

2023

Colorful
Night Vision




HIGH SPEED
video recording

HIGH
high quality image

• 4K@60FPS

• 1080P@200FPS



ABCSCOPE

PRODUCT MANUAL

HI-SC01





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HI-SC01IMAGES





HI-SC01 SPECIFICATION

	HI-SC01
Field of view at 1000 yds	340ft (6.5°) / 226ft (4.3°)
Magnification	2.8X~22.4X / 4.2X~33X
Eye relief	55mm
Sensor	1080p (1920x1080)
CPU Performance	14nm Quad-Core Processor
Micro Display	1280X720
PHOTO Resolution	1080p(1920x1080)
Video Recording Resolution	1080p@60fps 1080p@30fps
Wi-Fi	IOS and Android (Streaming, Gallery & Controls)
FFP	YES
RVA	YES
Electronic Zoom	1.0X~8.0X
Crosshair	8 reticle options & 6 Color Options
Microphone	Yes
TF CARD	32G/64G/128G/256G TF CARD
USB	type C
IR Illuminator	850nm/940nm
Battery life (Li-ion)	Up to 6 hrs (18650X1)
Battery type	Replaceable
Waterproof rating	Rain proof



FEATURES

- RECORD HIGH QUALITY VIDEO
- TRAJECTORY CALCULATOR 2.0
- BUILT IN HIGH SPEED TF CARD
- RECOIL ACTIVATED VIDEO(RAV)
- SMOOTH VIDEO DISPLAY
- LASER RANGE FINDER(OPTION)
- FFP & SFP
- QUICK ZERO CALIBRATION
- 1280x720 HD DISPLAY
- QUAD CORE PROCESSOR
- SMOOTH ZOOM
- DAY/NIGHT MODES

APPLICATIONS

This product is a digital day & night vision instrument suitable for hunting. ABCSCOPE is determined to produce the world's high-quality scope. Compared with traditional optical products, the digital night vision scope has extremely rich electronic functions.



IMPORTANT NOTES

- The flashlight can only be activated in night mode.
- **Do not look directly at the infrared flashlight, otherwise it will cause damage to the eyes.**
- Infrared flashlight will gather a lot of energy when it is turned on, it is strictly prohibited to align with combustible objects at close range, otherwise it may cause a fire, please turn off the infrared fill light when it is not in use.
- Do not point the lens directly at the sun.
- Sand and seawater can damage the lens coating.
- Please use 3.7V rechargeable lithium battery with constant voltage.
- Do not disassemble the device without permission, if a failure occurs, please contact the manufacturer in a timely manner, otherwise it will be considered as a waiver of warranty service!



■ PREPARING THE DEVICE

List of product accessories

List of product accessories

sight, mount rings, eyeshade, USB cable, flashlight, user guide, carriage bag, cleaning cloth, allen wrench	X1
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First use

Appearance inspection: please carefully check the appearance of the sight to ensure that the product is not damaged during transportation.

Component inspection: Please rotate the mechanical focusing parts and knobs on the sight to ensure that there is no abnormality.

Power on inspection: please press and hold the power button for 3 seconds to start the sight and observe whether the display screen can display normally. If the sight cannot be started normally, please perform the following steps:

- 1》 Check whether the positive and negative poles of the battery are placed correctly or replace the battery and try again;
- 2》 If it still not workable, please contact the manufacturer or after-sales service center.



