

Color Speed Dome Camera

Manual

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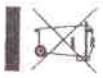
## 1. Safety Precautions



It is advised to read the Safety Precaution Guide through carefully before operating the product, to prevent any possible danger.

**⚠ WARNING:** This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage".

**⚠ CAUTION:** This symbol is intended to alert the user to presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance.



**Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).**

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Do not install the product in an environment where the humidity is high. Unless the product is waterproof or weatherproof, otherwise poor image quality may occur.

Please take extreme care when cleaning the dome surface. The plastic material that the dome is made of is, by necessity, relatively soft and prone to nicks and scratches which will impair vision through the dome.

Do not plug and unplug the power cord, it may result product malfunction.

Make sure to use only the power source specified in the specification.

Before operation, please make sure that the product has been properly installed.

## 2. Symbol Description

1. Function keys are shown by framed capital boldface print letters.  
Example: **ENTER**, **AUTO FOCUS**, etc.
2. Function key "+" indicates the order sequence.  
Example: **2** + **8** + **ENTER** meaning, press the function key "**2**", "**8**", and then **ENTER**.
3. **DEVICE 001** indicate messages from the device and is shown on the control keyboard LCD display.
4. "**n**" indicates the ID number of the nth device (ID numbers ranges from 001~127).

### 3. Features

- Speedy response with 22x optical auto-focus zoom lens and 16x Electronic Zoom or 35x optical auto-focus zoom lens and 16x Electronic Zoom.
- Day & Night (IR Cut Filter Change Mechanism).
- Auto Iris and Manual Iris Control.
- Advanced DSP Camera, including Auto White Balance, Backlight Compensation and Auto Iris Control.
- 360° Continuous Pan Rotation.
- 128 Preset Points Setup.
- Auto pan at pre-set point.
- Pan Speed up to 300°/Sec and Tilt Speed up to 200°/Sec.
- Horizontal Rotation of 180°.
- Built in 6 Alarm Inputs and one Relay Output.
- Two Types of Alarm out signal are provided: NO and NC.
- Remote Control via RS-485.
- Connects up to 127 Speed Dome Cameras.
- Supports PELCO Protocol (D and P Protocol).
- PC control software is applicable.
- Indoor Type Power Input: DC12V  
Outdoor Type Power Input: AC24V or DC12V
- Built-in heater and fan to maintain camera in normal operating temperature (for outdoor type only).
- Suitable for installation on different occasions:  
Indoor Type - can be flush mounted on a ceiling or in the ceiling with only the dome showing.  
Outdoor Type - can be wall mounted or pendant mounted (option: corner mounted).

### 4. Package List

#### Indoor Type:

1. DC adapter x1
2. Power Line x1
3. Power connector x1
4. 6P4C - 3M/ white double headed phone line x1 (In-Ceiling/ Flush Mount)
5. M3x4 screw x6
6. In-Ceiling Fixed Ring x2 (In-Ceiling Mount)
7. 35mm pillar of copper x3 (In-Ceiling Mount)
8. 40mm pillar of copper x3 (In-Ceiling Mount)
9. 45mm pillar of copper x3 (In-Ceiling Mount)
10. Embellished flush cover x1 (Flush Mount)
11. Embellished In-Ceiling Cover x1 (In-Ceiling Mount)
12. User's Manual x1

#### Outdoor Type:

- #### DC12V TYPE
1. DC Adaptor (x1)
  2. Power Line (x1)
  3. Power Connector (x1)

