

DLC1971

Mini PTZ Dome



Installation and Operations Manual

Model Number: DLC1971

Description: 1/3", Mini PTZ Dome

Day/Night 10X Optical / 12X Digital Zoom

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FEATURES

- ∪ High Quality motor, low power consumption, no vibration at low speed.
- ∪ Warm up under extreme low temperature to protect the camera.
- ∪ With black liner, more discreet surveillance.
- ∪ With Embedded operation system, support Online updating the dome information like dome title.
- ∪ Built in OSD Menu (English, French, German, Italian, Russian, Spanish, Portuguese and Chinese)
- ∪ Full functional OSD menu, setting and calling presets, auto tour, pattern tour and auto scan etc.
- ∪ Continuously 360° pan, tilt 180° with auto flip
- ∪ With compass function, shows pan/tilt direction on screen
- ∪ Can display the temperature inside.
- ∪ 256 Presets, ±0.1° accuracy.
- ∪ 300°/s preset speed
- ∪ 8 tours, 32 presets per tour
- ∪ 8 patterns, 8 scans, 8 regions
- ∪ 4 privacy masks
- ∪ 4 alarm inputs and 1 alarm outputs. (Optional)
- ∪ Support changing camera ID from OSD menu.
- ∪ Password protected menu
- ∪ Proportional Pan/tilt
- ∪ Auto memory function: auto running the previous function after power off/on
- ∪ Upgraded home position function. If the camera is not controlled for a specified time, it would call preset, run auto tour, pattern tour, auto scan or show display areas automatically
- ∪ With realtime clock and scheduled function (Color to B/W, Patrol, Pattern and Scan etc).
- ∪ Support PelcoC, PelcoD, PelcoP, AD, Vicon, VCL, Molyneux, Diamond, Kalatel, Philips etc.
- ∪ IP66, with heater and fan
- ∪ TVS3000V lightning proof and surge proof module



Environment

Operating Temperature

Model	Absolute Max	Sustained Max	Absolute Min	Sustained Min
InCeiling Indoor	32° to 122°F (0° to 50°C)			
Standard Pendant	113°F (45°C)	95°F (35°C)	4°F (20°C)	14°F (10°C)
Environmental Mount	158°F (70°C)	140°F (60°C)	60°F (51°C)	50°F (45°C)

Note:

1. Assume no wind chill factor
2. Prevents icing at sustained minimum of 50°F (45°C)
3. Deices 0.1 inch (2.5 mm) within 3 hours after powerup

SPECIFICATION

Optical Zoom		12X/NTSC	12X/PAL
Camera Voltage		DC 9V ~ 14V	
Camera Power Consumption		3.6W	
Video	Imaging Sensor/Lens type	4.5mm(1/4 Type)CCD F1.6(Wide End),F2.7(Tel End)f=3.80~45.6mm	
	Total/Effective pixel No.	520K/480K	610K/570K
	ISP	XDI-II	
	Optical Zoom Ratio	X12	
	Scanning Frequency(H/V)	15.734KHZ/59.94HZ	15.625KHZ/50HZ
	Digital Zoom	12X	
	Horizontal Resolution	600TVL	
	S/N Ratio	50dB	
	Sync.System	Internal/Line Lock	
	Minimum Illumination(50IRE)	Color-SENS-UP OFF:0.2lux,SENS-UP ON:0.003lux B/W-SENS-UP OFF:0.01lux,SENS-UP ON:0.00001lux	
	Video Output Signal	1Vp-p Composite (75Ω)	
Function	DNR	3D-DNR(Off/Low/Middle/High)	
	White Balance	Auto/ATW(1,700° K~11,000° K)/One Push/Manual	
	BLC	OFF/BLC/HLC	Low/middle, high/off
	Day/night	ICR(Auto/Day/Night)	
	Stabilizer(EIS)	On/Off	
	Backlight Compensation	ON/HSBLC/OFF	
	Electric Shutter speed	1/60~1/120.000	1/50~1/120.000
	Privacy Zone Masking	4 Mask Zones	
	Zoom speed	1.84s: wide to tele	1.75s: wide to tele
	Iris control	Manual/auto	

DECLARATION

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 the user's own expense.

■ PRECAUTION

- ◆ Only qualified and experienced person can carry out the installation. In many countries and areas licensed personnel is required
- ◆ Always take safety codes into consideration during installation.
- ◆ Use reliable tools only, poor quality tools may cause damage to both human and property
- ◆ Check the strength of all item onsite that are related to installation in advance. It is recommended that the stand of dome be 8 times stronger than the weight of the dome and its accessories.
- ◆ Keep all the original dome package materials in case of future repacking and transportation.

Choose and install speed dome according to environment requirement (Refer to the Product Features). This product conforms to IP66 standard as specified in "Housing Protection Classification (IP code)"

■ WARNINGS

- ◆ Avoid installing this speed dome in hazardous places where inflammable or explosive materials are stored or used.
- ◆ Indoor dome is not designed for outdoor environment.
- ◆ This speed dome runs on 24v AC.
- ◆ Connect to power only after completing installation.
- ◆ Disassemble can only be carried out by qualified personnel.
- ◆ Use soft towel to clean the down cover when necessary. Avoid using caustic detergent.
- ◆ Avoid aiming camera to strong light.

Remarks: Use Silicon Gel to seal the cable entry of the speed dome during installation, to ensure the IP grade.

INSTALLATION PREPARATION

■ TOOL LIST:

The following tools may be needed for the installation:

- ◆ Screw ,nut, anchors
- ◆ Adjustable wrench
- ◆ Philips screwdriver
- ◆ Slot type screwdriver
- ◆ pliers wire
- ◆ Ladder
- ◆ Electric drill
- ◆ Saw
- ◆ Socket Wrench

■ CABLE:

- ◆ Coaxial Cable
- ◆ 75W impedance
- ◆ Solid copper wire
- ◆ 95% braided copper shield

Check transmission distance according to the following chart

Model	Distance
RG 59/U	750ft(229m)
RG 6/U	1,000ft(305m)
RG 16/U	1,500ft(457m)

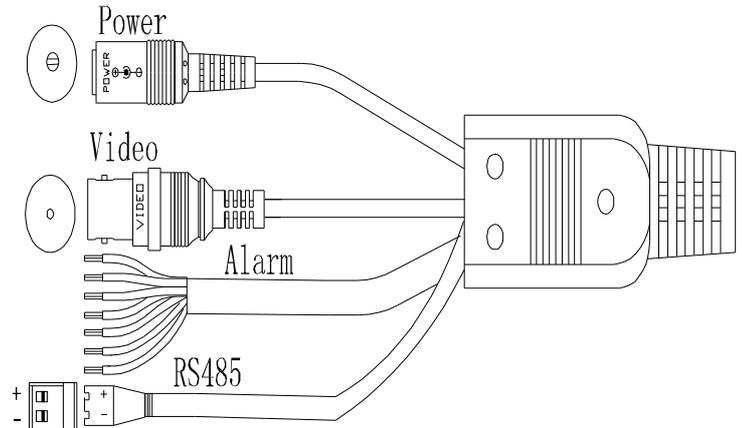
- ◆ RS485 Cabl
- ◆ 0.56mm (24AWG) twisted pair wire

■ DIP SWITCHER AND

JUMPER

Set dome ID, bard rate and protocol by configuring DIP switches (Refer to APPENDIX II).

■ CONNECTION DIAGRAM

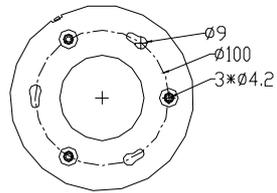
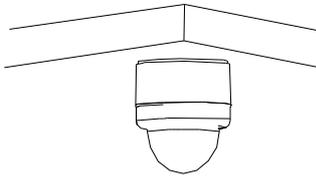


1. Power port connect to the DC12V or AC24V.
2. RS485 port connect to the data cable.
3. Video port connect to the video cable.
4. Alarm input and output
 - 1 : Alarm com
 - 2 : Alarm in1
 - 3 : Alarm in2
 - 4 : Alarm in3
 - 5 : Alarm in4
 - 6 : Alarm Out-A
 - 7 : Alarm Out-B

∨ Note: Alarm output is new type transistor optical coupler contact relay output,Contact Capacity 250V 110mA.

MOUNT TYPE

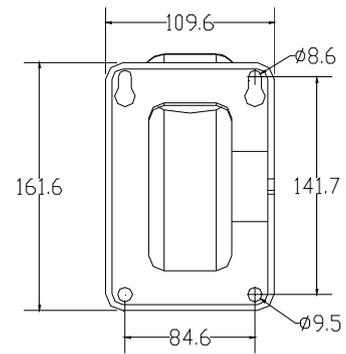
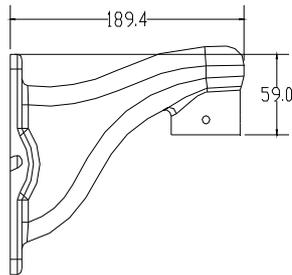
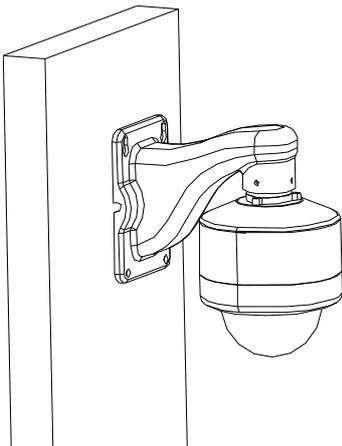
■ CEILING MOUNT



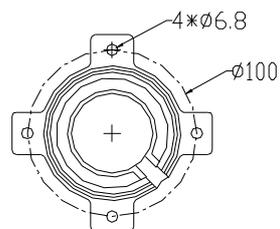
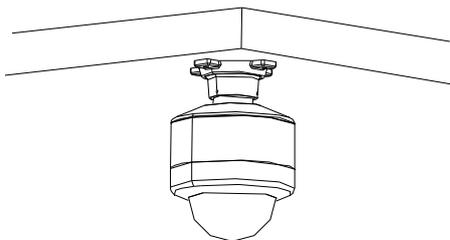
■ BRACKET MOUNT

There are 2 types brackets.

λ Wall Mount



◆ Pendant Mount

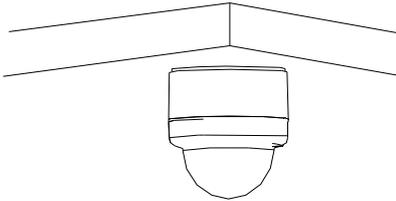


INSTALLATION GUIDE

■ CEILING MOUNT

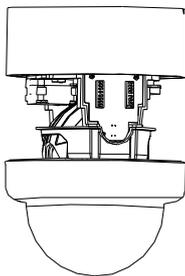
1. Install the plate to the ceiling

Fix the installation plate to the ceiling with 4 screws.



