

USER MANUAL

OUTDOOR HEAVY-DUTY PTZ CAMERA



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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 : 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.

PIP Dual Camera System

The "Picture In Picture" function clearly displays the cameras filed of view and eliminates blind spots by incorporating an fixed camera and a zoom camera. The fixed camera is responsible for detailed motion detection while the zoom camera performs broader image capturing. Utilizing both cameras greatly increases the quality of the video and level of surveillance.

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), so it provides visible distance up to 200m in dark. (Osram 870n 1w)

Built-in Fan & Heater

Built-in Wiper System

True 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 36X Optical Zoom

The built-in 36X optical zoom lens with auto-focus is combined with a 32X digital zoom, providing a maximum of 1,152X zoom.

Wide Range Auto functions

Preset : Up to 255 programmable preset.

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 memorized 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 set.

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.

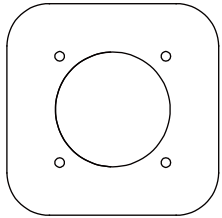
Eco-friendly Green Energy product

Minimize power consumption and save the earth by utilizing the WTK-E363 all-in-one camera system.

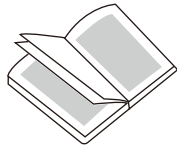
4. SETTING & INSTALLATION

4.1 Unpacking

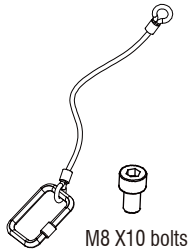
Guiding sticker for installation



Manual

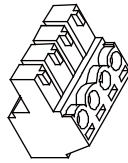


Detaching Hook

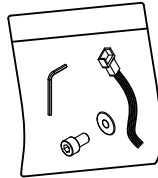


M8 X10 bolts

4PIN Communication Terminal

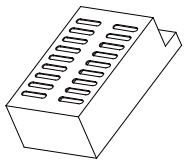


Accessory

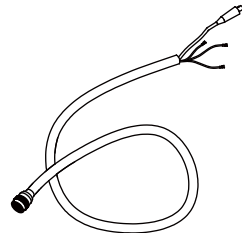


L-wrench, alarm cable
M8 wrench-bolt, M8 nut

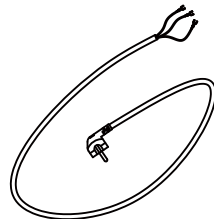
Switched-Mode Power Supply



MAIN CABLE

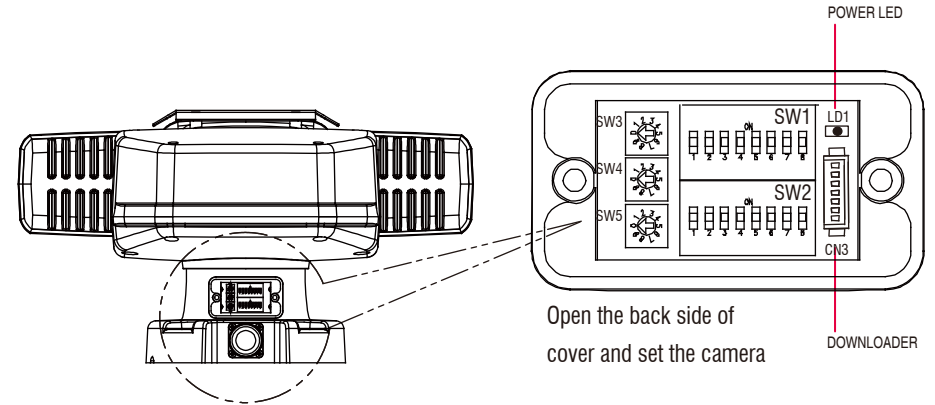


POWER CABLE



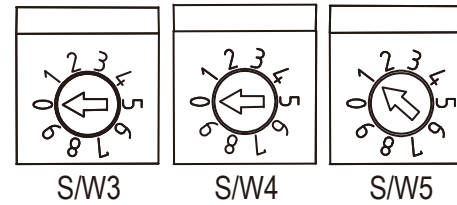
4.2 DIP Switch Setting

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



Open the back side of cover and set the camera

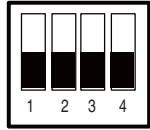
Camera ID (ADDRESS)



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

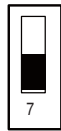
Each camera must have a unique address (ID). Identical ID's on the same line may damage the control circuit caused by an electronic short.

SW 1**PROTOCOL**

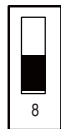
SET				PROTOCOL
1	2	3	4	
0	0	0	0	EZP
0	0	0	1	PELCO D
0	0	1	0	PELCO P
0	0	1	1	WTX
0	1	0	0	NC
.	.	.	.	NC
.	.	.	.	NC
1	1	1	1	NC

SW 1**CAMERA SELECTION**

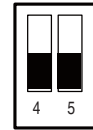
SET		CAM TYPE
5	6	
0	0	SDM
0	1	SONY
1	0	EM
1	1	NC

SW 1**VIDEO TYPE**

SET	VIDEO TYPE
0	NTSC
1	PAL

SW 1**RS485 LOOP (TERMINATION)****SW 2****BAUD RATE**

SET			BAUD RATE
1	2	3	
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 2**PARITY**

SET		PARITY
4	5	
0	0	NONE
0	1	EVEN
1	0	ODD
1	1	NC

SW 2 STAND MODE

SET	STAND MODE
0	NC
1	NC

SW 2 LIGHT TYPE

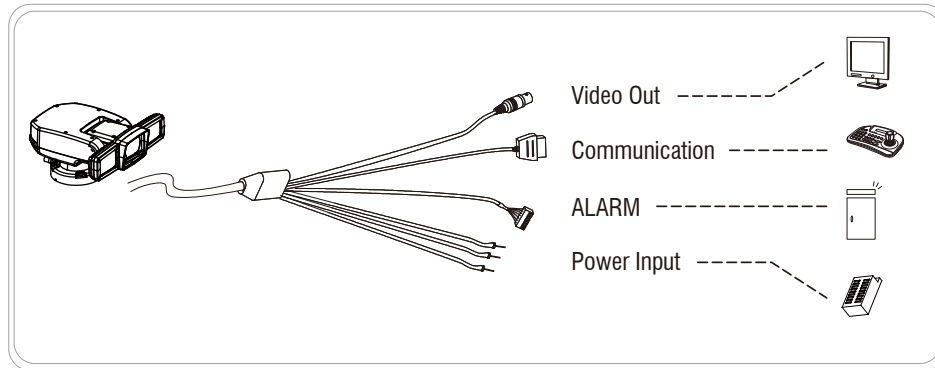
SET	LIGHT TYPE
0	IR
1	WHITE

SW 2 SUB CAMERA

SET	SUB CAM
0	OFF
1	ON

4.3 Cable Connection

4.3.1 Basic Diagram of Cable Connection



4.3.2 Video Output Connection

Connect the video out (BNC) connector to the monitor or 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, then 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)'s signal(Max 2 Alarm.)

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

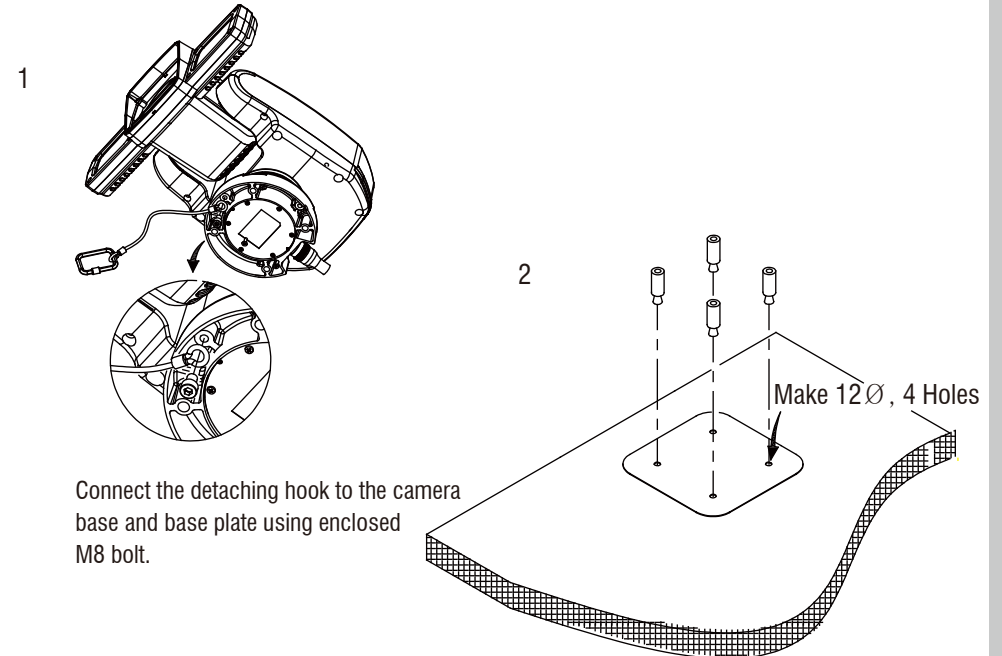
- Green color line : Ground / Brown & Orange color lines : Alarm 1 & 2.

