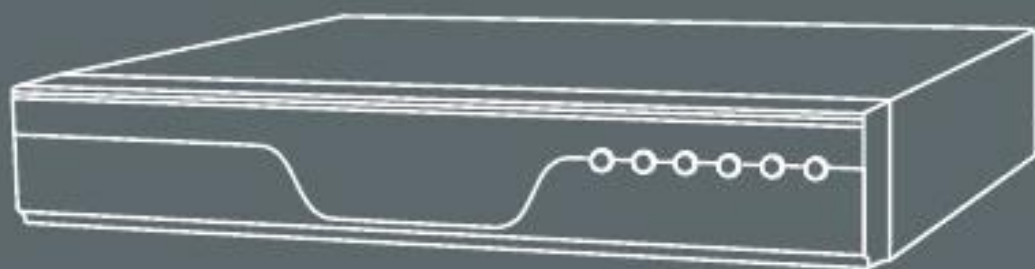


User Manual



AHD DVR

Important Safeguards and Warnings

- Do not place the heavy object on the DVR.
- Do not let any solid or liquid fall into or infiltrate the DVR.
- 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 DVR by yourself. Do not replace the electronic components by yourself.

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1. Production Introduction

1.1 Product Overview

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

1.2 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).

- . This device can receive multi-type signal input.

2. Open-package Check, Products Understanding and Cable Connection

2.1 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.

2.2 Understanding of Front Panel

Front panel button operation function table.

Note: The button descriptions are only for reference; please regard the actual product as the truth.

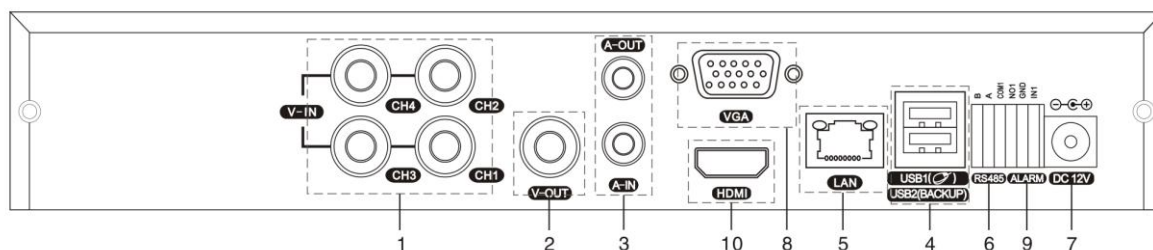
No.	Button name	Mark	Function
1	Shift function button	SHIFT	Shift in the number button, character button and other function button during the user under input state
2	Direction button	V ^	Remove the cursor
			Add or decrease number during the user edit state
			Change the setting in the menu
			Surveillance 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 button	ENTER	Confirm
			Enter main menu or next grade menu
3	Cancel button	ESC	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	REC	Start/stop the video recording manually. With the direction button choose the channel in the recording control menu
11	Recording search button	SEARCH	Search recording files
12	PTZ control button	PTZ	Enter PTZ setting, PTZ control

No.	Button name	Mark	Function
13	USB interface	USB	Connect USB device. Eg: USB flash drive, mouse etc.
14	Power switch button	POWER	Power switch button
15	Menu Switch	FN	Switch back and forth to the main menu
16	Remote controller receiver	IR	Receiving remote control signal
17	HDD indicator light	HDD	HDD is during working state if lighted
18	HDD information button	INFO	Check HDD information, state
19	Alarm indicator light		Trigger alarm if lighted
20	Pause button	STOP	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	BACKUP	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

2.3 Understanding of 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.



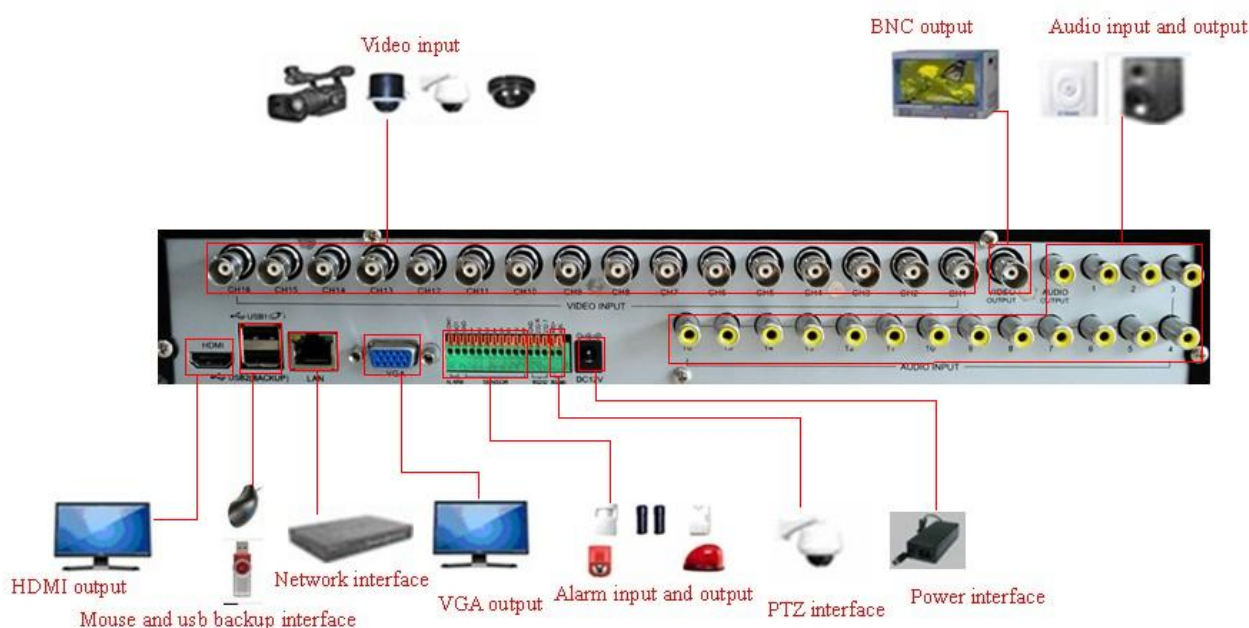
Picture 2.1

- | | | | |
|------------------------------|----------------------------|-------------------------------|-------------------|
| (1) Video input | (2) Video output | (3) Audio input/ audio output | (4) USB interface |
| (5) Network interface | (6) RS-485 interface video | (7) Power jack | (8) VGA output |
| (9) Alarm input/alarm output | | (10) HDMI interface | |

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.

2.4 Installation Connections Sketch Map

Take 16CH DVR as an example; please regard the actual product as the truth.

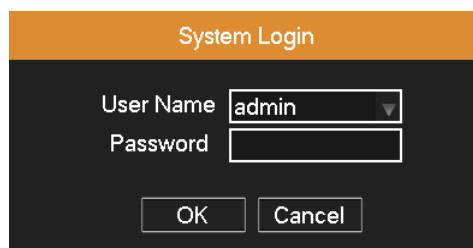


Picture 2.2

3. Basic Operation

3.1 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 has no PW. **Admin** is 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 three 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.

3.2 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

Table 3.1 Preview Icons

3.3 Desktop Shortcut Menu

In preview mode you can right click mouse to get a desktop shortcut menu, as shown in picture 3.2. The menu includes: **Main Menu, QuickPlay, Record Mode, PTZ, Color Setting, Output Adjust, System Info, Close System, View 1, View 4 and Exit Menu.**

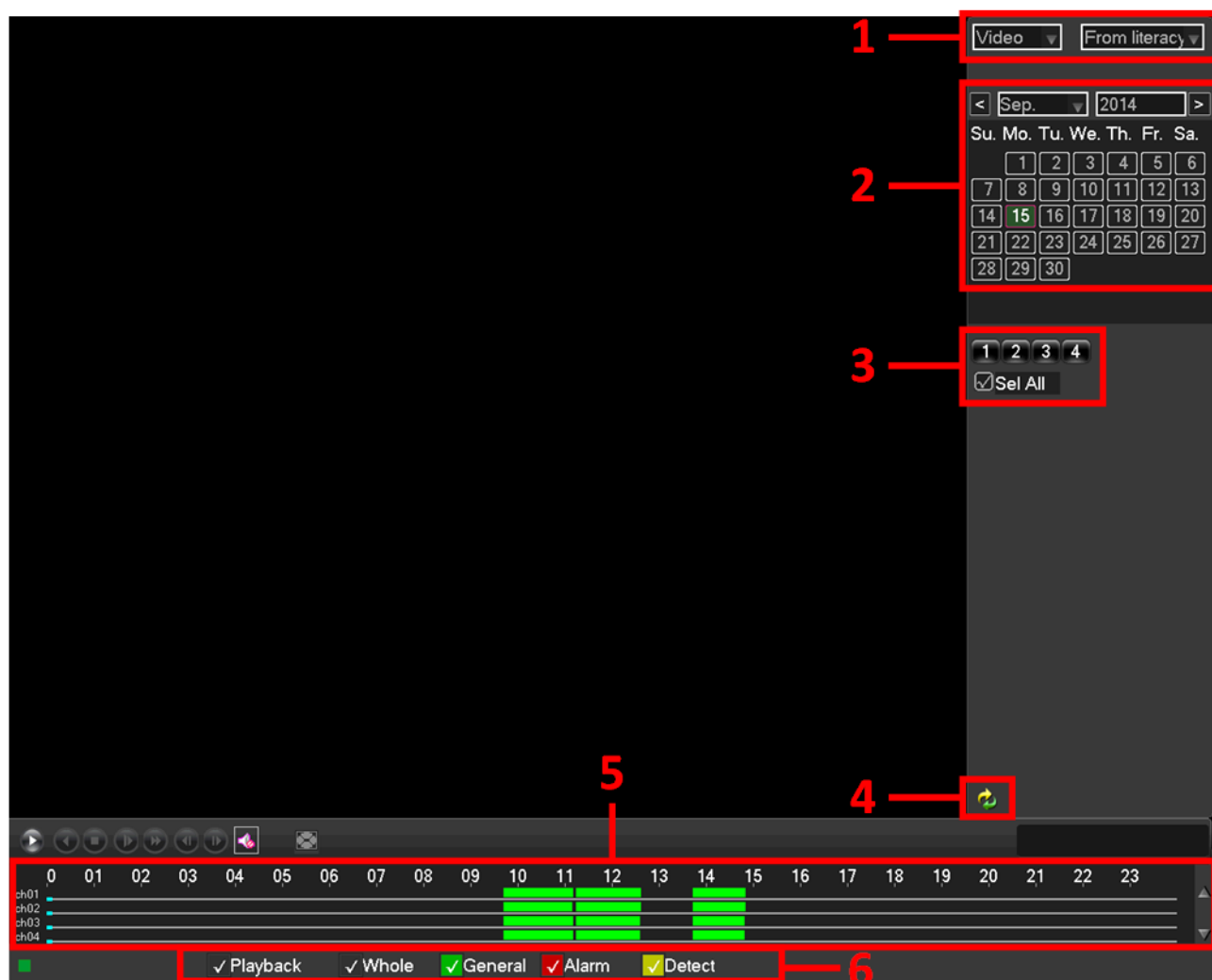


Picture 3.2 Desktop Shortcut Menu

3.3.1 QuickPlay

Select "Desktop Shortcut Menu"→"QuickPlay", Play the video files in the hard disk.

