

USER MANUAL

FULL HD MEGA-PIXEL RUGGED PTZ CAMERA



P/N : 388062720
PRINTED IN KOREA

Distributed by

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

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1. INFORMATION FOR USER

1.1 WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.

1.2 EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1.3 FCC COMPLIANCE STATEMENT

FCC INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.4 CE COMPLIANCE STATEMENT

WARNING - This is a CLASS A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CAUTION - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

***This installation should be made by a qualified service person and should conform to all local codes.*

2. PRECAUTIONS

■ Do not install the camera in extreme temperature conditions.

Do use the camera under conditions where temperatures are within -20°C to 60°C (in continuous operation). Under high temperatures, ensure proper ventilation.

■ Do not install or use the camera in an environment where the humidity is high.

It can cause the image quality to be poor.

■ Do not install the camera under unstable lighting conditions.

Severe lighting change or flicker can cause the camera to work improperly.

■ Never use the camera close to a gas or oil leak.

It can cause malfunctions to occur.

■ Do not disassemble the camera.

There are no user-serviceable parts inside it.

■ Do not drop the camera or subject them to physical shocks.

It can cause malfunctions to occur.

■ Do not allow direct sunlight into the camera.

It can damage CCD.

■ Do not expose the camera to rain or spill beverages on it.

If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.

■ To prevent electric shock and risk of fire hazards.

■ Do not use power sources other than that specified.

■ Note

If the camera is exposed to spotlight or object reflecting the strong light, smear or blooming may occur.

Please check the power whether it satisfies the normal specification before connecting the camera.

3. FEATURES

Outdoor Heavy-duty PTZ Camera

Heavy-duty aluminum die-cast body allows WTK Series is ideal for traffic control, harbor and airport surveillance, oil fields & refineries, the military & police, sport stadiums, town & city centers, bus & rail stations and other high security outdoor installations.

Unobstructed 360° rotation and 180° flip

Heavy-duty long life slip ring allows for 360° endless panning and unobstructed 180° flip.

Light Function

It's built-in 30 pcs Super IR LED (Infra-red or white).

Built-in Fan & Heater

Built-in Wiper System

T rue Day & Night (ICR Filter Change)

The IR cut filter is when the camera is operating as a color camera for precise color reproduction. With ICR, the filter is removed which allows for much greater light sensitivity in monochrome mode.

Break and clutch protected pan and tilt

OSD (On Screen Display)

The camera IDs, camera preset numbers, preset names, area names, and camera operation status are displayed on the monitor, allowing set up of various camera functions through the OSD menu screen.

Auto-focus 20X Optical Zoom

The built-in 20X optical zoom lens with auto-focus is combined with a 23X digital zoom (20x), providing a maximum of 43X zoom.

Wide Range Auto functions

Preset : Up to 255 programmable presets.

Tour : Up to 8 programmable Tours consisting of presets with individual dwell time.

Scan : Repeatedly pan & tilt operating between two positions. (Max.8)

Pattern : Up to 4 programmable Patterns memorizing the PTZ movement.

Privacy: Up to 8 programmable Privacy masking.

Alarm : Move the camera to programmed Preset position with Alarm trigger. (Max.2)

Area : Up to 16 programmable Area display sets.

WDR (Wide dynamic range)

The Camera delivers clear, high quality pictures even in backlight, by increasing exposure in dark areas while decreasing it in bright areas a corrected image with clear details results.

Variable speed Pan/Tilt control

In manual mode, sophisticated operating is possible at zoom in state by speed correcting function.

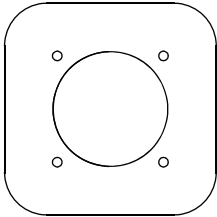
Eco-friendly Green Energy product

Minimize power consumption and save the earth by utilizing the WTK Series all-in-one camera system.

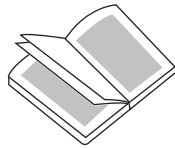
4. SETTING & INSTALLATION

4.1 Unpacking

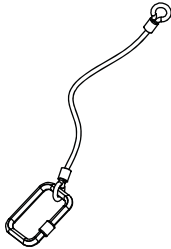
Guiding sticker for installation



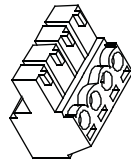
Manual



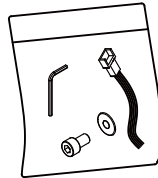
Detaching Hook



4PIN Communication Terminal

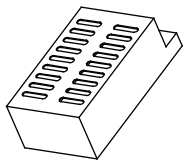


Accessories

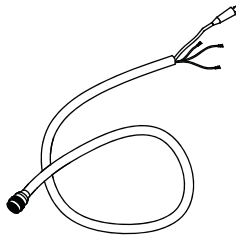


L-wrench, alarm cable
M8 wrench-bolt, M8 nut

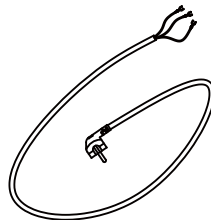
Switched-Mode Power Supply



MAIN CABLE

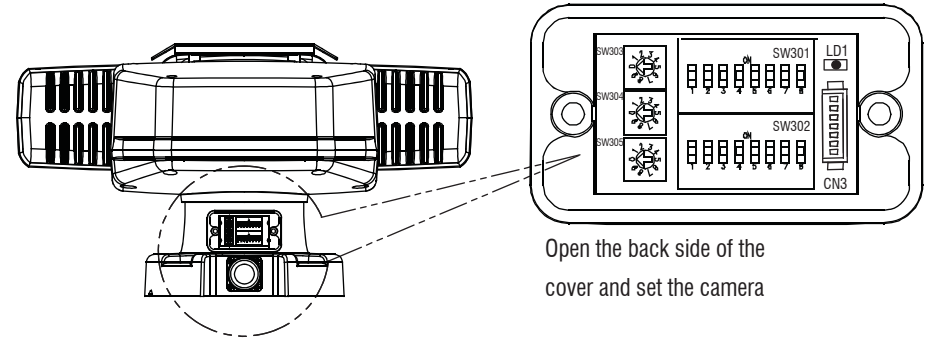


POWER CABLE

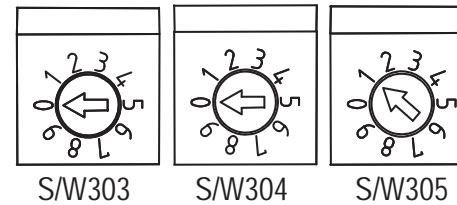


4.2 DIP Switch Setting

Before starting up the camera, set the protocol, camera address and details with dip-switches referring to the following.



Camera ID (ADDRESS)



S/W3 : 100 digit of ID
S/W4 : 10 digit of ID
S/W5 : 1 digit of ID

Ex) S/W 3=0, S/W 4=0, S/W 5=1
Address=001

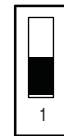
Each camera must have a unique address(ID). Identical ID's on the same line may damage the control circuit caused by an electric short.

SW 302**PROTOCOL**

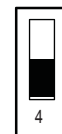
1	2	3	4	PROTOCOL
0	0	0	0	EZP
0	0	0	1	PELCO D V1.0
0	0	1	0	PELCO P
0	0	1	1	WTX
0	1	0	0	PELCO D V5.0
0	1	0	1	OCP
0	1	1	0	yujin
0	1	1	1	NC
1	0	0	0	sj 1000

SW 302**BAUDRATE**

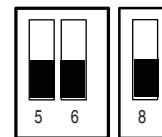
5	6	7	BAUDRATE
0	0	0	2400
0	0	1	4800
0	1	0	9600
0	1	1	19200
1	0	0	38400
1	0	1	57600
1	1	0	NC
1	1	1	NC

SW 301 RS485 LOOP (TERMINATION)**SW 301**

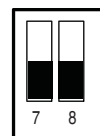
2	3	
0	0	NC
0	1	NC

SW 301 LED TYPE

4	LED TYPE
0	IR
1	WHITE

SW 301 SW 302

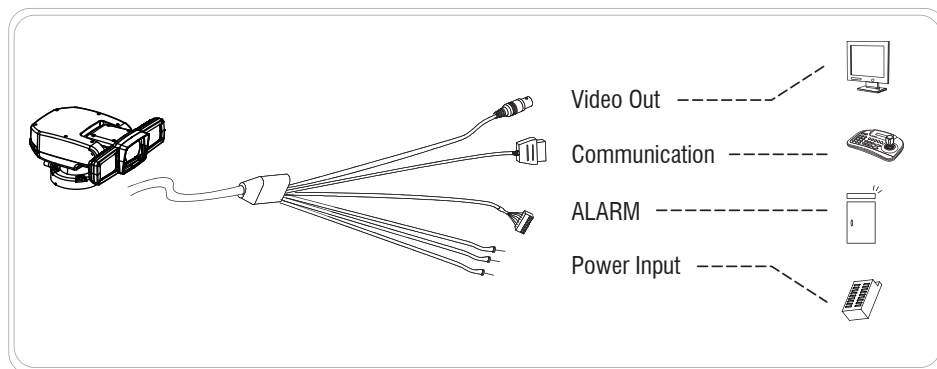
SW 301			SW 302	
5	6	OUTPUT FORMAT	8	VIDEO MODE
0	0	1920 x 1080 p 30	OFF	NTSC
0	1	1920 x 1080 i 60		
1	0	1280 x 720 p 60		
1	1	1920 x 1080 i 59	ON	PAL
0	0	1920 x 1080 p 25		
0	1	1920 x 1080 i 50		
1	0	1280 x 720 p 50		

SW 301**CAMERA SELECTION**

7	8	CAM TYPE
0	0	EH-6300
0	1	MM-202
1	0	NC
1	1	NC

4.3 Cable Connection

4.3.1 Basic Diagram of Cable Connection



4.3.2 Video Output Connection

Connect the video out (BNC) to the monitor or HD SDI video input of DVR.

4.3.3 RS-485 / RS-422 Communication Connection

It can be remotely controlled by an external device or control system, such as a control keyboard or DVR, using RS-485 half-duplex, RS-422 duplex or simplex serial communication signals. After inserting 4pin communication terminal of accessory package to green port of main cable, connect marked RX+, RX- to TX+ and TX- of the RS-485 control system. If control system is RS-422, connect TX+, TX- of controller to RX+ and RX- of the camera. And also connect the TX+, TX- of camera to RX+, RX- of the control device respectively. Total length of the cable for communication should not exceed 1.2Km.

4.3.4 Alarm Connection

It can operate specific motion receiving external Alarm Device(Sensor) signal(Max 2 Alarm.)

Connect the alarm cable to external Alarm Device referring to below, directions.

- Green color line : Ground / Blue & Orange color lines : Alarm 1 & 2.

4.3.5 Power Connection

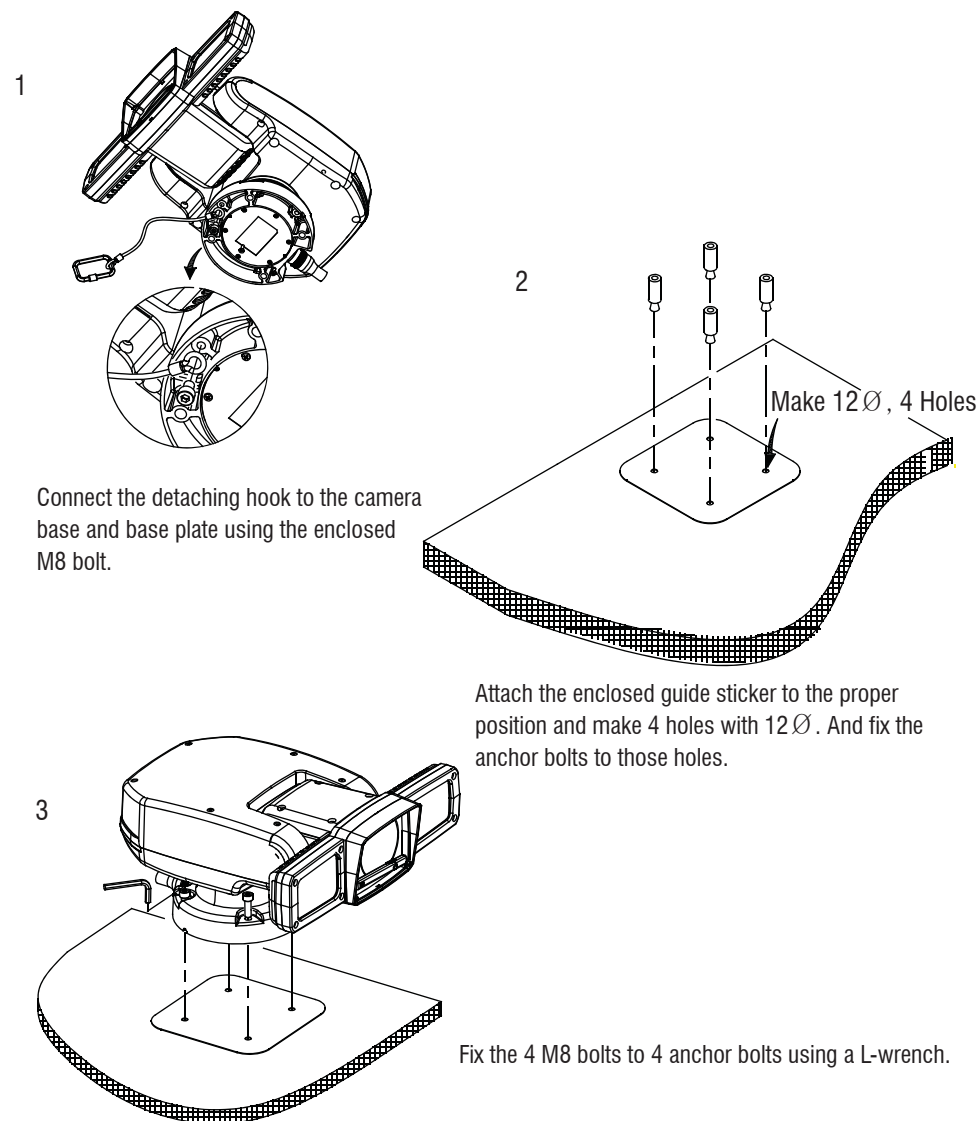
- Connect the 3 lines of power cable to the AC terminal of SMPS.
- Connect the main cable to the SMPS terminal.

