



# 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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# I 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

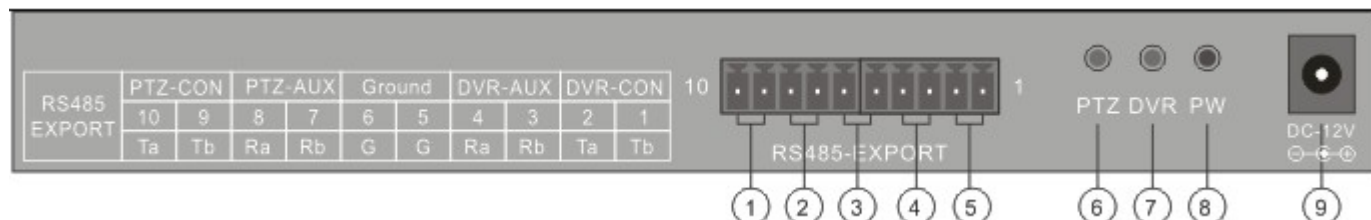
Classifying control can be supported in controlling embedded DRV, and 15 auxiliary keyboard can be connected, and the ID ranging from 0 to 15

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.

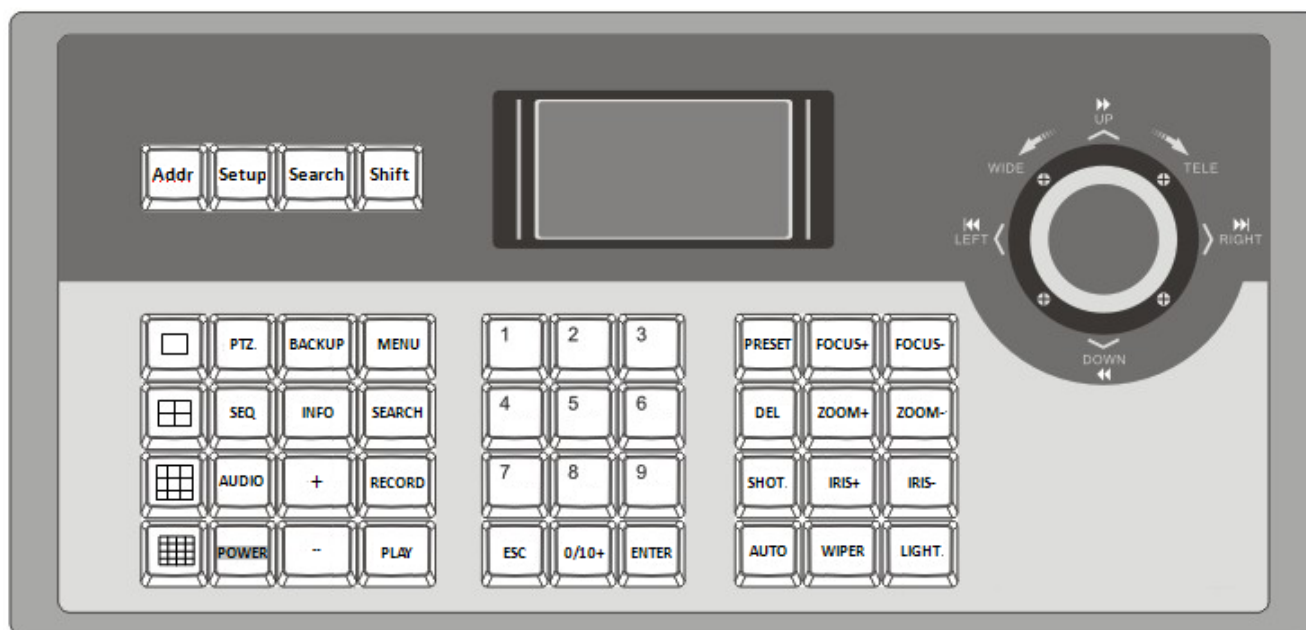
## 1.1 Rear panel interface introduction



