



NyxPro Series

Infrared Sight Usage and Maintenance Manual



Publication Statement

This manual serves as a guiding document for personnel using infrared sights, providing an understanding of their basic structure, performance, usage methods, and maintenance and storage.

Until a new manual is published, the usage and maintenance of infrared sights should be based on this document; other materials are for reference only.

If any issues are encountered during use, please provide timely feedback for further research and revision.

Table of Contents

1. Product Overview.....	1
1. Product Features.....	1
2. Product Appearance.....	1
2. Technical Parameters.....	2
3. Basic Description.....	3
1. Buttons.....	3
2. Interfaces.....	4
3. Power On/Off.....	4
4. Main Interface.....	5
5. Manual Focus.....	
. 4. Functional Operations.....	
61. Photography/Video Recording.....	
62. Image Polarity.....	
63. Main Menu.....	
63. 1. Scene Mode.....	
73. 2. Picture-in-Picture.....	
73. 3. Ballistic Table Group.....	
3. 4. Ballistic Table.....	
3. 5. Zoom Mode.....	9
3. 6. Pre-Recording.....	10
3. 7. Audio.....	
103. 8. Image Calibration.....	
103. 9. Dead Pixel Correction.....	
103. 10. Hotspot Tracking.....	
113. 11. Burn Protection.....	
113. 12. OSD.....	
113. 13. Device Time Configuration.....	
123. 14. Restore Factory Settings.....	
133. 15. Version Information.....	
13	

Refer to the maintenance manual for guidance.

3. 16. Network Mode.....	14
3. 17. Contrast.....	14
3. 18. Brightness.....	14
V. Basic Troubleshooting.....	15

Important Notice.

Please strictly adhere to the following precautions at all times:

- * Do not use or store the instrument in an environment that exceeds the permitted operating temperature or storage temperature of this product.

- * Do not point this product directly at high-intensity heat radiation sources, such as the sun, lasers, welding machines, etc.

- * 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 machine by yourself, as this may cause damage to the device and void the warranty.

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.

- * product. Do not touch the lens with your hands, as sweat on your hands will leave marks on the lens glass and may corrode the optical coating layer on the glass surface. When the optical lens surface is contaminated, use professional lens paper to wipe it carefully.

Refer to the maintenance manual for guidance.

1. Product Overview

1. Product Features

- 10 types of reticle styles and 4 colors of reticle, fulfilling various usage requirements
- 4 types of image polarity switching (White Hot, Black Hot, Fusion, Red Hot).
- Supports WIFI wireless transmission.
- Supports Picture-in-Picture functionality.
- Supports electronic magnification: 1×, 2×, 4×, and 8×.
- Supports photography and video recording.

2. Product Appearance

The product's objective lens is replaceable, supporting focal lengths of 35 mm and 50 mm.



Figure 1: Overall Structure of the Infrared Sight

- 1- Focusing Ring 2- Encoder Handwheel 3- Battery Cover Handwheel
4- TYPE-C Handwheel 5- Button 6- Eyepiece Diopter Adjustment Ring

II. Technical Parameters

Table 1: Main Technical Parameters of the Infrared Sight

Index	Parameter	
Model	NyxPro	
LENS	35mm	50mm
Detector Specifications	384 × 288,12μm	
Display specifications	1024 × 768	
NETD	≤30mk	
Eyepoint distance	≥60mm	
Framerate	50Hz	
Vision adjustment range	-5SD ~ +5SD	
Field of view	7.5° × 5.6°	5.2° × 3.9°
Exit pupil diameter	≥5mm	
Graticule adjustment accuracy	0.123mil	0.205mil
Magnification	1.0x-8.0x	
Power supply mode	Built-in battery + external battery or Type-c power supply	
Continuous working time	Built-in battery life: ≥10h	
Data Interface	Type-c, rechargeable, software upgradeable, video and picture exportable	
Wireless interface	Wi-Fi Data Communications	
Operating temperature	-20°C ~ +50°C	
Storage temperature	-20°C ~ +70°C	
Protection level	IP67	
Shock	1000G	

3. Basic Description

1. Buttons

On the left side of the product, there is 1 encoder handwheel, and at the top of the eyepiece, there are 3 buttons (as shown in Figure 2). The focusing ring is located around the lens. The definitions and operations of the buttons are detailed in the table below.

