HP06 V2 / HP13 / HL13

Holo Series 07/2021

全 息 热 像 仪

HOLO

Thermal Reflex Sight

Operating Manual

English/简体中文

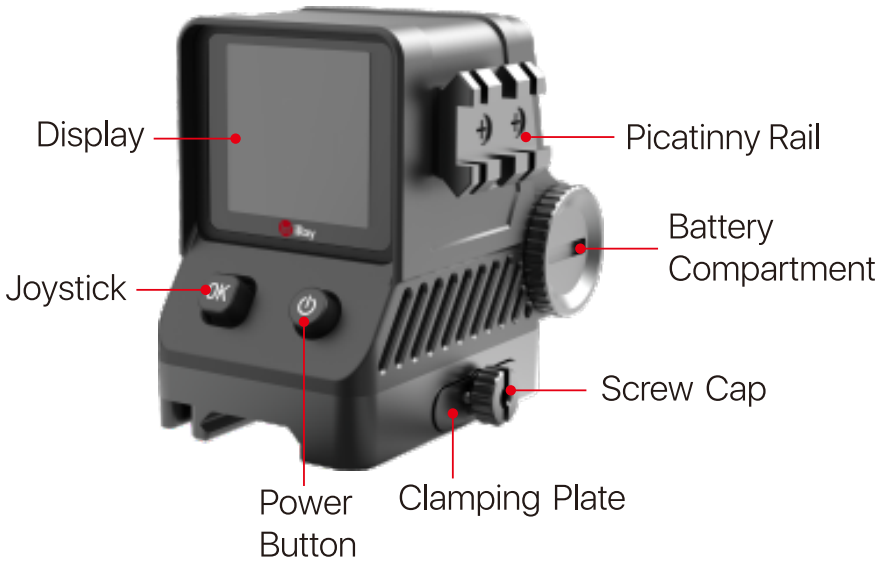
www.infirayoutdoor.com

ENGLISH

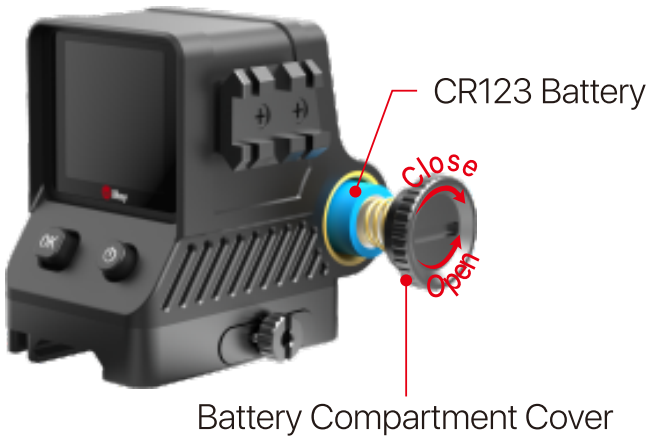
1 Production Description

We are proud to introduce our newest product -the thermal reflex sight (Holo series). It is a multifunctional device that can be used for both day and night target observation. Its compact size and lightweight design make it easy to carry. What makes it outstanding is long operation hours, good concealment and great ability to detect, recognize and identify objects or targets fast and easy. The Holo is effective at close and long ranges irrespective of light and harsh weather conditions, that is, in total darkness, through heavy smoke, haze, fog, and dust.

2 Components and Controls



3 Battery Installation



◎ Firstly, remove the threaded battery cap in the counterclockwise direction as shown above.

◎ Then, place a CR123 battery in as positive facing inward and negative facing outwards.

◎ At last, tighten the battery compartment cover clockwise.

Note

★ Holo series support CR123 batteries in both 3V and 3.7V, suggest using CR123 battery in 3.7V for better performance.

★ The device can also be connected to an external power supply via the Type-C interface data cable. No need to remove the battery when connected, but the rechargeable battery will not be charged at this time.

