

User Manual

Notice: Read this Manual carefully before installation and keep it for future reference.

PTW-983IR Outdoor 23X Optical Zoom Long Range Day / Night IR PTZ Dome Camera



Precautions:

1. Non-technician is forbidden to operate this dome device before reading this manual thoroughly.
2. Cut the power supply off before operating the dome device to avoid damage caused by improper operation.
3. Interior of the dome device are precision optical and electrical device. Heavy pressure, shock and other incorrect operations should be prevented. Otherwise, may cause damage on product.
4. Please do not remove and disassemble any internal parts of dome video camera by self in order to avoid normal usage being impacted. There is no part inside the device, which can be repaired by users themselves.
5. All the wiring of the dome device should be conducted strictly according to the wiring instruction. When necessary, thunder-proof, surge-proof and other protecting measures should be carried out.
6. Please do not use the product under the situations of exceeding specified temperature, humidity or power supply specifications.

Chapter 1 Product Overview

1.1 Performance Instructions

1. Address of dome device is from 0~255. The number (address) of dome device in the control system is setup by the hardware (8-digit on and off switch) of dome device.
2. Integrated multi-protocol and auto protocol differentiation. Note: The dome device only auto differentiate controller of the first communication.
3. Pan 360 degree continuous scanning.
4. Tilt 90 degree action plus 2 degree angle adjustment. Plus the 2 degree adjustment, the view angle can be 90 or 92 degree.
5. Pan manual operation speed can be 0.1 to 150 degree per second.
6. Tilt manual operation speed can be 0.1 to 55 degree per second.
7. 128 pre shot positions(A fixed position that aimed by the dome camera, which can be set and revised by user arbitrarily)
8. The maximum running speed when pre shot is being called can reach 240 degree per second with accuracy of ±0.1 degree.
9. Power supply: AC 24V / 3A.
10. Easy installation interface.
11. Pass environmental protection grade IP66 (outdoor type).
12. Adopts long distance RS-485 transmission mode.
13. Transmission speed, i.e. Baudrate is selectable. Get by the sixth and seventh bit of the on and off switch of the dome device. 2400bps~19200bps

1.2 Feature Functions Instruction

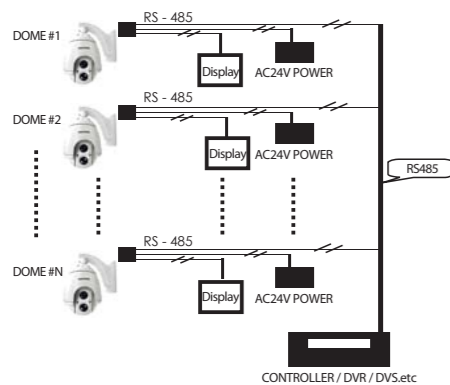
1. English and Chinese operation menu and function display.
2. Camera name and operation position and angle display. (The name of the camera can be edited and the coordinate angle of the dome device can be displayed on the screen.)
3. Operation crosshair function. (Enable this option, the target can be captured more effectively with crosshair on the screen.)
4. Three PTZ tours operation with 8 minutes record of each tour. (Can real-time monitor and record the action of manual operation)
5. Six group of programmable vector scans, including scan speed, dwell time, pre shot and interruption between tours
6. Auto flip function with 10 degree move up.
7. 24 sectors of programmable sectional mask. (Can mask part of the sectors of camera, which differs depending on different types of camera)
8. 8 sectors of programmable sectional display. (Can display the name and nature of concrete position shooting by the camera)
9. Auto enter function running after self-test of the dome device and auto enter function running when there is no transmission. (Dwell time can be set from 5 to 999 seconds)
10. Freeze video picture function. (frozen picture function)
11. Operation return function. (after executing operation return, the dome device will return to the previous operation)
12. Intelligent manual scan function. (execute this function in manual pan operation, you can adjust the manual pan operation)
13. Intelligent power off real time memory. (If power is cut off when a certain function is in operation, the dome device can resume working at where the power is cut off.)
14. High efficient 3-dimension scan.
15. Camera zoom in speed limit function. (When it is zooming in, the speed of the dome device will auto slow down.)
16. Remote setting of dome address.
17. Utilizes the world's most advanced high-power infrared LED technology.
 - a. Infrared LEDs have a high energy-conversion efficiency, low heat, long life, low power consumption of less than 5 watts, overcoming the LED limitation of fading.
 - b. Variable angle infrared LEDs were developed utilizing its single point high power characteristic to act as a spot light source. Angle will be adjusted according to the change in camera angle. This ensures that no infrared light is wasted and eliminates torch effect to maximize the utilization of infrared lights, overcoming the tradition of the need to use large infrared LEDs of higher power consumption for long distances.

