

# USER'S MANUAL

## SPEED DOME

V07121-LM



**Outdoor Series**  
(360° Continuous Rotation)



**Outdoor Series**



**Vandal Proof Series**



**Indoor Series**



## Thanks for your purchase of our product.

- In order to make good use of this product, please read this user's manual carefully.
- In order to use this product correctly and safely; be familiar with all operation steps.
- Please keep this user's manual for future reference.
- This document contains proprietary information, which is protected by copyright.
- The information contained in this document is subject to changes without notice.

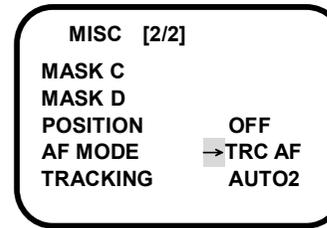
### **SAFETY WARNING**

- **Before using this product, please read installation instructions carefully and remove the protective lining from the dome before proceeding with set up.**
- In case of failure, disconnect power or remove power supply before contact our service personnel.
- To avoid electric shocks, do not disassemble this product on your own. Be sure to ask a skilled technician for the job.
- Use enclosed power supply only. Do not use other type of power supply, or the product may be damaged or fire can be triggered.
- Keep unconnected wires, plugs, duly insulated, or they might cause short circuit and damage this product.
- Do NOT connect power to the unit until all installation steps are completed.
- Do not turn the camera lens with your hand, doing so might damage camera.
- Do not point this camera to the sun or a shining object, do not put it on a static object; doing so might damage the camera.
- To avoid damage, do not load this camera in a place subject to vibration, humidity or a dusty environment.

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### 30.7 AF MODE

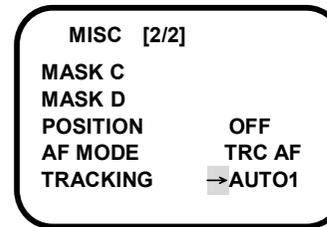


MISC [2/2] MENU

Move cursor to AF MODE, press ENTER key to enter AF MODE menu.

Press UP or DOWN key to select TRC AF/FULL AF.  
TRC AF: AF range is 1m~∞.  
FULL AF: AF range is Min. Object Distance~∞.

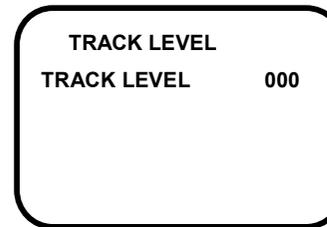
### 30.8 TRACKING MODE



MISC [2/2] MENU

Move cursor to TRACKING MODE, press ENTER key to enter TRACKING MODE menu.

Press UP or DOWN key to select AUTO1/AUTO2/FIX.  
AUTO1: AF when zoom ratio is x1~x23.  
AUTO2: AF when zoom ratio is x6~x23.

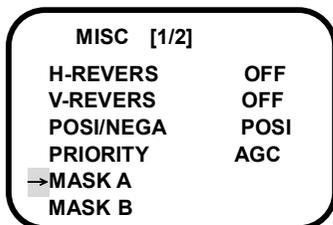


MISC [2/2] MENU

When you select FIX., and press ENTER key to enter TRACKING LEVEL menu.

Press UP or DOWN key to select TRACK LEVEL.  
The AF start position as below:  
000: ∞.  
128: 3m.  
255: 1m.

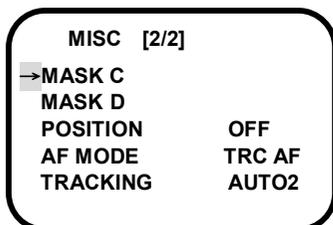
### 30.5 MASK A / B / C / D



MISC [1/2] MENU

#### MASKING AREA SETTING

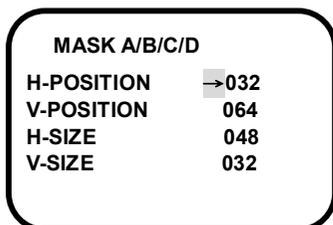
Move cursor to MASK A/B, press ENTER key to enter MASK A/B menu.



MISC [2/2] MENU

Move cursor to MASK C/D, press ENTER key to enter MASK C/D menu.

Press UP or DOWN key to select ON/OFF. Then press ENTER key to enter MASK A/B/C/D SETTING menu.



MASK A/B/C/D SETTING MENU

Move cursor to H-POSITION, V-POSITION, H-SIZE or V-SIZE press ENTER key to enter NUMBER SETTING menu. Press UP or DOWN key to adjust number.

The ranges of parameters as below:

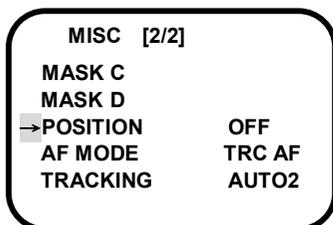
H-POSITION: -80~+80

V-POSITION: -60~+60

H-SIZE: 0~+80

V-SIZE: 0~+60

### 30.6 DEFAULT POSITION



MISC [2/2] MENU

Default Position when camera power on.

Move cursor to POSITION, press ENTER key to enter POSITION menu.

Press UP or DOWN key to select position No. (1~64) or OFF.

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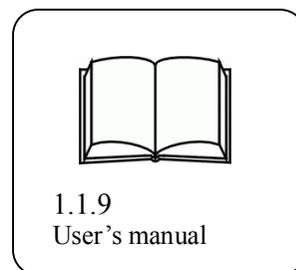
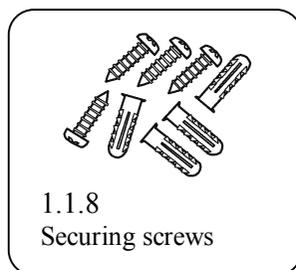
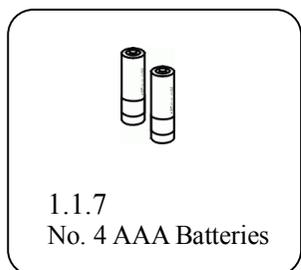
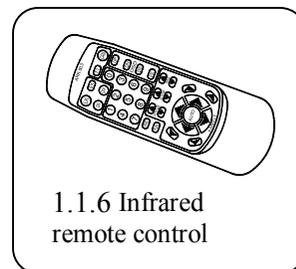
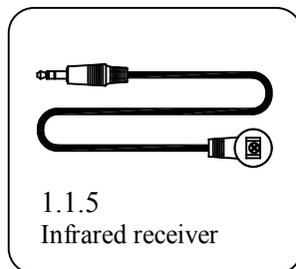
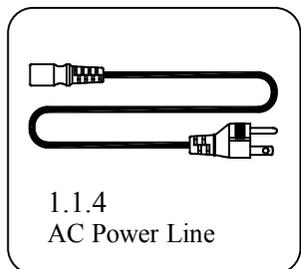
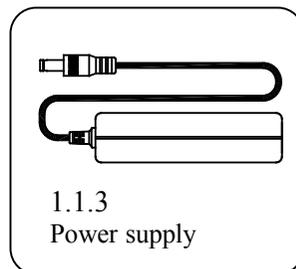
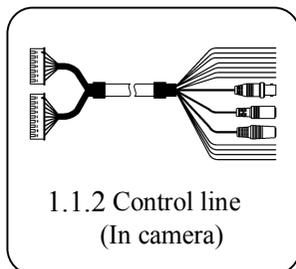
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## 1 – Accessories

Please check if the accessories enclosed are completed. If there is any shortage, please contact your local dealer and replace a new one.

### 1.1 Indoor Series



### 30.1 H-REVERS

MISC [1/2]	
H-REVERS	→OFF
V-REVERS	OFF
POSI/NEGA	POSI
PRIORITY	AGC
MASK A	
MASK B	

#### Horizontal Reverse (Mirror) Function

Move cursor to H-REVERS, press ENTER key to enter FREEZE ON/OFF menu.

Press UP or DOWN key to select ON/OFF.

MISC [1/2] MENU

### 30.2 V-REVERS

MISC [1/2]	
H-REVERS	OFF
V-REVERS	→OFF
POSI/NEGA	POSI
PRIORITY	AGC
MASK A	
MASK B	

#### Vertical Reverse (Up-side Down) Function

Move cursor to V-REVERS, press ENTER key to enter FREEZE ON/OFF menu.

Press UP or DOWN key to select ON/OFF.

MISC [1/2] MENU

### 30.3 POSI/NEGA

MISC [1/2]	
H-REVERS	OFF
V-REVERS	OFF
POSI/NEGA	→POSI
PRIORITY	AGC
MASK A	
MASK B	

#### Positive or Negative Picture Function

Move cursor to POSI/NEGA, press ENTER key to enter POSI/NEGA menu.

Press UP or DOWN key to select POSI/NEGA.

MISC [1/2] MENU

### 30.4 PRIORITY

MISC [1/2]	
H-REVERS	OFF
V-REVERS	OFF
POSI/NEGA	POSI
PRIORITY	→AGC
MASK A	
MASK B	

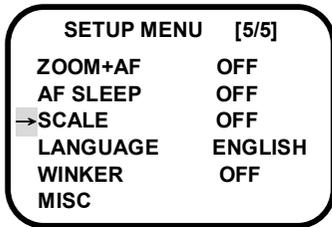
#### Selecting IR SW INT Detecting Signal

Move cursor to PRIORITY, press ENTER key to enter PRIORITY menu.

Press UP or DOWN key to select AGC/SENSE UP.

MISC [1/2] MENU

## 27. SCALE



Page5 MAIN MENU

### ZOOM SCALE DISPLAY

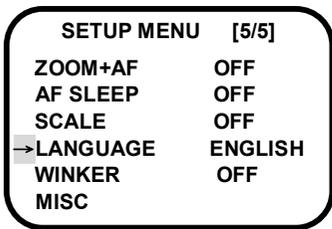
Move cursor to SCALE, press ENTER key to enter SCALE ON/OFF menu.

Press UP or DOWN key to select ON/OFF.

The zoom scale will be display on right-down of the screen in SCALE ON mode.

Note: The zoom scale is non-linear approximate value. It's a reference value for user.

## 28. LANGUAGE



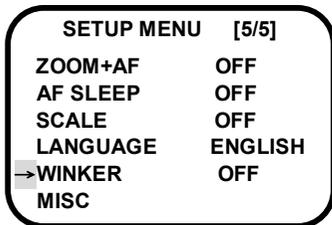
Page5 MAIN MENU

### OSD LANGUAGE SELECT

Move cursor to LANGUAGE, press ENTER key to enter LANGUAGE selecting menu.

Press UP or DOWN key to select ENGLISH, DEUTSCH or ITALIANO language.

## 29. WINKER



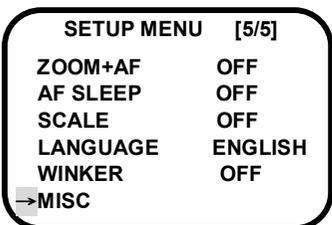
Page5 MAIN MENU

### WINKER SELECT

Move cursor to WINKER, press ENTER key to enter WINKER selecting menu.

Press UP or DOWN key to select ON/OFF.

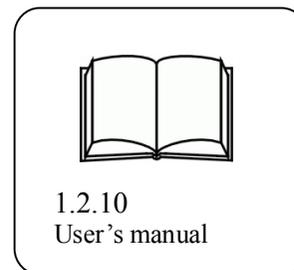
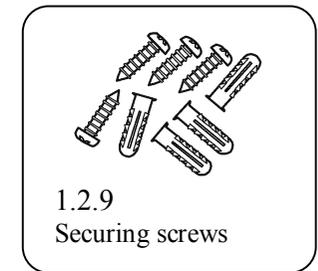
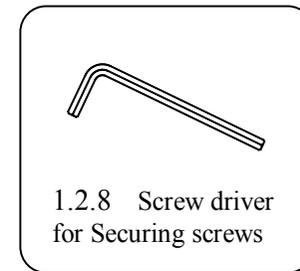
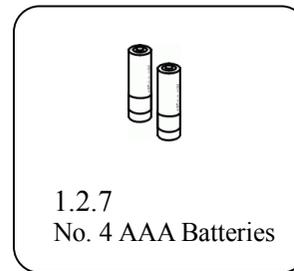
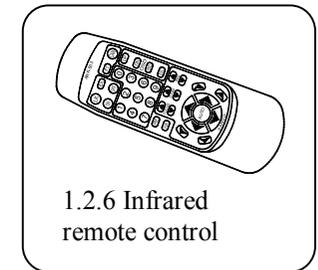
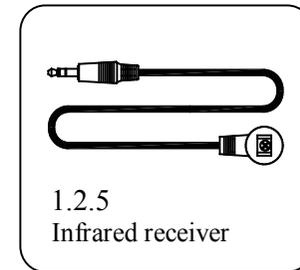
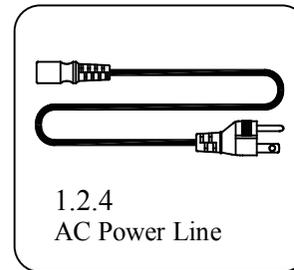
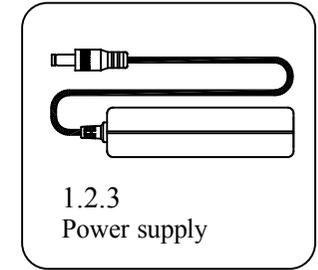
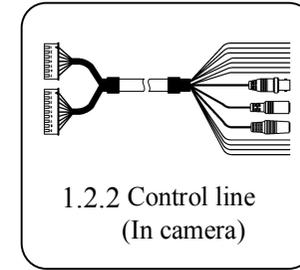
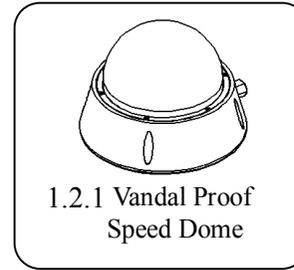
## 30. MISC



