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Q InfiRay Outdoor



User Manual

V1.0

TUBE

Thermal Imaging
Riflescope

TL35 V2 / TL50

Important safety information

Environmental influences

- Never point the lens of the device directly at intense heat sources such as the sun or laser equipment. The objective lens and eyepiece may become so hot that the internal components of the device may be damaged.
- Do not touch the metal surface (cooling fins) after exposure to sunlight or cold.

Ergonomic notes

Take breaks after extended periods of use to avoid wrist pain.

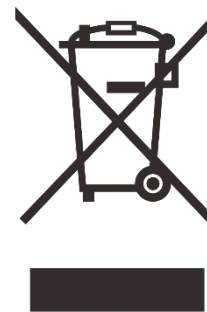
Risk of ingestion

Do not place this device in the hands of small children. Improper handling may cause small parts to come loose and be swallowed.

Safety instructions for use

- Handle the device with care: rough handling can damage the internal battery.
- Do not expose the device to fire or high temperatures.
- Install the batteries correctly according to the instructions on the device. Other connection methods are prohibited.
- If the device has been damaged, send the device to our after-sales service for repair.

Information for users on the disposal of electrical and electronic equipment (households)



2012/19/EU (WEEE Directive): products labelled with this symbol cannot be disposed of as unsorted municipal waste in the European Union.

For proper recycling, return this product to your local supplier when purchasing an equivalent new device or dispose of it at designated collection points. Read more

For information see: www.recyclethis.info.

For business customers within the European Union

Contact your dealer or supplier for disposal of electrical and electronic equipment. They will provide you with further information.

Information on disposal in other countries outside the European Union

This symbol is only applicable in the European Union. If you wish to dispose of this product, contact your local authority or dealer to request disposal.

Purpose of use

The device is designed for imaging heat signatures in nature observation, remote hunting observation and civilian use. This device is not a toy for children.

Use the device only as described in this User Guide. The manufacturer and the dealer are not liable for any damages resulting from inadvertent or improper use.

Function check

- Make sure your device is not visibly damaged before use.
- Test that the device displays a clear, unobstructed image.
- Check that the thermal imaging settings are correct. See the notes in the section **Turning on and adjusting the image settings**.

Installing/removing the battery

The TL35 V2 / TL50 is equipped with two power supply systems

- one built-in battery and one replaceable 18500 battery. The built-in battery cannot be removed.

1 Specifications

Model	TL35 V2	TL50
Detector specifications		
Type	Uncooled Vox	
Resolution, pixels	384 × 288	
Pixel size, μm	12	
NETD, mk	≤ 40	
Frequency, Hz	50	
Optics specifications		
Lens, mm	35	50
Field of view(H×E, °)	7.5 × 5.6	5.2 × 4.0
Linear field of view (H×V), m at 100 m	13.1 × 9.9	9.2 × 6.9
Optical magnification, ×	3.0 ~ 12.0	4.0 ~ 16.0
Digital Zoom, ×	1 ~ 4	
Eye relief, mm	70	
Output pupil diameter,mm	6	
Diopters, D	-4 ~ +4	
Detection range, m (Target size: 1.7 m×0.5 m, P(n)=99%)	1800	2600
Display Specifications		
Type	OLED	
Resolution	1024 × 768	

Batteries		
Batteries	Built-in battery / 6600 mAh + removable 18500 battery / 3.7 V	
Max. operating time (22°C), h*	15	
External power supply	5 V (Type C)	
Functions		
Wi-Fi / APP	Supported (InfiRay outdoor)	
Photography / Video	Supported by	
MIC	Supported by	
Bluetooth	Supported by	
Operating Characteristics		
Memory capacity,GB	32	
Class IP	IP67	
Operating temperature, °C	-20 ~ +50	
Max. recoil force of the projectile Weapons (Eo), Joules	6 000	
Compatible holders	Standard 30 mm rings	
Weight (without 18500 battery), g	< 950	< 985
Dimensions, mm	385 × 85 × 75	390 × 85 × 75

- Actual service time depends on the frequency of use of features such as

is Wi-Fi, video recording, etc.

- The design and software of this product may be improved without notice to enhance its features.
- This user guide can be downloaded from our official website: www.infirayoutdoor.com.

2 Contents of the package

- Thermal imaging TL35 V2 / TL50
- Lampshades
- Picatinny rail
- Carrying bag
- Type C cable
- Power adapter
- Lens cloth
- Heated target for zeroing
- Introductory Guide

3 Description of the device

The TL35 V2 / TL50 is an infrared rifle scope for outdoor hunting. It is designed based on the principles of infrared thermal imaging and requires no external light sources during the day or night, it works in all challenging weather conditions (such as rain, snow, fog and haze). It can be used without being affected by strong light, while also observing targets behind obstacles (such as branches, grass and bushes).

The TL35 V2 / TL50 thermal imaging camera has multiple battery power options, so it has a long operating time and can be widely used for hunting, observation or positioning in low visibility conditions.

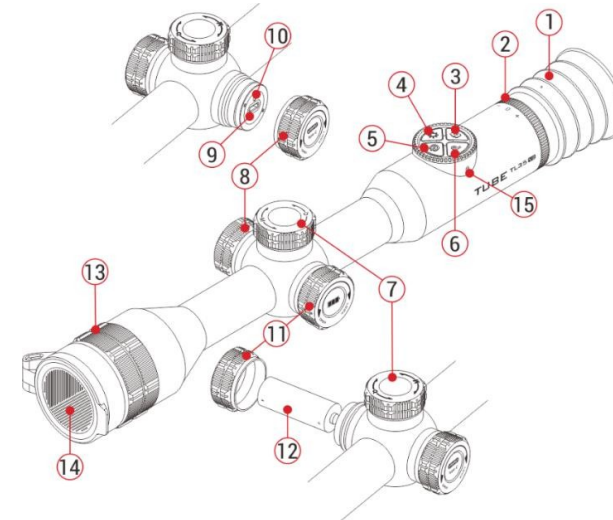
The TL35 V2/TL50 thermowell has a standard tube diameter of 30mm to meet the requirements of the general clamp interface.

4 Functions




1. 12μm sensor
2. High image quality
3. Infinite zoom
4. Dual power system with long battery life
5. Standard pipe diameter 30 mm
6. Detachable laser rangefinder
7. Long detection range
8. Frame rate 50 Hz
9. Built-in memory space, support for still photography, video recording and simultaneous audio and video recording
10. Built-in Wi-Fi module, supporting app connectivity
11. Built-in compass and motion sensor
12. PIP (Picture in Picture) function
13. Defective pixel correction
14. Convenient operating interface





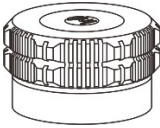
5 Components and controls

- | | |
|---------------------|-----------------------------|
| 1. Shades | . Diopter eyepiece ring |
| 3. Camera button | . Display brightness button |
| 5. Power button | . Picture mode button |
| 7. Driver | . USB cover |
| 9. Port type C | . LED indicator |
| 11. Battery cover | . Battery 18500 |
| 13. Lens focus ring | . Lens cap |
| 15. Microphone | |



6 Button control

Button	Default state	Press briefly	Long press	Turn
	Off	–	Switching on the device	–
	Home screen	Image calibration	Shutdown / Standby condition of the equipment	–
	Standby mode	Waking up the device	–	–
	Simple distance measurement.	Realization of a single measurement of education.	–	–
	Main menu interface	Return to previous bids without saving	–	–
	Defective pixel calibration	Add/Remove Defective pixels	–	–
	Home screen	Switching the picture mode	Turning PIP on/off	–
	Home screen	Setting the display brightness	<p>Default: Enable/disable the stadiametric rangefinder function.</p> <p>When connected to the laser rangefinder module: turn on/off the laser indicator on the module rangefinder.</p>	–



