InfiRay

InfiRay Outdoor • **Hybrid Series** • Operating Manual   www.infirayoutdoor.com

Quick Start Guide   V1.0

Hybrid Series | Thermal Imaging Scope

HYH50W / HYH35W

1 Specification

Model	HYH35W	HYH50W
Resolution, pixels	640×480/12µm	
Frame Rate	40Hz	
NETD	≤40mk	
Objective Lens, mm	f35 /F0.9	f50 /F1.0
Field of View	12.5°x9.4°	8.8°x6.6°
Recognization Range (Human)	830m	1180m
Recognization Range (Vehicle)	1490m	2130m
Digital Zoom	1×/2×/4×/8×	
Recommended Day Scope Magnification	1×-9×	
Exit Pupil Distance	25~60mm	
Color Palettes	White-hot, black-hot, red-hot, iron-red, rainbow, and outline	
Exit Pupil Diameter	23mm	
Diopter Adjustment	-4D~+2D	
Screen	1.03", 2560×1920 AMOLED	
Battery	3.7V/4400mAh	
Max. Operating Time (at temp.=22 ºC)	≥6 h★	
External power supply	5V (USB C)	
Max.Recoil Power on Rifled Weapon,g/s²	1200g	
Degree of protection, IP code	IP67	
Amount of built-in memory	64GB	

Laser Rangefinder	Wavelength 905nm；Max：2km（big target）；1km（deer），±1m	
Weight (with battery)	<870g	<890g
Dimensions	208×76×74（mm）	220×76×74（mm）
APP	Support	
Smart Range Finder	Support	

★ The actual operating time depends on the intensity of using Wi-Fi, video recorder.

➢ Improvements may be made to the design and software of this product to enhance its useful features.

➢ Technical parameters of the device may be improved without prior notice of the customer.
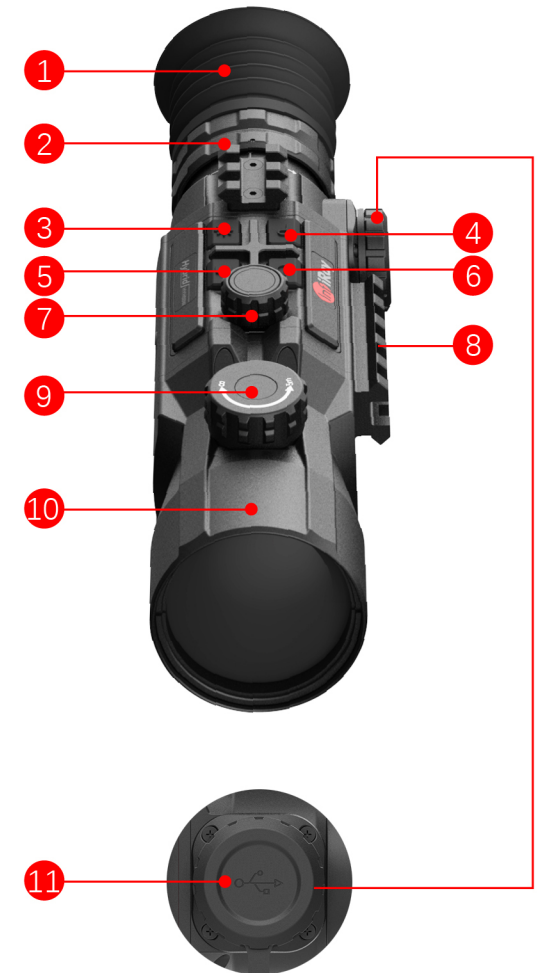
2 Package Contents

➢ Hybrid thermal scope
➢ Vibration damping mount
➢ Support screw: M3×10 (2 pcs.)
➢ Fastening wrench: M2.5 Allen wrench
➢ Portable bag
➢ USB C cable
➢ Power adapter
➢ IBC-1 battery charger
➢ IBP-1 battery pack×2
➢ Lens cleaning cloth
➢ Product description
➢ Bluetooth remote controller (optional)

3 Description

The Hybrid thermal scope is a high-end product designed for outdoor hunting. It supports the clip-on mode and rifle-scope mode. It combines detection chips with ultra-high sensitivity to restore the color and details of infrared images during daytime and night. It also has a large ultra HD screen, a comfortable eyesight system with long eye relief, and ballistic calculation. With rich functions and a long working time, it can be widely used for hunting and observation under complex or harsh conditions.

