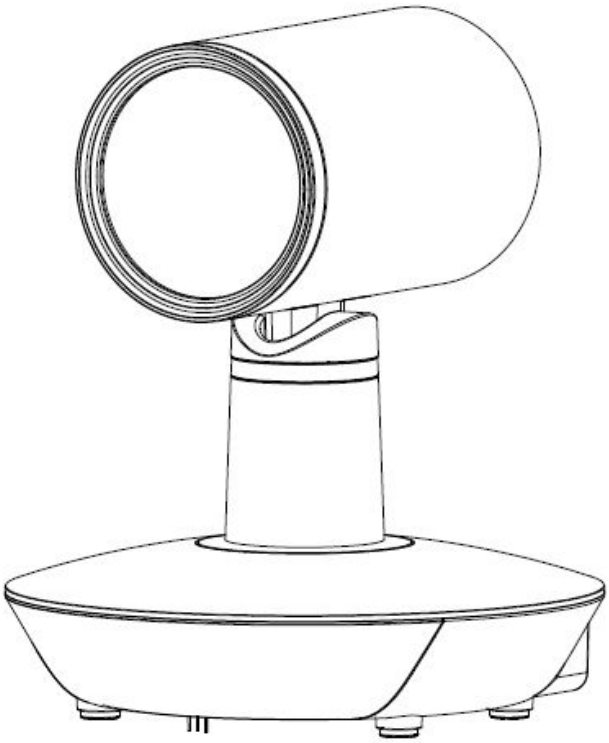
HD E-PTZ Video Camera



User Manual

（English）

Preface:

Thanks for using our HD color video conference camera.

This manual introduces the function installation and operation of the HD camera. Prior to installation and usage, please read the manual thoroughly.

Warning

This product can be only used in specified range in order to avoid any damage or danger;

●Don't expose the camera to rain or moisture place

●Don't remove the cover to reduce the risk of electric shock. Refer servicing to qualified personnel.

●Never operate the camera under unqualified temperature , humidity and power supply;

●Please use the soft cloth to clean the camera. Use neuter cleanser if bad smeared .Don't use the strong or cleanser avoiding scuffing.

Notes

Electromagnetic fields at the specific frequency may affect the image quality.

【Contents】

Notes

Electric Safety

Installation and operation must accord with electric safety standards.

Caution to transport

Avoid stress, vibration and soakage in transport, storage and installation.

Polarity of power supply

The power supply of the product is ±12V; the max electrical current is 2A.

Polarity of the power supply as the following drawing

Install Carefully

Never move the camera by seizing the camera head. Don't rotate camera head by hand; otherwise, mechanical trouble will occur.

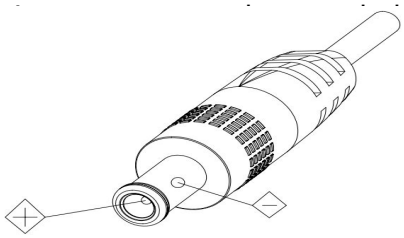
This seri esk or platform, and it can not be installed slantways;

If the ca r, the base can be fixed by three double-sided adhesive trays.

Don't ap d environment to avoid the cover which is made up of organic material.

ion range

Never pc mpleted



Don't dispatch discretionarily

We are not responsible for any unauthorized modification or dismantling.

Accessories

When you open the box, check that all the supplied accessories are included:

