



# **Network Video Recorder**

## **User Manual**

ENG V5.1

Please read instructions thoroughly before operation and retain it for future reference.

# Important Safeguards and Warnings

**Do not place the heavy object on the NVR.**

**Do not let any solid or liquid fall into or infiltrate the NVR.**

**Please brush the printed circuit boards, connectors, fans, machine box and so on regularly.**

**Before the dust cleaning please switch off the power supply and unplug it.**

**Do not disassemble or repair the NVR by yourself. Do not replace the electronic components by yourself.**

## Contents

|   |    |
|---|----|
| 1. Production Introduction .....  | 3  |
| Product Overview .....  | 3  |
| Main Functions .....  | 3  |
| 2. Open-package check,products understanding and cable connections .....                                    | 4  |
| Open-package check .....  | 4  |
| Understanding of the front panel .....  | 4  |
| Understanding of the rear panel .....   | 6  |
| Installation connections sketch map (take 16CH DVR for example, please refer to the specific object ) ..... | 6  |
| 3. Basic Operation .....  | 7  |
| Login .....   | 7  |
| Preview .....   | 7  |
| Desktop Shortcut Menu .....   | 7  |
| Guide .....   | 8  |
| PlayBack .....  | 9  |
| Record Mode .....   | 10 |
| PTZ Control .....   | 10 |
| Highspeed PTZ .....   | 11 |
| Output Adjust .....   | 11 |
| Digital Channel .....   | 11 |
| Info .....  | 11 |
| Version .....   | 12 |
| HDD Info .....  | 12 |
| BPS .....   | 13 |
| LOG .....   | 13 |
| Online User .....   | 13 |
| Logout .....  | 14 |
| 4. Main Menu .....  | 14 |
| General .....   | 15 |
| Record .....  | 16 |
| Network .....   | 18 |
| Net Service .....   | 18 |
| Alarm .....   | 24 |
| Motion Detect .....   | 25 |
| Video Blind .....   | 27 |

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|  |    |
|--|----|
| Video Loss   | 27 |
| Alarm input  | 28 |
| Alarm output   | 28 |
| Abnormality  | 28 |
| Switch   | 29 |
| Channel Type   | 29 |
| Channel Management   | 30 |
| Channel Status   | 32 |
| System   | 32 |
| HDD Manage   | 33 |
| PTZ config   | 34 |
| GUI Display  | 34 |
| Bacckup  | 35 |
| Account  | 36 |
| Device Info  | 38 |
| Restore  | 38 |
| Auto Maintain  | 38 |
| Upgrade  | 39 |
| Import/Export  | 39 |
| 5. Network access settings and cloud technology introduced | 40 |
| LAN access settings  | 40 |
| Cloud technology functions and using introduction          | 42 |
| Client CMS software operation                              | 43 |
| Mobile Phone monitoring                                    | 43 |
| Appendix 1. Remote controller operation                    | 44 |
| Appendix 2. Mouse operation                                | 44 |

# 1. Production Introduction

## Product overview

The series NVR is designed specially for security and defense field which is an outstanding digital surveillance product. It introduces embedded LINUX operating system which is more stable. It introduces standard H.264mp video compressed format and G.711A audio compressed format which insures the high quality image, low error coding ratio and single frame playing. It introduces TCP/IP network technology which achieves the strong network communication ability and telecommunication ability.

The series NVR can be used individually or online applied as a part of a safety surveillance network. With the professional network video surveillance software it achieves the strong network communication ability and telecommunication ability.

The series NVR can be applied in the bank, telecom, electric power system, judicial system, transportation, intelligent housing, factory, storehouse, water conservancy and so on.

## Main functions

### Real-time surveillance

- Analog interface VGA interface and HDMI interface , surveillance functions through monitor or display.
- The phone wireless monitor function.

### Storage

- Non-working hard disk dormancy processing which is convenient to radiate heat, reduce power and extend the life-span.
- Special storage format which insures the data safety.

### Compression

- Real-time compression by individual hard disk which insures the audio and video signal stable synchronization.

### Backup

- Through SATA interface and USB interface such as USB equipment, removable hard disk and so on.
- Through net download the files in the hard disk.

### Playback

- Individual real-time video recording as well as searching, playback, network surveillance, recording check, downloading and so on.
- Multi-channel playback mode.
- Zoom at arbitrary region.

### Net operating

- Through internet to real time surveillance, operate Settings menu, video download backup operation, etc.
- Remote control PTZ.
- Remote checks the recording and real-time playback.

### Alarm linkage

- Only one channel relay alarm output which is convenient for the alarm linkage and light control at the spot. (Optional).
- protecting circuits at the alarm input and output interface which protects the main machine from damage.

### Communication interface

- RS485 interface which fulfills the alarm input and PTZ control.
- Standard Ethernet network interface which fulfills the telecommuting function.
- IPC signal input function.
- With USB interface, 3G and WIFI wireless network connection

#### Intelligent features

- Mouse action function.
- Fast copy and paste operating for the same setting.
- Support cloud access technology, Make network monitoring more easily (Optional).

## 2. Open-package check, Products understanding and cable connection

### Open-package check

When you receive the DVR, please check first.

First, please check whether there is any visible damage to the package appearance.
















Then, please open the machine crust and check the data wire in the front panel, power wire, the connection between the fan power and the main board.

**Note:** Please carefully check the bottom or back on the product type and consistency. Label affixed by the base plate or on the rear panel, Label, has a very important significance, please protect. When contact with our customer service, will need you to provide label type and serial number.

### Understanding of the front panel

**Front panel button operation function table (Note: This manual is a generic manual, Please prevail in kind).**

| No | Button name           | Mark         | Function   |
|----|-----------------------|--------------|--|
| 1  | Shift function button | <b>SHIFT</b> | Shift in the number button, character button and other function button during the user under input state |
| 2  | Direction button      | V ▲          | Remove the cursor  |
|    |                       |              | Add or decrease number during the user edit state  |
|    |                       |              | Change the setting in the menu   |
|    |                       |              | Surveillance pictures, into the single channel or multi-channel image surveillance.                      |
|    | < >                   | < >          | Remove the cursor when the main menu or sub menu is popped   |
|    |                       |              | Remove the cursor during the playback mode   |
|    |                       |              | Enter former or after channel surveillance during single surveillance image                              |
|    | Main menu/Confirm     | ENTER        | Confirm  |
|    |                       |              | Enter main menu or next grade menu   |

|    | button                             |   |   |
|----|------------------------------------|---|---|
| 3  | Cancel button                      | <b>ESC</b>  | Back to the above level menu or cancel operation in the operation menu  |
|    |                                    |   | Back to the real-time surveillance during the playback state  |
| 4  | Play previous file button          |          | Play previous video during the playback state   |
| 5  | Play next file button              |          | Play next video during the playback state   |
| 6  | Slow play                          |          | Play in the multi-low or regular speed video during the playback state  |
| 7  | Fast play                          |          | Play in the multi-fast or regular speed video during the playback state   |
| 8  | Playback/pause button              |          | Playback the video or pause during the playback state   |
| 9  | Play/pause button                  |          | Play the video or pause during the playback state   |
| 10 | Recording button                   | <b>REC</b>  | Start/stop the video recording manually. With the direction button choose the channel in the recording control menu |
| 11 | Recording search button            | <b>SEARCH</b>   | Search recording files  |
| 12 | PTZ control button                 | <b>PTZ</b>  | Enter PTZ setting, PTZ control  |
| 13 | USB interface                      | <b>USB</b>  | Connect USB device. Eg: USB flash drive, mouse etc.   |
| 14 | Power switch button                | <b>POWER</b>  | Power switch button   |
| 15 | Menu Switch                        | <b>FN</b>   | Switch back and forth to the main menu  |
| 16 | Remote controller receiver         | <b>IR</b>   | Receiving remote control signal   |
| 17 | HDD indicator light                | <b>HDD</b>  | HDD is during working state if lighted  |
| 18 | HDD information button             | <b>INFO</b>   | Check HDD information, state  |
| 19 | Alarm indicator light              |        | Trigger alarm if lighted  |
| 20 | Pause button                       | <b>STOP</b>   | Stop playing recording file   |
| 21 | Channel 1 button                   |        | Display channel 1 image   |
| 22 | Channel 2 button                   |        | Display channel 2 image   |
| 23 | Channel 3 button                   |        | Display channel 3 image   |
| 24 | Channel 4 button                   |        | Display channel 4 image   |
| 25 | All channels button                |        | Display all channels  |
| 26 | Single channel display button      |        | Single surveillance image preview according to referred number  |
| 27 | Network connection indicator light |  /LINK | Network connects normally if lighted  |
| 28 | Backup button                      | <b>BACKUP</b>   | Back up recording files   |
| 29 | Power indicator light              |        | Power is connected if lighted   |


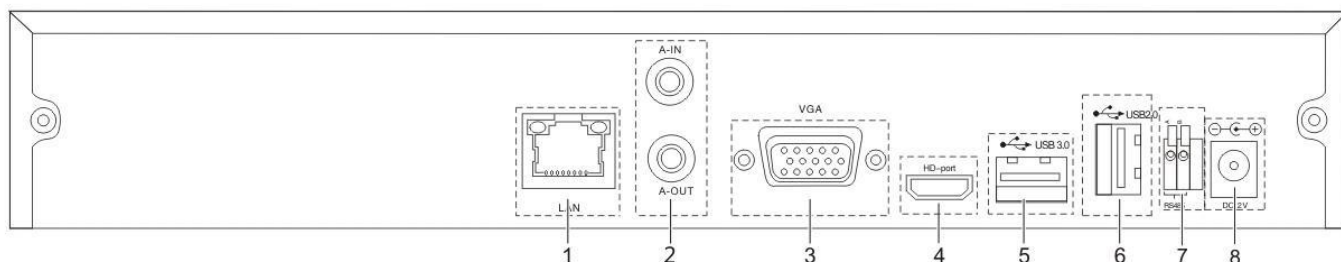
|    |                           |   |                             |
|----|---------------------------|---|-----------------------------|
| 30 | Recording indicator light |  | DVR is recording if lighted |
|----|---------------------------|---|-----------------------------|

Table 2.1 Front panel button operation function table

## Understanding of the rear panel

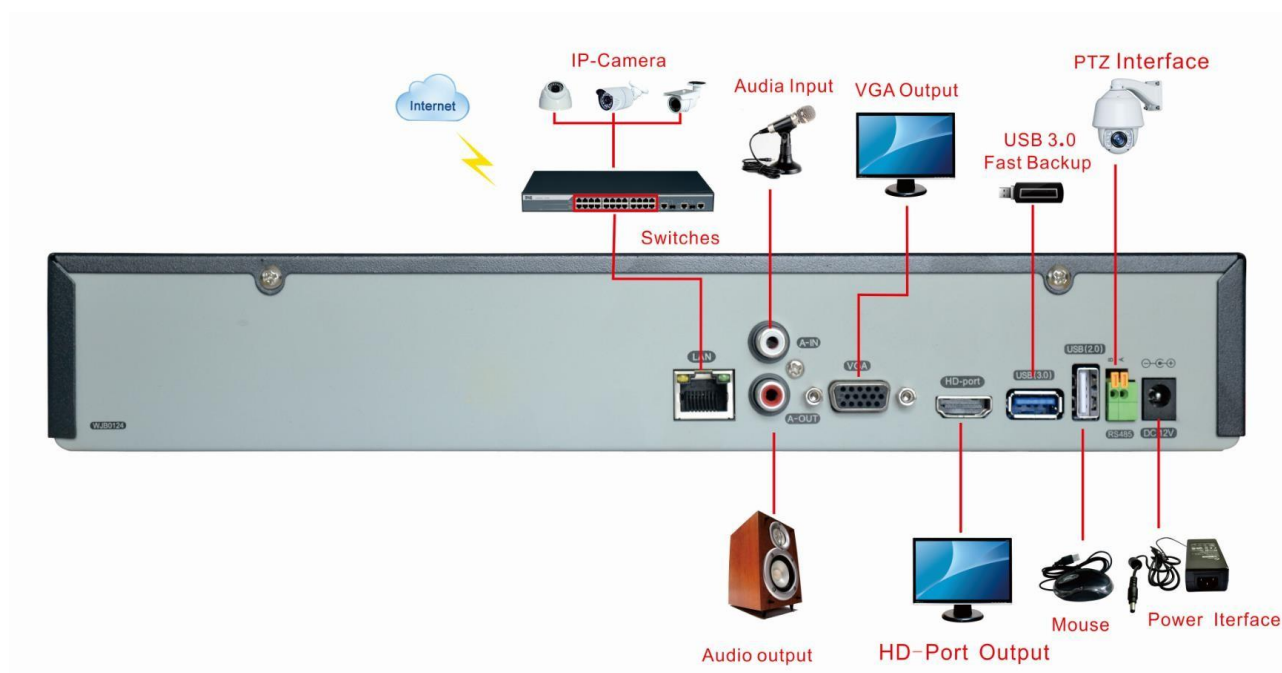
**Note:** Below are rear panels of some of our representative models. Pls take the real object as final, these are Just for reference.