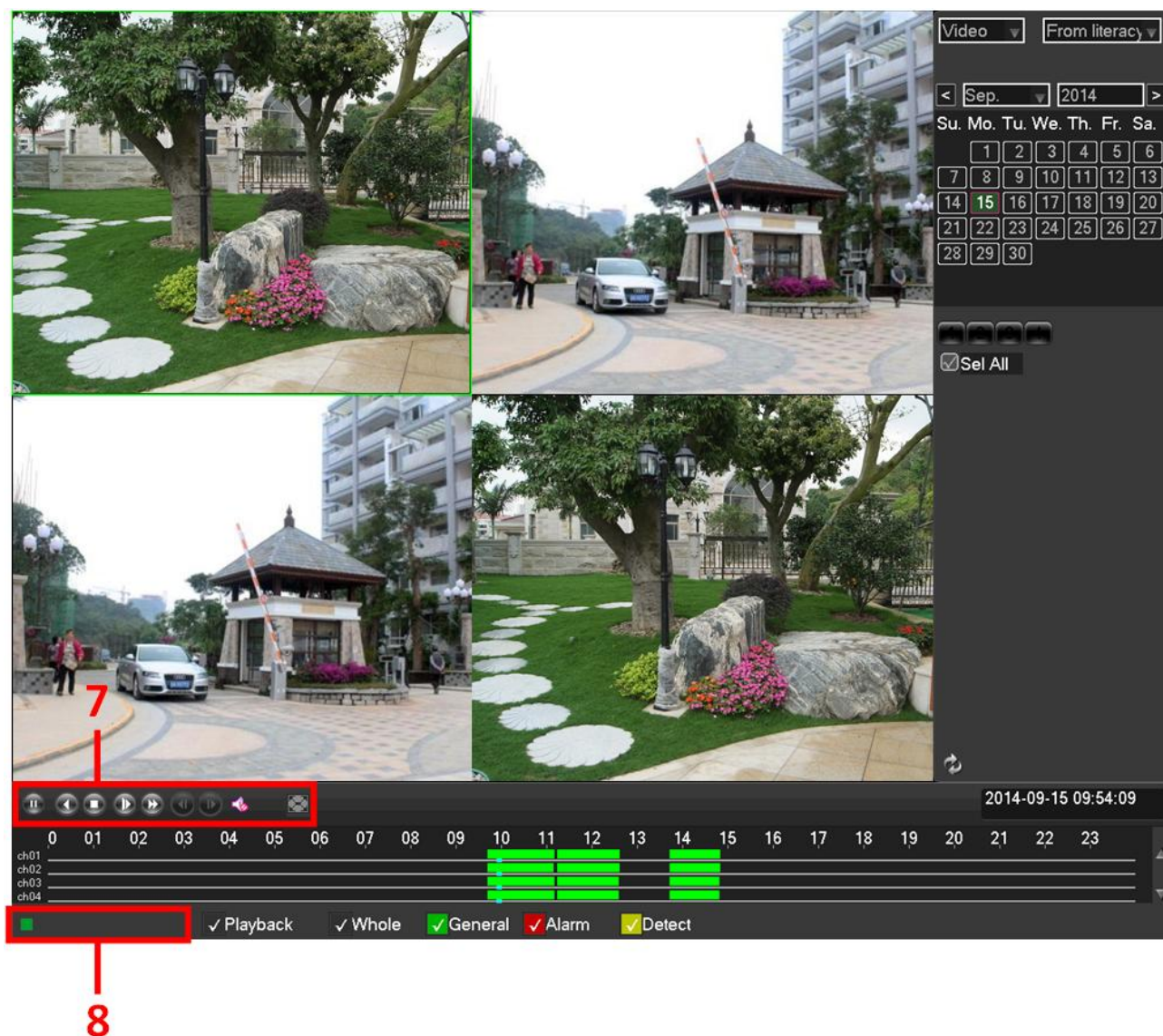
Note: The hard disk that saves the video files must be set as read-write or read-only state.



Picture 3.3 Playback

- | | | |
|-------------------------|------------------------------|-------------------------------|
| 1. HDD Switch | 2. Recording Search Calendar | 3. Playback Channel Selection |
| 4. Playback Page Switch | 5. Playback Time Selection | 6. Playback File Type |

Select a HDD, a certain date in the calendar, and the channels which need to search video, set the recording type, tick off "Playback" to realize multi-channel playback synchronously, find the playback time in the Playback Time Selection and double click it.



Picture 3.4

7. Playback Control Keys

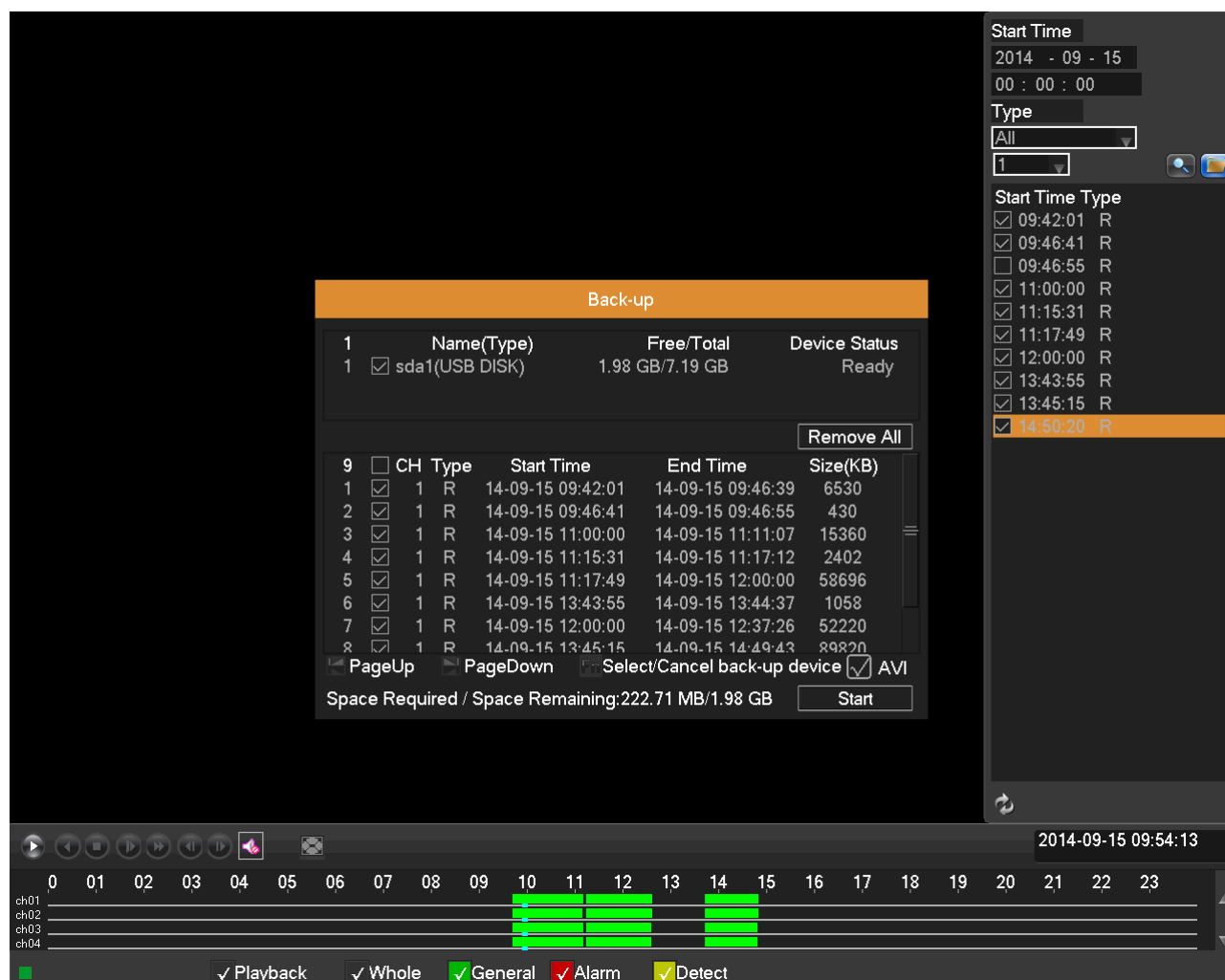
8. Operation hint: Display the function of the cursor place.

Button	Function	Button	Function
	Play/Pause		Backward
	Stop		Slow play
	Fast play		Previous frame
	Next frame		Open Sound / Mute
	Full screen		

Table 3.2 Playback control key list

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

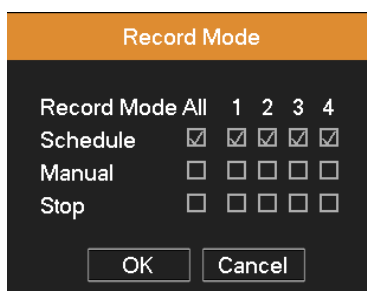
Click Page Switch button , select the file's start time, type and channel, click Search button  to show the eligible file information in the video file list, then select the files and click Backup button  to pop up the Back-up window. Select a backup device and the files, click "Start" button to back up the selected files.



Picture 3.5

3.3.2 Record Mode

Please check current channel status: ☒ means it is in recording status. (Take 4CH DVR for example)



Picture 3.6 record mode

Schedule: It records according to the parameters in “Main Menu” → “Record Set” → “Record Plan”.

Manual: Click Manual button and the corresponding channels are recording no matter the channel in any state.

Stop: Click Stop button and the corresponding channels stop recording no matter the channel in any state.

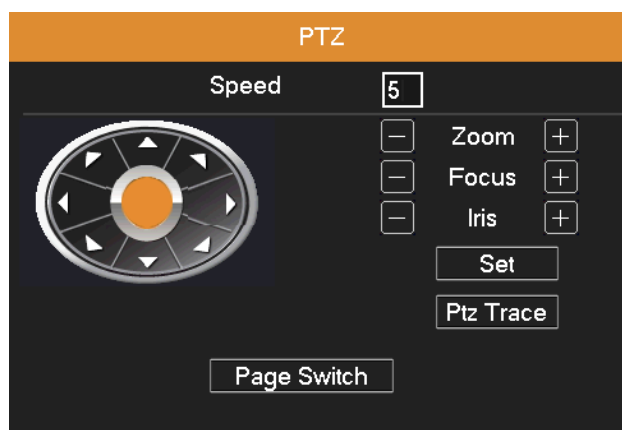
3.3.3 PTZ Control

Operation interface is as followed. The functions include: PTZ direction control, step, zoom, focus, iris, and set up trace, preset, tour, pattern, auto scan, auto pan 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” to set the PTZ parameters.

3. The PTZ functions are decided by the PTZ protocols.



Picture 3.7 PTZ Control

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

Direction control: Control the PTZ rotation. 8 directions control is supportive. (4 directions in Front panel is supportive).

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

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

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

PTZ Trace: To full-screen show the channel image. Press left mouse and control PTZ to rotate orientation. Press left mouse and then rotate the mouse to adjust the zoom multiple of camera.

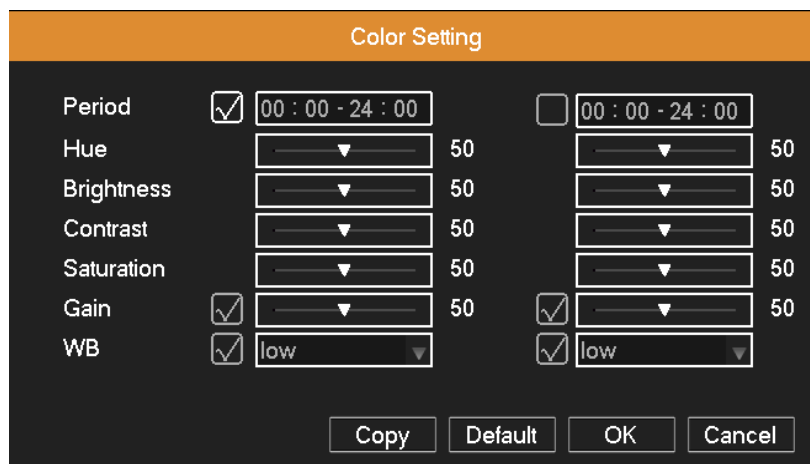
Set: Enter the function operation menu.

Page Switch: Switch between different windows.

3.3.4 Color Setting

You can use the desktop shortcut menu and enter the Color Setting interface to set the selective image parameters.

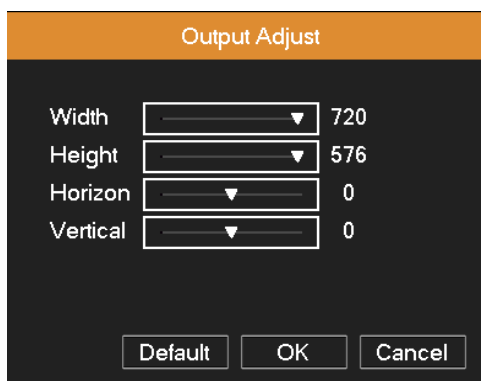
The image parameters include: hue, brightness, contrast, saturation. You can set different parameters at different time sections.



Picture 3.8 Color Setting

3.3.5 Output Adjust

Adjust output area parameters (some models with this function only for CVBS output).



Picture 3.9 Output adjust

3.3.6 Version Info

System Information menu items include: **State**, **HDD Info**, **Log**, **BPS**, **Version**, **Online Users**.

3.3.6.1 State

Display the network state: DHCP, IP address, subnet mask, gateway, DNS server, PPPOE and so on.

State

DHCP State :

Enable IP filtering? NO

Sender IP Address 0 . 0 . 0 . 0

Subnet Mask 0 . 0 . 0 . 0

Gateway 0 . 0 . 0 . 0

First DNS Server 0 . 0 . 0 . 0

Alternate DNS Server 0 . 0 . 0 . 0

PPPOE State:

Enable IP filtering? NO

Sender IP Address 0 . 0 . 0 . 0

OK

Picture 3.10 State

3.3.6.2 HDD Info

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

HDD Info

1*	Type	Total Space	Free	Status
All ☐	-	465.74 GB	409.28 GB	-
1* ☒	ead/Write	465.74 GB	409.28 GB	Normal

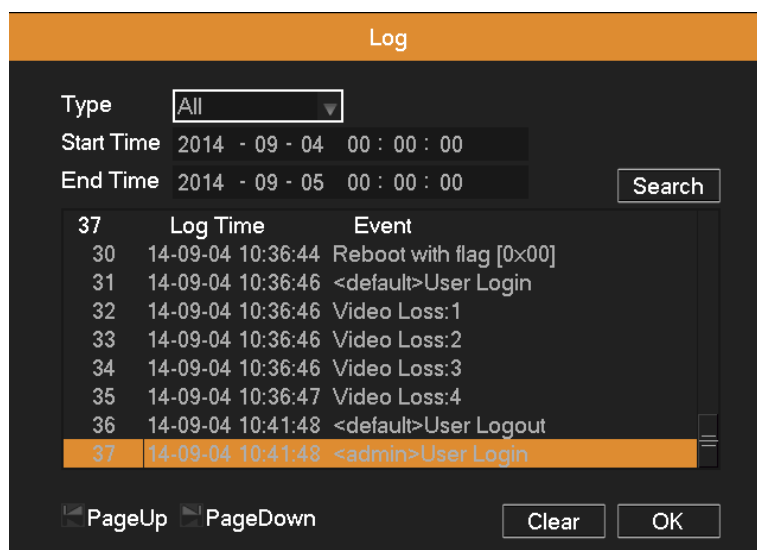
Cancel

Picture 3.11 Hard Disk Information

3.3.6.3 LOG

Look up system log according to the set mode.