Camera.....1

Power adapter 1

Power cable.....1

RS232 cable.....1

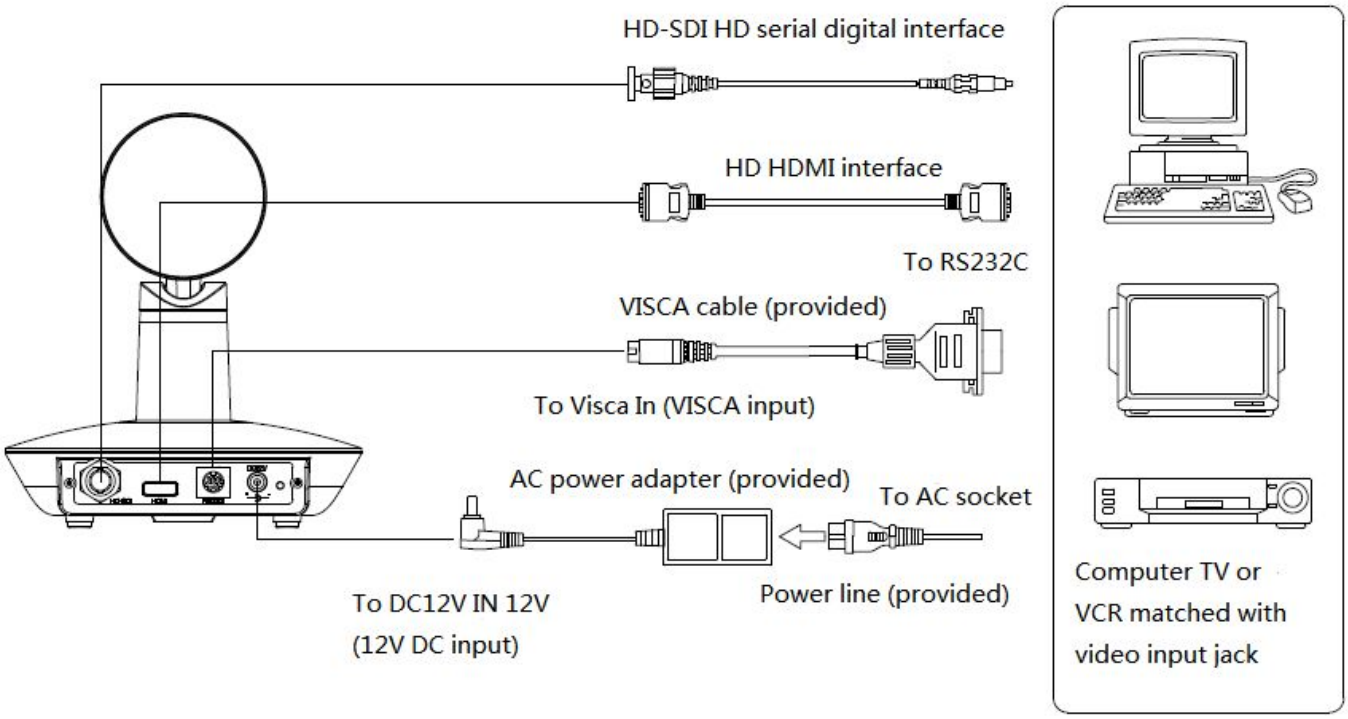
Remote controller.....1

User manual 1

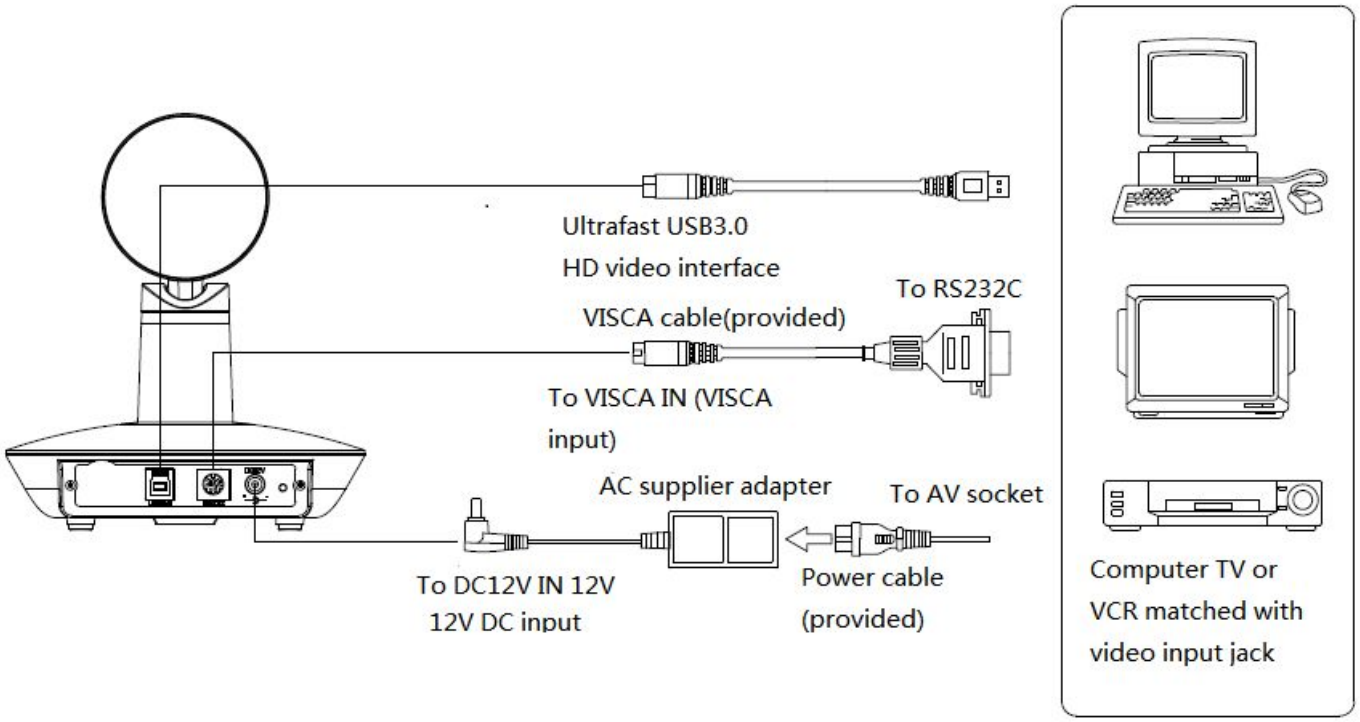
Double-side glue shim 4

Fast Installation

1、Pls check whether cable connection is correct。

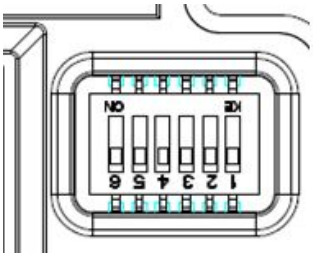


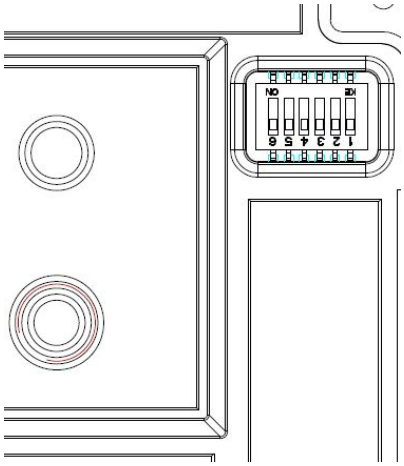
UV500-A9-H Model



UV500-A9-U3 Model

2、Dial switch setting at the bottom.
Two DIP switch is set to OFF，ie, choose normal working mode .





UV500-A9-H

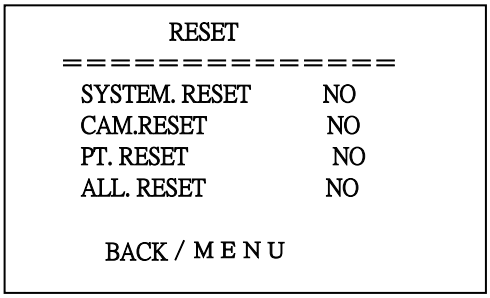
	SW2-2	SW2-1	SW2-3	SW2-4	SW2-5	SW2-6	Explanation
1	ON	OFF	NC	NC	NC	NC	Undefined
2	OFF	OFF	NC	NC	NC	NC	Updating mode
3	OFF	ON	NC	NC	NC	NC	Debugging mode
4	ON	ON	NC	NC	NC	NC	Working mode

UV500-A9-U3

	SW2-2	SW2-1	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	Explanation
1	ON	OFF	NC	NC	NC	NC	NC	NC	Undefined
2	OFF	OFF	NC	NC	NC	NC	NC	NC	Updating mode
3	OFF	ON	NC	NC	NC	NC	NC	NC	Debugging mode
4	ON	ON	NC	NC	NC	NC	NC	NC	Working mode
5	NC	NC	NC	NC	NC	NC	NC	NC	Undefined
6	NC	NC	NC	NC	NC	NC	NC	NC	Undefined
7	NC	NC	NC	NC	NC	NC	ON	OFF	USB3.0 programming mode
8	NC	NC	NC	NC	NC	NC	OFF	ON	USB3.0working mode

3.When the camera is power-on and begin initialize, front panel lights lit in red-yellow-green order cycle, until the front panel indicator light on to green fixedly, the initiation is completed.(Note: If the power-on mode is open and saved preset position 0 or 1, then the camera will go to preset 0 or 1 if no operation within 12 secs after power on)

4、Factory Default : entry OSD menu by pressing the menu key, 【MENU】-> 【RESET】-> 【ALL RESET】, moving the left/right key to select 【Yes】 ，then confirm by 【HOME】。



5.Camera standby：Press the "standby" button on the remote controller, the image is closed and the working light will be out, the light flashes once every 20s. If to restart the self-inspection, pls press "standby" again.

Camera Highlights

1、EPTZ: electronic pan tilt zoom function；

2，Chinese / English menu,convenient to use.；

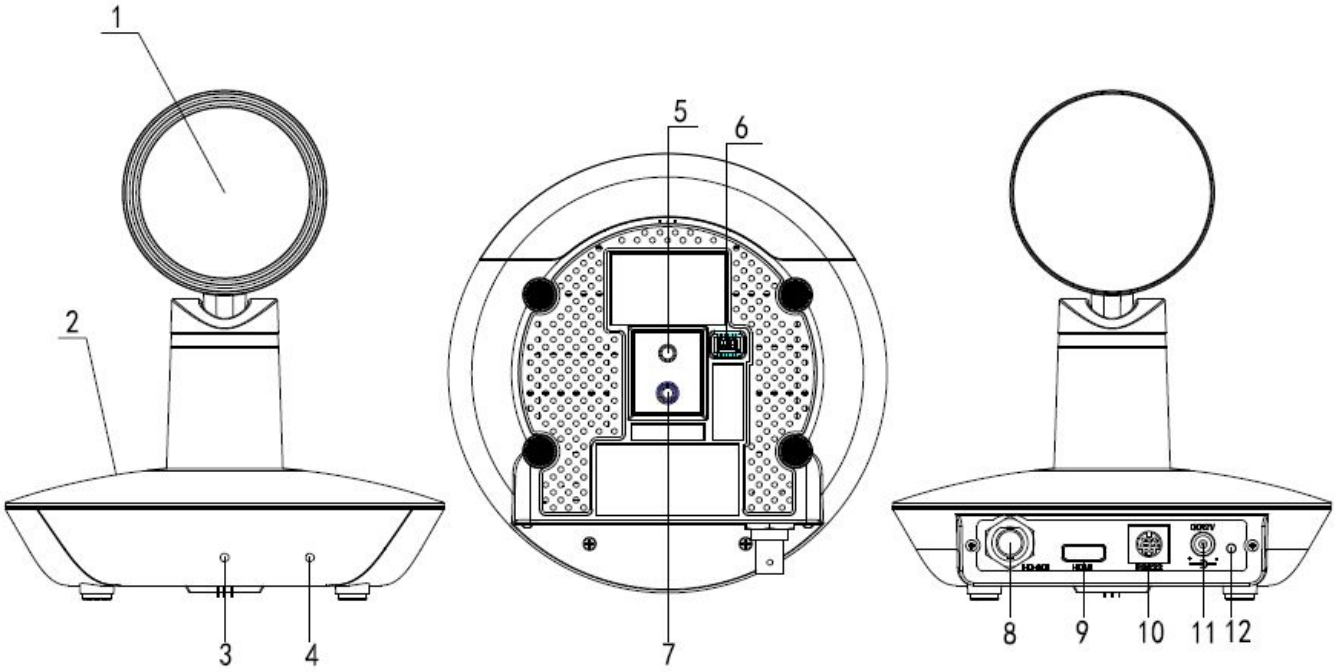
3、Multi interfaces：USB3.0(UV500-A9-U3) or HD-SDI. HDMI(UV500-A9-H)；

