

# **Control Keyboard**

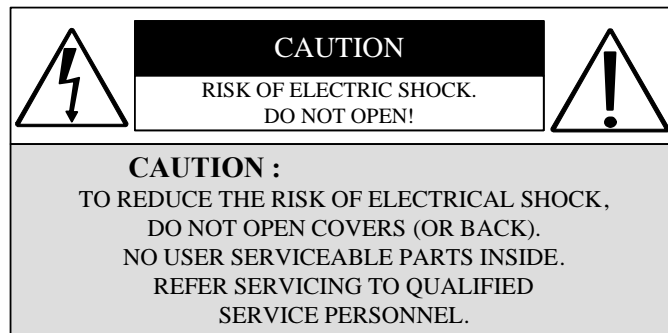
**User Manual**

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The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information herein.

# 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 Plug and unplug the power cord, it may result product malfunction.**

**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.

**Do not drop the product or subject them to physical shocks.**

Except for vandal-proof or shockproof product, otherwise malfunctions may occur.

**Never keep the product to direct strong light.**

It can damage the product.

**Do not spill liquid of any kind on the product.**

If it gets wet, wipe it dry immediately. Alcohol or beverage can contain minerals that corrode the electronic components.

**Do not install the product in extreme temperature conditions.**

Use the camera under conditions where temperatures are between 5° C(41° F) ~ 45° C(113° F). Be especially careful to provide ventilation when operating under high temperatures.

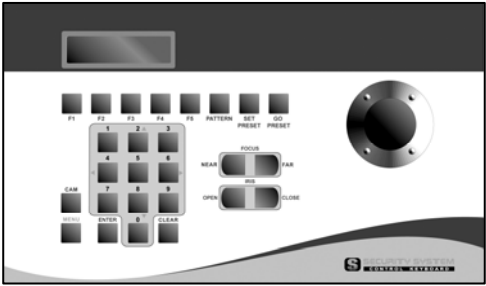

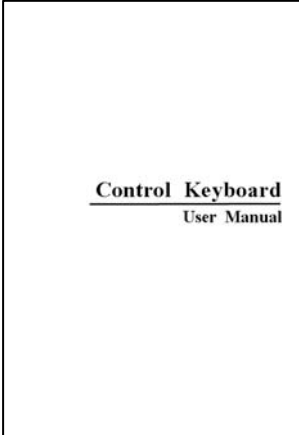
## 2. FEATURES

The control keyboard is able to control the P/T/Z Scanner, Speed Dome Camera, and P/T/Z Receiver. Features are listed below:

- Supports CCTV system control.
- Supports RS485 control interface, and control distance of up to 4000 feet (1.2 km).
- 3-Axis joystick is able to control P/T/Z Scanner, Speed Dome Camera, and P/T/Z Receiver (Up/ Down/ Left/ Right/ Zoom-In/ Zoom-Out). The speed depends on the angle of the joystick, the more you push the joystick, the faster the speed.
- Compatible to PELCO D&P protocol.
- Optional password protection setup.
- Keyboard ID can be setup in the Menu setup.
- Able to connect up to 32 Control Keyboards (one master control and the rest are slave controls). One keyboard (whether master or slave keyboard) can control up to 255 Speed Dome Cameras, the master Keyboard may also control any cameras controlled by the slave Keyboard.