COMPONENTS INTRODUCTION

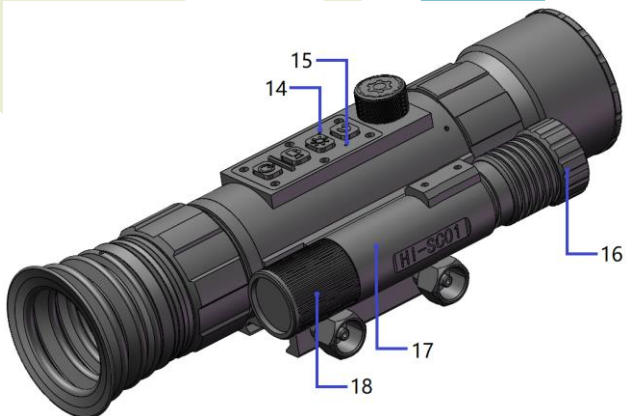
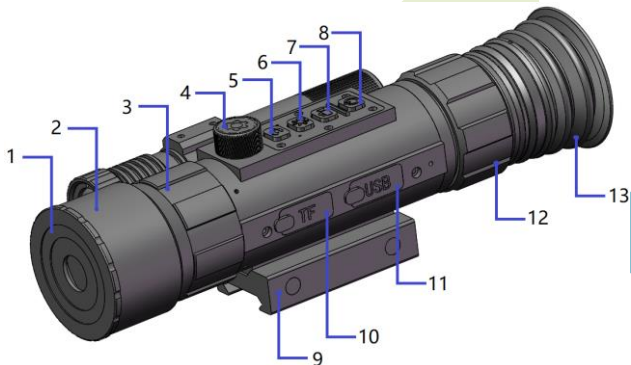




TABLE 1-1.MAIN PARTS

ITEM1	DESCRIPTION1	ITEM2	DESCRIPTION2
1	Diaphragm	10	TF Card Compartment
2	Objective Lens	11	USB Compartment
3	Objective Focus	12	Eyepiece Focus Ring
4	Menu Knob	13	Eye Shade
5	Return Button	14	Microphone
6	Flashlight Button	15	Power Indicator
7	Video/Photo	16	Flashlight
8	Power Button	17	Battery
9	Mount	18	Battery Cap

TABLE 1-2. SHORTCUTS BRIEFING

DESCRIPTION	SHORTCUTS
Menu Knob	Under video/photo mode, clockwise to enlarge the image, reduce the image by counterclockwise.
Power Button	When device is on, short press to switch night/day mode
Video/Photo Button	Short press to start video recording. Press again to end. Long press to switch video/photo function. More details please refer to point<7>
Flashlight Button	In night mode: Long press to activate the flashlight. Click one more time for strong light mode. Long press again to turn off the flashlight.
Return Button	1. Under the Menu interface, help to go back to the previous level of the menu. 2. Under the Main interface, 1st click to activate range finder function, 2nd click to activate BC function, 3rd click to return to main interface.



<1>Diaphragm

When the light is very strong during the day, the use of this diaphragm can reduce the impact of stray light on the equipment, so as to make the image clearer. When the light is very weak or at night, please remove the diaphragm to increase the light input.

<2>Objective Lens

<3> Objective Lens Focus Ring

Rotate the focus ring to obtain clear images at different distances

<4> Menu Knob

- Short press the Menu Knob to enter the setting menu, and rotate the knob to switch the options.
- Short press the Menu Knob to confirm the option parameters.
- Press the Return button to exit the setting menu.

<5> Return Button

- Under the Menu interface, help to go back to the previous level of the menu
- Under the Main interface, 1st click to activate range finder function, 2nd click to activate BC function, 3rd click to return to main interface.

<6> Flashlight Button

In night mode, long press to activate the flashlight.

Click one more time for strong light mode.

Long press again to turn off the flashlight.

<7> Video/Photo Button

- Press and hold 1 send the Photo/video button to switch between Photo mode and video recording mode.



- In the Photo mode, short press the Photo/video knob to take a picture.
- In the recording mode, short press the button to start recording, and then short press it again to end recording.
- Rotate the menu knob clockwise to enlarge the image, reduce the image by counterclockwise.

<8> Power Button

Long press 3 seconds to turn on or turn off the device.

When device is on, short press to switch night/day mode

<9> Mount

<10> TF Card Compartment

Support up to 256G TF Card.