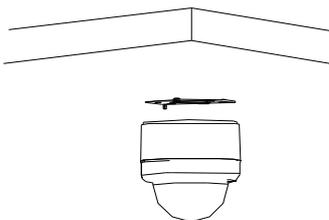
2. Set up the dome ID, protocol and baudrate

Open the dome and set the dip switcher of ID, protocol and baudrate, (refer to Appendix I), and cover the dome properly.



3. Install the dome

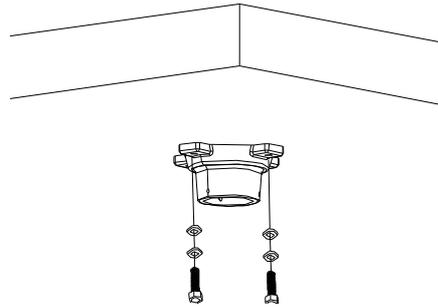
Put the cables through the central hole of the plate, line up the three screws with the plate, push the unit and turn clockwise, fix the fixing screw on the side.



■ PENDANT MOUNT

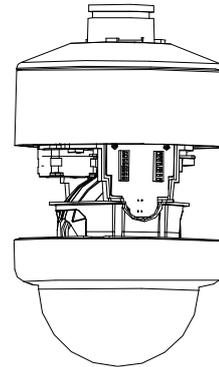
1. Install the pendent bracket

Install the pendent bracket on the ceiling and fix 4 screws.



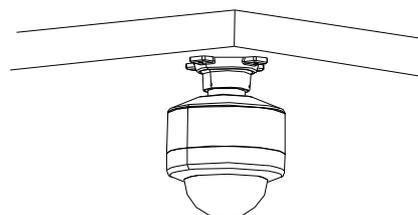
2. Set up the dome ID, protocol and baudrate

Open the dome and set the dip switcher of ID, protocol and baudrate, (refer to Appendix I), and cover the dome properly.



3. Install the dome

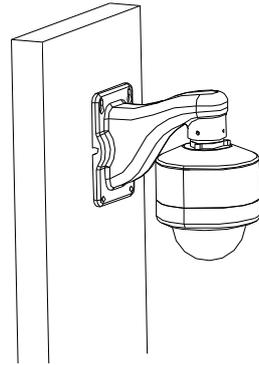
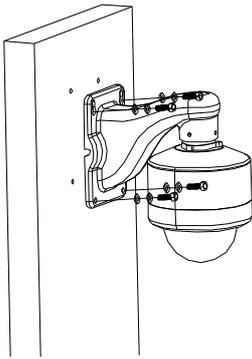
Put the cables through the central hole of the plate, line up the three screws with the plate, push the unit and turn clockwise, fix the fixing screw on the side.



■ WALL MOUNT

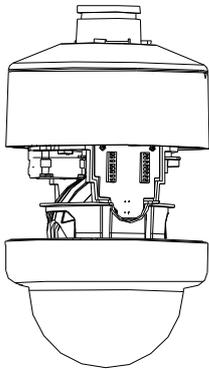
1. Install the wall bracket

Install the wall bracket on the wall and fix 4 screws.



2. Set up the dome ID, protocol and baudrate

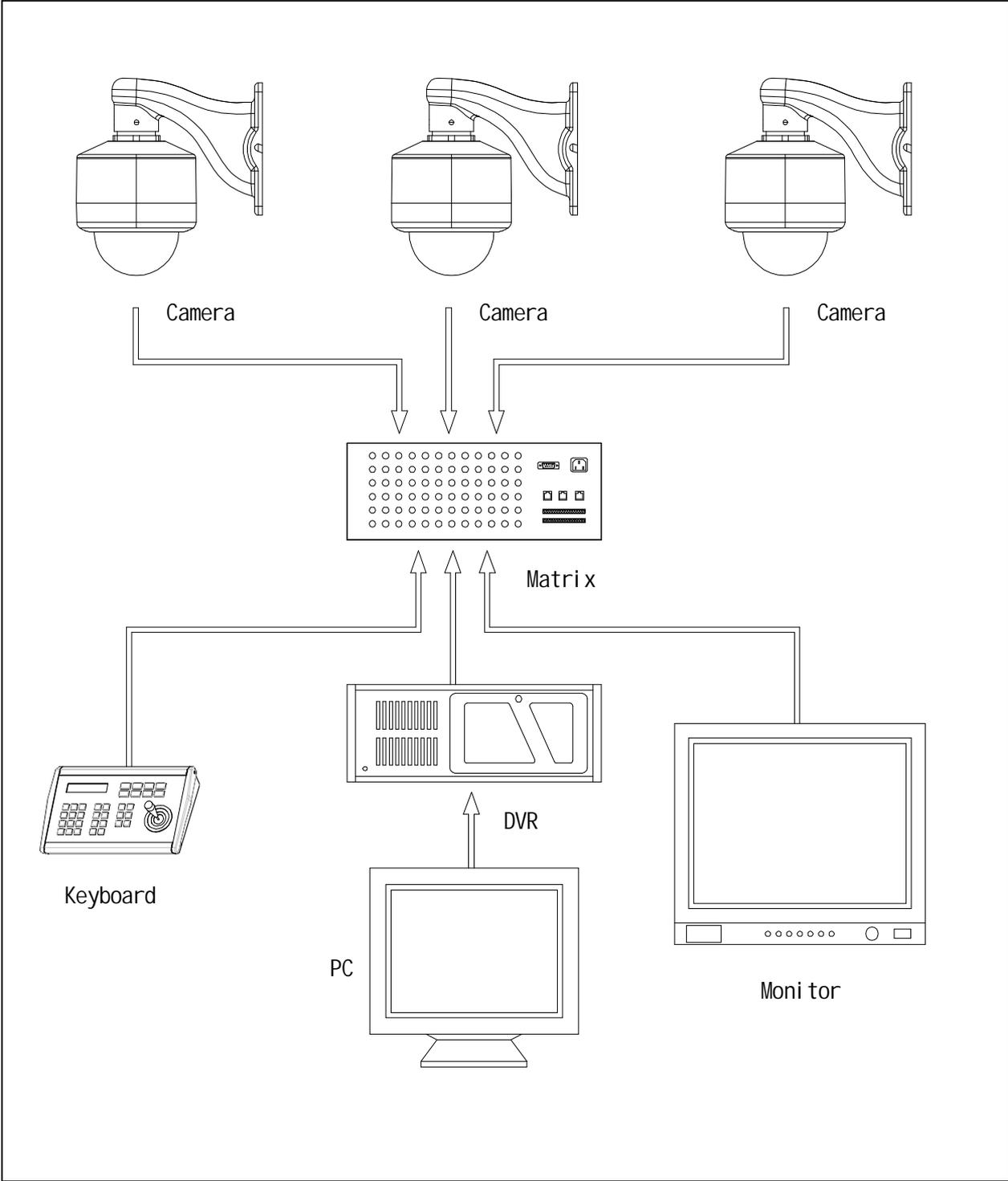
Open the dome and set the dip switcher of ID, protocol and baudrate, (refer to Appendix I), and cover the dome properly.



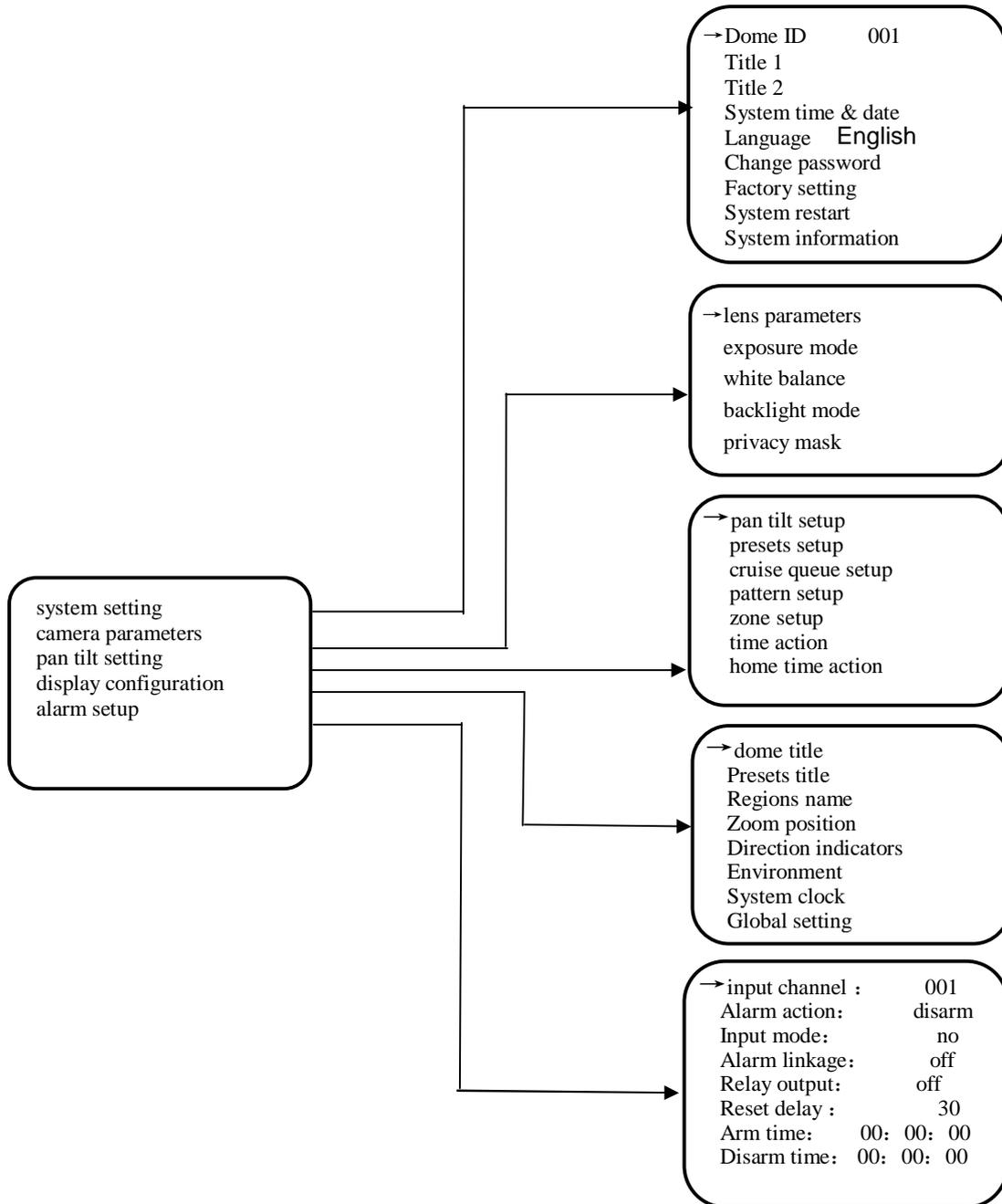
3. Install the dome

Put the cables through the central hole of the plate, line up the three screws with the plate, push the unit and turn clockwise, fix the fixing screw on the side.