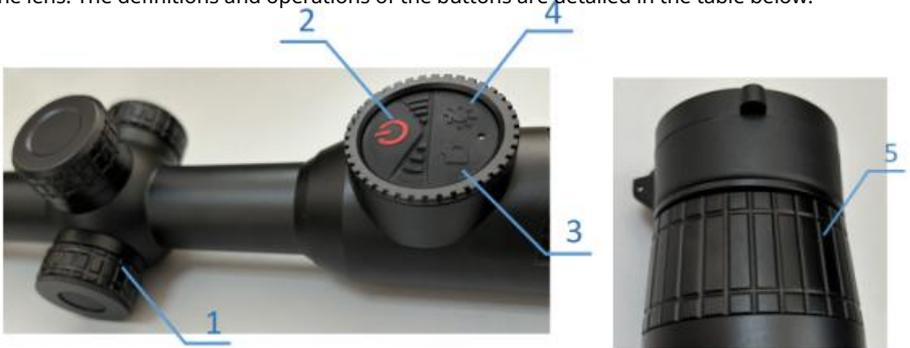


Figure 2: Buttons and Encoder Handwheel

Table 2: Infrared Sight Button Definitions and Operations

number	Button Name	Type of Operation	Description of Function	
			In the Main Interface	In the Menu Interface
1	Code Handwheel	Short Press	/	Switch Option Content
		Long Press	Access Main Menu	Return to Previous Level
		Rotate	Digital Zoom	Switch Option
2	Power Button	Long Press	On/Off	
		Short Press	Black/Bright Screen	
3	The "Photography/ Video Recording" Button	Short Press	Photography	/
		Long Press	Video Recording	/
4	The?suton	Short Press	Switch Image Polarity	/
		Long Press	Calibration	/
5	Focusing Ring	Rotate	Adjust the Focusing Position	

2. Interface

On the right side of the product, there is 1 Type-C interface (as shown in Figure 3).



Figure 3: Interface

1. Use the included Type-C cable to charge the product;
2. Connect to a computer as a USB device for software upgrades and to export videos and images.

3. Power On/Off

In the power-off state, press and hold the product's  button for 3 seconds to turn on the power. The startup screen will be visible through the eyepiece (as shown in Figure 4), indicating that the product is starting up. Once completed, it will enter the main interface. Press and hold the product's  button to power it off. The screen will display a shutdown countdown of 5 seconds, indicating that the product is in the process of shutting down.

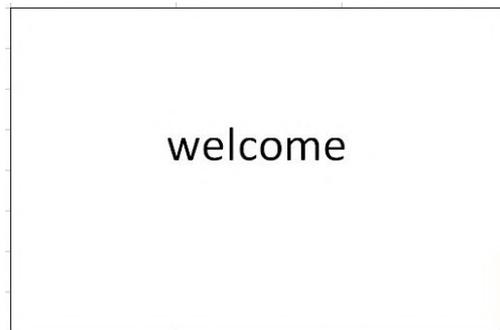


Figure 4: Startup Screen

4. Main Interface

The main interface is illustrated in Figure 5, featuring a status bar at the top of the screen. The meanings of the status bar icons are provided in Table 3.

