

# Keyboard User Manual

Thanks a lot for purchasing our product. If there is any question, please feel free to contact us.

This manual may have something inaccurate in technology, unsuited with the product's functions and operations or the misprints. The manual's content will change with the enhanced functions of the product, as well as give the regular advance or renew the product and procedure in this manual. The renewed content will be added in the new edition of this manual and no separate notice will be given.

**Notes:**

LCD display can be easily damaged. Please do not press or exposure in sunshine for a long time;

The joystick can be easily damaged. If it needs to be repaired, please wrap and ship it by using original or safety packaging;

This keyboard should be used in certain range of temperature and humidity, referring the technical index.

Please connect the keyboard correctly as this manual requires.

| Items | Quantity | Note |
|---|---|---|
| DC12V power adapter | 1 | Input：AC100-240V |
| 10PIN connector | 1 | |
| CD with user's manual | 1 | |

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# *1* Main Features

## Main Features

DS-1002K and DS-1003K keyboards are compatible with all of our company's full series embedded DVRs. These keyboards can control speed dome and PTZ either directly, or through the DVRs. Also they can control DVRs as well.

**Control**

Completely replace the all functions of DVR front panel.
Any operation is indicated in LCD display.
One keyboard can manage 31 DVRs maximum.
Control speed dome and PTZ: The speed dome and PTZ address is among 0~254.

**Control protocol**

Contain 9 kinds of speed dome and PTZ protocol. Users can require installing other specific protocol if the keyboard has not contained. We will send the modified procedure to you to update keyboard procedure via RS-485 communication port, as it does not need to change hardware in advance.

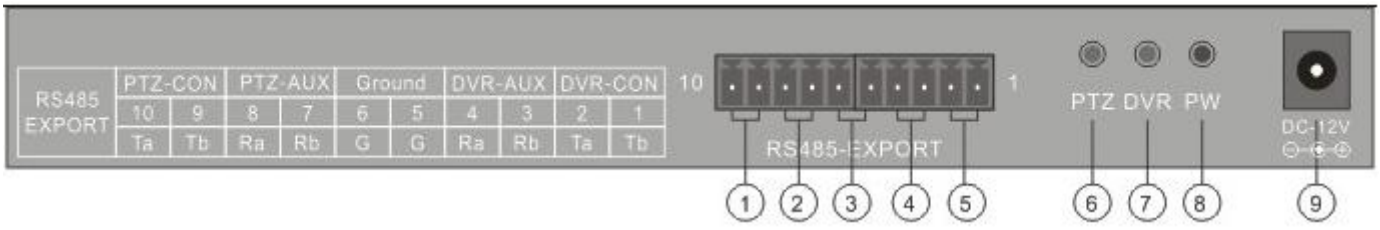
**Divided control by host and auxiliary keyboard**

Classifying control can be supported in controlling embedded DRV, and 15 auxiliary keyboard can be connected, and the ID ranging from 0 to 15
Classifying control can be supported in controlling quick DOME and decoder, and 15 auxiliary keyboard can be connected, and the ID ranging from 0 to 15.

**Features and functions**

The flexibility of system is improved wisely as any equipments connect with RS485 can be set in different protocols and baud rates. Due to all the configuration can be done on the LCD display, it is not needed to look for how to change the protocol.

### 1.1 Rear panel interface introduction




| No | Physical interface | Connect introduction |
|---|---|---|
| 1 | Output of control PTZ<br>PTZ-CON | Host keyboard connects PTZ RS485 port. Ta is for RS485+, and Tb is for RS485- |
| 2 | Input of auxiliary keyboard<br>for PTZ control<br>PTZ-AUX | Host keyboard connects auxiliary keyboard for PTZ control. Host keyboard pin8 (**Ra**) connects auxiliary keyboard pin10 (**Ta**), and host keyboard pin7 (**Rb)** connects auxiliary keyboard pin9 (**Tb**). Then auxiliary keyboard can control PTZ. |
| 3 | Ground | Ground control signal line terminal |
| 4 | Input of auxiliary control keyboard for DVR control<br>DVR-AUX | Host keyboard connects auxiliary keyboard for DVR control. Host keyboard pin4 (**Ra**) connects auxiliary keyboard pin2 (**Ta**), and host keyboard pin3 (**Rb)** connects auxiliary keyboard pin1 (**Tb**). Then auxiliary keyboard can control DVR. |
| 5 | Output of control DVR<br>( DVR-CON) | Connect host keyboard pin2 (**Ta**) with DVR **KB** port **D+**, and connect host keyboard pin1 (**Tb**) with DVR **KB** port **D-** |
| 6 | PTZ control indicator light | In PTZ control mode, the led is green lighted and twinkling. |
| 7 | DVR control indicator light | In DVR control mode, it is green and twinkling. |

| | | |
|---|---|---|
| 8 | Power light (PW) | The lamp of keyboard is constantly red lighted on the working state |
| 9 | Power input (DC-12V) | DC **12V** power input |

