

Saim SCP Series

Quick Start Guide

V1.1

IRay Technology Co., Ltd.

1. Description

The Saim series is a low-cost thermal rifle scope, which can be mounted on various firearms for night hunting and 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 Saim series 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.

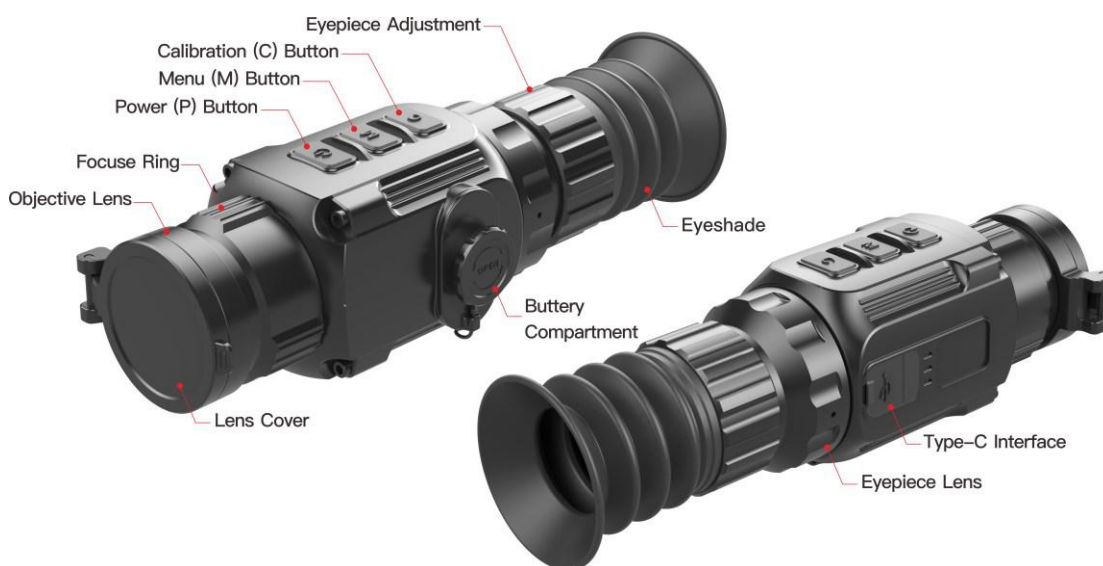


Fig.1 Parts info

2. Battery Assembling



Fig.2 Battery installation

- Open the battery compartment cover anticlockwise according to the

schematic diagram on the cover.

- Install the batteries correctly as shown in Figure 2.
- After installing the batteries, cover and push the battery bay cover till hear “click” sound to ensure both sides of cover being installed correctly.

- - - - - **Attention** - - - - -

- **Disposable batteries ONLY, and there are risks to use rechargeable batteries due to nonstandard quality.**
- Please do not use the different battery models or battery capacity.
- The Saim series supports external power supply via Type-C cable with a USB icon displayed on the screen.

3. Operation

A. Power On/Off

When the scope is off, long press **P** button for 3s and waiting for 6s until thermal image appears to start the unit.

When the scope is on, long press **P** button for 5s until the shutdown option menu appears, select the “√” to shut down and “×” to cancel. Then short press the **M** button to confirm the selection.

B. Diopter adjustment

Rotating the focus ring and eyepiece adjustment to get the clearest image after starting up the unit.

C. Focal length setting

Focus operation is performed by rotating the objective lens adjusting ring.

D. Calibration

Press **C** button for shutter correction and **C** for background correction.

E. Reticle On/Off

Press and hold the **P+C** button simultaneously for three seconds and click the **M** button four times to invoke the reticle for the first time use.

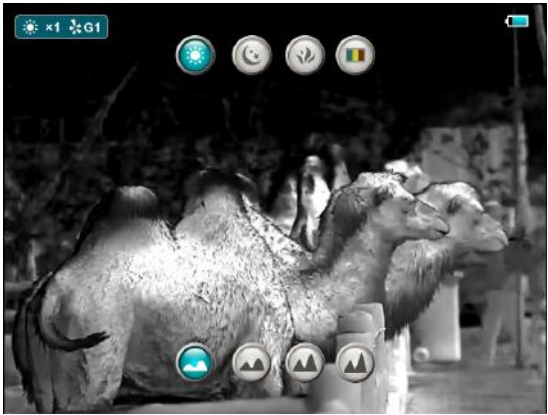
Press and hold **P + M + C** button simultaneously for three seconds to achieve the Shortcut key for switch the reticle on/off. This function should be activated when the reticle first enabled.