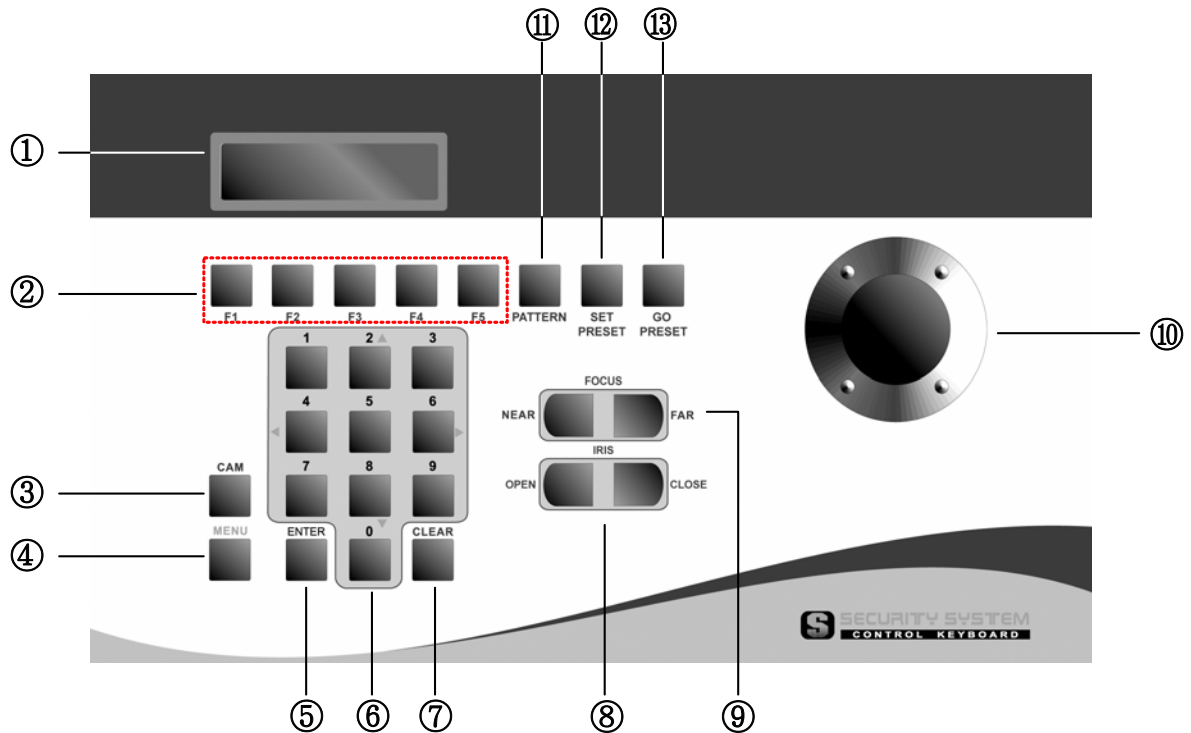
## 3. PACKAGE LIST

Check to make sure all of the items shown below are included in your product package. If something is missing, contact your dealer as soon as possible.

Item Description	Item Picture	QTY
Control Keyboard		1
Power Adaptor: DC 12V		1
User Manual		1

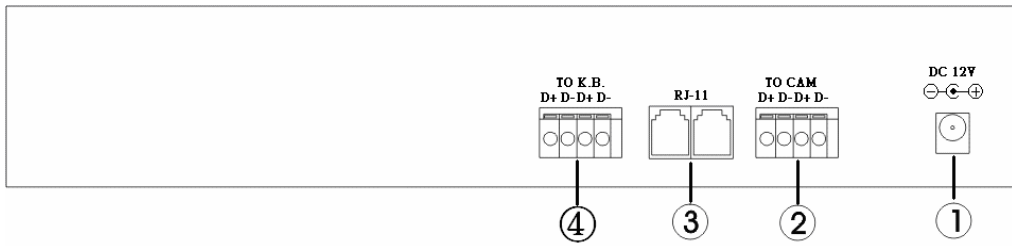
# 4. NAME and FUNCTION of EACH PART

## 4.1 Front Panel



- ① 16x2 STN LCD
- ② Function Key
- ③ Camera Select Key
- ④ Control Keyboard Setup Key
- ⑤ Confirm Key
- ⑥ Numeric Key
- ⑦ Clear Key
- ⑧ Iris Control Key
- ⑨ Focus control Key
- ⑩ 3-Axis Joystick
- ⑪ Pattern Run Key
- ⑫ Preset Setup Key
- ⑬ Call Preset Point Key

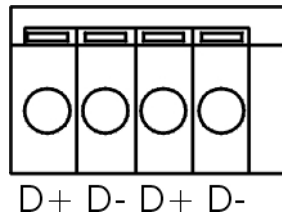
## 4.2 Rear Panel



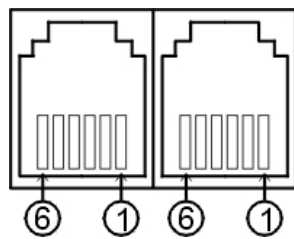
- ① Power Jack (DC 12V).



