QVIS®

LABS

IAPOLLO SMART NVR

4 Channel 4PoE Network Video Recorder

User's Manual

V 1.0.0 08/2013

ENHANCE YOUR NVR WITH OUR WIDE RANGE OF QVIS IP CAMERAS

OUR PRODUCTS ARE FULLY TESTED TO WORK TOGETHER

DONT SETTLE FOR LESS,
ALL OUR PRODUCTS CARRY QVIS LOGOS

Table of Contents

Welcome

Thank you for purchasing our network video recorder!

This user's manual is designed to be a reference tool for your system. Please open the accessory bag to check the items one by one in accordance with the list below. Contact your local retailer ASAP if something is missing or damaged in the bag.

Here you can find information about the **iApollo Mini** NVR's features and functions, as well as a detailed menu tree.

Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1．Electrical safety

- All installation and operation within this manual should conform to your local electrical safety codes.
- We assume no liability or responsibility for any fires or electrical shocks caused by improper handling or installation.

2．Transportation security

- Please avoid heavy stress, violent vibrations or water splashes during transportation, storage and installation. Please take heed, as this may cause permanent and irreversible damage to the unit.

3．Installation

- Handle product with care and the correct way up.
- Do not apply power to the NVR before completing installation.
- Do not place objects on top of the NVR.

4．Qualified engineers needed

- All the examination and repair work should be done by the qualified service engineers.
- We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

- The NVR should be installed in a cool, dry place away from direct sunlight, flammable and/or explosive substances, etc.
- This product should be transported, stored and used in the specified environments.

6. Accessories

- Be sure to use all the accessories recommended by manufacturer.
- Before installation, please open the product packaging and check all the components are included.
- Contact your local retailer ASAP if something is broken within the packaging.

7. Lithium battery

- Improper battery use may result in hazardous consequences such as the start of fires, an explosion, or personal injury!
- When you need to replace the battery, please make sure you replace I with the same battery model!

Before your operation please read the following instructions carefully.

Installation environment

- ✧ Keep away from extreme hot places and sources；
- ✧ Avoid direct sunlight；
- ✧ Keep away from extreme humid places；
- ✧ Avoid violent vibration；
- ✧ Do not put other devices on the top of the NVR；
- ✧ Be installed in well ventilated place; do not block the vent.

Accessories

Check the following accessories after opening the box：

Please refer to the packing list in the box

1 Features and Specifications

1.1 Overview

The NVR delivers high performance within a networked security surveillance system. This series of products also support local preview, multiple-window display, recorded file local storage, remote control & mouse shortcut menu operation, and remote management & control function.

In addition to this it can also provide integral centre storage, front-end storage and client-end storage. The monitor zone in the front-end can be setup anywhere. Working with other front-end devices within the Qvis product range, this product series can establish a strong surveillance network via the CMS. In order for the system to work you only need one network cable running from each security camera, to the monitor workstation, within the whole network. There is no need for multiple audio/video cables from the security cameras to the monitor workstation. The whole project features a simple connection, which reduces network installation costs and a low amount of maintenance work.

This series of NVRs can be widely used in many areas such as public security, water conservancy, transportation and education.

1.2 Features

Storage	• Via corresponding setup (such as alarm setup and schedule setup), you can backup related audio/video data on to the network video recorder. • Supports Web and local video recording.
Alarm	• Responds to external alarms (within 200miliseconds) whilst continuing to monitor and record video camera footage. This is based on user's pre-defined relay setup, the system can process the alarm input systematically and will prompt user by using screen and voice alerts (supports pre-recorded audio). • Supports central alarm server setup, so that alarm information can remotely notify user automatically. Alarm input can be derived from various connected peripheral devices. • Alarm trigger Alerts sent to your EMAIL.
Network Monitor	• Sending audio/video data, through the network, can both be compressed by the IPC or the NVS and then sent to the monitoring station. The data will then be decompressed and displayed. If the bandwidth is big enough, latency will be less than 500miliseconds. • Supports a maximum of 10 connections • Transmit audio/video data by HTTP, TCP, UDP, MULTICAST, RTP/RTCP, etc. • Transmit some alarm data or alarm info by SMTP. • Supports access in WAN.
Window Split	• Adopt the video compression and digital process to display multiple windows on one monitor. Supports 1/4/8/16-window display.

Record	• Supports scheduled record function. Save the recorded files on to the HDD, client-end PC, or network storage server. You can search or playback the saved files at the local-end or via the Web.
Backup	• Supports network backup, USB2.0 record backup function, the recorded files can be saved on to a network storage server, peripheral USB2.0 device, burner, etc.
Network Management	• Supervise NVR configuration and control power via an Ethernet connection. • Supports network management remotely via the internet.
Peripheral Equipment Management	• Supports peripheral equipment management such as protocol setup and port connection. • Supports transparent data transmission such as RS232 (RS-422), RS485 (RS-485).
Auxiliary	• Supports both NTSC and PAL video formats. • User can access real-time system resource information and running statistics display. • Supports log files. • Local GUI output. Shortcut menu operation via mouse. • IR control function. Shortcut menu operation via remote control. • Support IPC or NVS remote video preview and control.

1.3 Specifications

Parameter	**Specifications**
	31-P Series
System Resources	Max support 16-ch standard definition with the transmission rate of 2Mbps for each channel; 8-channel 720P, with the transmission rate of 4Mbps for each channel; 4-channel 1080P, with the transmission rate of 8Mbps for each channel; Support 20 online users at the same time, The image delay time of each channel is under 500ms.
Operation System	Embedded Linux real-time operation system
Operation Interface	WEB/Local GUI
Video Compression	H.264/MPEG4
Encode Capacity	For H.264, it max supports 16-channel D1, 8-channel 720P, 4-channel 1080P.
Audio Compression	G.711a
Video Output	1-channel VGA analog video output.
Video Input	4/8/16-ch network compression video input
HDMI	1-ch HDMI output.

Audio Input	1-ch bidirectional audio input	
Window Split	1/4/9-window	
Multiple-channel Playback	Max 16-channel D1/8-channel 720P/4-channel 1080P playback.	
Storage	One built-in SATA port.	
USB2.0 Port	One peripheral USB2.0 port.	
Network Connection	One RJ45 10/100Mbps self-adaptive Ethernet port.	
Power Port	One power port, power adapter. Input DC 12V.	Two power ports, power adapter. Input DC 12V or DC 48V.
Power Button	No on/off button. Connect to the power cable to boot up.	
IR Remote Control Receiver	Support IR remote control	
Clock	Built-in clock.	
Indication Light	One power status indication light. One network status indication light. One HDD status indication light.	
Power Consumption	＜12W(Excluding HDD)	
Working Temperature	0℃～+50℃	
Working Humidity	10%－90%	
Air pressure	86kpa－106kpa	
Dimension	270mmX205mmX41mm	
Weight	600-700G（Exclude HDD）	
Installation	Desk installation	

2 Front Panel and Rear Panel

2.1 Front Panel

The front panel is shown as in Figure 2-1.

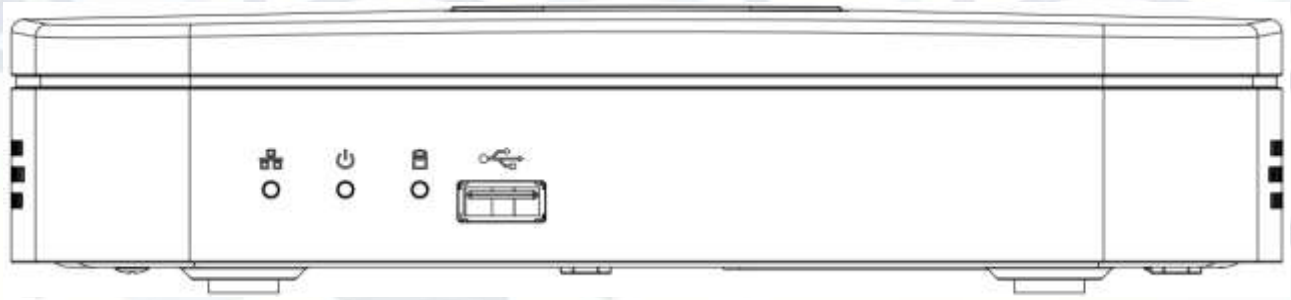


Figure 2-1

Please refer to the following sheet for detailed information:

Icon	Name	Function
	Power indicator light	The blue light becomes on when the power connection is OK.
	Network status indicator light	The blue light becomes on when the network connection is abnormal or offline.
	HDD status indictor light	The red light becomes on when HDD is abnormal or HDD space is below the threshold.
	USB	USB port. Connect to USB storage device, mouse burner and etc.

2.2 Rear Panel

The rear panel is shown as below. See Figure 2-.

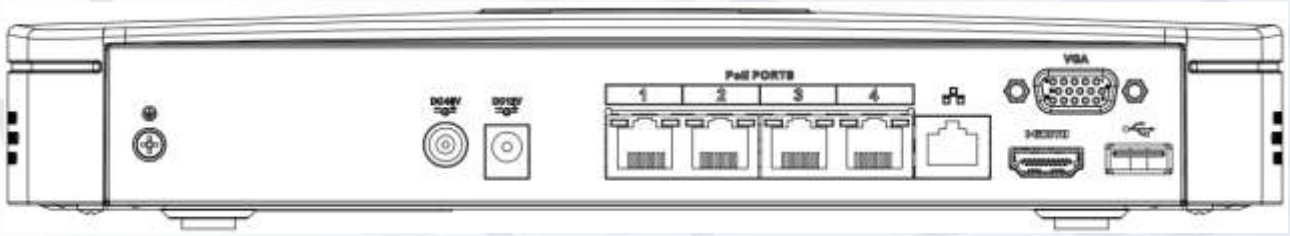


Figure 2-2

Please refer to the following sheet for detailed information:

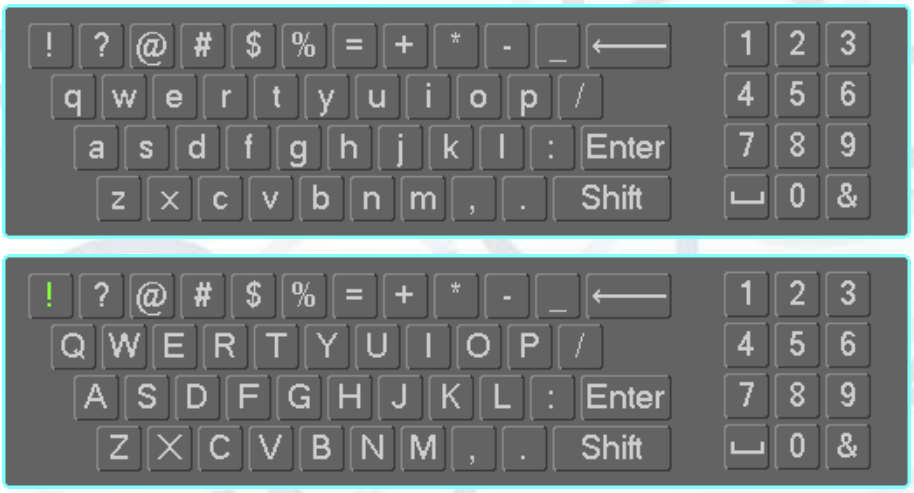
Port Name		Connection	Function
	Network port	/	10M/100/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	/	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device.
VGA	VGA video output port	VGA	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
	GND	/	Alarm input port GND port.
	Power input port	/	Power port. Input 12V DC.
	Power input port	/	Switch power port. Input DC 48V.
PoE PORTS	4 PoE ports	/	Built-in Switch supports PoE function. The 4 PoE ports series product supports total 48V 50W.
	USB 2.0 port	/	USB 2.0 port. Conenct to mouse.
Wireless AP			Support wireless hotspot function. Use WIFI to connect to the network camera when there is a hotspot.

2.3 Mouse Operation

Please refer to the following sheet for mouse operation instruction:

<table>
<tr><td rowspan="5">Left click mouse</td><td>When you have selected one menu item, left click mouse to view menu content.</td></tr>
<tr><td>Modify checkbox or motion detection status.</td></tr>
<tr><td>Click the ‘Combo’ box to pop up dropdown list</td></tr>
<tr><td>In the input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalised). Here the ← stands for backspace button. __ stands for space button.

In English input mode: _ stands for input a backspace icon and ← stands for deleting the previous character.

In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.</td></tr>
<tr><td rowspan="2">Double left click mouse</td><td>Implement special control operation such as double click one item in the file list to playback the video.</td></tr>
<tr><td>In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.</td></tr>
<tr><td rowspan="2">Right click mouse</td><td>In real-time monitor mode, this action pops up shortcut menu.</td></tr>
<tr><td>Exit current menu without saving the modification.</td></tr>
<tr><td rowspan="3">Press middle button</td><td>In numeral input box: Increase or decrease numeral value.</td></tr>
<tr><td>Switch the items in the check box.</td></tr>
<tr><td>Page up or page down</td></tr>
<tr><td>Move mouse</td><td>Select current control or move control</td></tr>
<tr><td rowspan="2">Drag mouse</td><td>Select motion detection zone</td></tr>
<tr><td>Select privacy mask zone.</td></tr>
</table>

3 Network Connection

Please refer to Figure 3-1 **Error! Reference source not found.**below for connection example.

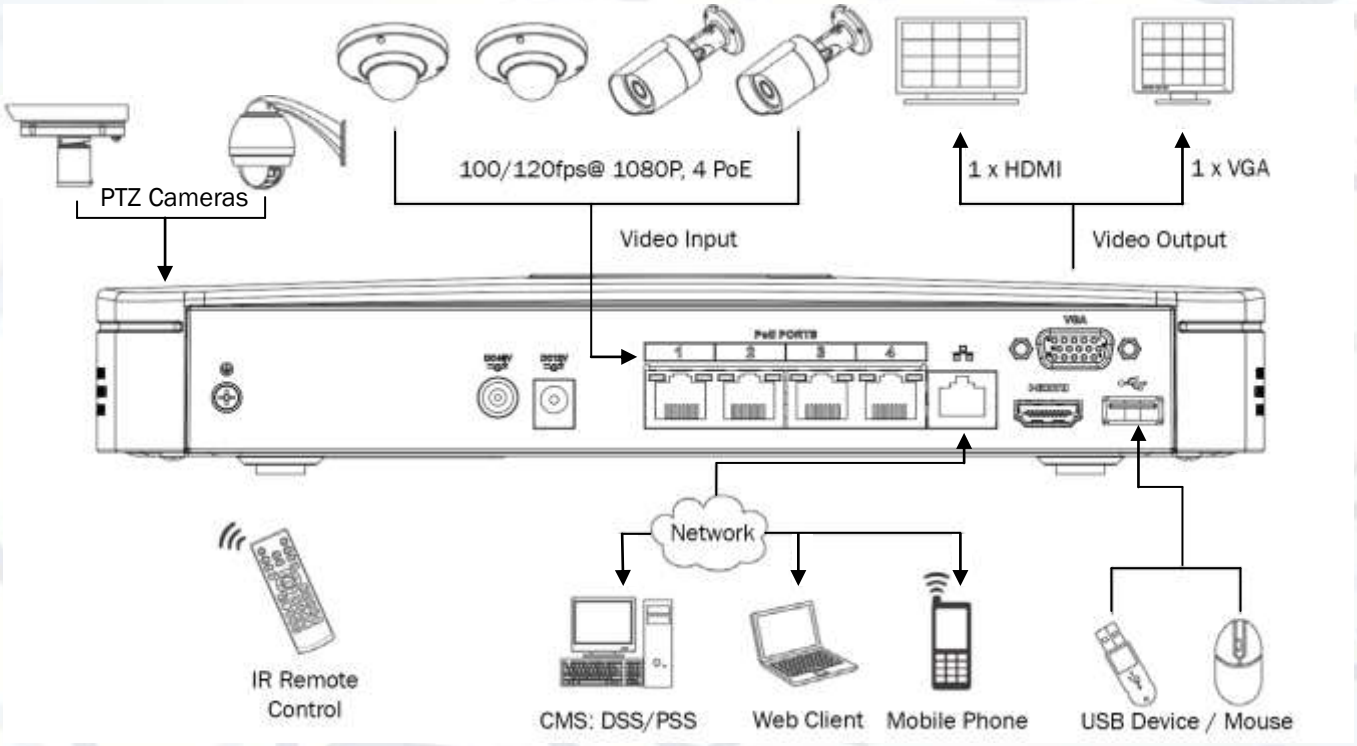


Figure 3-1

4 GUI (Graphic User Interface) Operation

Connect the device to the monitor and then connect a mouse and power cable. Click the power button at the rear panel and then boot up the device to view the analog video output. You can use the mouse to implement some GUI operation.

4.1 Login

After the device boots up, the system is in the multiple-channel display mode. See Figure 4-1.Please note the displayed window amount may vary. The following figure is for reference only.

Figure 4-1

You can use USB2.0 mouse to input. Click 123 to switch between numeral, English character (small/capitalized) and denotation.

Note:
For security reason, please modify password after you first login.

3 failed login attempts within 30mins will result in triggering the system alarm and after 5 failed attempts, also within 30mins, will result in account loss.

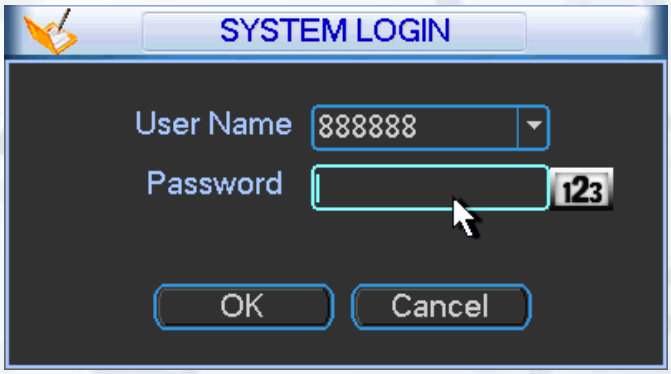


Figure 4-2

You can overlay the corresponding date, time and channel name on each screen. You can refer to the following sheet for channel record or alarm status information.

1		Recording status	3		Video loss
2		Motion detection	4		Camera lock

Preview Control

The preview control function has the following features.

- Support preview playback.
  - ✧ In the preview desktop, system can playback previous 5-60 minutes record of current channel. Please go to the Main Menu->General to set real-time playback time.
  - ✧ Supports drag and play function. You can use your mouse to select any playback start time.
  - ✧ Supports playback, pause and exit function.
  - ✧ At this point, the system does not support slow playback and backward playback function.
- Support digital zoom function.
- Support real-time backup function.

You can follow the contents listed below for the operation instruction.

Preview control interface

Move your mouse to the top centre of the current video channel; you can see that the system pops up the ‘Preview control interface’. See Figure 4-3. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.

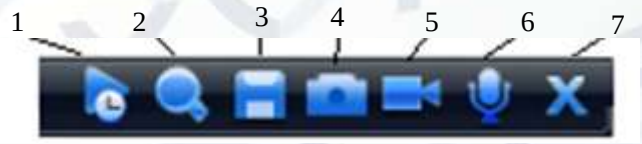


Figure 4-3

You can refer to the following sheet for detailed information:

SN	Name	Function
1	Realtime playback	This is to playback the previous 5-60 minutes of recorded from the current channel. Please go to the **Main Menu**->**General** to set real-time playback. System may pop up a dialogue box if there is no such record in current channel.
2	Digital zoom	This is to zoom in to a specified zone within the current channel. You can use the zoom in function with multiple-channels. The selected area has an icon as  and the free area is shown as an icon as  .
3	Real-time backup function	This is to backup the video of a current channel to the USB2.0 device. System cannot backup the video of multiple-channel at the same time. Current selected backup channel has an icon as  and the free channel is shown as an icon as  . Once the backup started, you can see the free channel is shown as an icon as  .
4	Manual Snap	Click it to snap manually.
5	Remote device add shortcut	This is to go to the remote device connection interface.
6	Bidirectional talk	Supports bidirectional talk function with the front-end device.
7		Exit

Playback control

The playback control has the following features.

- Supports play, pause, exit and drag function.
- During the preview playback process, you cannot see the channel title and record status of current channel. It will display the channel title and the record status once you exit the preview playback.
- During the preview playback, you cannot switch the displayed channel or change current window-display mode.
- Please note: the tour function has the higher priority than the preview playback. System automatically exits the preview playback function and its corresponding interface when

the tour function started. You cannot control the preview playback until the tour function has ended.

4.2 Right Click Menu

After you logged in to the device, right click mouse and you will see the short cut menu. Please see Figure 4-4

Figure 4-4

Here you can set local playback window, PTZ control, video color, search records, remote device etc. The local playback window includes 1/4/8/9/16 layout configurations. You can set the detail channel amount in 1/4-window.

4.3 Main Menu

After you login, the system main menu will be displayed, as shown below (Figure 4-4). There are a total of seven icons: Search, Information, Setting, Remote device, Backup, Advanced and Shutdown. Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.

Figure 4-4

4.4 Search & Playback

Click search button in the main menu, search interface is shown on the next page (Figure 4-5).

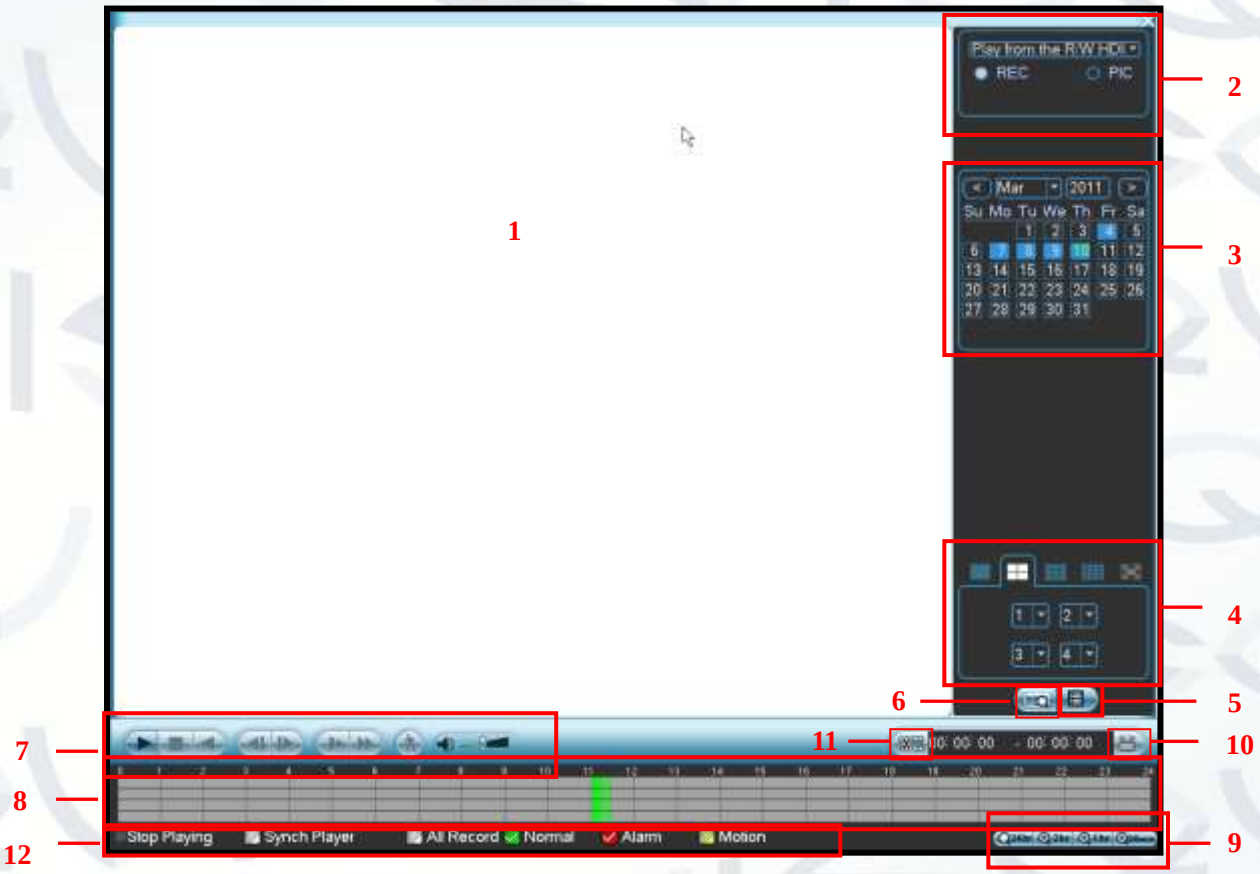
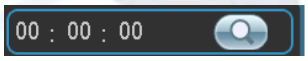


Figure 4-5

Please refer to the following sheet for more information:

SN	Name	Function
1	Display window	• This is to display the searched picture or file. • Supports 1/4/9/16-window playback configuration.
2	Search type	• Here you can select to search the video footage or the recorded file. • You can select to play from the read-write HDD, a peripheral device or a redundancy HDD. • Before you can view footage from a peripheral device, please connect the corresponding peripheral device. You can view all recorded files from the peripheral device within the root directory. Click the Browse button; you can select the file you want to play. **Important:** Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures stored on it.
3	Calendar	• The blue highlighted date means there is recorded video footage or file linked with it. Otherwise, it contains nothing. • In any play mode, click the date you want to see, you can see the

		corresponding record file trace in the time bar.	
4	Playback mode and channel selection pane.	• Playback mode：1/4/9/16. (It may vary due on different NVR models.) ✧ In 1-window playback mode: you can select one out of the 16 channels. ✧ In 4-window playback mode: you can select 4 channels according to your requirement. ✧ In 9-window playback mode, you can switch between 1-8 and 9-16 channels. ✧ In 16-window playback mode, you can switch between1-16 and 17-32 channels. • The time bar will change once you modify the playback mode or the channel option.	
5	File list switch button	• Double click this button; you can view the picture/record file list of current day. • The file list is to display the first channel of the record file. • The system can display a maximum of 128 files at any one time. Use the ▲/▼ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to initiate playback. • You can input the time period in the following interface to begin an accurate search.  • File type：R—regular record； A—external alarm record；M—Motion detect record. • Lock file. Click the file you want to lock and click the button  to lock. The file locked will not be overwritten. • Search locked file: Click the button  to view the locked file. • Return: Click button  , system goes back to the calendar and the channel setup interface. **Please note:** • System locks up to 16 files. The size of the locked file shall be less than a 1/4 of the HDD's total space. The first 16G of each partition cannot be locked. • System can only lock one file at one time and cannot lock the extra stream. For the file that is writing or overwriting, it cannot be locked.	
6	Card number search	The card number search interface is shown as below. 	
7	Playback control pane.	►/ II	Play/Pause There are three ways for you to begin playback. ● The play button ● Double click the valid period of the time bar. ● Double click the item in the file list.

			In slow play mode, click it to switch between play/pause.
		■	Stop
		◄	Backward play In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ►/II to restore normal play.
		|◄/ ►|	In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. In normal play mode, when you pause current play, you can click ◄| and |► to begin frame by frame playback. In frame by frame playback mode, click ►/II to restore normal playback.
		▶·	Slow play In playback mode, click it to display various slow play modes such as slow play 1, slow play 2, etc.
		▶▶	Fast forward In playback mode, click to display various fast play modes such as fast play 1,fast play 2 and etc.
		Note: The actual play speed is dependent what software version is installed.	
			Smart search
			The volume of the playback
			Click the snapshot button in full-screen mode, the system can snapshot at 1 picture per second. System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can then select or create path. Click Start button, the snapshot picture can be saved to the specified path.
8	Time bar	• This displays the record type and its period in current search criteria. • In the 4-window playback mode, there are four corresponding time bars. In other playback modes, there is only one time bar. • Use the mouse to click one point of the color zone in the time bar and the system will begin playback. • The time bar begins at 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file. • The green color represents the regular record file. The red color represents the external alarm record file. The yellow represents the motion detect record file.	
9	Time bar unit	• This option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record.	

		• The time bar is begins at 0 o'clock when you are setting the configuration. The time bar zooms in to the period of the current playback time when you are playing the file.
10	Backup	• Select the file(s) you want to backup from the file list. System supports files from up to four channels. Then click the backup button, now you can see the backup menu. Click the start button to begin the backup operation. • Check the file again, if you want to cancel current selection. • System support can display up to 32 files from one channel.
11	Clip	• This button allows you to edit the file. • Please play the file you want to edit and then click this button. You can see the corresponding slide bar in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time. Click this button again and then save current contents in a new file.
12	Record type	In any play mode, the time bar will change once you modify the search type.
13	Smart search	• When the system is playing footage, you can select a zone in the window to begin motion detect. Click the motion detect button to begin play. • Current button is null once the motion detect play has begun. • The system will take the whole play zone as the motion detect region by default. • The motion detect play function stops once you have switched the play file. • To set the time bar, click the play button, or any file within the list and operation will stop current motion detect play.
Other Functions		
14	Other channel synchronization switch to play when playback	When playing the file, click the number button and system will then switch to the same period of the corresponding channel (it will continue to play).
15	Digital zoom	When the system is in full-screen playback mode, left click the mouse in the screen, drag your cursor on the screen to select a section and then left click mouse to display the digital zoom tool. You can right click mouse to exit.
16	Manually switch channel when playback	During the file playback process, you can switch to other channels via the dropdown list or rolling the mouse. This function is null if there is no record file or system is in smart search process.

Note:

All the operations here (such as playback speed, channel, time and progress) is dependent on what hardware spec you are running.

4.5 Information

The ‘Info’ menu screen allows you to view system information. There are a total of seven items: ‘HDD’ (hard disk information), ‘BPS’ (data stream statistics), ‘Log’, ‘Version’, ‘Online user’, ‘Remote device information’ and ‘Network info’ (See Figure 4-6).

Figure 4-6

4.5.1 HDD Information

This option will list the hard disk type, total space, free space, and status (See Figure 4-7).

Note: For 32 series product you can install up to a maximum of 2 HDDs.

○ : Means current HDD is normal..

▬ : Means there is no HDD.

? : Means the disk is damaged. Please remove the broken hard disk before you add a new one.

Figure 4-7

In Figure 4-7, click ‘View recording times’ button, HDD record time information interface is shown in Figure 4-8.

Figure 4-8

Parameter	Function
SATA	1-4 here shows the occupied number of HDD spaces. For 32 series product there are max 2 HDDs.
SN (2*)	HDD allocated title column; * means HDD number ‘2’ is the currently working HDD.
Type	The corresponding HDD property.
Total space	The HDD total capacity.
Free space	The HDD free capacity.
Status	Displays if HDD is fully operational within the system or not.
Bad track	This is Displayed when HDD has a bad track.
Page up	Click it to view previous page.
Page down	Click it to view the next page.
View recording time	Click it to view HDD record information (file start time and end time).
View HDD type and capability	Click it to view HDD property, status, etc,

4.5.2 BPS

This option allows you to view the current video data stream (KB/s) and occupied hard disk storage (MB/h) (See Figure 4-9).

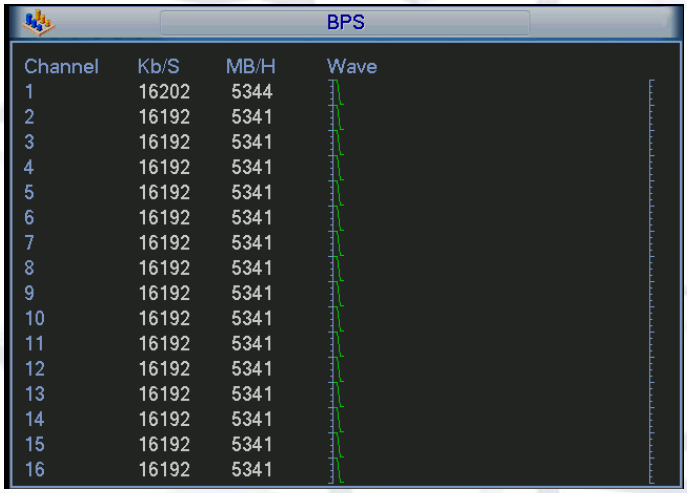


Figure 4-9

4.5.3 Log

This option allows you to view the system log file. System lists the following information (See Figure 4-10).

Log types include system operation, configuration operation, data management, alarm event, record operation, log clear, etc.

- **Start time/end time**: select start time and end time, then click the search button. You can view the log files in a list. System can display up to 100 logs in one page. It can save up to a maximum of 1024 log files. Please use the page up/down buttons on the interface or the front panel to view more.
- **Backup**: select a folder you want to save; you can click the backup button to save the log files. After the backup, you will see there is a folder named Log_time on the backup path. Double click the folder, you will be able to see the log file.
- **Details**: click the 'Details' button or double click the log item, you will then be able to view the information related to that log file (See Figure 4-11). Here you can use the grey highlighted rolling bar to view the information, or you can use Page up/Page down to view other log information not shown on the current list. To view the alarm event log for video loss, you can click the Playback button at the bottom right corner to commence playback.

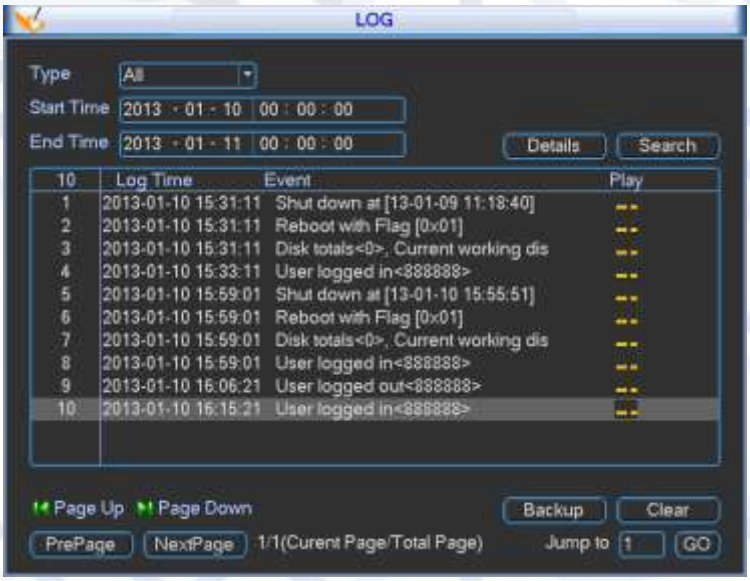


Figure 4-10

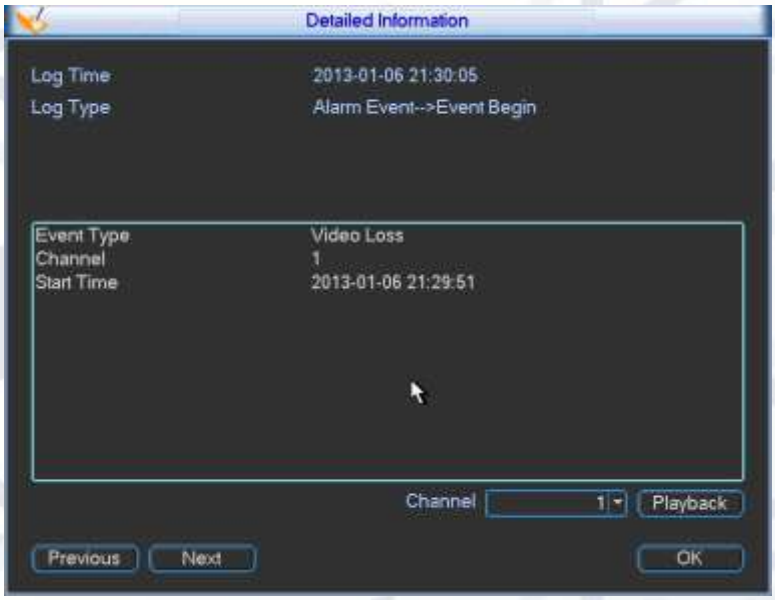


Figure 4-11

4.5.4 Version

This option allows you to view the system version information (See Figure 4-12). Such as:

- **Channel**
- **Alarm in**
- **Alarm out**
- **System version:**
- **Build Date**
- **Web**
- **Serial number**

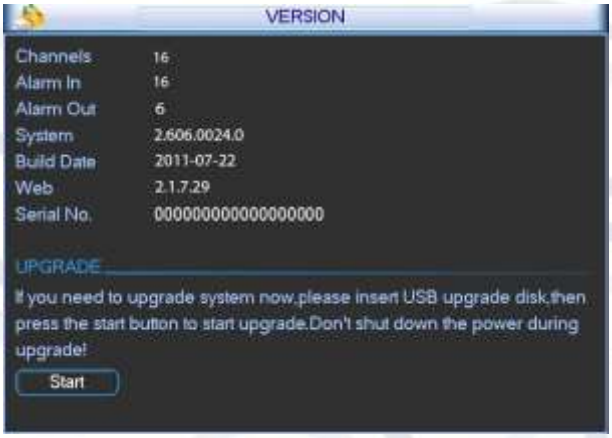


Figure 4-12

4.5.5 Online Users

This option allows you to manage the online users connected to the local device (See Figure 4-13). Depending on what user account privileges have been authorised, if you have been given the rights to you may be able to disconnect or block users.

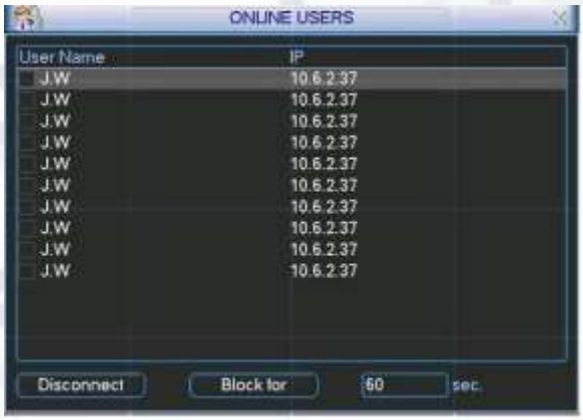


Figure 4-13

4.5.6 Remote Device Information

This option will allow you to view the channel status of the remote device, connection log, etc.

- **Channel status**: Here you can view the IPC status of the corresponding channel such as motion detect, video loss, camera masking, alarm, etc. (See Figure 4-14).

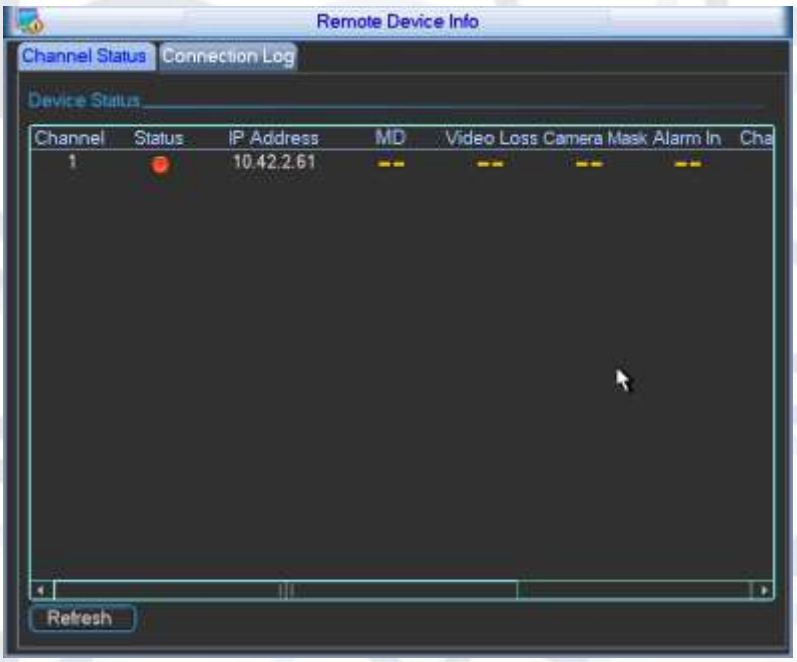


Figure 4-14

- **Connection log**: In this interface, you can search the IPC log information for the corresponding channel. It also includes IPC online, offline, etc. (See Figure 4-15).