Main cable	SMPS
Red	+ (Red)
Black	- (Black)
White	GND (↓)

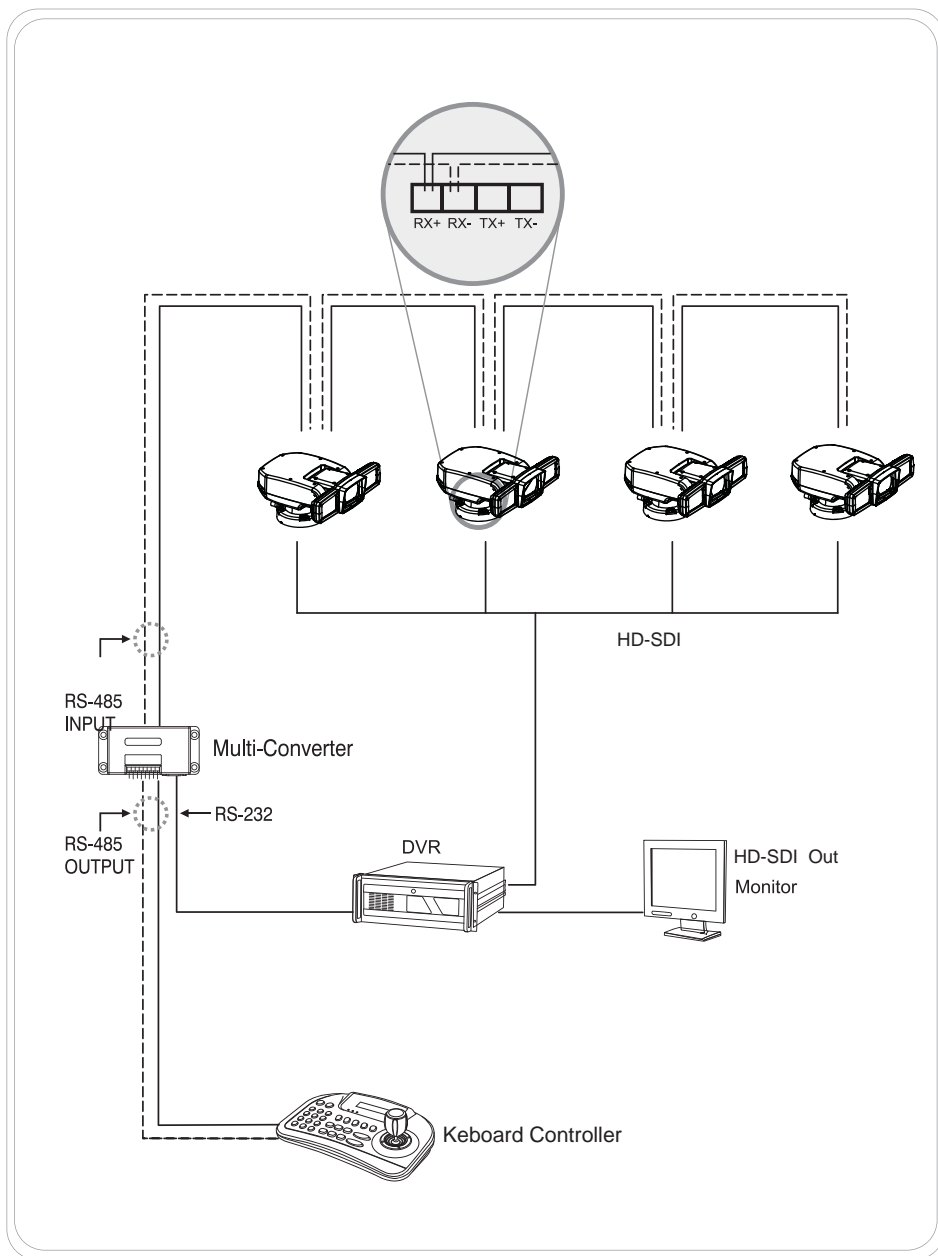
- Connect the power of DC 24V, 10A to this camera.
- Use certified Class 2 power supply transformers only.

4.4 Installation

- The following steps of installation and connection work should only be done by qualified service personnel or system installers and should conform to all local codes.
- Be sure to switch the camera off before installation is completed.
- Do not install the camera near the air outlet of an air conditioner.
- Before installation, set camera system with Dip-switches on the 8~9 pages.



4.5 Basic Configuration



5. MAIN SETUP MENU

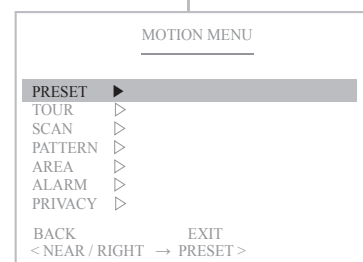
5.1 Initialize

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

INITIALIZE	
PTZID	: 001
FIRMWARE	: 1.07B
V-FORMAT	: 1080i60
CVBS	: NTSC
PROTOCOL	: PELCO-D V1.0
BAUDRATE	: 24W.N.1
CAMERA	: EMC MM202..ok
	: CAM VER-01_03
☐ PAN POS	
☐ TILT POS	
▷ NORMAL SETTING WAIT ...	

5.2 Motion Setting

5.2.1 Preset



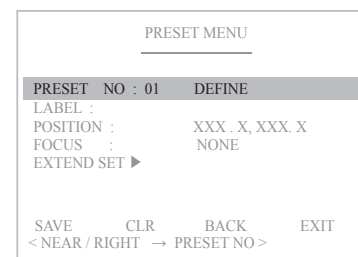
The preset function is that the camera memorizes positions of the pan/tilt and zoom. This function is a representative function of the speed dome which can find memorized preset positions just by selecting the preset No.

A Maximum of 255 Preset positions are toured in order.

(1) Select the Preset number

P01 : Defined Preset number / 01 : Undefined Preset number

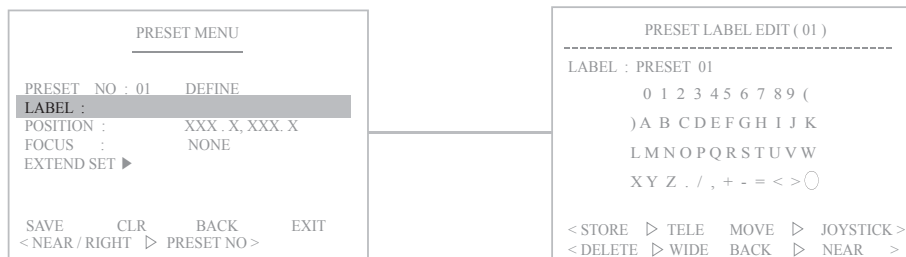
Move :  Select : 



(2) Set the Preset Label

Move :  Select :  or  Delete :  or 

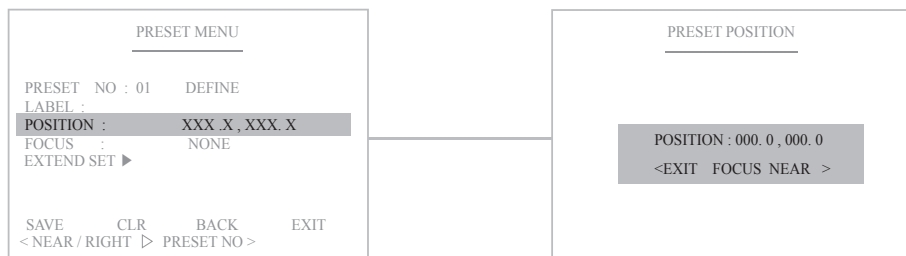
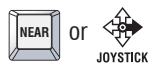
It's available to set the desired label, displayed on the executing screen of Preset.



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

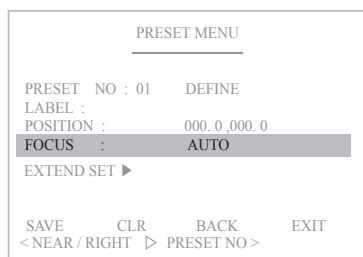
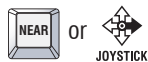
(3) Define the Preset position

- 1 Select the Position menu
- 2 Move and set the position
- 3 Set & Back



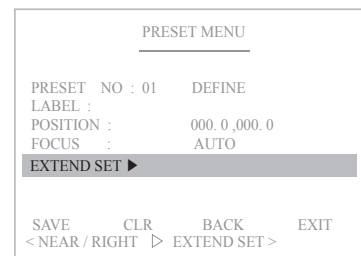
(4) Select the focus mode for Preset

- 1 Select the Focus menu
- 2 Move and set the Focus Menu



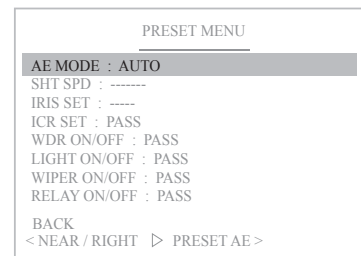
On focus menu, there are 4 modes : None, Auto, Manual, On Shot. It allows detailed settings for the preset.

(5) EXTEND SET



Set the additional preset functions.

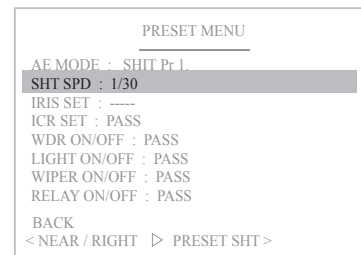
AE MODE



Select AUTO, SHUTTER, IRIS and PASS MODE.

Select :  or  Set ON :  Set OFF : 

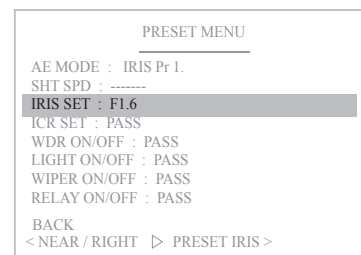
SHUTTER SPD



Set shutter speed in the AE MODE.

Select :  or  Set ON :  Set OFF : 

IRIS SETTING



Set IRIS value in the AE MODE.

Select :  or  Set ON :  Set OFF : 

ICR SETTING

```

PRESET MENU
AE MODE : PASS
SHT SPD : -----
IRIS SET : -----
ICR SET : <PASS>
WDR ON/OFF : PASS
LIGHT ON/OFF : PASS
WIPER ON/OFF : PASS
RELAY ON/OFF : PASS
BACK
<CHANGE▶UP/DN SEL▶NEAR>

```

Select PASS, DAY, NIGHT and AUTO in the IR LED.

Select :  or  Set ON :  Set OFF : 

WDR ON/OFF

```

PRESET MENU
AE MODE : PASS
SHT SPD : -----
IRIS SET : -----
ICR SET : PASS
WDR ON/OFF : <PASS>
LIGHT ON/OFF : PASS
WIPER ON/OFF : PASS
RELAY ON/OFF : PASS
BACK
<CHANGE▶UP/DN SEL▶NEAR>

```

Set WDR function.

Select PASS, ON and OFF.

Select :  or  Set ON :  Set OFF : 

LIGHT ON/OFF

```

PRESET MENU
AE MODE : PASS
SHT SPD : -----
IRIS SET : -----
ICR SET : PASS
WDR ON/OFF : PASS
LIGHT ON/OFF : <PASS>
WIPER ON/OFF : PASS
RELAY ON/OFF : PASS
BACK
<CHANGE▶UP/DN SEL▶NEAR>

```

Select PASS, ON and OFF.

: Select NIGHT in the ICR MODE and set ON.

