

NiteFury Series

Multifunctional Infrared Night Vision Device User Maintenance Manual



Publication Statement

This manual serves as a guiding document for personnel using the Multifunctional Infrared Night Vision Device, providing information on its basic structure performance, usage methods, and maintenance and storage.

Until a new manual is published, the usage and maintenance of the Multifunctional Infrared Night Vision Device should be based on this document; other materials are for reference only.

If any issues are encountered during use, please provide timely feedback for research and modification

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Important Notes

Please strictly observe the following precautions at all times:

- Do not use or store the device in environments that exceed the specified operating or storage temperature limits for this product
- Do not point this product directly at high-intensity heat radiation sources, such as the sun, lasers, or welding machines.
- Do not expose this product to dusty or humid environments.
- Do not hit, throw, or shake the instrument and its accessories to avoid damage.
- Please do not disassemble this device yourself, as this may cause damage to the equipment and void the warranty.

When cleaning this device, please follow these guidelines:

 Non-optical surfaces: A clean, soft cloth may be used to wipe the nonoptical surfaces of the product when necessary.

Optical surfaces: Avoid soiling the optical surfaces of the lens while using the product, and do not touch the lens with your hands, as

 sweat marks can leave traces on the lens glass and may corrode the optical coating on the glass surface. When the optical lens surface is contaminated, carefully wipe it with professional lens paper.

1. Product Overview

1. Product Features

- Four working modes: handheld, gun-mounted, front-mounted, and
 helmet-mounted.
- Four types of image polarity switching: white hot, black hot, red hot, and fusion.
- Supports WIFI wireless transmission.
- Equipped with a built-in electronic compass and angle sensor.
- Includes a zeroing function.
- Features bad pixel correction.
- Ofers a picture-in-picture function.
- Includes electronic zoom capabilities.
- Supports both photography and video recording.

2. Product Appearance



Figure 1: Overall structure diagram of the Multifunctional Infrared Night Vision Device

1- Eyepiece diopter adjustment ring2- Eyecup3- Button4- Focusing wheel5- Objective lens cover

6-Battery Cover7-Battery Cover Connection Strap

8-TYPE_C Cover 9-Bracket Locking Nut

II. Technical Specifcations Table 1: Main Technical Specifcations of the Multifunctional Infrared Night Vision Device

Index	Parameter	
Detector Spedfications	640×512,12µm	
Display Screen Specifications	1024×768	
Detection Range	Human: 600 m; Vehicle: 1050 m	
Objective Lens	25mmF1.0	
Diopter Adjustment Range	-4SD ~ +4SD	
Field of View	16.5° × 12.5°	
Focusi ng Range	10m ~ 0	
Exit Pupil Diameter	6mm(Gun SghtHandheld,Helmet);15 mm(Front String)	
Power Supply Method	1 Rechargeable186503.7VBattery	
Continuous Operating Time	$4h(25 \pm 5)$	
Data Interface	TYPE_C ;Supports mobile storage and software upgrades	
Interface	Picatinny, Helmet Flip Interface	
Operating Temperature	-20 ~+50	
Storage Temperature	-30 ~+70	
Protection Level	I P67	
Impact	1000G(Original Configuration Bracket)	

1. Unboxing

Before using the Multifunctional Infrared Night Vision Device for the first time, please ensure that you check the contents of the box.

Open the device case and verify the completeness according to

 the packing confguration of the Multifunctional Infrared Night Vision Device (Table2);

Check whether the lens, body, eyepiece, buttons, flip interface

 components, and vibration-damp-ing bracket components of the multifunctional monocular night vision device show any obvious damage;

Inspect the infrared lens and eyepiece for any dirt. If there are

 noticeable stains, please clean the infrared lens with a lens cloth to ensure it is clear.

2. Battery Installation

The multifunctional infrared night vision device is powered by 18650batteries. The installation steps are as follows:

When installing the battery, please strictly adhere to the

• instructions on the label inside the battery compartment. Do not install it in reverse

Before removing or installing the battery, ensure that the multifunctional infrared night vision device is turned off.