	Home screen		Taking a photo	Start / Stop recording videos	--
	Home screen		--	Switching the laser rangefinder function on/off, when connected to the laser module rangefinder	--
	Laser rangefinder		Switch distance measurement mode between single and by continuous measurement	--	--
	Reset screen		--	Image freezing	--
	Home screen		--	Turning the sight on/off and its functions	--
	Reset screen		Return of the sight to the centre		--
	Reset screen	Enter the local menu interface	Enter the interface main menu	Adjusting the image magnification	
	Local interface offers	Edit function parameters	Save and return to the home screen	Switch menu options	
	Main Interface offers	Confirm selection / Enter sub-offerings		Move the position of the sight: Clockwise - left / down Counterclockwise - right / up	
	Defective pixel calibration/zeroing interface	Switch the direction of movement			

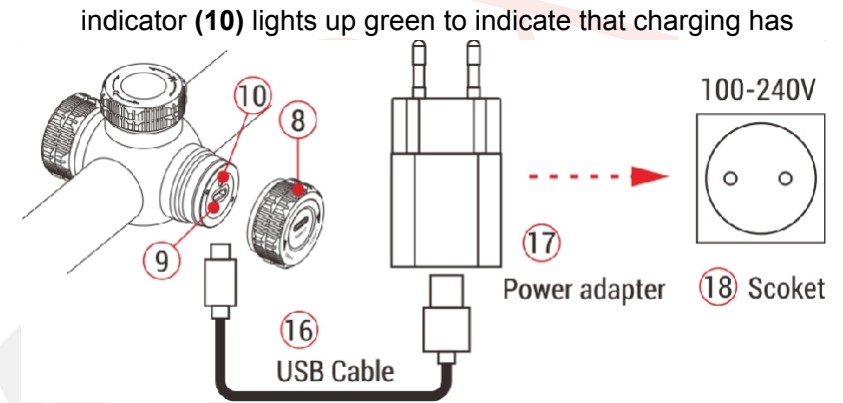
7 Power

The TL35 V2 / TL50 thermal imaging camera uses a dual power supply system: a built-in rechargeable lithium-ion battery and a replaceable 18500 battery, the operating time of the combination of these batteries normally reaches up to 15 hours. The battery should be fully charged before first use.

Charging the built-in battery

If the battery icon turns red during use, the battery is not sufficiently charged. Charge the battery in time to avoid shortening its life.

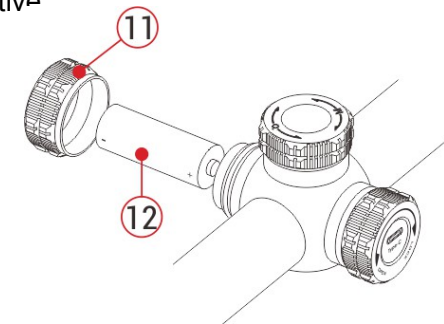
- Turn counterclockwise to open the USB port (8).
- Plug the (9) into the USB Type-C thermowell.
- Plug the other end of the USB cable (16) into the power adapter (17) and plug the adapter into a 100-240 V socket (18) for charging.
- When charging, a flash icon appears on the battery icon  a . The LED indicator (10) on the thermal imaging camera lights up red. When



Note: The USB port can only be used to charge the built-in battery.

Installation of replaceable battery 18500

- Turn counterclockwise to open the battery slot cover (11).
- Install the 18500 (12) battery according to the indicator plate in the battery holder, i.e. positive electrode inwards and the negative electrode



outwards.

- Close the battery slot cover **(11)** and turn it clockwise to tighten it.

Security measures

- When charging, use a 5V2A power adapter compatible with the device. Using any other type of adapter may cause irreversible damage to the battery or the adapter itself.
- If the device is not used for a long period of time, the battery should be partially charged, but not fully charged or discharged.
- Do not charge the device immediately after moving it from a cold environment to a warm environment. Allow 30 to 40 minutes for the battery to warm up.
- Do not use the charger if it is modified or damaged.
- The device should be charged at a temperature of 0 °C to + 40 °C. Otherwise, battery life may be significantly reduced.
- Do not leave the battery unattended while charging.
- Do not connect the battery to the power supply for more than 24 hours afterwards,

which is already fully charged.

- It is not recommended to connect third-party devices that consume more power than the allowed value.
- The device is equipped with a short-circuit protection system, but conditions that can lead to a short-circuit must be avoided.
- Use the device at the recommended operating temperature of - 20 °C to + 50 °C. Do not use the device outside this temperature range, otherwise use may shorten battery life.
- When using the device at temperatures below freezing, the battery capacity will decrease. This is normal and does not indicate a defect.

Switching between two battery types

The TL35 V2 / TL50 thermal imaging camera supports dual power system: built-in lithium-ion battery and replaceable 18500 battery and also supports USB power supply.

- If both batteries are installed in the TL35 V2 / TL50 thermal imager, two battery icons will appear to the right of the status bar above the image, with the replaceable battery in front of the built-in battery. Green indicates that the device is powered,

and grey means that the device is not active.



- If the removable battery is not installed, only the green built-in battery icon appears in the status bar.
- If a replaceable battery is installed and fully charged, it will be preferred. When the removable battery is almost discharged, the device will automatically switch to the built-in battery.
- When the device is connected to USB, it automatically switches to the external USB power supply. At this time, a flash-like charging icon appears on the built-in battery icon to indicate that the built-in battery is charging.
- The removable battery can also be replaced when the device is in use. At this point, it will automatically switch to the internal battery, after replacement it will automatically switch back to the removable battery.

8 External power supply

The TL35 V2 / TL50 thermal imager supports external power supplies such as

e.g. portable power supply for mobile phone (5V).

- Connect an external power supply to the USB port (9) on the thermal imager.
- The device then automatically switches to an external power source and charges the internal battery at the same time.
- When the external power supply is turned off, the device switches to the 18500 replaceable battery. If the 18500 replaceable battery is not installed or the battery charge level is low, it will switch to the built-in battery module instead of shutting down.

9

Installation and use

Mounting on the weapon

accuracy.

- The TL35 V2 / TL50 thermowell must be mounted using the adapter clamp, i.e. the simple Picatinny clamp supplied in the package. The TL35 V2 / TL50 thermal imaging camera uses a 30mm diameter tubular body which is compatible with standard 30mm diameter clamps. To install the thermowell on the weapon, the following can be used

only the appropriate tools, according to the supplier's suggestions and installation steps.

- During installation, the mounting position of the device should be adjusted according to the distance between the eye and the eyepiece (eye relief) as specified in the specifications. If this suggestion is not followed, the eyepiece may injure the shooter during shooting.
- It is recommended to mount the rifle scope as low as possible, but keep it away from the barrel of the gun or other devices.
- It is recommended to use a torque wrench to tighten the mounting clamp screws to avoid damage to the thermowell body due to over tightening, the recommended torque should not exceed 2.5 Nm.
- If thermal imaging is used for hunting, first perform a zeroing operation by referring to the **Zeroing Section** in this manual.
- When using the thermal imaging camera at night or in dark environments, it is recommended to use a shade **(1)** to avoid detection.

Switching on and setting the picture

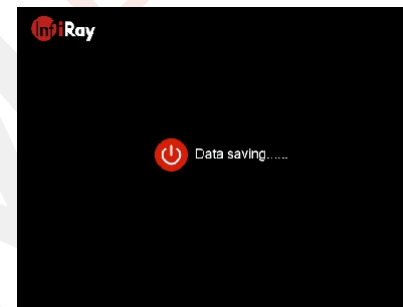
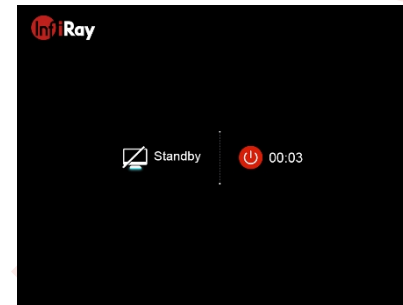
- Remove the lens cap **(14)**.
-
-
-
-
- Rotate the **lens** focus ring **(13)** to focus on the subject.
- **Image mode settings:** From the home screen, press the **Picture Mode** button **(6)** to set the picture mode, whose options include: warm white, warm black, warm red, pseudo-color, and target highlight.
- **Adjusting the brightness of the display:** From the home screen, press the **Display Brightness** button **(4)** to adjust the display brightness from level 1 to 5.
- **Set the laser rangefinder:** with the laser rangefinder module connected, press and hold the **Mode** button. **Image (6) + Display Brightness (4)** for 3 s - simultaneously to activate the laser rangefinder function (see section

just

) (2).