Select :  or  Set ON :  Set OFF : 

WIPER ON/OFF

```

PRESET MENU
AE MODE : PASS
SHT SPD : -----
IRIS SET : -----
ICR SET : PASS
WDR ON/OFF : PASS
LIGHT ON/OFF : PASS
WIPER ON/OFF : <PASS>
RELAY ON/OFF : PASS
BACK
<CHANGE▶UP/DN SEL▶NEAR>

```

Select PASS, ON and OFF.

Select :  or  Set ON :  Set OFF : 

RELAY ON/OFF

```

PRESET MENU
AE MODE : PASS
SHT SPD : -----
IRIS SET : -----
ICR SET : PASS
WDR ON/OFF : PASS
LIGHT ON/OFF : PASS
WIPER ON/OFF : PASS
RELAY ON/OFF : <PASS>
BACK
<CHANGE▶UP/DN SEL▶NEAR>

```

Select PASS, ON and OFF.

Select :  or  Set ON :  Set OFF : 

```

PRESET MENU
PRESET NO : 01 DEFINE
LABEL :
POSITION : 000.0 000.0
FOCUS : AUTO
EXTEND SET ▶
SAVE CLR BACK EXIT
<NEAR / RIGHT ▷ PRESET NO >

```

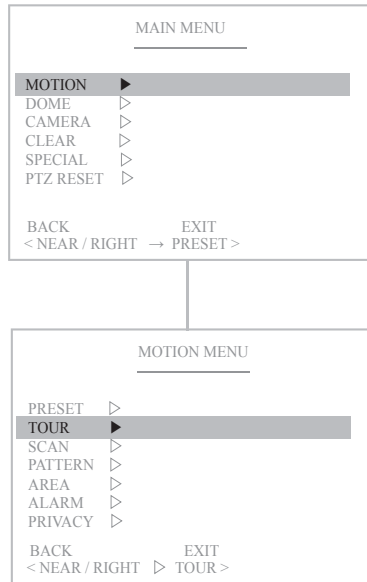
(6) "Save" above setting Pattern data to the memory.

(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.

5.2.2 Tour

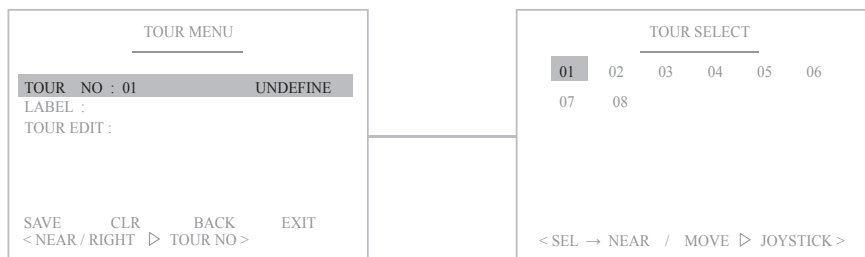


The Tour function consists of several presets run by turn. It is also adjusts the moving speed (1~63 step) and dwell time (1~99secs). Maximum of 8 Tour functions are toured in order. (※ 1 Tour can be set for 15 presets.)

(1) Select the Tour number

T01 : Defined Tour number / 01 : Undefined Tour number

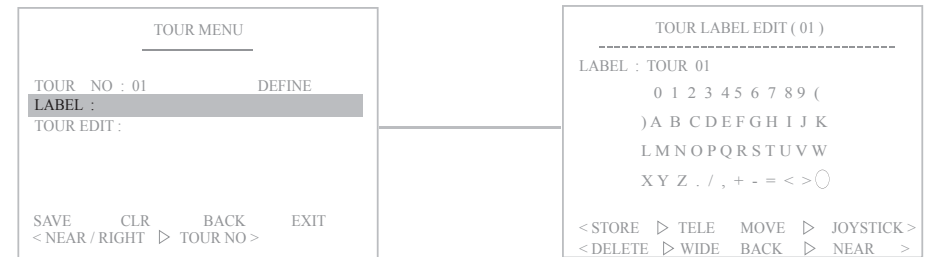
Move : Select :



(2) Set the Tour Label

Move : Select : or Delete : or

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

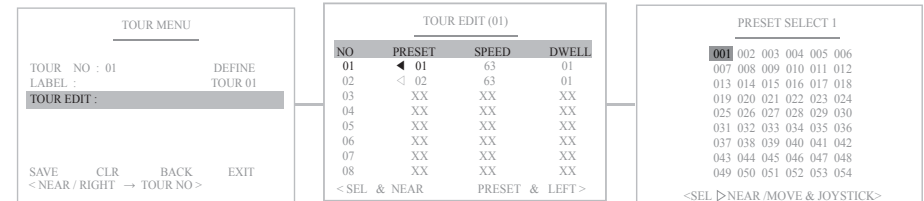


After the label is set, push the NEAR button to exit.

(3) Define the Preset position

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

or



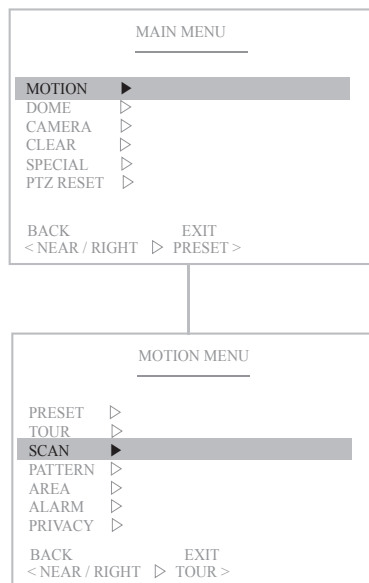
(4) "Save" above setting Pattern data to the memory.

(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.

5.2.3 Scan

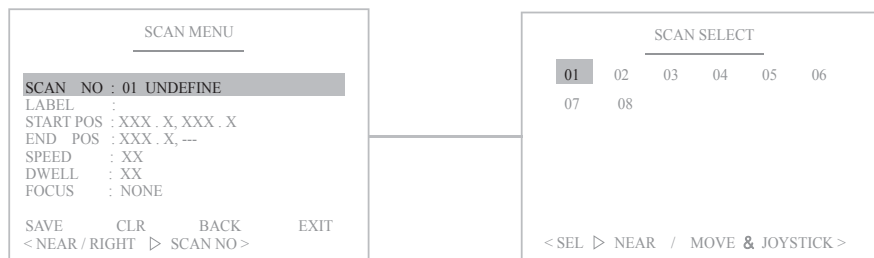


The Scan function means that the camera keeps panning between two programmed pan positions. It also adjusts the moving speed(1~63 step). Maximum 8 Scan functions are toured in order.

(1) Select the Scan number

S01 : Defined Scan number / 01 : Undefined Scan number

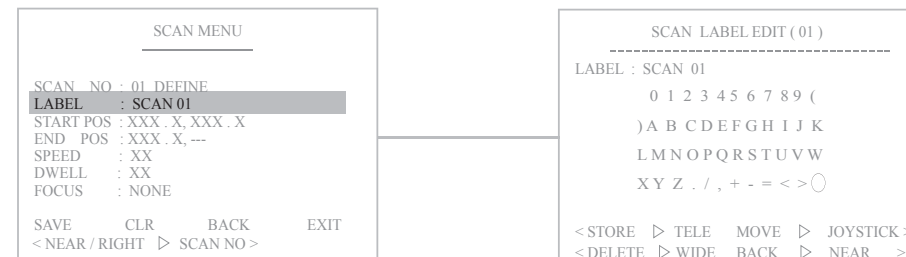
Move : Select :



(2) Set the Scan Label

Move : Select : or Delete : or

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



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

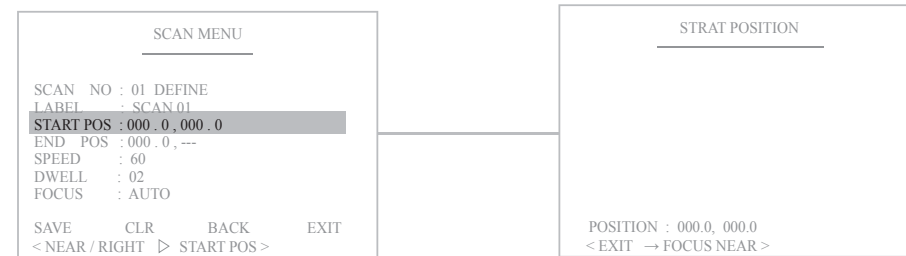
(3) Define the Start pan position

① Select Start Pos menu

or

② Move and set the position

③ Go back



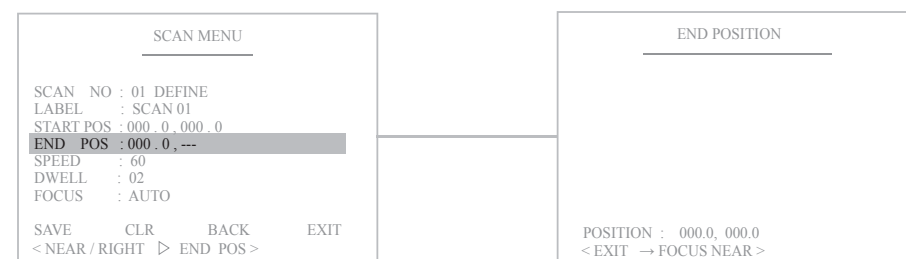
(4) Define the End pan position

① Select End Pos menu



or

② Move and set the position

③ Go back



(5) Set the Scan speed

Increase :  or 

Decrease :  or 

It adjusts the moving speed from 1~63 steps.

```

SCAN MENU
SCAN NO : 01 DEFINE
LABEL   : SCAN 01
START POS : 000.0,000.0
END POS  : 000.0,---
SPEED    : 60
DWELL    : 02
FOCUS    : AUTO
SAVE     CLR     BACK     EXIT
< NEAR / RIGHT > MOVE SPEED >
    
```

(6) 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.

```

SCAN MENU
SCAN NO : 01 DEFINE
LABEL   : SCAN 01
START POS : 000.0,000.0
END POS  : 000.0,---
SPEED    : 60
DWELL    : 02
FOCUS    : AUTO
SAVE     CLR     BACK     EXIT
< NEAR / RIGHT > DWELL >
    
```

(7) Set the Focus

Focus can be set Auto or Manual.

```

SCAN MENU
SCAN NO : 01 DEFINE
LABEL   : SCAN 01
START POS : 000.0,000.0
END POS  : 000.0,---
SPEED    : 60
DWELL    : 02
FOCUS    : AUTO
SAVE     CLR     BACK     EXIT
< NEAR / RIGHT > DWELL >
    
```

(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.

```

SCAN MENU
SCAN NO : 01 DEFINE
LABEL   : SCAN 01
START POS : 000.0,000.0
END POS  : 000.0,---
SPEED    : 60
DWELL    : 02
FOCUS    : AUTO
SAVE     CLR     BACK     EXIT
< NEAR / RIGHT > DWELL >
    
```

5.2.4 Pattern

```

MAIN MENU
MOTION ►
DOME  >
CAMERA >
CLEAR >
SPECIAL >
PTZ RESET >

BACK    EXIT
< NEAR / RIGHT > PRESET >

MOTION MENU
PRESET >
TOUR >
SCAN >
PATTERN ►
AREA >
ALARM >
PRIVACY >

BACK    EXIT
< NEAR / RIGHT > PATTERN >
    
```

The Pattern function memorizes User's random moving path and zoom ratio. Total recording time limit is 90secs and maximum 4 Pattern functions are toured in order.

(1) Select the Pattern number

PAT01 : Defined Pattern number / 01 : Undefined Pattern number

Move :  Select : 

```

PATTERN MENU
PATTERN NO : 01 UNDEFINE
LABEL :
RECORD :
PLAY :

SAVE     CLR     BACK     EXIT
< NEAR / RIGHT > PATTERN NO >

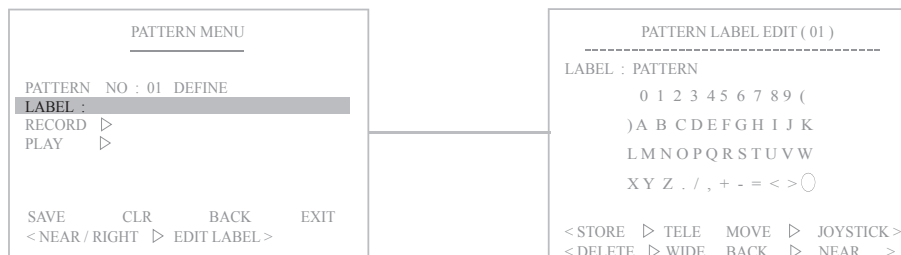
PATTERN SELECT
01 02 03 04

< SEL > NEAR / MOVE & JOYSTICK >
    
```

(2) Set the Pattern Label

Move :  Select :  or  Delete :  or 

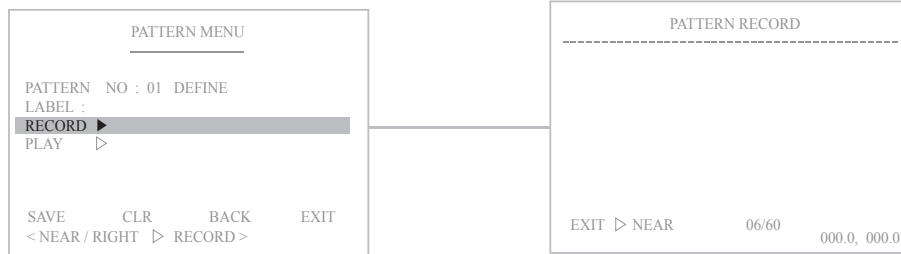
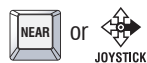
It's available to set the desired label, displayed on the executing screen of Pattern.