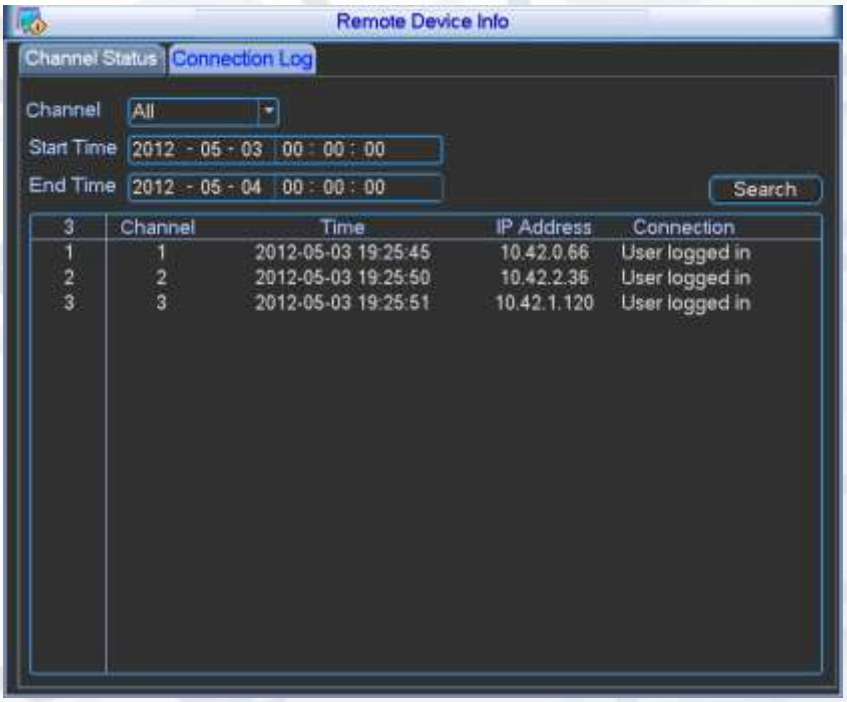


Figure 4-15

4.5.7 Network Info

In this interface, you can perform network tests, analyse the results from the tests, and view network load information.

4.5.7.1 Network Test

Network test interface is shown as in Figure 4-16.

- **Destination IP:** Please input valid IPV4 address and domain name.
- **Test:** Click it to test the connection with the destination IP address. The test results can display average delay and packet loss rate. You can also view the network status, which will either be displayed as ‘OK’, ‘Bad’, ‘No connection’, etc.
- **Network Sniffer Packet backup:** Please insert USB2.0 device and click the Refresh button, you can view the device on the following ‘Device Name’ dropdown box. You can use the dropdown list to select peripheral device. Click Browse button to select the snap path. The steps here are the same as preview backup operation.

You can view all connected network adapter names (including Ethernet, PPPoE, WIFI, and 3G) within the main list table panel. To begin Sniffer, click the button:  within the ‘Sniffer Packet Backup’ column. Click the grey stop button to stop. Please note system cannot Sniffer several network adapters at the same time. After the Sniffer function starts, you can exit to implement corresponding network operations such as login in to the Web, monitor, etc. Please go back to Sniffer interface to click  stop Sniffer. System can save the packets to the specified path. The file is named after “Network adapter *name+time*”. You can use software such as ‘Wireshark’ (Download from **http://www.wireshark.org/**) to open the packets on the PC for a professional engineer to anaylse and solve complicated problems.

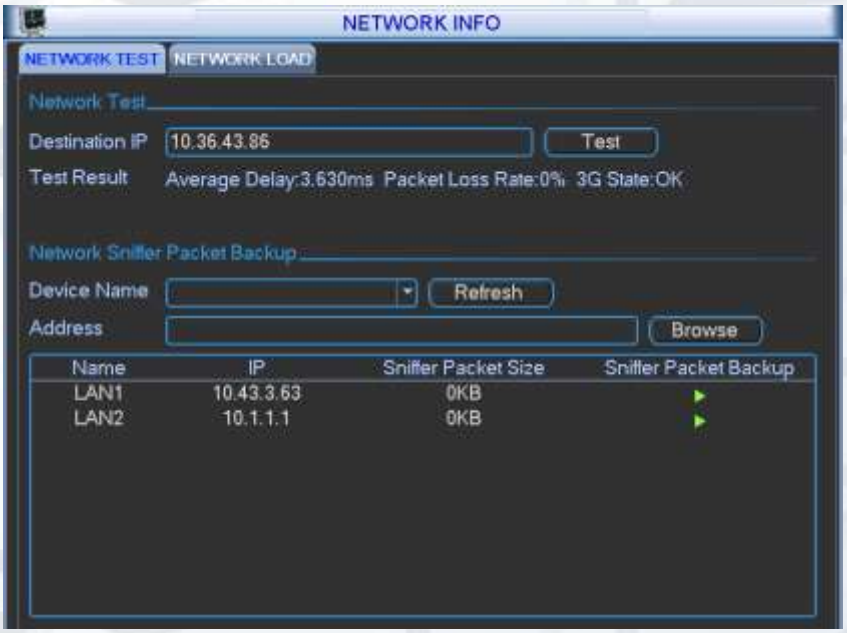


Figure 4-16

4.5.7.2 Network Load

Network load as shown in Figure 4-17, is where you can view the traffic rate statistics of the device network adapter.

Here you can view information of all connected network adapters. The connection status is shown as offline if connection is disconnected. Click one network adapter, you can view the flow statistics such as send rate and receive rate at the top panel

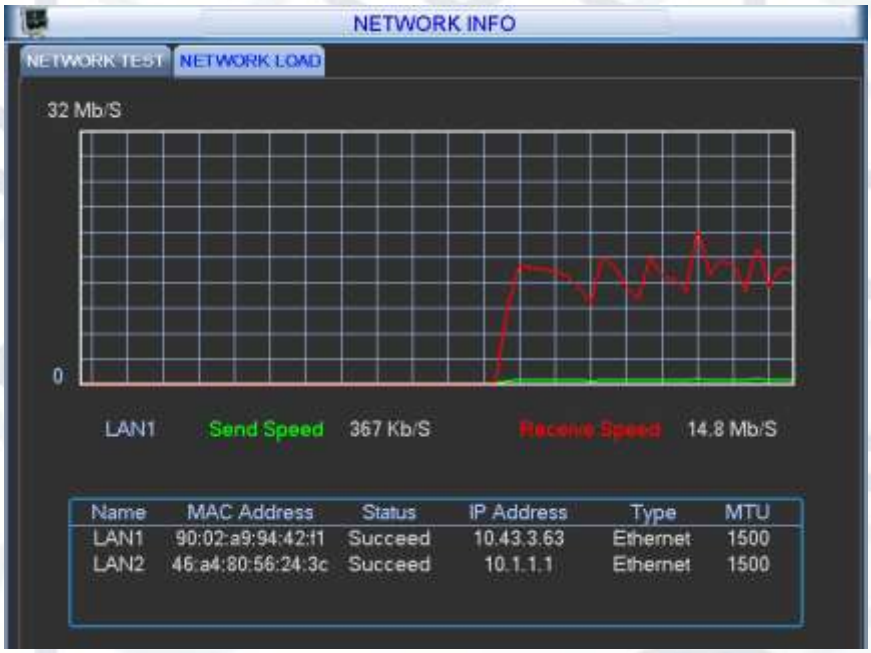


Figure 4-17

4.6 Setting

To view the main menu, highlight ‘Setting’ icon and double click mouse. System setting interface is shown as below (see Figure 4-18).

Figure 4-18

Important

Please note; you need to have the correct user permissions to implement the following operations.

4.6.1 General

General setting includes the following items. See Figure 4-19.

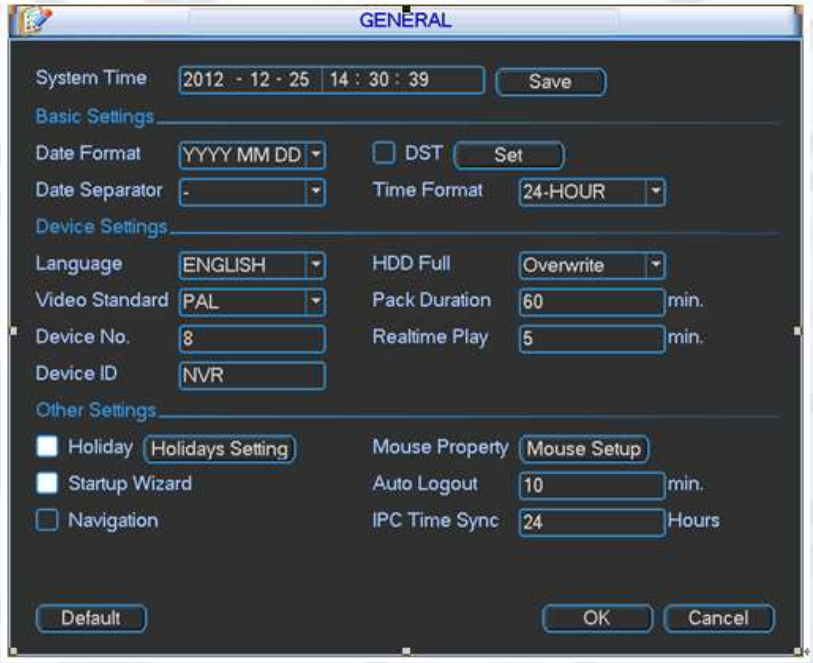


Figure 4-19

- **System time:** To set system time
- **Date format:** There are three types of date format: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- **Date separator:** There are three denotations to separate date: dot, beeline and solidus.
- **DST:** Here you can set DST time and date. Please enable DST function and then click the set button. You can see the interface shown in Figure 4-20. Here you can set the start and end time by setting the corresponding week setup. Click the date button to view the interface shown as in Figure 4-21. Here you can set start time and end time by setting corresponding date setup.

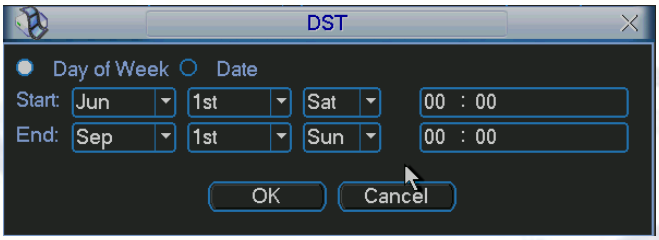


Figure 4-20

Figure 4-21

- **Time format:** There are two types to choose from: 24-hour mode or 12-hour mode.
- **Language:** System supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional).
- **HDD full:** This option allows you to select the working mode when hard disk is full. There are two options: 'Stop recording' or 'Rewrite'. When the 'Stop Recording' has been set; if the current working HDD is overwritten or the current HDD is full while the next HDD is not empty, then system stops recording, When the 'Rewrite' option is selected; if the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
- **Pack duration:** This allows you to specify record duration. The value ranges from 60 to 120 minutes. Default value is 60 minutes.
- **Device No:** When you are using one remote control (not included in the accessory bag) to control several NVRs, you can allocate a number to each NVR for easier management.
- **Video standard:** There are two formats: NTSC and PAL.
- **Realtime play:** This sets the amount of playback time that you can view in the preview interface. The value ranges from 5 to 60 minutes.
- **Device ID:** Please input a corresponding device name here.

- **Holiday setting:** Click this to see the interface shown as in Figure 4-22. Here you can set the holiday date. Please go to the Holidays Period interface to set the holiday date record setup.
  - ✧ When you enable Holiday settings and schedule setup at the same time, holiday setting has the priority. If the selected day is a holiday, then system records as you set in holiday setting. If it is not a holiday, system records as you set in Schedule interface. Please note you need to go to chapter 4.6.3 Schedule to learn about enabling the Holiday setup. Otherwise you may not correctly setup the holiday settings.

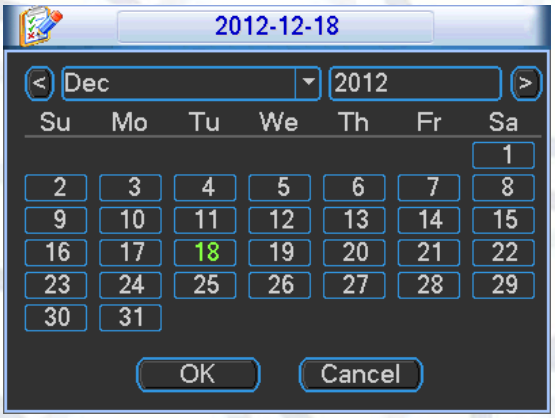


Figure 4-22

  - ✧ Please note there is no year setup on the holiday setting. For example, if you set 30th Oct, 2012 as a holiday, then the date of 30th Oct in each succeeding year will be set as a holiday. So, generally speaking, your holiday setup in the current year may also affect the holiday setup in the next.

- **Mouse property:** By Clicking the mouse setup button the mouse setup interface will appear (See Figure 4-23). You can set double click speed via dragging the slide bard. You can Click Default button to restore default setup.

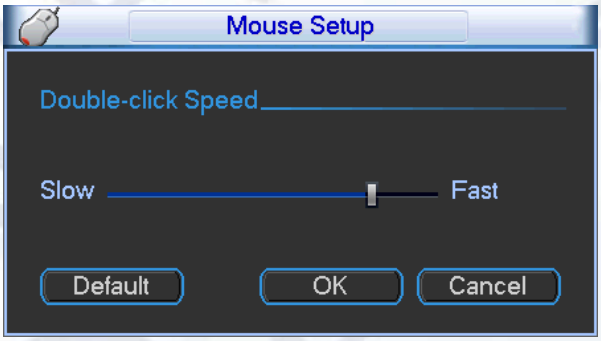


Figure 4-23

- **Startup wizard:** Once you check the box here, the system will go to the startup wizard directly when the system restarts the next time. Otherwise, it will go to the login interface.
- **Auto logout:** This is where you can set the auto logout interval, once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- **Navigation bar:** When you check the box, the system displays the navigation bar on the interface.
- **IPC Time Sync:** You can input an interval here to synchronize the NVR time and IPC time.

- **Snap times:** Here you can set the snap picture amount with one click.

Important:
Since system time is very important, do not modify time casually unless you absolutely need to!

Before you start any time modification, please stop recording operations first!

After completing all setups please click the save button, system goes back to the previous menu.

4.6.2 Encode

Encode setting includes the following items (See Figure 4-24).

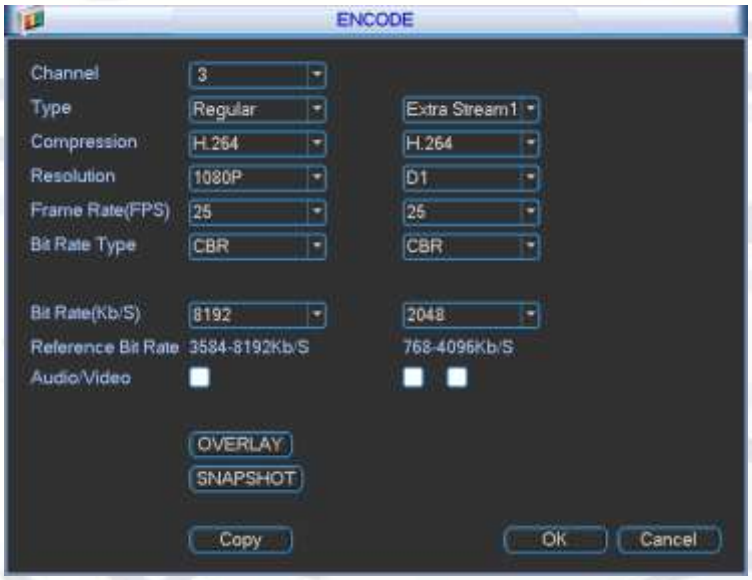


Figure 4-24

Please note some series do not support extra stream.

- **Channel:** Select the channel you want.
- **Type:** Please select from the dropdown list. There are four options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- **Compression:** System supports H.264, MPEG4, MJPEG and etc.
- **Resolution:** The mainstream resolution type is IPC's encoding configuration; you can set it to either D1, 720P or 1080P.
- **Frame rate:** It ranges from 1f/s to 25f/s in PAL mode and 1f/s to 30f/s in NTSC mode.
- **Bit rate type:** System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- **Quality:** There are six levels ranging from 1 to 6. The sixth level has the highest image quality, and level 1 having the lowest quality.
- **Video/audio:** You can enable or disable the video/audio.

- **Overlay:** Click overlay button, you can see the interface pop up box shown in Figure 4-25.

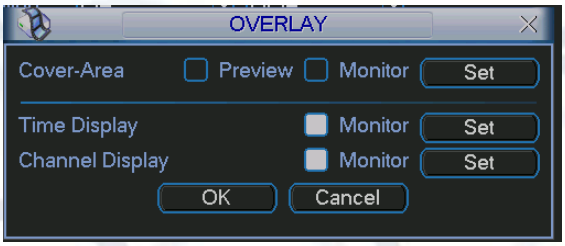


Figure 4-25

  - ✧ **Cover area (Privacy mask):** This allows you to set the privacy mask section. You can drag you mouse to set the proper section size. In one channel video, system supports up to 4 zones in one channel.
  - ✧ **Preview/monitor:** privacy mask has these two types to choose from. Preview means the privacy mask zone cannot be viewed by the user when system is set to preview status. Monitor means the privacy mask zone cannot be viewed by the user when system is set to monitor status.
  - ✧ **Time display:** You can choose to view the displays time or not during playback. Please click the set button and then drag the title to the corresponding position on the screen.
  - ✧ **Channel display:** You can choose to view the system displays channel number or not during playback. Please click the set button and then drag the title to the corresponding position in the screen.

- **Copy：** After you complete the setup, you can click the Copy button to copy current setup to other channel(s). You can see an interface box shown in Figure 4-26. If you look at the channel number in the small boxes you can see the current channel number is grey. Please check the number to select the channel or you can check the box ALL. Please click the OK button in Figure 4-26 and Figure 4-24 respectively to complete the setup.

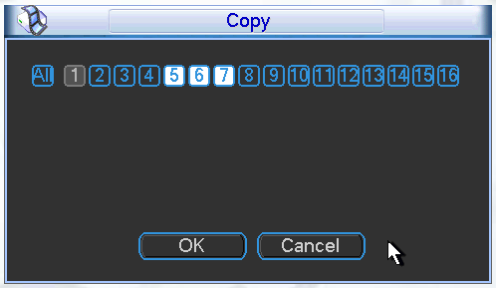


Figure 4-26

Please note, once you check the ‘All’ box, you set the same encode setup for all channels. Audio/video enable box overlay button and the copy button is shielded so that you cannot select it (See Figure 4-27).

Please highlight icon  to select the corresponding function.

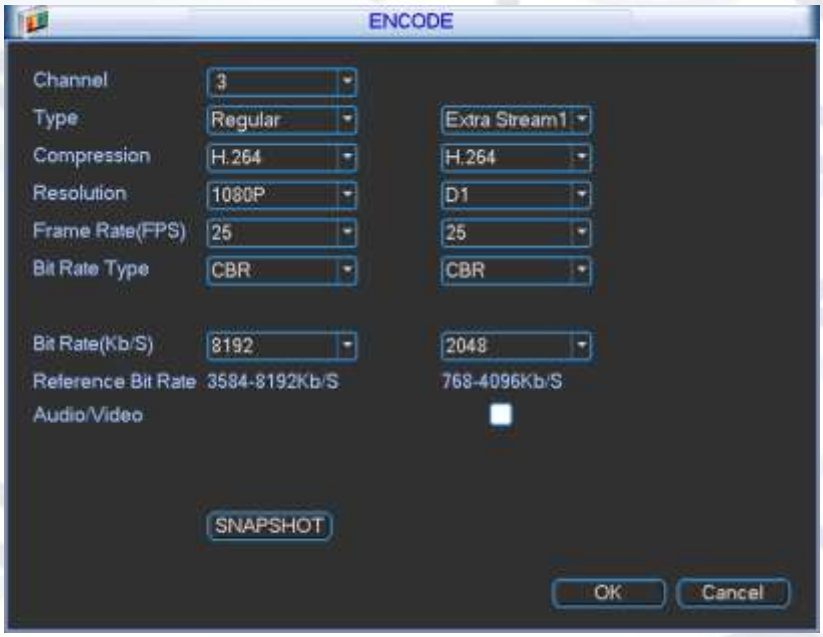


Figure 4-27

4.6.3 Schedule

Within the main menu, you can find the schedule option settings, which is shown in Figure 4-28, through the ‘Settings’ menu.

- **Channel:** Please select the channel number first. You can select ‘All’ if you want to set for the whole channels.
- **Period (Week day):** There are eight options: ranging from Saturday to Sunday, and all.
- **Pre-record:** The system can add pre-recorded video, stored in the memory cache, to the beginning of the captured event, so you can view the run up to the incident. The value ranges from 1 to 30 seconds depending on the bit stream.
- **Redundancy:** System supports a redundancy backup function. It allows you to backup recorded files on to two disks. You can highlight the Redundancy button to activate this function. Please note, before enabling this function, please set at least one HDD as redundant. (Main menu->Advanced->HDD Management). **Please note this function is null if there is only one HDD.**
- **Snapshot:** You can enable this function to instruct the system to take a snapshot image when an alarm is triggered.
- **Record types:** There are four types: regular, motion detection (MD), Alarm, MD & alarm.
- **Holiday:** Select button to Highlight, the holiday settings in General interface becomes activated.

Please highlight icon to select the corresponding function. After completing all the setups please click save button, system goes back to the previous menu.

At the bottom of the menu, there are color bars for your reference. Green color stands for regular recording, yellow stands for motion detection and red stands for alarm recording. The

white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will record neither when motion detection has occurred nor when the alarm has occurred.

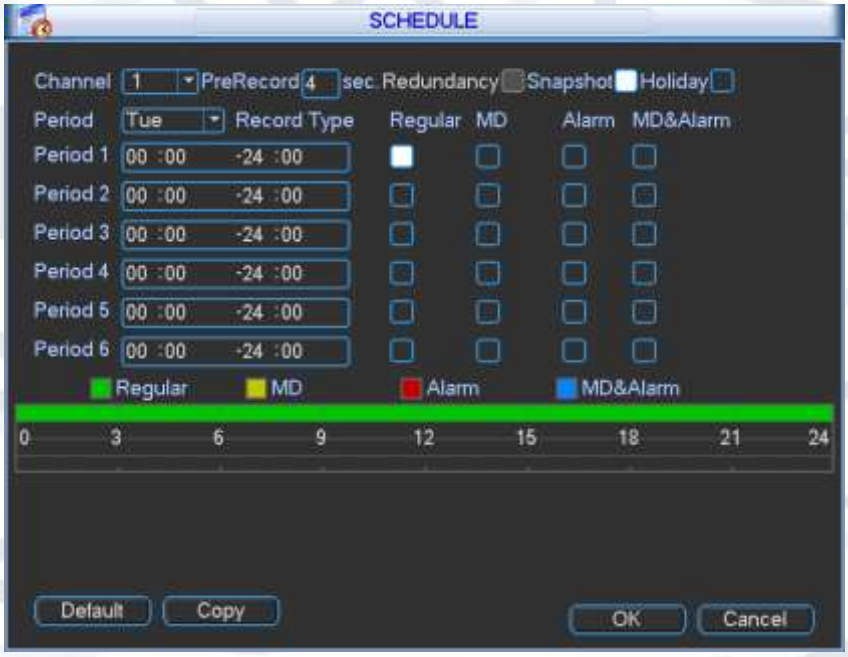


Figure 4-28

4.6.3.1 Quick Setup

The Copy function allows you to copy one channel setup to another. After setting up in channel 1, click the Copy button, you can go to interface (see Figure 4-29). You can see the current channel (channel 1 shown below) name is highlighted in grey. Now you can select the channel you want to paste over, such as channel 5/6/7 (also shown below). If you want to save the current setup of channel 1 to all channels, you can click the first box 'ALL'. Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function is now successfully completed.

Note: if you select 'ALL' in Figure 4-29, the record setup for all channels are the same and the Copy button becomes hidden.

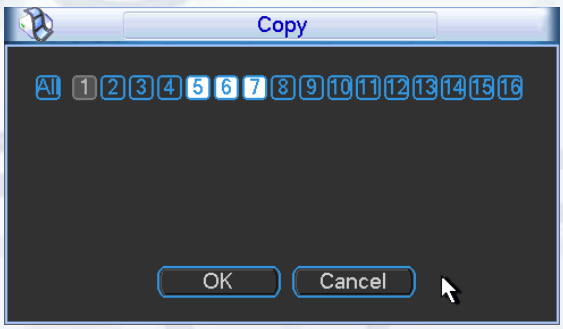


Figure 4-29

4.6.4 RS232

RS232 interface is shown as below. There are five items (see Figure 4-30).

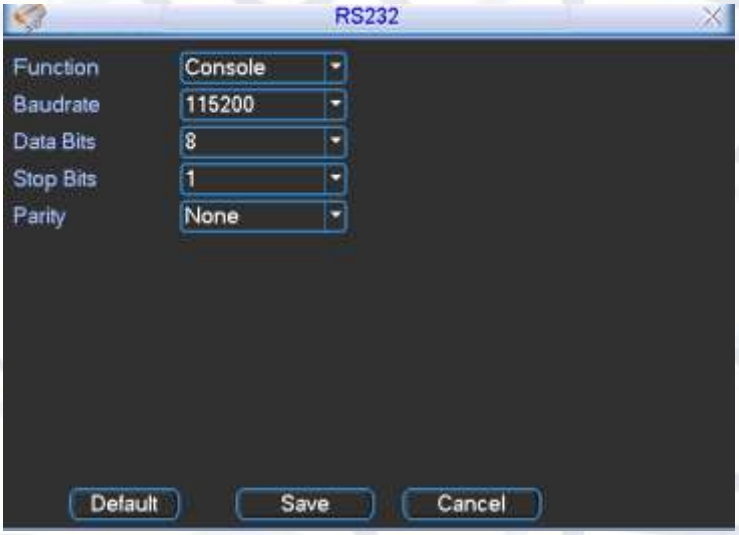


Figure 4-30

- **Function:** There are various devices for you to select. The ‘Console’ is for you to use the COM or mini-end software to upgrade or debug the program. The control keyboard is for you to control the device via the special keyboard. ‘Transparent COM’ (adapter) is connected to the PC to transfer data directly. ‘Protocol COM’ is for the card overlay function. ‘Network keyboard’ is for you to use the special keyboard to control the device. ‘PTZ matrix’ is to connect to the peripheral matrix control.
- **Baud rate:** You can select the proper baud rate.
- **Data bit:** You can select the proper data bit. The value ranges from 5 to 8.
- **Stop bit**: There are three values: 1/1.5/2.
- **Parity:** there are five choices: none/odd/even/space mark.

System default setup is:

- **Function:** Console
- **Baud rate:** 115200
- **Data bit:** 8
- **Stop bit:** 1
- **Parity:** None

After completing the entire setup within this menu please click the save button, the system will go back to the previous menu.

4.6.5 Network

This Menu section allows you to input network information (see Figure 4-31).

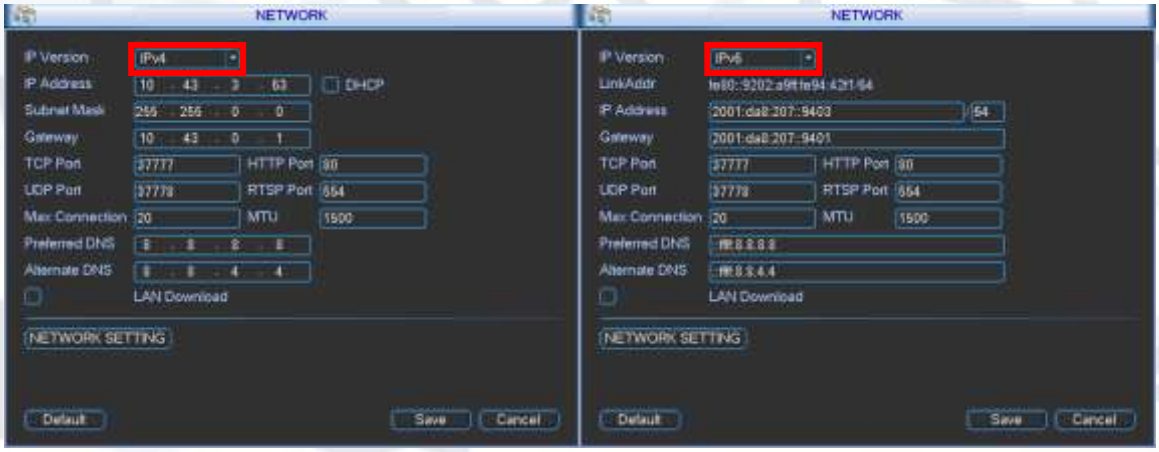


Figure 4-31

- **IP Version:** 'IPv4 and IPv6' are the two options to choose from. Right now, the system supports these two IP address formats and you can access the network through them.
- **MAC address:** The host in the LAN can acquire a unique MAC address. It is to allow you to gain access in to the LAN (read-only).
- **IP address:** Here you can use the up/down buttons (▲▼) or input the corresponding number to input the IP address. Then you can set the corresponding subnet mask to get the default gateway address.
- **Subnet prefix:** The input value ranges from 0 to 128. This is to mark a specified network MAC address. Usually it includes an organisation made up of multiple-levels.
- **Default gateway:** Here you can input the default gateway.

Note: system needs to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section, which means that the specified length of the subnet prefix shall have the same string.

- **DHCP:** This will automatically search for the IP. When you enable the DHCP function, you cannot modify IP/Subnet mask /Gateway. These values are from the DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway displays this as zero. You need to disable DHCP function to view current IP information. Although, whilst the PPPoE is operating, you cannot modify IP/Subnet mask /Gateway.
- **TCP port:** Default value is 37777. You can change if necessary.
- **UDP port:** Default value is 37778. You can change if necessary.
- **HTTP port**: Default value is 80.
- **RTSP port:** Default value is 554.

Important: System needs to reboot after you changed and saved any setup of the above four ports. Please make sure the port values here do not conflict.

- **Max connection:** system supports up to a maximum of 20 users. Having a 0 value means there is no connection limit.
- **MTU:** This is to set the MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes.

Note: MTU modification may result in network adapter reboot and the network will shut down. In other words the MTU modification can affect the current network service. System may pop up a dialog box for you to confirm the completed setup when you want to change the MTU settings. Click the OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the NVR shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for your reference only:

- ✧ **1500:** Ethernet information packet max value and it is also the default value. It is the typical setup when there is no PPPoE or VPN. It is the default setup of a router, switch or the network adapter.
- ✧ **1492:** Recommend value for PPPoE.
- ✧ **1468:** Recommend value for DHCP.
- ✧ Please make sure MTU port does not conflict with other ports.

- **Preferred DNS server:** DNS server IP address.
- **Alternate DNS server:** DNS server alternate address.
- **Transfer mode:** Here you can select the priority between fluency/video qualities.
- **LAN download:** System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.

Important: For the IP address for the IPv6 version, default gateway, preferred DNS and alternate DNS, the input value shall be 128-digits. It cannot be left blank.

After completing all the setup please click the save button, system will go back to the previous menu.

4.6.5.1 Network Setting

Network setting interface is shown in Figure 4-32. Please draw a circle to enable the corresponding function and then double click the current item to go to the setup interface.

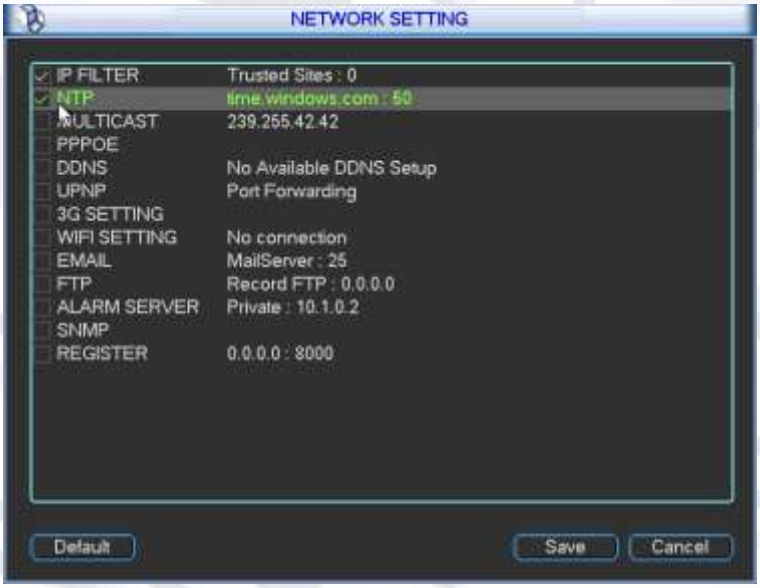


Figure 4-32

4.6.5.2 IP Filter

The IP filter interface is shown in Figure 4-33. You can add the IP in the following list. The list supports a maximum of up to 64 IP addresses. IPv4 and IPv6 are the valid supported addresses used by the system. **Please note system needs to check the validity of all IPv6 addresses.**

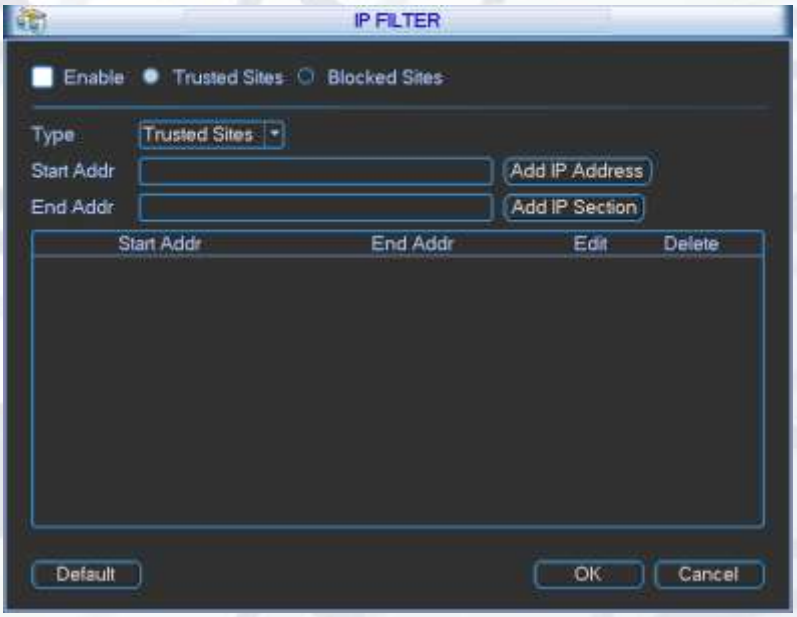


Figure 4-33

After you enable the trusted sites function, only the IP listed below can access current NVR. If you enable blocked sites function, the following listed IP addresses cannot access current NVR.

- **Enable:** If you highlight the box here, you can check the trusted site and blocked sites functions. You cannot see these two modes if the Enable button is highlighted in grey.
- **Type:** You can select 'Trusted site' and 'Blacklist' from the dropdown list. You can view the IP address on the following column.
- **Start address/end address:** Select one type from the dropdown list, you can input the IP address in the start and end address. Now you can click to add the IP address or add IP section to the list.
  a) For the newly added IP address, this can enable a status by default. Remove the √ before the item then current item if not in the list.
  b) System supports up to a maximum of 64 items.
  c) Address column supports IPv4 or IPv6 format. If it is an IPv6 address, the system can optimise it.

     For example: system can optimise:

     aa:0000: 00: 00aa: 00aa: 00aa: 00aa: 00aa

     as

     aa:: aa: aa: aa: aa: aa: aa.

  d) System automatically removes space if there is any before or after the newly added IP address.
  e) System only checks start address if you add an IP address. The system checks the start and end address if you add IP section and the end address shall be larger than the start address.
  f) System may check if a newly added IP address exists or not. The system does not add it to the list if the input IP address does not exist.
- **Delete:** Click it to remove specified item.
- **Edit:** Click it to edit start and end address. System can check the IP address validity after the edit operation and implement IPv6 optimisation.

4.6.5.3 NTP Setup

You need to install an SNTP server (i.e.: Absolute Time Server) in to your PC first. In a Windows OS, you can use command “net start w32time” to boot up NTP service. NTP setup interface is shown as in Figure 4-34.

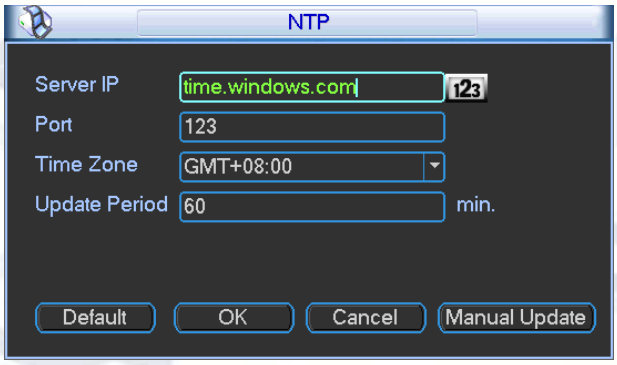


Figure 4-34

- **Host IP:** Input your PC address.
- **Port:** This series NVR supports TCP transmission only. Port default value is 123.
- **Update interval:** minimum value is 1. Max value is 65535. (Unit: minute)
- **Time zone:** select your corresponding time zone here.
- **Update period:** You can input interval here.
- **Manual update:** It allows you to synchronize the time with the server manually.

Here is a sheet for your time zone setup:

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10
Alaska	GMT-9
Pacific Time(P.T)	GMT-8
American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2

4.6.5.4 Multicast

The multiple-cast setup interface is shown as in Figure 4-35.

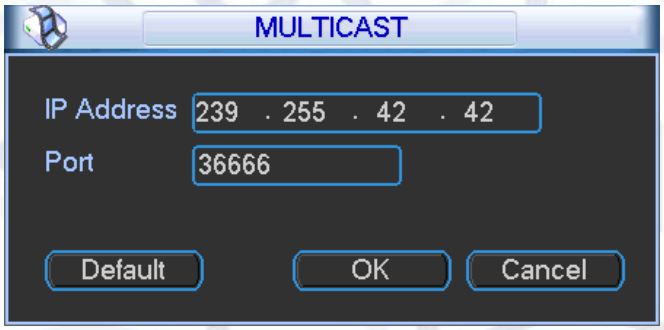


Figure 4-35

Here you can set a multiple cast group. Please refer to the following sheet for detailed information.