SYSTEM CONNECTION



MENU INDEX



OPERATION INSTRUCTION

The PTZ can be operated via one or more buttons on the keyboard or via OSD menu.

By calling or saving Preset #95 can call the OSD menu. Through keyboard or other equipments which can send command to the PTZ (e.g, computer), user can call or save presets.

The operation of the OSD menu is:

■ BOOTUP THE SCREEN

When power on or restart the dome, the boot up information will be displayed on screen and the dome begins selftesting. It last s about 40 seconds. “System booting up” will show on the screen until “bootup success” shows up.

After the dome receives effective command or about 2 minutes later, these characters disappears.

Serial number	000001AC78B2
Dome ID	001
Baud Rate	4800bps
Protocol	PELCO_P
Camera	SDM-100P
Version	1.00A
Fan speed	8020
Temperature	+33C/91F

■ OSD MENU AS FOLLOWS

The dome can show the following info on screen via setting:

Dome Title 1	Dome Title 2
Preset Title 1	Preset Title 2
	00: 10: 00
	2011-01-01
Zone Title 1	Zoom Title 2
South 187/+012	×1 +37C/98F
6600rpm	

- ∪ **Dome Title**
Line 1 shows Dome title 1 and title 2.
- ∪ **Preset Title**
Line 2 shows preset title 1 and title 2.
- ∪ **System time**
On the right side of the 4th line from the bottom

shows system time.

- ∪ **System date**
On the right side of the 3th line from the bottom shows system date.
- ∪ **Zone title**
The 2nd line from the bottom shows zone title 1 and title 2.
- ∪ **Position**
On the left side of last line shows dome position and pan/tilt angle.
- ∪ **Zoom**
At the middle of last line shows zooming status.
- ∪ **Temperature & fan speed**
The right side of last line shows the dome internal temperature and fan speed. XXC/XXF
C: centigrade ; F: Fahrenheit; rpm : revolution per minute

MENU OPERATION

ENTER OSD MENU

- ∪ It can show the main menu by call preset 95#

The OSD menu can be shown via calling or saving preset #95.

Note: If the keyboard is from a third party, please read the keyboard manual for how to call preset. Different factories may use different methods.

- ∪ Users need to input the password to enter the menu when the password protection works.(The default password is 000000)
- ∪ Move the joystick up or down to select 09, move the joystick right or left to select the digits, then press (IRIS OPEN) to confirm. If the password is wrong, the screen disappears automatically.

If there is no operation in a minute, OSD menu disappears automatically. all the settings would be saved and would not lost even if power off.

system setting
camera parameters
pan tilt setting
display configuration
motion detection
alarm setup

SELECT OSD MENU

The cursor flickers on the left side of the menu item. Move the cursor up or down to select the menu item. Press **【iris open】** to enter the menu item, and press **【iris close】** to cancel the operation or exit.

■ CHANGE SETTING

Press **【iris open】** to enter the menu, the chosen item flickers. Move the joystick up, down to change value. Press **【iris open】** to save and back, press **【iris close】** to cancel and exit. In case of multiple digits value, move up and down to change value, left and right to select digits, Press **【iris open】** to save and exit, and press **【iris close】** to cancel and exit.

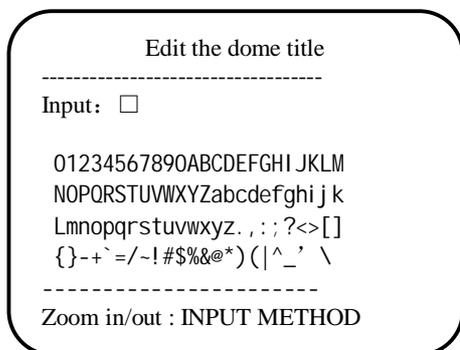
Note: To Increase the speed of the value changing, please hold the joystick to top or bottom for more than 10 seconds.

■ INPUT TITLE

The title can be up to 20 characters. If users set title 1 and title 2 in one line, it can show up to 40 characters.

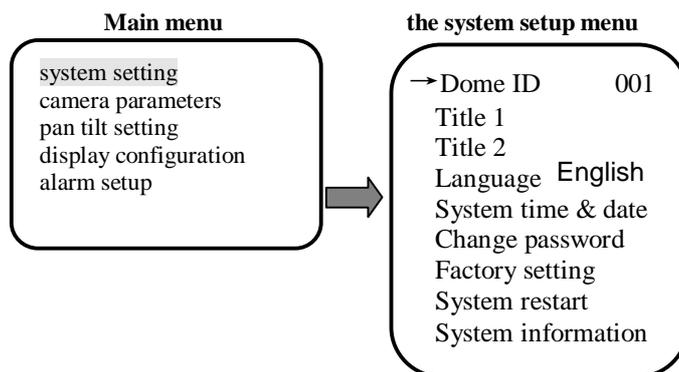
The Dome has ASC character and Latin ExtendedB. The user can change the input typewriting by operate **【zoom in】** or **【zoom out】** any time.

The title input is as follows



- 1、 After "input:" is the space for title. Move the cursor left or right to input/edit characters.
- 2、 Move cursor up and down to choose character. At this moment the cursor moves to the central screen which shows characters.
- 3、 Move the cursor up, down, right, left, then press **【iris open】** to confirm the editing characters. And the chosen characters would be shown on the title and can be edited.
- 4、 Input all the characters, press **【iris close】** to back to title editing area, and the cursor moves to this area.
- 5、 press **【iris open】** to save the title and exit, and press **【iris close】** to cancel the title input and exit.

SYSTEM SETTINGS



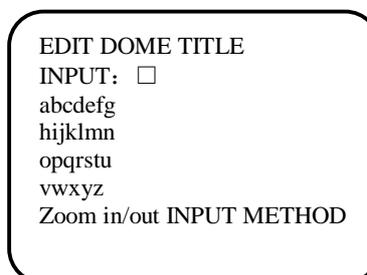
■ DOME ID SETTING

This camera supports soft and hard address change, and the default is the hardware address. When the dome's dip switch (SW2) that one to eight all sets at "ON", it may carry on the address change establishment, otherwise the dome address is at the hard address condition and the menu can't revise.

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【system settings】** menu items, press **【iris open】** key to confirm and enter the system setup menu.
3. Move the cursor to select **【Dome ID】** menu item in the **【system setting】** and press **【iris open】** key to confirm, then enter the camera serial number input menu item, the camera menu displays a default set of 12bit input the serial number.
4. Input the default 12digit serial number and press "open" button with pan tilt 's up, down, left and right command to enter dome ID menu. At this point the dome ID parameter shines and use up or down to modify the dome ID.
5. Press **【iris open】** key to save dome ID setting and exit, press **【iris close】** key without saving dome ID setting and exit.

■ TITLE SETTING



F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. move the cursor up or down to select **【system settings】** menu items, press **【iris open】** key to enter the system setup menu.

3. Move the cursor to select 【title 1】 menu item in the 【system setting】 and press 【iris open】 key to confirm, then enter the title parameter change establishment, this time parameter twinkle.
4. Use the control lens ZOOM IN/OUT switch the input method.
5. Refer to“Edit the title”

■ LANGUAGE SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.
2. Move the cursor up or down to select 【system settings】 menu items, press 【iris open】 key to confirm and enter the system setup menu.
3. Move the cursor to select 【language】 menu item in the 【system setting】 and press 【iris open】 key to confirm, then enter the language selection, this time parameter twinkle.
4. With pan tilt up, down, up or down to select setting.
- 5 Press 【iris open】key to save language setting and exit, press 【iris close】 key without saving language setting and exit.

■ TIME SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.
2. Move the cursor up or down to select 【 system settings】 menu items, press 【iris open】 key to confirm and enter the system setup menu.
3. Move the cursor to select 【system time/date】 menu item in the 【system setting】and press 【iris open】to confirm, enters the system time/date parameter change establishment, this time parameter twinkle.
4. With pan tilt up, down, up or down to select setting.
5. Press 【iris open】 key to save system time/date setting and exit, press 【iris close】 key without saving system time/date setting and exit.

■ PASSWORD SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.
2. Move the cursor up or down to select 【 system settings】 menu items, press 【iris open】 key to confirm and enter the system setup menu.
3. Move the cursor to select 【change password】 menu item in the 【system setting】and press 【iris open】to confirm, enters the password change establishment, this time the screen demonstrated that “inputs the old password”.
4. Refer “edit the title” to input the password.
5. When enter the old password is successful, press 【iris open】 key, then the screen displays “ENTER NEW PASSWORD”. If input the new password twice is the same, then the screen prompted “PASSWORD CHANGE SUCCESSFULLY”.

NOTE: The camera original password is 000000, when the password set to 000000,the dome turn off the password protection .

■ FACTORY SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.
2. Move the cursor up or down to select 【 system settings】 menu items, press 【iris open】 key to confirm and enter the system setup menu.
3. Move the cursor to select 【factory setting】 menu items in the 【system setting】 and press 【iris open】 button to restore factory settings

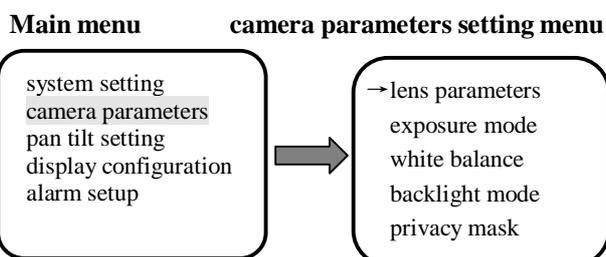
■ SYSTEM RESTART SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.
2. Move the cursor up or down to select 【 system settings】 menu items, press 【iris open】 key to confirm and enter the system setup menu.
3. Just move the cursor to select 【system restart】 menu item in the 【system setting】 and press 【iris open】 key.

CAMERA PARAMETERS

This menu allows you to operate on different manufacturers and camera parameters can be configured and may be used under different conditions and different usage requirements for flexible settings.

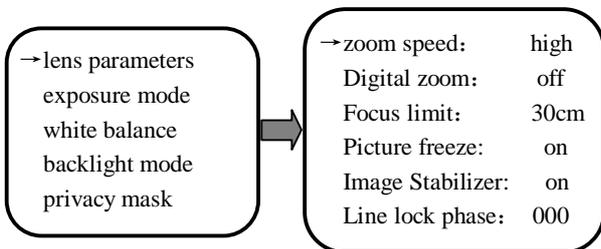


Attention: Different manufacturers series camera menu, for further details, please refer to the appropriate camera features Setup instructions.

LENS PARAMETERS

This menu allows user to select on the camera's zoom speed, digital zoom, focus limit and picture freeze.

