User Manual

BAVONO PTM-937WDR

Outdoor 37X Zoom Wide Dynamic Range PTZ Dome Camera

Chapter One — Product Overview

I. Performance Instruction

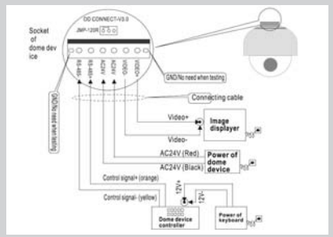
1. Address of Dome device is from 0 - 255.The number (address) of dome device in the control system is setup by the hardware (8-digit on and off switch) of dome device.
2. Integrate multi-protocol and auto protocol differentiation. Note: The dome device only auto differentiate controller of the first communication.
3. Pan 360 degree continuous rotation.
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 300 degree per second
6. Tilt manual operation speed can be 0.1 to 120 degree per second
7. 128 preshot 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 preshot is being called can reach 400 degree per second with accuracy of ±0.1 degree.
9. Compatible with many kinds of Module Camera
10. Power supply : AC 24V 1A (indoor type), AC 24V 2A (outdoor type)
11. Easy installation interface.
12. Pass environmental protection grade IP66 (outdoor type)
13. Adopts long distance RS-485 transmission mode
14. Transmission speed, i.e, Baud rate is selectable (Set by the fifth and sixth bit of the on and off switch of the dome device, baud rate 2400bps - 19200bps)

II. Feature Functions Instruction

1. Multi-language 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 2 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, preshot and interruption between tours)
6. Auto flip function with 10 degree move up
7. Eight sectors of programmable sectional mask (Can mask part of the sectors of camera , which differs depending on different types of camera)
8. Eight sectors of programmable sectional display (Can display the name and nature of concrete position shooting by the camera, which differs depending on different types of 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 form 1 to 999 seconds)
10. Frozen video picture function (freez 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 was 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 was zooming in, the speed of the dome device will auto slow down)

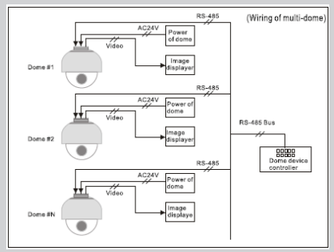
Chapter Two — Wiring and Setup of Dome System

I. Wiring of Dome System



1. Basic system connection
   In the drawing, JMP-120R is the impedance matching selection of control signal and noise restrain of RS-485, when there is long distance transmission or noise-control, it can short jumper

   Attention: No operation when the dome device is power on!

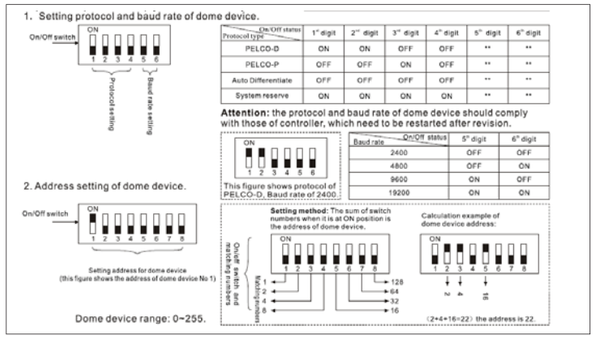


2. Multi-dome device connection
   When connecting many dome devices together, the user can embed multi-device system with auxiliaries such as arrester device, video matrix , DVR and alarm box for system integration. AV24V: Power supply of dome device, which will convert 110V / 60Hz or 220V/50Hz input to AC 24V output and supply to the dome device.

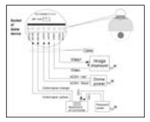
- RS-485 Bus: It is for the control signal (RS-485 signal) output of controller, connecting to the communication input terminals of control cable of each dome device.
- Video: It is for image signal output of dome device, (Can directly output to video equipment such as monitor or video matrix. Take care of the match up of impedance)

II. Setting of Dome Device Communication

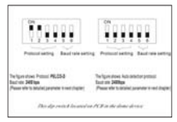
Before installation and use, the setting of communication protocol and transmission speed (baud rate) should comply with the control system



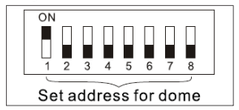
1. Wiring (Please do not turn the power on)



