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InfiRay Outdoor - AFFO Series - Operating Manual



@'iRoy

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Operating Manual

V2.0

AFFO Series | Thermal Imaging Monocular

AP13/AL19/AL25

§ § #g @ |?§} RoHS

IMPORTANT SAFETY INFORMATION

Environmental influences

WARNING! Never point the lens directly at intense heat sources such as the sun or laser devices. The lens and eyepiece can act like burning glass and damage the interior components. The warranty does not cover damage caused by improper use Act.

Notes on ergonomics

Caution: Take breaks after prolonged use to avoid wrist pain.

Danger of ingestion

Caution: Do not place this device in the hands of small children. Incorrect handling can cause small parts to come loose and be swallowed.

Safety instructions for use

- Handle the device with care: rough handling can damage the internal part batteries.
- Do not expose the device to fire or high temperatures.
- Do not disassemble the device to access the battery. The battery

for exchange by the end user.

- Use only the battery charger that is included. is not

Only charge the device at temperatures between 0 °C and 40 °C.

- When operating in cold environments, the battery capacity decreases. This is not a fault and is due to technical reasons.
- The recommended temperature for use of this product is -10° to +50°
- Temperatures exceeding this range will affect product life.
- Do not store the unit for extended periods of time at temperatures below 20°C or above 50°C. This will permanently reduce the battery capacity.
- Always store the equipment in a dry, well-ventilated area.
- If the device is damaged or the battery is faulty, please send the device to our after-sales service for repair.
- Before using this product in a water environment, make sure that the Type-C interface rubber cap on the bottom of the thermal monocular is tightly covered.

Safety instructions for the power supply unit

- Before use, check the power supply unit, cable and adapter for visible damage.
- Do not use any defective parts. Defective parts must be

replaced.

- Do not use the power supply in damp or wet environments.
- Use only the original cable supplied with the battery charger.
- Do not make any technical adjustments.

For more information and safety instructions, see Operation Manual supplied. This is also available on our website as a download Center: www.infirayoutdoor.com.

Disposal of batteries



In the European Union, this symbol indicates that The battery used in this product must not be disposed of in household waste and must be collected for disposal separately. When returning used batteries, please use the collection system that may exist in your country.

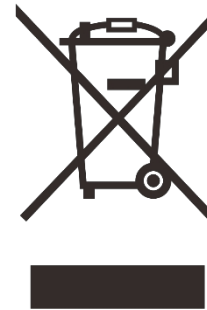
Materials and substances in batteries can be harmful impact on health and the environment.

By dropping off empty batteries at a recycling facility, you are helping to protect, maintain and improve the quality of our environment.

Please return only dead batteries.

The battery used does not contain mercury, cadmium or lead in quantities exceeding the limits defined in Directive 2006/66/EC.

User information on the disposal of electrical and electronic equipment (private households)



The WEEE symbol on products and/or attached documents indicates that used electrical and electronic products must not be mixed with normal household waste. For proper treatment, recovery and recycling, take these products to the appropriate collection points where they will be admitted without charge. In some

countries, it may also be possible to return these products to your local retailer when you buy the corresponding new product.

Correct disposal of this product serves to protect the environment and prevents possible harmful effects on humans and their environment that can result from improper handling of waste.

For more detailed information on the nearest collection point, please visit your local authority. In accordance with state legislation, penalties may be

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 Europe Union

This symbol is valid only in the European Union. Please contact your local authority or retailer if you wish to dispose of this product and request and option for disposal.

Intended use

The device is designed for displaying heat signatures during nature observations, remote hunting observations and for civilian use. This device is not a toy for children.

Use the device only as described in this manual. The

neither the manufacturer nor the seller shall be liable for any damages incurred

as a result of unintentional or incorrect use.

Functional test

- Before use, please make sure that your device has no visible damage.
- Test that the device displays a clear, unobstructed image.

- Check that the device settings are correct. See notes in the Operation section.

Installing/removing the battery

The AFFO series thermal monocular is equipped with a battery. It cannot be removed.

Observation with and without glasses

Thanks to the flexible aperture, the Tube series can be used with or without glasses. In both cases it offers a full field of view.

