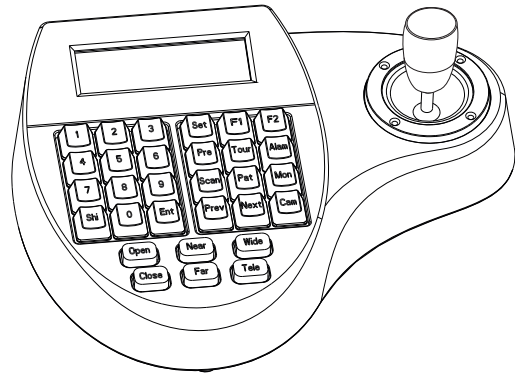


# 3-Axis Compact Keyboard Controller



## User's Manual

### Before Starting

- Refer all work related to the installation of this product to qualified service personnel or system installers.
- Do not attempt to disassemble the keyboard. To prevent electric shock, do not remove screws or cover. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance.
- Handle the keyboard with care. Do not strike or shake, as this may damage the keyboard. It should be protected against extreme pressure, vibration and humidity during transportation, storage and operation. Damages caused by improper transportation void the warranty.
- Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the keyboard in an extreme environment where high temperature or high humidity exists. Use it within -5°C to +40°C (23°F to 140°F) and a humidity below 90%. The input power source is 12V DC, and requires at least 500mA.
- Read this user's manual carefully before operation. Make sure that local electric safety standards are followed when using or installing the keyboard.
- Do not install this Product in a flammable and explosive environment.
- Before installation and maintenance, make sure that the keyboard is disconnected from the power source.
- Do not install or operate the keyboard near any high-voltage devices or high-voltage cable. The safety distance should remain at least 50 m.
- This product should be operated indoor only.

Technical specifications are subjects to change without prior notice. This Manual may contain printing or clerical errors. All trademarks mentioned belong to their respective owners.

### RS-485 (A+ / B-)

For connection to PTZ, Speed-Domes or other device which support telemetric controlling with RS-485 interface. The max. Distance can be up to 1000 meter ( depends on cable and environmental condition).

### RS-422 (T+/T-R/R-)

Rs422 Interface for telemetric control, up to 1200 meters.

### RJ-45

Control interface for matrix device (e.g. Pelco Cm6700, CM6800).

### DC Power Input

Power supply for the keyboard, Voltage range is 9V to 12V in DC or AC without polarity ( auto-sensing). When connected to the Matrix, the keyboard can be powered through the RJ-45 Interface.

### Check list

Please make sure that the following chapters are set correctly:

**Cable Connection:** Make sure that the RS485/422 cable are connected correctly to the camera devices.



**Baud-Rate:** The keyboard and the camera devices must have the same baud-rate setting, in order to establish the data exchange. Available settings are 2400, 4800 and 9600 Bps. For settings on the camera device, please refer to camera's manual for further details.

**Protocol:** Make sure that the keyboard and camera devices are set with the same protocol. Currently Pelco and B01/B02 are supported by the keyboard. Please refer to camera's manual for details.

**Camera ID:** Make sure that every connected PTZ device is assigned with a unique ID.

For settings of your keyboard. Please refer to later chapters for details

### PTZ related functions

With the keyboard, you can activate or setup the integrated function of connected camera device. For the supported functions, please refer to camera's manual for further details.

### Change currently selected camera

Press [n] + [CAM] : n.. ID of the camera

### Set / define a Preset position

Move the PTZ to the desired position and press [SET]+ [n] + [PRESET]  
To store the current position as a preset n

### Recall / activate Preset position

To recall the memorized preset position, press [n] + [PRESET]  
N.... The number of preset to be recalled.

### Set Tour function (B01)

You need to enter the keyboard's menu to setup the tour. Please refer to the later chapter for setup.

### Recall / activate Tour

To start the tour, press [n] + [TOUR]  
N.. Number of the stored tour

### Setup 2-Points scan

Scan between 2 pre-defined points. To define the points, move to the left end and press [SET]+[1] + [SCAN], and move to the right end and press [SET] +[2]+ [SCAN] to store the position. For changing the scan speed, you need to enter the PTZ's OSD menu. Please refer to the users manual for details.

### Start 2-Points Scan

Press [1]+[SCAN] to start the scan procedure.

