Installation and Operation Manual

for

Indoor 10x Mini PTZ Camera

SS10C-C480DN
SS10C-C480DNP

Economy Type PTZ Controller
PTZ-KB050

Optional Wall Mount Bracket
MB-CW10C

Please read the operation manual carefully
before installing and using this unit

CONTENTS

Warnings !

- Lightning proof equipment must be installed when the speed dome camera is installed in open area.
- Make sure the input voltage and normal rated power is correct before powering up.

Packing List

No.	Name	QTY/ Unit	Remark
1	Speed Dome Camera	1	
2	DC12V power supply adapter	1	
3	English Operation Manual	1	
4	Bracket	1	(Standard)
5	Wall Bracket	1	(Option)
6	Cable	1	
7	Accessories packing	1	

CAMERA SPECIFICATION

	SS10C-C480DN	SS10C-C480DNP
TV System	NTSC	PAL
SYNC System	Internal Mode / External (AC Lock) Mode (±1Hz)	
Scanning System	1:2 Interlace	
Image Pickup Device CCD Sensor	Sony ICX228AK	Sony ICX229AK
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
S/N	More than 46 dB ($\gamma = 1$，AGC OFF，APC OFF，Y-out)	
Horizontal Resolution	480 TV Lines	
Lens	F1.6(W) ～1.9(T) f=3.7(W)～37.8(T)mm	
Zoom	Hitachi Zoom Module (CZ40HCM-1) 10X Optical Zoom / 10X Digital Zoom	
White Balance	ATW/AWB/FIX (Zero Color Rolling)	
ALC	Auto/Fix (OSD Control)	
AGC	+24dB (Max)	
BLC Function	48 Zone BLC (OSD Control)	
ICR Function	YES	
Minimum Illumination	1.5 Lux(F1.8/50IRE) ICR ON 0.02 Lux	
Electronic Shutter	1/60~1/120,000sec Manual 8 Step	1/50~1/120,000sec Manual 8 Step
GAMMA Correction	0.45 / 1	
Video Signal Output	1.0Vp-p / 75Ω	
External Control	RS485	
Pan	Speed 0.5 ～ 30°/s	
Tilt	Speed 0.5 ～ 30°/s	
Preset	32 Preset Positions (Max)	
Auto Cruise	6 Auto Cruising Tracks (Max)	
Operation Temperature	-10℃ ～50℃	
Operation Humidity	Within 85% RH	
Power Source	DC12V ± 0.5V, 6W (Max)	

1. PRECAUTIONS

(1) Do not attempt to disassemble the camera.

To prevent electric shock, do not remove screws or covers.

There are no user-serviceable parts inside.

Ask qualified service personnel for servicing.

(2) Handle the camera with care.

Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

(3) Do not use strong or abrasive detergents when cleaning the camera body.

Use a dry cloth to clean the camera when it is dirty.

When the dirt is hard to remove, use a mild detergent and wipe gently. Care should be taken not to scratch the dome when wiping it.   Afterwards, wipe off the remaining part of the detergent in it with a dry cloth.

(4) Never face the camera towards the sun.

Do not aim the camera at bright objects. Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise, blooming or smear maybe caused.

(5) Never face the camera towards a place exposed to light sources for a long time.

If light sources such as spot light cause burn-in on the display screen, part of image may discolor due to deterioration of color filter in CCD when changing aim of the camera etc.

(6) Do not install this camera upside down.

This camera is designed for mounting on the ceiling or wall. Using this camera installed upside down, for example, mounted on the floor, may cause malfunction.

(7) Do not operate the camera beyond the specified temperature, humidity or power source ratings.

Do not use the camera in an extreme environment where high temperature or high humidity exists. Do not place near heat sources such as radiators, stoves or other units that produce heat.

Use the Indoor Speed Dome camera under conditions where temperature is between -30℃ - +50℃, and humidity is below 85 %. The input power source is DC12V.

(8) Do not install the camera near the air out-let of an air conditioner.

The lens may become cloudy due to condensation if the camera is used under the following conditions.

• Rapid temperature fluctuations by switching the air conditioner on and off

• Rapid temperature fluctuations due to frequent door opening and closing

• Use in an environment where eyeglasses become foggy

• Use in a room filled with cigarette smoke or dust.

If the lens becomes cloudy due to condensation, remove the dome cover and wipe all moist surfaces with a soft cloth.

(9) Consumables

Parts having contacts such as the lens-drive motors, cooling fan motor and slip-rings built inside the camera are subject to wear with time. About replacement and maintenance of such parts, please ask the nearest service center.

(10) Do not aim the camera at the same object for a long time.

Burn-in of an image may be caused on the fluorescent screen of CRT.

2.OPERATION

The speed dome camera can be controlled remotely horizontal and vertical movement. It is controlled remotely from the keyboard or controller through a serial connection to the RS-485 connector.

The speed dome camera will conduct a self-check after powered up and the monitor will display as following "P：P-D2400, ID：001, V10". The information will be disappeared after the self-check is finished.

（Protocol and ID code will be displayed according to the users' choice）

Normal Function：

2.1 Pan/Tilt Function

The camera is capable of moving vertically and horizontally. The Pan/Tilt speed is variable for given amount of joystick deflection.

2.2 Lens Function

2.2.1 Zoom Lens Function

Transform the view angle of the camera（zoom in / zoom out），press[TELE] or [WIDE] .

2.2.2 Focus Function

In some special circumstance, users need conduct focus manual, he can press [NEAR] or [FAR] to transform the focus.

2.2.3 Iris Function

In normal circumstance, iris is in auto mode. If users need to change the iris level, they can press [OPEN] or [CLOSE] to adjust.

2.3 Preset Function

The speed dome camera is capable of going to 32 preset positions. Each is with its own P/T/Z and focus. When preset a camera position, the P/T/Z and focus will be memorized for that position.

2.3.1 To set a preset position

First input " PRESET " , and then input the number of preset position and press "ENTER" at the end.
[PRESET] + N + [ENTER],   N→the number of preset position: 1～32.

2.3.2 To call a preset position

When camera positions have been preset, you can enter a memorized camera position number.

[CALL] + N + [ENTER],   N→the number of preset position: 1～32.

2.3.3 To delete a preset position：

First input " PRESET " , and then input the preset position number and press "OFF" at the end.
[PRESET] + N + [OFF],   N→the number of preset position which will be deleted.