1 Specifications

Model	AP13	AL19	AL25
Detector specifications			
Type	Unrefrigerated Vox		
Resolution	256×192	384×288	
Pixel size, μm	12		
NETD, mk	≤ 40		
Frame rate, Hz	25	50	
Optical specifications			
Lens, mm	13	19	25
Field of view	13,5°×10,1°	13,8°×10,4°	10,5°×7,9°
Digital zoom, ×	1×, 2×	1×, 2×, 4×	
Dioptres	-3 ~ +1	-7 ~ +2	
Detection range, m (Target size: 1.7 m×0.5 m, P(n)=99 %)	675	986	1298
Display Specifications			
Type	LCOS	OLED	
Resolution	720×540	640×400	
Battery power supply			
Battery type / Capacity / Output voltage	Built-in li-ion battery/3.6Ah/3.6V		
Max. operating time (t=22 °C), h*	9.5	7.5	
External power supply	5V (type C)		

Physical specifications		
Protection against intrusion Rating	IP67	
Memory capacity, GB	32	
Wi-Fi / APP	Support (InfiRay outdoor)	
Operational Temperature, °C	-10 ~ +50	-20 ~ +50
Weight, g	<340	<350
Dimension, mm	160×60×60	169×60×60

* Actual uptime depends on Wi-Fi usage density and built-in

in the VCR.

- It is possible to make design and software improvements to this product to improve its features without prior notice to the customer.

2 package contents

- AFFO Series Thermal Imaging Monocular
- Neck strap
- Drawstring bag
- Type C data cable
- Micro HDMI data output video cable
- Power adapter
- Lens cleaning cloth
- Operating Instructions



AFFO AP13



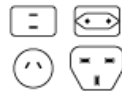
Operating Manual



USB Cable



HDMI Cable



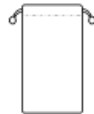
Power Adapter



Neck Strap



Lens Cloth



Drawstring Bag

3 Description

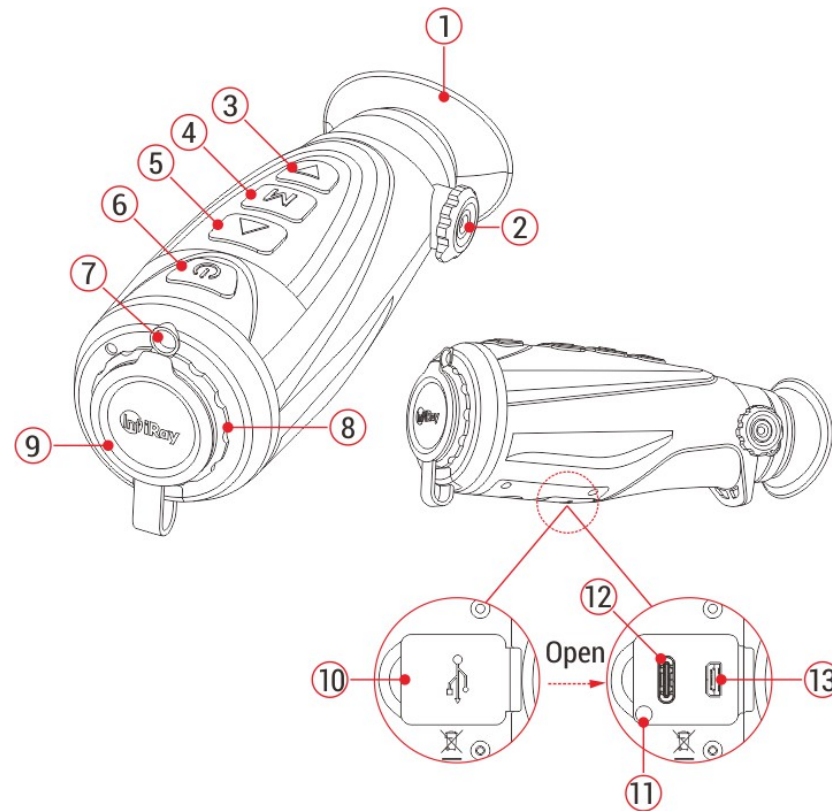
The AFFO series thermal monocular is for outdoor use. It can be used day or night or in harsh weather (such as rain, snow, fog etc haze) without being affected by strong light. It does not require any external light source. Even targets hidden behind obstacles (such as branches, grass, and shrubs) can be observed. AFFO Series Thermal Monoculars is lightweight and easy to carry, small size, convenient for one-hand operation, convenient to use and rich in functions. It can be widely used for hunting, searching and locating in various outdoor conditions.

