ENX Series Systems

Table of Contents

Welcome

Thank you for purchasing our NVR!
This user's manual is designed to be a reference tool for the installation and operation of your system.
Here you can find information about this series NVR 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 here should conform to your local electrical safety codes.
We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2．Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3．Installation

Keep upwards. Handle with care.
Do not apply power to the NVR before completing installation.
Do not place objects on 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, inflammable, explosive substances and etc.
This series product shall be transported, storage and used in the specified environments.

6. Lithium battery

Improper battery use may result in fire, explosion, or personal injury!
When replace the battery, please make sure you are using the same model!

7. Accessories

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

1 FEATURES AND SPECIFICATIONS

1.1 Overview

This series product is designed for the management, storage and applications of high definition video data. It adopts the LINUX OS and professional customized hardware platform. It consists of several HDDs management systems, front-end high definition device management system, high definition analysis system, and large-capacity video storage system. It uses the high-stream flow data network transmission technology, multiple-channel video decode and display technology. It realizes the smart management, safe storage, fast transmission, HD decode of the huge-capacity and multiple-channel high definition video data.

1.2 Features

This series product has the following features:

User Management	● Different user rights for each group, one user belongs to one group. ● The user right can not exceed the group right.
Storage Function	● Support central server backup function in accordance with your configuration and setup in alarm or schedule setting.
Alarm Function	● Real-time respond to external alarm input as user pre-defined activation setup. ● Support centralized alarm server setup, alarm can auto notify the user remotely; the alarm can be from the various peripheral devices. . ● Can generate an email to notify the user when an alarm occurred.
Network Monitor	● Transmit audio/video data from the IPC or the NVS connected to the device to the network terminal simultaneously. Delaying time is within 500ms (Network bandwidth support needed). ● Max supports 20 connections. ● Adopt the following audio and video transmission protocol: HTTP, TCP, UDP, MULTICAST, RTP/RTCP and etc. ● Support SMTP transmission for some alarm data or information. ● Support web access for WAN.
Window Split	● Adopts the video compression and digital process way to output several-window to display in one monitor at the same compression rate. ● Support 1/4/9/16-window mode and etc.
Record	● Support schedule record function. Support search and playback via the Web or local-end.
Backup	● Support USB record backup function. It can copy the record file to the peripheral devices connected to the NVR via the USB port.
Network Management	● Realize NVR configuration and management via Ethernet. ● Support device management via web.
Peripheral Equipment	● Support peripheral equipment connection, each peripheral equipment control protocol and interface can be set freely.
Assistant Function	● Support system resource information and running status real-time display. ● Support log function. ● Support local GUI output, support shortcut operation via the mouse. . ● Support to browse video and audio of the remote IPC and NVS.

1.3 Specifications

Specifications		128-channel Series	64-channel Series
	Main Processor	SandyBridge i5 Socket 1155-pin 32nm CPU	SandyBridge i3 Socket 1155-pin 32nm CPU
	Operation System	Embedded LINUX system	
	Power	Support hot swap	
	Fan	Redundant dual ball bearing fan MTBF>100 thousand hours Support online replacement.	
	Memory	4GB（Max 8G）Server-level（With ECC verification）	2GB（Max 8G）Server-level（With ECC verification）
	Case	1.2mm extra-thickness hot-dip galvanized steel. High accuracy aluminum alloy slider. Self-developed patent removable HDD bracket.	
	User Interface	WEB GUI	
	Network Protocol	RTP/RTCP, RTSP, UDP, HTTP, NTP, SNMP	
Audio/Video	**Audio/Video Connection**	384M connection	192M connection
	Audio/Video Transmission	384M transmission	192M transmission
	Audio/Video Storage	Based on 64-bit high-performance file system.	
	Video Resolution	1080P, 720P, D1, HD1, CIF, QCIF	
	Audio/Video Search	Based on data library and menu tree. Support various search engines.	
	Audio/Video Setup	Support one camera or a batch of camera setup at the same time.	
	Record Policy	Schedule record, manual record, alarm record	
	Alarm Record Type	Video loss, motion detect, camera masking, external alarm.	
Data Management	**HDD Amount**	16 SATA HDDs （Max 4T space per HDD）	
	HDD Mode	One HDD, RAID0, RAID1, RAID5.	
	HDD Installation	Additional HDD bracket, support HDD hot swap.	
	Disk Array Enclosure/Backup	Mini SAS port 3Gbps(Optional)	
	HDD Hotspare	Support global hotspare.	
Network Interface	**Network Amount**	4 100/1000Mbps Ethernet ports	
	Network Port Feature	Dual-network cards load balance binding or four independent 1000Mbps Ethernet ports.	
Others	**Power**	100V~240V，47~63Hz	
	Total Power Consumption	10W~200W（Including HDD）	
	Working Temperature	0℃~50℃	
	Working Humidity	5%~90%（Non-condense）	
	Storage Temperature	-20℃~70℃	
	Storage Humidity	5%~90%（Non-condense）	
	Working Altitude	-60m~3000m	

	Dimensions	516.5mm(without the LCD length)×485mm(With ear)×133.2mm（L*W*H）
	Net Weight	20Kg (front panel:0.4Kg)
	Installation Mode	Standard 19-inch rack installation

2 Overview and Controls

This section provides information about the rear panel. When you install this series NVR for the first time, please refer to this part first.

2.1 Front Panel

Front panel, it is shown as in Figure 2-1.

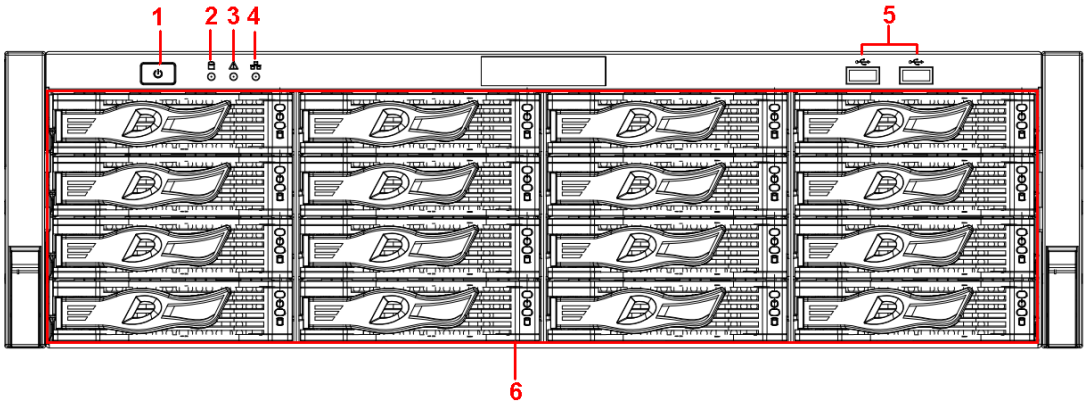


Figure 2-1

Please refer to the following sheet for detailed information.

SN	Name	Function
1	Power button	Press it once to turn on the device. Press it for a long time to turn off the device (**Usually we do not recommend**). Press power button for a long time or pull out the power cable may result in device auto restart.
2	System HDD Indication light	The blue light flashes when system is reading or writing the system HDD. In the system HDD, there are device important configuration file, factory default configuration file, device initial boot up data.
3	Alarm indication light	The alarm indication light becomes on once an alarm occurred. It becomes on via the software detection. The alarm includes local alarm, no disk and etc.
4	Network indication light	The network indication light is blue and it flashes when you connect the device to the network.
5	USB port	/
6	16 HDD slot	/

After you remove the front panel, you can see there are 16 HDDs. From the left to the right and from the top to the bottom, it ranges from 1~4, 5~8, 6~12, 13~16. See Figure 2-2.

You can see there are two indication lights on the HDD bracket.

- The power indication light is at the top. The light is yellow after you connected the device to the power.
- The read-write indication light is at the bottom. The blue light flashes when system is reading or writing the data.

