



Owner's Manual

Beyond Series Thermal Binoculars

TB200 & TB300

DISCOVER THE UNSEEN.

XVISIONOPTICS.COM

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- IMPORTANT -

Thank you for choosing this product. Please read this guide before use and keep it for future reference. We hope you'll be satisfied with this product.

This guide is a general guide for a series of products, which means that the specific model you receive may differ from the picture in the guide. Please refer to the actual product you receive.

This user guide is organized for the convenience of users to use and understand our products. We will do our best to ensure the accuracy of the contents of this guide, however, we still cannot guarantee the completeness of the contents thereof. As our products are subject to continuous upgrading, we reserve the right to modify this guide from time to time without prior notice.

- Welcome -

Thank you for purchasing an X-Vision Optics Beyond Series Thermal Binoculars. X-Vision Optics' all-new Thermal Binoculars (The TB200 and TB300) redefine hunting. The Beyond series thermal binoculars provide both day and night use for hunting, scouting, and surveilling. The Beyond series thermal binoculars have been built to withstand any and all conditions.

The Beyond Series Thermal Binoculars are multifunctional devices that can be used for both day and night target observation, and in any terrain. The unit has optional hotspot tracking which uses a small crosshair to pinpoint and follow the hottest object in its field of view, making it easy to detect game at long ranges, in dense terrains, and while on the run. Along with this, the binoculars have a stadia metric rangefinder, giving clarity on exactly how far away the target is. The picture in picture (PIP) feature allows the user to see the multiple views, with a magnification of 2x in an adjustable subset of the screen.

Along with a multitude of included accessories, this thermal binoculars come with two interchangeable rechargeable 18650 batteries, giving the user the ability to quickly change out batteries and never miss a shot.

The Thermal Binoculars in our Beyond Series (TB200 and TB300) emit their own WiFi signal, which means multiple devices can be connected to the device at the same time, so no need to rely on cellular data. This allows for a long-range connection giving devices the ability to connect to the binoculars up to 15 yards away! The device comes with free applications for both iOS and Android devices, allowing for pictures and videos to be saved on the connected device or on the 16GB of internal memory. The thermal scope is dust and water-resistant to an International Protection Rating of IP66.

- FCC WARNING -

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful

interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- The rating information is located at the bottom of the unit.

- PRECAUTIONS -



DANGER

- 1) Please charge the battery with the method described in this Guide, following the charging procedure and precautions. Improper battery charging can cause heating, damage and even physical injury.
- 2) Do not open or disassemble the battery. If the battery leaks, do not touch the leaked fluid. If the leaked fluid gets in your eyes, rinse them immediately with clean water for at least 15 minutes and seek medical attention.



WARNING

- Try to keep equipment stable and avoid violent shaking when in use.
- Do not use or store the device in an environment that exceeds the allowable operating temperature or storage temperature.
- Do not directly aim the device at high-intensity thermal radiation sources, such as the sun, lasers, spot welding machines, etc..
- Do not plug the device ports.

- Do not disassemble the machine by yourself. This may cause equipment damage and loss of warranty rights.
- Do not use soluble or similar liquids on equipment and cables. This may cause damage to the equipment.
- Please do not use in environments that exceed the operating temperature of the device. This may cause damage to the equipment.
- Please observe the following measures when cleaning this device:
 - Non-optical surface: Use clean and soft cloth to wipe the non-optical surface of the thermographic camera;
 - Optical surface: When using the thermographic camera, please avoid polluting the optical surface of the lens. Avoid touching the lens with your hands, because the sweat on your hands will leave traces on the lens glass and may corrode the optical coating on the glass surface. When the surface of the optical lens is polluted, use a microfiber cloth to clean.

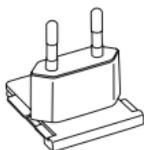
- Do not store the battery at a high temperature or near a high-temperature object.
- Do not short circuit the positive and negative poles of the battery.
- Do not expose the battery to moisture or water;
- Use only the original chargers and adapters that came with your device. Using other chargers or adapters can damage your device, or cause a fire.