Functions





- 12μm self-developed detector
- High image quality
- Lightweight and compact
- Stadiametric rangefinder
- Long detection distance
- Built-in memory card, supporting photo and video recording
- Built-in Wi-Fi module, supporting app connectivity

Units and controls

1. Eye shade
2. Dioptric correction
3. Down button
4. Menu button (M)
5. Up button
6. Power button
7. LED light
8. Lens
9. Lens cap
10. USB rubber cap
11. Power indicator
12. Type C port
13. Micro HDMI port



Description of buttons


Button	Current status	press	Press and hold
Power button 	Off	--	Switch on the device
	Home screen	Enter standby mode (the display is off, and the main chip goes into standby mode)	Turn off the device
	Standby mode	Wake up the device	--
	Menu interface	To return to the home screen without saving	Turn off the device
Up button 	Home screen	Switch the picture mode	--
	Menu interface	Scroll up in the menu	--
	Off	--	Press repeatedly to turn on the LED indicator and Release the button to turn off the LED indicator
Menu button 	Home screen	Digital zoom	Enter the menu interface
	Menu interface	Enter sub-menu / Confirm selection	Save and return to the home screen
Down button 	Home screen	Take a picture	Start video recording
	Menu interface	Scroll down to the menu option	--
	Video recording	Take a picture	Stop and save video recording
Up + M buttons	Home screen	--	Switching the stadiametric rangefinder function on/off
Up + down buttons	Home screen	--	Turning hotspot monitoring on/off
M + down buttons	Home screen	--	Sensor calibration


Charging


The AFFO series comes with a built-in rechargeable Li-ion battery, allowing operation for up to 9.5 hours. **When using the device for the first time, first fully charge it.**

- Open the rubber USB cover(10)on the bottom of the device.
- Connect the Type C connector of the data cable to the Type C(12) port on the the device.
- Connect the second port of the data cable to the power adapter.
- Insert the plug of the adapter into a 110-240V socket.
- When the device is charging, the power indicator(11)next to the Type C port(12) is red. Power indicator(11)is on only when charging status. When the power indicator(11)turns green, the device is fully functional charged.

When the power indicator(11)flashes red and green alternately, indicates that the battery is not charged or the temperature is too high or too low.

- When charging, the icon  appears inside the battery lights up icon on the display. The illumination icon does not disappear until the data cable is removed or power is interrupted.

is completely green .

- During use, when the battery icon turns red , it means the power level is low, please charge the device in time to avoid data loss.

Safety instructions for the battery

- The nominal voltage of the product is 5V. Please charge the device immediately when the battery is discharged, so that the life of the thermal imaging monocular will not be reduced due to excessive battery discharge.
- Do not charge the device immediately when you take the battery out of a cold environment and into a warm environment. Charge after 30-40 minutes.
- Charge the device at a temperature between 0°C and +40°C, otherwise the battery life will be significantly reduced.
- Never use a damaged or modified charger.
- Do not leave the battery unattended while charging. Do not leave the device with the charger connected to the mains for more than 24 hours after full charge.
- Charging is complete when the inside of the battery icon appears on the display

● Do not expose the battery to high temperatures or open flames.

● Do not connect external devices with higher current consumption permitted levels.

- The battery is protected against short circuit. However, any situation that may short-circuiting must be avoided.
- Do not remove the battery from the device.
- Battery capacity may be reduced when using the battery in the negative pole temperature, that's normal, it's not a malfunction.
- Avoid using the battery at a temperature higher than the temperature in the table, it may reduce the battery life.
- If you do not use the thermal imaging monocular for a long time, charge it the device at least every 2 months and then charge to 40%-50% power store the equipment in a dry and ventilated environment.
- A partial battery charge is necessary if the battery is planned to be idle for a long time. Avid is fully charged or discharged.
- Keep the battery out of the reach of children.

turn on the LED light and release the knob **(5)**to turn off the LED

LED light

The AFFO series is equipped with LED light**(7)**. You can quickly turn around

LED light on/off**(7)**only when AFFO is off

- When the device is switched off, keep pressing the **knob (5)**to

Light
manual

- Please note that when the device is switched on, the LED is lit unavailable.