2. Setting protocol and baud rate (Turn the power off when setting, and restart the device after revision).

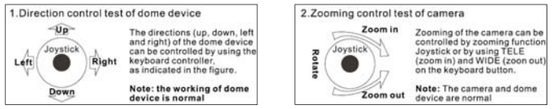


3. Setting dome device address. (Turn the power off when setting, and restart the device after revision)



The figure shows: Address of the dome device: No.1
(Please refer to detailed parameter in next chapter)
This dip switch located on PCB in the dome device

4. Install camera. (Please refer to camera installation for details)
   Attention: 1. Do not connect the camera and dome device with FFC in a wrong way.
   2. The installation holes of different camera differ.
5. Connect the power of dome device
   At this moment, the self-test (rotation) of dome device and self-test (there will be image on the monitor) of camera can be seen.
   Attention: When the dome device is self-testing, it is normal when sound is issued caused by the block of dome device after 2 - 5 seconds of vertical movement, which is the orientation of the dome itself.
6. Controller setting
   Set the protocol, baud rate and address of the keyboard controller identical with those of dome device. (Please refer to keyboard controller instruction manual).
   Attention: If the setting of protocol of dome device is 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.
7. Start testing.
   When all the above are ready, the testing to dome device can be started.

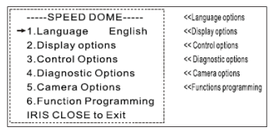


(Please refer to the next section for demonstration of menu operation and control of dome device.)

8. Complete the test (Summary)
   1) If the performance of item 7 is normal, it indicates the system is basically normal, Please do not change the wiring and various setting to avoid fault and unnecessary damage and loss.
   2) If the performance of item 7 is abnormal, or only one item works normally, please check the wiring (item 1 and 4) and setting (item 2 ,3 and 6) carefully.

Chapter Three — English Operation Menu of Dome Device

I. Main menu



1. Press 95+SHOT on the keyboard to enter the Main menu of dome device
2. Select options joy stick only between up and down, the arrow points to the current selected option, Press OPEN or left right of joystick to command entering the submenu ofthat option or change the value or setting of that option.
3. Press CLOSE to exit menu or return to upper stage menu

II.Tree Menu List

1. All sub-menus can be seen clearly in this tree list.
   1) Language Options
      < Language options joystick left or right to select
      < Display options
      < Preshot setup options

      ① Preshot (Preset position) Setup

      1~165
      001
      ⬆
      0 1 2 3 4 5 6 7 8 9
      IRIS CLOSE When Done

      < Preshot number selection Press OPEN or joy stick left or right enter
      < The default number after entering is 001, (hundred bit / ten bit / single bit), joy stick left or right to select preshot position and press OPEN to confirm , and joy stick left or right again to select numbers(0 - 9), Press OPEN to confirm the selection.

      ② Set Preshot

      IRIS CLOSE When Done

      < Select preshot and press CLOSE to confirm the programming when done and auto exit and return to the upper stage menu.

      ③ Call Preshot

      Call out

      < The action of the dome device can be seen and return to corresponding preshot point.

      ④ Delete Preshot

      Are you sure to do this?
      IRIS OPEN to Confirm
      IRIS CLOSE to Cancel

      < Press OPEN or joystick left or right to enter
      < Reminder: Are you sure to delete preshot?
      Press OPEN to confirm
      Press CLOSE to exit and return to upper stage menu

      ⑤ Name

      ⬆
      0123456789ABCDEFGHI
      JKLMNOPQRSTUVWXYZ_
      IRIS CLOSE When Done

      < Edit the name of preshot. Press OPEN or joystick left or right enter
      < Joystick left or right when programming to select preshot and press OPEN to confirm

      Joystick left or right to select (0 - 9 or A - Z). Press OPEN to confirm selection, Press CLOSE to exit or return to upper stage menu when programming is done.

