HD_Video Conference Camera
User Manual
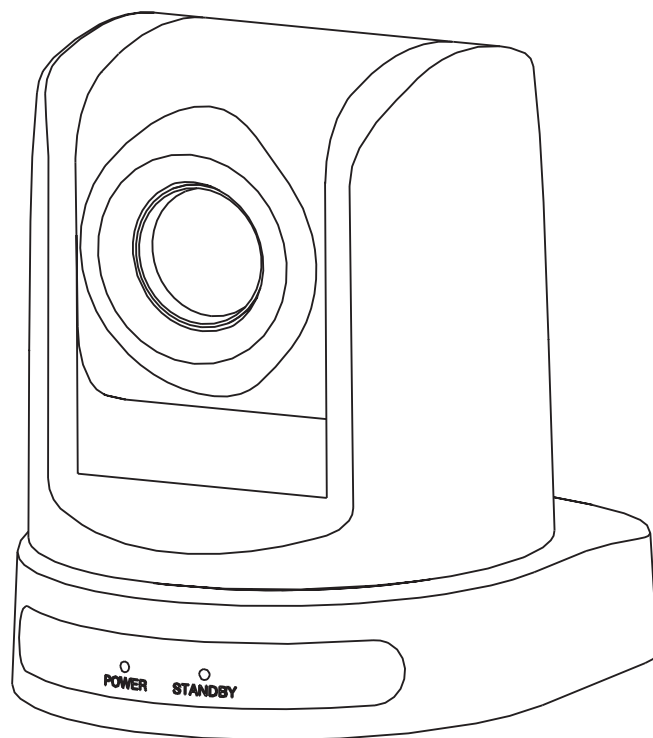
TABLE OF CONTENT

1. Precaution

● Electrical Safety

 Confirm country and local electrical safety standard when using or installing the product.
 The product itself has no power switch. Please stop power supply or plug out power socket when it
is not in good working.Video wire and control wire should be insulated and individual connected，can
not mix-up with other wires.

● Transportation with care

 Product should be protected against extremes of pressure, vibration and humidity during transportation,
storage and installation. It is transported by integrated packing style.

● Installation with care

 Please read carefully user installation manual when installation. Please pick up the camera parts
gently and do not press it, or else, which may cause malfunction; the camera parts belong to senior optical
products, please do not touch it by your hand in order to avoid scratch for protecting the imaging quality.

● Requirements to service personnel

 All the service work should be done by qualified technicians.

● Do not disassemble the Pan/Tilt module

 Do not disassemble screws and repair the parts of the Pan/Tilt module by yourself. Only qualified and
professional personnel can do this job.

● Environmental Requirements

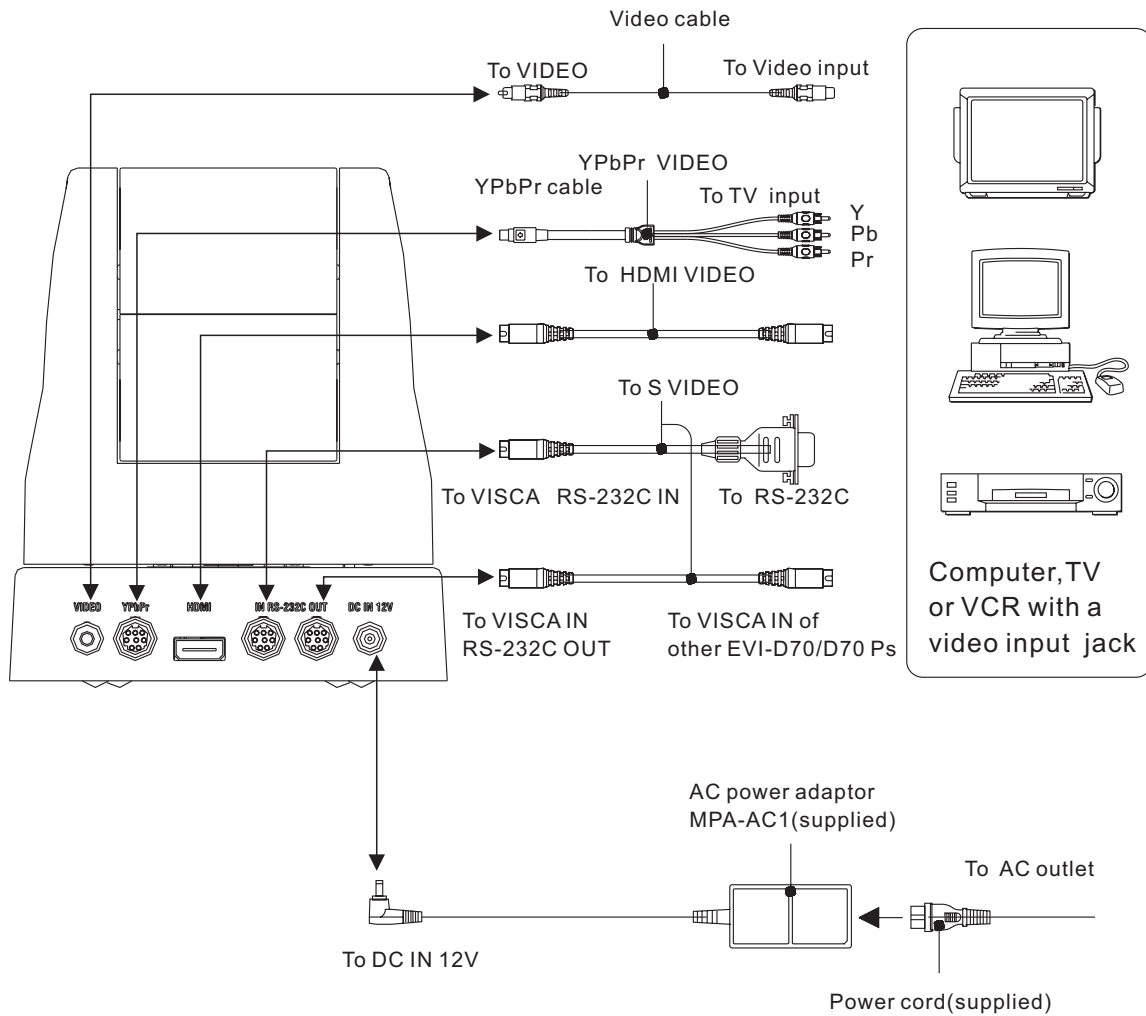| Environmental temp:	-40~+60°	Humidity:	<95%
Air Pressure:	86~106 Kpa	Power supply:DC12V±2V	
Power consumption:	Maximum 12W DC12V		

● Don't focus the camera on objects with strong light

 Don't focus the camera on objects with strong light. Don't focus the camera direct to the sun or
other bright objects no matter when in use or not. Otherwise ,it may affect image quality.

