



FAST

RED DOT FUSION SIGHT

QUICK START GUIDE

Important safety information

Environmental influences

WARNING! Never point the lens of the device directly at intense heat sources such as the sun or laser equipment. The objective lens and eyepiece can function as a burning glass and damage the interior components. The warranty does not cover damage caused by improper operation.

Risk of swallowing

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

Safety instructions for use

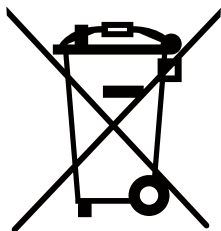
- Handle the device and Battery Pack with care: rough handling may damage the Battery Pack.
 - Do not expose the device to fire or high temperatures.
 - Only use the battery charger included in the delivery package.
 - The battery capacity decreases when operated in a cold ambient temperature. This is not a fault and occurs for technical reasons.
 - Always store the device in its carrying bag in a dry, well-ventilated space. For prolonged storage, remove the batteries.
 - Do not expose your device to extreme temperatures lower than -40°C and higher than +50°C.
 - The product shall only be connected to a USB Type C interface.
- If the device has been damaged, send the device to our after-sales service for repair.
-

Safety instructions for the power supply unit

- Check the power supply unit, cable and adapter for visible damage before use.
- Do not use any defective parts. Defective components must be replaced.
- Do not use the power supply unit in wet or humid environments.
- Only use the original cable provided with the battery charger.
- Do not make any technical modifications.

For further information and safety instructions, please refer to the Operation Instructions provided. This is also available on our website in the download center: www.infirayoutdoor.com.

Disposal of batteries



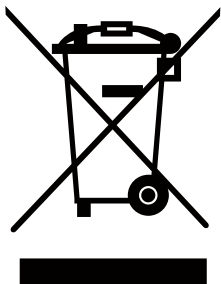
In the European Union, this symbol indicates that the battery used in this product may not be disposed of in domestic waste and must be collected for disposal separately. When returning used batteries, please use a collection system that may exist in your country. The materials and substances in the batteries may have a detrimental impact on health and the environment.

By depositing empty batteries at a recycling facility, you are contributing to the protection, maintenance and improvement of the quality of our environment.

Please only return discharged 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 devices (private households)



The WEEE symbol on products and/or accompanying documents indicate that used electrical and electronic products must not be mixed with ordinary household waste. For proper treatment, recovery and recycling, take these products to the appropriate collection points where they will be accepted without charge. In some countries, it may also be possible to return these products

to your local retailer when you purchase a corresponding new product. The proper disposal of this product serves to protect the environment and prevents possible harmful effects on human beings and their surroundings, which may arise as a result of incorrect handling of waste.

For further information and safety instructions, please refer to the Operation Instructions provided. This is also available on our website in the download center: www.infirayoutdoor.com.

More detailed information on your nearest collection point is available from your local authority. In accordance with state legislation, penalties may be imposed for the improper disposal of this type of waste.

For business customers within the European Union

Please contact your dealer or supplier regarding the disposal of electrical and electronic devices. He will provide you with further information.

Information on disposal in other countries outside of the European Union

This symbol is only applicable in the European Union. Please contact your local authority or dealer if you wish to dispose of this product and ask for a disposal option.

Intended use

You purchase a corresponding new product. The proper disposal of this product serves to protect the environment and prevents possible harmful effects on human beings and their surroundings, which may arise as a result of incorrect handling of waste.

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

Use the device only as described in this instruction manual. The manufacturer and the dealer accept no liability for damages which arise due to non-intended or incorrect use.

Function test

- Before use, please ensure that your device has no visible damage.
- Test to see if the device displays a clear, undisturbed image.
- Check that the settings for the device are correct.

Installing/removing the battery

The Fast series supports CR123 and USB C power supply.



IRay Technology Co., Ltd. thus declares that the Fast series device complies with the directives 2014/53/EU and 2011/65/EU. The full text of the EU declaration of conformity as well as additional information are available at: www.infirayoutdoor.com. This device may be operated in all member states of the EU.



Labeling requirements

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

Information to the user

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized 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, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used by the instructions, may cause harmful interference to radiocommunications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

Body-worn Operation

This device was tested for typical body-support operations. To comply with RF exposure requirements, a minimum separation distance of 0.5cm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