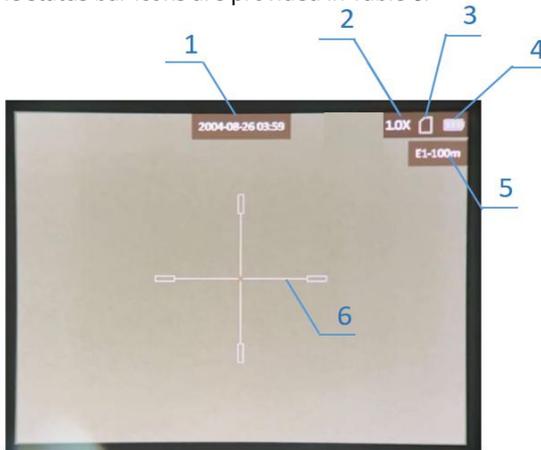


Figure 5: Main Interface

Table 3: Meanings of Infrared Sight Status Bar Icons

Number	Name	Number	Name
1	Date-Time	4	Battery Level Status
2	Magnification	5	Calibration Type- Calibration Distance
3	Storage	6	Center Reticle

5. Diopter Adjustment

The eyepiece diopter adjustment ring can compensate for vision ranging from myopia 500° to hyperopia 500° for users. Rotate clockwise to accommodate myopic users and counterclockwise to accommodate hyperopic users.

6. Focal Length Adjustment

Rotating the focusing ring eliminates parallax when aiming at targets at varying distances, with a focusing range of 10meters to infinity.

Refer to the maintenance manual for guidance.

4. Functional Operations

1. Photography/Video Recording

In the main interface, briefly press the  button to take a photo; after capturing the image, a prompt stating “Image Captured Successfully” will appear at the bottom of the screen. Press and hold the  button to begin video recording; during the recording, press and hold the  button again to stop. After recording, a prompt stating “Video Recorded Successfully” will appear at the bottom of the screen. The recorded videos and photos will be saved in the built-in storage.

2. Image Polarity

In the main interface, briefly press the  button to switch the image polarity, cycling through white hot, black hot, fusion, and red hot.

3. Main Menu

In the main interface, long press the Code Handwheel to access the Main Menu, as illustrated in Figure 6. In the Main Menu, the cursor position indicates the current option, and operation prompts will appear at the bottom of the screen.

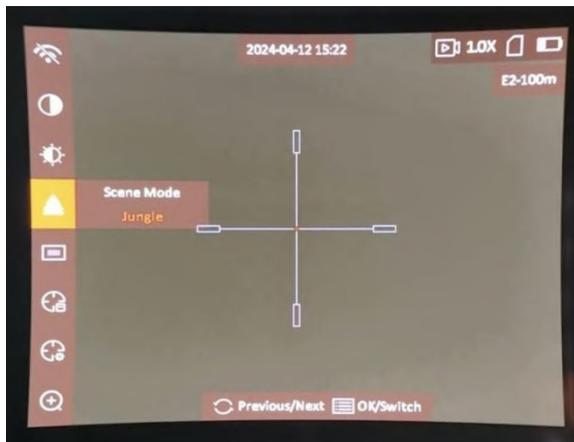


Figure 6: Main Menu

In the Main Menu, various operations can be performed using the buttons. If there are no specific operation instructions, please refer to the table below for guidance.

Table 4: Infrared Sight Button Descriptions

Serial Number	Button Operations	Function Achieved
1	Short press the Code Handwheel	Select the current option/Switch sub-option content
2	Long press the Code Handwheel	Return to the previous level/Exit the menu
3	Rotate the Code Handwheel	Switch menu options

3. 1. Scene Mode

In the Main Menu, when the cursor is positioned over 'Scene Mode', the current scene mode will be displayed on the right. Briefly press the Code Handwheel to switch between Jungle Mode and Identification Mode, and the icon will change accordingly. No additional operations are required to exit this option; if you wish to switch to the next option, you can simply rotate the Code Handwheel.

3. 2. Picture-in-Picture

In the Main Menu, rotate the Code Handwheel to position the cursor over 'Picture-in-Picture', and the current status of the Picture-in-Picture mode (on/off) will be displayed on the right. Briefly press the Code Handwheel to toggle the on/off status.

When the Picture-in-Picture mode is activated, a separate 'small window' will be displayed above the main image, showing a portion of the main image that is magnified by 2 times, centered around a crosshair, as illustrated in Figure 7.