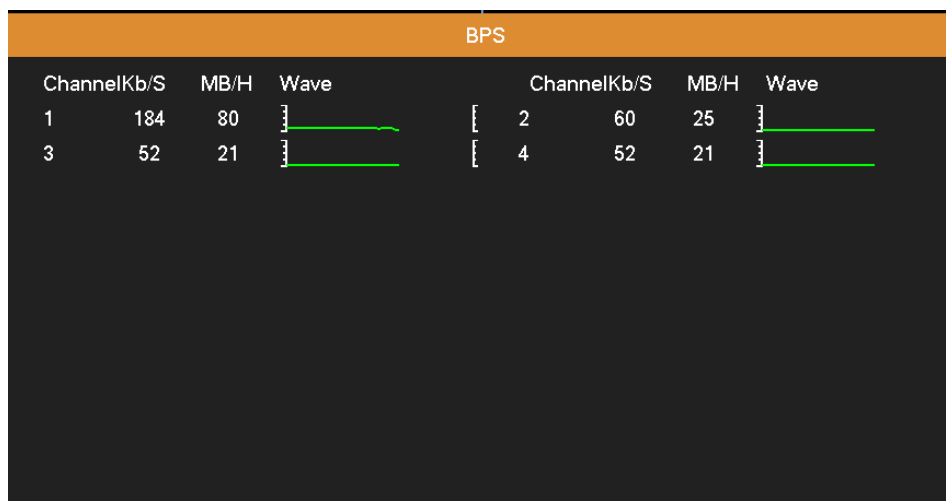
Log information include: system operation, configuration operation, data management, alarm affair, recording operation, user management and so on. Set the time section to look up and click Search button. The log information will display as a list. Press **Page Up** or **Page Down** button to look up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



Picture 3.12 Log Information

3.3.6.4 BPS

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

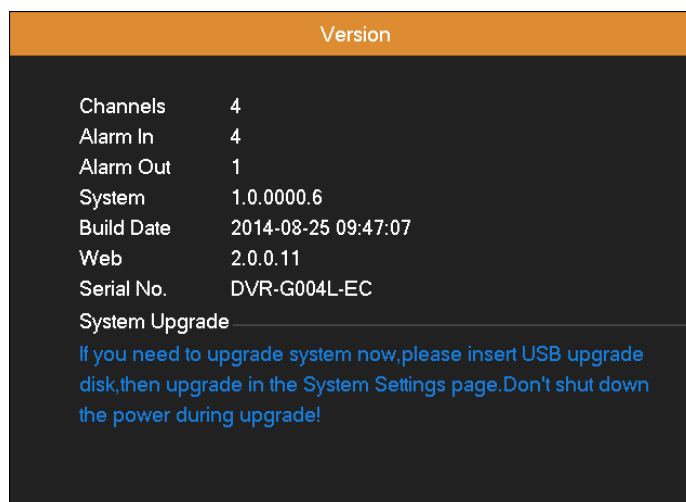


Picture 3.13 Code Stream Statistics

3.3.6.5 Version

Display the basic information such as hardware information, software version, issue data, SerialNo and so on.

Note: 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.

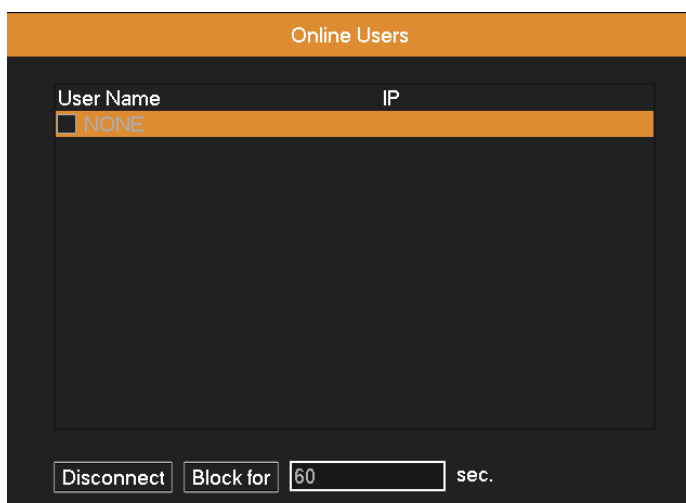


Picture 3.14 Edition Information

3.3.6.6 Online Users

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 3.15 Online User.

3.3.7 Close System

Logout, shutdown the system or reboot up.

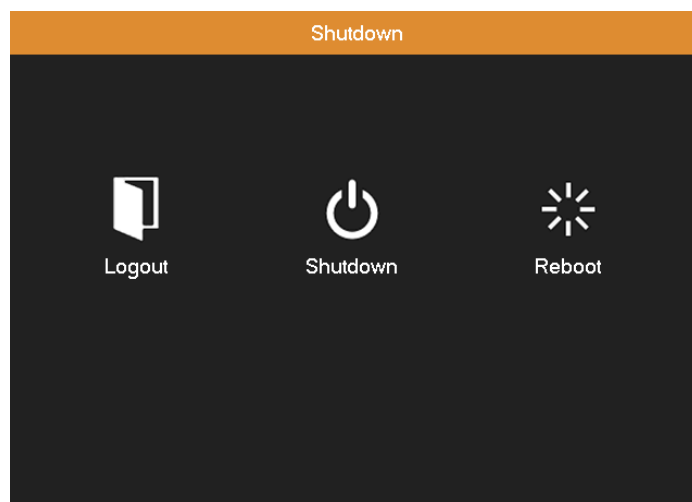
Logout: Quit the menu. Offer the password for next entrance.

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

When press the shut down button, there is a schedule hint. After three seconds, the system is shut down.

Midway cancel is of no effect.

Reboot: Quit the system. Reboot up the system.



Picture 3.16 shutdown

4. Main Menu

When a user logs in to the system, right click in any place, the shortcut menu will appear at the bottom of the screen, then 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.

4.1 Quick Setting

Language: Choose related operating language.

Video Standard: Set DVR's video system (PAL or NTSC are optional).

Resolution: Set output resolution.

System Time: Set DVR's current system date & time, time format, etc.

HDD Full: Select Stop Record: when the hard drive is full, stop recording.

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

DVR No: Using it in this situation would mean to control many DVRs. Only click "ADD" on remote control and enter local number, the related DVR can respond.

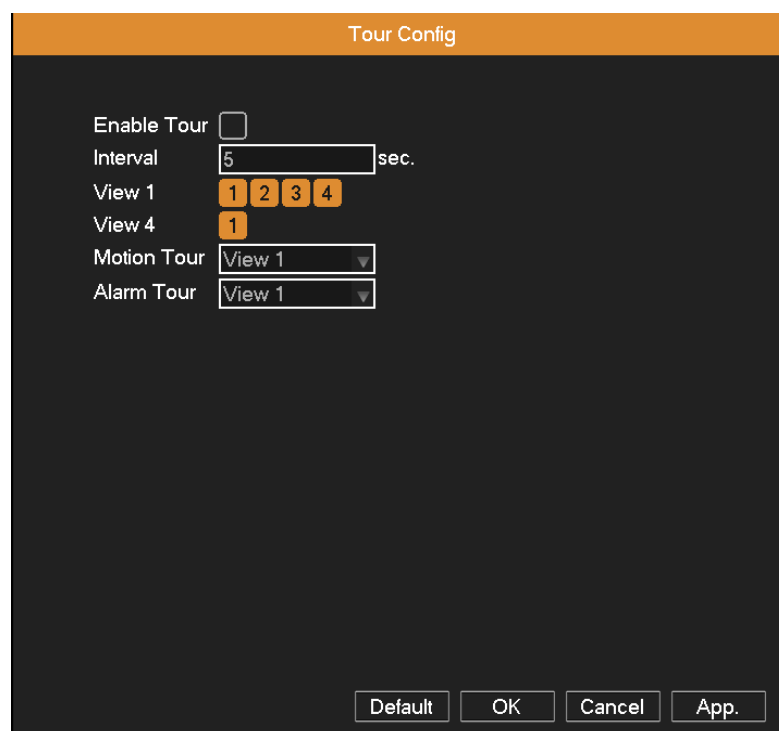
When Local No is "0", it will response the same series DVR's operation.

Transparency: Adjust the transparency of operating menu.

Auto Logout: If there is no any operation within the specified period, the device will automatically log out and return to login interface.

Pack Duration: Set the time length of each video file. "60 minutes" is default value (A maximum of 90 minutes).

Tour: Set screen tour display, ☒ shows tour was opened. Select the display mode and channel combination, set interval time for a certain dwell picture switching to next dwell picture.



Picture 4.2 Tour setting

4.2 Record Set

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

Set DVR'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 its recording parameters.

Set: Recording parameter (main stream) and network parameter (extra stream).

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.

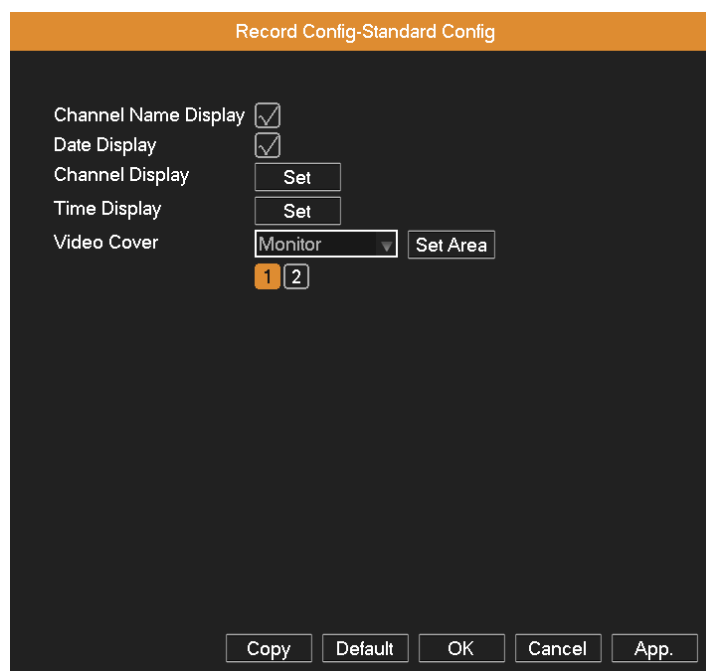
Bit Rate Control: Constant bit rate (CBR) or variable bit rate (VBR) which means recording stream changes automatically according to image changes.

Quality: Adjust the video quality, six grades are optional.

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

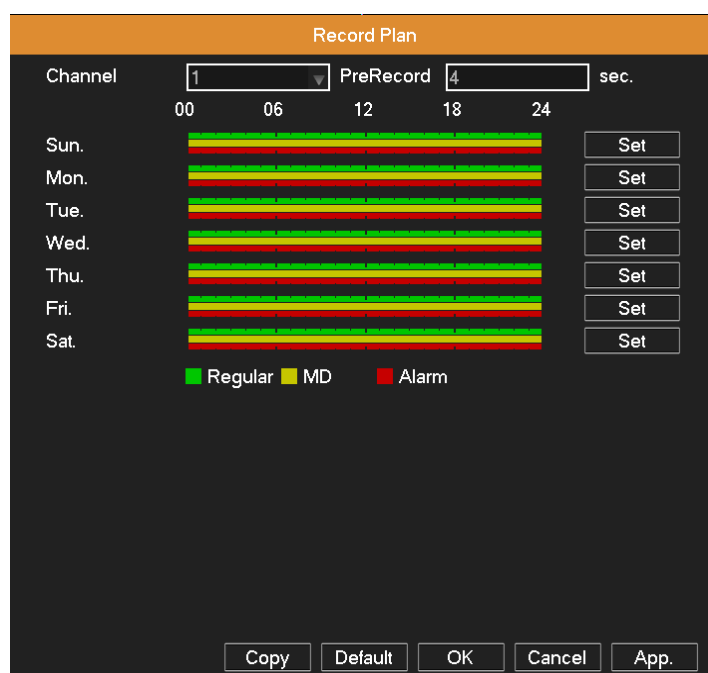
recording quality and occupies less HDD capacity.

Video Overlay: Set whether to display channel name, time and date on screen overlay, and adjust the position of time title and channel title on screen. Select the monitor and click Set Area button to enter relative channel, user can choose the size of region overlay, each channel can maximum set 2 regions (the video output is black of the covered region).