2.4 Setting of the Pan scan between two points：

1） The dome device conduct auto Pan Scan between two preset positions.
2） Users can set the starting point by pressing **"PRESET+52+ENTER"** and set the ending point by pressing **"PRESET+53+ENTER"**.
3） press **"CALL+52+ENTER"** to start Pan scan.
4） The dwell time of "starting point" and "ending point" of Pan scan is **4** seconds.
5） Stop it by operate "Pan"or "Tilt".
6） You can cancel the point by pressing **"PRESET+52+OFF"**

2. 5 Operation instruction about the tour scan movement：

1） Auto point by point scan from preset point number **1** to number **16**, if a certain point is not set or cleared, that point will not be scan when "tour scan" is in progress.
2） The dwell time of preset point in tour is **4** seconds.
3） The defaulted tour function can be executed by inputting **"CALL+51+ENTER"**.
4） Stop it by operate "Pan"or "Tilt".

2.6 Setting of Home position :

This means the time duration for the dome device to return to the number 1 direction preset position when no-man control occurs.

1） Start this function by pressing **"CALL+54+ENTER".**

2） The time of returning to preset direction position number 1 can be set to 1 minute / 5 minutes / 10 minutes / 30 minutes / 60 minutes by pressing **"CALL+55+ENTER"** / **"CALL+56+ENTER"** / **"CALL+57+ENTER"** / **"CALL+58+ENTER"** / **"CALL+59+ENTER".**

3） Disable this function by pressing "**PRESET+54+ENTER".**

2.7 Intelligent three-dimension tour scan setting :

When the user is monitoring with manual Pan scan, he only needs to maintain the scan direction to continue the scan monitoring, and then press "**CALL+50+ENTER**" to auto continue the manual Pan scan action.

2.8 Six groups of programmable tour:

It has the functions of tour setting and call out, as well as saving the directional used programmed tour. Each group of tour contains **12** preset positions, the running speed and dwell time of which can be set and the data will not be lost when the power is off.

2.9 Integrated swivel and tilt movement

1） Pan rotation is 360º endless; Tilt movement is 20～90º，by using the key boards speed can be adjustable from 0.5～30º/s.

2） The low speed running is stable with ultra-low noise and without image shake.

3） by pushing down the Joystick till the point of 90º the camera will auto lift up 10 degree. Monitoring all directions with ±2º precision.

3.0 OSD MENU exit

There are three ways to exit the menu after pressing "CALL+64+ENTER." The first way is by pressing "PRESET+64+ENTER"; the second way is by using the joystick and turning it left for about 3 seconds; the third way is also by using the joystick, but instead of turning it left for 3 seconds, turn it left several times.

3.1 Special Function—Power-off Protection

When the camera is under scan or cruise track, and power off occurs, the camera will save the state before the power-off. When power is resupplied, the camera will continue to perform the scan or cruise track automatically under the same state before power-off. Should scan or cruise track are not performed before power-off, the camera will stop at the first preset position automatically.

3.2 Auxiliary Functions List

| Operation	Function
Preset　+ N + Enter	Set the number N preset position (1≤N≤32)
Preset　+ N + OFF	Clear the number N preset position (1≤N≤32)
Call　　+ N + Enter	Call the number N preset position (1≤N≤32)
Call　　+ 50 + Enter	Auto Intelligent Tour Pan Scan
Call　　+ 51 + Enter	Auto cruise (preset position from No.1 to No.16)
Preset　+ 52 + Enter	Set the Starting Point of the Pan Scan between two points
Preset　+ 53 + Enter	Set the End Point of the Pan Scan between two points
Preset　+52 + OFF	Clear the Points of the Pan Scan between two points
Call　　+ 52 + Enter	Pan Scan between the two Seeting points
Call　　+ 54 + Enter	Auto Back Home ON
Preset　+ 54 + Enter	Auto Back Home OFF
Call　　+ 55 + Enter	Auto Back Home after 1 minute when Auto Back Home is ON
Call　　+ 56 + Enter	Auto Back Home after 5 minute when Auto Back Home is ON

Call + 57 + Enter	Auto Back Home after 10 minute when Auto Back Home is ON
Call + 58 + Enter	Auto Back Home after 30 minute when Auto Back Home is ON
Call + 59 + Enter	Auto Back Home after 60 minute when Auto Back Home is ON
SHOT+N+ON+(TELE or WIDE)+OFF	Set the cruise tracks N (1≤N≤6)
SHOT+N+Enter	Call the cruise tracks N (1≤N≤6)
SHOT+N+OFF (long press)	Clear the cruise tracks N (1≤N≤6)

Operation	Function
Call + 64 + Enter	Camera Menu ON
Preset + 64 + Enter	Camera Menu OFF
Call + 65 + Enter	Backlight Compensation ON
Preset + 65 + Enter	Backlight Compensation OFF
Call + 66 + Enter	Digital Zoom ON
Preset + 66 + Enter	Digital Zoom OFF
Call + 67 + Enter	Camera Preset ON
Call + 68 + Enter	Image Mirror ON
Preset + 68 + Enter	Image Mirror OFF
Call + 69 + Enter	Image Up-side down ON
Preset + 69 + Enter	Image Up-side down OFF
Call + 70 + Enter	Image Negative
Preset + 70 + Enter	Image Positive
Call + 71 + Enter	Image Freeze ON
Preset + 71 + Enter	Image Freeze OFF
Call + 72 + Enter	Color Bar ON
Preset + 72 + Enter	Color Bar OFF
Call + 73 + Enter	Preset OSD ON
Preset + 73 + Enter	Preset OSD OFF
Call + 74 + Enter	Camera Menu OSD in Chinese
Call + 75 + Enter	Camera Menu OSDin English
Call + 76 + Enter	Camera Menu OSD in Japenese
WIDE	Zoom Wide
TELE	Zoom Tele
FAR	Focus Far
NEAR	Focus Near
OPEN	IRIS Open
CLOSE	IRIS Close

3.ID SETTING

ID of this speed dome can be set by the switch with 8 codes. Below is the detail of setting ID code:

(Turn the power off when setting, and restart the device after revision).
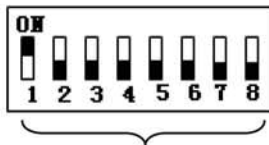
The figure shows: Address of the dome device: No. 1

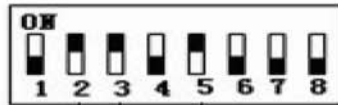(Please refer to detailed parameter in next chapter)

Set address for dome

This switch "S2" (ID NUMBER setting) located on PCB in the dome device.