Chapter 2 Basic Configuration

2.1 Integrated Connection of Multiple Dome

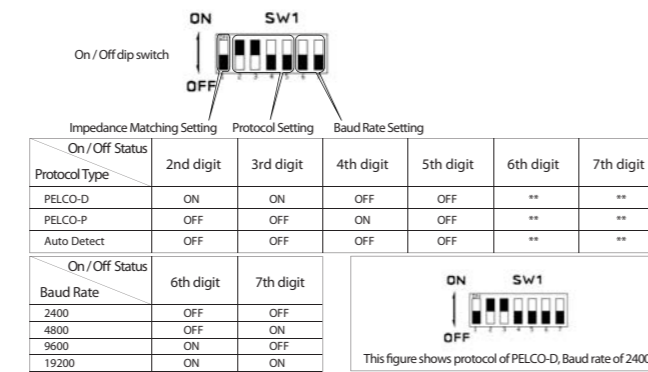
- When system connection for multiple domes is performed, lightning arresters, video matrix, DVR video recorder, alarm, and other additional devices can be embedded as per user's actual situation, to realize system integration.
- AC24V Power supply of dome (power supply of 110V / 60HZ or 220V/50HZ input converted to 24V AC output)
- RS-485bus: The output of control signal (RS-485 signals) from the controller connected to the corresponding input of the dome
- Video: The video output signal of dome (1Vp-p75 ohm)
(The output signal can be directly connected to video device such as display terminals or video matrix. Take the caution in the impedance matching)

Wiring Diagram for multiple domes:



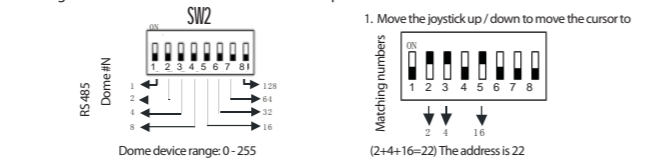
2.2 Setting Protocol and Baud Rate of Dome Device

Before installation and use, the unique address for each dome and the communication protocol including transmission speed (baud rate) should be set to correspond with the chosen control system. The dome must be power cycled after each change.

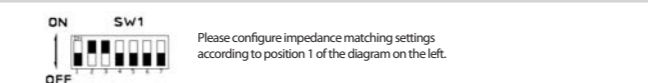


2.3 Setting Dome Device Address

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



2.4 Impedance Matching Setting



2.5 Camera Installation

(Please refer to the section on Camera Installation for more details on this operation)

1. Make sure the proper connection of flat flex ribbon that connects the camera module to the dome device.
2. Different camera models may have different secured positions of the hole.

2.6 Startup the Power Supply of the Dome Device

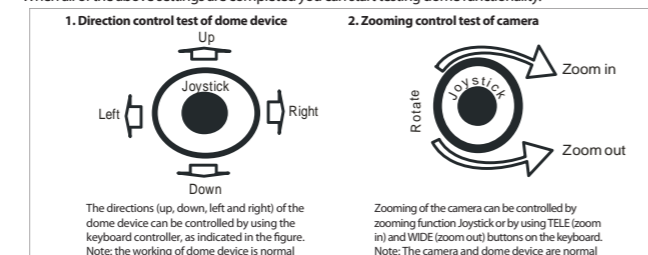
Self-detecting of the dome device (rotating) and the camera (displaying dome info) starts when startup the power supply. Note: The dome device will firstly make tilt action for around 3-5 seconds when start self-detecting, then be blocked and make a "click" sound that is normal as the dome is performing vertical positioning.

2.7 Controller Setting

Set the protocol, baud rate, and address of the keyboard controller to match the settings on the dome. (For instructions of how to set the keyboard communication settings please refer to keyboard controller manual). Attention: If the protocol setting of the dome is set to auto detection, the protocol of keyboard controller can be set arbitrarily. But its baud rate should be set identical with that of the dome device.

2.8 Start Testing

When all of the above settings are completed you can start testing dome functionality.



2.9 Complete the Test (Summary)

If you have achieved control of the dome device as described in section 2.7 above, the system is basically normal. Do not change the wiring or the applied settings to prevent from failure and loss. If the dome does not respond to the command or only partial functionality is achieved, verify the wiring connections (section 2.1 and 2.4) and communication setting (section 2.2, 2.3 and 2.6) carefully.