2. Application system diagram

2.1 Standard Definition camera operation illustration. for instance as below:

Video cable

To VIDEO   To Video input

YPbPr   VIDEO
YPbPr cable   To TV input   Y
    Pb
    Pr
To HDMI VIDEO

To S VIDEO

To VISCA   RS-232C IN   To RS-232C

VIDEO   YPbPr   HDMI   IN RS-232C OUT   DC IN 12V

To VISCA IN   To VISCA IN of
RS-232C OUT   other EVI-D70/D70 Ps

Computer,TV
or VCR with a
video input jack

AC power adaptor
MPA-AC1(supplied)

To AC outlet

To DC IN 12V

Power cord(supplied)

3. Performance

3.1 Camera parameter

Electricity：		Communications：	
Power supply	DC12V	Baud rate（RS232）	9600bps
Power consumption	12W	Protocol	Visca
Decoder	Built in	Address setting	1~8
Operation：		Environmental：	
Pan rotation	170°	Working environmental temperature	0 ℃~ +50℃
Tilt rotation	120°	Environmental humidity	0~95% No-condensation
Rotation speed	Pan 0.4°～80°／s		
Physical：			
Presets	Remote controller 9 Visca protocol 128	Installation	Stand-up position
net weight	1.7kg		

3.2 Camera parameter

Spec Model	KSS：20× Color
Signal system	PAL/NTSC
Imaging element	1/2.8Type Exmor CMOS Sensor
Scanning system	720P50/60，1080I50/60，1080P25/30 (Optional)
Effective pixel (H × V)	2 Mega pixel
Minimum illumination	1.7lux/0.005lux
Zoom	20X Optical,12X Digital
Focus	4.7-94(mm)
Angle Field of view	55.4°（W)-2.9°（T)
IRIS Control	Auto/Manual
Focusing system	Auto/Manual
White balance	Auto/Manual
Back -light compensation	Off/No
S/N ratio	＞50dB
Electronic shutter speed	1/1-1/10000
Video output port	SDI
Wide Dynamic Range	Off/No/Auto
Privacy zone masking	24

3.3 Performance&Features

Remark：The parameter for each video camera module is different; please refer to the details in Chapter 3.2

➢ **System**
- Video signal: PAL color
- Pixel: 2 mega
- Minimum distance for imaging: (wide view, the nearest settings under Visca protocol):10mm
- S/N Ratio: 50 dB
- Pan/Tilt: Pan±170°, maximum speed:100°/S
  Tilt:+90°, -30°, maximum speed: 90°/S
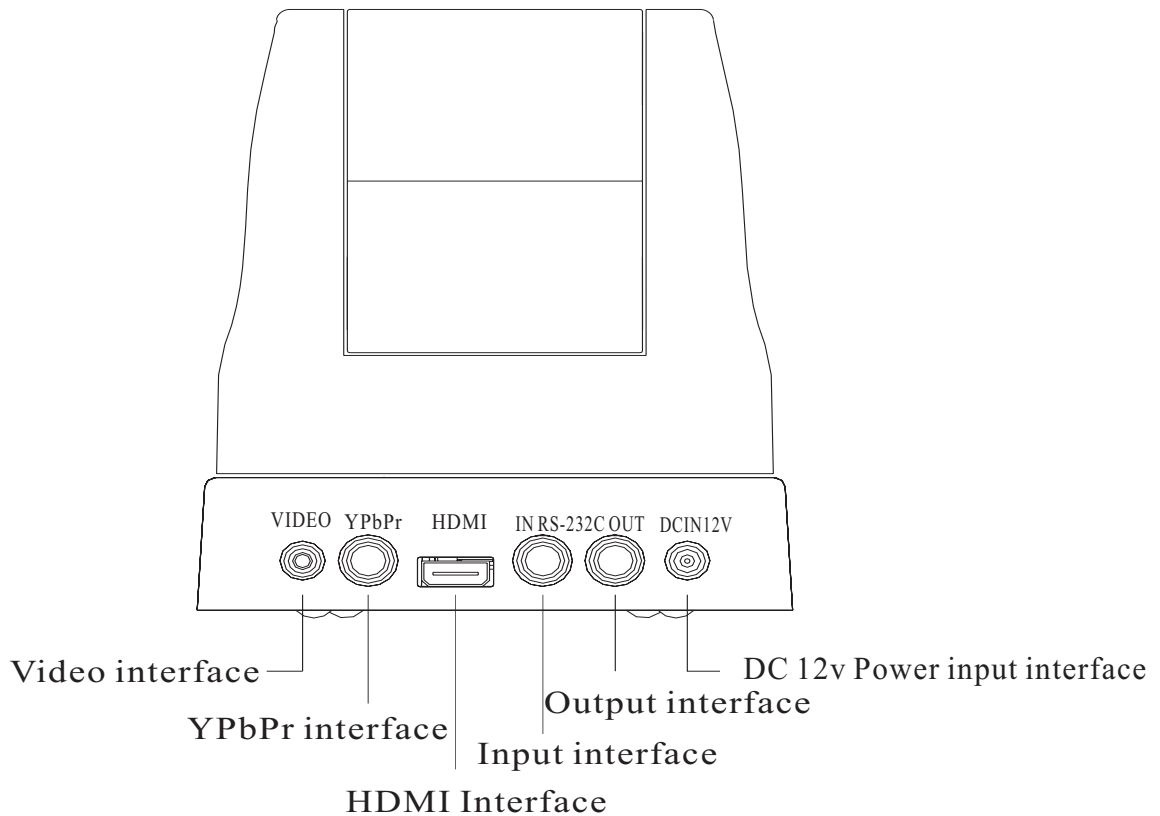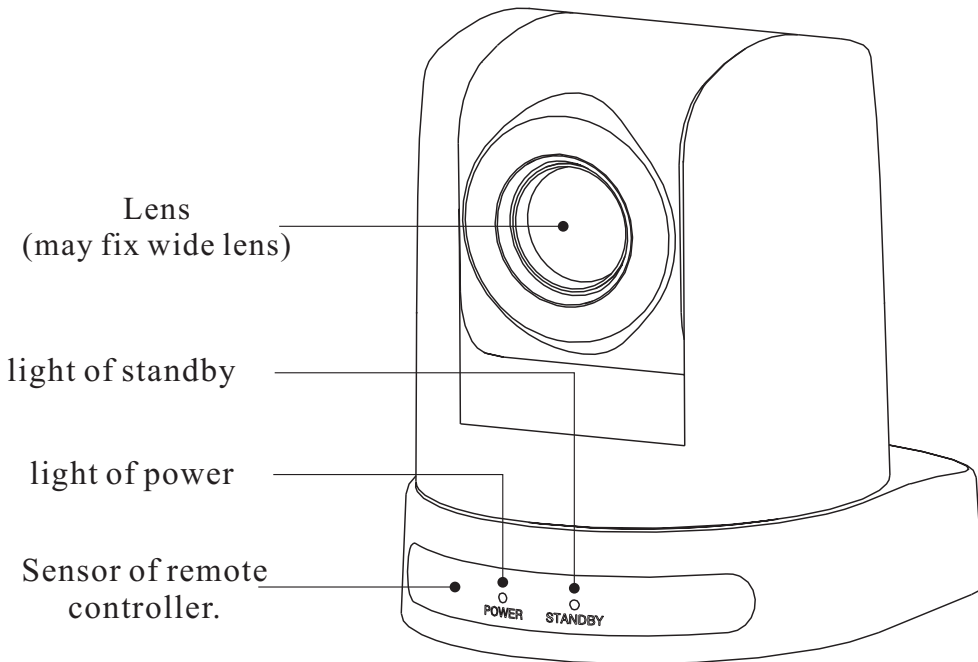
➢ **Input/Output port:**
- Output: RCA tone socket 1vpp, 75 ohm, Non-balance Sync: Negative
- Input/Output control connection port: Visca RS-232C: 8-Core Minisize DIN (input:1; output:1)
- Mode of signal control: 9600bps data:8 bit Stop bit:1
- Power connection port: JEITA 4

