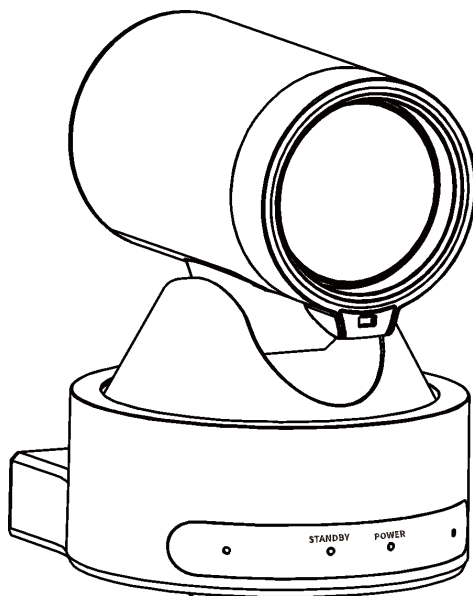


YoloLiv VertiCam PTZ Camera



User Manual English (V1.0)

Copyright

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Notice

Product specifications and information which were referred to in this document are for reference only. We may change, delete, or update any content at any time and without prior notice.

FCC NOTICE (Class A)



This device complies with Part 15 of the FCC Rules. The 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.



Note

This equipment has been tested and found to comply with the limits for a Class A 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/television technician for help.

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:



Warning

Operating this equipment in a residential environment may cause radio interference.

European Community Compliance Statement (Class A)



This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2014/30/EU.

1 Safety Precautions

- During the installation and operation, all electrical safety regulations of the country and region of use must be strictly observed.
- Please use the power adapter that comes standard with this product.
- Do not connect multiple devices to the same power adapter (exceeding capacity of the adapter may generate excessive heat or cause fire).
- Do not rotate the camera by hand, otherwise it may cause mechanical failure.
- When installing this product on a wall or ceiling, make sure the device securely and there are no obstacles within the rotation range; Do not power on until all installations are completed.
- To avoid heat build-up, please keep smooth ventilation around the device.
- If the device smokes, smells, or makes noises,

- please turn off the power and unplug the power cord immediately, then contact the dealer in time.
- This device is not waterproof, please keep the device dry.
 - This product has no user serviceable parts, damage caused by disassembly by the user is not covered by the warranty.



Notice

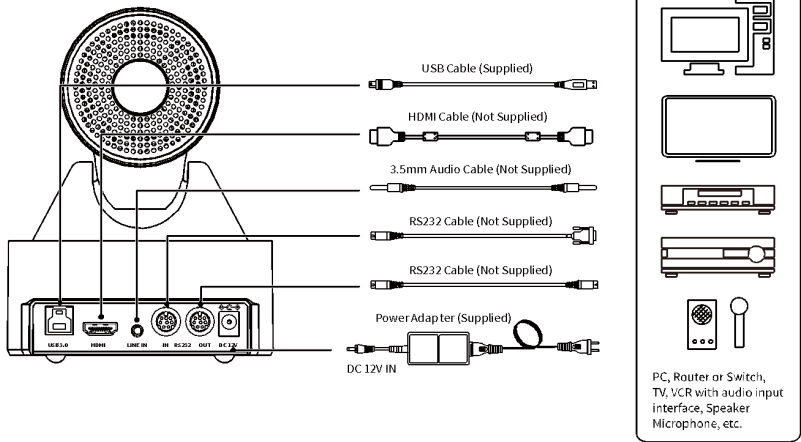
Specific frequencies of electromagnetic field may affect the image of the camera!

2 Packing List

Name	Quantity
Camera	1
Power Adapter	1
Remote Control	1
USB Cable	1
User Manual	1

3 Quick Start

- 1) Please check connections correct before starting.



- 1) Connect the power adapter to the power connector on the rear panel of camera. The power indicator on the front panel of the camera turns on.
- 2) After the camera is powered on, it starts to initialize, right up to the limit position, and then both horizontal and vertical go to the middle position. When the motor stops running, it indicates the initialization is completed.

4 About Product

4.1 Features

● Full Function USB Interface

Full function USB interface, compatible with USB3.0 and USB2.0, support UVC v1.1 and UAC 1.0 protocol, support video raw image and encoding output.