**NOTES:**

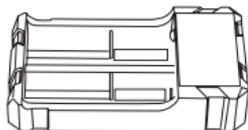
- 1) Do not expose the device to dust or moisture. Avoid water splashing on the equipment when being used in a wet environment. Cover the lens when not in use.
- 2) Please put the camera and all accessories in the case when not in use.

- PACKAGE CONTENTS -

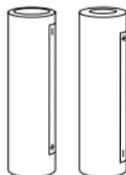
Standard accessories:



PLUG



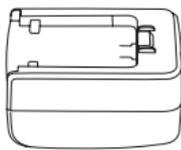
18650 CHARGER



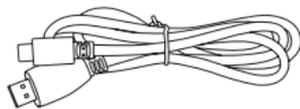
18650 BATTERY
X2 (INCLUDING
BATTERY BOX)



BAG (INCLUDING
SHOULDER STRAP)



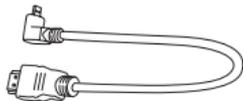
POWER ADAPTER



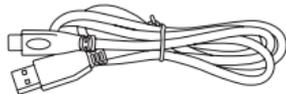
MICRO HDMI CABLE



SHOULDER STRAP



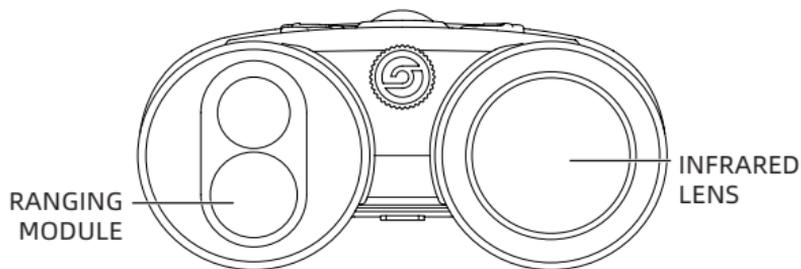
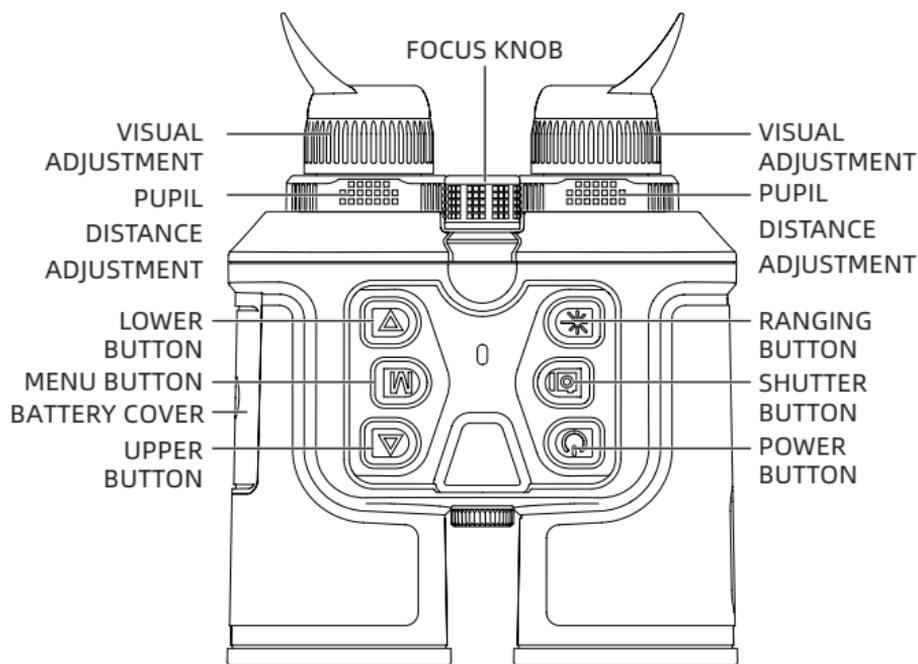
MICRO USB CABLE



TYPE-C CABLE

- ABOUT BEYOND SERIES -

This Guide is applicable to each models of this series, but only one model is shown in the figure.