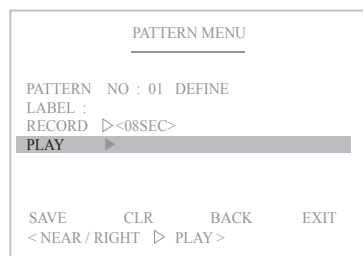
After the label set, push NEAR button to go out.

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

- ① Select the "Record" Menu
- ② Move and record the pattern
- ③ Set & Back



(4) Play back the recorded Pattern data

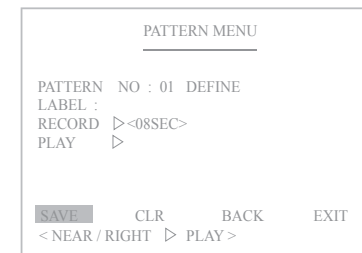


(5) "Save" above setting Pattern data to the memory.

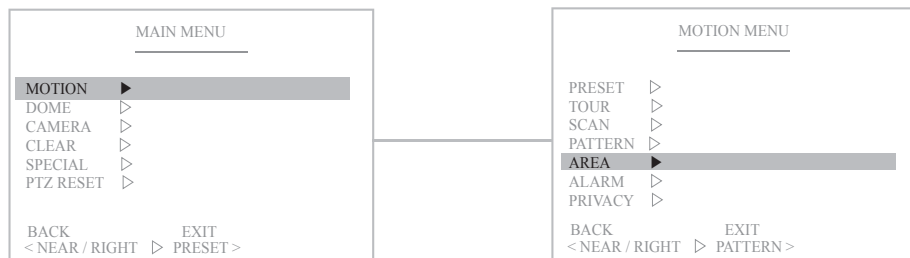
(6) "CLR" means above setting Pattern data will not be saved and be cleared.

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

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



5.2.5 Area

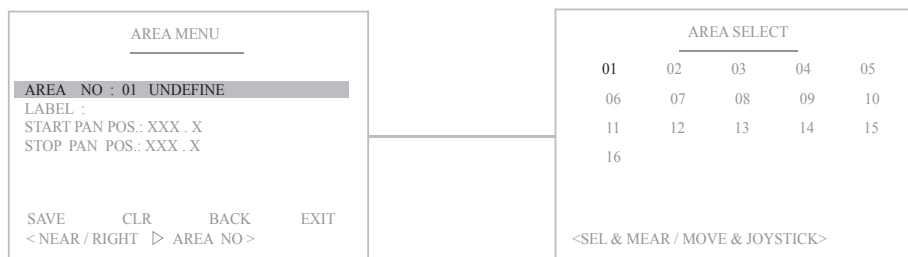


The Area function means that it displays the Area name between two programmed pan positions. Maximum 16 Area functions are toured in order.

(1) Select the Area number

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

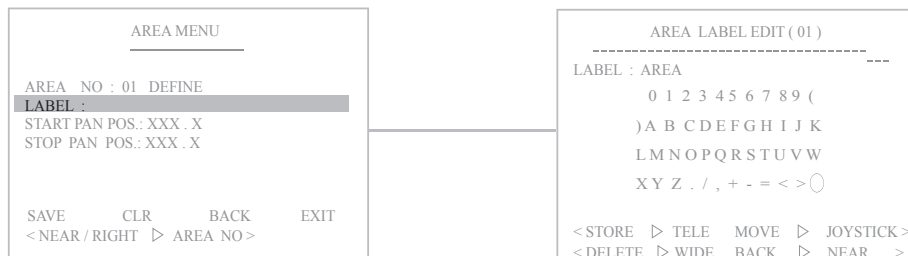
Move : Select :



(2) Set the Area Label

Move : Select : or Delete : or

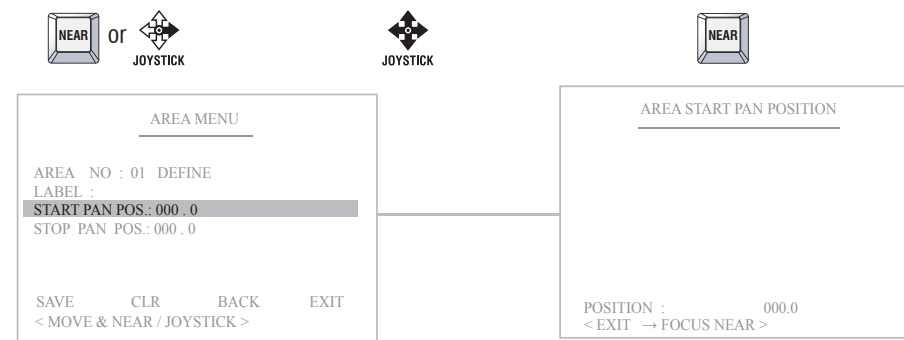
It's available to set the desired label, displayed on the executing screen of Area.



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

(3) Define the Start pan position

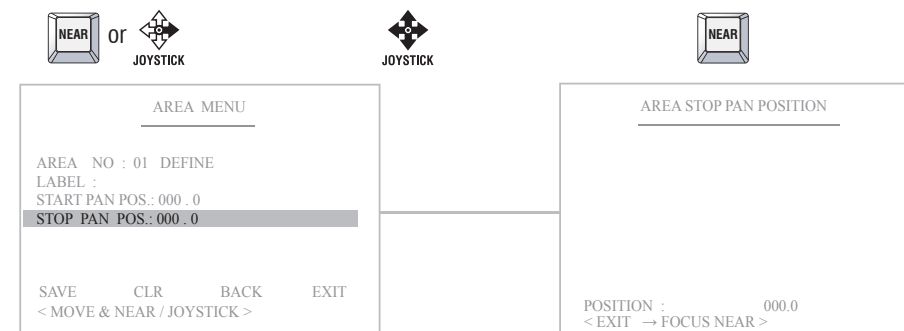
- ① Select the "Start Pan Pos" menu ② Move and set the position ③ Set & Back



※ Camera will move to clockwise direction only when START setting.

(4) Define the Stop pan position

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



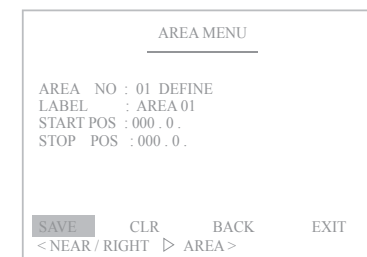
** Only pan position is adjustable, because tilt position is fixed when "Start Pan Position" is set.

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

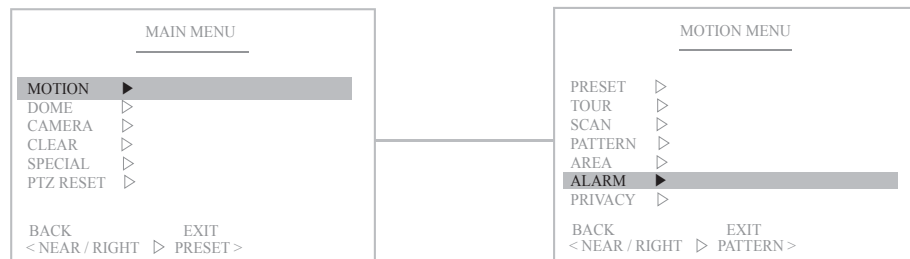
(6) "CLR" means above setting Area data will not be saved and be cleared.

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

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



5.2.6 Alarm

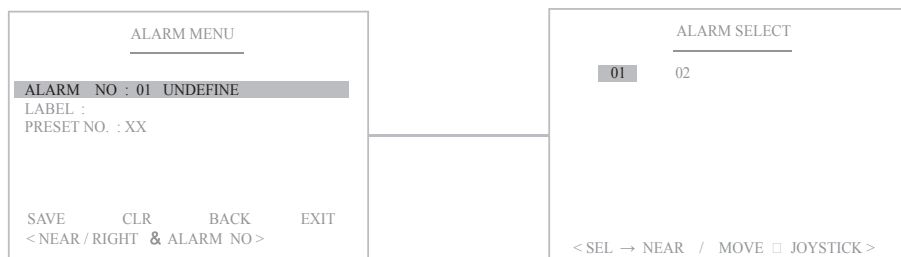


The Alarm function means that the camera moves to the programmed Preset position by the Alarm trigger. Maximum 2 Alarm functions are toured in order.

(1) Select the Alarm number

Alarm 01 : Defined Alarm number / 01 : Undefined Alarm number

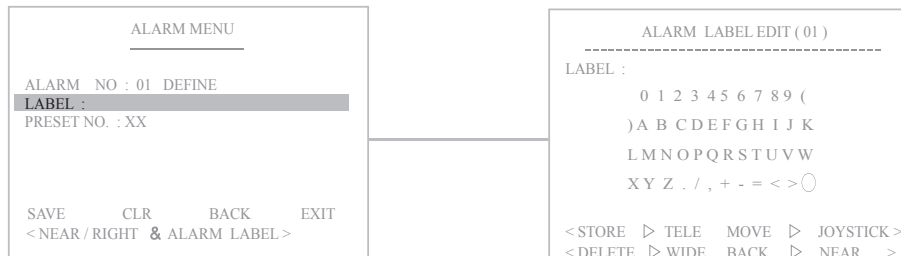
Move : Select :



(2) Set the Alarm Label

Move : Select : or Delete : or

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

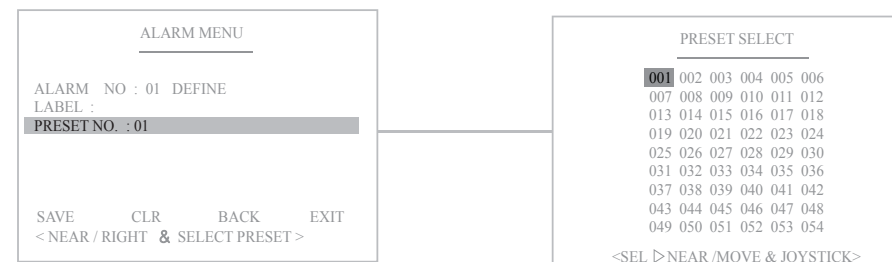


After the label is set, push the NEAR button to exit.

(3) Define the Preset position with Alarm trigger

- ① Select the "Preset No"
- ② Move and set the position
- ③ Set & Back

OR

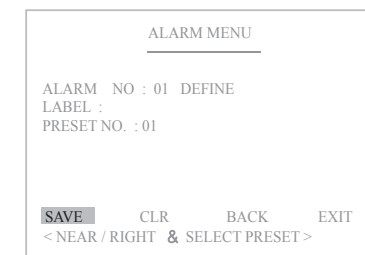


(4) "Save" above setting Alarm data to the memory.

(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



5.2.7 Privacy Zone Masking

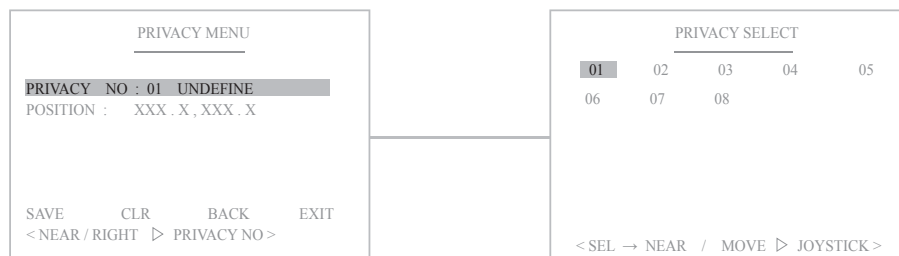


The Privacy Zone Masking function means that it sets the blocking territories to prevent camera functions for the privacy of personal reasons. Maximum of 8 Privacy Zone Masking functions are toured in order.

