

# NETWORK KEYBOARD

ART. IPKYB100B



Please read this manual thoroughly before use and keep it for future reference

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## Statement

**The instruction is for guidance only. Detailed information is in accordance with the product.**

The instruction may include some technical inaccuracies or typographical error though it is prepared with our every effort.

The product or procedures described in the instruction may be changed or updated at any time without advance notice.

Screenshots used in the instruction are only for indications and explanations.

For any doubts or to request documents about latest procedures and complementary notes, please consult with the after-sales service department..

## Precautions

The followings describe information about correct usage and risk prevention as well property loss prevention to be strictly followed.

Please use the device in an environment within allowable temperature and humidity.

Check if the power supply works normally before operation.

Do not furiously strike on the product and be careful not to fall it over.

Do not install the product in a dusty or moist place, or a place with strong electromagnetic radiation.

Do not place a container or others with liquid on the product or allow liquid flowing into inside the product.

When the product is left unused, place install the preventive dust cover for the image sensor.

Do not disassemble the product without authorization.

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# Chapter 1 Product Introduction

The keyboard is a network control keyboard mainly with IPC, PTZ, NVR and decoder use, feature-rich, simple operation.

## 1.1 Functional characteristic

- **Hardware features**

- 1) 7", 800 x 480 resolution TFT display
- 2) 3D joystick
- 3) Support the quick configuration and call of the dome camera preset point, cruise, track

- **Software functions**

- 1) Two levels of users, Administrator and Operator
- 2) Support USB disk upgrade
- 3) Support automatically search for the device in the same network segment
- 4) Support link platform software

- **Decoding capability**

Support the local side single-screen of the keyboard and 4-screen decoding preview; HDMI output support single-screen 4K, 4-screen 1080P, 9 screen 720P decoding.

## 1.2 Network keyboard appearance and buttons

### 1.2.1 Network keyboard appearance



Figure 1-1 Network keyboard appearance schematic diagram

Table 1-1 Area Description

| Area | Description          | Area | Description        |
|------|----------------------|------|--------------------|
| ①    | Display screen       | ②    | PTZ control area   |
| ③    | Numeric key area     | ④    | Function key areas |
| ⑤    | Remote-control lever |      |                    |

### 1.2.2 Key function table

Table 1-2 Key function

| Key name    | Function                                                                      |
|-------------|-------------------------------------------------------------------------------|
| FOCUS+      | Set the PTZ lens focus to increase                                            |
| FOCUS-      | Set the PTZ lens focus to decrease                                            |
| ZOOM+       | Set the PTZ lens zoom increase                                                |
| ZOOM-       | Set the PTZ lens zoom decrease                                                |
| IRIS+       | Set the PTZ lens aperture to increase                                         |
| IRIS-       | Set the PTZ lens aperture to decrease                                         |
| PATROL      | Cooperate with the number keys and SET keys for cruise calls and settings     |
| PATTERN     | Cooperate with the number keys and SET keys for tracking calls and settings   |
| LW          | Wiper / light (reserved)                                                      |
| SET         | Cooperate with the PATROL key and the PATTERN key to set the cruise and track |
| PRESET      | Cooperate with the numeric keys to set the preset points                      |
| CALL        | Cooperate with the numeric keys to call the preset points                     |
| Numeric key | Used for numeric, alphabetic input and with other keys                        |
| ECS         | Cancel / Exit                                                                 |
| ENTER       | OK / enter the next level                                                     |
| MON         | Cooperate with the numeric keys to switch the controlled screen               |
| WIN         | Cooperate with the numeric keys to toggle the selected focus window           |
| MULT        | Full screen / exit full screen                                                |
| CAM         | Cooperate with the numeric keys to switch channels                            |
| TOUR        | Turn on / stop round tour                                                     |
| PLAY        | Operation playback                                                            |
| SHIFT       | Switch (reserved)                                                             |
| AUX         | Auxiliary key (reserved)                                                      |
| Rocker      | PTZ control and direction operation                                           |

### 1.2.3 Interface explanation



Figure 1-2 Network keyboard interface diagram

- |                       |                           |                     |
|-----------------------|---------------------------|---------------------|
| ① Audio output        | ② RS485 port              | ③ Reserved          |
| ④ HDMI output         | ⑤ USB port                | ⑥ RJ45 Network port |
| ⑦ Power indicator     | ⑧ Communication indicator |                     |
| ⑨ 12V DC power supply | ⑩ Power switch            |                     |

## Chapter 2 System Menu

### 2.1 Start up and shutdown

#### 2.1.1 Start up

Open the network keyboard power, power light is on, the keyboard starts normally, the LCD screen lights up, after the start of the network keyboard, it will into the main interface, as shown in Figure 2-1:

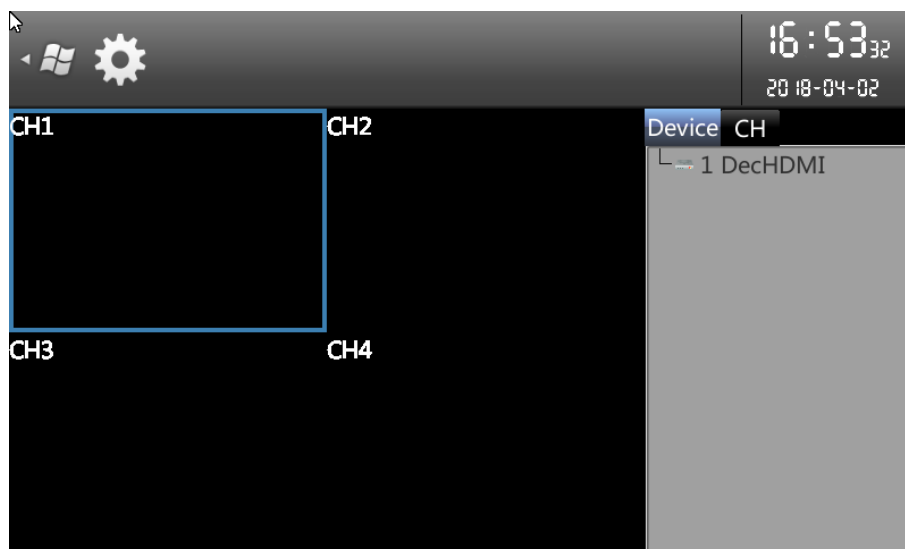


Figure 2-1 Main interface

Click  icon, select the login in the pop-up menu, enter the login screen, as shown in figure 2-2, enter the user name and password, and click the login button to log in to the system. The **default** factory administrator **User: admin**, **Password is empty**. After login, please change the administrator password.

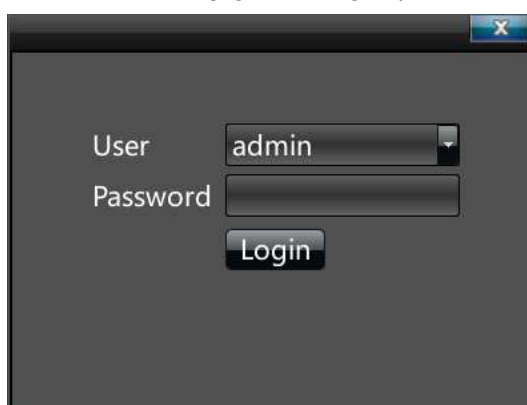


Figure 2-2 Login interface

#### 2.1.2 Shutdown

In the main interface, click  icon, it will pop-up menu as shown in figure 2-3, select Power Off, or closing the power ON/OFF key on the device, then it can be turned off.