- ② RS-485 Connector (for device connection).

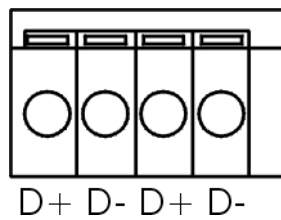


- ③ RS-485 RJ-11 Connector (for device connection).



Pin No.	Definition
1	-
2	-
3	-
4	D+
5	D-
6	-

- ④ RS-485 Connector (for keyboard connection).

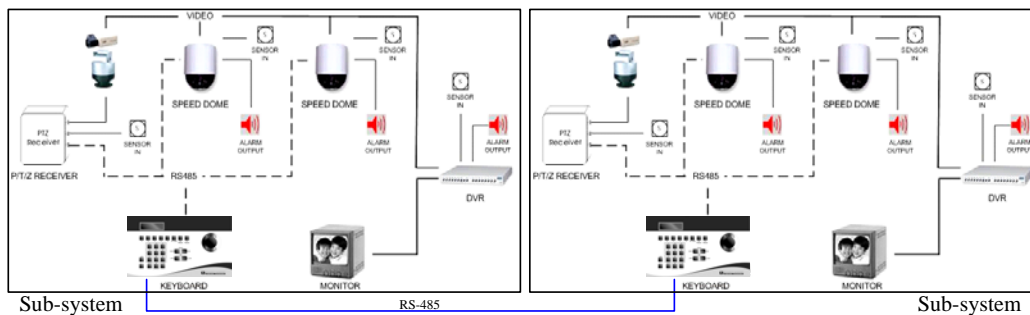


## 5. BASIC CONFIGURATION

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

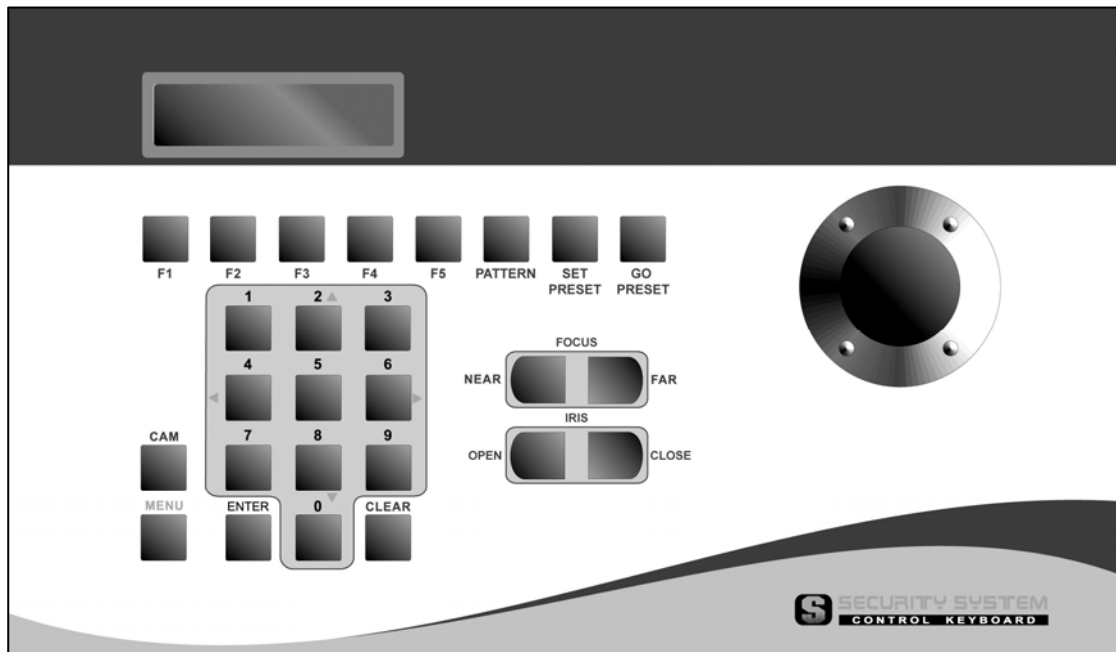
Connect terminal D+ of the RS-485 DATA OUT connector from the previous device to the terminal D+ of the RS-485 DATA IN connector from the next device; then connect terminal D- of the previous device (the same set of terminal) to the terminal D- of RS-485 DATA IN of the next device.