#### AC24V TYPE

1. Power Connector (x1)

#### Wall Mount

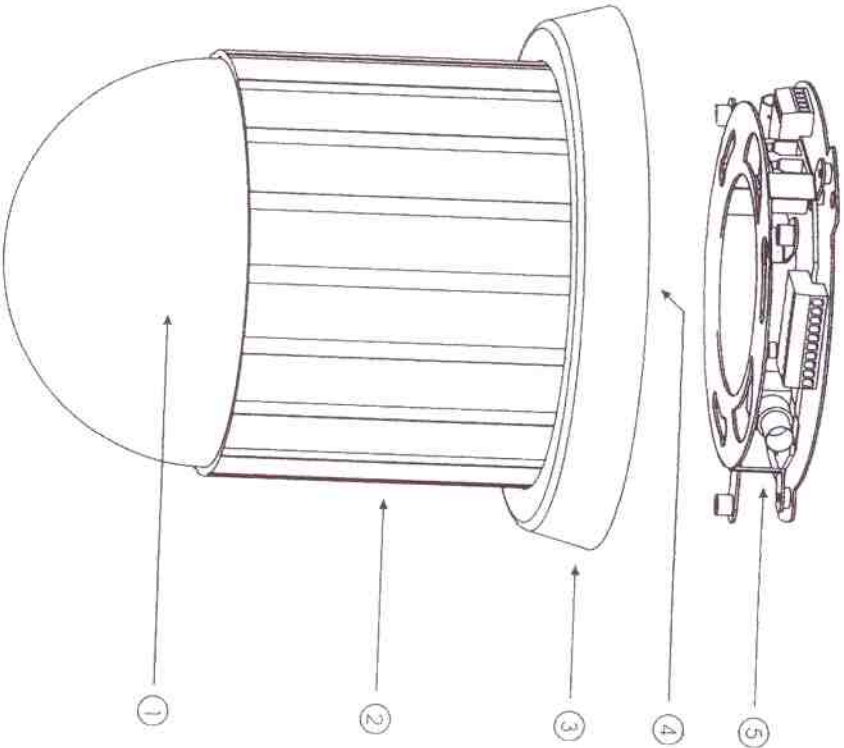
1. 3mm L-Wrench (x1)
2. 4mm L-Wrench (x1)
3. M4x22 Stainless Steel Screw (x5)
4. M8 Screw + Anchor (x5)
5. M3X4 Screw (x6)
6. Wall Mount Housing (x1)
7. Manual (x1)

#### Pendant Mount

1. 3mm L-Wrench (x1)
2. 4mm L-Wrench (x1)
3. M4x22 Stainless Steel Screw (x5)
4. M8 Screw + Anchor (x5)
5. Manual (x1)

## 5. Component and Structure Description

### Indoor Type



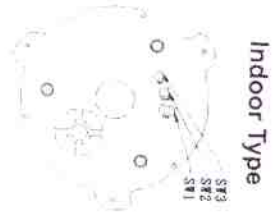
- ① Transparent Cover/ Black Housing
- ② Machine Housing
- ③ Embellish Cover
- ④ ID Number/ Protocol/ Baud Rate Setting (Please Refer to Pg8-9).
- ⑤ Alarm Input or Output / Video Output / Power Input Terminal (Please Refer to Pg11)

### Outdoor Type



- ① Wall Mount Bracket/ Pendant Mount Bracket/ Corner Mount Bracket
- ② Machine Housing
- ③ Transparent Cover
- ④ ID Number/ Protocol/ Baud Rate Setting (Please refer to Pg8 and Pg10).
- ⑤ Alarm Input or Output / Video Output / Power Input Terminal (Please refer to Pg12).