4、IR remote controller signal transparent transmission function: camera can receive both its own remote controller signal and the one from terminal equipment, by transmitting the signal through VISCA IN to terminal equipment IR receiver.

Camera Specifications:

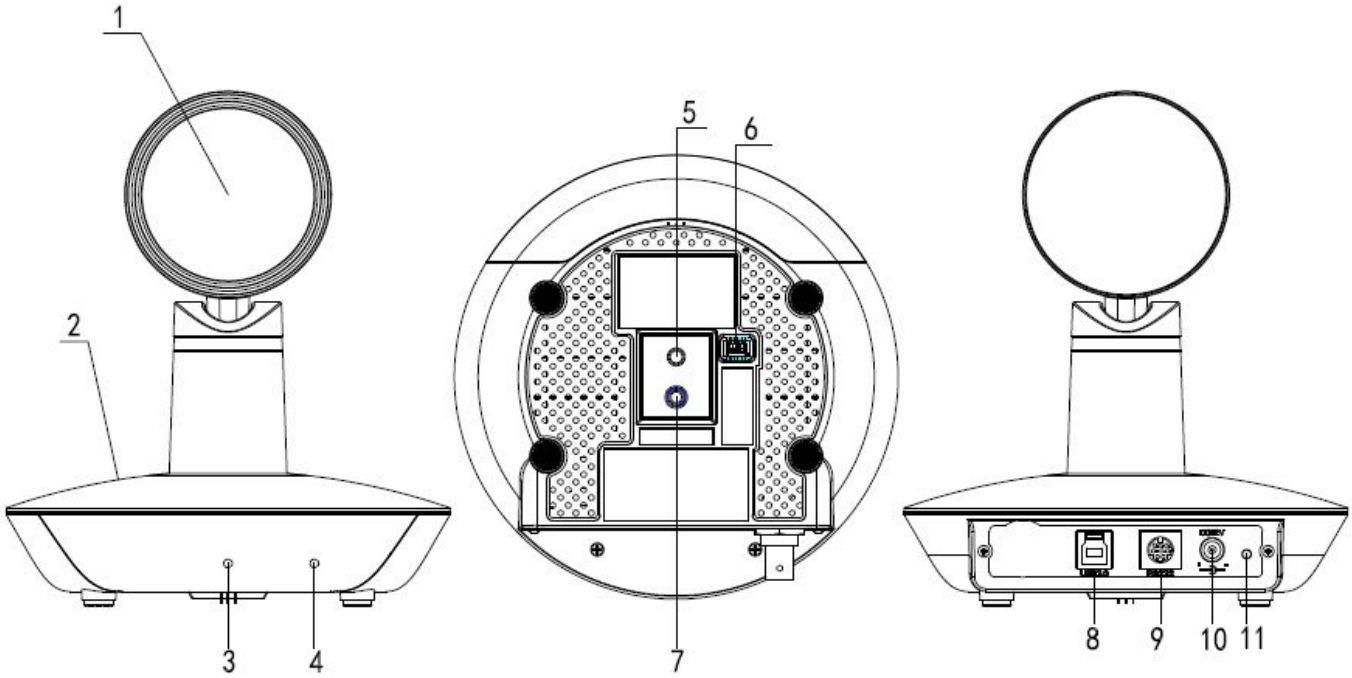
- video format : 1080P30
- Video Output Interface : USB3.0(UV500-A9-U3) or HD-SDI and HDMI(UV500-A9-H)
- Image Sensor : SONY IMX117CQT-D
- Lens: 2.46 mm ±5%，F2.2±5%, angle of view: 106.2°
- Mechanism (Manual Rotation): ±90°for pan rotation, and -25°~+25°for tilt rotation, support up-side-down installation
- Electronic P/T/Z : ±46°for pan rotation, and -25°~+25°for tilt rotation
- Presets: 10 preset positions (can reach to128 presets by serial command), precision error less than 0.1°
- Support auto/ manual white balance , auto/manual exposure (iris , shuttle)
- support WDR function: with performance ≥100dB
- Control Signal interface : 8 pins mini DIN--RS232/RS485，VISCA/Pelco-D/Pelco-P protocol
- Power interface : HEC3800 power jack , Power supply adapter: DC12V/2A
- Max power consumption: 6W
- Working temperature: -0℃ to +45℃
- Storage temperature:-10℃ to +60℃
- Weight: 1.0KG