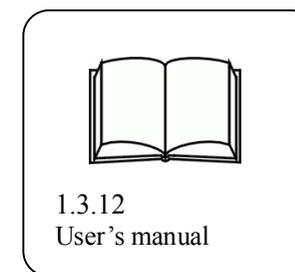
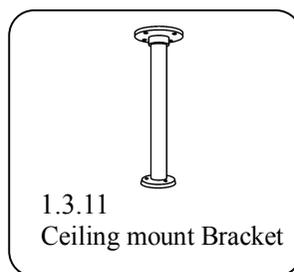
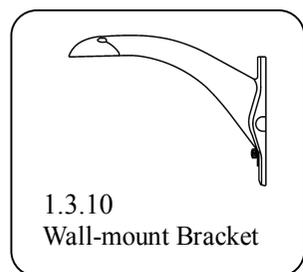
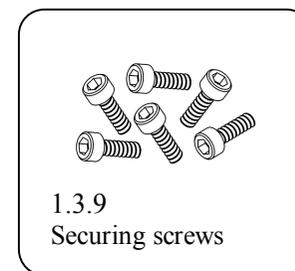
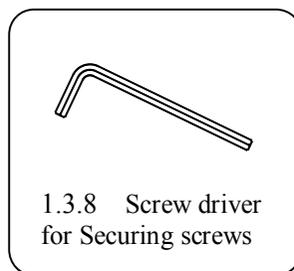
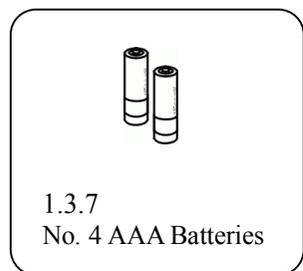
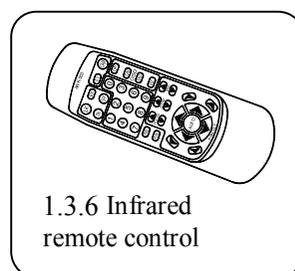
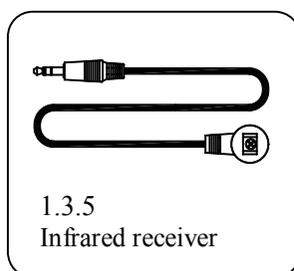
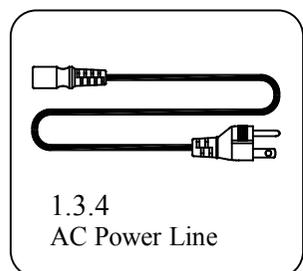
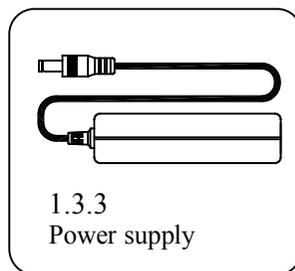
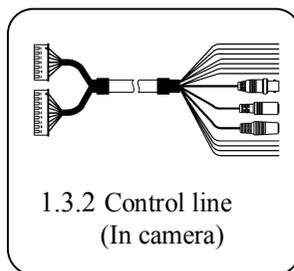
Page5 MAIN MENU

Move cursor to MISC, press ENTER key to enter MISC menu.

## 1.2 Vandal Proof Series



## 1.3 Outdoor Series



## 23. FOCUS SPEED

SETUP MENU [4/5]	
DEFAULT	CANCEL
FREEZE	OFF
FREEZE MODE	FIELD
ZOOM SPEED	MAX
FOCUS SPEED	→ MIN
GAMMA	GAMMA1

Page4 MAIN MENU

### FOCUS SPEED ADJUSTMENT

Move cursor to set FOCUS SPEED, press ENTER key to FOCUS SPEED SELECTING menu, then Press UP or DOWN key to select MIN, +1, +2, +3, MAX (5 steps adjustable).

## 24. GAMMA

SETUP MENU [4/5]	
DEFAULT	CANCEL
FREEZE	OFF
FREEZE MODE	FIELD
ZOOM SPEED	MAX
FOCUS SPEED	MIN
GAMMA	→ GAMMA1

Page4 MAIN MENU

### GAMMA SELECT

Move cursor to set GAMMA menu, press ENTER key to select GAMMA mode, then Press UP or DOWN key to select GAMMA1 or GAMMA2.

GAMMA1 = 0.45

GAMMA2 = 1.0

## 25. ZOOM + AF

SETUP MENU [5/5]	
→ ZOOM+AF	OFF
AF SLEEP	OFF
SCALE	OFF
LANGUAGE	ENGLISH
WINKER	OFF
MISC	

Page5 MAIN MENU

### ZOOM TRIGGER AUTO FOCUS

Move cursor to set ZOOM+AF mode, press ENTER key into select ZOOM+AF menu.

Press UP or DOWN key to select ON/OFF.

## 26. AF SLEEP

SETUP MENU [5/5]	
ZOOM+AF	OFF
→ AF SLEEP	OFF
SCALE	OFF
LANGUAGE	ENGLISH
WINKER	OFF
MISC	

Page5 MAIN MENU

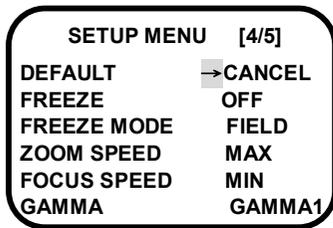
### AUTO FOCUS SLEEP

Move cursor to AF SLEEP, press ENTER key to enter AF SLEEP ON/OFF menu.

Press UP or DOWN key to select ON/OFF.

The image change less than auto focus range in five minutes; the auto focus will sleep in AF SLEEP ON mode. If the image change more  $\pm 6$ dB than auto focus range, the auto focus will wake up.

## 19. DEFAULT



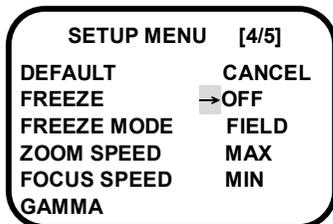
Page4 MAIN MENU

**RESTART THE CAMERA AND RESET PARAMETERS TO FACTORY'S DEFAULT.**

Move cursor to **DEFAULT**, press **ENTER** key to enter **DEFAULT CANCEL/OK** menu.

Press **UP** or **DOWN** key to select **OK**, then press **ENTER** key.

## 20. FREEZE



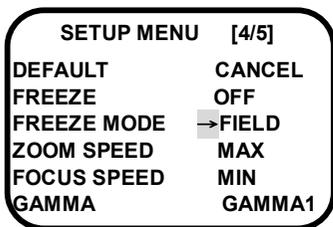
Page4 MAIN MENU

**FREEZE PICTURE FUNCTION**

Move cursor to **FREEZE**, press **ENTER** key to enter **FREEZE ON/OFF** menu.

Press **UP** or **DOWN** key to select **ON/OFF**.

## 21. FREEZE MODE



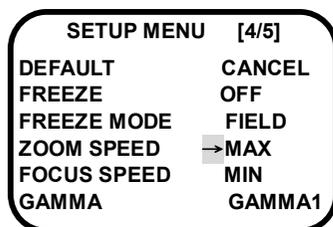
Page4 MAIN MENU

**FREEZE FIELD (or FRAME) OF PICTURE FUNCTION**

Move cursor to **FREEZE MODE**, press **ENTER** key to select **FREEZE MODE** menu.

Press **UP** or **DOWN** key to select **FIELD/FRAME**.

## 22. ZOOM SPEED

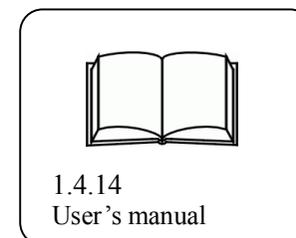
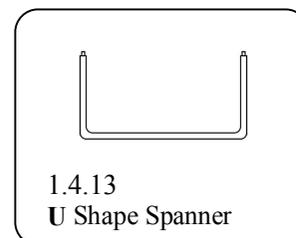
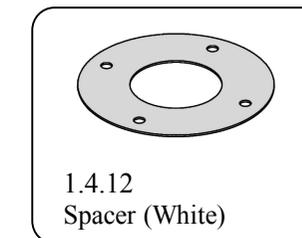
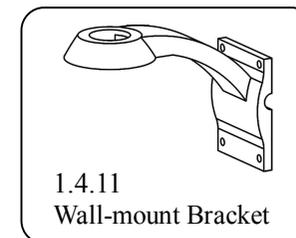
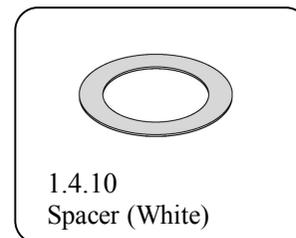
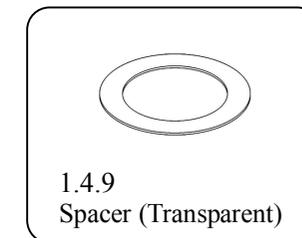
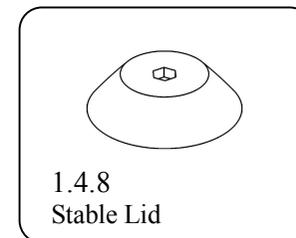
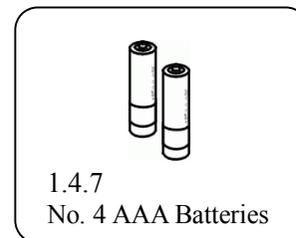
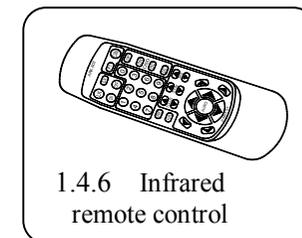
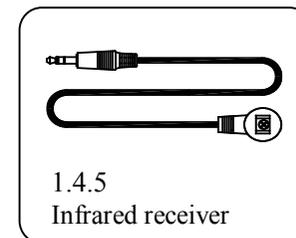
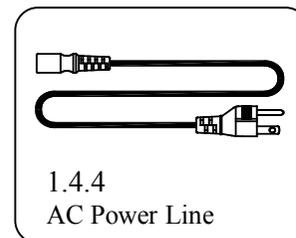
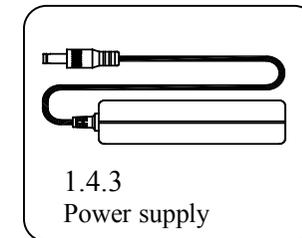
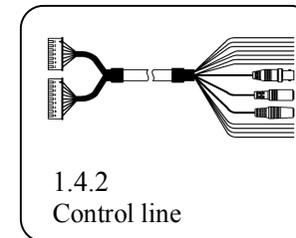
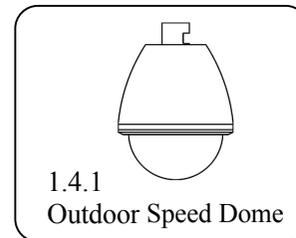


Page4 MAIN MENU

**ZOOM SPEED ADJUSTMENT**

Move cursor to **ZOOM SPEED**, press **ENTER** key to enter **ZOOM SPEED SELECTING** menu, then Press **UP** or **DOWN** key to select **MAX, +3, +2, +1, MIN** (5 steps adjustable).

## 1.4 Outdoor Series (360° Continuous Rotation)

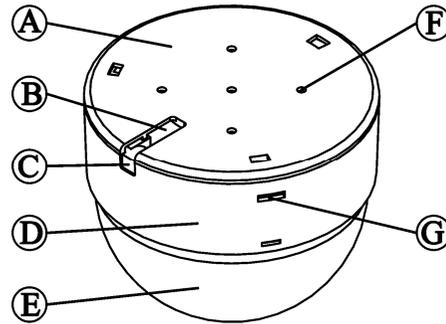


## 2 – Installation

### 2.1 Indoor Series

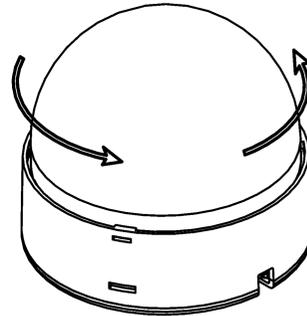
#### 2.1.1 Names of parts

- A. Mounting plate
- B. Top line outlet
- C. Side line outlet (2 Outlet)
- D. Base
- E. Dome cover
- F. Mounting hole (4 Hole)
- G. Mounting slot for Flush mount bracket (3 Hole)



#### 2.1.2 Remove protective lining

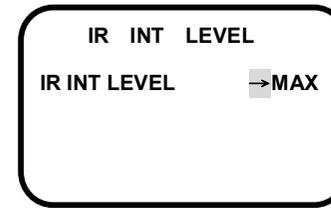
- 2.1.2.1 Turn the dome cover clockwise to open it and carefully remove protective lining
- 2.1.2.2 Place the dome cover back and turn tightly (counterclockwise).