### Start / Stop Pattern recording

The pattern function records user's PTZ movement, and can be recalled when need. Depends on the camera device, the recording time and supported number of pattern tracks might differ. To start the recording procedure, press

[SET] + [n] + [PATTERN]. n....the number of pattern track.

To stop the pattern recording, press

[SET] + [0] + [PATTERN]

### Activate recorded Pattern

To activate the recorded pattern, press [N] + [PATTERN]

### Matrix related functions

### Switching the input channel.

Press [PREV] : switch to previous channel  
Press [NEXT] : switch to next channel

### Auto switching sequence

Press [PREV] for 2 sec.: Sequence in rev. order  
Press [NEXT] for 2 sec.: Sequence to next channel.  
Press [STOP] to stop the sequence.

### Open matrix configuration menu

Press [SHIFT] + [SET] to enter the menu and show on main monitor. For the menu details, please refer to the users manual of the matrix.

### Confirm changes

Press [ENTER] after every changes in the menu.

### Change target monitor

Press [n] + [MON] to change the selected device in the matrix.

### Warning

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

### FCC COMPLIANCE STATEMENT

FCC INFORMATION: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. 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 HIS OWN EXPENSE.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

### CE COMPLIANCE STATEMENT

WARNING: THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

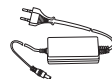


This Symbol indicates that this product should not be treated as household waste. When discarding this product, it must be sent to appropriate facilities for recycling or recovery. By separating this product from other household waste, you are helping to reduce the volume of waste incinerators and the natural resource will be conserved.

### Unpacking



1 X Controller

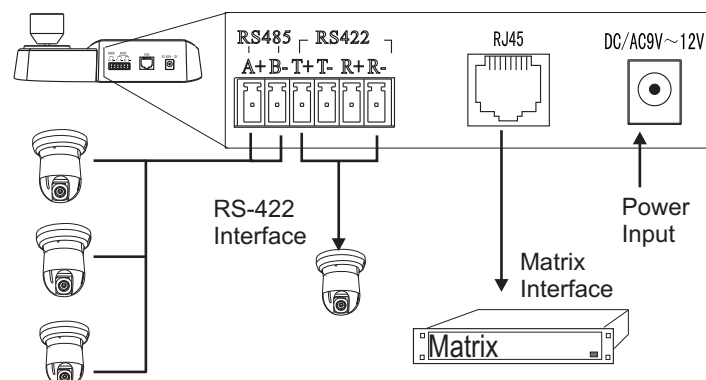


AC-DC Power Supply (optional)



1x User Manual

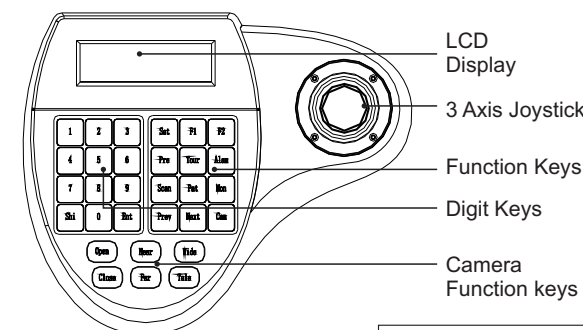
### Connection



RS-485 up to 32 Devices

**DO NOT CONNECT THE RJ-45 PORT TO ANY COMPUTER NETWORK INTERFACE, as this may cause serious damage to the keyboard.**

### Operation



Cam ID:001 Mon ID:001  
Protocol: B01  
Baudrate: 9600bps

### Initial Screen

**Cam ID:** Current camera ID  
**Mon ID:** Current monitor ID, indicates the output setting on matrix.  
**Protocol:** Telemetric protocol setting.  
**Baudrate:** Baud-Rate setting

The LCD back-light will be turned off automatically after 15 seconds of idle time.