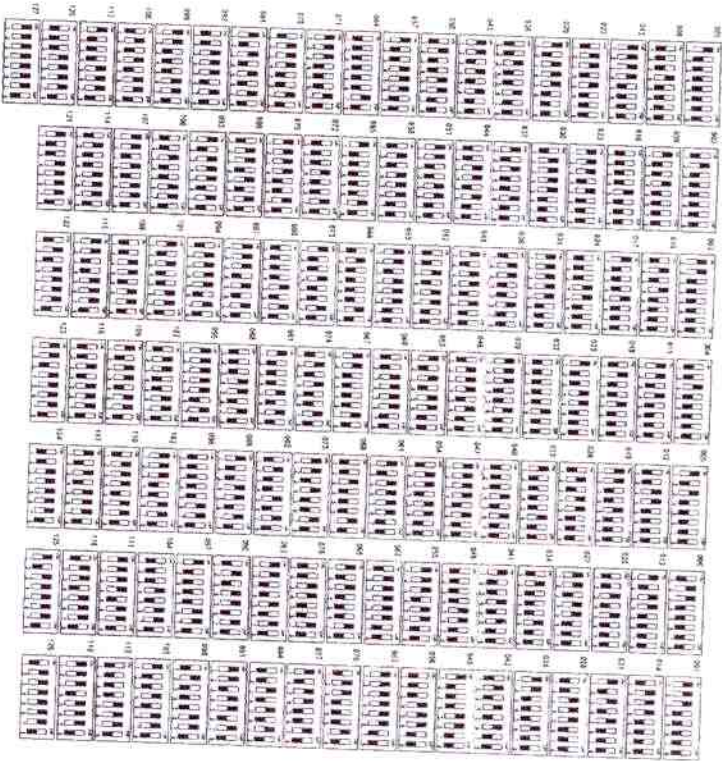
## 6. Camera Setting



Indoor Type

Outdoor Type

DIP Switch setting, shown below:



Setting 000, then the image display will show: DEVICE N/A.  
 Does not affect setup.

Indoor Type

SW1: ID Number Setting

Connection of up to 127 Speed Dome Cameras, each camera has its own ID Number.

SW2: Protocol Settings

Switch Number	Settings
#1 #2 #3 #4	Protocol
Off Off Off Off	<b>NATIVE</b>
On Off Off Off	PELCO
Off On Off Off	Reserved
On On Off Off	Reserved

\* Speed Dome automatically detects the type of PELCO Protocol. No

Switch settings are required to set D and P Protocols.

\* **BOLD**: Default Settings.

SW3: Baud Rate Settings

Switch Number	Settings
#1 #2 #3 #4	Baud Rate
Off Off Off Off	<b>9600 BPS</b>
On Off Off Off	4800 BPS
Off On Off Off	2400 BPS
On On Off Off	19200 BPS

\* **BOLD**: Default Settings

## Outdoor Type

### SW1: ID Number Setting

Connection of up to 127 Speed Dome Cameras, each camera has its own ID Number.

### SW2: Baud Rate Settings

Switch Number	Baud Rate
#1 #2 #3 #4	9600 BPS
Off Off Off Off	4800 BPS
On Off Off Off	2400 BPS
On On Off Off	19200 BPS

\* BOLD: Default Settings

### SW2: Protocol Settings

Switch Number	Protocol
#5 #6 #7 #8	NATIVE
Off Off Off Off	PELCO
On Off Off Off	Reserved
Off On Off Off	Reserved
On On Off Off	Reserved

\* Speed Dome automatically detects the type of PELCO Protocol. No switch settings are required to set D and P Protocols.

\* BOLD: Default Settings.