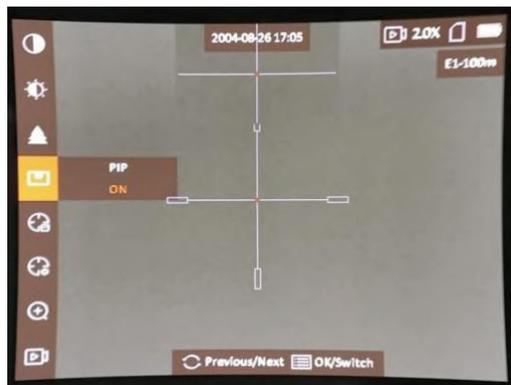


Figure 7: Picture-in-Picture Activation Interface

3. 3. Calibration Type

In the Main Menu, rotate the Code Handwheel to position the cursor on ' Calibration Type', and briefly press the Code Handwheel to switch. In modes A-D, the reticle and ballistic table distance are hidden; in mode E, the reticle and ballistic table distance are **E2-100m** displayed.

3. 4. Calibration Settings

In the Main Menu, rotate the Code Handwheel to position the cursor on ' Calibration Settings', and briefly press the Code Handwheel to enter the calibration settings interface, as shown in Figure 8.

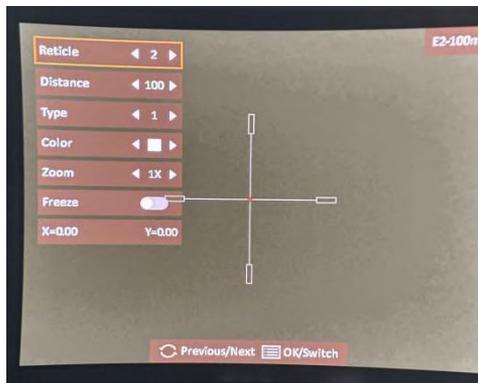


Figure 8: Calibration Settings Interface

1) Ballistic Table: You can switch the reticle type during calibration. Briefly press the Code Handwheel to switch the ballistic table type, for example, from E1-200m to E2-200m; when 'off' is selected, both the reticle and ballistic table group are hidden.

2) Distance: Rotate the Code Handwheel to select 'Distance', then briefly press the Code Handwheel to switch between the hundreds, tens, and units digit positions. Next, rotate the Code Handwheel to set the value of the current digit, cycling through 0-9; press the Code Handwheel **◀ 100 ▶** again to exit 'Distance Setting', while the upper right corner of the screen will also update to reflect the new Calibration Distance. Long press the Code Handwheel to display the prompt shown in Figure 9, then rotate the Code Handwheel to select 'OK' to save and exit.

Refer to the maintenance manual for guidance.

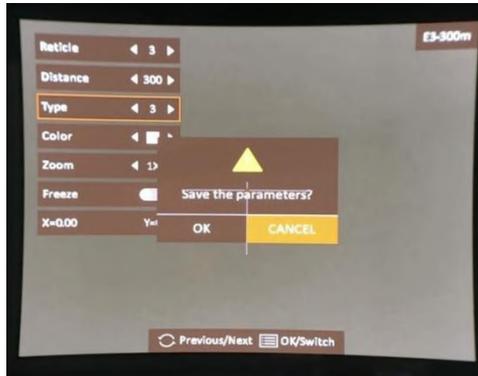
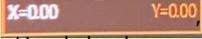


Figure 9 Save Prompt Interface

- 3) Type: Supports 10 types of scale types. Briefly press the Code Handwheel to switch between scale types, and long press the Code Handwheel to save and exit.
- 4) Color: Press the Code Handwheel briefly to adjust the reticle color, cycling through white, green, red, and black.
- 5) Magnification: Supports 1×, 2×, 4×, and 8× magnification options.
- 6) Freeze: (Once activated, long press the Code Handwheel to exit; it will automatically turn off.)
- 7) X/Y Axis Position: Adjust the reticle position horizontally and vertically. When the cursor is on the “X/Y Axis Position,” press the Code Handwheel briefly to select the “X Axis.”
 Rotate the Code Handwheel clockwise to decrease the value, moving the reticle to the left; rotate it counterclockwise to increase the value, moving the reticle to the right. Press the Code Handwheel again to select the “Y Axis.”
 rotate the Code Handwheel clockwise to move down. Rotate the Code Handwheel counterclockwise to move up.