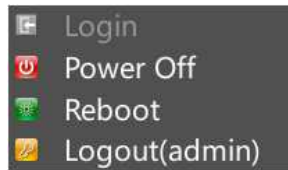


Figure 2-3 Shutdown interface

## 2.2 Menu operation

### 2.2.1 Main menu operation

The main menu includes Device, Channel, Network, Users and System, as shown in figure 2-4:

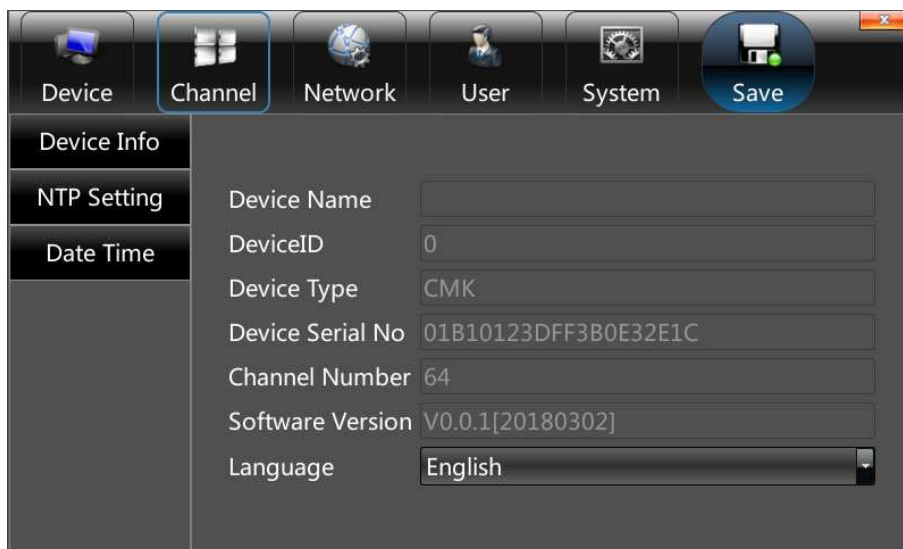


Figure 2-4 Main menu interface

The user can enter the main menu in the following two ways:

- (1) Press the "ESC" key in the main interface;
- (2) Click the related icon with the mouse in the main interface.

### 2.2.2 System setting

#### 2.2.2.1 Device info

Device information interface is shown in figure 2-5, display Device Type, Device serial number, software version and other informations.

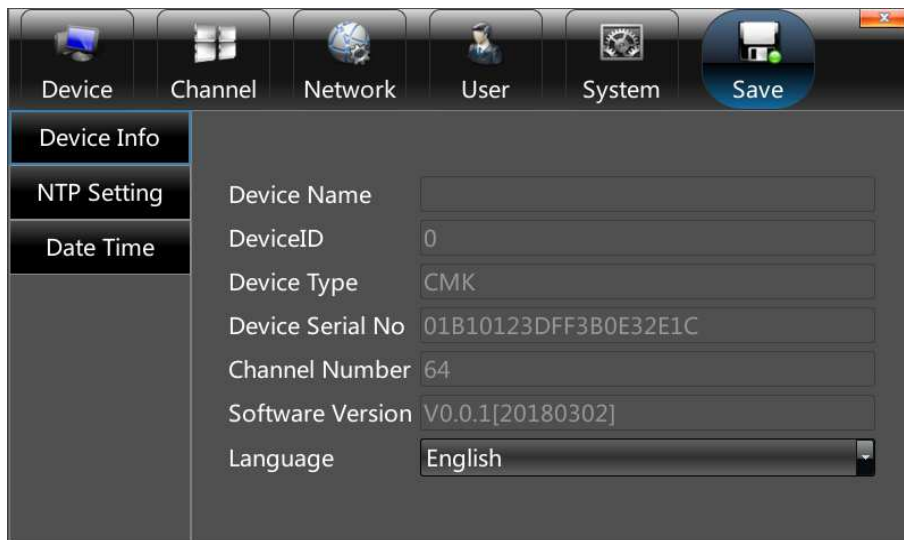


Figure 2-5 Device information interface

#### 2.2.2.2 Language setting

In the device information menu, Language item, click  the drop-down menu to select, as shown in figure 2-6, click **Save** after finish.

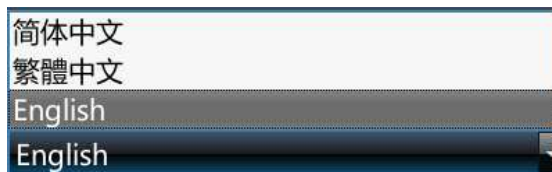


Figure 2-6 Language selection

#### 2.2.2.3 NTP setting



Figure 2.7 NTP settings

**Enable NTP:** click with the mouse on the white box check to **Enable NTP** time modification function;

**Server Address:** edit the server address;

**NTP port:** enter the NTP port number;

**Adjust the time interval:** set the time modification time interval.

#### 2.2.2.4 Date Time setting

The user can set the system time and date of the network, as shown in figure 2.8:

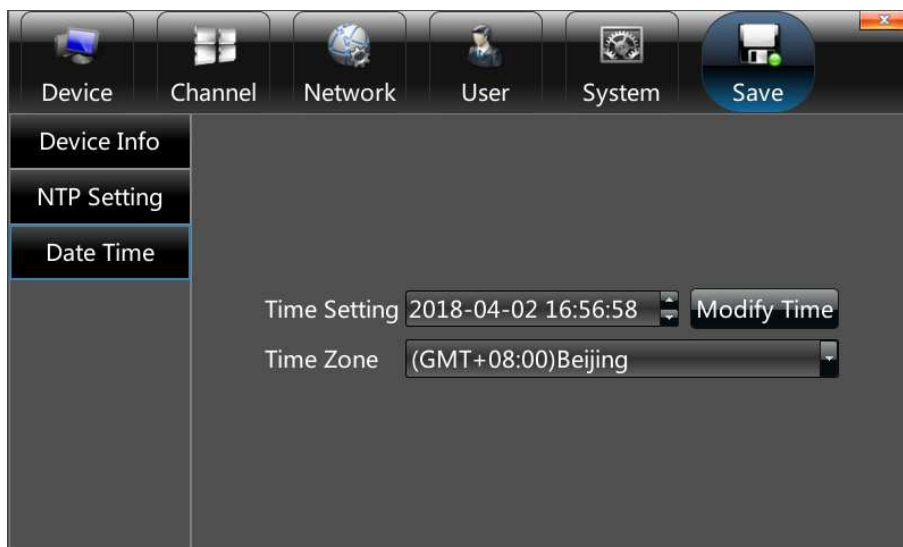


Figure 2.8 Date Time settings interface

Users can operate by the following two ways:

- (1) mouse click on the location that need to modify, set through the wheel of the middle of the mouse;
- (2) operate the joystick to the specified location, press the ENTER key, and then enter the corresponding number to modify and press ENTER to exit.

#### 2.2.2.5 Network Setting

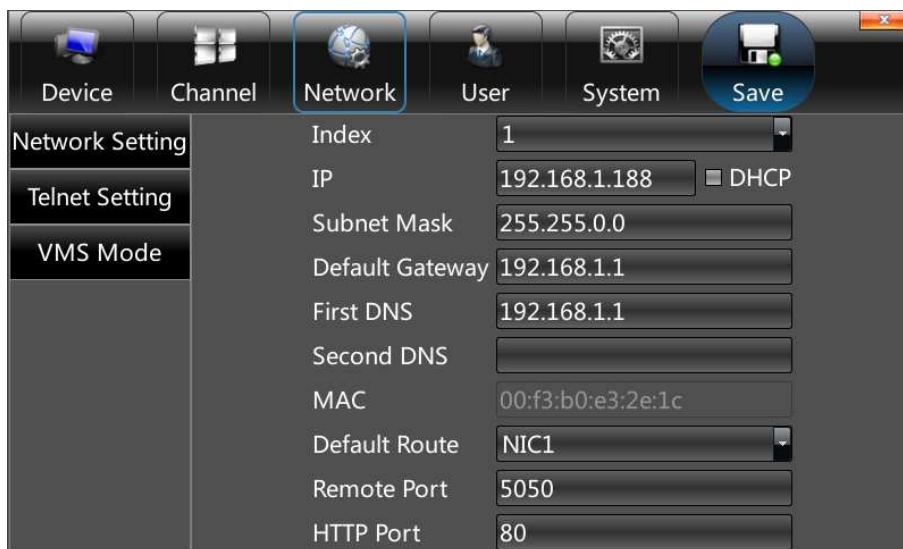


Figure 2.9 Network setting interface

Set the IP address of the keyboard, Subnet Mask, Default Gateway, First and Second DNS, Remote Port number, HTTP port number and other related information. Click **Save** after finish setting.