4.3.5 Power Connection

- After connecting above 3 connections(Video/Communication/Alarm), Connect the power cable finally.
- There are 3 lines: Red, Black, Gray. Connect red and black lines to + and - of power. And connect the gray line for Ground.
- Connect the power of DC 18V, 10A to this camera.
- Use certified Class 2 power supply transformer only.

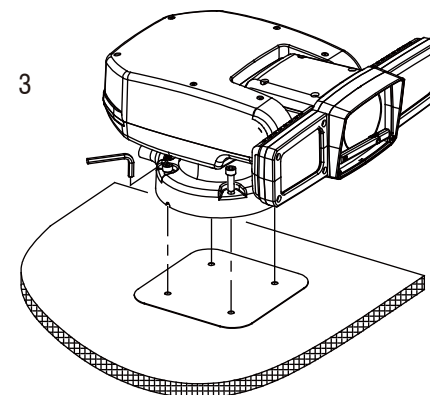
4.4 Installation

- 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.
- 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 7~8 pages.



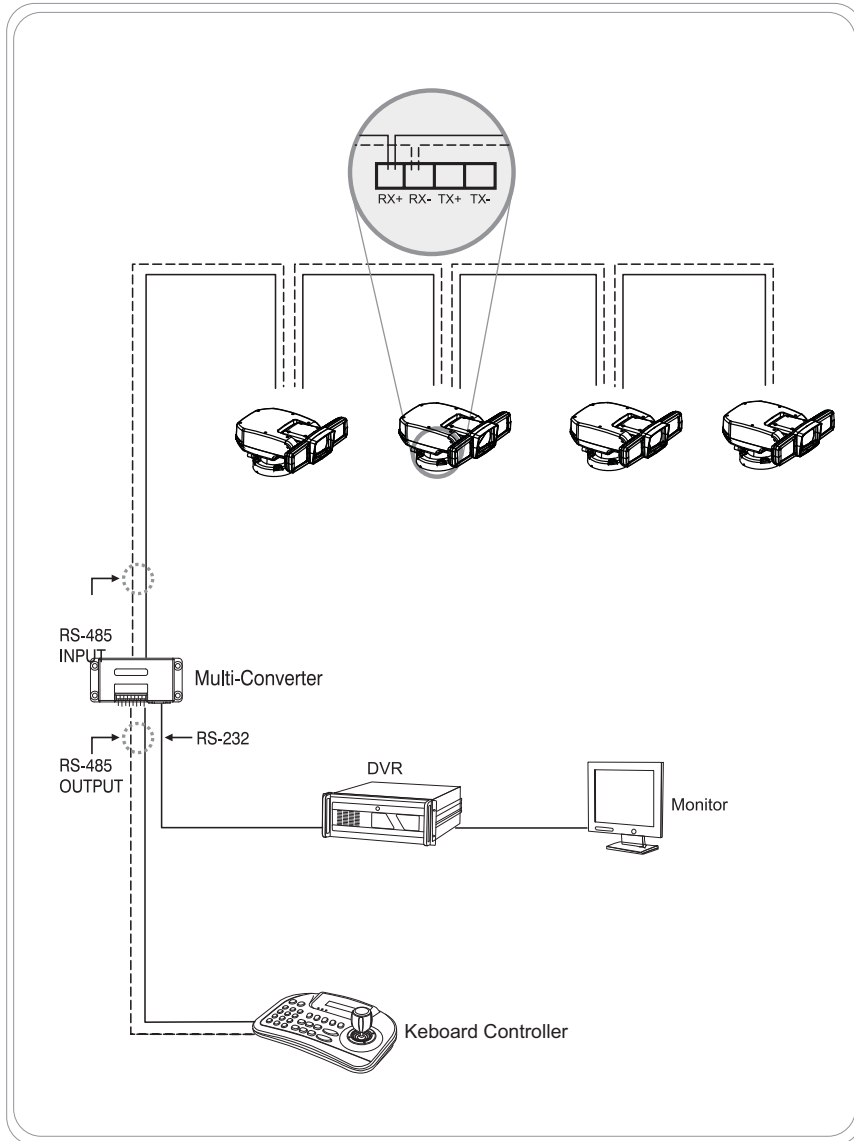
Connect the detaching hook to the camera base and base plate using enclosed M8 bolt.

Attach the enclosed guide sticker to the proper position and make 4 holes with 12Ø. And fix the anchor bolts to those holes.



Fix the 4 M8 bolts to 4 anchor bolts using L-wernch.

4.5 Basic Configuration



5. MAIN SETUP MENU

5.1 Initialize

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

INITIALIZE	
ADDRESS	:001 PIP
VERSION	:0.17
VIDEO	NTSC FCB EX-1010
PROTOCOL	WPD 2400,N,1
>>PAN OFFSET PASS
>>TILT OFFSET PASS
>>CAMERA PASS
NORMAL SETTING WAIT

5.2 Main Menu

To get the OSD Menu, press keypad "1" and hold the "Menu" Key for approximately 3 seconds or "Press 95 + Preset" through the OSD Menu screen. It's available to check the camera operation status and set up various camera functions.

1 + or 95 +

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

** Move the joystick up and down to navigate through the menu items.



JOYSTICK

Push the NEAR key or move joystick to the right to select a menu item.



JOYSTICK



or

MOTION MENU	
PRESET	▶
TOUR	▼
SCAN	▼
PATTERN	▼
AREA	▼
ALARM	▼
PRIVACY	▼
BACK	EXIT
< NEAR / RIGHT → PRESET >	

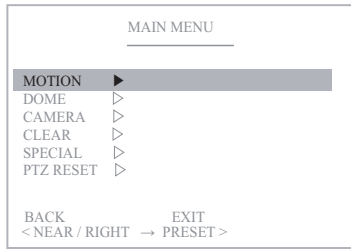
DOME MENU	
TITLE	: WTK
POWER UP ACTION	: ON
PARK ACTION	▼
DISPLAY ON/OFF	▼
SPEED BY ZOOM	▼
AUTO FLIP	▼
FACTORY SET	▼
SAVE	BACK
EXIT	EXIT
< NEAR / RIGHT → SELECT >	

CAMERA MENU	
ZOOM MODE	▶
FOCUS MODE	▼
WHITE BAL.	▼
AUTO EXP.	▼
SPECIAL	▼
CAMERA RESET	▼
SAVE	BACK
EXIT	EXIT
< NEAR / RIGHT ▶ ZOOM MODE >	

CLEAR	
PRESET	▶
TOUR	▼
SCAN	▼
PATTERN	▼
AREA	▼
ALARM	▼
PRIVACY	▼
BACK	EXIT
< NEAR / RIGHT → SELECT >	

5.3 Motion Setting

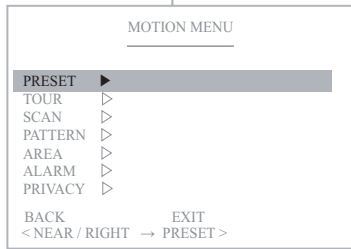
5.3.1 Preset



Preset Quick Operating Guide

Set Preset : #1~255 + 3sec.

Go to Preset : #1~255 +

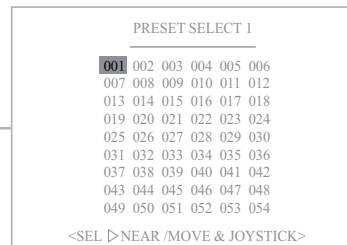
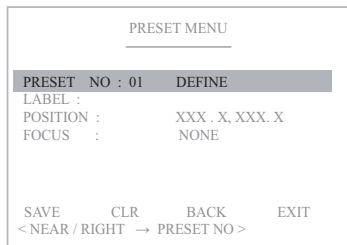


The Preset function is that the camera memorizes positions of the pan/tilt and zoom. This function is representative function of speed dome which can find memorized preset position just by selecting preset No. Maximum 255 Preset positions are toured in order.

(1) Select the Preset number

P01 : Defined Preset number / 01 : Undefined Preset number

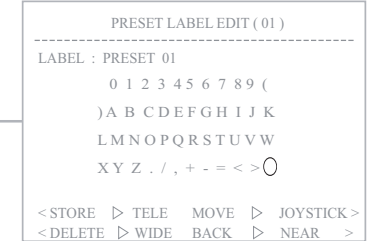
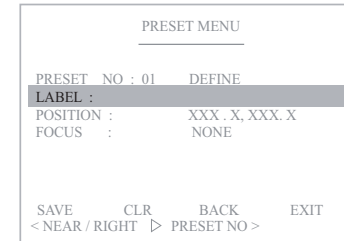
Move : Select :



(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.