<11> USB Compartment

The standard type-C USB port only supports 5V@2A or below charging power. The USB port also supports data transfer and can be connected directly to a computer to view files.

<12> Eyepiece Focus Ring

Rotate the hand wheel until you can clearly see the characters and crosshair on the display screen.

<13> Eye Shade

Attach to eyepiece when needed. Protect eye from recoil.

<14>Microphone

Voice recording.



<15>Power Indicator

It stays on when the device is turned on, and it is off when the device is turned off.

<16>Flashlight

- There is an 850nm or 940nm flashlight in the packing box.
- when replacing the battery, please hold the middle part of the flashlight (not the head or neck of the flashlight), and then rotate the tail cover to replace the battery.
- Rotate the tail of the flashlight and turn on the flashlight, and switch the light intensity at the same time.
- Make sure the positive and negative battery terminals are placed correctly.
- The flashlight head can be stretched and rotated for spot size adjustment.
- **Warning: do not look directly at the luminous part of the flashlight.**

<17>Battery Compartment

Please use standard 18650 lithium battery.

<18>Battery Cap

Corresponding to the negative electrode of the battery.



Software upgrade

Preparation before upgrade

Please back up the data in the device memory before upgrading. Please check the software version number to determine if you need to upgrade. The software version number of the device can be viewed as follows:

1. Turn on the device, short press the Setting Knob to enter the setting menu, rotate the knob, select the option <more>, and short press the Setting Knob to enter.
2. Rotate the knob to browse different options, and find the option "FW Version" which is the description of the software version.

Software upgrade

Please visit our website to obtain the latest upgrade software and steps:

<https://www.abcscope.com/h-col-105.html>



software upgrade



APP

The device app supports Android and IOS, and can be connected to mobile phone and pad. You can search "ABCSCOPE" in Apple store or Google store, then download and install this app.



ABCSCOPE

App connection steps

1. Turn on the sight and ensure that the Wi-Fi in the sight is turned on.
2. Turn on the Wi-Fi setting option of the mobile phone, select the Wi-Fi option named "ABCSCOPE_xxxxx", and connect this Wi-Fi option. The initial password of Wi-Fi is 88888888.
3. Short press the app icon on the mobile phone to enter.
4. Short press <Connect> to enter the app, and you can watch the video through your mobile phone.

If you fail to enter the app, please try the following methods:

1. Close the app and reopen the app to connect.
2. Turn off the sight, turn it on again, connect the sight's Wi-Fi with your mobile phone, and then reopen the app.

NOTES

- If the device is in the recording state, then after entering the app, the video cannot be viewed on the mobile phone. If the recording function is activated after APP is connected with the device, then you can review the video in APP same as device.
- When you click <Connect> to enter the app, if the mobile phone prompts that the current network cannot access the Internet, do you want to use this network? Be sure to use this network. If the phone cannot access APP, please close the APP



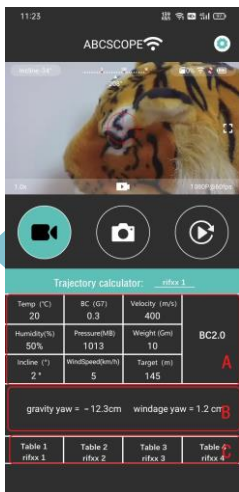
and "Mobile Data" option. Then open APP again after connecting the device successfully, you can open the cell phone "Mobile Data" option. At this time does not affect the normal use of APP.



Trajectory calculator 2.0 (BC 2.0)

Trajectory calculator 2.0 (BC 2.0) can adapt to different devices. Before using this function, you need to fill in some parameters on the mobile app. The specific instructions are as follows.