Laser rangefinder).

- From the home screen, short or long press the **Controls** button **(7)** to access the local menu or the main menu for more functional operations.
- From the home screen, press the **Power button (5)** to calibrate the image, while performing background calibration, first cover the lens cap **(14)** and complete background calibration after 2 s. Set the image calibration mode in the main menu.
- After use, press the **power button (5)** for 3 s to enter the shutdown interface. When the countdown icon changes from 3 to 0 s, the device will turn off, you can now release the button. Then the information about **Data saving...** ("Data saving...") will be displayed. When the data has been saved, the display turns black and the device switches off. **When the device shuts down and saves data, do not disconnect it from the power source. Otherwise, data cannot be saved.**







- Releasing the button during the countdown puts the device into standby mode. Press the **power button (5)** again to wake up the device.

10 Status bar




The status bar is located at the top of the visual interface and displays information regarding the current operating status of the device.



- Current picture mode (☀️ : warm white; 🌙 : warm black; 🔥 : warm red; 🐦 : target highlight; 🌈 : pseudocolor)
- Current selected rifle and zeroing distance (Rifles to be selected: A, B, C; zeroing distance: 1 ~ 999 m, customized; for example, A - 100 m)
- Ultra-bright mode status: (👁️ : Ultra-bright mode is off; 👁️ : Ultra-bright mode is on)
- Actual visual magnification (TL35 V2: 3.0× to 12.0× adjustable, TL50: 4.0× to 16.0× adjustable)
- Image calibration mode (: A is auto calibration mode; M is manual calibration mode; B is background calibration mode. Lens  must be covered during background calibration)
- Compass (not displayed when off)

- Standby status and time (off by default)
- Bluetooth status (🚫 : Bluetooth is off. 🔗 : Bluetooth is enabled but not successfully connected to the laser module. 🔗🔋 : Bluetooth is turned on and successfully connected to the laser range finder module; 🔋 : Laser range finder power status)
- Wi-Fi status (🚫 : Wi-Fi off; 📶 : Wi-Fi on)
- Clock (set it in the main menu or sync the time in the InfiRay Outdoor app)
- Replaceable battery power status (18500 battery)
- Built-in battery power status.
- **Note:** If the color in the battery icon is green  , it means that the battery percentage is higher than 20% and the power is sufficient. When the color in the icon is red  , it means that the power supply is insufficient and you need to recharge the battery immediately. When the flash icon  appears in the icon, it means that the device is powered by an external power supply and that the built-in battery is charging.

11 Resetting


The TL35 V2 / TL50 thermovision uses the "freeze" method. It is better to perform zeroing in environments within the operating temperature range of the thermal imager.

- Mount the thermal imaging camera on the weapon according to the instructions in section **9 - Mounting on the weapon.**
- When using the thermal imager for the first time, press and hold the **Camera** button (3) + **Display Brightness** button (4) for more than 15 seconds to activate the hidden viewfinder and related functions.
- Select a target at a certain distance, for example 100 m, 200 m.
- Adjust the distance according to **Se on and adjusting the image.**
- Select the zeroing profile (see "**Main menu - Rifle selection**").
- the menu interface.
- **Turn the rotary pushbutton (7) to select "Reset Zeroing Distance**  (Reset reset distance). Short Press the **rotary pushbutton (7)** to enter the submenu.

- Select or add a new reset distance according to the preset target distance.
- After selecting the zeroing distance, press the **rotary pushbutton (7)** to select the "Zeroing" function and press the **rotary pushbutton (7)** to enter the zeroing interface. The coordinate positions of the intentional cross (X-axis and Y-axis) are displayed in the upper left corner of the screen.
- Aim and shoot at the target
- actual point of the hit. 
- Suppose that the red **x** mark on the picture on the right is the position of the hit point (**This mark is for illustration only. In reality it should be a bullet hole**).
- If the hit point does not match the aiming point (center of the viewfinder), hold the aiming position still, then simultaneously press and hold the **image mode** button (6) + **camera** button (3) until the icon appears on the left side of the screen. 



- freezing similar to snow and the image will not be frozen.
- **Turn the rotary pushbutton (7)** to move the sight until the sight coincides with the point of impact. Turn clockwise to move the sight left or down and turn counterclockwise to move the sight right or up.
- Press the **rotary pushbutton (7)** briefly to switch the direction of movement between X

and Y.cursor position represents  the currently selected option, the icon then turns blue.

- When you move the sight, a small white dot that indicates the position of the intentional cross before movement.
- Press and hold the **rotary pushbutton (7)** while moving the sight to complete the reset and save the current position of the sight. After a countdown of 5 seconds, you will return to the home screen.



- Repeat aiming and firing until the position of the hit point matches the position of the aim point.

Note: After setting the zeroing distance, you can toggle this option using the **Zero Distance** option in the local menu.

12 Calibration

When the image is degraded or uneven, it can be improved by calibration. Calibration can equalize the background temperature of the detector and eliminate image defects (such as vertical bars, phantom images, etc.). There are three calibration modes: automatic calibration (A), manual calibration (M) and background calibration (B).

1. Select the desired calibration mode from the main menu.

1. Automatic calibration (A). There is no need to close the lens cap (the internal shutter covers the sensor). Before automatic calibration, a 5-second countdown prompt appears behind the shutter icon on the status bar, which can be cancelled during the countdown by briefly pressing the **power button (5)**. In this mode, the user can complete

calibration also manually by briefly pressing the **power button (5)**.

- 1. Manual Calibration (M):** Press the **power button (5)** briefly on the home screen to manually calibrate the shutter without closing the lens cover (the internal shutter covers the sensor).
- 1. Background calibration (B):** Press the **power button (5)** on the home screen and the display will show "Cover lens during calibration" (Cover lens during calibration). Cover the lens cap and the background calibration will be performed after 2 s. After calibration, remove the lens cap.

13 Digital Zoom

The InfiRay camera supports digital zoom. The base image magnification of 1* to 4*.

- On the home screen, turn the **rotary pushbutton (7)** to zoom smoothly.
- Turn clockwise to zoom in,



counterclockwise to zoom out.


- The zoom level updates with the new zoom.
- The TL35 V2 supports magnification from 3.0 to 12.0*, the TL50 supports magnification from 4.0 to 16.0*.

14 Photography / Video recording


The device has 2 GB of built-in memory space that can be used for storing photos and videos. Photos and videos will be named by time, so it is recommended to reset the system date and time in the main menu (see **Main Menu - Settings - Date/Time**) or synchronize the system date and time in the InfiRay Outdoor app before use.

Photography

- From the home screen, take a photo by pressing the **Camera button (3)**. The image freezes for 0.5 s and the left

The camera icon  appears in the top corner of the screen.

- The photos are stored in the internal memory space.

- When the exclamation mark icon appears on the right side of the camera icon, you will be informed that there is a lack of memory locations .



Review and transfer your videos and images to other media to free up space.

Video recording

- button (3)** to launch video recording.



- A recording icon and a recording time information window with the format 00:00:00 (hour: minute: second) will appear in the upper right corner of the display.
- You can also take photos during recording by pressing **Camera buttons (3)**.
- Press and hold the **camera button again (3)** stop recording and save the video.

Note

- You can also open and control the menu while recording Videos.
- The captured images and recorded videos are stored in the built-in memory space in the IMG_HHMMSS_XXX.jpg (image) and VID_HHMMSS_XXX.mp4 (video) format, where HHMMSS indicates the hour/minute/second and XXX indicates the three-digit serial number (for videos and photos).
- Serial number used for multimedia file names

cannot be reset.