## Indoor Type

Terminal base Connection, Data Line, and Signal Line Regulation

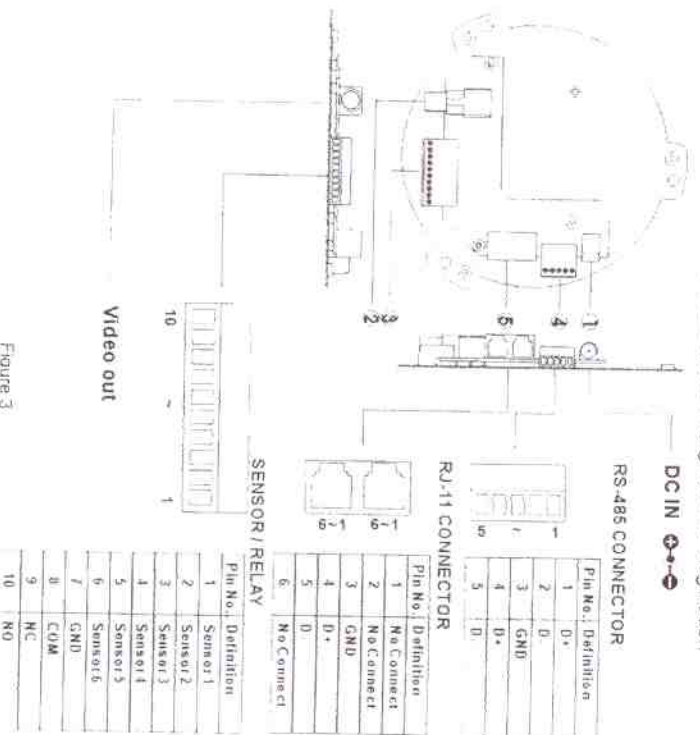
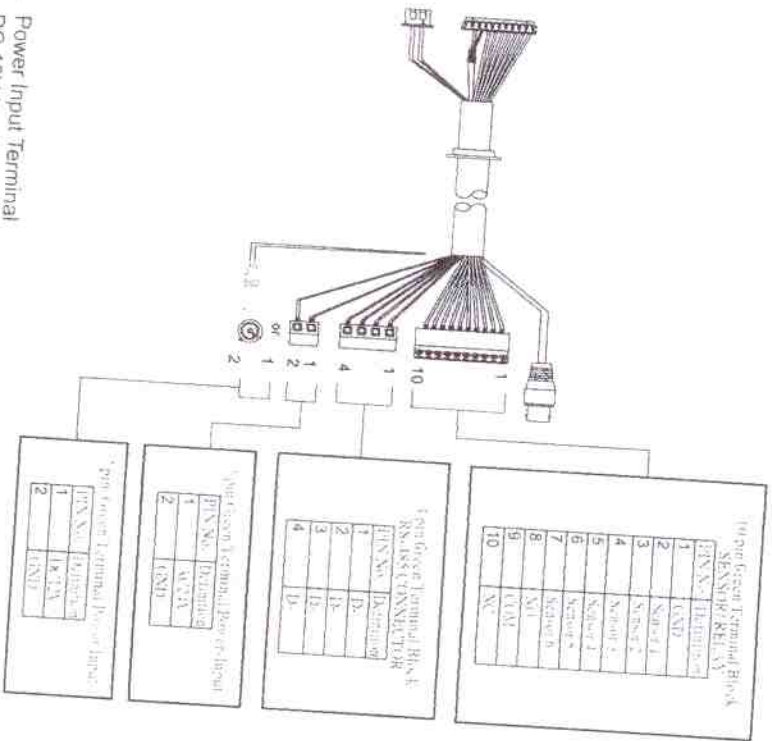


Figure 3

1. Power Input Terminal - DC 12V Input and power consumption of 1.1A.
2. Video Output Terminal - Video Signal Output: CVBS 1.0Vp-p 75Ω BNC.
3. The Speed Dome Camera is equipped with 6 external alarm triggering input and 2 sets of alarm output (1 set NO and 1 set NC). Alarm Input Voltage at 5.6Vmax and Alarm Output Specification: 0.5A AC120V/ 1AAC24V.
4. RS-485 Communication Control Input and Output connector RS-485 Input Terminal has two terminal points (D+, D-), using the twisted pair wire to connect onto the next Speed Dome Camera.
5. RJ-11 Input / Output Connector Control  
The function is similar to RS-485 Communication Control Input and Output connector. Using RJ-11 connector to interconnect.

## Outdoor Type

Terminal base Connection, Data Line, and Signal Line Regulation.