Camera Interface Explanation



UV500-A9-H model

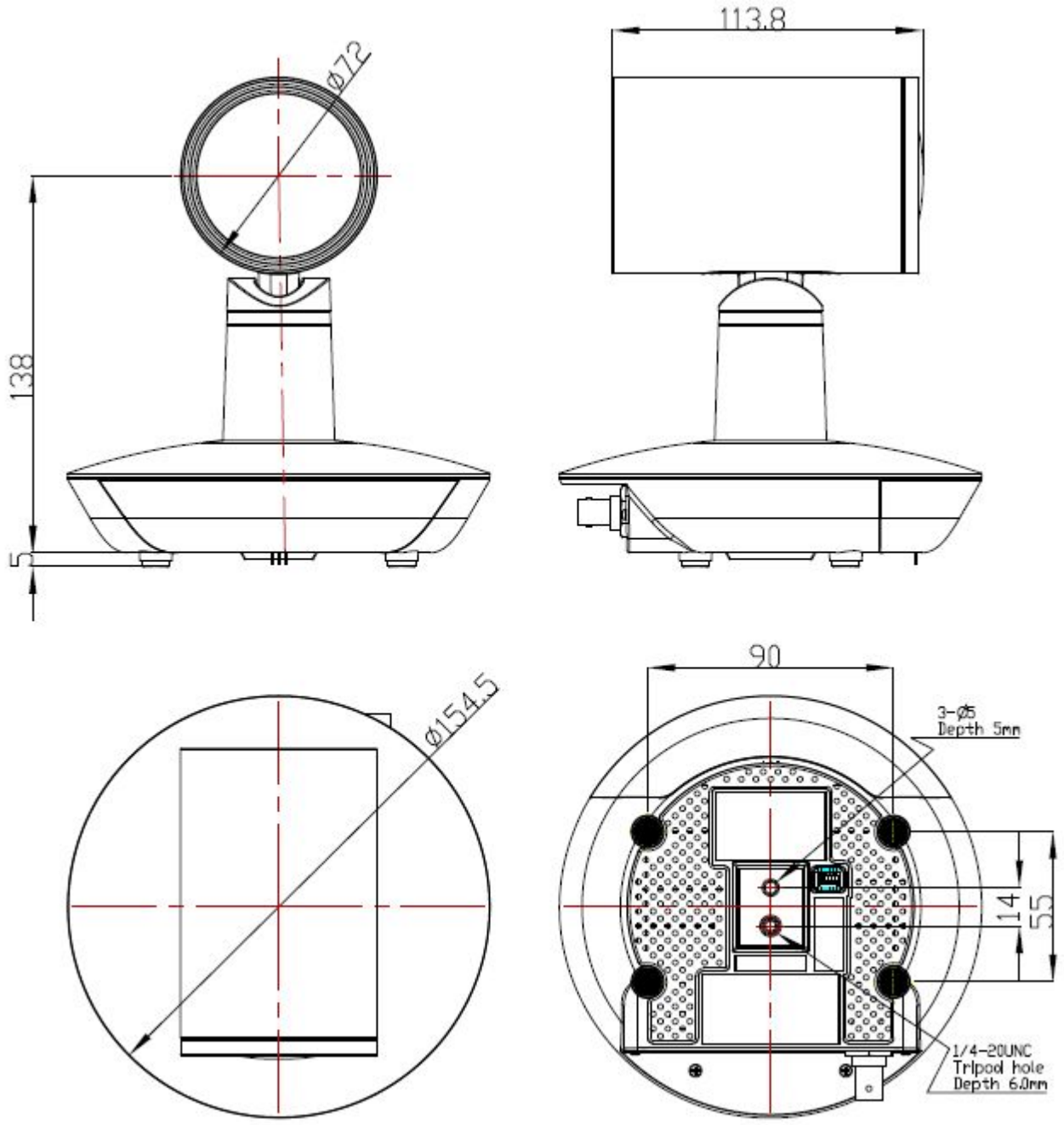
1、Camera lens　2、Camera base　3、Working status light indicator
4、Infrared receiver header　5、Tripod screw hole　6、Working mode selection switch
7、Installation hole　8、SDI interface　9、HDMI interface
10、RS232 control interface　11、DC12V Input Power Supply Jack　12、Power light indicator(red)



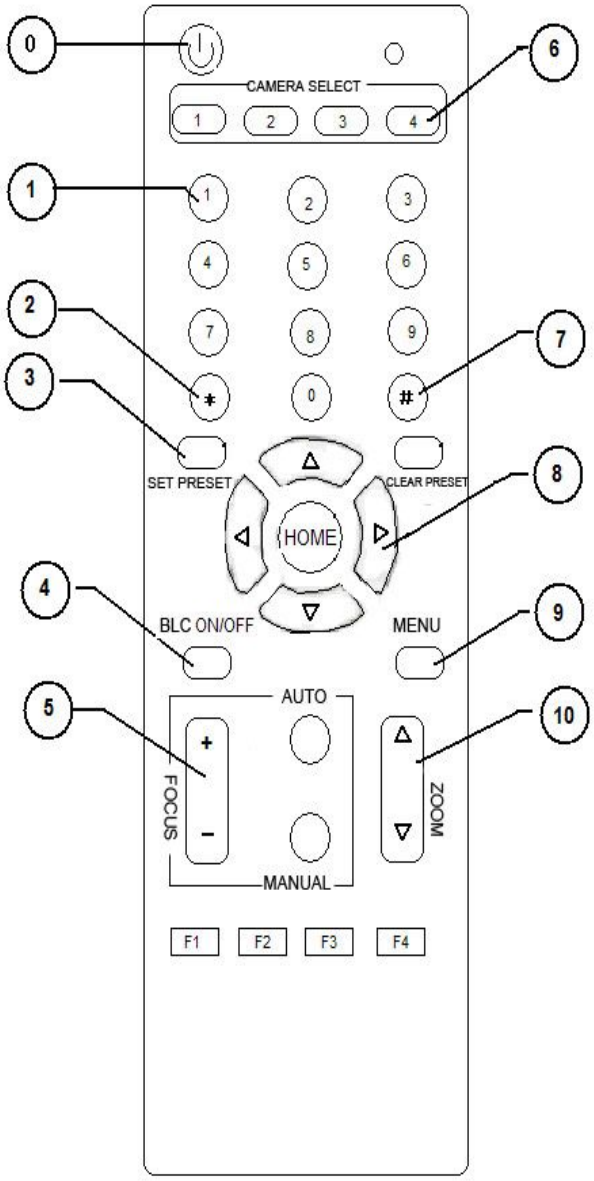
UV500-A9-U3 model

1、Camera lens 2、Camera base 3、Working status light indicator
4、Infrared receiver header 5、Tripod screw hole 6、Working mode selection switch
7、Installation hole 8、USB3.0 interface 9、RS232 control interface
10、DC12V Input Power Supply Jack 11、Power light indicator(red)

Dimension:


113.8
ø72
138
5
ø154.5
90
3-ø5
Depth 5mm
14
55
1/4-20UNC
Tripod hole
Depth 6.0mm

Remote Controller Explanation:



0、Standby key

After pressing the standby key, the camera will step into standby mode, while the front indicator light is off and sparks every 20sec.Press again, the camera will do self-checking again and back to home position.

1. Number key

Setting or locating presets

2.* key

Key combination use

3.Set preset key:

Set preset：

Set preset key + 0-9 number key：

Clear preset key：

Clear preset key + 0-9 number key

or：＃+＃+＃：Clear all the presets

4.BLC control key

BLC function is unavailable

5.Focus control key

Focus＋：unavailable

Focus－：unavailable

Auto focus：unavailable

Manual focus：unavailable

6.Camera address selection

Select the camera which wants to be controlled

7. # key

Key combination use

8.pan/tilt control key

Press ▲key ： up

Press ▼key ： down

Press ◀key ： left

Press ▶key：right

"HOME" key: Return to the wide angle position

9.Menu setting

Open or close the OSD menu

10.Zoom Control key

zoom▲： lens near

zoom▼： lens far

11.Camera IR remote control address selection

【*】+【＃】+【F1】： Camera Address No.1

【*】+【＃】+【F2】： Camera Address No. 2

【*】+【＃】+【F3】： Camera Address No. 3

【*】+【＃】+【F4】： Camera Address No. 4

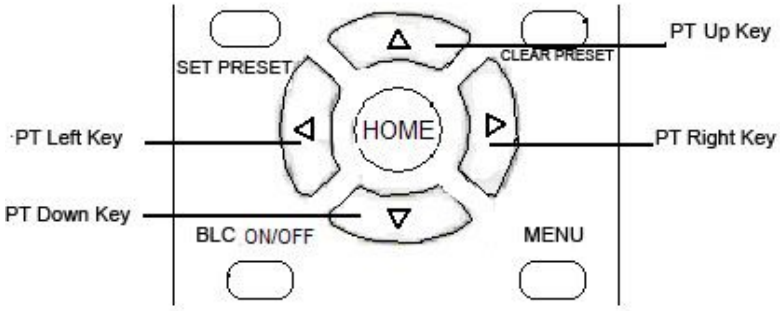
Usage of IR Remote Controller

Finishing initialization, it can receive and execute the IR commands. Users can control the pan/tilt/zoom, setting and running preset positions via the IR remote controller.