Setting method: The sum of switch numbers when it is at ON position is the address of dome device.

SWITCH "S2 ID NUMBER"

ON/OFF switch and Matching numbers

Matching
1 → 128
2 → 64
4 → 32
8 → 16
Matching
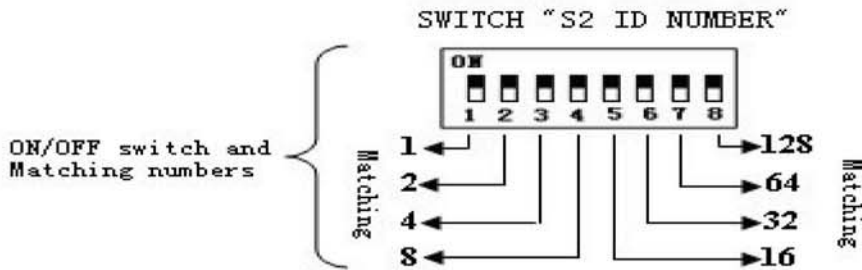
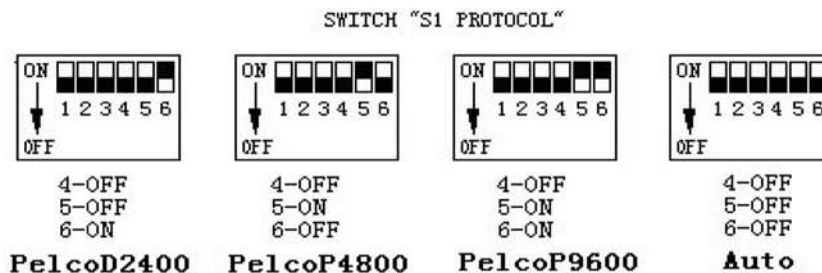**Calculation example of dome device address:**

2   4   16

(2+4+16=22) the address is **22**.

4.PROTOCOL SETTING

Protocol of this speed dome can be set by the switch with 3 protocol codes. Below is the detail of setting protocol code:

Note：All setting must be operated after power off.

Power off until it is completed.

SWITCH "S1 PROTOCOL"

ON 123456 OFF	ON 123456 OFF	ON 123456 OFF	ON 123456 OFF
4-OFF 5-OFF 6-ON	4-OFF 5-ON 6-OFF	4-OFF 5-ON 6-ON	4-OFF 5-OFF 6-OFF
PelcoD2400	**PelcoP4800**	**PelcoP9600**	**Auto**

The N0.4,N0.5 and No.6 of the switch "S1" is help to set the protocol :

When the N0.4 is set to "OFF" and the N0.5 is set to "OFF" and the N0.6 is set to "ON" ,the protocol is PELCO-D,the baud rate is 2400bps.
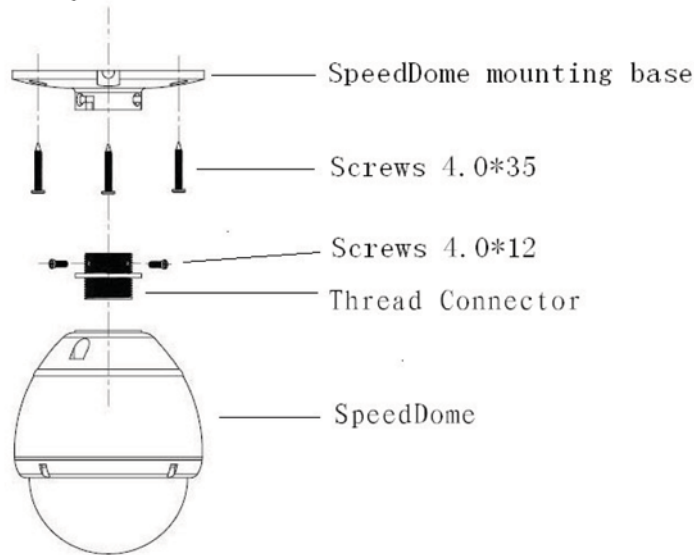
When the N0.4 is set to "OFF" and the N0.5 is set to "ON" and the N0.6 is set to "OFF" ,the protocol is PELCO-P,the baud rate is 4800bps.

When the N0.4 is set to "OFF" and the N0.5 is set to "ON" and the N0.6 is set to "ON" ,the protocol is PELCO-P,the baud rate is 9600bps.
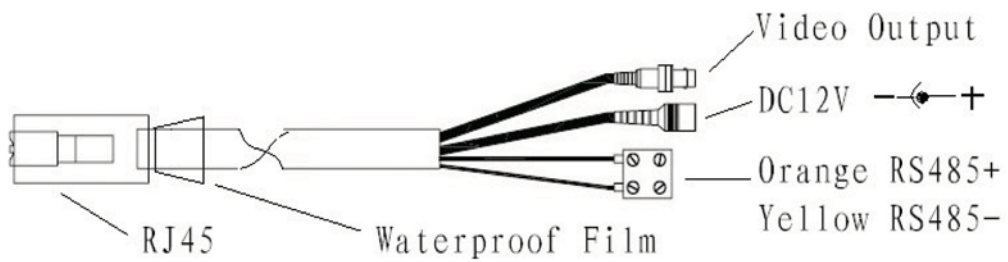
When the N0.4 is set to "OFF" and the N0.5 is set to "OFF" and the N0.6 is set to "OFF" ,the system judge the protocol from the keyboard automatically(only support the PELCO-D/2400bps,PELCO-P/4800bps,PELCO-P/9600bps).
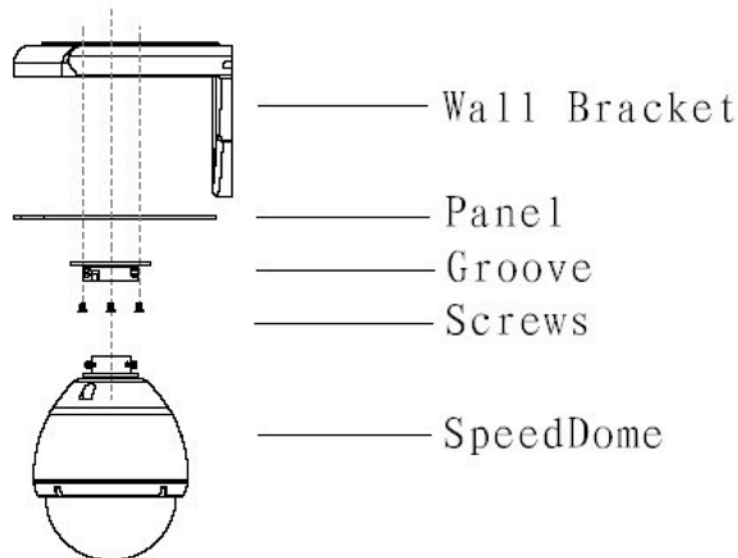
5. CONSTRUCTION