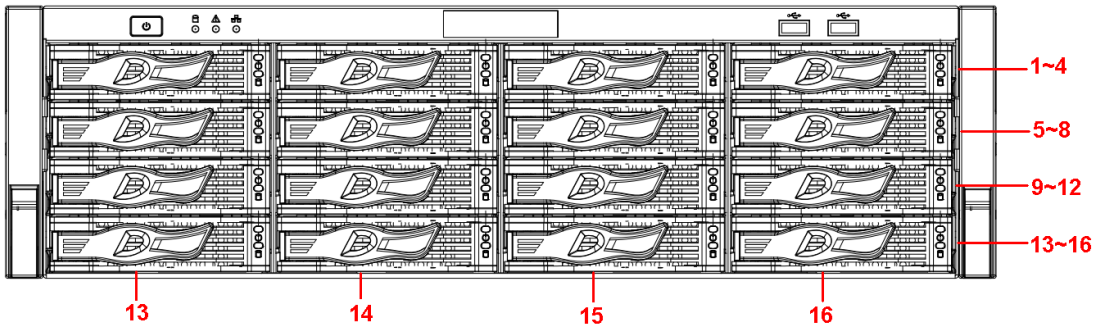


Figure 2-2

2.2 Rear Panel

The general rear panel is shown as in Figure 2-3.

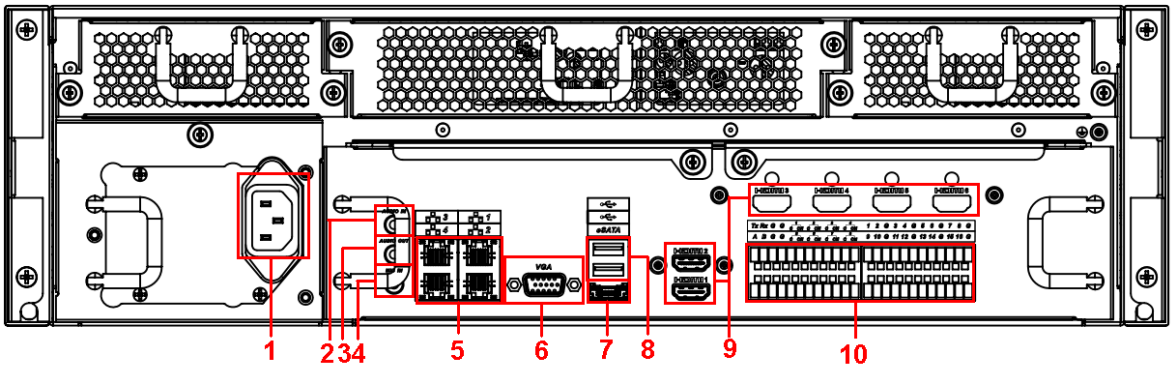


Figure 2-3

Please refer to the following sheet for rear panel button information.

SN	Function	SN	Function
1	Power socket	6	Video VGA output
2	Audio Input	7	eSATA port
3	Audio output	8	USB port
4	Bidirectional talk input	9	HDMI port
5	Network port	10	Alarm input, alarm output, RS485 port.

Important

Right now, system does not support audio input port. System supports HDMI1/HDMI2 port by default. You need to purchase HDMI interface board if you want to use HDMI3-HDMI6 port.

2.3 Alarm Input and Output Connection

Please refer to the following sheet for alarm input and output connection.

There are two alarm input types for you to select: normal open (NO) and normal close (NC).

1. Alarm input

a. Please make sure alarm input mode is grounding alarm input.

b. Grounding signal is needed for alarm input.

c. Alarm input needs the low level voltage signal.

d. Alarm input mode can be either NC (normal Open) or NO (Normal Close)

e. When you are connecting two NVRs or you are connecting one NVR and one other device, please use a relay to separate them,

2. Alarm output

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 realize the connection between the alarm output port and the load.

3. Please make sure the front-end device has soundly earthed.

Improper grounding may result in chip damage.

2.3.1 Alarm Input and Output Details

You can refer to the following sheet for alarm input and output information. See Figure 2-4.

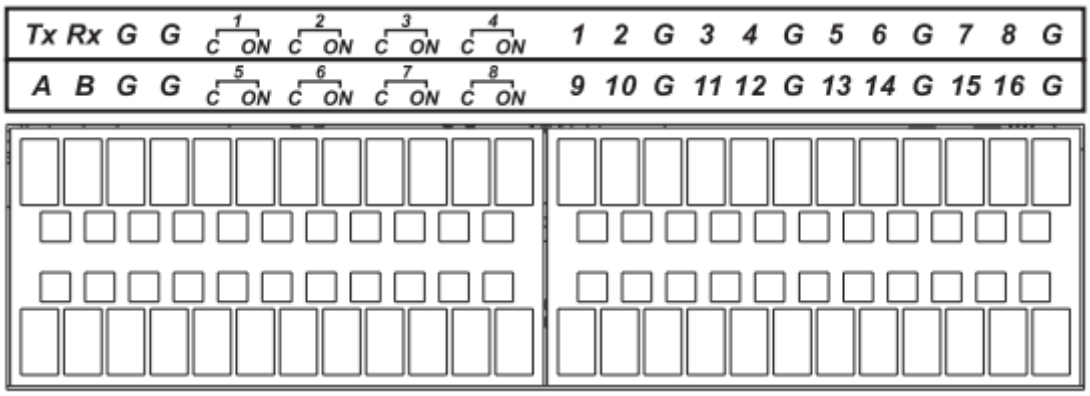


Figure 2-4

Please refer to the following sheet and Figure 2-4 for detailed information.

1，2，3，4，5，6，7，8，9，10，11，12，13，14，15，16	ALARM 1 to ALARM 16. The alarm becomes active in low voltage.
1-ON C，2- ON C，3- ON C，4- ON C，5- ON C，6- ON C，7 - ON C，8- ON	Eight groups of normal open activation output (on/off button)
G	GND cable.
485 A/B	The A/B cable to control the RS485 devices.
Tx and Rx	RS232 port. Tx is the data output cable and the Rx is the data input cable.

2.3.2 Alarm Input Port

Please refer to the following sheet for more information.

- Normal open or Normal close type.
- Please parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).
- Please parallel connect the Ground of the NVR and the ground of the alarm detector.
- Please connect the NC port of the alarm sensor to the NVR alarm input(ALARM)
- Use the same ground with that of NVR if you use external power to the alarm device.

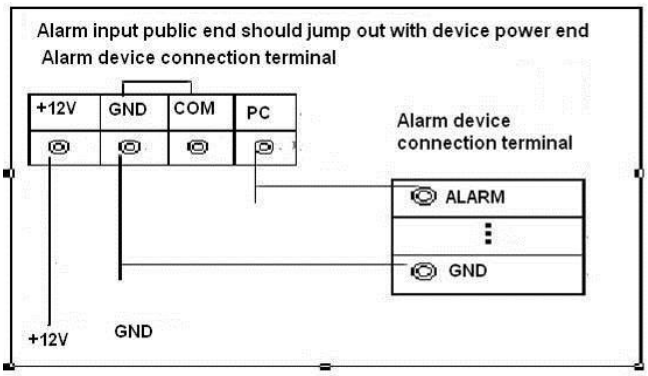


Figure 2-5

2.3.3 Alarm Output Port

- Provide power to peripheral alarm device.
- To avoid overloading, please read the following relay parameters sheet carefully.
- RS485 A/B cable is for the A/B cable of the PTZ decoder.

Relay Specification

Model:	**JRC-27F**	
Material of the touch	Silver	
Rating （Resistance Load）	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	Between touches with same polarity	1000VAC 1minute
	Between touches with different polarity	1000VAC 1minute
	Between touch and winding	1000VAC 1minute
Surge voltage	Between touches with same polarity	1500V (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×106 times (3Hz)
	Electrical	200×103 times (0.5Hz)
Temperature	-40℃~+70℃	

3 Overview of Navigation and Controls

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

3.1 Login

Right click mouse, you can see system pops up the login interface for you to input user name and password.

You can use USB mouse to input. Click 

to switch between numeral, English character (small/capitalized) and denotation.

Note:

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

Continuous three times login failure will result in system alarm and five times login failure will result in account lock.