- ※ Do not touch the lens with your hands or other object
- ※ Do not turn the lens or remove other parts; doing so may cause damage.

#### 2.1.3 Basic setup

- 2.1.3.1 Please refer to 3.1 Cable Connection and 3.5 Cable specification: connect **Power line, Video cable, Infrared receiver insulation cable first** , then connect **Alarm cable and RS-485 PVC instrument cable (pair type) if needed** .
- 2.1.3.2 Load batteries into infrared remote control and use infrared remote control to setup camera ID and RS-485 control protocol. Please refer to **4 Infrared Remote control** and **5 Initial Programming**.



IR INT LEVEL MENU

Press ENTER key to enter IR INT LEVEL ADJUSTMENT menu.  
Press UP or DOWN key to select IR INT LEVEL MIN, +1, +2, +3, +4, +5, +6, +7, +8, +9, +11, +12, +13, +14, +15, +16, MAX, 18 steps adjustable.

*1	*2	*3	OFF	x 2	x 4	x 6	x 8	x 12	x 16	x 32	x 64
BASE			x	x	MAX	16	15	14	13	11	9
+1	x		MAX	15	14	13	12	11	10	8	7
+2		x	16	14	13	12	11	10	9	7	5
+3	x		15	13	12	11	10	9	8	6	4
+4		MAX	14	12	11	10	9	8	7	5	3
+5	16		13	11	10	9	8	7	6	4	2
+6	15		12	10	9	8	7	6	5	3	1
+7	14		11	9	8	7	6	5	4	2	MIN
MAX	13		10	8	7	6	5	4	2		

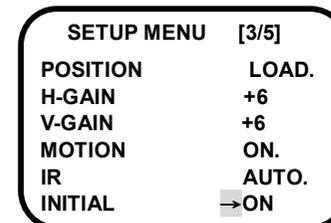
IR INT LEVEL TABLE

NOTE1:

- \*1: AGC LEVEL
- \*2: IR INT LEVEL (ACT UP THE LEVEL)
- \*3: SENSE UP

NOTE2: IR INT LEVEL (MAX) Approach 15Lux (illumination)  
IR INT LEVEL (MIN) Approach 0.02Lux (illumination)

### 18. INITIAL



Page3 MAIN MENU

LENS RESET FUNCTION  
Move cursor to INITIAL, press ENTER key to enter INITIAL ON/OFF menu.  
Press UP or DOWN key to select ON/OFF.  
When you select ON, the lens will initial again.

MOTION	
→AREA	
LEVEL	+4
TIME	30sec
OSD	OFF

Press ENTER key to enter MOTION FUNCTION menu.  
Press UP or DOWN key to select motion detection AREA, LEVEL (Sensitivity), TIME, OSD.

When detecting motion, it will display MOT on the screen.

MOTION MENU

AREA	
H-POSITION	00
V-POSITION	00
H-SIZE	65
V-SIZE	44

Press ENTER key to enter MOTION AREA menu.  
Press UP or DOWN key to select motion detection H-POSITION, V-POSITION, H-SIZE and V-SIZE.

The ranges of parameters as below:

H-POSITION: -80~+80

V-POSITION: -60~+60

H-SIZE: 0~+80

V-SIZE: 0~+60

MOTION AREA MENU

## 17. IR

### IR FILTER REMOVABLE FUNTION (DAY & NIGHT FUNCTION)

SETUP MENU [3/5]	
POSITION	LOAD.
H-GAIN	+6
V-GAIN	+6
MOTION	ON.
IR	→AUTO.
INITIAL	ON

Move cursor to IR, press ENTER key to enter IR AUTO/DAY/NIGHT menu.

You can press UP or DOWN key to select AUTO / DAY / NIGHT.

When you select DAY/NIGHT mode, camera will fix on Color or BW mode.

Page3 MAIN MENU

IR SW	
IR SW	→INT.

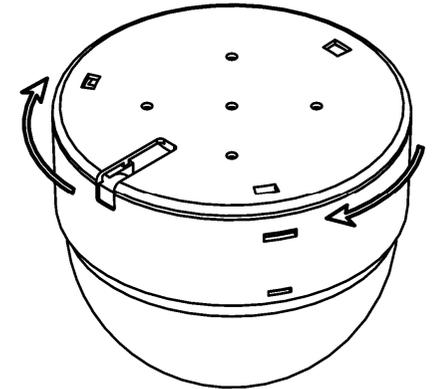
Press ENTER key to enter IR SW FUNCTION menu.  
Press UP or DOWN key to select IR SW detection INT.  
IR SW can detect INT. (AGC and SENSE UP) signal.

IR SW INT. MENU

## 2.1.4 Install mounting plate

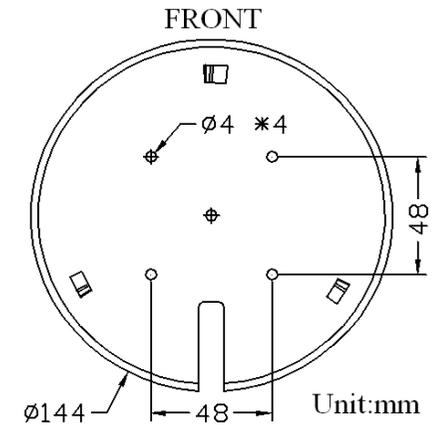
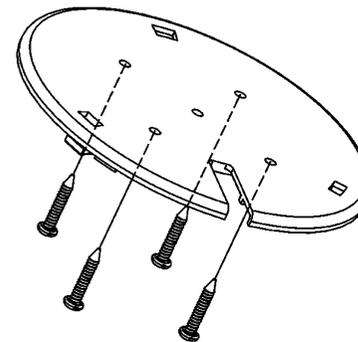
### 2.1.4.1 Remove mounting plate

Please turn mounting plate clockwise approximately 15° to separate the mounting plate and the base



2.1.4.2 Please select suitable location to install IP Speed dome. The long aperture should face backward of monitoring scope and take 1.1.8-Securing Screws to secure the mounting plate. (The dimensions of mounting hole please refer to figure below).

※ Before installation, make sure the structure of location you choose can hold the weight of camera.



### 2.1.5 Combine mounting plate with Speed Dome

Long aperture of mounting plate aim to point K (middle of two wire outlet) Turn Speed Dome clockwise approximately 15°, long aperture will meet wire outlet L. Make sure speed combine with mounting plate tightly. (Refer to figure below).

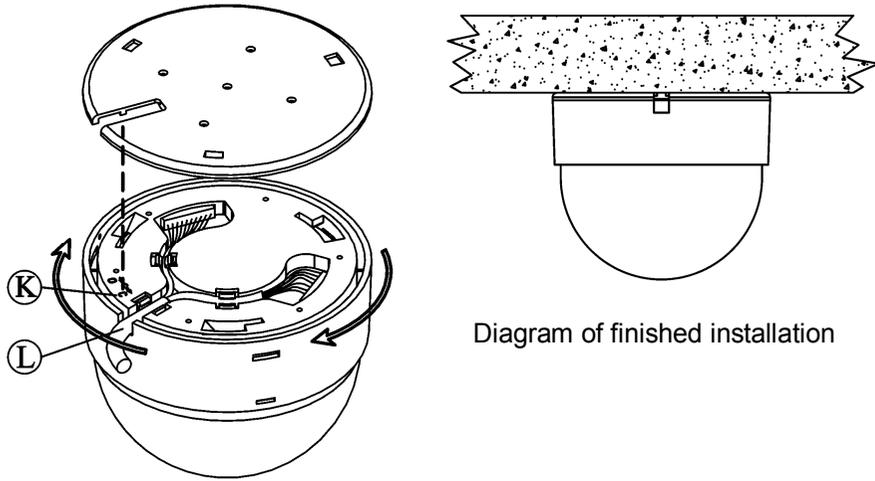
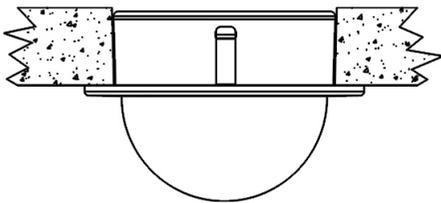


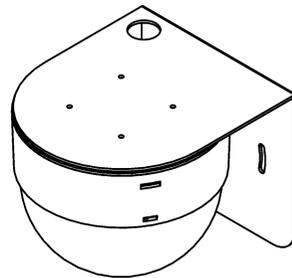
Diagram of finished installation

### 2.1.6 Other way to install Speed Dome

Flush Mount (Bracket is optional)



Wall mount (Bracket is optional)



2.1.7 When finished all above steps, please connect the control connecting line to related facilities. (Refer to 3 Cable Connections, Indoor Series) Please make sure all installation steps are correct then connect power.

**※ Keep unconnected wires, plugs, duly insulated, or they may cause short circuit and damage this product.**

### 14 H-GAIN

This is used to enhance the compensation of the picture quality.

H-GAIN: Horizontal Compensation

SETUP MENU [3/5]	
POSITION	LOAD.
H-GAIN	→+6
V-GAIN	+6
MOTION	OFF
IR	AUTO
INITIAL	ON

Page3 MAIN MENU

Move cursor to H-GAIN, press ENTER key to enter H-GAIN ADJUSTMENT menu.

Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, +8, +9, +11, MAX, 13 steps adjustable.

### 15. V-GAIN

This is used to enhance the compensation of the picture quality.

V-GAIN: Vertical Compensation

SETUP MENU [3/5]	
POSITION	LOAD.
H-GAIN	+6
V-GAIN	→+6
MOTION	OFF
IR	AUTO.
INITIAL	ON

Page3 MAIN MENU

Move cursor to V-GAIN, press ENTER key to enter V-GAIN ADJUSTMENT menu.

Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, +8, +9, +11, MAX, 13 steps adjustable.

### 16. MOTION

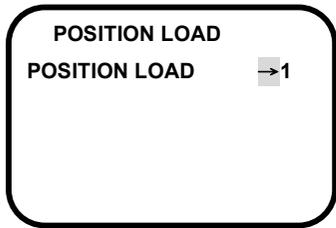
MOTION DETECTION FUNCTION

SETUP MENU [3/5]	
POSITION	LOAD.
H-GAIN	+6
V-GAIN	+6
MOTION	→ON.
IR	AUTO.
INITIAL	ON

Page3 MAIN MENU

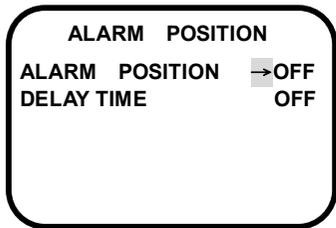
Move cursor to MOTION, press ENTER key to enter MOTION ON/OFF menu.

Press UP or DOWN key to select ON.



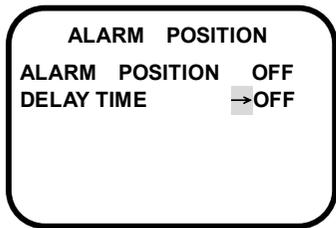
POSITION LOAD MENU

Press ENTER key to enter POSITION LOAD SELECTNG menu.  
Press UP or DOWN key to select position (1 to 64 position that you want to LOAD), then press ENTER key that will be loaded.



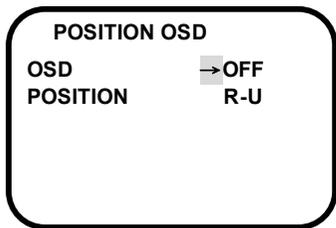
ALARM POSITION MENU

Press ENTER key to enter ALARM POSITION SELECTNG menu.  
Press UP or DOWN key to select alarm position (OFF, 1 to 64 position that you want to set), then press ENTER key that will be set.  
When input alarm signal, alarm position will be loaded.



ALARM POSITION MENU

Press ENTER key to enter ALARM POSITION SELECTNG menu.  
Press UP or DOWN key to select alarm delay time (OFF, 1 ~ 60 sec. that you want to set), then press ENTER key that will be set.



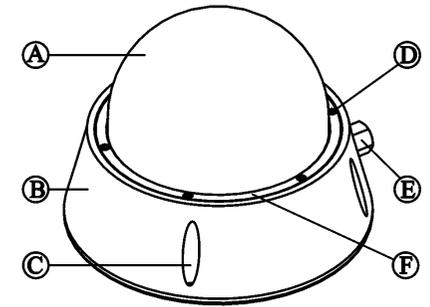
POSITION OSD MENU

Display position number.  
OSD set ON, position number will be display on right-up(R-U) or right-down(R-D) of the screen.

## 2.2 Vandal Proof Series

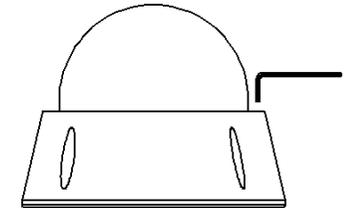
### 2.2.1 Names of parts

- A. Dome cover
- B. Base
- C. Mounting hole
- D. Securing screw
- E. Waterproof joint (*Do not open*)
- F. Waterproof ring



### 2.2.2. Remove protective lining

- 2.2.2.1 Use screwdriver (accessory 1.2.8) turns counterclockwise to remove all securing screws.
- 2.2.2.2 Remove dome cover and waterproof ring.
- 2.2.2.3 Remove protective lining.
- 2.2.2.4 Load waterproof ring and dome cover back and tighten securing screws (turn clockwise).