1. Open the app on the mobile phone, and you will see the Trajectory Calculator area in the lower half of the screen, as shown in the right figure.
2. Trajectory calculator is divided into three areas: A, B and C. All parameters in area A are obtained from the scope and cannot be modified. Area B is the actual calculator result of the Trajectory calculator. Area C has four tables, you can fill in one or all. After filling in, select one of the tables to use. You need to open the scope and find the Trajectory calculator option (BA) in the scope setting menu. Select the table to be used in this option.
3. Open the table 1 in area C to fill in. Please see (IMPORTANT NOTE) for the filling rules. After filling in, you can submit it.





11:24 ABCSCOPE

Trajectory calculator: rifxx 1 **IMPORTANT NOTE**

Temp (°C) 20	BC (G7) 0.3	Velocity (m/s) 400	
Humidity (%) 50	Pressure (mB) 1013	Weight (Gm) 10	BC2.0
incline(*) ≈0°	Wind Speed (km/h) 5	Sight High (cm) 5	

Range(m)	Gravity yam(cm)	Windage	Flying
0	3.333	1.15	
20	3.333	1.15	
40	3.333	1.15	
60	3.333	1.15	
80	3.333	1.15	
100	-14.9 3.333	9.8 1.15	0.267
150	3.333	1.15	
200	3.333	1.15	
250	3.333	1.15	
300	3.333	1.15	
350	3.333	1.15	



Software interface

Main interface

After pressing the power button to start the machine, the first interface on the display screen is the main interface. The main interface consists of video images, status bars at the top and bottom of the screen, and crosshair in the middle of the screen. The icons in the status bar are described as follows:



- ① Incline angle
- ② TF card capacity display
- ③ Wi-Fi status
- ④ Bluetooth status
- ⑤ Battery level indication
- ⑥ Electron magnification value
- ⑦ Photo / Recording / RAV modes indication
- ⑧ Resolution indication

Switching between Photo and Recording mode

- Long press the Photo / video knob to switch the Photo / Recording mode.



- After switching to the Recording mode, short press the Photo / video knob to record the video.
- After switching to the Photo mode, short press the Photo / video knob to take pictures.
- In Recording mode ,The function of RAV (RECOIL ACTIVATED VIDEO) needs to be opened in the setting menu. The specific opening method is described in the following description.

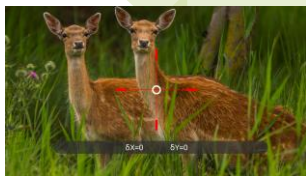
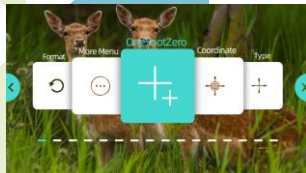
Setting menu

Press the Setting Knob to enter the setting menu. The setting menu has a total of 17 options, which can be switched through the knob.

<1> QUICK ZERO CALIBRATION

Step 1: Use the crosshair on the sight to aim at and shoot the target.

Step 2: Enter the setting menu and select the crosshair calibration option, as shown in the right figure, then short press the Setting Knob to enter.

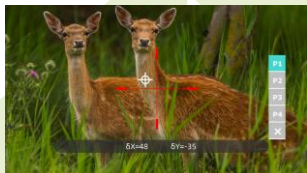


Step 3: as shown on the left figure, the small white circle represents the center of the screen. The red crosshair represents the crosshair currently used. When entering this option for the first time, the red

crosshair is located in the center of the screen, so it coincides with the small white circle. ($\delta X=0 \delta Y=0$) represents the coordinate value of the current crosshair.



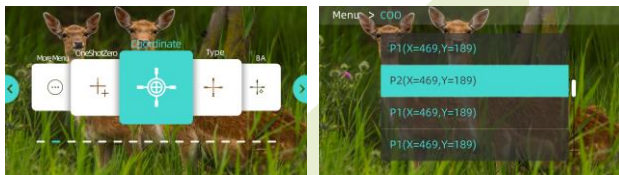
Step 4: rotate any knob to see a white cross line appear on the screen, as shown in the right figure. First the red cross line should coincide with the aiming point, then move the center of the white cross line to the actual impact point. The x-axis movement needs to rotate the Setting Knob, and the y-axis movement needs to rotate the Photo / video knob.