3. 5. Zoom Mode

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Zoom Mode'. A short press of the Code Handwheel will toggle between fixed zoom and continuous zoom modes.

Fixed Zoom: In the Main Interface, rotating the Code Handwheel will allow you to observe changes in the magnification displayed in the Status Bar: 1.0× , 2.0× , 4.0× , and 8.0×.

Continuous Zoom: In the Main Interface, rotating the Code Handwheel will allow you to observe continuous changes in magnification displayed in the Status Bar: 1.1×, 1.2×, 1.3× ... , with magnification increasing when the Code Handwheel is rotated counterclockwise.

3. 6. Pre-Record

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Pre-Record', then briefly press the Code Handwheel to toggle the 'Pre-Record' on/off status. The Status Bar will reflect the corresponding icon changes

3. 7. Audio

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Audio', then briefly press the Code Handwheel to toggle the 'Audio' on/off status. Sound can only be recorded during video recording when the audio is enabled.

3. 8. Image Calibration

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Image Calibration', then briefly press the Code Handwheel to switch between automatic and manual flat-field calibration. When automatic flat-field calibration is activated, the system will perform calibration automatically.

3. 9. Dead Pixel Correction

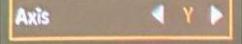
In the Main Menu, rotate the Code Handwheel to position the cursor on 'Dead Pixel Correction', then briefly press the Code Handwheel to enter the option; its submenu is illustrated in Figure 10 .



Figure 10: Dead Pixel Correction Submenu

Briefly press the Code Handwheel to select 'X', then rotate the Code Handwheel clockwise to move the small crosshair cursor to the left.

Refer to the maintenance manual for guidance.

Briefly press the Code Handwheel again to select 'Y' . Then, rotate the Code Handwheel clockwise to move the small crosshair cursor downward. A small window will appear in the lower right corner of the screen, displaying a magnified image of the location of the crosshair cursor.

After positioning the crosshair over the dead pixel, select the Code Handwheel and choose “DPC” to initiate dead pixel correction.

3. 10. Hotspot Tracking

In the Main Menu, rotate the Code Handwheel to place the cursor on “Hotspot Tracking,” then briefly press the Code Handwheel to toggle between the on / off states.

When Hotspot Tracking is activated, a green overlay will appear on the screen, allowing for real-time tracking of the infrared image location.



Figure 11: Hotspot Tracking Interface

3. 11. Burn Protection

In the Main Menu, rotate the Code Handwheel to position the cursor on “Burn Protection,” then briefly press the Code Handwheel to toggle between the on / off states.

3. 12. OSD

In the Main Menu, select “ OSD ” to control the display status of various OSD components . Briefly press the Code Handwheel to enter the OSD submenu, as illustrated in Figure 12.

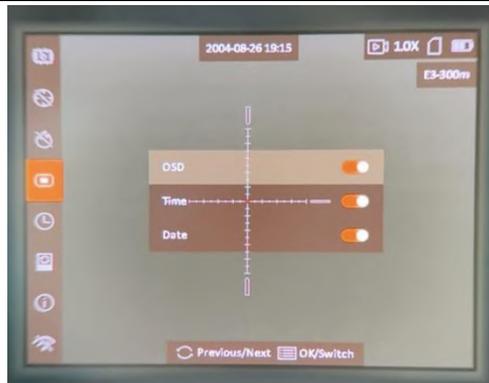


Figure 12: OSD Submenu

1) OSD Display: Briefly press the Code Handwheel to toggle the OSD on/off status. When the OSD is turned off, all content in the status bar at the top of the screen is hidden, leaving only the ballistic table distance visible.