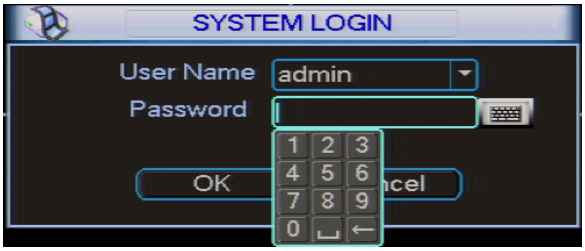


Figure 3-1

After device booted up, the system is in multiple-channel display mode. See Figure 3-2.Please note the displayed window amount may vary. The following figure is for reference only.

Figure 3-2

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		Monitor lock

Preview control bar

When you move your mouse on the top middle pane of the preview window, you can see the following preview control bar. See Figure 3-3.

Figure 3-3

Please refer to the following sheet for detailed information.

1		Main stream and extra stream switch	**3**		Monitor source zoom in
2		Front-end bidirectional talk	**4**		Close monitor source.

Navigation bar

The navigation bas is shown as below. See Figure 3-4.

Figure 3-4

① **Main interface**

② **Output screen option:**

Select corresponding output device and set the output window amount.

③ **Window split:**

System supports 1/4/8/9/16/25/36/64-window output mode. Please select the window mode and then select the corresponding channels.

④ **PTZ Setup**

The PTZ setup is shown as in Figure 3-5.

Please note the commend name is grey once device does not support this function.

Double click the title to hide the PTZ menu interface.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light and wiper, rotation and etc.

Speed is to control PTZ movement speed. The value ranges from 1 to 8.The speed 8 is faster than speed 1. You can use the remote control to click the small keyboard to set.

You can click and of the zoom, focus and iris to zoom in/out, definition and brightness.

The PTZ rotation supports 8 directions.

Figure 3-5

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 3-6. Please make sure your protocol supports this function and you need to use mouse to control. Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. Drag the mouse from top to the bottom to zoom in. Drag the mouse from bottom to up to zoom out. It can realize PTZ automatically. The smaller zone you dragged, the higher the speed.

Figure 3-6

Here is a sheet for you reference.

Name	Function key	function	Function key	function
Zoom		Near		Far
Focus		Near		Far
Iris		close		Open

Preset/ Patrol/Pattern/Scan

In Figure 3-5, please click the “set” button. The interface is shown as below. See Figure 3-7. Here you can set the following items:

- Preset
- Tour
- Pattern
- Border

Figure 3-7

In Figure 3-5, click page switch button, the interface is shown as in Figure 3-8. Here you can activate the following functions:

- Preset
- Tour
- Pattern
- Auto scan
- Auto pan
- Flip
- Reset
- Page switch

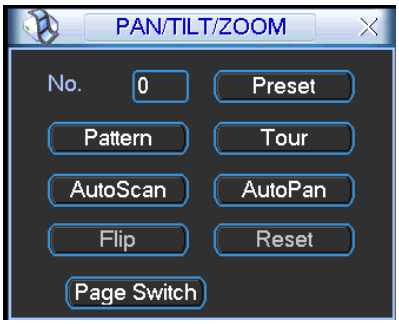


Figure 3-8

Note:

- Preset, tour and pattern all need the value to be the control parameter. You can define it as you require.
- You need to refer to your speed dome user's manual for Aux definition. In some cases, it can be used for special process.
- The following setups are usually operated in the Figure 3-5, Figure 3-7 and Figure 3-8.

Preset Setup

In Figure 3-5, use eight direction arrows to adjust camera to the proper position.

In Figure 3-7, click preset button and input preset number. The interface is shown as in Figure 3-9.

Now you can add this preset to one tour.

Figure 3-9

Activate Preset

In Figure 3-8, please input preset number in the No. blank, and click preset button.

Patrol setup (Tour Setup)

In Figure 3-7, click patrol button. The interface is shown as in Figure 3-10. Input preset number and add this preset to a patrol (tour). For each patrol (tour), you can input max 80 presets.

Figure 3-10

Activate Patrol (tour)

In Figure 3-7, input patrol (tour) number in the No. blank and click patrol button

Pattern Setup

In Figure 3-7, click pattern button and then click “begin” button. The interface is shown as in Figure 3-11. Then you can go to Figure 3-5 to modify zoom, focus, and iris.

Go back to Figure 3-11 and click “end” button. You can memorize all these operations as pattern 1.

Figure 3-11

Activate Pattern Function

In Figure 3-8, input mode value in the No. blank, and click pattern button.

Auto Scan Setup

In Figure 3-9, click border button. The interface is shown as in Figure 3-12.

Please go to Figure 3-5, use direction arrows to select camera left limit

Then please go to Figure 3-12 and click left limit button

Repeat the above procedures to set right limit.

Figure 3-12

Activate Auto Scan

In Figure 3-8, click “Auto Scan” button, the system begins auto scan. Correspondingly, the auto scan button becomes Stop button. Click stop button to terminate scan operation.

Flip

In Figure 3-8, click page switch button, you can see an interface is shown as below. See Figure 3-13. Here you can set auxiliary function. The aux value has relation ship with the Aux button of the decoder.

Click page switch button again, system goes back to Figure 3-5.

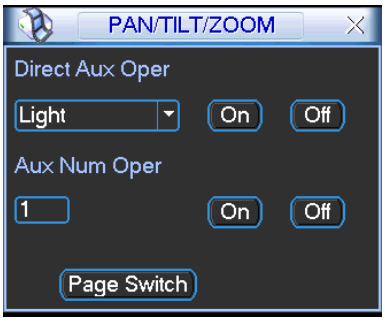


Figure 3-13

⑤：Record Search

It is a shortcut search menu. Please refer to chapter 3.3 for detailed information.

⑥：Event Info

The event information is shown as below. See Figure 3-14.

It is for you to set the alarm information of current channel.

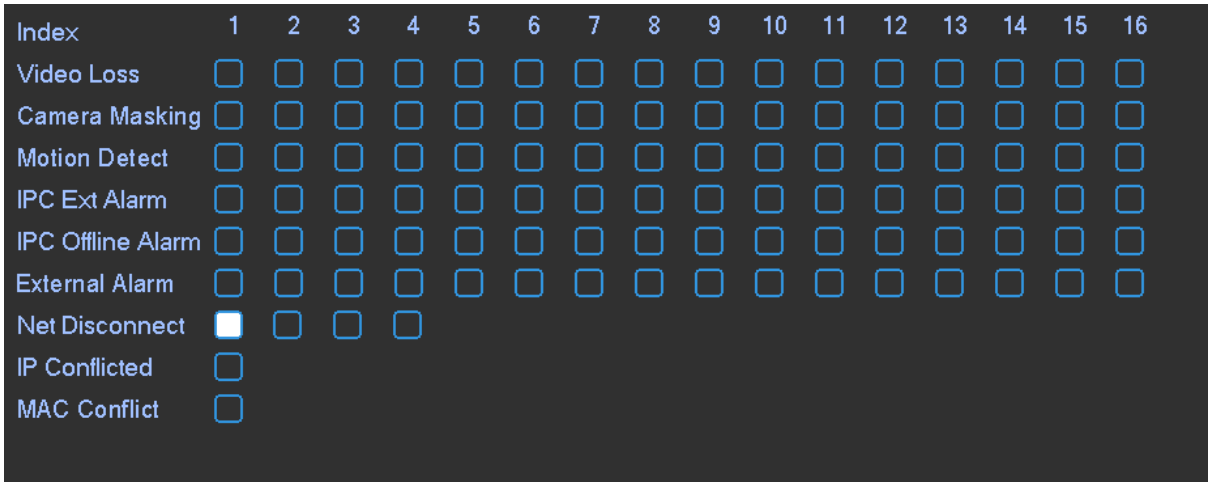


Figure 3-14

⑦ Network Setup

It is the shortcut network setup button. Please refer to chapter 3.5.4 for detailed information.

⑧: Output mode

It is the shortcut display setup button. Please refer to chapter 3.5.7 for detailed information.

⑨：Device management

You can use the channel list and the device list to manage the connected remote device. The channel list is on the left. Here you can view all connected channel information. The green color in front of the camera name means current channel is recording now. The grey color means current channel is not recording. The device list is on the right. Here you can view connected device information. Green icon means current device is online while the red cross means current device is offline. See Figure 3-15.

