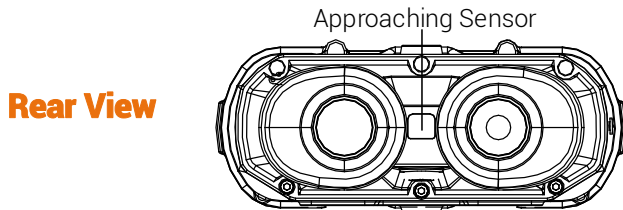
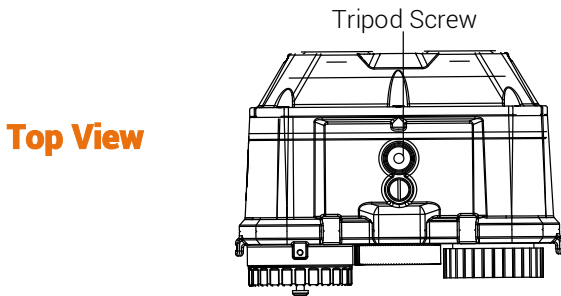
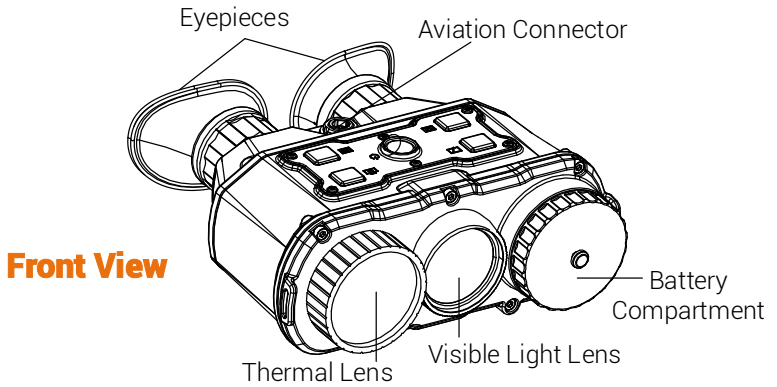


Handheld Thermal Binoculars

User Manual

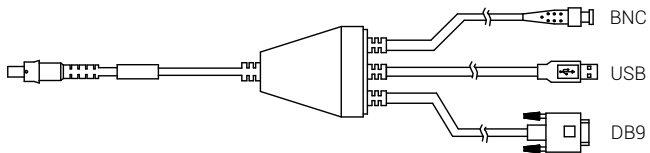
1.4 Appearance

1.4.1 Components



1	Eyepieces	Cover the eyes.
2	Visible Light Lens	Let the visible light in.
3	IR Lens	Let the infrared light in.
4	Battery Compartment	The battery is here.
5	Tripod Screw	Install the binocular on tripod.
6	Aviation Connector	Connect with the cables. See 1.4.2.
7	Approaching Sensor	Detect whether human eyes are approaching to save power. If it detected eyes, the OLED screen turns on, otherwise the OLED screen is off.

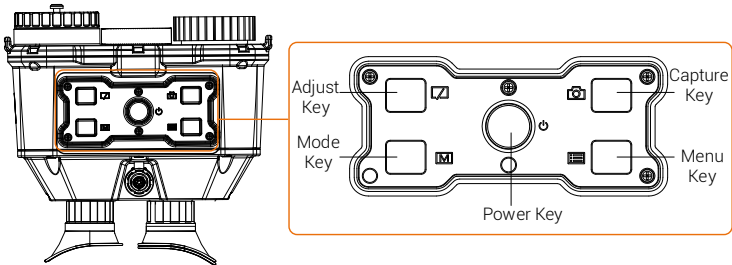
1.4.2 Cables Description



1	BNC	Connect it to the display screen.
2	USB	Connect it to your PC to backup videos/images.
3	DB9	Reserved.

1.4.3 Key Description

The main keys of the binocular are shown below.



For the descriptions of the menu buttons, see the table below.

	Adjust Key	Press the key to switch between Near , Middle , and Far . Hold the key to adjust the view parameters.
	Mode Key	Press the key to switch the pallets. Display the Mode menu.
	Power Key	Press the key to emphasize the high-temperature target in the view. Hold the key to power on/off the device.
	Capture Key	Press the key to capture the view. Hold the key to start/stop recording.
	Menu Key	Press the key to switch between White Hot mode and Black Hot mode. Hold the key to enter the menu.

2 Device Operation

2.1 Device Charging

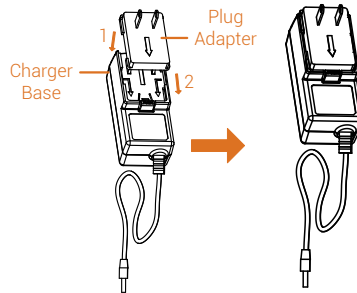
Purpose:

For the first use, and when the device is running low, charge the batteries with your charger.