(1) Select the Privacy Zone number

Privacy 01 : Defined Alarm number / 01 : Undefined Alarm number

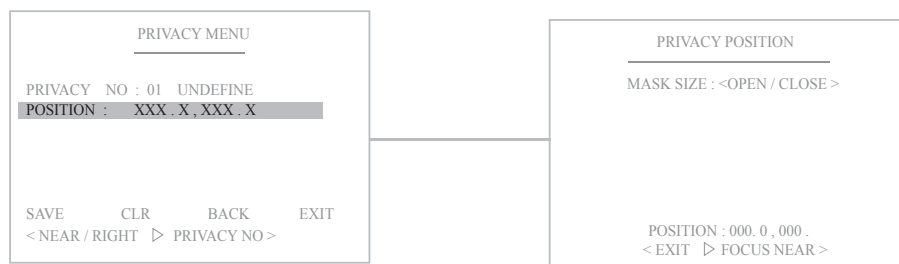
Move :  Select : 



(2) Set the Privacy Zone Position

Move :  Select :  or  Delete :  or 

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



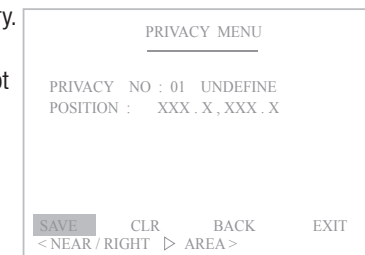
After the Privacy Zone is set, push the NEAR button to go out.

(3) "Save" above settings of Privacy Zone data to the memory.

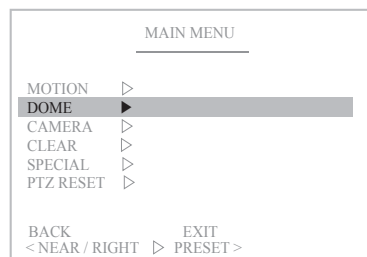
(4) "CLR" means above setting of Privacy Zone data will not be saved and be cleared.

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

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



5.3 Dome Setting



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

5.3.1 Set the Dome camera title

Move : JOYSTICK Select : or JOYSTICK Delete : or JOYSTICK

It's available to set the desired camera title.

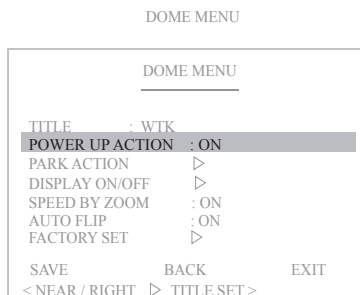


After the label is set, push NEAR button to exit.

5.3.2 Set the Power Up Action

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

select : JOYSTICK or Set ON : Set OFF :

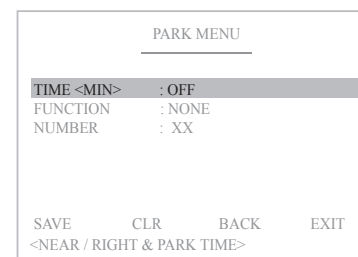


5.3.3 PARK ACTION

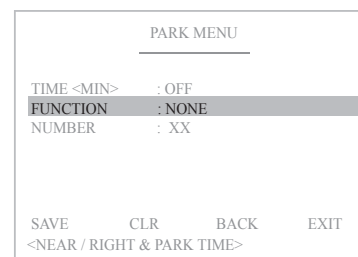
This function enables to locate the camera to specific position automatically if operator doesn't operate the controller for a while.



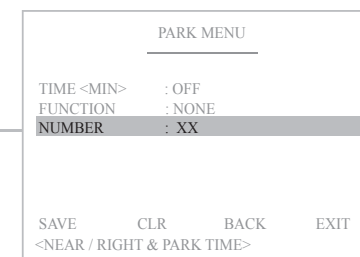
(1) Set the park Time (OFF, 01~60 min)



(2) Select the function which will be back after the above set time.



(3) Select the appointed function's Number

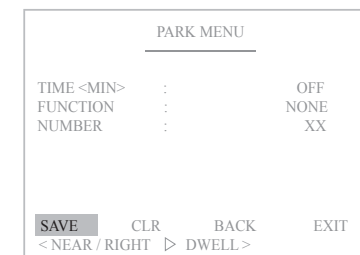


(4) “Save” above setting data to the memory.

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

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

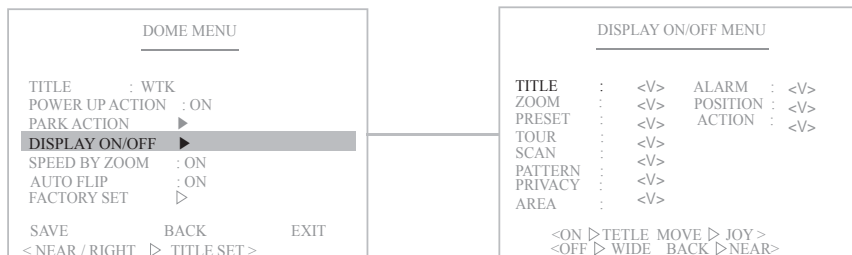
(7) “EXIT” means it goes out of the MENU



5.3.4 Display ON/OFF Set





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

select :  or  Set ON :  Set OFF : 



5.3.5 Speed by Zoom ON/OFF Set

When this function is ON, the pan/tilt speed is inversely adjusted to the zoom ratio.

select :  or  Set ON :  Set OFF : 




5.3.6 Auto Flip ON/OFF Set

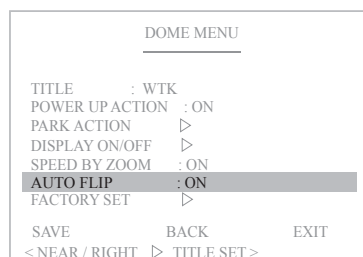
You can observe the moving object without reversing of the screen, by using this AUTO FLIP function.

ON: If this function is set to ON, camera will be automatically flipped in tilt 90°

OFF: If this function is set to OFF, tilt movement range is 0~90°

select :  or  Set ON : 

Set OFF : 

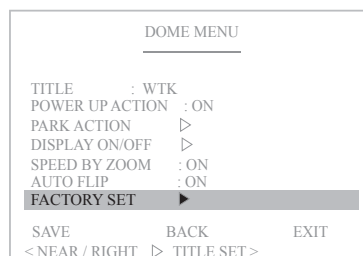


5.3.7 Factory Set

Restore setting values to the factory default.



All existing setting value will be erased.



5.4 Camera Setting

5.4.1 CAMERA MENU (EH-6300)

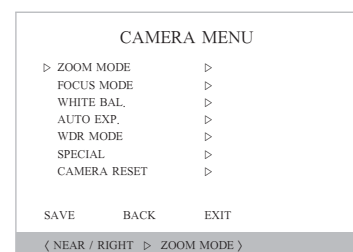


CAMERA MENU

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

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

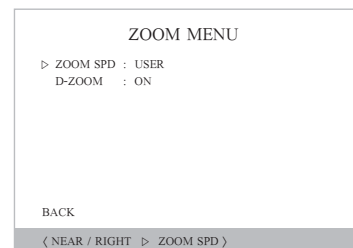
① ZOOM MODE



Decide using of digital zoom function and select zoom speed.

- * ZOOM SPD : 1 ~ 7steps, USER(standard)
- * D-ZOOM : ON / OFF

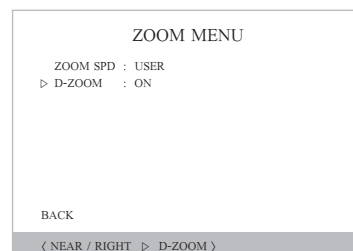
- ZOOM SPD



ZOOM SPD : Select from 1sept to 7 steps, USER (Standard speed)

Select :  or  Set ON :  Set OFF : 

- D-ZOOM

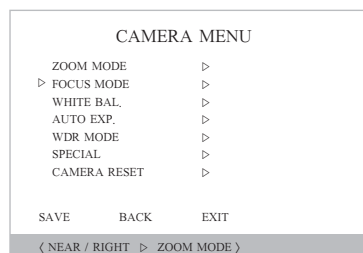


Decide using of digital zoom function.

D-ZOOM: ON/ OFF

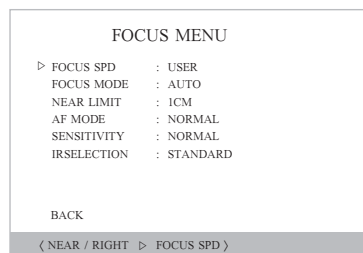
Select :  or  Set ON :  Set OFF : 

② FOCUS MODE



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

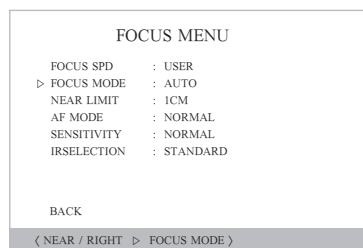
- FOCUS SPD



Set the speed for camera focusing.

Select : or Set ON : Set OFF :

- 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.

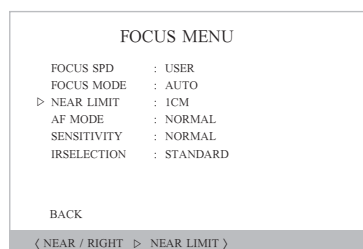
Manual: In the manual mode, users can adjust the camera focus manually.

One Push: It will be focused in about 5 seconds after zooming, panning, and return to MANUAL mode automatically. This is for focusing accurately after zooming.

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.

Select : or Set ON : Set OFF :

- NEAR LIMIT

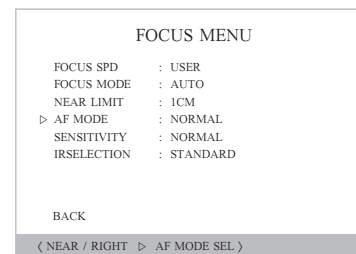


Infinity focus is the state where a lens forms an image of an object an infinite distance away. This corresponds to the point of focus for parallel rays.

(Over Infinity ~ 1.0CM)

Select : or Set ON : Set OFF :

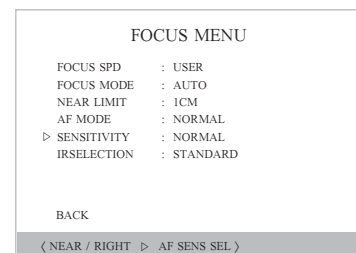
- AF MODE



Set the AUTO FOCUS MODE position

Select : or Set ON : Set OFF :

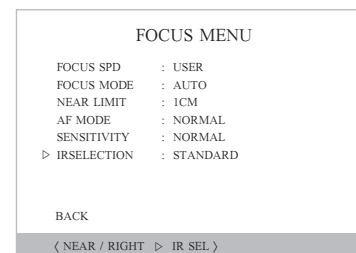
- SENSITIVITY



Set the sensitivity of focus.

Select : or Set ON : Set OFF :

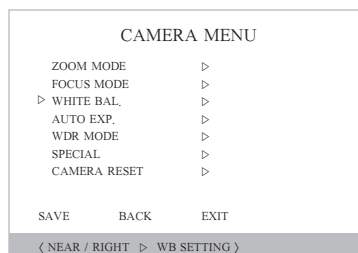
- IR SELECTION



Correct the IR conversion data.

Select : or Set ON : Set OFF :

③ WHITE BALANCE Set the white balance of camera.



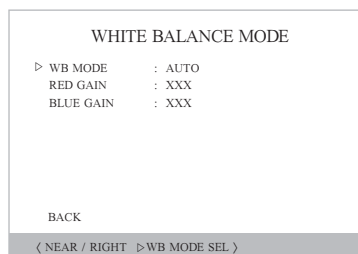
White balance setting is a function revising color temperature to resolve the problem that screen's colors change by the color temperature's difference according to time.

RED GAIN: Adjust red color level from 0~255.

BLUE GAIN: Adjust blue color level from 0~255.

Select : or Set ON : Set OFF :

- WB MODE

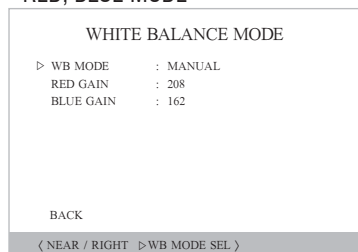


WB MODE: Set the color depend on white balance.

WB MODE : Select AUTO, INDOOR, OUTDOOR ONEPUSH, ATW or MANUAL.

Select : or Set ON : Set OFF :

- RED, BLUE MODE

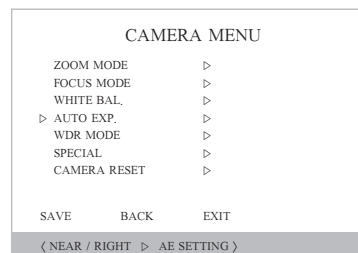


Adjust color level (RED, BLUE : 001~ 255)

Standard level : RED -> 208 BLUE->162

Select : or Set ON : Set OFF :

④ AUTO EXPO



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

AE MODE: Select AUTO, MANUAL, SHUTTER, IRIS or BRIGHT.

EXPOSURE : 10.5dB ~ -10.5dB (Standard 0dB)

SLOW SHUTTER: Select AUTO, MANUAL

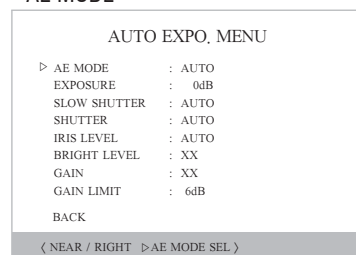
SHUTTER: Set the shutter speed.