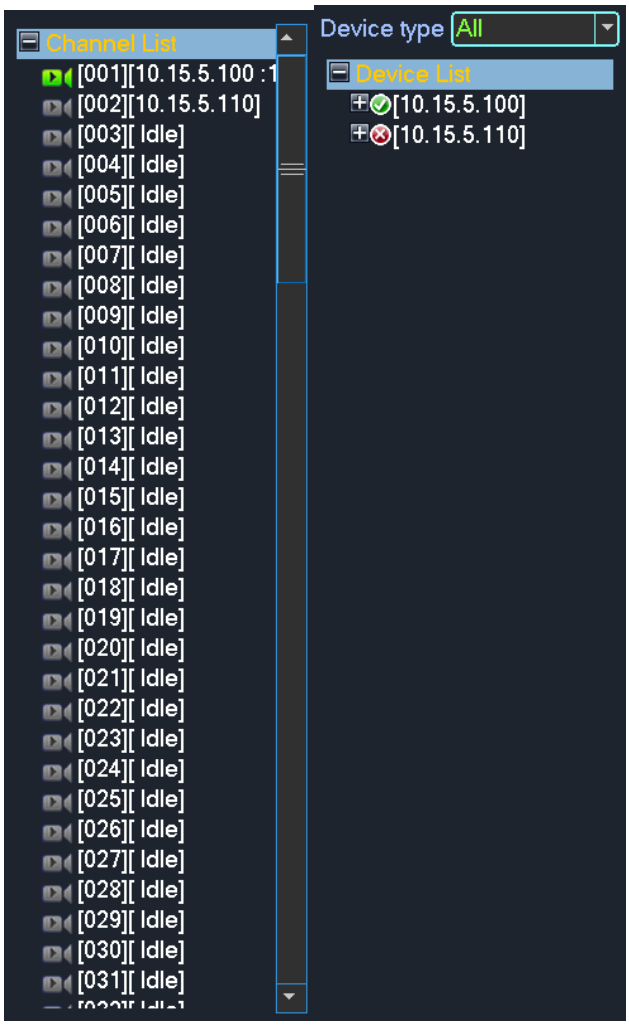


Figure 3-15

⑩：HDD management

It is the shortcut HDD management button. Please refer to chapter 3.7.1 for detailed information.

3.2 Main Menu

After you logged in, the system main menu is shown as below. See Figure 3-16. There are total 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.

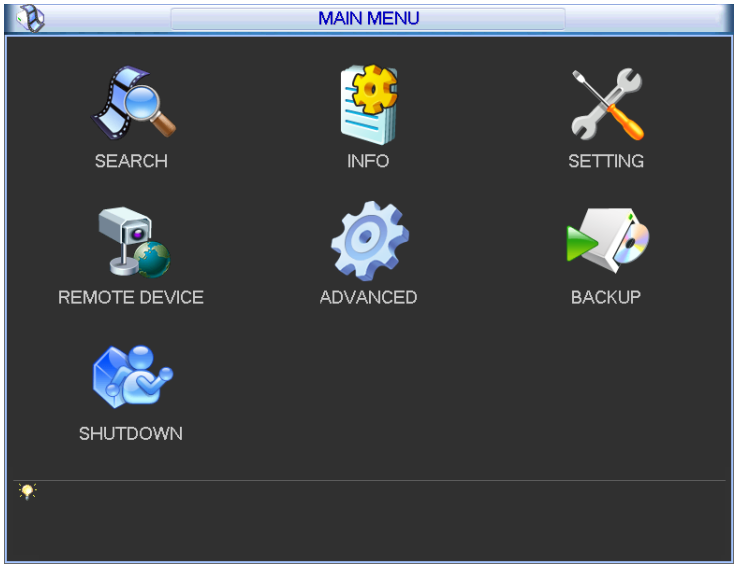


Figure 3-16

3.3 Search & Playback

Click search button in the main menu, or you can right click mouse and then select the Search item. Search interface is shown as below. See Figure 3-17.

Please note the initial version does not support smart search, card number search.

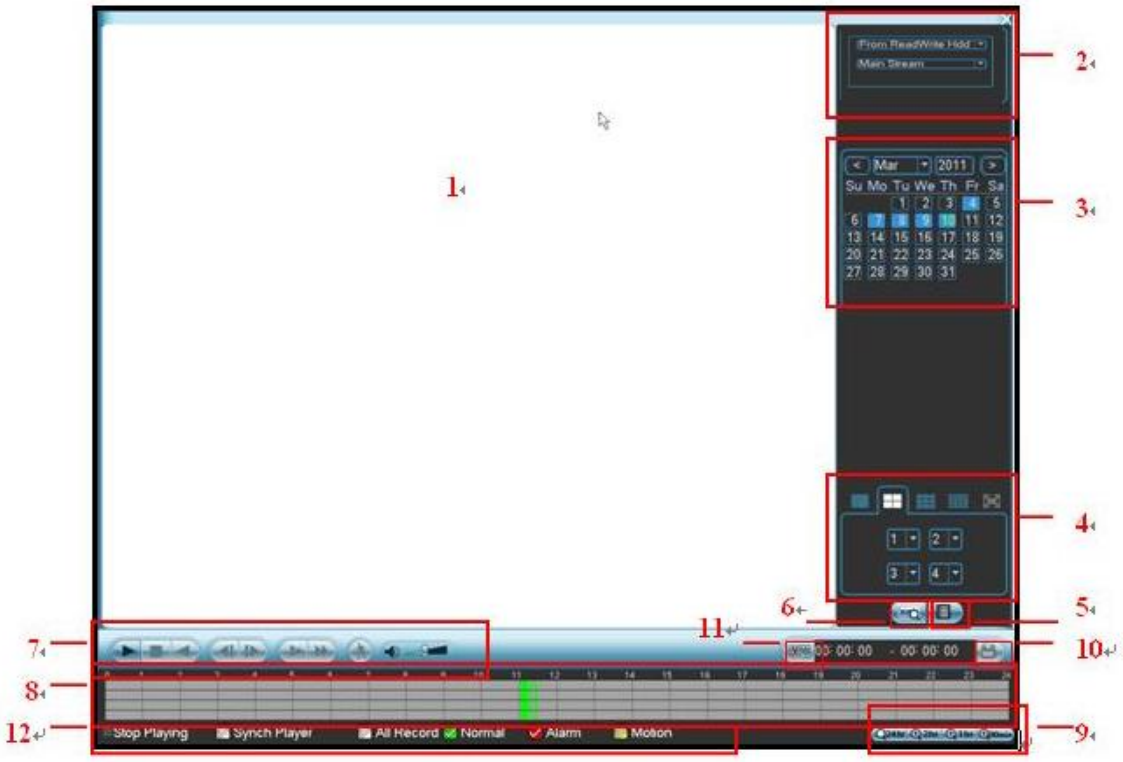
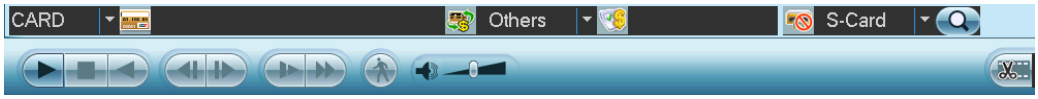


Figure 3-17

Please refer to the following sheet for more information.

SN	Name	Function
1	Display window	●Here is to display the searched picture or file. ●Support 1/4/9/16-window playback.

<table>
<tr><td>2</td><td>Search type</td><td colspan="2">●Here you can select to search extra stream, main stream or picture.
●Select play from read-write disk or play from thee peripheral devices.</td></tr>
<tr><td>3</td><td>Calendar</td><td colspan="2">●The blue highlighted date means there is picture or file. Otherwise, there is no picture or file.
●In any play mode, click the date you want to see, you can see the corresponding record file trace in the time bar.</td></tr>
<tr><td>4</td><td>Playback mode and channel selection pane.</td><td colspan="2">●Playback mode：1/4/9/16 and etc. (It may vary due to different series.).
✧ In 1-window playback mode: you can select 1-128（64） channels.
✧ In 4-window playback mode: you can select 4 channels according to your requirement such as channel 1-4, 5-8….
✧ In 9-window playback mode, you can switch between 1-8, 9-16….
✧ In 16-window playback mode, you can switch between 1-16, 17-32….
✧ …….
●The time bar will change once you modify the playback mode or the channel option.</td></tr>
<tr><td>5</td><td>File list switch button</td><td colspan="2">●Double click it, 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 max 128 files in one time. Use middle button of the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback.
●You can input the period in the following interface to begin accurate search.
●File type：R—regular record； A—external alarm record；M—Motion detect record.
  </td></tr>
<tr><td>6</td><td>Card number search</td><td colspan="2">The card number search interface is shown as below.
 
