

NORTIS

NIGHT VISION SYSTEMS

Night Vision Goggles

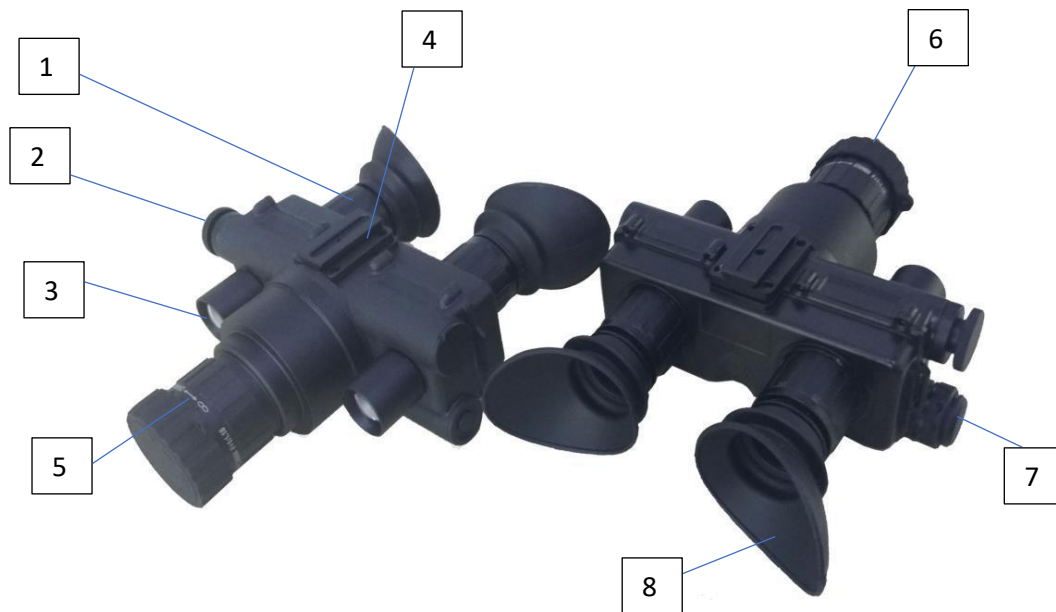
NORTIS 7G(7W)

User manual



Product description:

NORTIS 7G (7W) is based on the latest optoelectronics technology. It uses high-performance second-generation/third-generation image intensifier. It features excellent performance, small size, light weight, clear imaging, video output, adjustable eye distance, and can change magnification by changing objective lenses (or connecting multiplier lenses). This product can be adjusted arbitrarily with different eye distance requirements. Built-in red explosion lamp, infrared lighting and automatic strong light protection. This product has strong practicability and can be applied to military observation, frontier and coastal defense reconnaissance, public security surveillance, evidence collection, customs smuggling, etc. in the night without lighting. It is an ideal equipment for public security departments, armed police forces, special police forces, and guard patrols.



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|-----------------------|-------------------|
| 1- Diopter adjustment | 6- Lens Cap |
| 2- Operation Switch | 7- Battery Cover |
| 3- IR | 8- Eyepiece Cover |
| 4- Helmet Fixture | |
| 5- Objective Lens | |

Technical specifications:

Modele	NORTIS 7G(7W)
Image intensifier	GEN2+
Magnification	1X
FOM	1600 - 1800
Resolution center (lp/mm)	64 - 68
Phosphor Type	P43(P22) or P(45)
Luminance Gain	8000 - 12000
Signal To Noise Ratio	20 - 25
FOV (deg)	42 +/-3
Detection distance (m)	180-250
Adjustable range of eye distance	65 +/-5
Diopter (deg)	+5/-5
Lens system	F1.2, 25mm
Range of focus	0.25 - ∞
Auto anti strong light	High Sensitivity, Ultra Fast, Broadband Detection
Dimension (mm) (without eye mask)	130x130x69
Material	Aviation aluminium
Weight (g)	393
Power supply (volt)	2.6-4.2 V
Battery type	AA (2)
Wavelength of infrared auxiliary light source (nm)	850
Battery life (hours)	80 (without IR) 40(with IR)
Operating Temperature (°C)	-40/+50
Environmet rating	IP65 (IP67 optional)

Warning

Do not switch on the device in daylight with the lens cover folded!

Do not aim the device at a direct light source. The device may be damaged!

If you do not use the device for 24 hours or more, it is necessary to remove the batteries from the battery case and store them separately.

Please read this instruction manual carefully before handling the night vision goggles!

Improper and inappropriate use of the device may damage it and void the manufacturer's warranty.

Directions for use:

1. Battery installation:

As shown in figure ①, put two AA batteries (reference battery mark) Tack the battery into night vision battery cartridge. Lets battery cover and batteryCartridge's screw thread together ,Then clockwise rotation and tightened to complete the battery installation.



2. On/ off setting

As shown in Fig. 2, Turn the work switch along the clockwise direction. The knob indicates the location of "ON", when the system starts to work.