IRIS LEVEL: If you set IRIS in AE mode, you can control the level value (CLOSE ~F1.6)

BRIGHT LEVEL: If you set BRIGHT in AE mode, you can control level value (00~31)

Gain: Control the brightness (-3dB ~ 28dB)

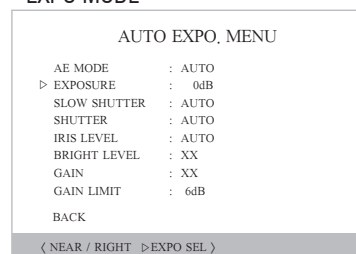
- AE MODE



Select AUTO, MANUAL, SHUTTER, IRIS or BRIGHT.

Select : or Set ON : Set OFF :

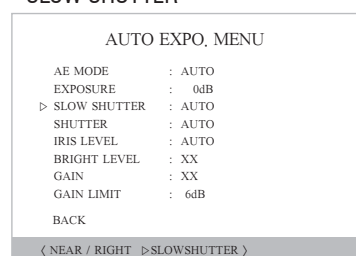
- EXPO MODE



Set the exposure.

Select : or Set ON : Set OFF :

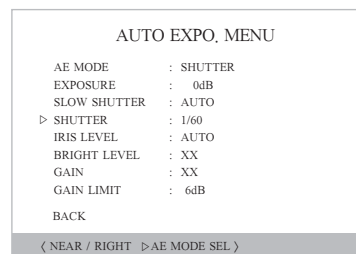
- SLOW SHUTTER



Select AUTO or MANUAL .

Select : or Set ON : Set OFF :

- SHUTTER



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

(1/50, 1/80, 1/120, 1/150, 1/250, 1/500, 1/1000, 1/1500, 1/2000, 1/5000, 1/10000, 1/20000, 1/50000, 1/100000)

Select : or Set ON : Set OFF :

- IRIS LEVEL

AUTO EXPO. MENU	
AE MODE	: IRIS
EXPOSURE	: 0dB
SLOW SHUTTER	: AUTO
SHUTTER	: AUTO
▷ IRIS LEVEL	: F1.6
BRIGHT LEVEL	: XX
GAIN	: XX
GAIN LIMIT	: 6dB
BACK	
〈 NEAR / RIGHT ▷ AE MODE SEL 〉	

If you set IRIS in the AE MODE, you can set the IRIS level from 00 to 17.

Select :  or  Set ON :  Set OFF : 

- BRIGHT LEVEL

AUTO EXPO. MENU	
AE MODE	: BRIGHT
EXPOSURE	: 0dB
SLOW SHUTTER	: AUTO
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
▷ BRIGHT LEVEL	: 27
GAIN	: XX
GAIN LIMIT	: 6dB
BACK	
〈 NEAR / RIGHT ▷ AE MODE SEL 〉	

If you set BRIGHT in AE mode, you can control level value.

Select :  or  Set ON :  Set OFF : 

- GAIN

AUTO EXPO. MENU	
AE MODE	: AUTO
EXPOSURE	: 0dB
SLOW SHUTTER	: AUTO
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
BRIGHT LEVEL	: XX
▷ GAIN	: XX
GAIN LIMIT	: 6dB
BACK	
〈 NEAR / RIGHT ▷ GAIN SEL 〉	

If you set MEMUAL in AE mode, you can control Gain.

Select :  or  Set ON :  Set OFF : 

- GAIN LIMIT

AUTO EXPO. MENU	
AE MODE	: AUTO
EXPOSURE	: 0dB
SLOW SHUTTER	: AUTO
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
BRIGHT LEVEL	: XX
GAIN	: XX
▷ GAIN LIMIT	: 6dB
BACK	
〈 NEAR / RIGHT ▷ GAIN LIMIT 〉	

Change the GAIN LIMIT. (0~30dB) -changed by 2dB

Select :  or  Set ON :  Set OFF : 

⑤ WDR MODE

CAMERA MENU	
ZOOM MODE	▷
FOCUS MODE	▷
WHITE BAL.	▷
AUTO EXP.	▷
▷ WDR MODE	▷
SPECIAL	▷
CAMERA RESET	▷
SAVE BACK EXIT	
〈 NEAR / RIGHT ▷ WDR MODE 〉	

Select WDR(Wide Dynamic Range)

Select :  or  Set ON :  Set OFF : 

- WDR MODE

WDR MODE MENU	
▷ WDR MODE	: WDR OFF
SCREED DISP	: LONG
DETECT SEN	: MID
BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
〈 NEAR / RIGHT ▷ WDR MODE 〉	

Select ON or OFF and set the LEVEL and the LIMIT value.
(OFF, LEV1 ~ LEV7)

Select :  or  Set ON :  Set OFF : 

- SCREEN DISP

WDR MODE MENU	
WDR MODE	: WDR OFF
▷ SCREED DISP	: LONG
DETECT SEN	: MID
BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
〈 NEAR / RIGHT ▷ SCREEN DIS 〉	

Select WDR changing time.(LONG. SHORT)

Select :  or  Set ON :  Set OFF : 

- DETECTION SENSITIVITY

WDR MODE MENU	
WDR MODE	: WDR OFF
SCREED DISP	: LONG
▷ DETECT SEN	: MID
BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
〈 NEAR / RIGHT ▷ DETECT SENS 〉	

Change the WDR level

Select :  or  Set ON :  Set OFF : 

- BLOCKED UP LEVEL

WDR MODE MENU	
WDR MODE	: WDR OFF
SCREED DISP	: LONG
DETECT SEN	: MID
▷ BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
⟨ NEAR / RIGHT ▷ SHADOW LEV ⟩	

Select blocked up level (LOW.MID.HIGH)

Select :  or  Set ON :  Set OFF : 

- BLOWN-OUT LEVEL

WDR MODE MENU	
WDR MODE	: WDR OFF
SCREED DISP	: LONG
DETECT SEN	: MID
BLOCKED UP LEV	: MID
▷ BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
⟨ NEAR / RIGHT ▷ HIGHLIGHT L ⟩	

Select blown-out level

Select :  or  Set ON :  Set OFF : 

- EXPOSURE RATIO

WDR MODE MENU	
WDR MODE	: WDR OFF
SCREED DISP	: LONG
DETECT SEN	: MID
BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
▷ EXPOSURE RATIO(%)	: 010
LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
⟨ NEAR / RIGHT ▷ EXP RATIO ⟩	

Select exposure ratio

Select :  or  Set ON :  Set OFF : 

- LONG EXPOSURE

WDR MODE MENU	
WDR MODE	: WDR OFF
SCREED DISP	: LONG
DETECT SEN	: MID
BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
▷ LONG EXP S/N	: 080
SHORT EXP S/N	: 100
BACK	
⟨ NEAR / RIGHT ▷ LONG EXP ⟩	

Select long exposure

Select :  or  Set ON :  Set OFF : 

- SHORT EXPOSURE

WDR MODE MENU	
WDR MODE	: WDR OFF
SCREED DISP	: LONG
DETECT SEN	: MID
BLOCKED UP LEV	: MID
BLOWN OUT LEV	: MID
EXPOSURE RATIO(%)	: 010
▷ SHORT EXP S/N	: 100
BACK	
⟨ NEAR / RIGHT ▷ SHORT EXP ⟩	

Select short exposure

Select :  or  Set ON :  Set OFF : 

⑥ SPECIAL

CAMERA MENU	
ZOOM MODE	▷
FOCUS MODE	▷
WHITE BAL.	▷
AUTO EXP.	▷
WDR MODE	▷
▷ SPECIAL	▷
CAMERA RESET	▷
SAVE	BACK
⟨ NEAR / RIGHT ▷ SPECIAL ⟩	

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

Select :  or  Set ON :  Set OFF : 

- ENHANCE

SPECIAL MENU	
▷ ENHANCE MODE	▶
APERTUREGAIN	: 05
BACK LIGHT	: OFF
DAY/NIGHT MODE	: DAY
DAY/NIGHT LVL	: 10
BACK	
⟨ NEAR / RIGHT ▷ SUB MENU ⟩	

Enhance the video color.

- * HR MODE : Select HIGH-Resolution
- * NR LEVEL : Select NOISE-Reduction level
- * GAMMA : Select light and shade level
- * HIGH SENSITIVITY : Select High sensitivity
- * CHROMA LEVEL : Select chroma level

- HR MODE

SPECIAL MENU	
▷ HR MODE	: ON
NR LEVEL	: 3
GAMMA	: STANDARD
HIGH SENS	: OFF
CHROMA LEV	: OFF
BACK	
⟨ NEAR / RIGHT ▷ HR MODE ⟩	

Select HIGH-Resolution

Select :  or  Set ON :  Set OFF : 

- NR LEVEL

SPECIAL MENU	
HR MODE	: ON
▷ NR LEVEL	: 3
GAMMA	: STANDARD
HIGH SENS	: OFF
CHROMA LEV	: OFF
BACK	
⟨ NEAR / RIGHT ▷ NR LEVEL ⟩	

Select NOISE-Reduction level

Select :  or  Set ON :  Set OFF : 

- GAMMA

SPECIAL MENU	
HR MODE	: ON
NR LEVEL	: 3
▷ GAMMA	: STANDARD
HIGH SENS	: OFF
CHROMA LEV	: OFF
BACK	
◀ NEAR / RIGHT ▶ GAMMA ▶	

GAMMA : Select light and shade level

Select :  or  Set ON :  Set OFF : 

- HIGH SENSITIVITY

SPECIAL MENU	
HR MODE	: ON
NR LEVEL	: 3
GAMMA	: STANDARD
▷ HIGH SENS	: OFF
CHROMA LEV	: OFF
BACK	
◀ NEAR / RIGHT ▶ HIGH SENS ▶	

HIGH SENSITIVITY : Select High sensitivity

Select :  or  Set ON :  Set OFF : 

- CHROMA LEVEL

SPECIAL MENU	
HR MODE	: ON
NR LEVEL	: 3
GAMMA	: STANDARD
HIGH SENS	: OFF
▷ CHROMA LEV	: OFF
BACK	
◀ NEAR / RIGHT ▶ CHROMA LEV ▶	

CHROMA LEVEL : Select chroma level

Select :  or  Set ON :  Set OFF : 

- APERTURE GAIN

SPECIAL MENU	
ENHANCE MODE	▷
▷ APERTUREGAIN	: 05
BACK LIGHT	: OFF
DAY/NIGHT MODE	: DAY
DAY/NIGHT LVL	: 10
BACK	
◀ NEAR / RIGHT ▶ APERTURE ▶	

APERTURE GAIN: Select aperture gain

Select :  or  Set ON :  Set OFF : 

- BACK LIGHT

SPECIAL MENU	
ENHANCE MODE	▷
APERTUREGAIN	: 05
▷ BACK LIGHT	: OFF
DAY/NIGHT MODE	: DAY
DAY/NIGHT LVL	: 10
BACK	
◀ NEAR / RIGHT ▶ BACK LIGHT ▶	

Select ON/OFF in the BACK LIGHT function.

Select :  or  Set ON :  Set OFF : 

- DAY/NIGHT

SPECIAL MENU	
ENHANCE MODE	▷
APERTUREGAIN	: 05
BACK LIGHT	: OFF
▷ DAY/NIGHT MODE	: DAY
DAY/NIGHT LVL	: 10
BACK	
◀ NEAR / RIGHT ▶ D'Y MODE ▶	

Select the BACK LIGHT function manually.
DAY: IR function OFF NIGHT: IR function ON

Select :  or  Set ON :  Set OFF : 

- DAY/NIGHT LEVEL

SPECIAL MENU	
ENHANCE MODE	▷
APERTUREGAIN	: 05
BACK LIGHT	: OFF
DAY/NIGHT MODE	: DAY
▷ DAY/NIGHT LVL	: 10
BACK	
◀ NEAR / RIGHT ▶ D'Y LEVEL ▶	

Select the darkness level

Select :  or  Set ON :  Set OFF : 

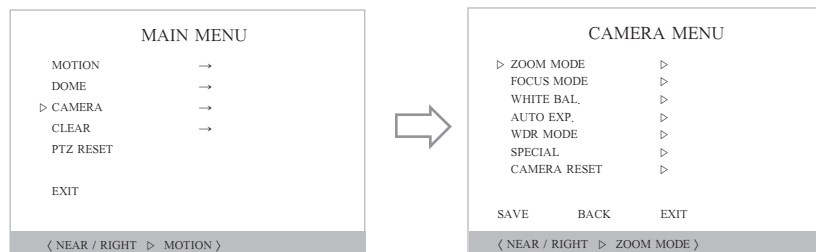
⑦ CAMERA RESET

CAMERA MENU	
ZOOM MODE	▷
FOCUS MODE	▷
WHITE BAL.	▷
AUTO EXP.	▷
WDR MODE	▷
SPECIAL	▷
▷ CAMERA RESET	▷
SAVE BACK EXIT	
◀ NEAR / RIGHT ▶ RESET ▶	

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

Select :  or  Set ON :  Set OFF : 

5. 4. 2 CAMERA MENU (MM-202)

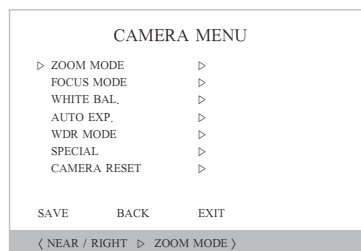


CAMERA MENU

- 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 ZOOM MODE

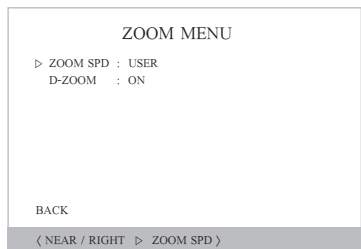


Decide using of digital zoom function and select zoom speed.