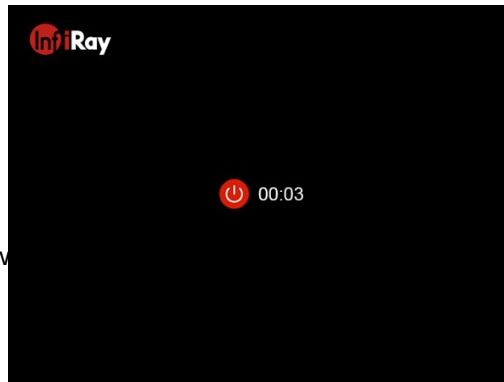
Action

- Open the lens cover(9).
- Press and hold the Power (6)button for 2s to turn on the thermo monocular imaging.
- When an infrared image is displayed in the eyepiece, the thermal the imaging monocular enters the operational state.
- Rotate the dioptic correction wheel(2)to adjust the resolution icon on the display. The dioptic correction knob is used to adjust the eyepiece diopters for users with varying degrees of myopia.
- **Setting the picture mode:** briefly press the top (5) button to set Image palette mode. There are five modes to choose from: hot white (), hot black (), hot red (), pseudo color () and target highlight (). The icon on the top status bar is updated in real time.
- **To adjust the brightness of the display:**press and hold theM (4)button to adjust display brightness level from level 1 to level 5 in the menu (see



Menu section for details).

- **Shut it down:** After using the device, press and hold the **Power (6)** button for 3 seconds to enter power - disabled interface with shutdown countdown. when the countdown icon will change to 0,



release the button. After saving the current status, the display turns black and the device is turned off. Do **not disconnect the device from the power source while saving data, otherwise the data cannot be saved.**

- **Standby:** From the home screen, press **thePower** button **(6)** briefly press the device standby. And press **theExecutive (6)** button again to wake up the device.

image defects (such as vertical bars, phantom images, etc.).

1R0calibration mode

Calibration allows you to equalize the detector temperature and eliminate it

manual(M) and background(b).

Select the desired calibration mode from the menu

(see Menu - Calibration).

● **Mode A (automatic).** When you select the automatic calibration mode,

the

is automatically calibrated according to the

software algorithm. There is no need to close the

lens hood (the internal shutter covers the sensor). In

this mode, manual calibration is still supported by the

short circuit

Press theM (4)+Down (3)button.

● **M mode (manual).** Selecting manual calibration

mode only calibrates the sensor manually. Short

pressM (4)+down (3)

buttons to activate shutter calibration without closing the

lens hood (the internal aperture covers the sensor).

● **B (Background) mode.**To select the

background calibration mode, press and holdM

(4)+

down

(3)buttons

on the

background

of the calibration

perform, prompt

appears on the home screen as

"The cover lens during



calibration" and background calibration will start after 2 s.

1D1 digital zoom

AFFO series support for quick 2X base magnification increase or 4 times, as well as to return to the base magnification.

- From the home screen, press the M button (4) briefly. 1×, 2× or 4× digital zoom. The zoom status is updated in status bar at the top in real time.
- AP13 supports only 2x zoom, AL19 and AL25 support 2x and 4× zoom.

1F2 photography and video recording


The AFFO series is equipped with a video recording function and photographing the observed image, which is stored on the built-in 32GB memory storage.

Photo and video files are named by time, so it is recommended to reset date and time in the menu before using the photo and video functions

(refer to Menu - **Date** and **Time Settings** in this manual) or to synchronize the date and time in the **InfiRay Outdoor app**.

Photography

- From the home screen, briefly press the (3)-dollar button to take a photo.
- When shooting is

photo icon  flashing under the status bar in the upper left corner Screen. The photo is taken successfully when the icon disappears



- If a red exclamation mark appears after the photo icon, it means that the memory space is not insufficient, please clear the memory or move the recording to another storage medium to free up the built-in memory space.
- Photos are stored in the built-in storage.

Recording video

- On the home screen, press and hold the knob **(3)** button to start video recording function.
- Then the recording timer starts format HH: MM: SS (hour: minute: second) appears at the top right of the display.
- During recording, the device supports taking a photo by briefly pressing the **button** down **(3)** button. Of course, other operations with the device are supported recording.
- Press and hold **(3)** again to stop and save the video record.
- All videos and photos are saved to the built-in storage.



Access do memory

When the device is switched on and connected to the computer, it is

The computer recognizes it as a flash memory card that is used

- Connect the device to a computer using a Type-C data cable.
- Turn on the device for operation and the USB function window will appear on the screen.