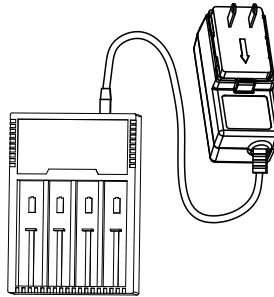
Steps:

1. Take the proper plug adapter.

2. Push and hold it, at the mean time slide it toward the inside to assemble the power adapter.



3. Connect the power adapter to the battery charger.



4. Insert the batteries in the charger with positive/negative terminals corresponded.

Note:

When the charger is powered on, the LCD display automatically lights up, and all the battery. The charger will detect the battery and charge it.

1	Model & battery bars	Standby mode
2	Unlighted	Power-saving mode Press any button to activate it.
3	Err	Battery is damaged.
4	Blinking	Battery is being charged.
5	Chg.Finish	Battery is fully charged.

5. Complete battery charging and disassemble the battery.

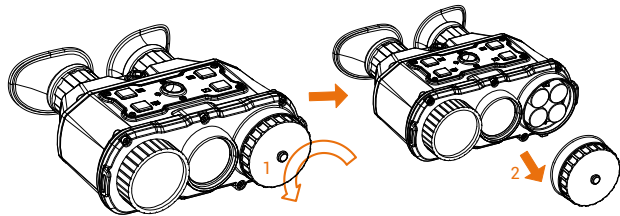
2.2 Battery Installation

Purpose:

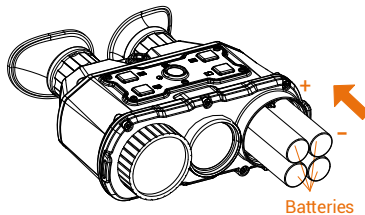
Insert the batteries into the battery compartment.

Steps:

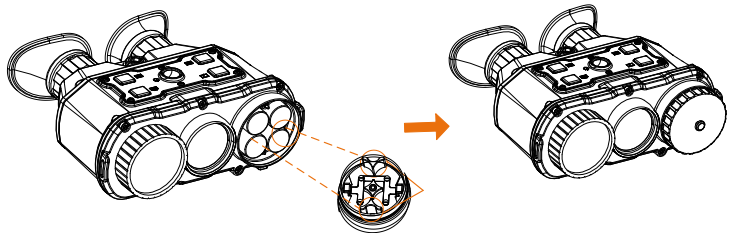
1. Rotate the battery cover anticlockwise to disassemble it.



2. Insert four batteries with positive/negative marks match with that of the battery compartment




3. Align the shape of battery cover with that of the batteries and cover the batteries.
4. Rotate the battery cover clockwise to fix it.





2.3 Power On/Off

2.3.1 Power On

Step:


When the binocular is sufficiently charged, press the  key to power on the binocular.

Notes:

- See the battery icon for the electricity quantity.  means battery is fully charged, and  means that the battery runs low.
- When the Low power note shows, charge the battery.

2.3.2 Power Off

Step:

When the binocular is running, hold the  key for four seconds to power off the binocular.

2.4 Cable Connection



Attentions:

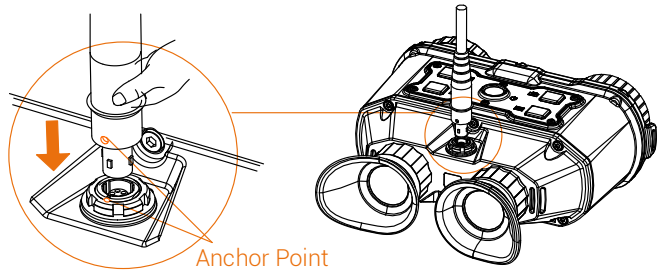
- Do NOT drag the cables when you do the connecting, or when it is connected to the binoculars.
- To plug in/out the cable, hold the cable end and then plug in/out it. Do NOT twist the cables, or the pins inside may be damaged.

Purpose:

Connect the binocular with the aviation cable, and you can connect the device to your PC via USB interface or the display via the BNC interface.

Step:

Connect the aviation cable with the aviation Interface. Make sure the anchor points match with each other and insert the cable.



To disconnect the cable, lift the cable.

