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# **Keyboard Controller**

**(Ver 3.057 Copyright 2013)**

Keyboard English manual

**(2013 Ver 3.057)**

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## 1 Overview:

The keyboard is a powerful multi-function operating keyboard the operational matrix switch / control various functions of the system, shell programming matrix system; variety of DVR functions with centralized control; high speed dome and decoder can directly control. Keyboard operation protective function.

## 2 Equipment:

On the key marked with the two functions of English and (Chinese characters / symbols) meaning the English function is mainly used for the operation matrix system; Chinese characters / symbols function is mainly used to operate the DVR Operating DVR key functions see [keys with DVR feature comparison table operating matrix system key function following meanings:

Digital District - used to enter the camera number, monitor number selected sites

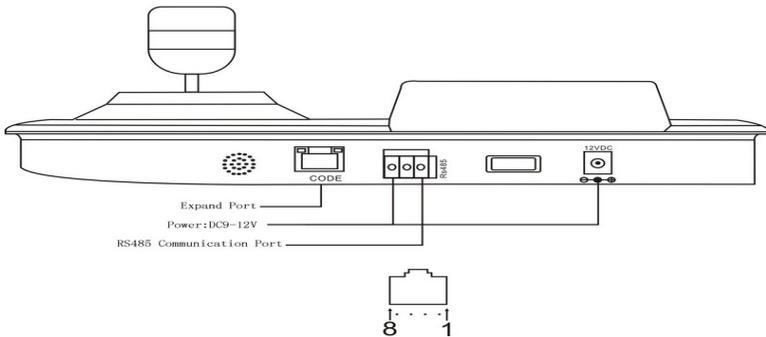
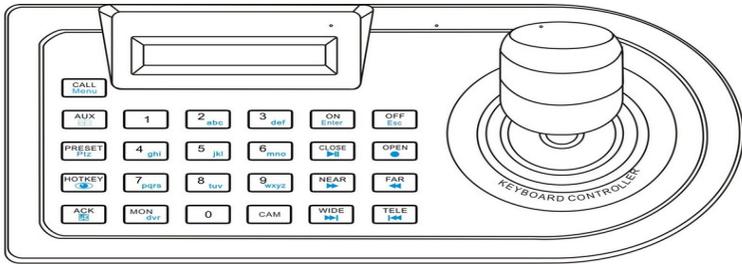
<b>【CALL】</b>	CALL Preset	<b>【PRESET】</b>	Set Preset
<b>【AUX】</b>	auxiliary function	<b>【HOTKEY】</b>	shortcut key
<b>【ACK】</b>	Confirm function	<b>【Ptz】</b>	DVR state operation PAN/titl
<b>【MON】</b>	Choose Monitor Screen	<b>【CAM】</b>	Choose Camera
<b>【ON】</b>	On subsidiary switch	<b>【OFF】</b>	off subsidiary switch
<b>【CLOSE】</b>	Close the lens aperture	<b>【OPEN】</b>	open the lens aperture
<b>【NEAR】</b>	adjust focus (+)	<b>【FAR】</b>	adjust focus (-)
<b>【WIDE】</b>	panoramic images	<b>【TELE】</b>	get a close-up image
<b>【Dvr】</b>	Turn to DVR mode	<b>【Menu】</b>	DVR MENU
<b>【Enter】</b>	Confirm	<b>【Esc】</b>	EXIT

【田】	Multi-SCREEN	【眼】	Monitor
【田】	Switch SCREEN	【●】	Record
【  】	Play/Pause	【▶▶】	Fast-Forward
【◀◀】	Fast-Backward	【▶▶】	Turn to the END frame
【◀◀】	Turn to The Home frame	joystick	control head, down, left, right and lens zoom
【0】-【9】	Input figure		

Note:

After power keyboard, input keyboard address will automatically find the host matrix; matrix host is not found within 2 seconds automatically to normal operation, the baud rate of the keyboard this time, the agreement is the last set of parameters, such as To change, please press the "digital 995 keys + AUX key" re-set into the keyboard menu (save the settings need to re-power).