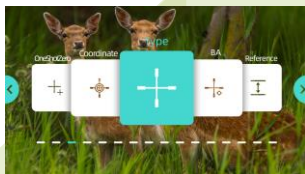
Step 5: short press the Setting Knob to display the vertical bar of the crosshair saving. Rotate the knob to select a location where you want to save the data, and short press the Setting Knob again to return to the previous menu directly. As shown in the left figure, you can also select the "x", which means discarding the current new coordinate, continuing to use the old coordinate, and directly returning to the previous menu.

<2> Crosshair coordinates selection

The device can save up to four coordinates, and you can use any of the crosshair coordinates. The left of the following figure is the option of crosshair coordinate selection, and the right of the following figure is the interface after entering this option. Rotate the knob to select the coordinate to be used, and then press the knob to confirm. Long press the knob to return to the previous menu.

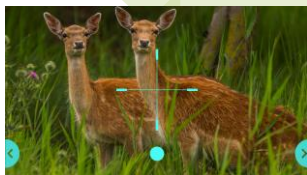
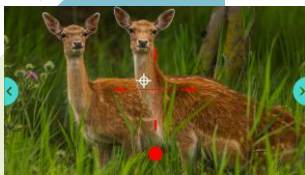


<3>Crosshair shape and color settings



The sight supports any combination of four colors and eight crosshair shapes. Enter the setting menu and select the crosshair calibration option, as shown in the left figure.

Short press the Setting Knob to enter, as shown in the right figure. Rotate the knob to select crosshairs of different shapes.

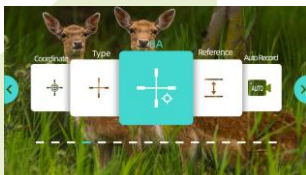


Short press the Setting Knob to switch to color selection, as shown in the left figure. Rotate the knob to select different colors. Long press the knob to return to the previous menu directly.



<4> Trajectory calculator settings (BC 2.0)

Trajectory calculator.



Short press to enter the parameter setting interface of Trajectory calculator, as shown in the left figure. Rotate the knob to switch between different options. Only four parameters can be modified:

Select Table, Wind Speed, Wind Angle and Temp. There are four table options in (Select Table). These tables need to be filled in on the APP. Please refer to Instruction **< Trajectory calculator 2.0>** for specific filling rules

Methods to modify parameters:

for example, to modify temperature parameters, first rotate the knob, select the temperature option temp, and then short press the knob, at this time, a long red line will appear under the temperature option.

You can rotate the knob to increase or decrease the temperature. short press the knob again to exit the parameter editing state, and the temperature parameter is successfully modified. Press and hold the knob for 1 second and return to the previous menu directly.





<5> Optical ranging finder settings

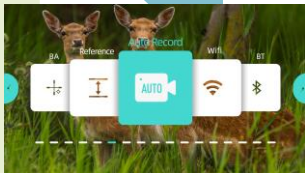
"Reference" option.



to exit the parameter modification mode. The modification is successful.

<6> RECOIL ACTIVATED VIDEO(RAV)

"Auto Record" option: short press the knob to turn this function on or off. When this function is turned on, you can set the recording time. The specific operations are as follows: short press the knob to



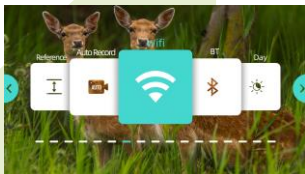
enter the parameter modification mode, then rotate the knob to increase or decrease the value, and then short press the knob again to exit the parameter modification mode. The modification is successful. "Before Fire" refers to the video duration before pulling the trigger, and "After Fire" refers to the video duration after pulling the trigger. Note: the recording duration before pulling the trigger is limited and cannot be unlimited. The specific duration is related to the selected resolution. The greater the resolution, the shorter the



duration.