- IP multiple cast group address:
  - 224.0.0.0-239.255.255.255
  - "D" address space
- The higher four-bit of the first byte="1110"
- Reserved local multiple cast group address:
  - 224.0.0.0-224.0.0.255
  - TTL=1 When sending out telegraph
  - For example:

224.0.0.1 All systems in the sub-net
224.0.0.2 All routers in the sub-net
224.0.0.4 DVMRP router
224.0.0.5 OSPF router
224.0.0.6 PIMv2 router

- Administrative scoped addressees:
  - 239.0.0.0-239.255.255.255
  - Private address space
- Like the single broadcast address of RFC1918
- Cannot be used in Internet transmission
- Used for multiple cast broadcast in limited space.

Except the above mentioned addresses of special meaning, you can use other addresses. For example:

Multiple cast IP: 235.8.8.36
Multiple cast PORT: 3666.

After you have logged in to the Web, the Web can automatically get a multiple cast address and add it to the multiple cast groups. You can enable a real-time monitor function to view the processes.

Note: multiple cast function applies to the special series only.

4.6.5.5 PPPoE

PPPoE interface is shown as in Figure 4-36.

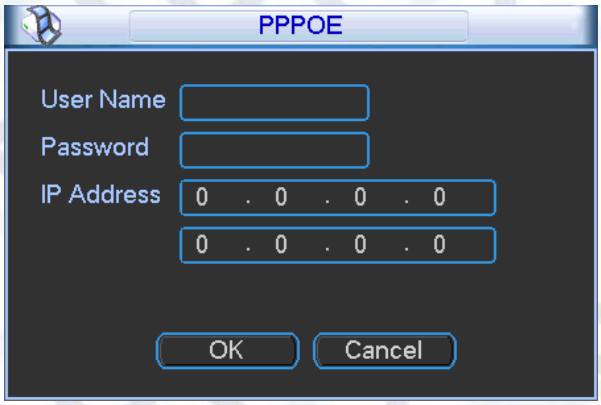


Figure 4-36

1. Input the “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider).

2. After you click the save button, you will need to restart the NVR to activate your configuration.

3. After rebooting, the NVR will connect to internet automatically. The IP in the PPPoE is the NVR’s dynamic value. You can access this IP to visit the unit.

4.6.5.6 DDNS

DDNS setup interface is shown as in
Figure 4-37.

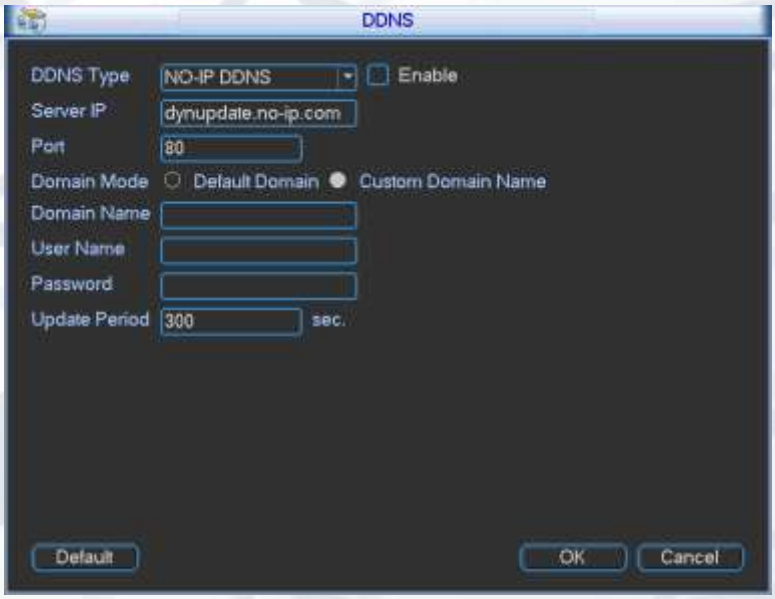


Figure 4-37

1. You need a PC with a fixed IP on the internet and with DDNS software running on it. In other

words, this PC needs to be a DNS (domain name server).

2. In the network DDNS, please select the DDNS type and highlight to enable item. Then input your PPPoE name you get from you IPS and server IP (PC with DDNS). Click the save button and then reboot system.

3. Click the save button, system prompts you to reboot so you can get all the setup activated.

4. After rebooting, open we browser and input the domain name.

5. Now you can open the DDNSServer web search page.

Note: NNDS type includes: CN99 DDNS, NO-IP DDNS, Quick DDNS, and Dyndns DDNS. All the DDNS can be valid at the same time, you can select them as you require.

6. Quick DDNS function shall work with special DDNS server and special Professional Surveillance Software (PSS).

Quick DDNS and Client-end Introduction:

1. Background Introduction

The device IP is not fixed if you use ADSL to login to the network. The DDNS function allows you to access the NVR via the registered domain name. Besides the general DDNS, the quick DDNS works with the device from the manufacturer so that it can add the extension function.

2. Function Introduction

The quick DDNS client has the same function as other DDNS client end. It recognises the bonding of the domain name and the IP address. Right now, the current DDNS server can only be used by our own devices. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name, password or the ID registration on the server. At the same time, each device has a default domain name (Generated by a MAC address) to add to your options. You can also use a customised valid domain name (that has not been registered).

3. Operation

Before you use our quick DDNS, you need to enable this service and set the proper server address, port value and domain name.

- **Server address**：www.quickddns.com
- **Port number**：80
- **Domain name**：There are two modes: Default domain name and customised domain name.

Except default the domain name registration, you can then also use customised domain name (You can input your self-defined domain name.). After successful registration, you can use the domain name to login and input the device IP.

- **User name:** This is optional. You can input your commonly used email address.

Important

- **Do not register frequently. The interval between two registrations should be more than 60 seconds in length. Too many registration requests may result in triggering an alarm within server, and will cause it to block your registration attempts.**
- **System may take back the domain name that is idle for one year. You can get a notification email sent to you before the cancel operation if your email address has been included in the setup.**

4.6.5.7 UPNP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address into the 'Router LAN IP' field (see Figure 4-31 to obtain IP address). Double click the UPNP item in Figure 4-31; you can see the following interface (see Figure 4-38).

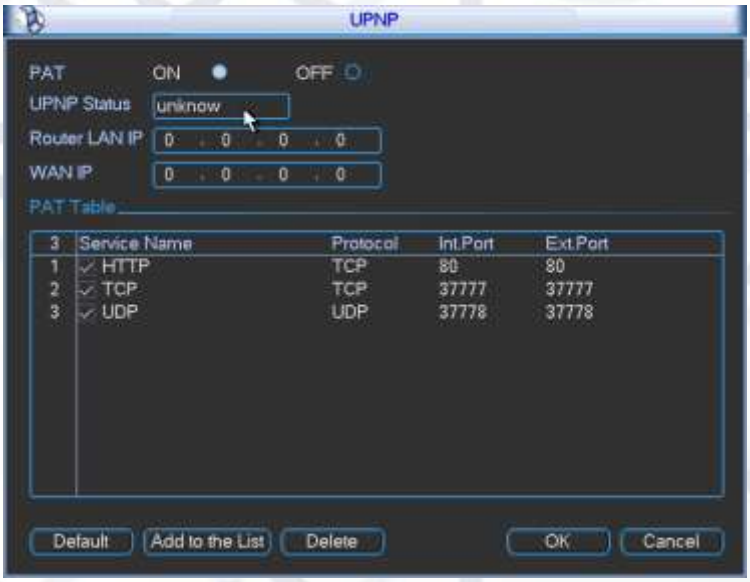


Figure 4-38

- **UPNP on/off**：Turns the UPNP function of the device on or off.
- **Status:** When the UPNP is offline, it shows as "Unknown". When the UPNP works it shows "Success"
- **Router LAN IP:** This is the router IP in the LAN.
- **WAN IP:** This is the router IP within the WAN.
- **Port Mapping list:** This has a one to one relationship with the router's port mapping setting.
- **Enable Switch** ☑ **:** It shows that the function of port mapping has been enabled on this port.
- **List**：
  - ✧ **Service name**：Defined by user.
  - ✧ **Protocol**： Protocol type
  - ✧ **Internal port**：Port that has been mapped in the router.
  - ✧ **External port**：Port that has been mapped locally.

- **Default:** UPNP default port setting is the HTTP, TCP and UDP of the NVR.
- **Add to the list:** Click this to add the mapping relationship.
- **Delete:** Click this to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 4-39.

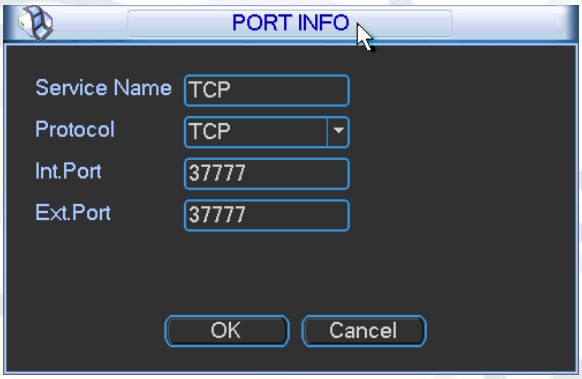


Figure 4-39

Important:

When you are setting up the router's external port, please use the 1024~5000 port. Do not use well-known port 1~255 and the system port 256~1023 to avoid any conflict.

For the TCP and UDP, please make sure the internal port and external port are the same to guarantee the proper data transmission.

4.6.5.8 WIFI Setting

You can view the WIFI connection status in the Network Setting interface (see Figure 4-40). You can also view the current connection status and IP address if there is a connection.

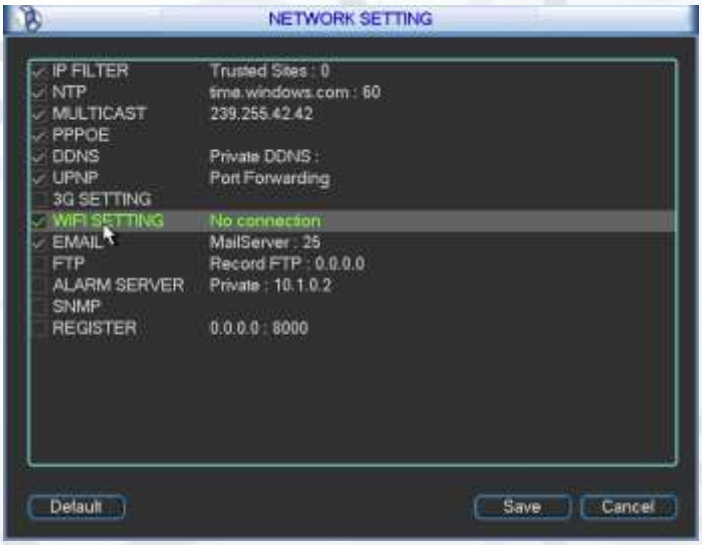


Figure 4-40

The WIFI interface is shown as below (see Figure 4-41).

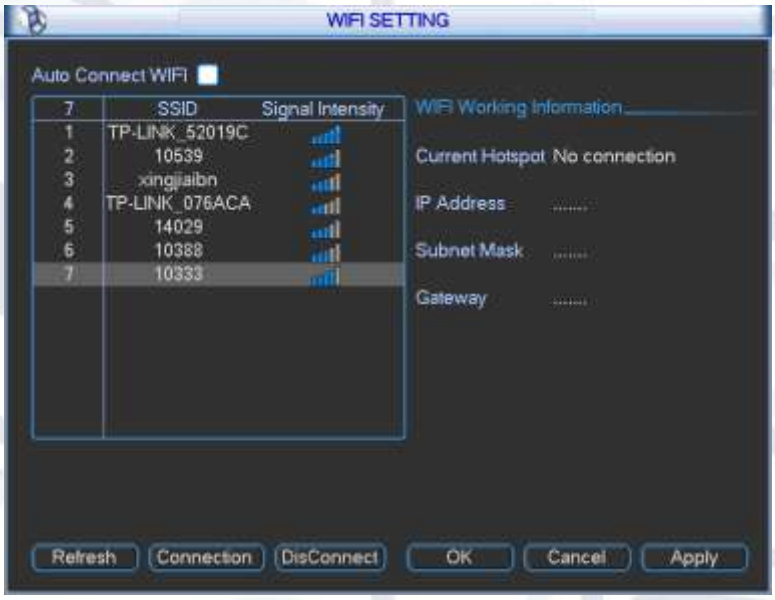


Figure 4-41

- **Auto connect WIFI:** When you select this box, the system automatically connects to the previous WIFI hotspot.
- **Refresh:** You can click this to search the hotspot list again. It can automatically add the information such as the password if you have set it beforehand.
- **Disconnect:** Click this to turn off the connection.
- **Connect:** Here you can click this to connect to the hotspot. System needs to turn off current connection and then connect to a new hotspot, if there is a connection available that you can select (see Figure 4-42).

Figure 4-42

After successfully connecting, you can see the following interface and it should show that you are now connected (see Figure 4-43).

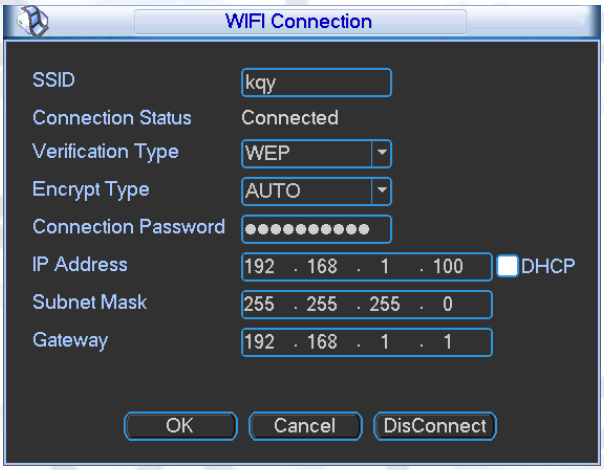


Figure 4-43

- **WIFI working status:** Here you can view current connection status.

Please note:

- After successful connection, you will see the WIFI connection icon at the top right corner of the preview interface.
- When the hotspot verification type is set to WEP, system displays the 'Encyption Type' as AUTO since the device cannot detect that encryption type.
- System does not support verification types WPA and WPA2. The display may become abnormal for those verification and encryption types.

After the device has successfully connected to the WIFI, you can view the hotspot name, IP address, subnet mask, default gateway, etc. (see Figure 4-44).

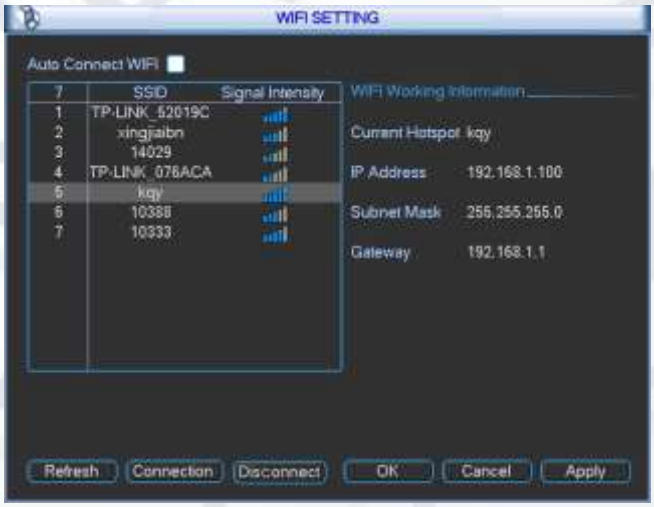


Figure 4-44

4.6.5.9 Email

The email interface is shown below (see Figure 4-45).

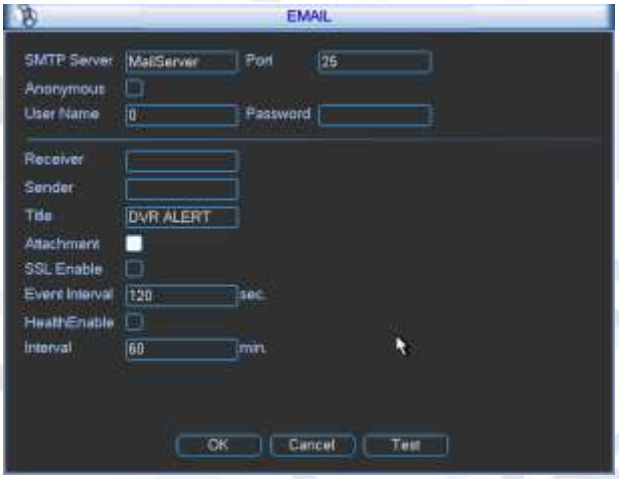


Figure 4-45

- **SMTP server:** Please input your email SMTP server IP here.
- **Port:** Please input corresponding port value here.
- **User name:** Please input the user name to login to the sender email box.
- **Password:** Please input the corresponding password here.
- **Sender:** Please input sender email box here.
- **Title:** Please input email subject here. System supports English characters and Arabic numbers. Max 32-digits.
- **Receiver:** Please input receiver email address here. System max supports 3 email boxes.
- **SSL enable:** System supports SSL encryption box.
- **Interval:** The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.
- **Health email enable:** Please check the box here to enable this function. This function allows the system to send out a test email to check the connection is OK or not.
- **Interval:** Please check the above box to enable this function and then set the corresponding interval. The System can send out the email regularly as you set here. Click the Test button; you can see the corresponding dialogue box to see the email connection is OK or not (see Figure 4-46).

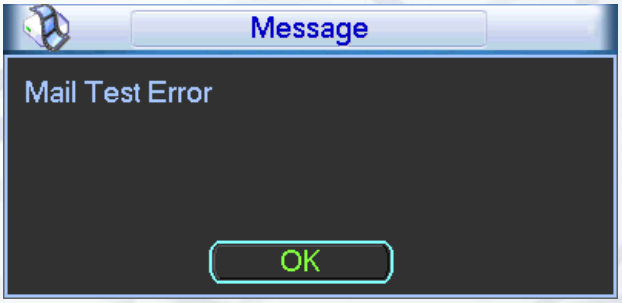


Figure 4-46

Please note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormity event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormity events, which may result in heavy load for the email server.

4.6.5.10 FTP

You need to download or buy FTP service tool (such as **Ser-U FTP SERVER**) to establish FTP service.

Please install **Ser-U FTP SERVER** first. From 'Start' -> 'Program' -> 'Serv-U FTP Server' -> 'Serv-U Administator'. Now you can set a user password and open up a FTP folder. Please note you need to grant writable permissions to FTP upload user. See Figure 4-47.

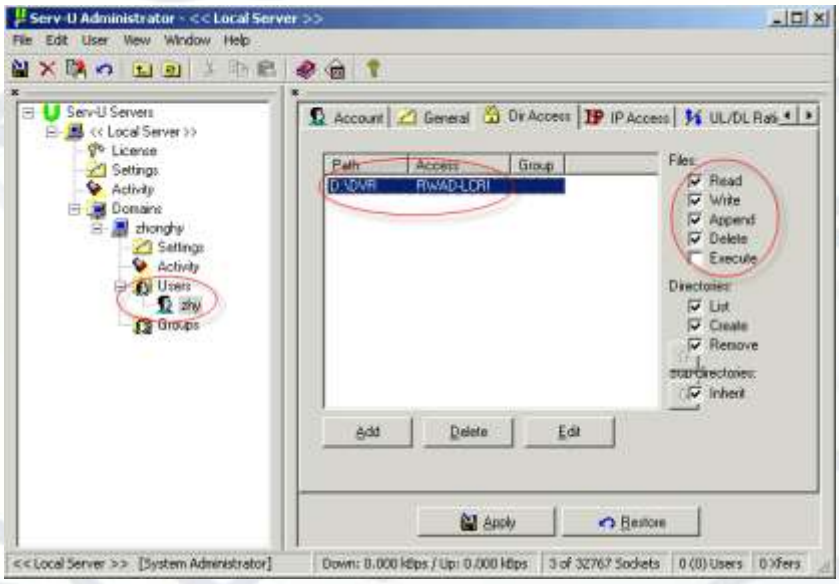


Figure 4-47

You can use a PC or FTP login tool to test if the setup is right or not.

For example, you can login as user **'ZHY'** to FTP://10.10.7.7 you can then test, modify or delete folder if you require to. See Figure 4-48.

Figure 4-48

System also supports the upload of multiple NVRs to one FTP server. You can create multiple folders under this FTP.

In Figure 4-31, select FTP and then double click mouse. You can see the following interface. See Figure 4-49.

Figure 4-49

Please highlight the icon  in front of Enable to activate FTP function.

Here you can input the FTP server address, port and the remote directory. When the remote directory is null, the system automatically creates folders according to the IP, time and channel. User name and password is the account information that you will need to login to the FTP.

File length is the upload file length. When setup is larger than the actual file length, system will upload the whole file. When the setup is smaller than the actual file length, system only uploads the set length and auto-ignores the left section. When the interval value is 0, system uploads all the corresponding files.

After completing channel and weekday setup, you can set two periods for each channel. Click the Test button, you can see that the corresponding dialogue box to see the FTP connection displays ‘OK’ or not. See Figure 4-50.

Figure 4-50

4.6.5.11 Alarm center

Interface is pre-reserved for the users to develop this function.

4.6.5.12 SNMP

SNMP is an abbreviation of **Simple Network Management Protocol**. It provides the basic network management frame for the network management system. The SNMP is widely used in many environments. It is used in many network devices, software and systems. You can setup the following interface. See Figure 4-51.

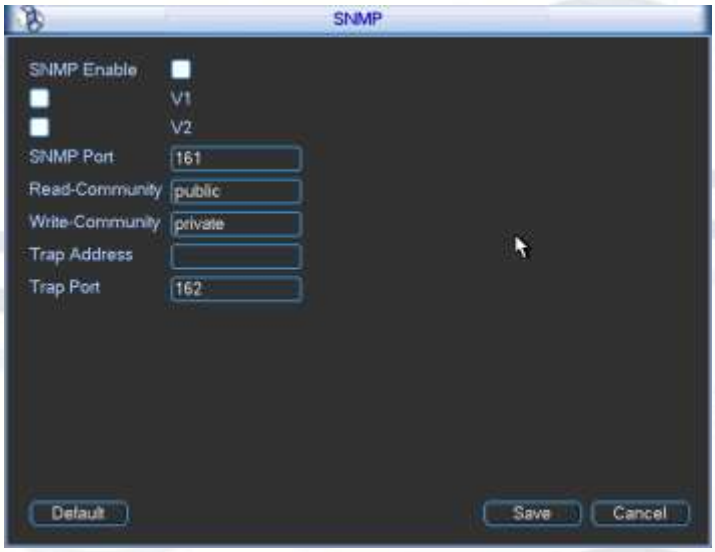


Figure 4-51

Please enable the SNMP function. Use the corresponding software tool (**MIB Builder and MG-SOFT MIB Browser**. You still need two MIB files: **BASE-SNMP-MIB, NVR-SNMP-MIB**) to connect to the device. You can get the device's corresponding configuration information after successfully connecting.

Please follow the steps listed below to configure.

1. In Figure 4-51, check the box to enable the SNMP function. Input the IP address of the PC that is running the software in the Trap address. You can select the default setup for the rest items that need to be filled in.
2. Compile the above mentioned MIB files, via the software MIB Builder.
3. Run MG-SOFT MIB Browser to load the file from the previous step to the software.
4. Input the device IP that you want to manage within the MG-SOFT MIB Browser. Please set the corresponding version for your future reference.
5. Open the tree list on the MG-SOFT MIB Browser; you will then be able to view the device configuration, which includes the number of video channels, audio channels, application version, etc.

4.6.5.13 Auto register

This function allows the device to auto register to your specified proxy. With this way, you can use the client-end to access the NVR via the proxy. Here the proxy has a switch function. In the network service the device supports the server address of IPv4 or domain.

Please follow the steps listed below to use this function.

1. Please set the proxy server address, port, and sub-device name at the device-end. Also enable the auto register function, the device is able to auto register to the proxy server. The setup interface is shown in Figure 4-52.
2. The proxy server software is developed from the SDK. Please open the software and input the global setup. Please make sure the auto connection port here is the same as the port you have setup in the previous step.
3. Now you can add the device. Please do not input default port number such as the TCP port in the mapping port number. The device ID here shall be the same as the ID you input in Figure 4-52. Click Add button to complete the setup.
4. Now you can boot up the proxy server. When you see the network status is ‘Y’, it means your registration is OK. You can view the proxy server when the device is online.

Important: Do not input network default port such as TCP port number.

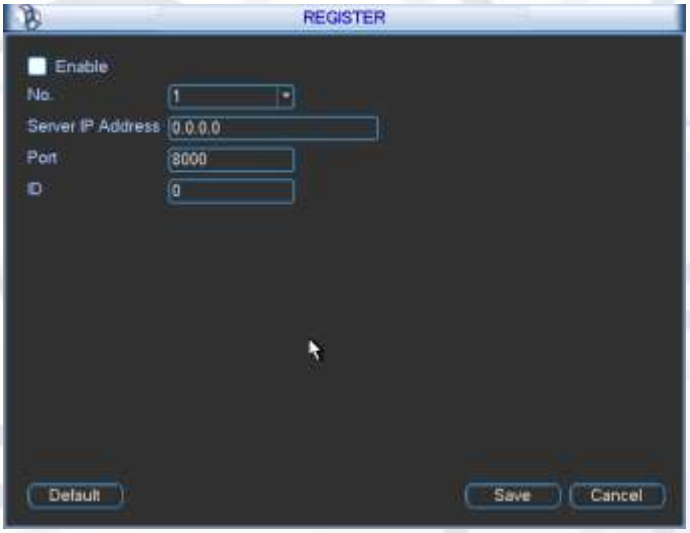


Figure 4-52

Important: The server IP address can also be domain. But you need to register a domain name before you run proxy device server.

4.6.6 Alarm

In the main menu, click through the Settings menu to ‘Alarm’, you will see alarm setup interface. See Figure 4-53.

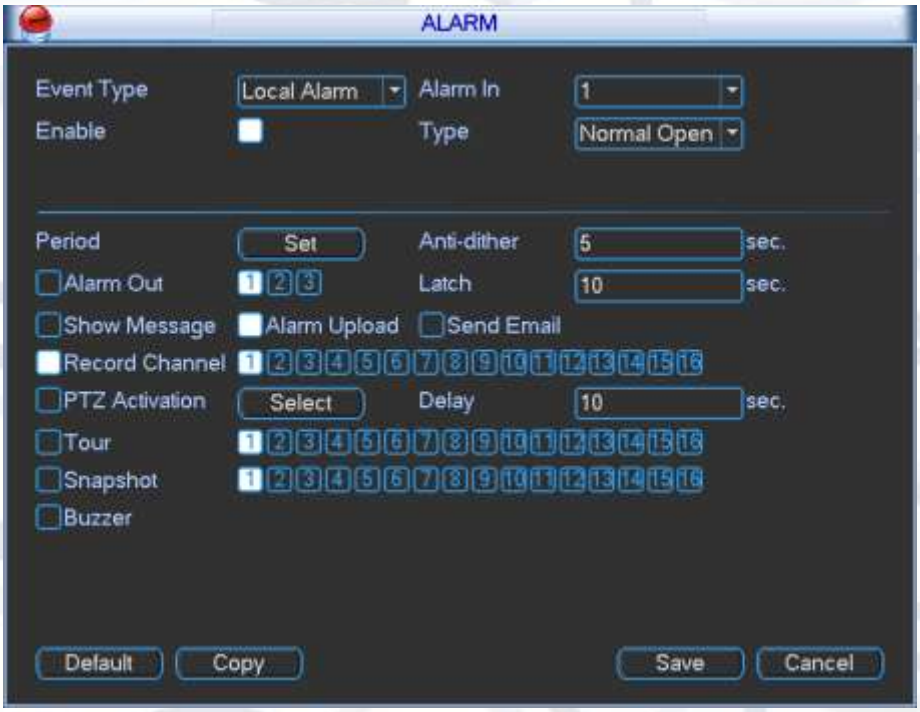


Figure 4-53

- **Alarm in:** Select the channel number.
- **Event type:** There are four types:
  - ✧ **Local input alarm:** The alarm signal system detects the signal from the alarm input port.
  - ✧ **Network input alarm:** This detects the alarm signal from the network.
  - ✧ **IPC external alarm:** This is the on-off alarm signal from the front-end device and can activate the local NVR.
  - ✧ **IPC offline alarm:** Once you select this item, system can generate an alarm when the front-end IPC disconnects with the local NVR. The alarm can activate the record, PTZ, snap functions. The alarm can last up until the IPC and the NVR connection resumes.
- **Enable:** Please highlight this button to enable current function.
- **Type:** normal open or normal close.
- **Period:** This section is to set local alarm period. System only enables local alarm in the specified period. Click the Set button; you can select the business day(s) and the non-business day(s). Please note for the work day/free day setup and the specific work day setup, system just saves the latest setup. For example, the work day ranges from 8:30-17:30 Monday to Friday, and then you set the period 7:10-18:00 for Monday. So, the arm period of the Monday ranges from 7:10 to 18:00. Please highlight the corresponding button to enable this function.
- **PTZ activation:** When an alarm has been triggered, system can activate the PTZ operation. The PTZ activation lasts as long as the specified anti-dither period.

- ✧ In the Pan/Tilt/Zoom interface (Main menu->Setting-> Pan/Tilt/Zoom), please set the video channel, speed dome protocol, etc.
- ✧ Select the channel for the current speed dome as the current monitor video and right click mouse to select the Pan/Tilt/Zoom item. Now you can set the preset and tour pattern.
- ✧ In Figure 4-54, click ‘Select’ button, you will be shown an interface as in Figure 4-55. Here you can set the activation operation such as preset tour, pattern and enable.

Figure 4-54

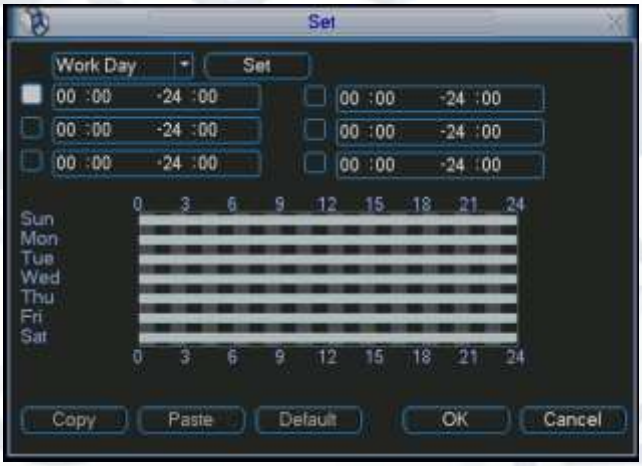


Figure 4-55

Figure 4-56

- **Anti-dither:** Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to how much of a delay can be set in before each trigger alarm activation during a period of multiple alarm triggering. This feature will set the alarm signal activation along with the system features such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process,

the alarm signal will begin an anti-dither time if the system detects the local alarm again. A screen prompt will appear displaying that the alarm upload and email will not be activated. For example, if you set the anti-dither time as 10 seconds, you will see that each activation will last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin to count another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.

- **Alarm output:** The numbers represent the device alarm output port. You can select the corresponding ports(s) so that the system can activate the corresponding alarm device(s) when an alarm has been activated.
- **Latch:** When the anti-dither time has ended, the channel alarm you select in the alarm output will last the specified period. The value ranges from 1 to 300 seconds. This function is not for other alarm activation operations. The latch is still valid even when you disable the alarm event function directly.
- **Show message:** System can pop up a message as part of the alarm to alert you within the local host screen if you have enabled this function.
- **Alarm upload:** System can upload the alarm signal to the network (including alarm centre and the WEB) once enabled. System only uploads the alarm channel status. You can go to the WEB and then go to the Alarm interface to set alarm event and alarm operation. Please go to the Network interface to setup the alarm centre information.
- **Send email:** System can send out the alarm signal via the email to alert you when alarm is triggered. Once you have enabled the snap function, the system can also send out an image as an added attachment. Please go to the Main Menu->Setting ->Network->Email interface to set.
- **Record channel:** you can select a proper channel to record the alarm video (Multiple choice).
  - ✧ You need to set alarm record mode as ‘Schedule’ in the Record interface (Main Menu->Advanced->Record). Please note that manual record has the highest priority. If you select Manual mode the System will record all the time, no matter if there is an alarm or not.
  - ✧ Now you can go to the Schedule interface (Main Menu->Setting->Schedule) to set the record type, corresponding channel number, week and date. You can select the record type: Regular/MD/Alarm/MD & Alarm. Please note, you cannot select the MD & Alarm and MD (or Alarm) at the same time.
  - ✧ Now you can go to the Encode interface to select the alarm record and set the encode parameter (Main Menu->Setting->Encode).
  - ✧ Finally, you can set the alarm input as the local alarm and then select the record channel. The select channel begins alarm record when an alarm has beed triggered. Please note system begins the alarm record instead of the MD record if the local alarm and MD event occurred at the same time.
- **Tour:** Here you can enable tour function when an alarm occurs. System supports 1/8-window tour. Please go to chapter 4.6.9 Display for tour interval setup. Please note the tour setup here has a higher priority than the tour setup you set in the Display interface. Once there are two tours both will be enabled. The system can enable the alarm tour when an alarm is triggered. If there is no alarm, system implements the tour setup in the Display interface.

- **Snapshot:** You can enable this function to take a snapshot image when an alarm is triggered.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when an alarm has been triggered.

Please highlight icon to select the corresponding function. After completing the setup, please click the save button, the system goes back to the previous menu.

For the 32-channel series product, the alarm interface and PTZ setup is shown below. See Figure 4-57 and Figure 4-58.

Figure 4-57

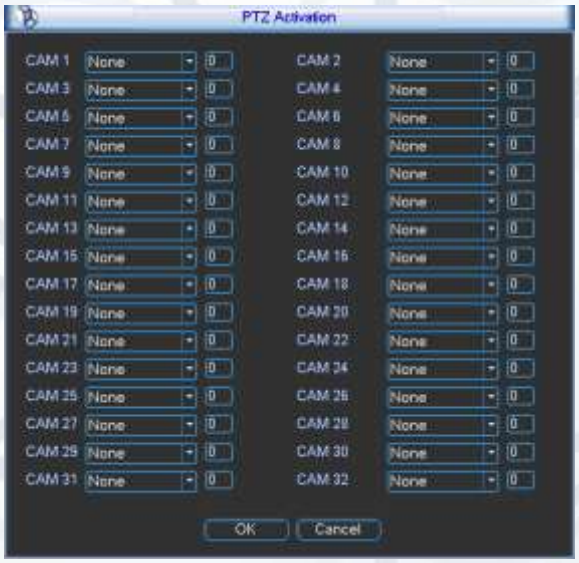


Figure 4-58

4.6.7 Detect

Go to Detect Menu

In the main menu, select ‘Setting’ and then ‘Detect’, you will see the motion detect interface. See Figure 4-59. There are three detection types: motion detection, video loss, camera masking.

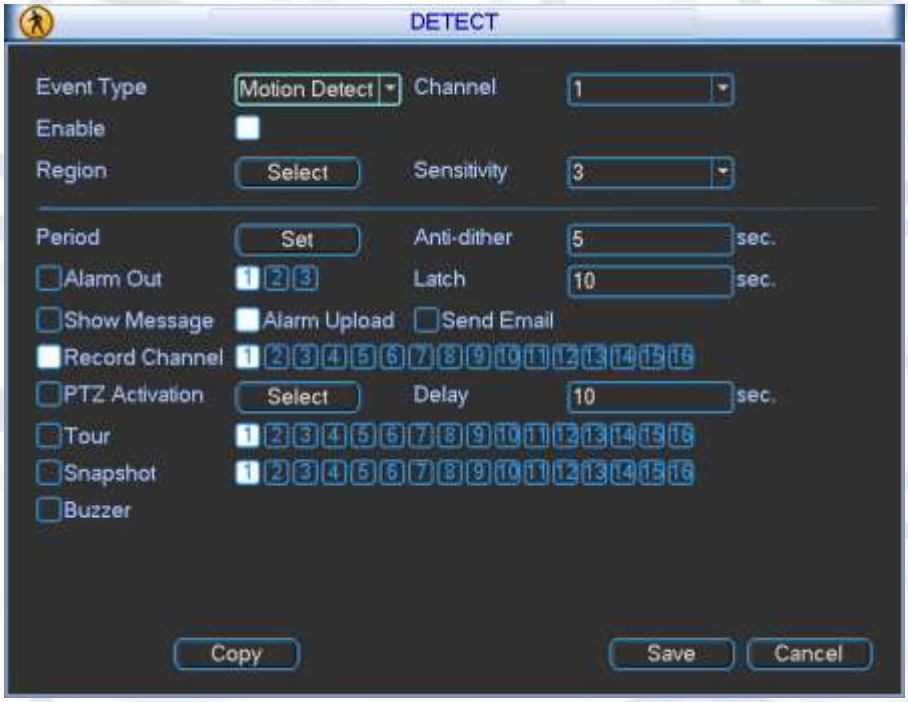


Figure 4-59

- The video loss has no detection region and sensitivity setup. Camera masking has no detection region setup.
- You will see the motion detect icon if the current channel has the motion detect alarm enabled.
- You can drag your mouse to setup the motion detect region without using the *Fn* button. Please click the ‘Save’ button to save current region setup. Right click mouse to exit current interface.

4.6.7.1 Motion Detect

Detection menu is shown above. See Figure 4-59.

- **Event type:** From the dropdown list you can select motion detection type.
- **Channel:** Select a channel from the dropdown list to set motion detect function.
- **Enable:** Check the box here to enable the motion detect function.
- **Region:** Click select button, the interface is shown as in Figure 4-60. Here you can set motion detection zone. There are 396(PAL)/330(NTSC) small zones. The green is the current cursor position. White is the motion detection zone. Red is the disarmed zone. You can click

Fn button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember to click the save button to save current setup. If you click the ESC button to exit the region setup interface system will not save your zone setup.

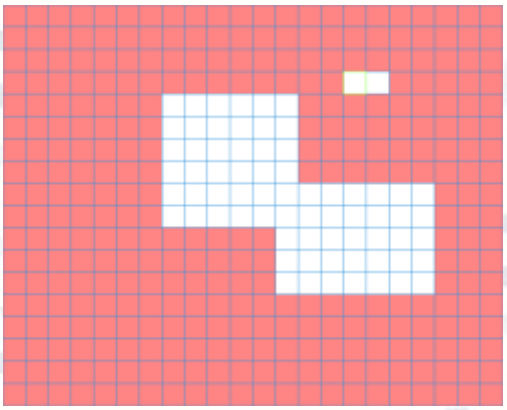


Figure 4-60

- **Sensitivity:** System supports up to 6 levels. The sixth level has the highest sensitivity.
- **Period:** Click set button, you can see an interface is shown as in Figure 4-. Here you can set for business day and non-business day. In Figure 4-63 click set button, you can see an interface is shown as in Figure 4-64. Here you can set your own setup for business day and non-business day.