- If a file is removed from the list, its number is not taken over by the other file.
- The maximum file duration for video recording is 5 minutes. If the duration is longer than 5 minutes, the video is automatically recorded to a new file.
- The number of files is limited by the internal memory space of the device. Check the remaining space regularly and transfer videos and images to other media to free up space on the memory card.
- Only the intentional cross is displayed on recorded videos and photos, and graphical data (status bar, icons and menus) are not displayed.
- We are currently working on something that can display GUI information on recorded videos and photos, which can be implemented in the future by updating the program.

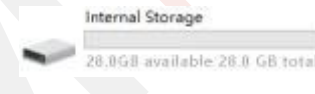
Access to device memory

When the device is turned on and connected to the computer, the computer recognizes it

as a flash memory card. You can then access the device's memory and copy images and videos.

- Connect the device to your computer using a USB cable;
- Switch on the device
-

device named InfiRay - double-click to open the name device Internal storage for memory access



- There are different folders in the memory named according to time in the format xxxx (year), xx (month), xx (day).
- The photos and videos recorded on a given day are saved in folders
- Select the files or folders you want to copy or delete.



15 PIP function

PIP (picture-in-picture) provides a floating window independent of the entire screen. This window displays a portion of the image that is enlarged to 2x in

a certain area centered on the intentional cross of the main image.

- Press and hold the **Picture Mode button (6)** on the home screen to turn on the PIP function.
- A separate "window" appears at the top of the display at the same time as the main image.
- When you turn **the rotary pushbutton (7)** to enlarge the main image, the image displayed in the PIP window will also be enlarged by a factor of 2.
- Press and hold **the picture mode button (6)** to turn off the PIP function.



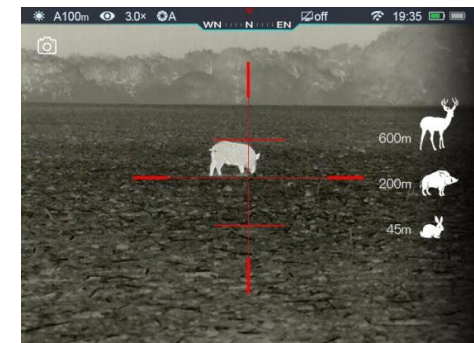
16 Rangefinder functions

stadiametric rangefinder function, also supports external laser rangefinder module. The stadiameter function will be temporarily disabled when connected to the laser rangefinder module via Bluetooth.

Stadiametric rangefinder

of known size.

- On the home screen, press and hold the **display brightness button (4)** to activate the stadiametric rangefinder function.
- Two horizontal measurement lines appear above and below the sight, three icons of preconfigured objects appear on the right side, and measured distance values.
- Three predefined target values are set as follows:
 - **Deer:** height 1,7 m





- **Wild boar:** height 0,9 m
- **Hare:** height 0,2 m
- Place the target in the middle of the measuring lines.
- **Turn the dial (7) clockwise** to enlarge or counterclockwise to reduce the target so that the target is completely between the measuring lines.
- When adjusting the width of the measuring lines, the rangefinder values are automatically recalculated.
- The colour and centre position of the measuring line are synchronised with the colour and the position of the sight.
- To change the unit of measure (meters or yards), please go to **Main Menu - Settings - Units of Measure** to modify the unit of measure.
- Press and hold the **display brightness button (4)** to exit this function.

Laser rangefinder (ILR-1200-1, supplied separately)

The TL35 V2 / TL50 thermal imaging camera supports an external laser rangefinder (ILR-1200-1, supplied separately).

For a detailed description of the installation and use of the laser rangefinder, please refer to the laser rangefinder manual included in the laser rangefinder package.

Compared to a stadiametric rangefinder, a laser rangefinder is more accurate without having to look for specific target objects.

- Press and hold the power button to turn on the laser rangefinder. The LED on the laser rangefinder module will flash.
- On the thermal imaging device, long press the **rotary pushbutton (7)** to enter the main menu.
- Select **Bluetooth** and make sure Bluetooth is turned on.
- It is necessary to select a laser rangefinder in the menu.
- After a successful connection, the battery icon appears to the right of the Bluetooth   icon in the status bar, indicating that the thermal imaging camera is successfully connected to the laser rangefinder.

- From the home screen, press and hold the **image mode button (6) + the display brightness button (4)** simultaneously to turn on the laser rangefinder function.
- After successfully connecting the laser rangefinder, press and hold the **display brightness button (4)** for 3 seconds to turn the laser indicator on the laser rangefinder on/off.

- Two measurement modes are available for selection: continuous (CON) and (SGL).



- The default distance measurement mode is just continuous mode.

Short

Press the **image mode button (6) + display brightness button (4)** simultaneously to switch the measurement mode.

- In the continuous distance measurement mode, the measurement takes place in real time, automatically

without any selected operation.

- For simple measurement mode, press the **button** briefly

power supply (5) to perform the distance measurement operation.

- The measurement mode and distance value are then displayed in the top right corner of the screen.
- If the distance value shows MAX, it means that the target distance has exceeded the maximum range of the laser rangefinder (999 m).
- Switch the unit of measure in the **main menu - Settings - Units of measure**.
- During continuous distance measurement, other functions such as taking photos and recording videos are not affected.
- Simultaneously press and hold the **picture mode** button **(6) + display brightness button (4)** to switch off the laser rangefinder function.
- When the laser rangefinder is installed to the thermal imager and successfully connected via Bluetooth, it replaces the stadiametric rangefinder.






17 Local offer

Basic settings, including sight style, sight colour, image sharpness and zero distance, can be quickly reset in the local menu.

- From the home screen, press the **rotary pushbutton (7)** go to the local menu interface.



- Turn the **rotary pushbutton (7)** to switch between the following function options, the selected option will be highlighted in the background.

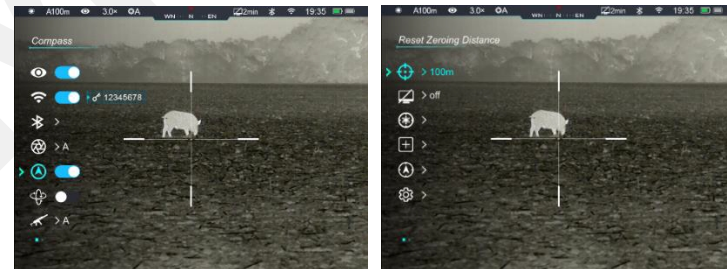
- Sight style** : Turn the **dial (7)** to select the sight style and press the **dial (7)** to switch between 6 different styles.
- Sight color** : Turn the **rotary pushbutton (7)** to select an option, then press the **rotary pushbutton (7)** to select a color (in order: white, black, red, green).
- Image sharpness** : Turn the **rotary pushbutton (7)** to select the desired option and press the **rotary pushbutton (7)** to adjust the image sharpness from level 1 to 5. 
- Zeroing Distance**  Turn the **dial (7)** to select an option, then press **the dial (7)** to toggle the zeroing distance stored for the currently selected rifle (e.g. if you select a Type A rifle, only the distance values stored for Type A will be available).
- Press and hold the **controller button (7)** or press the **power button (5)** to save your changes and return to the home screen.
- If no operation occurs within 5 seconds, the device automatically saves the changes and returns to the home screen.

18 Main menu



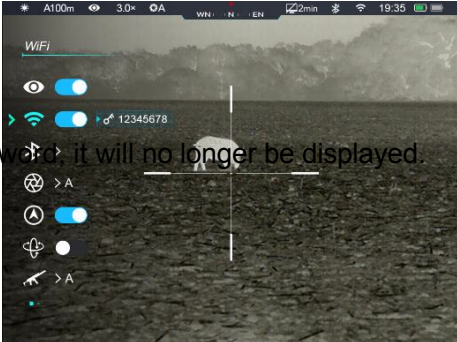
- From the home screen, press and hold the **rotary pushbutton (7)** to enter the main menu interface.
- **Turn the rotary pushbutton (7)** to toggle the function options - clockwise for downward movement, counterclockwise for upward movement.
- Press the **rotary pushbutton (7)** to adjust the parameters of the current option or enter the submenu.
- The cursor position indicates the selected option, whose icon changes from white to blue➤.
- The operations for secondary and tertiary bids are the same as above.
- From any menu interface, press and hold the **rotary pushbutton (7)** to save your changes and return to the home screen. Press the **power button (5)** to return to the main menu without saving the change.
- If no operation is performed on any menu interface within 15 seconds, you are automatically returned to the home screen without

Storage.