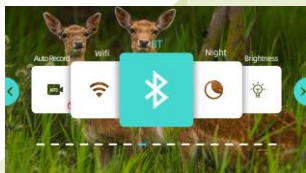
<7> Wi-Fi

Short press the knob to turn Wi-Fi on or off.

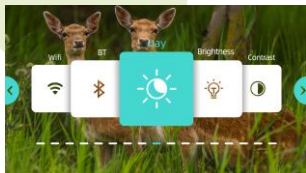


<8> Bluetooth

Short press the knob to turn Bluetooth on or off.



<9> Day mode and night mode switching



Day/Night modes: The figure on the left shows the Day mode. In the Day mode, the image is colorful.

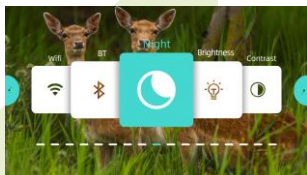
When you exit the setting menu, then long press the Setting Knob, you can switch three

different image states: DAY, DAY+ and COLOR NV. DAY+ and COLOR NV are enhanced modes for daytime and evening, respectively.

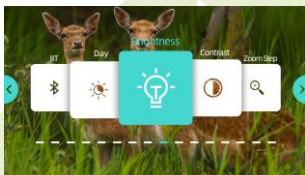


The right figure shows the night mode. In the night mode, the image is not colorful, which can be seen more clearly with an infrared flashlight.

When you exit the setting menu, then long press the Setting Knob, you can switch two different image states: NIGHT and NIGHT+. Night+ is the enhanced mode of night.



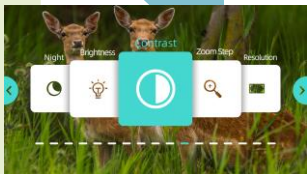
<10> Display brightness setting



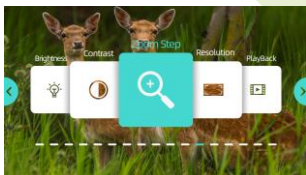
Brightness option

<11> Image contrast setting

Contrast option



<12> Zoom step value setting



Zoom step option:

When set to 0.1x, the change value of electronic magnification is 1.0x ->1.1x ->1.2x

When set to 0.5x, the change value of electron magnification is 1.0x ->1.5x ->2.0x



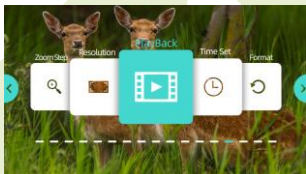
When you set it to 4.0x, the change value of electronic magnification is 1.0x ->5.0x ->8.0x

<13> Resolution setting

Resolution option



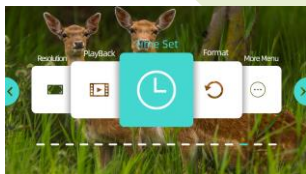
<14> Video / photo playback



Video / photo playback option: As shown in the left figure, the default is video preview. Rotate the knob to switch to photo preview or TF Card formatting options. Press the knob to enter the list of videos or photos, and

then rotate the knob to select the videos or photos to watch. Press the Setting knob to delete the currently played video, and press the Photo/Video knob to pause the video. When browsing video, you can speed up or slow down browsing by rotating Photo/Video knob.

<15> Time setting



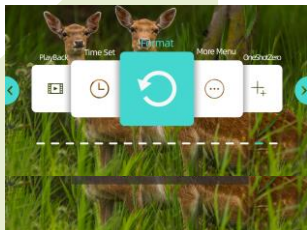
Time setting option: Rotate the knob to modify the parameters and short press the knob to switch to another parameter.



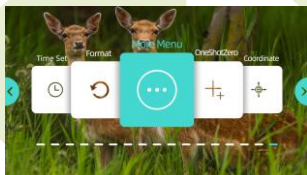
Press and hold the knob for 1 second to save the time parameter and exit.