Camera parameters setting camera parameters menu



◆ ZOOM SPEED SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【camera parameters】** menu items and press **【iris open】** key to confirm, then enter the lens parameters menu..
3. Move the cursor to select **【zoom speed】** menu item in the **【lens parameters】** and press **【iris open】** key to confirm. Then enter the zoom speed settings, in which case the parameter flashes .
4. With pan tilt up, down, up or down to select setting.
5. Press **【iris open】** key to save zoom speed setting and exit, press **【iris close】** key without saving zoom speed setting and exit.

◆ DIGITAL ZOOM SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【camera parameters】** menu items and press **【iris open】** key to confirm, then enter the lens parameters menu.
3. Move the cursor to select **【digital zoom】** in the **【lens parameters】** and press **【iris open】** key to confirm. then enter the digital zoom settings, in which case the parameter flashes .
4. With pan tilt up, down, up or down to select setting.
5. Press **【iris open】** key to save digital zoom setting and exit, press **【iris close】** key without saving digital zoom setting and exit.

◆ FOCUS LIMIT SETTING

You can set the camera in focus limit near the focal distance to improve special places lens performance. For example: a rainy day, will focus on a limit of 1 m, the lens will not be focused to the dome of water droplets.

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【camera parameters】** menu items and press **【iris open】** key to confirm, then enter the lens parameters menu.
3. Move the cursor to **【focus limit】** menu item in the **【lens parameters】** and press **【iris open】** key to confirm, Enter the focus limit settings, in which case the parameter flashes .

4. With pan tilt up, down, up or down to select setting .
5. Press **【iris open】** key to save focus limit setting and exit, press **【iris close】** key without saving focus limit setting and exit.

◆ PICTURE FREEZE SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【camera parameters】** menu items and press **【iris open】** key to confirm, then enter the lens parameters menu.
3. Move the cursor to select **【picture freeze】** menu item in the **【lens parameters】** and press **【iris open】** key to confirm. then enter the picture freeze settings, in which case the parameter flashes .
4. With pan tilt up, down, up or down to select setting .
5. Press **【iris open】** key to save picture freeze setting and exit, press **【iris close】** key without saving picture freeze setting and exit.

▼ **NOTE: Some cameras do not support this feature**

◆ IMAGE STABILIZER SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【camera parameters】** menu items and press **【iris open】** key to confirm, then enter the lens parameters menu.
3. Move the cursor to select **【Image Stabilizer】** menu item in the **【lens parameters】** and press **【iris open】** key to confirm. Then enter the Image Stabilizer settings, in which case the parameter flashes .
4. With pan tilt up, down, up or down to select setting .
5. Press **【iris open】** key to save Image Stabilizer setting and exit, press **【iris close】** key without saving Image Stabilizer setting and exit.

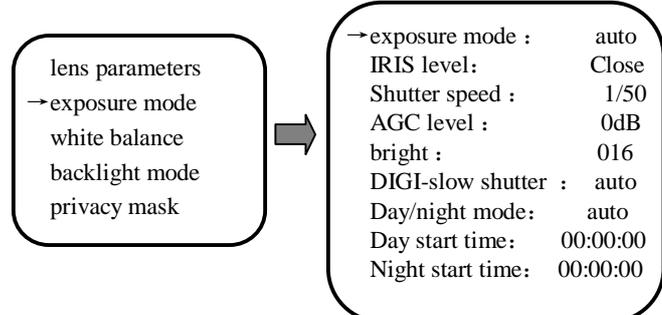
▼ **NOTE: Some cameras do not support this feature**

■ EXPOSURE MODE

The user may establish camera's exposure mode ,shutter speed iris level ,AGC level ,bright level ,backlight, DIGI-slow shutter and so on through this menu, achieves the picture effect which the user needs.

Camera parameters setting

exposure mode menu



◆EXPOSURE MODE SETTING

The image is good or bad and exposure related, Exposure and light time (shutter speed), the light areas (aperture). Image quality and gain and brightness establishment also related, it make public pattern each establishment possible to exist conflicts mutually, the interdependence situation, regards the different camera cassette mechanism to differ from, the special details please refer to corresponding camera function showing.

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor up or down to select **【camera parameters】** menu items and press **【iris open】** key to confirm, then enter the camera parameters menu..
3. Move the cursor to select **【exposure mode】** menu item in the **【camera parameters】** and press **【iris open】** key to confirm, then enter the exposure submenu setting.
4. Move the cursor to select **【exposure mode】** menu item in the **【exposure mode】** and press **【iris open】** key to confirm, then enter the exposure mode setting.

This allows you to select :

【auto】: Automatic exposure modes. This is the camera default setting and the camera according to the scene brightness, CCD, ISO speed automatically adjust the right exposure. This mode cannot be manually set the values of other exposure mode level.

【manual】 The manual setting mode, the mode can be chosen arbitrarily set the exposure mode.

【shutter speed】 : shutter first pattern

【IRIS level】 : IRIS first pattern

【bright level】 : bright first pattern

【AGC level】 : AGC first pattern

5. With pan tilt up, down, up or down to select setting; Press **【iris open】** key to save exposure setting and exit, press **【iris close】** key without saving exposure setting and exit.

◆SHUTTER SPEED SETTING

F Operation settings as follows:

1. Move the cursor to select **【shutter speed】** menu item in the **【exposure mode】** and press **【iris open】** key to confirm, then enter the shutter speed choice establishment item, this time parameter twinkle.
2. With pan tilt up, down, up or down to select setting .
3. press **【iris open】** key to save shutter speed setting and exit, press **【iris close】** key without saving shutter speed setting and exit .

√ **NOTE:** It can be set only when the exposure mode is set to manual or shutter.

◆IRIS LEVEL SETTING

F Operation settings as follows:

1. Move the cursor to select **【IRIS level】** menu item in the **【exposure mode】** and press **【iris open】** key to confirm, then enter the IRIS level parameters to change the settings, in which case the parameter flashes .

2. With pan tilt up, down, up or down to select setting .
3. press **【iris open】** key to save IRIS level mode of prior setting and exit, press **【iris close】** key without saving mode of prior setting and exit.

√ **NOTE:** It can be set only when the exposure mode is set to manual or aperture.

◆BRIGHT LEVEL SETTING

F Operation settings as follows:

1. Move the cursor to select **【bright level】** menu item in the **【exposure mode】** and press **【iris open】** key to confirm, then enter the bright level settings, in which case the parameter flashes .
2. With pan tilt up, down, up or down to select setting .
3. Press **【iris open】** key to save bright level setting and exit press **【iris close】** key without saving bright level setting and exit .

◆AGC LEVEL SETTING

F Operation settings as follows:

1. Move the cursor to select **【AGC level】** menu item in the **【exposure mode】** and press **【iris open】** key to confirm, then enter the AGC level settings, in which case the parameter flashes .
2. With pan tilt up, down, up or down to select setting .
3. Press **【iris open】** key to save AGC level setting and exit, press **【iris close】** key without saving AGC level setting and exit .

√ **NOTE:** It can be set only when the exposure mode is set to manual or AGC level .

◆DIGI-SLOW SHUTTER SETTING

The optical fiber is insufficient, the display monitor figure above is very likely black because the camera monitors in the night or when the dark environment, the optical fiber is insufficient, the display monitor figure above is very likely black, the process establishes the slow shutter, lengthens the camera natural lighting time, causes the image which photographs in darkness is clearer.

F Operation settings as follows:

1. Move the cursor to select **【DIGIslow shutter】** menu item in the **【exposure mode】** and press **【iris open】** key to confirm, then enter the DIGIslow shutter settings, in which case the parameter flashes .
2. With pan tilt up, down, up or down to select setting .
3. Press **【iris open】** key to save DIGIslow shutter setting and exit, press **【iris close】** key without saving DIGIslow shutter setting and exit .

◆DAY/NIGHT MODE SETTING

Changes in the surrounding ambient light, this feature automatically switch between day and night images. When you use this feature, the bright color images taken during the day, while shooting in the dark of night will be black and white image. You can also set a fixed day or night mode without using this automatic conversion.

Can be divided into :

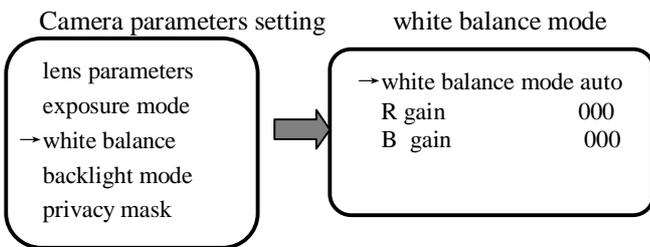
- 【evening mode】 : The light filter detachment image fixed is black and white, even if in the daytime is also blackandwhite image.
- 【day mode】 : Color image to light, it will not go to the black white (night) mode
- 【auto mode】 : When light enough for a while, a dim light automatically remove a filter for black and white pictures
- 【 timing mode】 : The time to set the camera running into a black and white and color image
- 【day start time】 : 00: 00: 00
- 【night start time】 : 00: 00: 00

F Operation settings as follows:

- 1.Move the cursor to select 【day/night】 menu item in the 【exposure mode】and press 【iris open】key to confirm , then enter the day/night settings.
2. With pan tilt up or down to change the settings and press the 【iris open】 key to save the day/night mode setting and exit; press 【iris close】 key without saving the day/night mode and exit.
3. Time settings: With pan tilt up and down the command, move the cursor to the start time of the day, press the 【iris open】 key to enter time or to change settings, press the 【iris open】 key to save the day/night mode setting and exit ; press 【iris close】 key without saving the settings and exit.

■ WHITE BALANCE

Users can set the camera through the menu of white balanced patterns (automatic and manual) red and blue, and gain benefits adjustment.



◆WHITE BALANCE SETTING

The camera supports a variety of white balance mode, automatic mode, and manual mode, automatic tracking mode, and single trigger mode, indoor and outdoor mode.

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.
2. Move the cursor up or down to select 【camera parameters】 menu items and press【iris open】key to confirm, then enter the lens parameters menu..
3. Move the cursor to select 【white balance】 menu item in the 【camera parameters】 and press 【iris open】 key to confirm, then enter the white balance mode setting.
4. Move the cursor to select 【white balance】 menu item in the 【white balance】 and press 【iris open】 key to confirm, then enter the white balance mode setting.

This allows you to select :

- 【auto】 : This is the machine default mode, the camera's white balance sensor for environmental detection automatically restored after a true color.
- 【manual】 : Under this pattern the user may the hand regulation red gain value and the green gain value.
- 【automatic tracking】 : automatic tracking mode
- 【once touch】 : once touch mode
- 【outdoor】 : the outdoor pattern, the tone is cold.
- 【indoor】 : The indoor pattern, the tone is warm

- 5.With pan tilt up, down, up or down to select setting
- 6.press 【iris open】 to save white balance setting and exit, press 【iris close】 without saving white balance setting and exit.