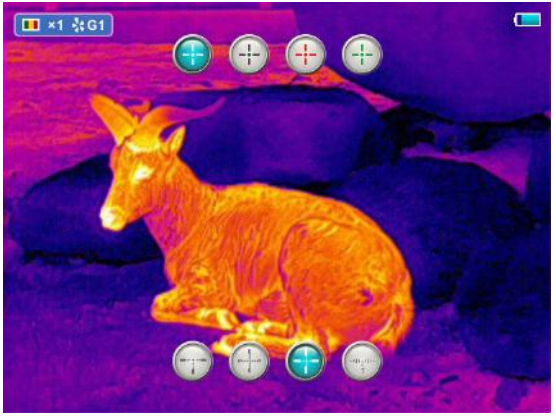
When the reticle is turned off, all the operations related to it in the menu will be hidden, including the adjustment of the reticle color and pattern (in shortcut menu 3), the options of zeroing and blind pixel correction in the advanced menu.

F. Shortcut Menu

In the normal mode, short press the **M** button to pop up the shortcut menu, including the image palette, image sharpness, digital zoom, display brightness, reticle color, reticle pattern, for detail as shown in table1.

Table 1. Shortcut Menu

Times to press M button	Shortcut Menu	Operation
1 time	Pop up Shortcut Menu1 to adjust palette and image sharpness 	➤ Short press P button to switch the image palette type: white hot, black hot, red hot and rainbow. ➤ Press C button to adjust 1 to 4 sharpness level.

2 times	Pop up Shortcut Menu2 to adjust image contrast and screen brightness 	➤ Short press P button to perform image contrast setting from level one to four. ➤ Press C button to switch perform screen brightness setting from level one to four..
3 times	Pop up Shortcut Menu3 to adjust reticle color and reticle pattern 	➤ Short press P button to switch reticle color type: white, black, red and green. ➤ Press C button to switch the reticle pattern.
4 times	Exit Shortcut Menu	——

G. Advanced Menu

- In the normal mode, press and hold the **M button** to enter the advanced menu, which including Auto shutter correction, motion sensor, battery type, zeroing type, zeroing, blind pixel calibration and factory reset. (As shown in fig. 3)
- Switch the function items by **P** and **C button**.
- After selecting the item of function, short press the **M button** to set up the item parameter.
- Long press the **M button** to exit the advanced menu.

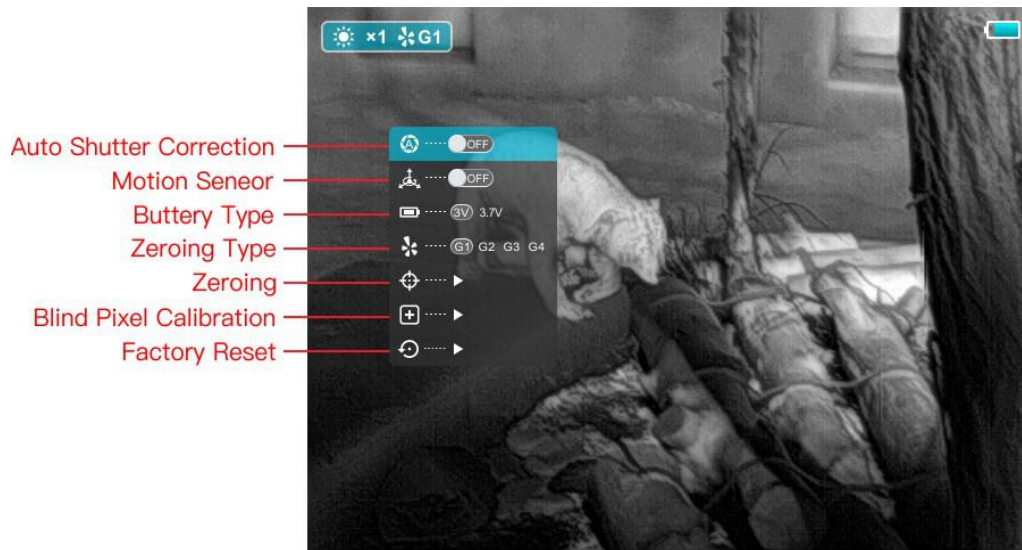


Fig.3 Advanced Menu

H. Auto Shutter Correction

When the function is enabled, the device will automatically performs shutter correction based on the software algorithm if needed.

I. Motion Sensor

When motion sensor is enabled, it will be displayed on the right side of the screen, showing dip Angle and pitch Angle. The horizontal radian scaleplate represents the dip Angle, while the vertical scaleplate represents the pitch Angle.

J. Battery Type

Two battery types can be used according to the battery parameters. If the battery type does not match the battery voltage, the battery power detection will be inaccurate.

3V ordinary dry batteries and 3.7V rechargeable batteries are supported. However, it is not recommended to use the rechargeable battery due to nonstandard quality.

K. Zeroing Type

Short pressing the **M button** to toggle among the zeroing data types. Up to four kinds of zeroing data can be stored.