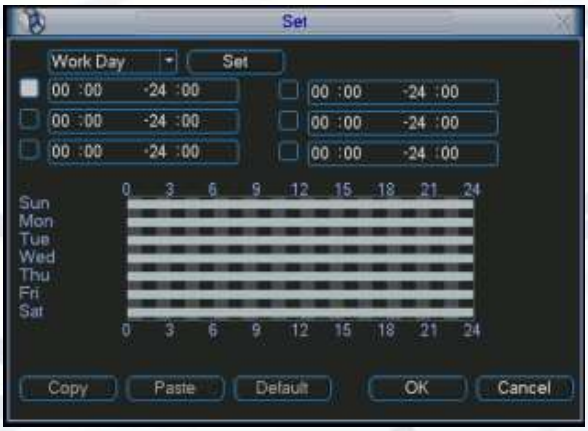


Figure 4-63

Figure 4-64

- **Alarm output:** when an alarm is triggered, system enables peripheral alarm devices.
- **Latch:** when motion detection has been detected, the system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
- **Show message:** System can pop up a message to alert you in the local host screen if you have enabled this function.
- **Alarm upload:** System can upload the alarm signal to the network (including alarm centre) if you have enabled this function.
- **Send email:** System can send out an email to alert you of when an alarm is triggered.
- **Record channel:** Select the channel to activate recording function once an alarm has been triggered. Please make sure you have set 'MD record' in the encode interface(Main Menu->Setting->Schedule) and scheduled to record in the manual record interface(Main Menu->Advanced->Manual Record)
- **PTZ activation:** Here you can set the PTZ movement when an alarm has been triggered. The System can go to a preset when there is an alarm. Click 'Select' button, you can see an interface is shown as in Figure 4-65.

Figure 4-65

- **Record Delay:** System can delay the record for specified time after alarm has ended. The value ranges from 10s to 300s.
- **Tour:** Here you can enable a tour function when an alarm is triggered. System one-window tour. Please go to **chapter 5.3.9** to display tour interval setup.
- **Snapshot:** You can enable this function to take a snapshot of an image when motion detect alarm is triggered.

Please highlight icon to select the corresponding function. After all the setup are complete please click the save button, system goes back to the previous menu.

Note: In motion detection mode, you cannot use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 4-60, you can left click mouse and then drag it to set a region for motion detection. Click *Fn* to switch between arm/withdraw motion detection. After setting, click 'Enter' key to exit.

4.6.7.2 Video Loss

In Figure 4-59, select ‘Video loss’ from the type list. You will see the interface shown in Figure 4-61. This function allows you to be informed when video loss phenomenon occurred.

You can enable an alarm output channel and then enable a ‘Show message function’.

Tip: You can enable preset/tour/pattern activation operation when video loss occurs.

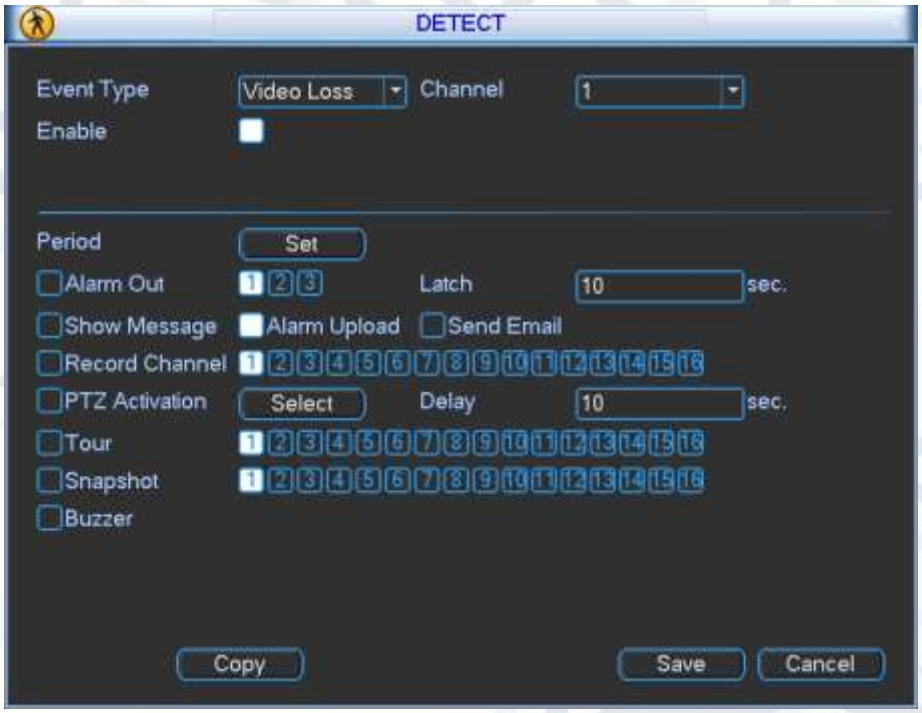


Figure 4-61

4.6.7.3 Camera Masking

If when an unauthorised person masks the lens or the output video comes out in a one-color image due to the environments light change, the system can alert you to guarantee video continuity. Camera masking interface is shown as in Figure 4-62. You can enable alarm output channel and then enable show message function. You can refer to chapter **4.6.7.1 Motion detect** for detailed information.

Tip: You can enable preset/tour/pattern activation operation when video loss occurs.

Note: In the Detect interface, copy/paste function is only valid for the same type, which means you cannot copy a channel setup in video loss mode and paste to the camera masking mode.

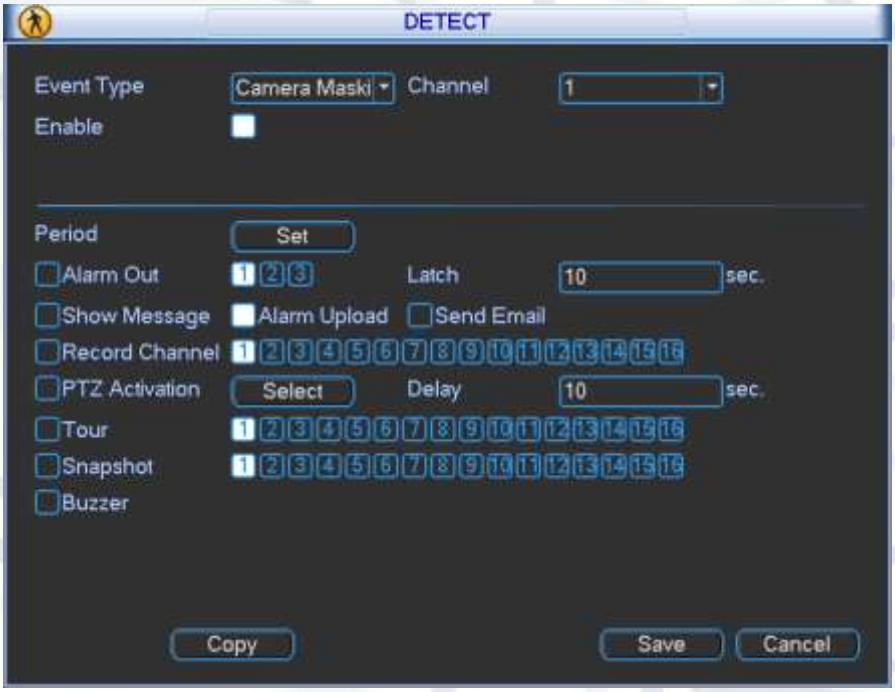


Figure 4-62

4.6.8 PTZ

Note: All the operations here are based on PELCO-D protocol. For other protocols, there might be little differences in the setup.

Cable Connection

Please follow the procedures below to go on cable connection:

1. Connect the dome RS485 port to NVR 485 port.
2. Connect dome video output cable to NVR video input port.
3. Connect power adapter to the dome.

PTZ Setup

The camera video should be in the current screen. Before setup, please check the following connections are correct:

1. PTZ and decoder connection is right. Decoder address setup is correct.
2. Decoder A (B) line connects with NVR A (B) line.
3. Boot up the NVR, input user name and password.
4. In the main menu, click setting, and then click the Pan/Tilt Control button. The interface is shown as in Figure 4-63. Here you can set the following items:
5. **Channel:** select the current camera channel.
6. **Protocol:** select corresponding PTZ protocol (such as PELCO-D)
7. **Address**: default address is 1.
8. **Baud rate:** select corresponding baud rate. Default value is 9600.
9. **Data bits:** select corresponding data bits. Default value is 8.

10. **Stop bits:** select corresponding stop bits. Default value is 1.
11. **Parity:** there are three options: Odd/Even/None. Default setup is none.

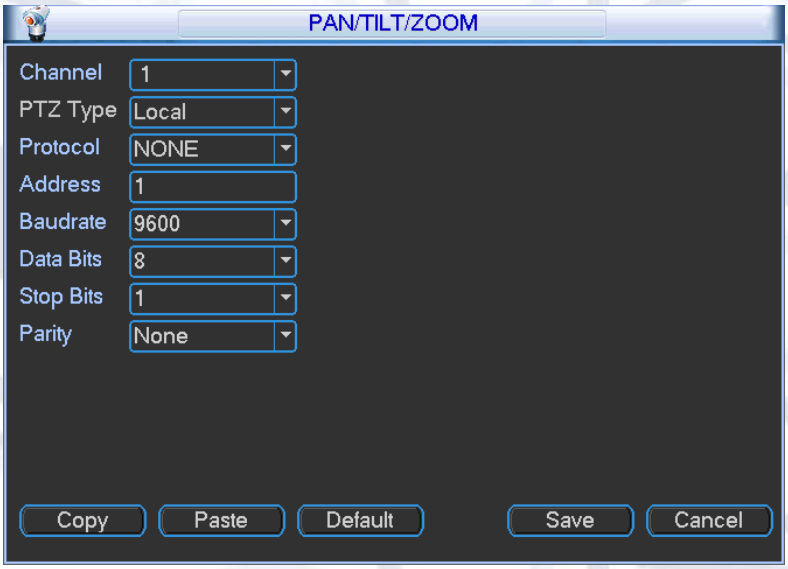


Figure 4-63

12. After completing all of the setup please click ‘Save’ button.

In one window display mode, right click mouse (click *Fn* Button in the front panel or click *Fn* key in the remote control).

Click Pan/Tilt/Zoom, the interface is shown as below. See Figure 4-64.

Here you can set the following items:

- Step (value ranges from 1 to 8)
- Zoom
- Focus
- Iris

Please click icon and to adjust zoom, focus and iris.

Figure 4-65

Figure 4-64

In Figure 4-64, please click direction arrows to adjust PTZ position. There are total 8 direction arrows.

Here is a button function explanation key for you reference:

Name	Function key	function	Shortcut key	Function key	function	Shortcut Key
Zoom		Wide			Far	
Focus		Near			Far	
Iris		Close			Open	

4.6.9 Display

Display setup interface is shown below (see Figure 4-66).

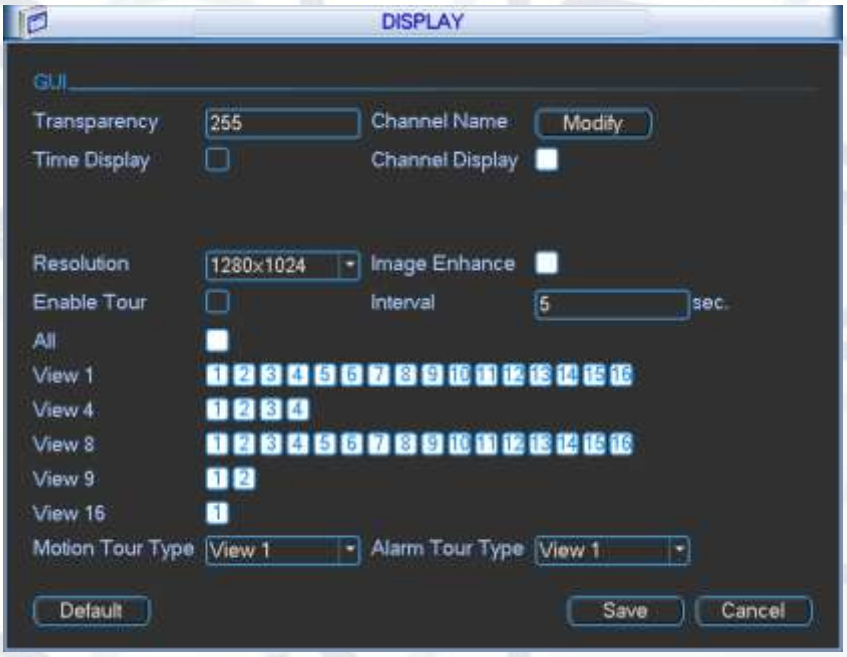


Figure 4-66

- **Transparency:** This is for you to adjust the transparency. The value ranges from 128 to 255.
- **Channel name:** This is for you to modify the channel name. System supports up to a maximum of 25-digits (The value may vary due to different series). Please note that all your modifications only apply to the NVR's local end. You need to open web or client end to refresh channel name.
- **Time display:** You can select this to display time when system is in playback mode.
- **Channel display:** You can select this to display the channel name when system is in playback mode.
- **Resolution:** There are four options to set: 1280×1024(default),1280×720,1024×768,800×600. Please note the system needs to reboot in order to activate the current setup.
- **Enable tour:** Click this box to activate tour function.
- **Interval:** System supports 1/4/8/9/16-window tours. Input proper interval value here. The value ranges from 5-120 seconds. In the tour process, you can use mouse or click Shift to

turn on window switch function. The icon stands for ‘Opening switch’ function, the icon stands for ‘Closing switch’ function.

- **Monitor tour type:** System supports a 1/8-window tour.
- **Alarm tour type:** System supports a 1/8-window tour.

Please highlight the icon to select the corresponding function.

After completing all the setups please click ‘Save’ button, system goes back to the previous menu.

In Figure 4-66, click the modify button after selecting each channel. You can see an interface shown as in Figure 4-67. Please note that all your modification on here applies to the local end only. You need to refresh the web or the client-end to get the latest channel name. System supports up to a maximum of 25-digital characters.

Figure 4-67

4.6.10 Default

Click default icon, system pops up a dialogue box. You can highlight the icon to restore back to the default factory setup.

- Select all
- General
- Encode
- Schedule
- RS232
- Network
- Alarm
- Detect
- Pan/tilt/zoom
- Display
- Channel name

Please highlight the icon to select the corresponding function.

After all the setups are complete please click the ‘OK’ button. The system will go back to the previous menu.

Warning! System menu color, language, time display mode, video format, IP address, user accounts will not maintain previous setup after initiating the default operation!

4.6.11 Remote Device

Important: Do not connect the switch to the PoE port, otherwise the connection may fail!

4.6.11.1 UPNP

Please connect the IPC to the PoE port of the device’s rear panel (Figure 4-68), the system can then auto connect to the IPC.

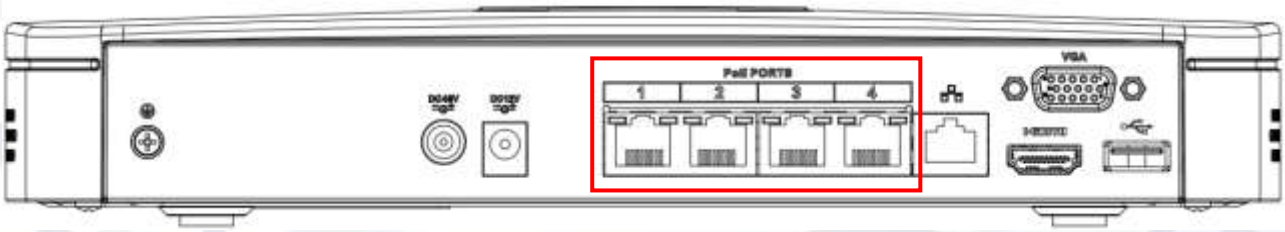


Figure 4-68

4.6.11.2 Built-in Switch Setup

The built-in switch function is for product of PoE port.

From Network->Network Server->Switch, you can set switch IP address, subnet mask and gateway. See Figure 4-69.

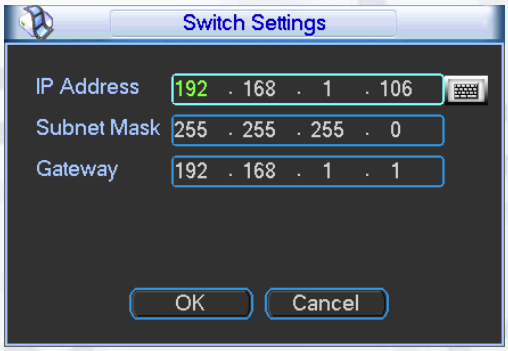


Figure 4-69

4.6.11.3 Remote Device

In the main menu, click the ‘Remote Device’ icon to go to the corresponding interface (see Figure 5- 75).

Figure 4-70

The remote device interface is shown in Figure 4-71.

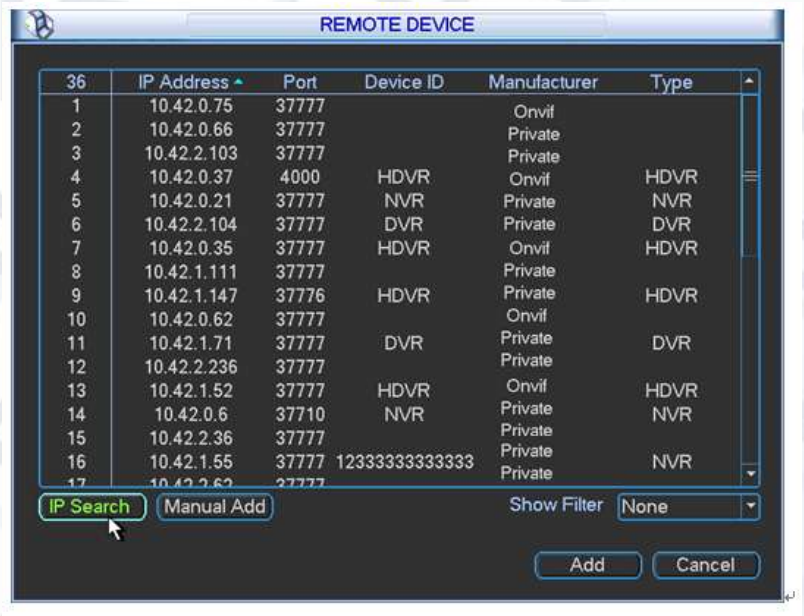


Figure 4-71

- **IP search:** Click it to search for an IP address.
- **Add:** Click it to connect to the selected device and add it to the ‘Added device’ list. It also allows batch add.
- **Show filter:** You can use this to display the specified devices from the added devices.

- **IPC config:** Double click the  on the IPC config column, you can go to the IPC setup interface (see Figure 4-72).

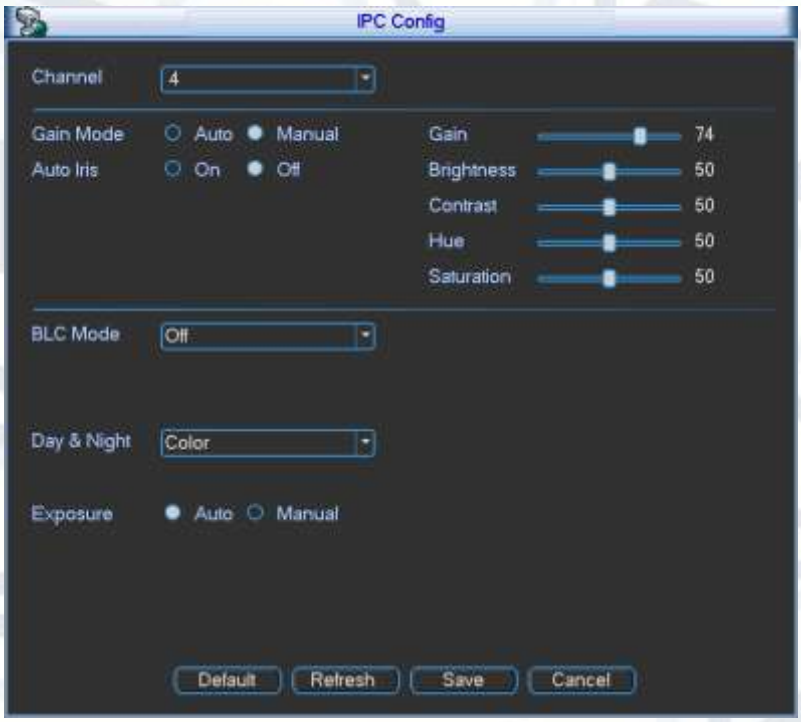


Figure 4-72

- ✧ **Gain mode:** It is to set the video noise level. Check the Auto setting and the system automatically sets the video gain. Check the Manual setting and you can set gain threshold and brightness yourself.
- ✧ **Gain threshold:** This is for you to set gain value. Each different series product has different default values. The lower the value, the lower the noise. But the video brightness may become too dark under the low illumination. If the value is high, it can enhance the video brightness under the low illumination, but the video noise may become too high. You will have to use your own judgment to set the preferred level.
- ✧ **BLC:** Check the box here to enable the backlight compensation function. The system can automatically set the exposure level according to the environment so that you can view the darkest section of the video.
- ✧ **Day/Night mode:** This is to set the video color to either a black or white mode.
  a) Color: Camera only outputs color video.
  b) Auto: Camera auto selects color or black and white video according to device feature (Video whole brightness or there is any IR light or not.).
  c) Black and white: Camera only outputs black and white video.
- ✧ **Exposure mode:**
  a) Auto: The video's brightness as a whole can adjust automatically within the normal exposure threshold according to different environments. The lower the gain value, the smaller the noise is.
  b) Manual: This is to display manual exposure value.

- **Delete:** Please select one device in the 'Added device' list and then click it to remove.

- **Manual add:** Click it to add the IPC manually. The port number is 37777. The default user name is **admin** and password is **admin**.

Click the Manual Add button; you can go to the following interface (see Figure 4-73).

Figure 4-73

This NVR product supports up to a maximum of 32-channel at standard definition. High definition video/non-real-time video has a transmission rate of 1Mbps per channel. It can also support up to a 4-channels of high definition video with a transmission rate of 8Mbps. The delay time of each channel is below 500ms.

Model	System Performance
16-ch series	Max support 16-channel video. Support 4-channel 1080p/5Mbps (extra stream D1/1Mbps), 8-channel 720p/2Mbps (extra CIF/640kbps), 16-channel D1/1Mbps.

This NVR supports IP Cameras from the Qvis range. You can just need to input the URL address, user name, and password to login the front-end device.

In the following interface, you can see there are three connection modes: auto, TCP (default) and UDP.

4.6.11.4 Short-cut Menu

In the preview interface, for the channel with no IPC connection, you can click the icon “+” in the centre of the interface to quickly go to the ‘Remote Device’ interface (see Figure 4-74 and Figure 4-75).

Figure 4-74

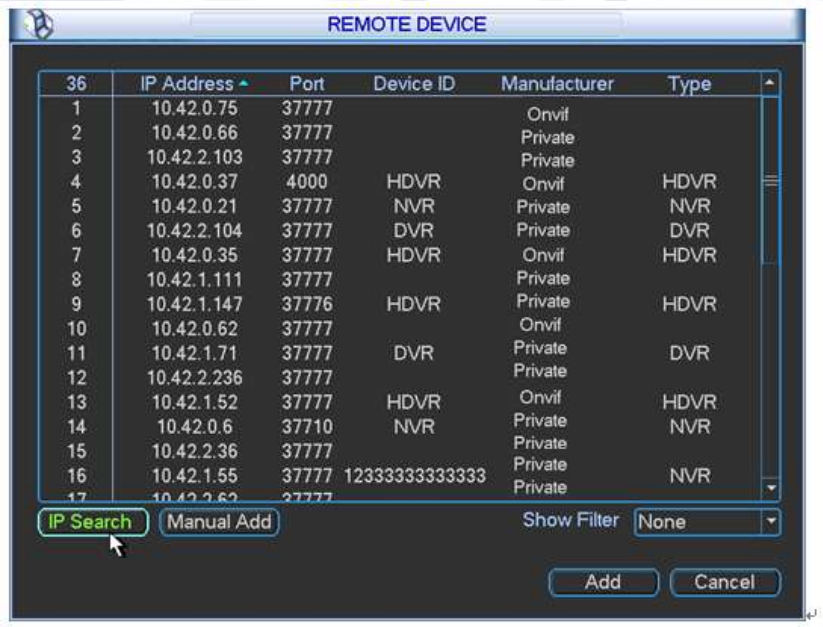


Figure 4-75

4.7 Advanced

Double click advanced icon in the main window, the interface is shown as below. See Figure 4-76.

There are a total of eight function options: HDD management, alarm output, abnormity, manual record, account, auto maintenance, TV adjust and video matrix.

Figure 4-76

4.7.1 HDD Management

This is for you to view and implement hard disk management (see Figure 4-77)
.
You can view the current HDD type, status, capacity and record time. When HDD is working properly, system is shown as ‘O’. When HDD error occurred, system is shown as ‘X’.

- **Alarm set:** Click the alarm set button, the interface that appears is shown below (see Figure 4-78) (This interface is just like the abnormity setup). Please refer to **chapter 4.7.2** for detailed information.
- **HDD operation:** You can select a HDD mode from the dropdown list, such as read-only or you can erase all data in the HDD. Please note the system needs to reboot to get all the modification activated.

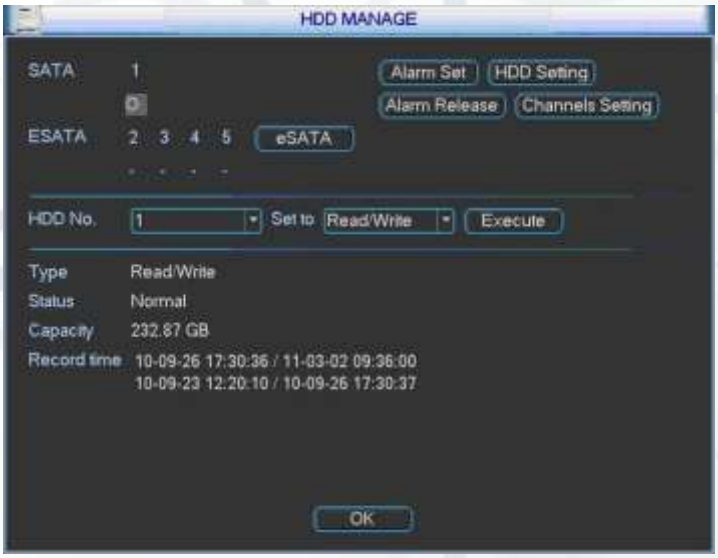


Figure 4-77

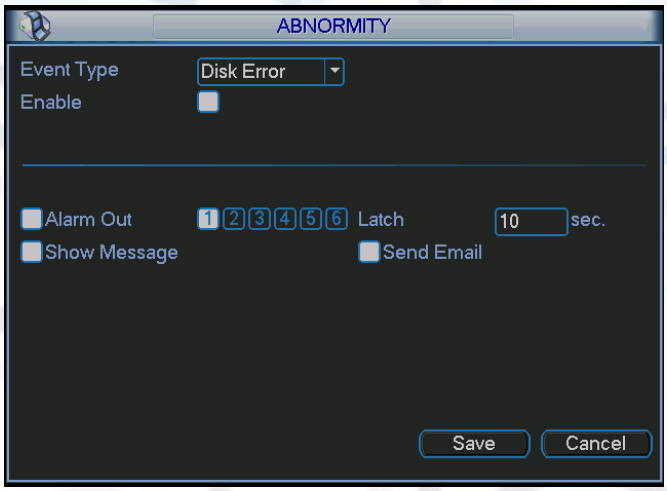


Figure 4-78

For the HDD group setup operation, please note:

- Each channel's recorded video can be stored into the specified HDD Group.
- Each HDD Group corresponds to several hard disks, while one hard disk is only included in one HDD Group.
- Each channel only corresponds with one HDD Group, while one HDD Group can store recorded video from several channels.
- A HDD Group is only available for read-write and self-defined disks, other types of hard disks cannot be set as HDD Group.

Important:

- eSATA also supports this function, you can manage e-SATA hard disks as local hard drives.
- Current series software version can only set the HDD group operation of the read-write HDDs. It does not apply to the redundancy HDD.

HDD Setting

Click the button 'HDD Settings' at the top right corner of the Figure 4-77, the system will pop up an interface as below. See Figure 4-79.

The number of hard disks from numbers 1 to 2 are shown in the "HDD No." column (It is to show the maximum HDD amount you can install). If the serial number is highlighted, it means this interface has had access to the hard disk. If it is not highlighted then it does not have access to the hard disk.

The "HDD Group" column lists the HDD Group number of the currently connected hard disks. You can select HDD group name from the dropdown list and then click 'Save' button.

Please note that one HDD corresponds to one group, while one group can have many HDDs. The HDD group Number corresponds to the HDD port, the HDD group number may vary if you change the HDD.

Important: Once you change the HDD Group settings, system will pack the recorded video files & snapshots, and then reboot.

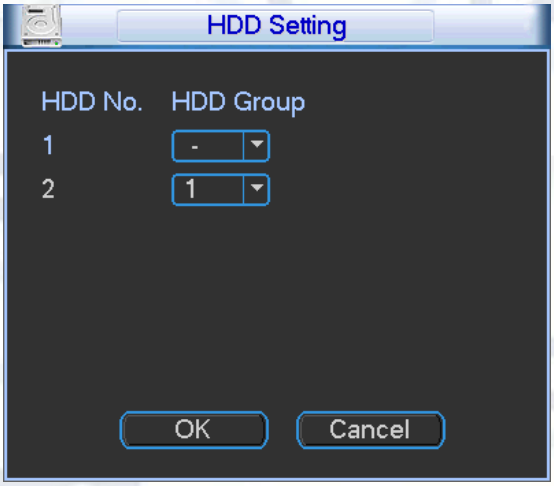


Figure 4-79

Channels Setting

Click the button named ‘Channels Settings’ at the top right corner of the Figure 4-77, the system will pop up an interface as shown in Figure 4-80.

You can set the HDDs to main stream, extra stream or snap pictures respectively. The main stream and extra stream of one channel can be saved to different groups.

Figure 4-80

Channel: It is to display the actual channel number of current NVR.

HDD Group: This is the SN of the HDD group management. For example, if you set two HDD groups such as Group 1 and Group 2, you can see there are two options (1 or 2) within the HDD group dropdown list.

Important:

- Please make sure you have set the HDD group for each channel, otherwise you cannot save current setup!

- Once you change the HDD Group settings, system will pack the recorded video files and then reboot!

Tip: There is an easy way for you to test whether the records from the corresponding channel is saved in the specified HDD. You can remove the HDD and then check to see if the channel can record or not. If you find that the channel has not recorded you cannot search for previous records.

4.7.2 Abnormity

Abnormity interface is shown in Figure 4-81.

- **Event type:** There are several options for you to choose from such as disk error, no disk, disconnection, IP conflict, etc.
- **Alarm output:** Please select the alarm activation output port (multiple choices).
- **Latch:** Here you can set the corresponding delaying time. The value ranges from 10s-300s. System automatically delays in turning off alarm with the specified seconds and activates output after external alarm has been cancelled.
- **Show message:** system can pop up a message in the local screen to alert you when an alarm is triggered.
- **Alarm upload:** System can upload the alarm signal to the network (including alarm centre) if you enabled current function.
- **Send email:** System can send out an email to alert you when an alarm is triggered.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.

Figure 4-81

4.7.3 Alarm Output

This menu section is for you to set the proper alarm output.

Please highlight the icon to select the corresponding alarm output.

After all the setups are complete please click OK button, system goes back to the previous menu (see Figure 4-82).

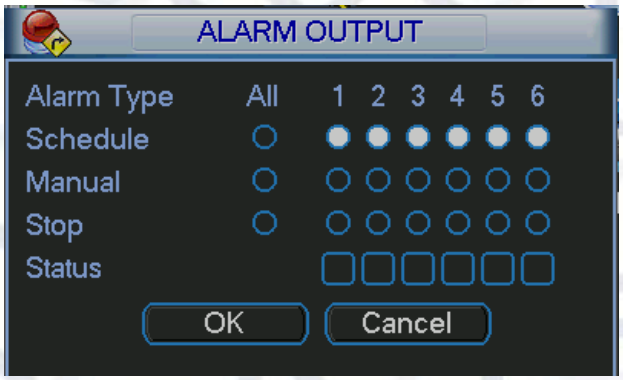


Figure 4-82

4.7.4 Manual Record

Note: You need to have proper rights to implement the following operations. Please make sure the HDD has been properly installed.

4.7.4.1 Manual record menu

Right click mouse or in the main menu, Advanced->Manual Record.

Manual record menu is shown as in Figure 4-83.

4.7.4.2 Basic operation

There are three statuses: schedule/manual/stop. Please highlight the "○" icon to select the corresponding channel.

- Manual: The highest priority. After completed manual setup, all the selected channels will begin ordinary recording.
- Schedule: Channel records as you have adjusted the settings in recording setup (Main Menu->Setting->Schedule)
- Stop: All channels stop recording.

Figure 4-83

4.7.4.3 Enable/disable record

Please check current the channel status: "○" means it is not setup to record, "●" means it is setup to record.

You can use mouse or direction key to highlight the channel number. See Figure 4-84.

Figure 4-84

4.7.4.4 Enable all channel recording

If you highlight the ○ below 'All', you can enable all channel recording.

Please highlight 'ALL' after "Schedule" (see Figure 4-85).

When system has scheduled recording setup, all channels will record as you have previously set (Main menu->Setting->Schedule).

The corresponding indication light in front panel will turn on.

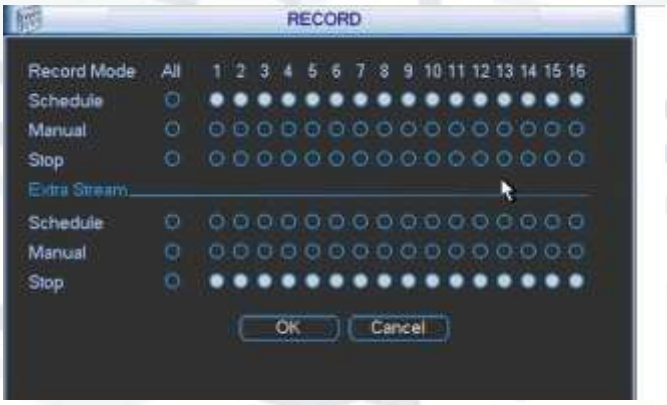


Figure 4-85

- All channel manual record

Please highlight “ALL” after “Manual.” See Figure 4-86.

When system is in manual recording, all scheduled set up you have set in will be null (Main menu->Setting->Schedule).

You can see indication light in front panel turns on, system begins manual record now.

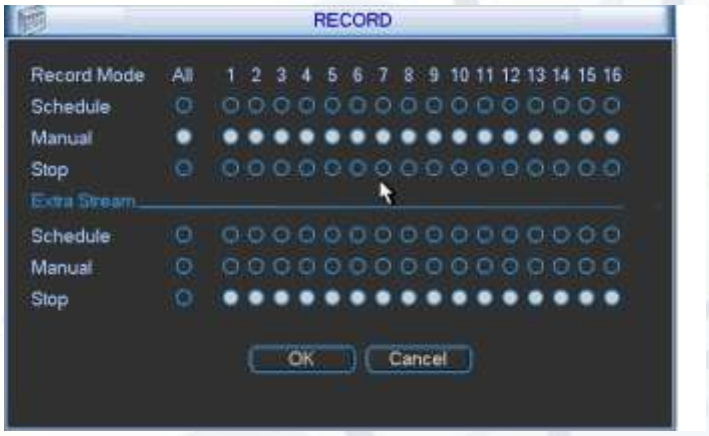


Figure 4-86

4.7.4.5 Stop all channel recording

Please highlight ‘ALL’ after ‘Stop’. See Figure 4-87.

System stops all channel recording no matter what mode you have set in the menu (Main menu->Setting->Schedule)

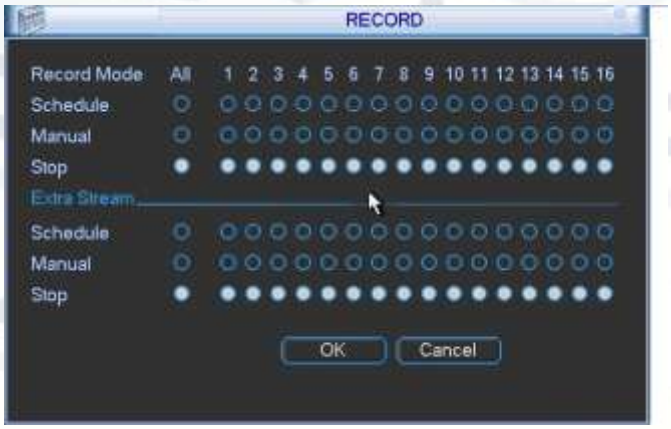


Figure 4-87

4.7.5 Account

Here is for you to implement account management. See Figure 4-88. Here you can:

- Add new user
- Modify user
- Add group
- Modify group
- Modify password.

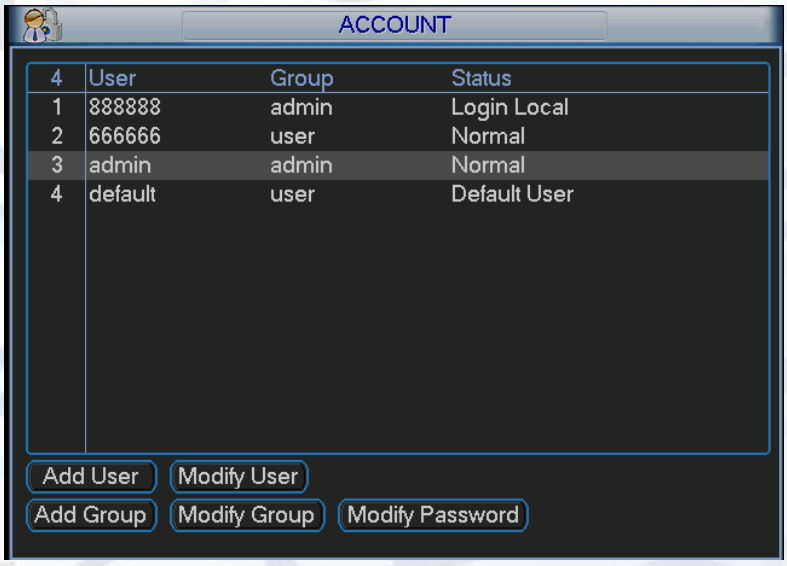


Figure 4-88

For account management please note:

- For the user account name and the user group, the maximum string length is up to 6-bytes. The backspace in front of or at the back of the string is invalid. There can be a backspace in the middle. The string must include the valid character, letter, number, underline, subtraction sign, and dot.

