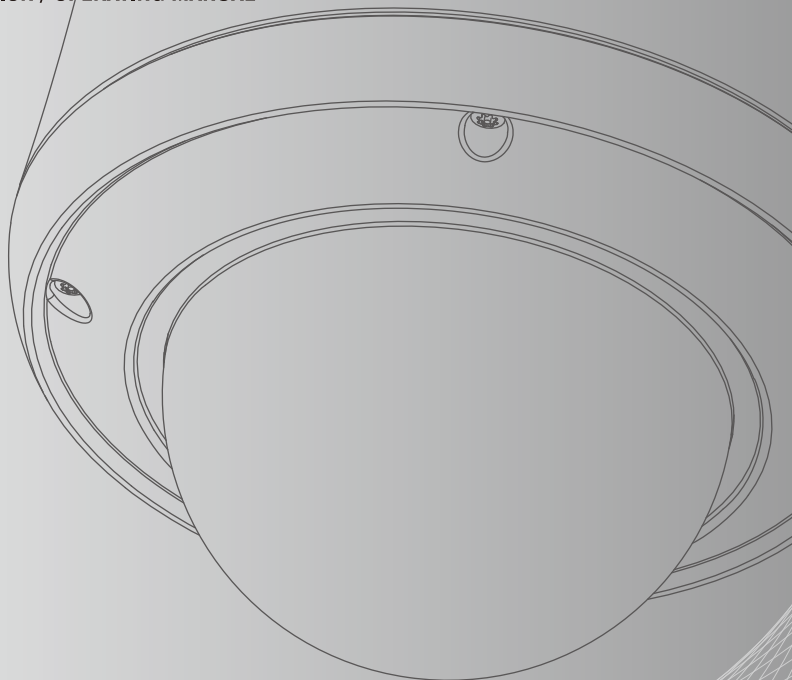


**INSTALLATION / OPERATING MANUAL**



# **Mega-pixel Mini Speed Dome camera**

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Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use

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# 1. PRECAUTIONS



## 1.1 Important Safety Instruction

---

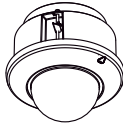
- Read these instructions.
- Pay attention on all the warnings.
- Follow all instructions.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not disassemble or insert foreign objects.
- Do not install near any heat sources such as radiation, heat registers, stoves, or other apparatus. (Including amplifiers) that produce heat.
- Do not aim the camera at the sun or any other strong light source.
- Do not install the camera in intermittent lighting environments.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Installation should be done only by qualified personnel and conform to all local codes.
- Installation should be done in a place strong enough to hold it.
- Use only installation methods and materials capable of supporting four times the maximum specified load.
- It is designed for indoor use only and it must not be installed where exposed to rain and moisture without additional outdoor housing and bracket.
- To prevent damage from water leakage when installing a mount outdoors on a roof or wall, apply sealant around the bolt holes between the mount and mounting surface.
- These instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- Only use replacement parts recommended by manufacturer and these instructions.

## 2. GETTING STARTED

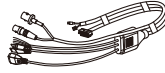
### 2.1 Unpacking



Indoor Ceiling



Indoor In Ceiling



MAIN CABLE



Manual



STICKER  
(In-Ceiling Type)







SCREW #8\*38  
(Surface Type)



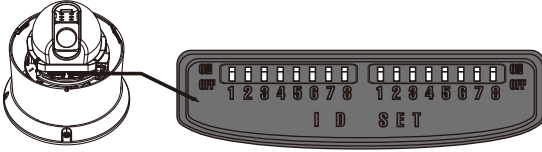
SCREW #8\*38  
(Ceiling Type)

### 2.2 Selection Flow

Type	Indoor	Outdoor
Surface	 <p>Indoor Ceiling</p>	
Ceiling	 <p>Indoor In Ceiling</p>	 <p>Outdoor Ceiling_Pipe (Pipe 200mm)</p>
Wall		 <p>Outdoor Wall</p>

# 3.Installation

## 3.1 Address / communication setting



### ► ADDRESS (ID) setting

S/W NO	1	2	3	4	5	6	7	8
HEX	1	2	4	8	16	32	64	128

### ► SETTING

#### PROTOCOL setting

S/W NO	PELCO-D V5.0	PELCO-P	WTX	EZP
1	OFF	OFF	ON	ON
2	OFF	ON	OFF	ON

#### ► Baudrate setting

S/W NO	2400	4800	9600	19200	38400	57600	115200
3	OFF	OFF	OFF	OFF	ON	ON	ON
4	OFF	OFF	ON	ON	OFF	OFF	ON
5	OFF	ON	OFF	ON	OFF	ON	OFF

#### ► NTSC/PAL setting

S/W NO	NTSC	PAL
6	OFF	ON

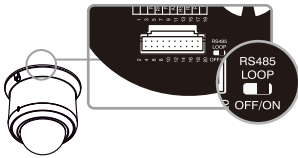
#### ► IP MODE setting

S/W NO	IP OFF	IP ON
7	OFF	ON

#### ► Communication

S/W NO	RS422	RS485
8	OFF	ON

### Set the termination On/Off

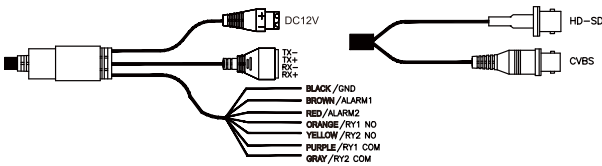


ON : Terminated  
OFF : Not terminated

The device which is connected at the end of the line must have the cable communication terminated. Without proper termination, there is potential for control signal errors. The camera have the cable communication terminated by setting the appropriate dip switch as below.

## 3.2 Cable Connection

### Normal Type

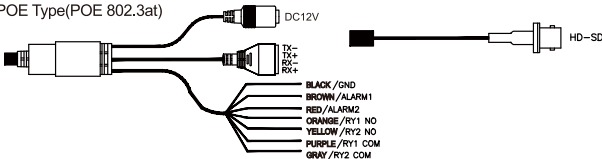


### \* ALARM /AUX CABLE

BLACK	GND
BROWN	ALARM1
RED	ALARM2
ORANGE	RY1 NO
YELLOW	RY2 NO
PURPLE	RY1 COM
GRAY	RY2 COM

### 1) Power cable connecting

### POE Type(POE 802.3at)

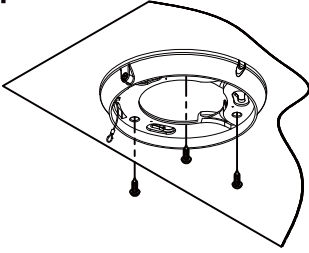


Normal Type	DC12V	INDOOR	1.5A
		OUTDOOR	4A
POE Type (802.3at)	DC12V	INDOOR	1.5A
		OUTDOOR	2.5A

### 3.3 Indoor Ceiling

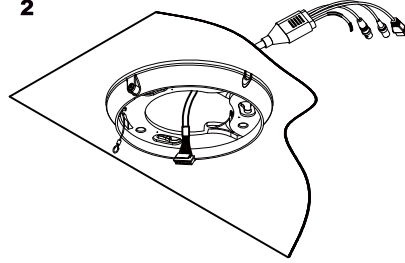
The following steps of installation and connection work should be done by qualified service personnel or system installers and should conform to all local codes.

1



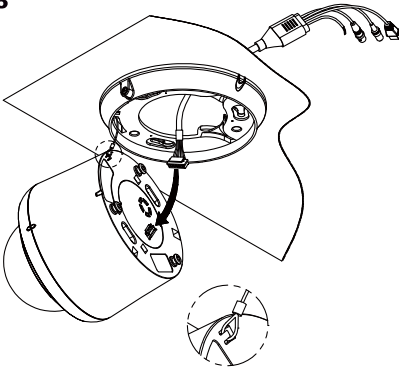
Make a  $\varnothing 70$  hole in the ceiling and install the bracket by using enclosed screws. (#8\*38)

2



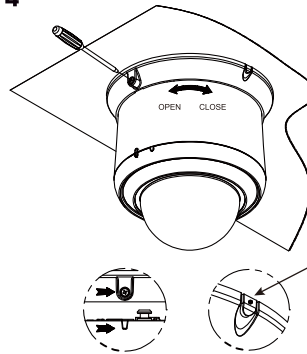
Pull out the main cable through the hole.


3



1. Connect the safety wire of mount bracket to the camera base.
2. Connect the main cable.

4



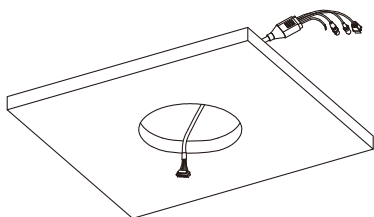
1. Align the mount bracket and  position of the body.
2. Attach the camera to the mount bracket by turning CLOSE direction and tighten (up) a screw.

\* If you want to pull out the cable to the side, cut the ● part and pull out the cable.

### 3.4 Indoor In Ceiling

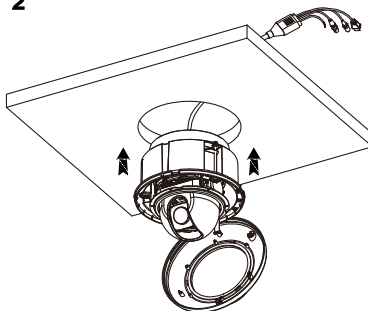
The mounting has to be installed onto a firm and stable location where all the parts may be completely secured. The installation needs to be performed by a trained and experienced professional.

**1**



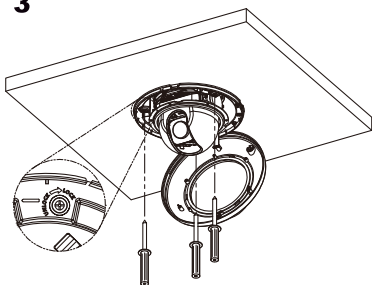
1. Make a  $\varnothing 165$  hole in the ceiling.
2. Pull out the main cable through the hole.

**2**



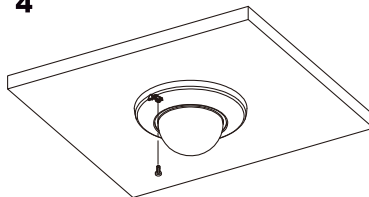
1. Connect the cable with the connector of the base.
2. Set the body into the hole.

**3**



1. Fix the PTZ using the M4x7 bolts.

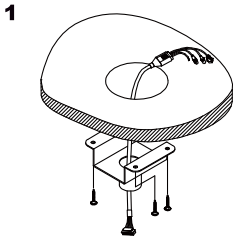
**4**



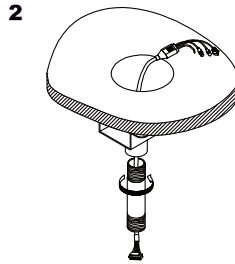
1. Assemble the dome cover on the PTZ and fix it by using the M3x6 screws.
2. Cover the rubber stopper after fix the screws.