- **Charging only:** If you select this option, you can power the device via computer and charge the built-in battery at the same time.



- **Read data:** Select this option, you can view the recorded videos and photos on your computer and charge the built-in battery the same time.
- **USB debugging:** Select this option, you can update the device program through the host computer and charge the built-in battery pack at the same time.

- Select the Read Data option using the Up **(5)** / Down **(3)** button and to access the device's memory and make copies of images and videos.

Confirm the selection by briefly pressing the **M (4) button**.

- Double click on "my computer" on the desktop - select USB flash drive and double-click to open the storage area.

- There are four components which are .MISC, LOCK-CIF, PHOTO-CIF and VIDEO-CIF.
- Recorded videos and photos are saved by time in the VIDEO-CIF and PHOTO-CIF folders.
- You can select the desired files or folders to copy or delete operations.

Note

- Photography and recording use the save before distribute mode. This means that even if there is no photo or video file, the memory is full and this is normal.
- Do not delete files other than the VIDEO-CIF and PHOTO-CIF folders. If you accidentally delete any of these files, you must format the memory before using the device.
- The maximum length of a video recording file is 5 minutes. After more than 5 minutes, the video is automatically uploaded to a new file.
- The videos and photos taken are stored by time, so if a file is removed from the list, its number is not taken over by another file.
- Interface icon information (status bar, icons, and menu) is not displayed in the video or photo you take.

13 Video output

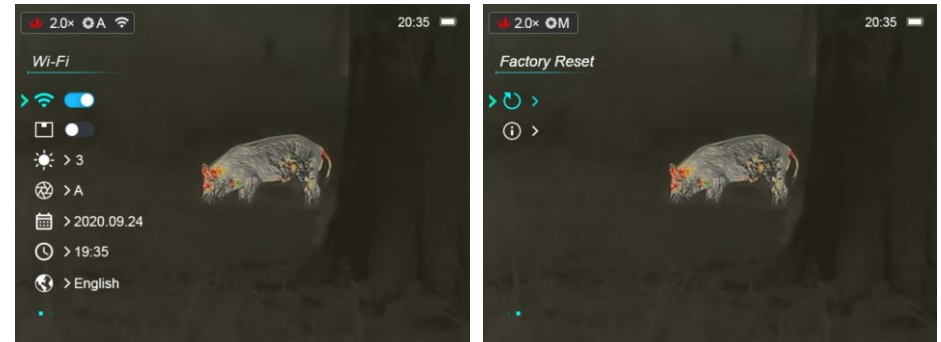
The AFFO series supports analog video output and connection to an external device View.

- Open the rubber USB cover(**10**)on the bottom of the device.
- Connect the Micro HDMI connector of the HDMI data cable to the Micro HDMI port(**13**)on the device.
- Connect another port of the HDMI data cable to the external display.
- The image can then be played back on an external display.
- Please note that the device cannot enter standby mode when the HDMI Inserted.



14 Menu functions

- From the home screen, press and hold theM (**4**)button to enter the menu interface.
- Press the Up (**5**) / Down (**3**) button briefly to switch between menus Options.
- Menu navigation is cyclical: as soon as the last menu item of the first when you get to a card, the first menu option of the second card is triggered.

- Edit the current parameters or enter the submenu using the shortcut printM (4)button.
- In all menu interfaces, briefly press thePerformance (6)button to return to Home screen .
- The menu automatically exits to the home screen after 15 seconds of inactivity.



Options and description of the offer

<p>Wi-Fi</p> 	<p>Turning Wi-Fi on/off</p> <ul style="list-style-type: none"> ● Press and hold theM (4)button to enter the menu interface. ● SelectWi-Option menu with Up (5) / Down (3)button. ● Briefly press theM (4)button to switch Wi-Fi on/off. ● When Wi-Fi is enabled, an icon appears in the status bar in the top left corner of the screen.
<p>PIP</p> 	<p>Turning PIP on/off</p> <ul style="list-style-type: none"> ● Press and hold theM (4)button to enter the Menu. ● SelectPIPOption menu with Up (5) / Down (3)knob. ● Briefly press theM (4)button to turn the PIP function on/off. ● When PIP is turned on, a small window and a blue box will appear on the screen. The image in the separate window is 2x enlarged image captured by the blue frame on the main image.