- The system account adopts two levels of management: group and user. There are no limits to group or user amount.
- For the group or user management, there are two levels: admin and user.
- The user name and group name can consist of up to 8-bytes. Only one name can be used once. There are four default users: admin/888888/666666 and hidden user ‘Default’. Except user 6666, other users have administrator rights.
- Hidden user ‘Default’ is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically logs in. You can set some rights, such as being able to monitor, for this user so that you can view some channels without login.
- One user should belong to one group. User rights cannot exceed group right.
- Reusable function: this function allows multiple users to use the same account to login.

After completing the setups please click save button, system goes back to the previous menu.

4.7.5.1 Modify Password

1. Click the password button, the interface is shown in Figure 4-89.
2. Here you can modify account password.
3. Please select the account from the dropdown list, input the old password and then input the new password twice. Click the Save button to confirm current modification.
4. For the users with account permissions to edit the ‘User account rights’, they can modify password of other users.

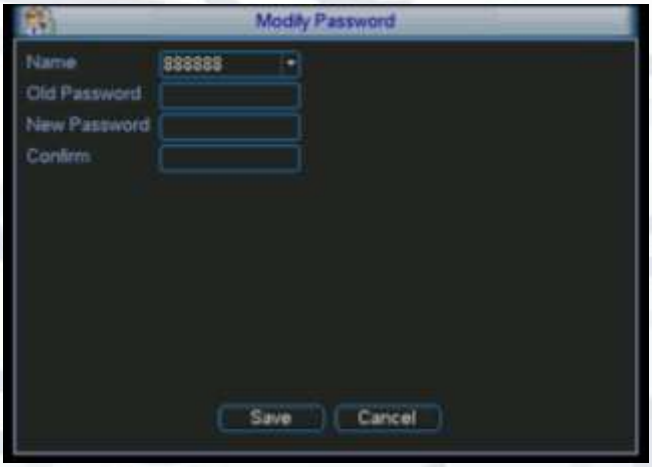


Figure 4-89

4.7.5.2 Add/Modify Group

- Click add group button, the interface is shown below (see Figure 4-90).
- Here you can input the group name and then input some memo information if necessary.
- There are a total of 60 different rights such as: control panel, shut down, real-time monitor, playback, record, record file backup, PTZ, user account, system information view, alarm input/output setup, system setup, log view, clear log, upgrade system, control device, etc.
- The modify group interface is similar to the Figure 4-90.

Figure 4-90

4.7.5.3 Add/Modify User

- Click add user button, the interface is shown in Figure4-91.
- Please input the user name, password, select the group it belongs to from the dropdown list.
- Then you can check the corresponding rights for current user.
- For convenient user management, usually we recommend the general user right is setup lower in the hierarchy than the admin account.
- The modify user interface is similar to Figure4-91.

Figure4-91

4.7.6 Auto Maintenance

- Here you can set auto-reboot time and auto-delete old files setup. You can set to delete the files for the specified days. See Figure 4-92.
- You can select proper setup from dropdown list.
- After all the setups please click save button, system goes back to the previous menu.

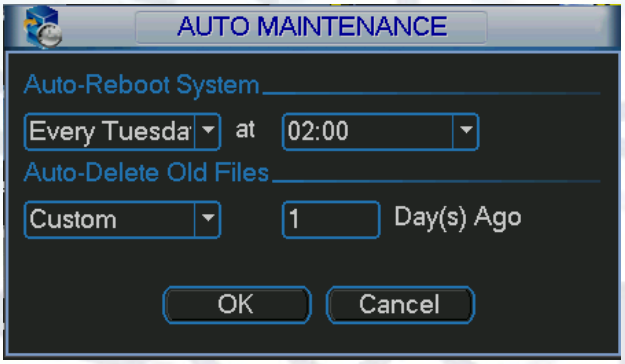


Figure 4-92

4.7.7 Config Backup

The configuration file backup interface is shown in Figure 4-93.

This function allows you to copy the current system configuration to other devices. It also supports import, create new folder, delete folder, etc. functions.

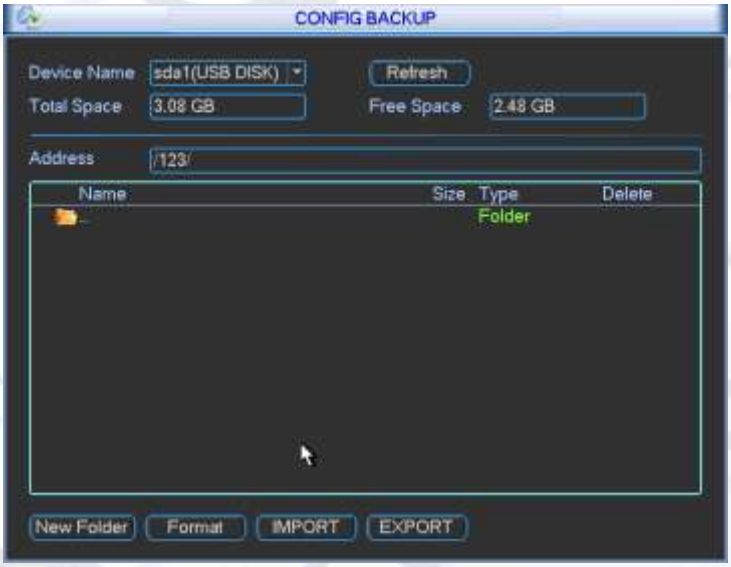


Figure 4-93

4.8 Shutdown

Double click the shutdown button; the system will pop up a dialogue box for you to make a selection. See Figure 4-94.

- **Logout menu user:** log out menu. You need to input password when you login the next time.
- **Restart application:** reboot device.
- **Shutdown:** system shuts down and turns off power.
- **Restart system:** system begins rebooting.
- **Switch user:** you can use another account to login.

If you shut down the device, there is a process bar for your reference, system waits for 3 seconds and then shuts down (You cannot cancel this process).

Please note, sometimes you need to input the proper password to shut down the device.

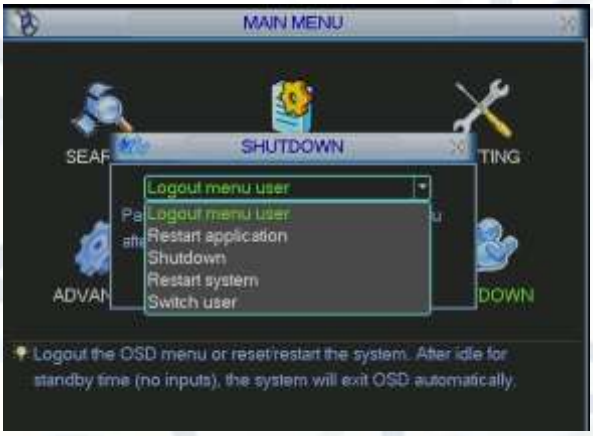


Figure 4-94

5 Quick Configuration Tool

5.1 Overview

The ‘Quick configuration’ tool can search current IP address and modify IP address. At the same time, you can use it to upgrade the device. Please note: the tool only applies to the IP addresses in the same segment.

5.2 Operation

Double click the “ConfigTools.exe” icon; you can see an interface is shown as in Figure 5-1.
In the device list interface, you can view the device IP address, port number, subnet mask, default gateway, MAC address, etc.

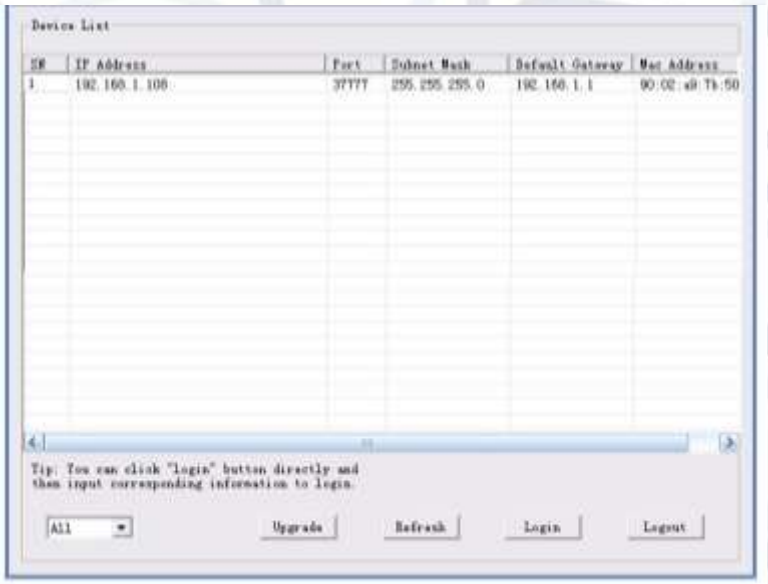


Figure 5-1

Select one IP address and then right click mouse, you will see an interface shown in Figure 5-2.

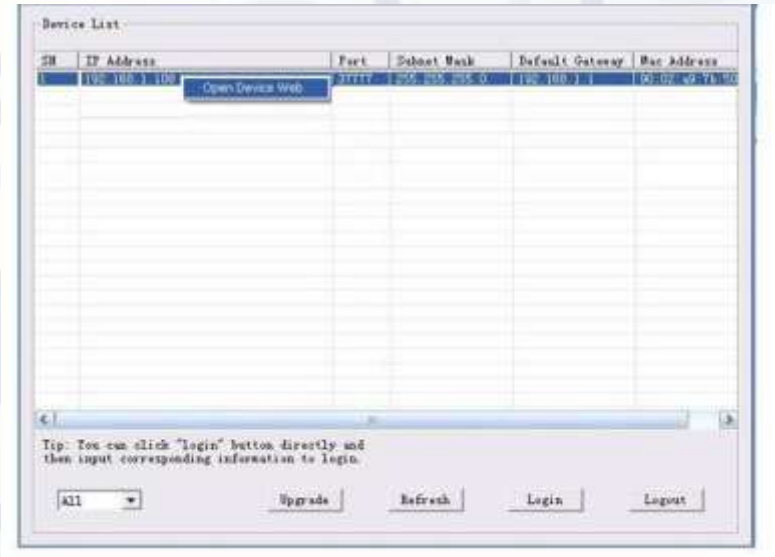


Figure 5-2

Select the ‘Open Device Web’ item; you can go to the corresponding web login interface (see Figure 5-3.

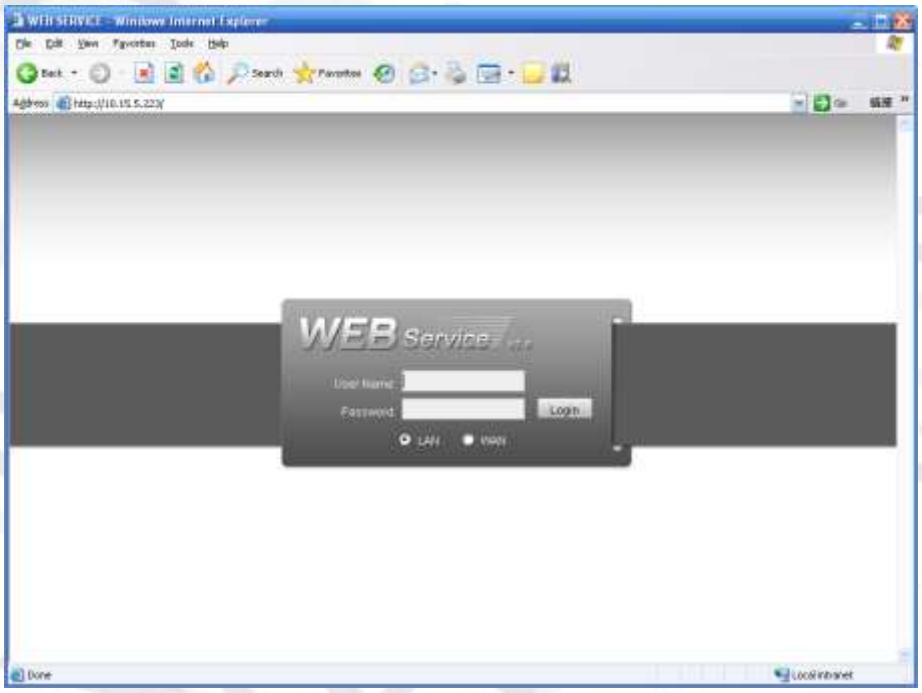


Figure 5-3

- If you want to modify the device IP address without logging in to the device web interface, you can go to the configuration tool main interface to set.
- In the configuration tool search interface (Figure 5-1), please select a device IP address and then double click it to open the login interface. Or you can select an IP address and then click the Login button to go to the login interface (see Figure 5-4).
- In Figure 5-4, you can view device IP address, user name, password and port. Please modify the corresponding information to login.
- Please note the port information here shall be identical to the port value you set in TCP port in Web Network interface. Otherwise, you cannot login the device.
- If you are using device background upgrade port 3800 to login, other setups are all invalid.

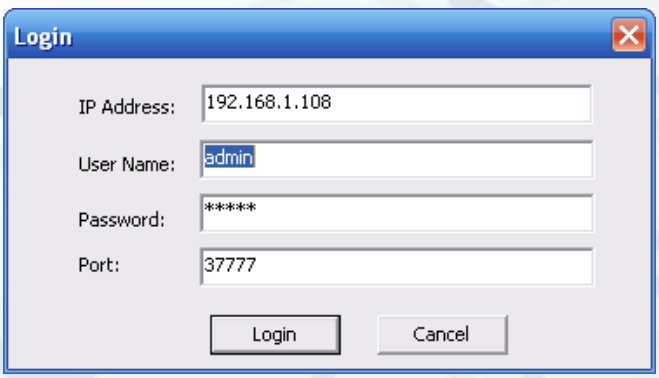


Figure 5-4

After you have logged in, the configuration tool main interface is shown as below (see Figure 5-5).

Please refer to the *Quick Configuration Tool User's Manual* included in the resources CD for detail information.

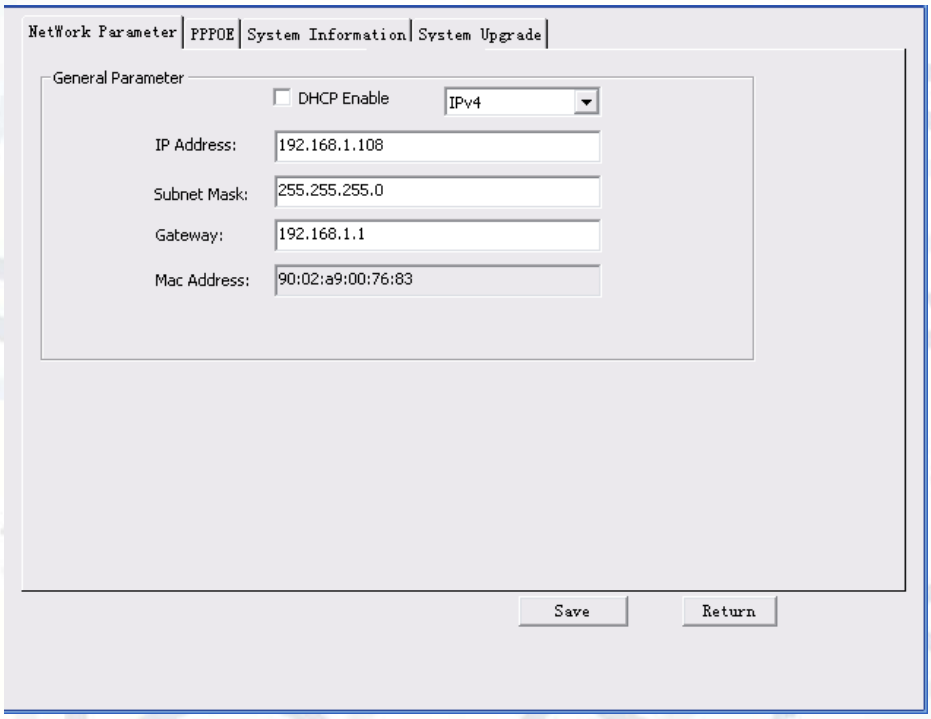


Figure 5-5

6 Web Operation

6.1 General Introduction

The device's web provides a channel monitor menu tree, search, alarm setup, system setup, PTZ control and monitor window.

6.1.1 Preparation

Before log in, please make sure:

- Network connections are correct.
- NVR and PC network setup are correct. Please refer to network setup (main-menu->setting->network)
- Use initiate a network ping: ***.***.***.*** using the NVR IP address, to check connection is OK or not. Usually the return TTL value should be less than 255.
- Open the web browser and then input NVR IP address.
- System can automatically download latest web control and the new version can overwrite the previous one.
- If you want to un-install the web control, please run *uninstall webrec2.0.bat*. Or you can go to C:\Program Files\webrec to remove the folder. Please note, before you un-install, please close all web pages, otherwise the un-installation might cause an error to occur.
- Current series product supports various browsers such as Safari, firebox browser, Google browser. Device only supports 1-channel monitors on an Apple based operating system.

About PoE address setup, operation and allocation.

1. Insert PoE

After you connect the PoE, the device may try to set a corresponding IP address from the Switch network adapter. At the start, the system will try to set via an ARP ping. It then uses the DHCP if it finds that the DHCP is enabled. After successfully setting the IP address, system may use the Switch to send out a broadcast. The system will think the connection is OK when there is any response made. Now the system will try to login the newly found IPC. When you check the interface, you will see the corresponding digital channel is active. You will also see a small PoE icon at the top left corner, which will allow you to view the PoE channel, PoE port information and etc from the connection list of the remote device interface (Chapter 4.6.11). For the IP search list, you need to click the IP search to display or refresh.

2. Remove PoE

After you remove the PoE, you will see the corresponding digital channel becomes idle (disabled). On the remote device interface, it is removed from the connected list. For the IP search list, you need to click the 'IP Search' button to refresh.

3. After you connect the PoE, the system follows the principles listed below to map a channel.

    a) If this is the first time the PoE has been connected, the system can map it to the first idle channel. After the mapping, the channel can memorize the MAC address of the IPC. It is a <Channel>---<IPC mac> map. If current channel does not connect to the other device, system can memorise the current MAC address, otherwise it can refresh to the newly added device and memorise the <PoE port>---<Channel>.
    b) If it is your second time the PoE has been connected, the system can check the saved MAC address according to <Channel>---<IPC mac> map to make sure current IPC has connected correctly or not. If system finds the previous information and the channel is idle, system can map it to the previously used channel. Otherwise system goes to the next step.
    c) Thirdly, according to the <PoE port>---<Channel> map, the system may know the previous mapping channel of current PoE port. System can select the current channel if it is free. Otherwise, it goes to the next step:
    d) The system goes to find the first idle channel it finds.

Generally speaking, once you connect the PoE, the system will follow the steps listed above to find the channel available.

System can pop up a dialogue box for you to select a channel to overwrite. The title of the pop-up interface is the name of the current operational PoE port. In this interface, All PoE channels will become grey and you will not be able to select them.

6.1.2 Log in

Open the web browser and then input the NVR IP address in to the address bar.

For example, if your NVR IP address is **192.168.1.108**, then please input **http:// 192.168.1.108** in the web browser address bar. See Figure 6-1.

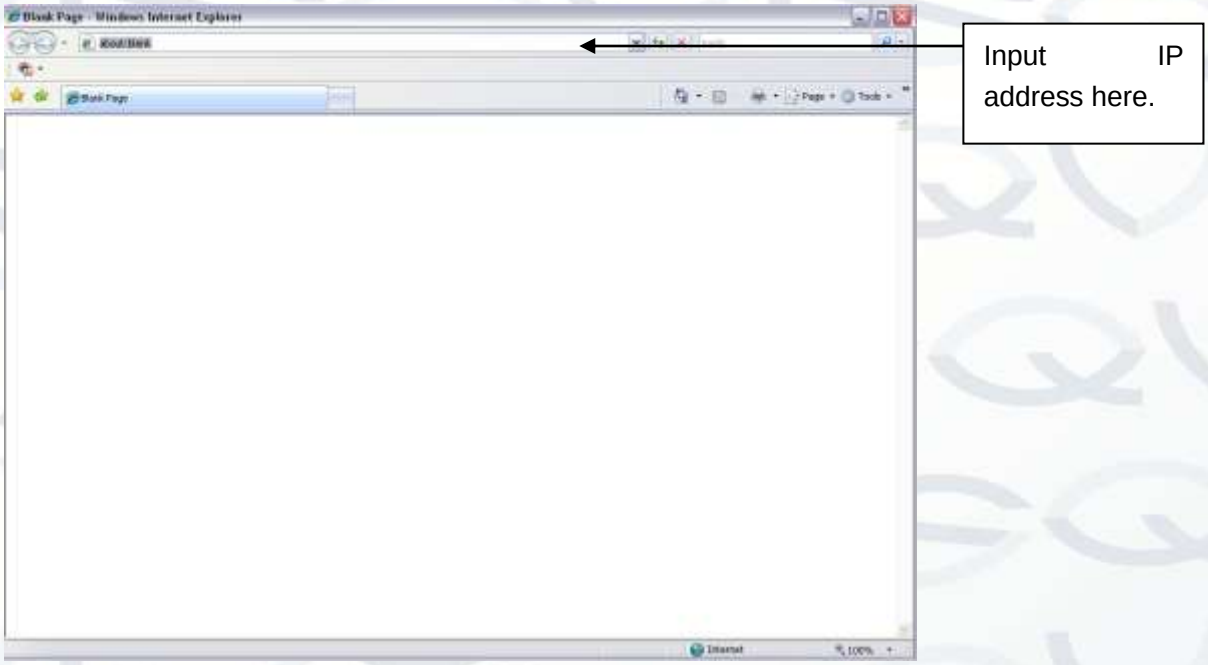


Figure 6-1 IE Interface

The system will pop up warning information to ask you whether to install '**webrec.cab'** control or not. Please click yes button.

If you can't download the ActiveX file, please modify your settings as follows. See Figure 6-2.

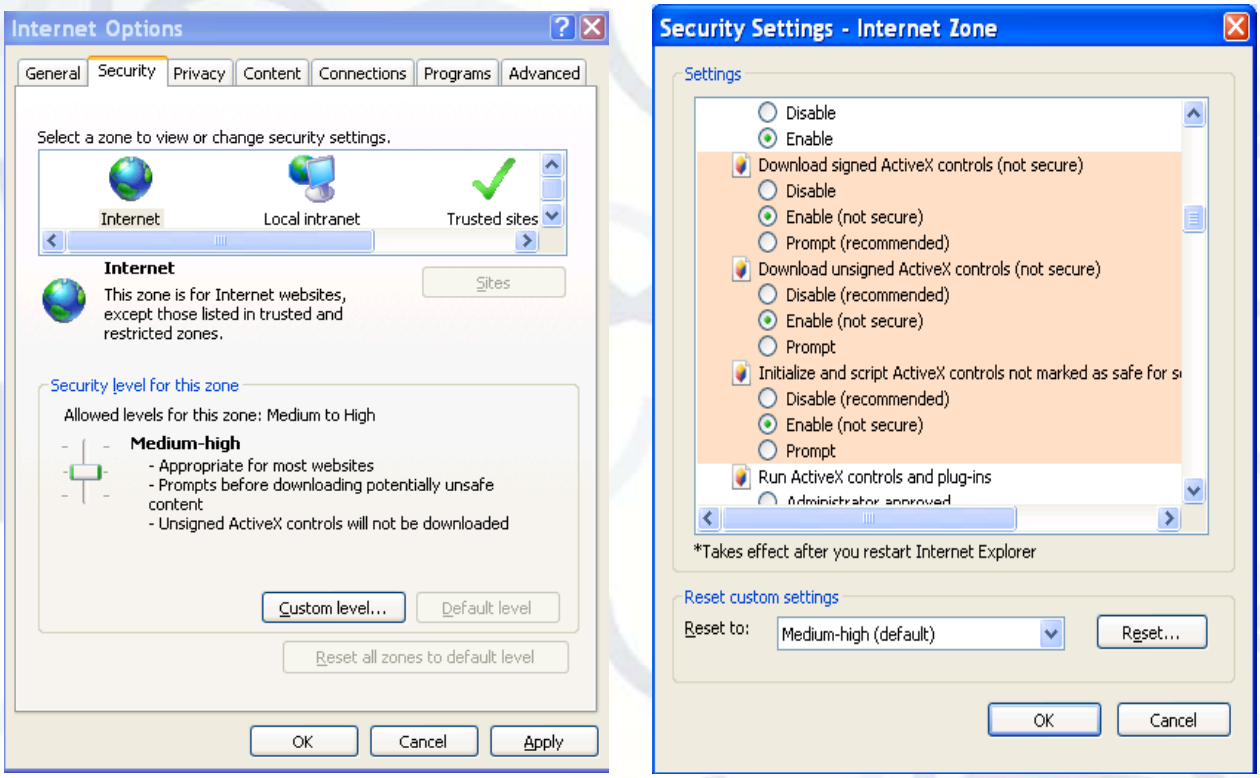


Figure 6-2 IE Safety Setup

After installation, the interface is shown as below. See Figure 6-3.

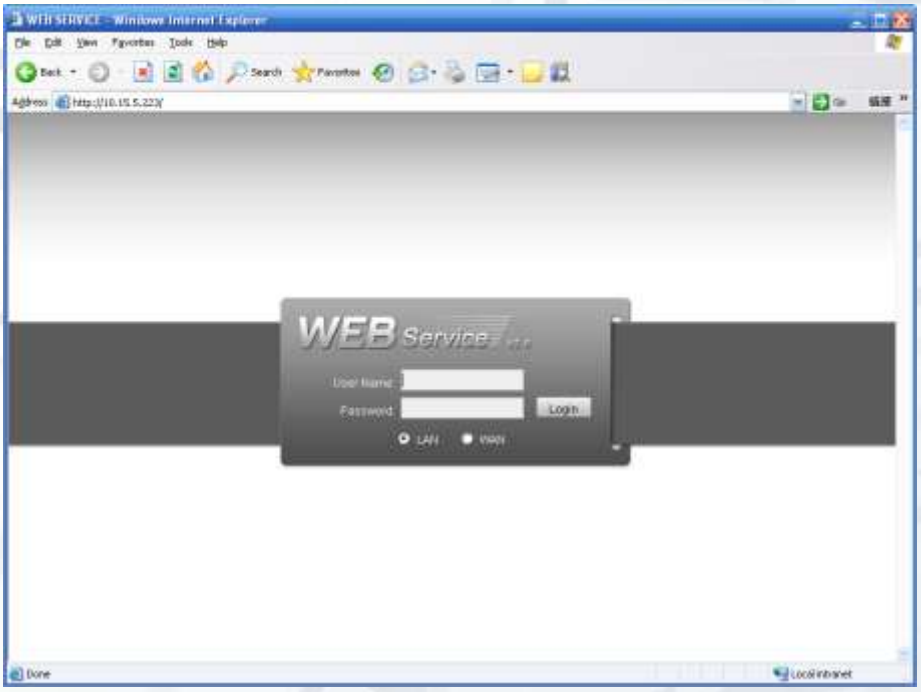


Figure 6-3 Login interface

Please input your user name and password.
Default factory name is **admin** and password is **admin**.

Note: For security reasons, please modify your password after you first login.

6.2 LAN Mode

After you logged in, you will see the main LAN window. See Figure 6-4.

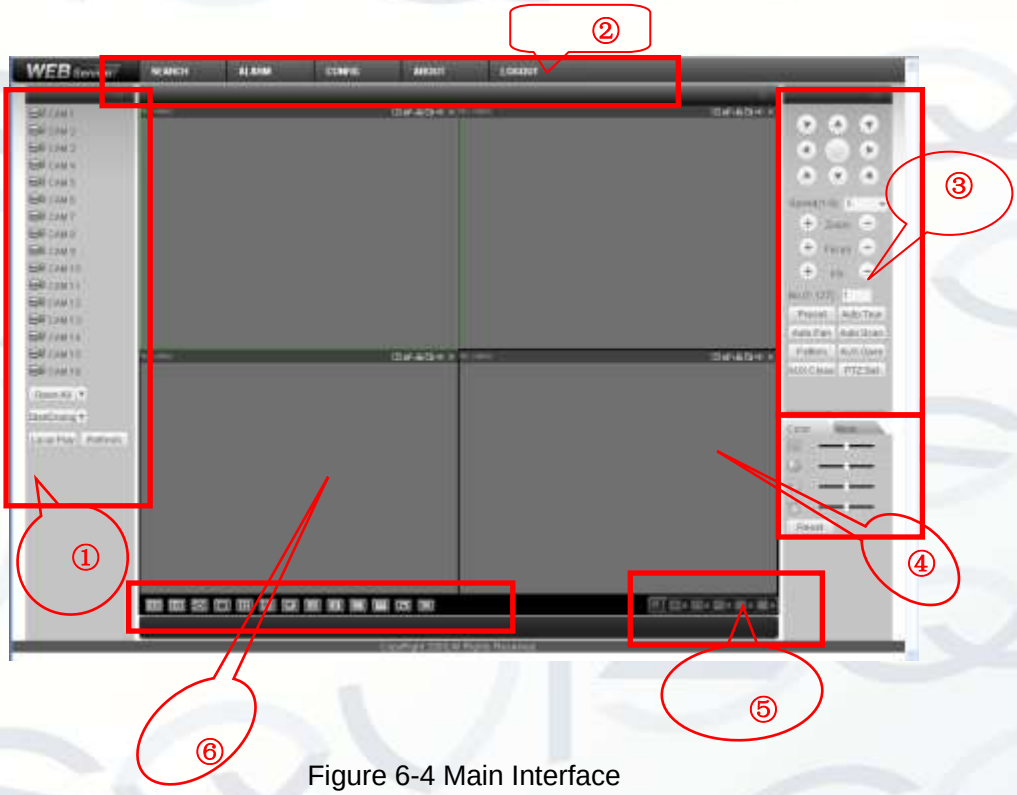


Figure 6-4 Main Interface

There are six sections:

- Section 1: Monitor channel menu tree
- Section 2: System menu
- Section 3: PTZ control
- Section 4: Video setup and other setup
- Section 5: Preview window
- Section 6: Monitor window switch

6.2.1 Monitor Channel Menu Tree

The monitor channel menu tree is shown as in Figure 6-5.

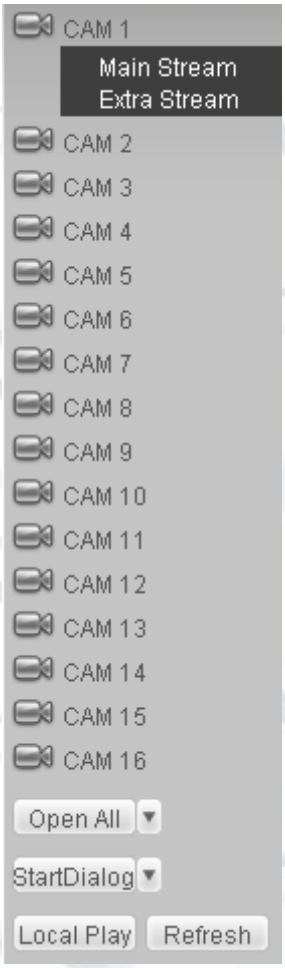


Figure 6-5 Monitor Channel Menu Tree

Please refer to the following sheet for detailed information:

Parameter	Function
CAM 1 to CAM 16	channel 1 to channel 4
Open all /close all	Click this button to open all video channels. Once all video channels are open, it becomes close all button.
Start Dialogue	You can click this button to enable audio talk. Click 【▼】 to select bidirectional talk mode. There are four options: DEFAULT，G711a，G711u and PCM. **Note:** the audio input port from the device to the client-end is using the first channel audio input port. During the bidirectional talk process, system will not encode the audio data from the 1-channel.
Local play	The Web can playback the saved (Extension name is dav) files at the PC-end. Click local play button, system pops up the following interface for you to select local play file. See Figure 6-6.  Figure 6-6
Refresh	Click this button to refresh monitor channel name.

Please left click one monitor to view real-time video, the monitor window as shown in Figure 6-7.

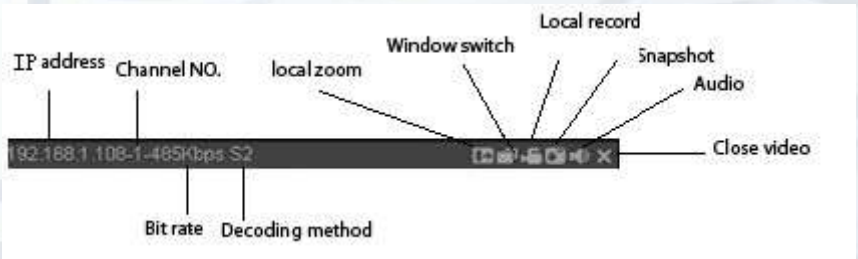


Figure 6-7 Real-time Monitor

Please refer to the following sheet for monitor window parameter information:

Parameter	Function
Display device information	● 1: NVR IP address. ● 2: Channel number. ● 3: Bit stream. ● 4: Bit stream decode type. ➢ S1: Overlay. ➢ S2: Off stream. ➢ S3:GD1 ➢ H1: Overlay ➢ H2: off stream decoding from the display card.
Digital zoom	Click this button and then left drag the mouse in the zone to zoom in. Right click mouse system restores original status.
Change show mode	Resize or switch to full screen mode.
Local record	When you click local record button, the system begins recording. The recorded file is saved to system folder: \ RecordDownload(default).
Snapshot	You can snapshot during important videos. All images are memorized in system folder: \ picture download (default).
Audio	Turn on or off audio.
Close video	Close video in current window.

6.2.2 System Menu

System menu is shown as in Figure 6-8.

Please refer to Chapter 6.4 Configuration, Chapter 6.5 Search, Chapter 6.6 Alarm, Chapter 6.7 About, Chapter 6.8 Log out for detailed information.

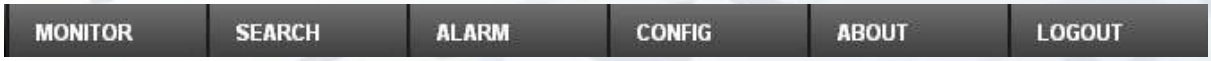


Figure 6-8 System Menu

6.2.3 Monitor Window Switch

The monitor window switch interface is shown as in Figure 6-9.

Figure 6-9 Monitor Window Switch

System supports **1/4/6/8/9/13/16/20/25/36**-window real-time preview.

- Video quality adjustment button. The interface will allow you to set different video resolutions.

 - Fluency button. You can use this function to adjust the priority between real-time and fluency.

6.2.4 PTZ Control

Before PTZ operation, please make sure you have properly set the PTZ protocol. (Please refer to chapter 6.4.2.7 PTZ).

Here you can view direction keys, speed, zoom, focus, iris, preset, tour, pan, scan, pattern, aux close, and PTZ setup button.

Note: open menu/close menu/up/down/left/right/confirm/cancel buttons are for speed dome only.

- PTZ direction: PTZ supports eight directions: left/right/up/down/upper left/upper right/bottom left/bottom right.
- Speed: The step 8 speed is faster than step 1.

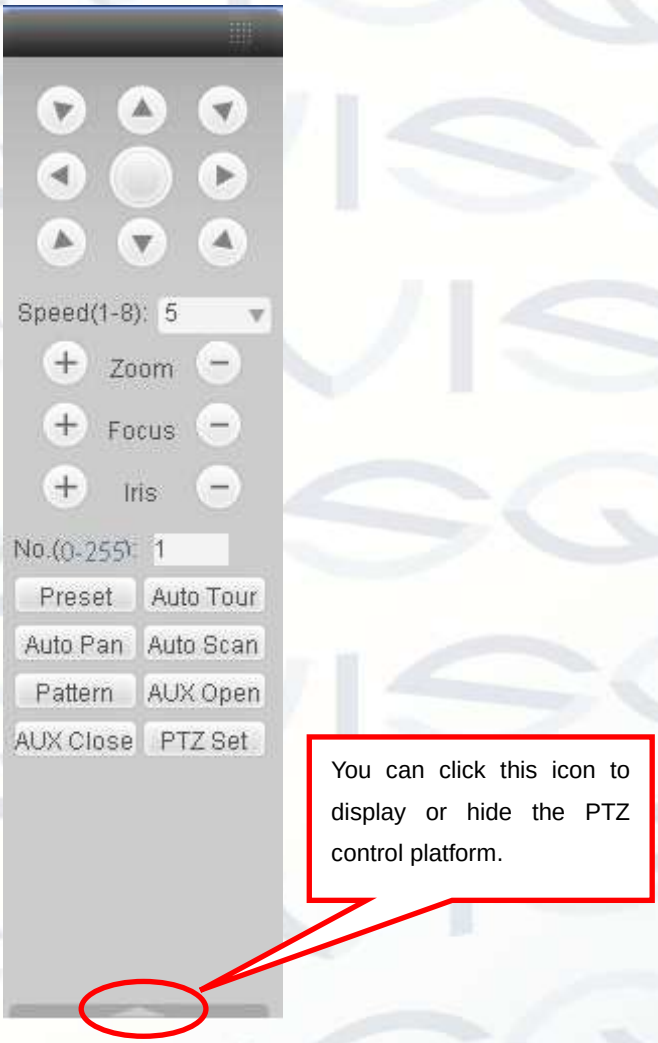


Figure 6-10 PTZ Interface

Click PTZ set button, the interface is shown as in Figure 6-11.

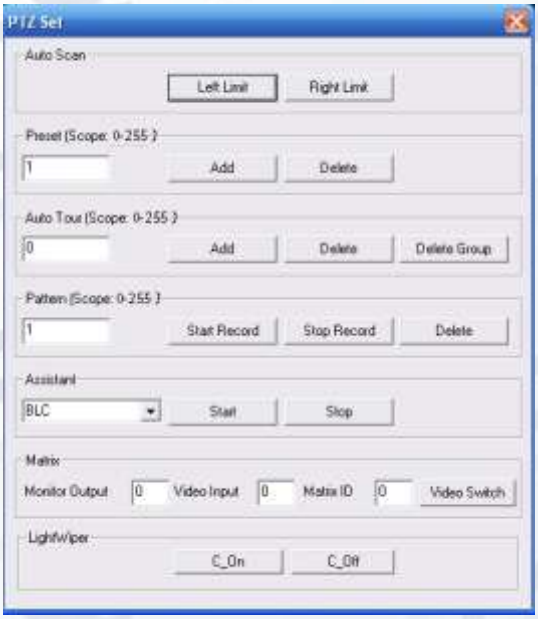


Figure 6-11 PTZ Setup

Please refer to the following sheet for PTZ setup information:

Parameter	Function
Scan	• Move the camera to you desired location and then click left limit button. • Then move the camera again and then click right limit button to set a right limit.
Preset	Use direction keys to move the camera to your desired location and then input preset value. Click add button to set one preset.
Tour	• Input auto tour value and preset value. Click add button, you have added one preset in the tour. • Repeat the above procedures you can add more presets in one tour. • Or you can click delete button to remove one preset from the tour.
Pattern	You can input pattern value and then click start record button to begin PTZ movement. Please go back to Figure 7-10 to implement camera operation. Then you can click stop record button in Figure 7-11. Now you have set one pattern.
Assistant	The assistant items include: BLC, Digital zoom, night vision, camera brightness, flip. You can select one option and then click start or stop button.
Matrix	Please select matrix x and then input corresponding monitor output channel number, video input channel number. Then you can click video switch button.
Light/wiper	You can control the light and wiper of the peripheral device.