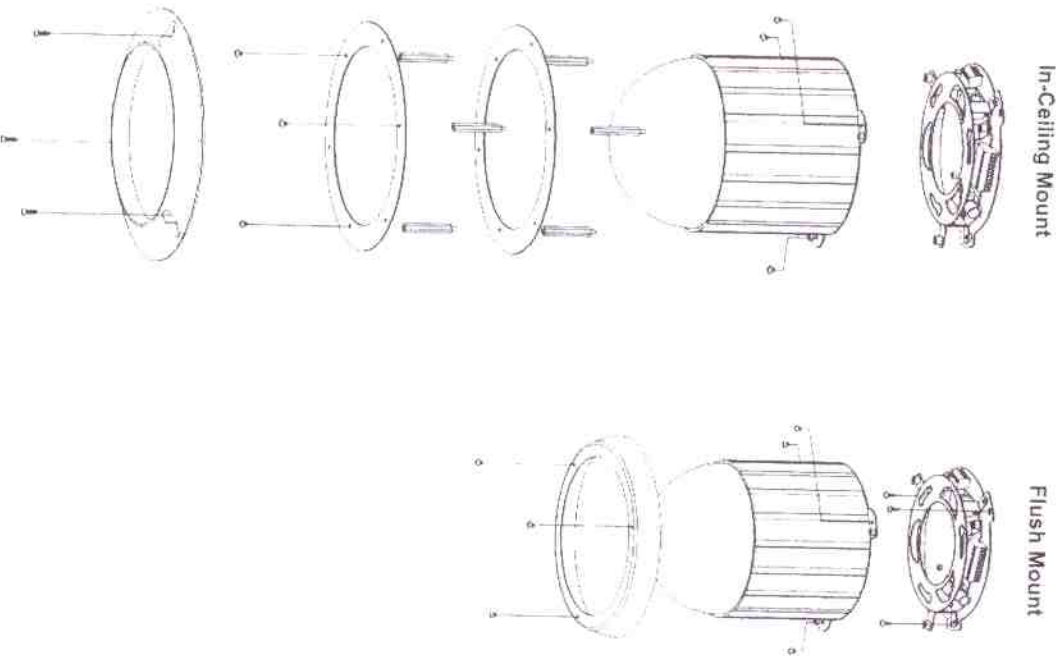


1. Power Input Terminal  
DC 12V Input and power consumption of 2.5A,  
AC 24V Input and power consumption of 2.2A.  
Video Output Terminal  
Video Signal Output: CVBS 1.0 Vp-p 75Ω BNC.
2. Alarm Input/ Output Terminal  
Each Speed Dome camera is equipped with 6 external alarm inputs and 2 sets of alarm outputs (1 set NO and 1 set NC). Alarm Input voltage: 5.6Vmax and Alarm Output Specification: 0.35A 120VAC/ 0.5A 24VAC.
3. Communication Control Input/ Output Terminal  
RS-485 Input Terminal has two terminal points (D+, D-), using the twisted pair wire to connect onto the next Speed Dome Camera.