● 1080P Full HD

The new 1/2.8-inch high-quality HD CMOS sensor with 2.07 million effective pixels enables high-quality images up to 1920x1080. Output frame rate is up to 60 frames/s to present clear and realistic HD video, vividly showing the expression and action of the characters.

● 72.5° Wide-angle Lens

The exclusively customized 72.5° high-quality ultra-wide angle lens with optical zoom up to 12x.

● Low Illumination

The new CMOS image sensor with ultra-high SNR can effectively reduce the image noise under low illumination. The application of 2D and 3D noise reduction algorithm greatly reduces the image noise even under the condition of ultra-low illumination, it keeps the picture clean and clear, and the SNR of image is as high as 55dB.

● Remote Control

The camera can be controlled remotely through the RS232 and USB port.

● Leading Auto Focus Technology

Using the advanced focusing algorithm and TOF module assists focusing, lens can focus quickly, accurately and stably.

● Multiple & Complete Interfaces

Support audio and video output via HDMI (optional) and USB 3.0 interface.

● Portrait

Support portrait output.

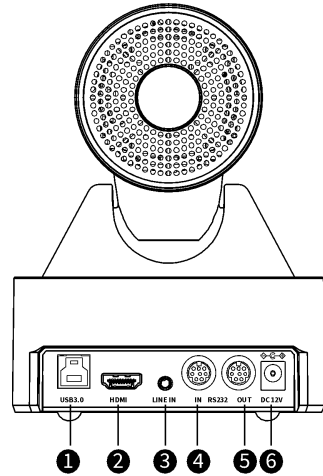
● Easy to Use

No need to download the driver, plug and play USB output to take a convenient and simple user experience.

4.2 Product Specification

Camera	
Video System	1080P60, 1080P50, 1080P30, 1080P25, 720P60, 720P50
Sensor	1/2.8-inch, CMOS, Effective Pixel: 2.07M
Scanning Mode	Progressive
Lens	12x, f=3.5mm ~ 42.3mm, F1.8 ~ F2.8
Digital Zoom	16x
Minimum Illumination	0.5 Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual, VAR
Backlight Compensation	Support
Digital Noise Reduction	2D&3D Digital Noise Reduction
SNR	≥55dB
Horizontal FOV	72.5° ~ 6.9°
Vertical FOV	44.8° ~ 3.9°
Pan Angle	±170°
Tilt Angle	-25° ~ +30°
Pan Speed	1.61° ~ 75.56°/s
Tilt Speed	0.44° ~ 15°/s
Image Flip	Support
Image Freeze	Support
Preset Position	255
Preset Accuracy	0.1°

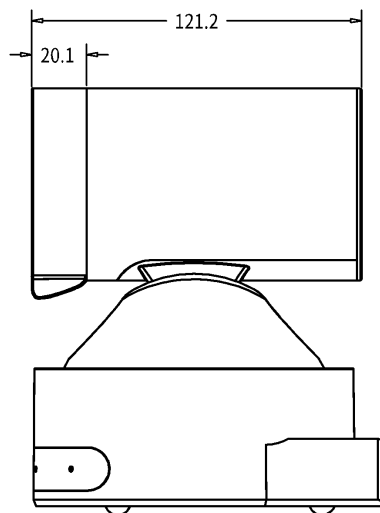
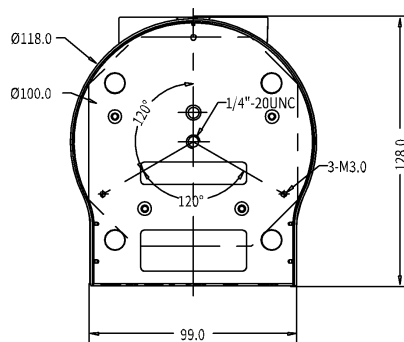
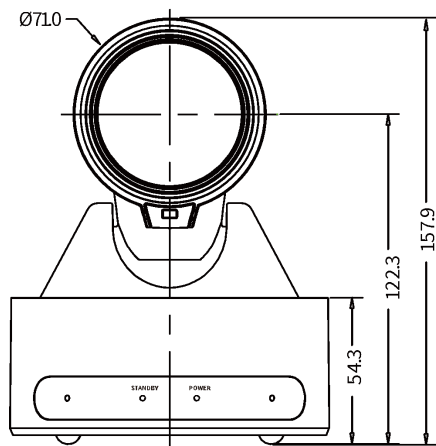
MIC Pick-up Distance	6m
USB Features	
Operate System	Windows 7, Windows 8, Windows 10, Mac OS X, Linux, Android
Color System/Compression	MJPG/YUY2
Video Format	<ul style="list-style-type: none"> ● YUY2 (ISOC): 1080P@60fps (max.) ● MJPEG: 1080P@60fps (max.)
USB Audio	Support
USB Video Communication Protocol	UVC 1.1
UVC PTZ	Support
Interfaces	
USB Interface	1 x USB3.0: Type-B
HDMI Interface	1 x HDMI 1.4b
Audio Interface	1 x LINE IN, 3.5mm
Communication Interface	1 x RS232 IN: 8pin min DIN; Max. Distance: 30m; Protocol: VISCA/Pelco-D/ Pelco-P 1 x RS232 OUT: 8pin min DIN; Max. Distance: 30m; Protocol: VISCA network use only
Power Jack	JEITA type (DC IN 12V)
General Specifications	
Input Voltage	DC 12V
Input Current	1.5A (max.)
Operating Temperature	-10°C ~ 40°C
Storage Temperature	-40°C ~ 60°C
Power Consumption	12W (max.)
Dimension	128mm x 118mm x 157.9mm
Net Weight	1.0Kg