When keyboard, DVR matrix host co-exist in a system .the DVR and keyboard communication baud rate must be 9600bps, otherwise DVR cannot be operated. When a system exists only keyboard, DVR the two devices must be the same baud rate and protocol.



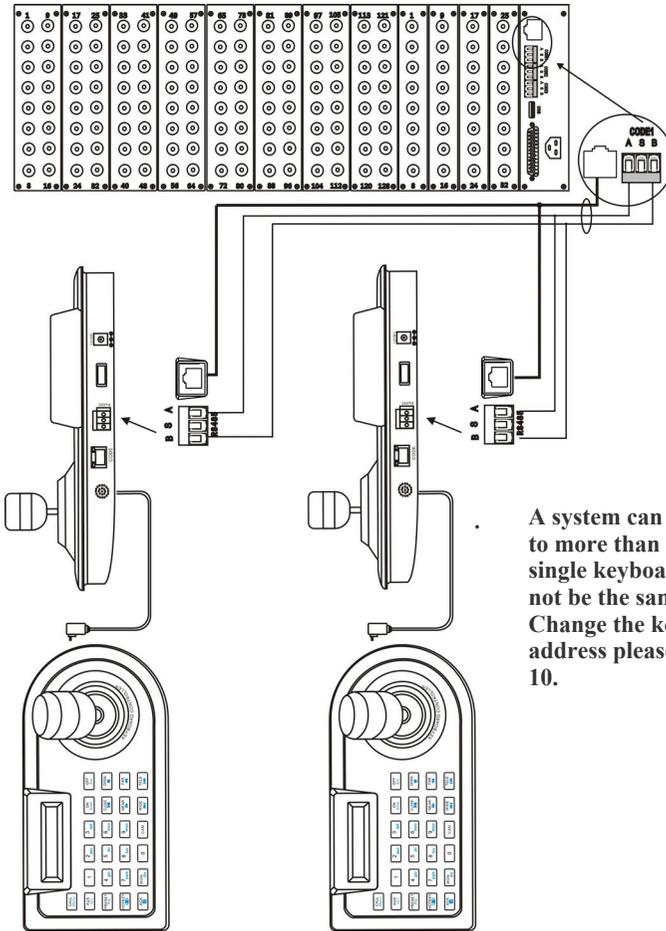
Keyboard panel Figure

- 1: RS232Rx (vacancy)    3: RS232Tx (vacancy)    2: RS485B    4: RS485B  
 5: GND    6: GND    7: DC9V    8: DC9V

## Chapter2 The keyboard connection diagram and setting

### Matrix Switching System

#### Keyboard rear view



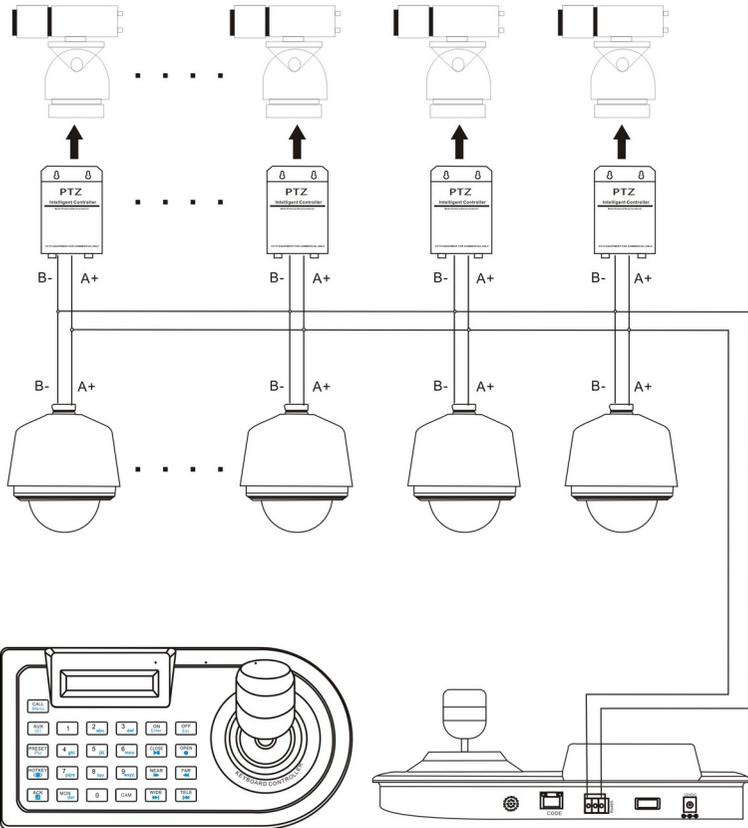
A system can be connected to more than one keyboard, single keyboard system can not be the same Change the keyboard address please turn to Page 10.