      ⑥ Name Display

      < Name display On / Off joystick left or right select IRIS CLOSE to Exit

2. Sector Setup
   Sector setup Press OPEN or joystick left or right to enter
   1). Number (1 - 9) Number selection joystick left or right to select
   2). Name editing Press OPEN or joystick left or right to entere

   ⬆
   0123456789ABCDEFGHI
   JKLMNOPQRSTUVWXYZ_
   IRIS CLOSE When Done

   < Joystick left or right when programming to select preshot and press OPEN to confirm.
   Joystick left or right to select (0 - 9 or A - Z). Press OPEN to confirm selection. Press CLOSE to exit or return to upper stage menu when programming is done

   3). Pan Start pos

   IRIS CLOSE When Done

   < Setup pan start point. Press OPEN or joystick left or right to enter Capture the start point and press CLOSE to exit and return to upper stage menu.

   4). Pan End pos

   IRIS CLOSE When Done

   < Setup pan end point, Press OPEN or joystick left or right to enter. Capture the end point and press CLOSE to exit and return to upper stage menu.

   5). Tilt Start pos

   IRIS CLOSE When Done

   < Setup tilt start point, Press OPEN or joystick left or right to enter, Capture the start point and press CLOSE to exit return to upper stage menu.

   6). Tilt End pos

   IRIS CLOSE When Done

   < Setup tile end point. Press OPEN or joystick left or right to enter. Capture the end point and press CLOSE to exit and return to upper menu.

   7). Name display ON/OFF

   IRIS CLOSE to Exit

   < Sector name display ON/OFF joystick left or right to select

   8). Coordinates ON/OFF < Coordinates display ON/OFF joystick left or right to select

   9). Crosshairs ON/OFF < Crosshairs ON/OFF joystick left or right to select

   10). Start-UP scr messsage ON/OFF

   IRIS CLOSE to Exit

   < Start-up screen message display ON/OFF Joystick left or right to select

3. Control Options
   Control options Press OPEN or joystick left or right to enter
   1). Set pan and Tilt
   < Pan/Tilt setup of dome device Press OPEN or joystick left or right to enter
   ① Pan Reverse ON/OFF < Pan Reverse ON/OFF joystick left or right to select
   ② Tilt Reverse ON/OFF < Tilt Reverse ON/OFF joystick left or right to select
   ③ +2 Tilt Limit ON/OFF <+2 Tilt Limit ON/OFF joystick left or right to select
   ④ Find Home on STA ON/OFF < Find Home on start ON/OFF joystick left or right to select
   IRIS CLOSE to Exit
   2). Set Default Function
   <Set default function Press OPEN or joystick or right to enter
   ① Default Function P/V/T
   < Select default function (Preshot /Tour /PTZ) Press OPEN or joystick left or right to enter
   ② Number 1

   1~128
   001
   ⬆
   0 1 2 3 4 5 6 7 8 9
   IRIS CLOSE When Done

   < Function number selection Press OPEN or joystick left or right to enter
   < Joystick left or right when programming to select preshot and press OPEN to confirm

   Joystick left or right to select (0 - 9). Press OPEN to confirm selection. Press CLOSE to exit or return to upper stage menu when programming is done

   3). Delay

   1~999
   001
   ⬆
   0 1 2 3 4 5 6 7 8 9
   IRIS CLOSE When Done

   < Time delay setting (second) Press OPEN or joystick left or right to enter
   < Joystick left or right when programming to select preshot and press OPEN to confirm

   Joystick left or right to select (0 - 9),Press OPEN to confirm selection. Press CLOSE to exit or return to upper stage menu when programming is done

   4). Operation ON/OFF
   < Default function ON/OFF joystick left or right to select IRIS CLOSE Exit Speed Limit ON/OFF
   < Operation speed limit ON/OFF joystick left or right to select Auto Flip ON/OFF
   < Auto flip ON/OFF joystick left or right to select Auto Focus PTZ/OFF/Z
   < Auto focus options joystick left or right to select Auto AE PTZ/OFF/Z
   < Auto AE option joystick left or right to select Vector scan AF ON/OFF
   < Vector scan auto focus control joystick left or right to select IRIS CLOSE to Exit
4. Diagnostic Options
   Diagnostic options Press OPEN or joystick left or right to enter

1). Clear Memory

Are you sure to do this?
IRIS OPEN to Confirm
IRIS CLOSE to Cancel

< Clear data in the memory
Press OPEN or joystick left or right to enter
< Reminder:are you sure to do this
Press OPEN to confirm
Press CLOSE to exit and return to upper stage menu