Chapter 3 Menu Setting

3.1 Operation Instructions

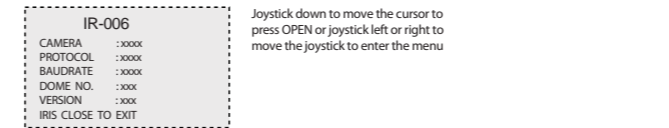
Menu operation instruction
To make a selection, move the joystick in the Up or Down direction. The on-screen arrow points to the selected option. Using the joystick to the Left or Right position you can change the value of your selection or enter the submenu for the selected option. Press the button CLOSE on the keyboard controller to exit the menu or return to the previous menu(one layer up)
Number setup:
1. Joystick Left or Right when programming to select preset.
2. Press OPEN to confirm, open and display the number selection cursor
3. Joystick Left or Right to select the number to be entered
4. Press OPEN to confirm selection. The selected number is displayed on the corresponding data bit.
5. Number of respective data bits are input as above.
6. Press CLOSE to exit or return to the previous menu level when programming is done.

3.2 Main Menu

95+SHOT+ACK to enter the main menu of the dome as illustrated down

- 1. **Language Setup**
Language: English and Chinese.
- 2. **Dome Information**
Joystick down to move the cursor to press OPEN or joystick left or right to move the joystick to enter the menu.
- 3. **Display Options**
Display dome info or function.
- 4. **Control Options**
Set the pan or tilt of the dome manually or auto compatible with the entire control system. User individualized operation setting.
- 5. **Camera Options**
Set camera function.
- 6. **Function Programming**
Program and execute PTZ and Vector Scan etc.
- 7. **SYSTEM SETUP**
System setup, including restore defaulter setup, clear memory, color system, dome reset

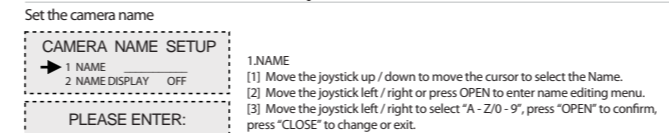
3.3 Dome information



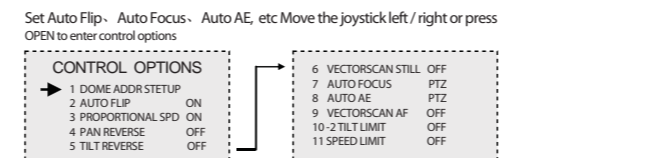
3.4 Display Options

- Set the display of dome info or function
- 1. CAMERA NAME SETUP
 - 2. COORDINATES ON
 - 3. START_UP_SCR MSG ON
 - 4. CROSSHAIRS ON
- Operation steps:
1. Joystick up / down to move the cursor to select Display Options
2. Joystick left / right to enter Display Option
3. Joystick up / down to select either one of the sub-menu
4. Joystick left / right to select ON / OFF

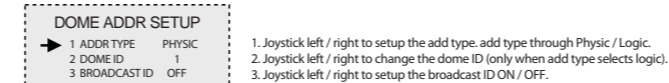
3.4.1 Camera Name Setup



3.5 Control Options



3.5.1 Dome Add Setup

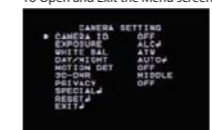


3.5.2 Control Option Operation

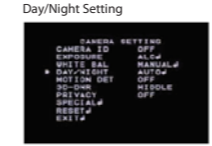
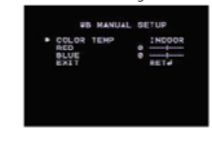
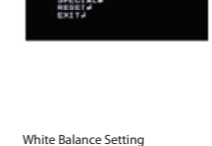
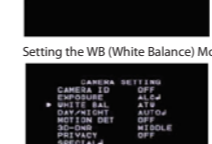
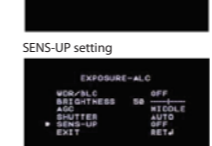
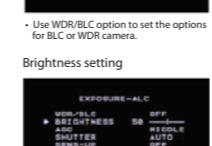
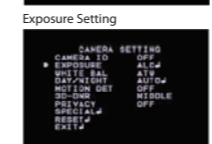
- Move the cursor to select Auto Flip / Proportional Speed / Pan Reverse / Tilt Reverse / Vector Scan AF / +2 Tilt Limit / Speed Limit. Move the joystick left / right or press OPEN to Display on / off / PTZ / Z / OFF
1. Auto Flip: If the camera lens auto rotates pan 180° then tilt 10° to auto track forward when the lens goes down tilt 90°.
 2. Auto AE: If the camera AE when the dome device changes its pan or tilt or zoom.
 3. Vector Scan AF: If the camera AF when vector scan is running.
 4. Speed Limit: the moving speed of dome device matching the video ratio to lower the speed.