## 7. Installation

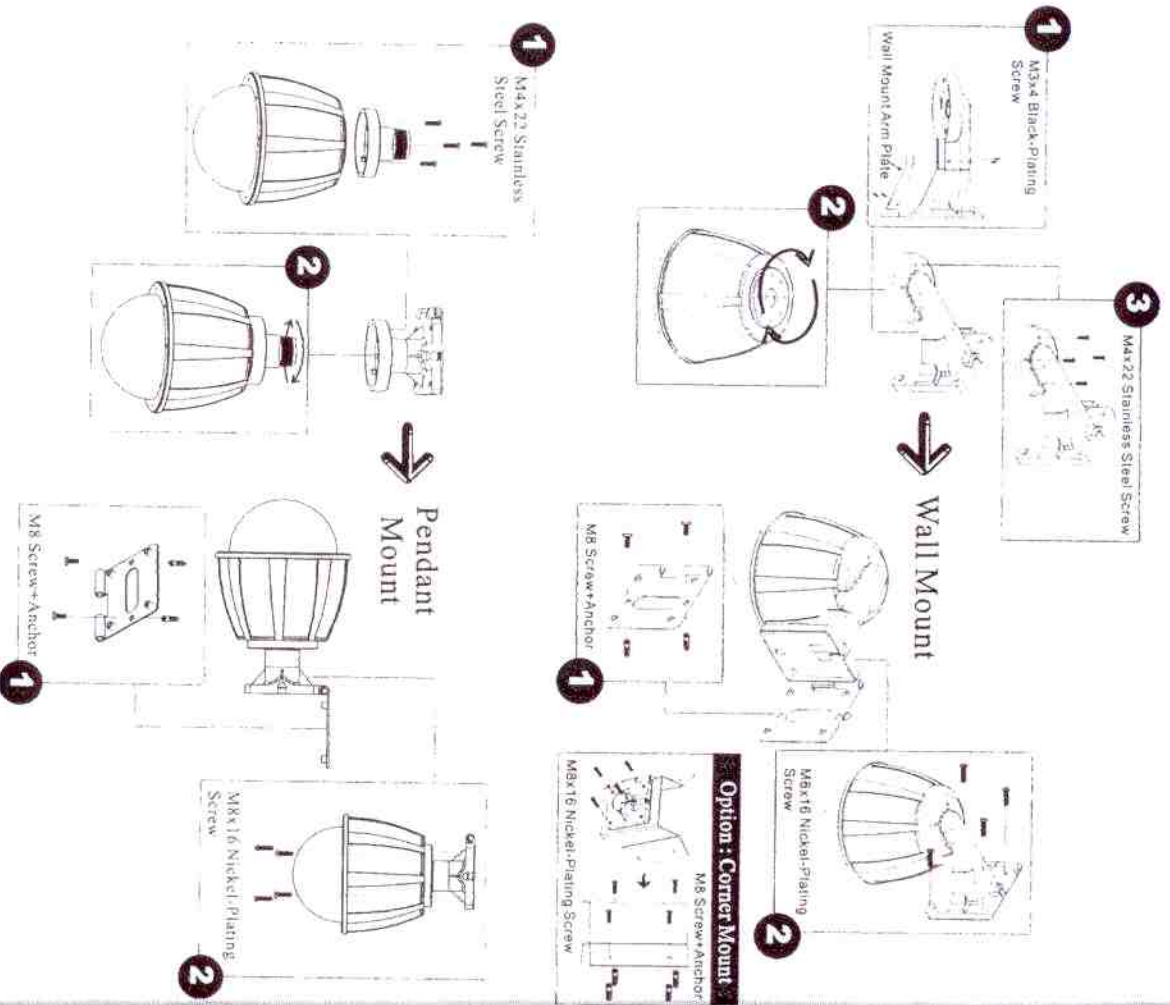
### Indoor Type

Installation Structure Diagram (In-Ceiling and Flush Mounting)





## Outdoor Type

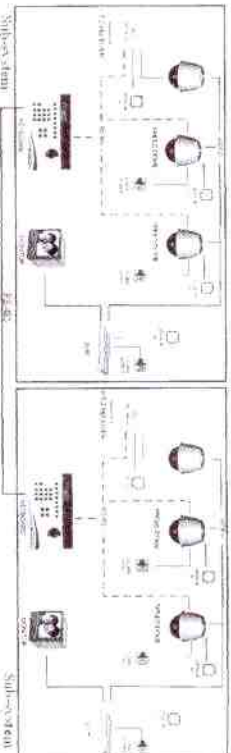


## 8. System Assembly

Simple to install, the system supports connection of numerous devices (Ex.: Speed Dome Camera, P/T/Z Receiver, and etc.)

Connect the double twisted cable from the keyboard to the RS-485 terminal, and video signal to the monitor, DVR or multiplexer to complete the main system connection.

Control keyboard can connect up to 32 sub-systems to form one control system. Using the main control keyboard, each system can be controlled separately.