➢ **Features**
- With Fast, wide Pan/Tilt functions.
- With RS-232C communication and Visca protocol, can control video conference camera by terminal equipment and computer.
- Improved quality and definition of digital zoom image by the newest development digital signal processor (DSP).
- Can remove and attenuate IR light by attenuation-filter. Besides, this filter can open and close automatically; it provides image with good quality in high definition and strong brightness in large scope.
- Can save 9 presets in memory, it's available for working when necessary.
- With 1 Multi function IR Remote controller, which is easily and convenient to control video conference camera.

4. Functions

4.1 positions of control system

Lens
(may fix wide lens)

light of standby

light of power

Sensor of remote
controller.

POWER   STANDBY

VIDEO   YPbPr   HDMI   IN RS-232C OUT   DCIN12V

Video interface

YPbPr interface

HDMI Interface

Input interface

Output interface

DC 12v Power input interface

5

4.2 Dimension

The Size for High definition video conference camera is as below:

POWER   STANDBY

154
110
131.56

90°
30°
165
66
142
8

14
8
Screw thread
1/4-20 UNC,
6.5mm

175°
175°
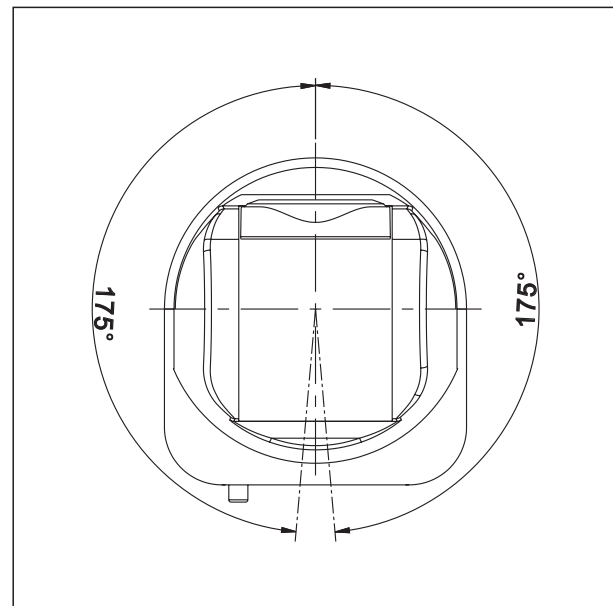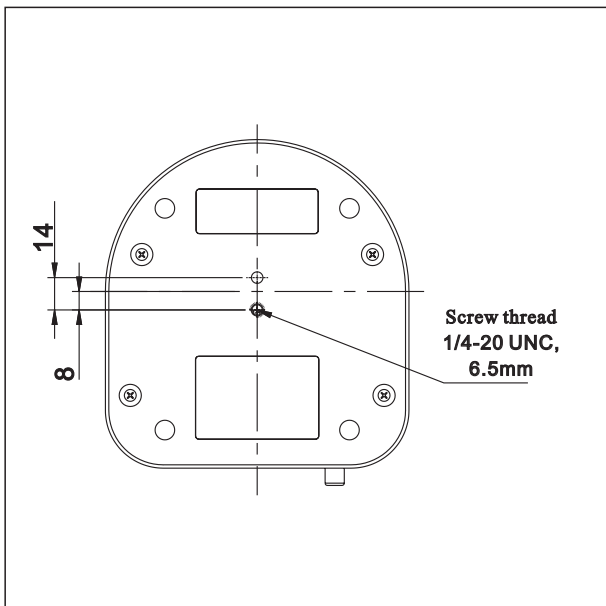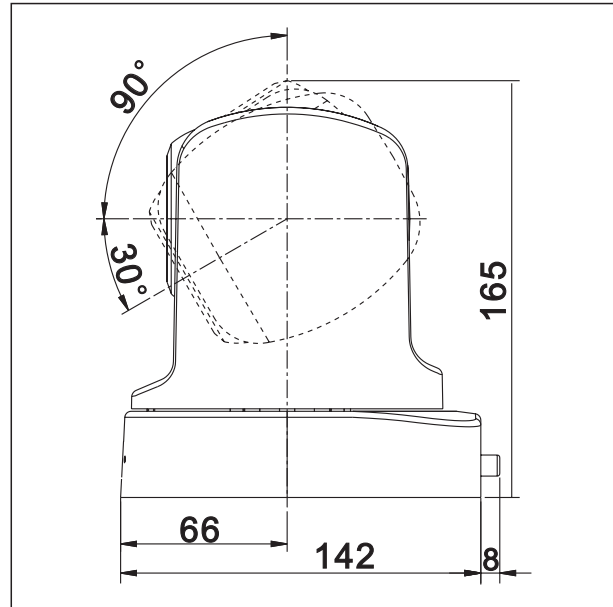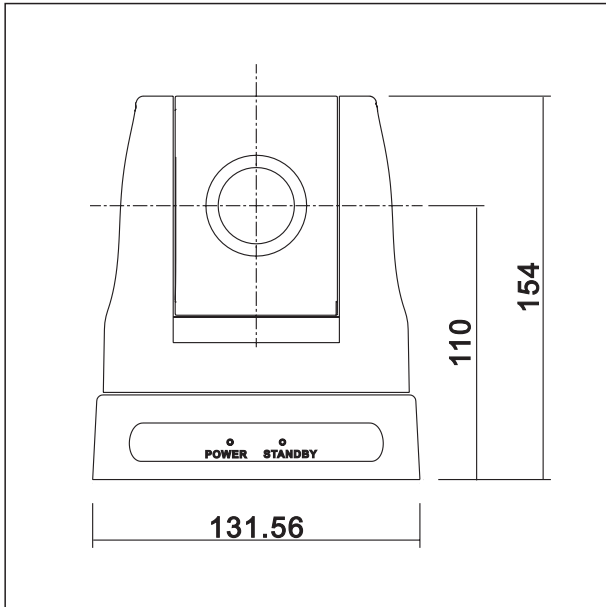
4.3 Functions of remote controller

① POWER：open/close power

