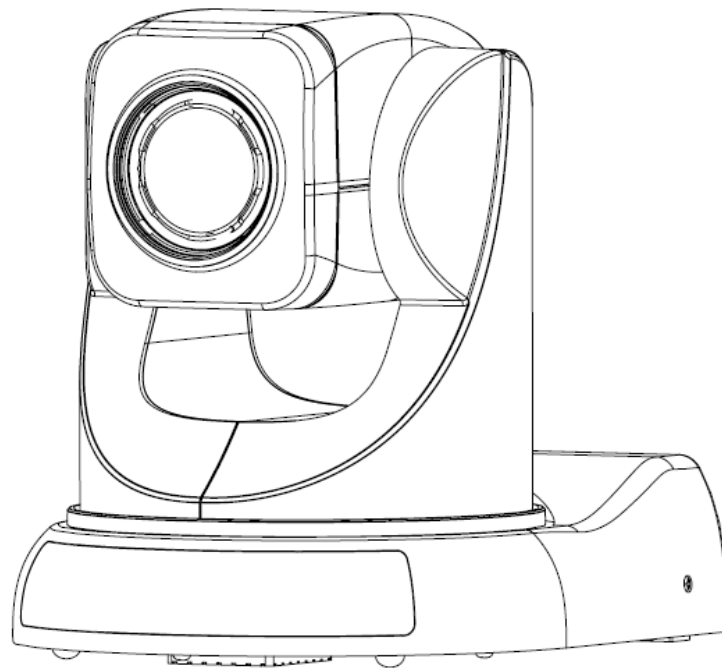


# **Minrray UV83**

## **Video Conference Camera**

### **User Manual**



**[www.Minrray.com](http://www.Minrray.com)**  
**(800) 486-5276**

**Forward**

Thank you very much for buying our cameras, please contact us if there is any doubts anytime. This manual may have technical error, product functions may not conform to actual operation or may have wrong printings. The content of this manual will be updated as product functions strengthened. Please note the updated content will be added in the new version manual without notice.

**WARNING!**

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

- It must not be installed where exposed to rain and moisture
- Do not open the camera box as to prevent the danger of electric shock; Installation and servicing should only be done by qualified service personnel;
- It must not be installed where exposed to rain and moisture and it can not be used in unqualified temperature, humidity and power supply.
- Only use replacement parts recommended by manufacturer.
- Please use the soft cloth to clean the dome. Use neuter cleanser if bad smeared. No use the strong or corrosive cleanser avoiding scuffing.
- Be cautious of moving, never press the drive parts heavily avoiding dome troubles.

**Caution !**

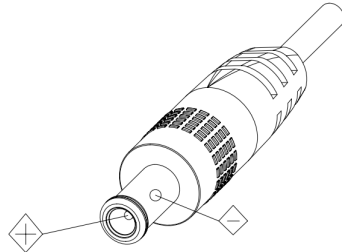
The image may be effected in Electromagnetic field under characteristic frequency.

## **【Contents】**

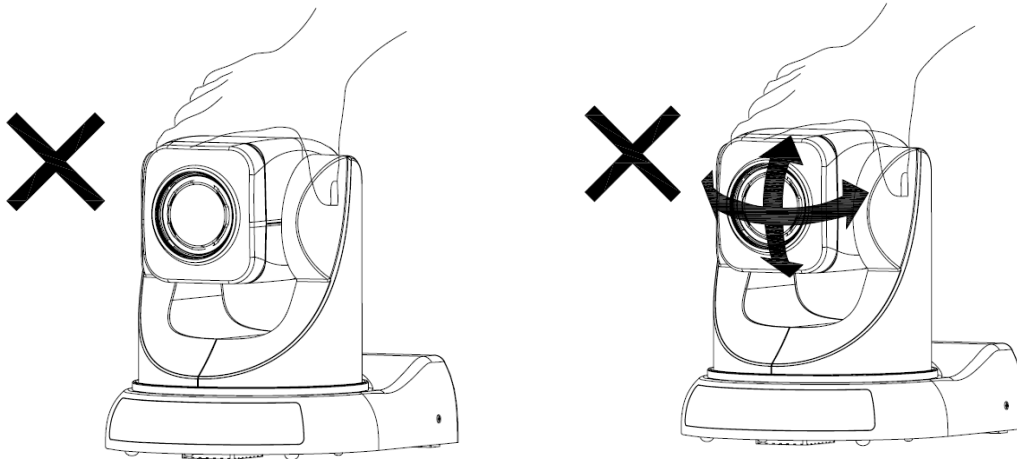
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# 1、 Note

- Electrical Safety  
The installation of this product must be completely according to the national or regional electric specification.
- Careful Transportation  
To prevent the product from the damage of stress, violent vibration and marination when under transportation, storage and installation.
- Polarity  
The power supply of the product is 12VDC, the max electrical current is 2A. Polarity of the power supply is as following drawing



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



- 1.This series item must put on the smooth desk or platform, and it can not be installed slantways;
- 2.If the camera is installed on TV or computer, the base can be fixed by three double-sided adhesive tray.
- 3.Don't apply in corrosive liquid, gas or solid environment to avoid the cover which is made up of organic material,
- 4.To make sure no obstacle in rotation range.
- 5.Never power on before installation is not completed.

### **Don't dispatch discretionarily**

This product has no spare parts for self repair, we will not guarantee the damage caused by self disassembly.

## 2、 Main Features:

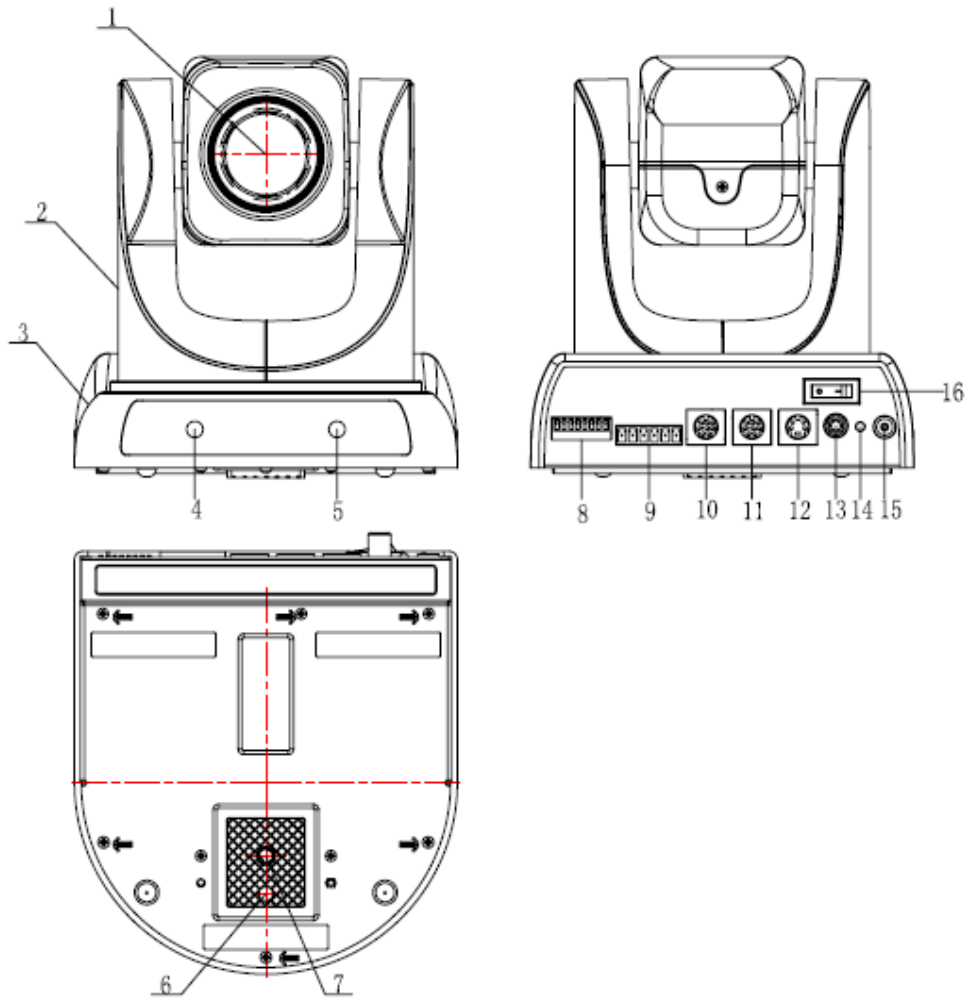
- **Standard Definition Video**  
1/4 inch high quality EXVIEW HAD CCD sensor。
- **18x optical zoom**  
F1.4--3.0  
Fast, accurate and stable auto focus lens, 18 x optical zoom; F1.4~3.0, mechanical shutter。
- **Wide range, high speed and low noise pan/tilt rotation**  
Step motor driving, smooth rotation and user friendly without dithering. Moving to the appointed position quickly and accurately, meanwhile, shooting large area.
- **Multiple video output format**  
Support AV interface CVBS video signal and S interface SVIDEO video output
- **RS-232C remote controller (VISCA protocol)**  
**RS-232C** (VISCA protocol) interface: All setting of camera and pan/tilt/zoom can be remote high speed communication controlled.
- **RS-485/RS-422 remote control (P/D/VISCA protocol)**  
RS-485/RS-422 (P/D /VISCA protocol) interface (3.81mm): All setting of camera and pan/tilt/zoom can be remote high speed communication controlled.
- **256 presets**  
User can preset the pan/tilt/zoom for 256 presets(P/D protocol: 256 presets;VISCA protocol: 16) and reserve the preset data when power off.
- **Support camera Inversion**  
Support camera inversion, user can set the pan/tilt/zoom, vertical flip, image inversion command and with power off self restoring function
- **Multi-function remote controller**  
Equipped with easy and convenient remote controller; Except the basic setting and the control of Pan,Tilt,zoom, it can also set the relative parameters of camera by the remote controller..
- English OSD menu  
User can set the camera parameters and rotation parameters by OSD menu.