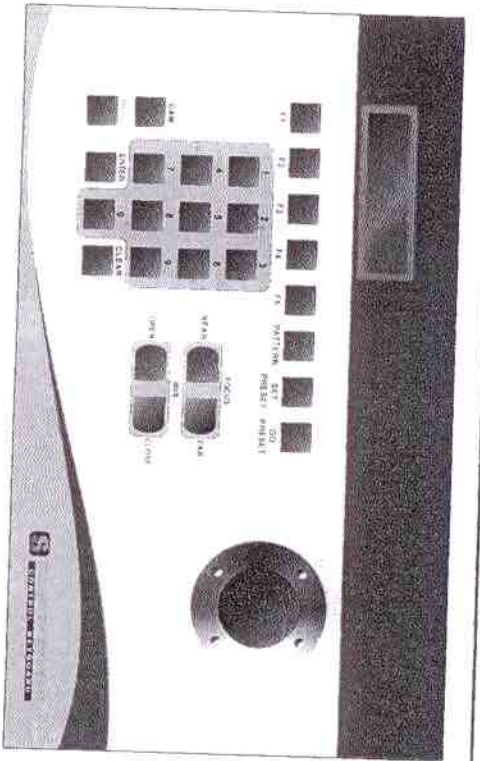


System Connection Illustration Diagram

The system supports connections of numerous Speed Dome Cameras or P/T/Z Receivers, assigning a set of ID (Note! ID numbers ranges from 1~127 and may not be repeated) to setup and control, through control keyboard.

- ▶ Connecting the Device
  - Connect terminal D+ of the RS-485 from the control keyboard to terminal D+ of RS-485 DATA IN connector from the device; then connect terminal D- of the RS-485 from the keyboard (the same set of terminal) to the terminal D- of RS-485 DATA IN connector from the device.
  - Connecting more than Two Devices
    - Connect terminal D+ of the RS-485 DATA OUT connector from the previous device to the terminal D+ of the RS-485 DATA IN connector from the next device; then connect terminal D- of the previous device (the same set of terminal) to the terminal D- of RS-485 DATA IN of the next device.
- ▶ Connecting the Keyboard
  - Connect terminal D+ of the RS-485 from one keyboard connection port to terminal D+ of RS-485 from the other keyboard connection port; then connect terminal D- of the RS-485 from the keyboard connection port (the same set of terminal) to the terminal D- of RS-485 from the other keyboard.

## 9. Operation



Select and switch Outdoor Speed Dome Camera

### CAMERA and SWITCH DEVICE

Use numeric key + **CAM** key

Enter the desired number n camera and press **CAM** key, the speed dome selected by the user to control will appear on the LCD display:



### CAMERA OPERATION and ZOOM CONTROL

The joystick may control many different devices: Speed Dome Camera, PTZ Receiver, and so on. The movement (Up/ Down/ Left/ Right) of the device depends on the angel of the joystick.

#### Zoom Wide / Zoom Tele

- Push the joystick clockwise, for close-up image (narrow the angle of viewing) and release the joystick to stop zooming.
- Push the joystick anti-clockwise, for far away image (widen the angle of viewing) and release the joystick to stop zooming.

#### Joystick Control

The movement depends on the angel of the joystick (the more you push the joystick, the faster the speed):

- Push the joystick up or down, the device will move forward or backward
- Push the joystick left or right, the device moves leftward or rightward.

Note! Under zoom mode, the speed movement becomes slow.

### FOCUS CONTROL

Press **FOCUS FAR** : focus far and release the key to stop focusing.

Press **FOCUS NEAR** : focus near and release the key to stop focusing.

### PRESET POINT SETUP

The speed dome camera enables 80 preset points. Preset function is to save the address information (such as PTZ pan/tilt, focus and etc) to the memory so that you can quickly adjust the dome and PTZ to the correct position, and when necessary to view life monitoring.