Right now, system does not support this function.</td></tr>
<tr><td rowspan="8">7</td><td rowspan="8">Playback control pane.</td><td>►/ II</td><td>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.</td></tr>
<tr><td>■</td><td>Stop button.</td></tr>
<tr><td>◄</td><td>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.</td></tr>
<tr><td>|◄/ ►|</td><td>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.</td></tr>
<tr><td>▶·</td><td>Slow play
In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc.</td></tr>
<tr><td>▸▸</td><td>Fast forward
In playback mode, click to realize various fast play modes such as fast play 1,fast play 2 and etc.</td></tr>
<tr><td colspan="2">Note: The actual play speed has relationship with the software version.</td></tr>
<tr><td>  </td><td>Smart search</td></tr>
</table>

			The volume of the playback
			Current series device **does not** support snapshoot function now.
8	Time bar	●It is to display the record type and its period in current search criteria. ●In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar. ●Use the mouse to click one point of the color zone in the time bar, system begins playback. ●The time bar is beginning with 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 stands for the regular record file. The red color stands for the external alarm record file. The yellow stands for the motion detect record file.	
9	Time bar unit	●The 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 beginning with 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.	
10	Backup	Select the file(s) you want to backup from the file list. System max supports files from 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 you can cancel current selection. System max supports to display 32 files from one channel.	
11	Clip	● It is to edit the file. ● Please play the file you want to edit and then click this button you can see the time control. Select the start time and end time on the right side and click this button again, you can see the backup data to be saved in the pop-up dialogue box. Click this button again to exit the clip mode.	
12	Record type	In any play mode, the time bar will change once you modify the search type.	
13	Smart search	● When system is playing, 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 stopped once you switch the play file. ● Operations such as set time bar, click the play button, or any file list operation will stop current motion detect play. **Right now, system does not support this function.**	
Other Functions			
14	Digital zoom		When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.

Note:

All the operations here (such as playback speed, channel, time and progress) have relationship with version. Some series NVRs do not support some functions or playback speeds.

3.4 Information

Here is for you to view system information. There are total six items: HDD info, BPS (data stream statistics), log, Version, online user and remote device information. See Figure 3-18.

Figure 3-18

3.4.1 HDD Information

Here is to list hard disk type, total space, free space, and status. See Figure 3-19.

○ means current HDD is normal.. - means there is no HDD.

If disk is damaged, system shows as “?”. Please remove the broken hard disk before you add a new one.

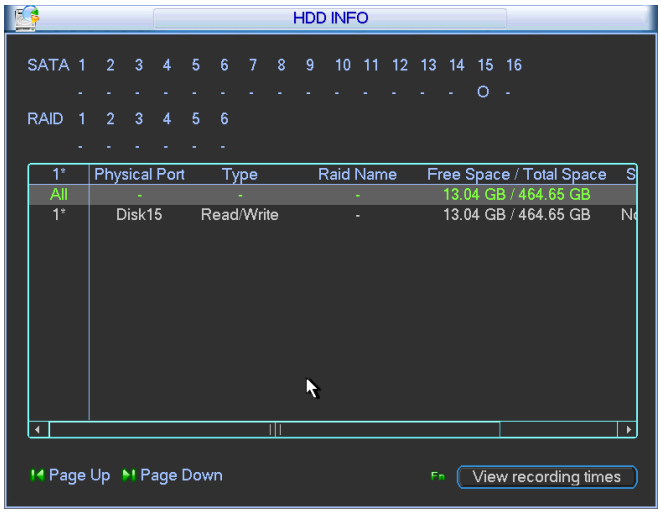


Figure 3-19

In Figure 3-19, click view record d time button, HDD record time information interface is shown as in Figure 3-20.

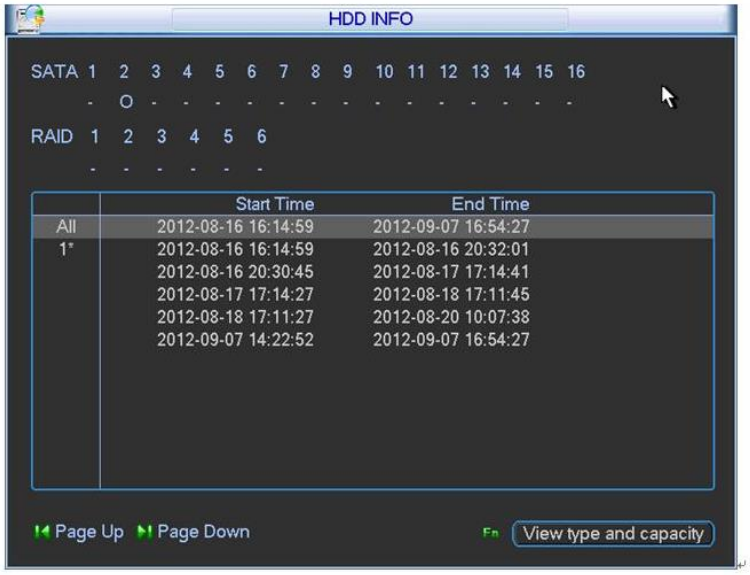


Figure 3-20

Parameter	Function
HDD Port	SATA 1-16： 1-16 here means current series product max supports 16 HDDs. RAID：1-6 here means current series product max supports 6 SATA HDDs. When HDD is working properly, system is shown as O. . "_" means there is no HDD.
SN	You can view the HDD amount the device connected to; * means the second HDD is current working HDD.
Physical port	It is to display device connected physical port.
Type	The corresponding HDD property.
Raid name	It is to display RAID HDD name.
Total space	The HDD total capacity.
Free space	The HDD free capacity.
Status	HDD can work properly or not.
Bad track	Display there is bad track or not.
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 and etc,

3.4.2 BPS

Here is for you to view current video data stream (KB/s) and occupied hard disk storage (MB/h). See Figure 3-21.

You can click PgUp/PgDn to view information of more channels.

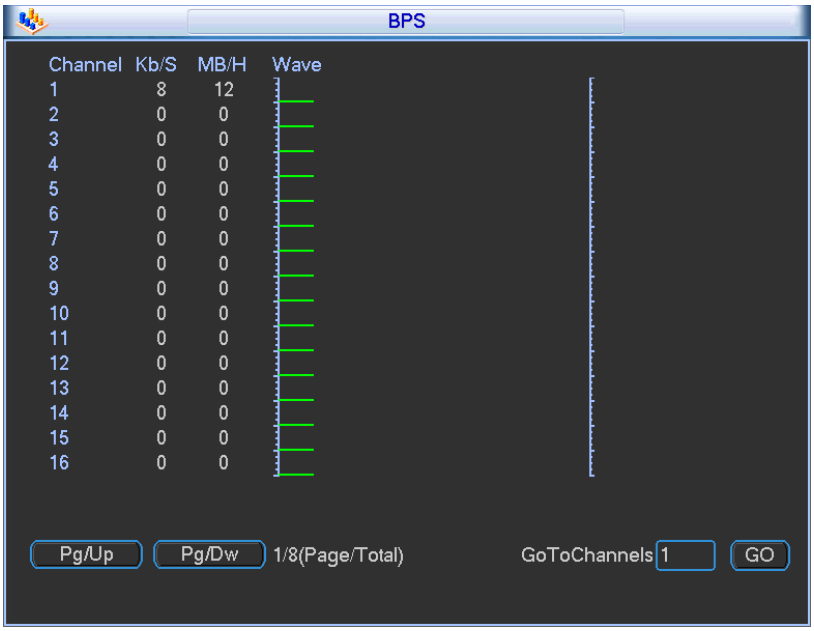


Figure 3-21

3.4.3 Log

Here is for you to view system log file. System lists the following information. See Figure 3-22.