◆RED GAIN SETTING

F Operation settings as follows:

- 1.Move the cursor to select 【R gain】 menu item in the 【white balance】 and press 【iris open】 key to confirm, then enter the Red gain settings.
 2. Change the red, can gain from 0 — 255 choose to set the value enhancement, and red, red represents an increase, the more shade warmer by the pan tilt’s up or down command.
 3. Press 【iris open】key to save red gain setting and exit, press 【iris close】 key without saving red gain setting and exit.
- Note: Just the white balance mode is manual, the setting can be done.

◆BLUE GAIN SETTING

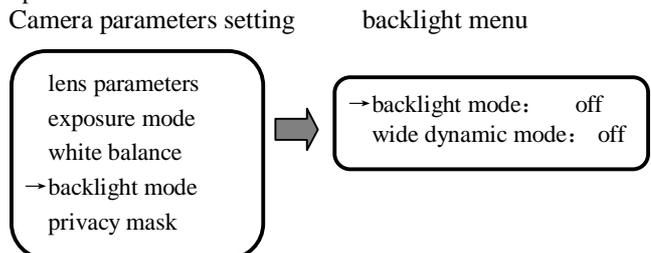
F Operation settings as follows:

- 1.Move the cursor to select 【B gain】 menu item in the 【white balance】 and press 【iris open】 key to confirm, then enter the blue gain settings,
2. Change from blue gain value 0 — 255 choose to set the blue, the greater the benefits of the value that represents an increase in the shade of green, the more he turn chilly. by the pan tilt’s up or down command.
3. Press 【iris open】 key to save green gain setting and exit, press 【iris close】 key without saving blue gain setting and exit.

Note: Just the white balance mode is manual, the setting can be done.

■ BACKLIGHT MODE SETTING

The background of the strong light to a shadow objects, the compensatory automatically adjust the aperture to facilitate Different light. the correct image of the brightness and a clear picture screen.



◆BACKLIGHT MODE SETTING

F Operation settings as follows:

1. Move the cursor to select **【backlight mode】** menu item in the **【camera parameters】** and press **【iris open】** key to confirm, then enter the backlight mode settings.
2. With pan tilt up, down, up or down to select setting .
3. Press **【iris open】** key to save backlight mode setting and exit, press **【iris close】** key without saving backlight mode setting and exit.

◆WIDE DYNAMIC MODE SETTING

When in the strong light (sun, lamps, or reflective) the high intensity in the region and shadow, and the relative brightness area in the image is also lead to bright because of overexposure region became white and dark areas for exposure of a black, serious impact on the image quality and dynamic features in a camera system to the region can become bright and make the scene of the soft light district has become more and changes the visual effect.

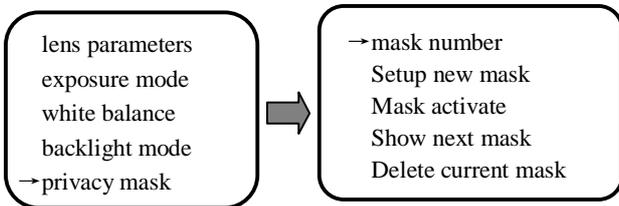
F Operation settings as follows:

1. Move the cursor to select **【wide dynamic level】** menu item in the **【camera parameters】** and press **【iris open】** key to confirm, then enter the wide dynamic level settings.
2. With pan tilt up, down, up or down to select setting .
3. Press **【iris open】** key to save wide dynamic level setting and exit, press **【iris close】** key without saving wide dynamic level setting and exit.

√ **NOTE:** some dome can not support the setting.

PRIVACY MASK SETTING

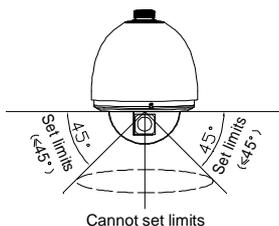
Camera parameters setting privacy mask submenu



Privacy functions will be a certain area shielded display. the user through the setting may be needed privacy in the area, covering up the camera can support up to eight privacy covered regional (size can be set up. the sunlight) can with the machine.

√ REMARK:

1. Privacy with builtin camera settings feature of the model, different types of camera support of the privacy of the window is slightly different. in addition, part of the camera does not support the privacy protection features.
2. When the camera down a vertical ≥ 45 degrees, the privacy in function must not be located, the following diagram :



◆PRIVACY MASK SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【camera parameters】** menu item and press **【iris open】** key to confirm, then enter the camera parameters setting menu, and then move the cursor to select **【privacy mask】** menu item and press **【iris open】** to enter privacy mask setting.
3. Move the cursor to select **【privacy mask setting】** menu item in the **【privacy mask】** submenu and press **【iris open】** key to confirm, then enter the camera parameters setting menu.
4. The user control about moving the camera, place at the centre needed privacy in an object or location, **【iris open】** the monitor screen button, and center location will show a small piece of black of the privacy of the window Sunlight.
5. According to cover the actual size, adjust the black privacy in the window's size to the required size. move right rockers, increased from a window size for the vacillating .
6. Press **【iris open】** key to save privacy mask setting and exit, press **【iris close】** key without saving privacy mask setting and exit.

√ **NOTE:** The camera cover all personal settings are the same regional approach to the definition, display, the privacy, you should choose to privacy.

◆MASK ACTIVATE SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【camera parameters】** menu item and press **【iris open】** key to confirm, then enter the camera parameters setting menu.
3. Move the cursor to select **【mask activate】** menu item and press **【iris open】** key to confirm, then enter the mask activate setting menu.
4. Move the cursor to select **【mask activate】** menu item in the **【privacy mask】** submenu and press **【iris open】** key to confirm, then enter the mask activate setting menu.
5. With pan tilt up, down, up or down to select setting .
6. .press **【iris open】** key to save mask activate setting and exit, press **【iris close】** key without saving mask activate setting and exit.

PAN TILT SETTING

Main menu

system setting
camera parameters
pan tilt setting
display configuration
alarm setup

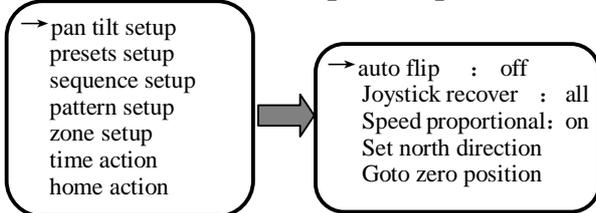
pan tilt setting menu

→ pan tilt setup
presets setup
sequence setup
pattern setup
zone setup
time action
home action

■PAN TILT SETTING

Users through the menu for automatic flip and joystick recover, speed proportional to set.

Pan tilt setting menu pan tilt parameters



◆AUTO FLIP

User panned to the bottom (vertical) if still leash rockers, the level of pivoting 180 degrees angle and turned up to 90 degrees, you can see to the scene, vertical 180 the whole monitoring.

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu.
3. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
4. With pan tilt up, down, up or down to select setting .
Choice open to open automatic rollover, but the automatic vertical 90 degrees rollover ; chosen to close and turned off automatically. automatic vertical cannot be achieved. over 90 degrees.
5. Press **【iris open】**key to save auto flip setting and exit, press **【iris close】** key without saving auto flip setting and exit.

◆JOYSTICK RECOVER

open: Select this after using the manual focus or manual iris, just click joystick manipulation, will return to the autofocus and automatic Iris mode..

Focus: Select this after using the manual focus or manual iris, just click joystick control, only to return to auto focus mode.

Iris: Select this after using the manual focus or manual iris, the manipulation of what rocker, only to return to the auto Iris mode.

Φ Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
3. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setup】**submenu and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
4. With pan tilt up, down, up or down to select setting .
5. Press **【iris open】** key to save joystick recover setting and exit, press **【iris close】** key without saving joystick recover setting and exit.

◆SPEED PROPORTIONAL

When manual regulation, possibly to the focal distance far situation, the camera high speed response causes touches when slightly the rocking bar to cause the picture to move rapidly, thus causes the picture to lose, when near looks at the picture burnt, easy to present the picture flutter.

In the speed proportion match opens in the situation, rapes the speed will change according to the lens time becomes the proportion change. The raping speed will increase along with lens' enlargement factor slows down gradually. Like this causes the image to rape in the rapid traverse also to be able to maintain clear in the monitoring device. The speed which when the lens will change time will be biggest rapes will turn for 0.1 degrees/second.

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
3. Move the cursor to select **【speed proportional】** menu item in the **【pan tilt setup】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
4. With pan tilt up, down, up or down to select setting .
5. press **【iris open】**key to save speed proportional setting and exit, press **【iris close】**key without saving speed proportional setting and exit.

◆SET NORTH DIRECTION

After carrying out this function, the system automatically the ball machine current position preservation for the ball machine north position, this position as the position instruction zero spot, namely the level 0° position.

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** submenu and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
3. Move the cursor to select **【set north direction】** menu item in the **【pan tilt setup】** submenu and press **【iris open】** key to confirm, then enter the et north direction setting.
4. User actions rockers, will be the lens at the set is the direction, press the **【iris open】** button confirmed that the system will keep the camera to the position of the press **【iris close】** button to return to the next menu.

◆GOTO ZERO POSITION

After carrying out this function, the system will examine horizontal and the vertical zero point, thus realizes in the camera accident outofstep situation to resume the localization.

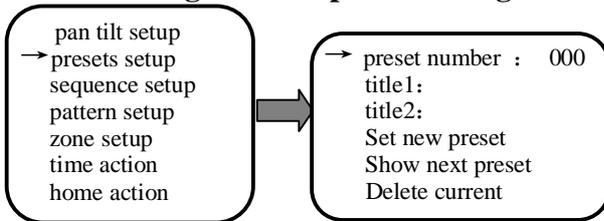
F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
3. Move the cursor to select **【goto zero position】** menu item in the **【pan tilt setup】** submenu and press **【iris open】** key to goto zero position.

■PRESET SETUP MENU

Preset time can make the camera will the current state of the horizontal, vertical angle head tilt camera angle and multiple locations such positional parameter, you need to preserve the memory can quickly in order to directly call these arguments make a quick adjustment to the location accuracy. The camera supports 255 presets.

Pan tilt setting menu preset setting menu



◆PRESET NUMBER SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, enter the pan tilt setting menu.
3. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
4. Move the cursor to select **【preset number】** menu item in the **【pan tilt setting】** submenu and press **【iris open】** key to confirm, then enter the preset number setting menu, in which case the parameter flashes .
5. With pan tilt up, down, up or down to select setting .
6. .press **【iris open】** key to save preset number setting and exit, press **【iris close】** key without saving preset number setting and exit.

◆TITLE SETTING

F Operation settings as follows:

1. Move the cursor to **【title】** menu item in the **【pan tilt setting】** submenu and press **【iris open】** key to confirm, then enter the title setting menu, in which case the parameter flashes .
2. Refer "edit the title"
3. press **【iris open】** key to save setting and exit, press **【iris close】** key without saving setting and exit.