5.1 Speed Dome (Standard)

SpeedDome mounting base

Screws 4.0*35

Screws 4.0*12

Thread Connector

SpeedDome

5.2 Cable

Video Output

DC12V

Orange RS485+

Yellow RS485-

RJ45

Waterproof Film

5.3 Speed Dome (Option)

Wall Bracket

Panel

Groove

Screws

SpeedDome

Note: When powered up, the camera performs a self-check for about **20 seconds** (including one panning, tilting, zooming and focusing operation). During the period, control operations are not executed.

6. TROUBLESHOOTING

Trouble	Possible Causes	Solution
No action, no video after powered up	Power supply is dead	Replace
	Engineering cable failure	Eliminate
	The power supply is not well connected	Correct
Self-check isn't normal, but image is normal and obstacle found in operation.	Machine failure	Repair
	The camera is declining	Put straight
	Voltage is low	Change power and place it near the camera. The distance between AC24V power supply to dome camera must be less 50 meters
Self-check is normal but no image	The contact of video cables is incorrect	Correct
	The contact of video cables is loose	Eliminate
	Camera is damaged	Replace
Self-check is normal but it is uncontrollable	The connection of control signal is incorrect	Correct
	Camera number is not set correctly.	Reinstall
	Protocol setting is incorrect	Correct
	RS485 cable A & B connection is not correct	Correct
	RS485 cable is too long	The maximum cable for RS485 communication is 1.2km
	RS485 signal network is star configuration	Star distributor is used at junction of connection
Instable image	The contact of video cables is loose	Eliminate
	Voltage is low	Replace
The camera is uncontrollable and running unceasingly	Dropout occurs due to low voltage	Check ID address settings
	Self-check is abnormal	Power up again
	The operation of mainframe is not correct	Power up again
	RS485 bus line isn't equipped with matched resistance, or the resistance is not matched.	Correct
Abnormal video	Extremely bright video	No termination or high resistance

7. CONNECTION OF RS485 BUS AND TERMINATION RESISTOR

(1) Characteristics of RS485 Bus

As specified by RS485 standards. RS485 Bus is of half duplexed data transmission cables with characteristic impedance as 12. The maximum load is 32 unit loads (including main controller and controlled equipment.)

(2) The RS485standarda require a daisy-chain connection between the equipment. There must be termination resistor with 120 ohms impedance at both ends of the connection (refer to the following FIGURE)

SWITCH "S1 PROTOCOL"

1-ON
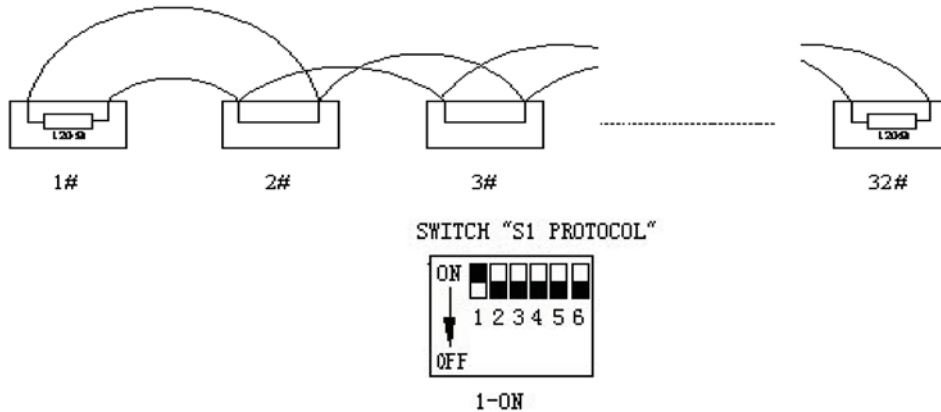
**Then No.1 bit of the switch S1 is set to "ON", the 120 ohms termination resistor is connected.**

(3) Problem in Practical Connection

In some circumstances user adopts a star configuration in practical connection. The termination resistors must be connected to the two equipments (No. 6 and No. 1) that are farthest away from each other. But the connection does not meet the RS485 standards.
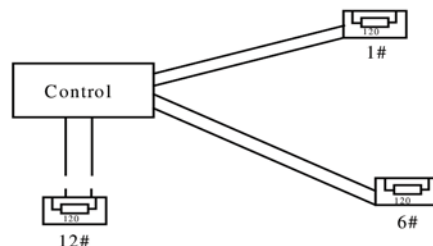
When the cable distance of equipments are far away, some problems, such as signal reflection, anti-jamming ability decrease are easily occur and result in the reliability decline of control signal. The resulted phenomena represent that the camera is out of control completely or interruptedly or operates automatically and fails to stop, etc. In such circumstances the factory recommends the RS485 Signal Distributor. The distributor can change the star configuration connection to the mode of connection stipulated in the RS485 standards. The new connection achieves reliable data transmission.

RS485 Distributor
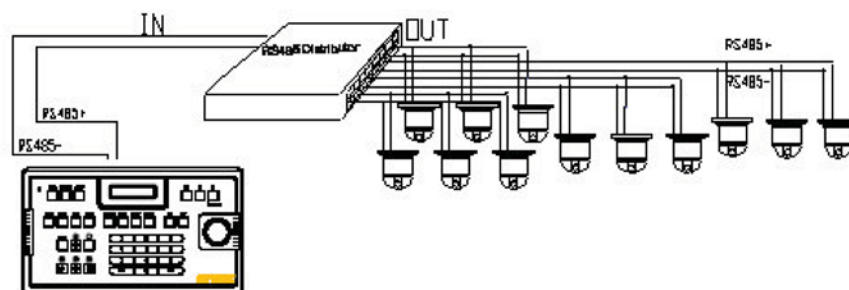
Each connection can connect 32 terminations, and practical connections must be considered.

