

3-Axis Compact Keyboard Controller



User's Manual

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.

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 avoid 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.

Unpacking



1 X Controller

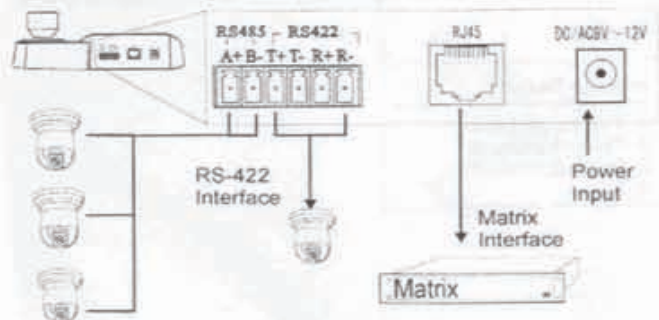


AC-DC Power Supply (optional)



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.

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.



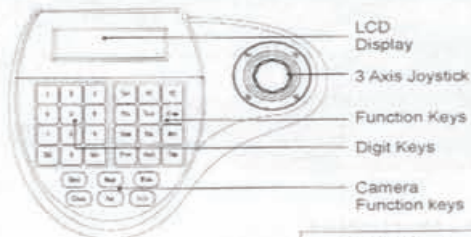
Baud-Rate: The keyboard and the camera devices must have the same baud-rate setting, in order to establish the data exchange. Available settings are 2400, 4800 and 9600 Bps. For settings on the camera device, please refer to camera's manual for further details.

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 an unique ID.

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

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

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.