## 3、 Supplied Accessories

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

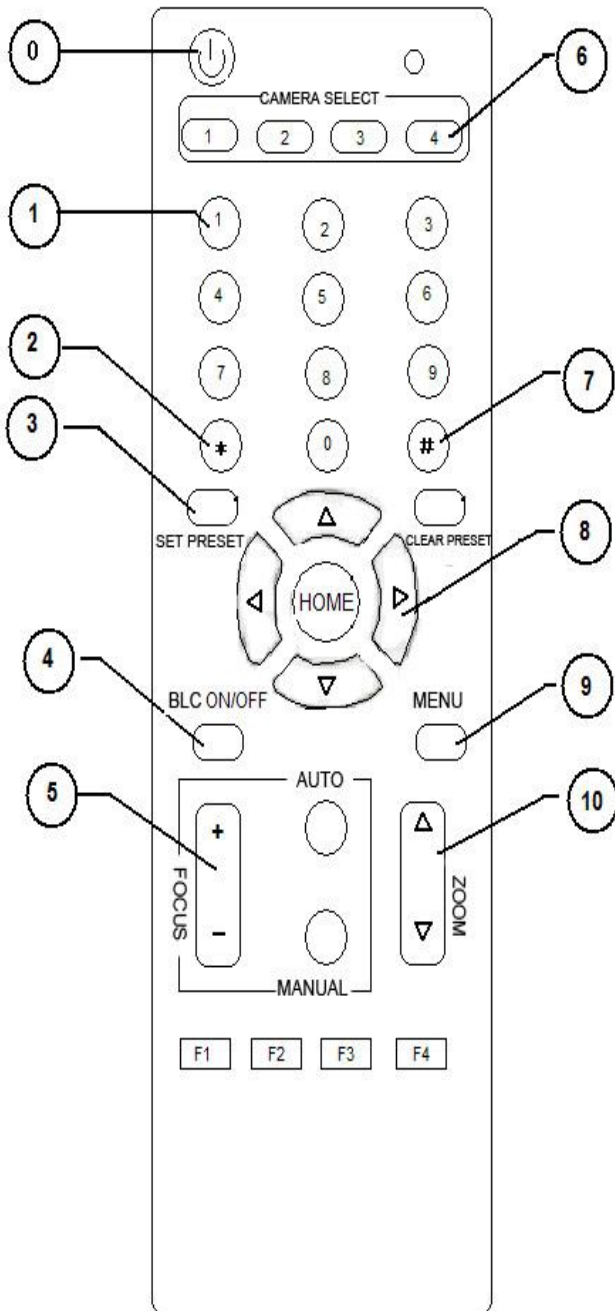
Camera.....	1
AC power adapter.....	1
Remote controller.....	1
RS232 communication cable.....	1
VISCA OUT cable(Optional) .....	1
S-VIDEO cable.....	1
Double-sided pads.....	4
User manual.....	1
Certificate.....	1

## 4、 Camera Interface Explanation



1. Lens
2. Camera Body
3. Main Camera Base
4. Remote Controller Receiver
5. Power indicator light (red)
6. Tripod screw hole
7. Installation Orientation Hole
8. Bottom dial Switch
9. RS485 and RS422 control interface
10. RS232 VISCA OUT output port
11. RS232 VISCA OUT input port
12. SVIDEO signal output
13. AV interface, CVBS signal video output
14. Power indicator light (red)
15. DC12V Input Power Supply Jack
16. Power Switch, On is open, OFF is close

## 5、 Remote controller instruction



### 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 ON: open black light compensation (Only available in the exposure mode effective for Auto)

BLC OFF: close black light compensation (Only available in the exposure mode effective for Auto)

### 5、 Focus control key

Focus+: focus length far from near

Focus-: focus length near from far

Auto focus: the camera focus mode is auto

Manual focus: the camera focus mode is manual

### 6、 Controlled Camera address selection

【\*】+【#】+【F1】: Camera Address No.1

【\*】+【#】+【F2】: Camera Address No. 2

【\*】+【#】+【F3】: Camera Address No. 3

【\*】+【#】+【F4】: Camera Address No. 4

### 7、 # key

#+#+# delete all presets

### 8、 pan/tilt control key

#### Normal mode:

Press ▲key : up

Press ▼key : down

Press ◀key : left

Press ▶key: right

“HOME” key: Return to the middle position

#### Menu mode:

Press▲: select the menu upwards

Press▼: select the menu upwards

Press◀: enter into the sub menu and select the current parameter

Press▶: back to the former menu

### 9、 Menu setting

Open or close menu

### 10、 Zoom Control key

zoom+: lens near

zoom-: lens far

11. F1,F2,F3,F4 functions are unavailable.

## 6、 Camera Basic Function

- **18X optical zoom**

With 18x optical zoom lens and wide angle lens, absolutely meet all sizes meeting room 's needs.  
Can be controlled by IR remote controller and VISCA command by RS232 interface.

- **Focus**

Auto focus mode and manual focus mode. Can be controlled by IR remote controller and VISCA command.

1, Auto Focus

2, Manual Focus(put on reserve)

- **Iris**

1, Auto iris mode

2, Manual iris mode(**Control by serial interface command**)

- **Electric Shutter**

Auto electric shutter

### **Black light compensation**

The object will become dark like shadow when the background turn up the highlight. The BLC function is the lens can compensate the brightness of darker objects and adjust the brighter background when under highlight, this is can help to prevent the image become too bright because of too highlight of the background and the object will not be recognizable, so the camera can capture the clear image.

- **Multiple white balance functions**

According to the different applications, multiple white balance modes can be set to adjust the various light environment and ensure the operator a vivifying image.

- **Video freeze function**

Open the video freeze function, the extra video during running the preset will not be displayed, this can reach the effect of image switch.

### **Multi-control modes**

1、 by IR remote controller

2、 by RS-232 serial interface, P/D protocol. VISCA protocol

3、 by RS-485 serial interface, P/D protocol

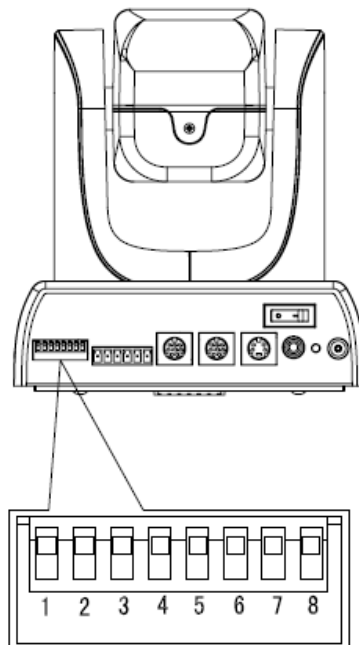
4、 by RS-422 serial interface, P/D protocol. VISCA protocol

### **Multi-SD video output**

1、 CVBS

2、 SVIDEO video signal output

## 7、 Dial Switch Setting





**Note:** SW1 dial switch position 4、5、6、7、8 are corresponding to the setting of Baud rate , IR remoter (on/off) and software update model /normal working mode switching .

**Note:** VISCA Protocol only working with 9600 Baud rate .

Baud rate , IR remoter and interface update setting	SW1 SWITCH SETTING				
	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
<b>Desktop Mount</b>	ON	--	--	--	--
<b>In ceiling Mount</b>	OFF	--	--		
<b>1200</b>	--	OFF	OFF	--	--
<b>2400</b>	--	<b>ON</b>	OFF	--	--
<b>4800</b>	--	OFF	<b>ON</b>	--	--
<b>9600</b>	--	<b>ON</b>	<b>ON</b>	--	--
<b>IR Remoter</b>	--	--	--	OFF	--
<b>IR Remoter</b>	--	--	--	<b>ON</b>	--
<b>Normal Working mode</b>	--	--	--	--	ON
<b>Software update mode</b>	--	--	--	--	<b>OFF</b>

**Note:** SW1 dial switch position1、 2、 3 are to be set the receiving address .

**P control Protocol address setting**

Address	SW1 Switch Setting		
	SW1-1	SW1-2	SW1-3
1	OFF	OFF	OFF
2	ON	OFF	OFF
3	OFF	ON	OFF
4	ON	ON	OFF
5	OFF	OFF	ON
6	ON	OFF	ON
7	OFF	ON	ON
8	ON	ON	ON