- ※ Do not touch lens with your hands or other objects.
- ※ Do not turn the lens or remove other parts. Doing so may cause damage.
- ※ Do not scratch the dome cover or touch any parts.
- ※ Make sure all the screws are properly tightened to keep Vandal speed dome waterproof.

### 2.2.3 Basic setup

- 2.2.3.1 Please refer to 3.1 Cable Connection and 3.5 Cable specification: connect **Power line, Video cable, Infrared receiver insulation cable first**, then connect **Alarm cable and RS-485 PVC instrument cable (pair type) if needed.**
- 2.2.3.2 Load batteries into infrared remote control and use infrared remote control to setup camera ID and RS-485 control protocol. Please refer to **4 Infrared Remote control** and **5 Initial Programming**.

### 2.2.4 Install Speed Dome

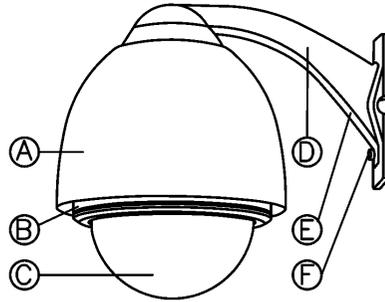
Use securing screws (accessory 1.2.9) install speed dome in an appropriate position. Before installation, make sure the structure of location you choose can hold the weight of camera. (2.4Kg)

※ **Keep unconnected wires, plugs, duly insulated, or they may cause short circuit and damage this product.**

## 2.3 Outdoor Series

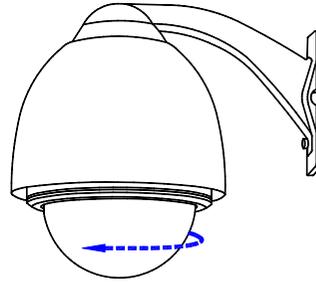
### 2.3.1 Names of parts

- A. Outer layer of base
- B. Base
- C. Cover
- D. Wall mounted Bracket
- E. Wire sheathing
- F. Securing screws for wire sheathing



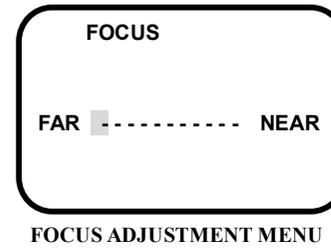
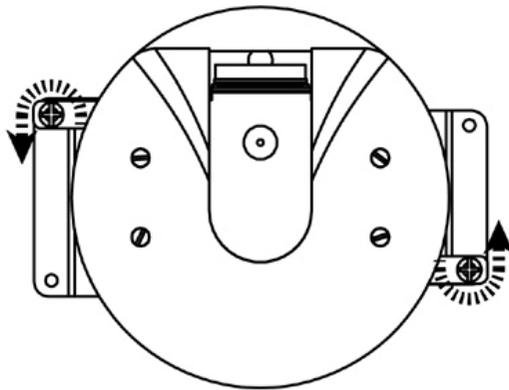
### 2.3.2 Remove protective lining.

- 2.3.2.1 Turn counterclockwise and carefully remove the protective lining.



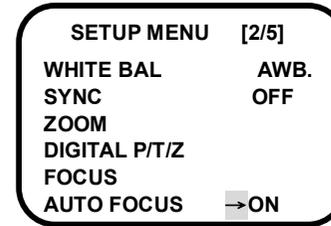
- 2.3.2.2 Remove securing screw for shipment (M4 \*10mm) by turning counterclockwise (As mark  below).

**※ Warning: Securing screw for shipment must be properly tightened before shipping this product ◦**



Press UP or DOWN key to select FOCUS FAR to NEAR.

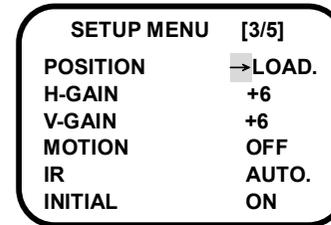
## 12. AUTO FOCUS



Move cursor to AUTO FOCUS, press ENTER key to enter AUTO FOCUS FUNCTION SELECTING menu.

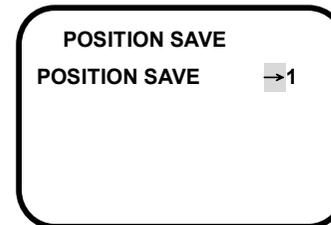
Press UP or DOWN key to select AUTO FOCUS ON or OFF.

## 13. POSITION



Move cursor to POSITION, press ENTER key to enter POSITION FUNCTION SELECTING menu.

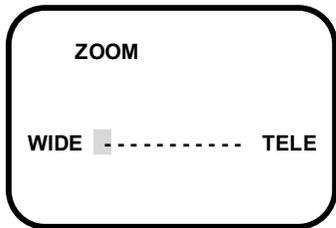
Press UP or DOWN key to select LOAD, SAVE, ALARM, and OSD.



There have 64 steps (position with zoom & focus) can be programmed.

After adjusting position with zoom & focus, Press ENTER key to enter POSITION SAVE SELECTNG menu.

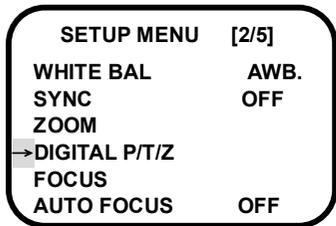
Press UP or DOWN key to select position (1 to 64 position that you want to save), then press ENTER key that will be saved.



ZOOM ADJUSTMENT MENU

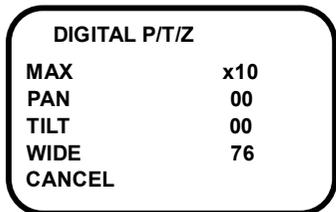
Press UP or DOWN key to select ZOOM WIDE to TELE, 1 to 23 times adjustable.

## 10. DIGITAL ZOOM



Page2 MAIN MENU

Move cursor to DIGITAL P/T/Z, press ENTER key to enter DIGITAL P/T/Z SELECTING MENU.



DIGITAL P/T/Z SELECTING MENU

Press UP or DOWN key to select DIGITAL ZOOM ON or OFF (1 to 10 times adjustable).

The ranges of P/T/Z adjustment as below:

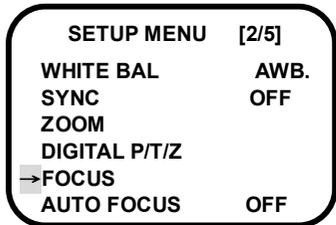
PAN: -72~+72

TILT: -54~+54

WIDE: 0~80

CANCEL: Recall the default values.

## 11. FOCUS



Page2 MAIN MENU

Move cursor to FOCUS, press ENTER key to enter FOCUS ADJUSTMENT menu.

2.3.2.3 Loads cover back and tightened all securing screws (Turn clockwise). **Make sure all the screws are properly tightened to keep camera waterproof**

2.3.2.4 Use securing screws (accessory 1.3.9) and choice of Wall mount bracket (accessory 1.3.10) or Ceiling mount bracket (accessory 1.3.11) install camera in an appropriate position.

※ Do not touch lens with your hands or other objects.

※ Do not turn the lens or remove other parts. Doing so may cause damage.

※ Ceiling mount bracket(accessory 1.3.11) is for indoor use.

※ **Make sure junction between dome cover、speed dome and bracket are air tight sealed with Silicon glue to keep speed dome waterproof.**

### 2.3.3 Basic setup

2.3.3.1 Please refer to 3.1 Cable Connection and 3.5 Cable specification: connect **Power line, Video cable, Infrared receiver insulation cable first**, then connect **Alarm cable and RS-485 PVC instrument cable (pair type) if needed.**

2.3.3.2 Load batteries into infrared remote control and use infrared remote control to setup camera ID and RS-485 control protocol. Please refer to **4 Infrared Remote control** and **5 Initial Programming**.

### 2.3.4 Install Speed Dome

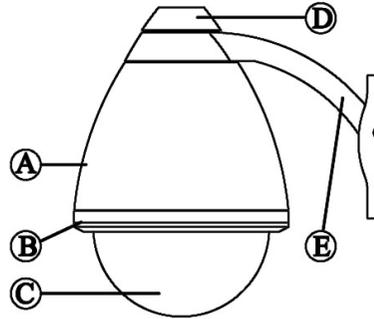
Install speed dome in an appropriate position. Before installation, make sure the structure of location you choose can hold the weight of camera. **(3.44Kg)** °

※ **Keep unconnected wires, plugs, duly insulated, or they may cause short circuit and damage this product.**

## 2.4 Outdoor Series (360° Continuous Rotation)

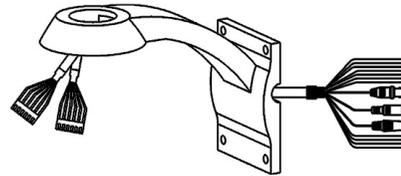
### 2.4.1 Names of parts

- A. Outer layer of base
- B. Base
- C. Cover
- D. Stable Lid
- E. Wall mounted Bracket



### 2.4.2 Insert control line

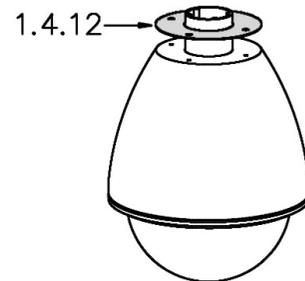
2.4.2.1 Insert accessories 1.4.2 Control Line into accessories 1.4.11 Wall Mount Bracket (As Diagram on right).



2.4.2.2 Install speed dome in an appropriate position. Before installation, make sure the structure of location you choose can hold the weight of camera. (3.5Kg)

### 2.4.3 Lay on Waterproof Spacer

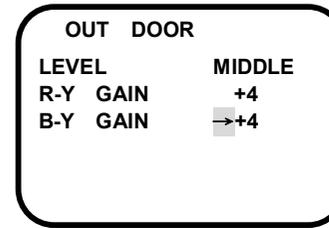
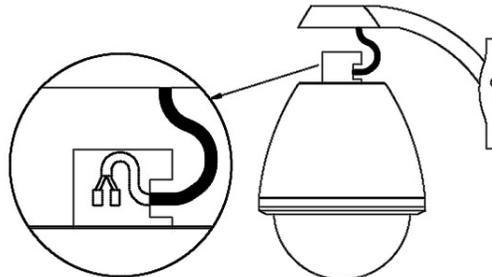
Lay on accessories 1.4.12 Waterproof spacer, (As Diagram on right).



### 2.4.4 Plug in connector

Insert control line into gap on the side of top of speed dome, and plug in 2 sets of connector.

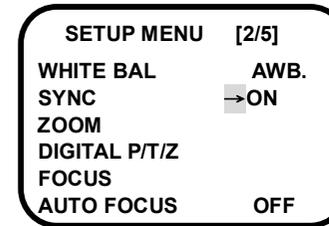
(6 pin and 7 pin, directional)



R-Y GAIN ADJUSTMENT MENU

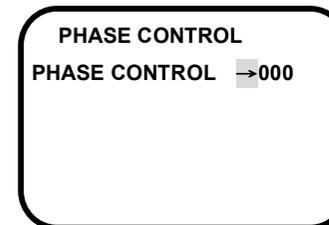
Move cursor to B-Y GAIN, press ENTER key to enter B-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

## 8. SYNC



Page2 MAIN MENU

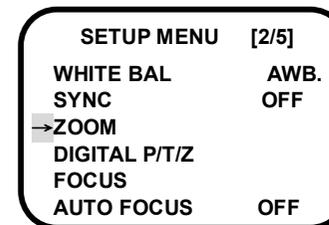
This function is used to adjust phase of external sync. When input external sync, we can press ENTER key to set SYNC ON, then into the PHASE ADJUSTMENT MENU.



PHASE ADJUSTMENT MENU

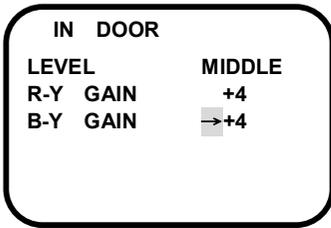
Press UP or DOWN key to adjust phase. The Adjust range is -130~+130.

## 4.9 ZOOM



Page2 MAIN MENU

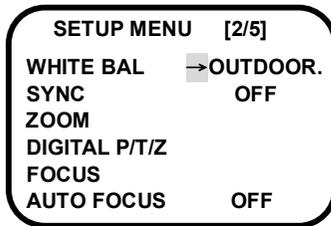
Move cursor to ZOOM, press ENTER key to enter ZOOM ADJUSTMENT menu.



R-Y GAIN ADJUSTMENT MENU

Move cursor to B-Y GAIN, press ENTER key to enter B-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

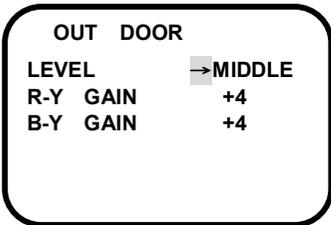
#### 7.4 Out Door



Page2 MAIN MENU

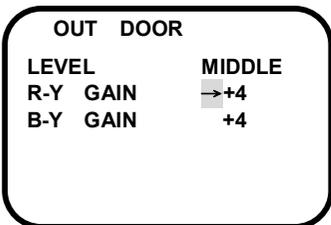
Move cursor to WHITE BAL, press ENTER key to enter WHITE BAL FUNCTION SELECTING menu, then Press UP or DOWN key to select OUTDOOR.