### ► 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.



## 6. OPERATION



### Symbol Description

1. Function keys are shown by, framed capital boldface print letters.

Example: **ENTER** and **MENU** .

2. Function key “+” indicates the order sequence.

Example: **2** **8** + **ENTER** meaning, press the function key “**2**“, “**8**“, and then **ENTER**.

3. **DEVICE001: \_** , indicate messages from the device and is shown on the control keyboard LCD display.

4. Symbol **N** indicates the ID number of the nth device (ID numbers ranges from 001~225).

## 6.1 SINGLE DEVICE OPERATION

### 6.1.1 SELECT and SWITCH DEVICE

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

### 6.1.2 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.

### 6.1.3 FOCUS CONTROL

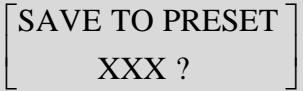
Press **FOCUS FAR** : focus far and release the key to stop focusing.

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

### 6.1.4 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 (please refer to 6.1.1 SELECT and SWITCH DEVICE).
- ② Use the joystick (on the control keyboard) and move the speed dome camera to the desired preset point.
- ③ Use the zoom control to adjust the monitoring display.
- ④ Enter preset number (1~32, 35~82), and press **SET PRESET** key, the LCD will display .
- ⑤ Press **SET PRESET** key, to enable storage and press **CLEAR** key to disable storage.

\* Repeat the steps 1~4 again, to setup more preset points.

### 6.1.5 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**  
128<sup>th</sup> preset point = **1** **2** **8** + **GO PRESET**

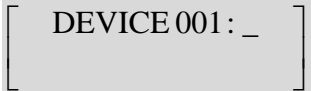
### 6.1.6 CHANGE PRESET POINT

To change the preset point, please follow the setup guide in the “6.1.4 PRESET POINT SETUP”.

### 6.1.7 PATTERN RUN

This function is designed to scan the preset points of the desired group in order (1~32). It memorizes the PTZ movement and camera focus from the starting point at the same interval (Please refer to speed dome user manual for group setup).

#### □ Start Pattern Run

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

### 6.1.8 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 proceed 360° auto scan.

#### □ Deactivate Auto Scan

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

### 6.1.9 CAMERA FUNCTION SETUP

#### □ Enter Camera Setup Menu

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

`DEVICE 001: _`, enter `F2 / 9 5` + `SET PRESET` key, to enter

camera setup menu..

#### □ Camera Operation Setup

Enter camera function setup menu to setup the camera function (Please refer to “7.3 Camera Menu Setup Mode” and for more detail refer to speed dome user manual for group setup).

### 6.1.10 KEYBOARD FUNCTION SETUP

Control keyboard supports keyboard ID, operation mode (PELCO P or PELCO D), communication protocol, and password setup. Press `MENU` key to enter control keyboard setup menu.

#### □ Password Confirm

Before entering the setup menu, password is requested.

When LCD displays: `ENTER PASSWORD: _`, enter password and press `ENTER`

key, system confirms the password. To enter menu setup correct password (if none was set, leave it blank and press `ENTER` key) has to be entered. When password entered is

incorrect, the system will return to previous display: `DEVICE 001: _`. When

`MENU` key has been accidentally pressed, press again to exit the CONTROL KEYBOARD MENU SETUP display.

\* When password is locked or forgotten, please contact your local dealer.