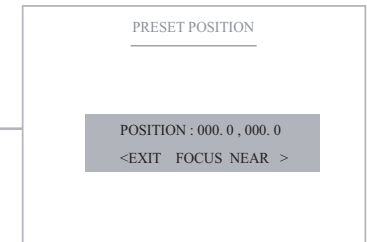
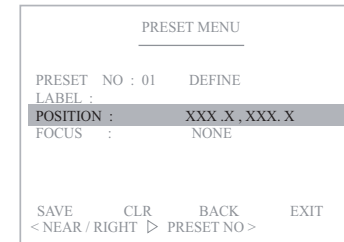


After the label set, push NEAR button to go out.

(3) Define the Preset position

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

or

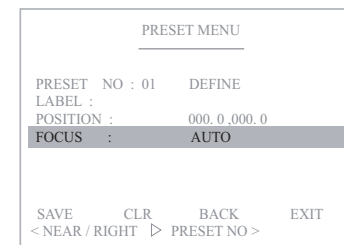


(4) Select the focus mode for Preset

- ① Select the Focus menu

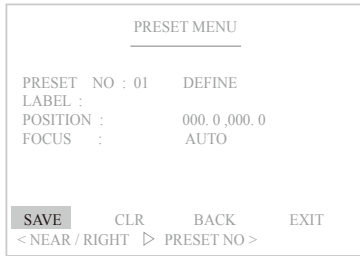
or

- ② Move and set the Focus Menu

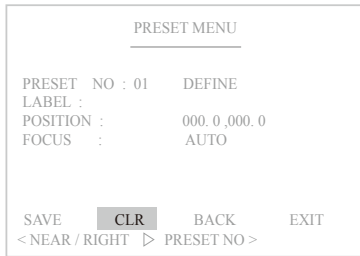


On focus menu, there are 4 mode : None, Auto, Manual, On Shot. It arrows detail setting for preset.

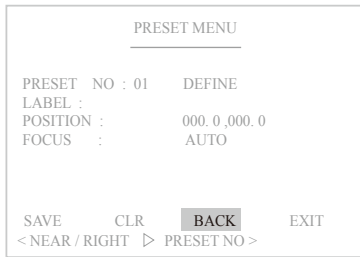
(5) "Save" above setting Preset data to the memory.



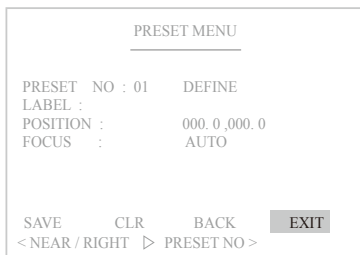
(6) "CLR" means above setting Preset data will not be saved and be cleared.



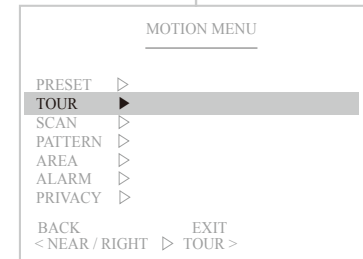
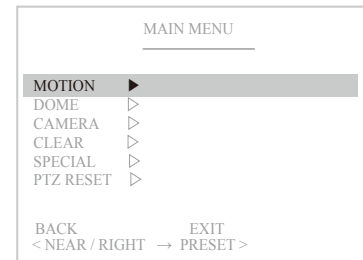
(7) "BACK" means it goes back to the previous menu :Motion.



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



5.3.2 Tour



Tour Quick Operating Guide

Programming : #71~78 + 3sec.

Operating : #71~78 +

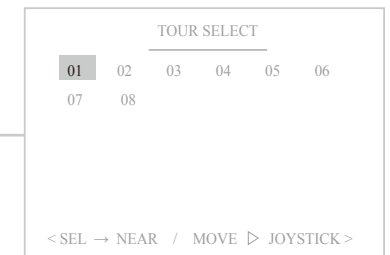
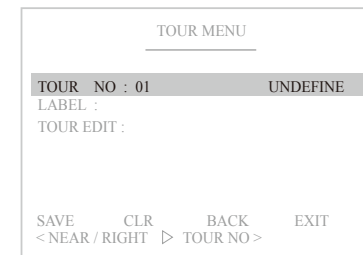
The Tour function consists of several presets run by turn. It is also adjustable the moving speed (1~63 step) and dwell time (1~99sec). Maximum 8 Tour functions are toured in order.

(※ 1 Tour can be set 15 presets.)

(1) Select the Tour number

T01 : Defined Tour number / 01 : Undefined Tour number

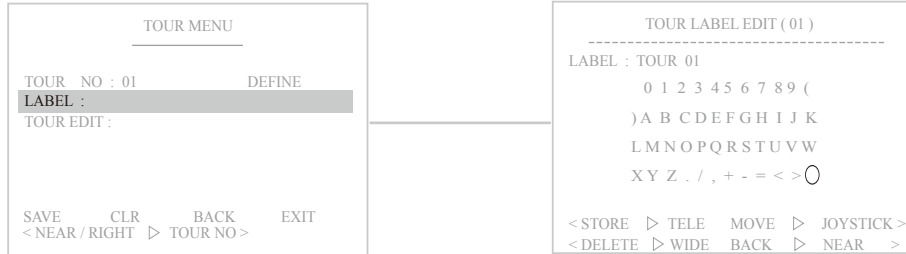
Move : Select :



(2) Set the Tour Label

Move : JOYSTICK Select : or JOYSTICK Delete : or JOYSTICK

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

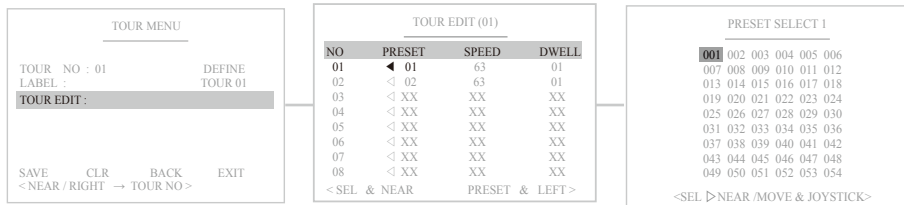


After the label set, push NEAR button to go out.

(3) Define the Preset position

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

or JOYSTICK JOYSTICK



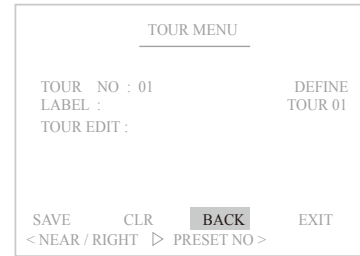
(4) Save above setting Tour data to the memory



(5) "CLR" means above setting Tour 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.



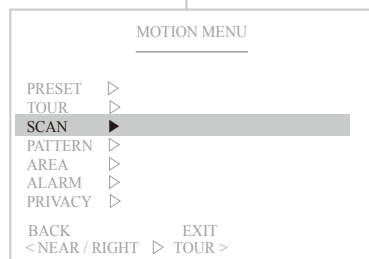
5.3.3 Scan



Scan Quick Operating Guide

Programming : #81~88 + 3sec.

Operating : #81~88 +

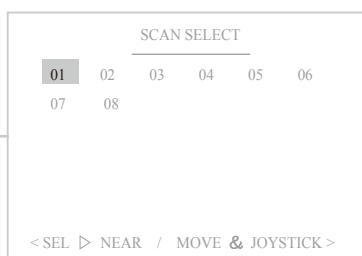
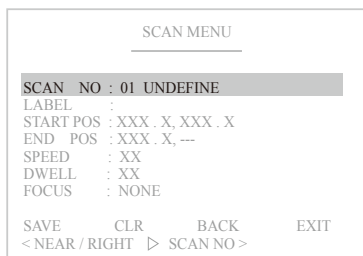


The Scan function is that the camera keeps panning between programmed two pan positions. And it is also adjustable moving speed(1~63 step). Maximum 8 Scan functions are toured in order.

(1) Select the Scan number

S01 : Defined Scan number / 01 : Undefined Scan number

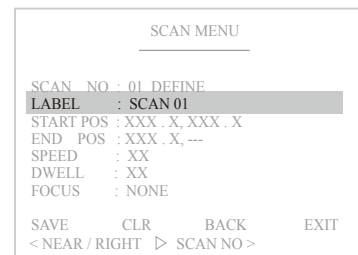
Move : Select :



(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.