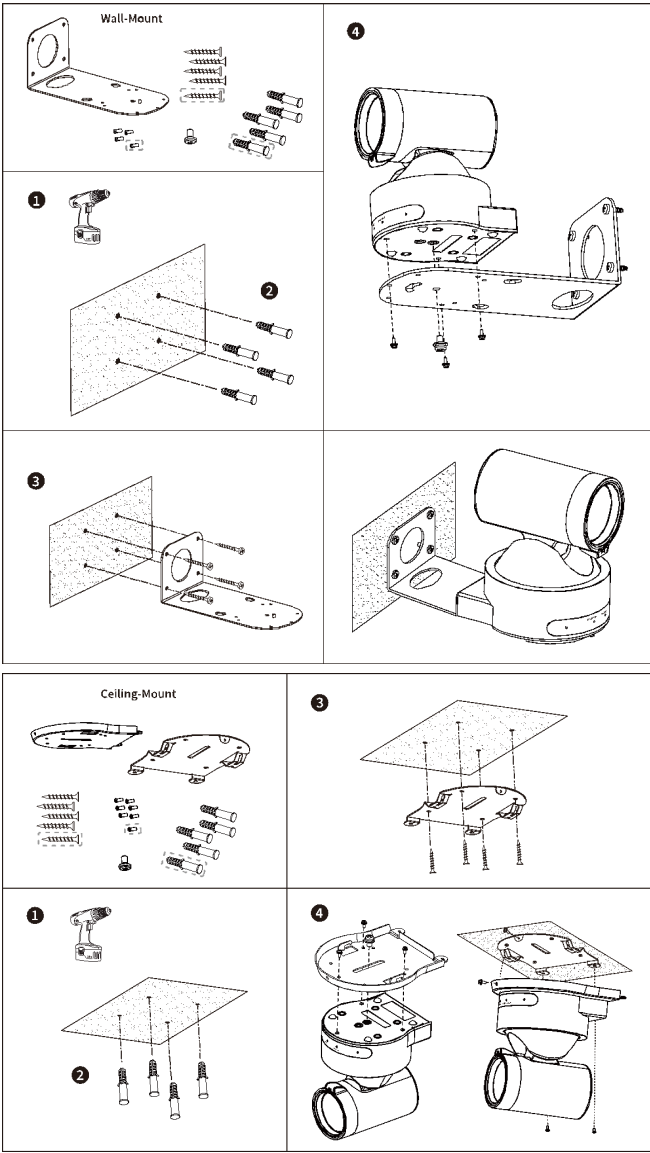
Item	Name
1	USB3.0 Interface
2	HDMI Interface
3	LINE IN Interface
	RS232 IN Interface
	RS232 OUT Interface
	DC 12V Interface

