



NoctisX Series

Instructions for use and maintenance



Imprint

This manual is for people who use infrared sights to understand its basic structure, performance, and usage.

Methods and guidance documents for maintenance and storage.

Before the new manual is published, the use and maintenance of the infrared sight should be based on this.

Other materials are for reference only.

If any unit finds any problems during use, please provide feedback in a timely manner so that we can study and modify it.

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Precautions

Please strictly observe the following precautions at all times:

- Do not use or store the instrument in an environment that exceeds the permitted operating or storage temperature of this product.
- Do not point this product directly at high-intensity heat radiation sources, such as the sun, lasers, electric welders, etc.

Keep the lens cap on when the instrument is not in use.

- Do not expose this product to dust or moisture.
- Do not knock, drop or vibrate the instrument and accessories to avoid damage.
- Do not disassemble the device by yourself, as this may cause damage to the device and void the warranty.

This device has a built-in lithium-ion rechargeable battery. For safe use of

the battery, the following matters must be strictly observed:

- The external power output specification for product charging is DC5V.
- Do not place the battery in a high temperature environment or near high temperature objects.

Please follow the steps below when wiping this device:

Non-optical surfaces: When necessary, the non-optical surfaces of the product can be wiped with a clean, soft cloth.

Optical surface: Avoid dirtying the optical surface of the lens when using the product. Do not touch the lens with your hands. Sweat marks will leave

marks on the lens glass and may corrode the optical coating layer on the glass surface.

When the lens surface is contaminated, wipe it carefully with professional lens paper.

1. Product Overview

1. Product Features

- 8Types of dividing lines,5Various reticle colors to meet various usage requirements.
- 5Quickly switch between various pseudo colors (white hot, black hot, green hot, iron red, red hot).
- WithWi-FiThe function of connecting to mobile terminals to transmit video images.
- 1×~8×Continuous electronic zoom.
- Supports picture-in-picture function.
- Support photo and video recording functions

2. Product appearance

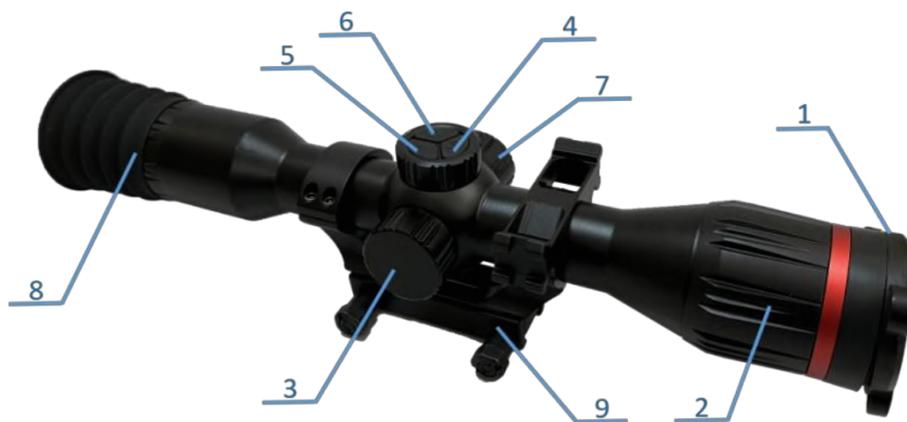


Figure 1 Overall structure of infrared sight Table 1
Infrared sight components

Serial number	name	Serial number	name
1	Lens cap	6	Photo/Video button
2	Lens focus ring	7	Menu Knob
3	Interface cover	8	eyepiece
4	Power button	9	Pickup Truck Bracket
5	Calibration key		

2. Technical parameters

Index	Parameter				
Detector Specifications	640×512, 12μm			384×288, 12μm	
focal length(mm)	25	35	50	25	35
Detection distance (people)	1000m	1400m	2000m	1000m	1400m
Field of view	17.4° × 14°	12.5° × 10°	8.7° × 7°	10.5° × 7.9°	7.5° × 5.6°
Boot time	20s				
Take photos/videos	JPG/MP4, H.264 Compression, audio and video synchronization				
Power supply mode	Rechargeable 3.6V, 4700mAh Large capacity 21700 Battery				
Continuous work time	8h				
Data Interface	Type-c, Can supply power and charge, can read memory card data				
Wireless interface	Wi-Fi Data communications, 2.4GHz, there is a corresponding mobile phone APP				
Operating temperature	-40 ~+50				
Storage temperature	-40 ~+60				
Protection level	IP67				
Shock	750g@0.3ms				

3. Basic description

1. Button

On the left side of the product there is 1 Knob with a 3 Buttons (see Figure 2) , there is a focus ring on the periphery of the lens.