Specifications

	Model	Fast FAL19/1×34D
Direct View Optics	Magnification	1×
	Display	High Luminance OLED
	Window Size	34mm×25mm
	Eye Relief	90mm
Thermal Channel	Resolution, pixels	384×288/12μm
	Objective Lens, mm	f19 /F1.0
	Recognition Distance	450m
	NETD	≤40mk
	Frame Rate, Hz	50Hz
	FOV	13.8°×10.4°
	Focus Range	5m- ∞
	Digital Zoom	1×、2×
	Mode	Red dot/Full/Fusion/Outline
	Polarity	Green hot/Black hot
Electrical	Battery Type	2×CR123
	Battery Life	Thermal mode>4h Red dot mode>65h
	Electrical Interface	5V (USB-C)
Mechanical	Interface	Picatinny
	Weight (with battery)	<660g
	Dimension	175mm×63mm×104mm
Environmental	Operating Temperature	-40°C ~ +50°C
	Storage Temperature	-50°C ~ +60°C
	IP Rating	IP67

*The actual service time depends on the use frequency of the product; Improvements may be made to the design and software of this product to enhance its features without prior notice; You can download this Operating Manual at our official website: www.infirayoutdoor.com

I. Package Contents

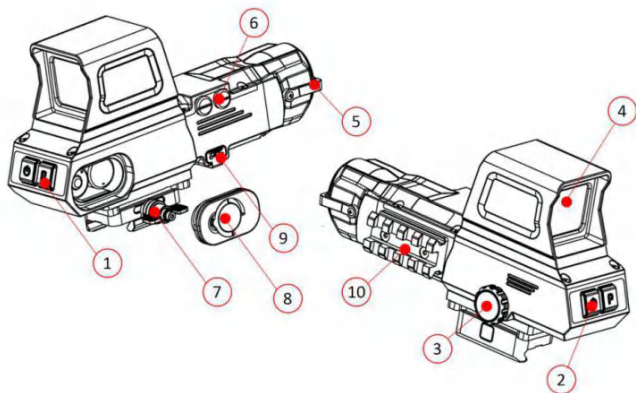
- Fast red dot fusion sight
- Portable bag
- USB-C cable
- Lens cleaning cloth
- Recoil-absorbing mount
- Support screws: M3×6 cross recessed screw (2 pcs.)
- Wrench: M3 L-shaped cross wrench
- Operating manual

II. Description




The Fast is a high-end product provided with fast red dot scope and thermal scope. It combines detection chips with ultra-high sensitivity to restore the color and details of thermal images during daytime and night. It also has an eyesight system with ultra large FOV and fast targeting red dot, as well as rich functions. It can be widely used for hunting and observation under complex or harsh conditions, and also can be used in military and police law enforcement occasions to effectively improve the duty efficiency.

IV. Device Composition

1. P button
2. Power button
3. Rotary function button
4. Window
5. Objective lens cover
6. Red dot adjusting screw
7. Recoil-absorbing mount
8. Battery compartment waterproof cover
9. USB C interface
10. Picatinny



V. Button Operations

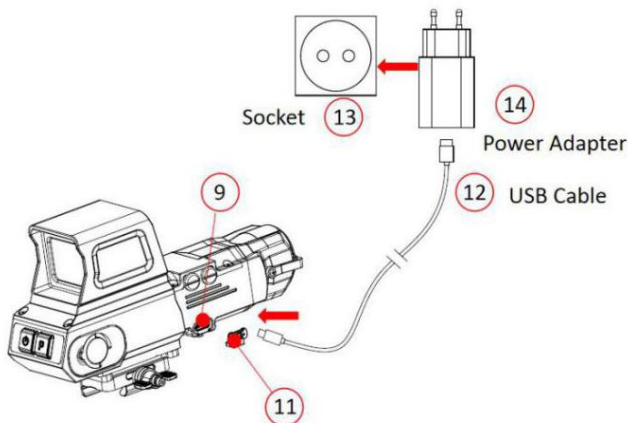
No.	Button	Current Mode	Press	Press and Hold
1	Power button 	Powered off	----	Start up the device
		Home screen	Digital zoom	Shutdown
		Menu screen	Return to the home screen	Shutdown
2	P button 	Home screen	Image calibration	Switch the image mode
3	Rotary function button 	Powered off	----	Turn on/off the red dot
		Home screen	Press: to enter the menu screen Rotate: to change the brightness of the red dot	
		Menu screen	Press: to confirm Rotate: to change an option	

VI. Battery Charging

The Fast red dot fusion sight adopts two CR123/CR123A batteries for power supply, with the normal power supply time up to 4 hours. The battery should be fully charged before first use.

Battery Replacement and Installation

- Rotate the battery cover handle clockwise (8) ;
- Hold the handle and pull it out;
- Install two CR123 batteries into the battery compartment according to the positive and negative poles;
- Install the battery cover back in the correct direction;
- Rotate the battery cover handle anticlockwise, lock the battery compartment cover, and fix it to the corresponding position.
- Use the USB-C cable (12) to connect to the power adapter (14), and then insert it into the Socket (13), you can use the external power supply.



Note: 1. When the USB-C cable (12) is used for power supply, the USB-C cable (12) will be preferred for power supply, and the battery will be stopped.