4.3 Interfaces and Buttons

4.4 Dimension

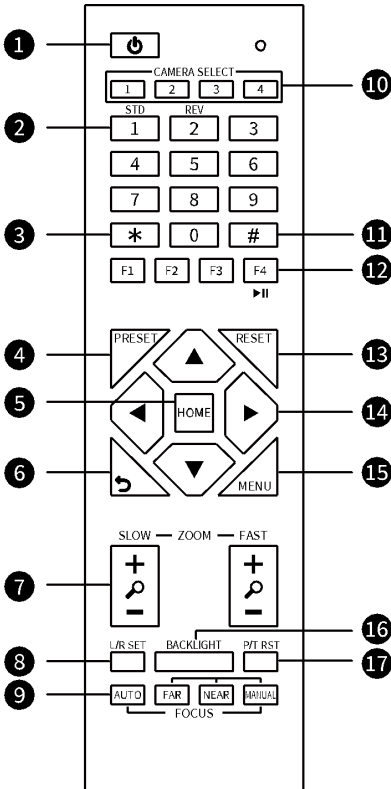


4.5 Installation



Note

4.6 Remote Control



Key Description

1. ⏻ (Standby) Key

Press to enter standby mode

2. Number Key

To set preset or call preset

3. * Key

Use with other keys

4. PRESET Key

Set preset: [PRESET] + Number key (0-9)

5. HOME Key

Confirm selection or press to turn PTZ back to the middle position

6. ↶ (Return) Key

Press to return to the previous menu

7. ZOOM Key

● SLOW: Zoom In [+] or Zoom Out [-] slowly

● FAST: Zoom In [+] or Zoom Out [-] fast

8. L/R SET Key

● Standard: Simultaneously press L/R SET + 1

● Reverse: Simultaneously press L/R SET + 2

9. FOCUS Key

Auto/Manual/Far/Near focus

10. CAMERA SELECT Key

Press to select and control the camera

11. # Key

Use with other keys

12. IR Remote Control Key

[*] + [#] + [F1]: Address 1

[*] + [#] + [F2]: Address 2

[*] + [#] + [F3]: Address 3

[*] + [#] + [F4]: Address 4

13. RESET Key

Clear the preset position: [RESET] + Number key (0-9)

14. PTZ Control Key

PTZ moved according to the arrow indicates

15. MENU Key

Enter or exit OSD MENU

16. BACKLIGHT Key

Backlight ON/OFF: Press repeatedly to enable or disable the backlight compensation.

NOTE:

● Effective only in auto exposure mode.

● If there is a light behind the subject, the subject will become dark, press the backlight key to enable the backlight compensation. Press again to disable this function.

17. P/T RST (PTZ Reset) Key

Press to preset Pan/Tilt self-test.

Shortcut Set

[*] + [#] + [1]: OSD menu default English

[*] + [#] + [3]: OSD menu default Chinese

[*] + [#] + [6]: Quickly recover the default

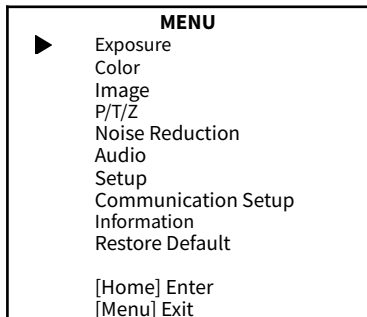
[*] + [#] + [8]: Check the camera version

[*] + [#] + [9]: Quickly set up inversion

5 GUI Settings

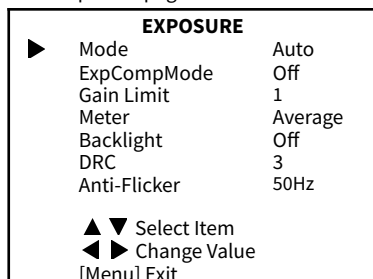
5.1 MENU

Press [MENU] key to display the main menu on the screen. Use the arrow key to move the cursor to desired item and press the [HOME] key to confirm to enter the corresponding sub-menu.



5.2 EXPOSURE

When in main menu page, move the cursor to [Exposure] and press [HOME] key to confirm to enter the Exposure page as below.