6.2.5 Color and More Setup

Color, Contrast, Video saturation and Monitor video hue setup interface are shown as in Figure 6-12.

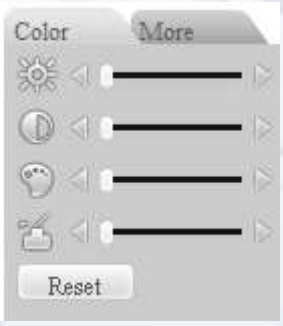


Figure 6-12 Color

Please refer to the following sheet for detailed information:

Parameter		Function	
Video setup		Adjusts monitor video brightness.	Note: All the operations here applies to WEB end only.
		Adjusts monitor video contrast ness.	
		Adjusts monitor video saturation.	
		Adjusts monitor video hue.	
	Reset	Restore system default value.	

Click the ‘More’ button and the interface will be shown below in Figure 6-13.

Figure 6-13 Color and More

Please refer to the following sheet for detailed information.

Parameter		Function
More	Picture Path	Click the picture path button, the system pops up an interface for you to modify path.
	Record Path	Click the record path button, system pops up an interface for you to modify path.
	Reboot	Click this button to reboot the device. If there is a local user logged into the system menu, then the Web logged in user has no right to reboot the device system, a pop up dialogue box will alert you.

6.3 WAN Login

In WAN mode, after you log in, the interface is shown as below (see Figure 6-14).

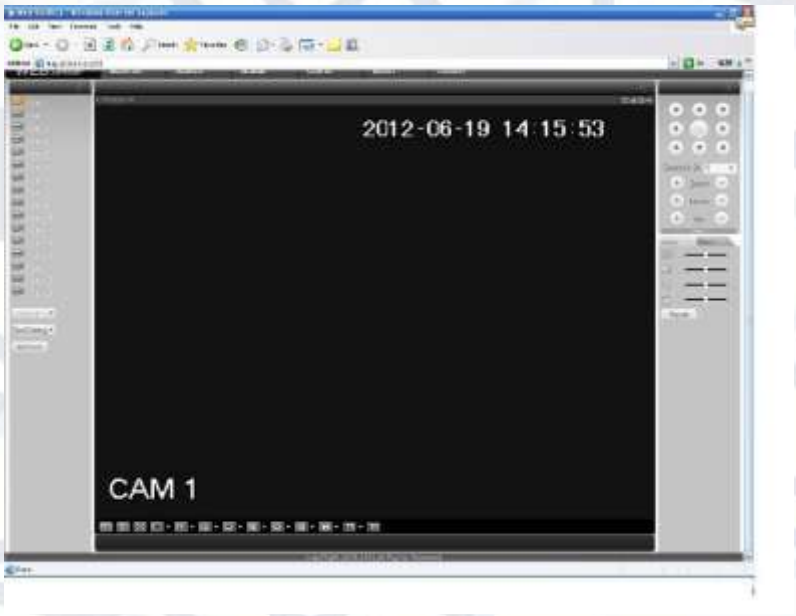


Figure 6-14

Please refer to the following content to understand the LAN and WAN login differences.

1. In WAN mode, system opens the main stream of the first channel, to monitor by default. The open/close button on the left pane is null.

2. You can select different channel and different monitor mode at the bottom of the interface (see Figure 6-15).

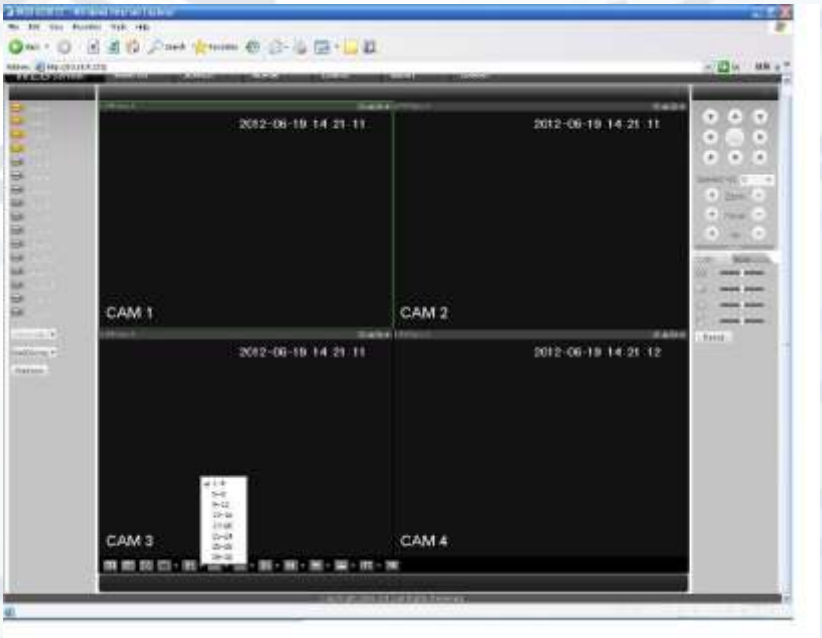


Figure 6-15

Important: The window display mode and the channel number are the default setting. For example, for the 16-channel, the max window split mode is 16.

3. Multiple-channel monitor system adopts an extra stream to monitor by default. When you double click one channel, the system switches to a single channel and then uses main stream to monitor. For your reference there are two video viewing icons on the top left corner of the channel number: '**M**' stands for 'Main stream', '**A**' stands for 'Alternative' stream.

4. When you switch from Monitor to 'Search' or to 'Configuration', the system pops up a dialogue box asking if you wish to leave the current interface or not (see Figure 6-16). Click the OK button, and the system will close the current monitor window. The same dialogue box will appear when you click the 'Config' button whilst monitoring video.

5. Click the OK button and the system will close the current monitor interface and opens the configuration interface. The monitor interface appears automatically after you close configuration interface. When you switch from Search to the Configuration interface, the system also pops up the same dialogue box for your confirmation. Also when you click the OK button, you will see the system close the playback interface and open the configuration interface.

Note: system will not open the playback interface again after you close the configuration interface.

Figure 6-16

If you login via the WAN mode, system does not support alarm activation to open the video function in the Alarm setup interface.

Important:

- **For multiple-channel monitor mode, system adopts an extra default stream. You cannot modify this manually. All channels will be trying to synchronize. Please note the synchronization effect still depends on your network environment.**
- **For bandwidth consideration, the system cannot support monitor and playback at the same time. System auto closes monitor or playback interface when you are searching setup in the configuration interface. This is to enhance search speed.**

6.4 Configuration

6.4.1 System Information

6.4.1.1 Version Information

Here you can view device hardware feature and software version information (see Figure 6-17).

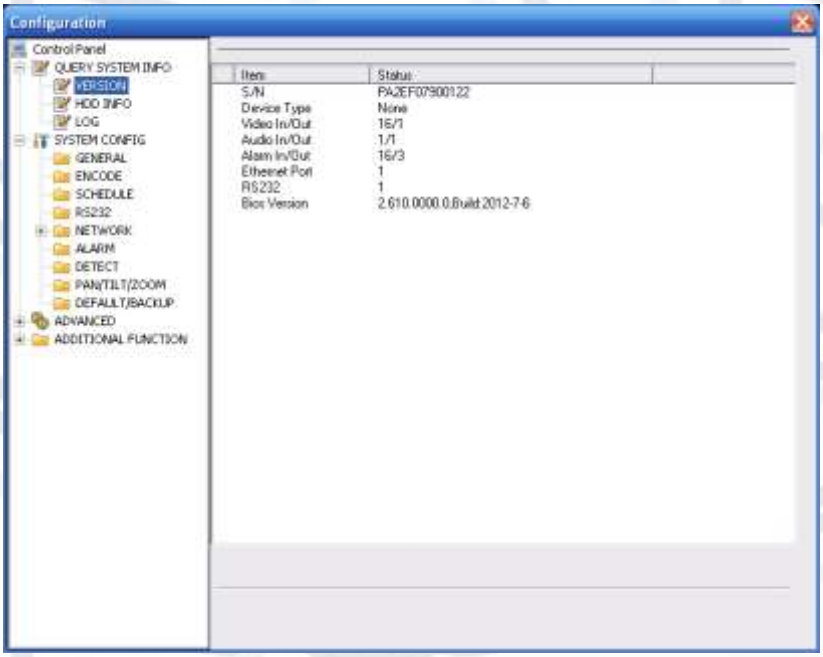


Figure 6-17 Version Information

6.4.1.2 HDD information

Here you can view local storage status such as free capacity and total capacity (see Figure 6-18).

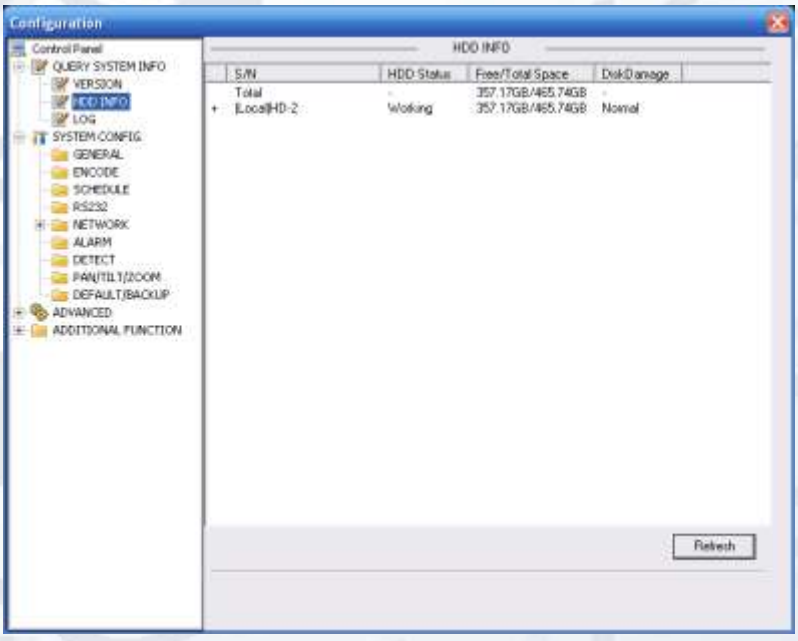


Figure 6-18 HDD Information

6.4.1.3 Log

Here you can view system log (see Figure 6-19)

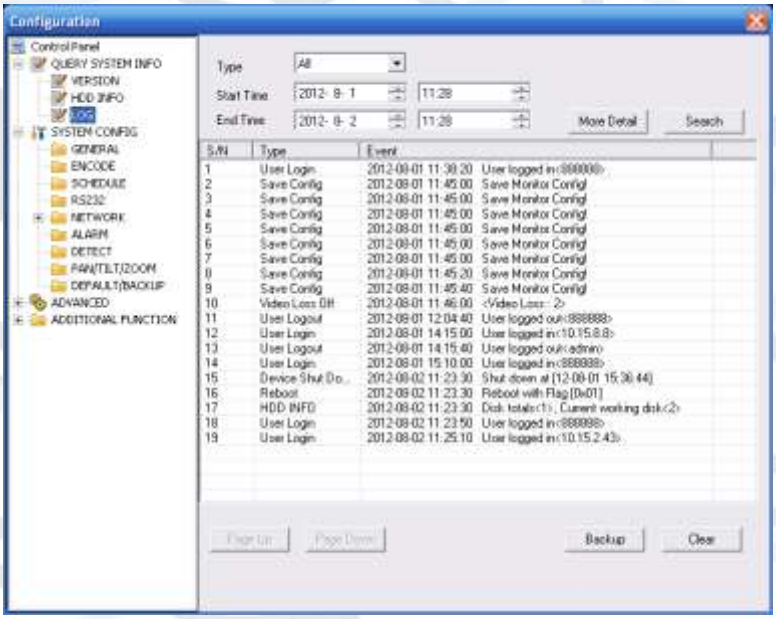


Figure 6-19 Log

Please refer to the following sheet for log parameter information:

Parameter	Function
Type	Log types include: system operation, configuration operation, data management, alarm event, record operation, user management, log clear and file operation.
Start time	Set time to start search.
Finish time	Set time to finish search
Search	You can select log type from the drop down list and then click search button to view the list.
Clear	You can click this button to delete all displayed log files. Please note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

6.4.2 System Configuration

Please click the save button to save your current setup. Please click the refresh button to view the latest setup.

6.4.2.1 General Setup

Here you can set system time, record length, video format and etc. (see Figure 6-20).

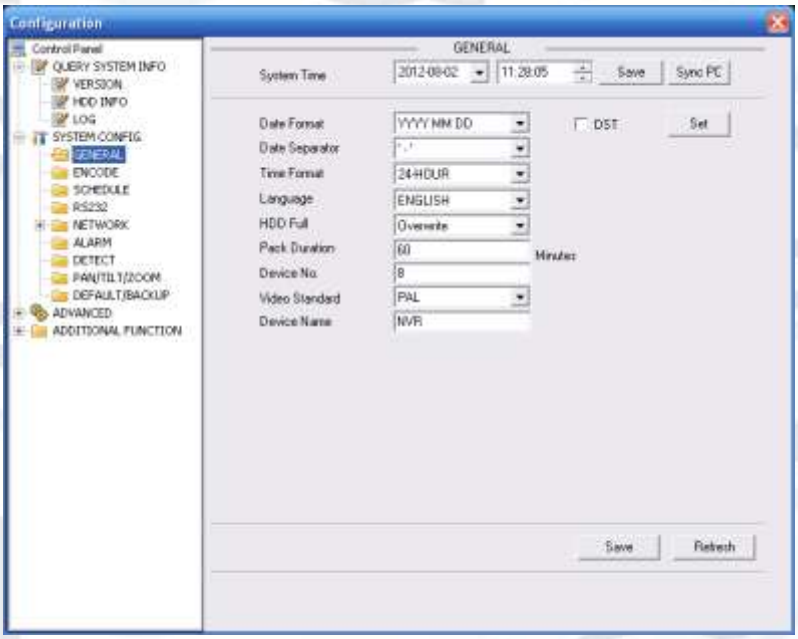


Figure 6-20 General Setup

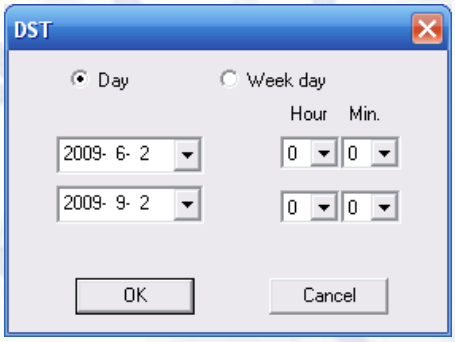


Figure 6-21 DST

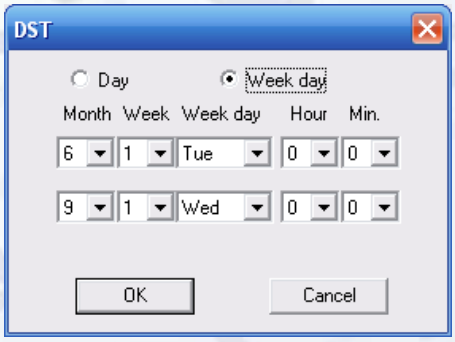


Figure 6-22 DST

Please refer to the following sheet for detailed information:

Parameter	Function
System Time	Here is for you to modify system time. Please click Save button after your completed modification
Sync PC	You can click this button to save the system time as your PC current time.
Data Format	Here you can select data format from the dropdown list.
Data Separator	Please select separator such as – or /.
Time Format	There are two options: 24-H and 12-H.
DST	Here you can set day night save time begin time and end time. See Figure 6-21 and Figure 6-22.
Language	Here you can view the system current language. You can select from the dropdown list.
HDD Full	There are two options: stop recording or overwrite the previous files when HDD is full.
Pack Duration	Here you can select file size. The value ranges from 1 to 120 (minute). Default setup is 60 minutes.
Device No	When you are using one remote control to manage multiple devices, you can give a serial numbers to the device. Please note current series product **does not** support this function.
Video Standard	Here you can view video format such as PAL.

6.4.2.2 Encode

The encode interface is shown in Figure 6-23.

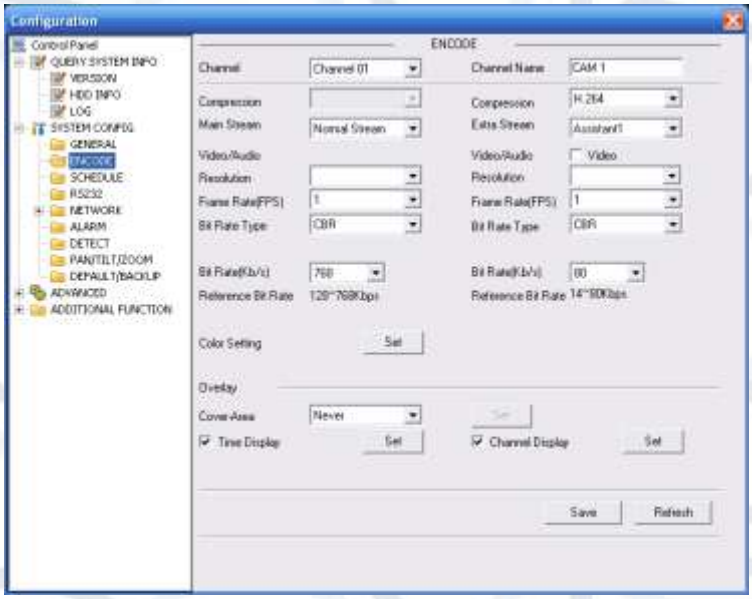


Figure 6-23 Encode

Please refer to the following sheet for detailed information:

Parameter	Function
Channel	Select the corresponding channel.
Channel Name	Display the current channel ID. You can also modify the channel ID here.
Encoding mode	The device does not support it.
Audio / video	For the main stream, recorded file only contains video by default. You need to draw a circle here to enable audio function. For extra stream, you need to draw a circle to select the video first and then select the audio if necessary.
Resolution	Main code stream types are **D1/HD1/2CIF/CIF/QCIF** Channel 1～16 extra code stream supports CIF/QCIF.
Frame rate	PAL: 1f/s-25f/s；NTSC: 1f/s-30f/s
Bit rate	There are two options: VBR and CBR. Please note, you can set video quality in VBR mode only.。
Reference bit	The bigger the bit value, the better the image quality. Reference bit is an ideal range for you to set bit rate.
Overlay	Here you can privacy mask the specified video in the monitor video. One channel max supports 4 privacy mask zones.

(Cover area)	The privacy mask includes two options: Never/monitor. Never: do not enable privacy mask function. Monitor: the privacy mask zone cannot be viewed in monitor mode.
Time display	You can enable this function so that system overlays time information in video window.
Channel display	You can enable this function so that system overlays channel information in video window.

6.4.2.3 Schedule

Here you can set different periods for various days. There are max six periods in one day (see Figure 6-24).

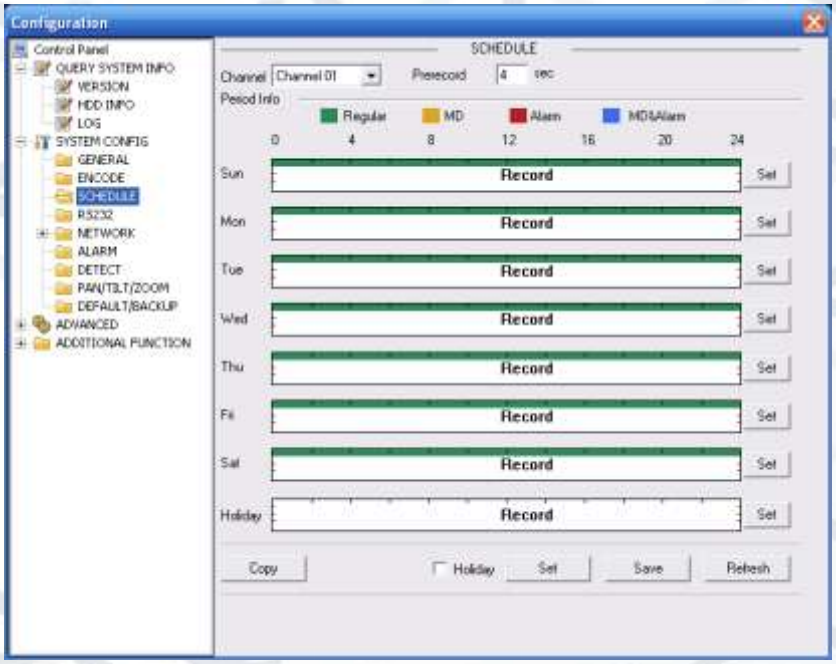


Figure 6-24 Schedule

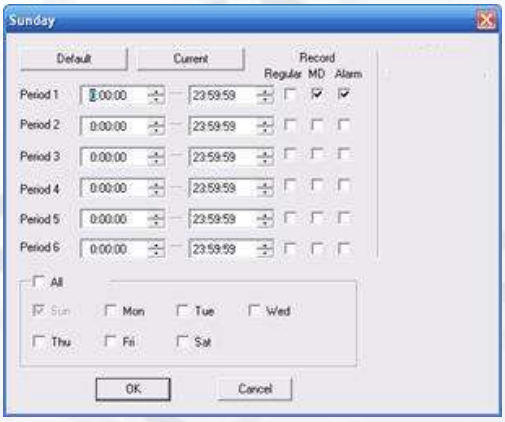


Figure 6-25 Schedule Time

Figure 6-26 Copy

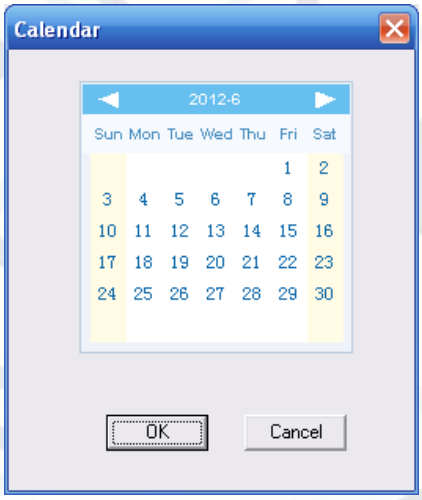


Figure 6-27

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel first.
Pre-record	Please input pre-record value here. When alarm record or motion detection record occurs, system can record the several seconds of video before activating the record operation into the file. (Depends on data size).
Setup	• In Figure 6-24, click the set button; you can go to the corresponding setup interface (see Figure 6-25). • Please set the schedule period and then select the corresponding record type: schedule, motion detection, and alarm. • Please select the date (Current setup applies to current day by default. You can draw a circle before the week to apply the setup to the whole week.) • After complete setup, please go back to Figure 6-24 and then click save to save current time period setup.

Parameter	Function
Holiday	Click Set button, system pops up a dialogue box shown as in Figure 6-27. Here you can set holiday date. Check the box, it means that the channel shall record your holiday setup. Please go to the Period interface to set the holiday date record setup.
Copy	This is a shortcut menu button. You can copy the current channel setup to one or more (all) channels. The interface is shown as in Figure 6-26.

6.4.2.4 Network

Network interface is shown as in Figure 6-28.

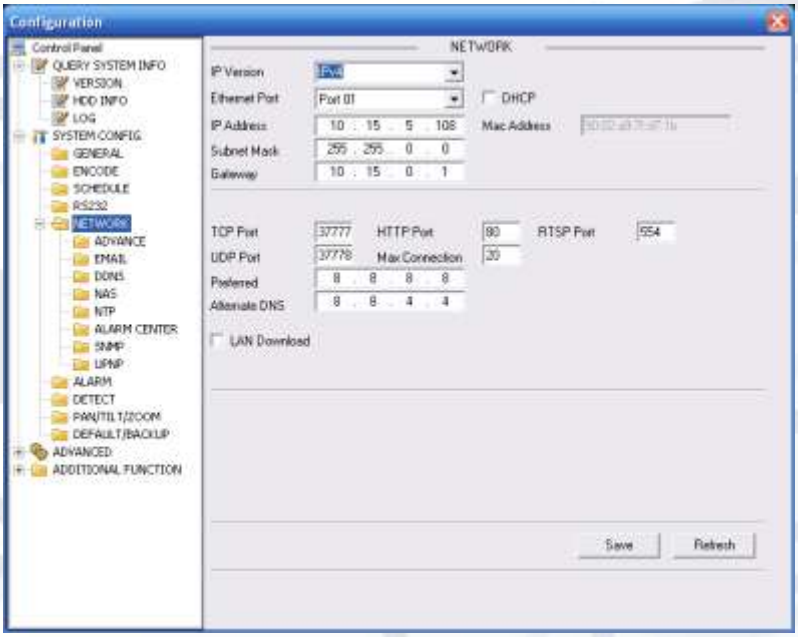


Figure 6-28 Network

Please refer to the following sheet for detailed information:

Parameter	Function
IP Version	There are two options: IPv4 and IPv6. Right now, syste supports these two IP address format.
MAC Address	The host in the LAN can get a unique MAC address. It is for you to access in the LAN. It is read-only.
IP Address	Here you can use the up/down buttons (▲▼) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask as the default gateway.

Parameter	Function
Subnet Prefix	The input value ranges from 0 to 128. It is to mark a specified network MAC address. Usually it includes organisation of the multiple-levels.
Default Gateway	Here you can input the default gateway.
TCP Port	Default value is 37777. You can change if necessary.
HTTP Port	Default value is 80.
RTSP port	Default value is 554.
UDP Port	Default value is 37778. You can change if necessary.
Max Connection	Network user max amount. The value ranges from 0 to 20. O means there is no user can access current device.

Note: system will need to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section. That is to say, the specified length of the subnet prefix shall have the same string.

For the IPv6 version, IP version, default gateway, preferred DNS and alternate DNS, the input value shall be 128-digit. It cannot be left in blank.

Advanced setup

The remote host can choose multi-cast and PPOE to set. See Figure 6-29.

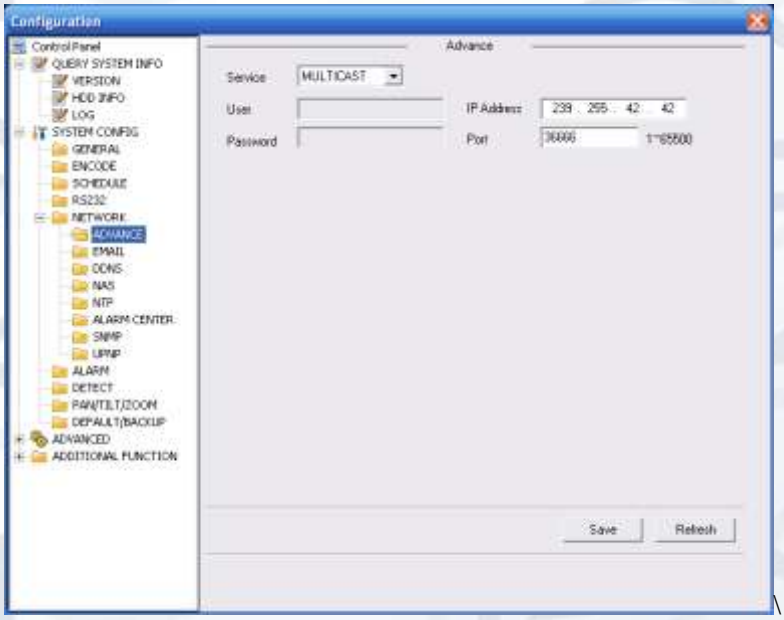


Figure 6-29 Network

Parameter		Function
Remote host	PPPOE	• Input the user name, password and which ISP (Internet service supplier) provider then chose enable. • Reboot system after configuration is saved and the device will auto connect to Internet. The IP address is the WAN IP. There are two conditions for reboot: 1. The user must have the authority to reboot device. 2. There is no user login the system menu on the local end • After PPPOE dial has succeeded, get the current IP address and visit this IP address via WEB.

Email

The email interface is shown as in Figure 6-30.

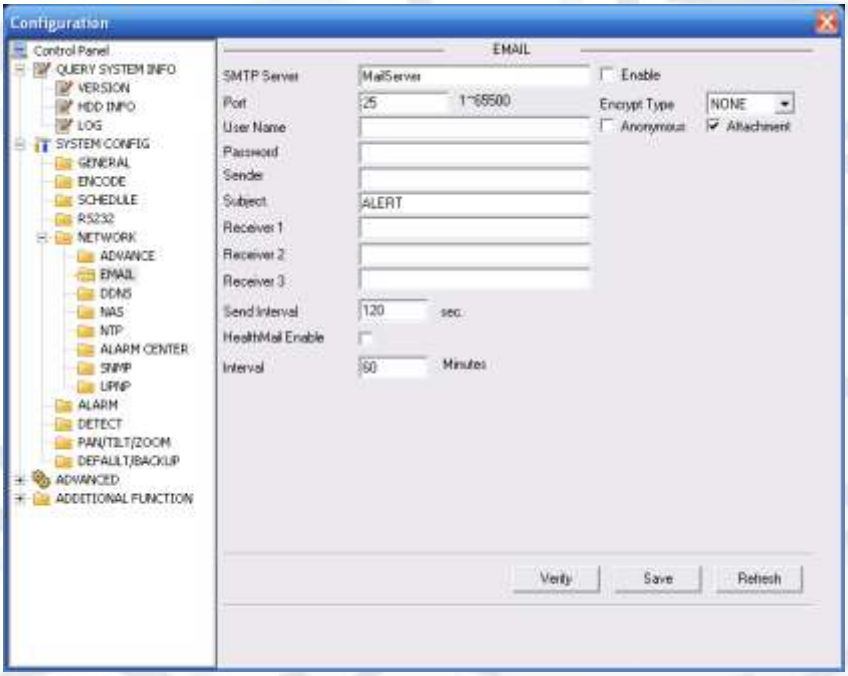


Figure 6-30 Email

Please refer to the following sheet for detailed information:

Parameter	Function
SMTP Server	• Input server address and then enable this function. • You can also input the corresponding server domain name here, but you need to go to DNS interface (chapter 7.3.4.1) to set the server IP that can parse the domain.

Parameter	Function
SSL enable	You can enable SSL encryption function to guarantee data safety.
Port	Default value is 25. You can modify it if necessary.
User Name	The sender email account user name.
Password	The sender email account password.
Sender	Sender email address.
Subject	Input email subject here. Max 32-digit.
Address	Input receiver email address here. Max input three addresses.
Interval	Please input the send interval value here.

DDNS

The DDNS interface is shown as in Figure 6-31.

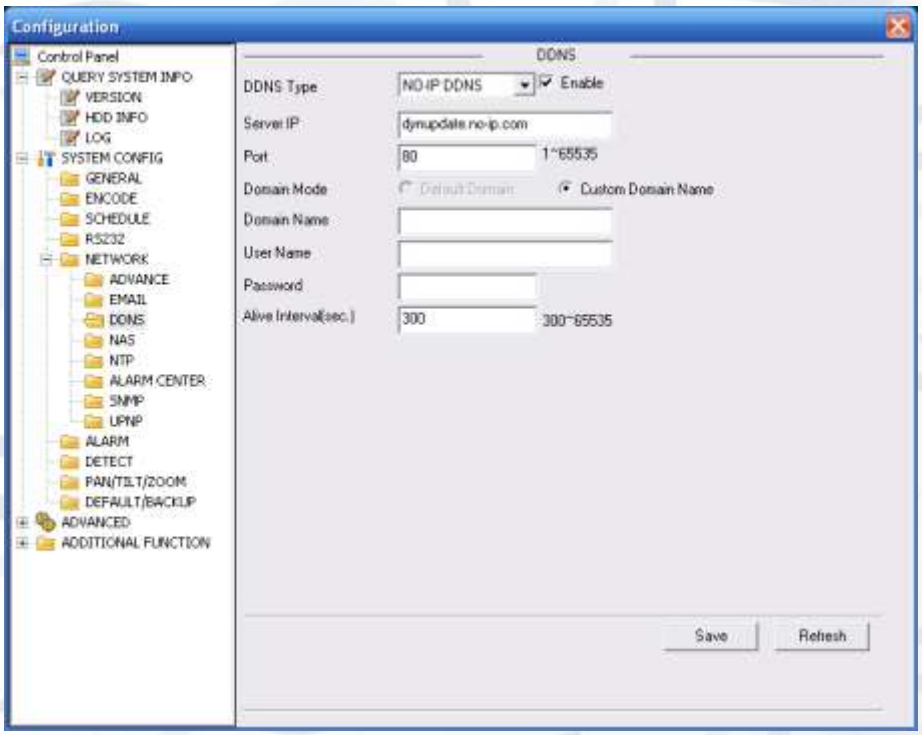


Figure 6-31 DDNS

Please refer to the following sheet for detailed information:

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.

Parameter	Function
Domain Name	Your self-defined domain name.
User	The user name you input to log in the server.
Password	The password you input to log in the server.
Interval	Device sends out alive signal to the server regularly. You can set interval value between the device and DDNS server here.

Private DDNS and Client-end Introduction

1. Background Introduction

Device IP is not fixed if you use ADSL to login to the network. The DDNS function allows you to access the NVR via the registered domain name. Besides the general DDNS, the private DDNS works with the device from the manufacturer so that it can add the extension function.

2. Function Introduction

The private DDNS client has the same function as other DDNS client end. It recognises the bonding of the domain name to the IP address. Right now, the current DDNS server is for our own devices only. You need to regularly refresh the bonding relationship of the domain to the IP. There is no user name, password or the ID registration on the server. At the same time, each device has a default domain name (Generated by MAC address) as an added option. You can also use customized valid domain name (has not registered).

3. Operation

Before you use our private DDNS, you need to enable this service and set proper server address, port value and domain name.

- Server address：www.quickddns.com
- Port number：80
- Domain name：There are two modes: Default domain name and customised domain name.

Except default domain name registration, you can also use customized domain name (You can input your self-defined domain name.) After successful registration, you can use the domain name to login to install the device IP.

- User name: This is optional. You can input your commonly used email address.

Important:

- **Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in server attack.**
- **System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.**

NAS

NAS interface is shown as in Figure 6-32.

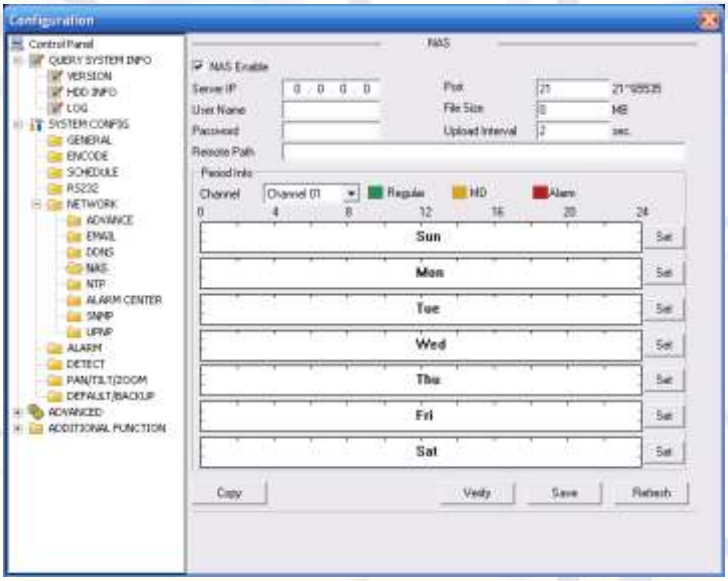


Figure 6-32 NAS

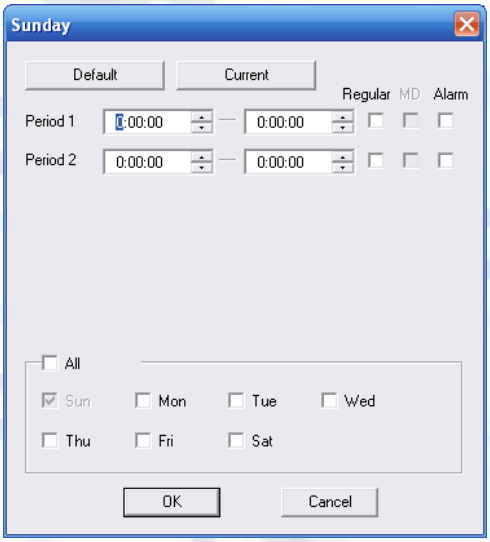


Figure 6-33 NAS Setup

Please refer to the following sheet for detailed information:

Parameter	Function
NAS enable	Please select network storage protocol and then enable NAS function. The network storage protocol includes FTP.
Server IP	Input remote storage server IP address.
Port	Input Remote storage server port number.
User Name	Log in user account.

Parameter		Function
File length		The max files length when you transfer the file. When the input value is 0, then system uploads whole files.
Password		The password you need to login the server.
Remote Path		Remote storage file path.
Period info.	Channel	Select a monitor channel.
	Setup	• In NAS interface, click set button, you can go to the corresponding setup interface. See Figure 6-33. • Please set schedule period and then select corresponding record type: schedule/alarm. Please note device does not support motion detect record function now. • Please select date (Current setup applies to current day by default. You can draw a circle before the week to apply the setup to the whole week.) • After complete setup, please go back to Figure 7-28 and then click save to save current time period setup.
Copy		User can use this shortcut to copy the storage state of a channel to another (or all other channels).

NTP

The NTP interface is shown in Figure 6-34.

Here you can check the network time synchronization. Please enable current function and then input server IP, port number, time zone and time.

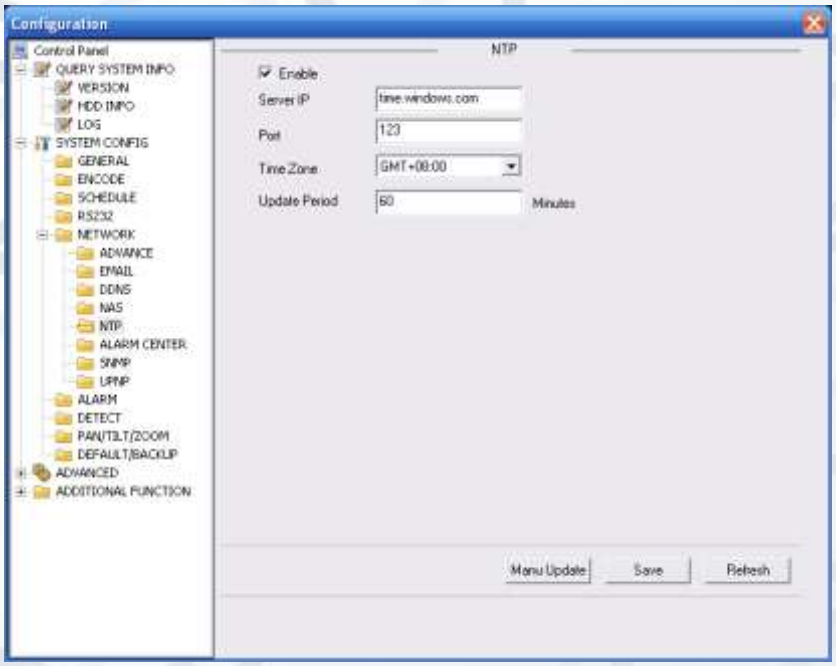


Figure 6-34 NTP

Please refer to the following sheet for detailed information:

Parameter	Function
Enable	Enable NTP function or not.
Server IP	Server IP address
Port	Server port. System supports TCP only and default port value is 123.
Time Zone	Device current time zone.
Update Interval	Time update interval value.