4 Operation Instructions

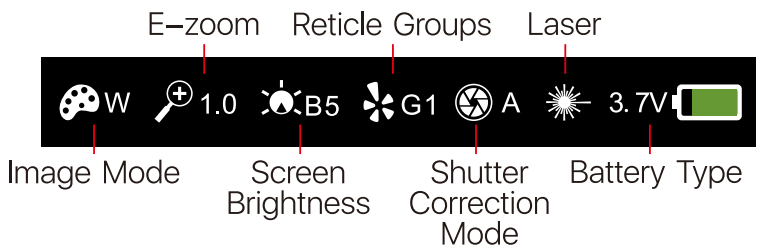
4.1 Power On/Off

Pressing the power button to turn on the unit and the splash screen shows upon.

Pressing the same button to turn off the unit.

4.2 Status Display

When the unit turns on, there is a line of status bar at the bottom of the screen that shows the current status of some regular functions, such as image mode, E-zoom, screen brightness, reticle group, shutter correction mode, laser enabling, battery model, and current battery status.



4.3 E-zoom

In the normal mode interface, pushing the joystick upward to achieve the image one to four times electronic magnification.

4.4 Shutter Correction

In the normal mode interface, pushing the joystick downward for shutter correction.

4.5 Screen Brightness Adjustment

In the normal mode interface, pushing the joystick leftward for screen brightness adjustment (from level 1 to level 6).

4.6 Display Off

In the normal mode interface, pushing the joystick rightward for display off. Do this once again to activate the screen.

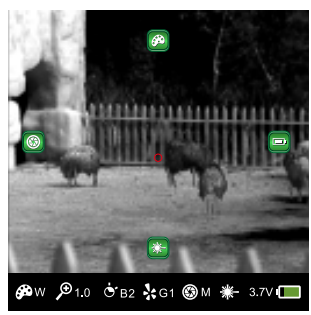
4.7 Navigation Menu

In the normal mode interface, pressing the middle part of the joystick briefly to achieve the operation of Navigation Menu 1- Navigation Menu 2 - exit the Navigation Menu.

When accessing the Navigation Menu, four– function icons will appear in the four directions of "top, bottom, left and right" on the screen, which corresponding to the "top, bottom, left, right" keys of the joystick.

4.8 Navigation Menu 1

In the Navigation Menu 1 interface, there are four functions: image mode, laser state, shutter correction mode and battery type.



4.8.1 Image Mode

Pushing the joystick upward to switch following five image mode types: White Hot (W)-Black Hot (B)-

Red Hot (R)- Color (C)-Target Highlight(H) and the icon will display at the bottom of the screen (the mode H is only applied to HL13 and HP13).

4.8.2 Laser On/Off

Pushing the joystick downward to turn the laser indicator on/off. And a red circular icon "O" will appear in the screen when the laser is turned on.

Note: The laser function depends on the legal restrictions of different countries and regions.

4.8.3 Laser Position Adjustment

Turn the laser on in the Navigation Menu 1, then push the joystick downward for 3s to enter the laser position adjustment interface with the laser icon flashing.

Position movement can be achieved by pushing the joystick up, down, left and right. When the adjustment is done, press and hold the joystick to save and exit.

4.8.4 Shutter Correction Mode

Push the joystick leftward to switch the correction mode: Manual (M) or Automatic (A) with the icon shown on the status bar.

4.8.5 Battery Type

Push the joystick rightward to switch battery type: 3V or 3.7V with the icon shown on the status bar.

NOTE!

The product implements a laser beam.
Please pay attention to the following:
– Do not point the laser at eyes.
– Do not point the laser to people.
– Do not look into the laser with optical devices.
– **DO NOT** disassemble, alter or repair the binoculars yourself.
– The laser can be hazardous to your health.

WARNING!

The laser product has been tested to meet the following standards:

LASER RADIATION
AVOIDE DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT

The wavelength of the laser is 635 nm.
The maximum power is < 5mW.

4.9 Navigation Menu 2

In the Navigation Menu 2 interface, the reticle functions can be set: reticle color, reticle pattern, reticle profile, and the reticle position adjustment.