Key Instruction：

1、When a key-combination is required, do it in sequence. For example, " 【*】+【#】+【F1】"means press"【*】"first and then press"【#】" and press"【F1】"at last.

1.Pan/Tilt Control



Up: press ▲

Down: press ▼

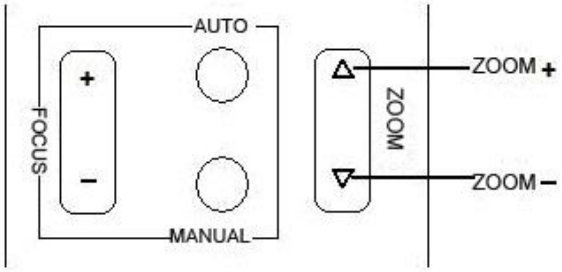
Left: press ◄

Right: press ►

Back to wide angle position：press【HOME】

Press and hold the up/down/left/right key, the pan/tilt will keep running, from slow to fast, until it run to the endpoint; The pan/tilt running stops as soon as the key is released.

2. Zoom Control

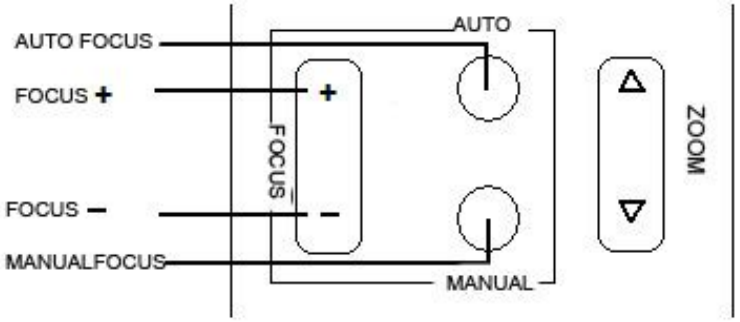


ZOOM OUT: press 【ZOOM ▲】 key

ZOOM IN: press 【ZOOM ▼】 key

Press and hold the key, the camera will keep zooming in or zooming out and stops as soon as the key is released.

3. Focus Control

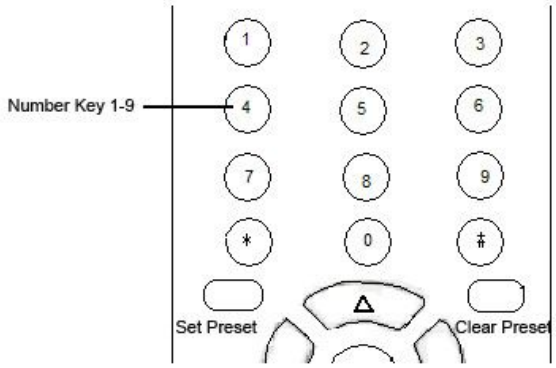


Focus (far)： Press 【focus+】 key (Valid only in manual focus mode)
Focus (near)： Press 【focus-】key (Valid only in manual focus mode)
Auto Focus: unavailable
Manual Focus: unavailable
Press and hold the key, the action of focus continues and stops as soon as the key is released.

4.BLC Setting

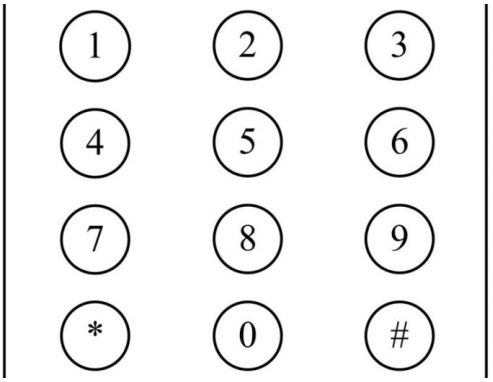
BLC ON / OFF : unavailable

5、Presets Setting / Cancel

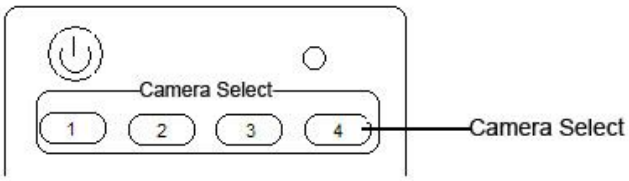


1、Preset setting : to set a preset position, the users should press the 【SET PRESET】key first and then press the number key 0-9 to set a relative position, 10 preset positions in total are available.
2、Preset clearing : to clear a preset position, the user can press the 【CLEAR PRESET】key first and then press the number key 0-9 to clear the relative position;
Note : press the【#】key three times continually to cancel all the presets.

6、Preset Running



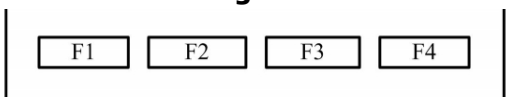
Press a number key 0-9 directly to run a relative preset.
Note: Action in vain if a relative preset position does not exist.



7、Camera Selection

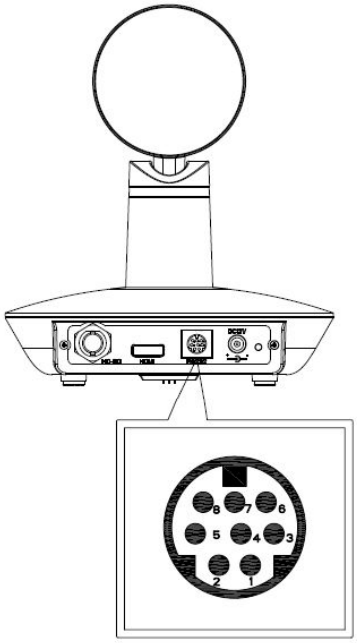
Select the camera number to control.

8、Camera Remote Controller Address Setting



【*】+【＃】+【F1】： Camera Address No.1
【*】+【＃】+【F2】： Camera Address No.2
【*】+【＃】+【F3】： Camera Address No.3
【*】+【＃】+【F4】： Camera Address No.4

RS-232C Interface



5.RXD → 5.RXD
6.A → 6.GND
7.IR OUT → 7.NC
8.B → 8.NC

Camera Windows DB-9

1.DTR → 1.CD
2.DSR → 2.RXD
3.TXD1 → 3.TXD
4.GND → 4.DTR
5.RXD1 → 5.GND
6.GND → 6.DSR
7.IR OUT → 7.RTS
8.NC → 8.CTS
9.RI

No.	Function
1	DTR
2	DSR
3	TXD1
4	GND
5	RXD1
6	RS485-A
7	IR OUT
8	RS485-B

Camera RS485

1.DTR
2.DSR
3.TXD1
4.GND
5.RXD1
6.RS485-A → A
7.IR OUT
8.RS485-B → B
9.GND

COM Control

In normal working mode, the camera is able to be controlled via RS-232C/RS485 command (VISCA IN) . The parameter of the RS232C/RS485 COM is as following :

Baud Rate ： 2400/4800/9600/115200 bit/s

Start bit：1bit ;

Data bit: 8bit ;

Stop bit : 1bit;

Code: None

The user can control the camera via serial command only after the camera finished self-check and powered on..

VISCA PROTOCOL

Part 1 Camera Return Command

Ack/Completion Message		
	Command Packet	**Note**
ACK	z0 41 FF	Returned when the command is accepted.
Completion	z0 51 FF	Returned when the command has been executed.

z = Camera Address + 8

Error Messages		
	Command Packet	**Note**
Syntax Error	z0 60 02 FF	Returned when the command format is different or when a command with illegal command parameters is accepted
Command Not Executable	z0 61 41 FF	Returned when a command cannot be executed due to current conditions. For example, when commands controlling the focus manually are received during auto focus.