Picture 4.4 Video Overlay

Record Plan: Set DVR's recording plan and trigger mode. The column means the seven days of a week from Monday to Sunday; the row means 24 hours of a day



Picture 4.5 Recording Plan

Channel: Choose the corresponding channel number to set the recording plan.

Pre Record: Record 1-5 seconds before the action. (Time length is decided by the code stream)

Set: Click **Set** button to pop up the Plan window, select one day or all days of recording plan, set recording type and period, then click OK, the recording will start only in the set range.

Record Type	Regular	MD	Alarm
Period 1 00:00 - 24:00	☒	☒	☒
Period 2 00:00 - 24:00	☐	☐	☐
Period 3 00:00 - 24:00	☐	☐	☐
Period 4 00:00 - 24:00	☐	☐	☐
Period 5 00:00 - 24:00	☐	☐	☐
Period 6 00:00 - 24:00	☐	☐	☐

☒ Sel All
☒ Sun. ☒ Mon. ☒ Tue. ☒ Wed.
☒ Thu. ☒ Fri. ☒ Sat.

OK Cancel App.

Picture 4.6 Plan

Recording type:

- **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 turned 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 turned on. The video file type is "A".

Note: Please refer to 4.4 Alarm Function for the related alarm function settings.

4.3 Network

Networking Type: Automatically get or manually enter IP address.

IP Address: Set the IP address.

Gateway: Set the default gateway.

Subnet Mask: Set the subnet mask code.

First DNS Server: Set the preferred DNS. Using DDNS function needs to set the address of DNS server as their local DNS address.

Alternate DNS Server: Set the spare DNS.

Main Menu					
General	Record Set	Network	Alarm Set	Switch	System
Networking Type		IP			
IP Address		192 . 168 . 3 . 188			
Gateway		192 . 168 . 3 . 1			
Subnet Mask		255 . 255 . 255 . 0			
First DNS Server		8 . 8 . 8 . 8			
Alternate DNS Server		8 . 8 . 4 . 4			
Physical Address		00:58:BF:EF:3D:E4			
Net Service		▶▶			
Default OK Cancel App.					

Picture 4.7 Network Setup

Net Service: Click Net Service button to enter the interface as shown in Picture 4.8, first select a Network Service entry and click Set button, or double-click a Network Service entry to set parameter items.

Network	
Type	Total Space
PPPOE	0:
DDNS	
NTP	0: NTPServer: 60
IP Filter	0: 0
Network transmission, port, UPNP	80: 8000 UPNP: 0: 0
Email	0: MailServer: 25
FTP	0: 0.0.0.0
3G	0:
Wireless Net	
Setting OK Cancel	

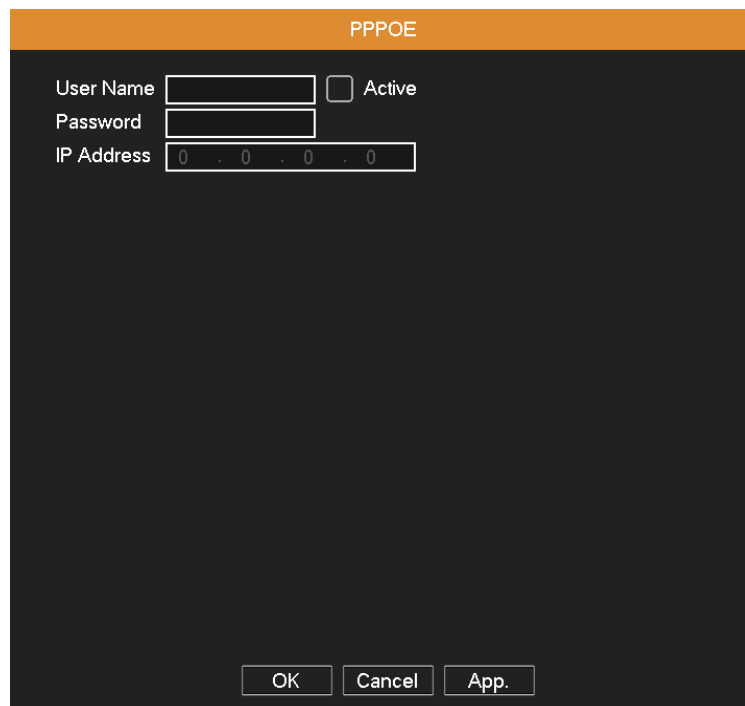
Picture 4.8 Network Service

4.3.1 PPPOE Setup

Activate the PPPOE function, enter the user name and password provided by ISP (Internet service provider)

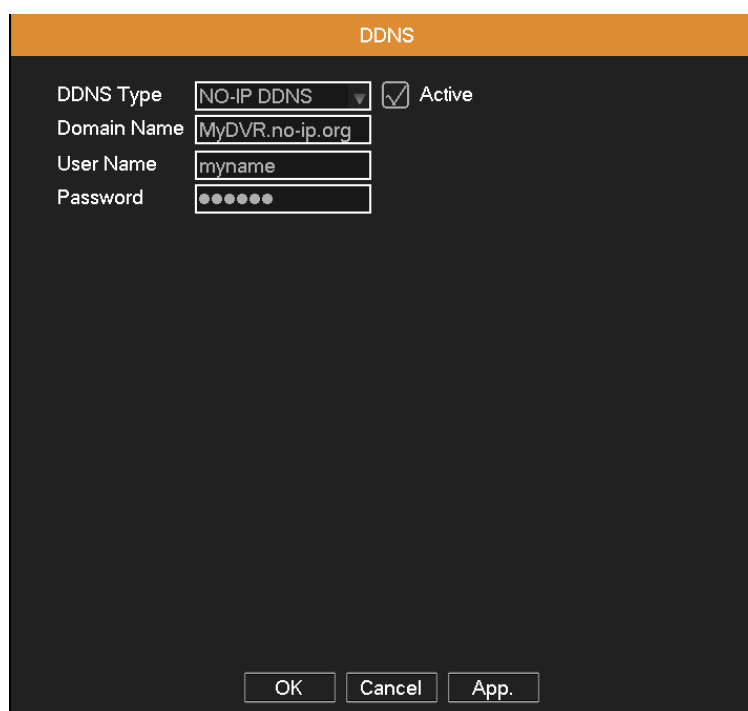
provides. After saving it reboot up your system. Then the DVR will build a network connection based on PPPOE. The IP address will change into dynamic IP address after above operations well done.

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



Picture 4.9 PPPOE

4.3.2 DDNS Setup



Picture 4.10 DDNS

Active: Activate the DDNS function.

DDNS Type: Choose DDNS supplier.

Domain Name: Input the domain name registered by DDNS.

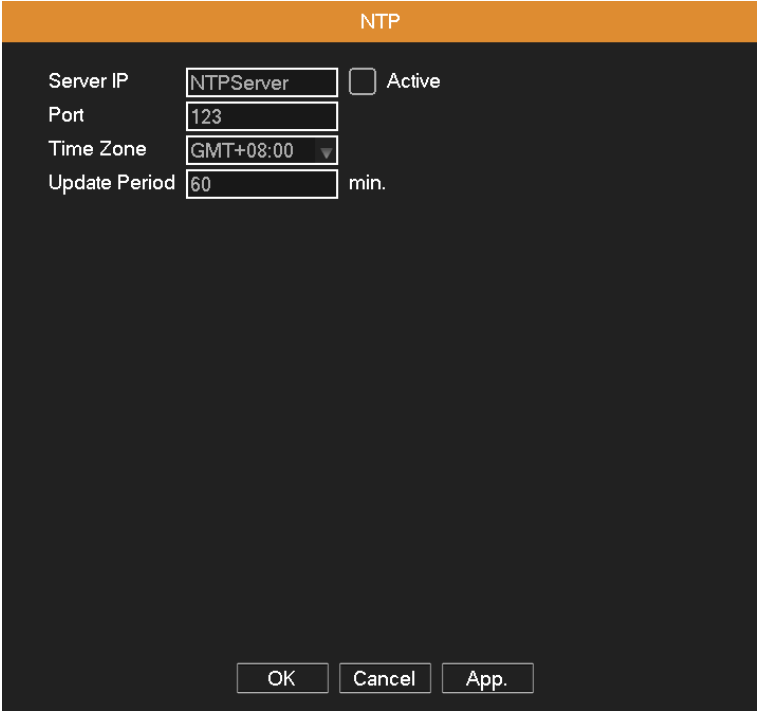
User Name: Input the account registered by DDNS.

Password: Input the password registered by DDNS.

When the DDNS is successfully configured and start, you can open IE and enter the domain name to visit your DVR remotely.

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

4.3.3 NTP Setup



Picture 4.11 NTP

Server IP: Enter the address of NTP server.

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

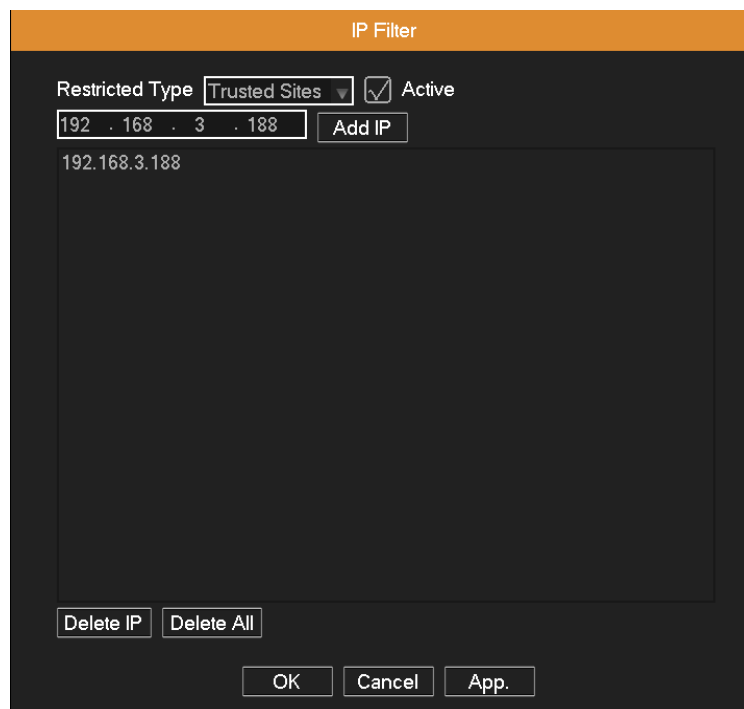
Time zone: London GMT+0; Berlin GMT +1; Cairo GMT +2; Moscow GMT +3; New Delhi GMT +5; Bangkok GMT +7; Hong Kong Beijing GMT +8; Tokyo GMT +9; Sydney GMT +10; Hawaii GMT-10; Alaska GMT-9; Pacific time GMT-8; American mountain time GMT-7; American mid time GMT-6; American eastern time GMT-5; Atlantic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

Update Period: The check interval about synchronizing system time with NTP server.

4.3.4 IP Filter

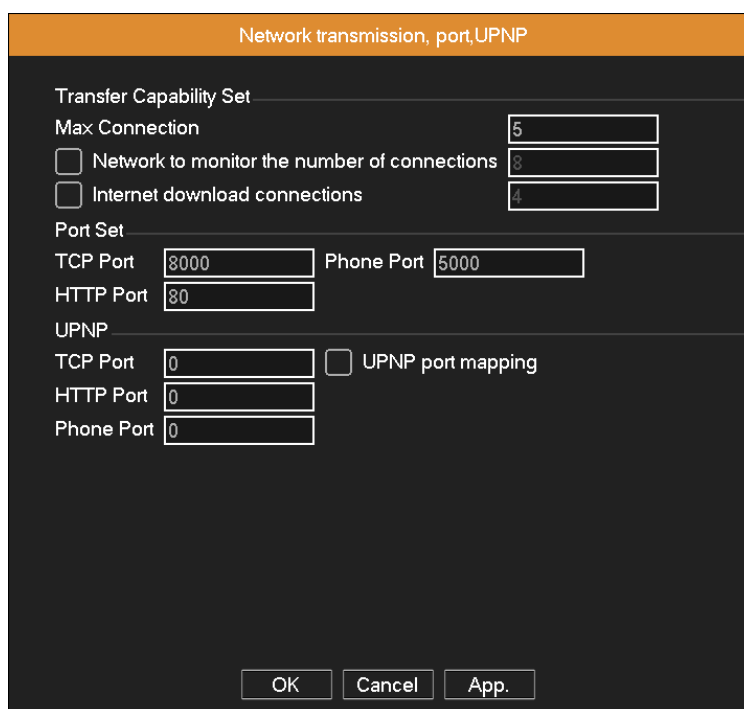
When choosing the trusted list, only the listed IP address can connect the DVR. If not in the list, it cannot connect the DVR.

Select the IP address in the list and click Delete IP button to delete it.



Picture 4.12 IP purview

4.3.5 Network Transmission, Port, UPNP



Picture 4.13

Transfer Capability Set: Set the maximum number of connection users, network monitoring and internet download.

Port Set: View and set TCP Port, Phone Port and HTTP Port.