**Note:** automatic access requires the router to have and enabled the DHCP feature.

### 2.2.2.6 User Management

Click **User** menu, enter **User** interface, as shown in figure 2-10:



Figure 2-10 User management interface

#### Add user

Click **Add User** to bring up the **Edit** dialog box, as shown in figure 2-11:

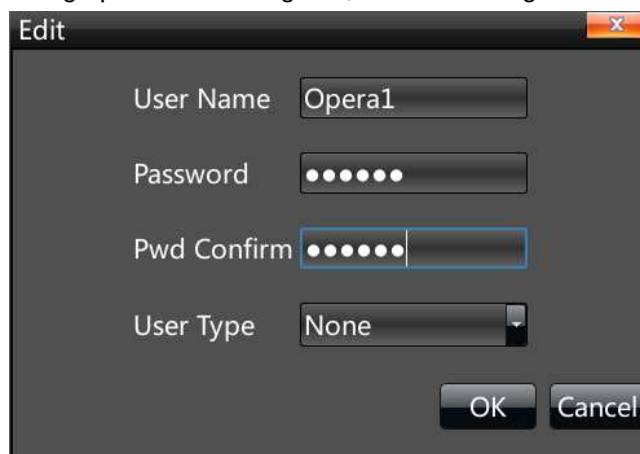


Figure 2-11 Add users

- (1) User name: new operator name, such as Opera1;
- (2) Password: set the operator password (for example: 123456);
- (3) Pwd Confirm: re-enter the operator password, pay attention to keep consistent before and after;
- (4) Click **OK** to complete the user add operation.

#### Modify user

Select the user name to be modified, click **Modify User**, it will pop-up an editing interface. There are two cases:

- (1) default Admin user, you can only modify the password, cannot modify the user name, as shown in figure 2-12:

Figure 2-12 Admin user modify

(2) Operator user, you can modify Username and Password, as shown in figure 2-13:

Figure 2-13 Operator user modify

To modify press the keys + joystick as follows:

- (1) move the joystick cursor to the user default;
- (2) press the Enter key, until turn to a blue background, use the joystick to move the cursor to the username to be modified, and then press the Enter key to confirm;
- (3) press the ESC key, use the joystick to move the cursor to **Modify User**;
- (4) press Enter to confirm and complete the related operation.

### Delete user

In the **User Management** interface, select the username you want to delete, click **Delete User** to complete the delete operation.

Keys + joystick operation: refer to modify operations.

### 2.2.2.7 Update

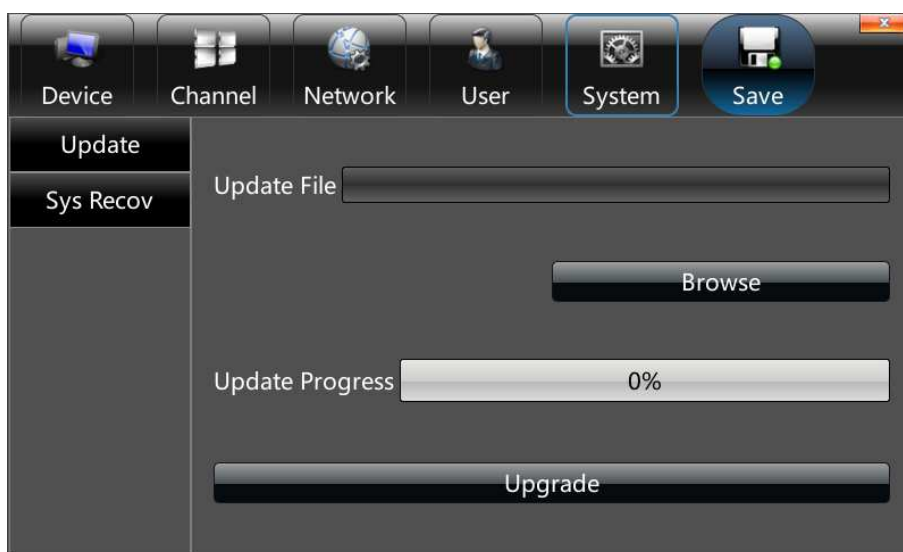


Figure 2-14 System Upgrade interface

- (1) insert the USB device to the keyboard USB port;
- (2) click **Browse**, select the Update File in the USB device;
- (3) click **Upgrade**. After the upgrading is complete, it will pop-up the upgrading prompt. Restart the device to take effect.

### 2.2.2.8 System recovery



Figure 2-15 System recovery interface

As shown in figure 2-15, can operate Import Cfg, Export Cfg, and Restore Cfg at default.

### 2.2.3 Add device

On the main menu, click **Channel** → **Search** to enter the Add interface, as shown in figure 2-16:



Figure 2-16 Device searching interface

To add the device:

- (1) in the device searching interface, check the responding agreement;
- (2) click the Search button;
- (3) select the device you want to add, and then click  button to add;
- (4) if you need to delete the added device, first select the device, and then click  button.

### IP Modify

- (1) In the searching list, select the device, right click, it will pop-up the details, and then left click, you can enter the IP modify interface, as shown in figure 2-17, set the IP and subnet mask, then click **OK**.



Figure 2-17 IP modification

- (2) In the device list, select the device, then right-click the mouse, it will pop-up the editing interface, as shown in figure 2-18:

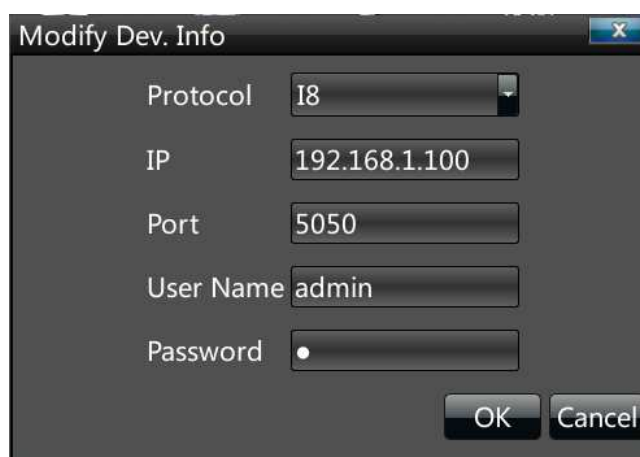


Figure 2-18 Modify the device information

**Protocol:** set the access protocol (such as: I8, I8H, ONVIF, GB28181, etc.);

**IP address:** set the device IP;

**Port:** set the port number;

**User name:** Edit device user name;

**Password:** Set the user password.

## 2.2.4 Channel

In the main menu, click **Channel** to output the device, as shown in figure 2-19:

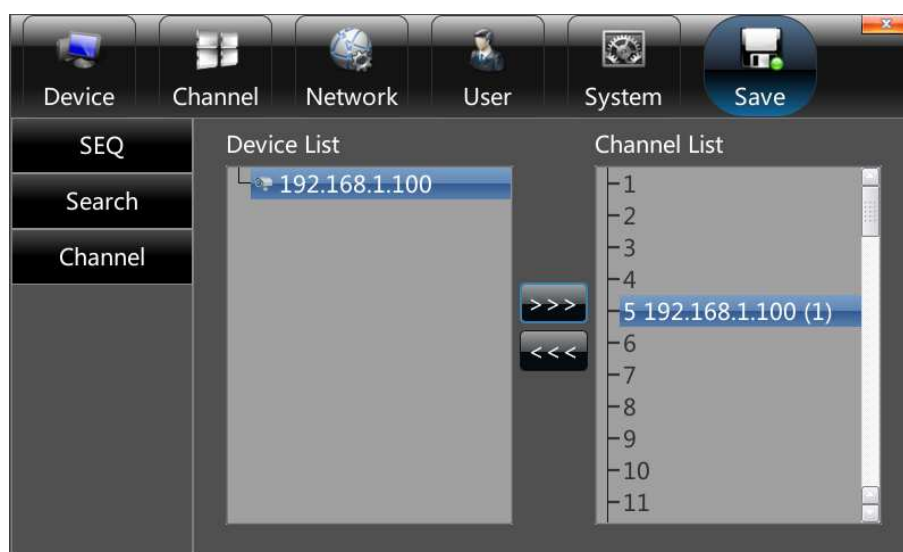


Figure 2-19 Output channel list editing interface

(1) Select the device to add in the Device List;

(2) Select the channel number to be added in the Channel List;

(3) Click **>>>** button to add.

**Note:** for the above operation, you can use the mouse to quickly operate. Use the keys and the joystick to move the cursor. Use the Enter key to select the corresponding item to confirm.