2). Restore Def Setting

Are you sure to do this?
IRIS OPEN to Confirm
IRIS CLOSE to Cancel

< Restore default setting
Press OPEN or joystick left or right to enter
< Reminder: are you sure to do this
Press OPEN to confirm
Press CLOSE to exit and return to upper stage menu

3) Color system PAL/NTSC
< PAL/NTSC switch joystick left or right to select

4). Scan & Camera Reset (Null)
< Restart dome camera. Press OPEN or joystick left or right to enter

5). Dome Information

Camera:x x x x x x x x
Protocol:x x x x x x x x
Baud rate: x x x x
Dome No.:x x x
IRIS CLOSE to Exit

< Dome information, Press OPEN or joystick left or right to enter
< Type of camera
< Control protocol
< Baud rate
< Dome number
< Press CLOSE to exit and return to upper stage menu
IRIS CLOSE to Exit

5. Camera Options

To Open and Exit the Menu screen 01

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

1. Press [EXIT]
2. Use [up] or [down] button to select the [EXIT] then use [left] or [right] button to select a mode
   - RET: Return to the previous.
   - TOP: Return to the CAMERA SETTING menu screen.
   - END: Exit the setup menu.

   Note: The setup menu will be disappear after save the current setting value.

Camera Identification Setting 02

- You can use the camera identification (CAMERA ID) to assign a number to the camera.

1. Select [CAMERA ID] option on the [CAMERA SETTING] menu.
2. Use [left] or [right] to select a CAMERA ID (OFF, 1-255).

Exposure Setting 03

- You can set the exposure options using the EXPOSURE menu.

  Select [EXPOSURE] option on the [CAMERA SETTING] menu.
  Press {EXIT] button and the EXPOSURE menu appears.

WDR/BLC Setting 04

- Use WDR/BLC option to set the options for BLC or WDR camera.

1. Select [WDR/BLC] option.
2. Use [left] or [right] button to select a mode then press [EXIT].
   - WDR: Set the WDR limit. - WDR LIMIT: LOW ⟷ MIDDLE ⟷ HIGH
   - BLC: Set the BLC limit. - BLC LIMIT: LOW ⟷ MIDDLE ⟷ HIGH
   - HSBLC: Use for adjusting brightness the specific area of picture.
     - AREA SETTING: Use [left] or [right] button to select a area then use [up]or [down] button to select a ON or OFF. Press [EXIT] to exit the Area setting menu.
     - GRAY SCALE: Use [left] or [right] button to select a gray scale. (GRAY ⟷ D.GRAY ⟷ BLACK).
     - USER SCALE: Use [left] or [right] button to select a bright level.(5 level)

Brightness setting 05

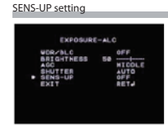
- You can set the brightness level. (0-100)

1. Select [BRIGHTNESS] option.
2. Use [left] or [right] button to set the bright level.

- AGC (Automatic Gain Control) setting
  If the images are too dark, change the maximum [AGC] value to make the images lighter.

1. Select [AGC] option.
2. Use [left] or [right] button to select a mode.
   (OFF ⟷ LOW ⟷ MIDDLE ⟷ HIGH)

SENS-UP setting 06



- If pictures are not clear due to darkness, use for increase the sensitivity of picture.

1. Use [up] or [down] button to select [SENS-UP] option.
2. Use [left] or [right] button to select a [AUTO].To setting the [AUTO] funtion, select the [AUTO] on the [SHUTTER].
3. Press and use [left] or [right] button to set the SENS-UP limit (x2~x128).

   Note: If you set to one of the SHUTTER options except AUTO on the [SHUTTER] menu, the [SENS-UP] setting is not available and [---] mark is displayed.

Setting the WB (White Balance) Mode 07

- You can select one of three modes for white balance adjustment.