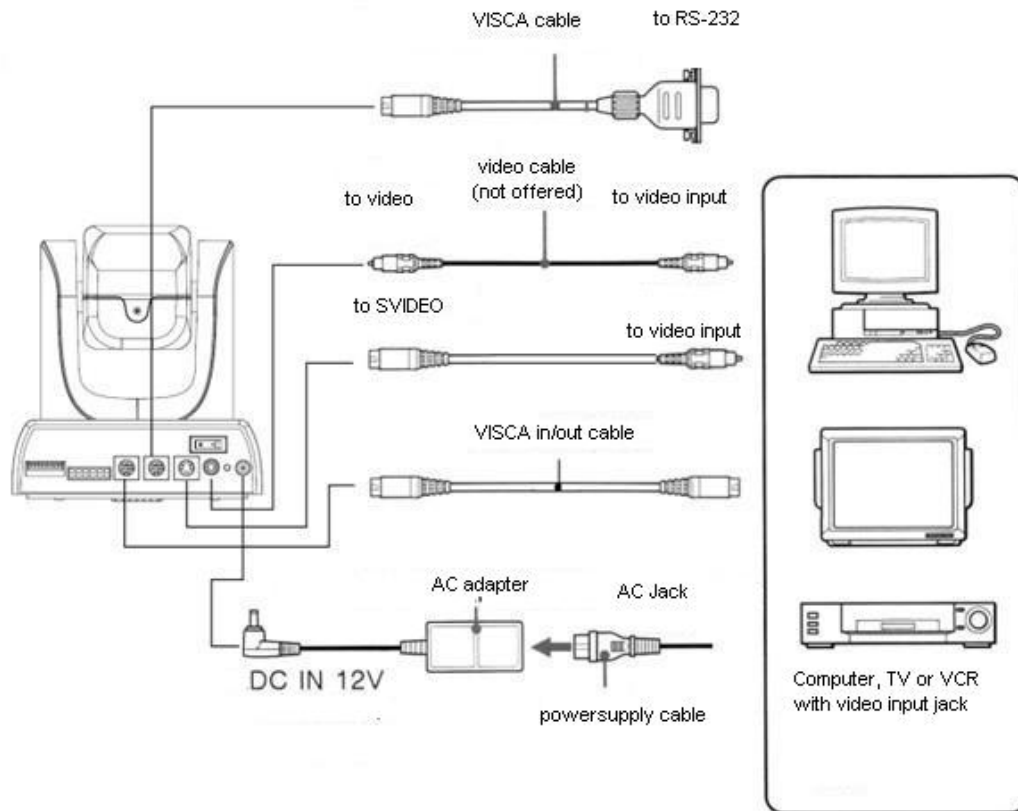
**D Control Protocol address setting :**

Address	Switch Setting		
	SW1-1	SW1-2	SW1-3
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON
5	ON	OFF	ON
6	OFF	ON	ON
7	ON	ON	ON

**VISCA Control Protocol address setting :**

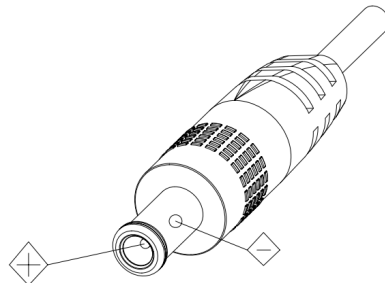
Address	Switch Setting		
	SW1-1	SW1-2	SW1-3
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON
5	ON	OFF	ON
6	OFF	ON	ON
7	ON	ON	ON

## 8、 Connection



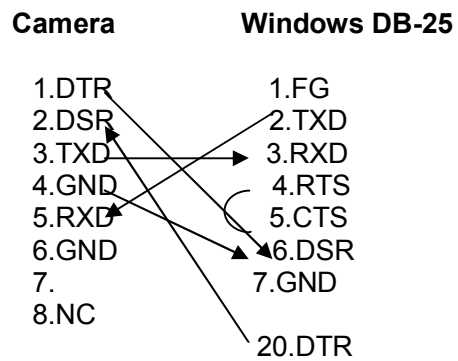
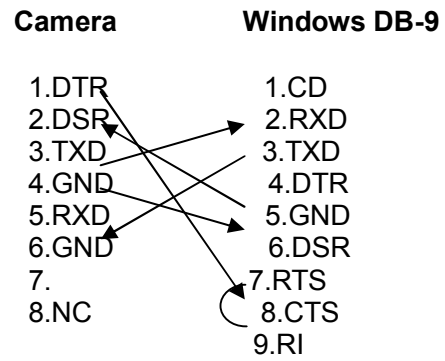
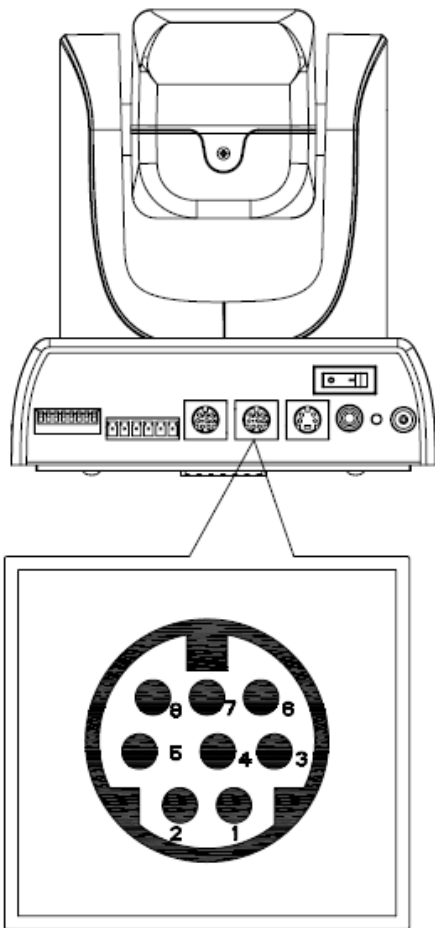
## 9、 Camera Interface explanation :

- **Control Interface RS-232**  
RS232 series interface , wiring is standard VISCA cable , one of the linker is 8pin mini DIN(1), the other is RS232C 9 core square linker (DB-9) , which connect with computer or conference TV terminal .
- **Standard definition video signal CVBS**  
AV interface, SD compound video signal
- **Standard definition video signal SVIDEO**  
SVIDEO SD video signal
- **VISCA out connecting cable (not attached )**  
Communication cable to connect the interfaces of two cameras
- **Power supply interface DC 12V**  
Input power supply is adopted external adapter to offer 12V/2A DC .  
BNC polarity of power supply is shown as following external adapter :



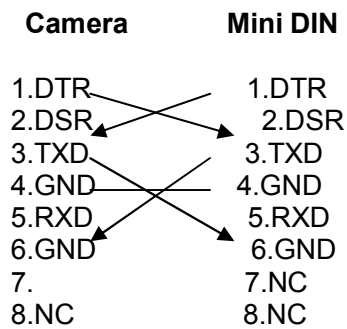
- **Power supply switch**  
ON is open, OFF is close
- **Power Indicator Light (Red)**  
Power supply Switch is "ON": indicator light is open , otherwise , indicator light is close ,no power or voltage is abnormal

## 9.1. VISCA RS-232 pin assignment



### VISCA IN Definition

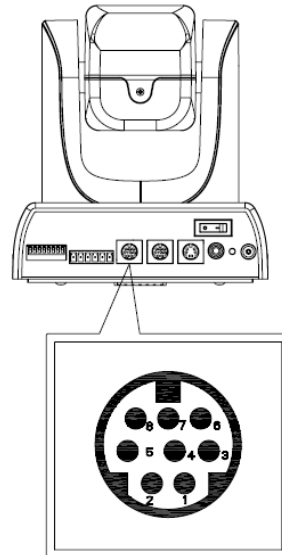
No.	Function
1	DTR
2	DSR
3	TXD
4	GND
5	RXD
6	GND
7	
8	NC



## 9.2、VISCA OUT output cable interface pin assignment

VISCA OUT Definition:

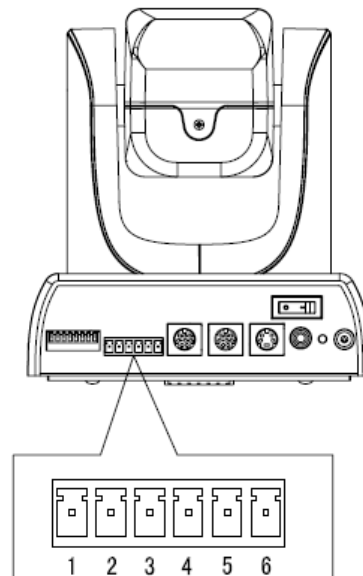
NO.	Function
1	
2	
3	RXD
4	GND
5	TXD
6	GND
7	
8	NC



## 10、RS485, RS422 Interface Pin Assignment .

RS485、RS422 Interface Definition :

NO.	Function
1	RX +
2	RX -
3	TX +
4	TX -
5	A +
6	B -



### RS422 using method :

RX +,RX -,TX +,TX - are the interfaces of RS422 . Connecting controller equipment interface of TX +(OUT+), TX -(OUT-) to the interface of SD video conference camera's RX +,RX - . Then connecting the interface of controller equipment RX +(IN+),RX -(IN-)to the camera's interface of TX +,TX - . Then can control the camera after adjusting the protocol , Baud rate and the Address .