1. FOCUS RING

After turning on the thermal imaging camera, aim it at the target. If the image is blurred, turn the lens focus ring until the image is clear. The distance between the camera and the target may affect the clarity, so it may be necessary to adjust the focus ring.

2. LENS COVER

Please cover the lens for protection when the device is not in use.

3. USB TYPE-C PORT

To connect the external power supply, plug the connector into the external port of the device. The output of the external power supply must be 5V2A.

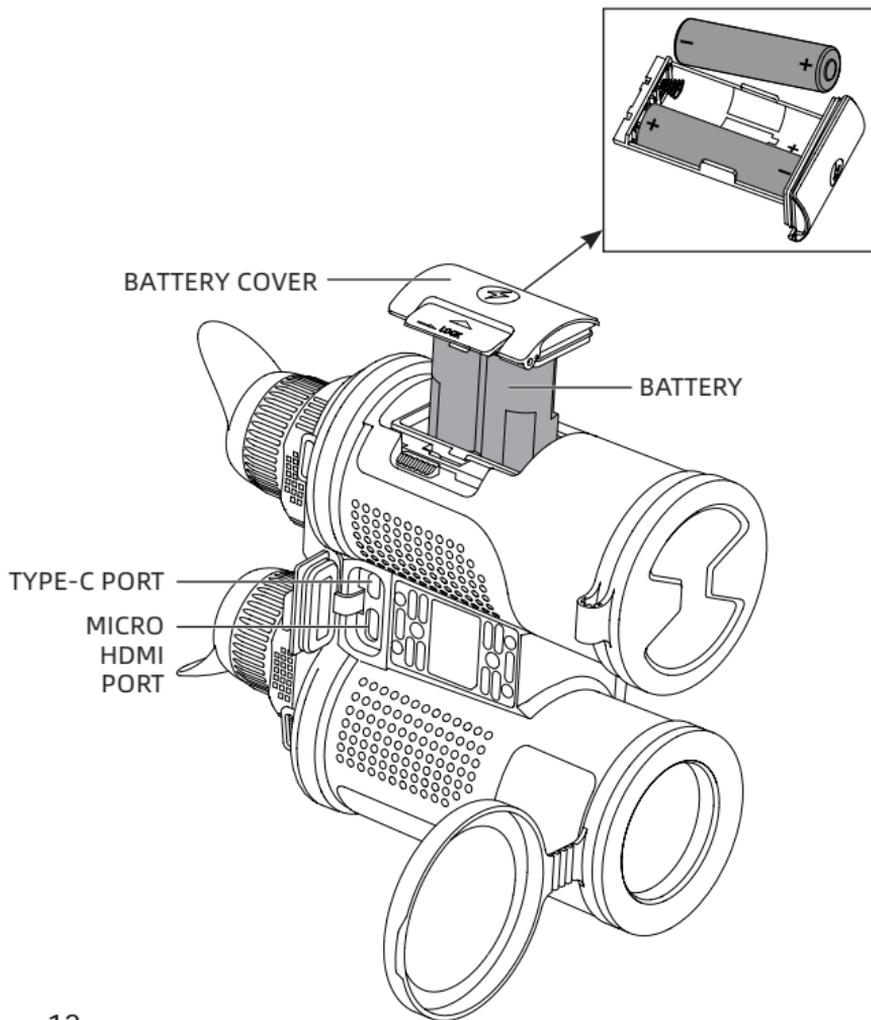
4. MICRO HDMI

To connect the device to an external display, use the video cable that came with the product. Connect one end of the video cable to the external port on the device and the other end to the external display. The image of the device will be shown on the external display.

5. BATTERY COVER

Open the cover as shown and insert the battery.

▲ NOTE: please insert the battery in the direction shown in the figure, and do not push forcibly.