3. Eyepiece adjustment

Choose a target with moderate brightness. The eyepiece is adjusted Without opening the lens cover. As in Figure 3, Turn the eyepiece hand wheel clockwise or counterclockwise. To match the eyepiece, when the most clear target image can be observed through an eyepiece, The eyepiece adjustment is complete. Different users need to readjust according to their vision.



4. Objective adjustment

The objective adjustment is need to see the target at different distances. Before adjusting the lens, must adjust the eyepiece according to the above method. When adjusting the objective lens, choose a dark environment target. As shown in Figure 4, Open the lens cover and aim at the target. Turn the focusing hand wheel clockwise or counterclockwise. Until you see the clearest image of the target, complete the adjustment of the objective lens. When observing targets at different distances, the objective needs to be adjusted again according to the above method.



5. Operation Mode

The working switch of this product has four gears. There are four modes in total, 4 except OFF. There are three modes of work: ON, IR and AT. Corresponding to normal working mode, infrared auxiliary mode and automatic mode, etc. As shown in Fig. 2.

6. Infrared mode

The environmental illumination is very low (all black environment). When the night vision instrument cannot observe clear images, The working switch can be turned clockwise to one shift. As shown in Fig. 2, The system enters the "IR" mode. At this time, the product is equipped with infrared auxiliary lighting to turn on. Ensure normal use in all black environments.

Note: in IR mode, similar equipment is easy to be exposed.

7. Auto Mode

The automatic mode is different from the "IR" mode, and the automatic mode starts the environment detection sensor. It can detect environmental illuminance in real time and work with reference to illumination control system. Under extremely low or extremely dark environment, The system will automatically turn on infrared auxiliary lighting, and when the environmental illumination can meet normal observation, The system automatically closes "IR", and when the ambient illumination reaches 40-100Lux, The whole system is automatically shut down to protect the photosensitive core components from damage by strong light.



8. Head mounted Installation

First, turn the knob on the helmet mount device to the end of the clock counter clockwise.

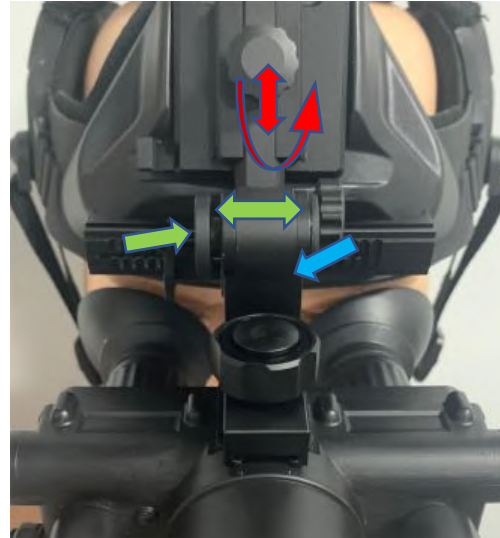
Then use the universal fixture of the night vision instrument to one end of the eyepiece to the equipment slot of the helmet hanging device. Press the device button on the helmet mount vigorously. At the same time, the night vision instrument is pushed along the equipment slot. Until the button of center is moved to the middle at the universal fixture. At this time, release the anti button, turn the equipment locking knob clockwise and lock the equipment. As shown in Fig. 5.

After installing the night vision instrument, Fasten the pendant of helmet mount to the general equipment slot of the soft helmet. Then press the lock button of the Helmet Pendant. At the same time, the components of the night vision instrument and Helmet Pendant are rotated counterclockwise. 5

When the helmet mount connector is completely attached to the universal equipment slot of the soft helmet, Loosen the lock button of the Helmet Pendant and lock the product components on the soft helmet. As shown in Fig. 6.

9. Head mounted adjustment

To ensure the comfort of users when using this system, the helmet mounted system has designed a perfect fine-tuning structure to meet the needs of different users.



1. Up and down :

Unlocking the height locking knob of helmet mount counterclockwise. Slide the knob up and down, adjust the eyepiece to the most suitable height to observe. Clockwise rotates the height locking knob of the helmet mount to lock the height. The red diagram is shown in Fig.

2. left and right:

press the left and right adjusting button of the Helmet Pendant with your finger to slide the night vision instrument assembly horizontally. When it is adjusted to the most suitable position, loosen the left and right adjusting button of the helmet pendant. The night vision assembly will lock this position and complete the left and right horizontal adjustment. As shown in Fig.

3. Front and aft :

when the distance between the eyepiece and the human eye needs to be adjusted, First turn the equipment locking knob on the Helmet Pendant counterclockwise. Then slide the night vision module back and forth and adjust it to the right position. Clockwise rotation of equipment locking knob, locking device, before and after adjustment. As shown in Fig. blue.