- When leaving the main menu, the cursor location is saved to position before termination for one work session only ➤ (i.e. the cursor returns to the position before the menu for the first time, the cursor remains on the first menu option (Ultra-bright mode)).

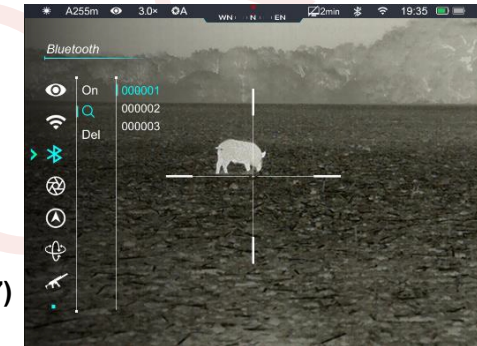


Main menu description and functions

<p>Ultra-bright mode</p> 	<p>Turning Ultra-bright mode on/off</p> <ul style="list-style-type: none">• Press and hold the rotary pushbutton (7) to enter the main menu interface.• Select the Ultra-bright mode option (selected by default in the menu after startup).• Press the rotary pushbutton (7) to turn Ultra-bright mode on/off, during which you will hear the shutter calibration click.• When the function is switched on/off, the icon in the status bar will change accordingly.
<p>Wi-Fi</p> 	<p>To turn Wi-Fi on/off</p> <ul style="list-style-type: none">• Press and hold the rotary pushbutton (7) to enter the main menu interface.• Turn the rotary pushbutton (7) to select the Wi-Fi function.• Press the rotary pushbutton (7) to switch the Wi-Fi function on/off.• When Wi-Fi is on, you will be prompted to enter your default password for 3 seconds after the Wi-Fi icon.• The password will only be displayed for the first 3 attempts. After changing the password, it will no longer be displayed.• When the function is switched on/off, the icon in the status bar will change accordingly. 

Input to LRF interface

- Press and hold the **rotary pushbutton (7)** to enter the main menu interface.
- Turn the **rotary pushbutton (7)** to select Bluetooth.
- Press the **rotary pushbutton (7)** to open the Bluetooth secondary menu.
- Turn the **rotary pushbutton (7)** to select on/off, press the **rotary pushbutton (7)** turn Bluetooth on/off.
- When the function is switched on/off, the icon in the status bar will change accordingly.




Bluetooth



LRF activation

- If only one is available, the LRF and the unit can automatically connect without binding.
- If there are multiple LRFs around, you must tie one LRF to the device.

Binding LRF

- A short press on the  search icon will bring up the SN LRF number. Turn the **rotary pushbutton (7)** to select, press the **rotary pushbutton (7)** to confirm that the selection needs to be bound.
- The SN binding number will be displayed to the right of on/off.
- The LRF automatically connects to the unit each time a connection is established.

Remove LRF

Rotate the **rotary pushbutton (7)** to select remove, press the **rotary pushbutton (7)** to remove the current binding, then you can bind the others.

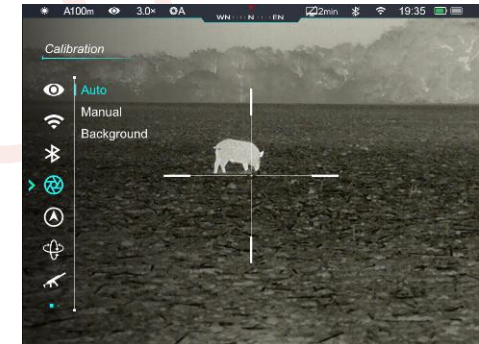
Calibration



Select calibration mode

There are three calibration modes: automatic calibration (A), manual calibration (M) and background calibration (B).

- Press and hold the **rotary pushbutton (7)** to enter the main menu interface.
- Turn the **rotary pushbutton (7)** to select "**Calibration**".
- **Press the rotary pushbutton (7)** to open the **Calibration** secondary menu.
- Turn the **rotary pushbutton (7)** to select one of the following options:
 - **Auto Calibration:** defined by software algorithms and images are calibrated automatically in this mode.
 - **Manual calibration:** images are calibrated by the user according to the image effect.
 - **Background calibration:** the camera must be covered by the lens hood in this mode.
- Press the **rotary pushbutton (7)** to confirm the selection. The icon in the status bar will change accordingly.






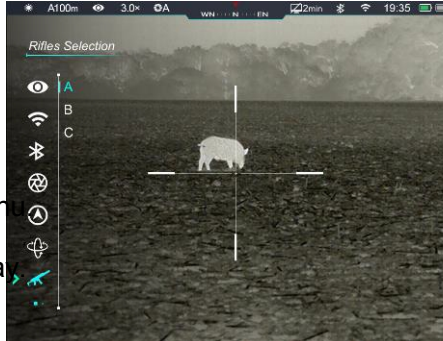
Compass



Switching the digital compass function on/off

- Press and hold the **rotary pushbutton (7)** to enter the main menu interface.
- Turn the **rotary pushbutton (7)** to select "**Compass**".
- Press the **rotary pushbutton (7)** to switch the compass function on/off.
- When the compass is on, it will be displayed in the middle of the status bar at the top.



<p>Motion sensor</p> 	<p>Turn the motion sensor function on/off</p> <ul style="list-style-type: none"> • Press and hold the rotary pushbutton (7) to enter the main menu interface. • Turn the rotary pushbutton (7) to select "Motion sensor". • Press the rotary pushbutton (7) to switch the motion sensor function on/off. • When the motion sensor is switched on, two scales appear on either side of the display. <ul style="list-style-type: none"> ○ The curved scale on the left represents the tilt angle and the vertical ruler on the right represents the pitch angle. 	
<p>Zeroing profile</p> 	<p>Zeroing selection</p> <ul style="list-style-type: none"> • Press and hold the rotary pushbutton (7) to enter the main menu interface. • Turn the rotary pushbutton (7) to select "Zeroing profile". • Press the rotary pushbutton (7) to open the Reset Profile secondary menu. • Turn the rotary pushbutton (7) to select one of the three rifles (A, B, C). • Press the rotary pushbutton (7) to confirm the selection and return to the main menu. • The name of the selected profile is displayed in the status bar at the top of the display. 	

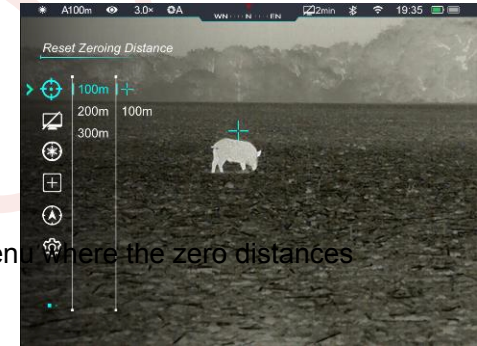
**Resetting
the reset
distance**



Before performing any zeroing operation, select the zeroing profile and set the zeroing distance.

The TL35 V2 / TL50 supports any zero distance from 1 to 999 meters.

- Press and hold the **rotary pushbutton (7)** to enter the main menu interface.
- Turn the **rotary pushbutton (7)** to select "**Reset Zeroing Distance**".
- **Press the rotary pushbutton (7)** to enter the **Reset Zero Distance** secondary menu where the zero distances are displayed.
- Turn the **rotary pushbutton (7)** to select one zero distance based on the preset target distance.
- **Press the rotary pushbutton (7)** to confirm the reset distance and enter the reset distance submenu including the two options below, i.e. **Reset** and **Reset reset distance**.