### 3.5 Outdoor (Ceiling Bracket)

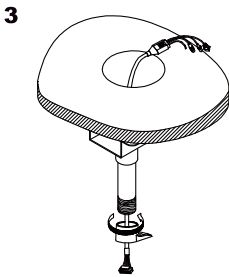
The mounting has to be installed onto a firm and stable location where all the parts may be completely secured. The installation needs to be performed by a trained and experienced professional.



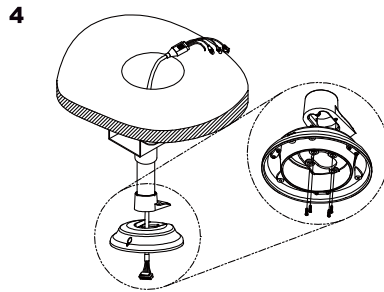
1. Make a hole in the ceiling and pull out the main cable through the hole.
2. Fix the plate ceiling by using #8x38 screws.



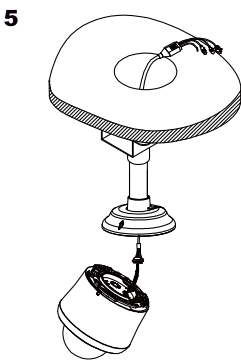
1. Pull out the main cable through the pipe ceiling.
2. Fix the pipe ceiling in the plate ceiling.



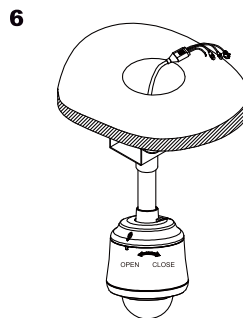
1. Fix the adapter flange in the pipe ceiling.



1. Fix the adaptor in the adapter flange by using M4x10 screws.



1. Connect the cable with the connector of the base.

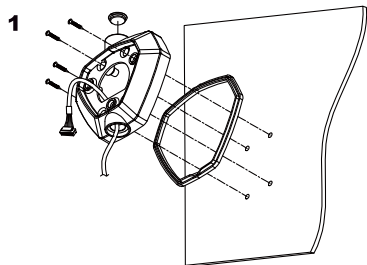


1. Align with the "▽" mark on the PTZ body and fix the screw.

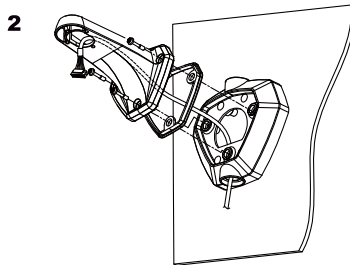


### 3.6 Outdoor (Wall Bracket)

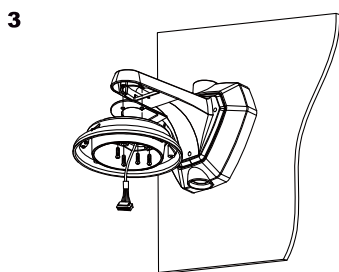
The mounting has to be installed onto a firm and stable location where all the parts may be completely secured. The installation needs to be performed by a trained and experienced professional.



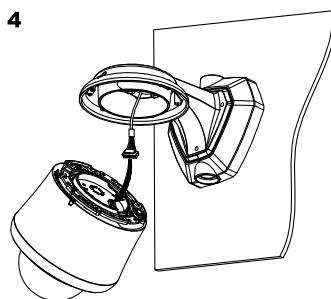
1. Attached the rubber on the adapter wall and fix it on the wall by using #8x38 screws.
2. Pull out the main cable and cover the hole by using 'bolt mount B type'.



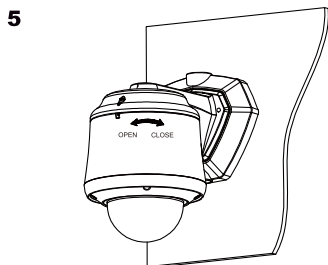
1. Attached the rubber on the bracket wall and fix it with adapter wall by using security M5x20 screws.
2. Pull out the main cable through the bracket hole.



1. Attach the rubber adapter on the adapter and fix it with wall bracket by using M4x10 screws.



1. Connect the cable with the connector of the base.



1. Align with the "▽" mark on the PTZ body and fix the screw.

## 4. MAIN SETUP MENU

### 4.1 Initialize

When the device is powered on, you can check the address, version, protocol and video setting values.

```

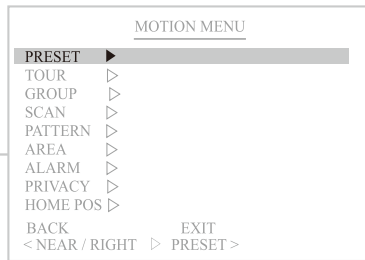
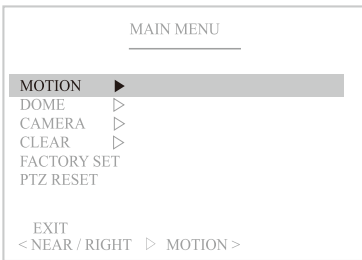
INITIALIZE
PTZ ID      : 001
VERSION    : X.XX
D-OUTPUT   : 1080p30/NTSC

PROTOCOL   : PELCO-D
BAUDRATE   : 2400.N.1
CAMERA     : XX XXX.OK
            VER: XX,XX
▷ PAN INIT  : ... OK
▷ TILT INIT : ... OK

▷NORMAL SETTING WAIT . .
    
```

### 4.2 Motion Setting

#### 4.2.1 Preset

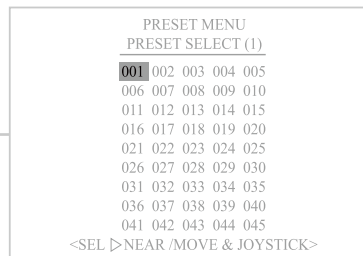
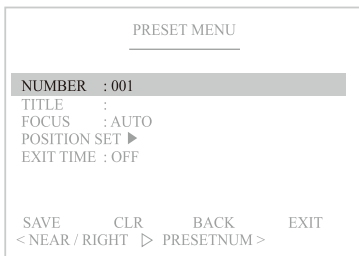


The preset function is that the camera memorizes positions of the pan/tilt and zoom. This function is a representative function of the speed dome which can find memorized preset positions just by selecting the preset No. A Maximum of 255 Preset positions are toured in order.

(1) Select the Preset number

P001 : Defined Preset number / 001 : Undefined Preset number

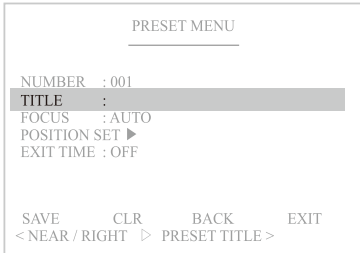
Move :  JOYSTICK      Select : 



## (2) Set the Preset TITLE

Move :  JOYSTICK    Select :  or  JOYSTICK    Delete :  or  JOYSTICK

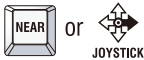
It's available to set the desired TITLE, displayed on the executing screen of Preset.



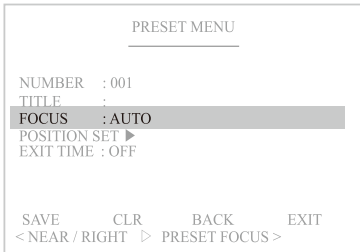
After the TITLE is set, push the NEAR button to exit.

## (3) Select the focus mode for Preset

① Select the Focus menu



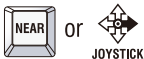
② Move and set the Focus Menu



On focus menu, there are 3 modes :  
AUTO, MANUAL, ONESHT. It allows detailed settings for the preset.

## (4) Define the Preset position

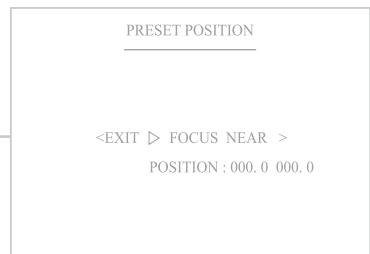
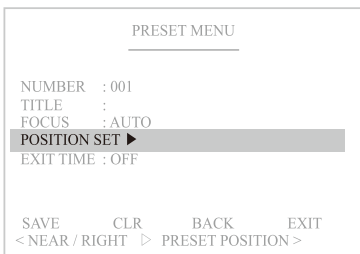
① Select the Position menu



② Move and set the position



③ Set & Back



## (5) EXIT TIME



Setting the dwell time to exit Preset mode after completing Preset working.

(OFF / 5SEC / 10SEC / 20SEC / 30SEC / 1MIN / 5MIN / 10MIN / 30MIN) ※ Default : OFF

Select :  or  Set ON : 

Set OFF : 



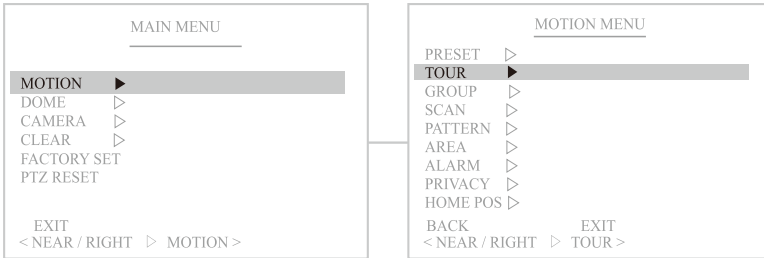
(6) "Save" above setting Pattern data to the memory.

(7) "CLR" means above setting Pattern data will not be saved and be cleared.

(8) "BACK" means it goes back to the previous menu : Motion.

(9) "EXIT" means it goes out of MENU.

## 4. 2. 2 Tour



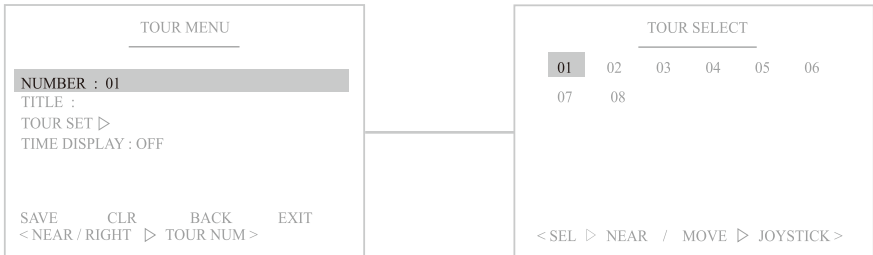
The Tour function consists of several presets run by turn. It is also adjusts the moving speed (1~63 step) and dwell time (1~99secs). Maximum of 8 Tour functions are toured in order.