No	Physical interface	Connect introduction
1	Output of control PTZ PTZ-CON	Host keyboard connects PTZ RS485 port. Ta is for RS485+, and Tb is for RS485-
2	Input of auxiliary keyboard for PTZ control PTZ-AUX	Host keyboard connects auxiliary keyboard for PTZ control. Host keyboard pin8 ( <b>Ra</b> ) connects auxiliary keyboard pin10 ( <b>Ta</b> ), and host keyboard pin7 ( <b>Rb</b> ) connects auxiliary keyboard pin9 ( <b>Tb</b> ). Then auxiliary keyboard can control PTZ.
3	Ground	Ground control signal line terminal
4	Input of auxiliary control keyboard for DVR control DVR-AUX	Host keyboard connects auxiliary keyboard for DVR control. Host keyboard pin4 ( <b>Ra</b> ) connects auxiliary keyboard pin2 ( <b>Ta</b> ), and host keyboard pin3 ( <b>Rb</b> ) connects auxiliary keyboard pin1 ( <b>Tb</b> ). Then auxiliary keyboard can control DVR.
5	Output of control DVR (DVR-CON)	Connect host keyboard pin2 ( <b>Ta</b> ) with DVR <b>KB</b> port <b>D+</b> , and connect host keyboard pin1 ( <b>Tb</b> ) with DVR <b>KB</b> port <b>D-</b>
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 <b>12V</b> 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
dwll	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 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 In DVR control mode: play record file fast
	DOWN	In PTZ control mode: control the pan/tilt to move upon In DVR control mode: play record file slowly
	LEFT	In PTZ control mode: control pan/tilt to move left In DVR control mode: control record file backward
	RIGHT	In PTZ control mode: control pan/tilt to move right 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.

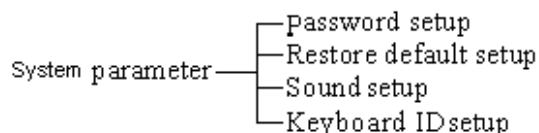
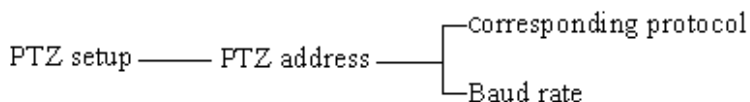
## 2 Keyboard configuration and query

### Keyboard menu tree

#### 2.1 Configuration menu tree:



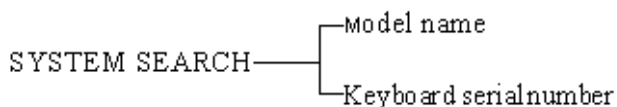
Hold  for three seconds, enter into keyboard setup (default password: 8888)



#### 2.2 Inquire Keyboard parameter:



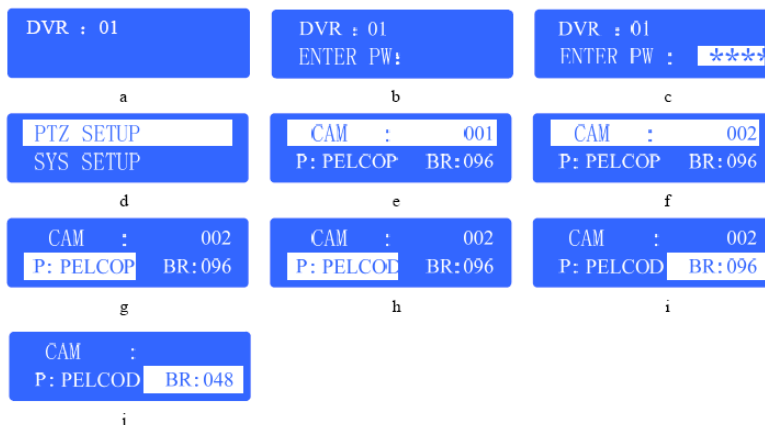
Press , check the control output, parameter setup of the keyboard



### Configuration illustration

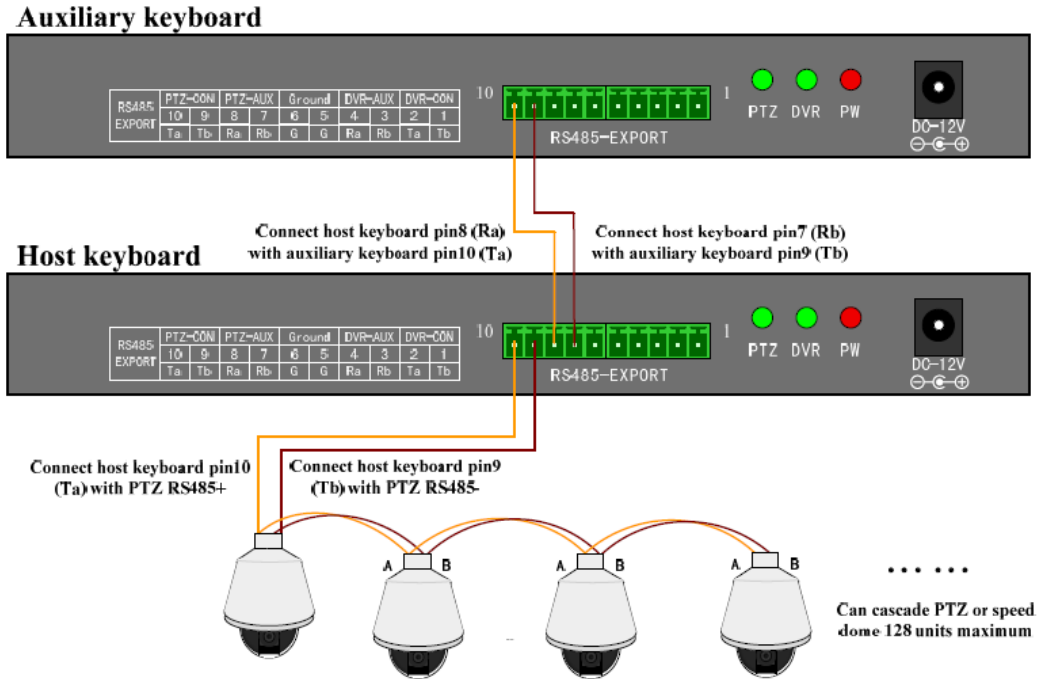
Here is an example to illustrate how to set dome: change the communication protocol of dome 002 to PELCO-D, and change the baud rate to 4800.