1. Select [WHITE BAL] option.
2. Use [left] or [right] button to select one of three modes for white balance then press [EXIT].
   - ATW (Auto-Tracing White Balance): The color temperature range for the proper white balance is approximately 1700 - 11000K. Proper white balance may not be obtained under the following conditions:
     1) The color temperature is out of the 1700 - 11000K range.
     2) When the scene contains mostly high color temperature objects, such as a blue sky or sunset.
     3) When the scene is dim.
   - AWC → PUSH: If you select the AWC → PUSH mode, you will be able to set up the White Balance automatically using [EXIT] button.

White Balance Setting 08

- MANUAL: You can set the white balance options manually.

- COLOR TEMP: Use [left] or [right] button to select a funtion. (INDOOR: 3200, OUTDOOR: 5100)
- RED: Obtains the optimum amount of red gain.
- BLUE: Obtains the optimum amount of blue gain.It is a function of a color camera to delete the filter with the IR Cut function in an illumination below the standard value so that it has a better sensitivity.

Day/Night Setting 09

1. Select [DAY/NIGHT] option.
2. Use [left] or [right] button to select mode for day/night function.

- AUTO: You will be able to change the Day/Night mode automatically.
  - LEVEL: Use [left] or [right] button to select a level. (LOW ⟷ MIDDLE ⟷ HIGH)
  - DWELL TIME: Use or button to select a dwell time. (5, 10, 15 sec.)

Note:

- If you set the AGC to [OFF] or the SHUTTER is set to one of the SHUTTER options except AUTO on the [EXPOSURE] menu, the AUTO mode of the DAY/NIGHT function is not available and [---] mark is displayed.

- EXT : Switches between color picture and black-and-white picture ,when an external day/night switching signal is received.
- DAY: Color mode enabled.
- NIGHT: Black-and-white mode enabled.

Motion Detection Setting 10

The motion detection detects the moving objects in the scene by monitoring changes in brightness level. You can select the level of sensitivity for motion detection to 4 zone.

1. Select [MOTION DET] option.
2. Use [left] or [right] button to select a [ON] and press [EXIT] . The MOTION DETECTION menu appears.
3. Use [left] or [right] button to select a zone number (AREA1~AREA4) 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 obtain the optimum detection level. If pictures are not clear due to bightness, use for reduce the noise of picture.

- 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.

3D-DNR Setting 11

1. Select [3D-DNR] option.
2. Use [left] or [right] button to select a 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.

Privacy Setting 12

- This function is aiming at the protection of personal privacy, selecting a screen part black not to be displayed in the screen. This function permits the control of the strength level in 8 levels. You may setup the size and location of the area.

1. Select [PRIVACY] option.
2. Use [left] or [right] button to select a [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.

Special Menu Settings 13

- This menu lets you adjust and set up D-ZOOM, D-EFFECT, SHARPNESS, COLOR, SYNC, USER TITLE, LANGUAGE function by yourself in the SPECIAL menu.

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.

D-ZOOM 14

- Setting the D-ZOOM offle, you can select listed DIGITAL ZOOM effect

1. Select [D-ZOOM] option on the [SPECIAL] menu.
2. Use [left] or [right] button to select a [ON] then press [EXIT] the DIGITAL ZOOM menu appears.
3. Use [up]or [down] to select a option then use [left] or [right] button to select a level.

D-EFFECT 15

- Setting the D-EFFECT (Digital effect) you can select the 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.

SHARPNESS 16

- Setting the SHARPNESS effect, you can select the SHARPNESS effect.

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

COLOR 17

- Setting the COLOR effect, you can select the 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

SYNC 18

- Setting the SYNC (Synchronization), you can select internal sync (INT) mode or line-lock (LINE) mode. The SYNC function is available only 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 cameras ,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 19

- Setting the USER TITLE, you can use the camera identification to assign a number and character to the camera (0 - 9, A-Z, a-z).
- The USER TITLE is displayed on the upper left of the screen. To disappear the user title, 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.

Language 20

- Setting the Language, you can Select a 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.

Reset Settings 21

1. Select [RESET] option.
2. Press [EXIT] button and the RESET menu appears.
3. 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.