Alarm Centre

Alarm centre interface is shown as below (see Figure 6-35).

Please input alarm centre server IP, port number. Once there is an alarm occurred, system can notify the alarm centre as you specified here.

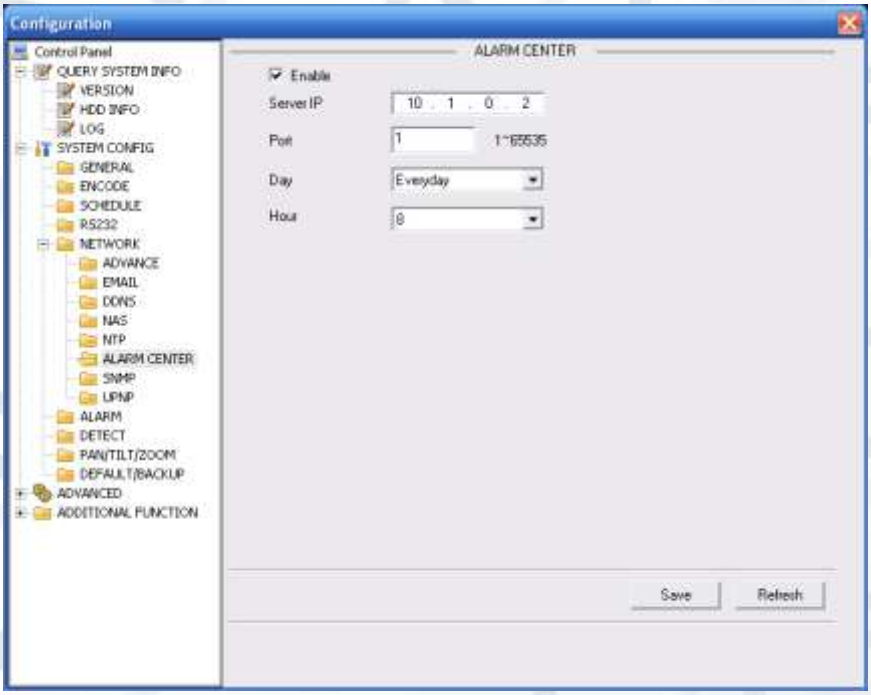


Figure 6-35 Alarm Centre

UNPN

Go to the UPnP interface, you will see an image as shown in (Figure 6-36).

It allows you to establish the mapping relationship between the LAN and the public network. Here you can also add, modify or remove UPNP item.

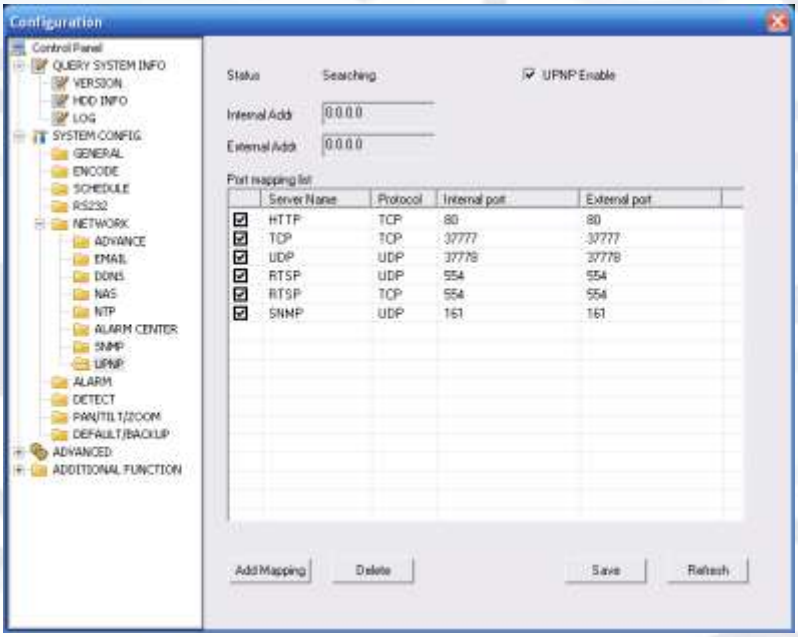


Figure 6-36 UNPN

SNMP

The SNMP interface is shown in Figure 6-37.

SNMP is an abbreviation of Simple Network Management Protocol. It provides the basic network management frame of the network management system. The SNMP widely used in many environments. It is used in many network device, software and system.

Please refer to chapter **4.6.5.12 SNMP** for detailed information.

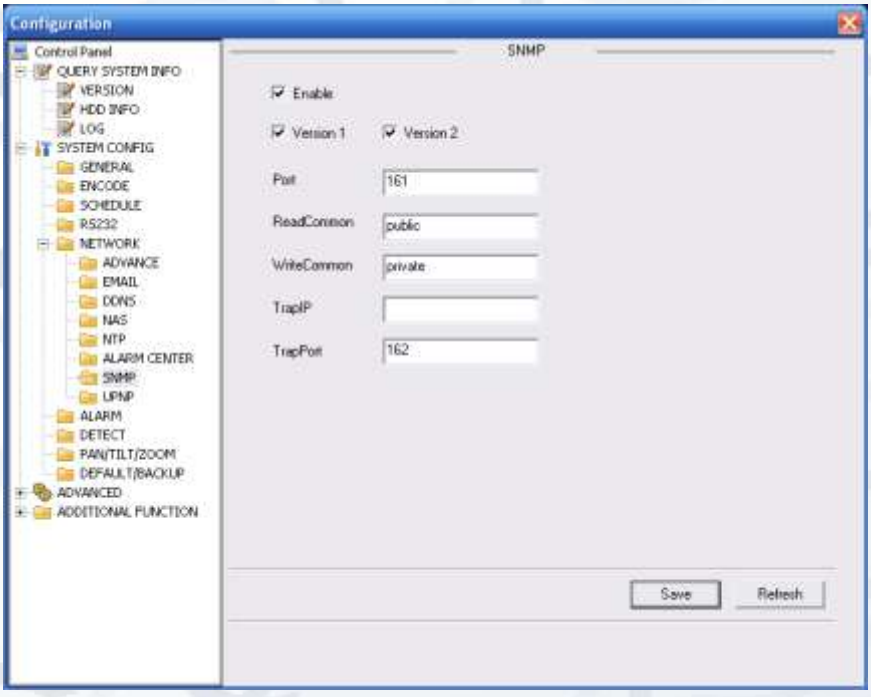


Figure 6-37 SNMP

6.4.2.5 Alarm

Alarm setup interface is shown in Figure 6-38.

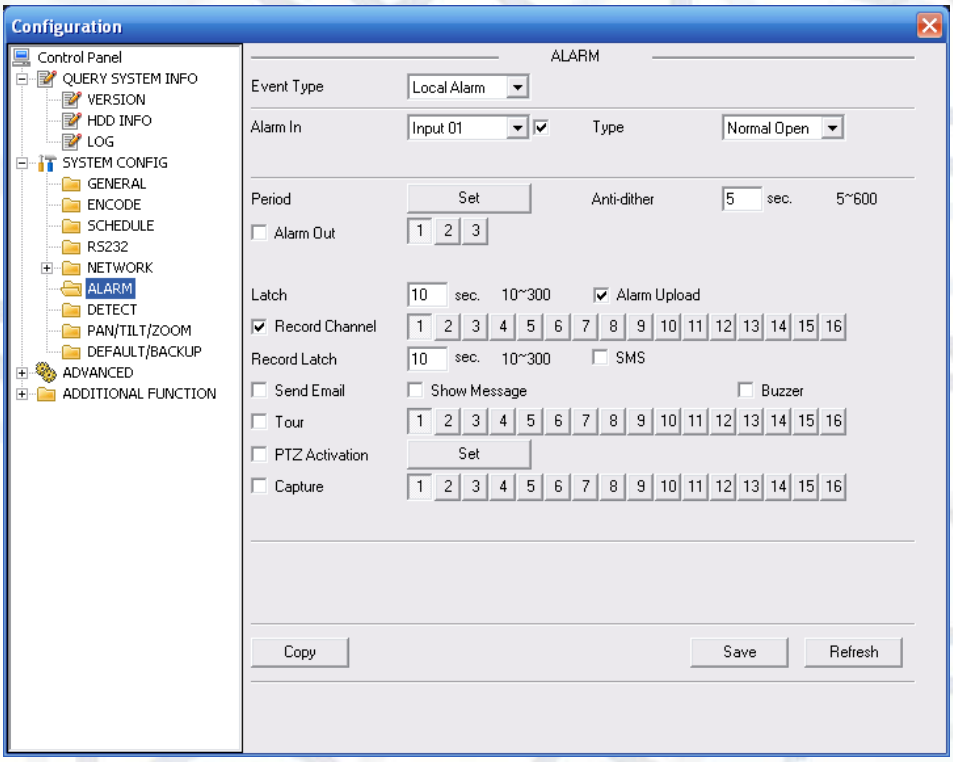


Figure 6-38 Alarm Setup

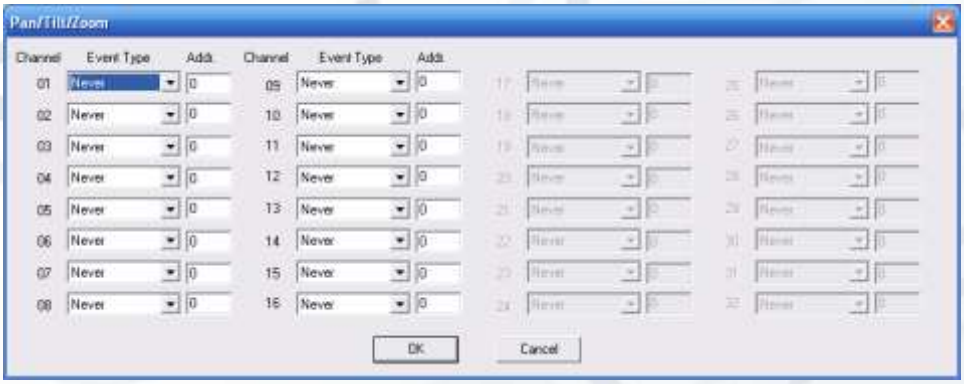


Figure 6-39 PTZ Setup

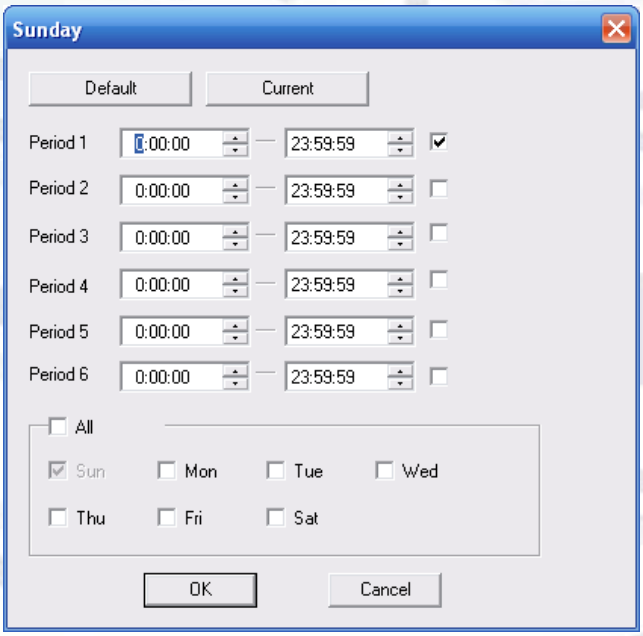


Figure 6-40

Please refer to the following sheet for detailed information:

Parameter	Function
Event Type	Event type: There are four types. Local input/network input/IPC external/IPC offline alarm. ✧ Local input alarm: The alarm signal system detects from the alarm input port. ✧ Network input alarm: This is the alarm signal from the netwo ✧ IPC external alarm: This is the on-off alarm signal from the front-end device and can activate the local NVR. ✧ IPC offline alarm: Once you select this item, system can generate an alarm when the front-end IPC disconnects with the local NVR.
Alarm in	Select corresponding alarm channel.
Enable	You need to draw a circle here so that system can detect the alarm signal.
Type	There are two options: normal open and normal close. ‘NO’ becomes activated in low voltage, NC becomes activated in high voltage.
Period	Alarm record function becomes activated in the specified periods. There are six periods in one day. Please draw a circle to enable corresponding period. Select date. If you do not select, current setup applies to today only. You can select the all week column to apply to the whole week. Click ‘OK’ button, system goes back to alarm setup interface, please click ‘Save’ button to exit.

Parameter	Function
Anti-dither	System only memorises one event during the anti-dither period. The value ranges from 0 to 15s.
Relay Out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when an alarm occurs. For 6-ch alarm output port device, the 6th channel is the controllable +12V output.
Alarm Latch	System can delay the alarm output for specified time after alarm ended. The value ranges from 10 seconds to 300 seconds.
Record Channel	System auto activates current channel to record once an alarm occurs (working with alarm activation function). Please note current device shall be in auto record mode
Record Latch	System can delay the record for specified time after an has alarm ended. The value ranges from 10s to 300s.
Email	Please draw a circle to enable email function. System can send out email to alert you when an alarm occurs and ends.
Screen display	After this has been enabled, alarm info will be prompted out on to the local output end. That is to say, the alarm prompt will be displayed beside the channel name on the local surveillance image.
Buzzer	Once you check the box here, the buzzer beeps when an alarm occurred.
Tour	Display the selected video in local monitor window. When alarm occurs, system can begin one-window tour for the activated record channel. Please set the tour time in the local end.
PTZ activation	Here you can set PTZ movement when alarm is triggered. Such as go to preset X when there is an alarm. The PTZ configuration events include preset, tour, and pattern.
Capture	You need to input capture channel number so that the system can backup the snapshot file when an alarm is triggered.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more (all) channels.

6.4.2.6 Detect

By analyzing video image, system will boot video detection alarm when it senses the motion signal which meets the senility standard that is previously set. See Figure 6-41.

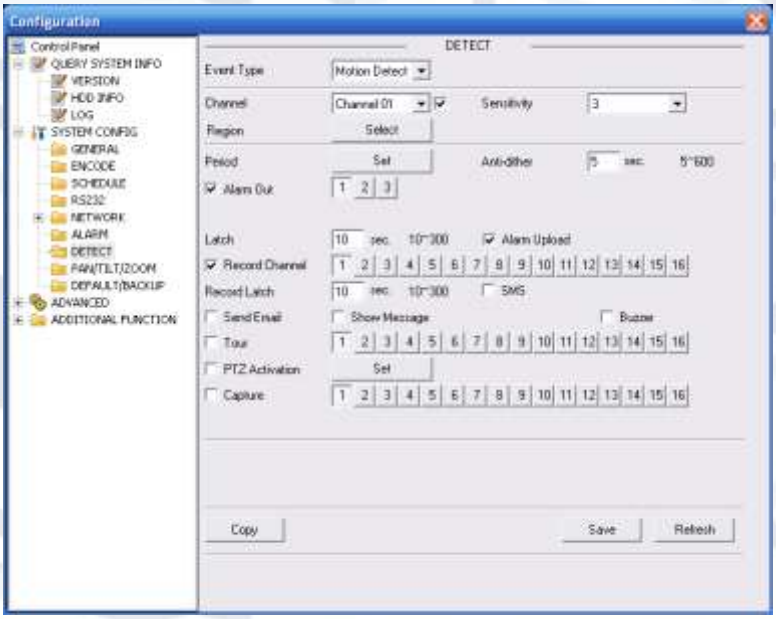


Figure 6-41 Detect

Please refer to the following sheet for detailed information:

Parameter	Function
Event type	Motion detect, video loss and video masking
Channel	Select a channel from the dropdown list to set motion detect, video loss and video masking function.
Sensitivity	System supports 6 levels. The sixth level has the highest sensitivity.
Enable button	Check the box to enable this function.
Region	There are PAL22X18/NTSC22X15 small zones. Blue area is the detection zone. Right click to view in full screen, click 'OK' before you exit to save the setup.
Period	Here you can set for business day and non-business day.
Anti-dither	Range: 0～600
Alarm output: s.	When an alarm is triggered, the system enables peripheral alarm device.
Record channel	Select the recording channel (Multiple choices). This channel will be activated to record when an alarm is triggered.
Send email	System can send out email to alert you when an alarm is triggered.
Tour	Here you can enable tour function when an alarm is triggered.
PTZ activation	Here you can set the PTZ movement when an alarm is triggered. Such as go to preset, tour & pattern when there is an alarm.
Capture	You need to input capture channel number so that system can backup snapshot file when an alarm occurs.

6.4.2.7 PTZ

PTZ interface is shown in Figure 6-42

Note: before operation, please make sure you have set the speed dome address and made sure the NVR & speed dome connection are OK.

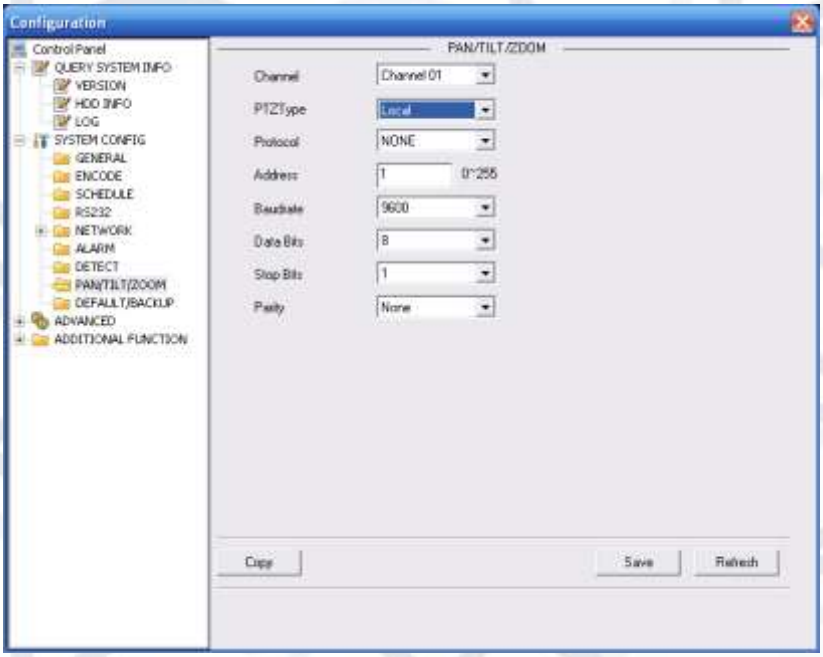


Figure 6-42 PTZ

Please refer to the following sheet for detailed information:

Parameter	Function
Channel	You can select monitor channel from the dropdown list. .
Protocol	Select the corresponding dome protocol.(such as PELCO-D)
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you cannot control the speed dome.
Baud Rate	Select the dome baud rate. Default setup is 115200.
Data Bit	Default setup is 8. Please set according to the speed dome dial switch setup.
Stop bit	Default setup is 1. Please set according to the speed dome dial switch setup.
Parity	Default setup is none. Please set according to the speed dome dial switch setup.

6.4.2.8 Default & Backup

Default: Restore factory default setup. You can select corresponding items.

Backup: Export current configuration to local PC or import configuration from current PC. Please refer to Figure 6-43.

Note: the system cannot restore some information such as network IP address.

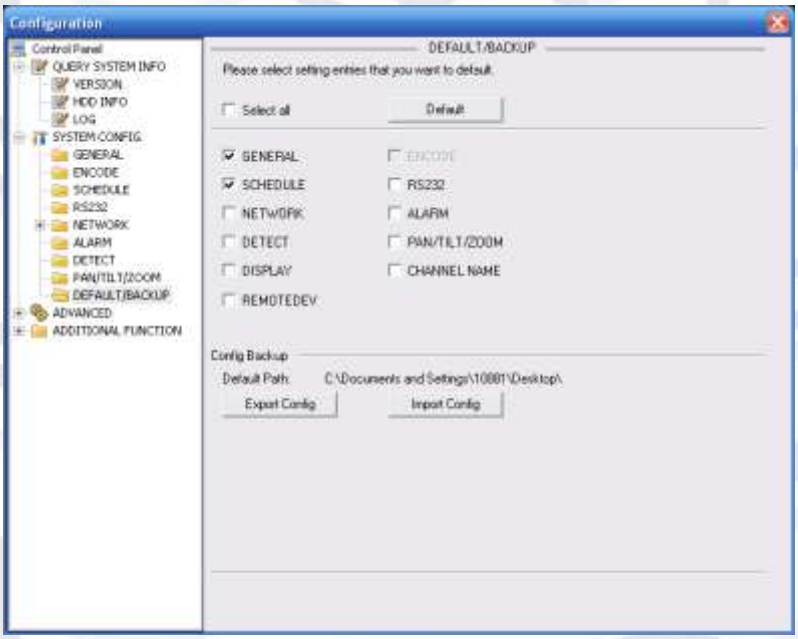


Figure 6-43 Default and Backup

Please refer to the following sheet for detailed information.

Parameter	Function
Select All	Restore factory default setup.
Export Configuration	Export system configuration to local PC.
Import Configuration	Import configuration from PC to the system.

6.4.3 Advanced

6.4.3.1 HDD Management

Please select the storage device first and then you can see the items on your right become valid. You can check the corresponding item here. See Figure 6-44:

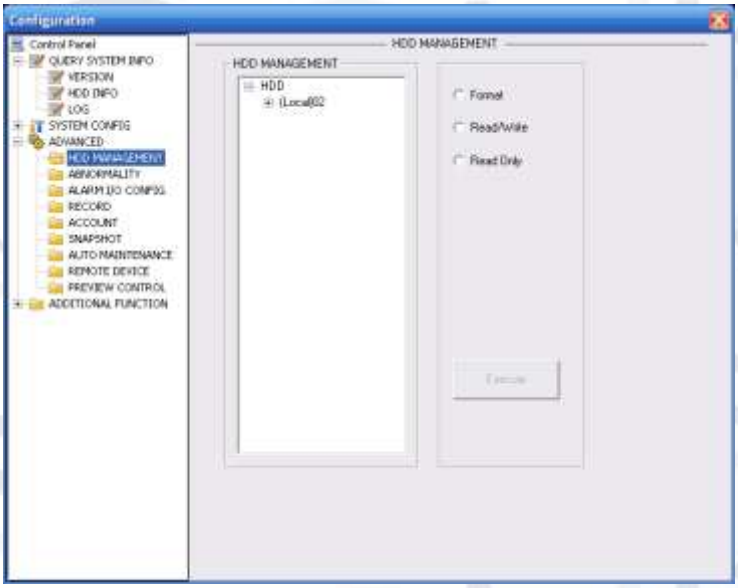


Figure 6-44 HDD Management

Please refer to the following sheet for detailed information:

Parameter	Function
Format	Clear data in the HDD.
Read/write	Set current HDD as read/write
Read only	Set current HDD as read.
Redundant	Set current HDD as redundant HHD.
Recover	Fix the HDD error. Right now the device does not support this function.

6.4.3.2 Abnormity

The interface is shown as in below (see Figure 6-45 and Figure 6-46):

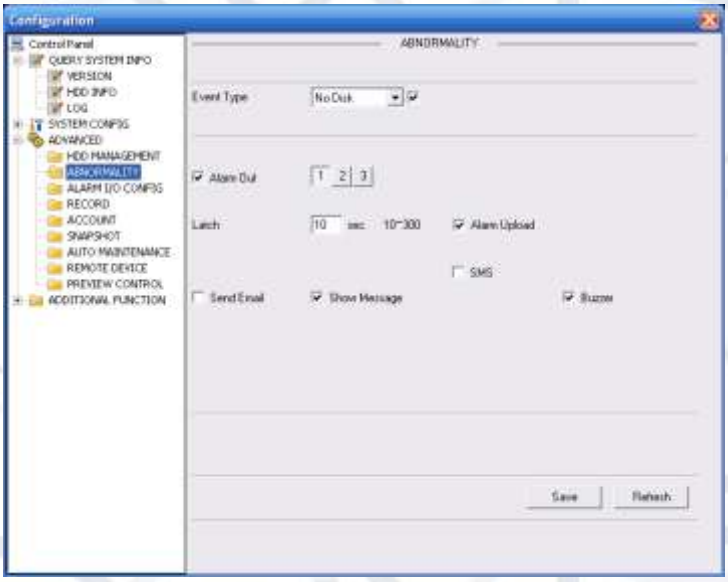


Figure 6-45 Abnormity -1

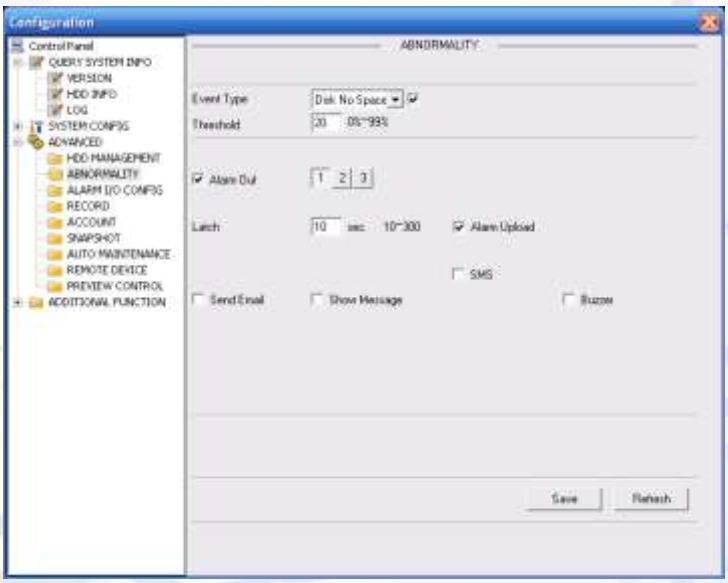


Figure 6-46 Abnormity -2

Please refer to the following sheet for detailed information:

Parameter	Function
Event Type	The abnormal events include: no disk, no space, disk error, offline, IP conflict. You need to draw a circle to enable this function. **Threshold:** It refers to the HDD free space threshold.
Normal Out	The corresponding alarm output channel when an alarm occurs. The alarm output channel may vary. The interface here is for reference only.
Latch	The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s.
Record channel	After you selected the disk connection option, once the device is offline, the activated channel can begin alarm record.
Record latch	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
SMS	If you check the box here, system can send out a message to the specified mobile phone when an alarm has been triggered.
Send email	If you enable this function, system can send out email to alert the specified user.
Show message	Once you check the box to enable this function, system will display the alarm icon on the right of the channel name, at the local end.

6.4.3.3 Alarm I/O

Here you can search alarm output status (see Figure 6-47):

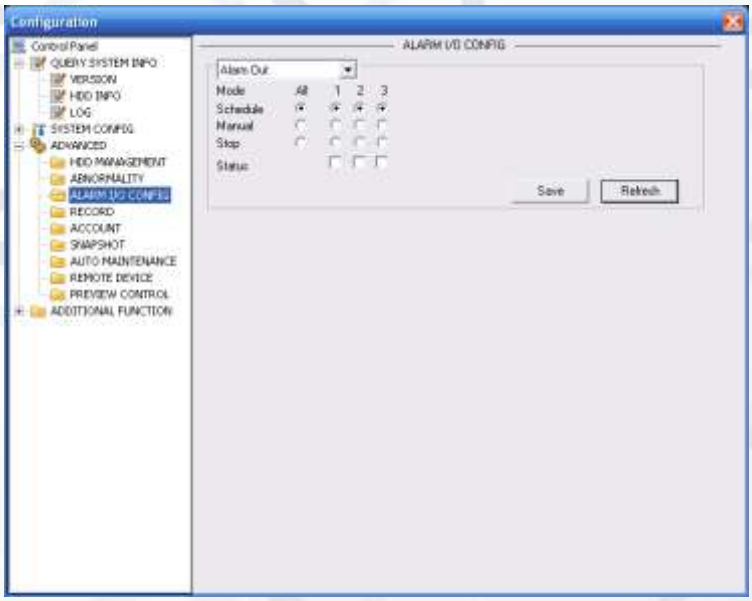


Figure 6-47 Alarm I/O Configuration

Important

The alarm output port should not be connected to high power load directly (It shall be less than 1A), to avoid high current which may result in relay damage. Please use the co-contactor to check the connection between the alarm output port and the load.

Please refer to the following sheet for detailed information:

Parameter	Function
Alarm output	The alarm output channel may vary. The interface here is for reference only. Please click the corresponding number and then click the trigger button.
Trigger	Enable/disable alarm output. Please note once you activate an alarm manually, you need to click the output channel number again and then click trigger button to disable it. Otherwise the alarm can not be cancelled.
Refresh	Search alarm output status.

6.4.3.4 Record

Record control interface is shown in Figure 6-48.

The bit stream type includes main stream and extra stream:

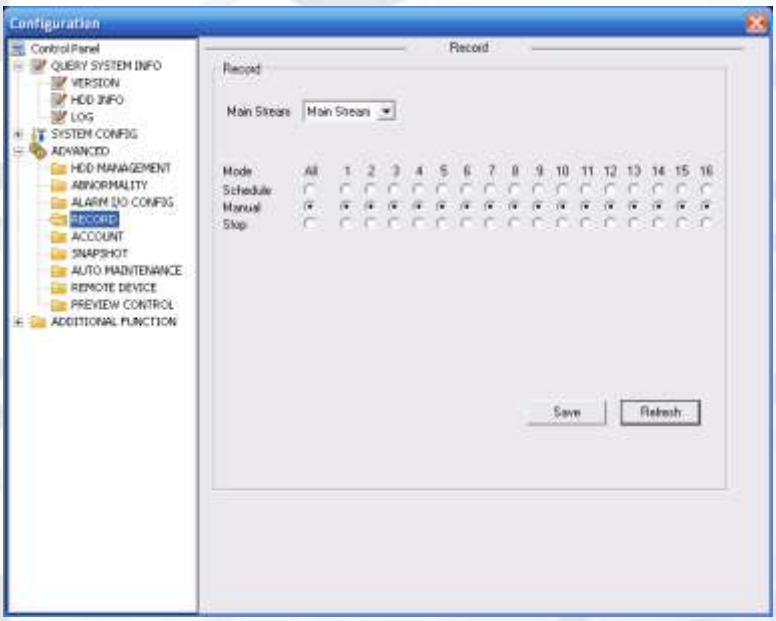


Figure 6-48 Record

Please refer to the following sheet for detailed information:

Parameter	Function
Schedule	System enables the auto record function as you configure the schedule setup.
Manual	Enable corresponding channel to record no matter what period is applied in the record setup.
Stop	Stops current channel record no matter what period applied in the record setup.

6.4.3.5 Account

Here you can add, remove user or modify password (see Figure 6-49):

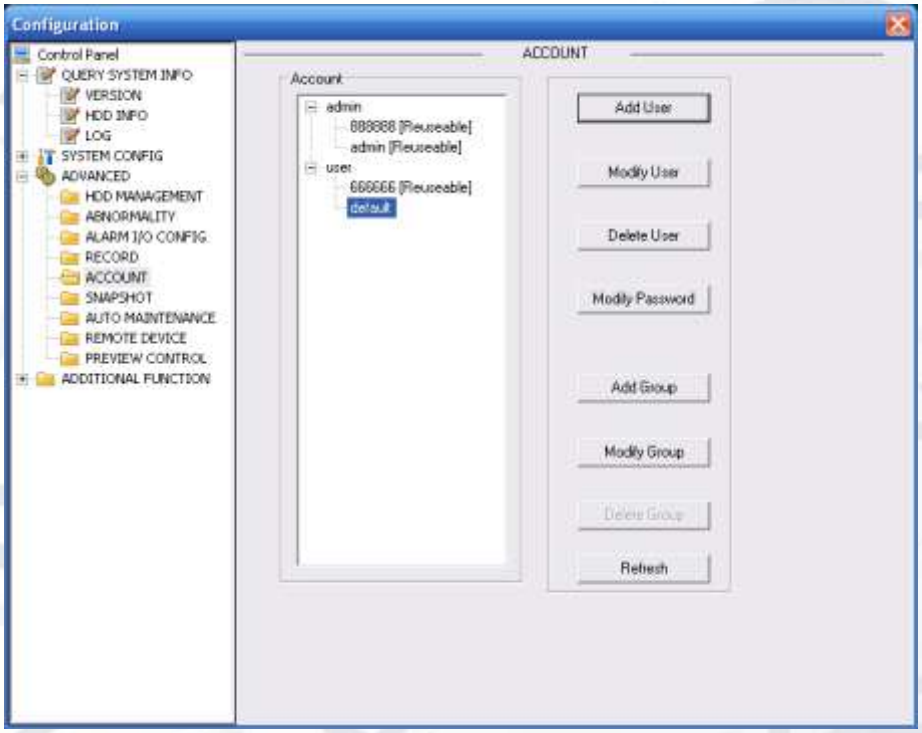


Figure 6-49 Account

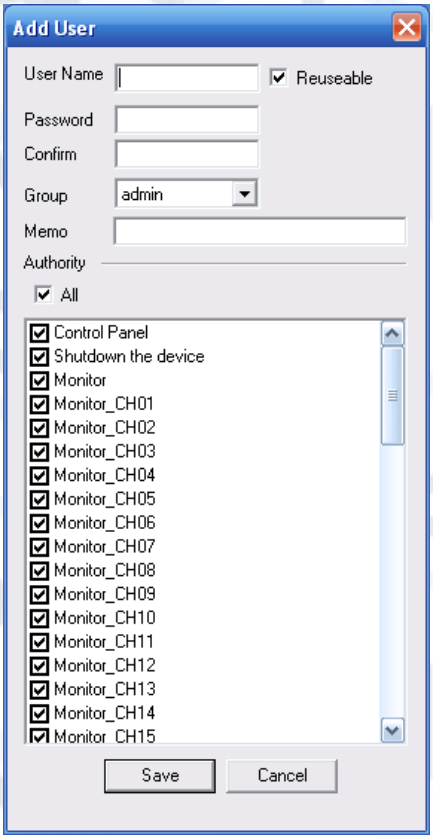


Figure 6-50 Add user

Please refer to the following sheet for detailed information:

Parameter	Function
User	Input the user name of the new established account.
Reusable	The reusable account means that this account can be used in more than one PC at the same time.
Password	Input the password of the new established account.
Confirm	Input the password of the new established account again.
Group	Select the group which the new account belongs to.
Memo	Memo about the new account
Authority/All	User can select all to entitle this account to all authorities or set authority of each item respectively.

6.4.3.6 Snapshot

Snapshot interface is shown in Figure 6-51. Here you can set snap mode, frequency, resolution and quality of each channel.

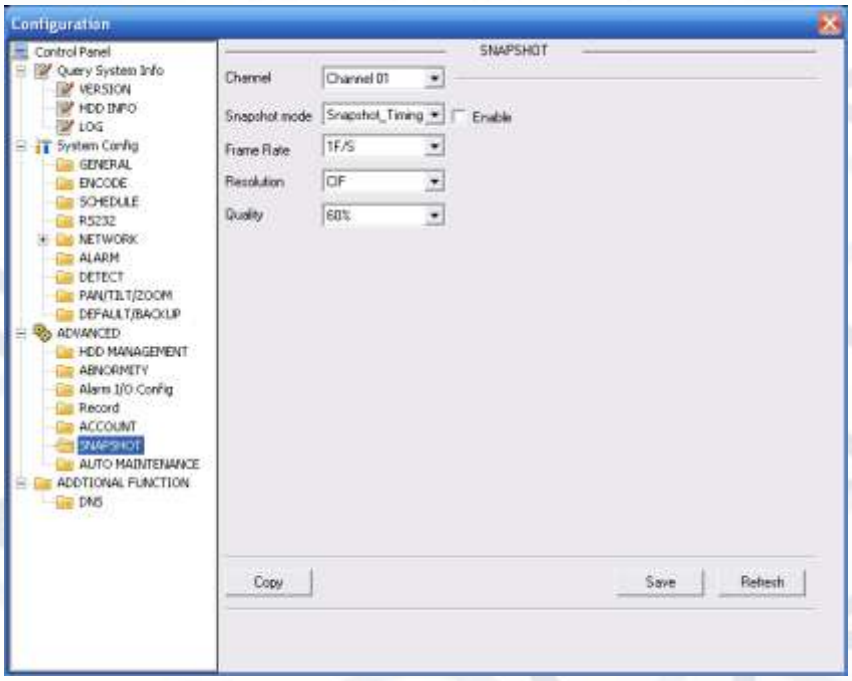


Figure 6-51

6.4.3.7 Auto Maintenance

Here you can select auto reboot and auto delete old files interval from the dropdown list. See Figure 6-52.

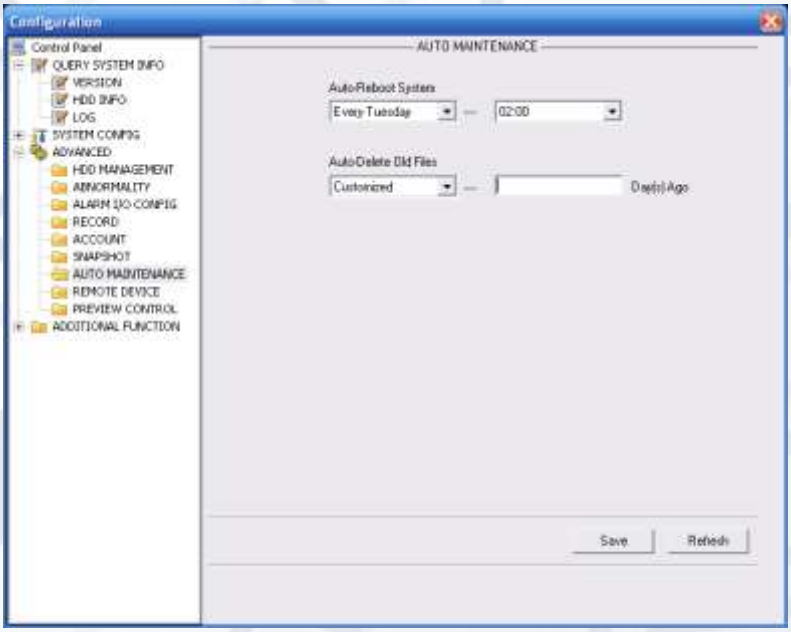


Figure 6-52 Auto Maintenance

6.4.3.8 Remote device

Remote device interface is shown in Figure 6-53.