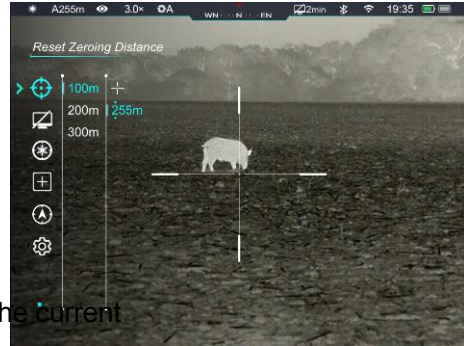


Resetting



If the preset zeroing distance is consistent with the distance displayed on the device, you can perform zeroing directly as shown below:

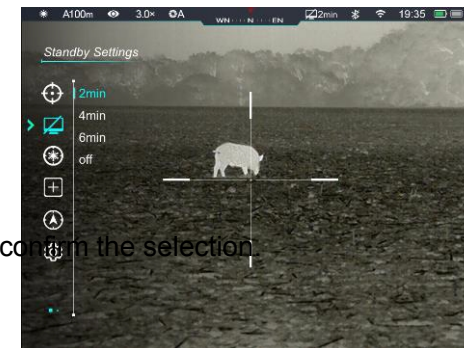
- Turn the **rotary pushbutton (7)** to select "**Zeroing**".
- **Press the controller button (7)** to enter the reset interface.
- The X and Y coordinates of the intentional cross are displayed in the upper left corner of the screen.

		<ul style="list-style-type: none"> • Aim the centre of the rifle scope at a point in the target distance and fire, then observe the position of the actual hit point. • Keep the aiming position stationary and simultaneously press and hold the image mode button (6) + camera button (3) until the Y coordinate on the left side of the freeze icon does not appear on the screen. The image is now frozen. • Rotate the dial (7) to move the position of the sight until the center of the sight is pointing at the hit point. See Section 11 - Zeroing for details. 	
	<p>Resetting the reset distance</p> <p>▼ 000 ▲</p>	<p>If the reset distance is not consistent with the preset target distance, this option can be used to reset the reset distance.</p> <ul style="list-style-type: none"> • Select an invalid reset distance, press the rotary pushbutton (7) briefly to enter its submenu. • Turn the rotary pushbutton (7) to select "Reset Zeroing Distance". • Press the rotary pushbutton (7) to activate the reset distance function, then two small triangle symbols will appear above and below the number. • Turn the rotary pushbutton (7) to set the numeric value of the current 	

- position, which can be switched between 0 and 9.
- Press the **rotary pushbutton (7)** to switch between the hundreds, tens and units positions.
- After setting, press and hold the **rotary pushbutton (7)** to save the settings and exit. In the meantime, the reset distance will change accordingly.
- In addition, the status bar is synchronously updated to the new reset distance.

Setting the standby time and time

- Press and hold the **rotary pushbutton (7)** to enter the main menu interface.
- Turn the **rotary pushbutton (7)** to select "**Standby Settings**".
- Press the **rotary pushbutton (7)** to enter the **Settings** submenu **standby mode**, including four options: 2 min, 4 min, 6 min and off.
- Turn the **rotary pushbutton (7)** to select and press the **rotary pushbutton (7)** to confirm the selection.
- The selected option is displayed in the top status bar.
- If "Off" is selected, the standby function is deactivated.



Settings

standby mode




Remark:

- Standby mode is activated automatically when the device is tilted up or down at an angle greater than 70° and to the left or right at an angle greater than 30°.
- When the device is in the capture state, standby mode is deactivated.


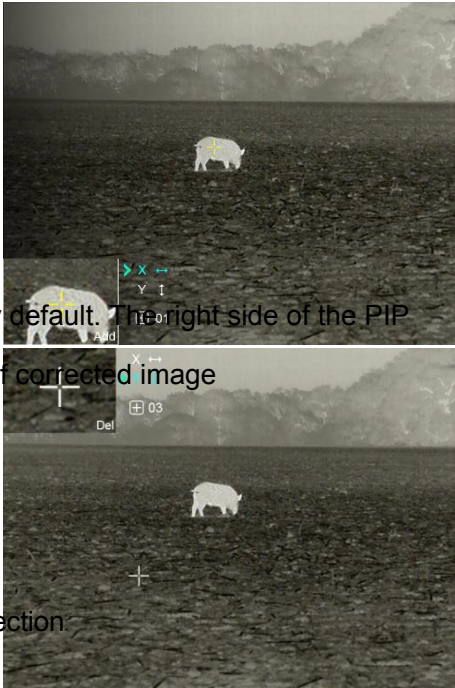
Laser calibration



If the target position directed by the laser pointer is not aligned with the center of the rangefinder cursor on the screen, the laser rangefinder cursor position needs to be calibrated with this function (laser rangefinder required).

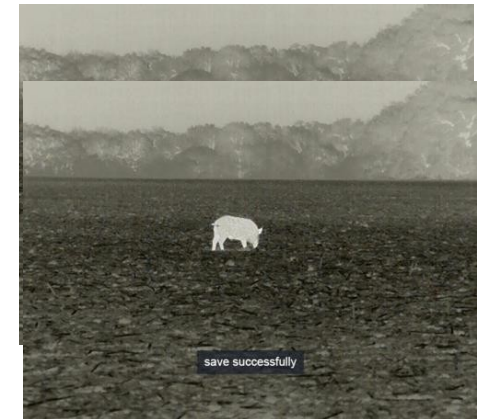
- Install the laser rangefinder on the thermal imaging camera.
- Activate the Bluetooth function in the main menu to connect the laser rangefinder module to the thermal imaging camera via Bluetooth.
- From the home screen, press and hold the **image mode** button (6) + **display brightness** button (4) to turn on the laser rangefinder function.
- Press and hold the **display brightness** button (4) to turn on the laser indicator on the laser rangefinder module.
- Press and hold the **rotary pushbutton** (7) to enter the main menu interface.
- Turn the **rotary pushbutton** (7) to select "Laser Calibration".
- **Press the rotary pushbutton** (7) to enter the laser calibration interface.
- Instead of the laser sight, the laser sight cursor  will appear on the screen and the following information will be displayed in the upper left corner:
 - X is the X axis (horizontal)
 - Y is the Y axis (vertical)
 - Center - means to return the cursor to the center of the screen.
- The red "x" in the picture represents the target position locked by the laser indicator (actually shown as a red dot).
- Press the **rotary pushbutton** (7) briefly to select X, Y or Center.
- When you select X or Y, turn the **rotary pushbutton** (7) and move the laser cursor until the center of the laser


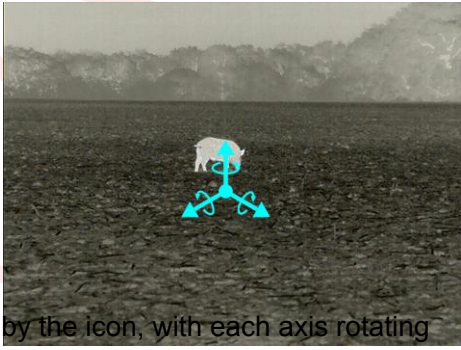








	<p>the cursor is aligned with the red "x" (the position to which the laser pointer is pointing). Rotate clockwise to move left/down and counterclockwise to move right/up.</p> <ul style="list-style-type: none"> • If Center is selected, briefly press the power button (5) to center the laser cursor on the screen. • If X or Y is selected, a short press of the power button (5) will end the laser calibration without saving. • After calibration, press and hold the rotary pushbutton (7) to save and return to the home screen.
<p>Defective pixel correction</p> 	<p>When using thermal imaging, you can detect defective pixels such as light or dark spots with stable brightness. To correct these defects, use the "Pixel defect correction" function.</p> <ul style="list-style-type: none"> • Press and hold the rotary pushbutton (7) to enter the main menu interface. • Turn the rotary pushbutton (7) to select "Pixel Defect Correction". • Press the rotary pushbutton (7) to enter the Defective Pixel Correction interface. • PIP is automatically enabled and displayed in the bottom left corner of the screen by default. The right side of the PIP window displays the direction of movement: the X-axis, the Y-axis and the number of corrected image Points. • The intentional cross is now changed to a small cross cursor in the defective pixel correction interface. • Rotate the rotary pushbutton (7) to move in the selected direction, rotate in the direction 




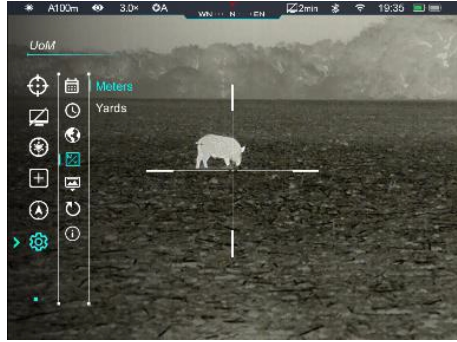
clockwise to move left or down, and counterclockwise to move right or up.