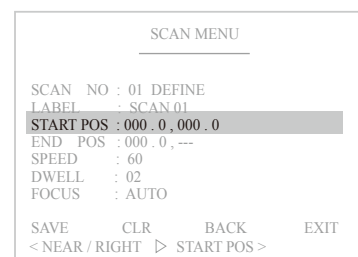


After the label set, push NEAR button to go out.

(3) Define the Start pan position

- ① Select Start Pos menu
- ② Move and set the position
- ③ Go back

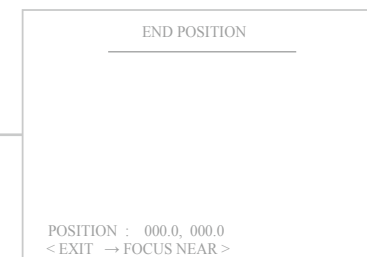
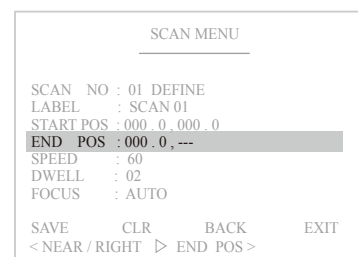
or



(4) Define the End pan position

- ① Select End Pos menu
- ② Move and set the position
- ③ Go back

or

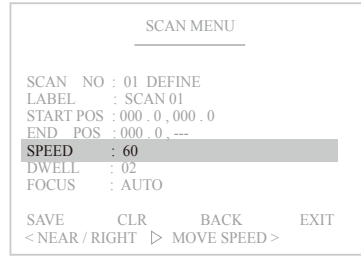


(5) Set the Scan speed

Increase :  or 

Decrease :  or 

It's adjustable the moving speed 1~63 steps.

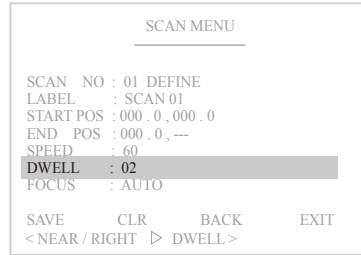


(6) Set the Dwell Time

Increase :  or 

Decrease :  or 

Dwell time means the time that camera stay at the start & end pan positions.
It's adjustable from 1~99 seconds.



(7) Set the Focus

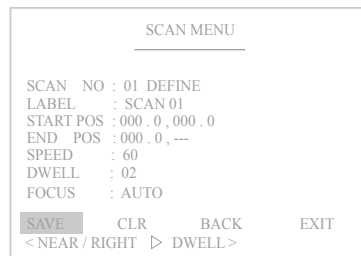
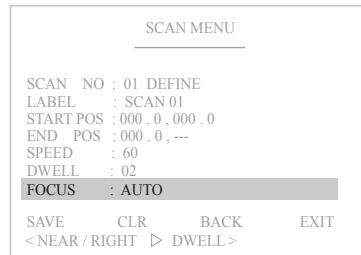
Focus can be set Auto or Manual.

(8) Save above setting Scan data to the memory.

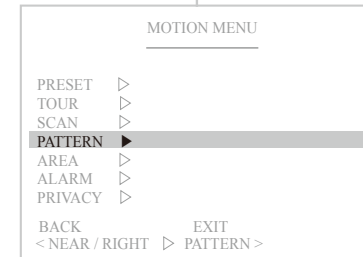
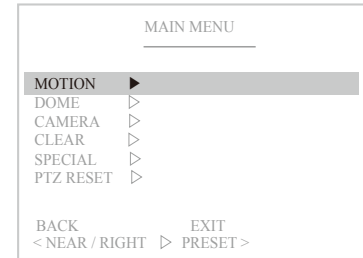
(9) "CLR" means above setting Scan data will not be saved and be cleared.

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


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




5.3.4 Pattern



Tour Quick Operating Guide

Programming : #91~94 +  3sec.

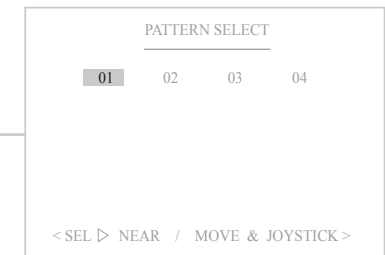
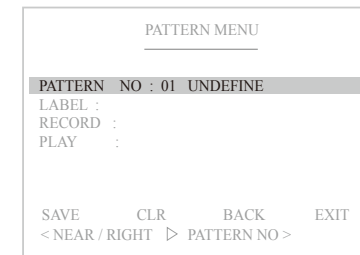
Operating : #91~94 + 

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

(1) Select the Pattern number

PAT01 : Defined Pattern number / 01 : Undefined Pattern number

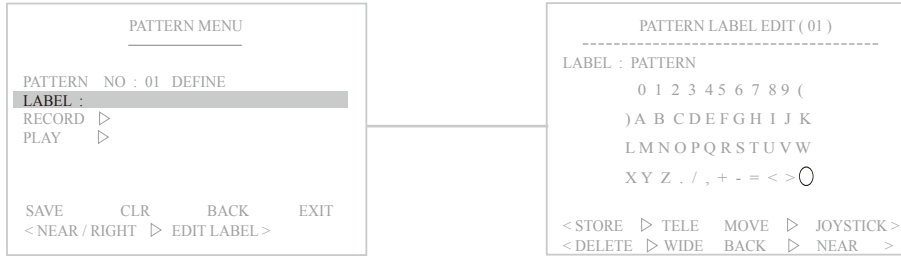
Move :  Select : 



(2) Set the Pattern Label

Move :  Select :  or  Delete :  or 

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

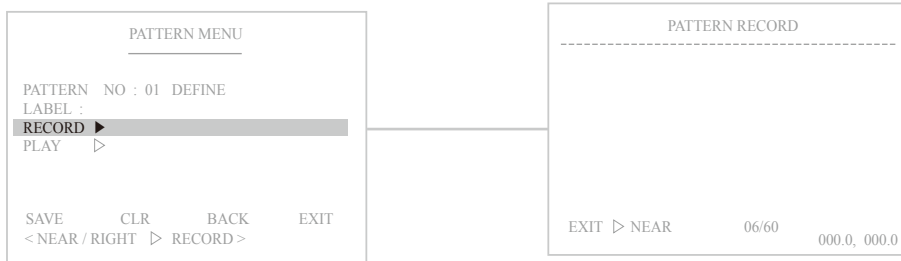


After the label set, push NEAR button to go out.

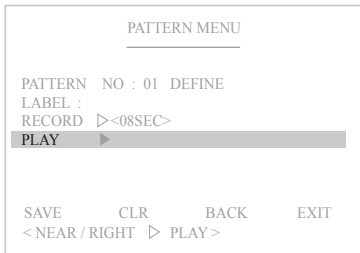
(3) Record and Save the User's random Pattern data

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

 or   



(4) Play back the recorded Pattern data

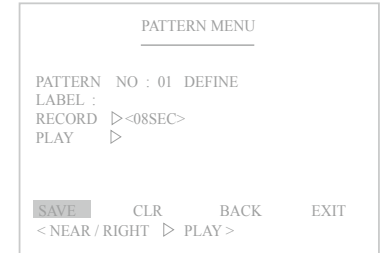


(5) "Save" above setting Pattern data to the memory.

(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



5.3.5 Area

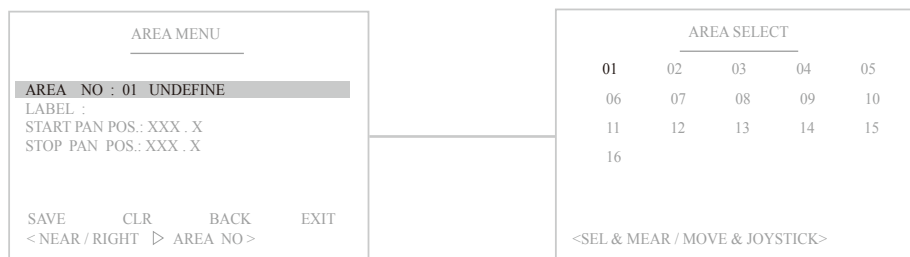


The Area function is that display the Area name between two programmed pan positions. Maximum 16 Area functions are toured in order.