## 1.2 Front panel introduction




| Button name | Function introduction |
|---|---|
| Addr | Choose addresses of PTZ or the device ID of embedded DVRs |
| Setup | Hold for 3 seconds, enter into keyboard configuration state (default password: 8888) |
| Search | Press 1 second, check keyboard Configuration: the PTZ protocol |
| Shift | Switch the control mode of embedded DVR or speed dome |
| ▭ | In DVR mode, switch the previews of single screen of live, playback |
| ⊞ | In DVR mode, switch the previews of four screen of live, playback |
| ▦ | In DVR mode, switch the previews of eight screen of live, playback |
| ▦ | In DVR mode, switch the previews of sixteen screen of live, playback |
| PTZ | Enter into DVR PTZ control menu; in the PTZ interface to control the cursor |
| dwell | In DVR mode, start or close dwell function |
| Audio | In DVR mode, press AUDIO+NUMBER+ENTER to switch audio to relevant channels |
| Power | Power off DVR |
| BACKUP | In DVR mode, switch to backup menu |
| INFO | In DVR mode, switch to info menu |
| +/- | Increase/decrease the value under any mode |
| MENU | In DVR mode, show the main menu |
| SEARCH | In DVR mode, switch to show the search menu |
| RECORD | In DVR mode, enter into DVR manual record menu |
| PLAY | In DVR mode, enter into DVR playback menu |
| 1-9 | Number.: 1, 2, 3, 4, 5, 6, 7, 8, 9<br>A-Z (26 letters) |
| ESC | Back to up-level menu |
| 0/10+ | Input digital 10 or above |
| ENTER | Confirm currently input content |

| | |
|---|---|
| PRESET | Setup the speed dome preset position |
| DEL | Delete the speed dome preset position |
| SHOT | Call the speed dome preset position |
| Auto | Set the speed dome to auto rotate（depend on speed dome itself, please reference the speed dome's manual） |
| FOCUS+ /- | Set the lens focus near/far |
| ZOOM+/- | Zoom in/out the lens |
| IRIS+/- | Open /close the lens iris |
| WIPER | On/Off the wiper relay |
| Light | On/Off the light relay |

## 1.3 Joystick control introduction

| Fig | Operation | Function introduction |
|---|---|---|
|  | UP | In PTZ control mode: control the movement of pan/tilt<br>In DVR control mode: play record file fast |
|  | DOWN | In PTZ control mode: control the pan/tilt to move upon<br>In DVR control mode: play record file slowly |
|  | LEFT | In PTZ control mode: control pan/tilt to move left<br>In DVR control mode: control record file backward |
|  | RIGHT | In PTZ control mode: control pan/tilt to move right<br>In DVR control mode: control record file forward |
|  | ROTATE LEFT | Zoom in the lens |
|  | ROTATE RIGHT | Zoom out the lens |

## 1.4 LCD display indication introduction

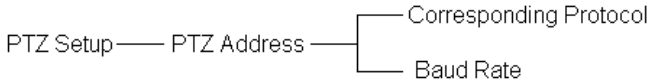
Any operation is indicated and corresponding in LCD display. The LCD will turn into electricity-save mode (Minimum the lightness) in 30 seconds if there is no any operation.