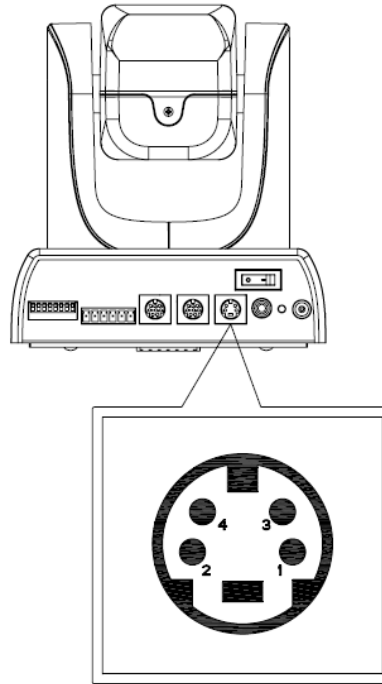
### RS485 using method :

Connecting the controller equipment interfaces of A, B to the camera interfaces of A +,B - . Then can control the camera after adjusting the protocol , Baud rate and the Address .

## 11、SVIDEO interface pin ass

### SVIDEO Definition:

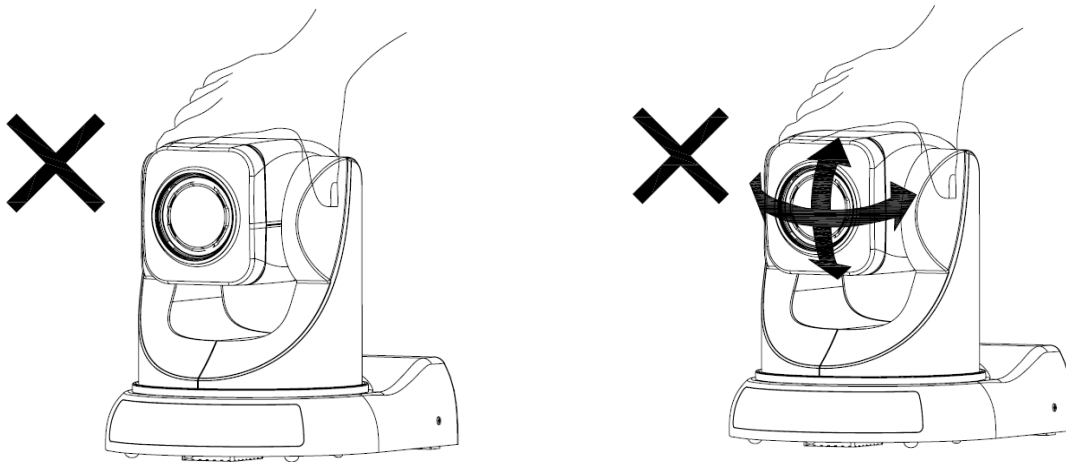
No.	Function
1	Y-GND
2	C-GND
3	Y-OUT
4	C-OUT



## 12、Installation

### Notice:

Do not move the camera by seizing the camera head; do not rotate the camera turn by force lest mechanical malfunction occur.



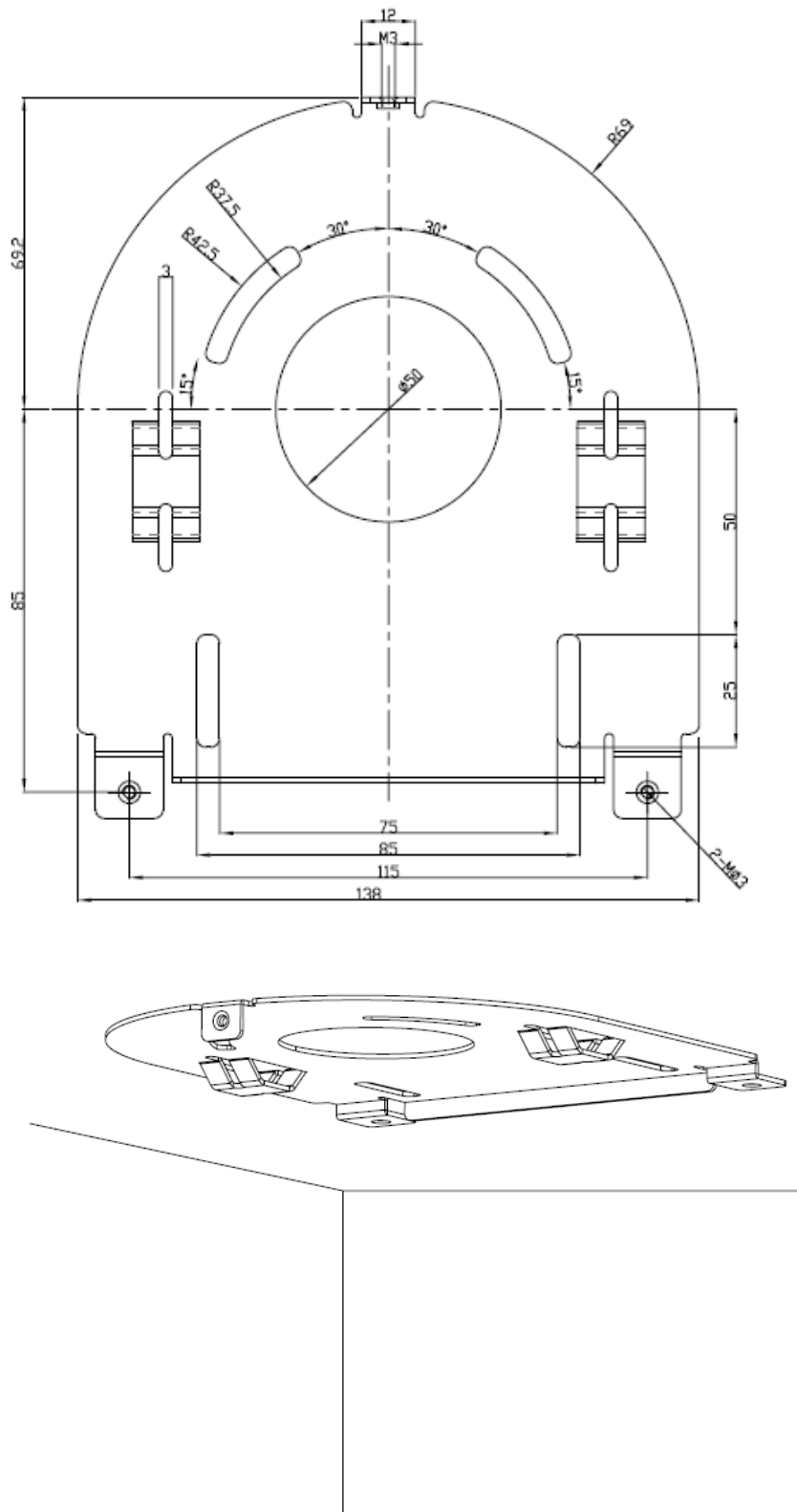
### Multiple installation modes are available for users upon the on-site situation

- on desktop
- on terminal equipment
- on tripod
- on hoisting bracket

### Steps to install in ceiling

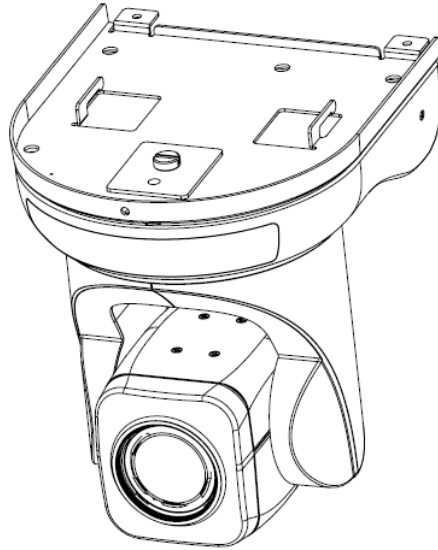
Step 1: install the upper base

Drill three holes on the ceiling, with the size (4mm in diameter) and position corresponds to the slots on the ceiling base. Put M4 expansion screw in each hole and fix the base on ceiling with screw cap and spacer.



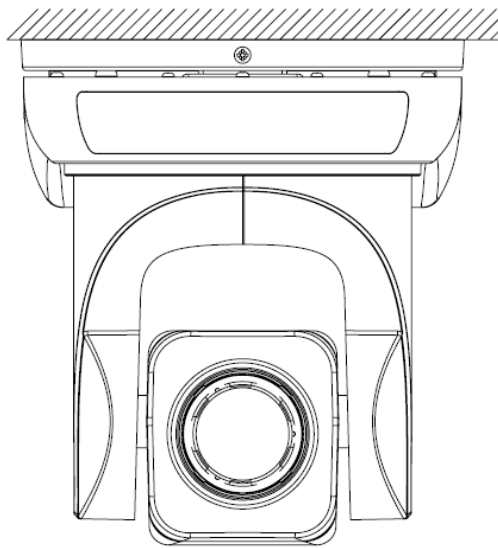
**Step 2: install the lower base**

Stamp insulation pads on the installation holes and make sure the holes are aligned. Put the pins in locating hole, and then fix the base at the baseboard of the camera with 1/4 inch screw.



**Step 3: Install the camera**

Buckle the clasps to the fixed installation board and fix it by 3 M3 screws.