- (1) Network interface    (2) Audio input/ audio output    (3) VGA output    (4) HDMI interface  
 (5) USB3.0 interface    (6) USB2.0 interface    (7) RS-485 interface video    (8) Power jack

**Note:** Some models have front panel USB interface, this interface with the top of the rear panel USB port are mutually exclusive, only one interface is effective at the same time. USB at the bottom of rear panel is independent and effective.

## Installation connections sketch map



### 3. Basic operation

#### Login

When the DVR boots up, the user must login and the system provides the corresponding functions with the user right. There are 3 user settings: **Admin**, **Guest** and **Default**. **Admin** default have no PW. **Admin** as super user. **Guest and default are** the common users at the factory presetting.



Picture 3.1 SYSTEM LOGIN

**Password protection:** If the password is continuous wrong seven times, the alarm will start. If the password is continuous wrong five times, the account will be locked. (After reboot or half an hour, the account will be unlocked automatically).

For your system security, please modify the username & password after first login.

#### Preview

You can right click mouse to choose the switch between the windows.

The system date, time and channel name are shown in each viewing window. The surveillance video and the alarm status are shown in each window.

|   |  |                  |   |  |             |
|---|--|------------------|---|--|-------------|
| 1 |  | Recording status | 3 |  | Video loss  |
| 2 |  | Motion detect    | 4 |  | Camera lock |

List 3.1 Preview icon

#### Desktop shortcut menu

In preview mode you can right click mouse to get a desktop shortcut menu, as picture 3.2. The menu includes: **Main Menu**, **Guide**, **Playback**, **Record Mode**, **PTZ control**, **High-speed PTZ**, **Color Setting**, **Output Adjust**, **Info**, **Logout**, **View 1**, **View 4**, **View 8**, **View 9**, **View 16** and **Hide**.



Picture 3.2 Desktop shortcut menu



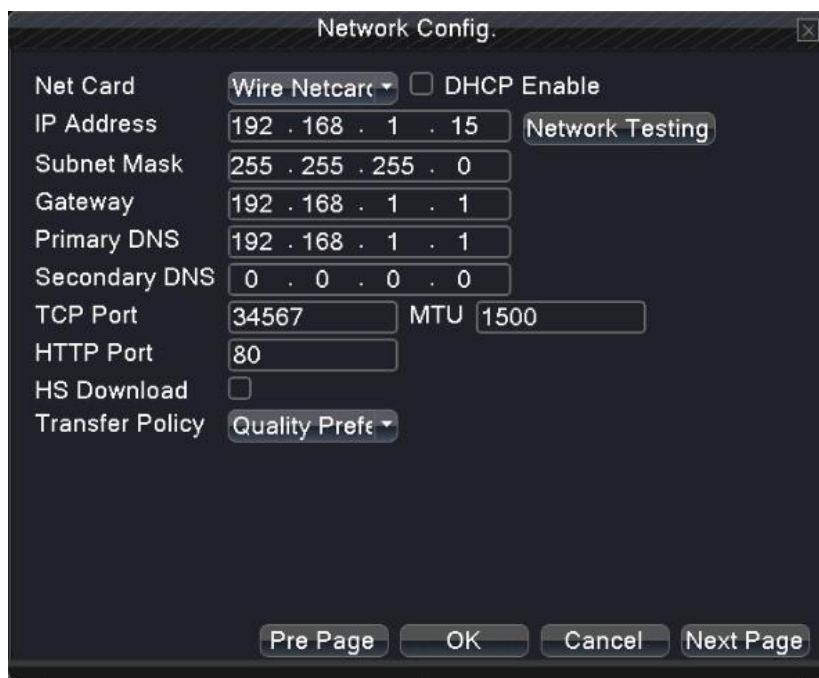
## Guide

This function can guide user to open "Cloud service" → "QR code" → "Network config." → "Remote device" and so on.



Picture 3.3 QR code

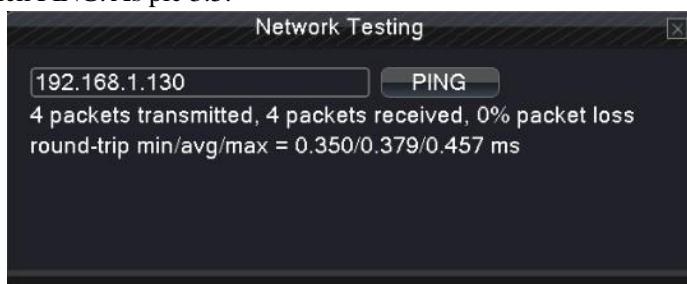
In "Network config.", setting IP Address, Network Testing, Subnet Mask, Gateway, Primary DNS, Secondary DNS, TCP Port, MTU Port, HTTP Port, HS Download, Transfer Policy and so on.. As pic 3.4:



Picture 3.4 Network Config.

In Network Testing, test whether DVR is connected with router or other network device properly. Step:

Input IP address directly, click PING. As pic 3.5.



Picture 3.5 Network Testing

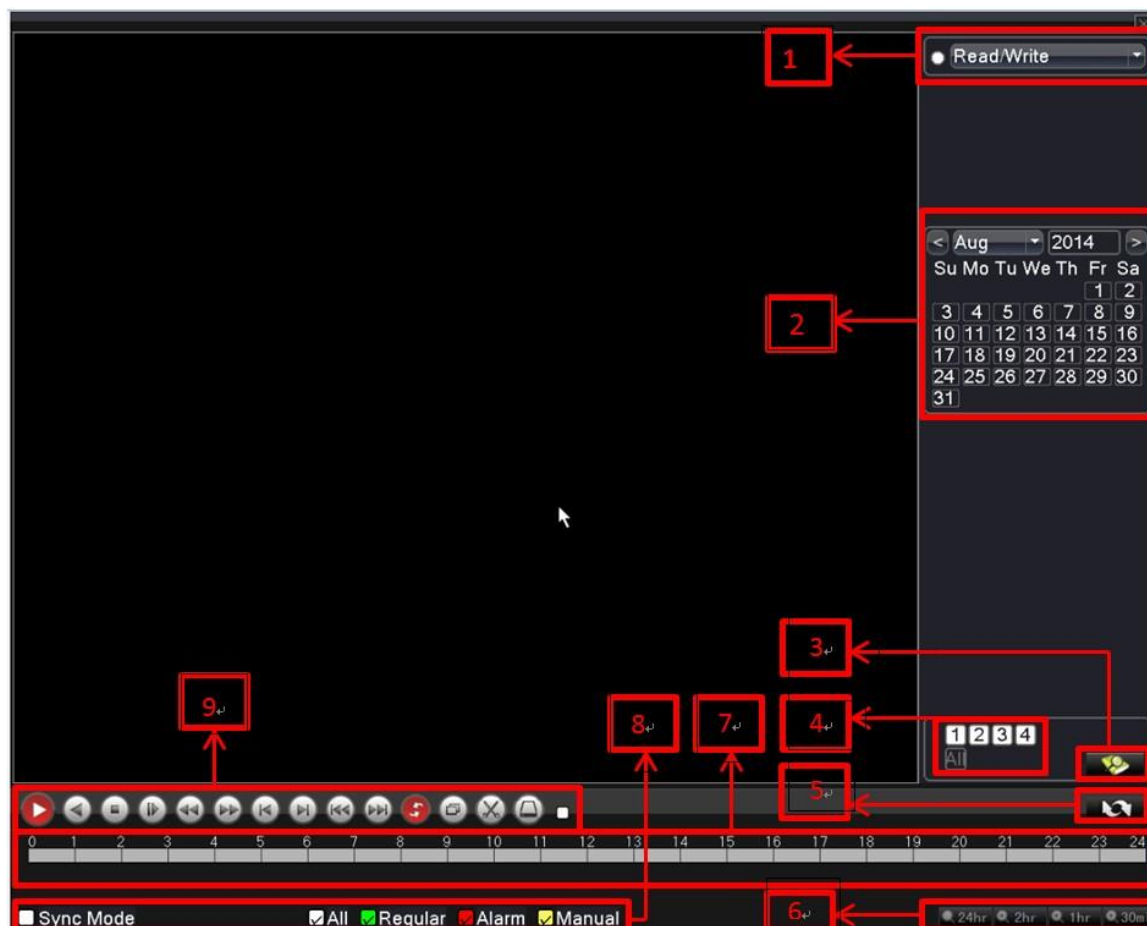
Setting "Remote Devicesetting" according to picture 4.5.2.

## Playback

Play the video files in the hard disk.

Select " desktop shortcut menu "→→ "playback"→→ "search"→→"play" appear as shown in Figure 3.3;

**Note: The hard disk that saves the video files must be set as read-write or read-only state.**



Picture 3.6 Playback

1. HDD switch    2. recording search calendar    3. recording search    4. playback channel selection
5. playback page switch    6. playback time selection    7. Playback time period, click progress bar then can playback    8. playback file type (the period with recording file is opposite status)    9. playback control keys



recording file search calendar: Search recent recording file.

**file information:** Search recent recording file.

**Synchronization:** Mode: to realize multi-channel playback synchronously.

**【Playback control】** Refer to the following sheet for more information.

| Button | Function   | Button | Function       |
|--------|------------|--------|----------------|
|        | Play/Pause |        | Backward       |
|        | Stop/Close |        | Fast back play |

|   |                |   |                           |
|---|----------------|---|---------------------------|
|  | Full screen    |  | Fast play                 |
|  | Previous frame |  | Next frame                |
|  | Previous file  |  | Next file                 |
|  | Circulation    |  | Cut (some models without) |

Form 3.2 Playback control key list

**Note:** Frame by frame playback is only performed in the pause playback state.

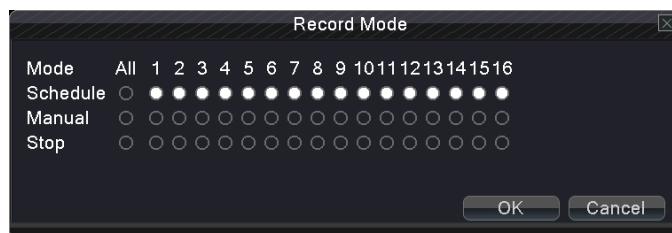
**Operation hint:** Display the function of the cursor place.

## Special Functions:

**Local zoom:** When the system is in single-window full-screen playback mode, you can drag your mouse in the screen to select a section and then left click mouse to realize local zoom. You can right click mouse to exit.

### Record Mode (take 16CH DVR for example)

Please check current channel status: “●” means it is in recording status.



Picture 3.7 record mode

**Schedule:** It records according to the set parameters in “main menu” and “record”→“record plan”.

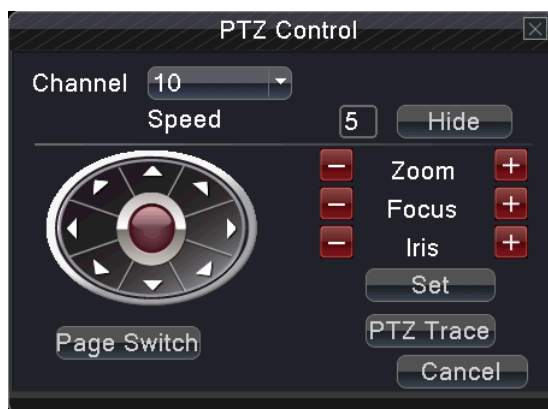
**Manual:** Click the all button and the according channel is recording no matter the channel in any state.

**Stop:** Click the stop button and the according channel stops recording no matter the channel in any state.

### PTZ Control

Operation interface is as followed. The functions include: PTZ direction control, step, zoom, focus, iris, and setup operation, patrol between spots, trail patrol, boundary scan, assistant switch, light switch, level rotation and so on.

- Note :**
1. Decoder 485+、485- line connects with DVR 485+、485- line. The connection is right.
  2. Click “main menu”→“system”→“PTZ Config ” to set the PTZ parameters.
  3. The PTZ functions are decided by the PTZ protocols.