Part 2 Camera Control Command

Command	Function	Command Packet	Note
AddressSet	Broadcast	88 30 01 FF	Address setting
IF_Clear	Broadcast	88 01 00 01 FF	I/F Clear
CommandCancel		8x 21 FF	
CAM_Power	On	8x 01 04 00 02 FF	Power ON/OFF
	Off	8x 01 04 00 03 FF	
CAM_Dzoom	Stop	8x 01 04 06 00 FF	Stop Dzoom and shift
	On	8x 01 04 06 02 FF	Digital zoom ON/OFF
	Off	8x 01 04 06 03 FF	
	Tele (Variable)	8x 01 04 06 2p FF	p=0 (Low) to 7 (High) * Enabled during Separate Mode
	Wide (Variable)	8x 01 04 06 3p FF	
	x1/Max	8x 01 04 06 10 FF	x1/MAX Magnification Switchover * Enabled during Separate Mode
	Direct	8x 01 04 46 0p 0q 0r 0s FF	pq: D-Zoom Position * Enabled during Separate Mode
CAM_Initialize	Camera	8x 01 04 19 03 FF	Camera reset
CAM_WB	Auto	8x 01 04 35 00 FF	Normal Auto

Command	Function	Command Packet	Note
	Manual	8x 01 04 35 05 FF	
CAM_RGain	Reset	8x 01 04 03 00 FF	Manual Control of R Gain
	Up	8x 01 04 03 02 FF	
	Down	8x 01 04 03 03 FF	
	Direct	8x 01 04 43 00 00 0p 0q FF	pq: R Gain
CAM_Bgain	Reset	8x 01 04 04 00 FF	Manual Control of B Gain
	Up	8x 01 04 04 02 FF	
	Down	8x 01 04 04 03 FF	
	Direct	8x 01 04 44 00 00 0p 0q FF	pq: B Gain
CAM_ColorGain	Direct	8x 01 04 49 00 00 00 0p FF	p: Color Gain setting 0h (60%) to Eh (200%)
CAM_AE	Full Auto	8x 01 04 39 00 FF	Automatic Exposure mode
	Manual	8x 01 04 39 03 FF	Manual Control mode
	Bright	8x 01 04 39 0D FF	Bright mode(Manual control)
CAM_Shutter	Reset	8x 01 04 0A 00 FF	Shutter Setting
	Up	8x 01 04 0A 02 FF	
	Down	8x 01 04 0A 03 FF	
	Direct	8x 01 04 4A 00 00 0p 0q FF	pq: Shutter Position
CAM_Gain	Reset	8x 01 04 0C 00 FF	Gain Setting
	Up	8x 01 04 0C 02 FF	
	Down	8x 01 04 0C 03 FF	
	Direct	8x 01 04 0C 00 00 0p 0q FF	pq: Gain Positon
CAM_Bright	Reset	8x 01 04 0D 00 FF	Bright Setting
	Up	8x 01 04 0D 02 FF	
	Down	8x 01 04 0D 03 FF	
	Direct	8x 01 04 4D 00 00 0p 0q FF	pq: Bright l Positon
CAM_ExpComp	On	8x 01 04 3E 02 FF	Exposure Compensation ON/OFF
	Off	8x 01 04 3E 03 FF	
	Reset	8x 01 04 0E 00 FF	Exposure Compensation Amount Setting
	Up	8x 01 04 0E 02 FF	
	Down	8x 01 04 0E 03 FF	
	Direct	8x 01 04 4E 00 00 0p 0q FF	pq: ExpComp Position
CAM_Aperture	Reset	8x 01 04 02 00 FF	Aperture Control
	Up	8x 01 04 02 02 FF	
	Down	8x 01 04 02 03 FF	
	Direct	8x 01 04 42 00 00 0p 0q FF	pq: Aperture Gain
CAM_NR		8x 01 04 53 0p FF	p: NR Setting (0: OFF, level 1 to 3)
CAM_NR3D		8x 01 04 54 0p FF	p: NR Setting (0: OFF, level 1 to 5)
CAM_LR_Reverse	On	8x 01 04 61 02 FF	Image Flip Horizontal ON/OFF
	Off	8x 01 04 61 03 FF	
CAM_PictureFlip	On	8x 01 04 66 02 FF	Image Flip Vertical ON/OFF
	Off	8x 01 04 66 03 FF	
CAM_Freeze	On	8x 01 04 62 02 FF	Still Image ON/OFF
	Off	8x 01 04 62 03 FF	
CAM_PictureEffect	Off	8x 01 04 63 00 FF	Picture Effect Setting
	Neg.Art	8x 01 04 63 02 FF	
	B&W	8x 01 04 63 04 FF	
CAM_ICR	On	8x 01 04 01 02 FF	Infrared Mode ON/OFF
	Off	8x 01 04 01 03 FF	
CAM_Display	On	8x 01 04 15 02 FF	Display ON/OFF
	Off	8x 01 04 15 03 FF	

Command	Function	Command Packet	Note
	On/Off	8x 01 04 15 10 FF	
CAM_IDWrite		8x 01 04 22 0p 0q 0r 0s FF	pqrs: Camera ID (=0000 to FFFF)
IR_Receive	On	8x 01 06 08 02 FF	IR(remote commander)receive ON/OFF
IR_ReceiveReturn	Off	8x 01 06 08 03 FF	IR(remote commander)receive message via the VISCA communication ON/OFF
	On/Off	8x 01 06 08 10 FF	
	On	8x 01 7D 01 03 00 00 FF	
Monitoring Mode		81 01 04 24 72 0p 0p FF	pp： 6,7:1080P30 8:1080P25 14,15: 720P30 17:720P25
E-Zoom Max		8x 01 04 24 52 0p 0p FF	pp: Max D-zoom ratio = 256/ (256-pp)
Cam_Shift	Shift	8x 01 04 7d sh 0h 0h sv 0v 0v 0p FF	s: sign bit，0 is plus, 1 is minus, 2 ignore the value of this direction hhh: pan shift view, 0 ~ 1920 vvv: tilt shift view, 0 ~ 1080 p: shift speed, 0x00 ~ 0x0F
	Stop	8x 01 04 06 00 FF	Stop Dzoom and shift