10.Head mounted flip

After the product has been dressed, in the actual use process, If the night vision device is not used for a while, night vision device can be flipped over the helmet. This does not affect the current line of sight, and is convenient to use at any time. When naked eyes need to observe, press the reversal button of the helmet mount, then turn the night vision assembly upward. , When the angle reaches 170 degrees, loosen the reversal button of the helmet mount, the system will automatically lock the reversal state. When you need to put down the night vision module, you also need to press the flip button of the Helmet Pendant first. The night vision module will automatically turn back to the working position and lock the working position. When the night vision module is turned over to the helmet, the system night watch will be turned off automatically. When turning back to the working position, the night vision system will automatically turn on. And work normally. As shown in Fig.



11.Objective lens replacement

The night vision system supports the replacement of different magnification lenses to meet the requirements of different observation distances. When replacing the objective lens, the objective lens is rotated counterclockwise. Remove the object lens mounted on the night vision instrument. Then the objective lens that needs to be replaced is rotated clockwise to be installed on the host of the night vision instrument.

12.Multiplying lens installation

This night vision instrument not only supports the replacement of objective lenses with different magnification. It also supports tandem magnification in order to change the observation rate and meet the requirements of different observation distances. (Tandem multiplier lens does not affect the waterproofing capability of the night vision apparatus itself). Before the series magnification, open the original lens cover, and twist the corresponding aperture doubling mirror directly to the front of the original lens. This doubling mirror also supports direct multistage series connection. The doubling mirror also supports direct multi-stage series connection, and the series connection mode of the doubling mirror is the same as that of the objective lens. This night vision instrument supports three levels of multiplying mirrors in series, and the maximum doubling is 6X times.

Common problem:

1. No power

- A. please checks whether the battery is loaded.
- B. checks whether there is electricity in the battery.
- C. confirms that the ambient light is not too strong.

2. Target Image is not clear.

- A. check the eyepiece, whether the objective lens is dirty.
- B. Check the lens cover open or not ?if at night time
- C. confirm whether the eyepiece is properly adjusted (refer to eyepiece adjustment operation).
- D. Confirm the focusing of the objective lens ,whether finished adjusted.r (referring objective lens focusing operation).
- E. confirms whether infrared light is enabled when the environments all back.

3. Automatic detection not working

- A. automatic mode, when glare automatic protection does not work. Please check if the environmental testing department is blocked.
- B. flip, the night vision system does not automatically turn off or install on the helmet. When the system is in normal observation position, the system cannot start normally. Please check the position of the helmet mount is fixed with the product. (reference headwear installation)

Noted:

1. Anti-strong light

The night vision system is designed with automatic anti-glare device. It will automatically protect when encountering strong light. Although the strong light protection function can maximize the protection of the product from damage when exposed to strong light, but repeated strong light irradiation will also accumulate damage. So please do not put products in strong light environment for a long time or many times. So as not to cause permanent damage to the product.。

2. Moisture-proof

The night vision product design has waterproof function, its waterproof ability up to IP67 (optional), but long-term humid environment will also slowly erode the product, causing damage to the product. So please store the product in a dry environment.

3. Use and preservation

This product is a high precision photoelectric product. Please operate strictly according to the instructions. Please remove the battery when it is not used for a long time. Keep the product in a dry, ventilated and cool environment, and pay attention to shading, dust-proof and impact prevention.

- 4. Do not disassemble and repair the product during use or when it is damaged by improper use. Please contact the distributor directly.

Manufacturer's warranty, warranty conditions

The manufacturer guarantees conformity of the quality of the device with the requirements of the technical conditions, if the consumer observes all conditions and principles of storage, transportation and use.

The warranty period begins on the day the buyer takes possession of the item. The warranty period for all products is generally 24 months (batteries 6 months) from the date of purchase according to the Civil Code and 12 months according to the Commercial Code, unless the manufacturer sets a longer warranty period (complaint directly to the manufacturer's service).

The service life of the electro-optical converter without loss of sensitivity is at least 10,000 hours if the rules of use are followed.

The warranty only applies to manufacturing defects and material defects. Does not apply to products with internal or external mechanical, chemical or thermal damage. Also, the warranty does not cover malfunctions caused by inappropriate handling of the device, opening of the device and intervention by an unauthorized person, damage by natural elements, inappropriate storage, unprofessional handling and use of inappropriate batteries. The warranty also does not cover theft of the device. The right to warranty repair expires if the damage was caused by mechanical damage, operating the product in inappropriate conditions (chemically aggressive environment, dusty, humid, strong magnetic field), any breach of the seal or obvious interference with the product. The warranty also expires in the event of a defect caused by a natural disaster. Light damage to the device is easily detectable with diagnostic equipment and is not covered by the warranty. Using the device reduces the life of the electro-optical converter, which is considered as natural wear and tear of the device.

The customer is obliged to make a claim for possible mechanical damage to the goods (device) immediately after receiving the goods. Later complaints will not be accepted.

If it is found during the complaint that the defect occurred in a way that is excluded from warranty repairs, or if the defect does not appear on the product, the owner is obliged to pay all possible costs associated with handling, testing and the costs of delivering the device to the service center. If the customer is interested, we will provide paid post-warranty service.

Manufacturer:

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If you have any questions regarding the use of the device or service, please contact your dealer or the manufacturer.

We reserve the right to change the text, description or images in the user manual.