- BUTTON DESCRIPTION -

Button	Current device status	Short Press	Long Press
Power button	Power on	Compensation	Display off/off
	Power off	/	Power on
	Display off	Display on	Display on
Shutter button	Menu bar not shown	Take photos	Video recording
	Menu bar display	/	/
Ranging button	Menu bar not shown	/	Turn on the distance function
	Menu bar display	/	Turn on the distance function
Menu button	Menu bar not shown	Open shortcut menu	Open Main Menu
	Menu bar display	Enter the lower menu, or confirm the options	Exit menu without saving settings
Upper button	Menu bar not shown	Switch scene mode	Zoom in
	Menu bar display	Menu options move up	/
Lower button	Menu bar not shown	Switch to color palettes	Zoom out
	Menu bar display	Menu option moves down	/

BUTTON DESCRIPTION

1. POWER BUTTON

POWER ON:

Long-press the power button until the startup picture appears in the display, indicating the device has been turned on successfully.

POWER OFF:

- a. Manual power-off: long-press the power button and the power-off progress bar will be displayed. Continue holding, and the device will shut down once the progress bar is complete.
- b. Automatic power-off: This feature will power-off the device after a set amount of time if the device is left idle. Automatic power-off can be disabled or enabled in settings.

DISPLAY OFF:

Long-press the power button, and the progress bar of power-off will be displayed. Before the progress bar is finished, release the power button and Display off mode will be entered.

DISPLAY ON:

In Display off mode, press any button to wake the screen.

COMPENSATION:

When the device is turned on and the menu is not open, short-press the power button to complete the corresponding compensation.

2. CAMERA OPERATION:

TAKE PHOTOS When the device is on and the menu is not open, short-press the shutter button to take a photo. The photo displays for 300ms before returning to real-time.

VIDEO RECORDING Long-press the shutter button to start recording, then long-press the recording again to finish recording. During the video recording, you can short-press to take photos.

3. RANGING BUTTON

Long-press the ranging button to enter single distance measuring mode. In distance measuring mode, short-press to re-measure a single distance. Long-press to enter continuous distance measuring mode. Long-press again to exit distance measuring.

4. UPPER BUTTON

SWITCH SCENE MODE

Short-press to switch between Natural, Highlight, Enhanced scene mode.

ZOOM IN

Long-press the upper button to enlarge the real-time picture.

5. LOWER BUTTON

SWITCHING COLOR PALETTES

Short-press the lower button to switch between white hot, black hot, adjustable red hot, green hot, blue hot, and iron red.

ZOOM OUT

Long-press the lower button, to zoom out from the real-time picture.

6. MENU BUTTON

SHORTCUT MENU

When the device is powered on and the menu is not open, short-press the Menu button to display the shortcut menu.

MAIN MENU

When the device is powered on and the menu is not open, long-press the menu button to display the main menu options.

CONFIRM AND BACK/EXIT

When in the menu open state, short-press the Menu button to confirm the current selection.

Long-press the menu button to return to or exit the menu without saving the current selection.

FUNCTION DESCRIPTION

1. SHORTCUT MENU

- Picture in Picture (PIP): There are top left, top middle, and top right positions to choose from, enabling a secondary 2x magnification view.
- Display Brightness: Brightness level can be adjusted from level 1-10.
- Hot track: a white cursor is displayed when turned on that traces the highest temperature point in the current display.
- Super energy-saving: When this mode is enabled, the ARM switches to low power mode. The OLED brightness control, WiFi, bluetooth, ranging, GPS, compass and accelerometer will be disabled in this mode. Display brightness is fixed at 20%.

2. MAIN MENU

- Image quality enhancement: image quality can be adjusted by enabling this setting.
- Scene Mode: Three scene modes, Natural/Enhanced/Highlight, can be selected from.
- Color palette: can be adjusted between white hot, black hot, adjustable red hot, green hot, blue hot, and iron red.

- Brightness: display brightness can be adjusted from level 1-10.

⚠ NOTE: The adjusted brightness value will be saved in the current scene mode.

- Contrast: Adjustable from level 1-10.

⚠ NOTE: The adjusted contrast value will be saved in the current scene mode.

- Compensation mode: Device compensation can be set to automatic, scene, or shutter mode.
- WiFi: Connect the device to a mobile phone client via WiFi to transmit recorded media and the real-time display to a mobile device. You can also control the device through the app, allowing the user to remotely operate from a distance.

- Download the “TargetIR” app.



(Available on iOS and Android).

- Connect the phone to the device WiFi network (Binocular-TI-xxxx) and enter the password “12345678”.
- Open the app to view and operate remotely.