Note: The reticle related functions (such as the navigation menu 2) are hidden by factory default. So when using the device for the first time, push the joystick in the following order to activate the reticle and related functions : **down-up-down-up-left-left**.

4.9.1 Reticle Color

Pushing the joystick upward to switch following four reticle colors: white-black-red-green.

4.9.2 Reticle Pattern

Pushing the joystick downward to switch four reticle patterns which are crossing, T shape, box, and red dot.

4.9.3 Reticle Group

Up to four groups of reticle calibration data can be stored. Push the joystick leftward to switch the reticle group between G1, G2, G3 and G4. The selected group will be displayed on the status bar at the display bottom.

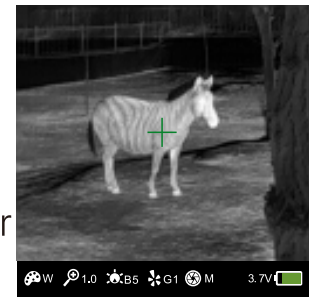
4.9.4 Reticle Position Adjustment

Pushing the joystick rightward to enter the reticle

adjustment interface. You can adjust the position by pushing the joystick up, down, left or right. When the adjustment is done, long press the middle part of the joystick until the massage "OK" appears, this means the current reticle position has been saved in the current reticle group and it can be brought up when switching to this reticle group.

4.10 Blind Pixel Calibration

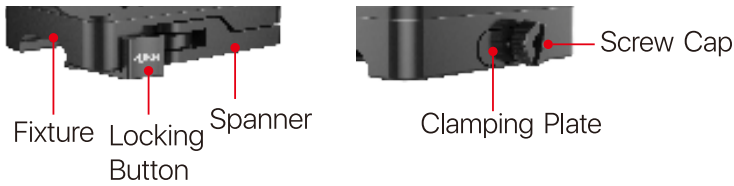
Press the middle part of the joystick for 3 seconds in the home screen to enter the pixel calibration interface. Short or long push the joystick in four directions (up, down, left, right) to move the cursor to the position of the blind pixel, then press the middle button briefly to finish calibration accompanied by a sound of shutter correction and long press to save and exit.



4.11 Reset to Factory Settings

In the home screen, push the joystick in the following directions: up-down-up-down-left-left to enter the factory reset interface, and the firmware version appears on the bottom right corner of the screen. Push the joystick upward / downward to select ✓ or ×, and short press the middle button to confirm selection.

5 Fixture Instruction



The bottom of the Holo series is provided with a quick release clamp which can be quickly installed on the Picatinny rail for fixing. The operation is simple and convenient. The specific method is as follows:

◎ Firstly, adjust the pressing plate to a proper position by a screw cap;

◎ Then the locking button is pressed to release the locking state of the spanner and open it upon;

◎ Placing the unit on the proper position of the Picatinny rail and return the spanner to clamp tight.

★ The Holo can either be mounted on the Picatinny rail by the fixture or be assembled to the matching handle (the handle needs to be purchased separately) in which can be installed with a single detachable 18650 battery as an external power supply.

6 Product Parameters

Model	 HP06 V2	 HP13	 HL13
Resolution	256×192		320×280
Pixel Size	12μm		17μm
Objective Lens	6.8mm	13mm	13mm
Field of View	25.4°×19.2°	13.3°×10°	23.6°×20.7°
Detection Range (Target size: 1.7m × 0.5m, P(n)=99%)	350m	670m	476m
NETD	⩽40mk		
Frame Rate	25Hz		
Display	1.63" AMOLED		
E-zoom	×1/×2/×3/×4		
Laser	650nm		
Reticle	Multiple patterns and colors options		
Battery	CR123×1		
Max. Battery Time	4.5h		3.5h
IP Rating	IP67		
Dimension	58.5mm×80.5mm×74.5mm		
Weight	<250g (without battery)		

- 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.

7 FCC Statement

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 user

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

Information to the user

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

off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Body 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.