- Start time/end time: Pleased select start time and end time, then click search button. You can view the log files in a list. System max displays 100 logs in one page. It can max save 1024 log files. Please use page up/down button on the interface or the front panel to view more.
- Backup: Please select a folder you want to save; you can click the backup button to save the log files. After the backup, you can see there is a folder named Log_time on the backup path. Double click the folder, you can see the log file
- Details: Click the Details button or double click the log item, you can view the detailed information. See Figure 3-23. Here you can use rolling bar to view information, or you can use Page up/Page down to view other log information.

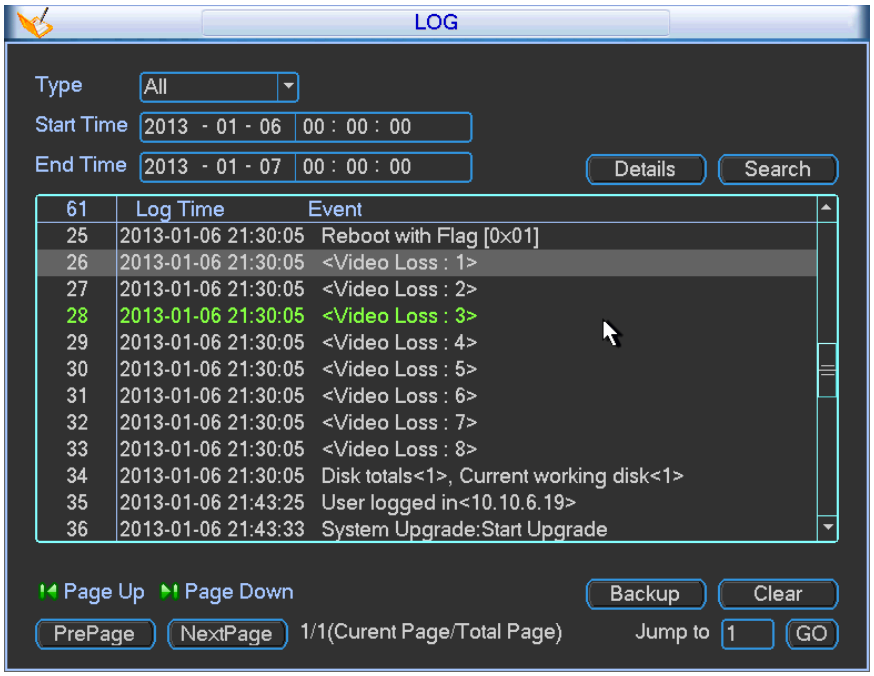


Figure 3-22

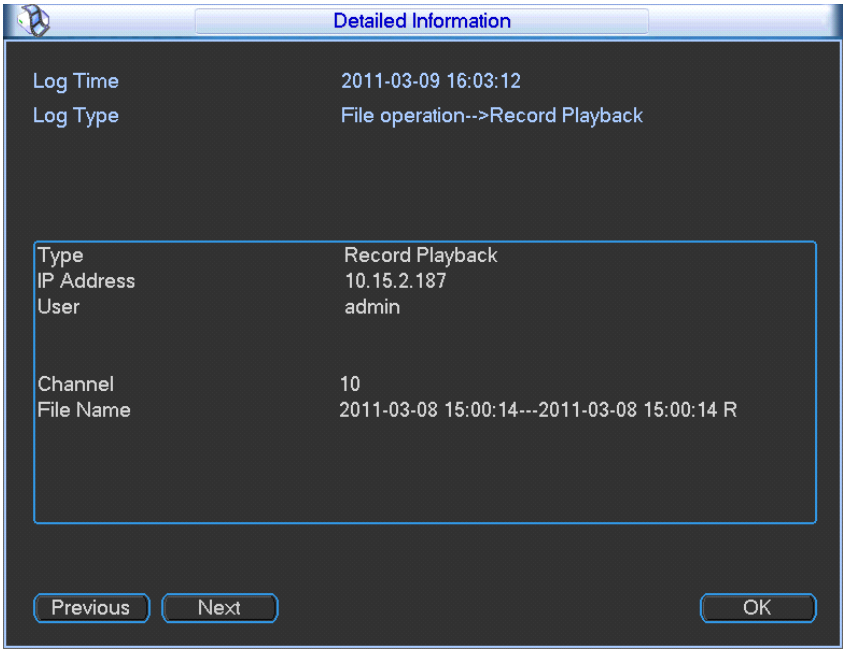


Figure 3-23

3.4.4 Version

Here is for you to view some version information. See Figure 3-24.

Please note the following interface is based on the 128-channel series product and it is for reference only.

- Channel
- Alarm in
- Alarm out
- System version:
- Build Date
- Web

- Serial number

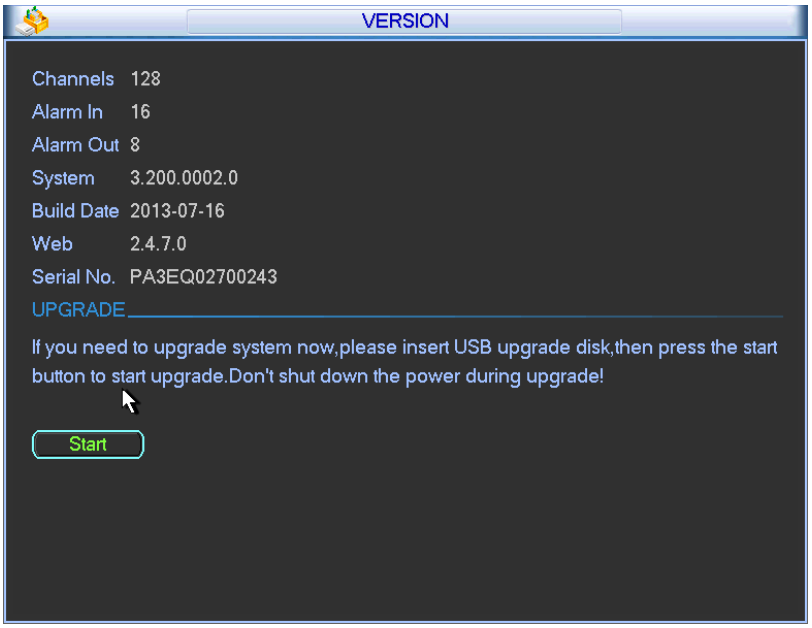


Figure 3-24

3.4.5 Online Users

Here is for you manage online users connected to the local device. See Figure 3-25.

You can disconnect one user or block one user if you have proper system right.

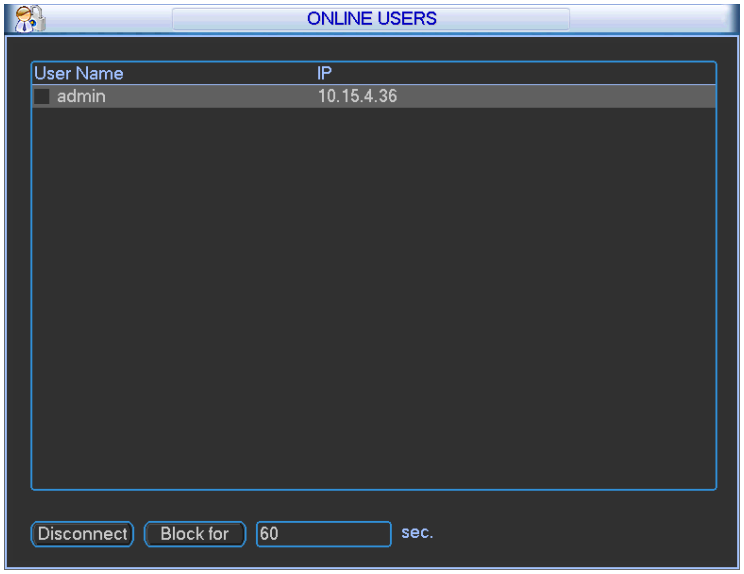


Figure 3-25

3.4.6 Remote Device Information

Here you can view the channel status of the remote device, connection log and network balance information and etc.

Channel status: Here you can view the IPC status of the corresponding channel such as motion detect, video loss, camera masking, alarm and etc. See Figure 3-26.