2. The product supports 3V and 3.7V batteries. To ensure the correct display of the power level, please select the correct battery voltage in the menu.

Safety Precautions

- When charging, please use the 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 in use for a long time, the battery shall be taken out of the device and stored in a dry place.
 - Do not charge the device immediately after it is moved to a warm environment from a cold environment. Wait for 30 to 40 minutes for preheating.
 - If the charger is modified or damaged, do not use it;
 - The device shall be used at the temperature of 0°C~+40°C, under which the battery is of the best performance, or else the battery activity will be decreased significantly.
 - When charging a lithium-ion battery, please do not leave the battery unattended;
 - Do not connect the battery to the power supply for more than 24 hours after it is already fully charged;
 - The device is equipped with a short circuit protection system, but operations or conditions that may lead to a short circuit should be avoided.
 - The recommended operating temperature for the device is from -20°C to +40°C. If the product is used beyond this temperature range, it can work normally, but the battery life may be shortened.
 - When the device is used under sub-zero temperature, the battery capacity drops. This is normal and does not indicate a defect.
-

Power on and Settings

- Open the lens cap (5); **if the outdoor sunlight is relatively strong, pay attention not to face the infrared lens directly to the sun to avoid burns;**
 - Press and hold the power button (2) for 3s to power on the device;
 - To set the image mode: On the home screen, press and hold the P button (1) green hot, black hot, outline (breathing effect), and fusion in sequence, and the icon on the top status bar is updated in real time;
 - To open the aiming point: On the home screen, press and hold the rotary function button (3), and a bright spot appears in the center of the screen, then rotate the encoder to adjust the color and brightness of the aiming point on the screen;
 - To set the display brightness and image contrast: Press the rotary function button (3) to enter the main menu to set the display brightness and image contrast (refer to "Main Menu Functions" for details);
 - After use, press and hold the power button (2) for 3 seconds and a shutdown countdown is displayed. Rotate the encoder, select "√" and press the encoder again, then the display turns black and the device is powered off. When the device is powering off and saving data, do not disconnect it from the power source. Otherwise, the data cannot be saved.
-

XIV. Technical Inspection

Perform a technical inspection to check the following items each time before you use the device.

- Exterior of the device (no crack on the enclosure).
- Lens and eyepiece (no crack, oil, stain, or other sediments)
- Status of the rechargeable battery (fully charged in advance) and electrical contact (no salinization or oxidation).

XV. Product Maintenance

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

- Wipe the surface of metal and plastic parts to clear off dust and dirt by using a cotton cloth. Silicone grease may be used for the cleaning process.
 - Clean the electric contact and battery slots on the device using a non-greasy organic solvent.
 - Check the glass surface of the eyepiece and lens. If necessary, clear off the dust and sand on the lens (it is perfect to use a non-contact method). Use a specialized wiping tool and solvent to clean the optical surfaces.
-

XVI. Troubleshooting

The following table lists all problems that are likely to occur during device operation. Check and address problems by referring to this table. If faults not included in this table occur or you cannot fix the fault, return the device to the vendor or supplier for troubleshooting.

Faults	Possible Causes	Solutions
The scope cannot be started.	The battery is out of charge.	Charge the battery.
The device cannot be powered by using an external power supply.	The USB cable is damaged.	Replace the USB cable.
	The external power supply is insufficient.	If necessary, check the external power supply.
Images are unclear, vertical lines are present, or the background is not even.	Calibration is required.	Calibrate the images as instructed in Section IX of the user manual.
Images are too dark.	The display is not bright enough.	Adjust the display brightness
Icons are clear but images are blurry.	The lens is not focused.	Rotate the lens focus ring to adjust the focus.
	The inner or outer optical surface of the lens is dusted or iced.	Wipe the outer optical surface by using a soft cotton cloth or leave the scope to dry in a warm and dry environment for more than 4 hours.
The scope cannot focus.	Configuration error.	Set the scope according to the contents as specified in

		<p>the Section of "Power On and Settings".</p> <p>Check the outer surface of the objective lens and eyepiece, and if necessary, wipe off any dust and frost on it.</p> <p>In cold weather, a special antifogging coating can be applied (such as those used on eyeglasses or car rearview mirrors).</p>
The observed target disappears.	You are observing the target through the glass.	Observe the target directly without the presence of glass.
The image quality is poor or the detection range shortens.	These problems are likely to occur when you use the device in harsh weather (such as snow, rain, and fog).	



IRay Technology Co., Ltd.

Add.: 11th Guiyang Street, YEDA, Yantai 264006, P.R. China

Tel: 0086-400-998-3088

Email: infirayoutdoor@infiray.com

Web: www.infirayoutdoor.com