- Press the **rotary pushbutton (7)** to save the motion data and switch the direction of motion between the X-axis and the Y-axis.
- When the cursor moves to the position of the faulty pixel, press the **power button (7)** to add and correct. At the same time, the word "Added" flashes in the PIP window to indicate that the defective pixel has been added.
- At the same position, press the **power button (7)** again to undo the defective pixel correction, the word "**Del**" will flash on the PIP window.
- Repeat the above steps to complete the repair of additional defective pixels.
- Each time you add or remove a defective pixel, the number of defective pixels changes accordingly.
- When the cursor moves near the PIP window, the PIP and the content on the right will automatically move to the top left corner of the screen.
- After making the correction, press and hold the **controller button (7)** until the prompt "**Do you want to keep these settings?**" appears. (Do you want to keep these settings?).
- **Turn the rotary pushbutton (7)** and select "Yes" to save and exit, or select "No" to cancel saving and exit.
- Press the **rotary pushbutton (7)** briefly to confirm the selection.
- If **Yes** is selected, the screen will display a **5-second save countdown**. Once you are informed that the settings have been successfully saved, you can go back to the main menu.


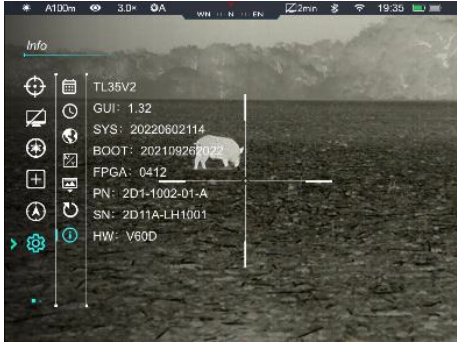


<p style="text-align: center;">Calibrating the compass</p> 	<p>Digital compass calibration</p> <ul style="list-style-type: none"> • Press and hold the rotary pushbutton (7) to enter the main menu interface. • Turn the rotary pushbutton (7) to select "Compass Calibration". • Press the rotary pushbutton (7) to enter the Compass Calibration interface. • An icon similar to the three-axis coordinate system will appear on the screen. • Within 15 seconds, rotate the thermal imaging camera along the three axes marked by the icon, with each axis rotating at least 360°. • After 15 s the calibration is automatically completed, so exit the interface. 	
<p style="text-align: center;">Settings</p> 	<p>This function is used to set the date, time, language, unit of measure, automatic status hiding, factory reset, and display device information.</p> <ul style="list-style-type: none"> • Press and hold the rotary pushbutton (7) to enter the main menu interface. • Turn the rotary pushbutton (7) to select "Settings". • Press the rotary pushbutton (7) briefly to enter the submenu. • This menu item allows you to configure the following settings: 	

<p style="text-align: center;">Date</p> 	<p>System date</p> <ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Date". • The date is displayed in yyyy/mm/dd format. • Press the rotary pushbutton (7) to activate the date reset function. • Two small triangle symbols are displayed above and below the "Year" number by default. • Press the rotary pushbutton (7) to switch the year, month and date. • Turn the rotary pushbutton (7) to set the correct number. • After setting, press and hold the rotary pushbutton (7) to save and exit the date reset function. 	
<p style="text-align: center;">Time</p> 	<p>Setting the system time</p> <ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Time". • The time is displayed in 24 hour format as hour:minute. • Press the rotary pushbutton (7) to activate the time reset function. • Two small triangle symbols are displayed above and below the hour number by default. • Turn the rotary pushbutton (7) to set the correct number. • Press the rotary pushbutton (7) to switch between the hour and 	

		<p>a minute.</p> <ul style="list-style-type: none"> • After setting, press and hold the rotary pushbutton (7) to save the changes and end the time reset. • After resetting, the time displayed in the status bar will be updated accordingly.
<p style="text-align: center;">Language</p> 	<p>Setting the system language</p>	<ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Language". • Press the rotary pushbutton (7) to go to the submenu Language. • Turn the rotary pushbutton (7) to switch between English and Russian. • Press the rotary pushbutton (7) to confirm the selection and the system language will change automatically. 
<p style="text-align: center;">Units of measurement</p> 	<p>Unit of measure settings</p>	<ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Measure units". • Press the rotary pushbutton (7) to enter the units of measure submenu. • Turn the rotary pushbutton (7) to switch between metres and yards. • Press the rotary pushbutton (7) to confirm the selection and enter the main menu interface. 

<p style="text-align: center;">Automatically hide the status bar</p> 	<p>Turn the automatic status bar hiding feature on/off</p> <ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Status Bar Auto Hiding". • Press the rotary pushbutton (7) to open the automatic status bar hiding submenu. • Turn the rotary pushbutton (7) to select "Show" or "Hide". • Press the rotary pushbutton (7) to confirm the selection and return to the top menu interface. 	
<p style="text-align: center;">Resetting the device</p> 	<p>Restore factory settings</p> <ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Reset device". • Press the rotary pushbutton (7) to open the submenu Resetting the device. • Turn the rotary pushbutton (7) to select "Yes" to restore the factory settings or "No" to cancel the operation. • Press the rotary pushbutton (7) to confirm the selection. • If Yes is selected, the thermal imaging system will automatically restart. • If No is selected, you are automatically returned to the main menu. The following functions will be restored to their default settings: 	

		<ul style="list-style-type: none"> - Image mode: Warm White - Zeroing distance: A100 - Ultra-bright mode: Off - Magnification: 3× - Shutter calibration: A - Compass: off - Standby mode: Off - Wi-Fi: Off - Motion sensor: off - Language: English - Units of measurement. - Automatic status hiding: Off
	<p>Information</p> 	<p>Display device information</p> <ul style="list-style-type: none"> • Turn the rotary pushbutton (7) to select "Info". • Press the rotary pushbutton (7) to display relevant information about the current device, including product model, GUI version, SYS information, boot versions, FPGA, PN and SN numbers of the rifle scope, hardware versions. • Rotary pushbutton (7) to exit the top menu and return to the main menu. 

19 Automatic state hiding

This feature is used to automatically hide the user interface and display the intentional cross only so that the image is not obscured.

- Press and hold the **rotary pushbutton (7)** to access the main menu on the home screen.
- Turn the **rotary pushbutton (7)** to select **"Settings"**.
- Press the **rotary pushbutton (7)** (to enter the submenu **Settings**, turn the **rotary pushbutton (7)** to select **"Status Auto Hiding"**.
- Press the **rotary pushbutton (7)** to go to the submenu **For automatic status hiding**, select **"On"**.
- Press the **rotary pushbutton (7)** to activate the Auto Hide function.
- When automatic status hiding is turned on, all GUI icons including the status bar are automatically hidden and only the clear image and the reticle are displayed, in case there is no progress within 8 s

to any surgery.

- The GUI is redisplayed by pressing any button.
- Only after the user interface is displayed can the buttons be manipulated.


20 Wi-Fi

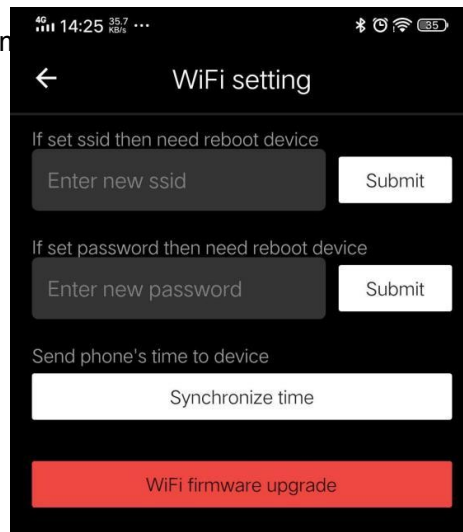
The TL35 V2 / TL50 has a built-in Wi-Fi module and can connect wirelessly to a mobile device (laptop or mobile phone) just via Wi-Fi.