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

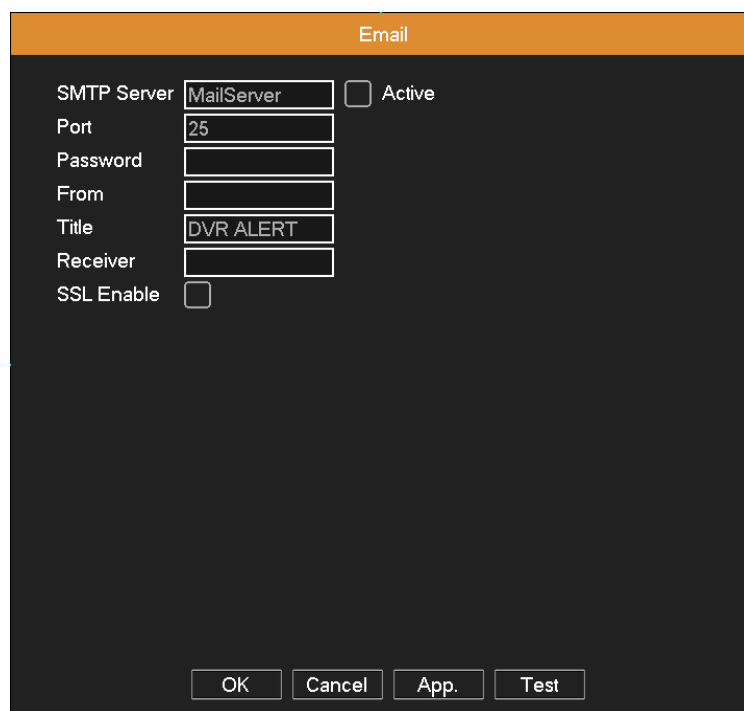
Phone Port: Need to map this port on the router while accessing by mobile phone.

HTTP Port: Need to add this port number while browsing by IE.

UPNP: UPNP protocol will be automatic port forwarding on the router, before using this feature, make sure UPNP feature is enabled on your router.

4.3.6 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 the appointed address.



Picture 4.14 Email

SMTP server: For example, SMTP server address of 126 email is "smtp.126.com".

Port: Email server port number.

Password: Input the password corresponding to the user.

From: Set the email sender address.

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

Receiver: Send an email to the appointed receivers when the alarm is turned on.

SSL Enable: Decide whether to use SSL (Secure Socket Layer) protocol to login.

4.3.7 FTP Setup

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 4.15 FTP

Active: Enable the FTP function.

Server IP: FTP server's IP address.

Port: FTP port, default port is "21".

Alternate IP: Spare FTP server's IP address.

User name: A user which has permission to log FTP.

Password: User's password.

Anonymous: Select it for anonymous user.

Remote Directory: File upload's directory.

File Length: Set the max length for each package of upload files, default is 1024KB.

4.3.8 3G Config

Dial-up Internet access through 3G card to realize the device access by client.

Auto Connect: Enable the Wireless function.

User: Dial-up of 3G User Name.

Password: Dial-up user's password.

APN: 3G access point, the default OK.

Dialup Num: 3G dial-up number, the default OK

IP Address: Dial-up IP address number obtained.

3G

Auto Connect ☐

User

Password

APN

Dialup Num

IP Address

Connect OK Cancel

Picture 4.16 Wireless config

4.3.9 Wireless Net Config

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

Wireless Net

SSID	Authentication	Encryption

Auto Connect ☐

SSID Key

Encryption

Authentication

Search Connect OK Cancel

Picture 4.17 Wi-Fi

Search: Click “Search” button to get the available wireless network in the list.

Auto Connect: Enable the Wi-Fi function.

SSID: Name of wireless LAN automatically fit the connected wireless device.

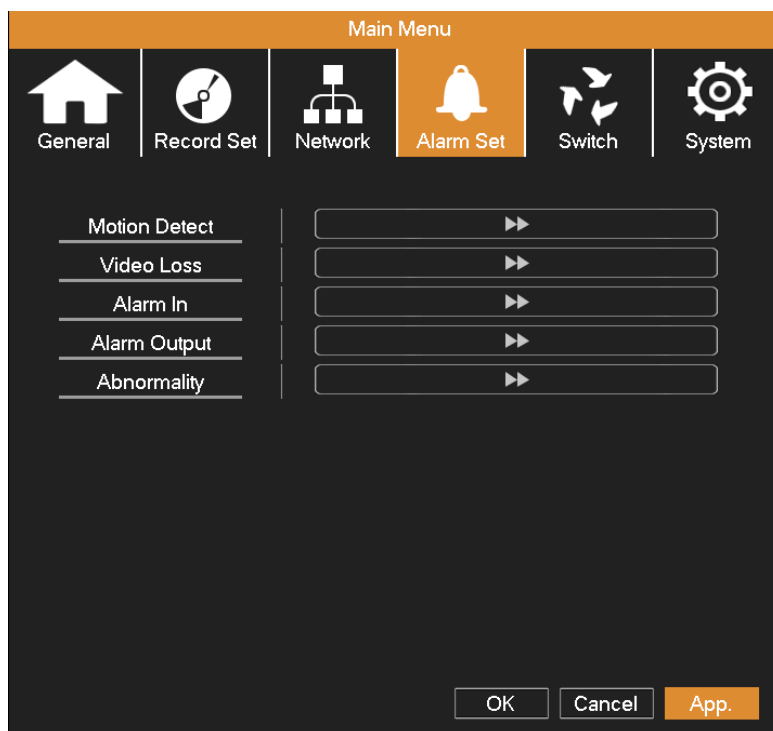
Key: Wireless network’s password.

Encryption: Set the router’s encryption type.

Authentication: Set the router’s authentication type.

4.4 Alarm Set

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



Picture 4.18 Alarm

4.4.1 Motion Detect

When system detects the motion signal that reaches the sensitivity you set, the motion detection alarm and the linkage function are turned on.

Picture 4.19 motion detect

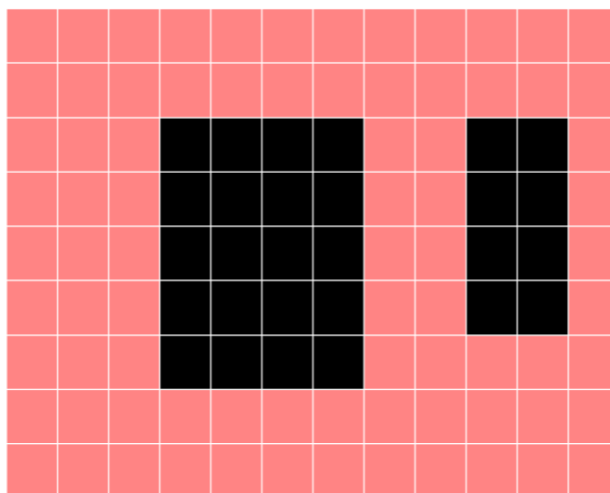
Channel: Choose a channel which needs to set the motion detection.

Active: Enable the motion detection function.

Sensitivity: Adjust the sensitivity of motion detection (six options) according to the practical situation.

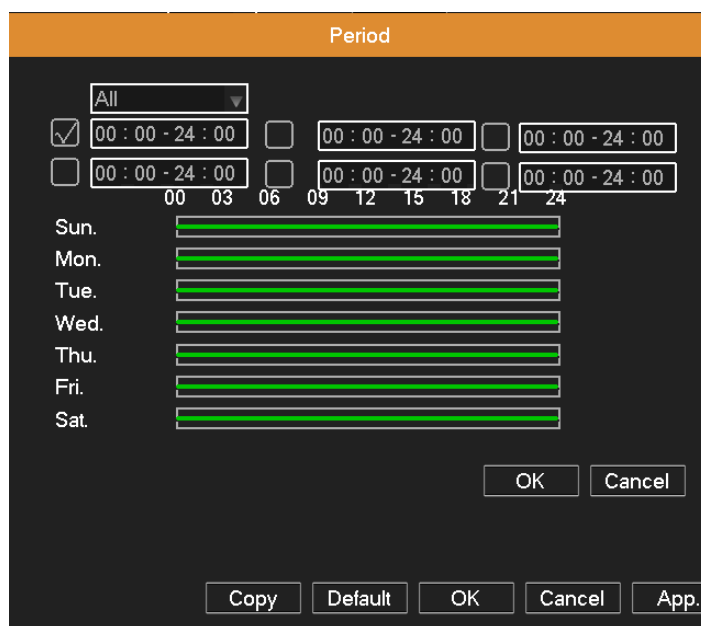
Region: Click Set button, drag the mouse to draw the detection area. Black block means the unfenced area.

Coverage block means the dynamic defensive area.



Picture 4.20 set the area

Period: Click Set button, select one day or all days of detection plan, set the time period (each day is divided into six time sections), then click OK, it will start detecting only in the set range.



Picture 4.21 Period

Interval: Only one alarm signal is turned on even there are several motion detection signals in this interval.

Alarm Out: Start the external equipment of corresponding linkage alarm when the motion detection alarm is turned on.

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

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

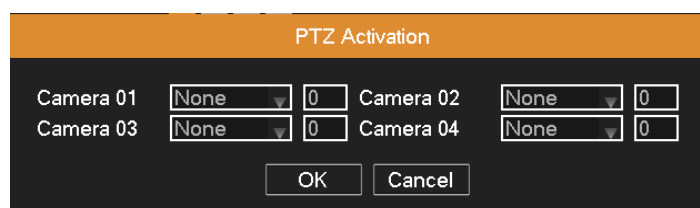
Note: Set in the “Main Menu” → “Record Set” → “Record Plan” and perform the linkage recording. And set “Desktop Shortcut Menu” → “Record Mode” to be configured, motion detection linkage recording can work.

Tour: Choose the recording channel (multiple options supportive), which will tour preview with single screen when the alarm is turned on.

Snapshot: Choose the snapshot channel (multiple options supportive), which will capture a snapshot when the alarm is turned on.

PTZ Activation: Set the PTZ linkage when the alarm is turned on.

Note: Using PTZ linkage needs to set preset, cruise between points and scan etc (“Desktop Shortcut Menu” → “PTZ” → “Set”).



Picture 4.22 PTZ activation

Delay: After stopping alarm, it is the extended period to stop alarm recording, the range is 10~300 seconds.

Show Message: ☒ means popping the alarm information dialog box in the local host computer's screen.

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

Note: Sending email function needs to do relative setting in “Main Menu”→“Network”→“Net Service”.

Buzzer: ☒ means when alarm occurs, the equipment issues the "DiDi" sounds of two long ring.

FTP Upload: ☒ means when alarm occurs, it will send alarm events to the FTP server.

Note: FTP upload function needs to do relative setting in “Main Menu”→“Network”→“Net Service”.

Copy: User can copy and apply channel settings to the other channel.

4.4.2 Video Loss

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

The screenshot shows the 'Video Loss' configuration window. At the top, the title is 'Video Loss'. Below it, there are several settings:

- Channel:** A dropdown menu showing '1'.
- Active:** A checkbox that is checked.
- Period:** A button labeled 'Set'.
- Alarm Out:** A dropdown menu showing '1'.
- Latch:** A text box showing '10' followed by 'sec.'.
- Record Channel:** A row of four buttons labeled '1', '2', '3', and '4'.
- Tour:** A row of four buttons labeled '1', '2', '3', and '4'.
- Snapshot:** A row of four buttons labeled '1', '2', '3', and '4'.
- PTZ Activation:** A button labeled 'Set'.
- Delay:** A text box showing '10' followed by 'sec.'.
- Show Message:** A checkbox that is checked.
- Send Email:** A checkbox that is unchecked.
- Buzzer:** A checkbox that is checked.
- FTP Upload:** A checkbox that is unchecked.

At the bottom of the window, there are five buttons: 'Copy', 'Default', 'OK', 'Cancel', and 'App.'.

Picture 4.23 video loss

Set method: refer to Chapter 4.4.1. Motion Detect.

4.4.3 Alarm Input

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

Channel: 1 Active: ☒

Type: Normal

Period: Set Interval: 1 sec.

Alarm Out: 1 Latch: 10 sec.

Record Channel: 1 2 3 4

Tour: 1 2 3 4

Snapshot: 1 2 3 4

PTZ Activation: Set Delay: 10 sec.

Show Message: ☐ Send Email: ☐

Buzzer: ☐ FTP Upload: ☐

Buttons: Copy Default OK Cancel App.

Picture 4.24 alarm input

Set method: refer to Chapter 4.4.1. Motion Detect.

4.4.4 Alarm Output

Control the alarm output state of all channels.

Alarm Type: All 1

Schedule: ☐ ☒

Manual: ☐ ☐

Stop: ☐ ☐

Status: OFF

Buttons: OK Cancel

Picture 4.25 alarm output

Schedule: Alarm is turned on according to the schedule configuration.