(1) Select the Area number

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

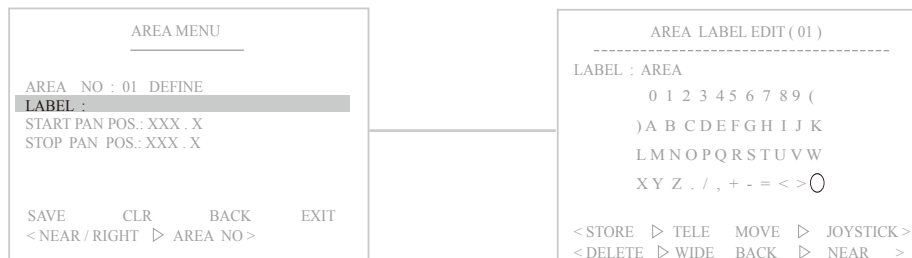
Move : Select :



(2) Set the Area Label

Move : Select : or Delete : or

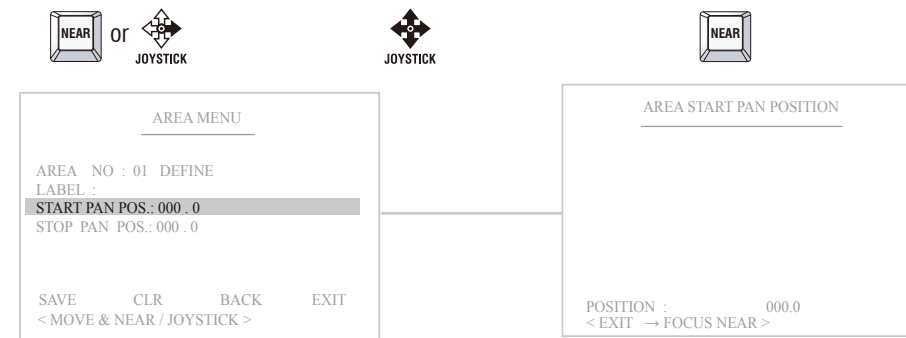
It's available to set the desired label, displayed on the executing screen of Area.



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

(3) Define the Start pan position

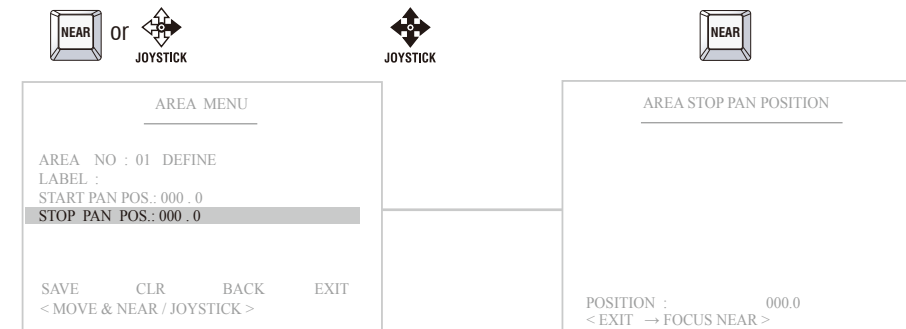
- ① Select the "Start Pan Pos" menu
- ② Move and set the position
- ③ Set & Back



※ 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



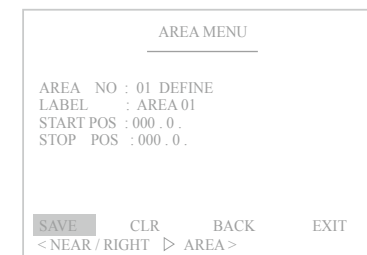
** Only pan position is adjustable, because tilt position is fixed when "Start Pan Position" is set.

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

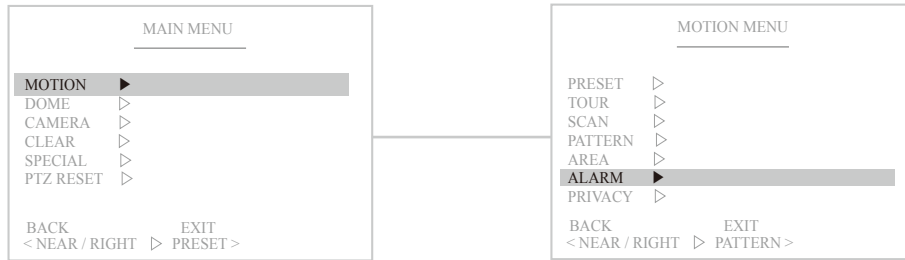
(6) "CLR" means above setting Area data will not be saved and be cleared.

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

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



5.3.6 Alarm

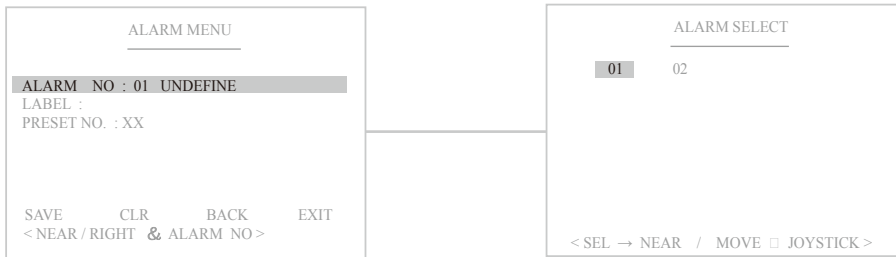


The Alarm function is that the camera moves to the programmed Preset position by Alarm trigger. Maximum 2 Alarm functions are toured in order.

(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 set, push NEAR button to go out.

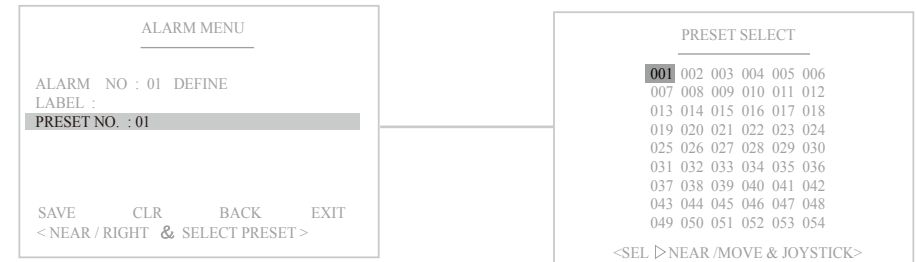
(3) Define the Preset position with Alarm trigger

① Select the "Preset No"

② Move and set the position

③ Set & Back

or

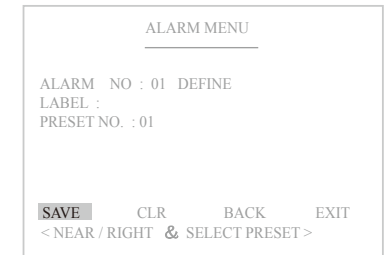


(4) "Save" above setting Alarm data to the memory.

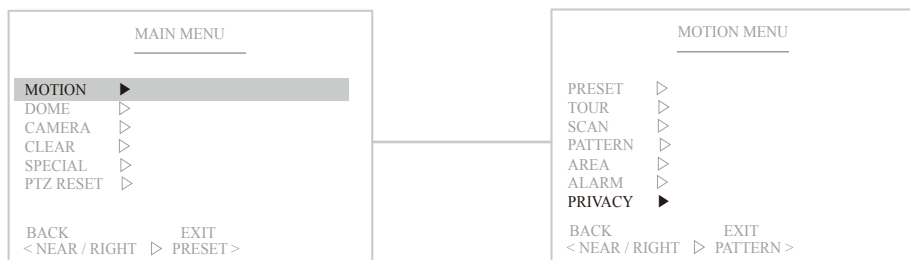
(5) "CLR" means above setting Alarm data will not be saved and be cleared.

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

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



5.3.7 Privacy Zone Masking

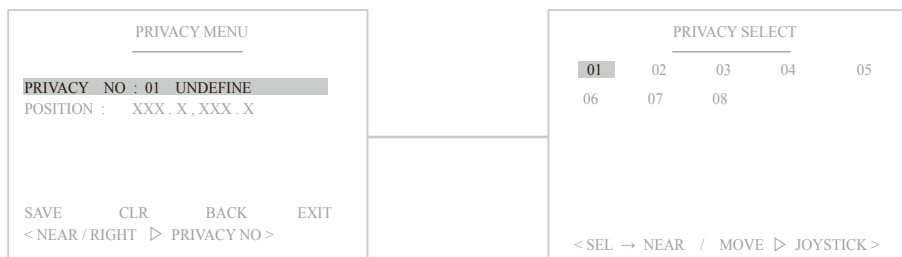


The Privacy Zone Masking function is that set the blocking territories to prevent to watch for the privacy of personal. Maximum 8 Privacy Zone Masking functions are toured in order.

(1) Select the Privacy Zone number

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

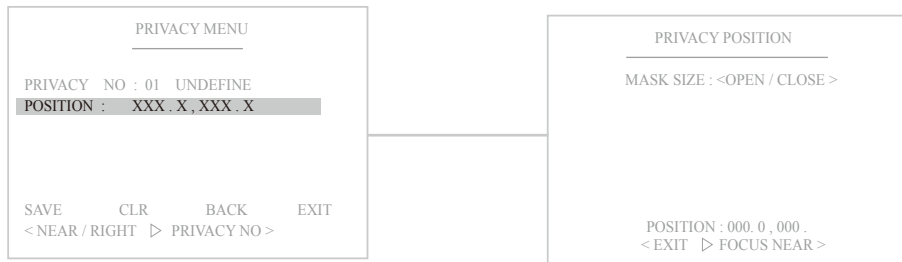
Move :  Select : 



(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.