- Opening the battery compartment while the device is powered on may cause serious damage. Before using the multifunctional infrared night vision device for the first time, please confirm that the battery is charged.
- Do not disassemble, throw, or short-circuit the battery to prevent accidents

If the battery becomes overheated, discolored, deformed, emits an

 odor, or exhibits any other abnormal phenomena during use, charging, or storage, stop using it immediately



Figure 2: Battery Installation Diagram

1. Button

The product features 3buttons on the top (as shown in Figure 2), with defnitions and operations for each button detailed in the table below.



Figure 3: Buttons

Table 3: Defnitions and Operations of the Multifunctional Infrared Night Vision Device Buttons

Seral	ButtonNam	Onorotion	Function Description				
Number	per e Opera		Power Off State	Under Main Interface	Under Menu Interface		
1	ds	Short Press	/	/	Switch Options/Adjust Parameters		
		Long Press	Power On	Power Off	Continuous Value Adjustment		
2	0	Short Press	/	Enter Menu	Confirm/Cancel Confirmation		
2	B	Long Press	/	/	Return to Previous Leve		
3	Short Press	/	Photography	Switch Options/Adjust Parameters			
	Long Press	/	Vi deo Recordi ng	Continuous Value Adjustment			

2. Power On/Of

In the power-off state, long press the ' ' key for 3 seconds to view the power-on screen through the eyepiece (as shown in Figure 4), indicating that the product is starting up. After this, it will enter the main interface. Long press the product's ' ' key to power off. The screen will display a power-off selection prompt. Select ' ' and then briefly press ' ' to confirm the power off.

Please wait....



3. Diopter Adjustment

The diopter adjustment ring on the eyepiece can compensate for vision ranging from -400° for myopia to +4 00° for hyperopia, rotating clockwise for myopic individuals and counterclockwise for hyperopic individuals.

When the information and markings on the screen are clearest, it indicates that the eyepiece diopter has been properly adjusted. Diferent users will need to readjust the eyepiece diopter. When using this scope, it is generally recommended to frst adjust the eyepiece diopter, and then proceed to adjust the objective lens distance.

4. Focusing Wheel

Rotating the focusing wheel can eliminate parallax when aiming at targets at diferent distances, with a focusing range of10meters to infnity.Align the observation target, and by rotating the objective lens, perform the focusing operation until the target image is as clear as possible.

5. Functional Operations

1. Photography/Video Recording

In the main interface, briefy press the " a " button to take a photo; when taking a photo, the camera icon will be displayed at the top of the screen. Long press the " a " button to start video recording; during recording, the recording time will be displayed in the upper left corner of the screen. A brief press of the " a " but- ton during recording will take a photo, while a long press of the " a " button will stop the recording. The maximum duration for video recording is 5minutes; if it exceeds 5minutes, the video will automatically be saved in a new video fle. The recorded videos and photos will be stored in the built-in storage space.

2. Button Descriptions in the Menu

In the main menu and submenus, various operations are performed using buttons. Unless otherwise specifed, operations can be carried out as indicated in the table below. The operations in Rife Scope, Handheld, Front String, and Helmet modes are identical.

SerialN umber	Button Operations	Function Achieved
1	short press " 🔳 "	Open menu or confirm/cancel
2	long press" 🔳 "	Return to Previous Level
3	short press " Ů " or " 🔯 "	Switch Options/Adjust Parameters

3. Rifle Scope Mode

The main interface of the Rifle Scope Mode is illustrated in Figure 5.



Figure 5: Main Interface of Rifle Scope Mode

The top row of the screen displays the status bar; the meanings of the status bar icons are detailed in Table 5.

Serial Number	Name	Serial Number	Name
1	Operating Mode	7	Time
2	Calibration Type and Calibration Distance	8	Battery Level Status
3	Image Polarity	9	Roll Angle
4	Azimuth Angle	10	Pitch Angle
5	Magni fi cati on	11	Reticle
6	WIFI		

ſable	5:	Meaning	of	lcons	in	the	Rife	Scope	Mode	Status	Bar

In the main interface, briefly press ' 🗐 ' to enter the main menu, as shown inFigure 6. In the main menu , the cursor position indicates the current option.