8. INSTALLATION

8.1 Standard Installation

8.11 Seting Protocol and ID

(1)Disassemble the glass Hood and the black Hood in the dome housing by the screwdriver, change the switch "S1" to set the ID of this speed dome and change the switch "S2" to set the protocol. The detail can see the **3.ID SETTING** and the **4.PROTOCOL SETTING**

(2) Assemble the glass Hood and the black Hood in the dome housing again.

8.12 Install the Thread Connector

Lock the screws (4*12   type) into the thred connector. (fig.1)
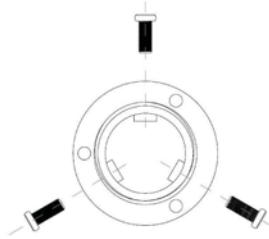
Fig.1

8.13 Install the Speeddome mounting base

(1) Cut three holes in the ceiling.
(2) Put the cable through the Speeddome mounting base.(Fig.2)
(3) Let the RJ45 left about 15mm from the Speeddome mounting base. (Fig.3)
(4) Mout the Speeddome mounting base with three screws (4*35   type) on the ceiling.
(5) Connect the RJ45 with the bottom of the speed dome.
(6) Put the waterproof film into the bottom of the speed dome closely.
(7) Put the thread connector into the Speeddome mounting base and then turn left,lock the screws of the thred connector to connect the Speeddome mounting base closely (Fig.4).

hole

put the cable
into the hole

Cable

Fig.2

Cable

15mm

RJ45

Fig.3

Turn Left
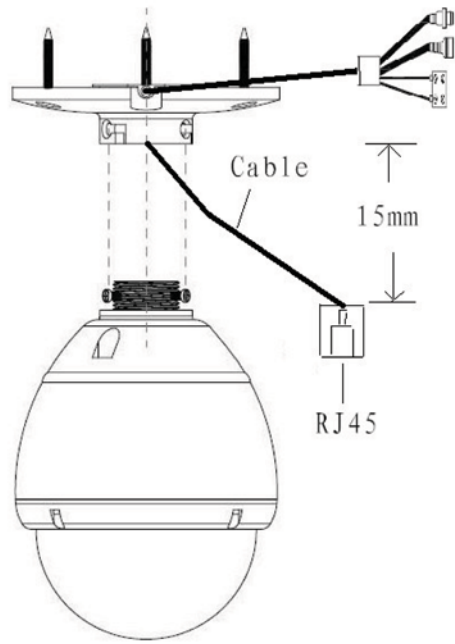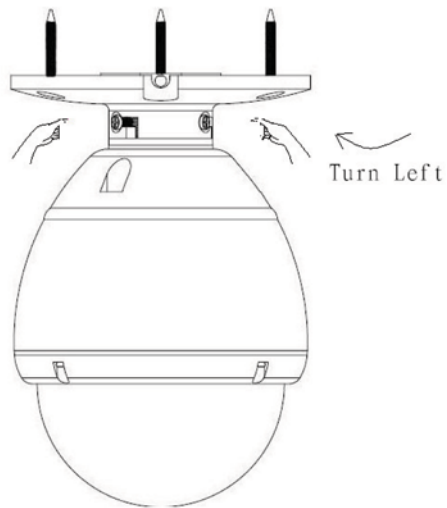
Fig.4

8.2 Wall Bracket Installation (Option)

8.21 Seting Protocol and ID

(1)Disassemble the glass Hood and the black Hood in the dome housing by the screwdriver, change the switch "S1" to set the ID of this speed dome and change the switch "S2" to set the protocol. The detail can see the **3.ID SETTING** and the **4.PROTOCOL SETTING**

(2) Assemble the glass Hood and the black Hood in the dome housing again.

8.22 Install the Wall Bracket
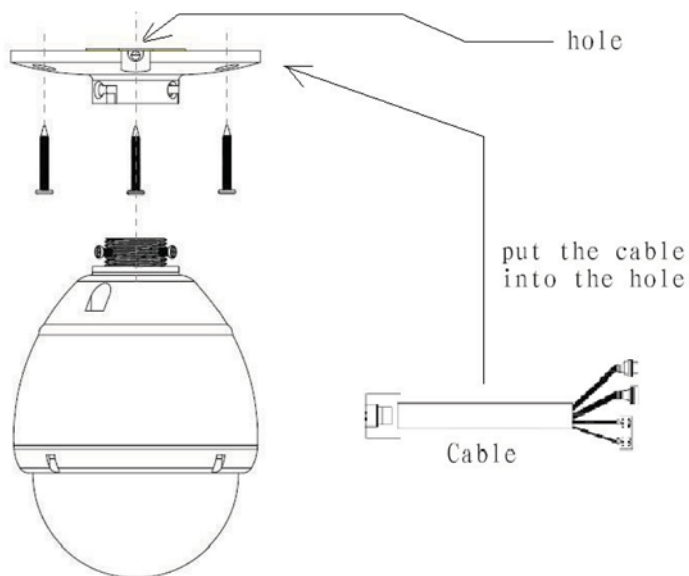
(1) Cut Four holes on the Wall.
(2) Put the cable through the hole of the panel of the wall bracket (Fig.5)
(3) Lock the panel with four screws (3*10 type) on the wall bracket(Fig.6)
(4) Connect the RJ45 with the bottom of the speed dome.
(5) Put the waterproof film into the bottom of the speed dome closely.
(6) Put the speed dome into the groove and turn left,lock the screws to connect the panel of the wall bracket (Fig.7).
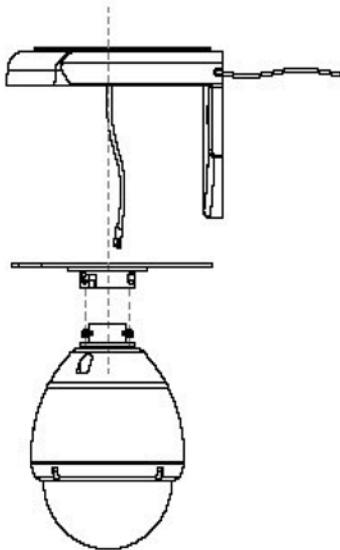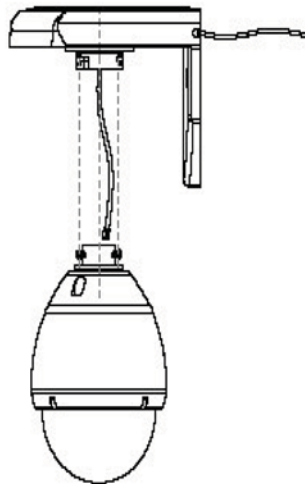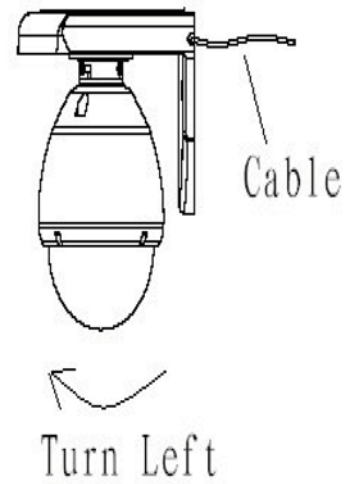
| Fig.5 | Fig.6 | Fig.7 |