◆PRESET SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu.
3. Move the cursor to select **【pan tilt setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pan tilt setup menu.
4. Move the cursor to select **【preset setting】** in the **【pan tilt setting】** submenu to confirm and enter the preset setting .

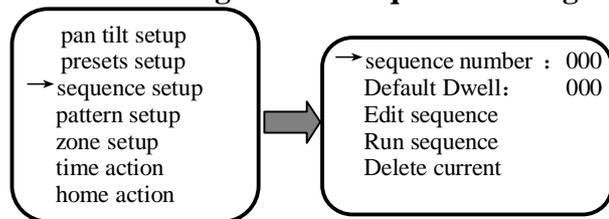
5. The user control migration camera, the central place alignment presetting, presses the **【iris open】** key, preserves the current initialization spot to establish and to withdraw from this establishment; Presses the **【iris close】** key, cancels the current initialization spot to establish and to withdraw from this establishment.

√ **NOTE: When must carry out the definition, the demonstration, the elimination initialization and the edition title, should choose an initialization serial number first.**

■CRUISE SEQUEUE SETTING

Scans the function establishment through a initialization cruise, may certain establish the order which the good preplaced spot presses needs to arrange to the cruise scans in the route, and may establish alone in each initialization pause time, after a movement initialization cruise scans, the ball opportunity according to a initialization order which arranges in advance one by one transfers. The camera most may establish saves 4 initialization cruise to scan the route, each may save 32 preplaced spots.

Pan tilt setting menu sequence setting



◆CRUISE SEQUENCE NUMBER SETTING

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu.
3. Move the cursor to select **【sequence setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the sequence setup menu.
4. Move the cursor to select **【sequence number】** menu item in the **【sequence setup】** submenu and press **【iris open】** key to confirm, then enter the sequence number setting menu, in which case the parameter flashes .
5. With pan tilt up, down, up or down to select setting .
6. .Press **【iris open】** key to save sequence number setting and exit, press **【iris close】** key without saving sequence number setting and exit.

◆EDIT SEQUENCE

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu.
3. Move the cursor to select **【edit sequence】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the edit sequence menu.

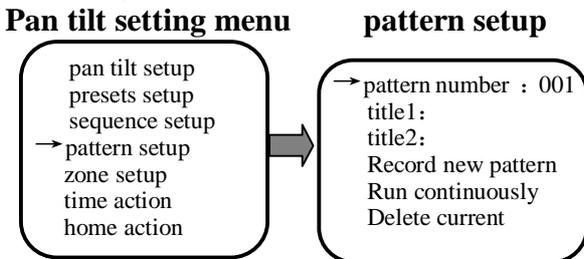
4. With pan tilt left, right, turn left or right to move the cursor parameters, then, with head and orders, or to choose to set the parameters.

5. Press **【iris open】** key to save edit sequence setting and exit, press **【iris close】** key without saving edit sequence setting and exit.

▼ **NOTE:** Each group of parameters are composed of two number of classes characters, first represents a initialization serial number, second represents the resident time, each initialization resident time take has not tacitly approved the time in the change situation as the standard, the user also possibly carries on through the current menu establishes each initialization pause alone the time, each cruise are most may establish 32 preplaced spots.

■ PATTERN SETUP

It may realize the camera continuous record 1000 different movement instructions, including the camera to rape movements and so on control, camera convention control, when movement the camera opportunity according to the record movement path redundant movement, the pattern function may establish 4.

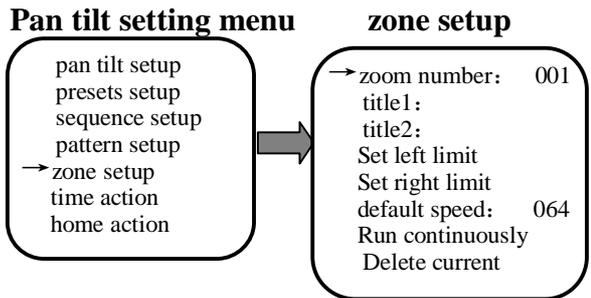


◆ RECORD NEW PATTERN

F **Operation settings as follows:**

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu.
3. Move the cursor to select **【pattern setup】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the pattern setup menu.
4. Move the cursor to select **【record new pattern】** menu item in the **【sequence setup】** submenu and press **【iris open】** key to confirm, then enter the record new pattern setting menu, The user may operate the top, bottom, left and right control lens (aperture exception) and so on.
5. Presses the **【iris open】** key to confirm that enters the record pattern condition, this time the screen demonstrated that "the record pattern way", instantly operates the ball machine the path movement which premost record according to the user, the ball machine movement path during this period of time will be preserved by 11 memories.
6. When the user need finished the current record pattern, pressed the **【iris open】**, preserved the current record pattern to establish and to withdraw from this establishment;
7. By the **【iris close】** button, the model set the record and exit of the settings.

■ ZONES SETUP



Area is the level of a region between two points. Users can set the region and the line.

Areas and levels were similar, only a user can be named for the zone. when the camera to certain areas, the name of the region will be shown to remind operators.

Attention: Camera only to sweep the horizon. The camera user can be set up eight areas.

Region indicate numbers : 001 displays the current key. the value of 001 ~ 008. in **【iris open】** select, change the values.

Sets the name of the zone. See the page title settings P23

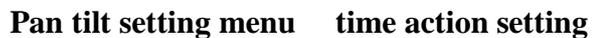
Set left limit
Operation of the camera moved to the needs of the location then press the **【iris open】**.

Set right limit
Operation of the camera moved to the needs of the location then press the **【iris open】**.

Delete current
Press **【iris open】** to delete

Cruise speed setting
The value of 001 to 255, the great speed higher. in **【iris open】** select, change the values.
Runs the current area scan (001 ~ 008).

■ TIME ACTION



F **Operation settings as follows:**

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu.

3. Move the cursor to select **【time action】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the time action menu.

4. with pan tilt on the orders, or to change the leisure time, but a second time. press select to set to **【iris open】** button and set out in your time action and at the **【iris close】** button ,and not saving time action setting and exit.

◆TIME ACTION

F Operation settings as follows:

1. Move the cursor to select **【time action】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the time action menu.

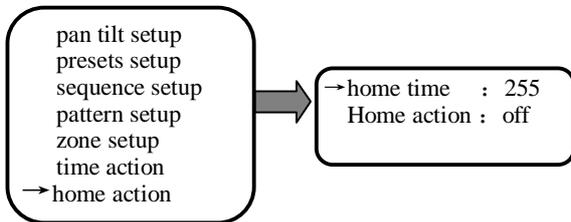
2. Issues a decree with rapping on, upward or downward changes the idle function, may from 14 automatic scans, 1200 initialization, 14 cruises line up in formation, in 14 pattern ways to choose.

3. Press **【iris open】** key to save home action setting and exit, press **【iris close】** key without saving home action setting and exit.

■HOME TIME SETTING

Has not received any order from the camera to start to time, in user hypothesis time section, if still did not have the receive to assume the post what order, then the camera automatic execution “carries out the function the user to assign the establishment idle” some function, the home time may from 5255 second choice establishment.

Pan tilt setting menu home action setting



◆ HOME TIME

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.

2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm ,then enter the pan tilt setting menu. Move the cursor to select **【home time】** menu item in the **【pan tilt setting】** and press **【iris open】** key to confirm, then enter the home time menu.

3. Move the cursor to select **【home time】** menu item in the **【home action】** and press **【iris open】** key to confirm, then enter the home time menu .

4. With pan tilt on the orders, or to change the leisure time, but from 5 seconds — 255 choose to set home time.

5. press **【iris open】** key to save auto home time setting and exit, press **【iris close】** key without saving home time setting and exit.

◆ HOME ACTION

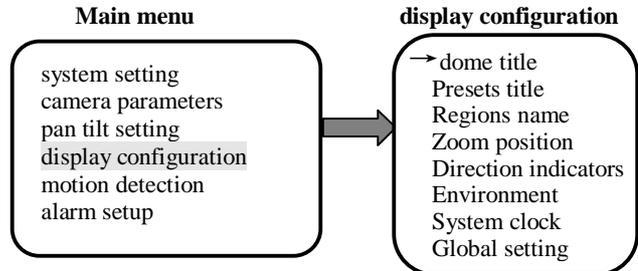
F Operation settings as follows:

1.Move the cursor to select **【home action】** menu item in the **【home action】** and press **【iris open】** key to confirm, then enter home action setting.

2. Issues a decree with rapping on, upward or downward changes the home action, may from 14 automatic scans, 1200 presets, 14 cruises line up in formation, in 14 pattern ways to choose.

3.Press **【iris open】** key to save home action setting and exit setting, press **【iris close】** key without saving home action setting and exit setting.

■DISPLAY CONFIGURATION



■DOME TITLE

F Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.

2. Move the cursor to select **【pan tilt setting】** menu item and press **【iris open】** key to confirm, then enter the pan tilt setting menu .then move the cursor to select **【dome title】** menu item in the **【display configuration】** and press **【iris open】** key to confirm.

3. With pan tilt up, down, up or down to select setting

4. .press **【iris open】** key to save dome title setting and exit, press **【iris close】** key without saving dome title setting and exit.

⊞ NOTE: presets title, zoom position, regions name, direction indicators, environment, and system clock are the same; please refer to the title setting out the steps below.

■GLOBAL SETTING

The settings for dome title, presets title, regions name, zoom position, direction indicators, environmental, system clock display to synchronize.

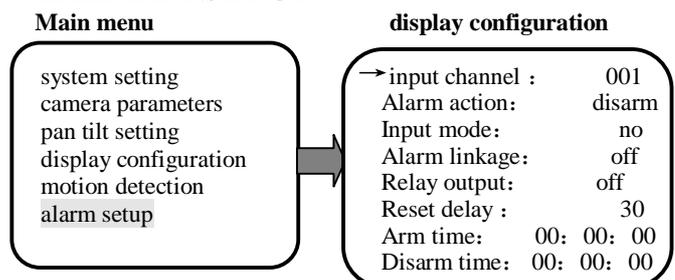
⊞ Operation settings as follows:

1. Call preset 95 and enter the camera’s main menu.

2. Move the cursor to select **【pan tilt setting】** menu item and press**【iris open】** key to confirm, then enter the pan tilt setting menu. then move the cursor to select **【dome title】** menu item in the **【display configuration】** and press **【iris open】** key to confirm.

3. Press **【iris open】** key, synchronizing changes the display configuration information and press **【CLOSE】** key to exit the menu.