(※ 1 Tour can be set for 16 presets.)

(1) Select the Tour number

T01 : Defined Tour number / 01 : Undefined Tour number

Move :  Select : 



(2) Set the Tour TITLE

Move :  Select :  or  Delete :  or 

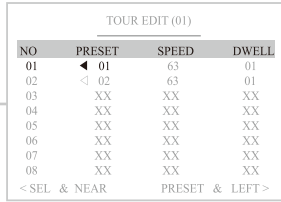
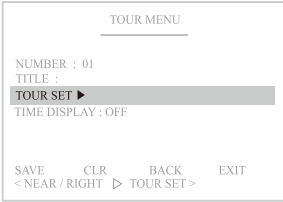
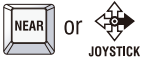
It's available to set the desired TITLE, displayed on the executing screen of Tour.



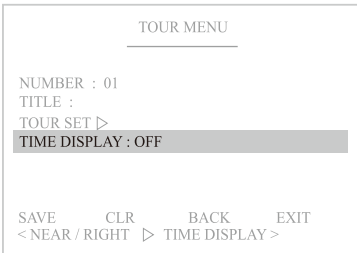
After the TITLE is set, push the NEAR button to exit.

### (3) Define the Preset position

- ① Move to the set-up window    ② Move and set the position    ③ Set & Back



### (4) Time Display



Display the remain time of each Preset dwell time during Tour operation.(OFF / ON) ※ Default : OFF

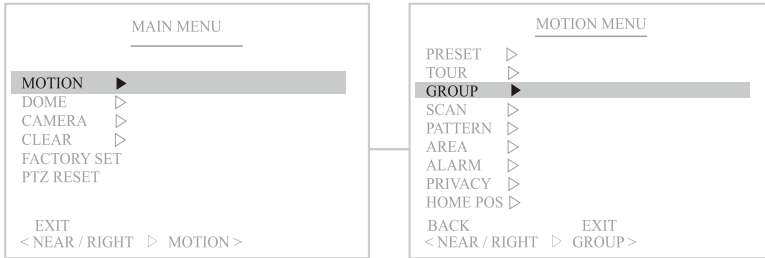
Select : or Set ON :

Set OFF :



- (5) "Save" above setting Pattern data to the memory.
- (6) "CLR" means above setting Pattern data will not be saved and be cleared.
- (7) "BACK" means it goes back to the previous menu :Motion.
- (8) "EXIT" means it goes out of MENU.

## 4. 2. 3 Group



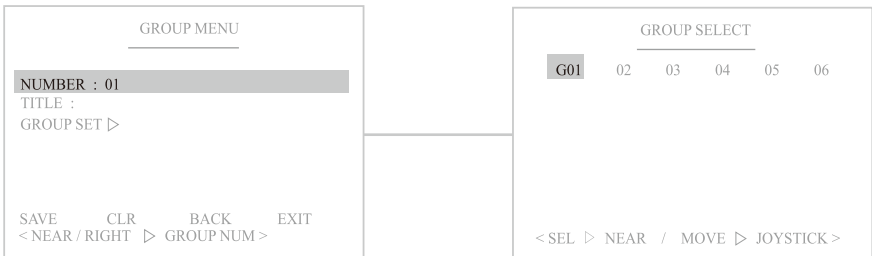
**GROUP** : You can make Max. 6 groups and call the saved tour by turn.

(1) Select the Group number

G01 : Defined Group number / 01 : Undefined Group number

Set from 1to 6 groups.

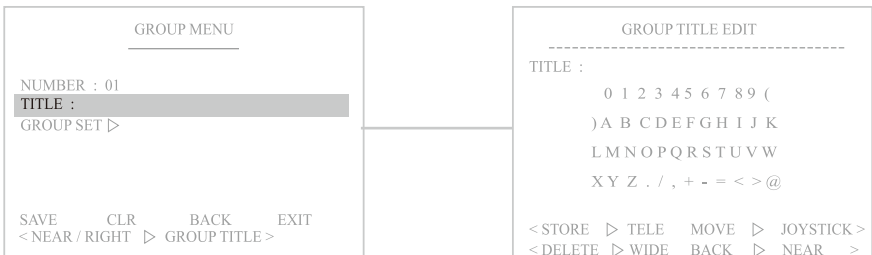
Move :  Select : 



(2) Set the Group TITLE

Move :  Select :  or  Delete :  or 

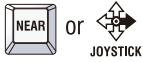
It's available to set the desired TITLE, displayed on the executing screen of Group.



After the TITLE is set, push the NEAR button to exit.

### (3) GROUP SET

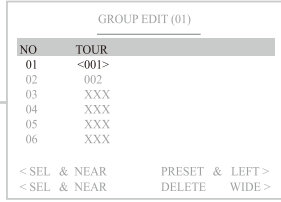
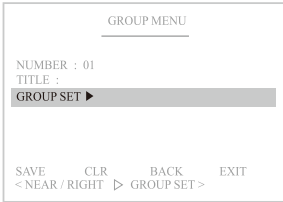
① Move to the set-up window



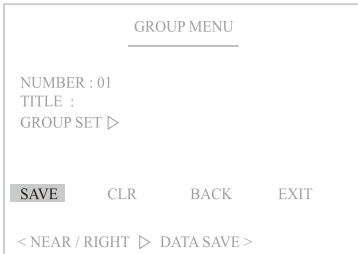
② Move and set the position



③ Set & Back



- GROUP EDIT : Set the tour from 1 to 6 of group.



(4) “Save” above setting Pattern data to the memory.

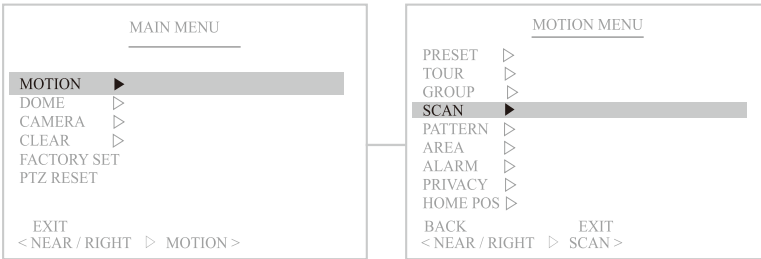
(5) “CLR” means above setting Pattern data will not be saved and be cleared.

(6) “BACK” means it goes back to the previous menu :Motion.

(7) “EXIT” means it goes out of MENU.



## 4.2.4 Scan

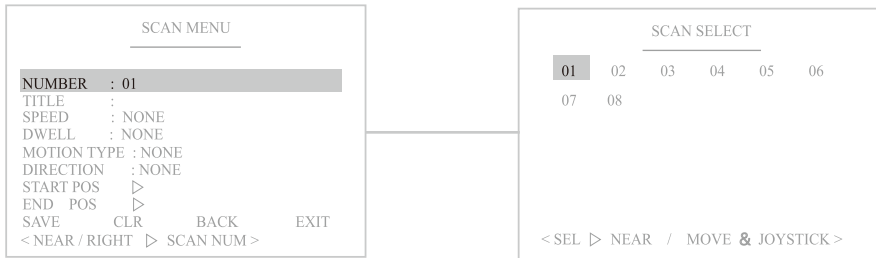


The Scan function means that the camera keeps panning between two programmed pan positions. It also adjusts the moving speed (1~63 step). Maximum 8 Scan functions are toured in order.

### (1) Select the Scan number

S01 : Defined Scan number / 01 : Undefined Scan number

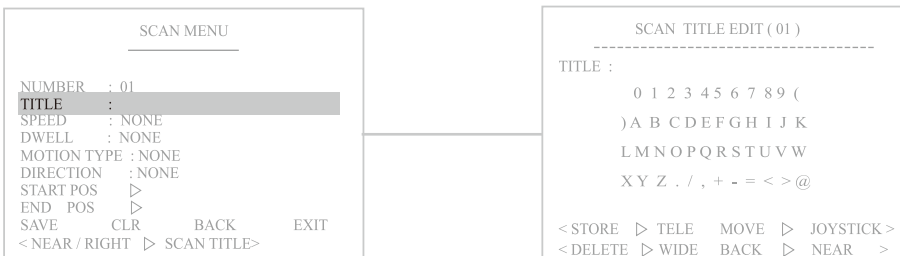
Move :  Select : 



### (2) Set the Scan TITLE

Move :  Select :  or  Delete :  or 

It's available to set the desired TITLE, displayed on the executing screen of Scan.



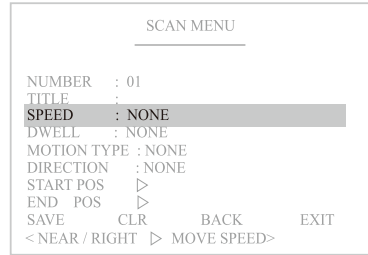
After the TITLE is set, push NEAR button to go out.

### (3) Set the Scan speed

Increase :  or 

Decrease :  or 

It adjusts the moving speed from 1~63 steps.



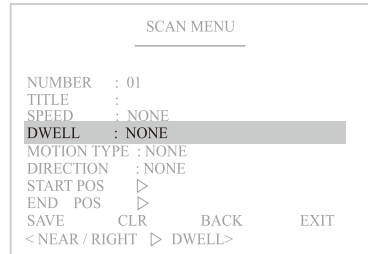
### (4) Set the Dwell Time

Increase :  or 

Decrease :  or 

Dwell time means the time that the camera stay at the start & end pan positions.

It's adjustable from 00~59 seconds.



### (5) Set the Motion Type

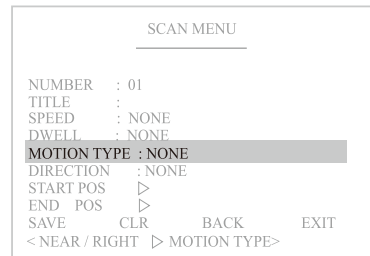
Set PAN/TILT direction

When PAN is set, PAN SCAN is proceeded with the specified coordinate value.

When TILT is set, TILT SCAN is proceeded with the specified coordinate value.

Select :  or  Set ON : 

Set OFF : 



## (6) Set the Direction

PAN : Select Clock Wise or C\_Clock Wise direction

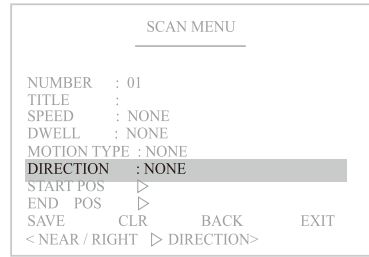
When select C\_Clock WISE, counterclockwise progression

When select Clock WISE, clockwise progression

TILT : Set the UP & DOWN.