Picture3.8 PTZ Control

**Speed:** Set the PTZ rotation range. Default range: 1 ~ 8.

**Zoom:** Click / button to adjust the zoom multiple of the camera.

**Focus:** Click / button to adjust the focus of the camera.

**Iris:** Click / button to adjust the iris of the camera.

**Direction control:** Control the PTZ rotation. 8 directions control is supportive.

**PTZ Trace:** Full-screen show channel image. Left press mouse and control PTZ to rotate orientation. Left press mouse and then rotate the mouse to adjust the zoom multiple of the camera.

**Set:** Enter the function operation menu.

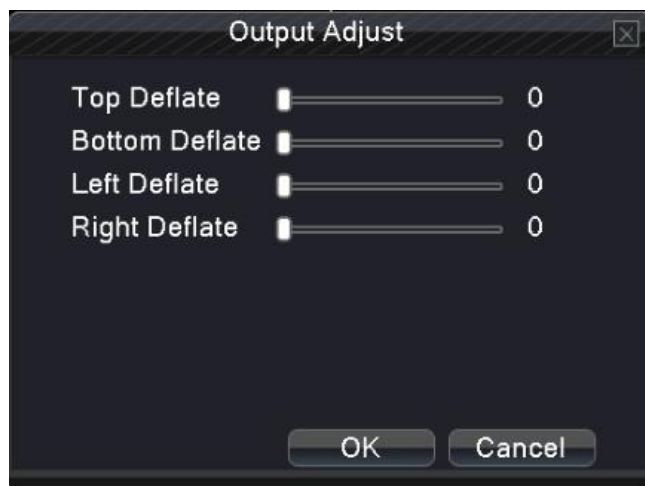
**Page Switch:** Switch between different windows.

#### High-Speed PTZ

After choosing, it displays the chosen channel to full screen. Click left button of mouse, can control the PTZ to fast move and orientation. And can adjust camera's magnification factor by move mouse roller

#### Output Adjust

Adjust output area parameters



Picture 3.9 Output adjust

#### Digital Channel

System Information menu items include: **one key add**、**Channel Management**、**Channel Status**. (as following picture 4.5“Channel type”)

#### Version Info

System Information menu items include: **Version**、**HDD Info**、**BPS**、**LOG**、**Online Users**.

## Version

Display the basic information such as hardware information, software version, MAC, issue data and Serial No and so on.

Note 1: The Serial No is needed when using cloud technology, please enter the Serial No correctly when using cloud technology to do remote control, or you can't login.

Note 2: MAC is the MAC address of the device, also is the device mark when login by device with ARSP service; please enter the MAC address correctly when using ARSP service to do remote control, or you can't login.

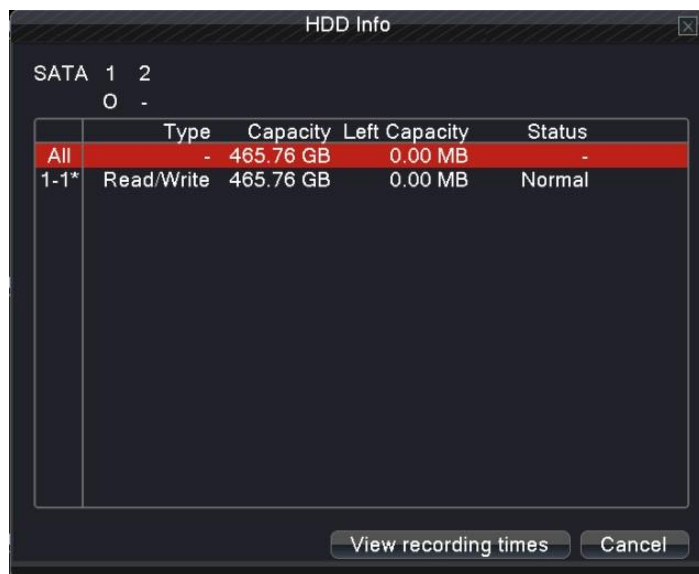
(Some model without ARSP function).



Picture 3.10 Version information

## HDD Info

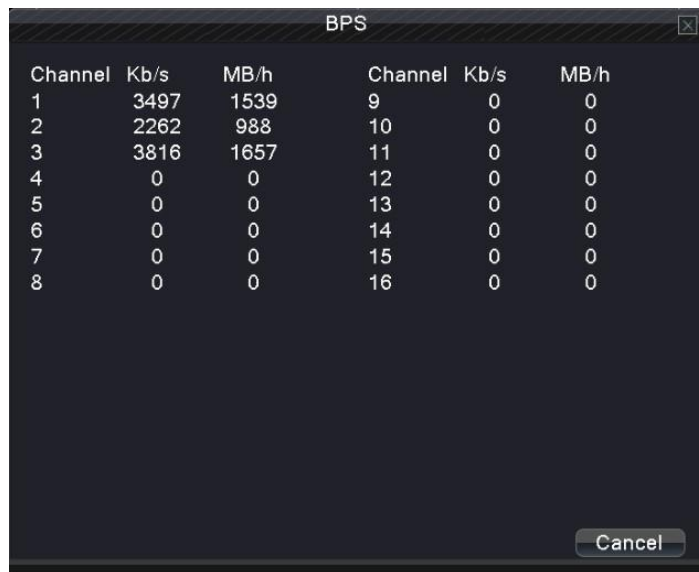
Display the hard disk state: hard disk type, overall capability, residual capability, the recording time and so on.



Picture 3.11 hard disk information

## BPS

Display the code stream (Kb/S) and hard disk capability (MB/H) in real time.



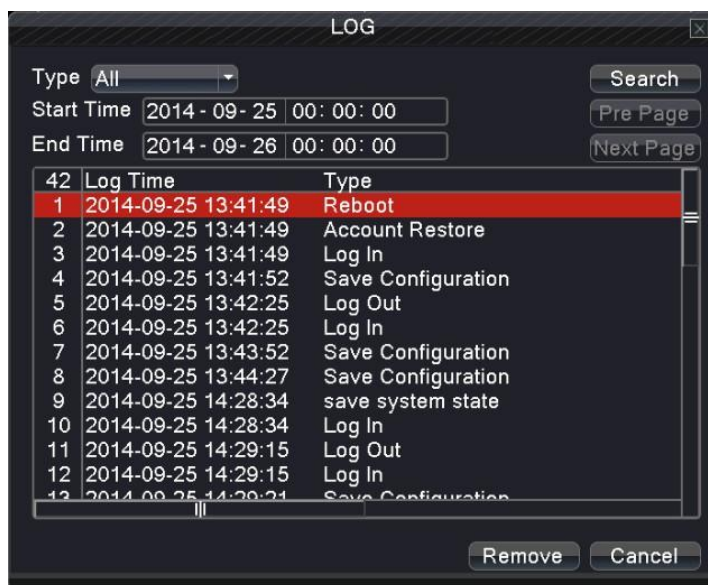
| Channel | Kb/s | MB/h | Channel | Kb/s | MB/h |
|---------|------|------|---------|------|------|
| 1       | 3497 | 1539 | 9       | 0    | 0    |
| 2       | 2262 | 988  | 10      | 0    | 0    |
| 3       | 3816 | 1657 | 11      | 0    | 0    |
| 4       | 0    | 0    | 12      | 0    | 0    |
| 5       | 0    | 0    | 13      | 0    | 0    |
| 6       | 0    | 0    | 14      | 0    | 0    |
| 7       | 0    | 0    | 15      | 0    | 0    |
| 8       | 0    | 0    | 16      | 0    | 0    |

Picture 3.12 Code stream statistics

## LOG

Look up system log according to the set mode.

**Log information** include: system operation, configuration operation, data management, alarm affair, recording operation, user management, and file management and so on. Set the time section to look up and click the look up button. The log information will display as a list. press **delete** button to clear all the log information.

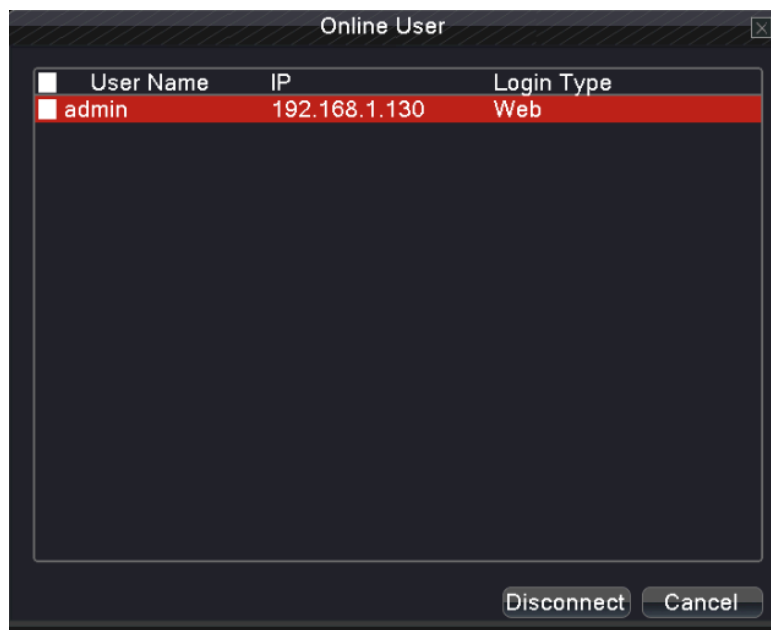


|    | Log Time            | Type               |
|----|---------------------|--------------------|
| 42 |                     |                    |
| 1  | 2014-09-25 13:41:49 | Reboot             |
| 2  | 2014-09-25 13:41:49 | Account Restore    |
| 3  | 2014-09-25 13:41:49 | Log In             |
| 4  | 2014-09-25 13:41:52 | Save Configuration |
| 5  | 2014-09-25 13:42:25 | Log Out            |
| 6  | 2014-09-25 13:42:25 | Log In             |
| 7  | 2014-09-25 13:43:52 | Save Configuration |
| 8  | 2014-09-25 13:44:27 | Save Configuration |
| 9  | 2014-09-25 14:28:34 | save system state  |
| 10 | 2014-09-25 14:28:34 | Log In             |
| 11 | 2014-09-25 14:29:15 | Log Out            |
| 12 | 2014-09-25 14:29:15 | Log In             |
| 13 | 2014-09-25 14:29:21 | Save Configuration |

Picture 3.13 log information

### 3.3.8.5 Online User

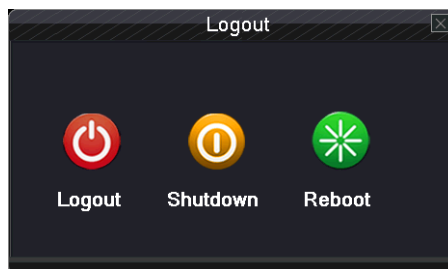
Look up the network user information in the local DVR. You can choose the network user and cut the connection. Then the user is locked until next boot-strap.



Picture 3.14 online user.

### 3.3.9 Logout

Logout, shutdown the system or reboot up.



Picture 3.15 shutdown

**Logout:** Quit the menu. Offer password next entrance.

**Shutdown:** Quit the system. Turn off the power supply.

**Reboot:** Quit the system. Reboot up the system..

## 4. Main Menu

When User login, right click mouse, the shortcut menu will appear at the bottom of the screen, then left click the first item to enter the main menu interface. As picture 4.1 shows.



Picture 4.1 Main menu

**Note:** Click “FN” on remote controller can shift different setting interface of main menu.

### General

On the system of general information configuration.( as shown in Picture 4.1 Main menu)

**Language:** choose related operating language

**Video standard:** Set Device’s video system (PAL or NTSC are optional)

**Resolution:** Set output resolution

**System time:** Set Device’s current system date &time, time format

**HDD full:** Stop: the hard drive is full, stop recording.

Select overwrite: when the hard drive is full, overwrite the earliest recording files..

**NVR No:** using under the situation that one remote controller control many NVRs. Only click “ADD”on remote control and enter local number, the related NVR can respond.

Re: when “Local No “is “0”

**Transparency:** Adjust the transparency or operating menu

**Tour:** set screen tour display, ☒ shows tour was opened. Single screen, four screens, eight screens, nine screens, sixteen screens etc. separate mode and mixed mode tour are optional. (As 16CH for example as blow ).





Picture 4.2 Tour setting

## Record

Set recording parameter (main stream) and network parameter (extra stream) of video and audio signal.

Set the Device's recording plan.

**Note:** There is at least one read-write hard disk.



Picture 4.3 Record config

**Channel:** Choose the corresponding channel number to set the channel. Choose the all option to set the entire channels.