Setup Steps:

1. Select the desired speed dome camera.

Use the joystick (on the control keyboard) and move the speed dome camera to the desired preset point.

Use the zoom control to adjust the monitoring display.

Enter preset number (1-32, 35-82), and press **SET PRESET** key: the LCD will display



Press **SET PRESET** key to enable storage and press **CLEAR** key to disable storage.

Repeat the steps 2-5 again, to setup more preset points.

### CALL PRESET POINT

Enter the assigned preset number and press **GO PRESET** key, the LCD will display:



, and the speed dome camera will move to that specified preset point.

Example: 1<sup>st</sup> preset point = **1** + **GO PRESET**  
28<sup>th</sup> preset point = **2** **8** + **GO PRESET**

### CHANGE PRESET POINT

To change the preset point, please follow the setup guide in the "PRESET POINT SETUP".

### PATTERN RUN

This function is designed to scan the preset points in order. Each group is allowed to set up 32 preset points for moving speed and retention time. The Auto Pan has a total of 6 setting groups, but only 4 are programmable. Group from 1-4 is allowed to set up to 32 preset points and Group 5-6 are not programmable by user (3 preset points).

The 5th and 6th group is fixed (not programmable)

\* The 5th group functions as a simple continuous rotational manner; included are 1st, 2nd, and 3rd preset points.

\* The 6th group functions as a simple continuous rotational manner; included are 4th, 5th, and 6th preset points.

## AUTOPAN SETUP

GROUP	001	→ Range: 1~4
INDEX	001	→ Range: 1~32
POSITION	15	→ Range: 80(1~33, 35~82) or ---
SPEED	10	→ Range: 1~15 (higher the value, faster the speed)
DWELL TIME (sec)	12	→ Range: 1~128

### Setup Steps:

1. Select a desired group number (1~4 groups).  
Use the joystick on the control keyboard and select the desired preset point (INDEX: 1~32).
2. Use the joystick on the control keyboard and change to the desired position. If you do not wish to set all 32 preset points, set "----" as the last preset point position (POSITION: 1~33, 35~82 or ---).
3. Use the joystick on the control keyboard and change to the desired speed level (SPEED: 1~15).
4. Use the joystick on the control keyboard and change to the desired retention time (DWELL TIME: 1~128 sec).  
Repeat the steps 2~5 again, to setup more group preset points.  
Press [CLOSE] button to exit Auto Pan Setup.
5. To activate a previously programmed Group Preset Function, press [GROUP No.] + [PATTERN] button.

### Tip:

1. You can select from 1~32 setting points (INDEX) and decide the pan direction (POSITION), the pan speed (SPEED), and also the dwell time (DWELL TIME) for each group.
2. Group number buttons in combination with PATTERN button, is used to activate a previously programmed Group Preset Function.
3. If you do not wish to set all 32 preset points, set "----" as the last preset point.

EXAMPLE : If you wish to set only 4 preset points, you must set the 5th preset point to "----". The system will auto pan as follow :

(1,2,3,4), (1,2,3,4),...

### Start Pattern Run

Under control mode (assume device=1), when the LCD displays:

DEVICE 001

, enter the desired group number to be setup (Assume group=1, then enter 1), then press PATTERN key, to activate pattern run mode in group number 1.

- Preset point group number may differ depending on the speed dome camera type.

### Stop Pattern Run

Push Joystick to any direction.

## AUTO SCAN

### Activate Auto Scan

Under control mode (assume device=1), when the LCD displays:

DEVICE 001

, enter 9 9 + GO PRESET key, the speed dome camera will slowly precode 360° auto scan.

### Deactivate Auto Scan

Enter 9 6 + GO PRESET key, or push the joystick to stop auto scan.

## CAMERA FUNCTION SETUP

### Enter Camera Setup Menu

Under control mode (assume device=1), when the LCD displays:

DEVICE 001

, enter F2 or 9 5 + SET PRESET key, to enter camera setup menu..