Mode: Auto, Manual, SAE, AAE, Bright.

ExpCompMode (Exposure Compensation Mode): On, Off (Effective only in Auto mode).

ExpComp (Exposure Compensation Value): -7 ~ 7 (Effective only in ExpCompMode On).

Gain Limit: 0 ~ 15 (Effective in Auto, SAE, AAE, Bright mode).

Meter: Average, Center, Bottom, Top (Effective in Auto, SAE, AAE, Bright mode).

Backlight: On, Off (Effective only in Auto mode).

Bright: 0~17 (Effective only in Bright mode).

Anti-Flicker: Off, 50Hz, 60Hz (Effective in Auto, AAE, Bright mode).

Iris: F1.8, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11.0, Close (Effective in Manual, AAE mode).

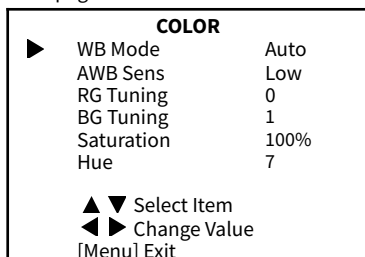
Shutter: 1/30, 1/60, 1/90, 1/100, 1/125, 1/200, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 (Effective in Manual, SAE mode).

Gain: 0 ~ 7 (Effective only in Manual mode).

DRC: 0 ~ 8.

5.3 COLOR

When in main menu page, move the cursor to [Color] and press [HOME] key to confirm to enter the Color page as below.



WB-Mode (White Balance Mode): Auto, Indoor, Outdoor, One Push, Manual, VAR.

AWB Sens (The White Balance Sensitivity): Low, Middle, High (Effective in Auto, One Push mode).

RG (Red Gain): 0~255 (Effective only in Manual mode).

BG (Blue Gain): 0~255 (Effective only in Manual mode).

RG Tuning (Red Gain Tuning): -10 ~ +10 (Effective in Auto, One Push, VAR mode).

BG Tuning (Blue Gain Tuning): -10 ~ +10 (Effective in Auto, One Push, VAR mode).

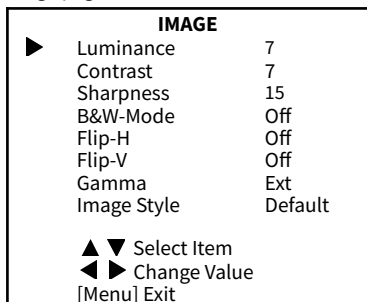
Saturation: 60% ~ 200%.

Hue: 0 ~ 14.

Color Temp: 2500K ~ 8000K (Effective only in VAR mode).

5.4 IMAGE

When in main menu page, move the cursor to [Image] and press [HOME] key to confirm to enter the Image page as below.



Luminance: 0 ~ 14.

Contrast: 0 ~ 14.

Sharpness: 0 ~ 63.

B&W-Mode: On, Off.

Flip-H: On, Off.

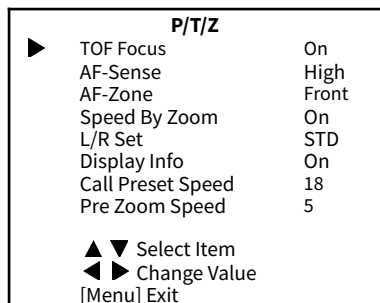
Flip-V: On, Off.

Gamma: Ext, Default, 0.45, 0.5, 0.56, 0.63.

Style: Default, Norm.

5.5 P/T/Z

When in main menu page, move the cursor to [P/T/Z] and press [HOME] key to confirm to enter the P/T/Z page as below.



TOF Focus: On, Off.

AF-Sense (Auto Focus Sensitivity): Low, Normal, High.

AF-Zone (Auto Focus Area): Front, Top, Middle, Bottom.

Speed By Zoom (The Depth of Field Ratio): On, Off.

L/R Set: STD, REV.

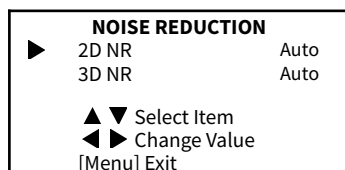
Display Info: On, Off.