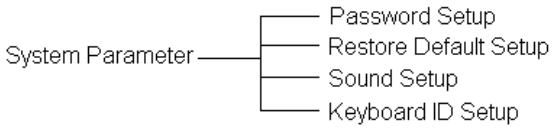
# 2 Keyboard configuration and query

## Keyboard menu tree

### 2.1 Configuration menu tree:

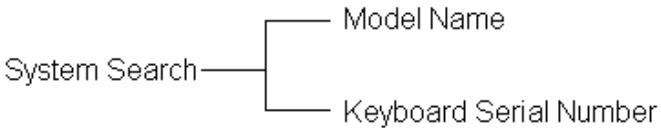
Hold  for three seconds, enter into keyboard setup (default password: 8888)




### 2.2 Inquire Keyboard parameter:

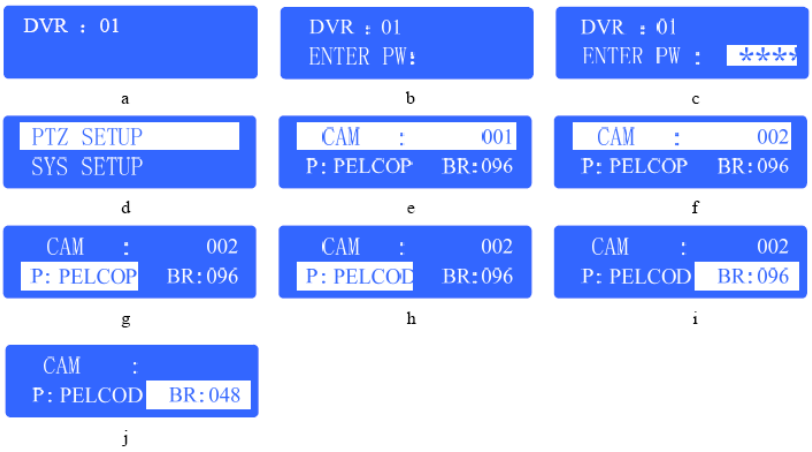
Press , check the control output, parameter setup of the keyboard




**Configuration illustration**

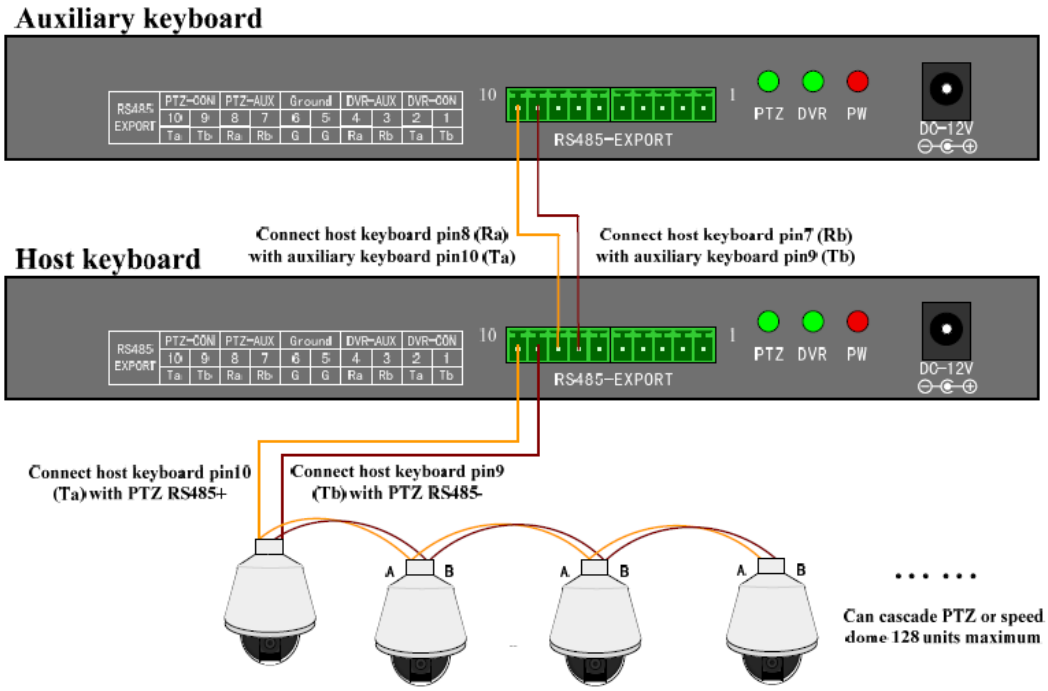
Here is an example to illustrate how to set dome: change the communication protocol of dome 002 to PELCO-D, and change the baud rate to 4800.