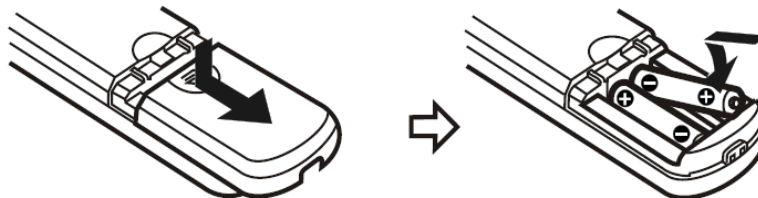


**Notice**

Do not install the camera on shaking object  
Do not install the camera obliquely

**Batteries installation**

- Open the battery cover, install the batteries, and close the cover.
- Be attention to the anode and cathode



**Notice**

- Change batteries:  
When control the  
when there is obstruction between them.

cannot work properly

# 13、 Operation

## ● Boot-strap

- 1、 Check if the wire connection is right before powering on.
- 2、 Turn on the switch at the back of camera and the indicator light on ( RED)
- 3、 Camera initialization begins as soon as powering on. It turn to the right limit position, down limit and the left limit in sequence, and then run to the right middle position and stop there, that means the initialization is complete.
- 4、 “CONFIGURE OK” on the menu means the camera is ready

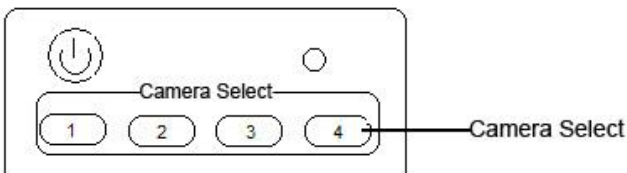
## IR remote control

When the camera is working, users can control the pan/tilt/zoom, setting and taking preset positions via remote controller

Instruction:

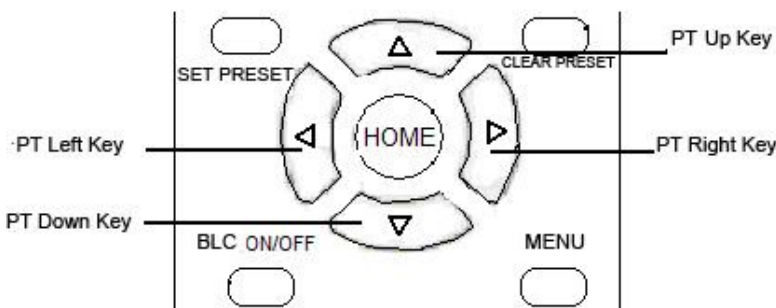
- 1、 In this instruction, “press the key” means a click other than a long-press, and a special note will be given if a long-press for more than one second is required.
- 2、 When a key-combination is required, do it in sequence. For example, “+#+F1”means press“\*”first and then press“#” and press“F1”at last.

### 1. 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

### 2. Pan/Tilt Control

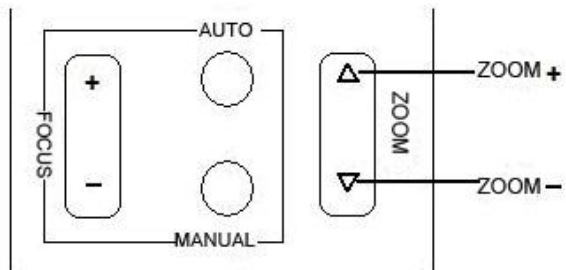


- Up: press ▲
- Down: press ▼
- Left: press ◀
- Right: press ▶
- Back to middle position: press“HOME”

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.



### 3. Zoom Operation

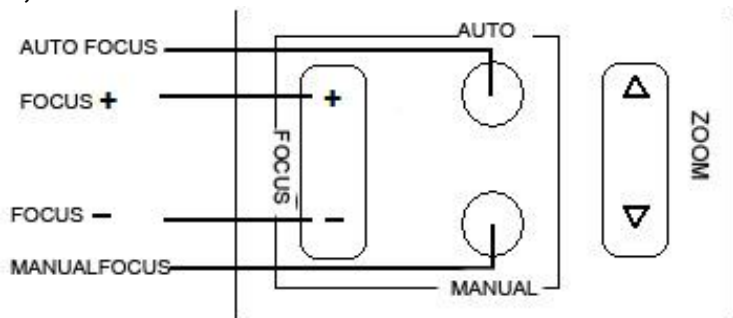


ZOOM OUT: press "ZOOM -" key

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.

### 4. Focus Control



Focus (far): Press "focus+" key

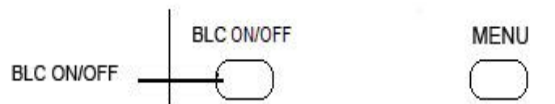
Focus (near): Press "focus-"key

Auto Focus: Press "auto"

Manual Focus: Press "manual"

Press and hold the key, the action of focus continues and stops as soon as the key is released.

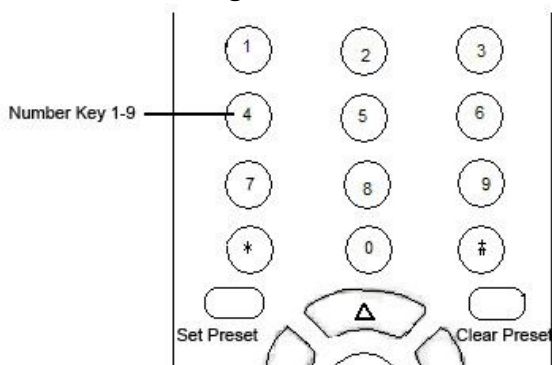
### 5. BLC Setting



BLC ON: Open BLC

BLC OFF: Close BLC

### 6. Presets setting

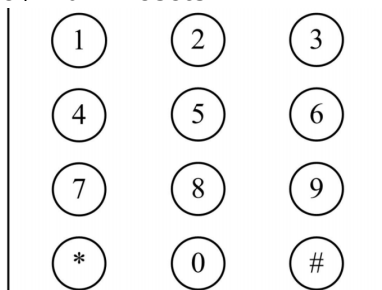


To set a preset position, the users should press the "SET PRESET" key first and then press the number key 0-9 to set a relative preset, 10 preset positions in total are available.

### 7. Preset Clearing

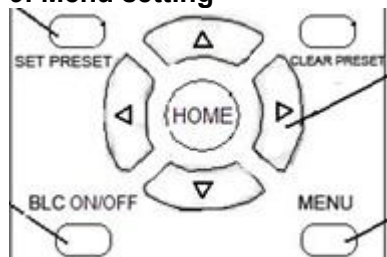
To clear a preset position, the user can press the "CLEAR PRESET" key first and then press the number key 0-9 to clear the relative preset; Or press the "#" key three times to cancel all the presets.

## 8、Run Presets



Press a number key 0-9 directly run to a set preset.  
It will be invalidated if with no preset set.

## 9. Menu setting



Press MENU key to open or close menu

### Menu mode:

- Press ▲ : select the menu upwards
- Press ▼ : select the menu downwards
- Press ◀ : enter into the sub menu and select the current parameter
- Press ▶ : back to the former menu

## COM Control

In default working mode, the camera is able to communicate with video conferencing terminal via RS-232C command. The baud rate of RS232 COM is 9600 bit/s, and each frame data includes 1 start bit, 8 data bits and 1 stop bit.

Connected to power, the camera runs to the right middle position, with the lowest zoom rate, auto focusing and default iris data. The users can control the pan/tilt/zoom, manual focus, presets setting and running of the camera via RS-232 command.

The control of preset position includes the following two aspects

- (1) Execute preset position checking command, and report current position and pan/tilt/zoom information.
- (2) Execute preset activating command. The camera re-enables the preset data, including position, zoom rate and focus.

## Inquiry Command

Some LG camera don't support some command. Mark "\*"

Inquiry command	Command information	Return command	Remark
Clear command	88 01 00 01 FF	88 01 00 01 FF	
Software version query	81 09 04 22 FF	90 50 20 10 12 FX YZ FF	X: version integer Y: Version after decimal one Z: Version after decimal point two This is Modification number (Range:0XA~0XF) Like: 90 50 20 10 12 F1 1A FF Current version is 201012 V1.1A,, and the return command

			changes with the version
Camera module query	81 09 00 02 FF	90 50 00 20 04 4C 01 00 02 FF	This Return command represent the camera module

### Movement Control Command

Movement Control		Command information	Return command	Remark
Up		81 01 06 01 HH VV 03 01 FF		The camera will keep rotating as ordered or stop on a stop command. HH for pan running speed, range from 1 to 24 VV for tilt running speed, range from 0 to 1x20 YYYY: for pan position, range from 0XF6A0~0x0960. ZZZZ: for tilt position, range from 0XFB50~0x04B0
Down		81 01 06 01 HH VV 03 02 FF		
Left		81 01 06 01 HH VV 01 03 FF		
Right		81 01 06 01 HH VV 02 03 FF		
Left up		81 01 06 01 HH VV 01 01 FF		
Right up		81 01 06 01 HH VV 02 01 FF		
Left down		81 01 06 01 HH VV 01 02 FF		
Right down		81 01 06 01 HH VV 02 02 FF		
Stop		81 01 06 01 HH VV 03 03 FF		
Relative Position to turn		81 01 06 03 HH VV 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF		
HOME(middle position)		81 01 06 04 FF		
Zoom out		81 01 04 07 3z FF		z zoom speed z 0~F
Zoom in		81 01 04 07 2z FF		
Stop		81 01 04 07 00 FF		
Auto focus(default)		81 01 04 38 02 FF		
Manual focus		81 01 04 38 03 FF		
Focus (far)		81 01 04 08 02 FF		
Focus (near)		81 01 04 08 03 FF		
Stop		81 01 04 08 00 FF		
Preset position command1	Position preset	81 09 06 12 FF	90 50 0W 0W 0W 0W 0Z 0Z 0Z 0Z FF	W Pan position info V Tilt position info
	Focus preset	81 09 04 47 FF	90 50 0Z 0Z 0Z 0Z FF	Z zoom rate info
	Position query	81 01 06 02 04 03 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	90 40 FF	Y Pan position info Z Tilt position info
	Zoom information query	81 01 04 47 0Z 0Z 0Z 0Z FF	90 40 FF	Z zoom rate info
Preset position command2	Position and zoom preset	81 01 04 3F 01 0z FF	90 40 FF	Z: 0—F, the number of preset positions, 16 in total
	Take preset position	81 01 04 3F 02 0z FF	90 40 FF	
	Clear preset position	81 01 04 3F 00 0z FF	90 40 FF	