3.6 Camera Options

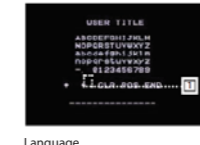
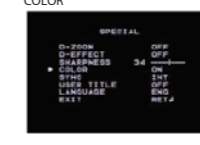
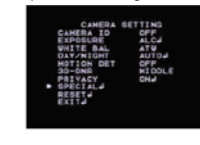
5. Camera Options
To Open and Exit the Menu screen



The MENU screen appears on the monitor. Check the current settings on the menu.



1. Select [MOTION DET] option.
2. Use [left] or [right] button to select a zone and press [EXIT]. The MOTION DETECTION menu appears.
3. Use [left] or [right] button to select a zone number (AREA1~AREA8) on the [ZONE NUMBER].
4. Use [left] or [right] button to set up the ON or OFF on the ZONE STATE.
5. Use [up] or [down] to select an option then use [left] or [right] button to adjust the option.



6. Use [SENSITIVITY] option to achieve the optimum detection level. This is used to reduce picture noise when the environment is too bright.

- HEIGHT: Enlarge or decrease the vertical size of the mask.
 - WIDTH: Enlarge or decrease the horizontal size of the mask.
 - MOVE X: Moves horizontal position of the mask.
 - MOVE Y: Moves vertical position of the mask.
1. Select [3D-DNR] option.
 2. Use [left] or [right] button to select an option.
(OFF ↔ LOW ↔ MIDDLE ↔ HIGH)
Note: If you set the AGC to [OFF] on the [EXPOSURE] menu, the [3D-DNR] function is not available and [—] mark is displayed.

This function is used for blocking out designated regions for privacy protection. User may select up to 8 regions of any size and location.

1. Select [PRIVACY] option.
2. Use [left] or [right] button to select [ON] and press [EXIT]. The PRIVACY SETUP menu appears.
3. Use [left] or [right] button to select a mask (AREA1~AREA8) on the [MASK NUMBER].
4. Use [left] or [right] button to set up the ON or OFF on the DISPLAY option.
5. Use [left] or [right] button to set up the GRAY, WHITE or BLACK on the COLOR option.
6. Use [up] or [down] select an option then use [left] or [right] button to adjust the option.
 - HEIGHT: Enlarge or decrease the vertical size of the mask.
 - WIDTH: Enlarge or decrease the horizontal size of the mask.
 - MOVE X: Moves horizontal position of the mask.
 - MOVE Y: Moves vertical position of the mask.

This menu lets you adjust and set up D-ZOOM, D-EFFECT, SHARPNESS, COLOR, SYNC, USER TITLE, and LANGUAGE functions.

1. Select [SPECIAL] option.
 2. Press [EXIT] button and the SPECIAL menu appears. Setting the D-ZOOM (Digital Zoom) level you can select the digital zoom level.
- To setup DIGITAL ZOOM:
 1. Select [D-ZOOM] option on the [SPECIAL] menu.
 2. Use [left] or [right] button to select [ON] then press [EXIT] the DIGITAL ZOOM menu appears.
 3. Use [up] or [down] to select an option then use [left] or [right] button to select a level.

- To setup DIGITAL EFFECT:
 1. Select [D-EFFECT] option on the [SPECIAL] menu
 2. Use [left] or [right] button to select a digital effect.
 - V-FLIP: Flip the picture vertically.
 - MIRROR: Turn on the mirror effect.
 - ROTATE: Rotate the picture. (180°)
 - OFF: Turn off the digital effect.

- To setup SHARPNESS effect:
 1. Select [SHARPNESS] option on the [SPECIAL] menu.
 2. Use [left] or [right] button to change a adjust the option.

- To setup COLOR effect:
 1. Select [COLOR] option on the [SPECIAL] menu.
 2. Use [left] or [right] button to change a color effect.
 - ON: Color screen
 - OFF: B/W (Black and White) screen

- For Synchronization(SYNC), you may select sync (INT) mode or line-lock (LINE) mode. This function is only available with AC power source.
 1. Select [SYNC] option on the [SPECIAL] menu.
 2. Use [left] or [right] button to select [INT] or [LL] (Line Lock).
 - INT: Selects for using the internal synchronization.
 - LL (Line Lock): Selects for the operation of multi camera, because it synchronizes the camera phase by using the external signal (AC Signal). A little phase deviation for some sets may be aligned.

- User Title allows a camera ID to be assigned to each camera using numbers (0-9) and characters (A-Z, a-z).
- The USER TITLE is displayed on the upper left of the screen. To remove the user title display, select [OFF].

1. Select [USER TITLE] option on the [SPECIAL] screen.
2. Use [left] or [right] button to select a [ON] then press [EXIT]. The USER TITLE menu appears.
3. Use [up] or [down], [left] or [right] button to select a character or number.
 - CLR: If you enter the wrong code, select CLR then press [EXIT].
 - POS: Use [up] or [down], [left] or [right] button to move position of USER TITLE on the screen.
 - END: Confirm your selection.
 - A(Blank): Inserts a space at the cursor position.
 - ← / →: Moves cursor to left or right.