Press ENTER key to enter OUTDOOR LEVEL ADJUSTMENT menu.



OUTDOOR LEVEL ADJUSTMENT MENU

Press ENTER key to enter OUTDOOR LEVEL ADJUSTMENT menu, then Press UP or DOWN key to select RED, RED+, RED++, RED+++, MIDDLE, BLUE, BLUE+, BLUE++, BLUE+++, 9 steps adjustable.



R-Y GAIN ADJUSTMENT MENU

Move cursor to R-Y GAIN, press ENTER key to enter R-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

#### 2.4.5 Assembling speed Dome with Bracket

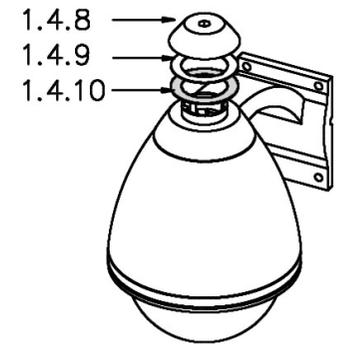
2.4.5.1 Insert speed dome into round hole of bracket.

2.4.5.2 Lay on accessories 1.4.10 Waterproof spacer

(White) 、 1.4.9 Waterproof spacer

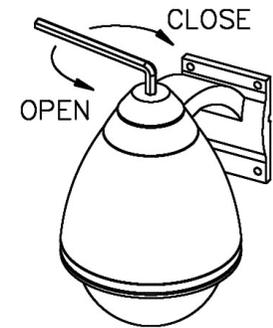
(Transparent) as Diagram.

2.4.5.3 Lay on accessories 1.4.8 Stable Lid, screw with hand.



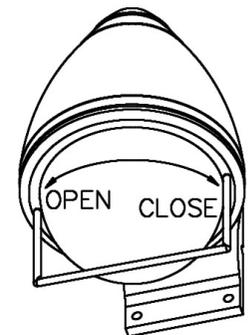
#### 2.4.6 Stable speed dome

Stable speed dome with 10mm hexagonal Spanner, Turn clockwise.



#### 2.4.7 Put on Dome Cover

Use Accessories 1.4.13 U shape spanner, Turn clockwise.



※ Do not touch lens with your hands or other objects.

※ Do not turn the lens or remove other parts. Doing so may cause damage.

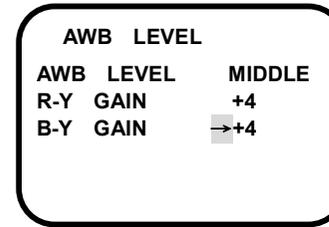
※ Make sure junction between dome cover 、 speed dome and bracket are air tight sealed with Silicon glue to keep speed dome waterproof.

## 2.4.8 Basic Setup

2.4.8.1 Please connect power line, video, Infrared receiver first, Connect RS-485 control, alarm in and out if necessary. (Please refer to 3.4 **Connection Chart** and 3.5 **Cable specification**).

2.4.8.2 Load batteries into remote controller, point to infrared receiver, setup camera ID and Protocol of RS-485. Please refer to **4 Infrared Remote control** and **5 Initial Programming**.

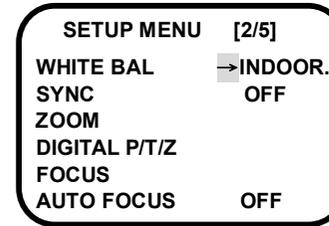
**※ Keep unconnected wires, plugs, duly insulated, or they may cause short circuit and damage this product.**



Move cursor to B-Y GAIN, press ENTER key to enter B-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

R-Y GAIN ADJUSTMENT MENU

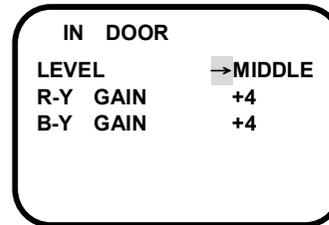
## 7.3 In Door



Move cursor to WHITE BAL, press ENTER key to enter WHITE BAL FUNCTION SELECTING menu, then Press UP or DOWN key to select INDOOR.

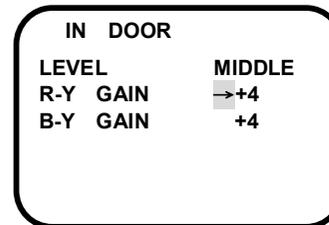
Press ENTER key to enter INDOOR LEVEL ADJUSTMENT menu.

Page2 MAIN MENU



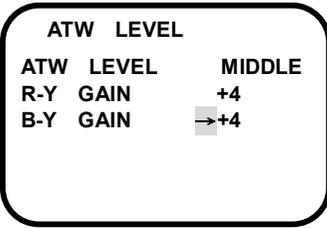
Press ENTER key to enter INDOOR LEVEL ADJUSTMENT menu, then Press UP or DOWN key to select RED, RED+, RED++, RED+++, MIDDLE, BLUE, BLUE+, BLUE++, BLUE+++, 9 steps adjustable.

INDOOR LEVEL ADJUSTMENT MENU



Move cursor to R-Y GAIN, press ENTER key to enter R-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

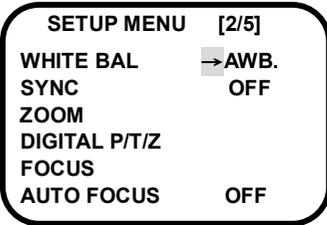
R-Y GAIN ADJUSTMENT MENU



R-Y GAIN ADJUSTMENT MENU

Move cursor to B-Y GAIN, press ENTER key to enter B-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

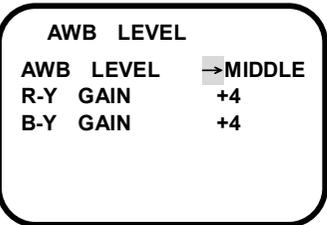
### 7.2 AWB (Auto White Balance)



Page2 MAIN MENU

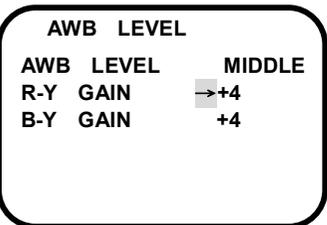
Move cursor to WHITE BAL, press ENTER key to enter WHITE BAL FUNCTION SELECTING menu, then Press UP or DOWN key to select AWB.

Press ENTER key to enter AWB LEVEL ADJUSTMENT menu.



AWB LEVEL ADJUSTMENT MENU

Press ENTER key to enter AWB LEVEL ADJUSTMENT menu, then Press UP or DOWN key to select RED, RED+, RED++, RED+++, MIDDLE, BLUE, BLUE+, BLUE++, BLUE+++, 9 steps adjustable.

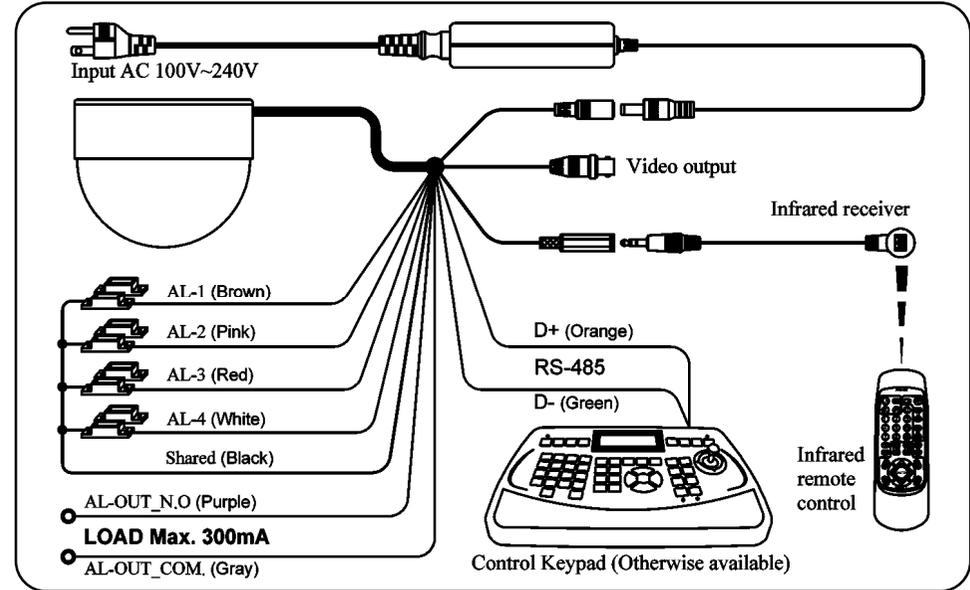


R-Y GAIN ADJUSTMENT MENU

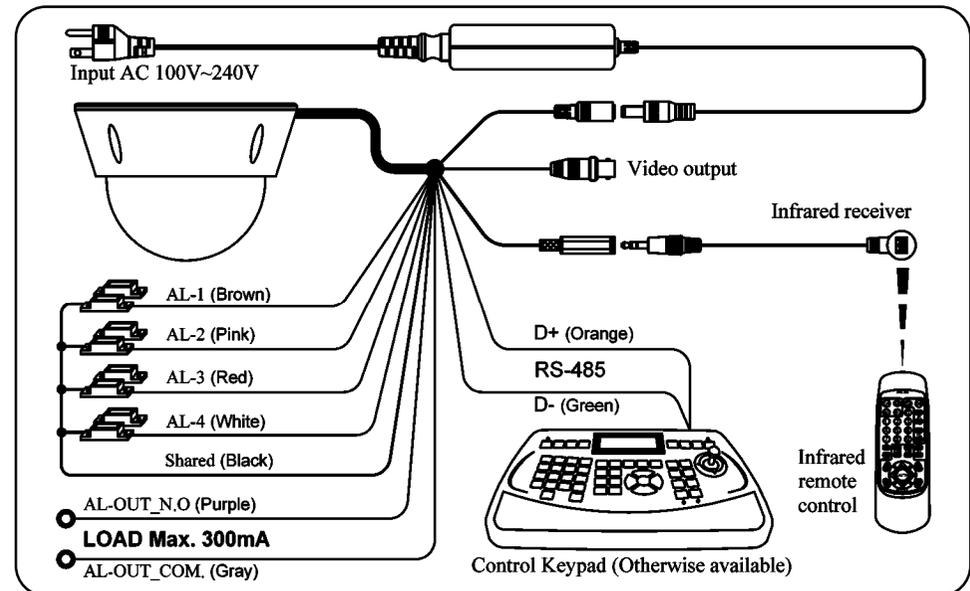
Move cursor to R-Y GAIN, press ENTER key to enter R-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