**Note:**

In this system, the electric keyboard will automatically find the host. Not found within two seconds, check the communication line.

**2 Keyboard, DVR, the composition of the host matrix system connection diagram**

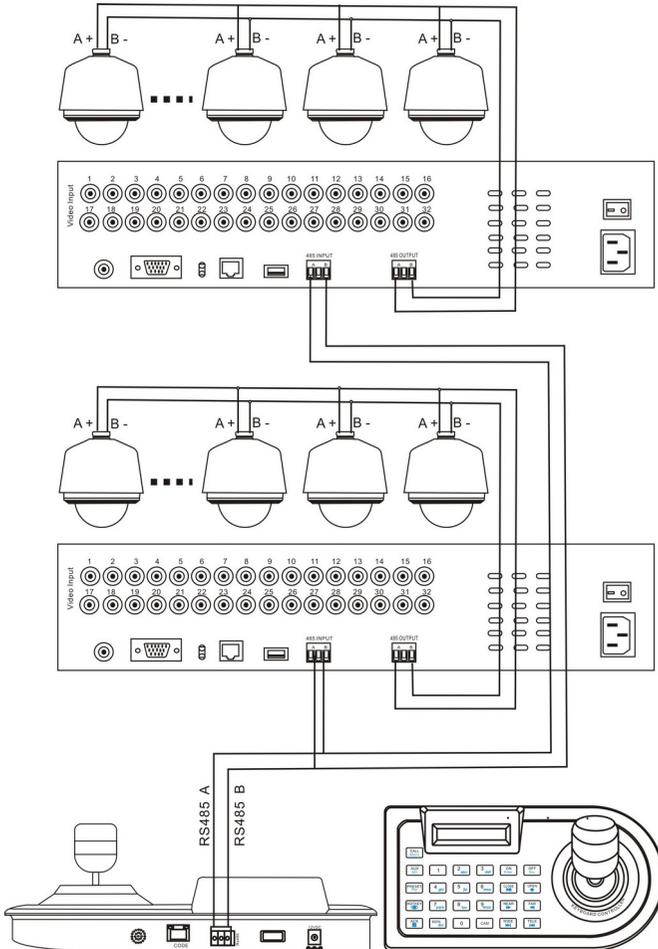
**Note:**



Matrix host or the multiple keyboard system, DVR and keyboard communication baud rate must be set to 9600bps, to control DVR agreements in the keyboard menu, select.

None matrix and only a keyboard to control the DVR system, the baud rate of the keyboard and the agreement must be consistent with the DVR, code converters can be removed.

### 3. Multiple keyboard, DVR , PTZ camera component systems



#### Note:

In this system, keyboard, DVR and PTZ camera communication baud rate must be the same. “In the Keyboard menu” 995 + AUX parameters baud rate port protocol agreement with the PTZ camera; the parameter entry DVR: This agreement is

consistent with the embedded DVR protocol. Set specific reference to the Keyboard menu.

The keyboard can directly control PTZ, camera so, more convenient operation PTZ camera .