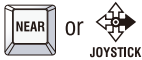
Select :  or  Set ON : 

Set OFF : 



## (7) Define the Start position

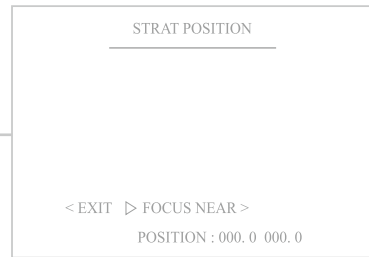
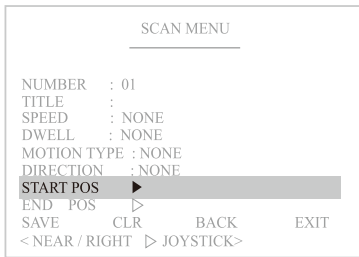
① Select Start Pos menu



② Move and set the position



③ Go back



## (8) Define the End position

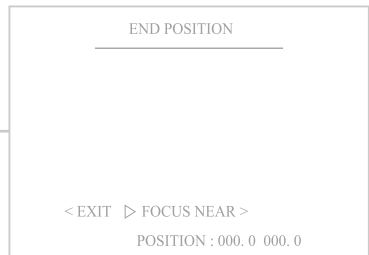
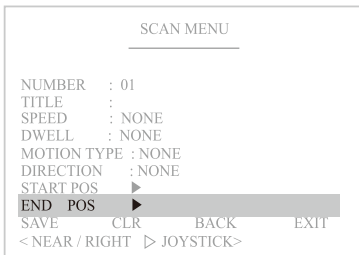
① Select End Pos menu



② Move and set the position

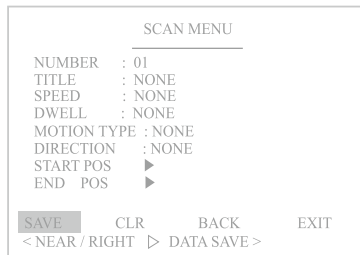


③ Go back

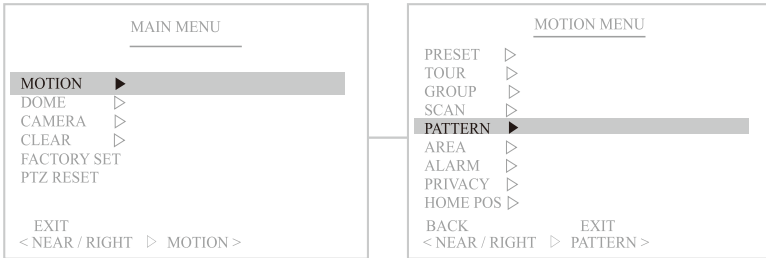


- When Motion type is PAN, Pan is available.
- When Motion type is TILT, TILT is available.

- (9) "Save" above setting Pattern data to the memory.
- (10) "CLR" means above setting Pattern data will not be saved and be cleared.
- (11) "BACK" means it goes back to the previous menu :Motion.
- (12) "EXIT" means it goes out of MENU.



## 4.2.5 Pattern

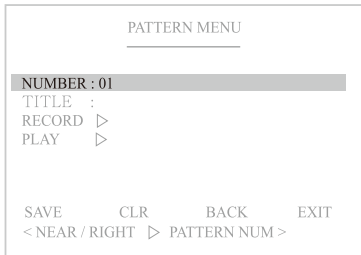


The Pattern function memorizes User's random moving path and zoom ratio. Total recording time limit is 65secs and maximum 4 Pattern functions are toured in order.

### (1) Select the Pattern number

PAT01 : Defined Pattern number / 01 : Undefined Pattern number

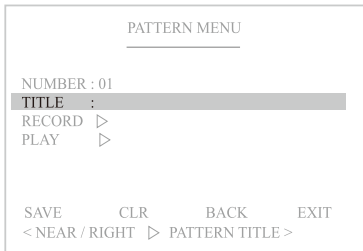
Move :  Select : 



### (2) Set the Pattern TITLE

Move :  Select :  or  Delete :  or 

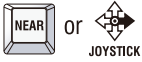
It's available to set the desired TITLE, displayed on the executing screen of Pattern.



After the TITLE set, push NEAR button to go out.

(3) Record and Save the User's random Pattern data

① Select the "Record" Menu

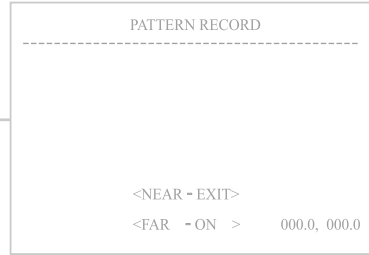
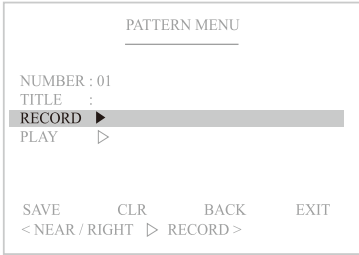


② Move and record the pattern

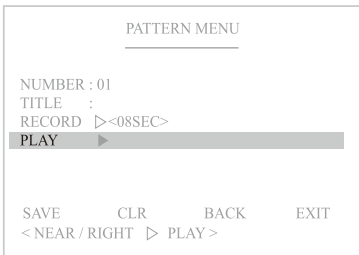


③ NEAR -> EXIT

FAR -> RECORD ON



(4) Play back the recorded Pattern data



(5) "Save" above setting Pattern data to the memory.

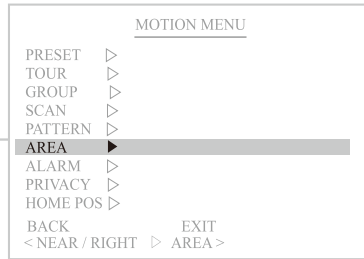
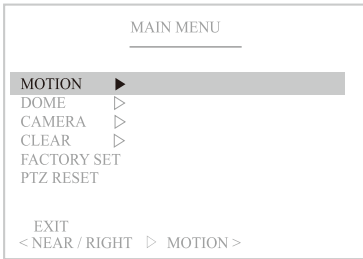
(6) "CLR" means above setting Pattern data will not be saved and be cleared.

(7) "BACK" means it goes back to the previous menu :Motion.

(8) "EXIT" means it goes out of MENU.



## 4. 2. 6 Area

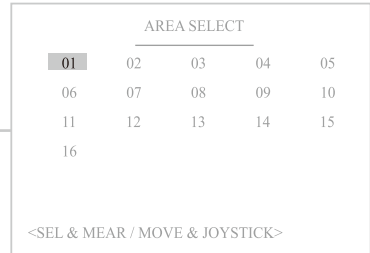
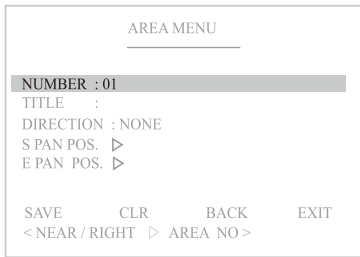


The Area function means that it displays the Area name between two programmed pan positions. Maximun 16 Area functions are toured in order.

### (1) Select the Area number

AR 01 : Defined Area number / 01 : Undefined Area number

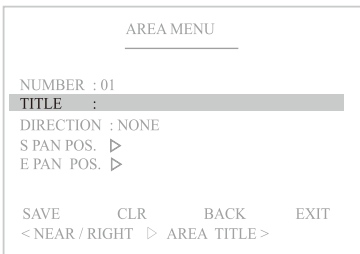
Move :  Select : 



### (2) Set the Area TITLE

Move :  Select :  or  Delete :  or 

It's available to set the desired TITLE, displayed on the executing screen of Area.

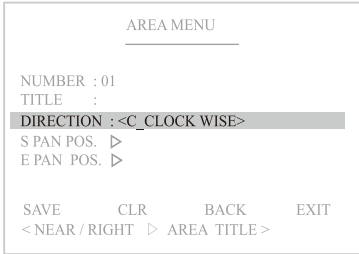


After the TITLE set, push NEAR button to go out.

### (3) Set the Direction

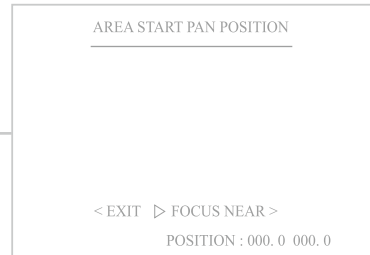
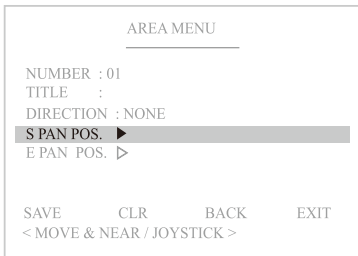
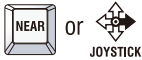
Select :  or  Set ON :  Set OFF : 

C\_Clock WISE is counterclockwise mark, Clock WISE is clockwise mark.



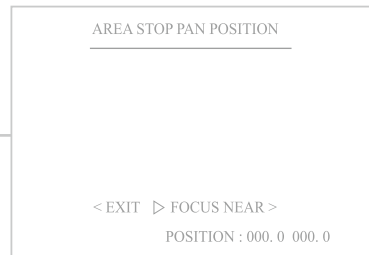
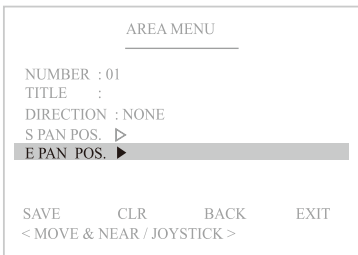
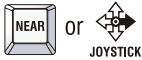
### (4) Define the Start pan position

- ① Select the "Start Pan Pos" menu
- ② Move and set the position
- ③ Set & Back



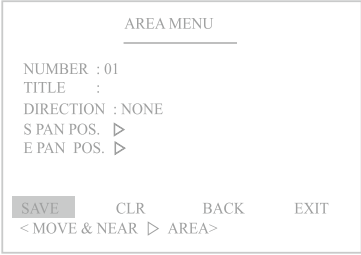
### (5) Define the END pan position

- ① Select the "END Pan Pos" Menu
- ② Move and set the position
- ③ Set & Back

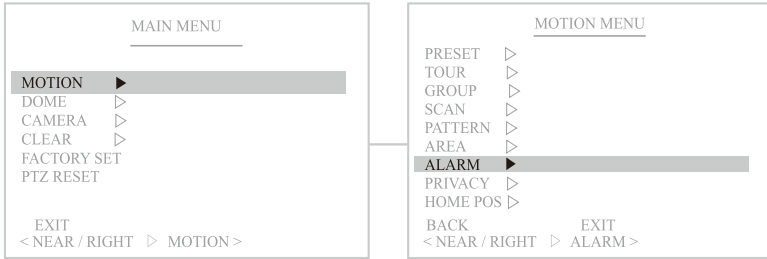




- (6) "Save" above setting Area data to the memory.
- (7) "CLR" means above setting Area data will not be saved and be cleared.
- (8) "BACK" means it goes back to the previous menu :Motion.
- (9) "EXIT" means it goes out of MENU



## 4. 2. 7 Alarm



The Alarm function means that the camera moves to the programmed Preset position by the Alarm trigger. Maximum 2 Alarm functions are toured in order.