② DATA SCREEN：Enter OSD Menu, Continuous press 6 times (Every time

　must be around 1 second), Restart may make the dome restore factory default.

③ BACK LIGHT：press for back light compensation.

④ AUTO：press for auto-focus.

⑤ FAR：press for far zoom, focus on objects in far distance；

　　NEAR：press for near zoom, focus on objects in near distance.

⑥ MANUAL ：press for Manual Auto/ focus.

⑦ POSITION：Setting for preset and reset.

　PRESET：press any number from 0-9 within 2 seconds

　after press "preset" to set preset.

　RESET ：press any number from 0-9 within 2 seconds

　after press "reset" to delete preset.

　Press any number to see preset.

⑧ HOME：press this key to set position in central of front side.

⑨ SLOW T：focus on near object slowly

⑩ SLOW W：focus on far object slowly

⑪ FAST T：focus on near object fast

⑫ FAST W：focus on far object fast

⑬ L/R DIRECTION/SET：1.press 1 in 2 seconds

　after press this key, camera start left to right rotation

　under upside installation style; Press 2 in 2 seconds after

　press this key, camera start left to right rotation under

　upside-down installation style.
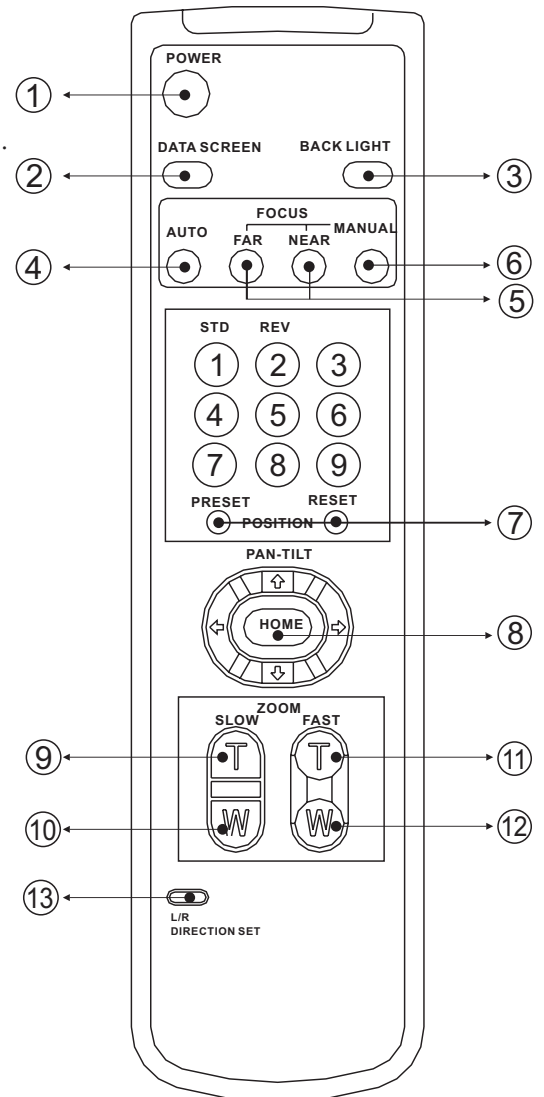
● **Notes:**

　　1. if the remote controller doesn't work, please change batteries.

　　2. camera can not work if there is any block between remote controller and camera, please make sure the

　　　controller is direct to the sensor when using.