简体中文

1 产品概述

Holo 系列是一款全息热成像仪，可用于夜间察，重量轻、体积小，携带方便，并具有工作时间长、隐蔽性好、可穿透浓烟沙尘或黑夜的特点。

2 部件说明

部件说明

部件说明

3 电池安装

◎ 首先，根据上图所示，沿着逆时针方向拧开电池仓盖；

◎ 然后，将一节CR123 电池，按照机身上的电池安装指示图标所示，即正极朝内、负极朝外的方式，放入电池仓内；

◎ 最后，顺时针拧紧电池仓盖。

★特别说明★

★ 本机具备电池型号的切换功能，支持电压为3V或3.7V的CR123电池，为保证效果推荐使用3.7V的CR123电池；

★ 本机亦可以通过Type-C接口数据线连接外部电源供电，无需取出电池，但是无法为可充电电池充电。

4 操作说明

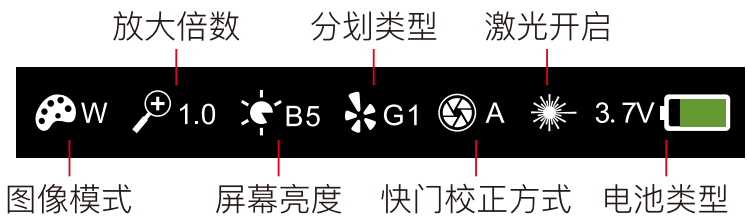
4.1 开关机

关机状态下，按下电源键，热像仪启动，屏幕显示图像画面。

开机状态下，按下电源键，热像仪关机。

4.2 状态显示

热像仪开机后，在图像下方有一行状态栏，显示一些常规功能的当前状态，如下图所示。



4.3 电子变倍

常显界面下，向上推动五向键，×1–×2–×3–×4，图像循环放大。

4.4 快门校正

常显界面下，向下推动五向键，进行快门校正。

4.5 屏幕亮度调节

常显界面下，向左推动五向键，调节屏幕亮度（1–6档）。

4.6 关屏

常显界面下，向右推动五向键，显示屏关闭；再次向右推动，显示屏点亮。

4.7 快捷菜单

常显界面下，短按五向键的中间键，实现快捷菜单1–快捷菜单2–退出快捷菜单的循环操作。进入快捷菜单后，屏幕上会出现“上、下、左、右”四个图标功能，分别对应五向键的“上、下、左、右”键。

快捷菜单1

快捷菜单2

4.7.1 快捷菜单1

快捷菜单1可调节图像模式、激光开关、快门校正方式以及电池型号的选择四个功能。

- **图像模式：**向上推动五向键，切换图像模式，依次为白热(W)–黑热(B)–红热(R)–伪彩(C)–目标凸显模式(H)，

目标凸显模式仅适用于HP13和HL13。

- **激光开关：**向下推动五向键，激光开启/关闭，开启时，屏幕上同时显示红色的圆形激光指示图标“O”。

注 意!

Holo系列全息热像仪配置一个激光指示器，请注意以下几点：

— 请勿用眼睛直视激光；
— 请勿将激光对准人；
— 请勿用光学设备直视激光指示灯；
— 请勿自行拆卸、修改或修理热像仪；
— 激光可能对您的健康有害。

警 告!

Holo系列全息热像仪配置一个符合3R类激光标准的激光指示灯。

激光辐射

避免眼睛受到直接照射

3R类激光产品

此激光波长为635 nm；能量< 5mW.