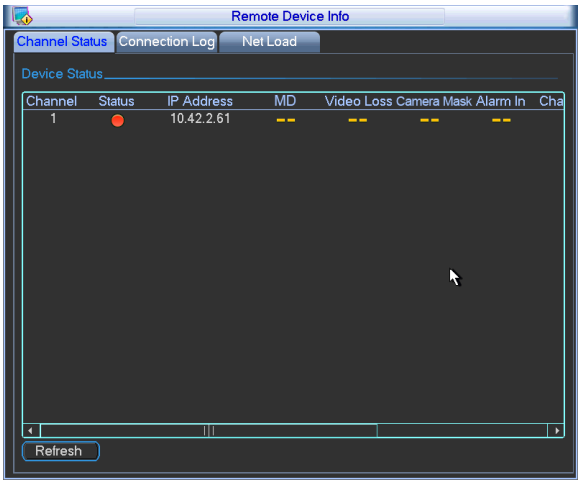


Figure 3-26

Connection log: In this interface, you can search the IPC log information of the corresponding channel. It includes IPC online, offline and etc. See Figure 3-27.

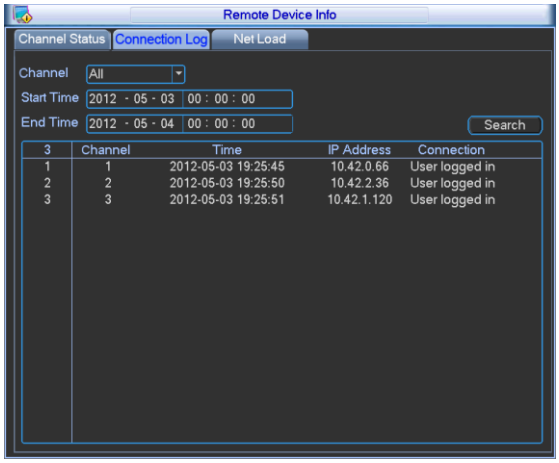


Figure 3-27

Network Balance: Here you can view network data transmission speed, receive speed. See Figure 3-28.

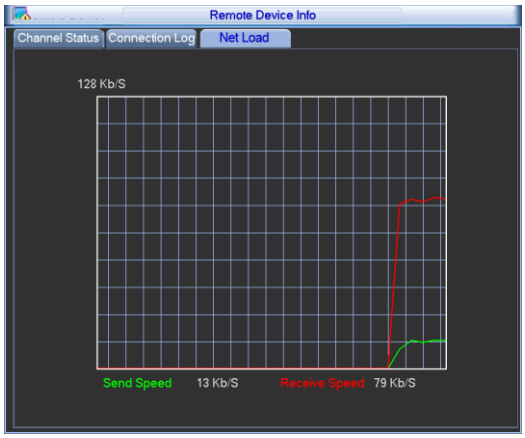


Figure 3-28

3.5 Setting

In main menu, highlight setting icon and double click mouse. System setting interface is shown as below. See Figure 3-29.

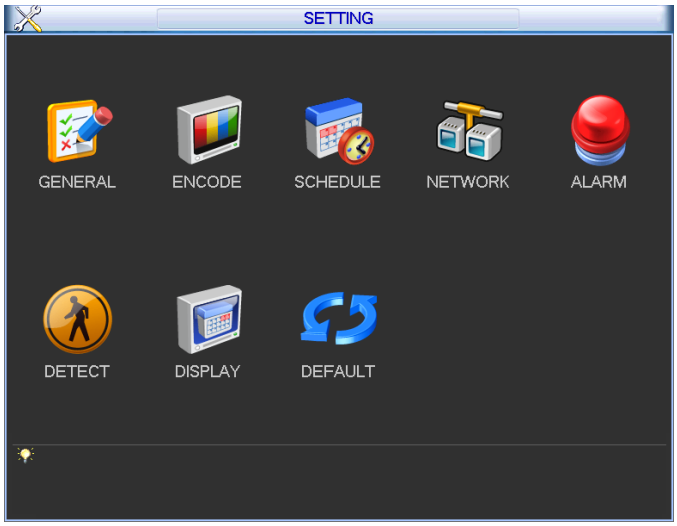


Figure 3-29

Important

Please note you need to have the proper right to implement the following operation.

3.5.1 General

General setting includes the following items. See Figure 3-30.

- System time: Here is for you to set system time
- Date format: There are three types: 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 set button. You can see an interface is shown as in Figure 3-31. Here you can set start time and end time by setting corresponding week setup. In Figure 3-31, enable date button, you can see an interface is shown as in Figure 3-32. Here you can set start time and end time by setting corresponding date setup.
- Time format: There are two types: 24-hour mode or 12-hour mode.
- Language: Here is to display current language name.
- HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
- Pack duration: Here is for you to specify record duration. The value ranges from 1 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 give a name to each NVR for your management.
- Realtime play: It is to set playback time you can view in the preview interface. The value ranges from 5 to 60 minutes.
- Device ID: Please input a corresponding device name here.
- Startup wizard: Once you check the box here, 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: Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- Navigation bar: Check the box here, 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.

Note:

Since system time is very important, do not modify time casually unless there is a must!

Before your time modification, please stop record operation first!

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

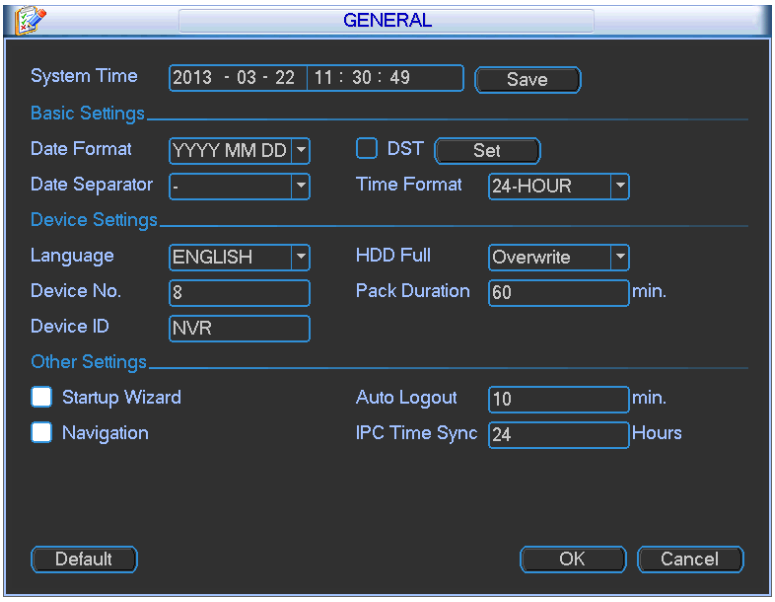


Figure 3-30

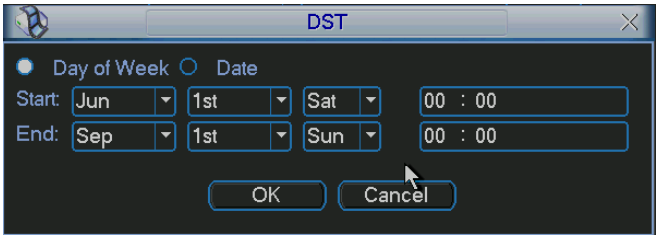


Figure 3-31

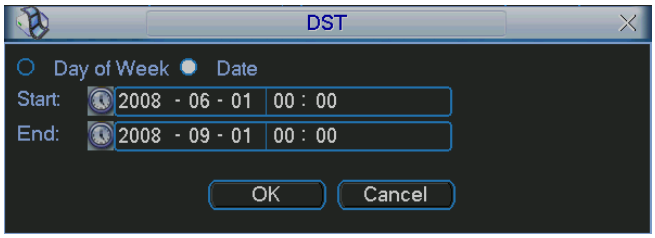


Figure 3-32

3.5.2 Encode

Encode setting includes the following items. See Figure 3-33.

Please note some series do not support extra stream.