■ALARM SETUP



■ DISPLAY CONFIGURATION

This camera supports 8 channel alarm input, 4 output. camera alarm input to switch quantity input alarm. camera alarm menu separate edit settings on a per alarm linkage function and alarm output ports, and routes alarming specific edit settings in the same way. When the camera alarm, the camera chance to do the following:

1. Carries out in the menu to edit the establishment a linkage function, the linkage function must preserve in advance has the corresponding function establishment. If 3 warnings are activated, the linkage function establishes as presetting 2, then the camera instantly changes to 2 presettings to carry on the surveillance.
2. Alarm output channel output alarm switch to start the external alarm devices
3. Alarm system, automatic alarm by priority (1 channel as the most advanced, 4 way to the lowest level).
4. Simultaneously has when the multichannel warnings produce, the warning output will respond also, but the warning linkage function moves one by one priority, the warning output may suppose to often open/often shuts the pattern, the concrete establishment please refer to jumps the line to establish one.

■ ALARM ACTION

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【alarm setup】** menu item and press **【iris open】** key to confirm, then enter the alarm setup menu.
3. Move the cursor to select **【alarm action】** menu item in the **【alarm setup】** and press **【iris open】** key to confirm.
4. With pan tilt up, down, up or down to select setting
5. Selective time action please to press the corresponding operation establishment cloth withdrawing from disarm time.

■ INPUT MODE

Sets the current channel alarm input mode :

When jumper to set at NC: Normal alarm input closed, disconnect an alarm is generated when the input signal ;

When jumper to set at NO: Normal alarm input disconnect and close the alert is generated when the input signal .

F Operation settings as follows:

1. Call preset 95 and enter the camera's main menu.
2. Move the cursor to select **【alarm setup】** menu item and press **【iris open】** key to confirm ,then enter the alarm setup menu.
3. Move the cursor to select **【input mode】** menu item in the **【alarm setup】** and press **【iris open】** key to confirm, then enter the input mode menu.
4. With pan tilt up, down, up or down to select setting
5. Press **【iris open】** key to save input mode setting and exit, press **【iris close】** key without saving input mode setting and exit.

■ ALARM LINKAGE

After using for establishes the current channel warning, whether the linkage carries out the special function which some establish in advance, like 14 automatic scans, 1255 initialization, 16 cruises line up in formation, 16 pattern ways.

1. Call preset 95, go to the camera's main menu.
2. Move the cursor to select **【alarm setup】** menu item and press **【iris open】** key to confirm, then enter the alarm setup menu.
3. Move the cursor to select **【alarm linkage】** menu item in the **【alarm setup】** and press **【iris open】** key to confirm.
4. Use the Pan tilt up or down command, or to change the alarm linkage, from 14 Autoscanning, pointinbox 1255, 16 cruise queues, 16 mode select a path.
5. Press **【iris open】** key to save the current settings and exit; press **【CLOSE】** key without saving the current settings and exit.

■ RELAY OUTPUT

The current channel is used to set the alarm, the alarm output relay linkage.

F Operation settings as follows:

1. Call preset 95t, go to the camera's main menu.
2. Move the cursor to select **【alarm setup】** menu item and press **【iris open】** key to confirm ,then enter the alarm setup menu
3. Move the cursor to select **【relay output】** menu item in the **【alarm setup】** and press **【iris open】** key to confirm.
4. Use the Pan tilt up or down command to turn on or off the relay output.
 5. Press **【iris open】** key to save the current settings and exit; press **【CLOSE】** key without saving the current settings and exit.

■ RESET RELAY

That is, the current channel alarm occurred, if the alarm signal removal, the dome will by setting the alarm time to clear the ball machine, back to their normal state. It can be set to 1255 seconds.

F Operation settings as follows:

1. Call preset 95, go to the camera's main menu.
2. Move the cursor to select **【alarm setup】** and press **【iris open】** key to confirm, then enter the alarm setup menu
3. Move the cursor to select **【reset Relay】** menu item in the **【alarm setup】** and press **【iris open】** key to confirm.
4. Use the Pan tilt up or down command to change the choices you can choose from 1255S.
5. Press **【iris open】** key to save the current settings and exit; press **【iris close】** key without saving the current settings and exit.

APPENDIX I: SPECIAL FUNCTION OPERATION

There are some shortcuts to operate some speed dome functions under PelcoD/P protocol.

Function	Shortcut Command
Call OSD menu	Call 95# preset, save 95# preset
Set left limit of scan area	Call 92# preset
Set right limit of scan area	Call 93# preset
Run 1 st zone setup	Call 97# preset
Run continuous preset tour	Call 99# preset
Run Tour 1	Call 98,201# preset
Run Tour 2	Call202# preset
Run Tour 3	Call 203# preset
Run Tour 4	Call 204# preset
Delete Tour 1	Call 205# preset
Delete Tour 2	Call 206# preset
Delete Tour 3	Call 207# preset
Delete Tour 4	Call 208# preset
Run Pattern 1	Call 96,209# preset
Run Pattern 2	Call210# preset
Run Pattern 3	Call 211# preset
Run Pattern 4	Call212# preset
Record Pattern 1	Call 213# preset
Record Pattern 2	Call 214# preset
Record Pattern 3	Call 215# preset
Record Pattern 4	Call 216# preset
Stop Recording Pattern	Call 217# preset

∪ Dome address setting

The control commands contain target dome's ID. The dome only reacts to the command sent to its own address or broadcast address.

Each dome should be assigned an address. Four kinds of IDs are applicable for domes:

1. **Hard ID:**
Hard ID is set via DIP SW2 can not be changed from OSD menu. Hard ID ranges from 1 to 254.
2. **Programmable ID:**
Set all 8bits of SW2 to ON to activate soft address. Input 10bit camera SN number, and then set dome ID by controller (The dome SN number can be found on the side of the camera or on the package and user manual.).
3. **Broadcast ID:**
Broadcast ID is programmable. When broadcast ID is available, all domes connected to the control bus will react to the command. The default broadcast ID is 255.

SW2 is for dome ID setting. The setting is strictly according to binary system. If you are not familiar with binary system please look up the address setting chart.

∪ Address setting chart

ID	B1	B2	B3	B4	B5	B6	B7	B8
1	ON							
2		ON						
3	ON	ON						
4			ON					
5	ON		ON					
6		ON	ON					
7	ON	ON	ON					
8				ON				
9	ON			ON				
10		ON		ON				
11	ON	ON		ON				
12			ON	ON				
13	ON		ON	ON				
14		ON	ON	ON				
15	ON	ON	ON	ON				
16					ON			
17	ON				ON			
18		ON			ON			
19	ON	ON			ON			
20			ON		ON			
21	ON		ON		ON			
22		ON	ON		ON			
23	ON	ON	ON		ON			
24				ON	ON			
25	ON			ON	ON			
26		ON		ON	ON			
27	ON	ON		ON	ON			
28			ON	ON	ON			
29	ON		ON	ON	ON			
30		ON	ON	ON	ON			
31	ON	ON	ON	ON	ON			
32						ON		
33	ON					ON		
34		ON				ON		
35	ON	ON				ON		
36			ON			ON		
37	ON		ON			ON		
38		ON	ON			ON		
39	ON	ON	ON			ON		
40				ON		ON		
41	ON			ON		ON		
42		ON		ON		ON		
43	ON	ON		ON		ON		
44			ON	ON		ON		
45	ON		ON	ON		ON		
46		ON	ON	ON		ON		
47	ON	ON	ON	ON		ON		
48					ON	ON		
49	ON				ON	ON		
50		ON			ON	ON		
51	ON	ON			ON	ON		
Soft Add	ON							

ID	B1	B2	B3	B4	B5	B6	B7	B8
52			ON		ON	ON		
53	ON		ON		ON	ON		
54		ON	ON		ON	ON		
55	ON	ON	ON		ON	ON		
56				ON	ON	ON		
57	ON			ON	ON	ON		
58		ON		ON	ON	ON		
59	ON	ON		ON	ON	ON		
60			ON	ON	ON	ON		
61	ON		ON	ON	ON	ON		
62		ON	ON	ON	ON	ON		
63	ON	ON	ON	ON	ON	ON		
64							ON	
65	ON						ON	
66		ON					ON	
67	ON	ON					ON	
68			ON				ON	
69	ON		ON				ON	
70		ON	ON				ON	
71	ON	ON	ON				ON	
72				ON			ON	
73	ON			ON			ON	
74		ON		ON			ON	
75	ON	ON		ON			ON	
76			ON	ON			ON	
77	ON		ON	ON			ON	
78		ON	ON	ON			ON	
79	ON	ON	ON	ON			ON	
80					ON		ON	
81	ON				ON		ON	
82		ON			ON		ON	
83	ON	ON			ON		ON	
84			ON		ON		ON	
85	ON		ON		ON		ON	
86		ON	ON		ON		ON	
87	ON	ON	ON		ON		ON	
88				ON	ON		ON	
89	ON			ON	ON		ON	
90		ON		ON	ON		ON	
91	ON	ON		ON	ON		ON	
92			ON	ON	ON		ON	
93	ON		ON	ON	ON		ON	
94		ON	ON	ON	ON		ON	
95	ON	ON	ON	ON	ON		ON	
96						ON	ON	
97	ON					ON	ON	
98		ON				ON	ON	
99	ON	ON				ON	ON	
100			ON			ON	ON	
101			ON			ON	ON	
102		ON	ON			ON	ON	
Soft Add	ON							

ID	B1	B2	B3	B4	B5	B6	B7	B8
103	ON	ON	ON			ON	ON	
104				ON		ON	ON	
105	ON			ON		ON	ON	
106		ON		ON		ON	ON	
107	ON	ON		ON		ON	ON	
108			ON	ON		ON	ON	
109	ON		ON	ON		ON	ON	
110		ON	ON	ON		ON	ON	
111	ON	ON	ON	ON		ON	ON	
112					ON	ON	ON	
113	ON				ON	ON	ON	
114		ON			ON	ON	ON	
115	ON	ON			ON	ON	ON	
116			ON		ON	ON	ON	
117	ON		ON		ON	ON	ON	
118		ON	ON		ON	ON	ON	
119	ON	ON	ON		ON	ON	ON	
120				ON	ON	ON	ON	
121	ON			ON	ON	ON	ON	
122		ON		ON	ON	ON	ON	
123	ON	ON		ON	ON	ON	ON	
124			ON	ON	ON	ON	ON	
125	ON		ON	ON	ON	ON	ON	
126		ON	ON	ON	ON	ON	ON	
127	ON							
128								ON
129	ON							ON
130		ON						ON
131	ON	ON						ON
132			ON					ON
133	ON		ON					ON
134		ON	ON					ON
135	ON	ON	ON					ON
136				ON				ON
137	ON			ON				ON
138		ON		ON				ON
139	ON	ON		ON				ON
140			ON	ON				ON
141	ON		ON	ON				ON
142		ON	ON	ON				ON
143	ON	ON	ON	ON				ON
144					ON			ON
145	ON				ON			ON
146		ON			ON			ON
147	ON	ON			ON			ON
148			ON		ON			ON
149	ON		ON		ON			ON
150		ON	ON		ON			ON
151	ON	ON	ON		ON			ON
152				ON	ON			ON
153	ON			ON	ON			ON
Soft Add	ON							