## Chapter 3 PTZ operation

### 3.1 Preset setting and call

(1) Use the joystick to operate the dome to the position where you want to set the preset point. Press the numeric key 1 + PRESET to set the preset 1, as shown in figure 3-1:

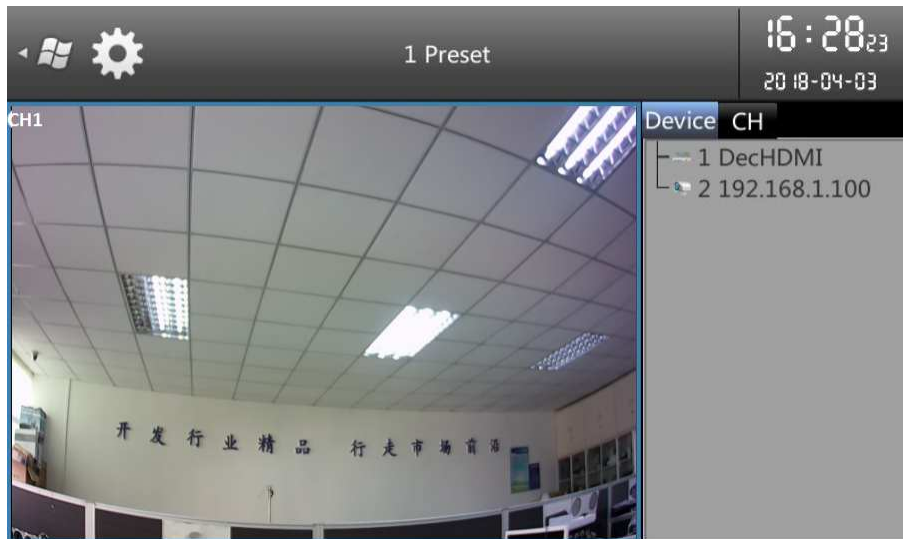


Figure 3-1 Preset setting

- (2) Setting multiple preset points according to the method of step 1;
- (3) Press the number key N (N = 1, 2, 3 ...) + CALL to call the corresponding preset point.

### 3.2 Patrol setting and call

(1) Press SET-1-PATROL to enter the patrol setting interface, as shown in figure 3-2, you can set patrol 1;

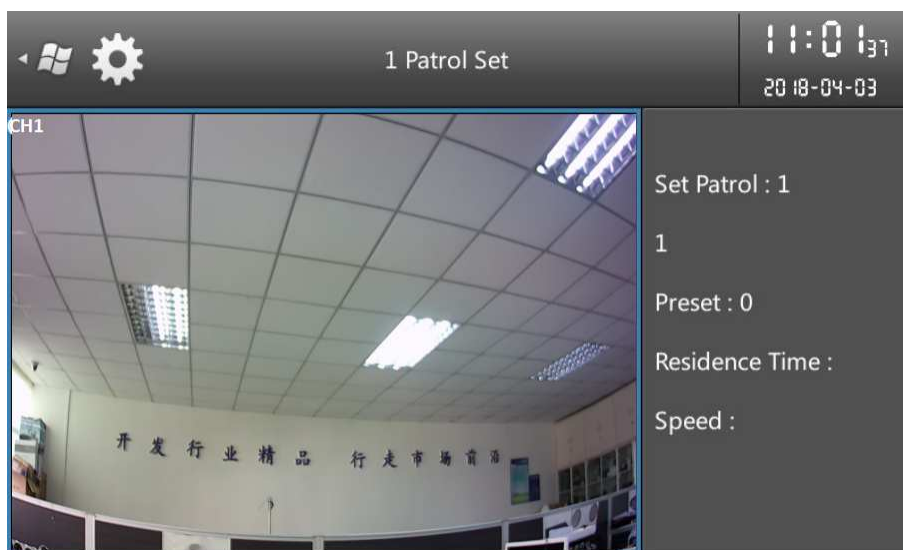


Figure 3-2 Patrol 1 settings

**Preset point:** press the number key + ENTER to select the preset point (Note: you can only select the preset point that has been set in the preset point setting).

**Dwell time:** press the number keys + ENTER to set the time the dome camera stays at the preset point;

**Speed:** set patrol speed.

Set the preset point, dwell time and speed in step 1 to complete the setting of the first preset point in the cruise, and then jump to the second preset point setting interface, as shown in figure 3-3:

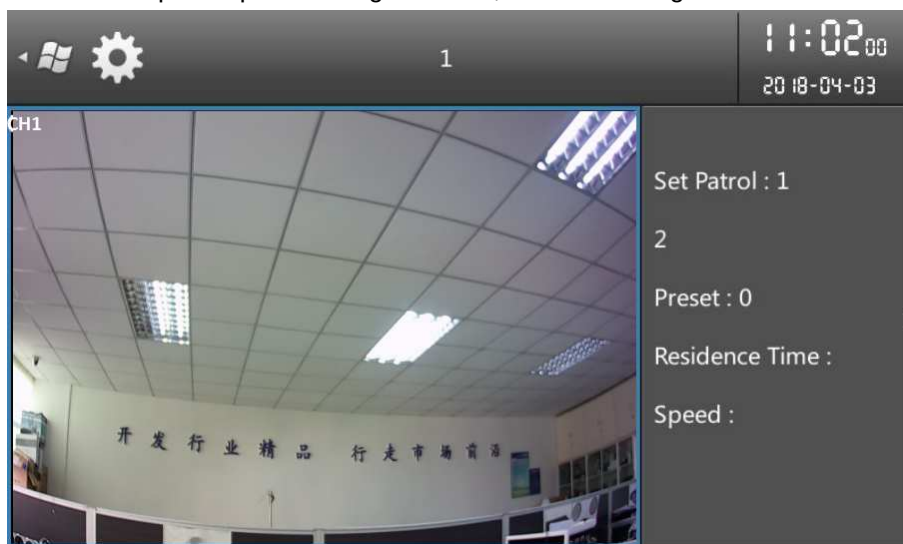


Figure 3-3 Patrol Preset 2 settings

- (1) Set all preset points in the cruise path according to the above steps;
- (2) Press the number keys N (N = 1, 2, 3 ...) + PATROL to call the cruise that has been set.
- (3) Press the number keys N + Shift + Patrol to stop the cruise.

### 3.3 Pattern settings and call

- (1) Press the SET-1-PATTERN key to enter the track setup interface, as shown in figure 3-4:

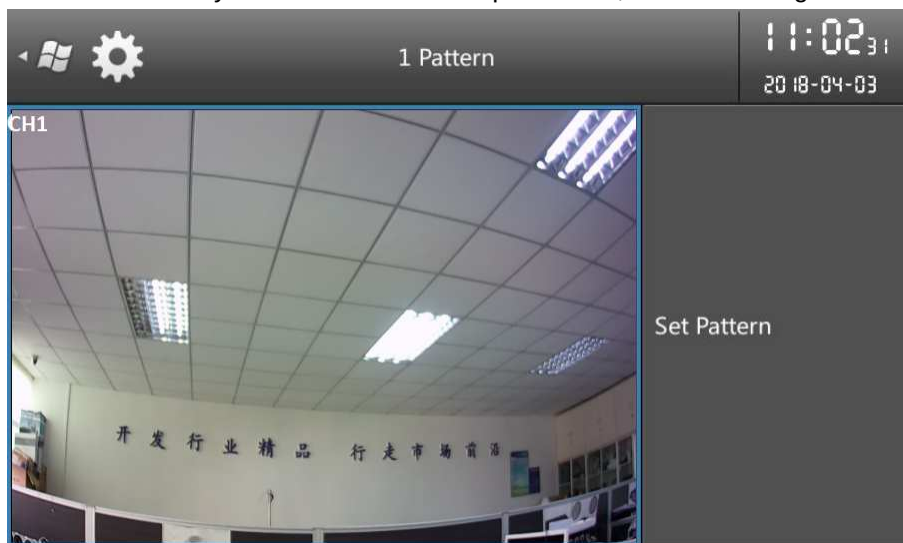


Figure 3-4 Tracking setting

- (2) Draw the trajectory 1 with the joystick and the zoom and other keys;

- (3) Press the SET button to complete the setting;
- (4) Set multiple tracks according to the above method;
- (5) Press N (N = 1, 2, 3 ...) + PATTERN to call a track.