5. Instruction

5. 1 Pan/Tilt operation
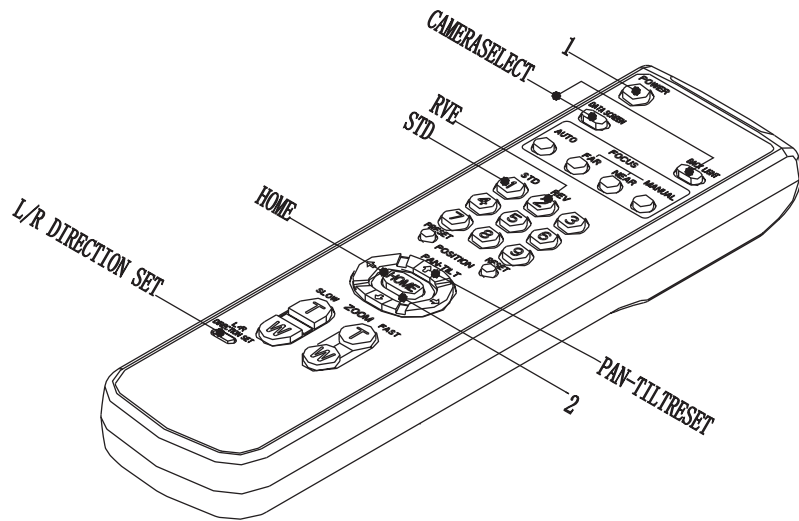
1. Press direction keys to change the direction. If need to change vision angle of camera, please press the right direction key. Press short time for slow moving, press long time for fast moving.
2. Press "Home" to set position in central of front side.

5. 2 Camera control
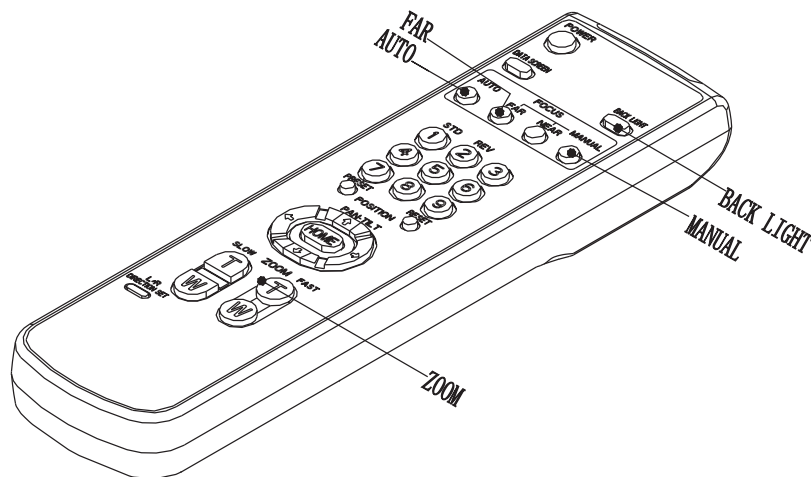
Focus

1. Auto focusing: press "auto", camera will focus on the central object.
2. Manual focusing: press "manual" to switch auto and manual focusing. Under model of "manual focusing", press "far" to set focus in far distance, press "near" to set focus in near distance.

➤ Back light imaging

Light behind of the object, which will be black, press "back light" for compensation.

Press again for cancel this function.

DATA SCREEN   BACK LIGHT

FOCUS

AUTO   FAR   NEAR   MANUAL

Far zoom   near zoom
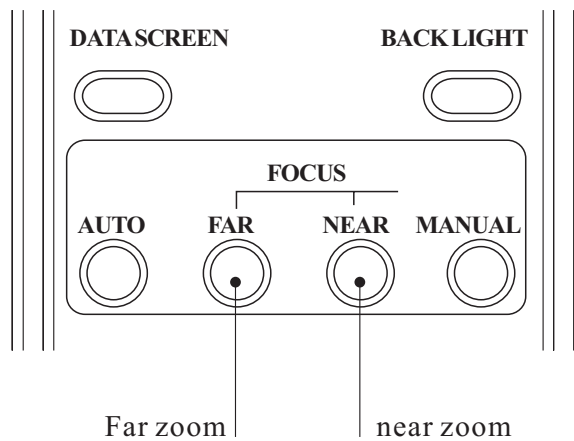
➤ **Change focus**

Press any button of zoom to realize different zoom.

press to near zoom
(far view)

T   T

press to far zoom
(wide view)

W   W

L/R
DRECTION SET

change zoom slowly   change zoom fast
(slow)   (fast)
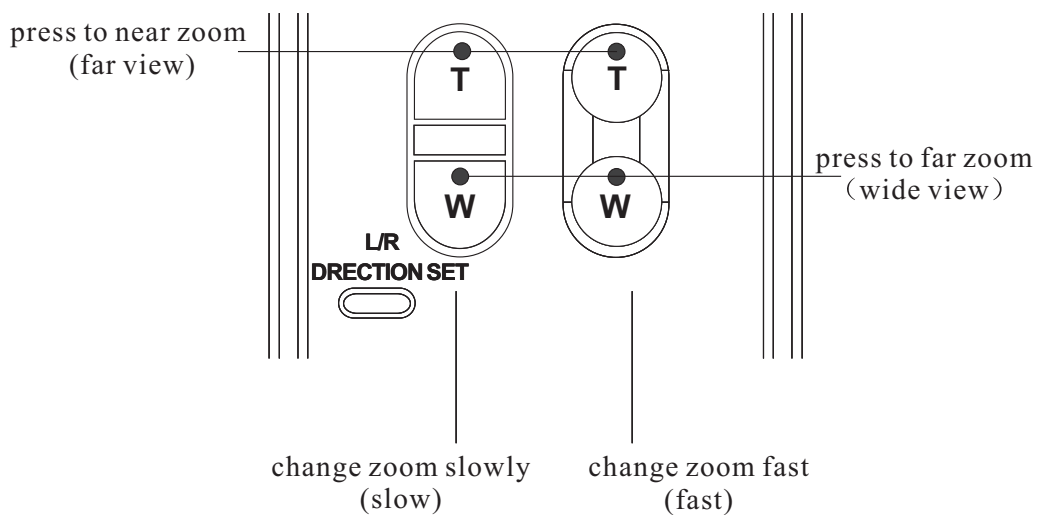
5. 3 Memory settings-preset function

Can set 9 combinations of presets: position, zoom and back light etc.