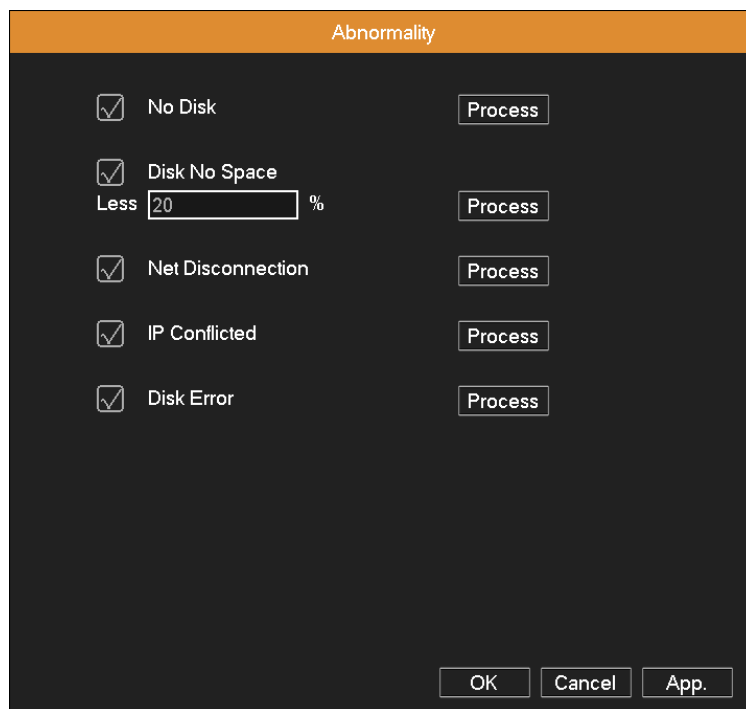
Manual: The relative channel outputs alarm signal no matter the channel in any state.

Stop: The relative channel stops alarming no matter the channel in any state.

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

4.4.5 Abnormality

It will trigger the relevant alarm according to the process setting once some abnormalities (no disk, no disk space, net disconnection, IP conflict, disk error) happen, which is convenient for customers to know DVR abnormality.



Picture 4.26 Abnormality

Select ☒ to enable abnormality type, click Process button to set the trigger options. Alarm out, delay, show message, send email and record are refer to Chapter 4.4.1 Motion Detect.

Less: Set a threshold value for remaining HDD space. If the threshold value is reached, DVR will have cue as the setting of process.

4.5 Switch

This device can receive multi-type signal input.

Support:

- 1) **Full analog HD 720P mode:** This mode can only access 720P analog HD cameras;
- 2) **Mixed mode:** This mode supports analog HD and SD analog cameras;
- 3) **Full SD analog mode:** This mode only supports SD analog cameras.

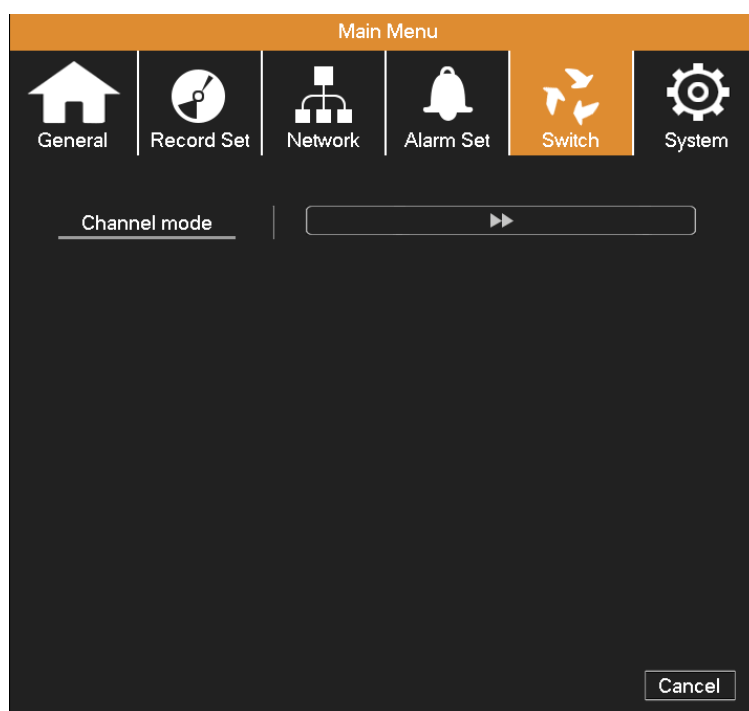
Warning:

1: Don't switch the channel mode if not necessary, once changed, the original related date maybe lost even cause the machine to abnormal use.

2: Please don't operate this function if non-professional.

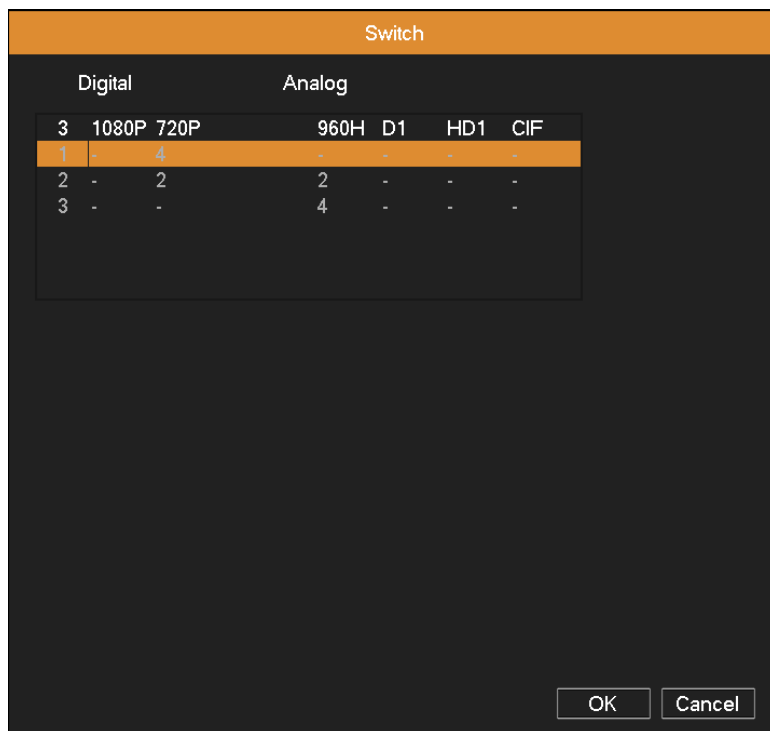
Channel mode: Customer can switch this device to the different mode.

1. Choose "Main Menu" → "Switch", show as picture 4.27.



Picture 4.27 Switch

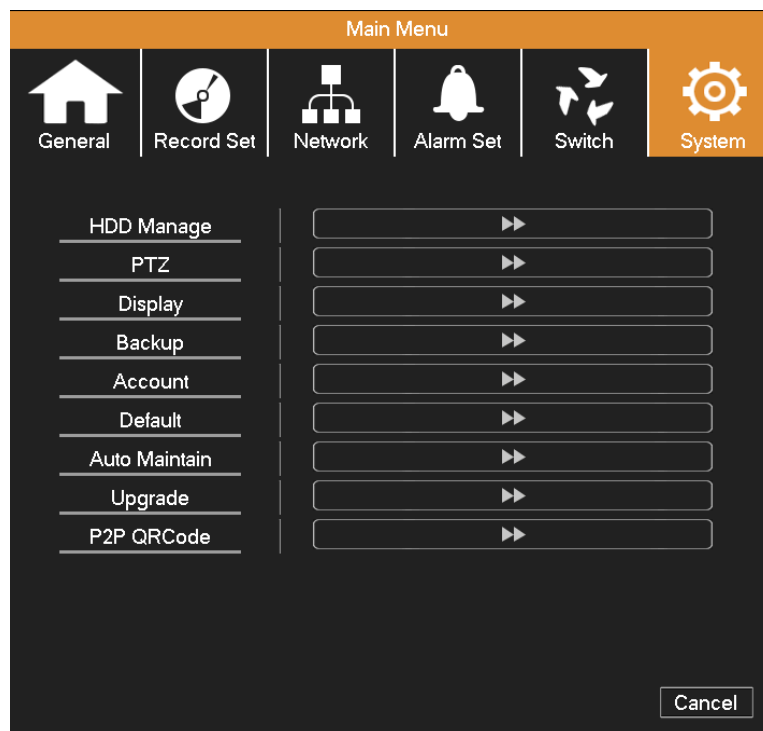
2. In channel type list, there are 3 available channel combination ways (picture 4.28). In analog channels, the numbers under resolution means the maximum analogue channels which can be connected under that resolution. In digital channels, the numbers under resolution means the maximum IP camera or other 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 the type switch (needs restart).



Picture 4.28 Channel Type

4.6 System Management

Set the system parameters such as **HDD Manage**, **PTZ**, **Display**, **Backup**, **Account**, **Default**, **Auto Maintain**, **Upgrade** and **P2P QRCode**.



Picture 4.29 System

4.6.1 HDD Management

Configure and manage the hard disk.

The menu displays the current hard disk's information: type, total space, free space, status, etc.

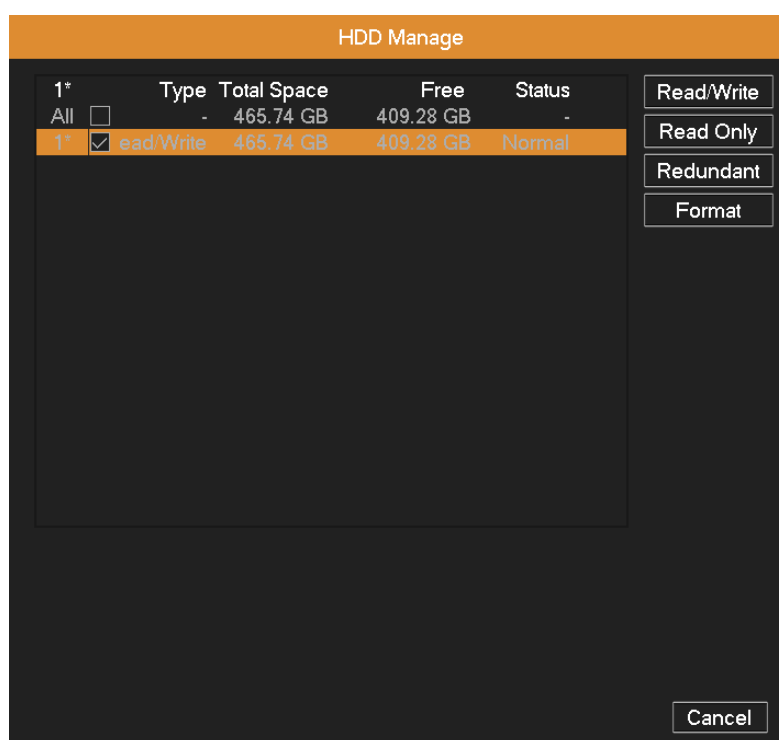
The HDD operation include: set up the write-read disk, read-only disk, redundant disk and format. Choose the hard disk and click the function button on the right to execute.

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

Read Only: The equipment can read data but cannot write data.

Redundant: In the case of DVR already has the write-read disk, double backup the video files in the write-read disk.

Format: All of the data on the selected disk will be lost after formatting.



Picture 4.30 HDD Management

4.6.2 PTZ Config

Channel: Choose the dome camera's input channel.

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

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

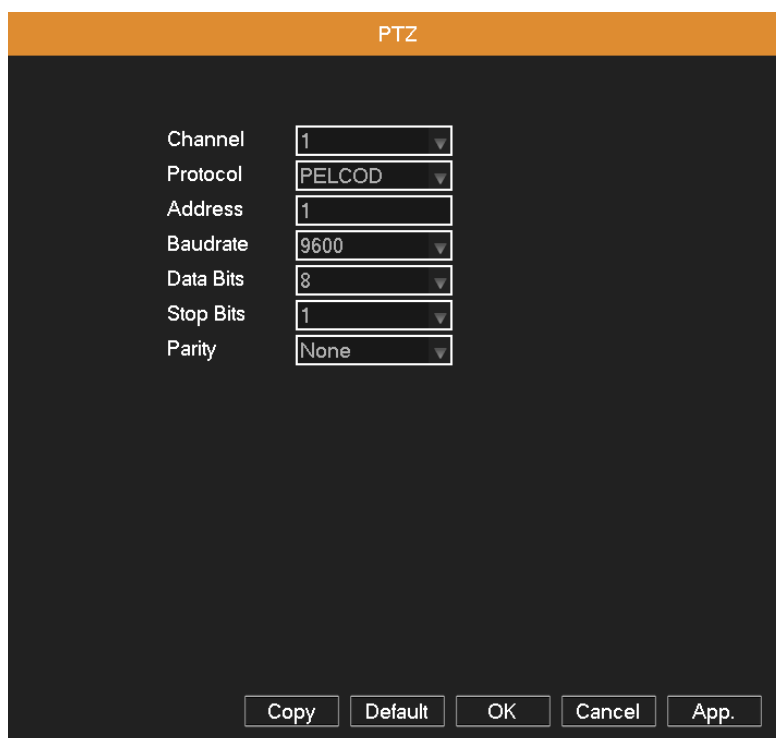
Baud rate: Choose the corresponding dome baud rate. Default: 9600.