2) Time Display: Rotate the Code Handwheel to select “Time Display,” then briefly press the Code Handwheel to adjust the on/off status of the date display. When the time display is turned off, the date and time in the status bar are hidden.

3) Date Display: Rotate the Code Handwheel to select “Date Display,” then briefly press the Code Handwheel to choose whether to enable the date display. When the date display is turned off, the date in the status bar is hidden, retaining only the time. **19:28**

3. 13. Device Time Synchronization

In the Main Menu, rotate the Code Handwheel to select 'Device Time Synchronization', then briefly press the Code Handwheel to enter the Device Time Synchronization submenu, as illustrated in Figure 13.



Figure 13: Device Time Synchronization Submenu

- 1) 24-Hour Format: Briefly press the Code Handwheel to disable the 24-hour format; the Time Bar will then display options for 'AM' or 'PM', with the time in the Status Bar changing accordingly.
- 2) Time: Rotate the Code Handwheel to position the cursor on the 'Time' bar, briefly press the Code Handwheel to switch between hours, minutes, and seconds, then rotate the Code Handwheel to adjust the values, and briefly press the Code Handwheel to confirm.
- 3) Date: Rotate the Code Handwheel to position the cursor on the 'Date' bar, briefly press the Code Handwheel to switch between year, month, and day, then rotate the Code Handwheel to adjust the values, and briefly press the Code Handwheel to confirm.

3. 14. Restore Factory Settings

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Restore Factory Settings'. Briefly press the Code Handwheel to display a prompt, then rotate the Code Handwheel to confirm or cancel

3. 15. Version Information

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Version Information'. Briefly press the Code Handwheel to enter the option, with detailed information as shown in Figure 14

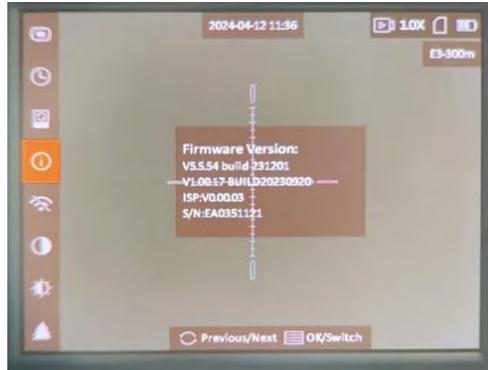


Figure 14: Version Information

3. 16. Network Mode

In the Main Menu, rotate the Code Handwheel to position the cursor on 'Network Mode'. Briefly press the Code Handwheel to switch the network status, including enabling WIFI, disabling WIFI, and enabling the hotspot, three modes, with the status bar icon corresponding adjustments.

3. 17. Contrast

The contrast of the image can be adjusted. In the Main Menu, rotate the Code Handwheel to position the cursor on 'Contrast', then briefly press the Code Handwheel to modify the contrast, which is adjustable in 1-10 levels.

3. 18. Brightness

In the Main Menu, rotate the Code Handwheel until the cursor highlights 'Brightness', then briefly press the Code Handwheel to adjust the brightness level, which supports 1-10 levels of brightness adjustment.

5. Simple Troubleshooting

Table 5: Common Faults and Solutions

Symptoms	Detailed Analysis	Recommended Actions
Unable to power on	Insufficient battery charge	Please replace the battery or use a Type-C cable to charge the device.
	The power button was pressed for too short a duration	Press the power button for more than 3 seconds, and release it once the startup screen appears in the eyepiece.
The image appears unclear.	The lensor eyepiece may be fogged up or contaminated	Please use professional cleaning tools.
	The focal length has not been properly adjusted	Rotate the focusing ring.
The scale markings are unclear	It has not been adjusted to the corresponding diopter	Adjust the diopter adjustment knob
The image is too dark.	The screen brightness is set too low	Please adjust the screen brightness
The Wi-Fi signal has either disappeared or been interrupted.	The device is outside the Wi-Fi coverage area there are obstacles (such as concrete walls) between the device and the receiver.	Please relocate the device to a location where it can directly receive the Wi-Fi signal.