1. Confirm standby with no glitter.

2. Adjust camera position, zoom and focus on back light.

3. Keeping press preset key, then press any number 1-9 to save presets.
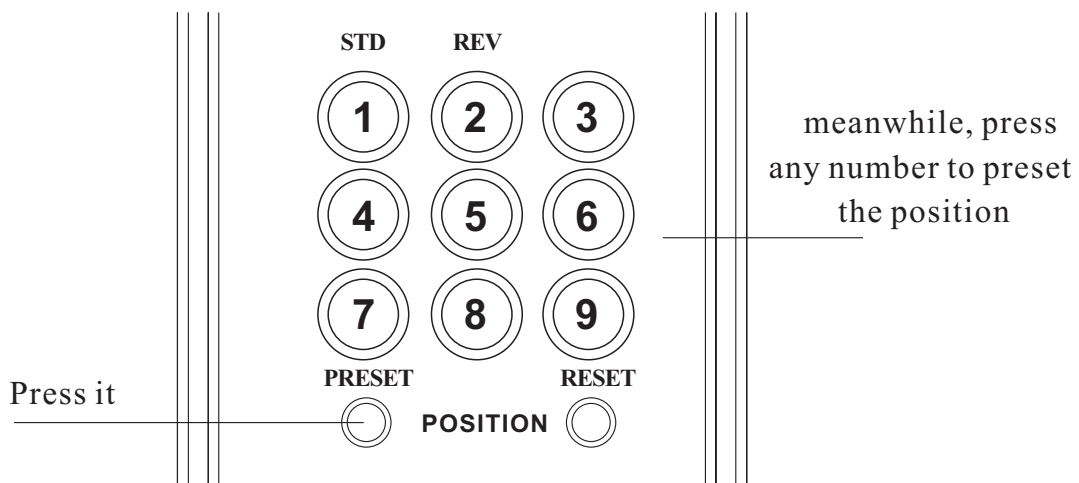
Choose memory settings：Press any number 1-9 which stands for the saved preset.
Delete memory settings：Press RESET while press the related number which is saved for the preset for deletion.

Attention

1、 When camera wired into the power supply, it starts automatically from the memory presets.

2、 If you want to keep the presets effective when start again after power break off, you can save the presets in position .

3、 Preset is saved or deleted in one position, it can not use other presets when setting. Same preset only can be saved or deleted in one position.

6. System setting

```
MAIN  MENU

SYSTEM  SETTING
CAMERA  SETTING
VIDEO OUT
COMM PARA
EXIT
```

1、Operate remote controller, press 【DATA SCREEN】 enter OSD menu;
2、Press the arrow keys to select the menu, press left and right button to set functions;

6.1 System setting

```
SYSTEM  SETTING

ZOOM  LABEL     OFF
HEAD DOWN       OFF
L-R DIRACTION  OFF
POS  MODE    VISCA
INITIAL INFO
DEFAULT
BACK
EXIT
```

1、Operate remote controller, Press 【DATA SCREEN】 enter OSD menu, press the arrow keys to move to 【SYSTEM SETTING】 press right button to enter next menu; as the left picture

```
INITIAL  INFO

FIRMWAR  V2.33 6300
PROTOCOL：VISCA
DAURATE：9600
CAM ADDRESS：AUTO

BACK
EXIT
```

● 【ZOOM LABEL】
● 【HEAD DOWN】 Image inversion【OFF】Top mount 【NO】Top-down mount
● 【L-R DIRACTION】Remote controller arrow keys and the camera running direction
● 【OFF】Remote controller arrow keys consistent with the direction of camera run
● 【NO】Remote controller arrow keys with the camera running direction of the opposite
● 【POS MODE】protocol mode, VISCA and FACTORY for option
● 【INITIAL INFO】Dome initialization information display; As the left picture shown: Initialization information including software version number, PTZ protocols, communication parameters, dome address, etc.
● 【DEFAULT】Restore to factory default setting

7. CAMERA SETTING

```
       MAIN  MENU

   SYSTEM  SETTING
   CAMERA  SETTING
   VIDEO OUT
   COMM PARA
   EXIT
```

Operate remote controller, Press 【DATA SCREEN】 enter
OSD menu, press the arrow keys to move to 【CAMERA
SETTING】 press right 1button to enter next menu;
as the left picture

7.1 CAMERA【EXPOSURE】SETTING

1. Press arrow keys to move to 【EXPOSURE】 and then press
right button to enter next menu, as the left picture

【AE MODE 】

1.Press right button ,for optional as Follows

```
   CAMERA SETTING

 * EXPOSURE
   COLOR
   FOCUS
   PICTURE
   BACK
   EXIT
```

- 【AUTO 】: default setting, auto Iris mode
- 【MANUAL】: manual setting
- 【BRIGHT】: brightness priority mode
- 【IRIS】: iris priority mode
- 【SHUTTER】: shutter priority mode

2. Option iris priority mode【IRIS】, press right-hand
button,save setting.

3. Move the joystick to AE model sub-options【IRIS F1.4】
press right key, Select the appropriate aperture size,
press right button, save setting.

```
       EXPOSURE

 AE  MODE    SET
 AGC  LIMIT        28DB
 SLOW  SHUTTER   OFF
 BLC                OFF
 EX-COMP        -1.5DB
 BACK
 EXIT
```

- 【SHUTTER 1/50】It means shutter speed, when the AE
mode is shutter priority, this function can be set.
- 【IRIS F1.6/0DB】It means the size of iris, when the AE mode
is iris priority, this function can be set.
- 【BRIGTH F1.6/0DB】It means brightness, when the AE mode
is brightness priority, this function can be set.
- 【AGC LIMIT】Automatic Gain，range of options 8-28dB；
- 【AGC LIMIT】The smaller the value, the darker and image
of snowflakes point less; numerical bigger and bright , the image
of snowflakes point more

```
       AE MODE

 AE  MODE         AUTO
  SHUTTER          N/A
  IRIS               N/A
  BRIGHT           N/A
  GAIN              N/A
 BACK
 EXIT
```

- 【SLOW SHUTTER】Slow shutter control
【OFF】Close slow shutter
【ON】Open slow shutter
- 【BLC】Backlight compensation function
【OFF】Close backlight compensation
【ON】Open backlight compensation
- 【EX-COMP】Exposure compensation function