- To select language for the Setup Menu and On-screen Display:
 1. Select [LANGUAGE] option on the [SPECIAL] screen.
 2. Press [left] or [right] button to select a language.



- Select [RESET] option.
 - Press [EXIT] button and the RESET menu appears.
 - Use [up] or [down] to select option.
- CAMERA REBOOT: To reboot the camera system.
 - FACTORY RESET: To reset the camera setting to factory setting, select [FACTORY RESET] option.

3.7 Function Programming

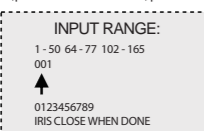
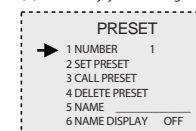


Function: User can make different auto scan according to various inspection.

- Function: User can program three traces simulating manual operation.
- Preset option:
- Move the joystick left/right or press OPEN to enter Function Programming options.
 - Move the joystick up/down to move the cursor to select the pre shot options.
 - Move the joystick Left/Right or press OPEN to enter preset options.

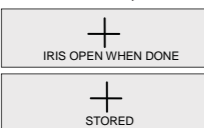
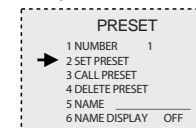
3.7.1 Preset

- Number
 - Move the joystick left / right or press OPEN to enter the number editing programming.
PS: Program the number of preset position.
 - Move the joystick left / right to select "0-9", press "OPEN" to confirm, press "CLOSE" to exit.



2. Set Preset

- Move the cursor to select preset position.
- Move the joystick left/right or OPEN to enter the setting(ensure the preset position data you desire to save)
- Press OPEN to finalize your selection, then the screen displays STORED and return to the previous menu level. Or press CLOSE to return to the previous menu level, without save your selection



3. Call Preset

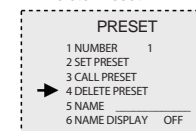
- Move the joystick left/right or press OPEN. The lens auto switch to current preset position corresponding to the edited number.



Call Preset:

- Function: User can program three traces simulating manual operation.

4. Delete Preset



Delete Preset:

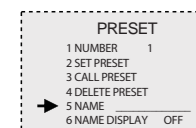
- Program the desired deleting number referring to Number Setup Section so as to select the preset position to be deleted.
- Move the cursor to select Delete Preset
- Move the joystick left/right or press OPEN to enter the Delete Preset.



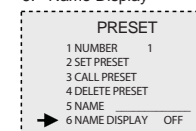
- Press OPEN to confirm the selection and exit. Press CLOSE to cancel the selection and exit.

5. Name

- Move the joystick up / down to move the cursor to select the Name.
- Move the joystick left / right or press OPEN to enter name editing menu.
- Move the joystick left / right to select "A-Z / 0-9", press "OPEN" to confirm, press "CLOSE" to change or exit.



6. Name Display



Setup On / Off display on the direction name preset:

- Move the cursor to select name display.
- Move the joystick left / right to set ON or OFF of the name display.

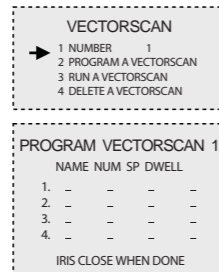
3.7.2 Program Vector Scan

Function: User can make different auto scan according to various inspection.



Programming Vector Scan instruction:

- Joystick Up / Down to select Program Vector Scan.
- Joystick Left / Right or press OPEN to enter the programming.
- Joystick Up / Down to select pending programming serial number (number range: 1-6).
- Move the Joystick to select and enter the items to Program a Vector Scan



(items include: name / number / SP / dwell).

- I: Name
Pr: stands for Preset Position.
Vs: stands for Vector Scan.
Pt: stands for PTZ Tour.
Il: Number Programming-selection based on the name.
Ili: SP-Set up the speed of Preset.
Iv: Dwell

Vector scan running operation steps:

- Select pending Vector scan track in Number menu
- Joystick Up / Down to select Vector scan
- Joystick Left / Right or press OPEN to run the selected Vector scan track

Vector scan track deletion steps:

- Select pending deleting vector scan track in Number menu.
- Joystick Up / Down to select Delete a Vector Scan.
- Joystick Left / Right or press OPEN to delete the selected vector scan track.

3.7.3 Pattern



Function: User can program three traces simulating manual operation.

- Pattern Operation Steps:
- Joystick Up / Down to move the cursor to select Pattern.
 - Joystick Left / Right or press OPEN to enter the menu.