L. Zeroing

- Before setting Zeroing, please make sure that the reticle is on and select the zeroing type in advanced menu firstly.

- Select the Zeroing item, and press the **M** button to pop up the Zeroing interface as shown in figure 4. In the Zeroing interface, the reticle is shown as a small cross for position adjustment.



Fig. 4 Zeroing interface

- Then aim the center of the reticle at the bull's-eye 100 meters away and shoot.
- Locate the bullet hole after shot.
- **If the bullet hole can be seen on the display screen:**
 - Keep the position of the scope fixed, press and hold the **M** and **C** button at the same time to freeze the image, and a snowflake icon appears on the upper-left corner of the screen.
 - Short press the **M** button to move up, down, left and right. Short press or long-press the **P** or **C** button to move the reticle to the actual impact point position.
 - Press and hold the **M** button to save and exit when the process is done.
- **If the bullet hole cannot be seen on the display screen of the scope:**
 - Measure the horizontal and vertical distance between the bull's eye and bullet hole.
 - According to the measured distance, move the reticle up, down, left and right by short or long -pressing the **P** and **C** key. Short pressing the **M** key to move up, down, left and right. Adjust the reticle position to the

distance marked on the scale plate consistent with the measured distance.

- Press and hold the **M** button to save and exit when the process is done.

Notes

- To ensure the accuracy of the position, aim the bull's-eye again and repeat the operations above after zeroing, until the bull's-eye is hit.
- In the zeroing interface, the reticle moves one pixel when short click **M** or **C** button to the corresponding direction, and ten pixels movement by long pressing. The scale plate on the top and left shows the reticle movement distance.
 - For the SCP19, the digit of scale plate changes by 2.53cm per one-pixel movement.
- In the zeroing interface, there is a white dot that represents the original position of the reticle before calibration.
- After zeroing, the center of all reticles will be changed accordingly.

M. Blind Pixel Calibration

- In the advanced menu, press the **Power/C** button to select the blind pixel calibration item and press the **M** button to enter the calibration interface as shown in figure 5.
- In the blind pixel calibration interface, press **P** and **C** button to move the reticle up/down or left/right. Press **M** button to switch up/down or left/right.
- After selecting the blind pixel, long press **P** and **C** button to calibration, and press the same button again for cancelation. The number of the blind pixels calibrated is displayed on the bottom of the screen.
- Repeat the above process till all blind pixels are calibrated, and long-press the **M** button to save and exit.

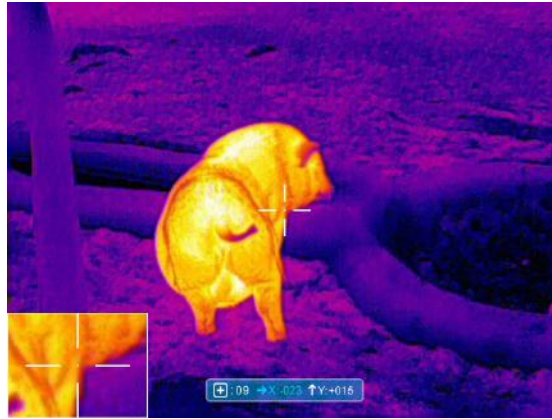


Fig.5 Blind pixel calibration interface

N. Factory Reset

- In the advanced menu, press **Power/C** button to select the default resetting item, then press **M** button to enter the resetting interface as shown in figure 6.
- Then press the **P** and **C** button to switch the option. The “√” is to reset to the default, and the “×” is to cancel.
- When selecting “√” or “×”, short press the **M** button to confirm the selection and exit to the normal interface.



Fig.6 Default resetting interface

4. Shortcut Buttons Instructions

To quickly realize the frequently used functions, the Saim SCP series made the default shortcut keys of the most commonly used functions in the observation interface.

- Short press the **P** button to perform the E-zoom function between 1x and 2x.
- Long press the **P** button for shut down the unit.
- Short press **C** button for shutter correction.

- Long press **C** button for background correction. (cover the lens cap when background correction carried out).
- Long press **M+C** button to perform stadiametric rangefinder function.
- Long press **P+M** button to turn the standby function on/off.

5. Specification

Model	SCP19
Resolution, pixels	256*192
Pixel Size, um	12
NETD, mk	≤40
Frame Rate, Hz	25
Objective Lens, mm	19
Field of View	9.2° × 6.9°
Magnification, x	2.3 ~ 4.6
Diopter Adjustment	-5D ~ +5D
Display	1280×960 LCOS
Battery	CR123×2
Max. Battery Life, h	8
Weight (without batteries), g	<380
Dimension, mm	186×61×61
Interface	Type C
Detection Range, m (Target size:1.7m×0.5m, P(n)=99%)	986