**Set:** Recording parameter (main stream) and network parameters (extra stream) illustrate

**Video/Audio:** Set whether to record video and audio simultaneously.

**Resolution:** Set recording resolution. The Higher resolution, the better recording quality, occupies more HDD capacity. Conversely, the lower resolution, the worse recording quality,

occupies less HDD capacity.

**Frame Rate (FPS):** set recording FPS; the higher recording FPS, the better fluency of recording images and occupies more HDD capacity. Conversely, the lower recording FPS, the worse fluency of recording images and occupies less HDD capacity.

**Bit Rate Type:** Set whether recording stream changes automatically according to image changes  
Adjust recording quality, six grades are optional

**Quality:** Adjust the video quality, grade six kinds of optional.

**Bit Rate (Kb/S):** set recording stream statics under fixed stream state; The Higher Stream statics, the better recording quality and occupies more HDD capacity. Conversely, the lower Stream statics, the worse recording stream statics quality and occupies less HDD capacity.

**Notice :** when NVR can not identify the front-end IPC , above recording parameter is not optional,the NVR will be recording according to setting parameters of "main stream"

**Of front-end IPC**

**Recording plan:** Set NVR's recording plan



Picture 4.4 Recording Plan

**Channel:** Choose the corresponding channel number to set the channel. Choose the all option to set the entire channels.

**Redundancy:** Choose the redundancy function option to implement the file double backup function.  
Double backup is writing the video files in two hard disks. When you do the double backup, make sure that there are two hard disks installed. One is read-write disk and the other is redundant disk.

**Length:** Set the time length of each video file. 60minutes is default value (A maximum of 120 minutes).

**Pre Record:** Record 1-30 seconds before the action. (Time length is decided by the code stream)

**Mode:** Set video state: configuration, all or stop.

**Schedule:** Record according to the set video type (common, detection and alarm)and time section.

**Manual:** after choosing manual button, the related channel will carry common recording whatever state the current channel is.

**Stop:** Click the stop button and the according channel stops recording no matter the channel

in any state.

**Week:** set (Monday to Sunday) or full week to record, it will just record in set days

**Period:** Set the time section of common recording, the recording will start only in the set range.

**Recording type:** Set recording type: regular, detection or alarm.

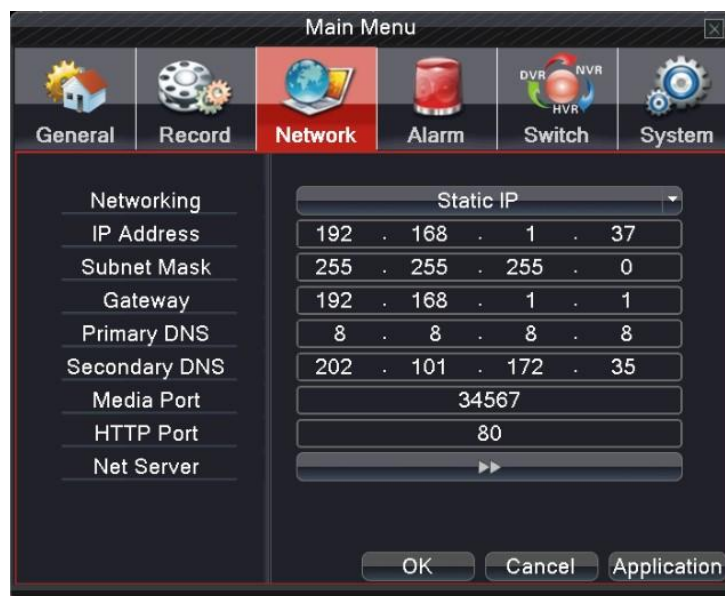
**Regular:** Perform the regular recording in the set time section. The video file type is "R".

**Detect:** Trigger the "motion detect", "camera mask" or "video loss" signal. When above alarm is set as opening recording, the "detection recording" state is on. The video file type is "M".

**Alarm:** Trigger the external alarm signal in the set time section. When above alarm is set as opening recording, the "detection recording" state is on. The video file type is "A".

**Note:** related alarm function setting, pls refer 4.4 alarm function to have detailed setting ways

## 4.3 Network



Picture 4.5 network setup

**Net Link Mod:** Set automatically gets or manually enters IP address

**IP address:** Set the IP address.

**Subnet Mask:** Set the subnet mask code.

**Gateway:** Set the default gateway.

**Primary DNS:** Set Preferred DNS

**Secondary DNS:** Set spare DNS

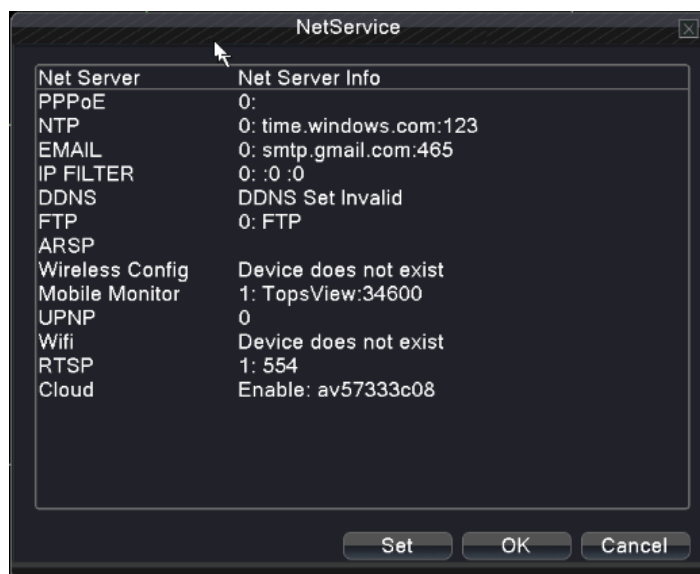
**Media port:** Set port for recording network transmission

**HTTP port:** Set HTTP Port

**Net Service:** set all network service. Pls refer 4.3.1 network service to have detailed setting ways.

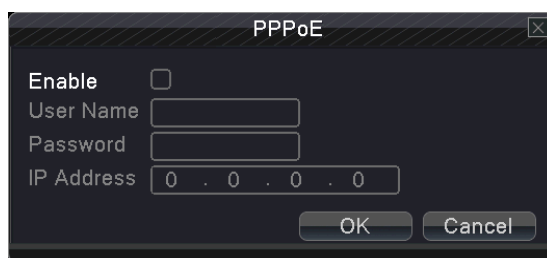
### 4.3.1 Net Service

Advanced network functions on the configuration, double-click the Net Service button to enter the Picture 4.6 interface, first select the Network Services entry and click the Settings button, or double-click the service parameter configuration items.



Picture 4.6 network service

## 【PPPoE setup】



Picture 4.7 PPPOE

Input the user name and password that ISP (Internet service provider) provides. After saving it reboot up your system. Then the DVR will build a network connection based on PPPoE. The IP address will change into dynamic IP address after above operation is well done.

Operation: After PPPoE dialing successfully look up the IP address in the IP address and obtain the current IP address. Then use this IP address to visit the DVR through user port.

## 【NTP setup】



Picture 4.8 NTP

**Server IP:** Enter the NTP server address..

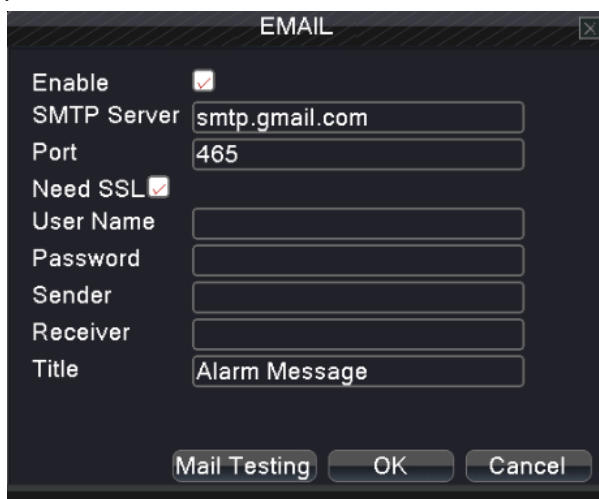
**Port:** Default: 123. You can set the port according to NTP server.

**Time zone:** London GMT+0 Berlin GMT +1 Cairo GMT +2 Moscow GMT +3 New Delhi GMT +5 Bangkok GMT +7 Hong Kong Beijing GMT +8 Tokyo GMT +9 Sydney GMT +10 Hawaii GMT-10 Alaska GMT-9 Pacific time GMT-8 American mountain time GMT-7 American mid time GMT-6 American eastern time GMT-5 Atlantic time GMT-4 Brazil GMT-3 Atlantic mid time GMT-2.

**Update Period:** The same with the NTP server check interval. Default: 10minutes.

#### 【EMAIL setup】

If the alarm is turned on or the alarm linkage photos are taken, send an email about the alarm information and the photos to appointed address.



Picture 4.9 EMAIL

**SMTP server:** for example, SMTP server address of 126 email is: smtp.126.com.

**Port:** Email server port number.

**Need SSL:** Decide whether using Secure Socket Layer protocol to login.

**User Name:** Apply the email server user name. **Password:**

Input the password corresponding to the user. **Sender:** Set the email sender address.

**Receiver:** Send the email to appointed receivers when the alarm is turned on. You can set three receivers at most, and each receiver separate by “;”( Semicolon + Space), receiver and sender can use same email.

**Title:** The subject of the message, you can set your own.

#### 【IP FILTER】

When choosing the white list, only the listed IP address can connect the NVR.,Without listed IP address can not connect the NVR.

**Note:** When the same IP address is in the white and black list at the same time, the black list precedence is higher.



Picture 4.10 IP purview

#### 【DDNS】



Picture 4.11 DDNS

**DDNS Type:** choose DDNS supplier

**Domain name:** Provide the domain name registered by DDNS.

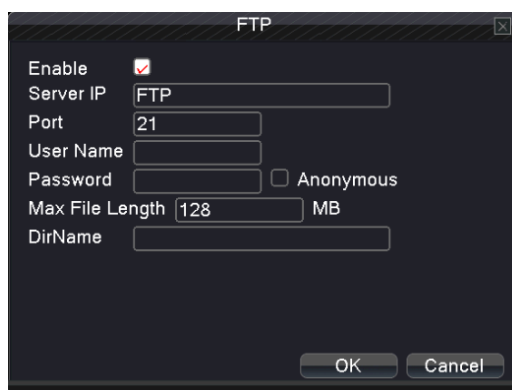
**User name:** Provide the account registered by DDNS. **Password:** Provide the password registered by DDNS.

When the DDNS is successfully configured and start, you can connect the domain name in the IE address column to visit.

**Note: The DNS setup must be configured correctly in the network setup.**

#### 【FTP】

FTP used when there get alarm, or alarm linkage to recording, snap pictures, you can specify the FTP server to upload video and capture specific images.



Picture 4.12 FTP

**Enable:** Select ☒, enable the FTP function.

**Server IP:** FTP server's IP address

**Port:** FTP port, default port 21.

**User name:** Permission to log FTP user name.

**Password:** User's password.

**Max File Length:** Upload files for each package the max length, default is 128M.

**Dir Name:** Upload file directory.

#### 【ARSP】

After enable this function, when login ARSP server and choose "login by device", you just need to enter MAC to do remote network viewing. No need to apply domain name

Note 1: MAC can be got in "desktop shortcut menu" → "info" → "version"

Note 2: after setting ARSP, also need to do relative port forward setting (it can be done in router, to realize by enabling DMZ function and directing to this device, or by setting port forward manually, also

can enable router and UPNP function synchronously to realize port forward)



Picture 4.13 ARSP

**Enable:** select ☒, enable the ARSP function.

**Type:** Default type is DNS

**Server IP:** set default server address

**Port:** device service default port: 15000.

**User name:** Enter the ARSP server registered user name.

**Password:** enter user's password.

**Update Period:** Synchronize with ARSP server time, default: 5 minute.

#### 【Wireless config】

Dial-up Internet access through 3G card to realize the client access device, the device configuration  
(Note: only for some models)



Picture 4.14 Wireless config

**Enable:** Select ☒, enable the Wireless function.

**Type:** Dial type, the default auto.

**Wireless AP:** 3G access point, the default OK.

**Dial Number:** 3G dial-up number, the default OK

**User Name:** Dial-up of 3G User Name.

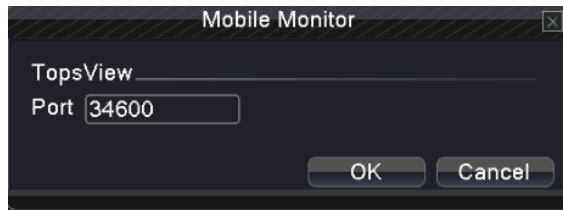
**Password:** Dial-up user's password.