* ZOOM SPD : 1 ~ 7steps, USER(standard)

* D-ZOOM : ON / OFF

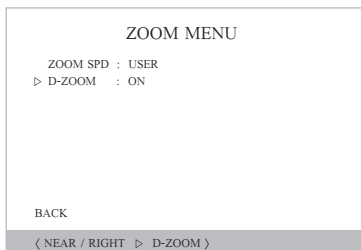
- ZOOM SPD



ZOOM SPD : Select from 1sept to 7 steps,
USER (Standard speed)

Select : or Set ON : Set OFF :

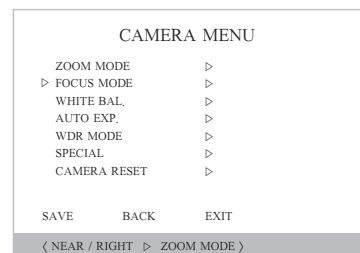
- D-ZOOM



Decide using of digital zoom function.
D-ZOOM: ON/ OFF

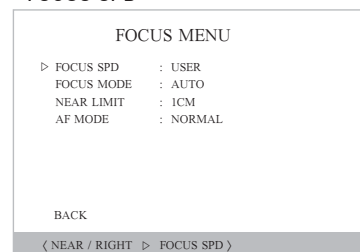
Select : or Set ON : Set OFF :

② FOCUS MODE



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

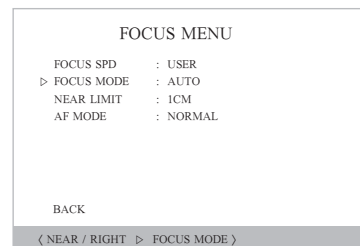
- FOCUS SPD



Set the speed for camera focusing.

Select : or Set ON : Set OFF :

- 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.

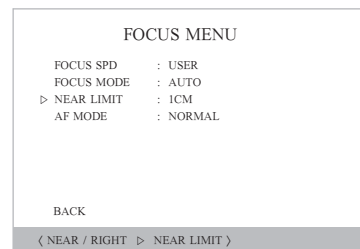
Manual: In the manual mode, users can adjust the camera focus manually.

One Push: It will be focused in about 5 seconds after zooming, panning, and return to MANUAL mode automatically. This is for focusing accurately after zooming.

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.

Select : or Set ON : Set OFF :

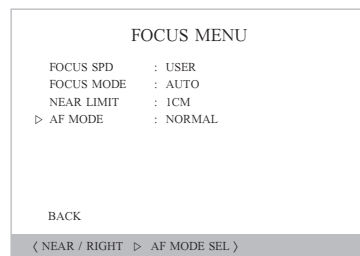
- NEAR LIMIT



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)

Select : or Set ON : Set OFF :

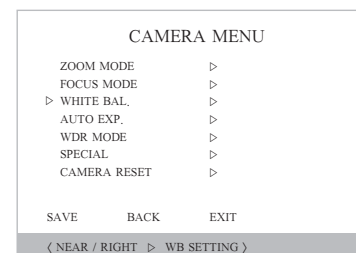
- AF MODE



Set the AUTO FOCUS MODE position

Select : or Set ON : Set OFF :

③ WHITE BALANCE Set the white balance of camera.



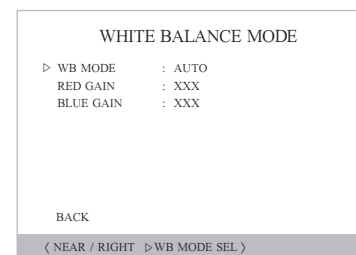
White balance setting is a function revising color temperature to resolve the problem that screen's colors change by the color temperature's difference according to time.

RED GAIN: Adjust red color level from 01~20.

BLUE GAIN: Adjust blue color level from 01~20.

Select : or Set ON : Set OFF :

- WB MODE

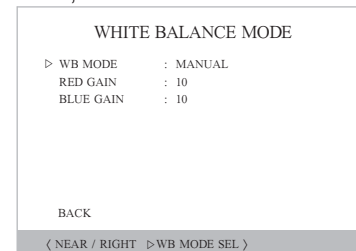


WB MODE: Set the color depend on white balance.

WB MODE : Select AUTO, INDOOR, OUTDOOR, ONEPUSHAWG, ONEPUSHTRG or MANUAL.

Select : or Set ON : Set OFF :

- RED, BLUE MODE

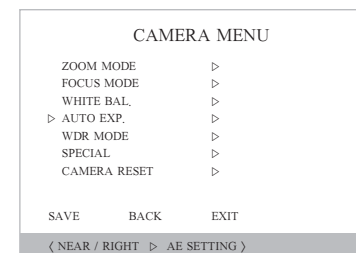


Adjust color level (RED, BLUE : 01 ~ 20)

Standard level : RED -> 10 BLUE->10

Select : or Set ON : Set OFF :

④ AUTO EXPO



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

AE MODE: Select AUTO, MANUAL, SHUTTER, IRIS.

EXPOSURE : 00 ~ 20 (Standard 00)

SLOW SHUTTER: ON/OFF

SHUTTER: If you set SHUTTER in AE mode, you can control the level value

IRIS LEVEL: If you set IRIS in AE mode, you can control the level value (00~20)

DSS LEVEL: Control digital show shutter speed.

- AE MODE

AUTO EXPO. MENU	
▷ AE MODE	: AUTO
EXPOSURE	: 00
SLOW SHUTTER	: ON
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
BRIGHT LEVEL	: XX
GAIN	: XX
GAIN LIMIT	: 6dB
BACK	
⟨ NEAR / RIGHT ▷AE MODE SEL ⟩	

Select AUTO, MANUAL, SHUTTER or IRIS.

Select :  or  Set ON :  Set OFF : 

- EXPO MODE

AUTO EXPO. MENU	
AE MODE	: AUTO
▷ EXPOSURE	: 00
SLOW SHUTTER	: ON
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
DSS LEVEL	: 00
BACK	
⟨ NEAR / RIGHT ▷EXPO SEL ⟩	

Set the exposure. (00 ~20)

Select :  or  Set ON :  Set OFF : 

- SLOW SHUTTER

AUTO EXPO. MENU	
AE MODE	: AUTO
EXPOSURE	: 00
▷ SLOW SHUTTER	: ON
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
DSS LEVEL	: 00
BACK	
⟨ NEAR / RIGHT ▷SLOWSHUTTER ⟩	

Select AUTO or MANUAL .

Select :  or  Set ON :  Set OFF : 

- SHUTTER

AUTO EXPO. MENU	
AE MODE	: SHUTTER
EXPOSURE	: 00
SLOW SHUTTER	: ON
▷ SHUTTER	: 1/30
IRIS LEVEL	: AUTO
DSS LEVEL	: 00
BACK	
⟨ NEAR / RIGHT ▷SHUTTER SEL ⟩	

If you set SHUTTER in the AE MODE, you can control shutter speed.
(1/30, 1/60, 1/120, 1/240, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000, 1/30000, 1/60000, X4, X3, X2)

Select :  or  Set ON :  Set OFF : 

- IRIS LEVEL

AUTO EXPO. MENU	
AE MODE	: IRIS
EXPOSURE	: 00
SLOW SHUTTER	: ON
SHUTTER	: AUTO
▷ IRIS LEVEL	: 10
DSS LEVEL	: 00
BACK	
⟨ NEAR / RIGHT ▷AE MODE SEL ⟩	

If you set IRIS in the AE MODE, you can set the IRIS level from 00 to 20

Select :  or  Set ON :  Set OFF : 

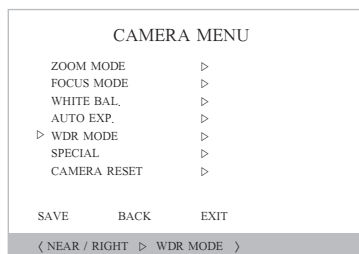
- DSS LEVEL

AUTO EXPO. MENU	
AE MODE	: AUTO
EXPOSURE	: 00
SLOW SHUTTER	: ON
SHUTTER	: AUTO
IRIS LEVEL	: 01
▷ DSS LEVEL	: X2
BACK	
⟨ NEAR / RIGHT ▷DSS LEVEL ⟩	

Digital Slow Shutter: Control digital show shutter speed.
(X2, X3, X4)

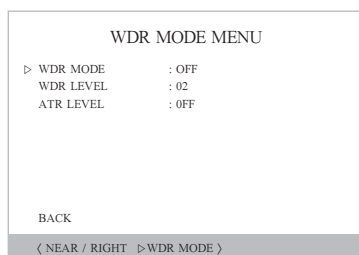
Select :  or  Set ON :  Set OFF : 

⑤ WDR MODE



Set WDR function
WDR(Wide Dynamic Range)

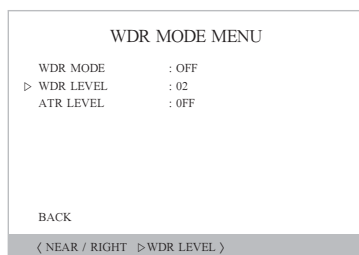
- WDR MODE



Select ON or OFF.

Select : or Set ON : Set OFF :

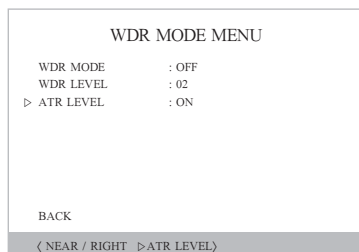
- WDR LEVEL



Select from 00 to 03.

Select : or Set ON : Set OFF :

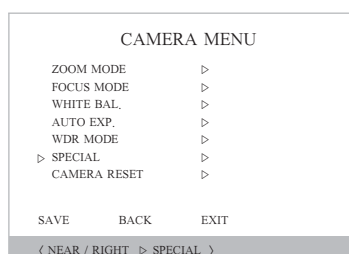
- ATR LEVEL



Select ON or OFF

Select : or Set ON : Set OFF :

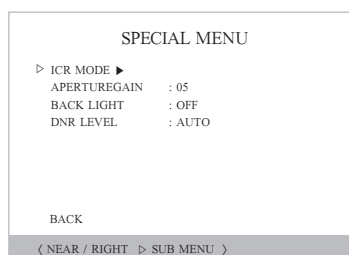
⑥ SPECIAL



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

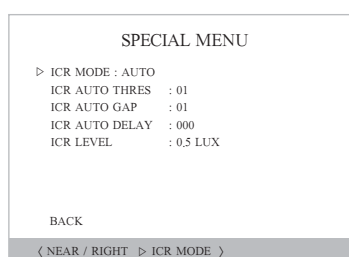
select : or Set ON : Set OFF :

- ICR MODE



Control DAY & NIGHT function.