## Output video setting

System reset command	81 01 06 05 FF	Reset the pan/tilt and the camera, The pan/tilt self-inspection .
----------------------	----------------	---

## Lens parameter setting

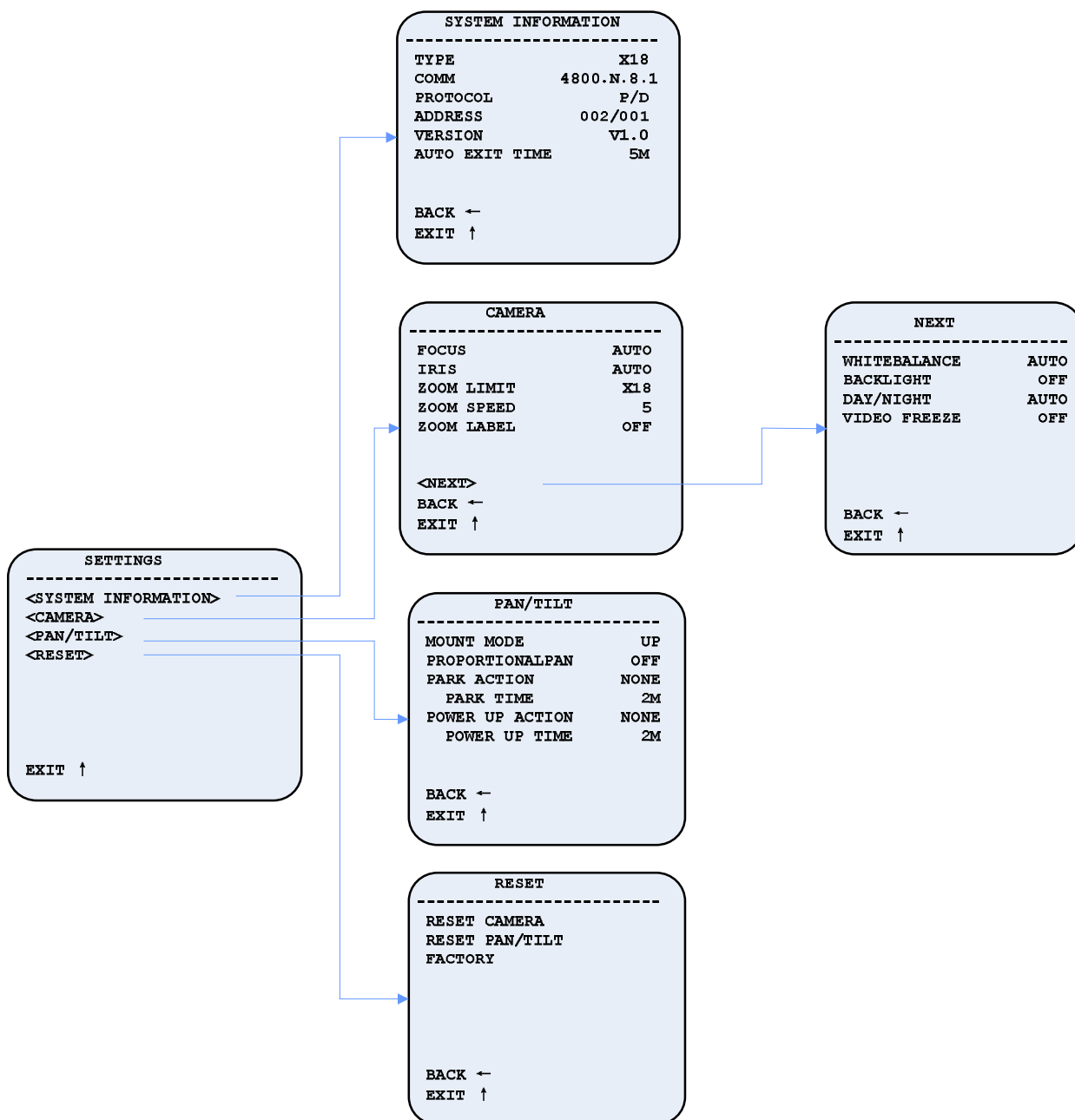
Function	Setting command	
Iris control	Auto exposure	81 01 04 39 00 FF
	Manual iris	81 01 04 39 0B FF
	Iris +	81 01 04 0B 02 FF
	Iris -	81 01 04 0B 03 FF
	Iris stop	81 01 04 0B 00 FF

## Menu Setting

Function	Setting command	
Menu control	Open menu	81 01 04 5F 5F FF
	Close menu	81 01 04 5F 5E FF
	Normal operation and menu switch	81 01 04 5F 5D FF

## 14、 Menu control

Menu index:



### 14.1 Operation explanation

The basic menu control includes change the menu bar, enter the next level menu, return to the menu, exit the menu, select the menu, Change set data, confirm changes and cancel the change

Keyboard control (P/D/VISCA protocol):

Fluctuation command: change menu bar and change the value

Open Iris command: enter the next level menu or select menu and confirm change

Close Iris command: return to the menu and cancel the change

The remote control operation:

Press ▲: Moving up the menu bar and change the set value (equivalent to the keyboard tilt up)

Press ▼: Moves down the menu bar and change the set value (equivalent to the keyboard tilt down)

Press ◀: Return to the menu and cancel change (equivalent to open the Iris of the keyboard)

Press ▶: enter the next level menu or select menu and confirm change (equivalent to close the Iris of the keyboard)

According to VISCA protocol control regulations.

Through a serial port send "menu open" or "normal operation and menu switch" the order to open the menu

Through a serial port send "menu close" or "normal operation and menu switch" the order to close . the menu

This series conference camera is according to P/D control protocol

By calling the number 95 preset commands to open menu, by calling 94 preset commands to exit menu, other control Settings, please refer to our controller manual.

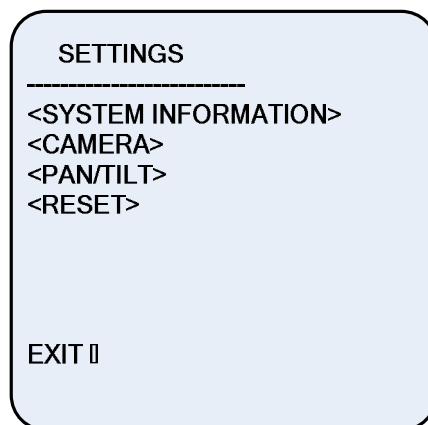
Note:

1、 With a "< >" menu section contains a next menu.

2、 Through the "up", "down" button to move the cursor "→"; Through the "open" and "off" button to select.confirm and return. When the cursor stays in the menu columns can be amended parameters, press "open" key parameters flickered on this column, through the "up", "down" button to change the parameters,after finish changing ,press the open button to confirm. If the parameter at flashing state. press the close button to cancel the change.

3、 When the cursor stays in the menu columns can be amended parameters, Press the "open" button, the columns right parameter will begin to flashing. ,after finish changing ,press the open button to confirm.or press the close button to cancel the change. The right column parameters will be closed flashing.

### 14.2 Main Menu



#### **SYSTEM INFORMATION (System information)**

Display the system information and set the time of auto exit

#### **CAMERA (Camera parameter setting )**

Set the parameter of camera

#### **PAN/TILT (PAN/TILT parameter setting)**

Set the parameter of PAN/TILT

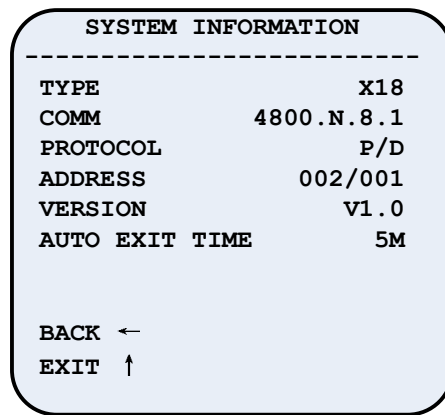
#### **RESET**

Set the various components of system restoration

#### **EXIT**

Close main menu

14.3 sub menu  
 14.3.1 system information



**TYPE**

Determined according to the camera optical zoom. The camera is currently supported 18x

**COMM**

Communication port information, 4800: communication baud rate, N: none, 8: 8 bits of data bit, 1: 1 bit of stop bit.

Description: the communications port information will show a different baud rate in accordance with the different DIP switch settings, but the N.8.1 will not change.

Note: VISCA protocol only works in the baud rate 9600.

**PROTOCOL**

Protocol type, the camera will automatically recognize P, D, VISCA protocol with no need for DIP.