Display brightness

Adjust the brightness level of the display

- Press and hold the **M (4)** button to enter the Menu.
- Select **display menu option** with **Up (5) / Down (3)** knob.
- Briefly press the **M (4)** button to enter the submenu.
- There are five levels to choose from. Select one level using the **Up (5) / Down (3)** knob.
- Briefly press **M (4)** to confirm your selection and return to the menu interface.
- The default level is 3.



Calibration



Select calibration mode

Three calibration modes are available: automatic (A), manual (M) and background (B).

The selected calibration mode is displayed in the status bar.

- Press and hold the **M (4)** button to enter the Menu.
- **Select Calibrate** menu option with **Up (5) / Down (3)** knob.
- Briefly press the **M (4)** button to enter the submenu.
- press **Up (5) / Down (3)** button to select one of the following modes:
 - **Automatic (A).** The software determines the need for calibration in automatic mode. The calibration process starts automatically.
 - **Manual (M).** The user independently determines the need for calibration based on the quality of the observed image.
 - **Background (B).** Close the lens hood before starting calibration.
- Briefly press **M (4)** to confirm your selection and return to the menu interface.



- The calibration mode icon appears in the status bar.

Set the date of the device

- Press and hold the **M (4)** button to enter the Menu.
- Select **Date Setting option** menu with **Up (5) / Down (3)** knob.
- Briefly press the **M (4)** button to activate the **menu**. Two triangle icons will appear above and below the value.
- The date format is displayed as **YY.MM.DD** format (2020.01.01).
- Press the button briefly to select the correct value for the year, month and day number **(5) / down (3)** knob.
- Switch between digits by briefly pressing the **M (4)** button.
- Save the selected date and exit the submenu by long pressing the **M (4)** button.
- Or briefly press the **Power (6)** button to return to the home screen without saving.

date


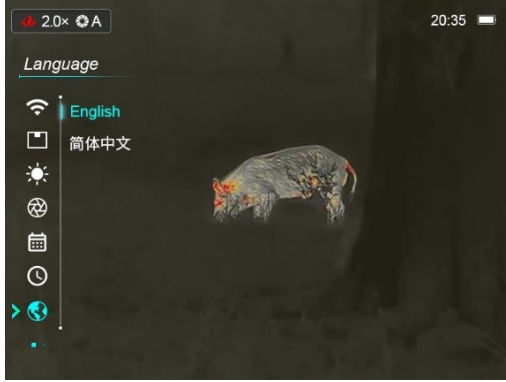




Set the device time

- Press and hold the **M (4)** button to enter the Menu.
- Select **Set time menu option** with the **Up (5) / Down (3)** knob.
- Briefly press the **M (4)** button to activate the **the Cascars** menu. There will be two triangle icons appears above and below the value.
- The time format is displayed as **HH:MM** in 24-hour format (14:48).
- Press the button briefly to select the correct value for the hour and minute **Nahor (5) / down (3)** knob.
- Switch between digits by briefly pressing the **M (4)** button.

Time



	<ul style="list-style-type: none"> ● Save the selected time and exit the submenu by long pressing the M (4) button. ● Or briefly press the Power (6) button to return to the home screen without saving. 	
<p>Language</p> 	<p>Set the GUI language</p> <ul style="list-style-type: none"> ● Press and hold the M (4) button to enter the Menu. ● Select Language option menu with Up (5) / Down (3) button. ● Briefly press the M (4) button to enter the language submenu. ● Short press the button to select the desired language Up (5) / Down (3) knob. AFFO The series supports two languages, English and Chinese. ● Confirm your selection by briefly pressing the M button (4) and return to the interface menu automatically. 	
<p>Restore factory settings</p> 	<p>Reset to factory settings</p> <ul style="list-style-type: none"> ● Press and hold M (4) to access the Menu on the Home screen. ● Select Factory reset menu option with Up (5) / Down (3) button. ● Enter the Factory Reset submenu by briefly pressing the M (4) button. ● Briefly press the Up (5) / Down (3) button to select Not or Not. ● Confirm your selection by briefly pressing the M (4) button. ● LiAnois selected, the device completes a factory reset. ● LiNot selected, the action is cancelled and returns to the menu interface. 	
<p>Info</p>	<p>View device information</p> <ul style="list-style-type: none"> ● Press and hold M (4) to access the Menu on the Home screen. 	