## 3-Cable Connection

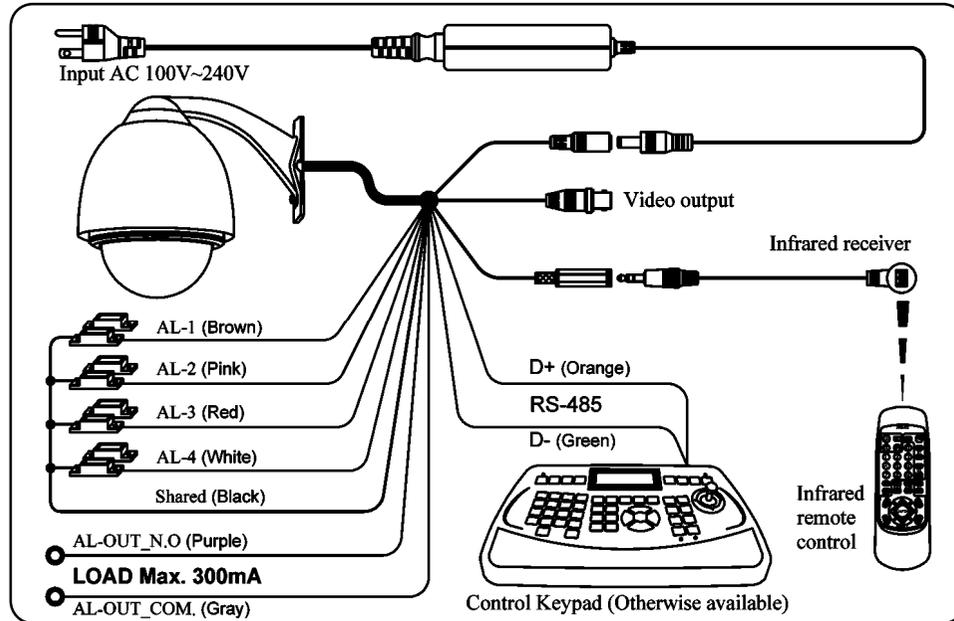
### 3.1 Indoor Series



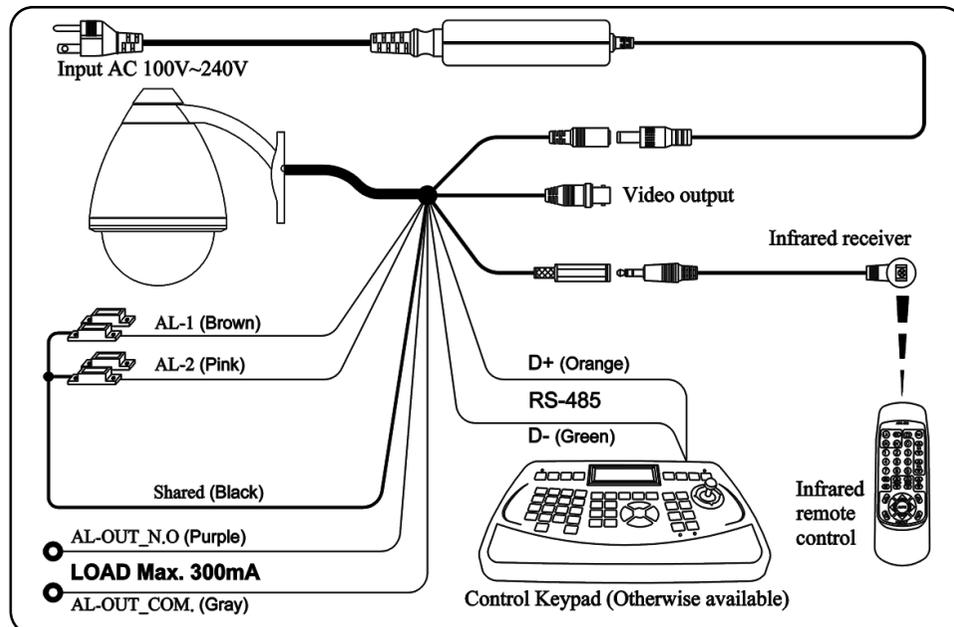
### 3.2 Vandal Proof Series



### 3.3 Outdoor Series



### 3.4 Outdoor Series (360° Continuous Rotation)



### 6. AGC (Auto Gain Control)

SETUP MENU	[1/5]
CAMERA ID	OFF
SENSE UP	OFF
AISHUT	AUTO.
AES	FIX.
BLC	OFF
AGC	→+4

Move cursor to AGC, press ENTER key to enter AGC LEVEL SELECTING menu, then Press UP or DOWN key to select BASE, +1, +2, +3, +4, +5, +6, +7, MAX (0dB ~ 36dB, 9 steps adjustable).

AGC ADJUSTMENT MENU

### 7. WHITE BALANCE

#### 7.1 ATW (Auto Trace White Balance)

SETUP MENU	[2/5]
WHITE BAL	→ATW.
SYNC	OFF
ZOOM	
DIGITAL P/T/Z	
FOCUS	
AUTO FOCUS	OFF

Move cursor to WHITE BAL, press ENTER key to enter WHITE BAL FUNCTION SELECTING menu, then Press UP or DOWN key to select ATW.

Press ENTER key to enter ATW LEVEL ADJUSTMENT menu.

Page2 MAIN MENU

ATW LEVEL	
ATW LEVEL	→MIDDLE
R-Y GAIN	+4
B-Y GAIN	+4

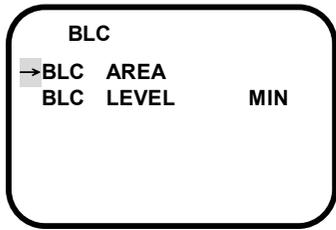
Press ENTER key to enter ATW LEVEL ADJUSTMENT menu, then Press UP or DOWN key to select RED, RED+, RED++, RED+++, MIDDLE, BLUE, BLUE+, BLUE++,BLUE+++, 9 steps adjustable.

ATW LEVEL ADJUSTMENT MENU

ATW LEVEL	
ATW LEVEL	MIDDLE
R-Y GAIN	→+4
B-Y GAIN	+4

Move cursor to R-Y GAIN, press ENTER key to enter R-Y GAIN ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX, 9 steps adjustable.

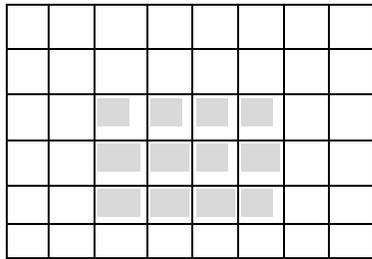
R-Y GAIN ADJUSTMENT MENU



Press ENTER key to enter BLC AREA ADJUSTMENT menu.

**AREA AND LEVEL ADJUSTMENT MENU**

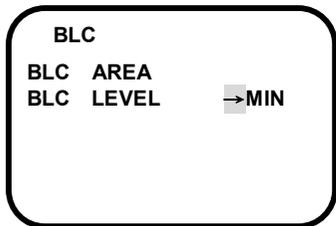
Press ENTER key to set BLC AREA BLOCK. Press UP or DOWN key to select BLC AREA BLOCK.



OPD WINDOW

This method is suited for cases where the main subject is fixed within the screen.

The important object in a scene is usually placed in the center of the monitor's screen. In this mode more photometric weight is given to the center of the screen than to the edge of the picture, this function will eliminate the interference by strong background light which makes the camera picture dark. The size and location of center window can be adjusted freely by user within 48 area on screen (detail please see OPD setting)



Press ENTER key to enter BLC LEVEL ADJUSTMENT menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, MAX.

**AREA AND LEVEL ADJUSTMENT MENU**

**3.5 Cable specification:**

**Power line:** 18AWG-2C

**Video cable:** 5C2V(5CFB) 168

**Alarm cable:** 22AWG-4C

**Infrared receiver insulation cable:** 22AWG-3C

**RS-485 PVC instrument cable (pair type):** 22AWG-1P

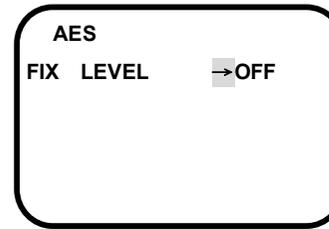
*※ To insure reliable operation, above requirements must be fulfilled. To obtain better quality, higher standard cable for long-distance transmission is recommended.*

## 4 – Infrared Remote control



- (LK) Clear / Camera ID Display key
- (CAM) Camera selected key.
- (0) (9) Number key for Input camera ID /Function setting
- (ON) (OFF) Alarm/subtitle display on or off
- (EX) Alarm/subtitle display setting
- (ZOOM) Manual zooming (WIDE / TELE)
- (FOCUS) Manual focusing (FAR / NEAR)
- (IRIS) Iris adjustment (AISHUT)
- (Auto) Camera direction control key and auto cruise key
- (PRE) Call / Save / Clear preset positions
- (FUN) Recall preset position
- (UP) Up / Right (OSD Menu)
- (DN) Down/Left (OSD Menu)
- (END) Enter into (OSD Menu) / OK
- (ESC) Exit from (OSD Menu) / Skip

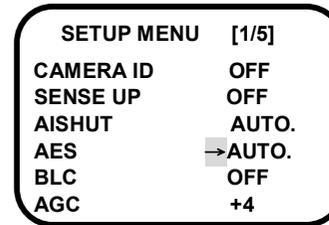
- Make sure to press a key after another within 5 seconds, or you will make an invalid input.
- In case of erroneous input, press **LK** to clear.
- Keys without a description are not operational in this model.
- Make sure that there is nothing between the infrared receiver and the remote control.
- Effective distance of the remote control is 7 meters.
- If you find that the effective distance of the remote control is shortened, replace the batteries with new ones of the same spec.



FIX LEVEL ADJUSTMENT MENU

Press ENTER key to enter FIX LEVEL SELECTING menu, then Press UP or DOWN key to select OFF, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000 or 1/10000.

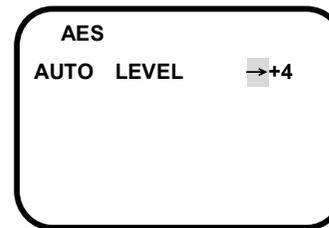
### 4.2 AES AUTO MODE



Page1 MAIN MENU

Move cursor to AES, press ENTER key to enter AES FUNCTION SELECTING menu, then Press UP or DOWN key to select AUTO.

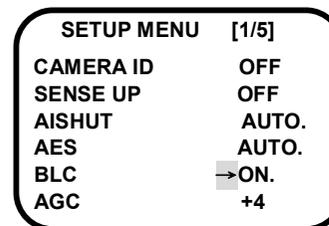
Press ENTER key to enter AUTO LEVEL ADJUSTMENT menu.



AUTO LEVEL ADJUSTMENT MENU

Press ENTER key to enter AUTO LEVEL SELECTING menu, then Press UP or DOWN key to select MIN, +1, +2, +3, +4, +5, +6, +7, MAX.

## 5. BLC (Backlight Compensation)



Page1 MAIN MENU

Move cursor to BLC, press ENTER key to enter BLC FUNCTION SELECTING menu, then Press UP or DOWN key to select ON.

Press ENTER key to enter BLC ARES AND LEVEL ADJUSTMENT menu.

# 5 – Initial Programming

Be sure to keep the remote control within 7 meters from the receiver. All inputs shall be made within 5 seconds, or the input mode would be cancelled automatically. In case of erroneous input, press **LK** to clear or escape from the operating mode.

## 5.1 Power on

After connect power for the first time, the camera will rotate once for reposition, which is normal.

## 5.2 Camera ID setup.

There are two ways to setup camera ID

### 5.2.1 Direct setup camera ID

5.2.1.1 Input digit **3→4→5→6→3→4→5→6→3→4→5→6→3** then camera will rotate once, indicate that camera is waiting for input camera ID

5.2.1.2 If a monitor is connecting to camera then the screen will show **KEYIN NEW ID: ---**, each digit input will show on the screen and the meantime camera will “nod”. After that, you can input next digit.

5.2.1.3 Camera ID is three digits totally. It can be set from 001~255.

5.2.1.4 After input all three digits, new ID will show on the screen and camera will rotate once and go through Default preset point group 1 that indicate you already finished camera ID set up. (If **NEW ID: 000** show on the screen means your ID input exceed 255)

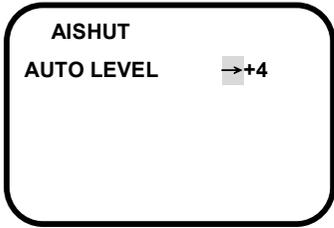
### 5.2.1.5 Check camera ID

- 5.2.1.5.1 Press **LK** button on the remote control, camera ID will show on the screen.
- 5.2.1.5.2 Press **CAM** button on the remote control then input camera ID (Three digits) check is the new camera ID show on the screen?

5.2.1.6 If any mistake made on the process of camera ID setup please repeat from 5.2.1.1 to 5.2.1.4

### 5.2.2 Camera ID setup from OSD MANUAL

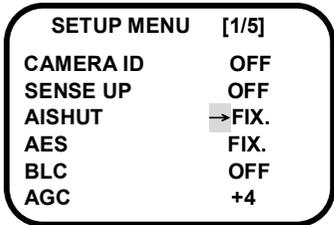
Please refer 5.4.6 **ID-SET**.



Press **ENTER** key to enter **AUTO LEVEL SELECTING** menu, then Press **UP** or **DOWN** key to select **MIN, +1, +2, +3, +4, +5, +6, +7, MAX**.

AUTO LEVEL ADJUSTMENT MENU

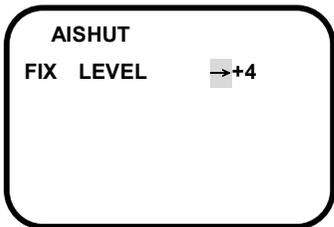
## 3.2 AISHUT FIX MODE



Move cursor to **AISHUT**, press **ENTER** key to enter **AISHUT FUNCTION SELECTING** menu, then Press **UP** or **DOWN** key to select **FIX**.

Press **ENTER** key to enter **FIX LEVEL ADJUSTMENT** menu.

Page1 MAIN MENU

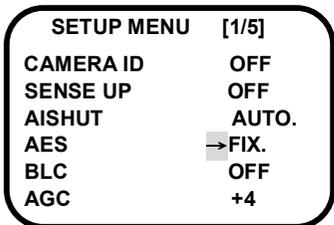


Press **ENTER** key to enter **FIX LEVEL SELECTING** menu, then Press **UP** or **DOWN** key to select **MIN, +1, +2, +3, +4, +5, +6, +7, MAX**.

FIX LEVEL ADJUSTMENT MENU

## 4. AES (Auto Exposure Mode)

### 4.1 AES FIX MODE



Move cursor to **AES**, press **ENTER** key to enter **AES FUNCTION SELECTING** menu, then Press **UP** or **DOWN** key to select **FIX**.

Press **ENTER** key to enter **FIX LEVEL ADJUSTMENT** menu.

Page1 MAIN MENU

- ※ There is no time limit on the process of camera ID setup
- ※ Default of camera ID is "000. If you only use one camera you don't have to setup camera ID. You can operate all function through remote control directly.
- ※ Camera ID "000" is only for single camera user; if you have more than one camera you have to setup camera ID from "001".

### 5.3 Load Default

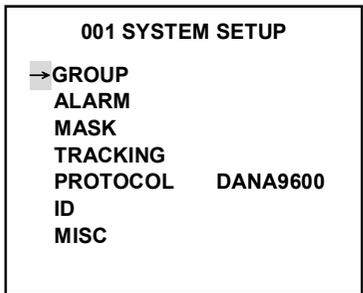
Input digit 0→1→2→3→0→1→2→3→0→1→2→3→0, then all setup will be cleared and back to default.