**ADDRESS**

It will show the " P protocol address/ D protocol address" if the current protocol is PELCO P or PELCO D, and the others which are corresponding to the P/D protocol will show the corresponding protocol address. PTZ responds control commands based on the address.

Description: the control equipment will select the conference camera to display the corresponding address according to their own control protocol, can communicate.

**VERSION**

Software version number will change with the upgrades of product.

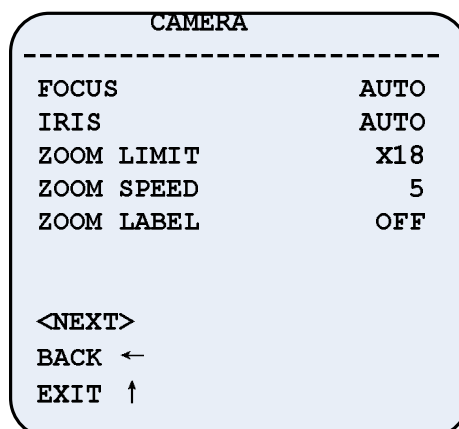
**AUTO EXIT TIME**

default to 5M

Auto exit time, 2,3,4,5,6,7,8,9,10 minutes can be selected.

Description: when the conference camera enter into the menu, no parameter is selected, if there is no operate to the camera in setting time, conference camera will exit the menu safe and enter into the normal control state.

14.3.2 Camera parameter setting menu



Note: ZOOM SPEED, different cameras have different amount of speed level and factory settings.

**FOCUS**

Default setting: AUTO

Two focus modes: AUTO/MANUAL

**IRIS**

Default setting: AUTO

Two Iris modes: AUTO/MANUAL

**ZOOM LIMIT**

Default setting: X18

Zoom limit will show different limit according to different cameras

**ZOOM SPEED**

Default setting: 5

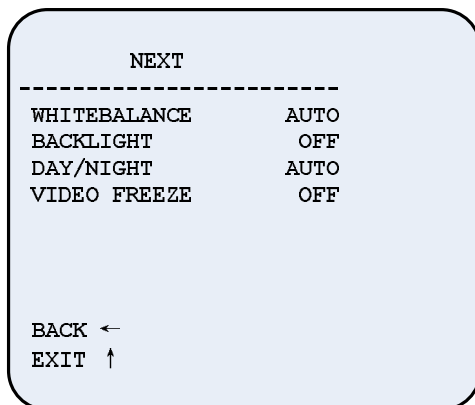
Zoom speed has 1 to 7 level zoom speed and will show different times according to different cameras.

**ZOOM LABLE**

Default setting: OFF

Two options for zoom: ON/off

in <NEXT> press Iris (OPEN), the screen displays second page of the camera parameter setting menu page .



Note: VIDEO FREEZE function depends on whether the camera has this function, it can be set if the camera has this feature; and it can not be set if camera do not have this feature.

WHITEBALANCE will be different according to the different brands, so the factory value varies due to the camera.

**WHITEBALANCE**

Default setting: AUTO

White balance can be selected the AUTO、INDOOR、OUTDOOR、ONEPUSH、ATW types, different camera will be different.

**BACKLIGHT**

Default setting: OFF

Two select models for back light: ON、 OFF

**DAY/NIGHT**

Default setting: AUTO

Three models for day/night selection: AUTO、 DAY、 NIGHT

**VIDEO FREEZE**

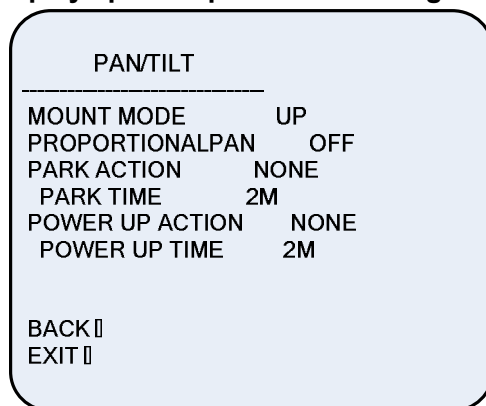
Default setting: OFF

Two select models for video freeze: ON/OFF

**14.3.3 Pan/tilt parameter setting menu**

&lt;PAN/TILT&gt;

press Iris OPEN, the screen displays pan/tilt parameter setting menu page



**MOUNT MODE**

Default setting: UP

Two mount modes: UP / DOWN. (only modified in the menu display, not in the menu)

**PROPORTIONALPAN**

Default setting: OFF

Two options for proportional pan: ON/OFF

**PARK ACTION**

Default setting: NONE

Ten options for park action: NONE, PRESET1→PRESET8, SCAN.

**PARK TIME**

Default setting: 2M

Park time range: 2M (minute) →10M

**POWER UP ACTION**

Default setting: NONE

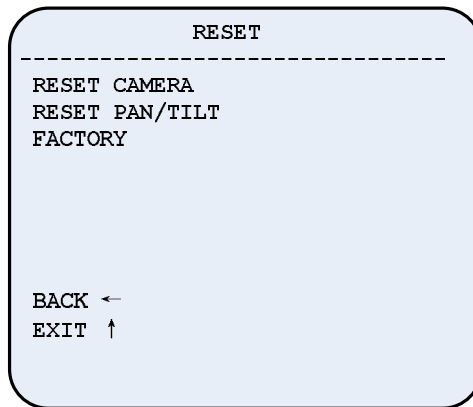
Ten options for power up action: NONE, PRESET1→PRESET8, SCAN.

**POWER UP TIME**

Default setting: 2M

Power up time range: 2M (minute) →10M

**14.3.4 Reset setting menu**



**RESET CAMERA**

Reset camera parameters, <camera parameter setting> menu bar all restore to the factory settings.

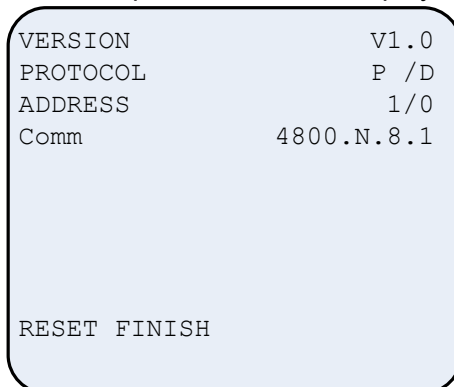
**RESET PAN/TILT**

Reset pan/tilt parameter, <pan/tilt parameter setting> menu bar all restore to the factory settings.

Note: pan/ tilt reset will not make the installation to reset to the factory settings.

**FACTORY**

Reset the machine include: camera reset, PTZ reset, power-on mode reset, clear all the presets, camera parameters( except the installation mode) back to the factory setting. Camera can do pan and tilt self-checking. The horizontal direction will turning to the zero position, and will display as following diagram.



Note: the machine reset will not make the installation mode to reset to the factory values.

**BACK ←**

Back to the previous menu

**EXIT ↑**

Exit menu



# 15. Maintenance and Troubleshooting

## Camera Maintains

- If camera is not used for long time, please turn off power switch, adapter switch and AC plug.
- Use soft cloth or tissue to clean the camera cover.
- Use soft cloth to clean the lens; Use neuter cleanser if bad smeared. No use strong or corrosive cleanser or corrosive cleanser avoiding scuffing.

## Unqualified Applications

- No shooting extreme light object, such as sunlight, lamplight etc.
- No operating in unstable light environment, otherwise image will twinkle
- No operating in radio wave with great power environment, such as TV station or Wireless Launcher etc.

**Image effective will be not good when the light is not accordant with camera's lux.**

## Trouble Shooting

### Image

- No Image

Check whether the power cord, voltage is OK, power indicator light is ON.

Turn off the power supply to check whether the camera can auto configure.

Check the dial switch in bottom and make sure the two dial position are all on OFF.

Check video and TV wire is connected correctly.

- Abnormal display of image

Check the video connecting wires is well and other connecting sockets and camera flat wires are well.

- The camera can only works at one focus, other position can not be focused.  
Change the position to see if this phenomenon still exists. If yes, it may be caused by Camera control drive focus control system trouble.

- Image dithering even at MAX. Zoom  
Check whether camera is fixed correctly.  
If there is vibrative mechanical object.

### Control

- Remote Controller

Change the battery

Check the dial switch of IR remote controller is ON

- Terminal

Check the camera operation mode is right.

Check control wire is connected correctly.