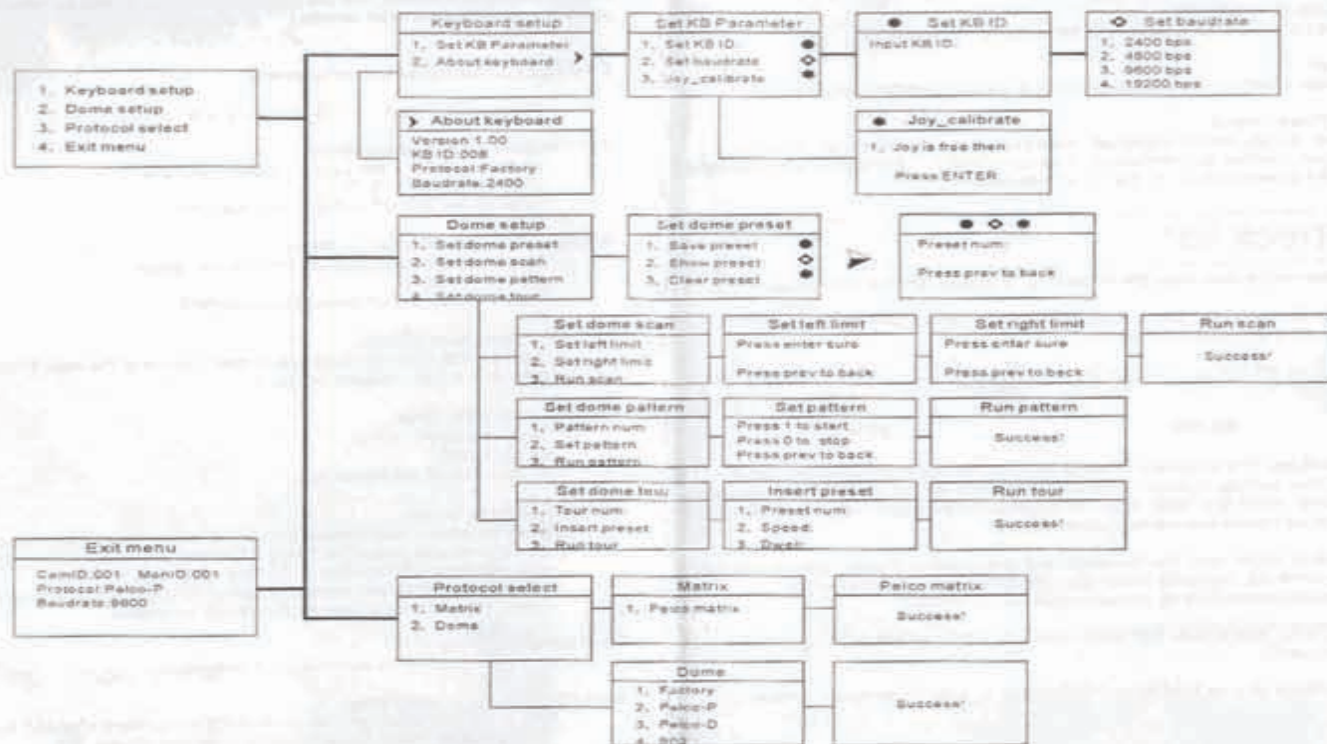
Confirm changes

Press [ENTER] after every changes in the menu.

Change target monitor

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

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

In main menu, you can select the items by pressing the digit key, or use joystick to navigate through the items. For returning to upper menu level, press [PREV] key. Use the [ENTER]

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

Keyboard Setup

- 1. Set KB Parameter
- 2. About keyboard

Initial setup for the keyboard, such as keyboard ID, and baud-rate. Press digit key to enter.

Keyboard Setup > Set KB Parameter

- 1. Set KB ID
- 2. Set baudrate
- 3. Joy_calibrate

Setup keyboards ID, Baud-rate and calibrates the joystick. Joystick up/down to select item [ENTER] to enter the sub-menu [PREV] return to upper level.

Keyboard Setup > Set KB Parameter> Set KB ID

- Input KB ID:
- (1 - 64)

Use the digit keys to enter the ID, and press [ENTER] to confirm. LCD will show "SUCCESS" when accepted, or "ERROR" if the ID input exceeds the range.

Keyboard Setup > Set KB Parameter> set baudrate

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

Available baud rate. Move joystick "up" or "down" to select the setting and press [ENTER] to confirm. Press [PREV] to return to upper level.

Keyboard Setup > Set KB Parameter> Joy_calibrate

- Joystick is free then
- press Enter

Release the joystick, and press [ENTER] to confirm the calibrate of zero-point. Press [PREV] to return to upper level.

Keyboard Setup > About keyboard

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

Information about current keyboard setting. Press [PREV] to return.

Dome setup

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

Configure and setup the PTZ related functions, such as preset, pattern... Etc.

Dome setup > Set dome preset

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

Save, recall and clear the preset points.

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

- Preset num:
- Press PREV to back

Enter the preset number with the digit key. For saving preset, move the joystick and press [ENTER]. To show or clear the preset, enter the preset number and press [ENTER], or press [PREV] to exit.

Dome setup > set dome scan

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

Setup the 2-Points scan, select 1. And 2. To define the left and right limit. Select option nr. 3. To run the scan

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

- Press ENTER sure
Press PREV to back

Move the Joystick to the desired position and press [ENTER] for confirmation.

Dome setup > Set dome pattern

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

1. Press the digit and [ENTER] to select the pattern number.
2. Sub-menu for pattern setup.
3. start the selected pattern

Dome setup > Set dome pattern > Set pattern

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

Press 1 to start the pattern recording. The dome will now memorize your PTZ operation. When finished, press 0 to stop the recording. Press [PREV] to exit the menu

Dome setup > Set dome tour

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

1. Press the digit and [ENTER] to select the tour number
2. Add defined preset position to the tour
3. start the selected tour

Dome setup > Set dome tour > insert preset

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

1. Preset num: _ select the defined preset position (1 - 80)
2. Speed: PTZ moving speed to this preset, 1 - 8 (fastest)
3. Dwell: Stop time on this preset. Max. 60 seconds.

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

1. Matrix: Matrix Mode
2. Dome: Setup Dome Protocol

Protocol select > Matrix

1. Pelco Matrix

Currently only pelco protocol is supported in the matrix mode. Press [ENTER] to exit.

Protocol > Dome

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



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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

Recall stored preset

position

[N]+[PRESET]

Define current position

as the left limit for scan

[SET]+[1]+[SCAN]

define current position

as the right limit for

scan

[SET]+[2]+[SCAN]

Start the scan

Start pattern recording

[1]+[SCAN]

Stop the pattern

recording and store.

[SET]+[N]+[PATTERN]

Start recorded pattern

[SET]+[0]+[PATTERN]

Start the defined tour.

[N]+[PATTERN]

[N]+[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.