5.3.1 Use OSD (Please refer to 5.4.7.3 DEFAULT) to load Default  
All Setup will restore DEFAULT except PROTOCOL and camera ID.

### 5.4 OSD MENU FUNCTION SETUP

By holding END (for 5 seconds), OSD menu will show on the screen that indicates camera is standing by for system setup.

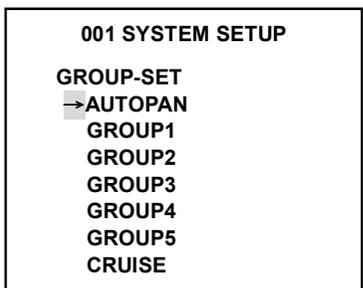
To escape from the menu, you may press and release ESC repeatedly until 001 SYSTEM SETUP disappears or you may press LK to escape rapidly from the function menu. To do so, you must wait until 001 SYSTEM SETUP disappears before proceeding.



- UP Up / Right key
- DN Down / Left key
- OSD  
END Enter (OSD MANU) / OK key
- ESC Escape (OSD MANU) / Escape key

※ MASK and TRACKING function are option.

#### 5.4.1 GROUP



Select→GROUP

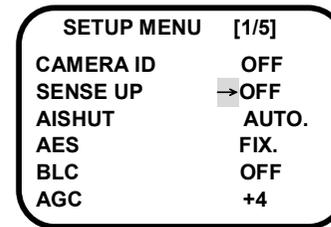


Move cursor to POSITION, press ENTER key to enter ID POSITION SELECTING menu.



Press UP or DOWN key to select ID POSITION L-U,R-D,L-D or R-U. Then the ID will directly display on the position that you select.

### 2. SENSE UP

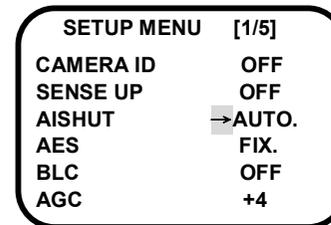


Page1 MAIN MENU

Move cursor to SENSE UP, press ENTER key to enter SENSE UP FUNCTION SELECTING menu, then Press UP or DOWN key to select OFF, x2, x4, x6, x8, x12, x16, x32 or x64.

### 3. AISHUT (Auto Iris)

#### 3.1 AISHUT AUTO MODE

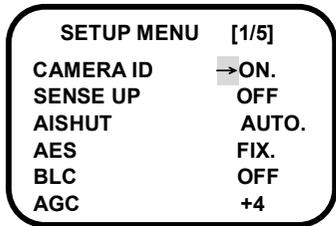


Page1 MAIN MENU

Move cursor to AISHUT, press ENTER key to enter AISHUT FUNCTION SELECTING menu, then Press UP or DOWN key to select AUTO.

Press ENTER key to enter AUTO LEVEL ADJUSTMENT menu.

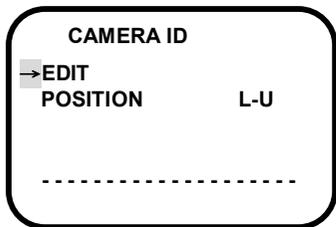
# 1. Camera Identification Setting ( CAMERA ID )



Page1 MAIN MENU

Move cursor to CAMERA ID, press ENTER key to enter ID FUNCTION SELECTING menu, then Press UP or DOWN key to select ON.

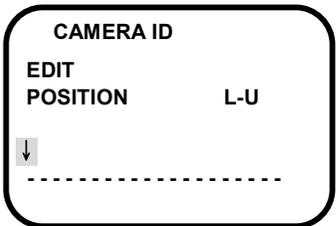
Press ENTER key to enter CAMERA ID EDIT menu.



CAMERA ID EDIT MENU

Press ENTER key to edit ID character, then press UP or DOWN key to select ID character position (total twenty character positions).

Press ENTER key to enter ID characters menu.



ID CHARACTER MENU

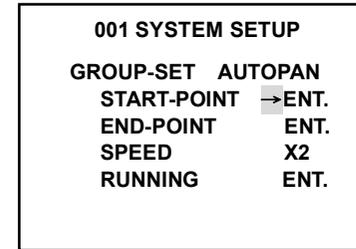
Select the desired character by using UP and DOWN button, and Press ENTER key to select the character .



CHARACTER SELECT MENU

Select the desired character by using UP and DOWN button, and Press ENTER key to confirm the blinking character .The first character is saved and the cursor in the button of the screen moves to next (Maximum 20 characters).

## 5.4.1.1 AUTO PAN

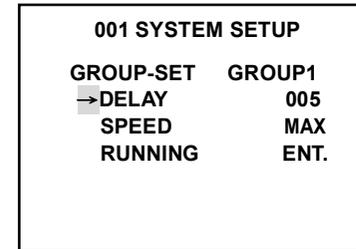


Select →AUTO PAN

START-POINT: PAN LIMIT TO THE LEFT  
 END-POINT : PAN LIMIT TO THE RIGHT  
 AUTO PAN SPEED SETUP 2.5° ~ 60° /s  
 MIN, X1, X2, X3, X4, MAX  
 2.5° 5° 10° 20° 40° 60°

RUNNING: Running Auto pan

## 5.4.1.2 GROUP1~ 5 Dwell time and cruise speed of group auto cruise set up



Enter into group setup

Choose group from group1~5

DELAY-SET is to setup dwell time of each preset position 005 ~ 255 seconds

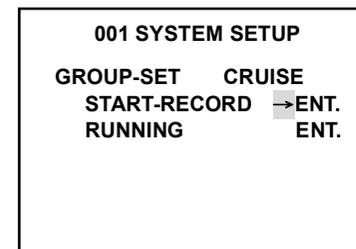
005 ~ 255 stand for 005 ~ 255 seconds

SPEED-SET is to set the cruise speed of group auto cruise from 2.5°/sec ~ 320°/sec

MIN, X1, X2, X3, X4, X5, X6, X7, MAX  
 2.5° 5° 10° 20° 40° 60° 80° 160° 320°

RUNNING: Running group auto cruise

## 5.4.1.3 CRUISE



Select →CRUISE ( Recorded Cruise)

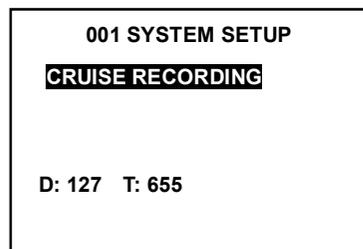
1. Select START-RECORD

2. Press **END** and prepare to record

3. Adjust camera (including direction and zoom) to the spot you want to start recording.

※ When recording, zoom cannot be adjusted.

### 5.4.1.3.1 RECORDING

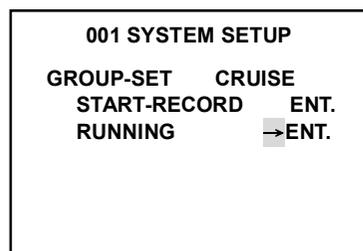


1. Press **END** to start recording
2. Use direction key to control camera to the spot need to be monitoring
3. When finish recording, press **END** to save

※ When recording only camera direction control key and **END**·**ESC**·**LK** key can function ◦

※ "D: 127" , "T: 655" Show on monitor indicate data and time left to be recorded

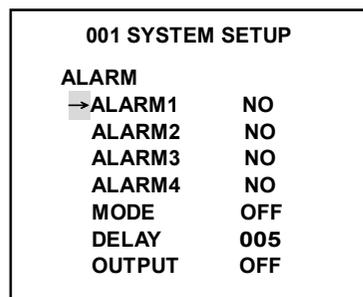
### 5.4.1.3.2 RUNNING CRUISE (PRECORDED CRUISE)



- Select→ RUNNING
1. Press **END** twice to start cruise
  2. Press any key to stop

※ When exit OSD MENU , press **AUTO** → 6 to start cruise.

### 5.4.2 ALARM

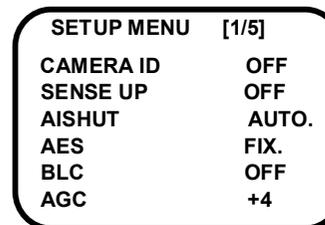


- Select→ALARM
- ALARM1~4 alarm trigger mode setup
- NO alarm triggered when short circuit
  - NC alarm triggered when broken circuit
  - OFF no alarm will be triggered

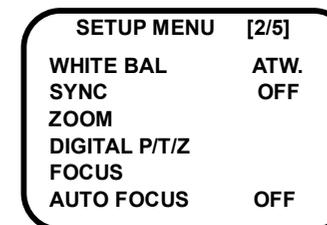
MODE : set alarm mode:

- SAT When alarm 1 triggered camera will automatically goes to preset position  
1 · activate auto tracking function and output switch "ON" until finish delay time count down.
- ON When alarm 1 triggered camera will automatically goes to preset position  
1 · activate output switch "ON" until finish delay time count down.
- OFF alarm output goes off

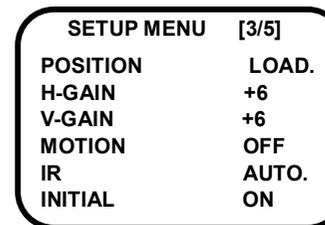
## 12-Lens internal setting



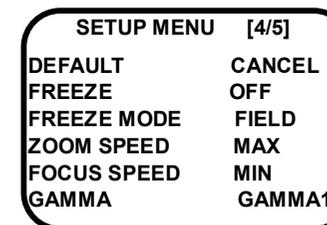
Page1 MAIN MENU



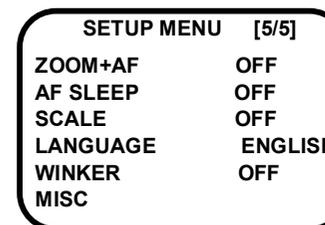
Page2 MAIN MENU



Page3 MAIN MENU



Page4 MAIN MENU



Page5 MAIN MENU

### Reinforced wall Mount Bracket

- Easy installation
- Rigid and aesthetically designed
- Made of rigid materials
- Apt for use in indoor and outdoor environments
- For Vandal Proof Series



### Reinforced wall Mount Bracket

- Easy installation
- Rigid and aesthetically designed
- Made of rigid materials
- Apt for use in indoor and outdoor environments
- For Indoor Series



### Flush Mount Bracket

- Easy installation
- Rigid and aesthetically designed
- Made of rigid materials
- Apt for use in indoor environments
- For Indoor Series



DELAY : Delay time setup, after finish delay time count down , camera will back to original status before alarm triggered.

BY SAT Delay time will automatically go with 5.4.4 TRACKING delay time setup ◦ (Can be set only when ALARM MODE set on SAT)

005 Delay time can be set from 005 ~ 255 秒 ◦ (Can be set only when ALARM MODE set on "ON" or "OFF")

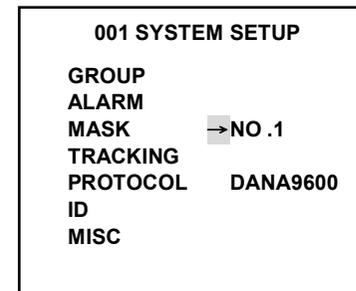
OUTPUT : switch of small electric facility (Max load 300mA),  
ON  
OFF

(Only when MODE is setup to OFF, OUTPUT will show on the OSD MENU)

※ Output switch goes off by press **[LK]** key during delay time count down.  
Auto tracking functions keep working.

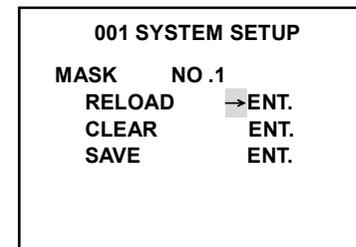
※ Press **[LK]** key to know the current status of alarm.  
**Twinkling "AL001"**: ALARM1 keeping triggered.  
**"AL001"**: ALARM1 was triggered, but already goes off.  
: No alarm been triggered.

### 5.4.3 MASK



Only 4 blocks of privacy masking can be set in a single frame of monitor.  
Maximum 24 blocks of privacy masking can be set ◦  
Choose one block from No.1 ~ No. 24 ,  
Press **[END]** to enter.

### 5.4.3.1 RELOAD, CLEAR, SETUP BLOCK OF MASKING



RELOAD Load masking or reload previous setup ◦  
CLEAR Clear block of masking  
SAVE Setup position and size of masking

### 5.4.3.2 SETUP POSITION AND SIZE OF MASKING

001 SYSTEM SETUP	
MASK	NO .1 MODIFY
H-POS.	→08
V-POS.	08
H-SIZE	08
V-SIZE	08

Enter **SAVE**, Use **UP** , **DN** key to adjust position and size of masking. Exit **SAVE** to finish setup.

H-POS. Horizontal position adjustment

V-POS. Vertical position adjustment

H-SIZE Horizontal size adjustment

V-SIZE Vertical size adjustment

### 5.4.4 AUTO TRACKING

001 SYSTEM SETUP	
TRACKING	
DELAY	→005
MODE	SAT2
RUNNING	ENT.

**DELAY** Delay time setup, can setup from 005 ~ 255Secs

**MODE** Tracking mode setup

**SAT1** When the object been tracking make no move or out of range, start to count down delay time, when finish count down, camera automatically goes back to previous activate position to stand by.