Part 3 Inquiry command

Command	Command packets	Return packets	Notes
CAM_PowerInq	8x 09 04 00 FF	y0 50 02 FF	On
		y0 50 03 FF	Off(Standby)
CAM_ZoomPosInq	8x 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Zoom Position
CAM_FocusModeInq	8x 09 04 38 FF	y0 50 02 FF	Auto Focus
		y0 50 03 FF	Manual Focus
CAM_WBModeInq	8x 09 04 35 FF	y0 50 00 FF	Auto
		y0 50 05 FF	Manual
CAM_RGainInq	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R Gain
CAM_BGainInq	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B Gain
CAM_AEModeInq	8x 09 04 39 FF	y0 50 00 FF	Full Auto
		y0 50 03 FF	Manual
		y0 50 0D FF	Bright
CAM_ShutterPosInq	8x 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: Shutter Position
CAM_GainPosiInq	8x 09 04 4C FF	y0 50 00 00 0p 0q FF	pq: Gain Position
CAM_ BrightPosiInq	8x 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: Bright Position
CAM_ExpCompModeInq	8x 09 04 3E FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_ExpCompPosInq	8x 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpComp Position
CAM_ApertureInq	8x 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture Gain
CAM_MemoryInq	8x 09 04 3F FF	y0 50pp FF	pp: Memory number last operated.
CAM_LR_ReverseInq	8x 09 04 61 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_PictureFlipInq	8x 09 04 66 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_IDInq	8x 09 04 22 FF	y0 50 0p 0q 0r 0s FF	pqrs: Camera ID
CAM_VersionInq	8x 09 00 02 FF	y0 50 ab cd mn pq rs tu vw FF	
IR_Receive	8x 09 06 08 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
IR_ReceiveReturn		y0 07 7D 01 04 00 FF	Power ON/OFF
		y0 07 7D 01 04 07 FF	Zoom tele/wide
		y0 07 7D 01 04 38 FF	AF On/Off
		y0 07 7D 01 04 33 FF	CAM_Backlight
		y0 07 7D 01 04 3F FF	CAM_Memory
		y0 07 7D 01 06 01 FF	Pan_tiltDrive
Monitoring Mode_Inq	81 09 04 24 72 FF	y0 50 0p 0p FF	pp: 6,7:1080P30 8:1080P25 14,15: 720P30 17:720P25
Pan-tiltPosInq	8x 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	wwww: Pan Position zzzz: Tilt Position

Note:【x】 means the camera address you want to control ， 【y】=【x + 8】

Pelco-D protocol

Function	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
Zoom In	0xFF	Address	0x00	0x20	0x00	0x00	SUM
Zoom Out	0xFF	Address	0x00	0x40	0x00	0x00	SUM
Set Preset	0xFF	Address	0x00	0x03	0x00	Preset ID	SUM
Clear Preset	0xFF	Address	0x00	0x05	0x00	Preset ID	SUM
Call Preset	0xFF	Address	0x00	0x07	0x00	Preset ID	SUM
Query Pan Position	0xFF	Address	0x00	0x51	0x00	0x00	SUM
Query Pan Position Response	0xFF	Address	0x00	0x59	Value High Byte	Value Low Byte	SUM
Query Tilt Position	0xFF	Address	0x00	0x53	0x00	0x00	SUM
Query Tilt Position Response	0xFF	Address	0x00	0x5B	Value High Byte	Value Low Byte	SUM
Query Zoom Position	0xFF	Address	0x00	0x55	0x00	0x00	SUM
Query Zoom Position Response	0xFF	Address	0x00	0x5D	Value High Byte	Value Low Byte	SUM

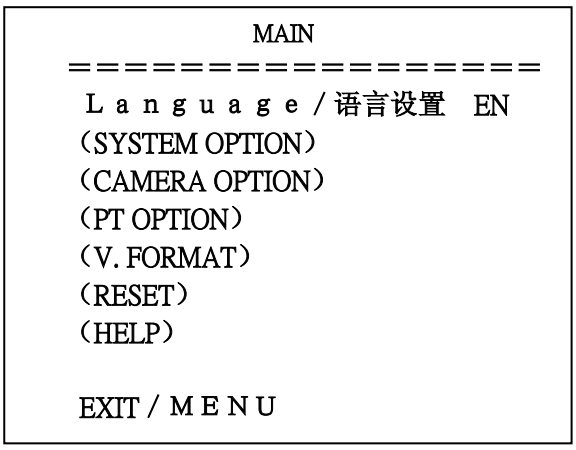
Pelco-P protocol

Function	Byte1	Byte2	Byte 3	Byte 4	Byte5	Byte6	Byte 7	Byte 8
Zoom In	0xA0	Address	0x00	0x20	0x00	0x00	0xAF	XOR
Zoom Out	0xA0	Address	0x00	0x40	0x00	0x00	0xAF	XOR
Set Preset	0xA0	Address	0x00	0x03	0x00	Preset ID	0xAF	XOR
Clear Preset	0xA0	Address	0x00	0x05	0x00	Preset ID	0xAF	XOR
Call Preset	0xA0	Address	0x00	0x07	0x00	Preset ID	0xAF	XOR
Query Pan Position	0xA0	Address	0x00	0x51	0x00	0x00	0xAF	XOR
Query Pan Position Response	0xA0	Address	0x00	0x59	Value High Byte	Value Low Byte	0xAF	XOR
Query Tilt Position	0xA0	Address	0x00	0x53	0x00	0x00	0xAF	XOR
Query Tilt Position Response	0xA0	Address	0x00	0x5B	Value High Byte	Value Low Byte	0xAF	XOR
Query Zoom Position	0xA0	Address	0x00	0x55	0x00	0x00	0xAF	XOR
Query Zoom Position Response	0xA0	Address	0x00	0x5D	Value High Byte	Value Low Byte	0xAF	XOR

Menu setting

1. MENU（main）

In normal working mode, press 【MENU】key to display the menu, using scroll arrow to point at or highlight the selected items.



Reset state：can be set by users

Ｌａｎｇｕａｇｅ：Chinese / English for options

SYSTEM OPTION：system setting

CAMERA OPTION：camera setting

PT OPTION：pan tilt setting

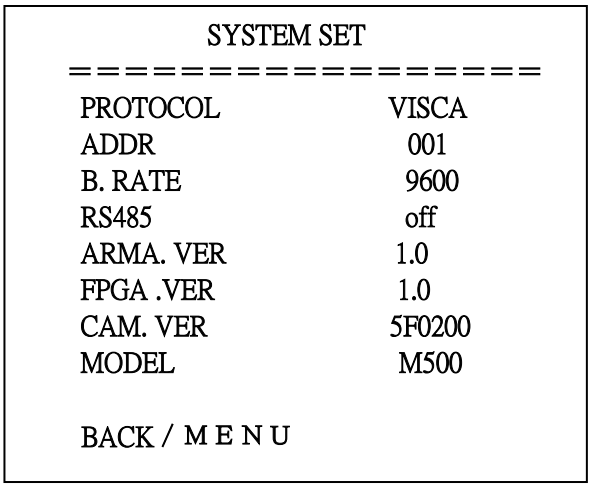
V. FORMAT: video format setting

RESET：reset setting

HELP：for help

2. SYSTEM OPTION

Move the pointer to the (SYSTEM SET) in the Main Menu, click the【HOME】and enter SYSTEM SET as follow,



PROTOCOL: Reset State VISCA

Protocol type:VISCA/Pelco-P/Pelco-D

ADDR：Reset State: 001

VISCA=1~7 Pelco-P/Pelco-D = 1~255

B. RATE：Reset State:9600

2400/4800/9600/115200

RS485： Reset State:off

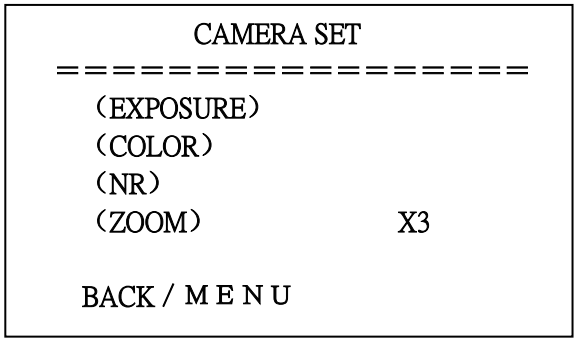
It is ON when using RS485 communication

ＡＲＭ VER./ＦＰＧＡ VER/CAM VER: version information,it will upgrade synchronously with software.