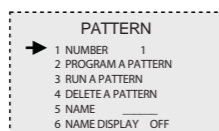


Fig 1



Fig 2

- Joystick Up / Down to select pending operating or programming Pattern (number range: 1-3).
- Joystick Up / Down to move the cursor to select Program a Pattern.
- Press OPEN to enter recording of the manual running trace, as left Fig 1.
- Press CLOSE to finalize the selection, as left Fig 2.
- Joystick Up / Down to move the cursor to select NAME.
- Edit name (Please refer to name setting section of preset position)
- Joystick Up / Down to move the cursor to select Name Display.

Running Pattern Tracking Operation Steps:

- Select pending running Pattern trace from NUMBER.
- Joystick Up / Down to select Run a Pattern.
- Joystick Left / Right or press OPEN to run the trace of selected Pattern.

Delete Pattern Operation Steps:

- Select pending Delete Pattern trace from NUMBER.
- Joystick Up / Down to select Delete a Pattern.
- Joystick Left / Right or press OPEN to enter and Click OPEN to delete the trace of selected Pattern as below Fig 3 - Fig 4



Fig 3

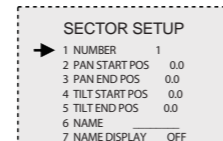
Fig 4

3.7.4 Sector Setup



Sector Setup:

- Move the joystick up / down to move the cursor to select sector setup.



- Move the joystick left / right or press OPEN to enter the setting.

- Number
 - Joystick left / right or press OPEN to select the sector number (number range:1-8).

2. Pan Start POS

- Move the joystick left / right or press OPEN to select a Pan Start Point.
- IRIS OPEN when done or IRIS CLOSE to exit without saving.

3. Pan End POS

- Move the joystick left / right or press OPEN to select a Pan End Point.
- IRIS OPEN when done or IRIS CLOSE to exit without saving.

4. Tilt Start POS

- Move the joystick left / right or press OPEN to select a Pan Start Point.
- IRIS OPEN when done or IRIS CLOSE to exit without saving.

5. Tilt End POS

- Move the joystick left / right or press OPEN to select a Pan End Point.
- IRIS OPEN when done or IRIS CLOSE to exit without saving.

6. Name

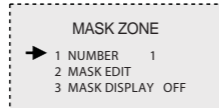
- Select the sector name and press OPEN to enter name editing.
- Edit the name referring to preset setup instruction.

7. Name Display

- Joystick Up / Down to move the cursor to select Name Display of ON or OFF.

3.7.5 Mask Zone

Function: User can program three traces simulating manual operation.



- Number
 - Joystick Up / Down to move the cursor to select NUMBER.
 - Joystick Left / Right to select pending editing mask areas (from area1-24).
- Mask Edit
 - Joystick Up / Down to move the cursor to select Mask Zone.
 - Joystick Left / Right or press OPEN to enter editing.
 - Press OPEN to edit the mask zone, capture the mask point. Press NEAR, FAR (set the mask area in pan action), WIDE, TELE (set the mask area in tilt action) to adjust the area of mask zone. Press CLOSE to exit when done and return to upper stage menu.

3.Mask Display

- Joystick Left / Right to set up the display name of ON / OFF.

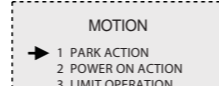


3.7.6 Mask Color

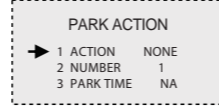


- Mask color
 - Joystick Up / Down to move the cursor to select MASK COLOR.
 - Joystick Left / Right to move the cursor to select the Mask color.
- Semi-transparency
 - Joystick Up / Down to move the cursor to select SEMI-TRANSPARENT.
 - Joystick Left / Right to set up the Semi-transparency of ON / OFF.

3.7.7 Motion



- << Function: The lens will auto return to the assigned preset position or perform certain motion using command set by user when the camera does not receive orders from controlling device.



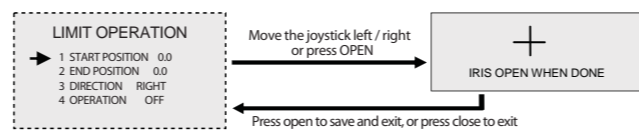
- Move the joystick left / right or press OPEN to enter the Motion
 - Action
 - Move the joystick left / right or press OPEN to enter the Action panel.
 - Joystick left / right to select Action. Action by: None / Preset / Vector Scan / Pattern / Pan Scan / Auto Scan.
 - Number
 - Select the Number and press OPEN or move the joystick left / right to enter Number editing.
 - Setup method: referring to preset setup instruction.
 - Park Time
 - Select the Park Time and press OPEN or move the joystick left / right to enter Park Time (time range:1-999).
 - Setup method: referring to preset setup instruction.