7.2 CAMERA【COLOR】SETTING

```
        MAIN  MENU

    SYSTEM  SETTING
    CAMERA  SETTING
    VIDEO OUT
    COMM PARA
    EXIT
```

```
    CAMERA SETTING

      EXPOSURE
    * COLOR
      FOCUS
      PICTURE
      BACK
      EXIT
```

```
          COLOR

    WB  MODE        ATW
     R  GAIN         100
     B  GAIN         100
    BACK
    EXIT
```

```
          FOCUS

    FOCUS  MODE  AUTO
    BACK
    EXIT
```

1. Operate remote controller, Press 【DATA SCREEN】 enter OSD menu, press the arrow keys to move to 【CAMERA SETTING】 press right button to enter next menu; As the left picture:
2. Press arrow keys to move to 【COLOR】 and then press right button to enter next menu, as the left picture
   - 【WB MODE】White balance mode.
     Auto mode of white balance 【AUTO】is the default mode of intelligent PTZ, environmental detection by the camera's white balance sensor automatically restore the true color. When select manual mode【MANUAL】you can adjust the values of【R GAIN】and【B GAIN】
   - 【R GAIN】Options range in 1-255, values larger, represents an increase of more red, hue warm .
   - 【B GAIN】Options range in 1-255, values larger, represents an increase of more blue, hue turn cold .
   Indoor mode【INDOOR】hue cool colors
   Outdoor mode【OUTDOOR】 hue warmer
   - 【ATW】Auto tracking mode
   - 【OPW】Single lock white balance mode

7.3 CAMERA【FOCUS】SETTING

1. Operate remote controller, Press 【DATA SCREEN】 enter OSD menu, press the arrow keys to move to 【CAMERA SETTING】 press right button to enter next menu; as the left picture
2. Press arrow keys to move to 【FOCUS】 and then press right button to enter next menu, as the left picture

   - 【FOCUS MODE】Focus ptional.
     【AUTO】Auto Focus
     【MANUAL】Manual Focus

13

7.4 CAMERA【PICTURE】SETTING

```
┌─────────────────────────┐
│     MAIN  MENU          │
├─────────────────────────┤
│                         │
│   SYSTEM  SETTING       │
│   CAMERA  SETTING       │
│   VIDEO OUT             │
│   COMM PARA             │
│   EXIT                  │
│                         │
└─────────────────────────┘
```

```
┌─────────────────────────┐
│    CAMERA SETTING       │
├─────────────────────────┤
│                         │
│    EXPOSURE             │
│    COLOR                │
│    FOCUS                │
│  * PICTURE              │
│    BACK                 │
│    EXIT                 │
│                         │
└─────────────────────────┘
```

```
┌─────────────────────────┐
│     PICTURE             │
├─────────────────────────┤
│                         │
│  B&W            AUTO    │
│  GAMMA       NORMAL     │
│  HI-RESOLUTION   OFF    │
│  NOISE REDUCE    OFF    │
│  MIRROR          OFF    │
│  FLIP            OFF    │
│  SHARPNESS       000    │
│  BACK                   │
│  EXIT                   │
│                         │
└─────────────────────────┘
```

1.Operate remote controller, press【DATA SCREEN】enter
OSD menu, press the arrow keys to move to 【CAMERA
SETTING】 press right button to enter next menu;
as the left picture

2.Press arrow keys to move to 【PICTURE】 and then press
right button to enter next menu, as the left picture

- 【B&W】color / black and white switch mode
  【AUTO】 Auto color / black and white switch mode,
  intelligent PTZ automatically switched according to
  illumination
  【COLOR】set as color mode
  【BLACK】 set as black and white mode
- 【GAMMA】 Gamma correction
- 【HI-RESOLUTION】 Camera built - in high-resolution
  capabilities , refer to the camera types
- 【NOISE REDUCE 】**Noise reduce processing**
- 【MIRROR】 Mirror image function
- 【FLIP】 The function of Auto flip when the camera
  rotates pan 180 degrees
- 【SHARPNESS】image acutance settings

8. Video output and communication parameters setting

```
┌─────────────────────────────┐
│        MAIN  MENU           │
│ ─────────────────────────── │
│                             │
│  SYSTEM  SETTING            │
│  CAMERA  SETTING            │
│  VIDEO OUT                  │
│  COMM PARA                  │
│  EXIT                       │
│                             │
└─────────────────────────────┘
```

1. Operate remote controller, press【DATA SCREEN】enter OSD menu, press the arrow keys to move to 【VIDEO OUT】press right button to enter next menu; As the left picture

 ● 【FORMAT】Video output format including 1080P30、1080P25、1080I60、720P60、NTSC、720P50、PAL CVBS、 1080I50 etc for optional.
 ● 【RGB /YUV】Signal output format
 ● 【HDCP】High-bandwidth Digital Content Protection
  【OFF】Closed off high-bandwidth Digital Content Protection
  【ON】Open high-bandwidth Digital Content Protection
 ● 【OPT·CORR】Optical correction

```
┌─────────────────────────────┐
│         VIDO  OUT           │
│ ─────────────────────────── │
│ FORMAT        1080P30       │
│ RGB/YUV         OFF         │
│ HDCP            OFF         │
│ OPT · CORR      N/A         │
│ BACK                        │
│ EXIT                        │
└─────────────────────────────┘
```

2. Operate remote controller, press【DATA SCREEN】enter OSD menu, press the arrow keys to move to 【COMM PAPR】 press right button to enter next menu; As the left picture.