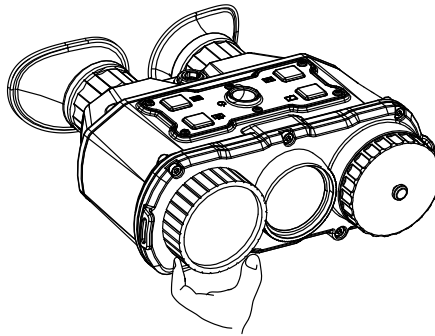
2.5 Focus

Notes:

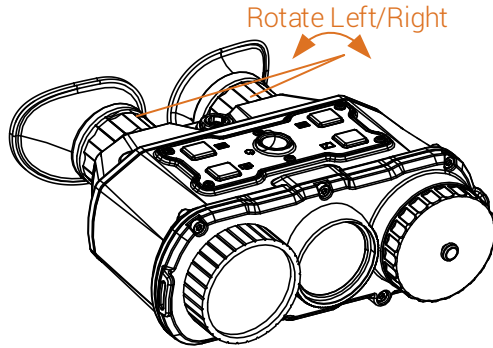
Do NOT touch the lens directly with your finger, or place any sharp objects near them.

Steps:

1. Slightly rotate the focus wheel to focus the objective lens.



2. Slightly rotate the focus wheel to focus the objective lens.



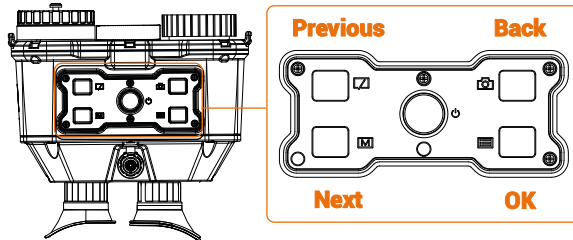
3 Binoculars Setup

3.1 Menu Description

Step:

Hold the  button to show the menu.

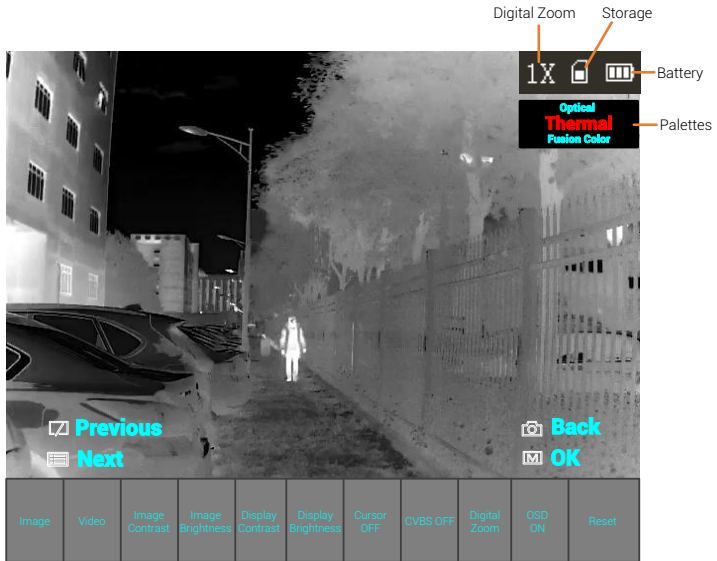
In the menu, the direction keys, OK key, and the Exit key are shown below.



See the figure below for the menu interface.

Note:

The figure below is only for reference, the font size is readjusted for better viewing.



3.2 Local Output





Before you start:

Connect the binocular to the display unit via CVBS interface of the aviation plug. Refer to Section 2.4.


Purpose:

View the binocular image on the display unit for details.

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor and open CVBS ON/OFF submenu.
3. Press the  key to confirm.

Note:

To disable the local output, go to CVBS ON/OFF submenu and press the  key.

3.3 File Export

Before you start:

Connect the binocular to your PC via USB interface of the aviation plug. Refer to Section 2.4.

Purpose:

Export the videos and snapshots with your PC.

Steps:





1. In your PC, go to the **Removable Disk**.
2. Double-click to open the disk. View or copy the videos or snapshots.
3. Disconnect the binocular with the PC.

3.4 Reset Default Settings

Purpose:

Restore the device to default settings.

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Reset** submenu.
3. Press the  key to confirm.

3.5 Display Settings

3.5.1 Display Brightness & Contrast




Adjust the brightness and contrast of the screen display.




Note:

This adjustment also affects the brightness and contrast of menu, icons, etc.

• **Screen Brightness**







Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Display Brightness** submenu.

3. Press the  key to confirm.
4. Press the  key and  key to set the brightness value. The higher, the brighter.

- **Screen Contrast**

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Display Contrast** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to set the contrast value. The higher, the more contrasting.

3.5.2 Image Brightness & Contrast







Adjust the brightness and contrast of the image.

Note:

This adjustment only affects the brightness and contrast of image.







- **Image Brightness**

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Image Brightness** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to set the brightness value. The higher, the brighter.

- **Image Contrast**

Steps:




1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Image Contrast** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to set the contrast value. The higher, the more contrasting.