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

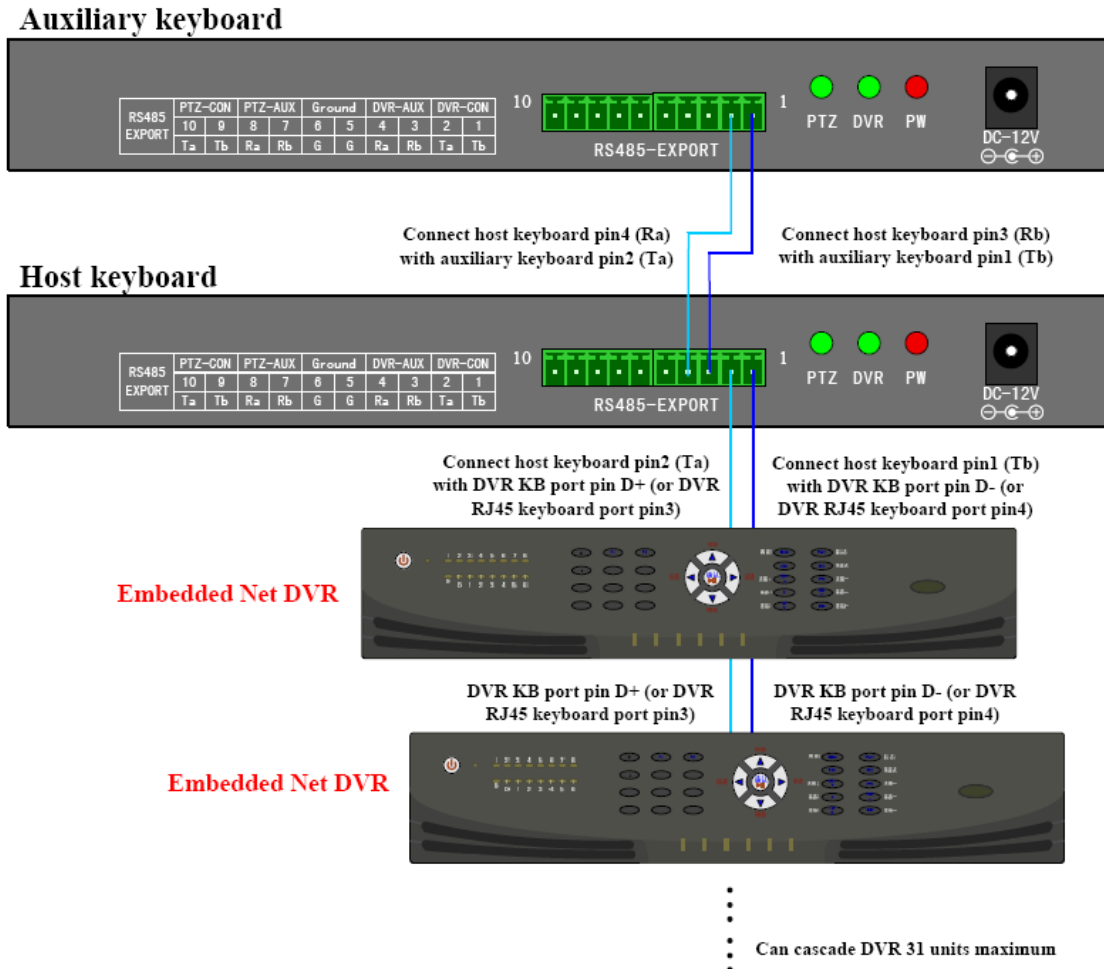


### 3 Typical wiring diagram

#### 3.1 Control speed dome



#### 3.2 Control DVR



## 4 Technical Specification

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