#### 4. Keyboard settings:

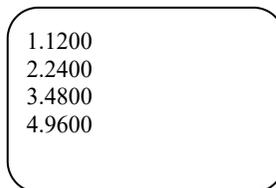
##### 4.1 Keyboard menu

1. "995 + AUX", into the keyboard menu, as shown below (Figure 1-5):



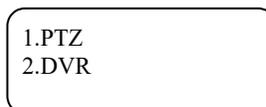
(Figure1-5)

2 . If (Figure 1-5), select one chose to enter “1. BAUDRATE” . As follows (Figure 1-6), require the user to select the baud rate



(Figure1-6)

3. Selecting the baud rate is completed, enter the dome PTZ protocols. As follows (Figure 1-7).



(Figure 1-7)

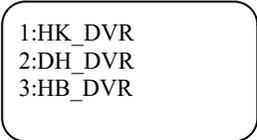
Press “1” or Press “ON” to enter PTZ Sub-menu. As follows (Figure 1-8).



```
1: AD2200
2: PELCO_D
3: PELCO_P
4: SAMSUNG
5: YAAN
6: PANASONIC
```

(Figure1-8)

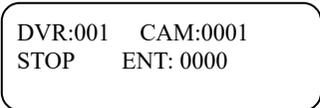
5. Selecting the baud rate is completed, go to the DVR to select the protocol. As follows (Figure 1-9).



```
1: HK_DVR
2: DH_DVR
3: HB_DVR
```

(Figure1-9)

6. After setting, Press “OFF” exit this SUB-MENU, and go to main menu, choose “7. EXIT”, Press “ON” key for confirm EXIT this menu. The screen display:



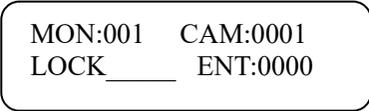
```
DVR:001 CAM:0001
STOP ENT: 0000
```

(Figure1-10)

## Chapter3 control matrix switching / control system

### 1. keyboard is energized:

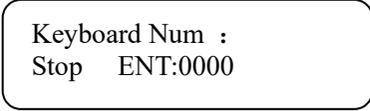
Matrix system connection: through the DC power connector or 8 core line altogether RJ45 interface powered by a 9V power supply. And 8-core wire properly connected the other end of the communication interface of the host matrix LCD screen displays the welcome page (Figure 1-1):



MON:001 CAM:0001  
LOCK\_\_\_\_ ENT:0000

Figure 1-1

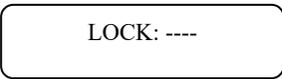
Note: Keyboard address settings, please refer to the keyboard settings.If you want to change this keyboard's address,Please press "994"+"ACK", Input the Keyboard Number at this screen(Figure 1-2),The address range is 0-32, The default address is "0".Remark:The address is lower,But it's jurisdiction is high-grade.



Keyboard Num :  
Stop ENT:0000

Figure 1-2

If successful connection matrix, the communication indicator flashing (CODE), and the LCD screen is displayed (Figure 1-3):



LOCK: ----

Figure 1-3

Asked to enter the 4 keyboard password (original password is "0000"), input: "\*\*\*\*" + ACK. The keyboard password input is correct CODE lights flashing,

keyboard and matrix in the control state.

CODE lights are not flashing or the LCD no such display, the matrix keyboard interface communication line might pick the wrong or no connection, please check the line of communication between the matrix and the keyboard is properly connected. Then restart the keyboard can be.

## **2. Control matrix switching / control system**

The following features must be properly connected with the host matrix can be achieved

### **2.1 Keyboard video input and output options:**

Keyboard must be effectively connected with matrix, in order to operate the video select, choose the monitor then call the camera in order to achieve the operation of the camera

Example: the 2nd monitor up on the 6th of camera images.

1. Enter "2 + MON".
2. Enter "6 + CAM".

#### 2.1.0 Select the network matrix:

1. Enter the desired number of matrix (0-32), If the Matrix Site Number is "0", then the all Keyboard Address can control this matrix.
2. Press the "AUX" key 5 second, then new matrix number will display on LCD.

For example: to call the 2nd matrix.

1. Press 102 numeric keys
2. Press the "AUX" key 5 second.

In this case, the 2nd network matrix is a current controlled matrix

#### 2.1.1 Tune a monitor to the keyboard

1. Enter desired monitor number in the keyboard digital area
2. Press the MON key, then LCD Monitor: The display area shows the number of new input monitor.

For example: call on the 2nd monitor.

1. Press 2 numeric keys.
2. Press the MON key.

In this case, the 2nd monitor is current controlled monitor.