6. Function Programming

Special function programming. Press OPEN or joystick left or right to enter

1. PTZ Tour (Pattern) Pan/Tilt/Zoom tour programming Press OPEN or joystick left or right to enter

① Number (1 - 3)
< PTZ tour number joystick left or right to select
< Edit PTZ name Press OPEN or joystick left or right to enter

② Name

< Joystick left or right when programming to select preshot and press OPEN to confirm
· Joystick left or right to select (0 - 9 or A - Z),Press OPEN to confirm selection, Press CLOSE to exit or return to upper stage menu when programming is done.

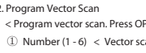
③ Program a Tour

< Enter PTZ tour programming. Press OPEN or joy stick left to enter
< Press OPEN to confirm and start programming
< Press CLOSE to exit the programming and return to upper stage menu

④ Run a Tour

< Run Pan /Tilt / Zoom tour (pattern). Press OPEN or joystick left or right to enter

⑤ Delete a Tour



< Delete PTZ tour. Press OPEN or joystick left or right to enter
< Reminder : are you sure to do this. Press OPEN to confirm.
· Press CLOSE to exit and return to upper stage menu.

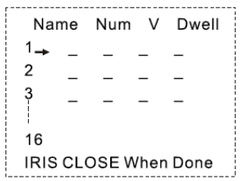
⑥ Name Display ON/OFF: PTZ tour name display ON/OFF ,joystick left or right to select IRIS CLOSE to Exit

2. Program Vector Scan

< Program vector scan. Press OPEN or joystick left or right to enter

① Number (1 - 6) < Vector scan number joystick left or right to select

② Program a Vector scan

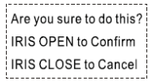


< Joystick arbitrarily to move the cursor, and stop the cursor at place of programming, Press OPEN to enter the selection.
· Function name : Press OPEN continuously to slect P: Preshot,T: self-study (patten or PTZ tour),V: vector scan
· Function number: Joystick left or right to select (0~9), Press OPEN to confirm selection.
· Press CLOSE to exit or return to upper stage menu when programming is doen, stage menu
· Velocity selection : Press OPEN continuously to select
· Velocity selection: Joy stick left or right when programming to select preshot and press OPEN to confirm,
· Joy stick left or right to select (0 - 9) , Press OPEN to confirm selection. Press CLOSE to exit or return to upper stage menu when programming is done.

③ Run a Vector Scan

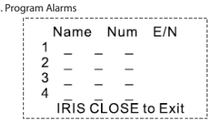
< Run vector scan, Press OPEN or joy stick left or right to enter

④ Delete a Vector Scan

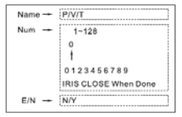


< Delete vector scan press OPEN or joy stick left or right to enter
< Reminder :are you sure to do this.
Press OPEN to confirm
Press CLOSE to exit and return to upper stage
IRIS CLOSE to Exit

3. Program Alarms



< Program alarms, Press OPEN or joy stick left or right to enter



< This function is not available at the moment

Chapter Four — Short-cut Operations and Specification of Dome Device

Short-cut operation table

System Preset Short – cut Operation Table	
51+Preset	Run cruise track
52+Preset	Setup start position for line scan
53+Preset	Setup end position for line scan
51+SHOT	Setup speed for line scan
52+SHOT	Run line scan
55+Preset	BLC off
55+SHOT	BLC on
57+SHOT	Call camera menu
58+Preset	Digital zoom off
58+SHOT	Digital zoom on
59+Preset	Manual focus
59+SHOT	Auto focus
61+SHOT	Auto white balance
62+SHOT	Manual white balance
80+SHOT	Run PTZ Tour 1
81+SHOT	Run PTZ Tour 2
82+SHOT	Run PTZ Tour 3
83+SHOT	Start Vector Scan 1
84+SHOT	Start Vector Scan 2
85+SHOT	Start Vector Scan 3
86+SHOT	Start Vector Scan 4
87+SHOT	Start Vector Scan 5
88+SHOT	Start Vector Scan 6
89+SHOT/89+Preset	Toggles between freeze and unfreeze video
95+SHOT	Setup the Menus and Camera
91+SHOT	Invokes the Flashback Function
92/93/94+SHOT	Reserve

Preset point of the position: 1-50, 64-77, 102-165 (totally 128)