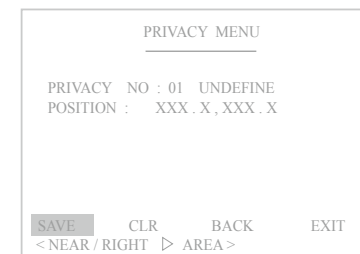
After the Pravity Zone set, push NEAR button to go out.

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

(6) "CLR" means above setting Privacy Zone 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



5.4 Dome Setting

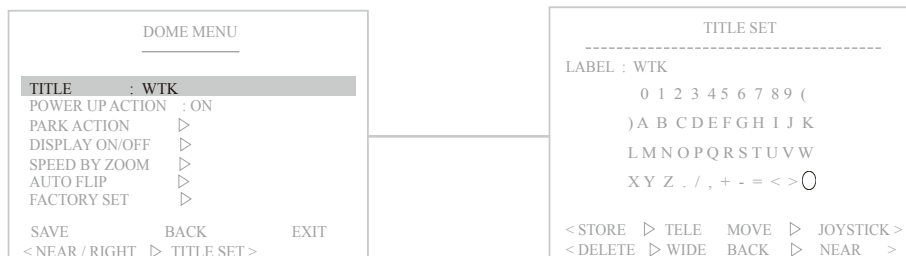


Pan, Tilt, Zoom motion is adjustable in the “Dome Setting” Menu.

5.4.1 Set the Dome camera title

Move : Select : or Delete : or

It's available to set the desired camera title.



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

5.4.2 Set the Power Up Action

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

select : or Set ON : Set OFF :

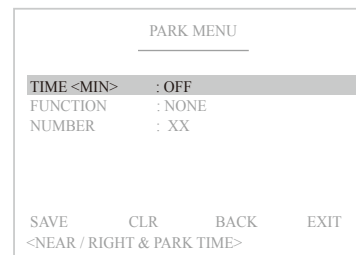


5.4.3 PARK ACTION

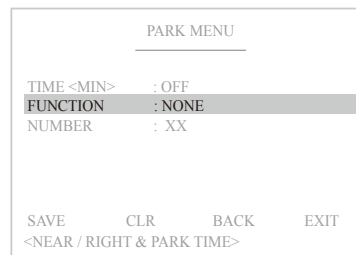
Park Action is the function that the camera move back to the programmed Auto Function after the set time.



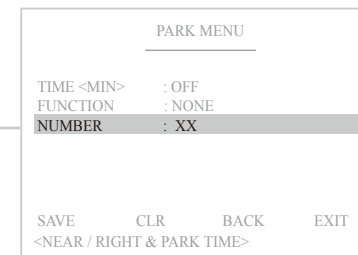
(1) Set the park Time (OFF, 01~60 min)



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



(3) Select the appointed function's Number

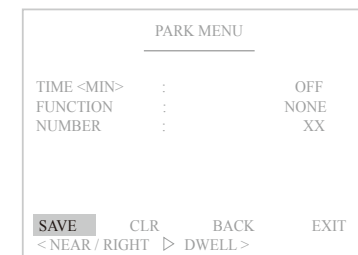


(4) “Save” above setting data to the memory.

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

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

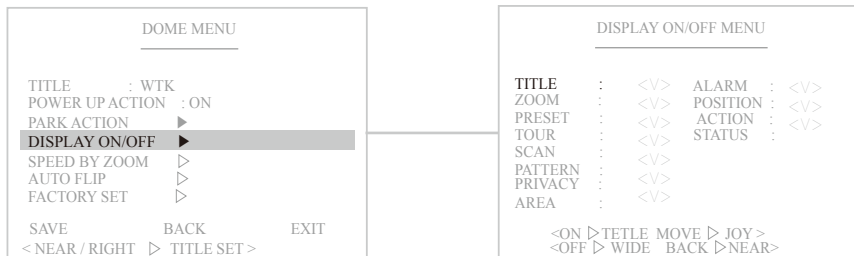
(7) “EXIT” means it goes out of MENU



5. 4. 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. 4. 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. 4. 6 Auto Flip ON/OFF Set

The tilt angle is extended to 90° when this function is ON.

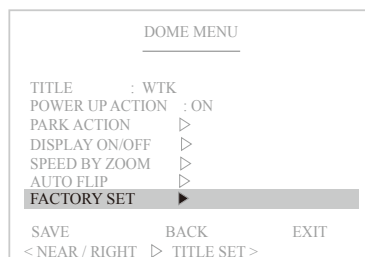
select :  or  Set ON :  Set OFF : 



5. 4. 7 Factory Set

Restore all of setting value to the factory default.

 All of existing setting value is erased.



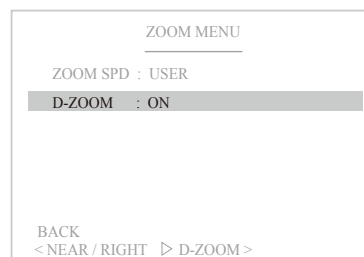
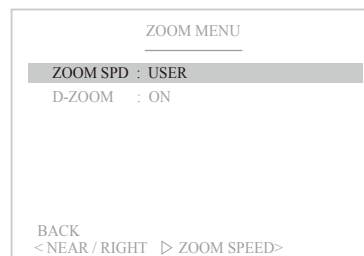
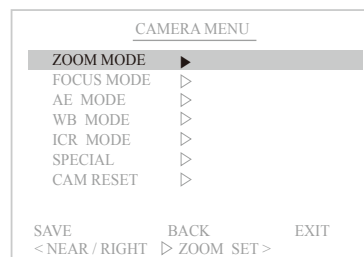
5. 5 Camera Setting

Most of camera functions like zoom, focus, distance, color and brightness can be set in the menu.







5. 5. 1 ZOOM MODE





Zoom speed can be set and decided using of digital zoom function.



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

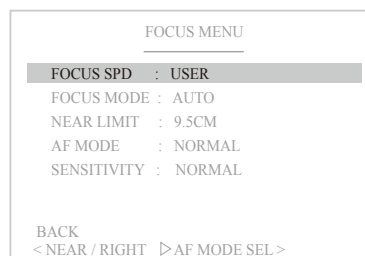
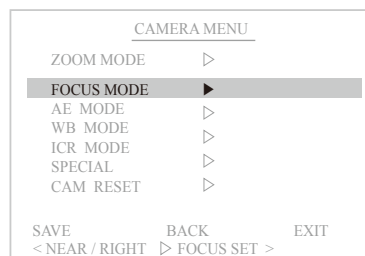
select :  or  Set ON :  Set OFF : 

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

select :  or  Set ON :  Set OFF : 

5. 5. 2 Focus Mode

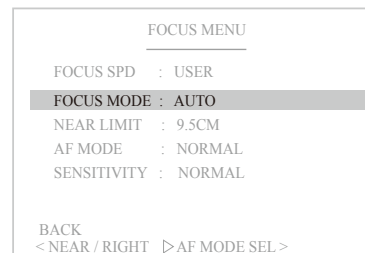
Set the camera focus mode.



Set the speed for camera focusing.

select : or Set ON :

Set OFF :



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.

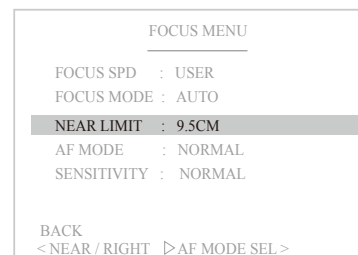
One Push: It will be focused in about 5 seconds after zooming, panning, and return to MANUAL mode automatically. This is for focusing accurately after zooming.

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

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 :

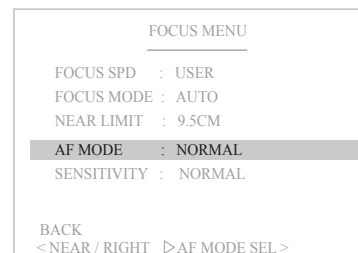
Set OFF :



Set the focus distance.

select : or Set ON :

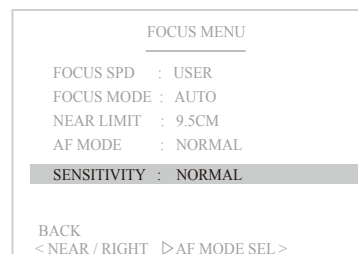
Set OFF :



AF MODE: Set the auto focus mode

select : or Set ON :

Set OFF :



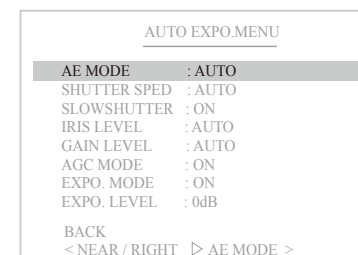
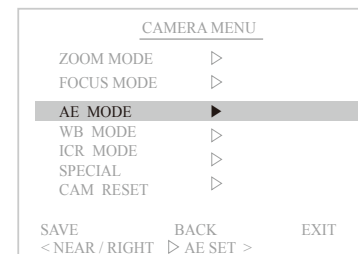
SENSITIVITY: Set the sensitivity of focus

select : or Set ON :

Set OFF :

5. 5. 3 AUTO EXPOSURE

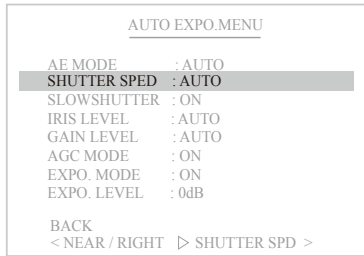
AE setting is a function adjusting shutter speed according to subject's brightness to get standard amount of exposed light.