- SelectUp (5) / Down (3) button.
- Press the button briefly to display the relevant device informationM (4) knob.
- This item allows the user to view the following information: product model, SN number, PN number, hardware version, software version and kernel version.
- pressPerformance (6) to return to the home screen.

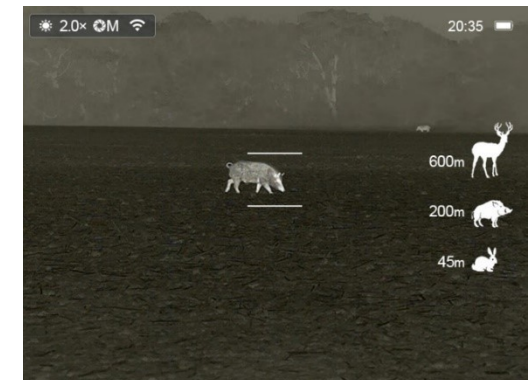


15 Stadiametric rangefinder

The AFFO series supports stadiametric rangefinder functionality, allowing user to estimate the approximate distance to an object of known size.

- From the home screen, press and hold theNahor (5) + M (4) buttons at the same time to enter the stadiametric rangefinder mode.
- When this function is enabled, two horizontal lines are displayed for measurement the icons of the three predefined objects appear on the display and the measured values are shown on the right side.
- There are three pre-defined target values:
 - Deer: 1,7 m tall
 - Wild boar: 0,9 m tall
 - Hare: 0.2 m tall

- Find the objectv in the middle of the measurement lines.
- Extend or reduce the measuring line to ensure that the measured object is within a series with a short or long press of the UP (5) / DOWN (3) button.
- When you adjust the measurement line width, the rangefinder the data on the right-hand side changes accordingly.
- Press and hold top (5)+M (4) to exit the metric mode again rangefinder function.



16 Hotspot monitoring

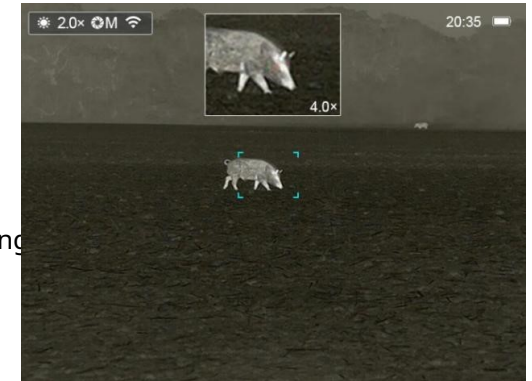
The AFFO series provides a hotspot tracking feature that allows you to track the hottest object in image.

- From the home screen, press **Up (5) + Down (3)** buttons to enable the hotspot monitoring feature.
- A blue box will appear automatically take a picture and follow the hottest object.
- Press and hold **Up (5) + Down (3)** press again to exit the hotspot tracking function.



interfaces.

- Use to select PIP **Up (5) / Down (3)** knob.
- Turn on the PIP function using **Up (5) / Down (3)** short press the **M** button **(4)** knob.
- When PIP is turned on, a small window and a blue box will appear on the screen. The image in the separate window is 2x magnified the image that is captured by the blue frame in the main image when the laser indicator is on, zoom in with the laser cursor in the centre.
- When the main image is enlarged by briefly pressing the **M** button **(4)**, the PIP image is synchronously enlarged twice.
- For example, when the magnification of the main image is 1x, 2x, 4x, the corresponding magnification of the PIP is 2x, 4x, 8x.



17 PIP function

The PIP (picture-in-picture) function allows you to see both the picture in a specific window and the main picture at a larger scale. This window displays a portion of the image that is enlarged to 2x in a specific area of the main image.

- From the home screen, press and hold the **M** button **(4)** to enter the menu

18 Wi-Fi

The AFFO series is a built-in Wi-Fi module for wireless communication mobile device (smartphone or tablet) via Wi-Fi.

- Press and hold the **M (4)** button to enter the Menu.
- Use the button to select the Wi-Fi menu option **Up (5) / Down (3)** button.
- Press the **Wi-Fi (4)** button briefly to turn on/off.
- After activating the Wi-Fi device, search for the Wi-Fi signal using a name such as AP13_XXXXXX on the mobile device, including

XXXXXX is a 6-bit serial number composed of numbers and letters.
- Select this Wi-Fi, enter the password on your mobile to set up the connection. The initial password is 12345678.
- After a successful Wi-Fi connection, you can control the device via


mobile apps.
- Launch **InfiRay Outdoor app** on your mobile device (see section **Updates and InfiRay Outdoor**).