Chapter Five — Troubleshooting of Dome Device

Troubleshooting Table

S.N.	Problem Description	Possible Reason	Troubleshooting	Remarks
1	After power on,no motion and no image	Power cable is connected improperly.	Check if the power cable is connected to power of AC24V	Please follow the above basic system wiring strictly
		Power cable is connected improperly	Change the power PCB	
		Fault of power PCB of dome device	Change slip ring	
		Fault of main control board	Change main control board	
2	After power on, the dome device totate normally, but no character nor image display	Character monitor switch is off	Switch on the character monitor according to the menu instruction	About 45 second after the dome device is power on.
		Improper connection between camera and dome device	Replace a FFC cable or a camera	
3	After self-test of the dome device, menu cannot be displayed	Wrong operation	95+SHOT	After self-test, the menu can only be displayed when there is image display of the dome device
		Fault of OSD control board	Change OSD board	
4	Distorted character or image	Interfered by exterior electronic signal (noise) or the camera is directed to the monitor screen	Grounding the dome device or shut off the surrounding big electronic devices (electric,HF,signal generating equipment, or rotate the camera)	Shielded cable should be adopted for video cable
		System wrong function	Restart the dome device	
5	After power on, no self-test and motor locked	The system setting is start self-test after receiving command and you can see the video on the screen	Connect the controller and set correct transmission protocol and baud rate as well as dome device address	There is character display in normal circumstance
6	Cannot stop pan rotation (rotate and stop alternatively)	OSD board is not properly connected with main control board or the photoelectric switch is broken	Fix OSD board again, if the problem still exits, then replace the OSD board	Pan interrupter should be at 2/3 of the central slot within photoelectric switch
		Pan interrupter is not in due position	Adjust the pan interupter	
7	After normal working, it will totate one circle when being controlled	The system is checking the data again	It is normal event	If this happens frequently, please adjust the pan interrupter or check if the connection is too tight
8	Vertical range is not within90±2 degree with large deviation	Fault occurs when the dome device is in tilt movement, It may be caused by obstacle of camera of other object,which lead to early tilt movement	Check and adjust the mechanical installation	
9	Self-test is normal, but cannot control	Wrong setting	Set the protocol, baud rate and address of dome device	
		Improper connection of control cable	Check the circuit	
10	Insensitive control of dome device	Overload or too long distance transmission	Add driver	Mostly happen in the connection
		Improper contact of control cable	Check the circuit	
		Slip ring is demage	Replace slip ring	
11	Call out function fails	System failure caused by noise interference	Restart the dome device	
12	Auto action of dome device periodically	NO transmission auto “call back” function is set to the dome device	Called this setting	
13	One dome working well while the other does not under identical operaion	Something wrong with the setting or wiring	Something wrong with the setting or wiring	

Preset point of the position: 1-50, 64-77, 102-165 (totally 128)

Specification

Model	PTM-937WDR
Scanning System	PAL
Image Sensor	1/4" EX-View HAD CCD
Effective Picture Elements	795 (H) × 596 (V)
Horizontal Resolution	540 TV lines
Minimum illumination (approx.)	0.003 Lux (Color) / 0.0001 Lux (B/W)
Synchronizing System	Internel / Line Lock LL
Electronic Anti-shake	Electronic Anti-shake EIS
Video Output Level	1.0 V (p-p) / 75 ohms, composite
Video S/N Ratio	More than 52dB (AGC Off)
Electrical Shutter	1/50 - 1/100,000 sec
3D-DNR	Low / Middle / High / Off
AGC	Low / Middle / High / Off
WDR	On / Off
Sens-Up	On / Off
White Balance	ATW / Manual / Push
Day / Night	Color / B/W / Ext / Auto
Optical Zoom	On / Off (37 X Zoom)
Motion Detection	On / Off (4 Zones)
Privacy Masking	On / Off (8 Zones)
OSD Language	English / Chinese
Preset Positions	128 Preset
Communication	RS-485
Protection Levels	IP 66
Lens	Auto Iris Lens (3.3mm - 76mm)
Power Requirement	AC 24V
Power Consumption	3.6W
Operating Temperature	– 10℃ - +50℃
Storage Temperature	– 20℃ - +60℃
Humidity	0% - 80%

Preset point of the position: 1-50, 64-77, 102-165 (totally 128)