Figure 6: Main Menu of the Sight Mode

Table 6:	Explanation	of the	Main	Menu	in	Sight	Mode
----------	-------------	--------	------	------	----	-------	------

No.	Name	No.	Name
1	Mode	7	Screen Brightness
2	Electronic Zoom	8	File
3	Color Palette	9	Reticle
4	Image Brightness	10	Background Calibration
5	Image Contrast	11	Picture-in-Picture
6	Image Enhancement	12	Advanced Settings

3.1 Mode

3.2 Electronic Zoom

Supports three magnification levels: $1 \times , 2 \times ,$ and $4 \times .$ In the main menu, position the cursor on "Electronic Zoom," briefly press " \blacksquare " to enter the options, and then use the " \bigcirc " or " \bigcirc " " key to switch between the magnification levels.

3.3 Color Palette

3.4 Image Brightness

3.5 Image Contrast

Supports switching between 10 levels (1 to 10). In the main menu, when the cursor is positioned on "Image Contrast," briefly press "■" to enter the options and use the "●" or " or " or " or " key to adjust the image contrast.

3.6 Image Enhancement

Improves image quality and enhances image clarity, with 10 levels of adjustment (1 to 10). In the main menu, when the cursor is positioned on "Image Enhancement," briefly press "■" to enter the options, and then use the "也" or "②" key to switch between the enhancement levels.

3.7 Screen Brightness

Supports 10 levels of adjustment (1 to 10). In the main menu, when the cursor is positioned on "Screen Brightness," briefly press "■" to enter the options and use the "⊍" or "or "key to switch between the brightness levels.

3.8 File In the main menu, briefly press 🗐 " to enter the "File" option, where you can view the captured photos and videos, as shown in Figure 7. The file interface consists of four main areas: the file list, file thumbnails, memory status, and the operation menu.

IMG_20200301_132802.JPG IMG_20200301_120105.JPG	
	X X X
	1/1
7.0/7.1GB	
(\mathfrak{S})	
Figu	re 7. File

When the cursor is positioned on " (2)". briefly press " (2)" to enter the options and view the photos. The file name of the saved photo is displayed on the left, while the thumbnail of the photo is shown on the right. Briefly press the " (1)" or " (2)" with between photos.

IMG_20200301_132802.JPG IMG_20200301_120105.JPG	
	[] K > x 1/1
7.0/7.1GB	15
Figure 8: Photo Op	peration Interface

IMG_20200301_132802.J	PG
IMG_20200301_120105.J	PG
	\checkmark \times
	1 / 1
7.0/7.1GB	

Figure 9: Photo Deletion Confirmation Interface

When the cursor is positioned on "Video", briefly press "■" to enter the options and view the videos. The other operations are the same as for photos and will not be repeated.



Figure 10: Video Viewing Interface

When the cursor is positioned on "Return", briefly press " \blacksquare " to confirm and exit the file options.

3.9 Reticle

When the cursor is positioned on "Reticle", briefly press "
"
"
to enter the reticle submenu, as shown in Figure 11.



Figure 11: Reticle Submenu

4.9.1 Reticle Type

Supports 7 types of reticle patterns. When the cursor is positioned on "Reticle Type," briefly press "■" to enter the editing state, and use the "●" or " ◎" key to switch between reticle types.



Figure 12 7 Types of Reticle Patterns

4.9.2 Reticle Brightness

Supports 0-5 levels of reticle brightness adjustment. When the cursor is positioned on "Reticle Brightness," briefly press "■" to enter the editing state, and use the "●" or "●" key to switch between the reticle brightness levels

4.9.3 Reticle Color

Supports switching between 5 types of reticle colors, including white, black, green, red, and blue. When the cursor is positioned on "Reticle Color," briefly press "■" to enter the editing state, and use the "U" or "D"" key to switch between the reticle colors.

4.9.4 Zeroing Distance



Figure 13: Zeroing Distance Switching Interface If the zeroing distance does not match the set target distance, this option can be used to make adjustments. The zeroing distance can be reset based on the distance to the selected target.

Briefly press "■" again to enter the zeroing distance setting state. Briefly press "■" to switch between the hundreds, tens, and units digit positions, with the selected position value highlighted 700m Briefly press "●" or "●" to set the value at the current position, with the value cycling from 0 to 9; briefly press "●" to increase the value, and briefly press "●" to decrease it . After setting the value at the current position, briefly press "■" to save. After all three digits of the zeroing distance have been set, long press "■" to exit the zeroing distance setting state.