ID	B1	B2	B3	B4	B5	B6	B7	B8
154		ON		ON	ON			ON
155	ON	ON		ON	ON			ON
156			ON	ON	ON			ON
157	ON		ON	ON	ON			ON
158		ON	ON	ON	ON			ON
159	ON	ON	ON	ON	ON			ON
160						ON		ON
161	ON					ON		ON
162		ON				ON		ON
163	ON	ON				ON		ON
164			ON			ON		ON
165	ON		ON			ON		ON
166		ON	ON			ON		ON
167	ON	ON	ON			ON		ON
168				ON		ON		ON
169	ON			ON		ON		ON
170		ON		ON		ON		ON
171	ON	ON		ON		ON		ON
172			ON	ON		ON		ON
173	ON		ON	ON		ON		ON
174		ON	ON	ON		ON		ON
175	ON	ON	ON	ON		ON		ON
176					ON	ON		ON
177	ON				ON	ON		ON
178		ON			ON	ON		ON
179	ON	ON			ON	ON		ON
180			ON		ON	ON		ON
181	ON		ON		ON	ON		ON
182		ON	ON		ON	ON		ON
183	ON	ON	ON		ON	ON		ON
184				ON	ON	ON		ON
185	ON			ON	ON	ON		ON
186		ON		ON	ON	ON		ON
187	ON	ON		ON	ON	ON		ON
188			ON	ON	ON	ON		ON
189	ON		ON	ON	ON	ON		ON
190		ON	ON	ON	ON	ON		ON
191	ON	ON	ON	ON	ON	ON		ON
192							ON	ON
193	ON						ON	ON
194		ON					ON	ON
195	ON	ON					ON	ON
196			ON				ON	ON
197	ON		ON				ON	ON
198		ON	ON				ON	ON
199	ON	ON	ON				ON	ON
200				ON			ON	ON
201	ON			ON			ON	ON
202		ON		ON			ON	ON
203	ON	ON		ON			ON	ON
204			ON	ON			ON	ON
205	ON		ON	ON			ON	ON
Soft Add	ON							

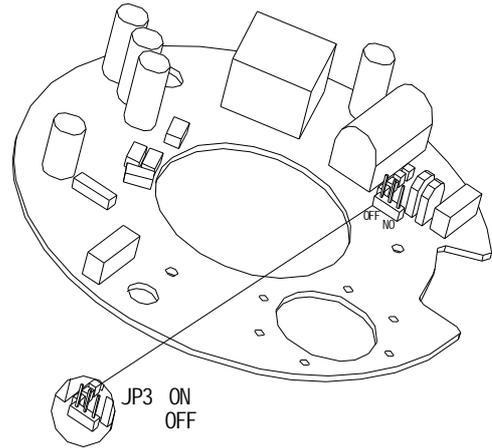
u **Resistor Jumper Setting**

2 120 Ω resistor is needed to be set at the fatherest dome and keyboard in the RS485 bus.

Set the JP3 ON to connect the 120 Ω resistor.

Set the JP3 OFF to disconnect the resistor

Factory default “OFF” .



APPENDIX III: WIRE DIAMETER & TRANSMISSION CHART

The transmission distance listed below are farthest ones recommended for each given wire diameter when the 24V AC voltage loss ratio is below 10% (for equipment powered by AC, the allowed maximum voltage loss ratio is 10%).

For example, a set of equipment with nominal power as 80VA, installed 35 feet (10m) away from transformer, needs a wire with a minimum diameter of 0.8000mm.

	0.8000	1.000	1.250	2.000
10	283 86 % &	451 137 % &	716 218 % &	1811 551 % &
20	141 42 % &	225 68 % &	358 109 % &	905 275 % &
30	94 28 % &	150 45 % &	238 72 % &	603 183 % &
40	70 21 % &	112 34 % &	179 54 % &	452 137 % &
50	56 17 % &	90 27 % &	143 43 % &	362 110 % &
60	47 14 % &	75 22 % &	119 36 % &	301 91 % &
70	40 12 % &	64 19 % &	102 31 % &	258 78 % &
80	35 10 % &	56 17 % &	89 27 % &	226 68 % &
90	31 9 % &	50 15 % &	79 24 % &	201 61 % &
100	28 8 % &	45 13 % &	71 21 % &	181 55 % &
110	25 7 % &	41 12 % &	65 19 % &	164 49 % &
120	23 7 % &	37 11 % &	59 17 % &	150 45 % &
130	21 6 % &	34 10 % &	55 16 % &	139 42 % &
140	20 6 % &	32 9 % &	51 15 % &	129 39 % &
150	18 5 % &	30 9 % &	47 14 % &	120 36 % &
160	17 5 % &	28 8 % &	44 13 % &	113 34 % &
170	16 4 % &	26 7 % &	42 12 % &	106 32 % &
180	15 4 % &	25 7 % &	39 11 % &	100 30 % &
190	14 4 % &	23 7 % &	37 11 % &	95 28 % &
200	14 4 % &	22 6 % &	35 10 % &	90 27 % &

APPENDIX IV: RS485 BUS BASIC KNOWLEDGE

1. Basic Property

RS485 Bus is specified by RS485 standards. It is of halfduplex data transmission cables with characteristic impedance as 120.

The maximum load capacity is 32 effective loads (including main controller and controlled equipment).

2. Transmission Distance

For 0.56mm (24AWG) twisted pair wires as data transmission cable, the maximum theoretical transmitting distances are as follows

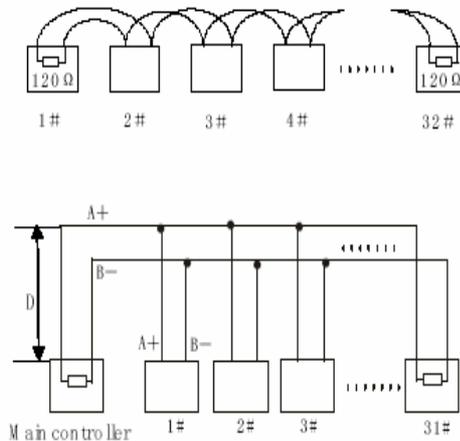
Baud Rate	Max. Transmit Distance
2400BPS	1200m
4800BPS	1000m
9600BPS	800m

In case of thinner cables, or installs the dome in an environment with strong electromagnetic interference, or connects large number of equipment to the RS485 Bus, the maximum transmitting distance will be decreased.

3. Connection and termination resistor

31 The RS485 standards require daisychain connection between the equipment. There must be termination resistors with 120 ohm impedance at both ends of the connection (Refer to following pictures).

Please refer to following picture for simple connection. "D" should not exceed 7m.

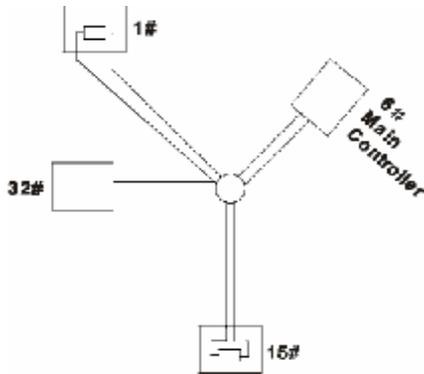


4. Best Practice

In some circumstances user adopts a star configuration in practical connection. The termination resistors must be connected to the two equipment that are farthest away from each other, such as equipment 1# and 15# in the following picture.

As the star configuration is not in conformity with the requirements of RS485 standards, problems such as signal reflections, lower antiinterference performance arise when the cables are long in the connection.

The reliability of control signals is decreased with the phenomena that the dome does not respond to or just responds at intervals to the controller, or does continuous operation without stop (Refer to following picture).



5. RS485

Trouble	Possible Cause	Solution
Dome can do selftesting but cannot be controlled.	<ol style="list-style-type: none"> 1. The address and baud rate settings of dome are not in conformity with those of controller. 2. The + and connection of RS485 Bus is incorrect. 3. Wiring is not fully seated. 4. There is breakage in the middle section of the RS485 Bus. 	<ol style="list-style-type: none"> 1. Change the address and baud rate of controller or dome. 2. Correct the connection. 3. Make sure the connections are fully seated.
The dome can be controlled but the operation is not smooth	<ol style="list-style-type: none"> 1. The RS485 Bus line is not in good contact with the connectors. 2. One wire of the RS485 Bus is broken. 3. The dome is very far away from controller. 4. There are too many domes connected in the system. 	<ol style="list-style-type: none"> 1. Secure the connection. 2. Replace RS485 Bus wires. 3. Add termination resistors to the system. 4. Install RS485 distributor.

APPENDIX V: TROUBLE SHOOTING

Problem	Cause	Solution
<p>No movements, no video after power on</p>	<p>Red LED on circuit board is off: The is no AC power connected to the PCB Board. There is a power outage or problem of the transformer. Camera module is not correctly connected. Output Voltage of transformer is too low. The power board is not working.</p>	<p>Check the power connection and outlet make sure they are working properly. Check power supply and transformer to make sure if they are working properly. Check all power related cable. Examine the power on the dome side making sure it is above 16V.</p>
<p>Selftest is ok but dome can not be controlled</p>	<p>Wrong dip switch setting; Control cable reversely connected or disconnected</p>	<p>Set the dip switch correctly according to operation manual. Check the control cable, making sure it is correctly and firmly connected.</p>
<p>Fan speed under 1000 rps</p>	<p>Fan not firmly connected</p>	<p>Connect fan correctly. If speed is still under 1000 rpm, please contact dealer to replace the fan</p>
<p>Blurred picture</p>	<p>Dome in manual focus mode or bubble is stained</p>	<p>Set focus to auto mode. Clear the bubble</p>

APPENDIX VI: LIGHTNING PROOF & SURGE SIGNAL PROOF

The product adopts TVS lightning proof technology to prevent from damage by lightning strike below 1500 W and impulse signals such as surge.

But it is also necessary to abide by the following precautions to ensure electrical safety based on practical circumstances:

Keep the communication cables at least 50 meters away from high voltage equipment or cables.

Make outdoor cable layingout under eaves as possible as you can.

In open area shield cables in steel tube and conduct a single point ground to the tube. Trolley wire is forbidden in such circumstances.

In strong thunderstorm or high faradic zone (such as high voltage transformer substation), extra strong lightning proof equipment must be installed.

Take the building lightning proof requirements into account to design the lightning proof and grounding of outdoor equipment and cable layingout in accordance with the national and industrial standards.

The system must be grounded with equal potentials. The earth ground connection must satisfy the antiinterference and electrical safety requirements and must not shortcircuited with high voltage electricity net. When the system is grounded separately, the resistance of down conductor should be $\leq 4 \Omega$ and the sectional