**IP Address:** Dial-up IP address number obtained.

#### 【Mobile monitor】

Via mobile devices, realize the equipment monitoring and other related operations of the device





Picture 4.15 Mobile monitor

**Enable:** Select ☒, enable the Mobile phone function.

**Port:** Port for mobile phone view, need mapping the port on Router.

#### 【UPNP】

UPNP protocol will be automatic port forwarding on the Router, before use this feature, make sure UPNP feature is enabled on the router.



Picture 4.16 UPNP

**Enable:** Select ☒, enable the Mobile phone function.

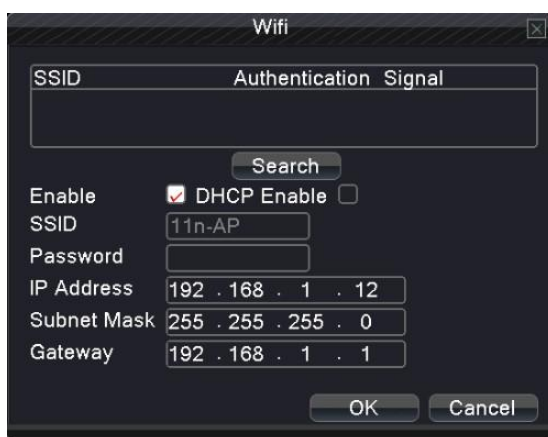
**HTTP Port:** Need to add the port number while browsing by IE

**TCP Port:** While use the client software to monitor, required by the port number

**Mobile Port:** Mobile phone monitoring through the port number

#### 【Wi-Fi】

Connect to wireless router by wireless module. View the device with IP under the condition that NVR has been connected to WIFI module.



Picture 4.17 Wi-Fi

**Search:** Click “search” button to get available wireless network.

**Enable:** Select ☒, enable the Wi-Fi function

**SSID:** name of wireless LAN automatically fit the connected wireless device

**Password:** wireless network password

**IP address:** Set the IP address.



**Subnet mask:** Set the subnet mask code.

**Gateway:** Set the default gateway.

**RTSP** :With streaming media player access through "URL" to see the image of the equipment



Pitcure 4.18 RTSP

#### The method of creating a "URT"

For Example :

rtsp://10.6.3.57:554/user=admin&password=&channel=1&stream=0.sdp?

10.6.3.57 Connected ip of the equipment

:554This is RTSP service Port,can change from the network service of the equipment

user=admin login user name

password= blank

channel=1 The first channel

stream=0.sdp? Main stream

#### 【Cloud services】



picture 4.19Cloud service

**Enabled** : Select ☒, set then start the cloud access function

**Service Address:** Cloud access address

**Port:**servicer port .

**Equipment ID:** Cloud service serial number

**QR code:**Cloud service serial QR code

## 4.4 Alarm

Alarm functions include: **Motion Detect, Video Blind, Video Loss, Alarm Input, Alarm Output and Abnormality.**

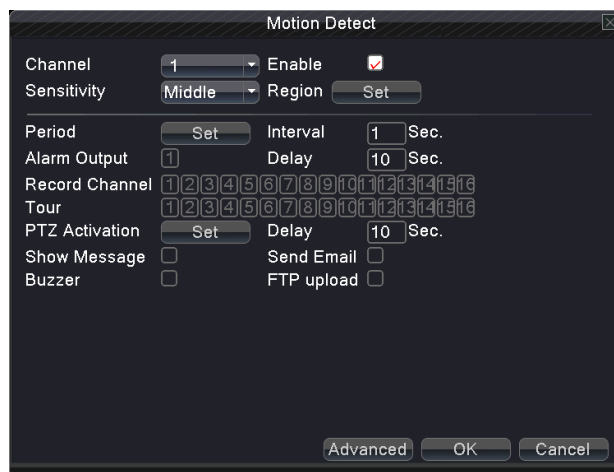


Picture 4.20 Alarm

#### 4.4.1 Motion Detect

When system detects the motion signal that reaches the set sensitivity, the motion detect alarm is on and the linkage function is turned on.

Note: click advanced button can back to upper page, to display surveillance screen, copy, default, recording setup

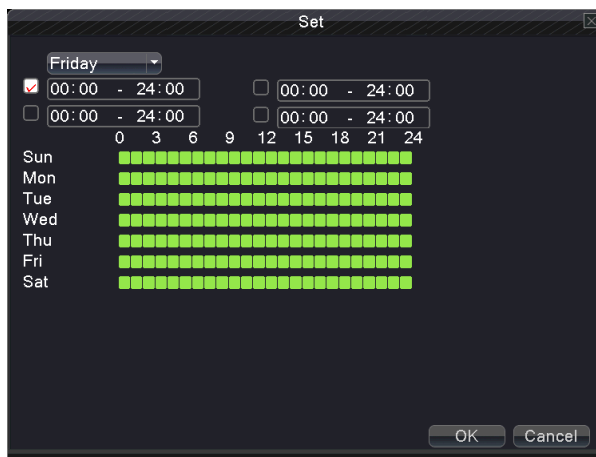


Picture 4.21 motion detect

**Channel:** Choose the set motion detect channel.

**Enable:** ☒ means that the motion detect function is on.

**Period:** Trigger the motion detect signal in the set time section. You can set according to week or set uniformly. Each day is divided into four time sections. ☒ means the set is valid.



Picture 4.22 Make/cancel defence time quantum

**Interval:** Only one alarm signal is turned on even there are several motion detect signals in the set interval.

**Alarm output:** Start the external equipment of corresponding linkage alarm when the motion detect alarm is turned on.

**Delay:** Delay a few moments and stop when the alarm state is turned off. The range is 10~300 seconds.

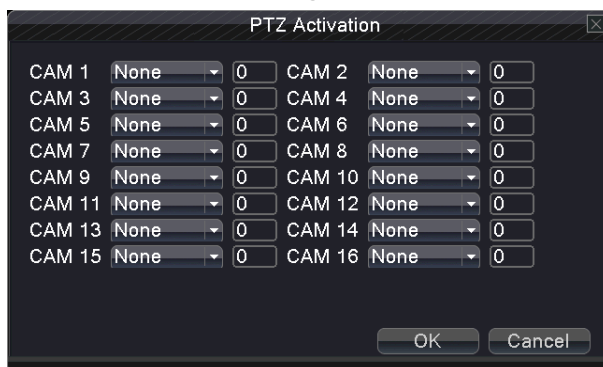
**Record channel:** Choose the recording channel (multiple option supportive). Trigger the video signal when the alarm is turned on.

**Note:** Set in the “main menu” → “record” → “record plan” and perform the linkage recording. And set “desktop shortcut menu” → “record mode” to be configured, motion detect linkage recording can work

**Tour:** choose the recording channel (multiple option supportive), which will tour preview with single screen when have alarm signal

【PTZ activation】 Set the PTZ linkage when the alarm is turned on. As Picture 4.23

**Note:** using PTZ linkage, need to set preset, cruise between points and scan etc. parameters in “desktop shortcut menu” → “PTZ control” → “setting”.



Picture 4.23 PTZ activation

**Delay:** After alarm stop, the extended period of time to stop alarm recording, the range is 10~300 seconds.

**Show Message:** Select ☒, means Pop the alarm information dialog box in the local host computer screen.

**Send Email:** ☒ means sending an email to user when the alarm is turned on.

**Note:** if sending email, need to do relative setting in “main menu” → “network setting” → “network service”

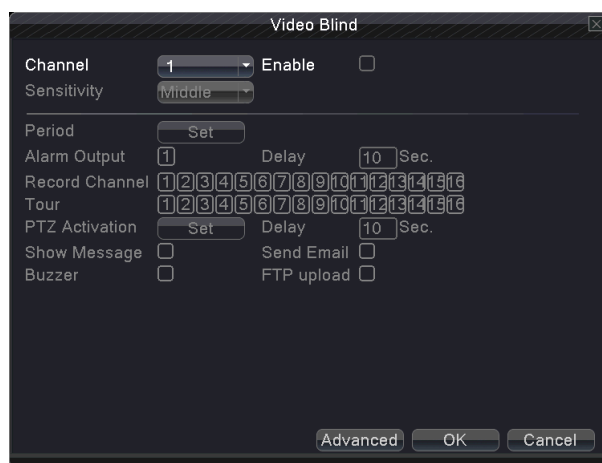
**Buzzer:** Select ☒, means when Alarm occurs, the equipment issue "Didi" the sounds of two long ring. **FTP upload:** Select ☒, means Alarm occurred while sending alarm events to the FTP server.

**Note:** if FTP sending, need to do relative setting in “main menu” → “network” → “net service” Advanced function: Click the advanced button can return to the previous page table, display monitor image and the function of copy, paste and defaulted .

#### 4.4.2 Video Blind

When the video image is influenced by outer environment or bad brightness and reaches the set sensitive parameter, the video blind function is turned on and the linkage function is turned on.

**Note:** need open the IPC video blind function first , and make sure IPC well connected with NVR. before open the video blind function .

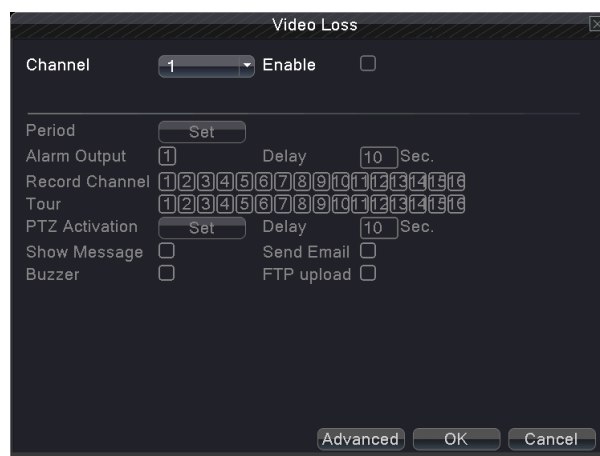


Picture 4.24 Video Blind

Set method: refer to Chapter 4.4.1. Motion Detect

#### Video Loss

When the equipment can not obtain the channel video signal, the video loss alarm is turned on and the linkage function is turned on.

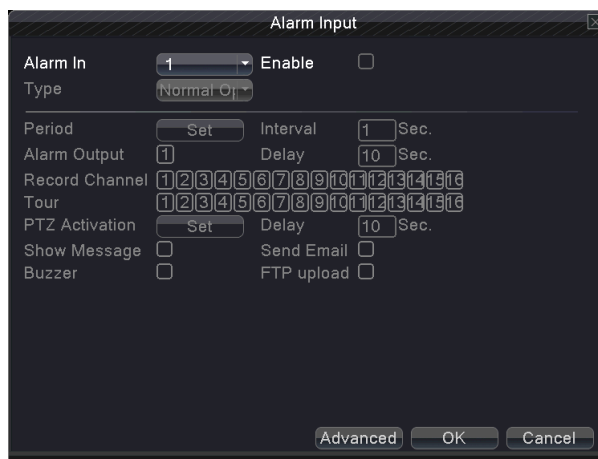


Picture 4.25 video loss

**Set method:** refer to Chapter 4.4.1. Motion Detect

### Alarm input

When the equipment obtains the external alarm signal, the alarm function is turned on.

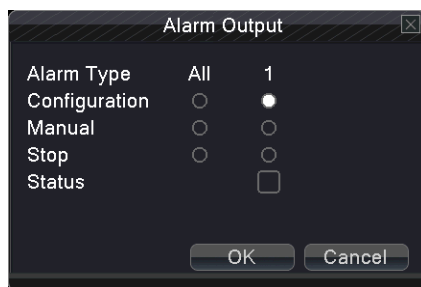


Picture 4.26 alarm input

**Set method:** refer to Chapter 4.4.1. Motion Detect

### Alarm output

Control alarm output state of all channels



Picture 4.27 alarm output

**Configuration:** Alarm is on according to the configuration.

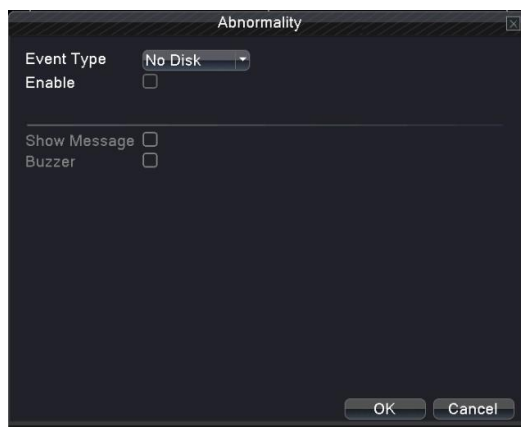
**Manual:** whatever state it is, the relative channel output alarm signal after choosing manual button

**Stop:** Click the stop button and the according channel stops alarming no matter the channel in any state.

**Status:** ☒ means this channel has alarm output, otherwise without.

### Abnormality

It will buzz and appear screen prompts once no disk, HDD wrong, no disk space, network cut, IP conflict etc. happens, which is convenient for customers to know DVR abnormality.