# 16. Specification

## ● Camera and Lens features

Video Transducer	1/4 inch super quality EXVIEW HAD CCD transducer
Video Signal	1.0±0.1VP-P (75Ω, compound)
Lens Zoom	18X optical zoom, f=4.1—73.8mm, F1.4—3.0
Angle	2.8° (tele angle) --48° (wide angle)
Minimum Illumination	0.7LUX
White Balance	Auto/sunlight/cloudy/darkness/fluorescence multi white balance mode
Focus	Auto/Manual
Iris	Auto/Manual
Electronic Shutter	Auto
BLC	Open/Close
S/N Ratio	>50dB

## ● Rotation Feature

Pan Rotation: ±360 degree

Manual Control Speed:

upright method -30~+90degree; inverted method -90~+22 degree

Pan speed: 0.2-80°/sec

Tilt speed: 0.2-40°/sec

Preset Speed:

Pan running: 80°/sec

Tilt running: 40°/sec

Preset: 256 (Max)

## ● Input/Output Interface

Video Output:: RCA socket, Compound video 1Vp-p,75Ω none balance

S-Video output : 4pin mini DIN

Controller Signal Interface: 8 core mini DIN

Controller Signal Interface: Start bit: 1; Data bit: 8; Stop bit: 1; Baud Ratio: 1200, 2400,4800,9600bps

Power interface: HEC3800 Power Socket

## ● Electrical Index

Power supply adapter: DC12V/2A

Input voltage: DC12V(DC10.5-DC14V)

Input power: 18W(MAX)

## ● Structure

● Material: All-alloy, PC plastic

● Weight: 1KG

● Dimension width x highness x depth) : 210mm x 143mm x 140mm

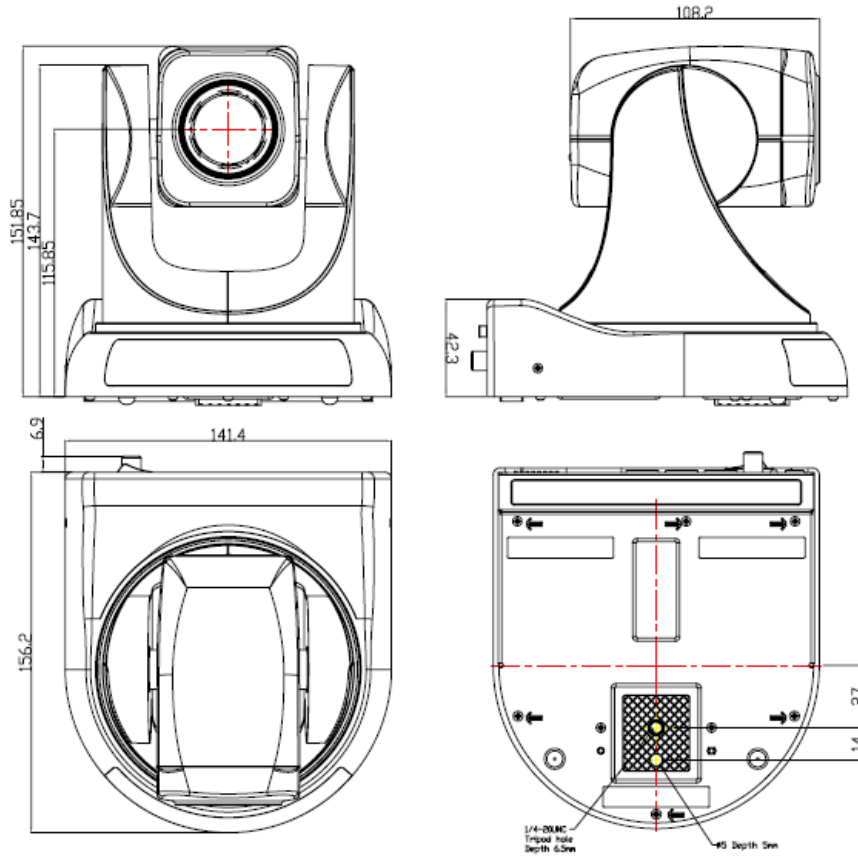
● Working environment: Indoor

● working temperature: -0°C to +45°C

● Storage temperature: -10°C to +60°C

● Color: Black

# 17. Dimension



## Appendix I P control protocol

### (1) Command format

BYTE	VALUE	FUNCTION
1	\$A0	STX(start transmission)
2	\$00 to \$FF	Address
3	Data byte 1	
4	Data byte 2	
5	Data byte 3	
6	Data byte 4	
7	\$AF	ETX(end transmission)
8	\$00-\$FF	Check sum (XOR 1-7 bytes)

### (2) Instruction command

BYTE	VALUE	FUNCTION
1	\$A0	STX(start transmission)
2	\$00 to \$FF	Address
3	Data byte 1	
4	Data byte 2	
5	Data byte 3	
6	Data byte 4	
7	\$AF	ETX(end transmission)
8	\$00-\$FF	Check sum (XOR 1-7 bytes)

### (3) Special command format

COMMAND	DATA BYTE1	DATA BYTE2	DATA BYTE3	DATA BYTE4
Set preset. xx	00	03	00	01 to FF
Clear preset. xx	00	05	00	01 to FF

COMMAND	DATA BYTE1	DATA BYTE2	DATA BYTE3	DATA BYTE4
Go to preset. xx	00	07	00	01 to FF
Zero pan position	00	07	00	22
Set Pan Position	00	4B	Pan	Pan
Set Tilt Position	00	4D	Tilt	Tilt
Set Zoom Position	00	4F	Zoom	Zoom
Query Pan Position	00	51	00	00
Query Tilt Position	00	53	00	00
Query ZoomPosition	00	55	00	00
Query PanResponse	00	59	Pan	Pan
Query Tilt Response	00	5B	Tilt	Tilt
Query Zoom Response	00	5D	Zoom	Zoom

**Example: No.1 address rotator speed:30**

```

RIGHT      A0 00 00 02 30 00 AF 3D
LEFT       A0 00 00 04 30 00 AF 3B
UP         A0 00 00 08 00 30 AF 37
DOWN      A0 00 00 10 00 30 AF 2F
NEAR      A0 00 02 00 00 00 AF 0D
FAR       A0 00 01 00 00 00 AF 0E
OPEN      A0 00 04 00 00 00 AF 0B
CLOSE     A0 00 08 00 00 00 AF 07

```

**Appendix II D control protocol**

**(1)command format**

BYTE	VALUE	FUNCTION
1	\$FF	STX (start transmission)
2	\$01 TO \$1F	Address
3	Data byte 1	
4	Data byte 2	
5	Data byte 3	
6	Data byte 4	
7	\$00-\$FF	Checksum(add byte 2,3,4,5,6)

**(2)Instruction command**

Bit number	7	6	5	4	3	2	1	0
Data1	0	0	0	0	0	Iris close	Iris open	Focus near
Data2	Focus far	Zoom wide	Zoom tele	Tilt down	Tilt up	Pan left	Pan right	0 (for pan/tilt) 1 (extended)
Data3	Pan speed \$00 to \$40 for turbo							
Data4	Tilt speed \$00 to \$3F							

**(3)Special command format**

COMMAND	DATA BYTE1	DATA BYTE2	DATA BYTE3	DATA BYTE4
Set preset. xx	00	03	00	01 to FF
Clear preset. xx	00	05	00	01 to FF
Go to preset. xx	00	07	00	01 to FF
Zero pan position	00	07	00	22
Set Pan Position	00	4B	Pan	Pan
Set Tilt Position	00	4D	Tilt	Tilt
Set Zoom Position	00	4F	Zoom	Zoom
Query Pan Position	00	51	00	00
Query Tilt Position	00	53	00	00
Query Zoom Position	00	55	00	00
Query PanResponse	00	59	Pan	Pan

COMMAND	DATA BYTE1	DATA BYTE2	DATA BYTE3	DATA BYTE4
Query Tilt Response	00	5B	Tilt	Tilt
Query Zoom Response	00	5D	Zoom	Zoom

**Example: No.1 address**

<b>RIGHT</b>	<b><u>FF</u></b>	<b><u>01</u></b>	<b><u>00</u></b>	<b><u>02</u></b>	<b><u>20</u></b>	<b><u>00</u></b>	<b><u>23</u></b>
<b>LEFT</b>	<b>FF</b>	<b>01</b>	<b>00</b>	<b>04</b>	<b>23</b>	<b>00</b>	<b>28</b>
<b>UP</b>	<b>FF</b>	<b>01</b>	<b>00</b>	<b>08</b>	<b>00</b>	<b>23</b>	<b>2C</b>
<b>DOWN</b>	<b>FF</b>	<b>01</b>	<b>00</b>	<b>10</b>	<b>00</b>	<b>23</b>	<b>34</b>
<b>OPEN</b>	<b>FF</b>	<b>01</b>	<b>02</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>03</b>
<b>CLOSE</b>	<b>FF</b>	<b>01</b>	<b>04</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>05</b>
<b>NEAR</b>	<b>FF</b>	<b>01</b>	<b>01</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>02</b>
<b>FAR</b>	<b>FF</b>	<b>01</b>	<b>00</b>	<b>80</b>	<b>00</b>	<b>00</b>	<b>81</b>

**Appendix III Special presets explanations**

Preset no.	Function
1-8	Park
34 (set or run No.34 preset)	Home position
79 (set or run No.79 preset)	open digital zoom
80 (set or run No.80 preset)	close digital zoom
81 (set or run No.81 preset)	auto low lux switch function
82 (set or run No.82 preset)	Open low lux shift (B&W image)
83 (set or run No.83 preset)	Close low lux shift (color image)
84 (set or run No.84 preset)	Open WDR
85 (set or run No.85 preset)	Close WDR
86 (set or run No.86 preset)	Open BLC
87 (set or run No.87 preset)	Close BLC
88 (set or run No.88 preset)	Open video freeze
89 (set or run No.89 preset)	Close video freeze
94 (set or run No.94 preset)	Exit OSD menu
95 (set or run No.95 preset)	Enter OSD menu
96 (set or run No.96 preset)	Scan stop
99 (set No.99 preset)	Tilt position and Zoom value for auto scan
99 (run No.99 preset)	Run auto scan

**Notes:**

If camera module does not have WDR function, Preset 84 and Preset 85 will be unavailable.