### ❑ Select Operation Mode

Enter menu setup, LCD will display:

→ KEYBOARD ID  
OPERATION MODE

Five item setups:

KEYBOARD ID  
OPERATION MODE  
COMM PARAMETER  
BUZZER  
SET PASSWORD

Use   key to move the cursor “→” to the desired item and press  key to enter item setup. Due to LCD display size, each time only two items are displayed and not all five items at once. When necessary, LCD display will auto roll-down to display the next two items and so on.

### ❑ Operation Mode Setup

Enter setup menu, use   key to change the setup. Press  key to return to main menu setup.

### ❑ Password Setup

Enter password item setup. When LCD displays:  , use number key, enter new password and press  key. When LCD displays:  , re-enter the new password. After confirmation, password setup will be complete.

\* Please do not setup password unless necessary, because only with the correct password can you enter KEYBOARD FUNCTION SETUP menu. Therefore, it is utterly important to remember your password once it has been setup.

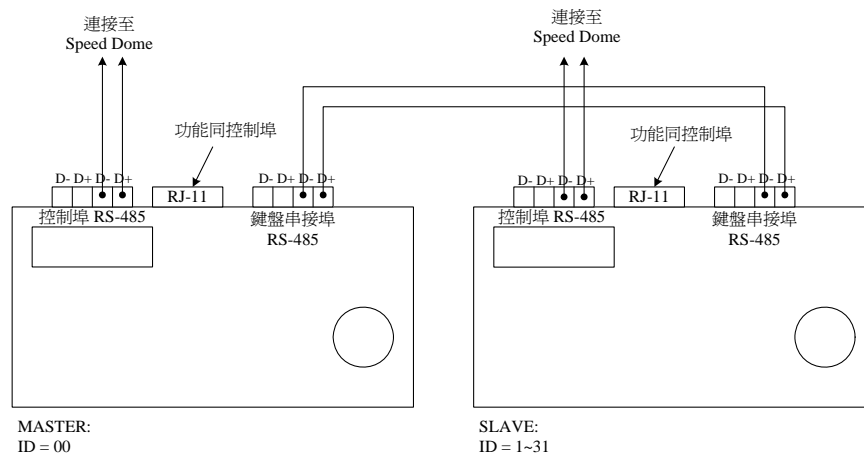
## 6.2 KEYBOARD CONNECTION

Control keyboard supports string connection and one keyboard controls multiple system platforms (one keyboard control system includes a keyboard that controls one group of devices). Slave keyboard controls only a single device, master keyboard controls a single device, as well as the entire slave keyboard and the cameras connected to the slave keyboards. Master keyboard ID No. must be setup to 00, and slave keyboard ID No. can be setup to any ID No. from 01~31.

\* Note that the ID No. may not be repeated, otherwise error may occur.

## 6.2.1 SYSTEM CONNECTION

According to the diagram below, setup the master ID to 00 and complete the slave control keyboard setup.



System Connection Diagram

## 6.2.2 KEYBOARD COMMUNICATION PROTOCOL

The whole system uses the same operation mode (Pelco P/ Pelco D) and communication protocol. Setup 2 parameters for the master keyboard, press **F5** key during operation mode to transfer the parameter to all slave keyboards within the system (no need to setup individually). This enables one to know straight away if there is more than one ID No. setup as 00 (but impossible to find out in slave keyboard). When there are repeated ID No setups as 00, LCD will display: **MASTER DUPLEX CHECK SYSTEM** and starts flashing until it has been deactivated (press any key to deactivate), otherwise no command will be accepted.

## 6.2.3 KEYBOARD ID MANAGEMENT

Control keyboard display differs according to master/ slave. Master keyboard displays: **DEVICE 001: \_**  
**G : 00**. G indicates group and 00 indicates the ID No. of the slave keyboard that has been controlled. Thus also mean that the master keyboard has control on the cameras connected to it (master keyboard ID No. = 00). When using master keyboard to control other groups of slave keyboards, please enter slave keyboard ID No. and then press **F1** key (the master keyboard will request slave keyboard to release authority). After the slave keyboard has released full authority to the master keyboard, LCD displays: **CONTROL BY**  
**MASTER** slave keyboard loses all control authority until master keyboard returns the authority back to the slave keyboard. When the master keyboard calls to control other slave keyboards it will return the control authority to the previously controlled slave keyboard (when the master keyboard receives the full authority, it is able to fully control all cameras that was controlled by the slave keyboard). To return control authority to the slave keyboard, enter master keyboard ID No. (00) and then press **F1** key, to release slave keyboard control authority.