**SAT2** When activate Auto tracking function, start to count down delay time, when finish count down, camera automatically goes back to previous activate position to stand by.

**RUNNING** Activate Auto tracking function (\* twinkles on upper-left corner of monitor after activate.

※ *Auto tracking function may be influenced by dark environments or lights.*

## 11 - Optional accessories

### Multi-function keyboard

- For RS-485 control system
- Expandable to a medium or large system for integrated controls
- Extra-large LCD for easy reading
- Built-in universal joy stick of easy handling
- A variety of functions programmable with push buttons
- Apt for use in indoor environments

### SKC-IR485 IR Control for camera

- For RS-485 control system
- Expandable into a simple one-to-multiple camera
- Compact & lightweight for easy installation
- IR remote control of easy operation
- To convert IR signals into RS-485 signals
- Apt for use in indoor environments



### 485 Signal Amplifier

- For RS-485 control system
- Signal amplification for extended control distance
- Built-in surge protection and scramble signal resistance
- Compact & lightweight for easy installation
- Apt for use in indoor environments



### 232 Signal Converter

- For RS-485 control system
- To convert RS-232 signals into RS-485 signals
- To convert PC, DVR control signals
- Compact & lightweight for easy installation
- Apt for use in indoor environments



## 10 – Specifications

### CAMERA

**Pick-UP Device:** 1/4" COLOR CCD SONY EXVIEW HAD / SUPER HAD (Day & Night)

**Sync System:** Internal synchronous

**Resolution:** 500 TVL (NTSC: 410K Pixel / PAL: 470K Pixel)

**Sensitivity:** 0.1 Lux ~ 0.002 Lux

**Lens:** Canon 23x Zoom lens f 3.6 ~ 82.8mm / F 1.6 ~ 3.8 (10x Electronic Zoom)

**S/N Ratio:** 50dB (AGC OFF)

**IR-Cut Filter:** Auto / Manual

**Focus:** Auto / Manual

**Electronic shutter:** NTSC:1/60 ~ 1/100,000 Sec. / PAL:1/50 ~ 1/100,000 Sec.

**Video output:** 1.0 Vp-p, 75Ω

**α Correction:** 0.45 / 1

**Gain Control:** Super AGC 0 ~ 36dB

**White Balance:** ATW 2500°~9500°K Preset / Manual

**WBC:** Auto on/off

**BLC:** Super BLC / 48 zone BLC

### OPERATION FEATURES

**Rotation mode:** Auto Pan feature / Preset Position Patrol / Auto-flip

**Rotation angle speed:** Horizontal Pan 0°~375° (400°/sec) / Vertical Tilt 0°~95° (330°/sec)

**Speed setting:** Auto:2.5 ~ 60°/Sec / Manual:2.5~160°/Sec / Preset: Max.320° / Sec

**DI / DO:** DI\*4 / DO\*1(Load Max 300mA)

**Preset:** 128 Points / 62 Points

**Max link:** 256

**Control:** Internet control & Infrared Remote Control & RS-485 Control

**Power supply:** INPUT DC 13.5V /2.2A

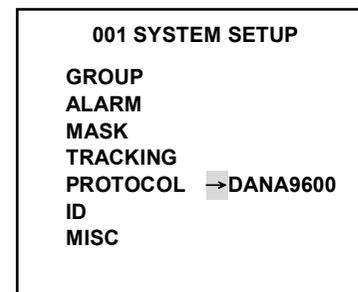
**Ambient Operation:** Indoor Series: 0°C ~ 50°C / 30% ~ 90% RH  
Vandal Proof Series: 0°C ~ 50°C / 30% ~ 90% RH  
Outdoor Series: -30°C ~ 60°C / 30% ~ 90% RH

**Dimensions / Weight:** Indoor Series: -143 x H120mm / 0.86Kg  
Vandal Proof Series: -186 x H142mm / 2.4Kg  
Outdoor Series: -217 x H266mm / 3.44Kg  
Outdoor Series (360): -210 x H269mm / 3.5Kg

**Approval:** CE, FCC, IP66

※ *Function varies according to different model*

### 5.4.5 PROTOCOL



Select→PROTOCOL (*For RS-485 systems*)

DYNA9600 (*DYNACOLOR Rate 9600*)

ELITAR2400 (*ELITAR Rate 2400*)

CHIPER9600 (*CHIPER Rate 9600*)

LILIN9600 (*LILIN Rate 9600*)

PELCOD2400 (*PELCO-D Rate 2400*)

PELCOP4800 (*PELCO-P Rate 4800*)

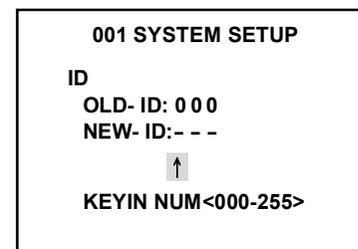
PELCOP9600 (*PELCO-P Rate 9600*)

*Please choose protocol that match to your control device (DVR or KEY PAD).*

※ *Protocol can not be set through RS-485*

※ *The only way to set protocol is through Infrared remote control*

### 5.4.6 ID



Select→ID

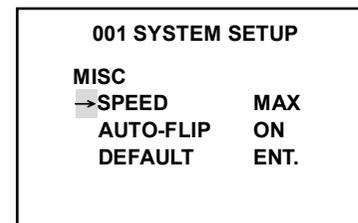
Setup new camera ID (three digits 001~255) then press **END** to store.

※ *Camera ID cannot be setup through RS-485.*

※ *Only way to setup camera ID is through infrared remote control.*

### 5.4.7 MISC (Manual control speed setup, Auto flip, Default)

#### 5.4.7.1 SPEED



Select→SPEED

SPEED Manual control speed setup  
From 2.5° /sec to 160° /sec

MIN, X1, X2, X3, X4, X5, X6, MAX  
2.5° 5° 10° 20° 40° 60° 80° 160°

※ *Rotation speed can be variable by controlling a joystick*

#### 5.4.7.2 AUTO-FLIP

001 SYSTEM SETUP	
MISC	
SPEED	MAX
→AUTO-FLIP	ON
DEFAULT	ENT.

AUTO-FLIP

Select→AUTO-FLIP

ON

OFF

#### 5.4.7.3 DEFAULT

001 SYSTEM SETUP	
MISC	
SPEED	MAX
AUTO-FLIP	ON
→DEFAULT	ENT.

DEFAULT

All Setup will restore DEFAULT

Except PROTOCOL and camera ID.

## 9 – Troubleshooting

### 9.1 When no video image on the screen after successful mounting.

- 9.1.1 Make sure the video output connector of the camera is properly connected to the input of the monitor.
- 9.1.2 Double-check cable connections and the power supply.

### 9.2 Why the control fails to reach the preset position?

- 9.2.1 Make sure the preset positions are in normal operation.
- 9.2.2 Make sure the preset positions in a specific group has 2 or more .
- 9.2.3 Have you set all the preset positions of one group in the same position?

### 9.3 Unsuccessful control

- 9.3.1 Please check whether the control wire has properly connected.
- 9.3.2 Has the camera ID properly set? Have you selected the correct camera before operation?
- 9.3.3 Remote control aimed at the receiver? Does it in the effective range of 7 meters? Are the batteries dead?
- 9.3.4 Is the protocol match to the control device's?  
*(For RS-485 control)*

### 9.4 Troubled control

- 9.4.1 Is the control wire in poor contact? Is it properly grounded? Is the wire experiences interference?
- 9.4.2 Make sure you use PVC instrument cable (pair type) as the extended control wire? *(For RS-485 control )*
- 9.4.3 Is the control distance too long? Double-check the spec of wire.

※ *For technical support, please contact your local dealer.*

## 8 – Maintenance & cleaning

- **Daily cleaning**  
Use a piece of soft and dry cloth to wipe off the dust from the dome cover. Dirt or scratch may influence focusing.
- **Lens cleaning**  
Use an exclusive lens cleanser to remove dust from the lens.
- **Removal of stubborn stains**  
To remove stubborn stains from the surface of the camera, use a soft cloth damped with diluted mild detergent, wiping it clean with a piece of dry soft cloth.  
*※ When cleaning, be sure not to hurt the surface of the dome cover or leave water stains that may deteriorate image.*
- **Do not use benzene, diluents or gasoline and other corrosive solvents**  
Solvents may hurt the casing or damaged the dome cover.

## 6 – Infrared Remote Control mode

### 6.1 Select Camera - By Input camera ID

6.1.1 Press CAM then **CALL ID<001-255>: ---** show on the screen.

6.1.2 Input CAMERA ID (Three digits) then you can set function or control camera.

**Example:** To select ID 1 camera: **CAM** → 0 → 0 → 1, the operation must be completed within 5 seconds, or the Camera ID Selection mode would be cancelled automatically. When selecting a correct Camera ID, the Camera ID will appear on the screen; otherwise no display would appear on the screen.

※ If you do not know the Camera ID, Press **LK** to check the Camera ID.

### 6.2 Remote control

After you select the camera you want by input camera ID, then you may press the direction key or the lens control key to control it. Press it down for operation and release it to stop. When you operate, a status code will appear below the screen, such as: Direction key Up **↑**, Down **↓**, Left **←**, right **→**, Tilt left up **↖**, Tilt right up **↗**, Tilt left down **↙**, tilt right down **↘**, **ZOOM▲▼** z/Z, **FOCUS▲▼** f/F **IRIS▲▼** adjust IRIS from MIN ~ MAX ◦

※ The rotation speed will change according to the zoom lens in or out. (5~60° /sec).

For speed setting, please refer to MENU **SPEED-SET** menu setting.

※ When **↑ ↓ ← →** twinkles means this direction is already to the end.

### 6.3 Alarms and Output On/Off

6.3.1 Press **EX** screen shows **SET EX<1 - 5> -**

6.3.2 Press 1~4 to choose alarm 1~4 on or off.

**Example:** Alarm input 1: **EX** → 1 → **ON** / **EX** → 1 → **OFF**

6.3.3 Press 5 to choose output ON or OFF

**Example:** Output ON: **EX** → 5 → **ON** / Output OFF: **EX** → 5 → **OFF**

※ When alarm input 1 triggered, the camera will corresponding goes to preset position. For alarm mode setting, please refer to MENU **ALARM-SET**.

※ Output switch can control small electric facility **Max Load 300mA**.

※ Functional only when alarm-set : **MODE** is **OFF**

## 6.4 Preset positions Call, Save and Clear

### 6.4.1 Call

Press **PRE** once then input camera ID **CALL PRESET: --**  
**PRE**→0→2 call preset 02

### 6.4.2 Save

Press **PRE** twice then input camera ID **CALL PRESET: --**  
**PRE**→**PRE**→1→0 save preset 010

### 6.4.3 Clear

Press **PRE** three times then input camera ID **CALL PRESET: --**  
**PRE**→**PRE**→**PRE**→0→6 clear preset 06

※ Preset position input limit from 01 to 62.

## 6.5 Call Next Preset Position

By press and release **FUN** key you may recall preset position 01 and see **CALL PRESET : 01 OK** on the screen. And by repeating this method you may check all preset positions. When execute **FUN**, the auto pan and group auto cruise will stop.

## 6.6 Execute Auto Pan Mode, Group Auto Cruise Mode, (Recorded) Cruise Mode and Auto Tracking Mode

Press **AUTO** screen shows **CALL GROUP <0 - 7> :-**

**AUTO**→0 : Auto Pan (Refer 5.4.1.1 Auto Pan SET to set auto pan limit.)

**AUTO**→1 : cruise preset 001 ~ 032 (01 ~ 16 M / T-Series)

**AUTO**→2 : cruise preset 033 ~ 064 (17 ~ 32 M / T-Series)

**AUTO**→3 : cruise preset 065 ~ 096 (33 ~ 48 M / T-Series)

**AUTO**→4 : cruise preset 096 ~ 128 (49 ~ 62 M / T-Series)

**AUTO**→5 : cruise preset 001 ~ 128 (01 ~ 62 M / T-Series)

**AUTO**→6 : Recorded cruise

**AUTO**→7 : Auto Tracking Mode

※ To execute group auto cruise, at least 2 positions shall be preset in each group.

※ Press any direction key to stop **AUTO** mode. When camera regains power after lost it, need 20 sec to restart and back to previous status.

## 6.7 Speed activate Auto Tracking Function

Adjust camera (Direction and zoom) to the spot to start auto tracking,

Press **AUTO**→7 to activate Auto Tracking.

(Setup please refer to 5.4.4 TRACKING)

## 7-RS-485 Control mode

## 7.1 Initial Programming

If camera needs to connect to DVR or control panel (KEY PAD) you need to setup protocol match to DVR's or control panel's protocol. Please refer to

### 5.4.5 PROTOCOL.

※ This device is working in standard RS-485 communication format at the bps as set.

## 7.2 Connection

Please refer to **3 Wire Connections** and the wire specification. The reference connection diagram shows simple layout and this device is able to connect with as many as 128 units and integrated application with other systems.

## 7.3 Controls

All function depends on the control device such as DVR or Key Pad you choose. Function can be performed only if control device can support.

## 7.4 Protecting

To avoid lose control of camera when connecting to DVR or KEY PAD; (They might mistakenly reset camera ID or protocol). Camera's protocol and ID Can only be set through infrared remote control.