The definitions and operations are detailed in the table below .



Figure 2 Buttons and knobs

Table 3 Infrared sight button definitions and operations

Serial number	Key Name	Operation Type	Functional Description	
			On the main interface	In the menu interface
1	Menu Knob	Short press	Enter the main menu	Select current option Toggle Options
		Rotation	Digital zoom	
2	Power button	Long press	Power on/off	
3	"Calibration"button	Short press	Shutter Correction	Back to previous level
		Long press	Background Correction	
4	"Photo/Video"button	Short press	Photograph	Back to previous level
		Long press	Video	
5	Focus ring	Rotation	Adjust the focus position	

2. Interface

The product has one Type-C port and one HDMI port on the right side(as shown in Figure 3).

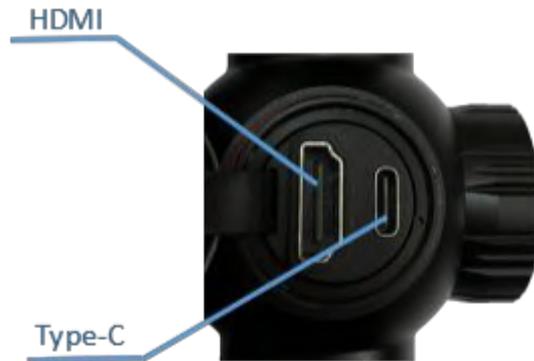


Figure 3 Interface

Table 4 Infrared sight interface name and description

Serial number	Interface Name	Illustrate
1	Type-C	Use Package Type-C The cable can be used to charge the product; As USB Connect the device to the computer to realize data Copy and delete functions
2	HDMI	pass HDMI Interface to transfer images

3. Turn the machine on and off

In shutdown state, long press the product "⏻" button. Turn on the product. Observe the startup screen through the eyepiece (such as picture 4), prompting that the product is starting up, and then entering the main interface.

Long press the product "⏻" button to shutdown.



Figure 4 Boot screen

4.Maininterface

The main interface is as shown in Figure 5.