APPENDIX : MENU OF HITACHI ZOOM MODULE
How to enter the menu of Hitachi zoom module?
1. To execute the order CALL+64+ENTER into the menu.
2. Then you will see the menu of Hitachi module

Main Menu (Page 1.)

```
S E T U P   M E N U      ( 1 / 3 )

➔ W H I T E    B A L A N C E
   I R I S
   A G C · S E N S
   B A C K L I G H T
   E N H A N C E R
   Z O O M · F O C U S
   H / V   R E V E R S E
   T I T L E
   P R E S E T
```

Main Menu (Page 2.)

```
S E T U P   M E N U      ( 2 / 3 )

➔ M O T I O N   D E T E C T
   P O S I T I O N
   G A M M A
   P O W E R   O N
   M A S K
   O S D
   Z O O M + A F
   L A N G U A G E
   C O M M · I D
```

Main Menu (Page 3.)

```
S E T U P   M E N U      ( 3 / 3 )

➔ C R O S S   L I N E
   F R E E Z E
   P O S I / N E G A
```

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Sub Menu

♦ **White Balance**

```
W H I T E     B A L A N C E

→ C O L O R      O F F
                 O N

                 → A U T O

   W B            → A T W    R  -  -  -  ■  -  -  B
                   A W B     R  -  -  -  ■  -  -  B

   G A I N        → R  -  Y   -  -  -  -  ■  -  -  -
                    B  -  Y   -  -  -  -  ■  -  -  -
```

This is used to control the color ON/OFF and white balance and the gain rate of RED & BLUE color.

1. 「COLOR」selector：OFF is monochrome image，ON is normal color image，AUTO is at low light AGC up, display image will be auto change to monochrome image.

2. 「WB」White balance control：ATW is Auto trace white balance,can be adjust offset level. AWB is One push white balance. Push [menu] key「AWB」will start flicker, until flicker stop it will lock the current color temperature at the same time.

3. 「GAIN」：The gain rate of R-Y & B-Y can be adjusted separately.

♦ **IRIS**

```
I R I S

→ P E A K      → O F F
                 O N          A  ■  -  -  -  -  P

   A L C        → A U T O       -  -  -  ■  -  -  -
                  F I X         -  -  -  ■  -  -  -

   A E S          A U T O       -  -  -  ■  -  -  -
                → F I X             O F F
```

This is used to control the iris & shutter speed of the lens. It included 3 items "PEAK", "ALC", "AES".

1. 「PEAK」is used to control the reaction of auto iris, which is based on the average light of picture signal or the light rate of the peak.

2. 「ALC」is used to select AUTO or FIX. Adjust IRIS level.

3. 「AES」is used to select electronic shutter be AUTO or FIX function, at AUTO mode can be adjust AES level,at FIX mode can be selector shutter speed at below, [OFF]，[1/100sec]，[1/120sec]，[1/250sec]， [1/500sec]，[1/1000sec]，[1/2000sec]，[1/4000sec]，[1/10000sec]

♦ AGC·SENS

```
   A G C  ▪  S E N S
──────────────────────────────────────────
 →  A G C        A U T O      - - - ▪ - - -
    S E N S      A U T O      ▪ - - - - - -
```

This is used to select 「AGC」 and 「SENS」 function.

1. 「AGC」: To adjust auto gain control, 0dBb~24dB 9 steps adjustable.

2. 「SENS」: For low light application: 0 Frame，6 Frame，12 Frame，16 Frame，18 Frame，22 Frame，24 Frame，30 Frame，36 Frame, 9 steps adjustable.

♦ BACKLIGHT

```
   B A C K L I G H T

 →  O F F
    O N
 →  A R E A
    S E N S      L O W - - - - ▪ - - - - H I
```

This is used to control "BLC" (Back Light Compensation),

1. 「BLC」 ON / OFF selector. Selector 「ON」 has 2 sub-items：「AREA」，「SENS」.

2. 「AREA」: 48 BLC zones can be set separatly. According to the mask area (BLC zone) signal to decide the iris and shutter speed.

3. 「SENS」: Is used to enhance the BLC effect.

♦ENHANCER

```
   E N H A N C E R

   H  ▪  G A I N        - - - - - - ▪ - - -

   V  ▪  G A I N        - - - - - - ▪ - - -
```
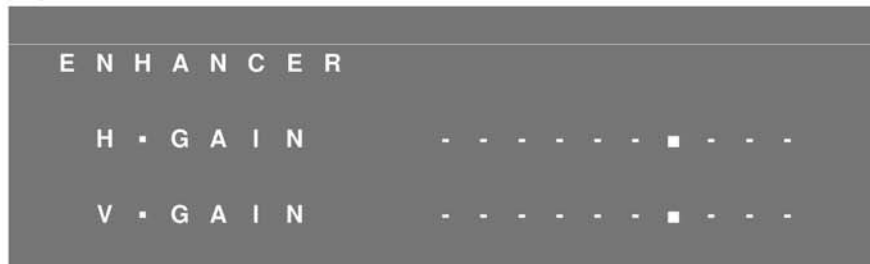
This is used to enhance the compensation of the picture quality.

1. 「H • GAIN」: Horizontal Compensation
2. 「V • GAIN」: Vertical Compensation

♦ ZOOM·FOCUS

```
Z O O M  ·  F O C U S

➔ D I G I T A L    Z O O M         O F F

  Z O O M        S P E E D    - - - ▪ - -
  F O C U S      S P E E D    - - - ▪ - -

  Z O O M                W I D E      T E L E
  F O C U S
  ➔ M A N U A L       I N F        N E A R
    A U T O
```

This is used to control the motion of the lens, including "Digital ZOOM" ON/OFF and times set function.