## Chapter 4 NVR control

### 4.1 Search and add NVR

Keyboard supports controlling NVR function, select the corresponding protocol in the device search interface, click search button to search NVR device.

Select the corresponding NVR device IP in the search list, click  to add NVR to the device list and click Save.



Figure 4-1 Add NVR

### 4.2 Channel edit

Click on the little arrow to the left of NVR's IP in order to show the NVR channel list. Select the NVR channel and the keyboard channel in channel list on the right, than click on  to add it. Click on save button to finish the operation.

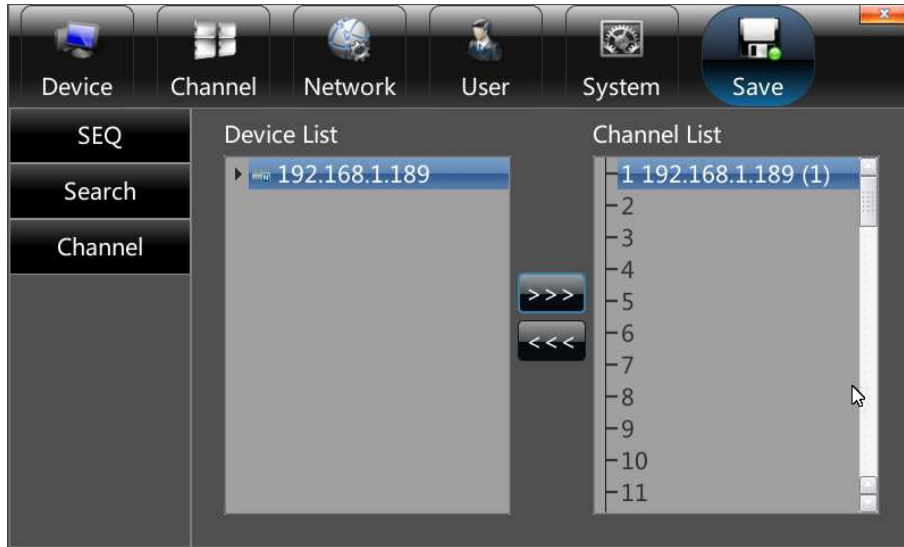


Figure 4-2 Channel edit

### 4.3 Modify device information

Select device IP in the device list, right-click the mouse button to modify device information, select device protocol that needs to be modified, fill in the corresponding IP address, Port number, Username, Password and then click OK and Save button, as shown in figure 4-3:



Figure 4-3 Modify device information

### 4.4 Switch to NVR control mode

In the preview interface, press the number of the NVR in the device list plus MON key to switch keyboard to NVR control mode, as shown in figure 4-4:

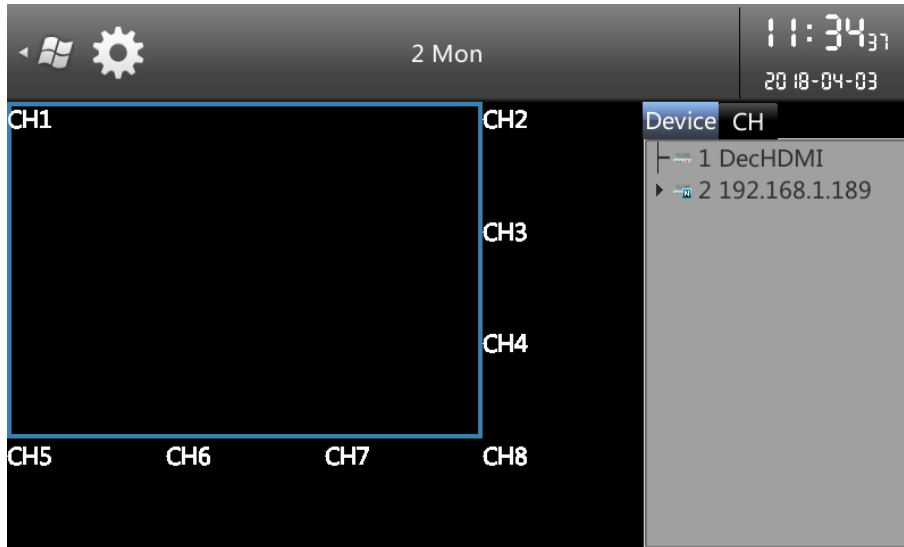


Figure 4-4 Switch to NVR control mode

## 4.5 NVR split screen control

To control the NVR split screen, press numeric key+MULT key. When the selected numeric key does not have a corresponding split screen, actively adapt to the nearest split screen, such as operating 4+MULT, switch to 4 split screen, and operate 5+MULT, switch to 6 split screen, as shown in figures 4-5 and 4-6 respectively

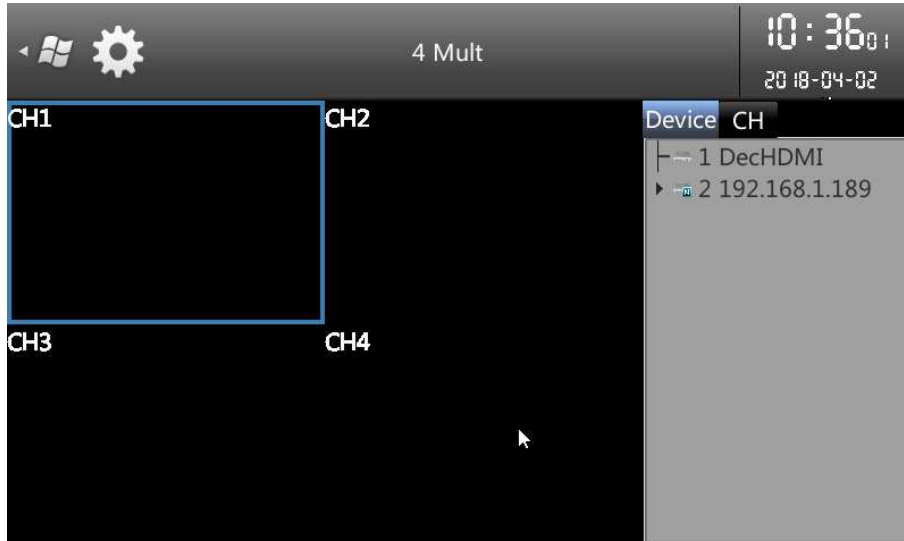


Figure 4-5 4 Split screen display

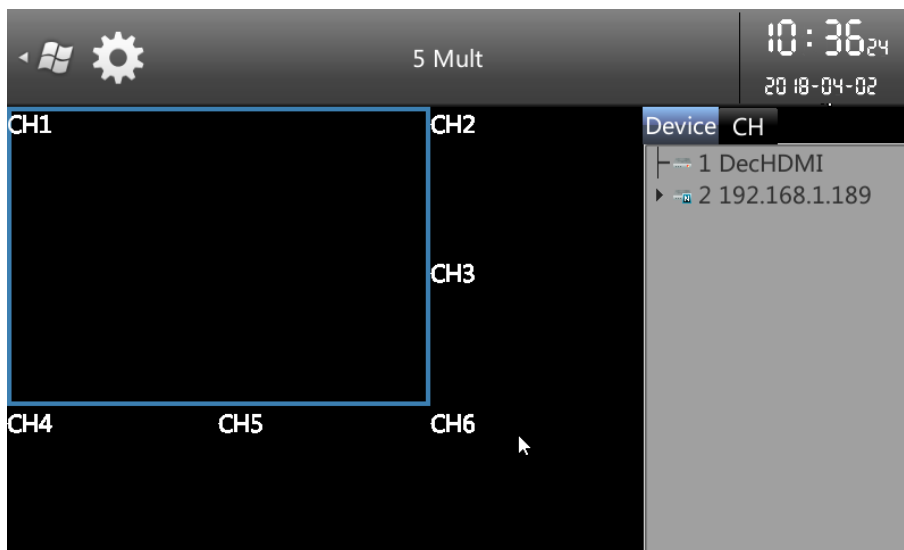


Figure 4-6 6 Split screen display

## 4.6 Sequence switch

Switch the IP address of NVR channel on the keyboard, take 4 split screen as an example, switch from 4 +MULT to 4 split screen, the NVR will display the first sequence. Need to operate 5 / 6 / 7 / 8 (as long as it is any channel number in the next sequence) +CAM, switch to next sequence, as shown in figure 4-7