1. In the mode of standby (fig a), hold the “Setup” button for 3 seconds, login the main menu (fig b);
2. Enter the password (fig c, default password: 8888);
3. Press [Enter], enter into setup menu, and operate the Joystick up and down to choose [PTZ SETUP] or [SYS SETUP](fig d);
4. Choose [PTZ SETUP], press [Enter] to enter in [PTZ SETUP];
5. Operate the Joystick left and right to choose the address of speed dome, e.g. 002（fig e, f）, and then press [Enter] to enter the next level menu (fig g);
6. Operate the Joystick up and down to choose communication protocol, e.g. PELCO-D (fig h);
7. Operate the Joystick right to change the baud rate (fig i), and then choose the baud rate up and down (fig j);
8. Press [Enter], then press “ESC” until back to the standby mode (fig a);
9. Configuration is done

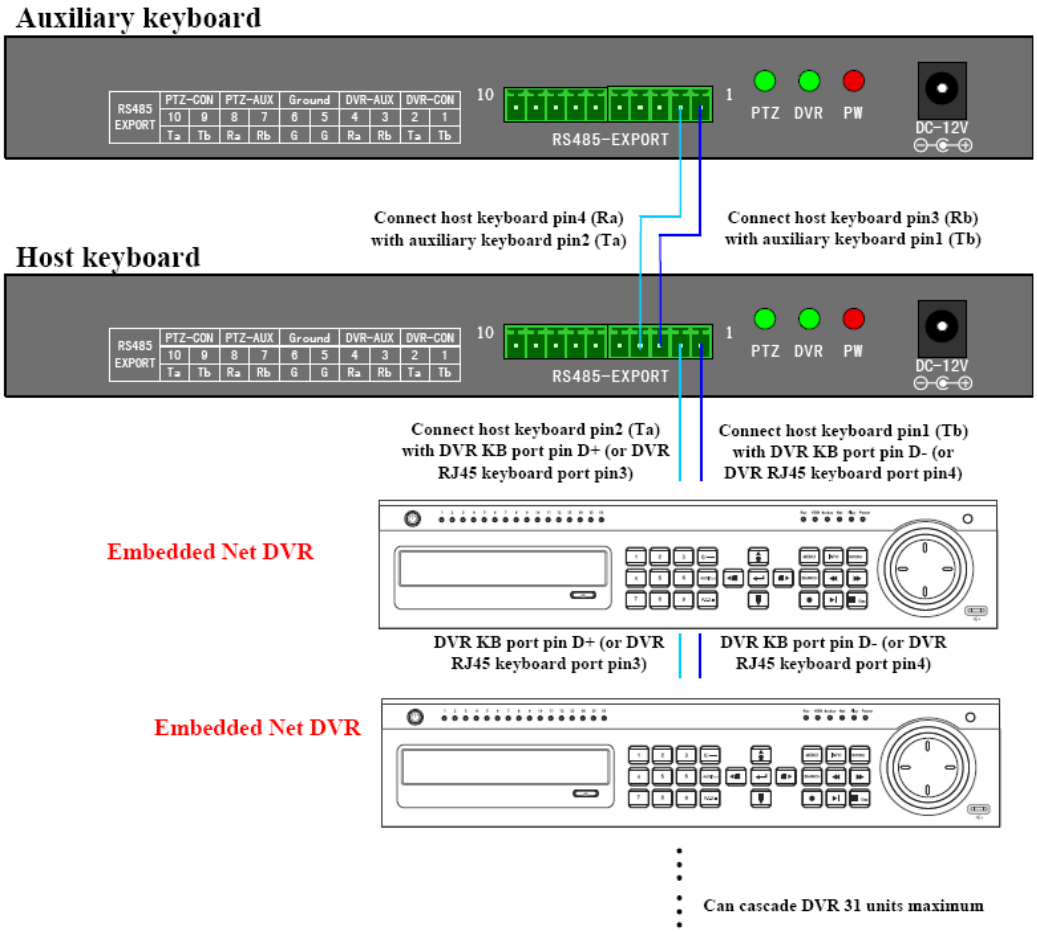


# 3 Typical wiring diagram

## 3.1 Control speed dome




## 3.2 Control DVR



# *4* Technical Specification

| Keyboard model | Description |
|---|---|
| Supported | 31 |
| Supported | 128 |
| Joystick | 2D |
| Communication interface | RS-485 port |
| LCD screen | 122mm* 32mm |
| Maximum cable length | 1200 m |
| Working temperature | -10℃-- +55℃ |
| Working humidity | 10%--90% |
| Power supply | DC-12V±10% 50Hz |
| Average operation power | 10W |
| Size | 300mm*180mm*86mm |
| Weight | 2.50kg |