1. 「Digital ZOOM」selector：OFF、X2、X4、X6、X8、X10.
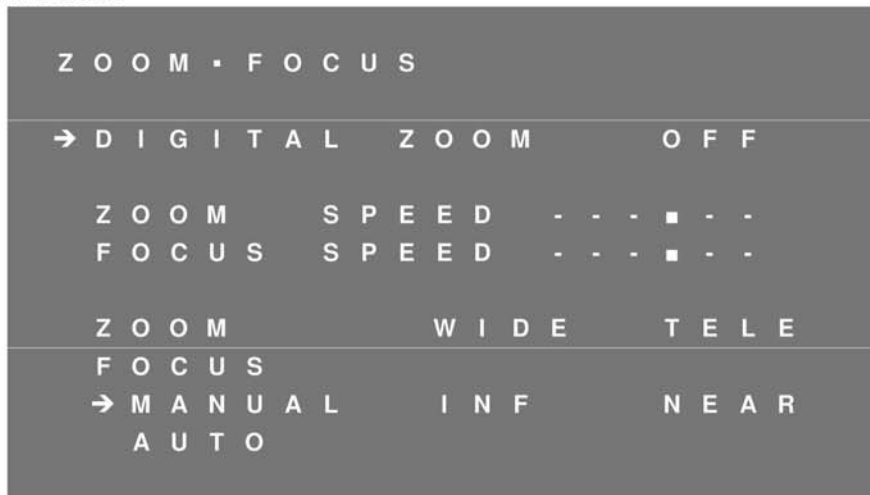2. 「ZOOM Speed」：Set the speed of the zoom.
3. 「FOCUS Speed」：Set the speed of focus.
4. 「ZOOM」：Lens ZOOM adjust WIDE / TELE
5. 「FOCUS」：AUTO / MANUAL setting

♦ H/V REVERSE

```
H / V     R E V E R S E

➔ H · R E V E R S E        ➔ O F F
                             O N

  V · R E V E R S E        ➔ O F F
                             O N
```
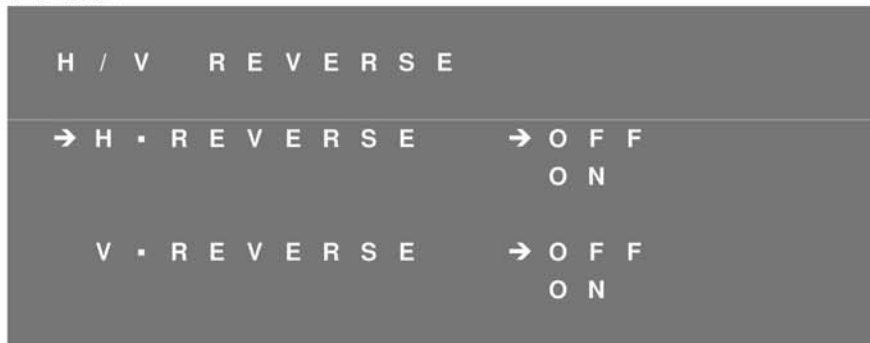
This is used to select image「Horizontal Reverse」and「Vertical Reverse」function.

1. 「H.REVERSE」：Horizontal Reverse (Mirror) ON/OFF
2. 「V.REVERSE」：Vertical Reverse (Up-side down) ON/OFF

♦ TITLE

```
T I T L E

➔ 0  1  2  3  4  5  6  7  8  9
  A  B  C  D  E  F  G  H  I  J  K  L  M
  N  O  P  Q  R  S  T  U  V  W  X  Y  Z
  a  b  c  d  e  f  g  h  i  j  k  l  m
  n  o  p  q  r  s  t  u  v  w  x  y  z
  □  :  ;  '  "  .  ,  <  >  (  )  [  ]  {  }  「  」  —  *  /
  U P

  D O W N
```

This is used to set up the ID figures & position on the screen. (Title setting)

1.TITLE start position selector.

2.TITLE Character selector.

3.TITLE display position UP or DOWN selector.

♦ PRESET

```
   P R E S E T

 →  O F F
    O N
    I N I T I A L
      O F F
 →  O N
    P H A S E
 →  O F F
    O N
    —  - - - - - ■ - - - -   +
```

This is used to select the camera go back to "PRESET", "INITIAL", "PHASE" condition

1. 「PRESET」：Set to ON camera will be reset and set to default data.

2. 「INITIAL」select：Set to ON lens is action,Set to OFF lens is not action.

3. 「PHASE」adj select：Set to OFF ext-sync is disable,Set to ON ext-VD sync is enable,(EXT-VD signal must be input)

4. PHASE set to ON sync-phase adjustment.

♦ MOTION DETECT

```
   M O T I O N   D E T E C T

 →  O F F
    O N
    T I M E       1 0 S E C
              →  3 0 S E C
                 6 0 S E C

    S E N S     L O W   - - - ■ - - -   H I
```

This is used to select the montion detcet function.

1. Motion detect ON / OFF select.

2. Motion detects area select.

3. Motion detects output time select.

4. Motion detect sensitive adjust.

♦ POSITION

```
P O S I T I O N

    A L A R M        N O  =  0
    F R E E Z E    → O F F
                     O N
    P O S I T I O N
  → N O  =  1
    Z O O M     S P E E D   - - - ▪ - -
    F O C U S   S P E E D   - - - ▪ - -
    Z O O M     W I D E         T E L E
    F O C U S   I N F           N E A R
```

This is used to set「ALARM-IN」function,either「ALARM POSITION」or「IMAGE FREEZE」.

1.「ALARM NO.」：Set alarm position(1~64),if set to (0) alarm position is not enable.

2.「Freeze」：Set ON mode,「ALARM-IN」is freeze trigger input.

3.「POSITION」：The alarm position have 64 steps (position) can be programed.

By this program,the zoom & focus may go to the exactly position where is programed.

♦ GAMMA

```
G A M M A

  → T Y P E 1
    T Y P E 2
```

This is used to select the camera gamma correction.

「GAMMA」select：TYPE-A gamma is 0.45, TYPE-B gamma is 1.0

♦ POWER ON

```
P O W E R    O N

  → B L U E    B A C K
    O F F
  → O N

    P O S I T I O N
  → O F F
    O N    N O  =  1
```

This is used to select the camera power on state.