- Select the Power on Action and move the joystick left / right or press OPEN to enter the Power on Action.
 - Select the Action and move the joystick left/right or press OPEN to enter Action. Action includes: None / Preset / Vector Scan / Pattern / Pan Scan / Auto Scan
 - Select the Number and move the joystick left/right or press OPEN to enter. Setup method: refer to preset setup instruction.

- Move the joystick left / right or press OPEN to enter the Limit Operation.

(1) Start Position



(2) End Position

Refer to End Position setting section

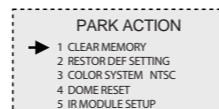
(3) Direction

Move the joystick left / right to select the Direction (left or right).

(4) Operation

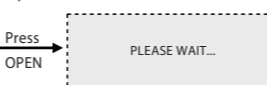
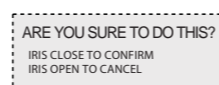
Select the OPERATION and move the joystick left / right set up the Operation of ON / OFF.

3.8 System Setup



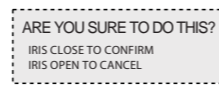
3.8.1 Clear Memory

- Joystick Up / Down to move the cursor to select Clear Memory.
- Joystick Left / Right or press OPEN to enter.
- Press OPEN to Clear Memory or press CLOSE to cancel.



3.8.2 Restore Default Setting

- Joystick Up / Down to move the cursor to select Restore Def Setting.
- Joystick Left / Right or press OPEN to enter.
- Press OPEN to Restore Def Setting or press CLOSE to cancel.



3.8.3 Color System

- Joystick Up / Down to move the cursor to select Color System.
- Joystick Left / Right to select the PAL or NTSC.

3.8.4 Dome Reset

- Joystick Up / Down to move the cursor to select Dome Reset.
- Joystick Left / Right or press OPEN to reset the dome.

3.8.5 IR Module Setup



- Joystick Up / Down to move the cursor to IR CONTROL.
- Joystick Left / Right to select the IR control AUTO / MANUAL.
- Joystick Up / Down to move the cursor to IR SW DELAY.
- Joystick Left / Right to select the IR Switch delay 5SEC / 10SEC / 15SEC / 30SEC / 45SEC.

Chapter 4 Short-Cut Operations and Specification of Dome Device

4.1 Short-Cut operation table

Number of preset position	Control Object Pan-Tilt Control	Call preset position	Save preset position
51		Record line scanning speed	Run cruise track
52	Pan-Tilt Control	Start line scanning	Set line scanning starting point
53		Background light compensation*	Set line scanning ending point
55		On	Off
56	Day/Night*	Auto	Color
57	Camera related OSD*	Camera menu On / Off	Camera function OSD On/Off
58	Digital zoom*	On	Off
59	Focus*	Auto	Manual
60	Iris*	Auto	Manual
61		Auto	Manual
62	White balance*	Indoor	Outdoor
63		ATW	One push WB
79	Set line scanning mode	Long distance	Short distance
80		Run pattern 1	
81	Run pattern	Run pattern 2	
82		Run pattern 3	
83		Run vectors can 1	
84		Run vectors can 2	
85		Run vectors can 3	
86	Run vector	Run vectors can 4	
87		Run vector scan 5	
88		Run vector scan 6	
89	Picture freeze*	On	Off
91	Dynamic preset point	Call dynamic preset point	
92	Reserve		
93			
94	Dome reset	Reset dome	
95	Main menu	Call main menu	
96	Set the auto flip	On	Off
101	Pan continuous scanning	On	

Notes:

1.These functions differs depending on different types of camera.

Description of the preset point :

Preset point of the position: 1-50, 64-77,102-165 (totally 128)
Function short - cut preset point: 51-63, 78-101

Note : Dome operation will be different due to controller's different specs.

Preset point setting:

Press "No." + "Shot" + "ON" .

Call Preset point:

Press "No." + "Shot" + "ACK".

Clear Preset point:

Press "No." + "Shot" + "OFF".

4.2 Description of "Cruise Track" Function:

- When enter "51+SHOT+ON", the device is enabled system default cruise track. The device will auto scan point by point from No.1 preset position to No.16 preset position. If certain position has not been preset or been cleared after preset, "cruise track" will not scan them.
- Dwell time of the preset position is 2 seconds.
- About other 6 cruise tracks operation, please refer operation manual of the keyboard controller. Different controller is with different operation.

4.3 Description of "Line-Scanning" Function:

- Dome device will auto line-scan between two specified points.
- User can set the start point by "52+SHOT+ON" and end point by "53+SHOT+ON".
- Line scanning speed set: user keep a manual line scan speed three seconds above, then through "51+SHOT+ACK" to save the speed as line scan speed, use "52+SHOT+ACK" to enable the line scan.
- Dwell time of line-scanning between "starting point" and "ending point" is 2 seconds.