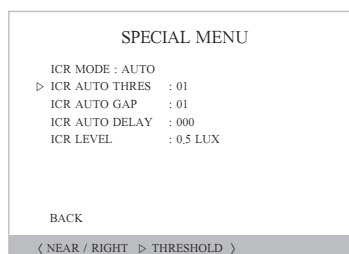
- ICR MODE



Select AUTO, DAY and NIGHT.

select : or Set ON : Set OFF :

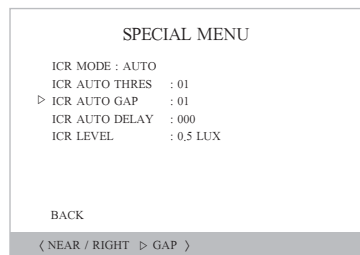
- ICR AUTO THRESHOLD



Set the ICR THRESHOLD

select : or Set ON : Set OFF :

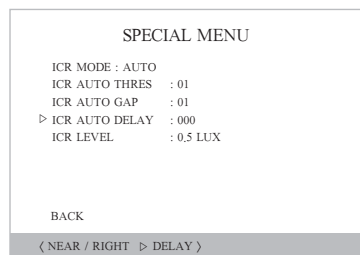
- ICR AUTO GAP



Select the ICR level.

select :  or  Set ON :  Set OFF : 

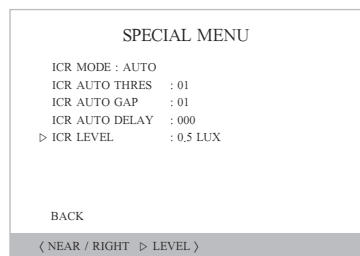
- ICR AUTO DELAY



Set ICR auto delay.

select :  or  Set ON :  Set OFF : 

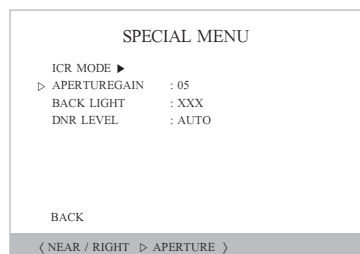
- ICR LEVEL



Set ICR Value.

select :  or  Set ON :  Set OFF : 

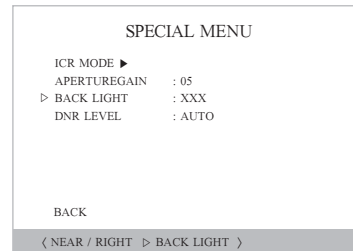
- APERTURE GAIN



APERTURE GAIN: Select aperture gain

select :  or  Set ON :  Set OFF : 

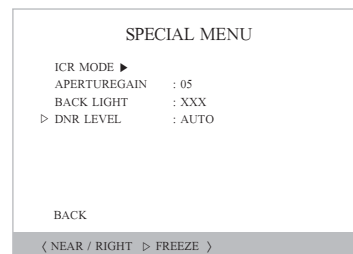
- BACK LIGHT



Select ON/OFF in the BACK LIGHT function.

select :  or  Set ON :  Set OFF : 

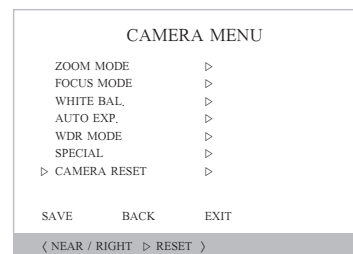
- DNR LEVEL



Select the DNR level from AUTO, LEV1, LEV2, LEV3 and OFF.

select :  or  Set ON :  Set OFF : 

⑦ CAMERA RESET

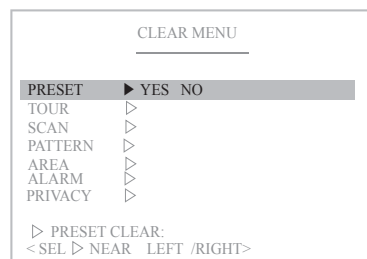


Make initialize the setting value which is set in CAMERA MENU.

select :  or  Set ON :  Set OFF : 

5.5 Clear Setting

Clears the PTZ position and function value. With this function the camera keeps the accuracy of the PTZ position value.



select : or Set ON :

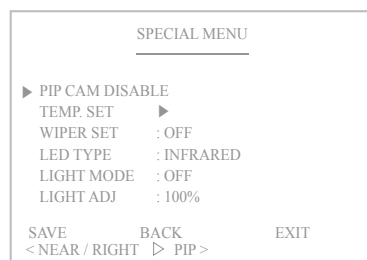
Set OFF :

5.6 SPECIAL SETTING

In the PIP menu, it's available to set the details for PIP function.

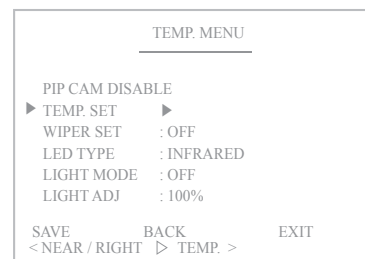


- PIP CAM DISABLE



* PIP is not supported.
(Support ANALOG product only)

- TEMP SETTING

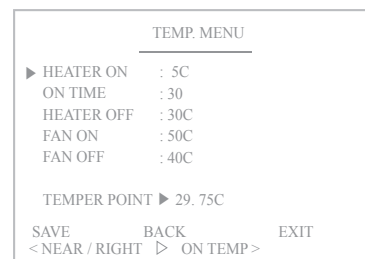


* Set the operating temperature of Fan&Heater in the camera. It shows you the current temperature and you can also set the value manually. The compulsory Fan & Heater operation is a useful function to remove humidity. (Select the operating time of Heater from 10 to 60 min.)

select : or Set ON :

Set OFF :

- HEATER ON

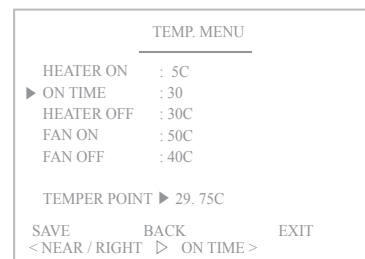


* Set the operating temperature of the heater.

select : or Set ON :

Set OFF :

- ON TIME

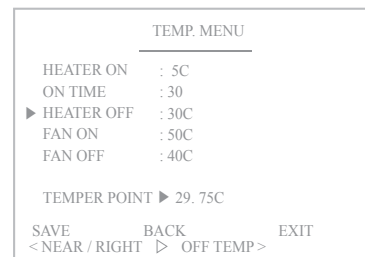


* Set the operating time of the heater.

select : or Set ON :

Set OFF :

- HEATER OFF



* Set the temperature of heater OFF.

select : or Set ON :


Set OFF :

- FAN ON

TEMP. MENU	
HEATER ON	: 5C
ON TIME	: 30
HEATER OFF	: 30C
▶ FAN ON	: 50C
FAN OFF	: 40C
TEMPER POINT ▶ 29.75C	
SAVE	BACK EXIT
< NEAR / RIGHT ▷ PAN ON >	

* Set the operating temperature of the fan.

select :  or  Set ON : 


Set OFF : 

- FAN OFF

TEMP. MENU	
HEATER ON	: 5C
ON TIME	: 30
HEATER OFF	: 30C
FAN ON	: 50C
▶ FAN OFF	: 40C
TEMPER POINT ▶ 29.75C	
SAVE	BACK EXIT
< NEAR / RIGHT ▷ PAN OFF >	

* Set the temperature of Fan OFF.

select :  or  Set ON : 


Set OFF : 

- WIPER SETTING

TEMP. MENU	
PIP CAM DISABLE	
TEMP. SET	▶
▶ WIPER SET	: OFF
LED TYPE	: INFRARED
LIGHT MODE	: OFF
LIGHT ADJ	: 100%
SAVE	BACK EXIT
< NEAR / RIGHT ▷ ONOFF >	

* Set the wiper function of the camera.(ON/OFF)

select :  or  Set ON : 


Set OFF : 

- LED TYPE

TEMP. MENU	
PIP CAM DISABLE	
TEMP. SET	▶
WIPER SET	: OFF
▶ LED TYPE	: INFRARED
LIGHT MODE	: OFF
LIGHT ADJ	: 100%
SAVE	BACK EXIT
< NEAR / RIGHT ▷ CHOICE >	

* Select LED type.

select :  or  Set ON : 

Set OFF : 

- LIGHT MODE

TEMP. MENU	
PIP CAM DISABLE	
TEMP. SET	▶
WIPER SET	: OFF
LED TYPE	: INFRARED
▶ LIGHT MODE	: ON
LIGHT ADJ	: 100%
SAVE	BACK EXIT
< NEAR / RIGHT ▷ ON/OFF >	

* Set IR ON/ OFF

select :  or  Set ON : 

Set OFF : 

- LIGHT ADJUSTABLE

TEMP. MENU	
PIP CAM DISABLE	
TEMP. SET	▶
WIPER SET	: OFF
LED TYPE	: INFRARED
LIGHT MODE	: OFF
▶ LIGHT ADJ	: 100%
SAVE	BACK EXIT
< NEAR / RIGHT ▷ ADJUST >	

* IR Adjusts the light value.

select :  or  Set ON : 

Set OFF : 

5.7 PTZ Reset

It is a reset function and is useful when you change the dipswitches for address, protocol and baud rate.

MAIN MENU	
MOTION	▷
DOME	▷
CAMERA	▷
CLEAR	▷
SPECIAL	▷
PTZ RESET	▶
EXIT	
< NEAR / RIGHT ▷ RESET >	

6. SPECIFICATIONS

6.1 Mechanical Specifications

6.1.1 MECHANICAL

Pan	: 360° Continuous Pan, 0.1° to 90°/sec.
Pan Preset Speed	: Max. 150°/sec, $\pm 0.1^\circ$ Accuracy
Tilt	: -90° to 90° tilt angle
Tilt Preset Speed	: Max.150°/sec, $\pm 0.1^\circ$ Accuracy
Weight	: Approx. 12 Kg/ Packing 15 Kg

6.1.2 ENVIRONMENTAL

Construction	: Die-casing Aluminum & "O" Ring sealed : All internal parts are corrosion protected epoxy powder coating
Ingress Protection	: IP66 Outdoor Application
Color	: Black and Ivory
Operating Temp	: -10°C to 50°C (In continuous operation with Fan & Heater)
Storage Temp	: -20°C to 60°C
Humidity	: 0% to 90%

6.1.3 FUNCTIONS

Preset	: 255 points, less than 0.1° accuracy
Tour	: 8 programmable
Pattern	: 4 patterns
Scan	: 8 scans
Area	: 16 Area
Alarm	: 2 alarms
Flip	: Auto Flip On/Off
Address	: Up to 255 selectable ID (setting with Dip-switches)
Data Communication Control	: RS-485/ RS-422
Protocol	: Multiple Protocol
Baud rate	: 2400, 4800, 9600, 19200, 38400, 57600 bps selectable

6.1.4 ELECTRICAL

Power	: DC 24V Power adaptor included
Consumption	: Operating(3A), Max(4.0A, IR light on, Heater on)
Fan & Heater	: 10W / 3.4W

6.2 Camera Specifications

6.2.1 Zoom Camera

EH-6300

Imager	1/3 Type Exmor CMOS Sensor
Picture elements	2000K pixels
Lens	20× zoom F= 4.7 mm (WIDE) to 94.0 mm(TELE), F1.6 to F3.5
Digital zoom	12× (240× with optical zoom)
Angle of view (H)	Approx. 55.4 degrees (WIDE end), approx. 2.9 degrees (TELE end) (1080i mode) Approx. 37.6 degrees (WIDE end), approx. 2.0 degrees (TELE end) (720p mode)
Min. working distance	10 mm (WIDE end), 1000 mm (TELE end)
Sync system	Internal
Min. illumination (Typical value)	0.5 lx (1/30 sec, 50%, High Sensitivity mode ON) 1.7 lx (1/30 sec, 50%, High Sensitivity mode OFF) ICR-ON Mode 0.095 lx (1/30 sec, 50%, High Sensitivity mode ON) 0.3 lx (1/30 sec, 50%, High Sensitivity mode OFF)
S/N ratio	50 dB (Weight ON)
Wide dynamic range	ON/OFF/AUTO
Noise reduction	ON/OFF (level 5 to 1 / OFF, 6 steps)
Color Enhancement	ON/OFF
Aperture control	16 steps
Preset	6-POSITIONS
Video Output	HD: Analog component (Y/Pb/Pr) Digital (LVDS) Analog SD: VBS

MM-202

Imager	1/3 Type Exmor CMOS Sensor
Picture elements	2000K pixels
Lens	20× zoom F= 4.7 mm (WIDE) to 94.0 mm (TELE), F1.6 to F3.5
Digital zoom	12× (240× with optical zoom)
Angle of view (H)	Approx. 55.4 degrees (WIDE end), approx. 2.9 degrees (TELE end) (1080i mode) Approx. 37.6 degrees (WIDE end), approx. 2.0 degrees (TELE end) (720p mode)
Min. working distance	10 mm (WIDE end), 1000 mm (TELE end)
Sync system	Internal
Min. illumination (Typical value)	0.5 lx (1/30 sec, 50%, High Sensitivity mode ON) 1.7 lx (1/30 sec, 50%, High Sensitivity mode OFF) ICR-ON Mode 0.095 lx (1/30 sec, 50%, High Sensitivity mode ON) 0.3 lx (1/30 sec, 50%, High Sensitivity mode OFF)
S/N ratio	50 dB (Weight ON)
Wide dynamic range	ON/OFF/AUTO
Noise reduction	ON/OFF (level 5 to 1 / OFF, 6 steps)
Color Enhancement	ON/OFF
Aperture control	16 steps
Preset	6-POSITIONS
Video Output	HD: Analog component (Y/Pb/Pr) Digital (LVDS) Analog SD: VBS

6. 2. 2 LED Specification

	Infra Red LED	White LED
Light Distance	200 m(Manual focusing)	
LED	Super IR LED 30 EA (OSRAM 870n) with Lens 12°	Super White LED 30EA (OSRAM 870n) with Lens 12°

7. DIMENSIONS(mm)