Date Bit: Include 4 options. Default: 8.

Stop Bit: Include 2 options. Default: 1.

Parity: Include odd check, even check, mark check, space check. Default: None.

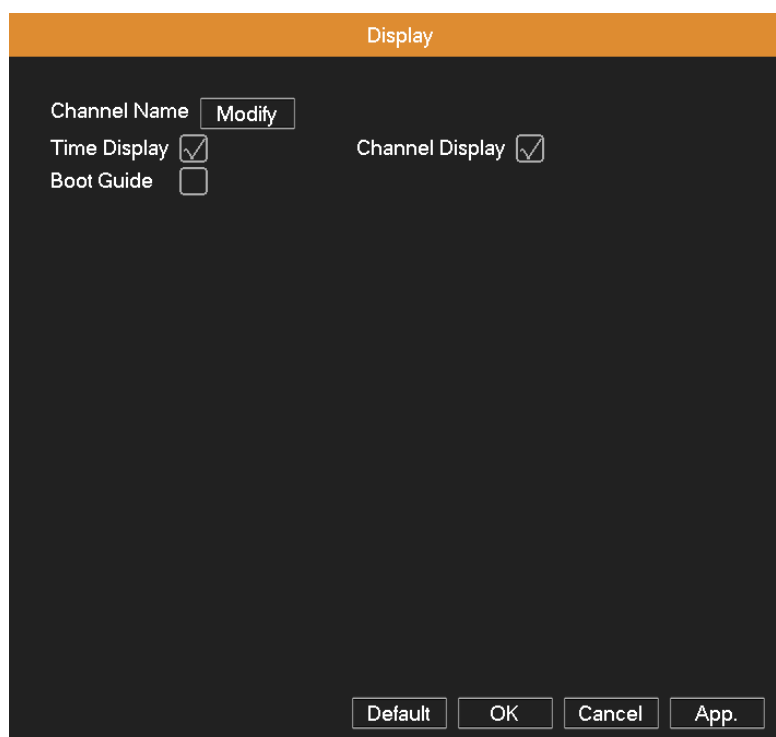
Note: The parameters of protocol, address, baud rate should be consistent with relative PTZ or dome for the user to control PTZ and dome.

The image shows a software window titled "PTZ" with an orange header bar. The window has a dark gray background. It contains a list of configuration parameters on the left, each with a corresponding dropdown menu on the right. The parameters and their values are: Channel (1), Protocol (PELCOD), Address (1), Baudrate (9600), Data Bits (8), Stop Bits (1), and Parity (None). At the bottom of the window, there are five buttons: "Copy", "Default", "OK", "Cancel", and "App.".

Parameter	Value
Channel	1
Protocol	PELCOD
Address	1
Baudrate	9600
Data Bits	8
Stop Bits	1
Parity	None

Picture 4.31 PTZ

4.6.3 Display

The image shows a software window titled "Display" with an orange header bar. The window has a dark gray background. It contains several configuration options. "Channel Name" is followed by a "Modify" button. "Time Display" and "Channel Display" are each followed by a checked checkbox. "Boot Guide" is followed by an unchecked checkbox. At the bottom of the window, there are four buttons: "Default", "OK", "Cancel", and "App.".

Parameter	Value/State
Channel Name	Modify
Time Display	☒
Channel Display	☒
Boot Guide	☐

Picture 4.32 GUI display

Channel Name: Click Modify button to enter the channel name menu. Modify the channel name. The 16 Chinese characters and 25 letters are supportive.

Time Display: ☒ means to display the system data and time in the surveillance window.

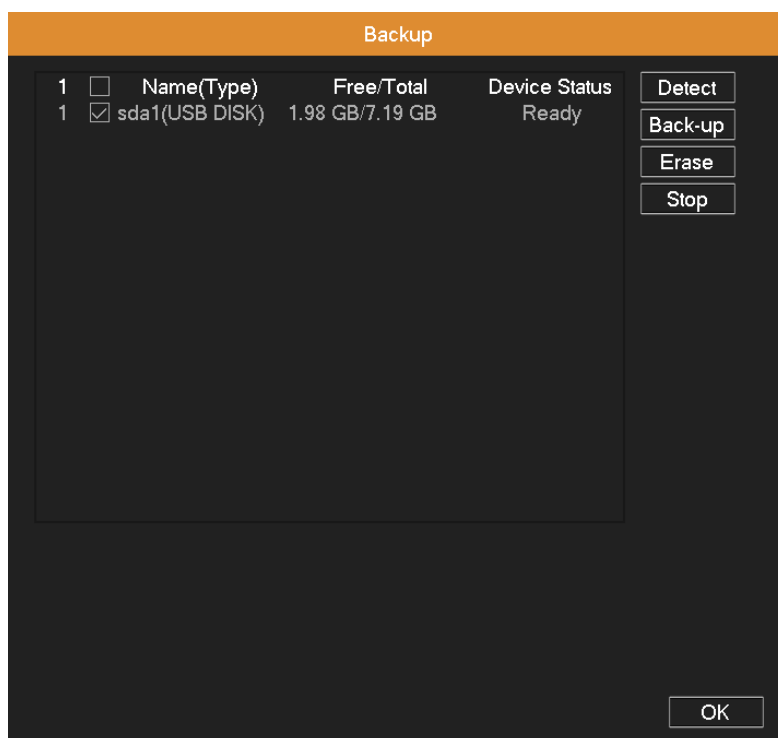
Channel Display: ☒ means to display the system channel number in the surveillance window.

Boot Guide: ☒ means to display the setup guide once the DVR has loaded. It will walk you through some of the more important settings of your DVR.

4.6.4 Backup

You can back up the video files to external storage device.

Note: The storage device must be installed before the file backup. If the backup is terminated midway, the files that have been copied in the storage device can be playback individually.



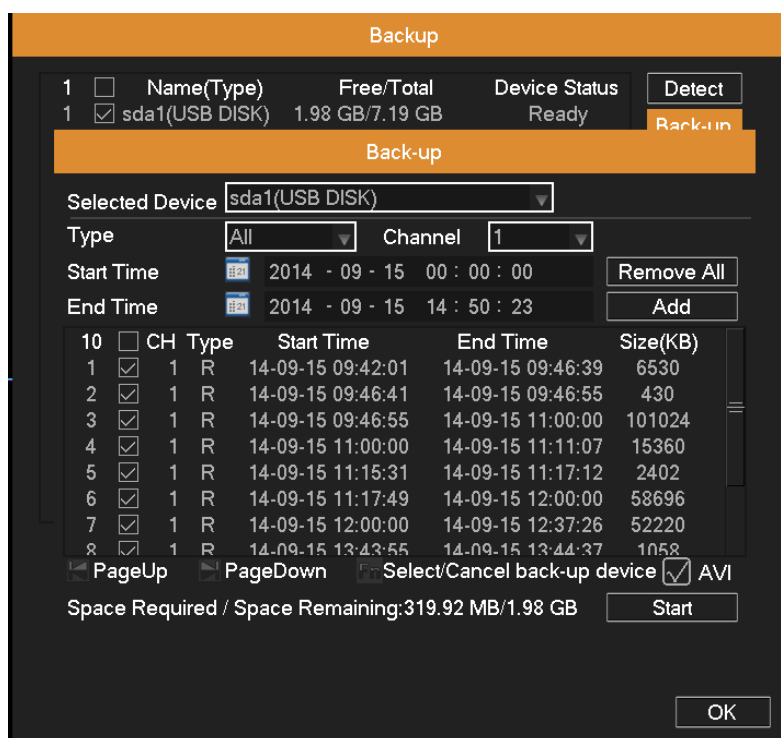
Picture 4.33 Storage device detect

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

Back-up: Click Back-up button to pop up a dialog box, as shown in picture 4.34. You can choose the backup files according to the type, channel and time.

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

Stop: Stop the backup.



Picture 4.34 Backup

Selected Device: Choose a storage device for backing up files.

Type: Choose the file type.

Channel: Choose a channel or all channels which need to back up data.

Time: Choose the start & end time.

Remove All: Clear the file information.

Add: Show the file information satisfying the criteria you set.

Start/Pause: Click Play button to start the backup and click Pause button to stop the backup.

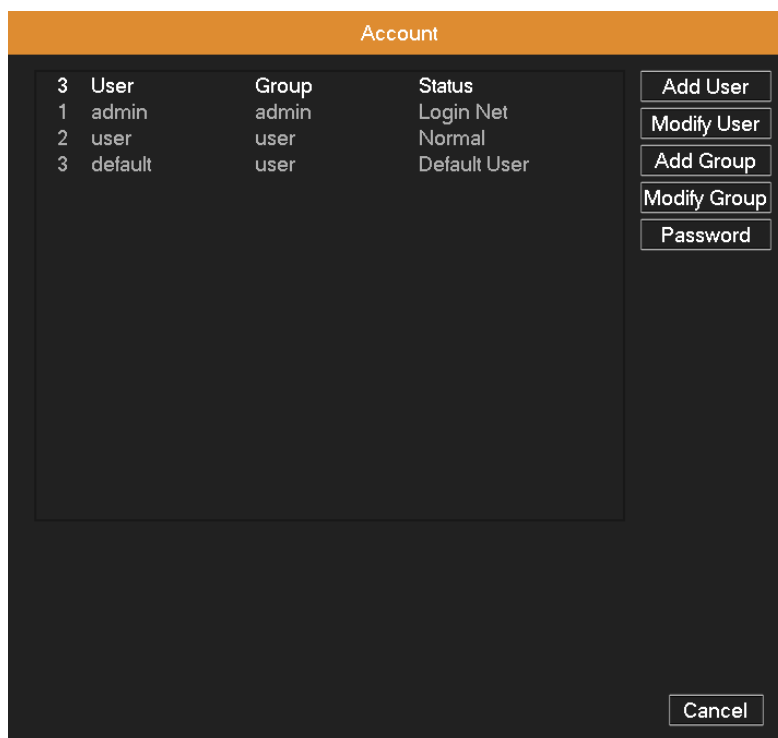
Backup format: AVI is optional.

4.6.5 Account Management

Manage user permissions.

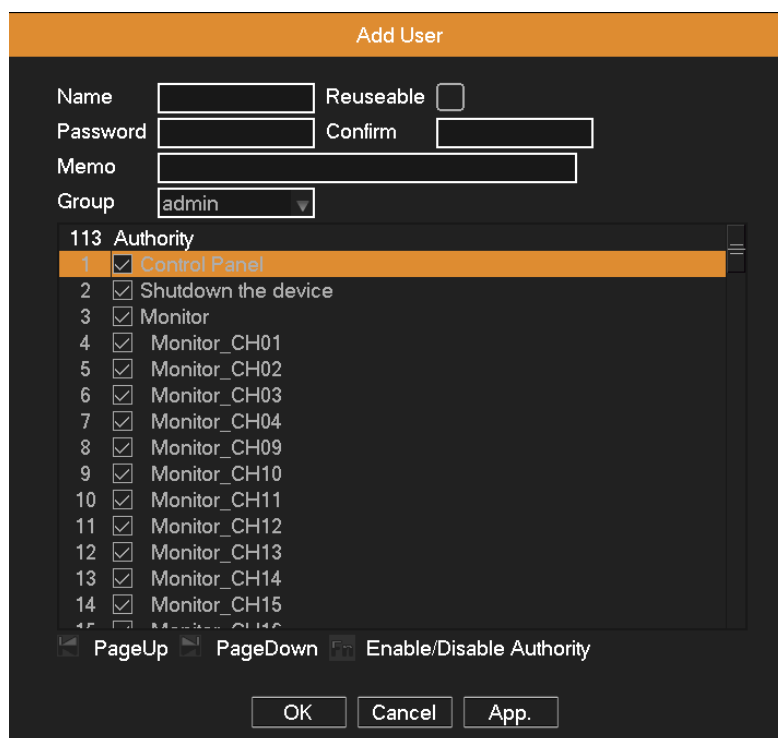
Note:

1. You can add or delete the user group according to user definition. The factory setup include: user\admin. You can set new user's group as you wish. Users can be specified permissions within its group.
2. The user management include: group\user. The group name and user name cannot be the same. Each user only belongs to one group.



Picture 4.35 user management

Add user: Click Add User button, input the new user's name and password, choose the group and permissions, and then click OK. Enabling Reusable function means that this account can be used by multiple users at the same time. Once you have selected the user group, its permissions can only be the subclass of group. We recommend that the common user's permission is lower than the advanced user.



Picture 4.36 add user

Modify User: Click Modify User button, select a user you want to modify, and then modify this user's attribute. Click **Delete** button to delete the current user. (The default user cannot be deleted, like admin, user and default)

Picture 4.37 Modify user

Add Group: Click Add Group button, input the new group's name, choose this group's permissions, and then click OK.

Picture 4.38 add group

Modify Group: Click Modify Group button, select a group you want to modify, and then modify this group's attribute. Click

Delete button to delete the current group. The group cannot be deleted if there are users in the group.