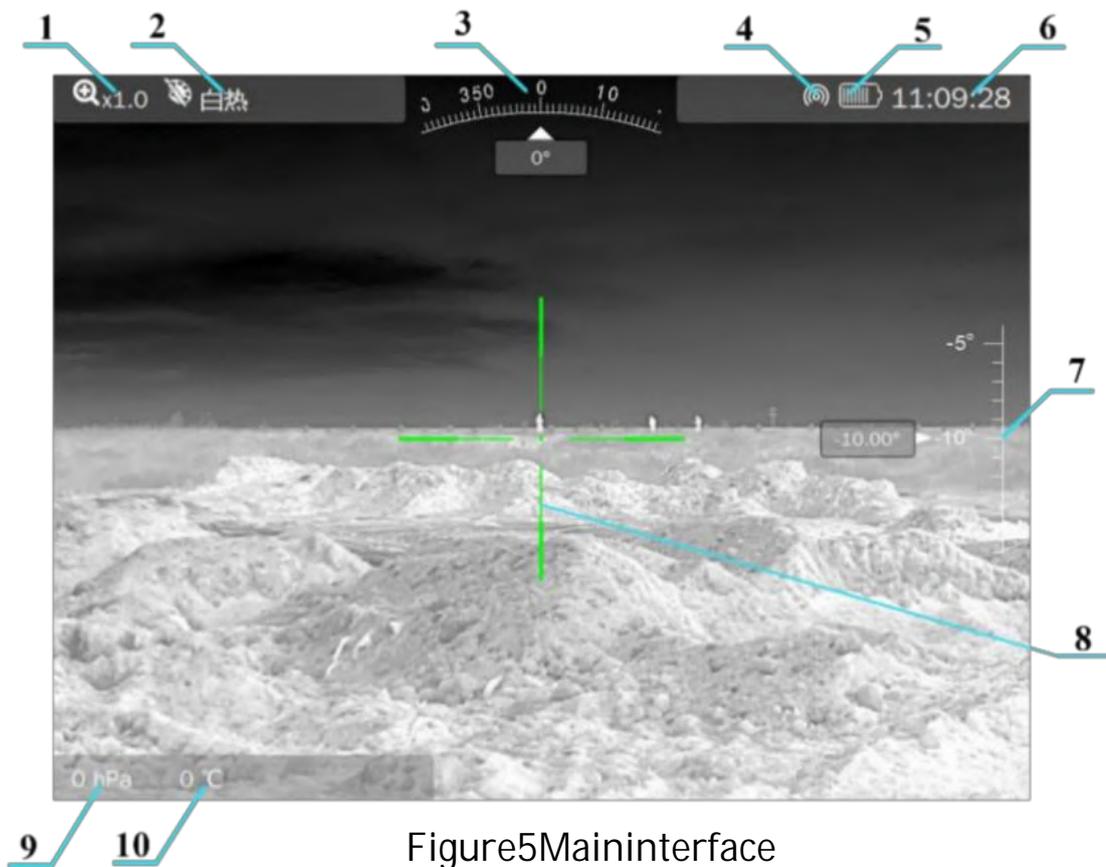


Figure 5 Main interface

- | | |
|------------------------|-------------------------|
| 1: Magnification | 2: FalseColorMode |
| 3: Azimuth | 4: Wi-FiHotSpots |
| 5: Battery status | 6: Currenttime |
| 7: PitchAngle | 8: CenterCross |
| 9: Atmosphericpressure | 10: Internaltemperature |

5.Manualfocus

When observing a target through the eyepiece, if the target is not clearly imaged, you can adjust the focus by rotating the focus ring on the lens. Perform focusing operation. Observe through the eyepiece while focusing to make the image clear.

4.Function Operation

1.Take photos/videos

In the main interface, short press the "📷" key to take a photo; long press the "📷" key to start recording a video.

The recording time is displayed in the corner. During recording, short press the "📷" key to stop recording

2. Calibration

Correction can improve the non-uniformity of infrared detectors and reduce the noise on the image. The product can be used in two ways Background correction and shutter correction can be performed in this way

1) Use shortcut keys:

In the main interface, you can press "C" button to calibrate the shutter speed; put on the lens cap and long press the "C" Key in Perform background correction.



Note: To ensure the background correction effect, you must cover the lens cap before correction, or point it at the ground below your feet. Or look at the cloudless sky in the distance!

2)MenuSelection

In the main menu, turn the menu knob to select "Calibration", enter the calibration options, as shown in the figure6.

A) Background correction

Before background correction, you need to cover the lens cap to obtain a uniform background., then press the menu Use the single knob to select "Background Correction" to perform background correction. After the correction is completed, the screen automatically returns to the main interface.

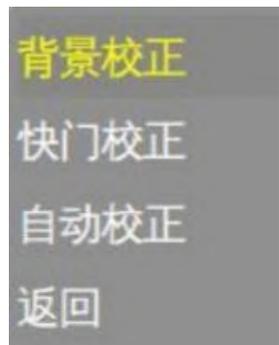


Figure 6 Digital zoom submenu

B) Shutter Correction

Select "Shutter Correction" via the menu knob , short press the menu knob to execute the operation.

C) Automatic correction

Select "Auto Calibration" by using the menu knob. , short press the menu knob to enter the option, select the knob to select "Yes" or " No" to set the switch.

When the automatic calibration function is turned on, the device will periodically perform shutter calibration

3. Main Menu

In the main interface, short press the menu knob to enter the main menu, as shown in the figure7As shown, in the main menu, the cursor stops The left position indicates the current option.

In the main menu and submenus, various operations are performed by pressing keys. If there are no special operating instructions, press the following table to perform the operation

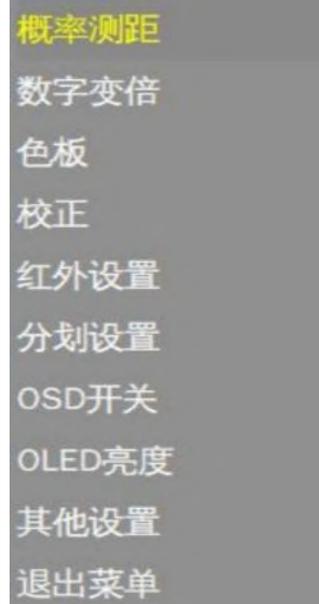


Table 5 Infrared sight button description

Figure7Mainmenu

Serial number	Key Operation	Implementing functions
1	Shortpress the menu knob	Open or select the current option/execute the current option
2	Rotate the menu knob forward and backward	Move cursor/switch option content
3	Short press"C"key	Exit Menu
4	Short press the""key	Exit Menu

4. Probabilistic ranging

In the main menu, rotate the menu knob to place the cursor on the "Probability Ranging" position, and short press the knob to enter Probability ranging (as shown in the figure8) .