Select AUTO, MANUAL, SHUTTER and IRIS .

select : or Set ON :

Set OFF :

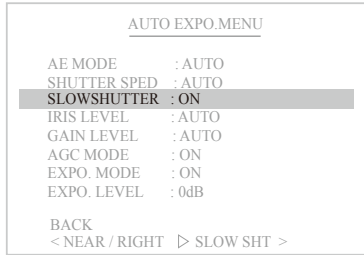


If you set SHUTTER in the AE MODE, you can control image brightness by adjusting shutter speed.

Set from 1/5, 1/30, 1/60, 1/90, 1/100, 1/130, 1/250, 1/500, 1/900, 1/1500, 1/2000, 1/5000, 1/10000, 1/20000, 1/50000, 1/100000, X513 , X128, X64, X32, X16, X8)

select : or Set ON :

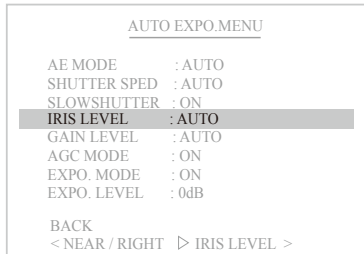
Set OFF :



Select ON/ OFF.

select : or Set ON :

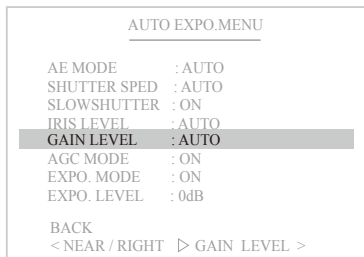
Set OFF :



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

select : or Set ON :

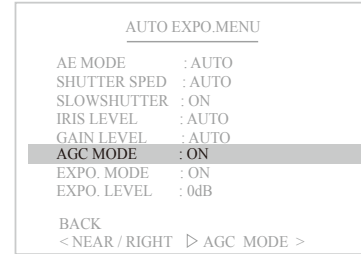
Set OFF :



If you set MANUAL, IRIS and SHUTTER in the AE MODE, you can set the GAIN for brighter image from 0~30dB. (Changable by 2dB)

select : or Set ON :

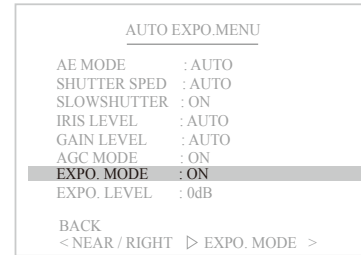
Set OFF :



Select ON/ OFF in AGC MODE.

select : or Set ON :

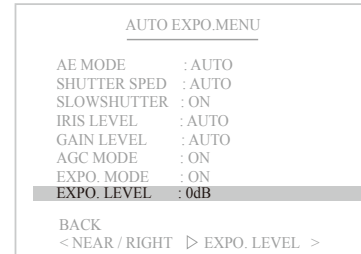
Set OFF :



Select AUTO or Manual.

select : or Set ON :

Set OFF :



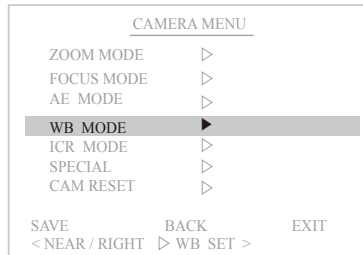
If you set ON in the EXPO MODE, you can control this level. ("0" is standard (±10.5 selectable), changed by 1.5dB)

select : or Set ON :

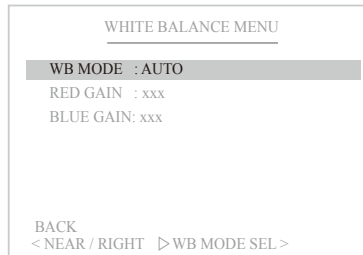
Set OFF :

5. 5. 4 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.

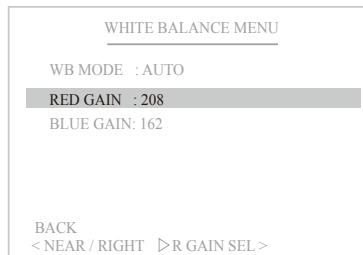


WB MODE: Set the color depend on white balacne.

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

select : or Set ON :

Set OFF :



RED GAIN: Adjust red color level from 0~255. (Standard level is 025)

BLUE GAIN: Adjust blue color level from 0~255. (Standard level is 025)

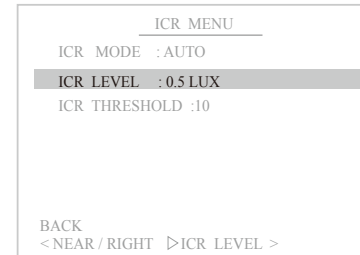
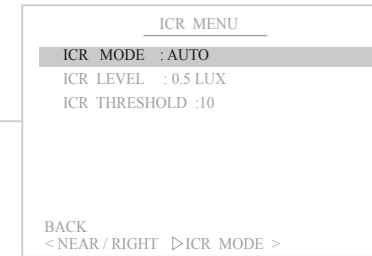
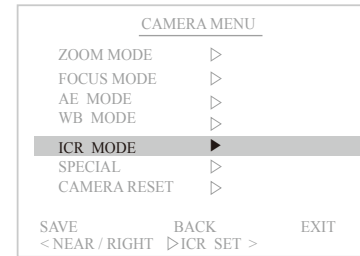
select : or Set ON :

Set OFF :

5. 5. 5 ICR MODE

Set the LED operating depend on IRC Mode.

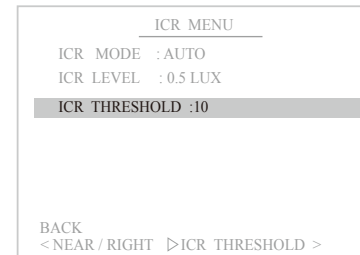
Select AUTO, DAY and NIGHT mode and the LED will be operated depend on this mode.



Set the ICR LEVEL from 0.5 to 20 LUX.

select : or Set ON :

Set OFF :



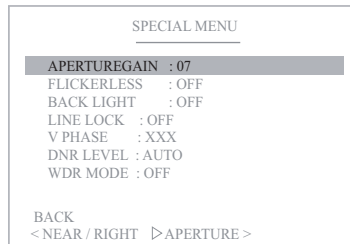
Set the ICR THRESHOLD from 00 to 28 LUX.

select : or Set ON :

Set OFF :


5.5.5 Special

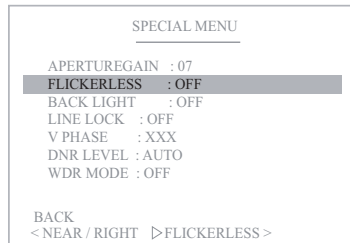
In the Special menu, it's available to set APERTUREGAIN, BACK LIGHT, DAY&NIGHT MODE, DAY&NIGHT LEVEL and WDR.