 ● 【PROTOCOL】Dome Communation protocol, the optional of VI PELCO D, PELCO P and so on;
 ● 【BAUDRATE】Setting dome baud rate, optional: 2400bps、 4800bps、9600bps、19200bps、38400bps.
 ● 【ADDRESS】Setting dome address, (range of address 001-255), when it is AUTO, the system automatically assigns the linkage dome address;

```
┌─────────────────────────────┐
│        COMM  PAPR           │
│ ─────────────────────────── │
│ PROTOCOL       VISCA        │
│ BAUDRATE       2400         │
│ ADDRESS        AUTO         │
│ BACK                        │
│ EXIT                        │
└─────────────────────────────┘
```
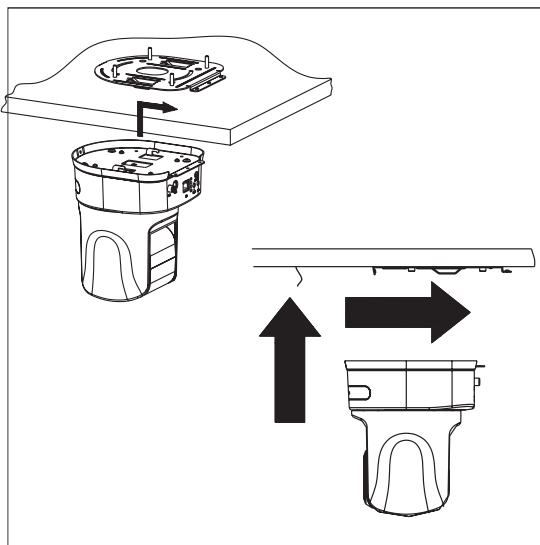
9. Installation instruction
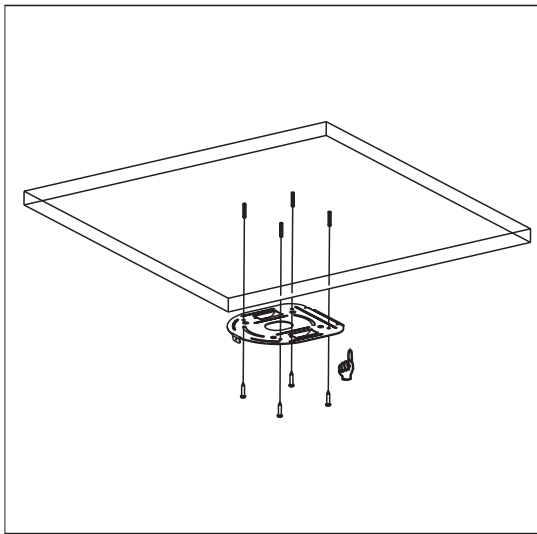
1.To drill 4 M4 screw hole in ceiling (see above sketch), use 4pc STP4X16 cross screws to fix the upside-down installation board of D57 on ceiling.
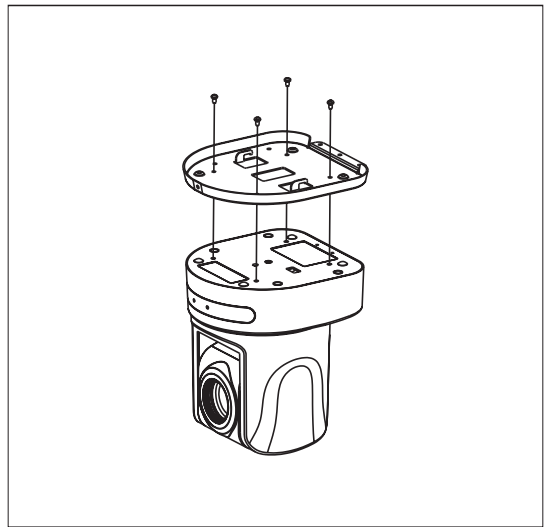
2.Use 4 M3 x5 cross screws to fix the video conference camera on the connection board, showed as the sketch.

3.Hang the discreteness made in step 2 on the installation board, showed as the above sketch.
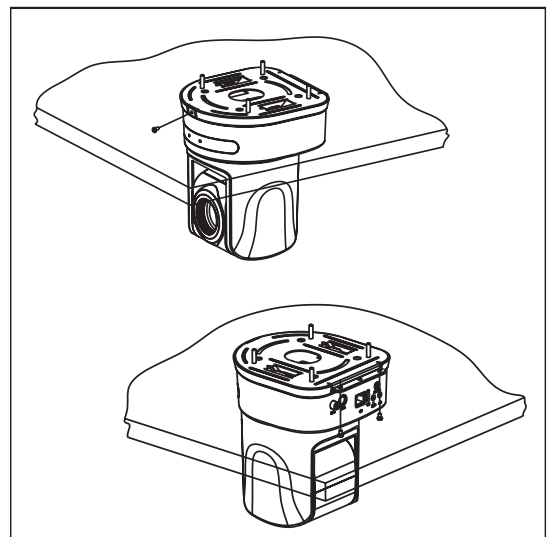
4.Use 3pcs M3X5 cross screws to fix the connection board and installation board, like above sketch.

10. Maintenance service terms

1. Range of warranty

● The product will be maintained free for one year.

● The product will be obtained the free maintenance service if the same malfunction appears again within three payable maintenance months.

● Malfunction of products caused by force majeure (such as war, earthquake, lightning strike and so on), abuse, non-standard operation, change of construction, non-normal wear or accident are non-free of warranty.

● Please prevent from the damage which is caused by heavy pressure , the fierce vibration and soaks in the process of transportation and storage, which does not belong to the free maintenance range.

● Please adopt the way of fission package or original package to transport because the product damage dose not belong to the free maintenance scope if you use the whole packing way , not the original packing way.

● The maintenance services will not be free when the pan/tilt module is disassembled or serviced by the user voluntarily.

● Our company implements the lifetime payable service if the product in malfunction has surpassed the warranty period.

● To the products with defect :if it's in the period of warranty, please fill in the form of warranty information correctly, describe the trouble in details, and provide original sales. invoice or its copy.

● For the damage and loss which was caused by the user's specifically application, factory won't bear any risk and responsibility. The factory compensation made by breach of faith, negligence or tortious won't exceed the amount of the products. The factory won't bear any responsibility for the special, unexpected and continue damage caused by any other reasons.

● Our company has the final right of explanation for the above terms.

2. Warranty terms

● If the products are within the warranty time, the buyer should fill in the warranty card and send back together with the products.

3. Shipping

● If the product needs repaired , you can return it to the manufacturer through the supplier or directly. If you choose the later , please contact us in order to speed up the process. And our company only undertake the one-way freight from manufacturer to customer after maintenance.