1.「BLUE BACK」：Set to OFF camaer power on initial is normal display, Set to ON camaer power on initial is display blue back.

2.「POSITION OFF」：Camera power on lens position is current position.

3.「POSITION ON」：Camera power on lens position is go to the designation position(1~64).

♦ MASK

```
M A S K

→ P O S I T I O N    N O = 1
  M A S K    N O = 1
          → O F F
            O N   → H - S T A R T = 2 0
                    H - E N D     = 2 0
                    V - S T A R T = 2 0
                    V - E N D     = 2 0
                    C O N N E C T → O F F
                                    O N
```
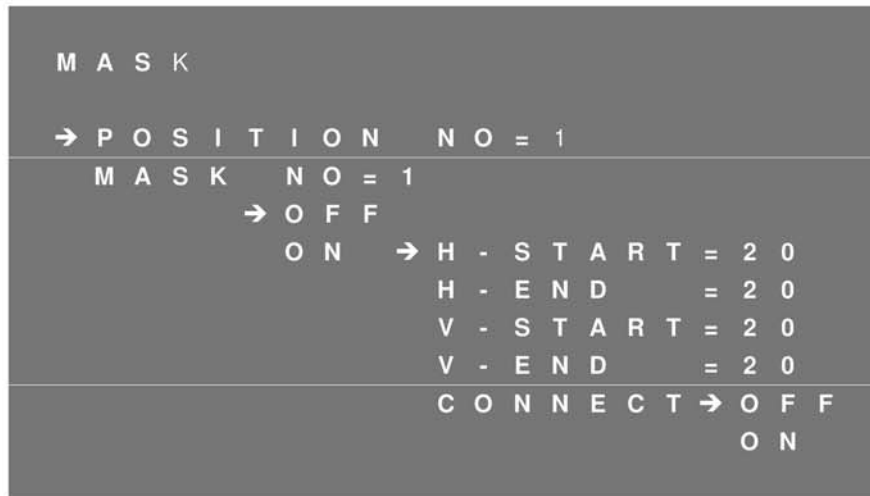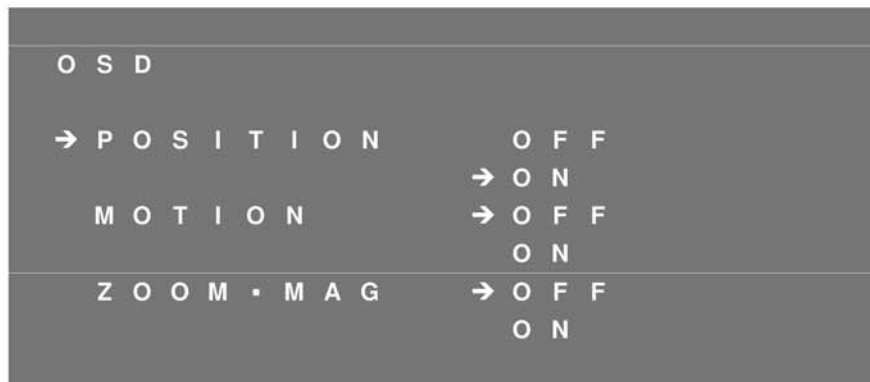
This is used to select mask area size and position for each setable lens position.
1. Lens position no. select(1~64)
2. MASK NO. select(1~4)
3. MASK area display ON / OFF select.
4. Hor. direction start position.
5. Hor. direction end position.
6. Ver. direction start position.
7. Ver. direction end position.
8. ZOOM action to link mask area, ON / OFF select.

♦ OSD

```
O S D

→ P O S I T I O N       O F F
                      → O N
  M O T I O N         → O F F
                        O N
  Z O O M · M A G     → O F F
                        O N
```

This is used to select on screen display ON / OFF select.

1. POSITION NO. display ON / OFF select.
2. MONTION action display ON / OFF select.
3. ZOOM times display ON / OFF select.

♦ ZOOM+AF

```
Z O O M + A F

→ Z O O M + A F      → O F F
                       O N
  A F   S L E E P    → O F F
                       O N
```

This is used to select an occasion for auto focus action.
1. ZOOM stops time execute lens focus once, action OFF / ON select.
2. AF Sleep function ON / OFF select.

(As show screen stillness about 5 minutes cameras come into AF Sleep mode namely, as screen has bigger change time come back again act for normal mode namely.)

♦ **LANGUGE**

```
        L A N G U A G E


    →   E N G L I S H
        C H I N E S E
        J A P A N E S E
```

This is used to select OSD manu display language.

OSD display language select, ENGLISH / CHINESE (Simp.) / JAPANESE

♦ **COMM·ID**

```
    C O M M · I D


    →  C O M M · I D = 1
       M O D E        →  1 : 1
                         1 : N
```

This is used to select communcation ID and mode.

1. Communication ID number's set.(Enactment supply controller identification camera uses ID number.)
2. MODE choice
    1:1 : One controller to control one Camera.
    1:N : One controller to control many Cameras.

♦ **CROSS LINE**

```
    C R O S S    L I N E

    →  O F F
       O N
```

This is used to select the cross line display ON / FF.
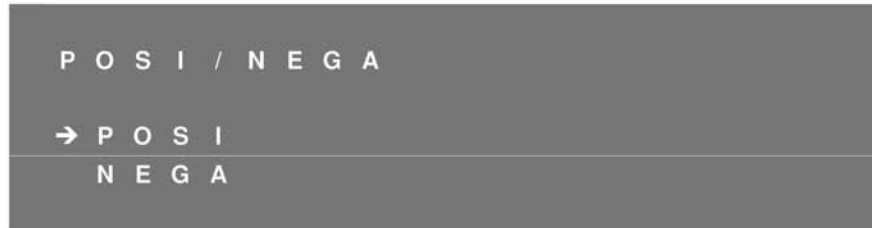Cross line ON/OFF select,set ON cross line display,set OFF cross line is hidden.

♦ FREEZE

```
     F  R  E  E  Z  E

 ➔  O  F  F
     O  N
```

This is used to set「IMAGE FREEZE」.

「Freeze」: Set ON mode,「ALARM-IN」is freeze trigger input.

♦ POSI / NEGA

```
     P  O  S  I  /  N  E  G  A

 ➔  P  O  S  I
     N  E  G  A
```

This is used to select image「Positive」and「Negative」function.

「POSI/NEGA」: Image positive & negative select.