Set the APERTUREGAIN value .


select :  or  Set ON : 

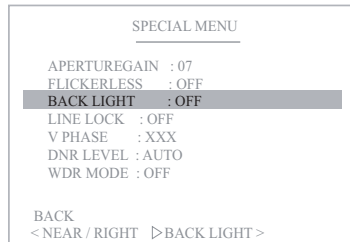
Set OFF : 



Select ON/OFF in the FLICKERLESS function.


select :  or  Set ON : 

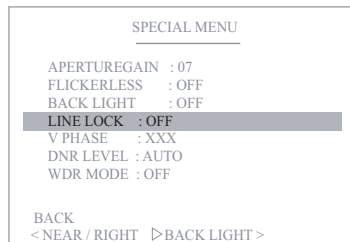
Set OFF : 



Select ON/OFF in the BACK LIGHT function.


select :  or  Set ON : 

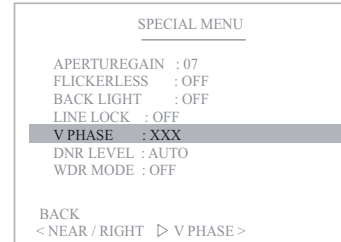
Set OFF : 



Select ON/OFF menu and set the illumination value by using joystick.


select :  or  Set ON : 

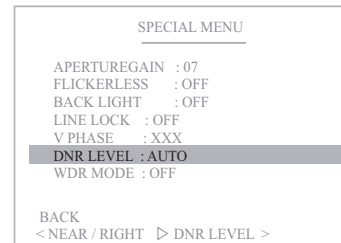
Set OFF : 



If you set ON in the LINE LOCK menu, you can set the V PHASE.


select :  or  Set ON : 

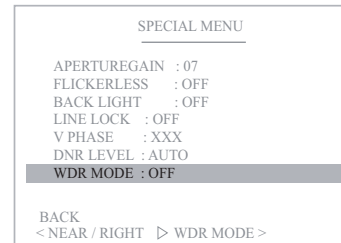
Set OFF : 



Set the DNR LEVEL from AUTO, OFF and 1 ~ 10.


select :  or  Set ON : 

Set OFF : 



Set the WDR MODE from OFF, LEV1 ~LEV7.

select :  or  Set ON : 

Set OFF : 

5.5.6 CAMERA RESET

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



Move :  Select : 

5.6 Clear Setting

Make initialize the PTZ position and function value. With this function the camera keep the accuracy of the PTZ position value.



select : or Set ON :

Set OFF :

5.7 SPECIAL SETTING

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



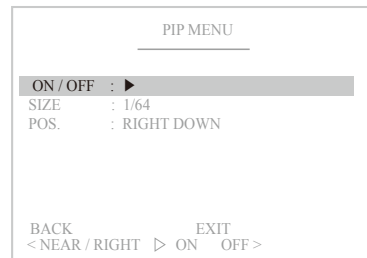
5.7.1 PIP SETTING

Set the sub camera menu.

Select ON/ OFF to using PIP function.

select : or Set ON :

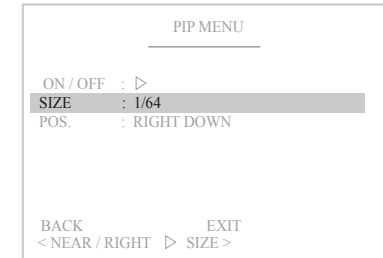
Set Off :



Set the size of sub camera.
(1/4 , 1/9 , 1/16 , 1/32 , 1/64)

select : or Set ON :

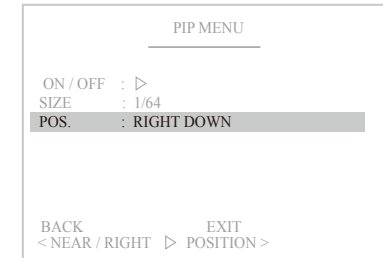
Set OFF :



Set the position of sub camera.

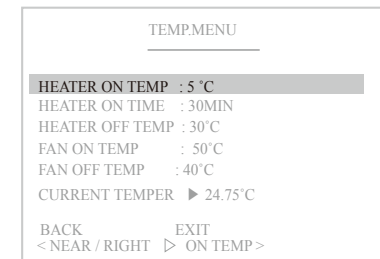
select : or Set ON :

Set OFF :



5.7.2 TEMPERATURE SETTING

Set the operating temperture of Fan&Heater in the camera.



It shows you the current temperatuer and also can be set the value manually. The compulsory Fan & Heater operating is useful function to remove the humidity. (Select the operating time of Heater from 10 to 60 min.)

select : or Set ON :

Set OFF :

5. 7. 3 WIPER SETTING

Set the wiper function of the camera.



Select ON / OFF to using wiper function.

select : or Set ON :

Set OFF :

5. 7. 4 LIGHT MODE SETTING

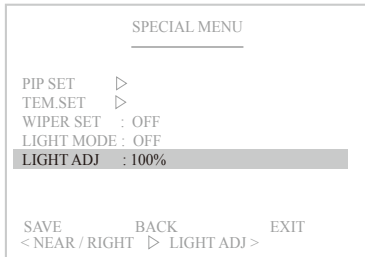


Select ON / OFF to using light function.

select : or Set ON :

Set OFF :

5. 7. 5 LIGHT ADJUSTMENT



Adjust light value.

select : or Set ON :

Set OFF :

5. 8 PTZ Reset

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



5. 9 Other Quick Operating Guide

- 240 + set preset (3sec) = night mode
- 241 + set preset (3sec) = day mode
- 242 + set preset (3sec) = auto mode
- 244 + set preset (3sec) = wiper on
- 245 + set preset (3sec) = wiper off
- 246 + set preset (3sec) = heater on
- 247 + set preset (3sec) = heater off
- 250 + set preset (3sec) = camera reset
- 251 + set preset (3sec) = camera refresh
- 252 + set preset (3sec) = IR on (dip s/w in IR LED mode)
- 253 + set preset (3sec) = IR off (dip s/w in IR LED led mode)
- 255 + set preset (3sec) = ptz info

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, ± 0.1° Accuracy
Tilt	: -90° to 90° tilt angle
Tilt Preset Speed	: Max.150°/sec, ± 0.1° 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	: -20°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
Display	: 4 Area Titles
Alarm	: 2 alarms
Flip	: Digital Flip On/Off
Address	: Up to 255 selectable ID (setting with Dip-switches)
Data Communication Control	: RS-485/ RS-422
Protocol	: Multiple Protocol (PELCO-D/P, EZ)
Baud rate	: 2400, 4800, 9600, 19200, 38400, 57600 bps selectable

5.1.4 ELECTRICAL

Power	: DC 11.5V~DC 30V Power adaptor included
Consumption	: Operating(3A), Max(4.0A, IR light on, Heater on)
Fan & Heater	: 10W / 3.4W

5.1.5 CERTIFICATIONS

CE EMC, FCC CLASS A, RoHS, e-Mark

6.2 Camera Specifications

6.2.1 Zoom Camera

Model	NTSC	PAL
Image Sensor	1/4" SONY Super HAD II (Double Scan) CCD	
Total Pixels	1028(H)x508(V)	1028(H)x596(V)
Lens	36x f=3.4 to 122.4mm(F1.6 to 4.5)	
Digital Zoom	ON/OFF(Max. 32x)	
Angle Field of View	H : 57.8° (wide) to 1.7° (tele)	
Scanning System	2:1 Internal	
Synchronization	Internal	
Frequency	NTSC: 15.734 Khz(H), 59.94 Hz(V) PAL: 15.625 Khz(H), 50.00 Hz(V)	
Resolution	650 TV lines (Color) / 750TV lines (B/W)	
Min. Illumination	Color :0.5lux , BW: 0.2lux Color DSS: 0.001lux, BW DSS: 0.0004lux	
S/N (Y signal)	More than 50 dB (AGC off)	
Video Output	CVBS : 1.0Vp-p/75Ω	
Focus	Auto / Zoom-Tring / Manual	
Image DNR	Off / Manual / Auto	
Display	Disp Sel / Init Sel / Set Title / Set Init Msg / Language	
Day & Night	Auto / Sens-in / Ext / Day / Night	
Gain Control	Off / On (Auto Max 30dB)	
White Balance	ATW / One-Push / Indoor / Outdoor / Manual / Auto	
WDR / BLC	Off / WDR / BLC	
Shutter Speed	1/60~1/100,000 sec	1/50 ~ 1/ 100,000sec

6. 2. 2 Fixed Camera

Model	PAL	NTSC
Total/Effective Pixels	470K/440K Pixels	410K/380K Pixels
Pick-up Device	1/3" Interline HAD CCD	
Lens	2.8~11mm	
Iris	DC/ELC Selectable	
Scanning System	2:1 Interlace	
Synchronization	Internal/Line Lock	
System Scanning	50 Hz(VD)	59.94 Hz(VD)
Frequency Reslution	600 TV Lines	
S/N Ratio	Morethan 52 dB(AGC Off, F1.0)	
Minimum illumination	0.0002Lux (0.1Lux :Sense-up Off)	
Video Output Signal	1.0 Vp-p Composite Signal (75Ω)	
Auto Gain Control	OFF/LOW/MIDDLE/HIGH	
Exposure	ALC/ELC	
Elctric shtter	1/50~1/90,000 (Auto Mode)	1/60~1/90,000 (Auto Mode)
White Balabce	ATW/AWC->PUSH/MANUAL	
Back Light	OFF/WDR/BLC/HSBLC	
ELS	ON/OFF	
WDR	60dB	
MOTION DET.	ON/OFF	

6. 2. 3 Fixed Camera

	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)