Figure8 Probability ranging submenu



A) Target type: Use the knob to switch the target type, including: "people " Wolf", "Wild Boar", "deer" wait.

B) Overline/Underline: Use the knob to change the position of the overline/underline in the image. The lines are adjusted to align with the top and bottom of the target image, and the probability ranging result is displayed at the bottom right of the screen

C) Line reset: The line position returns to the default initial position

5. Digital zoom

Digital zoom function can magnify the image, magnification $1\times$ --- $8\times$.

In the main menu, use the menu knob to select "Digital Zoom" and enter the option. The submenu is as shown in the figure.9, spin Turn the knob to select the desired magnification and short press the knob to confirm.

Select "Continuous Zoom", the icon turns red and the current electron magnification is displayed on the right side of the option. Rotate the knob to Continuous selection of multiples, short press the knob to determine the multiple

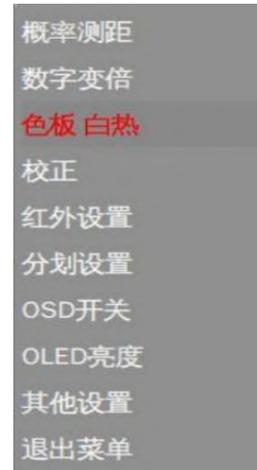
Figure 9 Digital zoom submenu



6. Color palette

In the main menu, rotate the menu knob to move the cursor to "Color Plate", short press the knob to confirm, and the icon will turn red. color, and the current pseudo color mode is displayed on the right side of the option (as shown in the figure10), rotate the knob to switch the mode, short Press the knob to confirm the pseudo color mode

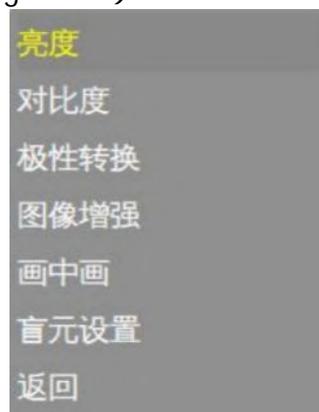
Figure 10 Color palette switching



7. Infrared settings

Select "Infrared Settings" from the main menu, you can set the parameters of the product infrared image (as shown in the figure11)

Figure 11 Infrared settings submenu



A) Brightness: You can set the brightness of the infrared image. Short press the menu knob, the option turns red and displays the current brightness. Front brightness level, rotate the knob to change the brightness level, select the appropriate brightness and short press the knob to confirm.

B) Contrast: You can set the contrast of the image. Short press the menu knob, the option turns red and displays the current contrast. Contrast gear, rotate the knob to change the gear, select the appropriate contrast and short press the knob to confirm.

C) Polarity conversion: White hot/

black hot mode can be switched between each other.

D) Picture in Picture: Select to turn on/off the Picture in Picture function.

E) Image Enhancement: Select on/off image enhancement mode.

F) Blind pixel setting: Blind pixels can be eliminated manually.

8. Graticule settings

Select "Division Settings" in the main menu to set 10Gun type and 10Reticle parameters for group projectile types.

Note: When using for the first time, you need to initialize the parameters of each group

Figure 12: Scale setting submenu



When setting, first select the gun type and ammunition type, then enter the setting menu to set the scale parameters. The stroke parameters include color, style, and crosshair position (see Figure 2).13)

Figure 13: Graticule parameters submenu



A) Color: The color of the reticle can be changed. 4 Colors available.

B) Style: You can change the reticle style.

C) Move: You can adjust the position of the crosshair cursor to achieve the gun calibration function. When calibrating the gun, first aim at the center of the reticle. The center of the target, after shooting, adjust the center of the scale to the bullet hole position. The lower right corner of the interface prompts that the scale is horizontal/ vertical.