● **激光位置调整：**激光开启后，向下推动五向键3秒，进入激光位置调整界面，激光指示图标闪烁，通过向上下左右方向推动五向键移动光标位置，长按五向键中间键保存并退出。

● **快门模式：**向左推动五向键，切换快门模式，手动（M）–自动(A)，并显示于屏幕下方状态栏中。

● **电池类型：**向右推动五向键，切换电池电压类型，依次为3V–3.7V，显示于电池图标前面。

4.7.2 快捷菜单2

快捷菜单2主要是调节分划相关的功能参数，包括分划颜色、分划样式、分划类型以及分划位置调整。

注意：分划及相关功能(如快捷菜单2)，在出厂时默认为消隐状态，所以首次使用热像仪时，请按照下–上–下–上–左–左的顺序推动五向键，激活分划及相关功能，重复操作可消隐分划及相关功能。

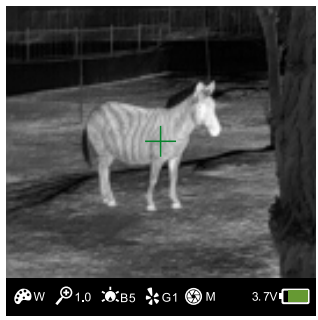
● **分划颜色：**向上推动五向键，进行分划颜色的循环切换，依次为白色–黑色–红色–绿色四种颜色。

● **分划样式：**向下推动五向键，进行分划样式的循环切换，依次为十字、T型、方框、红点四种样式。

● **分划类型：**向左推动五向键，切换分划类型，G1–G2–G3–G4 共可存储4组校枪数据，显示于底部状态栏。

● **分划位置调整：**向右推动五向键，进入分划位置调整界面，然后通过上、下、左、右推动五向键调整分划的位置，完成后长按五向键中键出现“OK”提示，表明已保存当前分划位置状态，并可以通过分划类型调出。

分划位置调整界面



盲元校正界面

4.8 盲元校正

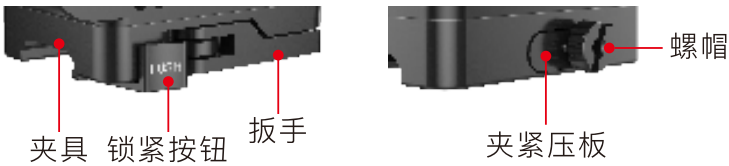
在常显界面下，长按五向键的中间键3秒进入盲元校正界面。沿着上下左右四个方向推动五向键，将光标移动到盲元位置后，短按中间键进行盲元校正并伴随着快门校正的声音。校正完成后，长按中间键保存并退出。

4.9 恢复出厂设置

在常显界面下，按照上–下–上–下–左–左的顺序推动五向键（每次操作间隔时间不超过3秒），进入恢复出厂设置界面，右下角显示当前程序的版本日期。

向上或向下推动五向键选择是否恢复出厂设置；短按中间键确定选择并保存退出。

5 夹具安装



Holo系列底部装有快拆夹具，可以快速安装到皮轨上固定，操作简单、便捷，具体方法如下：

◎首先通过螺帽调节夹紧压板至合适位置；

◎然后按压锁紧按钮，以解除扳手的锁定状态，并掰开扳手；

◎将Holo放在皮轨的合适位置上，掰回扳手即可夹紧皮轨。

★另外，通过夹具除了可以将Holo安装到皮轨上外，还可以安装到配套的手柄上使用（手柄需另外购买），手柄可安装单节可拆卸的18650电池，作为外部电源为Holo进行供电。

6 技术参数

型 号	 HP06 V2	 HP13	 HL13
分辨率	256×192	256×192	320×280
像元尺寸	12μm	12μm	17μm
镜头	6.8mm	13mm	13mm
视场角	25.4°×19.2°	13.3°×10°	23.6°×20.7°
探测距离（目标:1.7m×0.5m，P(n)=99%）	350m	670m	476m
NETD	≤40mk		
帧频	25Hz		
显示屏	1.63” AMOLED		
电子变倍	×1、×2、×3、×4		
激光	650nm		
分划	四种颜色、四种样式可选		
电池	CR123×1		
工作时间(600mAH)	4.5h		3.5h
IP防护等级	IP67		
外形尺寸	58.5mm×80.5mm×74.5mm		
重量	<250g（不含电池）		

❖ 为了完善产品的使用特性，其设计及软件程序可能会持续更新;

❖ 产品技术参数如果改动，将不另行通知。

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