# 7. SIMPLE OPERATION GUIDE

## 7.1 NORMAL OPERATION MODE

Functions		Method of Operation
P/T/Z Control	Upward Rotation (upward image monitoring)	Push the Joystick Forward
	Downward Rotation (downward image monitoring)	Push the Joystick Backward
	Leftward Rotation (leftward image monitoring)	Push the Joystick Leftward
	Rightward Rotation (rightward image monitoring)	Push the Joystick Rightward
	Zoom Tele	Push the Joystick Clockwise
	Zoom Wide	Push the Joystick Counterclockwise
Select device	No. Key+ <b>CAM</b>	
Manual Operation Focus Far	FOCUS <b>FAR</b>	
Manual Operation focus Near	FOCUS <b>NEAR</b>	
Iris Control to Bright	IRIS <b>OPEN</b>	
Iris Control to Dark	IRIS <b>CLOSE</b>	
Preset Point Setup	Enter Preset No. (1~32, 35~82) Press Key: <b>SET PRESET</b>	
Call Preset Point	Enter Preset No. (1~32, 35~82) Press Key: <b>GO PRESET</b>	
Start Pattern Run Mode	Enter Group No. (1~6) Press Key: <b>PATTERN</b>	
Stop Pattern Run Mode	Push Joystick to any direction	
Start Preset Mode	Enter 99 Press Key: <b>GO PRESET</b>	
Stop Preset Mode	Push Joystick to any direction	
Enter Camera Menu Selection Mode	Press Key: <b>F2</b> or Enter 95 Press Key: <b>SET PRESET</b>	

## 7.2 KEYBOARD MENU SETUP

Functions	Method of Operation
Enter Main Menu	<b>MENU</b>
Cursor Up	↑
Cursor Down	↓
Menu Enter	<b>ENTER</b>
Menu Exit	<b>ENTER</b>
Decrease (-)	←
Increase (+)	→
Exit Main Menu	<b>MENU</b>

## 7.3 CAMERA MENU SETUP MODE

Functions	Method of Operation
Cursor Up	Push the Joystick Forward FOCUS <b>NEAR</b>
Cursor Down	Push the Joystick Backward FOCUS <b>FAR</b>
Menu Enter	IRIS <b>OPEN</b>
Menu Exit	IRIS <b>CLOSE</b>
Decrease (-)	Push the Joystick to the Left
Increase (+)	Push the Joystick to the Right



## 8. SPECIFICATION

<b>Power</b>	DC12 V $\pm$ 10% (Recommendation 12 $\pm$ 0.5 V)		
<b>Power Consumption</b>	400mA		
<b>RS-485 Pelco P &amp; Pelco D</b>	Default(depends on chose protocol) 2400,N,8,1 2400,O,8,1 2400,E,8,1 4800,N,8,1 4800,O,8,1 4800,E,8,1 9600,N,8,1 9600,O,8,1 9600,E,8,1		
<b>Control Device</b>	255 Device		
<b>P/T/Z Control</b>	Manual	Pan	Right / Left
		Tilt	Up / Down
	Auto	Pan	On / Off
		Sequence	On / Off
<b>Lens Control</b>	ZOOM		WIDE / TELE
	FOCUS		NEAR / FAR
	IRIS		OPEN / CLOSE
<b>Camera Control</b>	Preset Point		80 (1~32, 35~82)
	Camera Setup		Available
<b>Dimension</b>	296x190.4x52.7mm ( W x D x H )		
<b>Operating Temp.</b>	0°~45°C		
<b>Weight</b>	1.4 Kg		

(Note: Design and Specifications are subject to change without notice.)