- Turn on the Wi-Fi function in the main menu.
- After enabling the Wi-Fi function, look for a Wi-Fi signal on the mobile device called "TUBE_XXXXXX", XXXXXX is a 6-bit serial number code consisting of numbers and letters.
- Select Wi-Fi and enter your password to connect. The initial password is 12345678.
- Once Wi-Fi is successfully connected, control the device via the **InfiRay Outdoor** app downloaded on your mobile device.

To set a Wi-Fi name and password

You can reset the Wi-Fi thermal imager name and password in the **InfiRay Outdoor** app.

- After connecting the thermal imager to your mobile device, search for and click on the "Settings" icon  on the **InfiRay Outdoor** and go to the **Settings** interface.
- Enter and send in the text box new Wi-Fi name (SSID) and password.
- You need to restart the device to save the changes.



Note: If the device is reset to factory settings, the Wi-Fi name and password will also be reset to the default settings.

21 InfiRay Outdoor updates and apps

The TL35 V2 / TL50 thermal imaging camera supports the **InfiRay Outdoor** app technology, which allows you to transmit images to your smartphone or tablet via Wi-Fi in real-time.

The InfiRay Outdoor User Guide is available for download on our official website (www.infirayoutdoor.com).

Continuous improvements will be made to improve the user experience. The latest programs can be automatically detected and updated using the InfiRay Outdoor app. It can also be downloaded and updated from the official website: www.infirayoutdoor.com.

About InfiRay Outdoor

- The InfiRay Outdoor app can be downloaded and installed via the official website (www.infirayoutdoor.com) or the app store. Alternatively, you can scan the QR code below to download it for free.



- After installation, open the InfiRay Outdoor app.
- If your device has been connected to a mobile device, turn on mobile data on the mobile device. Once connected, the app will automatically prompt you to update. Tap "Now" to immediately download the latest version or "Later" to update later.
- InfiRay Outdoor automatically registers the last connected device. So once you have previously connected to InfiRay Outdoor, the app automatically detects the update even if the device is not connected to a mobile device.
- If an update is available and your mobile device has internet access, download the update first. Once the device is connected to the mobile device, it will automatically

Updated.

- After the update is installed, the device automatically restarts.

22 Technical inspection

Before using the equipment, perform a technical check and check the following items.

- Outside of the device (no crack on the cover);
- Lens and eyepiece (no cracks, oil, stains or other deposits);
- Rechargeable battery status (pre-charged) and electrical contact (no salting or oxidation).

23 Maintenance

Maintenance should be carried out at least twice a year and includes the following steps:

- Use a cotton cloth to wipe the surface of metal and plastic parts to remove dust and dirt. For the process

silicone lubricant can also be used for cleaning.

- Clean the electrical contacts and battery slots on the device with a non-greasy organic solvent.
- Check the glass surface of the eyepiece and lens. If necessary, remove dust and sand on the lens (it is ideal to use the non-contact method). Use a special wiper tool and solvent to clean the optical surfaces.

24 Troubleshooting

The following table lists all the problems that may occur during operation of the device. Check and solve the problems by referring to this table. If you encounter problems that are not listed in this table, or if you are unable to correct the problem, return the equipment to the dealer or supplier for troubleshooting.

Glitch	Possible causes	Solution
Thermal imaging cannot be started.	The battery's dead.	Charge the battery.
The device cannot be powered by external power supply.	The USB cable is damaged.	Replace the USB cable.
	External power supply is insufficient.	If necessary, check the external power supply.
The image is indistinct, there are vertical lines or background is not uniform.	Calibration is required.	Calibrate your images according to the instructions in this User Guide.
The picture is too dark.	The screen is not bright enough.	Adjust the brightness of the display.
Icons are clear, but image is blurry.	The lens is out of focus.	Rotate the focus ring of the lens to focus the image.
	The inner or outer optical surface of the lens is dusty or frozen.	Wipe the surface of the outer optics with a soft cotton cloth or allow the thermal imaging camera to dry in a warm, dry environment for more than 4 hours.

<p>The position of the aiming cross shifts after firing.</p>	<p>The thermowell or clamp is not firmly mounted.</p>	<p>Check that the thermowell is firmly mounted. Ensure that the type of bullet and calibre you are using are the same as those used for zeroing.</p> <p>If you are doing zeroing in the summer, but using thermal imaging in winter (or vice versa), the zero point may shift slightly.</p>
<p>The image cannot be focused.</p>	<p>Incorrect settings.</p>	<p>Set the image according to the contents of the Power On and Settings section in this User Guide.</p> <p>Check the outer surface of the lens and eyepiece, wiping off any dust and frost if necessary.</p> <p>In cold weather, a special antifogging coating can be applied (e.g. used on goggles or reversing in the car mirrors).</p>
<p>Thermal imaging cannot connect to a mobile device.</p>	<p>The Wi-Fi password is incorrect.</p>	<p>Enter the correct password.</p>
	<p>There are too many Wi-Fi networks around the device.</p>	<p>Move the device to an area with fewer signals Wi-Fi or where there is no signal at all.</p>
<p>The Wi-Fi signal is lost or interrupted.</p>	<p>The device is outside Wi-Fi coverage. There is a blockage between the device and the receiver (for example, a concrete wall).</p>	<p>Move your device to a location where you can receive Wi-Fi signals.</p>

The observed target will disappear.	Observation through glass.	Observe the target directly without using glass.
The picture quality is poor or is shortened detection distance.	These problems are likely to occur when you use the device in harsh weather (such as snow, rain, and fog).	
If the device is used at low temperature, the display quality is worse than at normal temperature.	<p>At temperatures above 0 °C, the temperature rise varies depending on the observed objects (environment and background) due to different thermal conductivity coefficients. As a result, the contrast with high temperature is better and the image quality is better.</p> <p>At low temperatures, the observed targets (background) usually cool to a similar temperature due to the reduced temperature contrast. Therefore, the image quality (detail) is poor, but this is a disadvantage for thermal imaging equipment characteristic.</p>	

25 Legal and regulatory information

Frequency range of the wireless transmitter module:

WLAN: 2.400-2.500GHz (for EU)

Wireless transmitter module power < 20dBm (EU only)

IRay Technology Co., Ltd. hereby declares that the TL35 V2 / TL50 Thermal Imaging System complies with Directives 2014/53/EU and 2011/65/EU. The full text of the EU Declaration of Conformity and additional information is available at: www.infirayoutdoor.com.

This equipment can be operated in all EU Member States.



FCC Statement

FCC ID: 2AYGT-2D-00

Labelling requirements

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

Information for users

Any changes or modifications not expressly approved by the party responsible for authorizing them may void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any interference to the radio or TV caused by unauthorized modifications to this equipment. Such modifications could revoke the user's permission to use the device.

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

from harmful interference when installed in living areas. This equipment may emit 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 causes harmful interference to radio or television reception (which can be detected by turning the equipment off and on), the user is advised to attempt to correct the interference by one or more of the following measures:

- Change the orientation or location of the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a different circuit than the one to which the receiver is connected.
- Ask your dealer or an experienced radio/TV technician for help.

This equipment complies with the FCC radio frequency exposure limits for uncontrolled environments.

Wearing on the body

This device has been tested for typical theme functions. In order to meet the requirements for exposure to radio frequency radiation, the following must be between

a minimum distance of 0.5 cm between the user's body and the handset (including the antenna). Belt buckles, holsters and similar accessories used with this equipment should be free of metal parts. Thermal imaging accessories that do not meet these requirements may not meet RF exposure requirements and should be avoided. Use only the supplied or approved antenna.