Move up 1 The corresponding density value of the grid (as shown in the figure 14).



Figure 14 Gun calibration interface

9. OSD switch

Select "OSD" The switch can control each OSD Component display status: On or Off (such as picture 15).

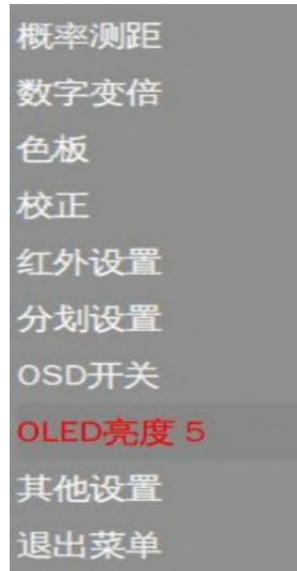


Figure 15 OSD switch submenu

10.OLEDbrightness

Select "OLEDbrightness" After a short press, the option turns red and the current Brightness level: select screen brightness by rotating the menu knob and short press the knob to select.

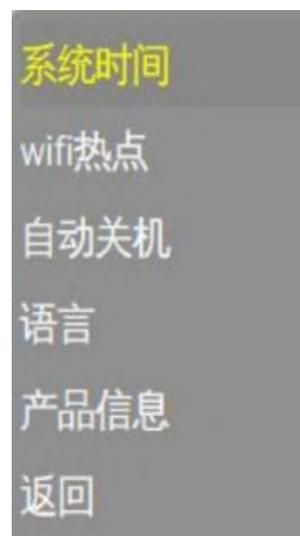
Figure 16 OLED brightness setting interface



11.Othersettings

Select "Other Settings" from the main menu , you can change the system settings ofthe product, and its submenu is shown in the figure17

Figure 17 Other settings submenu



System time: You can modify the system time and date of the product (as shown in the figure18), short press the knob to select, rotate the knob

Press the button to adjust the number and press again to confirm the selection.

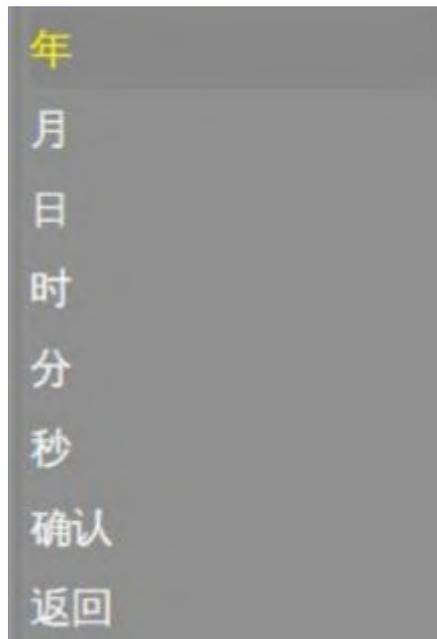


Figure 18 Time setting interface

Wi-FiHotspot: On/Off selectableWi-FiHotspot. The hotspot name is the product model + serial number, password:

12345678After the hotspot is turned on, the product is sent in real timeRTSPOnline video, play address:rtsp://192.168.5.1/live.

Automatic shutdown: Set the automatic shutdown time. If there is no operation within the set time, the product will automatically shut down.

Language: Chinese, English, and Russian are available

Product information: View product number, infrared resolution, focal length and other information

5. Simple troubleshooting

Table 6 Common faults and solutions

Phenomenon	Specific analysis	measure
Image in use homogeneity becomes stronger	No calibration	Short press the "C" key to perform shutter calibration
		Put on the lens cap, or point it at the ground below. Or, facing the cloudless sky in the distance, press and hold "C" key (about 4 seconds) to perform background correction
Unable to turn on	Low battery	Charging via TYPE-C port Try to restart the computer after some time
	 The key is pressed too short	Press the key for more than 3 seconds. Release it after the startup screen appears in the eyepiece.
Cannot take photos or videos	Out of Memory	Clear up space on your device's memory
Unclear image	No focus on target	Turn the focus ring left or right until the image is clear.
	The image and characters are not clear	Rotate the eyepiece left and right to adjust the diopter Until the characters can be clearly seen.
	Lens or eyepiece covered Water vapor or pollution	Use professional tools for cleaning