<16> TF card format

TF card format option: short press the knob, A prompt will appear on the display: **Format Card?** The default is "x". If formatting is required, please select "√", and then short press the knob. The device will prompt again that formatting will delete all data.



<17> More



"more" option: From page 1 to page 5, there are many parameters that can be modified. The first page is the video parameter setting, the second page is the photo parameter setting, the third

page is the function setting, and the fourth and fifth pages are other settings.

Video parameter setting

Video Quality	S.Fine/Fine/Normal: Indicates the video quality stored in the memory card, where s.fine Option has the best video quality, but takes up the most storage space. S.fine is recommended
Video EV	-2.0/-1.7/-1.3/-1.0/-0.7/-0.3/0.0/0.3/0.7/1.0/1.3/1.7/2.0 Exposure Values
Video ISO	100/200/400/800/1600/3200/6400/MAX200/MAX



	400/MAX800/MAX1600/MAX3200/MAX6400 Sensitivity, Recommended max3200
Video shutter time	AUTO 1/60 1/120 1/240 1/480 1/960 Exposure duration, it is recommended to select ATUO
Video Stamp	DT_TM ON/OFF DT_ TM represents a combination of date and time that appears on recorded videos and photos. Off means it will not appear on the recorded videos and photos
Reset Video settings	Restore the parameters on this page to the initial state

Photo parameter setting

Photo Quality	S.Fine/Fine/Normal Indicates the photo quality stored in the memory card, where s.fine indicates the best quality
Photo EV	-2.0/-1.7/-1.3/-1.0/-0.7/-0.3/ 0.0/ 0.3/ 0.7/ 1.0/ 1.3/ 1.7/2.0 Exposure Values
Photo ISO	AUTO/100/200/400/800/1600/3200/6400 , Sensitivity, AUTO recommended
Photo shutter time	AUTO 1/1000 1/500 /250 1/125 1/60 1/30 /15 1/8 1/4 1/2 1 2 5 10 30 60Sec Exposure duration, AUTO recommended
Photo Burst	Off 3P/S Number of consecutive photos per second
Reset Photo settings	Restore the parameters on this page to the initial state

Function setting

Sharpness	Normal/Soft/Strong Image sharpness, strong is recommended
Metering	Center/Multi/Spot



	Metering mode: Center metering, multi-point metering and single point metering
Saturation	S0 ~ S10 Color saturation settings, S5 or S6 is recommended
Auto low light	ON OFF Night vision enhancement options. It is strongly recommended to turn it on. When this function is enabled, the system will automatically reduce the image frame rate to enhance the night vision effect in a weak light environment, but reducing the frame rate will increase the delay of the image
Slow-motion	ON OFF Slow-motion function, If the current recording frame rate is set to 30 frames, this function is disabled
Slow rate	30P/60P/120P Slow motion rate. This option only works when the slow-motion function is enabled. This option indicates the frame rate of the video stored in the TF card, 30P is recommended

Other setting

Mic volume	Off/50%/60%/70%/80%/90%/100% microphone sensitivity
Compass adjust	Incline calibration
Icon hidden	ON OFF Whether the icon is hidden
Reset password	Wi-Fi Restore Wi-Fi password to initial state:88888888
Language	Language selection
FFP	YES/NO
Video encoding	H.264/H.265 Video coding format



Dual files	ON When recording video, the video stored on the memory card is divided into two parts: one is the video source file without any compression, which takes up a large space; the other is the compressed video file, which takes up a small space, but the video quality becomes poor. There is no crosshair in this small video file
Tv mode	PAL/NTSC TV mode
Fw version	Vx.xx Software version
Reset other settings 2	Restore the parameters on this page to the initial state
Factory reset settings	YES/NO Restore to the factory settings, and all parameters will be lost



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