4.9.5 Zeroing

After aiming at the target and firing, observe the actual point of impact. If the actual point of impact does not match the aiming point (the center of the reticle), adjust the position of the reticle center until it coincides with the point of impact.

Adjust the position of the zeroing reticle center on the X/ Y axes. Briefly press "■" to enter the zeroing interface , as shown in Figure 14. when the cursor is positioned on "X/Y Axis Position," briefly press "■" to select "X/Y Axis" and enter the editing state.



Figure 14: Zeroing Interface

Adjusting the position of the reticle center on the "X-axis ": Briefly press "**也**" to increase the value, moving the reticle to the right; briefly press " o decrease the value, moving the reticle to the left. Each brief press moves the reticle center by 1 pixel. When zeroing at 100m, a change of 1 pixel corresponds to a 3cm change in the status bar value. After completing the adjustment, briefly press "
"
to save and exit the editing state.

Adjusting the position of the reticle center on the "Y-axis ": Briefly press "O" to increase the value, moving the reticle upward; briefly press "O" to decrease the value, moving the reticle downward. Each brief press moves the reticle center by 1 pixel. When zeroing at 100m, a change of 1 pixel corresponds to a 3cm change in the status bar value . After completing the adjustment, briefly press "O" to

save and exit the editing state.

After completing the adjustments of the reticle center position on both the X-axis and Y-axis, move the cursor to select "Save" and exit the zeroing adjustment. Repeat the aiming and shooting process until the point of impact coincides with the aiming point.

4.9.6 Freeze

If the point of impact does not match the aiming point (the center of the crosshair), keep the aiming position unchanged, select "Freeze" to lock the current image, so as to adjust the position of the zeroing reticle.

Move the cursor to select "Freeze" , and briefly press "

3.10 Background Calibration

When the image deteriorates or becomes uneven, it can be improved through calibration. Calibration can balance the background temperature of the detector and eliminate defects in the image.

Before performing background calibration, cover the lens first. When the cursor is positioned on "Background Calibration", briefly press ", and a 3-second calibration countdown prompt will appear on the screen (as shown in Figure 15). After 3 seconds, the background calibration is completed. Open = lens cover after the calibration is finished.



Figure 15: Background Calibration Interface

3.11 Picture-in-Picture (PIP)

When the Picture-in-Picture (PIP) mode is enabled, a separate "small window" is displayed above the main image. The small window shows a portion of the main image centered on the reticle, magnified by 2 times, as shown in Figure 16.

Move the cursor to select "Picture-in-Picture (PIP)", and briefly press "
"
"
to toggle the on/off state of PIP.



Figure 16: Picture-in-Picture (PIP) Enabled Interface

3.12 Advanced Settings



3.12.1. WiFi

3.12.2 Shutter Calibration

Move the cursor to select "Shutter Calibration" and briefly press "
"
to perform manual shutter calibration without covering the lens.

3.12.3 Units

3.12.4 Ballistic Table

Modify the zeroing type, supporting four types: A, B, C, and D. The reticle for zeroing will change accordingly based on the selected type.

Move the cursor to select "Ballistic Table" ■, briefly press "■" to enter the option, and use the "U" or "◎" key to switch between zeroing types. Briefly press "■" again to save the settings.

3.12.5 Compass Disabling

Move the cursor to select "Compass Disabling" (20), and briefly press "(20)" to toggle the on/off state of compass disabling. When compass disabling is turned on, the electronic compass, tilt angle, and pitch angle will all be hidden, as shown in Figure 18.



Figure 18: Main Interface with Compass Disabling Enabled

3.12.6 Compass Calibration

This operation calibrates the electronic compass. It should be performed when the usage location changes or when there is a significant change in the surrounding magnetic field environment, to ensure the accuracy of the electronic compass.

Briefly press " 📄 " to enter the compass calibration interface, where a calibration prompt icon will appear. Rotate the scope along the three axes indicated by the icon, with at least one full 360° rotation for each axis. The calibration will end by default after 15 seconds and exit automatically.