#### 2.1.2 Call a camera to the controlled monitor:

Enter desired camera number in the keyboard digital area (make sure there are video signals for that number).

Press CAM key No display on the keyboard, the user can check the operation by state character of monitor and number of camera

In this case, the camera picture should be switched to the designated monitor.

For example: call 1 camera displayed on the 2nd monitor.

1. Press 2 numeric key
2. Press the MON key
3. Press 1 numeric key
4. Press "CAM"

Then 2nd monitor display 1st camera picture

### 2.2 control the decoder (remote camera):

The operation of the camera pan and tilt, lens, preset and auxiliary functions work when the camera is raised to a controlled monitor.

If the camera is programmed not to control, keyboard control of the camera will be invalid.

#### 2.2.1 Operating PTZ:

1. Call the controlled camera to the controlled monitor.
2. Move and keep the operation lever to the direction of PTZ movement, then can move the PTZ, the speed of movement of the vector PTZ proportional to the degree of deviation of the operating lever, the operating lever farther off-center position, the pan speed of moving faster.
3. The operating lever back to the center position, PTZ stops turning.

#### 2.2.2 Lens control:

The right of the keyboard, a set of buttons to control the camera lens of variable, these buttons:

CLOSE / OPEN for the lens aperture electric remote control. Through these two buttons can change the amount of light entering the lens, so as to obtain the moderate video signal level.

NEAR / FAR for lens focus control, make the image clear.

WIDE / TELE used to change the focal length of the lens, to obtain a wide-angle or close-up picture.

Operation:

1. Call the controlled camera to the controlled monitor.
2. Press the lens function key you want to operate, you can control the lens.
3. Release the button to stop the lens operation.

2.2.3 Operating standby (auxiliary) function:

AUX ON / OFF key of the keyboard control standby (auxiliary) function, specific standby function and function number:

- 1 + AUX + ON / OFF decoder auxiliary on / off;
- 2 + AUX + ON / OFF decoder Auxiliary 2 on / off;
- 4 + AUX + ON / OFF decoder auxiliary lighting on / off;
- 5 + AUX + ON / OFF the camera power on / off;
- 6 + AUX + ON / OFF decoder alarm probe power on / off;

Operation:

Call the controlled camera to a controlled monitor, enter the desired operation of the auxiliary function number (1 - 6), the AUX key, press the ON button to open the auxiliary function or OFF button to turn the auxiliary function.

2.2.4 PTZ scanning functions: ( front-end equipment support)

Automatically scan: 8 + AUX + ON / OFF PTZ Auto scan on / off.

Level limit scanning:

1. Call the controlled the camera to be controlled monitor.
2. 9 + AUX + ON setting pan left limit, PTZ begins to rotate.
3. Press OFF settings dome's left position rotary head.
4. 8 + AUX + OFF the PTZ level limit scanning to stop.

## 2.3 control high-speed intelligent dome:

### 2.3.1 Variable speed horizontal and vertical movement:

The speed of movement of the vector speed dome proportional to the degree of deviation of the operating lever, the operating lever farther off-center position, the pan speed of moving faster.

### 2.3.2 Lens operation:

Operation CLOSE / OPEN adjust the lens aperture;

Operation NEAR / FAR to focus the lens;

Operating the WIDE / TELE, available panoramic or close-up image.

### 2.3.3 Settings preset:

Select the camera, rocker zoom operations such as adjusting the image, enter the self-defined preset number, and then press the PRESET key.

For example: Set the preset position No. 6

1. Adjust the image
2. Press 6
3. Press the "PRESET" key.

### 2.3.4 Call preset:

Select the camera, enter the preset number, press the CALL button, the preset image displayed on the monitor. Prior did not set the preset image, the monitor image did not change.

### 2.3.5 Clear preset:

Enter the preset number need to clear, press the CLEAR key, press CALL

For example: Clear the preset position No. 5

1. 5 key
2. Press CALL
3. Press the "CLEAR" key.

### 2.3.6 HOTKEY shortcuts:

The HOTKEY shortcuts is an editable smart key. designed according to the market a variety of speed dome .