Modify Group

Group: test

Name: test

Memo:

114 Authority

- 1 ☒ Control Panel
- 2 ☒ Shutdown the device
- 3 ☐ Monitor
- 4 ☒ Monitor_CH01
- 5 ☒ Monitor_CH02
- 6 ☒ Monitor_CH03
- 7 ☒ Monitor_CH04
- 8 ☐ Monitor_CH09
- 9 ☐ Monitor_CH10
- 10 ☐ Monitor_CH11
- 11 ☐ Monitor_CH12
- 12 ☐ Monitor_CH13
- 13 ☐ Monitor_CH14
- 14 ☐ Monitor_CH15
- 15 ☐ Monitor_CH16
- 16 ☐ Monitor_CH17

PageUp PageDown Enable/Disable Authority

OK Cancel Delete App.

Picture 4.39 modify group

Modify Password: Click Password button, select a user and then modify this user's password.

Password

Name: admin

Old Password:

New Password:

Confirm:

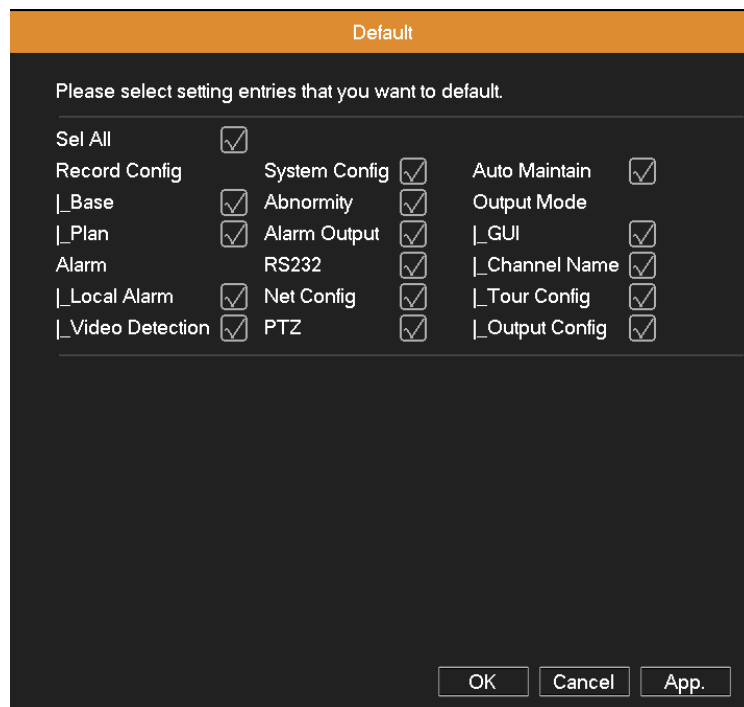
OK Cancel App.

Picture 4.40 modify password

Note: The user who possesses the user control permission can modify his/her own or other user password.

4.6.6 Default

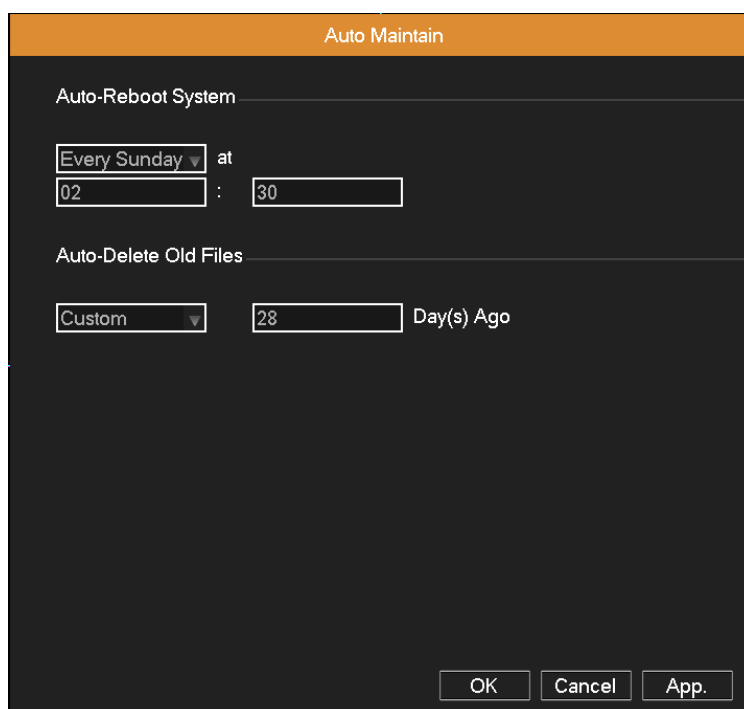
The system will be restored to default setup (can selectively restore the selected options).



Picture 4.41 resume default

4.6.7 Auto Maintain

User can set the device to timing reboot the system, and automatically delete the files if they are longer than the specified interval.

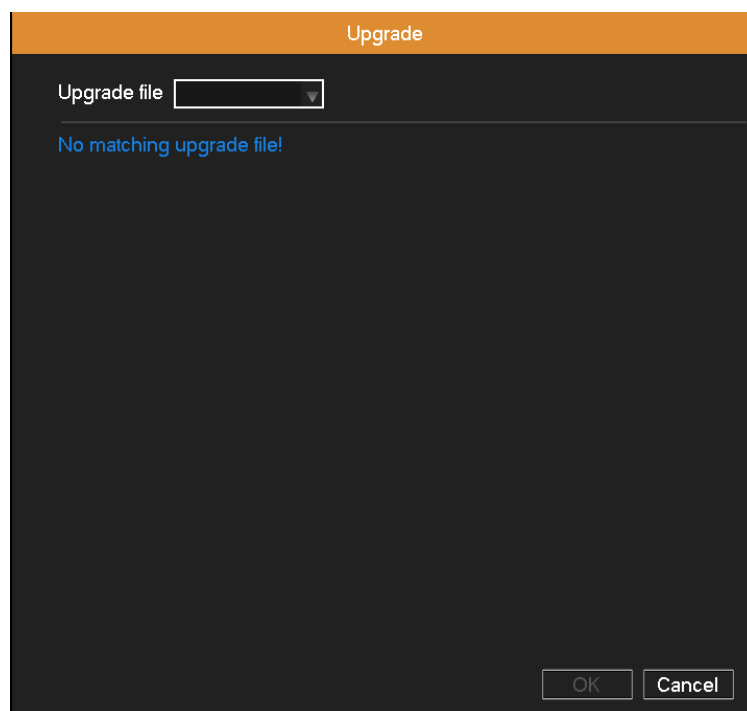


Picture 4.42 Auto Maintain

4.6.8 Upgrade

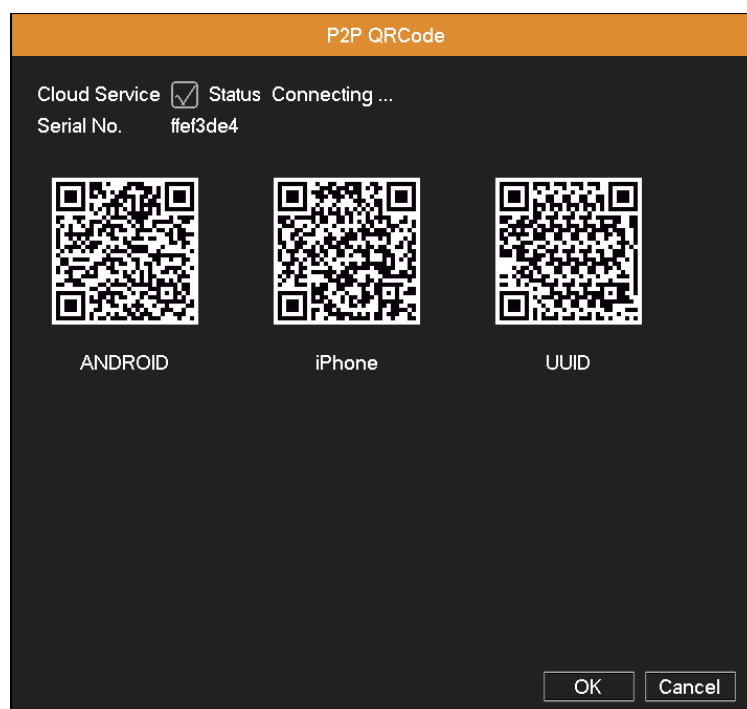
User can get the upgrade file from your dealers, and upgrade the system once DVR has the new software version.

Copy the upgrade file into the USB disk, and then insert it to USB port on the DVR. Enter into “Main Menu”→“System”→“Upgrade”, then find the upgrade file in the drop-down box, click OK button to start upgrading.



Picture 4.43 upgrade

4.6.9 P2P QR Code



Picture 4.44 P2P QR Code

User can use the Cloud Service client on iPhone™, iPad™ and Android™ phone to view the channel video remotely through P2P function. When adding a new device, select the “Cloud” connection mode, click into the scanning state, then scan the corresponding QR Code.

5. Network Access Settings and Cloud Technology Introduced

5.1 LAN Access Settings

1、Network connection

- (1) Before the WEB operation, make sure your DVR is properly connected to the network.
- (2) Enter DVR “Main Menu” → “Network” to set correct IP address, subnet mask, DNS and gateway or set to obtain IP address automatically by DHCP. Port retains the default settings. (The IP segment of device should be the same with PC, if disconnected, please check device IP was connected successfully.)

2、Login

Step 1: After connecting successfully, then you can login to view.

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. cab, 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 closed other prohibited controls to download software 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: Enter the user name and password, the company factory default administrator user name admin, password is blank.

5.2 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.

Note: Some of the devices don't have this function, pls prevail in kind.

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.

WAN remote access & Cloud technology use

1. Open a web browser, enter cloud access address (The method of looking at cloud server address: Boot and select "desktop shortcut menu" → "System information" → "Version information" → "Cloud server") .

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

2. By Serial number: Device: enter Serial No of DVR can realize remote access (way to get Serial No: start up and choose "desktop shortcut menu" → "info" → "version")

3. By user: need to register a user name, and then enter the user name and password to login; need to add the device after login, when finish adding device, click on the current equipment for preview, playback, configuration and operation

According to the user access, multi device can be added and remote access at the same time

5.3 Client ISS Software Operation

ISS is a powerful center control software. It is distributed architecture combining with the functions of multi window, multi user, multi languages, voice intercom and alarm center all in one. With friendly interface and simple operation, it's convenient to permission settings.

Please take out the CD-ROM in the accessories, copy the ISS install software in the CD-ROM. After installation on the local PC, double click the "ISS", open the control interface, default without password, the client can set the login password (**Note: The password for the ISS client password, non-DVR login password**).

Details please refer to the "ISS operation manual" in the CD or ISS software help information.

5.4 Mobile Phone Monitoring

This device supports the user to use the phone for remote video surveillance operation. Use extra stream technology to do mobile phone monitoring. Support channel switching and multi-channel monitoring simultaneously. Convenient and simple to use, preview once network connected.

There are two ways to download the mobile phone monitor software:

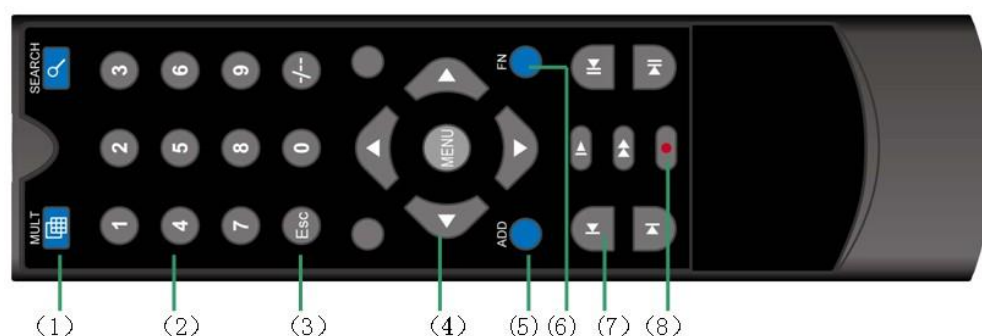
1. Accessories package CD: English/Tool/mobile phone monitor. Find corresponding mobile app package for installation .
2. Download mobile app through scanning the QR code. Find the QR code from the device and scan the corresponding QR code to download and install the mobile app.

For more details please refer to cell phone monitoring software help information..

Device can only be visited by mobile phone after the mobile phone connects with the wireless router if the device is on LAN.

Note: Device can also be visited via cloud technology by mobile phone APP.

Appendix 1. Remote Controller Operation



Serial Number	Name	Function
1	Multi-window button	Enter into multi-window preview interface
2	Numeric button	Code input/number input/channel switch
3	【Esc】	Return to previous page
4	Direction button	Direction and confirm button
5	ADD	Input the number of DVR to control it
6	FN Assistant button	Switch different setting pages of main menu/Enter the corresponding secondary function of the main menu
7	Playback control button	Basic operation in playback
8	Record control button	Enter into video record control menu

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
	Double click the playback video to zoom in or out the screen
	Double click the channel to make it full screen display in preview state double click again to resume the multi-window display
Left click	Select the corresponding function under the menu page
Right click	Pop-up 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
Move mouse	Choose the widget or move the item in the widget
Drag mouse	Set the motion detect area
	Set the cover area