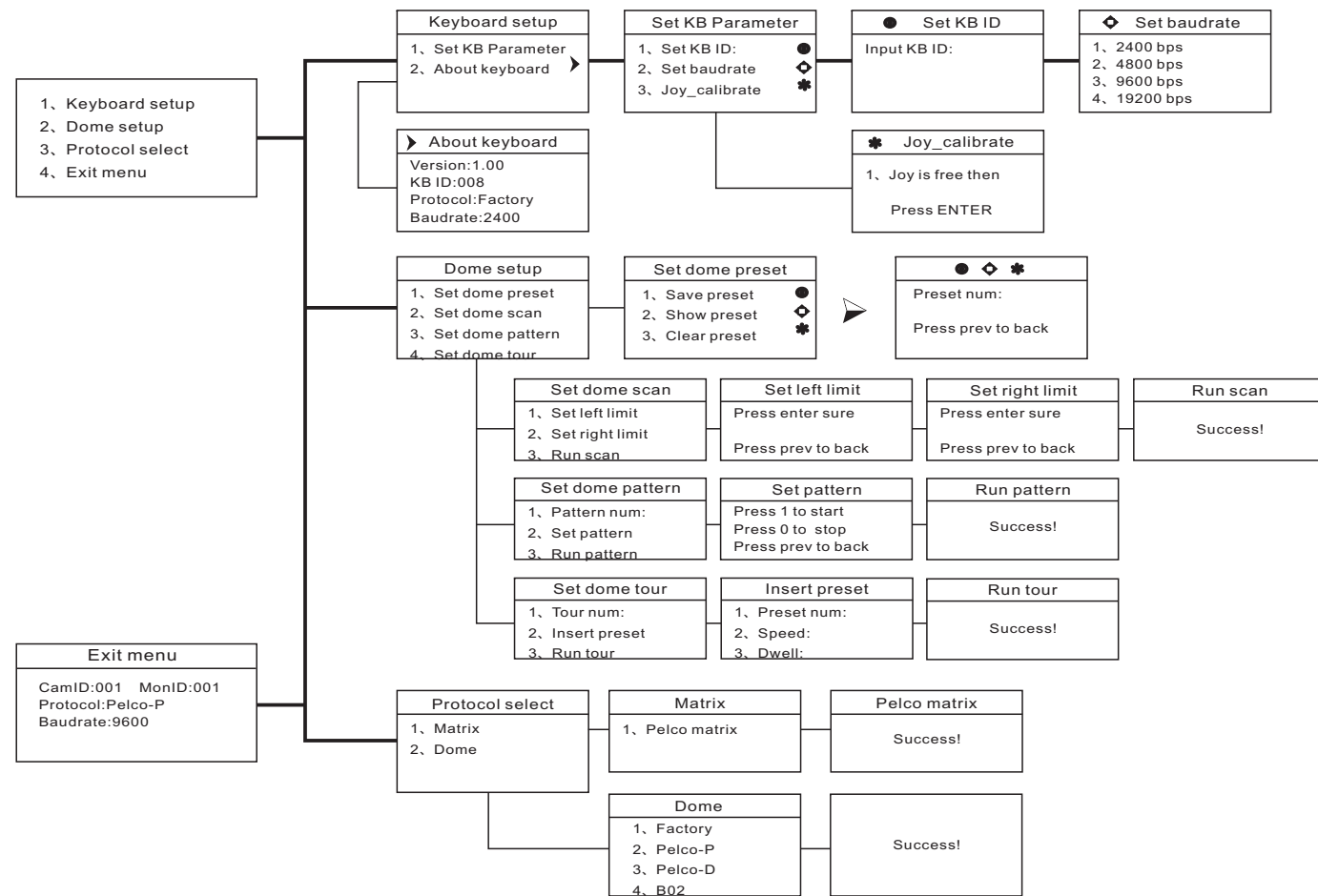
### PT Operation with Joystick

Move the joystick up, down, left and right to perform pan or tilt operation. Depends on the angle of stick, the keyboard changes the speed of PT movement. On performing the PT action, the LCD will show the current movement with arrow signs

### Zoom operation

The keyboard provides camera function keys with following function:  
Wide / Tele: Zoom-out and zoom-in  
Far / Near: Manual focus control  
Open / Close: Manual Iris control

# Keyboard Menu



## Enter the keyboard menu

To enter the keyboard's setup menu, keep the [SET]-Key pressed for 2 seconds, To navigate through the menu items, use the joystick with "up" and "down" to move between the items. Use "right" to enter the item or confirm changes. Use "left" to leave the item or discard changes"

### Main Menu

- 1. Keyboard setup
- 2. Dome setup
- 3. Protocol select
- 4. Exit menu

key to confirm the changes. The display will show "SUCCESS" when changes are accepted.