Picture 4.28 Abnormality

**Event Type:** Choose abnormality type, support five matters

**Enable:** Select ☒, enable these three settings

**Less than:** this item can be set only when matter type choose no disk space, set percent (1-99).

When HDD space reach this setting limitation, DVR will have cue as following two ways:

**Show Message:** Show message: pop up message frame on DVR screen

**Buzzer:** DVR will buzz when alarm occurs

### Switch (Some model without this function)

Customers can switch channel type according to their demands



Picture 4.29 Switch

**Note 1:** Different models have different channel type.

**2:** If needn't please don't switch channel type

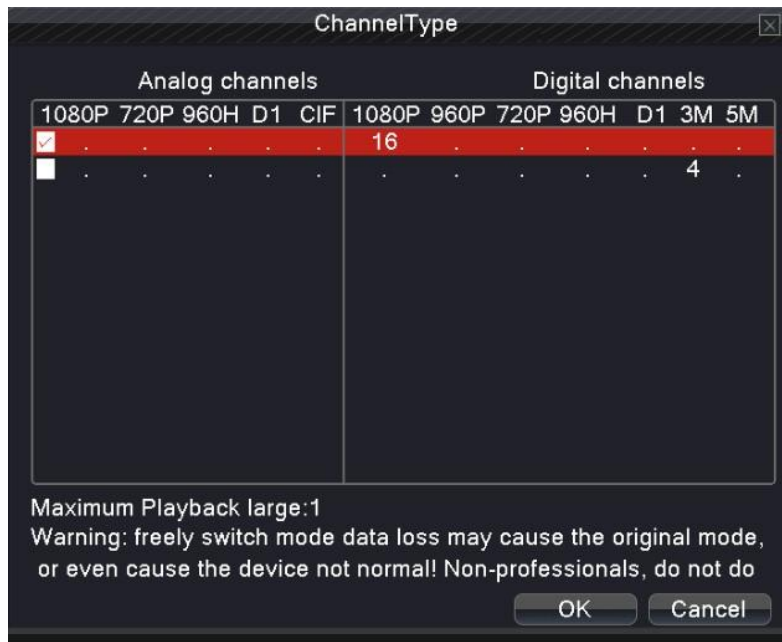
#### 【Channel Type】

Switch channel type(the following NVR mode for example)

Operating process as below:

1. Choose "Main Menu"→"Switch"→"Channel type"

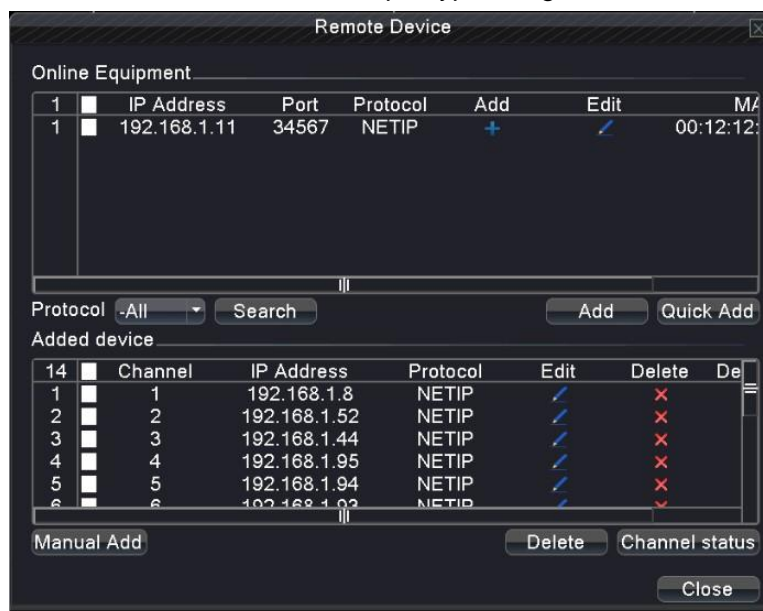
2. In channel type list, there are many channel type combination ways available (as picture 4.30); In digital channels, the numbers under resolutions means the maximum IP camera or other network device channels which can be connected under that resolution. Customers can choose any of the combination according to their demands. Click "OK" to finish channel type shift (needs restart when shifting)



Picture 4.30 Channel type

### 【Remote Device】

Used to bind signals of the channels which video input type is digital network HD signal, As picture 4.31.





Picture 4.31 Remote Device

**Network configuration list:** click search then shows that have added all network device name, type, IP address, remote channel information to that channel.

**Protocol:** Use ONVIF&NETIP protocol searching IP device on LAN.


**Search:** Search IP Device on LAN.

**Add:** add new IP device for this NVR channel, there are 3 ways for adding IP address;

- Click  in any channels to search the IP device and add it
- Click "Add" in "Online Equipment"
- Click  for related device to add IP device in "Online Equipment"

**One key add:** automatic add device by LAN IP , the ip address priority added by the last digit

**Modify IP:** Change the IP device IP address when it had been searched. as picture (4.32)


Click  to enter.

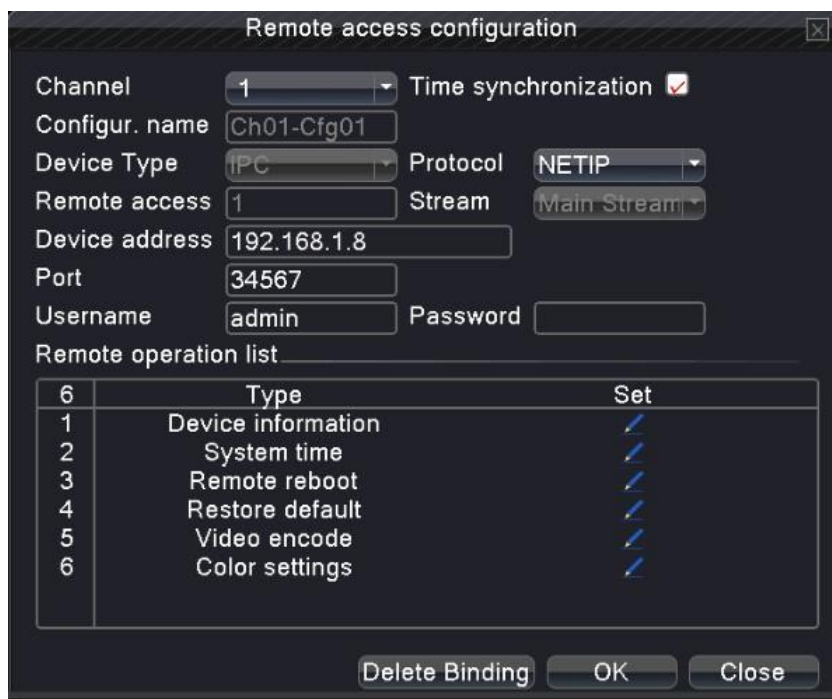








Picture 4.32 Modify IP

**Added device:** display added device at this NVR channel

**Manual Add:** manual input a IP device's IP, user name, password, protocol and IP port.

**Edit :** Click  to enter Remote access configuration, can change IPC parameters.(as picture 4.33)



|   | Type               | Set   |
|---|--------------------|---|
| 1 | Device information |  |
| 2 | System time        |  |
| 3 | Remote reboot      |  |
| 4 | Restore default    |  |
| 5 | Video encode       |  |
| 6 | Color settings     |  |

Picture 4.33 Remote access configuration

**Devive information:** display remote IP device's system version, release date, series



number.

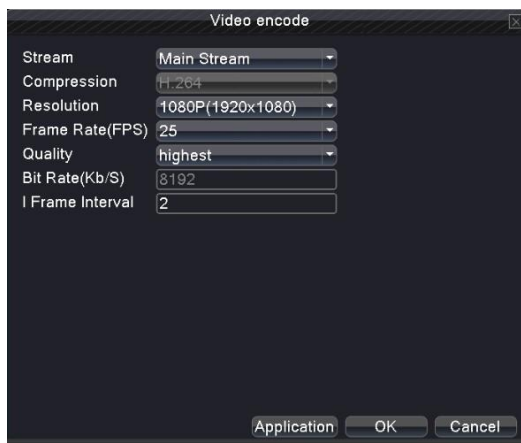
**System Time:** Modify remote IP device's time.

**Remote restart:** can restart remote IP device via local operation

**Default:** Restore remote IP device's parameters.

**Vedio encode:** can change IP device's stream, compression, frame rate, quality and so on as picture (4.34) .

**Image color:** can change remote IP device's color



Picture 4.34 Vedio encode

**Delete:** Click "Delete" or click



"X" to make IPC unbinding with the selected channel. **4.5.3**

**【Channel status】** Show the maximum resolution of all digital channels, connected signal resolution and connection status.

| Channel status |                 |                 |               |
|----------------|-----------------|-----------------|---------------|
| Channel        | Max. resolution | This Resolution | Connection St |
| D01            | 1080P           | 1080P           | Connected     |
| D02            | 1080P           | 960P            | Connected     |
| D03            | 1080P           | 720P            | Connected     |
| D04            | 1080P           | Unknown         | Not configur  |
| D05            | 1080P           | Unknown         | Not configur  |
| D06            | 1080P           | Unknown         | Not configur  |
| D07            | 1080P           | Unknown         | Not configur  |
| D08            | 1080P           | Unknown         | Not configur  |
| D09            | 1080P           | Unknown         | Not configur  |
| D10            | 1080P           | Unknown         | Not configur  |
| D11            | 1080P           | Unknown         | Not configur  |
| D12            | 1080P           | Unknown         | Not configur  |
| D13            | 1080P           | Unknown         | Not configur  |
| D14            | 1080P           | Unknown         | Not configur  |
| D15            | 1080P           | Unknown         | Not configur  |
| D16            | 1080P           | Unknown         | Not configur  |

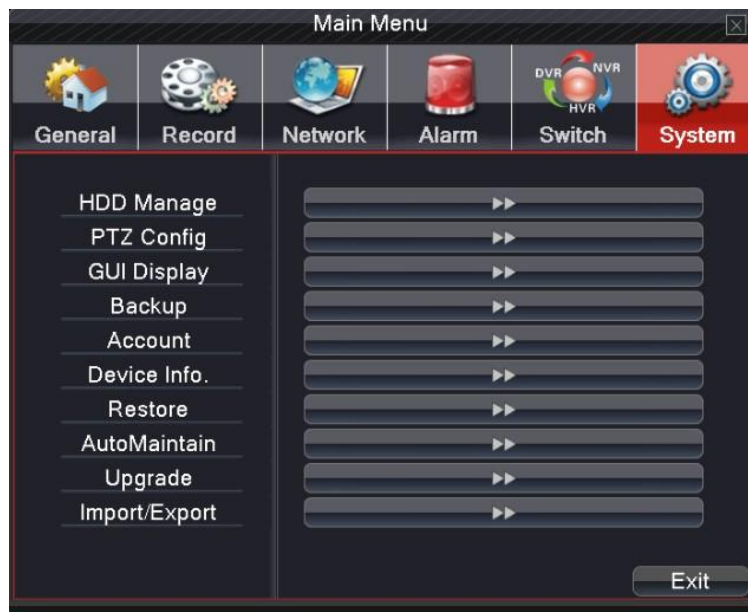
Picture 4.35 channel status

**Note:** binding the digital signal of channel, please ensure that the IP device resolution less or equal this digital channel maximum resolution, otherwise it can not view the IP device's image.

**Channel configuration:** change IP device's configuration.

## System management

Set the system parameters such as **HDD Manage**、**PTZ Config**、**GUI Display**、**Backup**、**Account**、**Device Info**、**Restore**、**Auto Maintain**、**Upgrade** and **Import/Export**.



Picture 4.36 System Management

### HDD Management

Configure and manage the hard disk.

The menu displays current hard disk information: hard disk number, input port, type, status and overall capability.