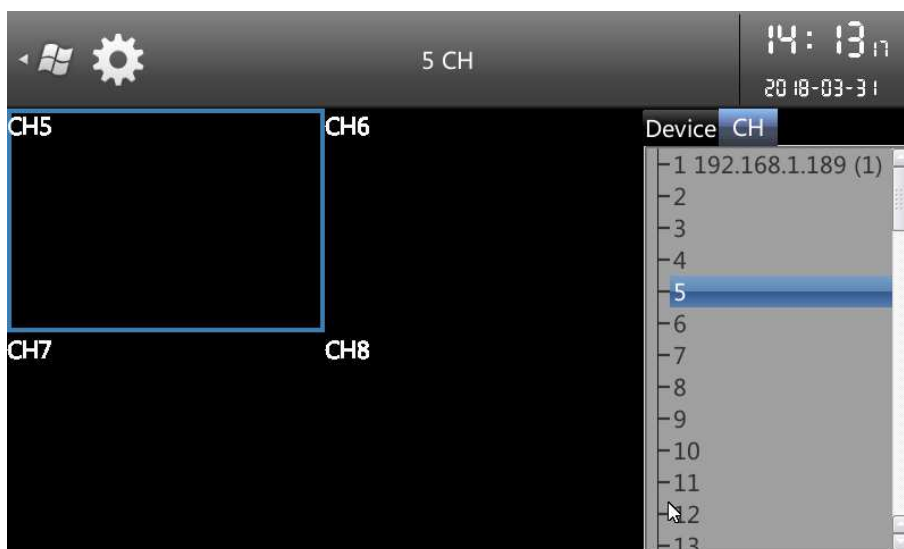


Figure 4-7 Switch channel sequence

In a similar way, operate 9 / 10 / 11 / 12 + CAM will switch to the third sequence, and so on

## 4.7 Channel switch

Numeric key + WIN/CAM key switch focus window (note: the selected number of WIN which is current window arrayed number, CAM key is IPC channel number.)

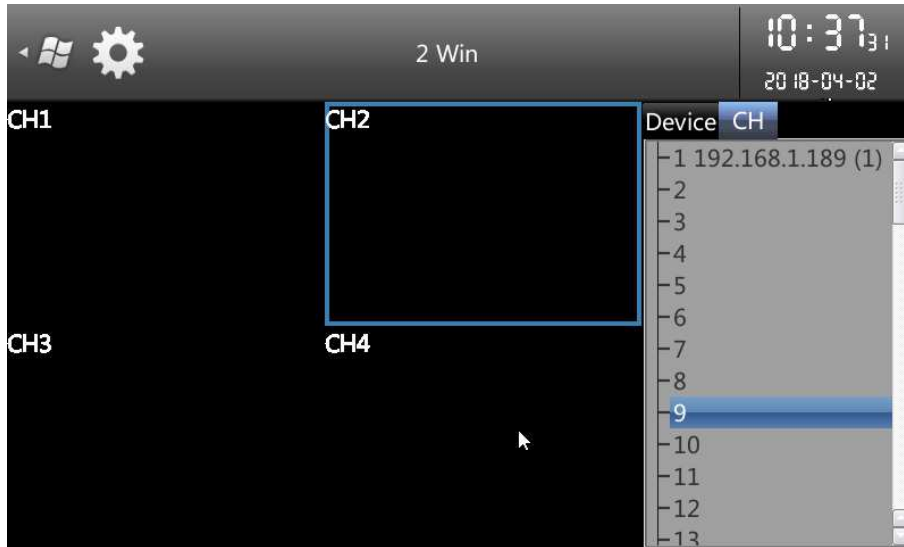


Figure 4-8 Switch channel

## 4.8 Open/close NVR round touring

After configuring the groups at NVR end, when the configuration is ready, press tour key to start round touring, press again to exit round touring function, as shown in figure 4-9:

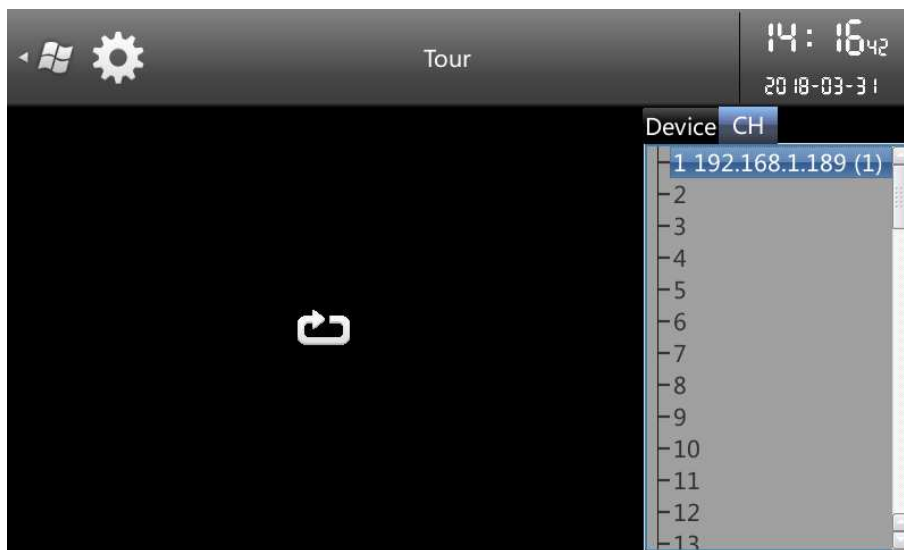
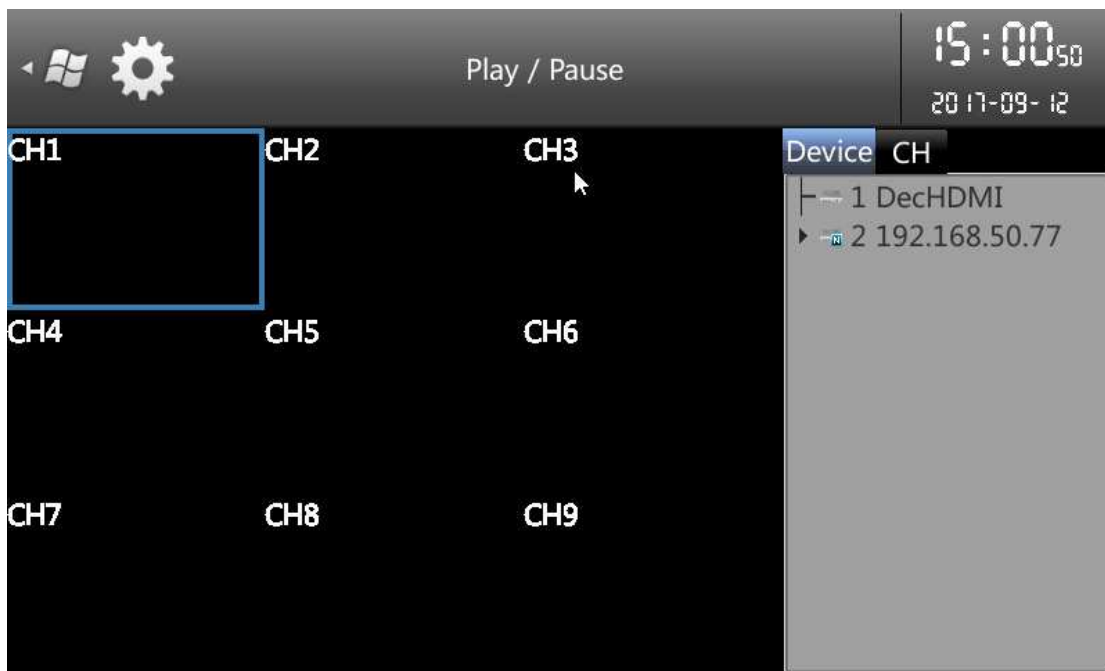


Figure 4-9 Round touring operation

## 4.9 Open/stop NVR local playback

Press PLAY key to switch to playback page, press another time to search, press the third time to Playback. Press the button to switch between play and pause.