- GPS: When GPS is turned on, the device location can be obtained and recorded.
- Compass: When enabled, current orientation information is displayed. Follow the on-screen instructions to calibrate.
- Accelerometer: When enabled, this detects the device's orientation and angle deviation. It gives a homing prompt if the device is not properly aligned.
- Auto Stand-by: the Auto Stand-by time can be set to 5, 10, or 15 min. If there is no operation within the set time, sleep state will be entered.
- Automatic power-off: The automatic power-off time can be set to 15, 30, or 60 minutes. If there is no button operation within the set time, the device will power-off.
- Working indicator light: The switch that controls the working indicator light.
- Time format: selectable between 12H/24H.
- Date format: Optional from YYYY-MM-DD, or MM-DD-YYYY, or DD-MM-YYYY.
- Time setting: in the time adjustment setting, you can set the device time and date.

- Watermark Settings: can be set to Time Only, Date Only, Date and Time, or Off.
- Language setting: Available in English, Chinese, Russian, German, and French
- Memory card formatting: Users can format the memory card in settings.
- Restore default: Users can restore the default settings for their device. Select 'Yes' to restore all parameters to factory settings, or 'No' to cancel the operation.
- Remote control: When enabled, it will search for a Bluetooth remote control. Once the connection is successful, users can use the remote to control all functions of the device (except the power-off function).

 **NOTE: The device may be used along with optional accessories.**

- Laser indication: the display of red, yellow, or green laser indication icon can be toggled.
- Indication calibration: The coordinates of the three laser Indicator icons can be set separately.
- About: Check the device's ARM, MCU, FPGA firmware versions, and MAC address in the settings.

- When the device is on, the battery level indicator will appear in the lower left corner of the display. This indicates the remaining battery power.

 **NOTE: When the power is low, please replace the battery in time!**

- TROUBLESHOOTING -

1. **Device fails to start.**

Solution: Replace the battery or connect the adapter for charging.

2. **The device cannot take photos/record.**

Solution: the internal storage space of the device is likely full. Format the memory card.

 **NOTE: This operation can lead to lost media data.**

3. **The device display time does not match the actual time display.**

Solution: Reset the time and date of the device in the settings.

4. **Screen goes out during use.**

Solution: Short-press any button to wake the device up from hibernation and light up the screen.

5. **The image of the device is blurred during use.**

Solution: Adjust the device to focus manually until the display is clear.

- STORAGE AND TRANSPORT -

To prevent damage, danger, property loss, etc., please read the manual carefully before using the device. Follow the instructions in this manual closely, and keep for future reference

Storage:

1. The packaged product must be stored in a well-ventilated, clean, condensate-free and corrosive gas-free room with temperature of -22F ~ 140F and relative humidity not exceeding 95%.
2. Please charge the device once every 3 months to prevent deterioration.

Transport:

During transport, the device should be protected against water, falling, and any severe vibration or impact. Handle with care

	TB300	TB200
Magnification	3.2 to 12.8x	2 to 16x
Thermal Sensor	640 x 480	400 x 300
Pixel Size	12 μ m	
Frame Rate	50 Hz	
Objective Lens	35mm	50mm
Field of View	70ft @ 100yd	60ft @ 100yd
Detection Range	1,500yd	
Recognition Range	500yd	
Laser Range Finding Distance	1,100yd	
Hotspot Tracking	YES	
Picture in Picture	YES	
NETD	\leq 30 mk	
Temperature Variation Detection	0.05° F	
Display Resolution	1024 x 728 OLED	
Color Palettes	6	
Power Supply	Two rechargeable 18650 Batteries	
Battery Life	5.5 Hours	
IP Rating	IP66	
Dimensions	6.4" x 5.7" x 2.8"	
Weight	1.94 Pounds	1.89 Pounds
Internal Memory	16GB	
Mount	Tripod Mount	
Wi-Fi Capability	YES	
Photo and Video	YES	
Applications	YES	
Accessories	Dual Battery Charger, USB-C Cable, Protective Case, Rubber Eye Pieces, Lens Caps, Two 18650 Batteries	



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