Model: internal identified code

3. CAMERA OPTION

Move the pointer to the (CAMERA SET) in the Main Menu, click the【HOME】and enter CAMERA SET as follows,



EXPOSURE：exposure setting

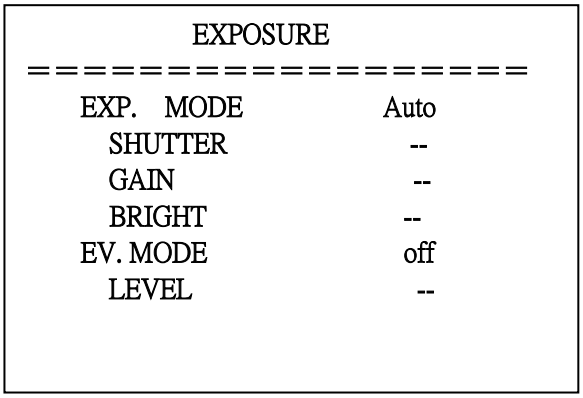
COLOR: image setting

NR: noise reduction setting

ZOOM: zoom setting

3.1 EXPOSURE

Move the pointer to the (EXPOSURE) in the Main Menu, click the【HOME】and enter EXPOSURE setting as follows,



EXP. MODE：Reset State: Auto

Available mode: Auto，Manual，Bright

SHUTTER：Reset State: Default

Available selections: 1/30、 1/60、1/90、1/100、1/125、1/180、1/250、1/350、1/500、1/725、1/1000、
1/1500、1/2000、1/3000、1/4000、1/10000（only available in Manual Shutter mode）

GAIN: Reset State: Default

Available: 0~15（only available in Manual mode）

BRIGHT：Reset State: 3

Available: 0~9 (only available in Bright mode)

EV MODE：Reset State: off

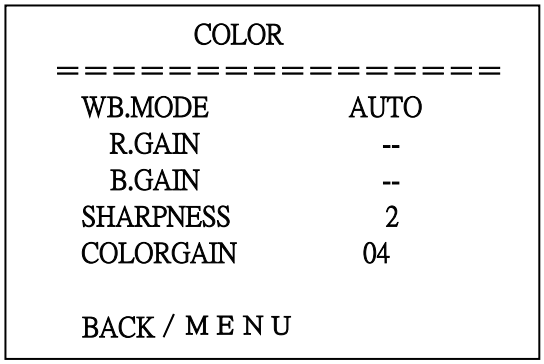
Available: On/Off (only available in Auto Exposure mode)

LEVEL：Reset State: Default

Available Setting: -6~6

3.2 COLOR SETTING

Move the pointer to the (COLOR) in the Main Menu, click the【HOME】and enter COLOR setting as follows:



WB MODE：Reset State: AUTO

White balance mode setting: Auto/Manual

R.GAIN：Reset State:Default

Red gain setting：0~50（only available in Manual mode）

B.GAIN：Reset Condition:Default

Blue gain setting：0~50（only available in Manual mode）

SHARNESS: Reset State: 2

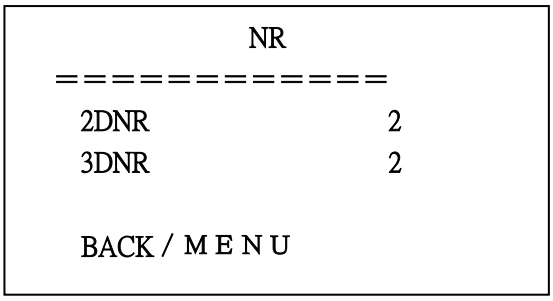
Sharpness setting:0~9

COLOR GAIN: Reset State: 04

Color gain setting:0~14

3.3 NR(Noise reduction)

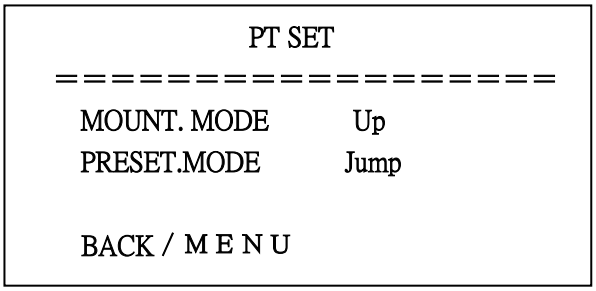
Move the pointer to the (NR) in the Main Menu, click the【HOME】and enter the noise reduction setting as follows,



2D NR: Reset State: 2
Setting range: 0~3
3D NR: Reset State: 2
Setting range:0~5

4.PAN TILT SETTING

Move the pointer to the (PT SET) in the Main Menu, click the【HOME】and enter PT SET as follows,



MOUNT.MODE：Reset State: Up
Mode options: UP/DOWN
Preset Mode: Reset State: Jump
Modes: Jump/Move

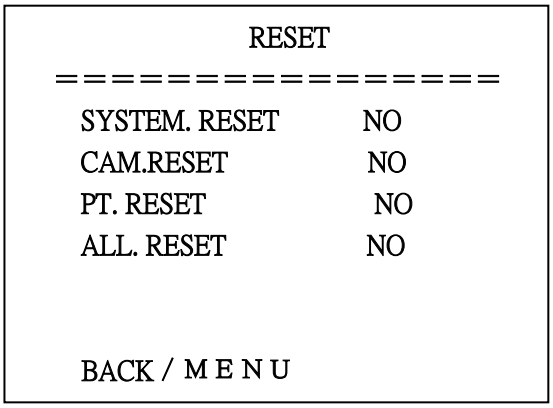
5. Video Format

Move the pointer to the (VIDEO FORMAT) in the Main Menu, click the【HOME】and enter video format setting as follows,

Only 1080P30 is available at present.

6. Reset

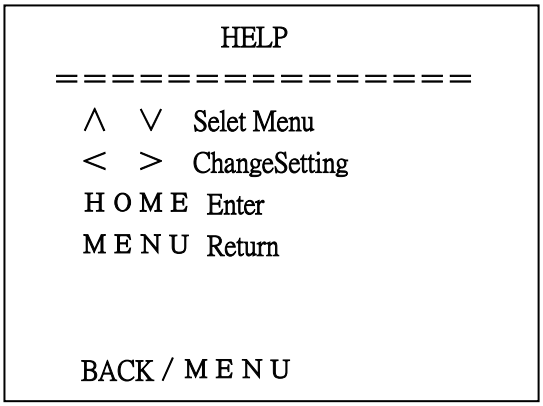
Move the pointer to the (RESET) in the Main Menu, click the【HOME】and enter RESET setting as follows,



SYS. RESET：Protocol: VISCA; Address: 1; baud rate:9600; ＲS485:Off
CAM. RESET：reset **all** camera parameter
PT. RESET：mount mode:Up; preset mode: Jump
ALL RESET：reset above 3 items

7. Help

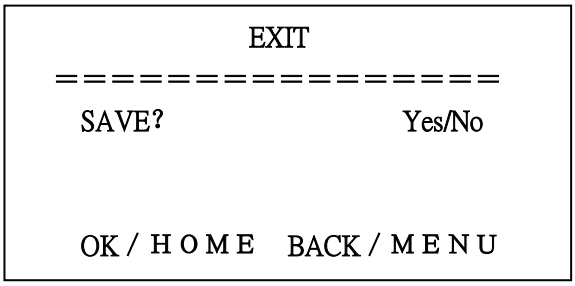
Move the pointer to the (HELP) in the Main Menu, click the【HOME】and enter HELP setting as follows,



Display menu operation method.

8. Exit

In main menu, press the key【MENU】again will show the exit window as follows,



SAVE？：to save settings：Yes、No.

Note：please press【HOME】key to confirm;

press【MENU】key to return to the main menu