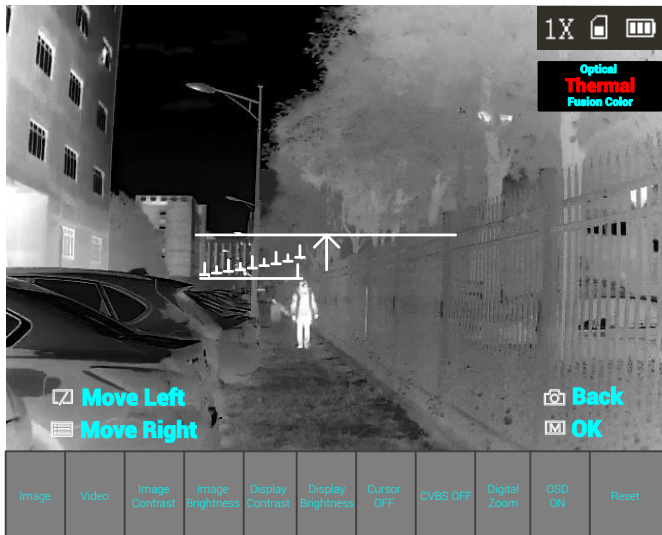
3.5.3 Cursor Display

Purpose:

Display the cursor on the live view, and the target can be indicated better.









Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Cursor** submenu.




3. Press the  key to confirm.



4. To move the cursor position, adjust the cursor moving offset first.
 - a) Hold the  key to go to offset setting interface.
 - b) Press the  key and  key to enlarge / shorten the offset value.
5. Adjust the cursor position.
 - a) Press the  key to move the cursor upward.
 - b) Press the  key to move the cursor downward.
 - c) Press the  key to move the cursor leftward.
 - d) Press the  key to move the cursor rightward.
6. Hold the  key to exit.

Note:







To disable the cursor, go to **Cursor** submenu and press the  key.

3.5.4 Digital Zoom

Purpose:

Enable the digital zoom function to enlarge the image display.

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Digital Zoom** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to set the digital zoom ratio. Up to four times zoom ratio are supported.

3.6 Palettes Settings



Purpose:

The binocular has dual-lens: thermal and visible light lens. You can set the thermal/optical view to show thermal channel, visible light channel, or both them combined. For thermal view, you can set the palettes.

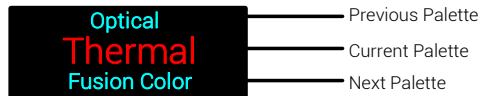
Step:

1. In the live view interface, hold the **[M]** key to display the palettes menu.
2. Press the **[M]** key to switch the view mode.

Thermal	In thermal mode, the device displays the thermal view. Press the [M] key to switch between white hot and black hot mode.
Visible	In visible mode, the device displays the view of visible light channel.
Fusion B/W	It displays the combined view of thermal channel and optical channel in black and white.
Fusion Color	It displays the combined view of thermal channel and optical channel in colors.
City	Applicable to city environment.
Jungle	Applicable to jungle environment.
Desert	Applicable to desert environment.
Sea	Applicable to sea environment.
Snow	Applicable to snow environment.

Result:

After setting the palette, the current palette, next palette, and the previous palette are shown in the upper right corner.




4 Capture and Video

4.1 Capture Settings

4.1.1 Capture Snapshots

Step:








In the live view mode, press the  key to capture a snapshot.

When capturing succeeded, it shows **Snapshot captured**.

When capturing failed, it shows **Capturing failed**.

4.1.2 View Snapshots

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Image** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to select snapshot.
5. Press the  key to view the selected snapshot.







4.1.3 Delete Snapshots



Attention:

Once a snapshot is deleted, it can NOT be recovered. Do this operation with attention.

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Image** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to select snapshot.

5. Hold the  key to delete the selected snapshot.



Or

You can delete the snapshot while viewing the live view.

4.2 Video Settings








4.2.1 Video Recording

Steps:

1. In the live view mode, hold the  key to record videos.
When the recording time shows on the top, it starts to record.
2. When the desired video is recorded, hold the  key to stop recording.

4.2.2 Video Playback

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Video** submenu.
3. Press the  key to confirm.
4. Press the  key and  key to select video.
5. Press the  key to play the selected video.




4.2.3 Delete Snapshots







Attention:

Once a snapshot is deleted, it can NOT be recovered. Do this operation with attention.

Steps:

1. Hold the  key to show the menu of binocular.
2. Press the  key and  key to move the cursor to **Video** submenu.

3. Press the  key to confirm.
4. Press the  key and  key to select video.
5. Hold the  key to delete the selected video.

5 Appendix

5.1 Dimensions