## 4.10 Control PTZ function of NVR

Select a certain PTZ channel on NVR, which can remote control in all directions, such as up, down, left, right, etc., and can call presets on PTZ, cruise, pattern function, operations like zoom, focusing, iris zoom, etc. Operation is the same as PTZ control above

# Chapter 5 Decoding on wall and related operations

## 5.1 Switch to VMS mode

On the PC side, open VMS software, click Network icon in keyboard settings menu, click VMS mode. Fill in the IP address of PC where VMS is located, the port number (5252), the VMS user name and password, click enable VMS mode, as shown in figure 5-1. Click the Test button, if prompt parameter is correct, adding is successful, click Save will automatically restart and switch to VMS mode.

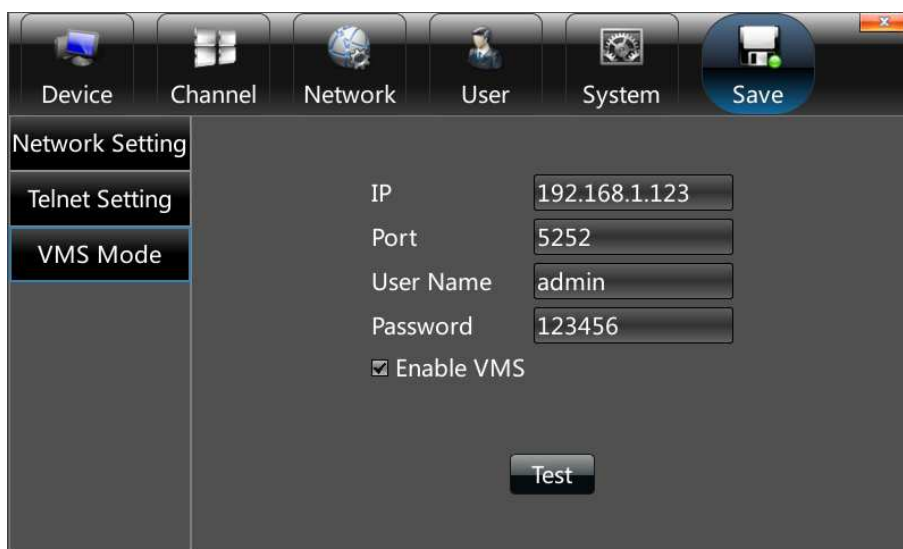


Figure 5-1 Add VMS interface

## 5.2 Add IPC, NVR, decoder and others to VMS

Search IPC, NVR and decoder device IP to add to VMS client software. The added IPC, NVR and decoder devices will automatically sync to keyboard local-end device list, the added interface as shown in figure 5-2.

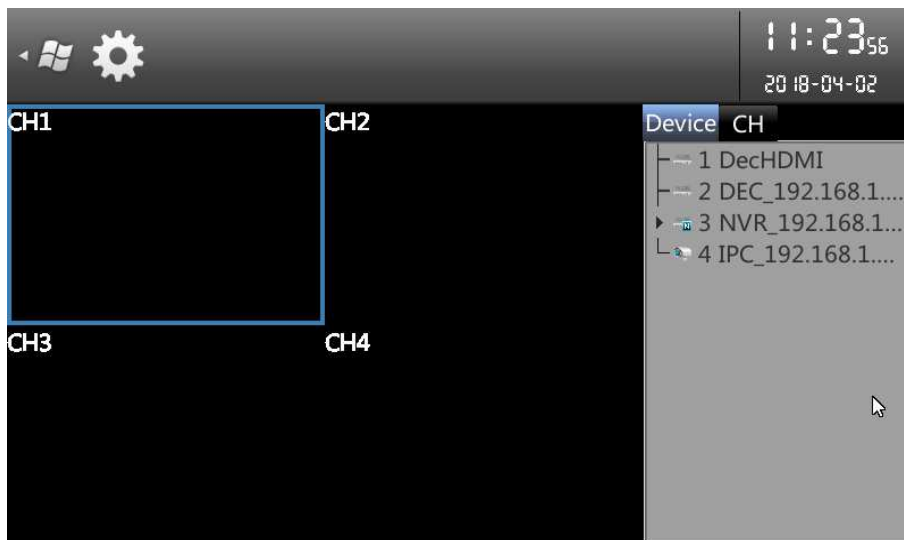


Figure 5-2 Add device interface

## 5.3 Local preview

Switch to VMS mode and press 0 + MON to local preview mode, as shown in figure 5-3:

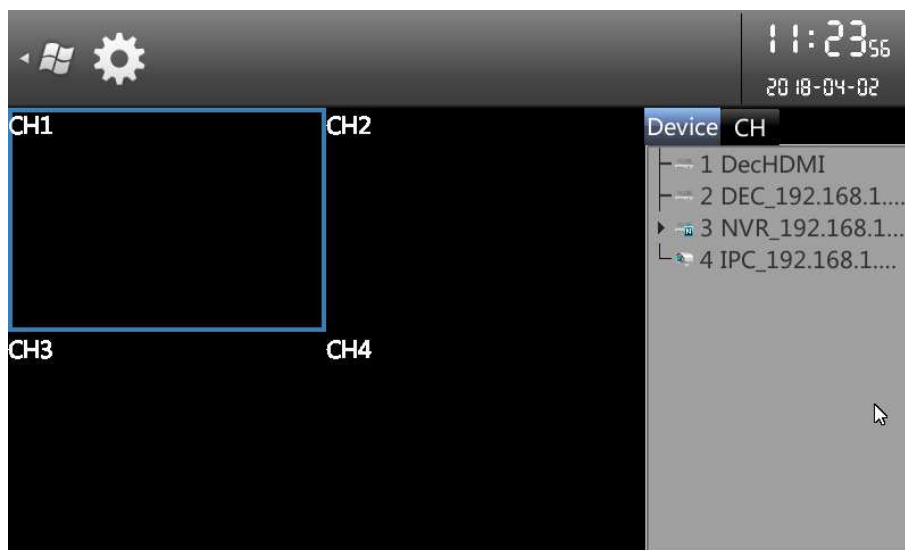


Figure 5-3 Local preview

## 5.4 HDMI output

Switch to HDMI preview mode by pressing 1+MON in VMS mode, as shown in figure 5-4:

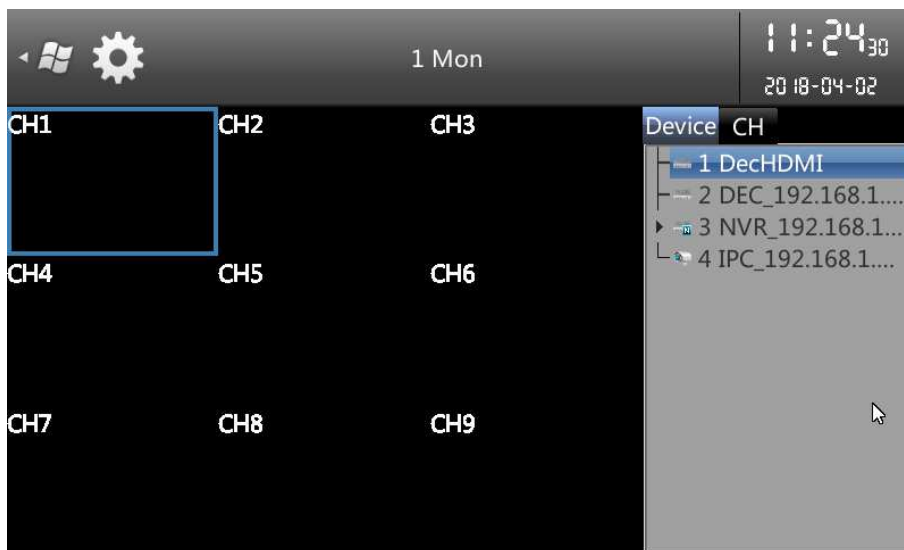


Figure 5-4 HDMI output

## 5.5 Control NVR

After switching to VMS mode, select the IP address on the NVR list + MON to switch to NVR mode, as shown in figure 5-5:

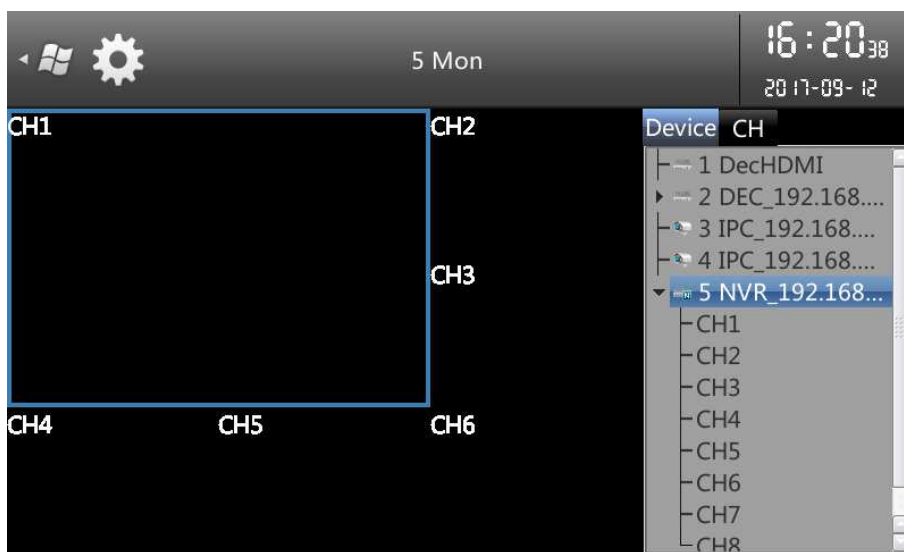


Figure 5-5 NVR control mode

## 5.6 Decoding on wall mode

In VMS mode, select the IP address on the decoder device list, as shown in figure 5-6:

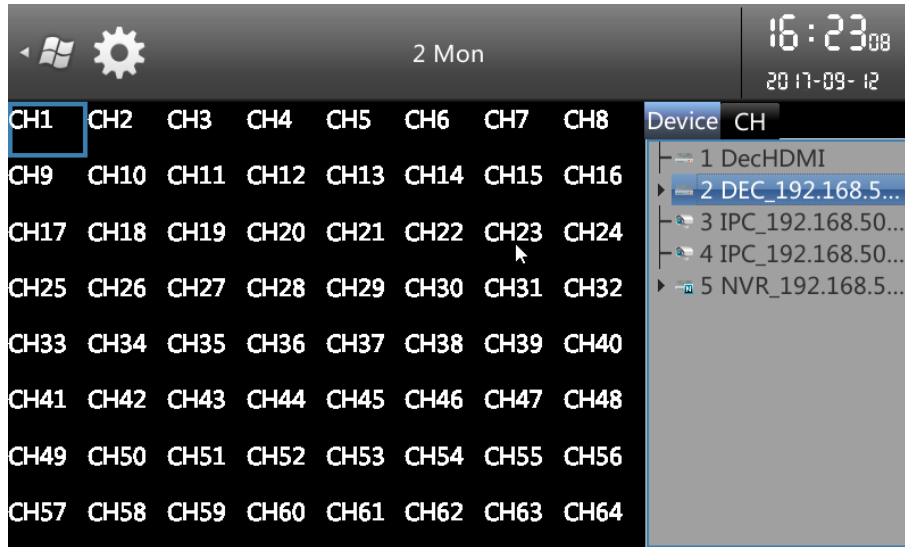


Figure 5-6 Decoding on wall mode

## 5.7 Control IPC decoding on wall

Select a channel, select the IP address on the IPC device list + ENTER, select IPC that needs to be on wall to the corresponding channel to decode on wall, as shown in figure 5-7:

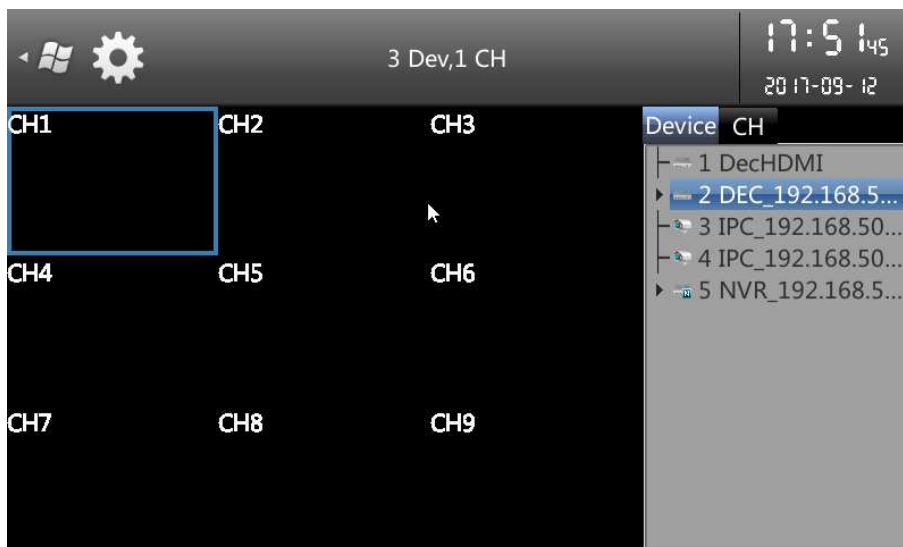


Figure 5-7 IPC decoding on wall

## 5.8 Control NVR decoding on wall

Select a channel, select the IP address on the NVR device list + ENTER + NVR channel number+ ENTER, select channel of NVR that needs to be on wall to the corresponding channel to decode on wall, as shown in figure 5-8:

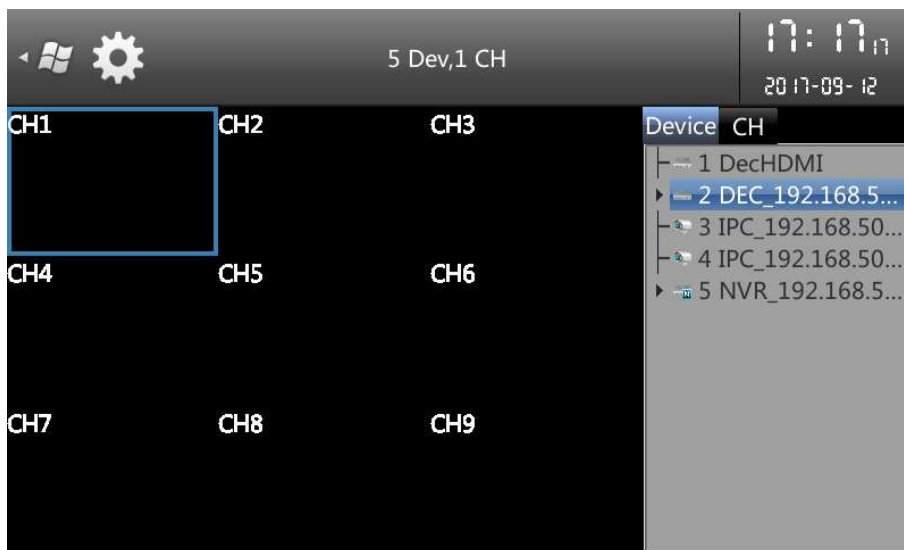


Figure 5-8 NVR decoding on wall

## Chapter 6 Keyboard shortcut

### Local preview of the keyboard

The local preview of the keyboard currently supports single-screen main stream and 4-screen sub-stream decoding, when local preview.

Related operations:

- (1) press the 0 + MON key to select the local preview of the keyboard;
- (2) press MULT key to switch between single screen and 4 screen;
- (3) under single screen, press the number key I + CAM. The channel list under the channel will start local decoding through the keyboard;
- (4) under 4 screen, press the number key I + CAM, call out the channel I where the 4-screen group;
- (5) under 4 screen, press the number key N + WIN, select the serial number of the sub-window N;

**Note: N must be the channel number under the current 4 screen.**

### HDMI output preview

HDMI output preview currently support maximum 1 channel 4K (single screen), 4 channels 1080p (4-screen) and 9 channels 720p (9-screen) decoding, the relevant shortcuts are as follows:

- (1) press the key 1 + MON key to select the HDMI output preview;
- (2) press MULT key to switch between single screen and multi-screen;
- (3) under single screen, press the number key I + CAM. The channel list under the channel will start local decoding through the keyboard;
- (4) under multi-screen, press the number keys I + CAM, call out the channel I where the picture group;
- (5) under multi-screen, press the number keys N + WIN, select the serial number of the sub-window N;

**Note: N must be the channel number under the current multi-screen.**

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