### Keyboard Setup

- 1. Set KB Parameter
- 2. About keyboard

### Keyboard Setup > Set KB Parameter

- 1. Set KB ID
- 2. Set baudrate
- 3. Joy\_calibrate

### Keyboard Setup > Set KB Parameter> Set KB ID

- Input KB ID: (1 - 64)

### Keyboard Setup > Set KB Parameter> set baudrate

- 2400 bps
- 4800 bps
- 9600 bps
- 19200 bps

### Keyboard Setup > Set KB Parameter> Joy\_calibrate

- Joystick is free then press Enter

### Keyboard Setup > About keyboard

- Version: 1.00
- KB ID: 001
- Protocol: B01
- Baudrate: 9600 bps

### Dome setup

- 1. Set dome preset
- 2. Set dome scan
- 3. Set dome pattern
- 4. Set dome tour

### Dome setup > Set dome preset

- 1. Save preset
- 2. Show preset
- 3. Clear preset

### Dome setup > Set dome preset> Save, show or clear preset

- Preset num:
- Press PREV to back

### Dome setup > set dome scan

- 1. Set left limit
- 2. Set right limit
- 3. Run Scan

### Dome setup > set dome scan> set left, right limit

- Press ENTER sure
- Press PREV to back

### Dome setup > Set dome pattern

- 1. Pattern num: \_
- 2. Set pattern
- 3. Run pattern

### Dome setup > Set dome pattern > Set pattern

- Press 1 to start
- Press 0 to stop
- Press PREV to back

### Dome setup > Set dome tour

- 1. Tour num: \_
- 2. Insert preset
- 3. Run tour

### Dome setup > Set dome tour> Insert preset

- 1. Preset num: \_
- 2. Speed:
- 3. Dwell:

Use the digit keys to change the value on every option, and press [ENTER] to complete the insert action. The LCD will show "SUCCESS" to confirm the preset, and returns to upper menu level.

### Protocol select

- 1. Matrix
- 2. Dome

### Protocol select > Matix

- 1. Pelco Matrix

### Protocol > Dome

- 1. Factory protocol
- 2. Pelco-P protocol
- 3. Pelco-D protocol
- 4. B02

**DO NOT CONNECT THE RJ-45 PORT TO ANY COMPUTER NETWORK INTERFACE, as this may cause serious damage to the keyboard.**

# Quick Reference

[N] + [CAM]

Select the connected device

[TELE]

Zoom-In

[WIDE]

Zoom-Out

[FAR]

Manual focus far

[NEAR]

Manual focus near

[CLOSE]

Manual iris close

[OPEN]

Manual iris open

[SET]+[N]+[PRESET]

Store current PTZ position as preset

[N]+[PRESET]

Recall stored preset position

[SET]+[1]+[SCAN]

Define current position as the left limit for scan

[SET]+[2]+[SCAN]

define current position as the right limit for scan

[1]+[SCAN]

Start the scan

[SET]+[N]+[PATTERN]

Start pattern recording

[SET]+[0]+[PATTERN]

Stop the pattern recording and store.

[N]+[PATTERN]

Start recorded pattern

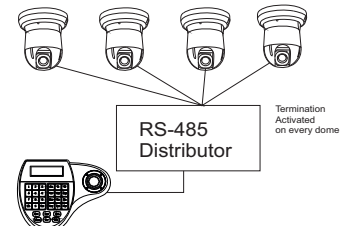
[N]+[TOUR]

Start the defined tour.

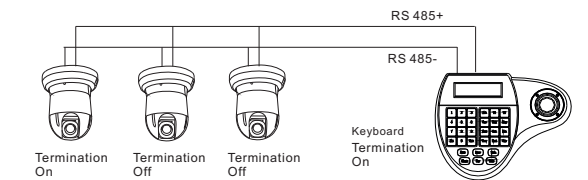
# Connection sample

## Star-Connection with RS-Distributor

Max. 32 devices (Keyboard and camera) can be connected to a RS-485 chain. E.g with 1 keyboard, you can max. Connect 31 Speed Domes.



## Termination on RS-485 chain



## Multiple device connection

For a multiple connection, you can attach max. 4 keyboards to the network. Make sure that every keyboard has a unique ID.