(1) Select the Alarm number

A01 : Defined Alarm number / 01 : Undefined Alarm number

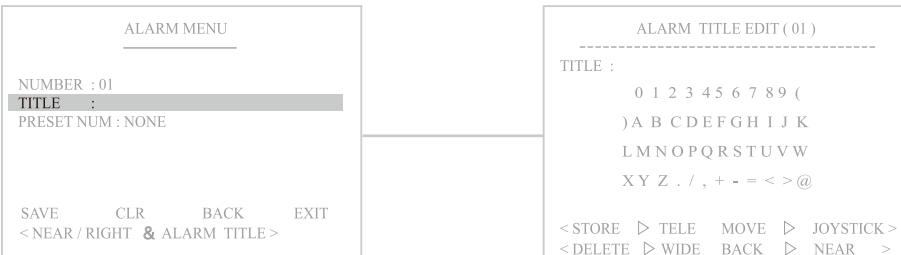
Move :  Select : 



(2) Set the Alarm TITLE

Move :  Select :  or  Delete :  or 

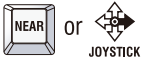
It's available to set the desired TITLE, displayed on the executing screen of Alarm.



After the TITLE is set, push the NEAR button to exit.

(3) Define the Preset position with Alarm trigger

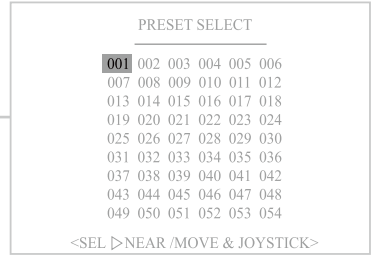
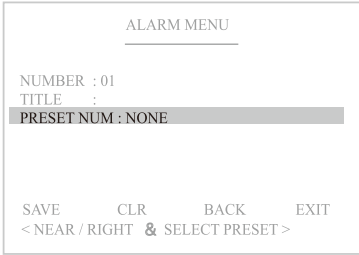
① Select the "Preset Num"



② Move and set the position



③ Set & Back

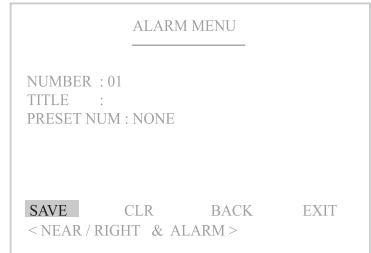


(4) "Save" above setting Alarm data to the memory.

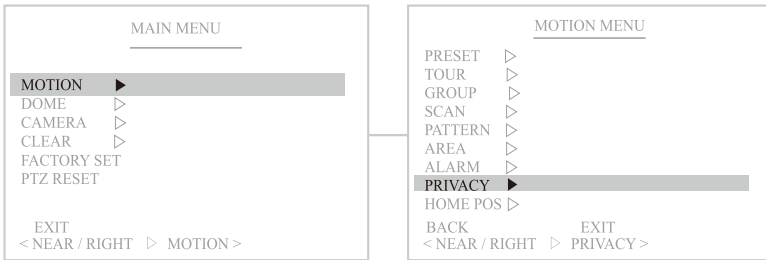
(5) "CLR" means above setting Alarm data will not be saved and be cleared.

(6) "BACK" means it goes back to the previous menu :Motion.

(7) "EXIT" means it goes out of MENU



## 4. 2. 8 Privacy Zone Masking

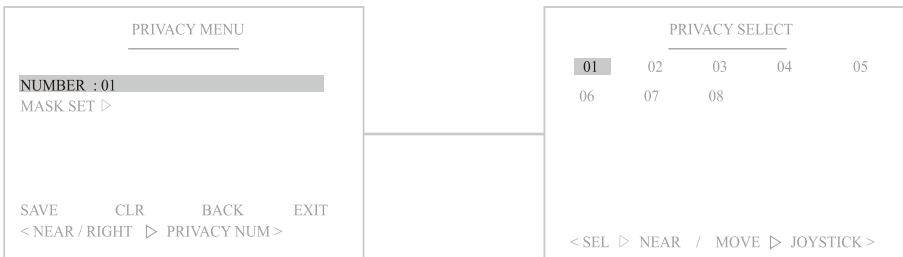


The Privacy Zone Masking function means that it sets the blocking territories to prevent camera functions for the privacy of personal reasons. Maximum of 8 Privacy Zone Masking functions are toured in order.

(1) Select the Privacy Zone number

PR01 : Defined Alarm number / 01 : Undefined Alarm number

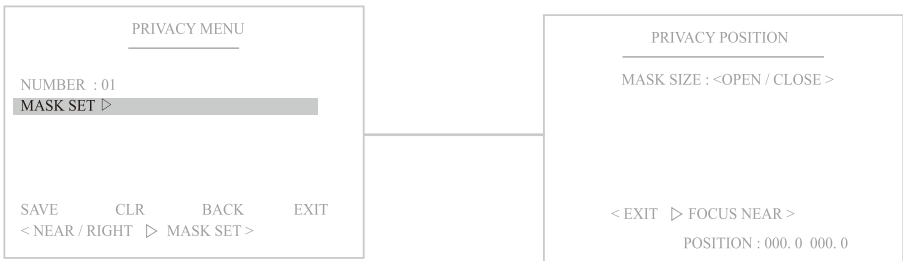
Move :  Select : 



(2) Mask set

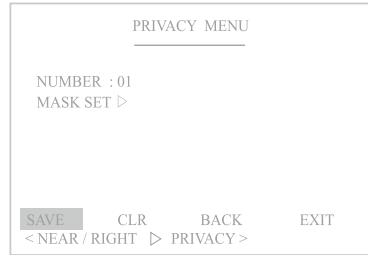
Move :  Select :  or  Delete :  or 

It's available to set the desired position and size of the blocking territories freely.

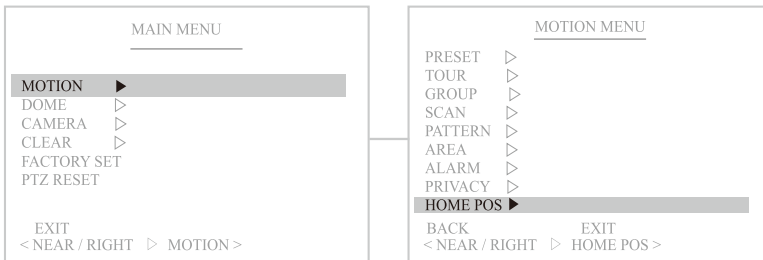


After the Privacy Zone is set, push the NEAR button to go out.

- (3) "Save" above settings of Privacy Zone data to the memory.
- (4) "CLR" means above setting of Privacy Zone data will not be saved and be cleared.
- (5) "BACK" means it goes back to the previous menu :Motion.
- (6) "EXIT" means it goes out of MENU.



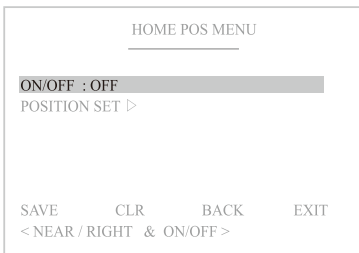
## 4. 2. 9 Home Position



Home Position : Move to selected home position.(255 + GO PRESET)

- (1) Home Position ON/OFF setting

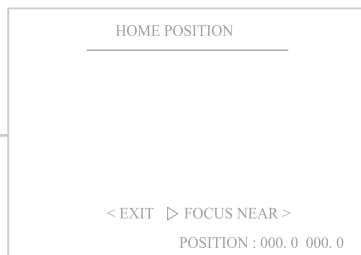
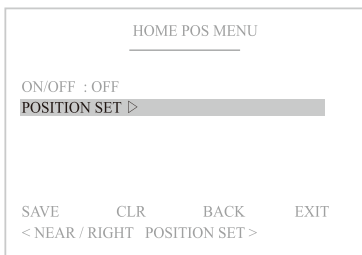
Move :  Select : 



## (2) Home Position SET

Move :  JOYSTICK

Select : 



(3) “Save” above settings of Home Position Zone data to the memory.

(4) “CLR” means above setting of Home Position data will not be saved and be cleared.

(5) “BACK” means it goes back to the previous menu :Motion.

(6) “EXIT” means it goes out of MENU.



## 4.3 Dome Setting

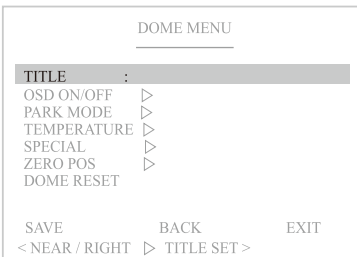


Pan, Tilt, Zoom motion is adjustable in the “Dome Setting” Menu.

### 4.3.1 Set the Dome camera title



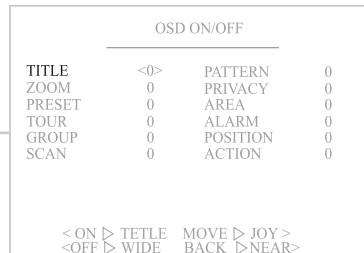
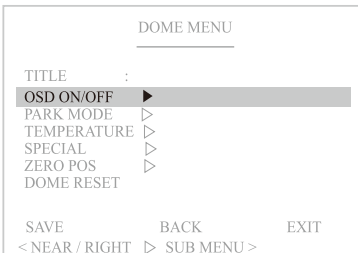
It's available to set the desired camera title.



After the TITLE is set, push NEAR button to exit.

### 4.3.2 OSD ON/OFF Set

You can select the OSD ON to shown on the screen or clear by selecting OFF in this function.



### 4. 3. 3 PARK MODE

This function enables to locate the camera to specific position automatically if operator doesn't operate the controller for a while.