4.4 Intelligent Manually Pan Continuous Scan:

When user use joystick for pan scan monitoring, keep manually 3 seconds, then press "101+SHOT+ACK", the dome can go on with the scan speed and monitor position automatically.

Chapter 5 Specifications

PTW-9831R			
Scanning System	PAL NTSC	Sens-Up	Auto / Fix: X2,X4,X5,X12
Effective Picture Elements	795H(X)996V)	ES Electronic Anti-Shake	On / Off
Image Sensor	1/4" EX-New CCD	OSD Language	Chinese / English
Digital Signal Processing (DSP)	LG XDI	Pan Preset Speed	240%/s
Synchronizing System	Internal / Line Lock LL	Tilt Preset Speed	150%/s
Horizontal Resolution	540TVL (Color) / 570TVL (B/W)	Manual Speed Pan	0°-180°/s
Video S/N Ratio	More than 52dB(AGC Off)	Manual Speed Tilt	0°-55°/s
Min Illumination (approx)	Color : 0.003 (0.6) Lux (Sens up Off) / B/W : 0.001 (0.1) Lux (Sens up Off)	Preset Points	128
Video Out Level	1Vp-p (75Ω) Composite	Motion Detection	Yes; 6 different area
Optical Zoom	- ZX	Scanning Speed	0.5°-60°/s
IR LED Effective Range	120-150 meters	Pattern	8 minutes
White Balance	Auto / Push / Manual (1800°K- 10,500°K)	OSD Language	Chinese / English
Auto Gain Control (AGC)	Off / Low / Middle / High	Communication	RS-485
Wide Dynamic Range (WDR)	WDR	Ingress Protection	IP 66
High Light Compensation (HLC)	On / Off	Relative Humidity	10%~90%
3D Digital Noise Reduction (DNR)	Off / Low / Middle / High	Operating Temperature	-10℃~50℃
Day / Night	IR CUT	Power Supply	AC 24V / 3A
Electronic Shutter	1/50-1/100,000	Shell Size (mm)	355 (H) x 210 (W)
Motion Detection	4 Zones	Weight	7.5 kg
Privacy Masking	8 Zones	Installation Type	Wall Mount / Hanging
		Mounting brackets	Optional

Chapter 6 Troubleshooting of Dome Device

- Problem description:** Power switched on with no response, fail to lock motor and no image.

Possible reason: Problems with power circuit
Solution: Check if the power cable is connected to power of AC24V.

- Problem description:** Camera rotates normally, but with no text display and no image

Possible reason: The text display is switched off
Solution: Switch on the text display according to the menu instruction



- Problem description:** After self-detection of the dome device, menu cannot be displayed
Possible reason: Incorrect operation
Solution: Call +95+ACK to open

- Problem description:** Distorted character or image
Possible reason: Interfered by external electronic signal (noise) or the camera is directed to the an electronic image
Solution: Grounding the dome device or shut off the surrounding big electronic devices (electric, HF, signal generating) equipment, or rotate the camera

- Problem description:** Self-detection is normal, but failed to control the device.
Possible reason: Incorrect settings or improper/incomplete connection of circuit setting
Solution: Set the protocol, baud rate and address of dome device and check the circuit

- Problem description:** Difficulties with controlling dome camera
Possible reason: Improper or incorrect circuit connection
Solution: Check the control circuit

- Problem description:** Periodic actions performed automatically
Possible reason: Respective functions are set to perform automatically
Solution: Switch off relevant automatic functions



第57區

Table of characters for the 57th district, including 7201-7294.

第58區

Table of characters for the 58th district, including 7301-7394.

第71區

Table of characters for the 71st district, including 8601-8694.

第72區

Table of characters for the 72nd district, including 8701-8794.

Main table of characters and their corresponding numbers, organized in a grid format.

第59區

Table of characters for the 59th district, including 7401-7494.

第60區

Table of characters for the 60th district, including 7501-7594.

附表2：字符區位碼表

字符區位碼表

Table of character codes and their corresponding numbers, organized in a grid format.

第61區

Table of characters for the 61st district, including 7601-7694.

第62區

Table of characters for the 62nd district, including 7701-7794.

第63區

Table of characters for the 63rd district, including 7801-7894.

第64區

Table of characters for the 64th district, including 7901-7994.

第65區

Table of characters for the 65th district, including 8001-8094.

第66區

Table of characters for the 66th district, including 8101-8194.

第67區

Table of characters for the 67th district, including 8201-8294.

第68區

Table of characters for the 68th district, including 8301-8394.

第69區

Table of characters for the 69th district, including 8401-8494.

第70區

Table of characters for the 70th district, including 8501-8594.