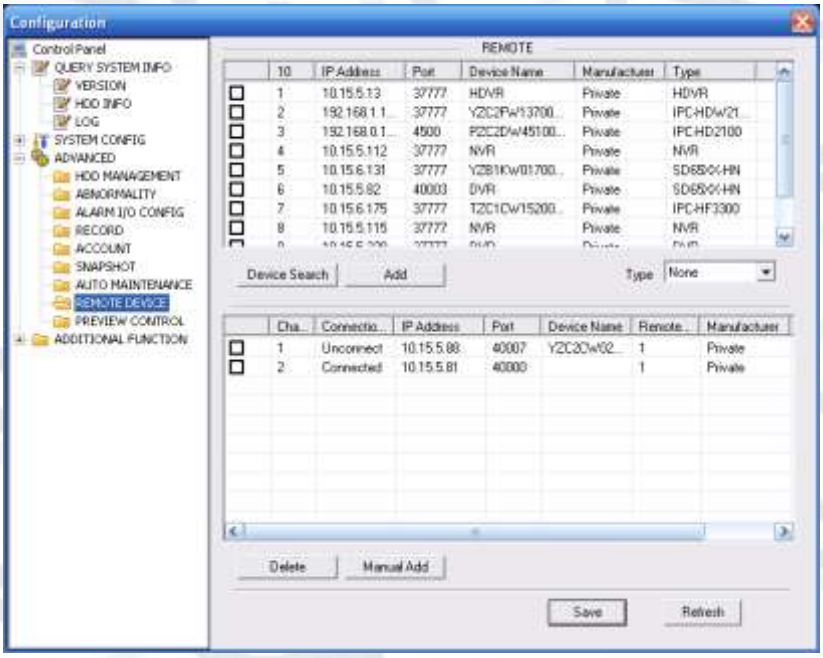


Figure 6-53 Remote device

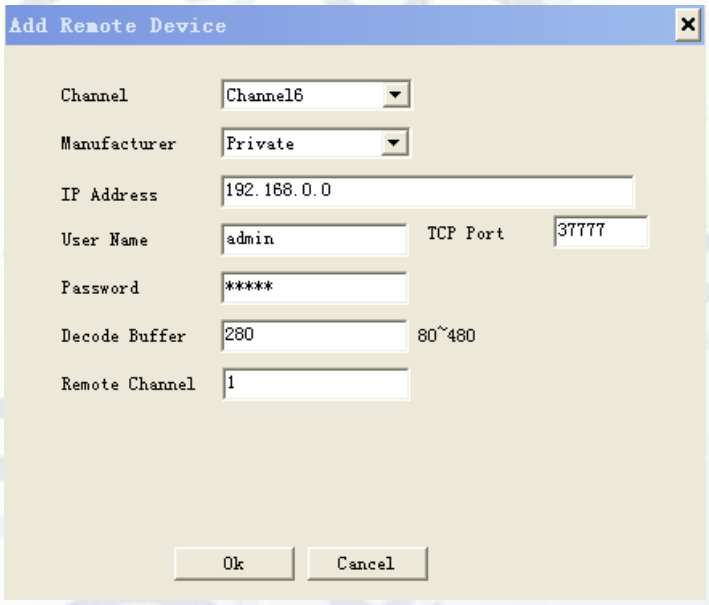


Figure 6-54 Manual Add

Please refer to the following sheet for detailed information:

Parameter	Function
Remote device information	Here you can see the searched remote device name, IP address, TCP port and manufacturer's name.
Channel	Please select the local device channel number to connect to the remote device. You need to highlight the enabled item to activate this function. Now you can see remote device type, IP address, etc.
Device search	Please click the Device Search button to search for all the remote devices that are available. Please note the system can only search the devices in the same segment and the device shall disable the firewall.
Type	Select remote device type here.
Manufacturer	Includes: private, Panasonic, Sony，Dynacolor AXIS, Arecont, Samsung, Onvif, custom, etc. For the custom mode, you can just input the URL, user name and password to view the video. There are two modes: TCP (default) & UDP.
IP address, port, remote channel.	Please input remote device IP address, port number, remote device, channel number and account manually.
User/password	Please input account to login the remote device.
Manual add	Click the 'Manual add' button, you will see an interface as shown in Figure 6-54. You can input remote device information manually.

6.4.3.9 Preview Control

Here you can set preview mode: 1/4-window. See Figure 6-55.

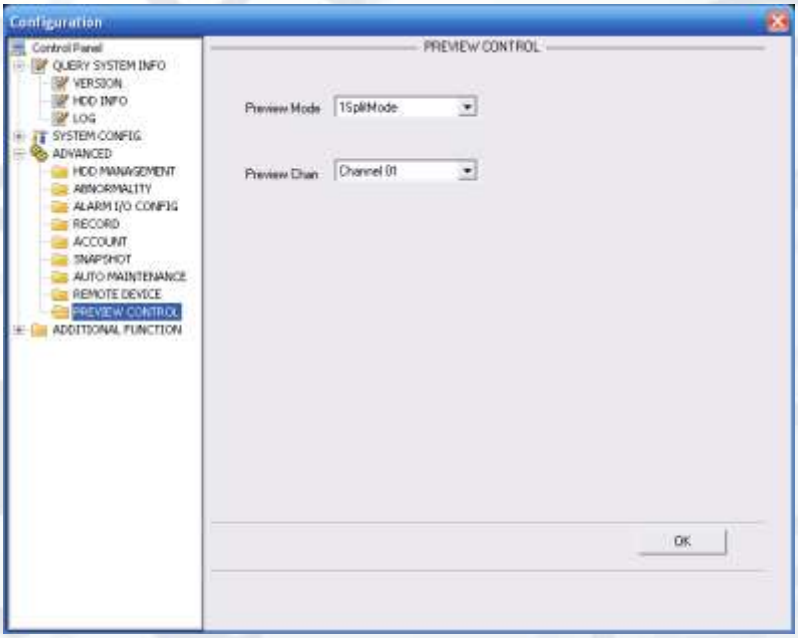


Figure 6-55 Preview Control

6.4.4 Additional Function

6.4.4.1 IPC Config

IPC configuration interface is shown in Figure 6-56. Here you can set the gain, iris, brightness, contrast, hue, saturation BLC, etc. of the network camera.

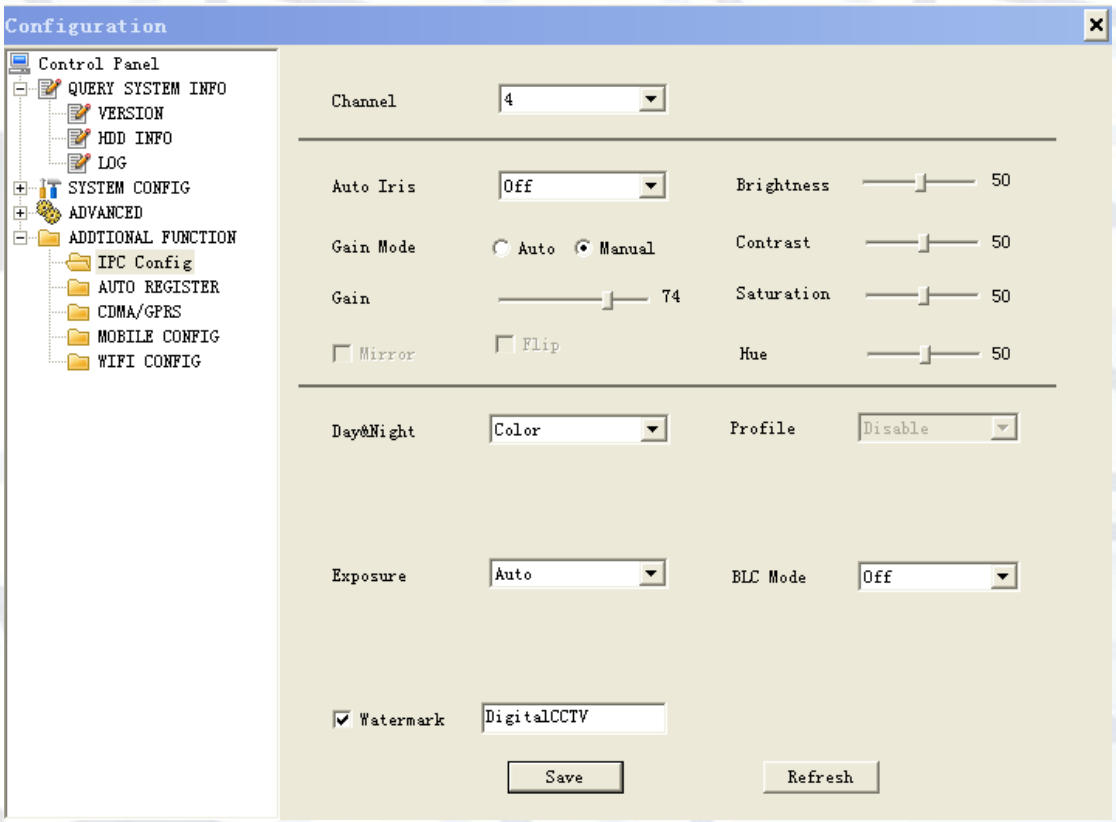


Figure 6-56 IPC Config

Please refer to the following sheet for detailed information.

Parameter	Function
Brightness	This is to adjust the monitor window brightness. The value ranges from 0 to 100. The default value is 50. The larger the number, the brighter the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges are from 40 to 60.

Contrast	This is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number, the higher the contrast is. You can use this function when the whole video brightness is OK but the contrast is not correct. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposed .The recommended value ranges are from 40 to 60.
Saturation	This is to adjust the monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
Day/Night Mode	This is to set the device color and the B/W mode switch. The default setup is on. • Color: Device outputs the color video. • Auto: Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.) • B/W: The device outputs the black and white video.
BLC	This function can make the target clearer. It can make the details of the dark section become clear when the background is too bright. This function is disabled by default.
Gain Mode	This is to set the video noise. Check Auto button; system automatically sets the video gain. Check Manual button; you can set gain threshold, brightness, etc.
Gain Adjust	Gain threshold: Here you can set the gain value. The lower the value is, the lower the noise is. But the video brightness may become too dark under the low illumination. If the value is high, it can enhance the video brightness under the low illumination, but the video noise may become high at the same time.
WB	Enabling the white balance allows the camera to restore the white object colour temperature. It can correct the color temperature between the indoor and outdoor environment.
Mirror	This is to switch the video left and right limit. This function is disabled by default.
Flip	This switches the video up and bottom limit. This function is disabled by default. Please note the video resolution shall be 720P or lower when it is to flip 90°.
Watermark	Enable this function to check the video has been tampered with or not.

6.4.4.2 Auto register

The auto register interface is shown in Figure 6-57. You can set the server IP and port if you want to use the auto register function. After the device registered to the server, you can access the device after the client-end connected to the server.

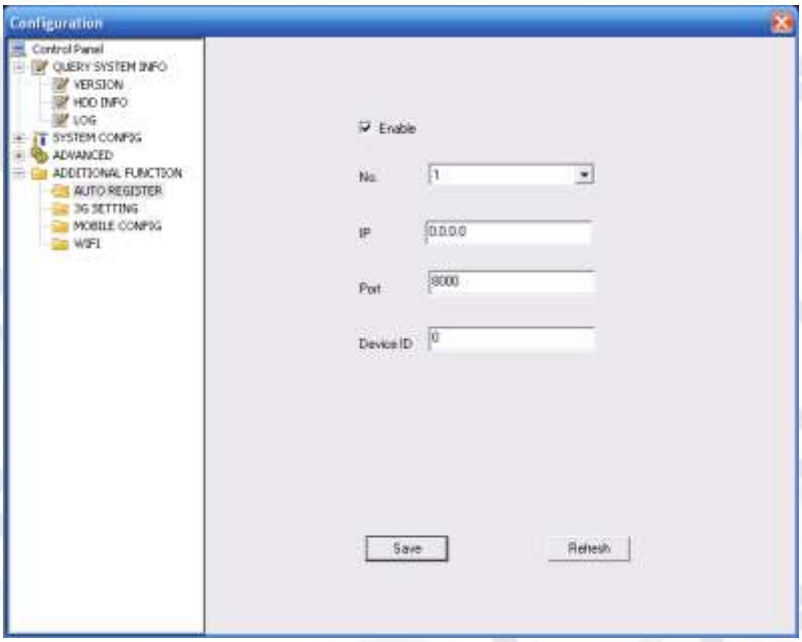


Figure 6-57 Auto register

6.4.4.3 Mobile Config

The mobile setup interface is shown as in Figure 6-58. Here you can activate or disconnect device with a 3G connection, such as telephone, mobile phone or the alarm activated message number.

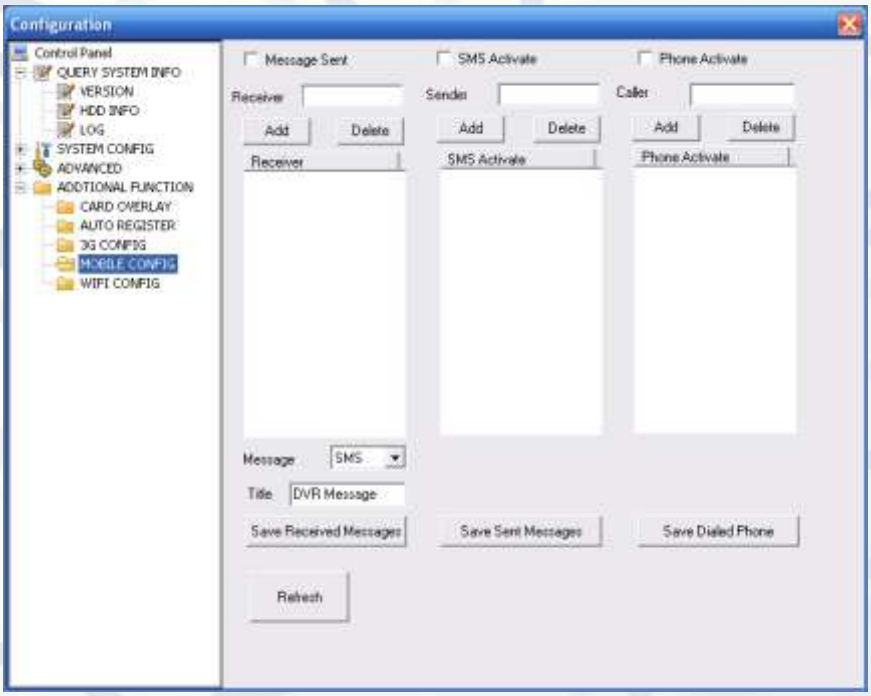


Figure 6-58 Mobile Setup

6.4.4.4 WIFI Config

The WIFI interface is shown in Figure 6-59. Here you can view WIFI connection status. System displays it as ‘No connection’ if there is no connection. You can view connection status and IP address if there is a connection. See Figure 6-60.

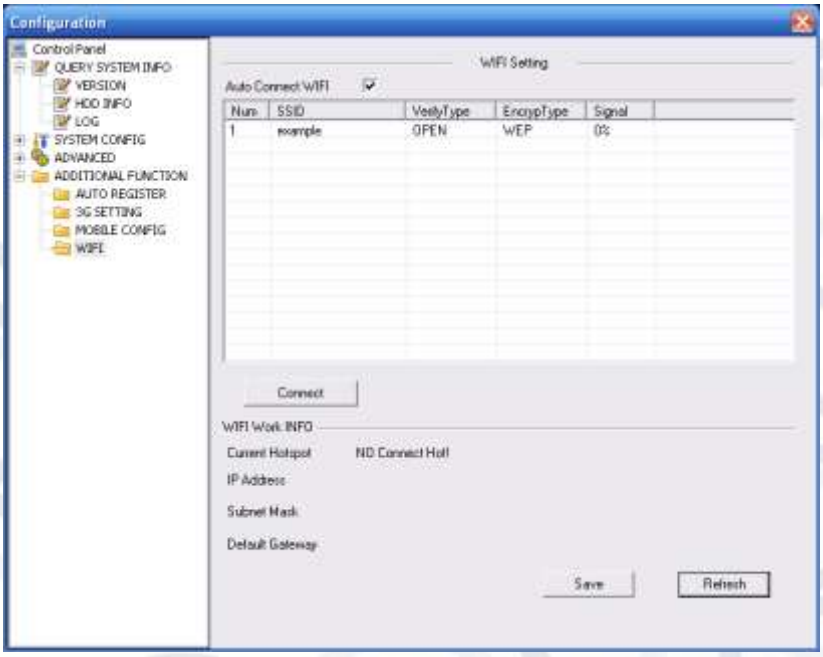


Figure 6-59 WIFI Setup

Figure 6-60

Please refer to the following sheet for detailed information:

Parameter	Function
Refresh	Search hotspot again and system will automatically add the information such as the password (If there is any record of the hotspot.)
WIFI working information	Here you can view current connection status. You can view connection status and IP address if there is a connection. Otherwise the system shows there is no hotspot connection.

6.5 Search

Click search button, you can see an interface is shown in Figure 6-62.

Please set the record type, record date, window display mode and channel name.

You can click the date on the right pane to select the date. The green highlighted date is the system current date and the blue highlighted date means it has stored recorded files.

Figure 6-61

Then please click the search button, you will then see the corresponding files in the list (see Figure 6-63).

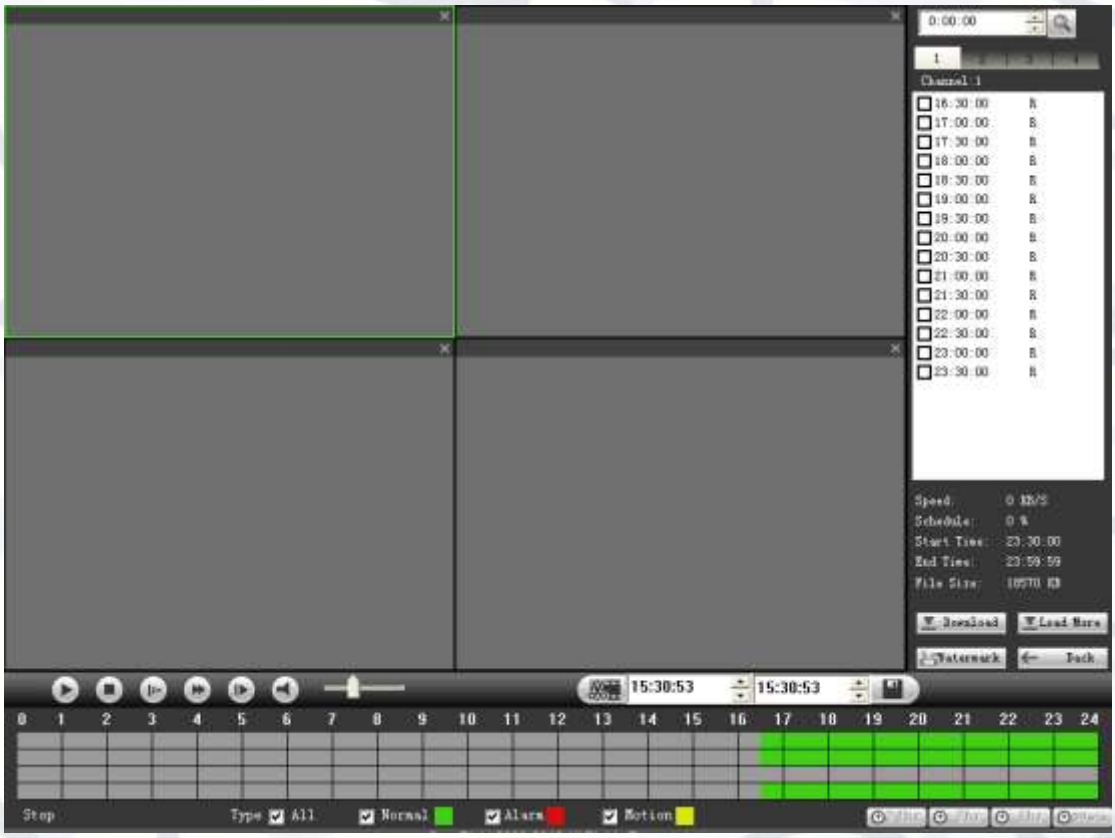


Figure 6-62

Select the file(s) you want to download and then click download button, system pops up a dialogue box shown as in Figure 6-63. You can then specify file name and path to download the file(s) to your local PC.

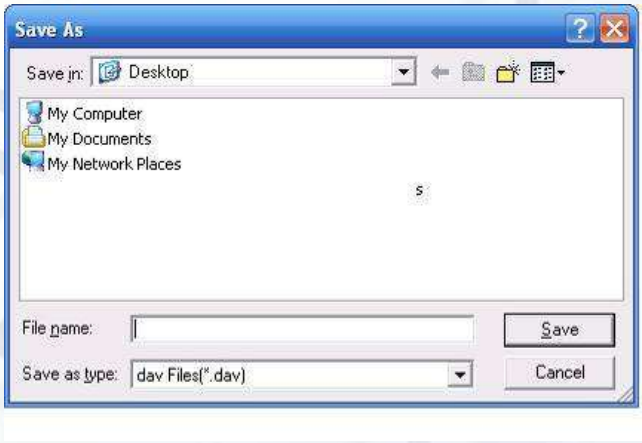


Figure 6-63

Load more

This is for you to search for a recorded footage or picture(s). You can select the record channel, record type and record time to download (see Figure 6-64).

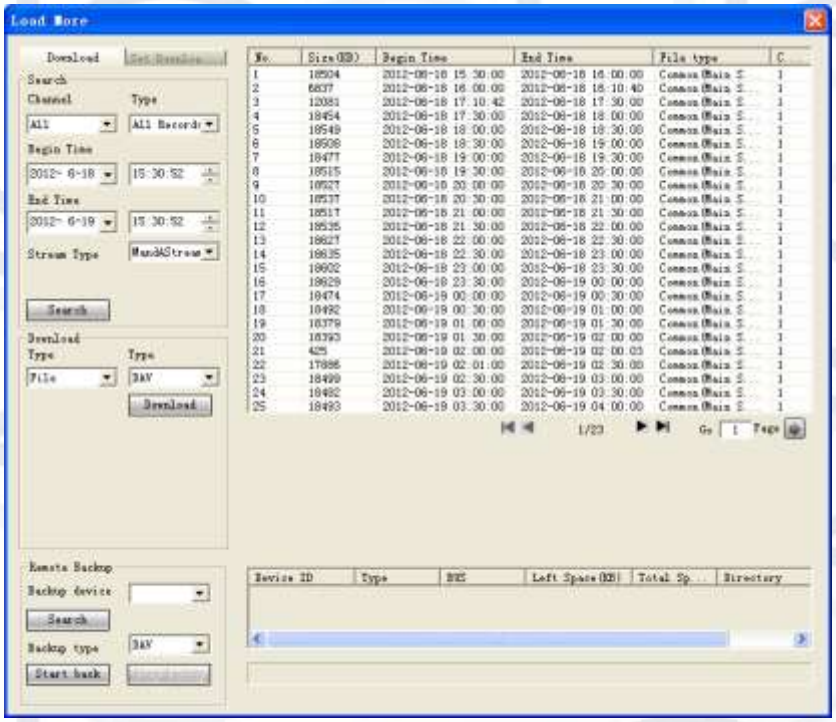


Figure 6-64

In Figure 6-64, there is a remote back pane at the left bottom of the pane. It allows you to remotely back up the recorded footage or picture to your local USB2.0 storage media via the internet. Click the search button; you can view the available storage device. See Figure 6-64. Please select from the dropdown list and then begin the backup.

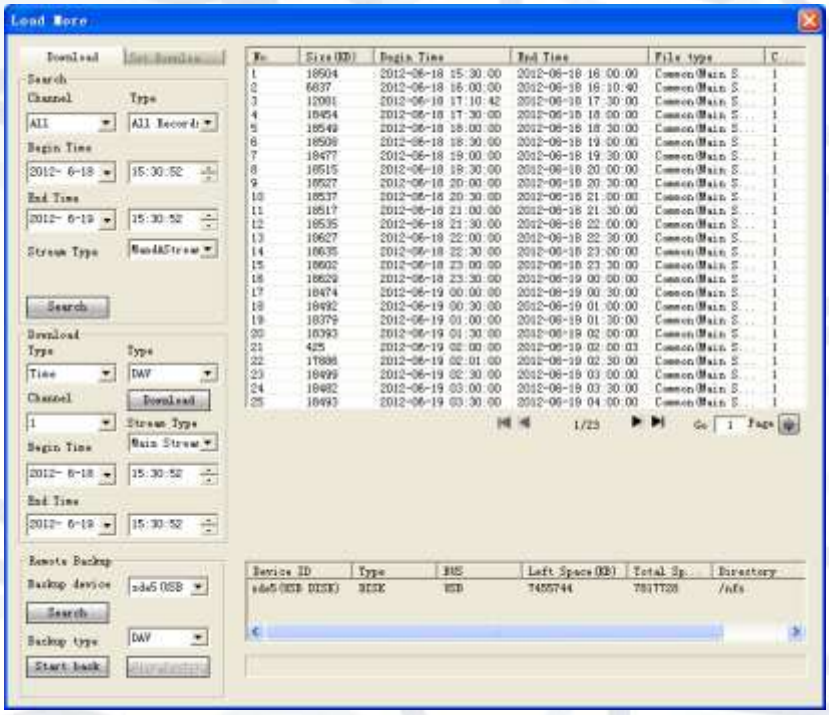


Figure 6-65

Now you can see system begins the download and the download button becomes the stop button. You can click it to terminate current operation.

At the bottom of the interface, there is a process bar for your reference.

6.6 Alarm

Click alarm function, you can see an interface shown in Figure 6-66. Here you can set device alarm type and alarm sound setup.

When an alarm occurs, the system can display the alarm information in the corresponding interface.

For motion detect, video loss and camera masking you need to set the event in the motion detection interface. Current series product does not support this function.

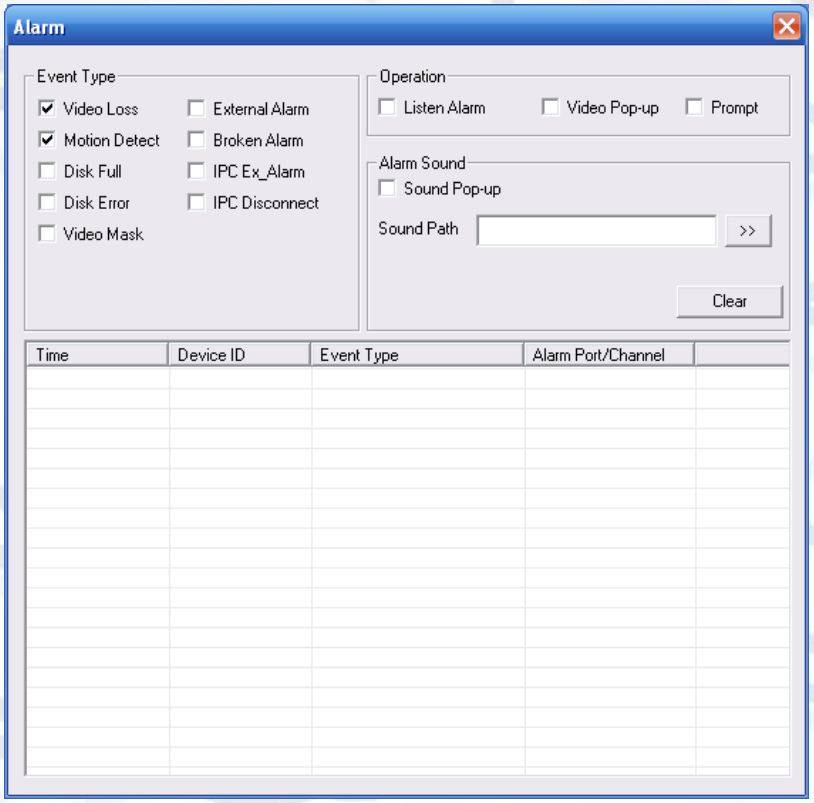


Figure 6-66 Alarm

Please refer to the following sheet for detailed information:

Type	Parameter	Function
Alarm Type	Video loss	System alarms when video loss occurs.
	Motion detection	System alarms when motion detection alarm is triggered.
	Disk full	System alarms when disk is full.
	Disk error	System alarms when disk error occurs.
	Camera masking	System alarms when camera has been viciously masked.
	External alarm	Alarm input device sends out an alarm.
	Offline alarm	NVR local-end offline alarm.
	IPC external alarm	This refers to the on-off alarm signal from the front-end device and can activate the NVR local operation.

Type	Parameter	Function
	IPC offline alarm	System can generate an alarm when the front-end IPC disconnects with the local NVR.
Operation	Listening alarm	System notifies the web when an alarm occurs (you select from the above event type), and then web can notify user.
	Video	When an alarm occurs, system auto enables video monitor. This function only applies to the video detection alarm (motion detection, video loss and camera masking). This function is not available in current device.
	Prompt	Automatically pops up alarm dialogue box.
	Sound pop up	System sends out alarm sound when an alarm occurs. You can specify what alarm sound to use.
	Path	Here you can specify alarm sound file.

6.7 About

Click about button, you can view the web information (see Figure 6-67).

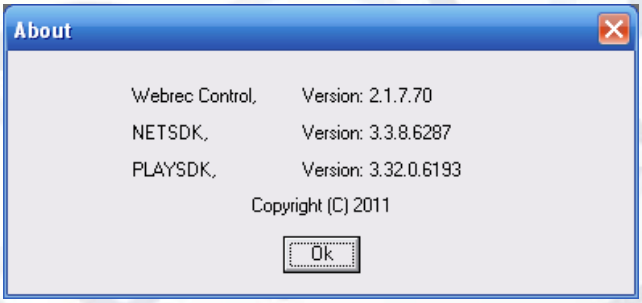


Figure 6-67 About

6.8 Log out

Click log out button, you can go back to log in interface (see Figure 6-68).

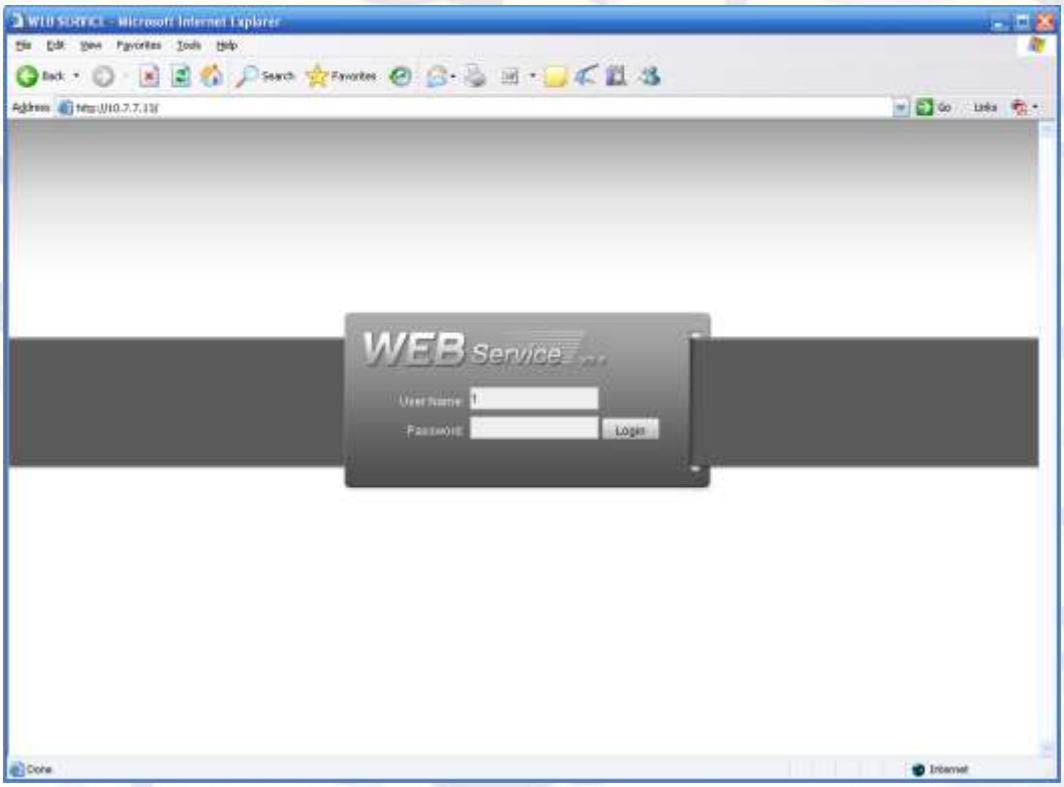


Figure 6-68 Logout

7 FAQ

1. Device cannot boot up properly.

These are the following possibilities:

- Input power is not correct.
- Power connection is not correct.
- Power switch button is damaged.
- Program upgrade is wrong.
- HDD malfunction or something wrong with HDD ribbon.
- Front panel error.
- Main board is damaged.

2. Device often automatically shuts down or stops running.

These are the following possibilities:

- Input voltage is not stable or it is too low.
- HDD malfunction or something is wrong with the internal disk.
- Button power is not enough.
- Front video signal is not stable.
- Working environment is too harsh, too much dust.
- Hardware malfunction.

3. System cannot detect hard disk.

These are the following possibilities:

- HDD is broken.
- HDD internal disk is damaged.
- HDD cable connection is loose.
- Main board SATA port is broken.

4. There is no video output whether it is one-channel, multiple-channel or all-channel output.

These are the following possibilities:

- Program is not compatible. Please upgrade to the latest version.
- Brightness is set to the ‘0’ value. Please restore factory default setup.
- There is no video input signal or it is too weak.
- Check privacy mask setup or your screen saver.
- Device hardware malfunctions.

5. Real-time video color is distorted.

These are the following possibilities:

- When using the BNC output, the NTSC and PAL setup may not be correct. The real-time video will become black and white.
- Device and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.
- Device color or brightness setup is not correct.

6. I cannot search local records.

These are the following possibilities:

- HDD internal disk is damaged.
- HDD is broken.
- Upgraded program is not compatible.
- The recorded file has been overwritten.
- Record function has been disabled.

7. Video is distorted when searching local records.

These are the following possibilities:

- Video quality setup is too low.
- Program read error, bit data is too small. If there is mosaic in the full screen, please restart the device to solve this problem.
- HDD internal disk error.
- HDD malfunction.
- Device hardware malfunctions.

8. There is no audio when monitoring.

These are the following possibilities:

- It is not a power picker.
- It does not have powered acoustics.
- Audio cable is damaged.
- Device hardware malfunctions.

9. There is audio when monitoring but there is no audio when system playback.

These are the following possibilities:

- Setup is not correct. Please enable audio function.
- Corresponding channel has no video input. Playback is not continuous when the screen is blue.

10. Time display is not correct.

These are the following possibilities:

- Setup is not correct.
- Battery contact is not correct or voltage is too low.
- Crystal is broken.

11. Device cannot control PTZ.

These are the following possibilities:

- Front panel PTZ error.
- PTZ decoder setup, connection or installations are not correct.
- Cable connection is not correct.
- PTZ setup is not correct.
- PTZ decoder and device protocols are not compatible.
- PTZ decoder and device addresses are not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control will not be stable.
- The distance is too far.

12. Motion detection function does not work.

These are the following possibilities:

- Period setup is not correct.
- Motion detection zone setup is not correct.
- Sensitivity is too low.
- For some versions, there is hardware limit.

13. I cannot log in client-end or web.

These are the following possibilities:

- Please make sure you have at least Windows XP installed on to your system. The system is compatible with Vista and Windows 7 also, but only 32-bit versions.
- ActiveX control has been disabled.
- No DirectX 8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with device program.

14. It shows a mosaic or no video when previewed, either locally or remotely.

These are the following possibilities:

- Network fluency is not good.
- Client-end resources are limited.
- There is multiple-cast group setup in device. This mode can result in a mosaic being produced. Usually we do not recommend this mode.
- There is a privacy mask or channel protection setup.
- Current user has no right to monitor video footage.
- Local device video output quality is substandard.

15. Network connection is not stable.

These are the following possibilities:

- Network is not stable.
- IP address conflict.
- MAC address conflict.
- PC or device network card is not good.

16. Burn error /USB2.0 back error.

These are the following possibilities:

- Burner and device are using the same data cable.
- System uses too much CPU resources. Please stop recording first and then begin backup.
- Data amount exceeds backup device capacity. It may result in burner error.
- Backup device is not compatible.
- Backup device is damaged.

17. Keyboard cannot control device.

These are the following possibilities:

- Device serial port setup is not correct
- Address is not correct
- When there are several switchers, power supply is not enough.
- Transmission distance is too far.

18. Alarm signal cannot be disarmed.

There are following possibilities:

- Alarm setup is not correct.
- Alarm output has been open manually.
- Input device error or connection is not correct.
- Some program versions may have this problem. Please upgrade your system.

19. Alarm function is not working.

These are the following possibilities:

- Alarm setup is not correct.
- Alarm cable connection is not correct.
- Alarm input signal is not correct.
- There are two loops connected to one alarm device.

20. Remote control does not work.

These are the following possibilities:

- Remote control address is not correct.
- Distance is too far or control angle is too small.
- Remote control battery power is low.
- Remote control is damaged or device front panel is damaged.

21. Record storage period is not long enough.

These are the following possibilities:

- Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- HDD capacity is not enough.
- HDD is damaged.

22. Cannot playback the downloaded file.

These are the following possibilities:

- There is no media player.
- No DirectX 8.1 or higher graphic acceleration software has been installed.
- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. I forgot local menu operation password or network password

Please contact your local service engineer for help. They will be able to guide you to solving this problem.

24. There is no video. The screen is in black.

These are the following possibilities:

- IPC IP address is not correct.
- IPC port number is not correct.
- IPC account (user name/password) is not correct.

25. The displayed video is not complete.

Please check the current resolution setup. If the current setup is 1920x1080, then you need to set the monitor resolution as 1920x1080.

26. There is no HDMI output.

These are the following possibilities:

- Displayer is not in HDMI mode.
- HDMI cable connection is not correct.

27. The video is not fluent when I view in multiple-channel mode from the client-end.

These are the following possibilities:

- The network bandwidth is not sufficient. The multiple-channel monitor operation needs at least to be 100M or higher.
- Your PC resources are not sufficient. For 16-ch remote monitor operation, the PC shall have the following recommended specification setup: Quad Core processor, 2G or higher memory, independent displayer, graphics card memory 256MB or higher.

Daily Maintenance

- Please use a brush to clean the board, socket connector and the chassis regularly.
- The device shall be soundly earthed in case there is any audio/video disturbance. Keep the device away from the static or induced voltage.
- Please unplug the power cable when you remove the audio/video signal cable, RS232 or RS485 cable.
- Always shut down the device properly. Please press the power button in the front pane for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
- Please make sure the device is away from the direct sunlight or other heating sources.
- Please keep a decent level of ventilation around the device.
- Please check and maintain the device regularly.

Note:

- **This manual is for reference only. Slight differences may be found when using the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks are the properties of their respective owners.**
- **Please visit our website: www.adata.co.uk or contact your local service engineer for more information.**

Connect remotely to control and view footage from your NVR security camera system, with the iAPOLLO Mobile App.

To download these apps please scan the QR codes below with your mobile device, using the camera feature and the appropriate QR scanner app:

iPad & Tablets:

APPLE
iTunes

ANDROID
Google
Play

Mobile Smart Phones:

APPLE
iTunes

ANDROID
Google
Play

WINDOWS
Phone