- ON/OFF : Select ON/OFF
  - TIME : Select 10 sec~1 HOUR
  - MOTION : Set PRESET / TOUR / GROUP / SCAN / PATTERN
  - NUMBER
- PRESET : 1~255  
TOUR : 1~8  
SCAN : 1~8  
PATTERN : 1~4  
GROUP : 1 ~ 6

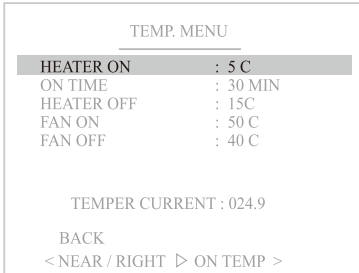
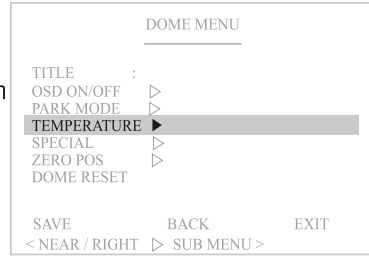




### 4.3.4 TEMP MODE

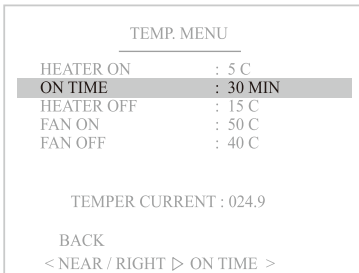
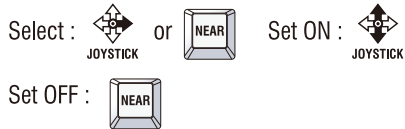
It shows you the current temperature and you can also set the value manually. The compulsory Fan & Heater operation is a useful function to remove humidity.

❖ **Support outdoor product only.**



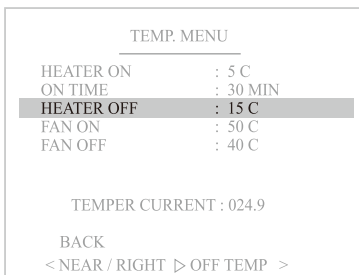
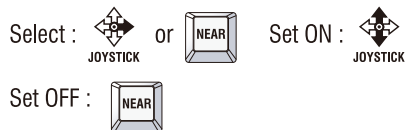
#### (1) HEATER ON

Set the operating temperature of the heater. (0~70 °C)



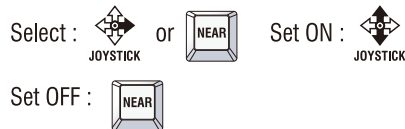
#### (2) ON TIME

Set the operating time of the heater.  
 - By 10min. (10~60 min.)



#### (3) HEATER OFF

Set the temperature of heater OFF. (0~70 °C)



TEMP. MENU	
HEATER ON	: 5 C
ON TIME	: 30 MIN
HEATER OFF	: 15 C
FAN ON	: 50 C
FAN OFF	: 40 C
TEMPER CURRENT : 024.9	
BACK	
< NEAR / RIGHT > FAN ON >	

#### (4) FAN ON

Set the operating temperature of the Fan. (0~70℃)

Select :  or  Set ON : 

Set OFF : 

TEMP. MENU	
HEATER ON	: 5 C
ON TIME	: 30 MIN
HEATER OFF	: 15 C
FAN ON	: 50 C
FAN OFF	: 40 C
TEMPER CURRENT : 024.9	
BACK	
< NEAR / RIGHT > FAN OFF >	

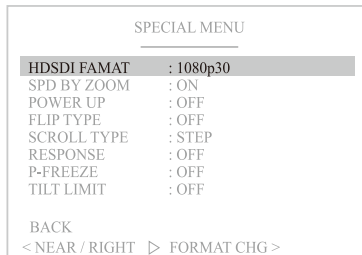
#### (5) FAN OFF

Set the temperature of Fan OFF. (0~70℃)

Select :  or  Set ON : 

Set OFF : 

## 4.3.5 Special



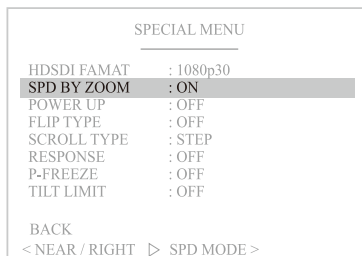
### (1) HDSDI FORMAT

720p30 (25) fps ~ 1080p60 (50) fps

- \* Video format setting depends upon the models.
- \* Video format is not applied for analogue models.

Select :  or  Set ON : 


Set OFF : 

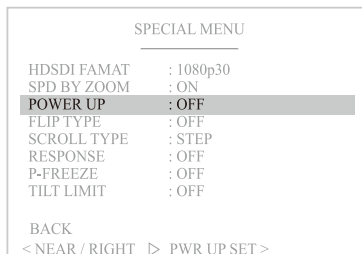


### (2) Speed by Zoom

Adjust PAN/Tilt Speed by Zoom ration.  
 (Available to check with max zoom rate.)

Select :  or  Set ON : 

Set OFF : 



### (3) POWER UP

When this function is ON, the camera memorizes the latest action and restores, it from sudden power failure.

Select :  or  Set ON : 


Set OFF : 

HDSDI FAMAT	: 1080p30
SPD BY ZOOM	: ON
POWER UP	: OFF
<b>FLIP TYPE</b>	<b>: OFF</b>
SCROLL TYPE	: STEP
RESPONSE	: OFF
P-FREEZE	: OFF
TILT LIMIT	: OFF
BACK	
< NEAR / RIGHT ▷ TYPE >	

#### (4) FLIP TYPE

- ON : When TILT move to 90°, PAN 180° automatically reversed moved
- OFF: TILT movement ranges from 0 ~90°

Select :  or  Set ON : 

Set OFF : 

SPECIAL MENU	
HDSDI FAMAT	: 1080p30
SPD BY ZOOM	: ON
POWER UP	: OFF
FLIP TYPE	: OFF
<b>SCROLL TYPE</b>	<b>: STEP</b>
RESPONSE	: OFF
P-FREEZE	: OFF
TILT LIMIT	: OFF
BACK	
< NEAR / RIGHT ▷ TYPE >	

#### (5) SCROLL TYPE

- Set the cursor progress
- STEP : by 1 STEP
- AUTO : Continuous scroll

Select :  or  Set ON : 

Set OFF : 

SPECIAL MENU	
HDSDI FAMAT	: 1080p30
SPD BY ZOOM	: ON
POWER UP	: OFF
FLIP TYPE	: OFF
SCROLL TYPE	: STEP
<b>RESPONSE</b>	<b>: OFF</b>
P-FREEZE	: OFF
TILT LIMIT	: OFF
BACK	
< NEAR / RIGHT ▷ ON/OFF >	

#### (6) RESPONSE TXD

- Tx communication line to transfer the unique value of protocol response.

Select :  or  Set ON : 

Set OFF : 

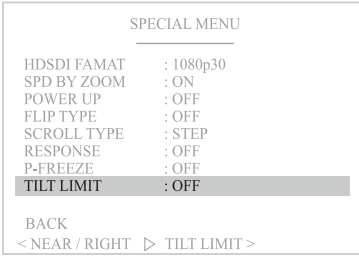
SPECIAL MENU	
HDSDI FAMAT	: 1080p30
SPD BY ZOOM	: ON
POWER UP	: OFF
FLIP TYPE	: OFF
SCROLL TYPE	: STEP
RESPONSE	: OFF
<b>P-FREEZE</b>	<b>: OFF</b>
TILT LIMIT	: OFF
BACK	
< NEAR / RIGHT ▷ ON/OFF >	

#### (7) P-FREEZE

- The screen is stopped while the camera is operating Motion funtion.

Select :  or  Set ON : 

Set OFF : 




### (8) TILT LIMIT

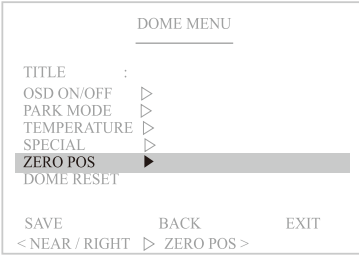
Set tilt stop angle. : off ~15°

※ Factory default is 10°.

Select :  or  Set ON : 


Set OFF : 

### 4. 3. 6 ZERO POS

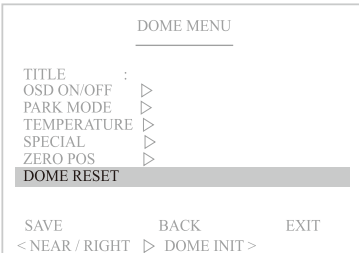


When select ON, the zero position is changeable.  
POSITION change 000.0 / 000.0 value.

Select :  or  Set ON : 

Set OFF : 

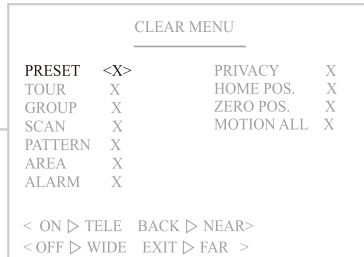
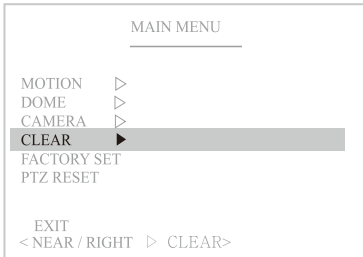
### 4. 3. 7 DOME RESET




DOME MENU initialization function.

## 4.4 Clear Setting

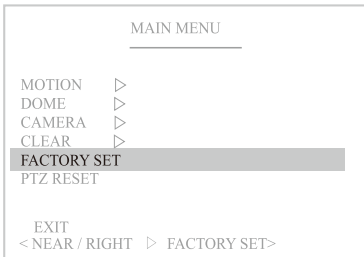
Clears the PTZ position and function value.




select :  or  Set ON : 

Set OFF : 

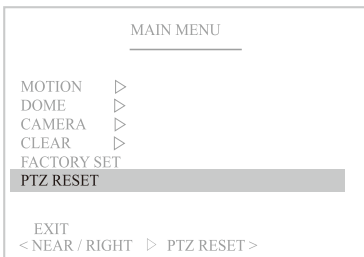
## 4.5 Factory set



Clear the DOME, CAMERA and MOTION setting value.

 Restore setting values to the factory default.  
 All existing setting value will be erased.

## 4.6 PTZ Reset



It is a reset function.