Editing method according to the following steps:

First found function instruction of the speed dome that you want to call :

1. Input n (Instruction No.)
2. Set successfully by pressing the HOTKEY key 5 seconds

Next time, just press the HOTKEY key will be able to directly call the set function

Note: the factory is set to the NO 1 group tour queue correspond to my company

## **2.4 Programming automatic switching sequence:**

The monitor automatically switches through appropriate programming, so press the keyboard “100” + “AUX” key on the monitor automatically orderly display series of video input specified by the programmer. Automatic switching can be recycled repeatedly, may remain in a video input.

2.4.1 Monitor automatically switch the programming process as follows:

1. Call the monitor number. that need to be set automatically switch
2. Enter the starting automatically switch the camera number.
3. Enter end cameras automatically switch numbers.
4. Enter the time you want to stay seconds.

90+AUX stay 2 second

91+AUX stay 5 second

92+AUX stay 8 second

93+AUX stay 10 second

94+AUX stay 20 second

95+AUX stay 30 second

5. Press “100”+”AUX”,Monitor automatically switch starts running.

Note: Press the keyboard 997 +AUX key. This step will remove the monitor original automatic switching sequence, save the existing monitor to automatically switch sequence.

6. Press N (non-zero number keys) +CAM key can be from the monitor to automatically switch the programming mode. The picture remains on the screen of the selected camera.

Example: In the 3rd monitor switch 2 --- 5 camera screen to stay for four seconds:

- 3- MON.
- 2- ON.
- 5- OFF.
- 91-AUX
- 100- AUX.

2.4.2 add a camera programmed to automatically switch queue:

Proceed as follows:

1. Select the monitor number to be programmed, press number keys "MON";
2. Select the camera number you want to increase , press the number keys "ACK"+"ON" key;

2.4.3 Delete a camera programmed to automatically switch queue:

Proceed as follows:

1. Select the monitor number to be programmed, press number keys "MON";
2. Select the camera number you want to delete, press numeric keys +"ACK" key +"OFF" key;

2.4.4 Change automatically switches the camera in the residence time in the queue:

- 90+AUX stay 2 second
- 91+AUX stay 5 second
- 92+AUX stay 8 second
- 93+AUX stay 10 second
- 94+AUX stay 20 second
- 95+AUX stay 30 second

2.4.5 Calls automatically switch:

1. Select the monitor number you want to run, press number keys "MON";
2. Enter "100" key +"AUX" key.

2.4.6 Stop automatically switches run:

Press N (nonzero numeric keys) +CAM key, you can stop the automatic switching of running, and stay for the show called camera screen.

Press “100” +”AUX” can continue to run automatically switch.

#### 2.4.7 Display the Next picture/Last picture of switching queue:

Switch queue next image, press the “99” + ”AUX” .Display the Last switch picture,Press “88”+”AUX”.

### 2.5 Save the settings:

Free switching system, fortification, alarm output time, For reserved next boot, the following:

Press the keyboard "997" +AUX" button.

### 2.6 Menu key instructions:

Enter the menu programming 6+AUX

Exit the menu programming 0+AUX

Enter submenu ON key

Exit the submenu OFF key

Programming cursor up joystick up

Programming the cursor down joystick down

The programming cursor left joystick left

The programming cursor right joystick right

Programming previous page HOTKEY

The programming next page ACK

The programmed left page 4

The programming right page 5

Programming the numbers 0 - 9 key

### 2.7 Move screen character

1. Call monitor number of which need to move character.
2. “996” +”AUX”.
3. Operate the rocker. To the direction where you want to move the characters
- 4.Character moves into place, according to the “996” +”AUX” key to exit the

on-screen character moving state

## 2.8 keyboard operation protection:

1. Keyboard operation is completed, in order to prevent illegal operations the keyboard can be put into operation protection state.