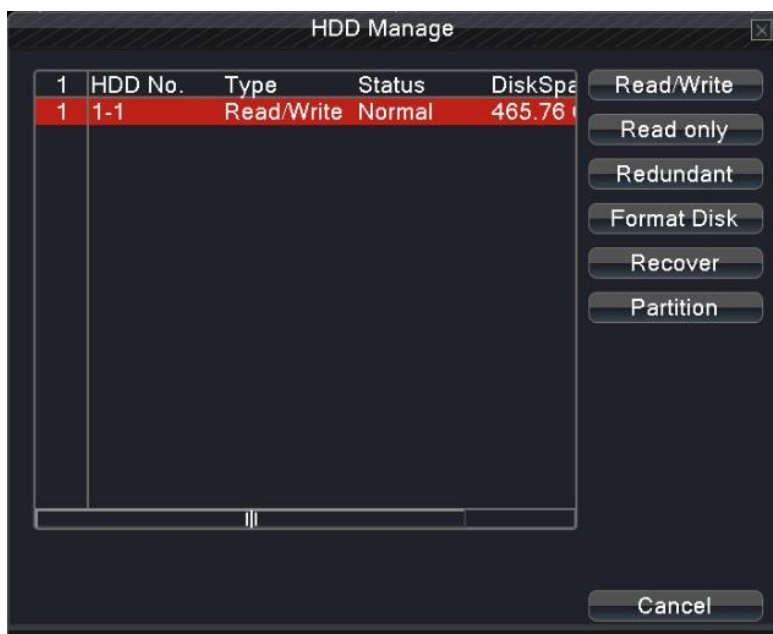
The HDD operation include: setup the write-read disk, read-only disk, redundant disk, hard disk format, resume default. Choose the hard disk and click the right function button to execute.

**Read/Write:** The equipment can read data and write data.

**Read only:** The equipment can read data but can not write data.

**Redundant:** Double backup the video files in the write-read disk.

**Format Disk:** All statics lose after format disk



Picture 4.37 HDD Manage

**PTZ Config**

Picture 4.38 PTZ Config

**Channel:** Choose the dome camera input channel.

**Protocol:** Choose the corresponding dome protocol. (PELCOD as an example)

**Address:** Set as the corresponding dome address. Default: 1.

**Baud rate:** Choose the corresponding dome baud rate length. You can control the PTZ and camera.  
Default: 115200.

**Date bit:** Include 5-8 options. Default: 8.

**Stop bit:** Include 2 options. Default: 1.

**Check:** Include odd check, even check, sign check, blank check. Default: void.

Note: parameters of protocol, address, baud rate should be consistent with relative PTZ or dome. Or PTZ and dome can be controlled.

**GUI Display**

**【output display】** setting the information in local preview: including time title, channel title.



Picture 4.39 GUI display

**Time title:** ☒ means the selective state. Display the system data and time in the surveillance window.

**Channel title:** ☒ means the selective state. Display the system channel number in the surveillance window.

**Recording status:** ☒ means the selective state. Display the system recording status in the surveillance window.

**Alarm status:** ☒ means the selective state. Display the system alarm status in the surveillance window.

**Deflick:** select ☒, enable this function.

## Backup

You can backup the video files to external storage through setup.

**Note:** The storage must be installed before the file backup. If the backup is terminated, the already copy files can be playback individually. If the backup is stop midway, the already copy files also can be playback individually.



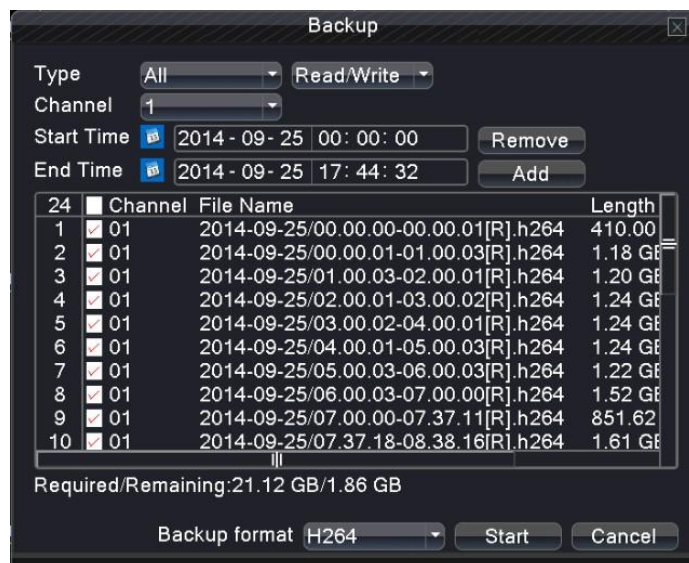
Picture 4.40 Backup

**Detect:** Detect the storage connected with the DVR such as hard disk or universal disk.

**Backup:** Click “backup” button and the dialog box is popped up as picture 4.41. You can choose the backup file according to the type, channel and time.

**Erase:** Choose the file to delete and click erasure to delete the file.

**Stop:** Stop the backup.



Picture 4.41 Backup

**Remove:** Clear the file information.

**Add:** Show the file information satisfying the set file attributes.

**Start/pause:** Click the play button to start the backup and click the pause button to stop the backup.

**Cancel:** During backup you can exit the page layout to carry out other functions.

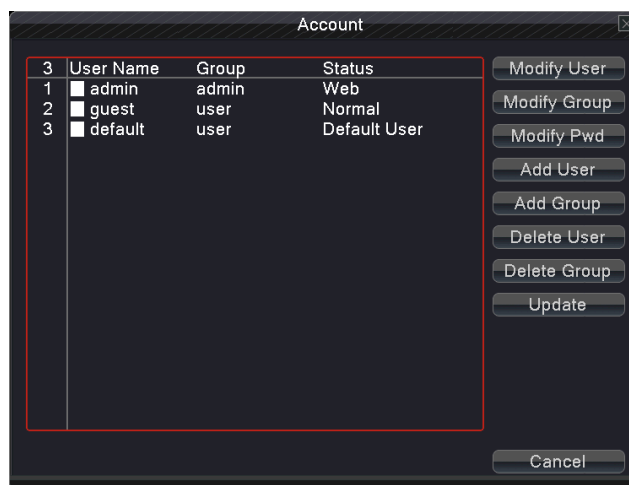
**Backup format:** H.264 and AVI are optional

## Account

Manage the user purview.

**Note:** 1. You can add or delete the user team according to user definition. The factory setup include: user\admin. You can set the team as you wish. The user can appoint the purview in the team.

2. The user management include: team/ user. The team and the user name can not be the same. Each user only belongs to one team.



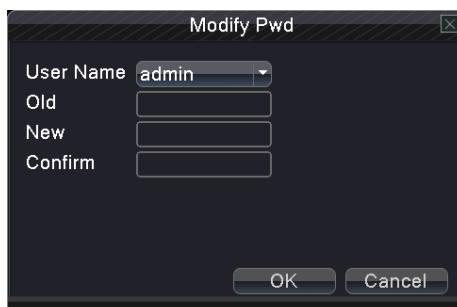
Picture 4.42 user management

**Modify user:** Modify the existed user attribute.

**Modify team:** Modify the existed team attribute.

**Modify password:** Modify the user password. You can set 1-6 bit password. The blank ahead or behind the char string is invalid. The middle blank in the char string is valid.

**Note:** The user who possess the user control purview can modify his/her own or other user password



Picture 4.43 modify password

**Add user:** Add a user in the team and set the user purview. Enter the menu interface and input the user name and password. Choose the team and choose whether cover using the user. Cover using means that the account can be used by multiple users at the same time. Once choose the team the user purview is the subclass of the team. We recommend that the common user's purview is lower than the advanced user.



Picture 4.44 add user

**Add Group:** Add a user Group and set the function authority ,show as 4.45, include shut down the equipment, real time surveillance, playback, recording setup, video file backup and so on.



Picture 4.45 Add Group

**Delete user :** Delete the current user. Choose the user which need to delete .Click the delete user button. The factory default user cannot be deleted （Such as :Admin、 User、 Default） .

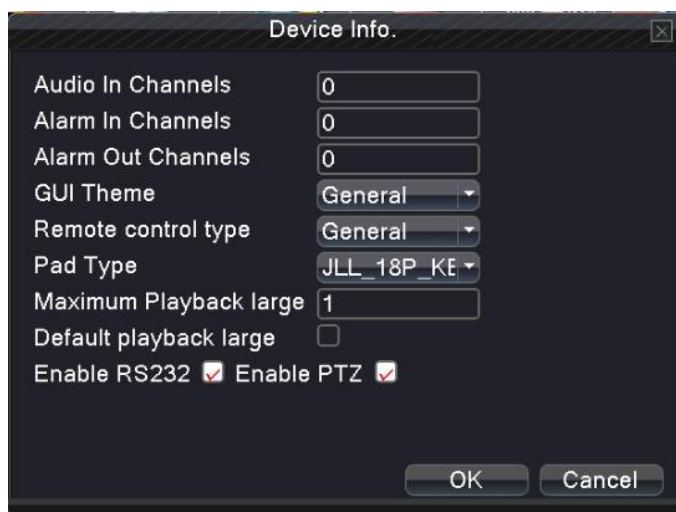
**Delete Group :** Delete the current team （there is no need to ensure that the team users ）.In Picture 4.42, Click the Delete Group button, In Picture 4.46,select the need to remove the team, click the delete button.



Picture 4.46 Delete Group

## Device Info

Provide information of device port.



Picture 4.47 Device Info

## Restore

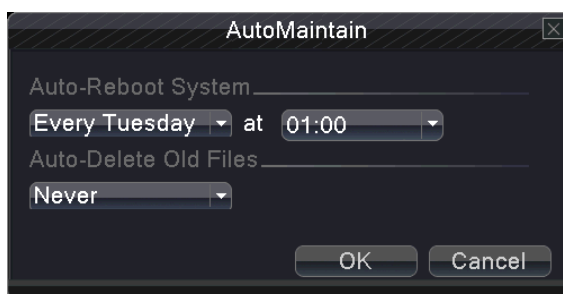
The system resume to the default setup. You can choose the items according to the menu.



Picture 4.48 Restore

## Auto Maintain

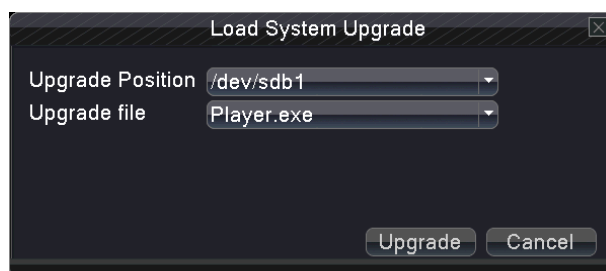
Users can set the device to automatically reboot the system and automatically delete the file set time period.



Picture 4.49 Auto Maintain

## Upgrade

To upgrade device software system



Picture 4.50 Upgrade

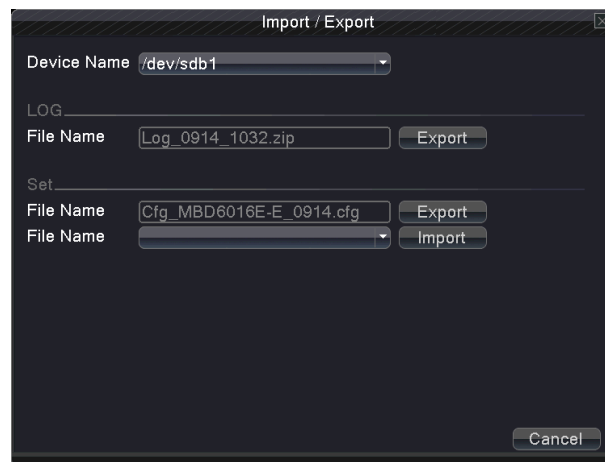
**Upgrade:** choose USB interface.

**Upgrade file:** choose the file which need upgraded



**Import/Export (Some models without this feature)**

Import/export log information and system parameters.



Picture 4.51 Import/Export

**Device name:** choose USB interface

**File name:** choose the importing file

## 5. Network access settings and cloud technology introduced

### LAN access settings

#### 1、 Network

##### connection

1. Before the WEB operation, need to connect this device with the network.
2. Enter DVR “main menu” →→“network” to set correct IP address, subnet mask and gateway port default (the IP segment of the device should be the same with PC computer, if disconnected, please check device IP was connected successfully.)