Figure 19: Compass Calibration

3.12.7 Defective Pixel Correction

During the use of the scope, defective pixels may appear, such as bright or dark spots with constant brightness visible on the image. In such cases, the defective pixel correction function needs to be used to eliminate these defective pixels.



Figure 20: Defective Pixel Correction Interface

3.12.8 Formatting

Formatting the internal storage will delete all captured photos and videos.

Move the cursor to select "Formatting", briefly press " \blacksquare " to bring up the selection prompt (as shown in Figure 21). Select " \checkmark " to format the device.

Note: The formatting operation is irreversible . Please proceed with caution. Do not perform any other operations during formatting.



Figure 21: Formatting Interface

3.12.9 Time

You can modify the system date and time. Briefly press " " to enter the option, and use the " " or " " " key to switch between the options to be modified. Briefly press " " again to enter the editing state of the option, with the value highlighted. Use the " " or " " " key to adjust the content of the option, and set the correct date and time. After completing the settings, briefly press " " to exit the editing state.

After completing the date and time settings, move the cursor to select " \checkmark " to save the date and time settings.



Figure 22: Time Setting Interface

3.12.10 Rese

Restore to the default state as it was when the device was manufactured. Move the cursor to select "Reset", briefly press "■" to bring up the selection prompt (as shown in Figure 23). Select "√" and then power off and restart the device to restore the factory settings.



Figure 23: Reset Interface

3.12.11 Hide Status Bar

In the main interface, the status bar icons only display WiFi (if WiFi is currently enabled), time, battery level, and reticle, as shown in Figure 24. Move the cursor to select "Hide Status Bar " and briefly press " a " to toggle the status bar on/off state.



Figure 24: Status Bar Hidden Interface

3.12.12 Device Information

Displays product information. Detailed information is shown in Figure 25. Briefly press " \blacksquare " to enter the option and view the product information.



3.12.13 Language

Supports switching between Chinese and English. When the cursor is positioned on "Language", briefly press"

4. Handheld Mode

The main menu of the Handheld Mode is shown in Figure 26. The definitions, icons, and button operations of the same functions are identical to those in the Sight Mode and will not be repeated.



Figure 26:Main Menu of Handheld Mode



Figure 27: Submenu of Advanced Settings in Handheld Mode

5. Forward Serial Mode

In Forward Serial Mode, the display interface is reduced in size, and the main menu is shown in Figure 28.



Figure 28: Main Menu of Forward Serial Mode

The definitions and operations of Mode, Color Palette, Image Brightness, Image Contrast, Image Enhancement, Screen Brightness, Device Information, and Reset are the same as in the Sight Mode and will not be repeated.

6. Helmet Mode

Entering Helmet Mode: In any of the Handheld, Sight, or Forward Serial modes, while on the main interface (with no menu displayed), simply flip the device 180° so that the buttons are facing downward to automatically activate the Helmet Mode.

Exiting Helmet Mode: While on the main interface (with no menu displayed), flip the device 180° so that the buttons are facing upward to exit Helmet Mode.

The main menu of Helmet Mode is shown in Figure 29.



Figure 29: Main Menu of Helmet Mode



Figure 30: Submenu of Advanced Settings in Helmet Mode

The definitions, icons, and button operations of the Color Palette, Image Brightness, Image Contrast, Image Enhancement, Screen Brightness, File, Background Calibration, and Advanced Settings in the main menu are the same as in the Sight Mode and will not be repeated.

6. Basic Troubleshooting

Phenomenon	Specific Analysis	Measures
Unable to Turn On	Insufficient Battery Power	Replace the Battery
	Pressing Time Too Short	Press the power button for more than 3 seconds.
The image is not clear.	Objective or eyepiece is dirty	Clean the objective lens and eyepiece.
	The focus is not properly adjusted.	Rotate the "objective distance adjustment ring".
Reticle lines are not clear.	Not adjusted to the corresponding di opter.	Adjust the diopter adjustment ring.
The image is too dark.	Screen brightness is low	Adjust the screen brightness.
Wi-Fi signal is lost or interrupted.	The device is not within the Wi-Fi coverage area; there are obstacles(such as concrete walls) between the device and the receiver.	Relocate the device to a place where it can connect to the Wi-Fi signal.