Operating method: press "991" + "AUX" key the LCD area. Will display password: ----

2. Unlock the keypad operation protection

Methods of operation: "\*\*\*\*" ACK

Note: the above operation LCD area only displays ----, the \*\*\*\* 4 keyboard password (original password is "0000")

## 2.9 Change keyboard password settings:

Keyboard password is limited to four digits, if you want to change the keyboard password, required to perform the following operations:

1. Input "990";
2. Press the "AUX" button;
3. Enter the four password "\*\*\*\*";
4. Press the "ACK" key.

Note: If you forget your password, you can check through the menu function within the matrix switching hosts KEYBOARD PASSWORD item

## 2.10 keyboard operation guide:

- 1 Select Monitor n + MON ("n" represents the number keys, the same below)
- 2 Select the camera n + CAM
- 3 free switching 100 + AUX
- 4 free switch start / end n MON n the ON / n OFF
- 5 free switching time 90+AUX stay 2 second
  - 91+AUX stay 5 second
  - 92+AUX stay 8 second
  - 93+AUX stay 10 second
  - 94+AUX stay 20 second
  - 95+AUX stay 30 second

---

6 shielded image	n + ACK+ OFF
7 add images	n +ACK+ON
10 Program Switch	101-132 + AUX the 1-32th Program Switch
Synchronous switch	201-232 + AUX the 1-32th Synchronous switch
Groups switch	301-332 + AUX The 1-32th Groups switch
Stop Groups	Hotkey
11 last images / forward switch	88 + AUX
12 next image / backward switching	99 + AUX
14 save the matrix setting state	997 +AUX
15 fortification	501-599+AUX+ON the 1-99 <sup>th</sup> Alarm on
16 Disarm	501-599+AUX+OFF the 1-99 <sup>th</sup> Alarm OFF
	500+AUX+ON/OFF Open/Close All Alarm
17 Keyboard Address	994+AUX N + ACK
18 move characters	996+AUX+ joystick
19 PTZ direction	n +CAM + joystick
20 Iris- / +	n +CAM CLOSE / OPEN
21 Focus - / +	n + CAM NEAR / FAR
22 Zoom - / +	n + CAM the WIDE / TELE
23 auxiliary 1 On / Off	1 + AUX ON / OFF
24 auxiliary 2 On / Off	2 + AUX ON / OFF
25 auxiliary lights on / off	4 + AUX ON / OFF
26 camera power on / off	5 + AUX ON / OFF
27 probe power on / off	6 + AUX ON / OFF
28 PTZ automatically scan on / off	8+ AUX ON / OFF
29 PTZ the limit horizontal scan start / end	9 + AUX ON / OFF
30 buzzer on / off	999+ AUX ON / OFF
31 set the preset	n + PRESET
32 call preset position	n + CALL
33 Clear preset	n + CALL+OFF
34 unlock the system keyboard	**** ACK
35 lock the systems keyboard	991 + AUX

---

36 enter the menu programming	6 + AUX
37 exit programming	0 + AUX
38 keyboard password protection	991 + AUX
39 change keyboard password	990 + AUX
40 keyboard menu	995 + AUX
41 change keyboard Site number	N + Press "AUX" 5 second
42 restore factory settings	5678 + AUX
43 Baud rate: 1200	12 + ACK
44 Baud rate: 2400	24 + ACK
45 Baud rate: 4800	48 + ACK
46 Baud rate: 9600	96 + ACK
47 Protocol: PELCO-D	44 + ACK
48 Protocol: PELCO-P	50 + ACK

### 2.11 DVR control:

Keyboard key is equivalent to the embedded DVR front panel buttons. When the keyboard control the DVR .The function of keyboard key may not be the same for different manufacturers embedded DVR. **Specific** functions please refer to the table for "buttons and embedded DVR operation. Make sure properly connected embedded DVR, keyboard baud rate and protocol consistent with the embedded DVR. Then it takes effect. There are different DVR connection and operation for different manufacturers and different models. More detailed explanation, refer to different manufacturers instructions.

Press the DVR key ", display the third line will show" DVR: 01 ", followed by numbers" 01 "

N + **【DVR】** (Press "DVR" Key 5 second),Turn to DVR Mode.The screen display the DVR number,

DVR:000 CAM:0001  
HK\_DVR ENT:0000

Press "DVR" key 5 second,Keyboard exit DVR mode.