4 Components and Controls

1. Eyeshade of eyepiece

2. Eyepiece diopter adjustment ring

3. Display brightness button

4. Image mode button (P button)

5. Photo/video recording button

6. Power button

7. Rotary encoder

8. External picatinny rail

9. Objective lens focusing handwheel

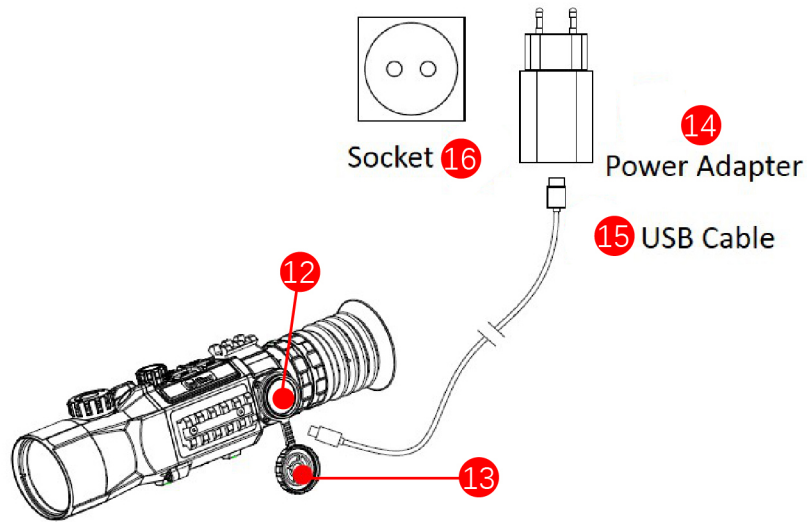10. Objective lens

11. USB-C interface

5　Description of Control

Button	Current Mode	Short Press	Press and Hold
Power Button on the mainframe	Powered off	--	Power on
	Home screen	Image calibration	Power off the device/Standby
	Menu screen	Return to the upper menu without saving changes	--
	Dormant status	Cancel dormant status	--
	Rangefinding module connection	Enable single rangefinding/ continuous rangefinding	--
Menu button (press rotary encoder) on the mainframe	Home screen	Open the shortcut menu	Open the main menu
	Shortcut menu interface	Enter the next menu/ confirm option parameters and return to the previous menu	Save and back to the home screen
	Main menu interface		
Menu button (left/right-handed rotate rotary encoder) on the mainframe	Menu screen	Digital zoom	--
		Scroll up/down/left/ right menu options	

Button	Current Mode	Short Press	Press and Hold
Capture button on the mainframe	--	Photographing	Video recording
	Recording screen	Photographing	End the recording and save the video
Image mode button (P button) on the mainframe	Home screen	Switch the observation mode	Switch the image palettes
Image brightness buttonon the mainframe	Home screen	Adjust the display brightness	Turn on/off the PIP function
⏻ + ☀	Home screen	ON/OFF ROI	--
⏻ + P	Home screen	--	--
	Rangefinder mode	Switch between single and continuous rangefinder modes	Laser rangefinder reticle position adjustment screen
⏻ + ⚙	Home screen	--	Enable/Disable the clip-on mode

6 Battery Instal ation

Hybrid is powered by a battery with custom cell, a rechargeable lithium-ion battery pack that provides battery power for up to six hours of normal operation. The battery should be fully charged before first use.

Charging of battery pack

➢ Open the USB C cover (13);

➢ Insert the USB C end of the data cable (15) into the USB C socket (12) on Hybrid;

➢ Connect the other end of the data cable to the power adapter (14), and insert the adapter into a 100-240V power socket (16) for charging;

➢ When charging, a lightning charging icon appears on the battery icon and the current battery level flashes alternately, and the LED indicator on the device is in red.When the LED indicator turns green, it indicates that the charging is completed.

➢ During use, when the icon is displayed white inside, it indicates that the battery capacity is higher than 20%, which is sufficient. When the icon turns red, it indicates that the battery capacity is insufficient and should be charged in time to avoid reducing the service life of the device due to over-discharge of the battery.

7 Update and InfiRay Outdoor

You can download the user manual of InfiRay Outdoor at our official website (www.infirayoutdoor.com).

You can also test and update the firmware program of the product via the InfiRay Outdoor app or download it on our official website.

About InfiRay Outdoor

➢ You can download and install the InfiRay Outdoor app on the official website (www.infirayoutdoor.com) or the app store. Alternatively, you can scan the QR code below to download it for free.

➢ After installing the app, open InfiRay Outdoor application.

➢ If your device has been connected to a mobile device, please switch on the mobile data in mobile device. After connection, an update prompt will be displayed automatically in the app. Click Now to download the latest version immediately or click Later to update later.

➢ InfiRay Outdoor can store the last connected device automatically. Therefore, once you have connected with InfiRay Outdoor before, it will automatically detect the update even when the scope is not connected to a phone or laptop. If an update is available and the mobile device accesses the Internet, you can download the update first. Then when the device is connected with the mobile device, the scope will be connected to the mobile device, it will be updated automatically.

➢ After the update is installed, the device will restart automatically.

■ Wi-Fi Password： 123456789

8 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).

9 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 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.