#### 2、 Login

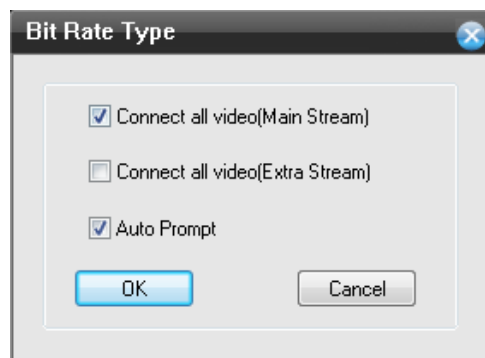
**Step 1 :** Open a web browser; enter the IP address of the login device in the address bar. As the device with IP address 192.168.1.10, HTTP port 80 for example, then enter: http://192.168.1.10 in the address bar and connections. If HTTP port is not 80, such as 81, then need to add port when viewing, as: http://192.168.1.10:81

**Note:** If the PC connects the device at first time, when open system, the security warning will pop up whether to accept the WEB control web control , please choose to accept the user, the system will automatically identify the installation. (If the system is prohibited to download, please confirm whether you have other prohibited controls to download plug-ins, and reduce the IE security level, permit unsigned plug-in to operate. Connection as shown below will pop up after the success of the interface.

**Step 2** : Login. Enter the user name and password, the company factory default administrator user name admin, password is blank, Picture 5.1.

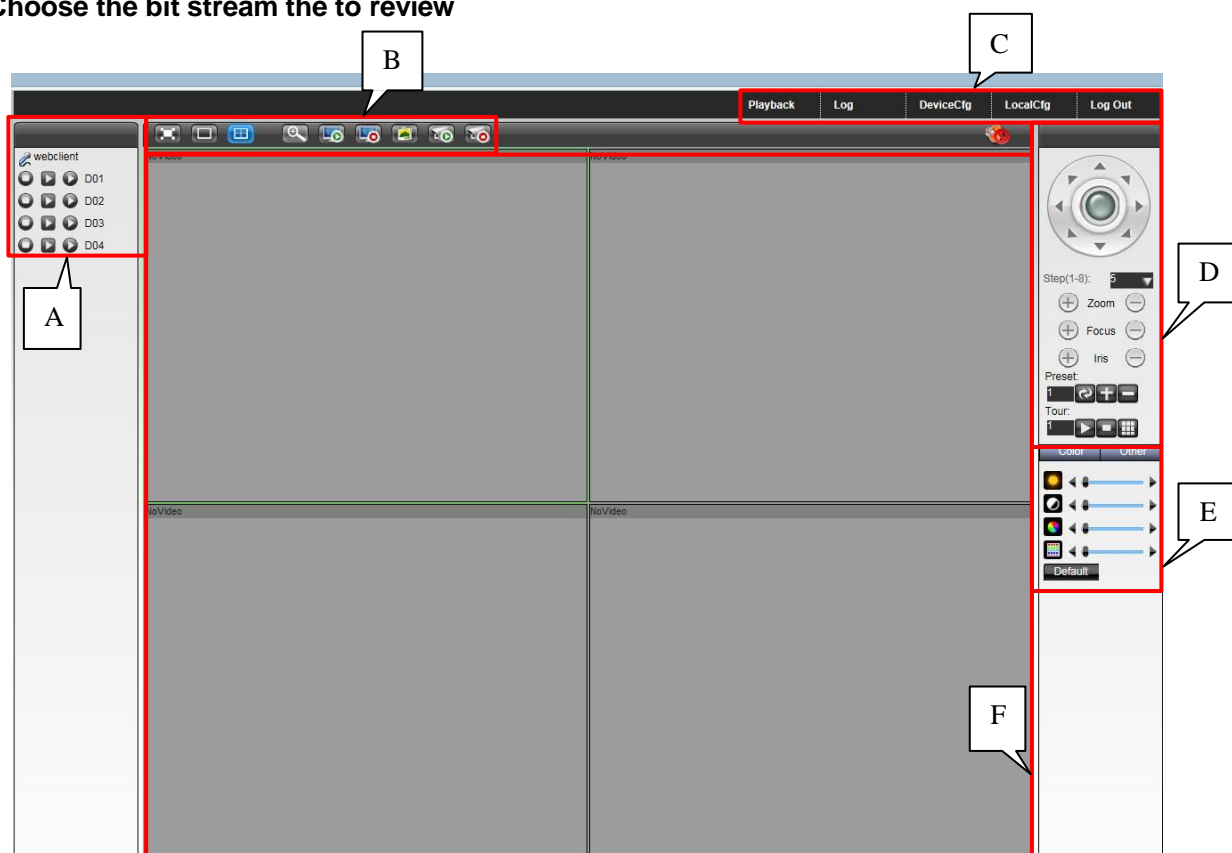


Picture 5.1 Login interface



Picture 5.2 Stream selection

### 3、Choose the bit stream the to review



Picture5.3 IE Access Interface

#### A District

**Client Video:** Available on the specified channel for video、Cancel recording operation.

**Auxiliary Stream:** Click to auxiliary stream for a particular channel monitor, click again on the close monitoring.

**Main Stream:** Click on a particular channel will be the main stream for monitoring, click again on the close monitoring.

#### **B District**

**Full Screen :** Full screen monitor interface.

**Single screen:** Set the screen for single channel monitoring state.

**Four screen:** Set the screen to monitor state 4 channels.

**Zoom:** Click to zoom button, drag your mouse in the available screen area of any size, in the selected area, click the left mouse button, you can zoom in this area of the screen, click the right mouse button to exit the enlarged screen.

**Full Screen play:** Open all channels monitored

**Close Full Screen:** Close all channels monitored

**Screenshot:** Grab the current monitor channel screen image and save

**Full Channel Video:** Open all current monitored video channel

**Close Full Channel Video:** Close all current monitor video channel

#### **C District**

**Playback:** Playback local video files, and video recorder inside the hard disk video files.

**Log:** display the current alarm log and log operation of the equipment.

**Device:** to set up for the various parameters of the device.

**Client Configuration:** IE can address the client's video storage, as well as external alarm, and so do the settings.

**Exit:** Exit back to the login screen.

**D District:** PTZ Control, Can control PTZ, setting between the preset point, cruise, etc.

**E District:** Adjust the information such as the color of the currently selected channel.

**F District:** Monitor display area

## **Cloud technology functions and using introduction**

Cloud technology is the latest network remote access technology; with cloud technology, without any complex network settings to achieve remote access easily.

### **A、Main features of cloud technology**

One step to realize DVR Internet, operating easily and conveniently. No need to have professional network knowledge, DDNS and port mapping; instantly connect just use and review

### **B、WAN remote access & Cloud technology use**

1. Open web browser, enter cloud access website (View cloud server address ways: Boot and select "desktop shortcut menu" "System Information", "Version", "cloud server address").

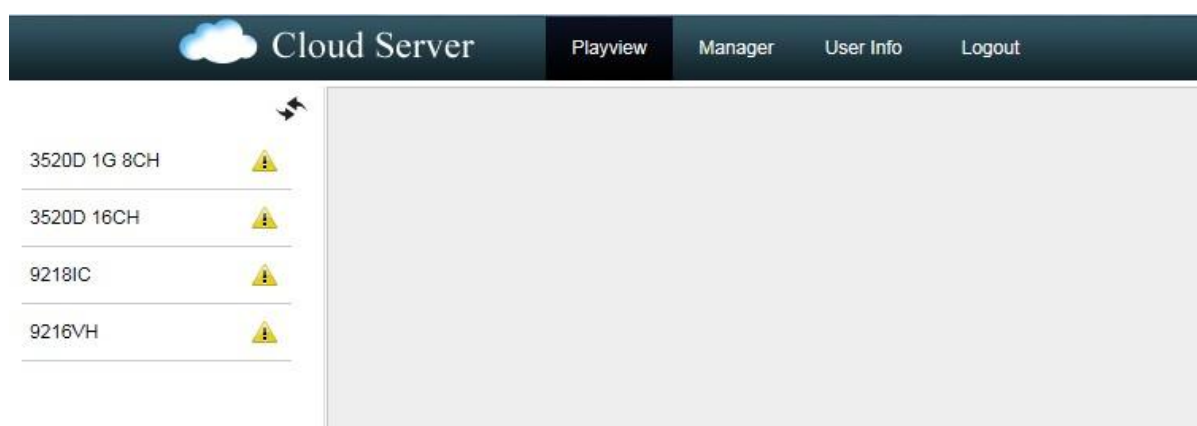
**There are two ways to remote control the device with cloud technology:**

2. User: need to register a user name, and then enter the user name and password to login; need to add the device after login (enter "device management" page can finish adding device); after finish adding device, the added device will appear in the left column of "my devices".; Click on the current equipment for preview, playback, configuration and operation.



Picture 5.4 login

According to the user access, you can add multiple devices, implemented on a visit to multiple devices at the same time (Picture5.5)



Picture 5.5 Device Preview Interface

1. Device: enter Serial No of DVR can realize remote access (way to get Serial No: start up and choose "desktop shortcut menu" → "info" → "version" → "Serial No") After entering the reference to the "LAN Access Settings".

### Client CMS software operation

CMS software is a powerful central control software; Distributed architecture, set multiple windows, multi-user, multi-language, voice intercom, alarm centers and other functions into one, the software interface is friendly, easy to operate, can be easily carried out various functions.

Please accessory bag disc removed in CD copies of supporting tools in CMS software installation package to install. After the local PC installation, double-click to open the CMS login screen, the default is no password can also be set up client login password, either centralized management operations after landing. (Note: This password is the password for the CMS client, non-NVR login password).

For details, refer to the help information disc inside "CMS Manual" or CMS software.

## Mobile Phone Monitoring

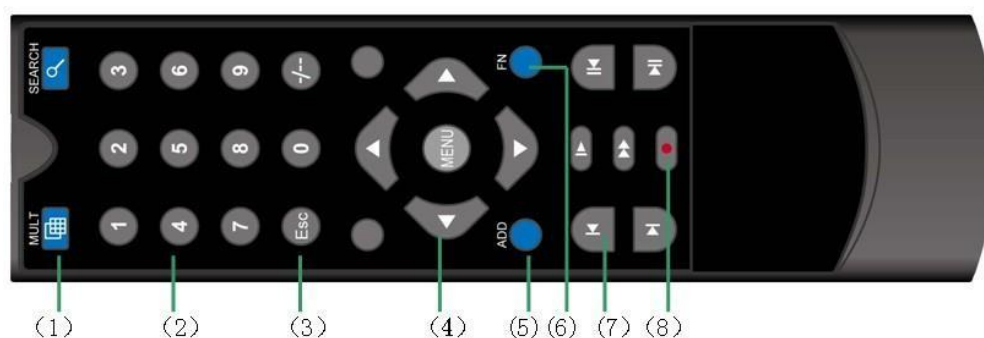
This device supports the user to use the phone for remote video surveillance operation(mobile phone monitoring. Support channel switching and multi-channel monitoring simultaneously),Convenient and Simple Use .

Download mobile phone monitoring software in the following ways:

1. Kit CD inside Chinese\matching tools \Mobile Phone Monitoring find the corresponding installation package inside the installation
2. Android users can open Google play store, Search ViewEasyV2. Iphone users can open App Store, Search ViewEasyV2.Download and install.

For details, refer to the help information phone monitoring software.

## Appendix 1. Remote controller operation



| Serial number | Name                | Function  |
|---------------|---------------------|---|
| 1             | Multi-window button | Same function as Multi-window button in the front panel |
| 2             | Numeric button      | Code input/number input/channel switch                  |
| 3             | 【Esc】               | Same function as 【Esc】 button in the front panel        |
| 4             | Direction button    | Same function as direction button in the front panel    |
| 5             | ADD                 | Input the number of DVR to control it                   |
| 6             | FN                  | Assistant function                                      |
| 7             | Record control      | Control the record                                      |
| 8             | Record mode         | Same function as “Record mode”                          |

## Appendix 2. Mouse operation

**\* Take right hand as an example \***

The mouse in USB connection is supportive.

| Operation           | Function   |
|---------------------|--|
| Double left click   | Double click one item in the file list to playback the video<br>Double click the playback video to zoom in or out the screen |
|                     | Double click the channel to make it full screen display<br>double click again to resume the multi-window display             |
| Left click          | Choose the according function in the menu  |
| Right click         | Pop desktop shortcut menu in preview state   |
|                     | Current shortcut menu in the menu  |
| Press middle button | Add or subtract number in the number setting   |
|                     | Switch the items in the combo box  |
|                     | Page up or down in the list  |
|                     | In the preview and playback mode, turn the wheel to zoom in.   |
| Move mouse          | Choose the widget or move the item in the widget   |
| Drag mouse          | Set the motion detect area   |
|                     | Set the cover area   |