# 5. SPECIFICATIONS

## 5.1 Mechanical Specifications

### 5.1.1 MECHANICAL

Pan	: 360° Endless Pan, 0.1° to 200°/sec.
Pan Preset Speed	: Max.300°/sec, ± 0.1° Accuracy
Tilt	: 0° to 90° tilt angle, 0.1° to 120°/sec.
Tilt Preset Speed	: Max.250°/sec, ± 0.1° Accuracy
Weight	: Approx. 1.04kg(Indoor), 2.2kg(Outdoor)

### 5.1.2 ENVIRONMENTAL

Construction	: Die-casing Aluminum & "O" Ring sealed All internal parts are corrosion protector epoxy powder coating
Ingress Protection	: IP66 Outdoor Application
Operating temp	: -40°C to 60°C
Humidity	: 0% to 90%

### 5.1.3 FUNCTIONS

Preset	: 255 points, less than 0.1°accuracy
Tour	: 8 programmable
Pattern	: 4 patterns
Scan	: 8 scans
Group	: 6 group(max.6 Tours are programmable in each Group)
Privacy Zone	: 8 block with title(Mask)
Area	: 16 Area
Alarm	: 2 alarms
Flip	: Auto Flip
Address	: Up to 255 selectable(setting with Dip-switches)
Data Communication Control	: RS-485/RS-422
Protocol	: PELCO-D/P(WTX)
Baud rate	: 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps selectable

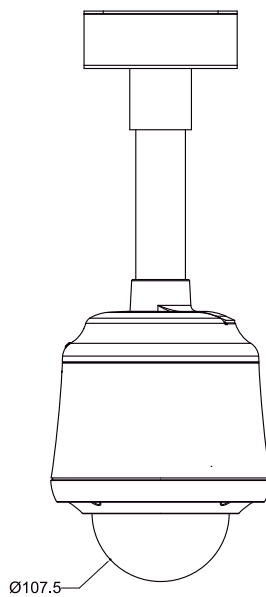
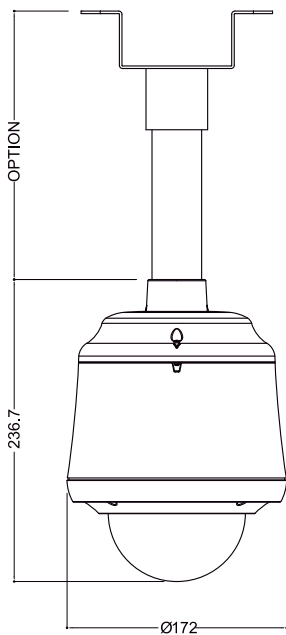
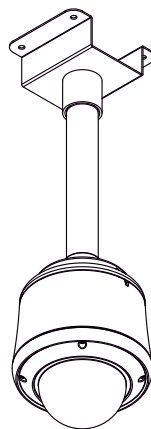
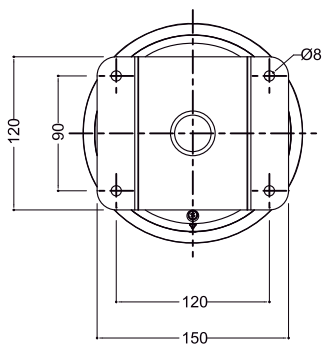
### 5.1.4 ELECTRICAL

Normal Type	DC12V	INDOOR	1.5A	-
		OUTDOOR	4A	Heater(30W) / Fan On
PoE Type (802.3at)	DC12V	INDOOR	1.5A	-
		OUTDOOR	2.5A	Heater(5W) / Fan On

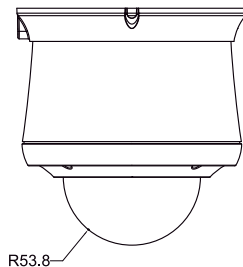
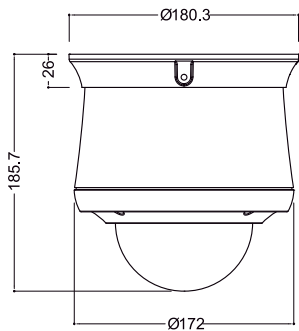
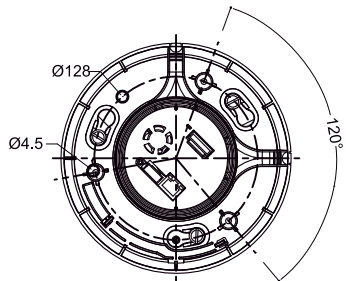
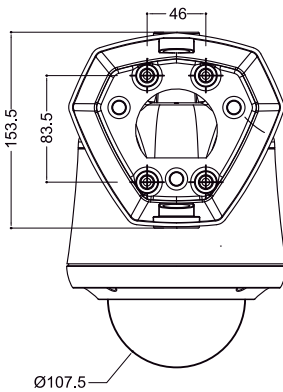
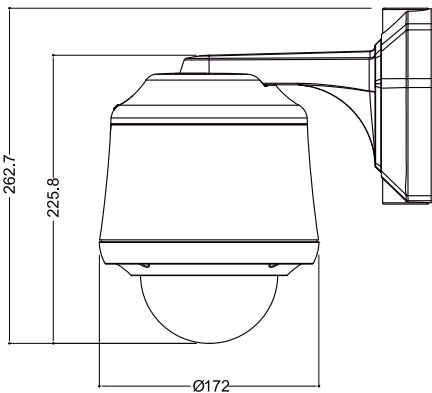
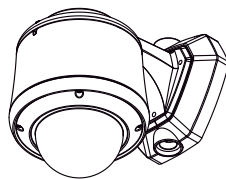
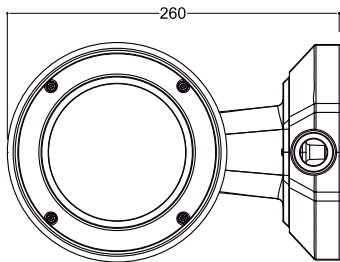
\* Design and specifications are subject to change without notice.

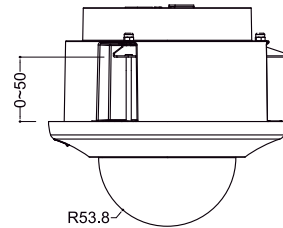
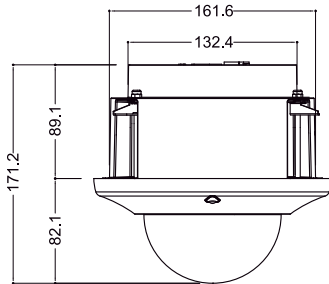
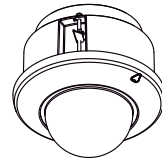
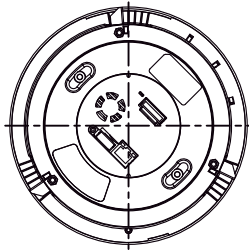
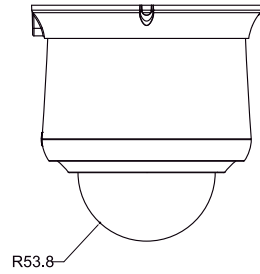
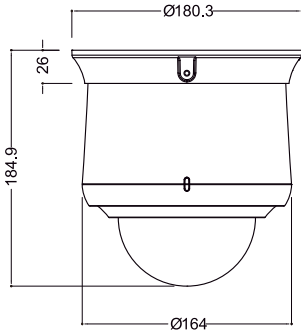
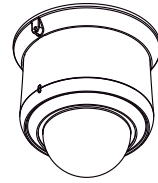
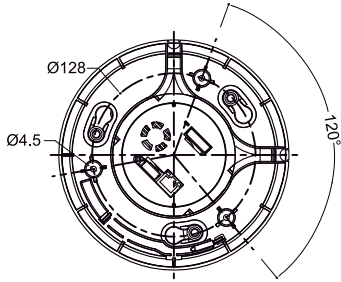
## 6. DIMENSION

### 6.1 DIMENSION









# Camera OSD Manual

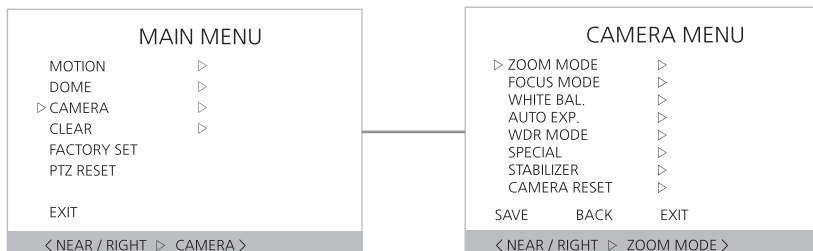
---

Before installing, operating or adjusting this product, please read this instruction booklet carefully and completely.

# 1. Camera Setting

Camera menu subject to be changed without prior notice to upgrade and quality increase and we may use slip sheet for the change.

Please check the camera version and the slip sheet if the camera menu and this manual menu is not matched.

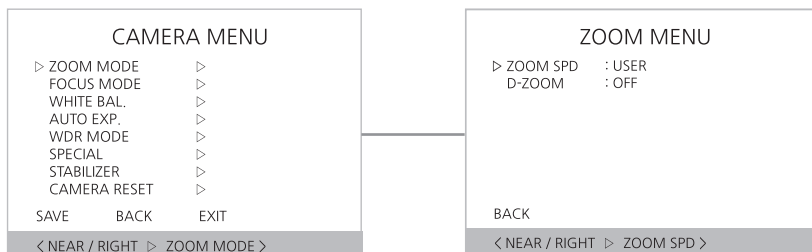


## CAMERA MENU

- Functions can be set-up using the Camera menu.

In this menu, user can set the zoom, focus, white balance, auto exposure...etc functions.

### 1.1 ZOOM MODE



#### (1) ZOOM SPD

Decide using of digital zoom function and select zoom speed.

Select from 0steps to 7 steps, USER (Standard speed)

#### (2) D-ZOOM

Decide using of digital zoom function.(ON/ OFF)

## 1.2 FOCUS MODE



In Focus menu, you can set up the focus speed, focus mode, near limit and AF mode.

### (1) FOCUS SPD

Set the speed for camera focusing. (0~7 USER)

### (2) FOCUS MODE

**AUTO** : The camera adjusts the focus automatically while monitoring the screen continuously in the auto mode.

In the auto focusing mode, zoom key operation is not recognized as the input of the focus key.

**MANUAL** : In the manual mode, users can adjust the camera focus manually.

**ONE PUSH** : Make focus with one push button and Zoom in/out operation.

**INFINITY** : infinity focus is the state where a lens forms an image of an object an infinite distance away.

This corresponds to the point of focus for parallel rays.

### (3) NEAR LIMIT

Infinity focus is the state where a lens forms an image of an object an infinite distance away.

This corresponds to the point of focus for parallel rays. (Over Infinity~ 1.0CM)

### (4) AF MODE

Set the Auto Focus Mode. AF MODE is work in the AUTO MODE only.

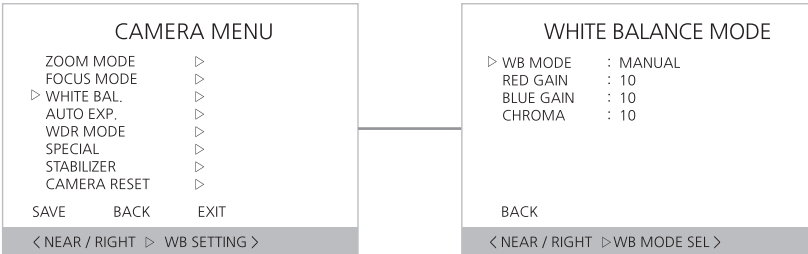
**NORMAL** : AF is worked when the image is changed.