Call Preset Speed: 1 ~ 24.

Pre Zoom Speed: 0 ~ 7.

5.6 NOISE REDUCTION

When in main menu page, move the cursor to [Noise Reduction] and press [HOME] key to confirm to enter the Noise Reduction page as below.

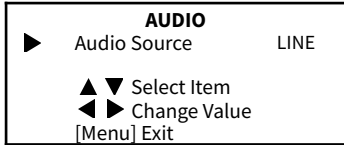


2D NR (2D Noise Reduction): Auto, Off, 1 ~ 5.

3D NR: (3D Noise Reduction): Auto, Off, 1 ~ 8.

5.7 AUDIO

When in main menu page, move the cursor to [Audio] and press [HOME] key to confirm to enter the Audio page as below.

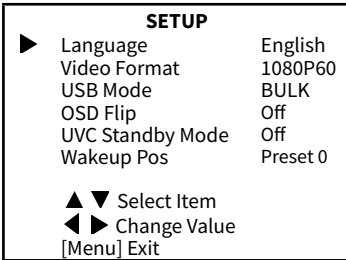


Audio Source: Off, LINE, MIC.

NR-Switch: On, Off (Effective only in MIC audio source)

5.8 SETUP

When in main menu page, move the cursor to [Setup] and press [HOME] key to confirm to enter the Setup page as below.



Language: English, Chinese.

Video Format: 1080P60, 1080P50, 1080P30, 720P60, 720P50.

USB Mode: ISOC, BULK.

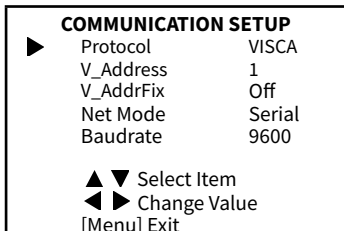
OSD Flip: On, Off.

UVC Standby Mode: On, Off.

Wakeup Pos: Preset 0, Preset UVC.

5.9 COMMUNICATION SETUP

When in main menu page, move the cursor to [Communication Setup] and press [HOME] key to confirm to enter the Communication setup page as below.



Protocol: VISCA, PELCO-D, PELCO-P.

V_Address: 1 ~ 7 (Effective only in VISCA protocol).

V_AddrFix: On, Off (When set to On, the 88 30 01 FF command does not work. Effective only in VISCA protocol).

P_D_Address: 0 ~ 254 (Effective only in PELCO-D protocol).

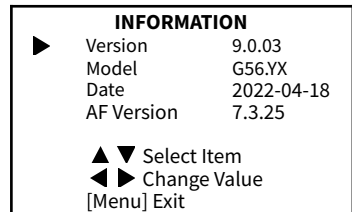
P_P_Address: 0 ~ 31 (Effective only in PELCO-P protocol).

Net Mode: Serial, Paral (Effective only in VISCA protocol).

Baudrate: 2400, 4800, 9600, 19200, 38400.

5.10 INFORMATION

When in main menu page, move the cursor to [Information] and press [HOME] key to confirm to enter the Information page to check the product information.



Note

The above information is for reference only, please refer to the real product for the actual specification.

5.11 RESTORE DEFAULT

When in main menu page, move the cursor to [Restore Default] and press [HOME] key to confirm to enter the restore default page as below.



Restore: Yes, No.



Notice

When selected “Yes” and confirm with [HOME] key, all parameters will restore to default, include the IR Remote address and VISICA address.



Note

GUI menu and parameters are subject to change without notice.

6 Troubleshooting

Image

- The monitor shows no image
 - 1) Check that the camera power supply is connected, the voltage is normal, and the power indicator is always on.
 - 2) Turn off the power switch to check whether the camera is self-testing.
 - 3) Check the cable of video platform and TV whether in correct connection.
- Image jitters after the camera is properly connected
 - 1) Check that the camera installation position is stable.
 - 2) Check that any vibrating machinery or object near the camera.

Control

- Remote control does not work
 - 1) Check and replace with new batteries.
 - 2) Check that the camera is in normal working mode.
 - 3) Check the address key of remote control can match the camera.
- Serial port cannot control
 - 1) Check the protocol, address and bit rate of the camera are consistent.
 - 2) Check the control cable is properly connected.

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