Setting the name and password of the Wi-Fi

Wi-Fi AFFO name and password

series can be reset in the **InfiRay Outdoor application**.

- When connected to a mobile device

locate and click on the "Settings" icon.  V

a **InfiRay Outdoor** screen



enter the settings interface.

- Enter and submit the new Wi-Fi name (SSID) and Password in the text box.
- After sending the change, reboot the device and assume the new name and password effect.

Note

- After the factory reset, the Wi-Fi name and password are displayed also restored to factory settings.

19 Updates and InfiRay Outdoor

Supports **AFFO InfiRay Outdoor technika** thermal camera series, that allows you to transmit the image from the thermal imager to the smartphone or tablet via Wi-Fi in real-time.

You can find detailed instructions on **InfiRay Outdoor Officer** Web site www.infirayoutdoor.com.

The design of the AFFO series provides the possibility of software updates. Updating is possible via **the InfiRay Outdoor application**. In addition, it is feasible to download and update the software from the official website:

www.infirayoutdoor.com.

About InfiRay Outdoor

- Can you **getInfiRay Outdoor** applications on the official website:

www.infirayoutdoor.com; or

SearchInfiRay **Outdoor**in the App

store to download the app; or scan



the following QR code to download.

- Once the installation is complete, open it.
- If your device was connected to a mobile device, turn it on mobile data on your mobile device. After the device connects to the internet, you will automatically be prompted to update. ClickNow Download the latest version immediately or clickUpdate later.
- **InfiRay Outdoor**automatically saves the last connected device. Therefore, as soon as you connect to InfiRay Outdoor before, it will automatically detect the update in the background, even if the device is not connected to your phone or laptop. If an update is available and the mobile device is accessing the internet, you can download the update first. Then, when the device is connected to the mobile device, the version will be

automatically updated.

- After the update is installed, the device will be rooted.

20 Technical inspection

It is recommended to carry out a technical check before each use monocular. Check the following:

- Appearance (there should be no cracks on the body).
- Condition of the subject lens and eyepiece (no cracks, greasy spots, dirt or other deposits).
- Battery status (should be charged).
- Controls/buttons should be functional.

21 Legal and regulatory information

Frequency range of the wireless transmitter module:

WLAN: 2.412-2.472 GHz (for EU)

Wireless transmitter module power<20dBm (EU only)



IRay Technology Co., Ltd. hereby declares that the AFFO series of thermal imaging monoculars complies with Directives 2014/53/EU and 2011/65/EU.



Information is available at: www.infirayoutdoor.com. This equipment can be operated in all EU Member States.

FCC Statement

FCC ID: 2AYGT-AFFO

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 and (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 the compliance officer could revoke the user's authority to operate

facility.

Note:The manufacturer is not responsible for any interference to the radio or television caused by unauthorised modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Note:This equipment has been tested and found to comply with the limits for a Class B digital device under Part 15 of the FCC Rules. These limits are designed to provide adequate protection against harmful interference in residential installation. This device creates the use and can 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 determined by

- Reorient or relocate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit other than the one to which the receiver is connected.

This device complies with the FCC's limits for exposure to radio frequency radiation uncontrolled environment.

Operation on the body

This device has been tested for typical body support operations. In accordance with

RF exposure requirements, a minimum distance of 0.5 cm must be maintained between the user's body and the handset, including Antenna. Belt clips, holsters and similar third party accessories used by the company this device should not contain any metal parts. Body accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or approved antenna.

We, IRay Technology Co., Ltd., hereby declare that this product has been tested in accordance with the applicable FCC rules under the most accurate measurement standards possible, and that all necessary steps have been adopted and are in force to ensure that production units of the same the facility will continue to comply with the Commission's requirements.

Power adapter manufacturer

Shenzhen Simsukian Electronics Technology Co., Ltd.

Add: Simsukian Industrial Park, Jiayi Industrial Zone, Guihua Village,
Guanlan Street, Longhua District

Shenzhen PR China

Model number: SK22G-0500200Z

Input: 100-240V~50/60Hz, MAX/0.35A

Output: 5.0V ~~2.0A~~ 10.0W