**ZOOM** : AF is worked when the zoom rate is changed.

※ ZOOM features may vary by model.

**INTERVAL** : AF and AF STOP is repetitively worked in settled time.

## 1.3 WHITE BALANCE



White balance setting is a function revising color temperature to resolve the problem that screen's colors change by the color temperature's difference according to time.

### (1) WB MODE

WB MODE: Set the color depend on white balance.

Select AUTO, ONEPUSH, MANUAL, INDOOR, OUTDOOR or AUTO-EXT.

※ Set value depends upon the camera models.

### (2) WB MANUAL MODE

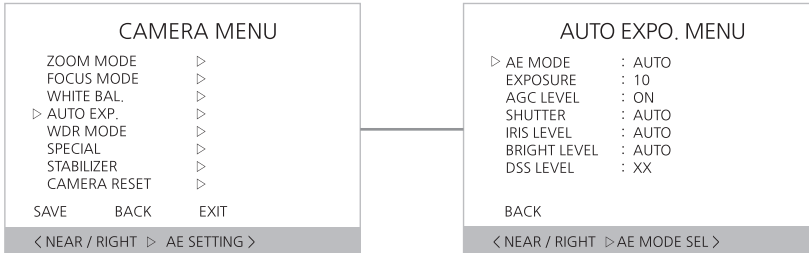
Adjust color level (RED, BLUE : 00~ 20)

Standard level : RED -> 10 BLUE->10

### (3) WB CHROMA GAIN

Set WB Chroma Gain(00~ 20, Default : 10)

## 1.4 AUTO EXPOSURE



AE setting is a function adjusting shutter speed according to subject's brightness to get standard amount of exposed light.

### (1) AE MODE

Select AUTO, MANUAL, SHUTTER, IRIS or BRIGHT.

### (2) EXPO MODE

Set the exposure. (00 ~ 20)

### (3) AGC LEVEL

If you set AUTO or IRIS in the AE MODE, you can set the AGC level from 00 to 10

### (4) SHUTTER

If you set SHUTTER in the AE MODE, you can control shutter speed.

\* NTSC : 1/1 ~ 1/60000, PAL : 1/1 ~ 1/60000

### (5) IRIS LEVEL

If you set IRIS in the AE MODE, you can set the IRIS level from 00 to 13

### (6) BRIGHT LEVEL

To change bright level, select BRIGHT in AE MODE and set by NEAR key. Set from 00 ~ 23.

### (7) DSS LEVEL

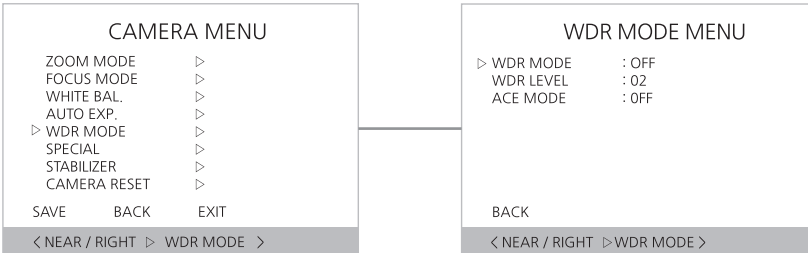
Digital Slow Shutter : Control digital slow shutter speed. (2x ~ 64x)

\* DSS LEVEL can be set when the AE MODE is set to AUTO or IRIS.

\* If you set OFF in the FLICKERLESS, you can set DSS level.

※ Set value depends upon the camera models.

## 1.5 WDR MODE



Set WDR function. WDR(Wide Dynamic Range)

### (1) WDR MODE

Select ON/OFF in the WDR MODE function.

\* When WDR MODE is ON, the analog is not output.

### (2) WDR LEVEL

Select WDR LEVEL.

### (3) ACE MODE

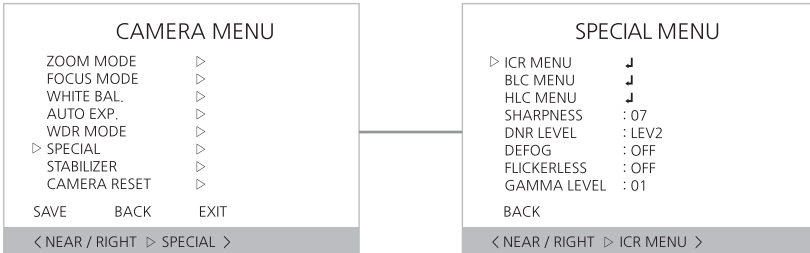
Select ON/OFF in the ACE MODE function.

\* Defog function is disabled in the ACE ON mode

※ Set value depends upon the camera models.



## 1.6 SPECIAL



In the Special menu, it's available to set special function of the camera.

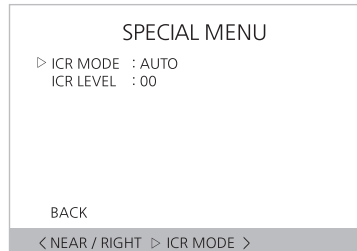
### (1) ICR MENU

#### ICR MODE

Select AUTO, DAY and NIGHT.

#### ICR LEVEL

Set ICR Value.

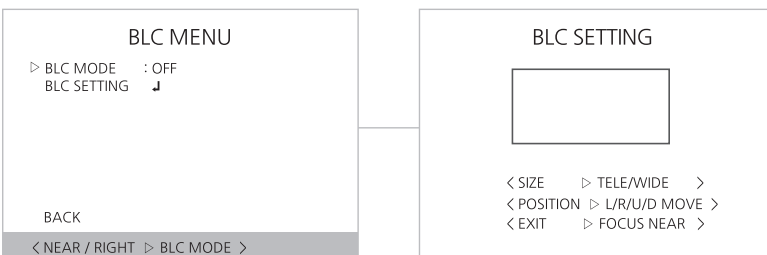


### (2) BLC MENU

Select ON/OFF in the BACK LIGHT function.

\* If you set ON in the BACK LIGHT, you can set the BLC.

\* Position : Position setting depends upon the camera models.



### (3) HLC MENU

Select High Light Compensation.

When extremely bright light is projected to the camera masking is used on the portion to prevent partial saturation on the monitor.

#### HLC LEVEL

0 ~ 20(Default : 10)

#### HLC CLIP

BLK ~ MAG(Default : WHT)

### (4) SHARPNESS

Select Sharpness.

### (5) DNR LEVEL

DNR, Digital Nois Reduction funtion.(OFF ~ AUTO, Default : LEV2)

### (6) DEFOG

Defogging foggy video image.(ON/OFF)

Disable in ACE MODE ON

### (7) FLICKERLESS

Occurs flicker correction function in the Power frequency is different areas(50Hz/60Hz)

Select ON, OFF or AUTO.

AE MODE AUTO / IRIS MODE can be in control

\* If you set OFF in the FLICKERLESS, you can set DSS level.

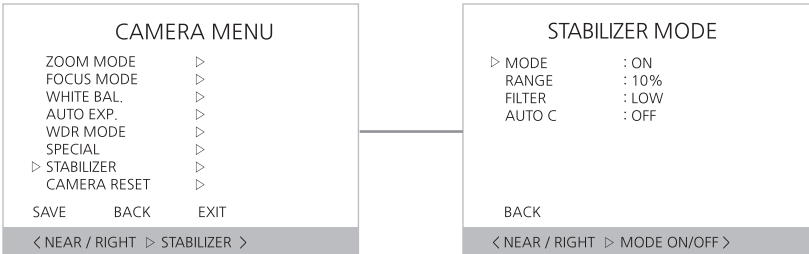
### (8) GAMMA LEVEL

Select GAMMA LEVEL.(0~3)

※ Set value depends upon the camera models.



## 1.7 STABILIZER



Select Digital Image Stabilizer mode.

### (1) STABILIZER MODE

Set the Stabilizer mode.(ON/OFF)

### (2) RANGE

Setting the image compensation range.(10%, 20%, 30%)

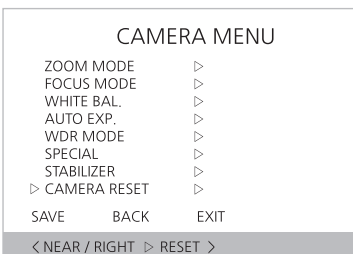
### (3) FILTER

Setting the sensitivity DIS function in worst case.(LOW, MIDDLE, HIGH)

### (4) AUTO C

Setting Auto Centering mode.(OFF, HALF, FULL)

## 1.8 CAMERA RESET



Make initialize the setting value which is set in CAMERA MENU.

## 2. CAMERA SPECIFICATION

### 2. 1 10x Camera

Image Sensor	1/2.86" Panasonic CMOS Sensor
Total Pixels	1956 (H) x 1266 (V) = 2.48M Pixels
Active pixels	1944 (H) x 1092 (V) = 2.12M Pixels
Scanning system	Progressive Scan
Sync. System	Internal
Resolution	Digital : 1080p/60(50)fps, 1080p/30(25)fps, 720p/60(50)fps, 720p/30(25)fps
Min. illumination	Color : 0.5 lux , BW : 0.1lux
	Color DSS : 0.125 lux , BW DSS : 0.025 lux
Video Output	HD : Digital(LVDS)
S/N Ratio	more than 50dB (AGC off)
Lens type	10x Day & Night Zoom Lens
Zoom Ratio	Optical 10x, Digital 32x Zoom
Focal Length	f = 5.1 mm ~ 51.0 mm
Aperture Ratio	F1.6 (wide) ~ F1.8 (tele)
Focus	Mode / Distance / AF Mode
Mode	Auto / One Push / Manual
Distance	0.1 / 1.0 / 3.0 / 6.0 / 10.0 m / Over
Lens Refresh	One Push
E.Zoom	Off / MAX 2x ~ 32x
Exposure	AUTO / IRIS.P / SHUT.P / MANUAL
Shutter Speed	1/30(25) ~ 1/30,000 sec
Iris	0 ~ 20
Digital Slow Shutter (DSS)	Off / 2x / 4x ( / 8x : 60 or 50 fps mode only)
WDR/BLC	OFF / WDR / BLC
Day&Night	Auto / Day / Night
White Balance	AUTO / One Push / Manual / Indoor / Outdoor
DNR	Auto / Off / Low / Middle / High
System	NTSC / PAL
HD Format	1080p/30(25)fps / 1080p/60(50)fps / 720p/30(25)fps / 720p/60(50)fps

\* Design and specifications are subject to change without notice.