DVR:000 CAM:0001  
Stop ENT:0000

Represents the current address controlled embedded DVR.

#### 2.11.1 Set to the, DVR address and serial parameters

##### 2.11.1.1 HIKVISION DVR set method:

Main menu => Local Settings => Device No.

=> Serial port settings

No flow control for console

##### 2.11.1.2 Dahua DVR setting method:

The Main Menu => System Settings => General Settings => Local No.

=> Serial port settings

Serial port function selection: network keyboard

Keyboard control menu user must be canceled

##### 2.11.1.3 the HANBANGGAOKE DVR setting method:

Main menu => PTZ set => serial port settings

All set method 8 data bits, stop bits to 1, and the school seizure free.

The baud rate is 9600BPS.

#### 2.11.2 Select the address of the DVR

Address key + numeric keys, such as the 1st address: "N + **【DVR】** (Press "DVR" Key 5 second)"

#### 2.11.3 Select the image of the DVR

HIKVISION Dahua press the CAM key + numeric keys, such as choice No. 1: "CAM key + key + key".

For example: "CAM"+"0"+"1"

#### 2.11.4 Video Monitor

Press **【】** key, Can control the DVR exit from PLAY, Record state, To the Normal monitor state.

### 2.11.5 Multi-screen

Press **【田】** key, Can control the DVR to the Multi-screen display mode.

### 2.11.6 Video Browse

Press **【⊞】** key, can control the DVR video switch display, For operator browse.

### 2.11.7 Video Play, Pause

Press **【▶】** key for play the recorded video, In video playing, Press **【⏸】** can pause this video, if you want to continue, Press **【▶】** can starting paly from this frame.

### 2.11.8 Video Fast-forward/Fast-backward

Press **【▶▶】** key for Fast-forward play recorded video, Press **【◀◀】** key for Fast-backward play recorded video.

### 2.11.9 Video Home frame/End frame

Press **【⏪】** key for turn the DVR play the Home frame of recorded video, Press **【▶▶】** key for end of this video, Start play next video.

### 2.11.10 Video Record

Press **【●】** key for record the selected camera's video.

### 2.11.11 Through DVR operation PTZ

When you need to operate PTZ, press the **【Ptz】** keys. Corresponding control PTZ function keys on the keyboard, Focus, Zoom, Call preset, Pan/tilt.

To be effective. To exit the PTZ control, for Dahua press multi-screen key for Haikang, press **【Esc】** key, "In this case, the control PTZ function keys on the keyboard corresponding recovery to control DVR functionality.

### 2.11.12 DVR Menu Settings:

Press **【Menu】** key enter the DVR menu setting, In this menu,

12.1 Use joystick move the cursor to the sub-menu, HIKVISION need press **【ARM】** key move the cursor.

12.2 **【ENTER】** key confirm this function,Press **【ESC】** key cancel this function.

12.3 Press figure key input the menu data.

#### 2.11.13 Exit control DVR

Press **【Dvr】** key,The LCD didn't display DVR words,Keyboard return to normal model,In this case,Can control the camera and switching.

DVR:001	CAM:0000
STOP	ENT:0001

## Chapter 4 separate control of front-end devices(host mode)

### 1. Separate control model setting

If the keyboard is not used to control matrix but separate control high-speed dome, the decoder, constant speed dome. keyboard should be set to host mode When the power is turned on and the keyboard in working condition, enter "995"+"AUX". Operate the joystick up/down choose the sub-menu, press the **【ON】** key enter the sub-menu,Press the **【ON】** key save the settings and EXIT this sub-menu,Press **【OFF】** key didn't save the settings and EXIT,Return to the last menu.In the Main Menu,choose the **【EXIT】**,Press **【ON】** key exit menu,Setting complete.

### 1. Selected front PTZ camera l, PTZ decoder (hereinafter referred to as the front-end equipment) address:

N+CAM

For example: To control the front-end device of the address 5":

1. "5" to press the number keys, the keyboard input area 0005
2. Press CAM

2. 2Control of front-end equipment

specific methods of operation, please refer to the "control matrix switching / control system. sections

## **Solemnly declared**

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