- Channel: Select the channel you want.
- Type: Please select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- Compression: According to the front-end parameter, system supports MPEG4, MS_MPEG4, MPEG2, MPEG1, H263, MJPEG, FCC_MPEG4, H.264 and etc.
- Resolution: The mainstream resolution type is IPC's encoding config such as D1/1080P.
- Frame rate: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL 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.
- Video/audio: You can enable or disable the video/audio.
- Overlay: Click overlay button, you can see an interface is shown in Figure 3-35.
  - ✧ Cover area (Privacy mask): Here is for you to set privacy mask section. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel.
  - ✧ Preview/monitor: privacy mask has two types. Preview and Monitor. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.
  - ✧ Time display: You can select system displays time or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
  - ✧ Channel display: You can select system displays channel number or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
- Snapshot: Click snapshot button, you can set snapshot mode, picture size, quality and frequency. See Figure 3-34. **Before the snapshot operation, please make sure the front-end device supports current operation.**
  - ✧ Snapshot mode: There are two modes: Timing (Schedule) and activation. If you set timing mode, you need to set snapshot frequency. If you set activation snapshot, you need to go to Detect interface (Main menu->Setting-Detect) to set snapshot activation operation.
  - ✧ Image size: Here you can set snapshot picture size.
  - ✧ Image quality: Here you can set snapshot quality. The value ranges from 1 to 6.
  - ✧ Snapshot frequency: It is for you to set timing (schedule) snapshot interval. The value ranges from 1-7 picture(s) per second.
- Copy：**Before the Copy operation, please make sure you selected channel supports current copy contents.** After you complete the setup, you can click Copy button to copy current setup to other channel(s). You can see an interface is shown as in Figure 3-36 (The figure here is based on the 128-channel series product.). You can see 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 3-36 and Figure 3-33 respectively to complete the setup. Please note, once you check the All box, you set same encode setup for all channels. Audio/video enable box, overlay button and the copy button is shield. See Figure 3-37.

Please highlight icon  to select the corresponding function.

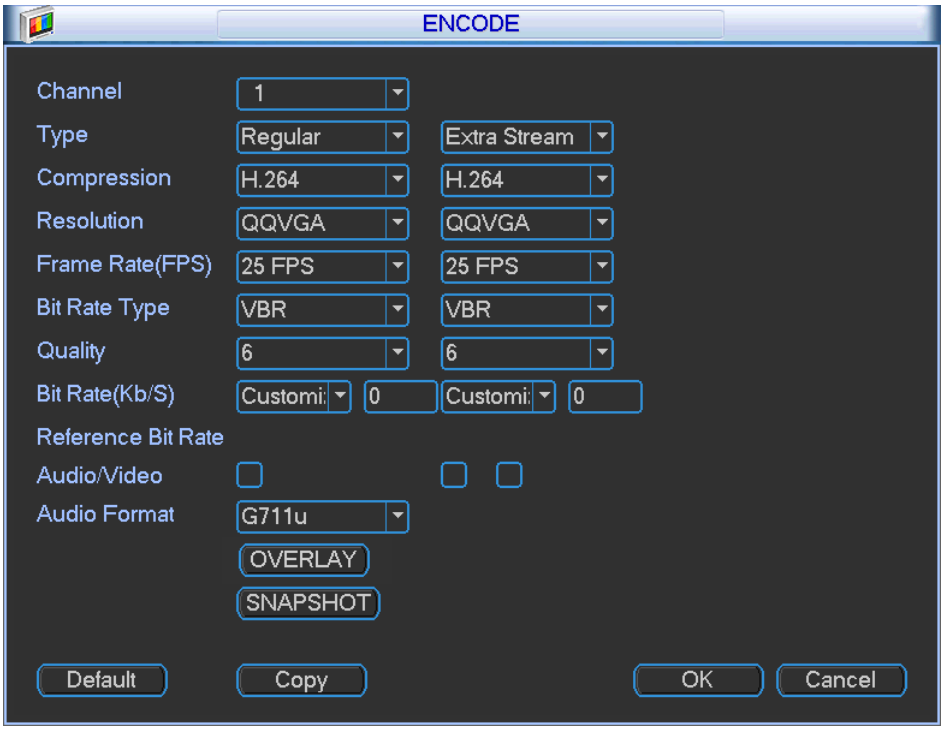


Figure 3-33

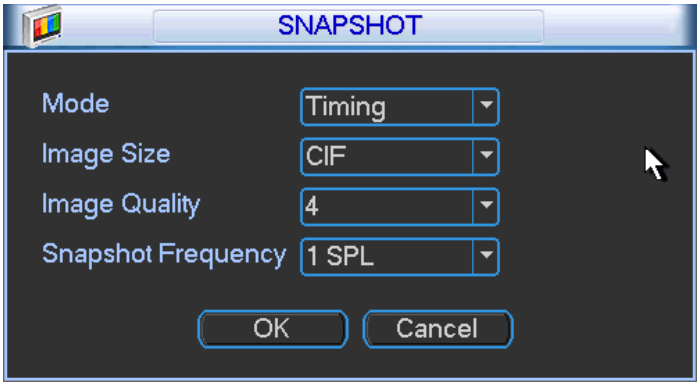


Figure 3-34

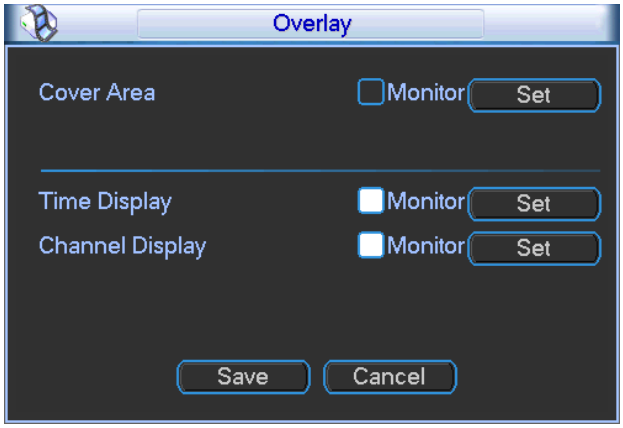


Figure 3-35

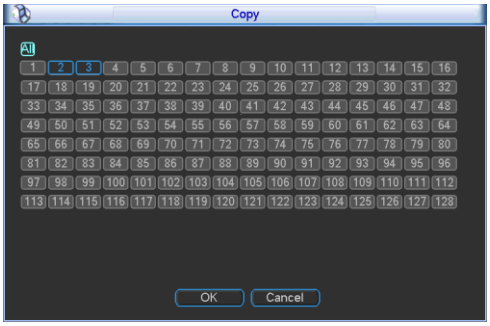


Figure 3-36

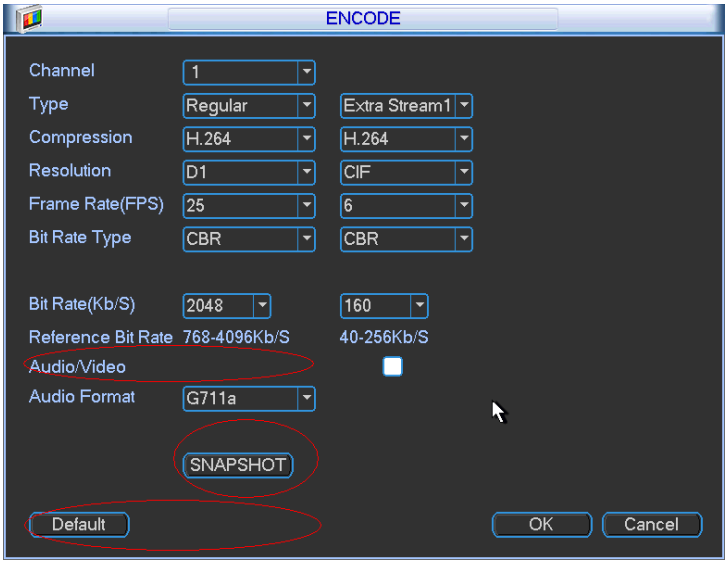


Figure 3-37

3.5.3 Schedule

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 3-38.

- Channel: Please select the channel number first. You can select “all” if you want to set for the whole channels.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Record types: There are four types: regular, motion detection (MD), Alarm, MD & alarm.
- Holiday setting: Click it you can see an interface shown as in Figure 3-39. Here you can set holiday date. Check the box, it means current channel shall record as your holiday setup. Please go to the Period interface to set the holiday date record setup.

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 color stands for motion detection and red color 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 not record neither motion detect occurs nor the alarm occurs.

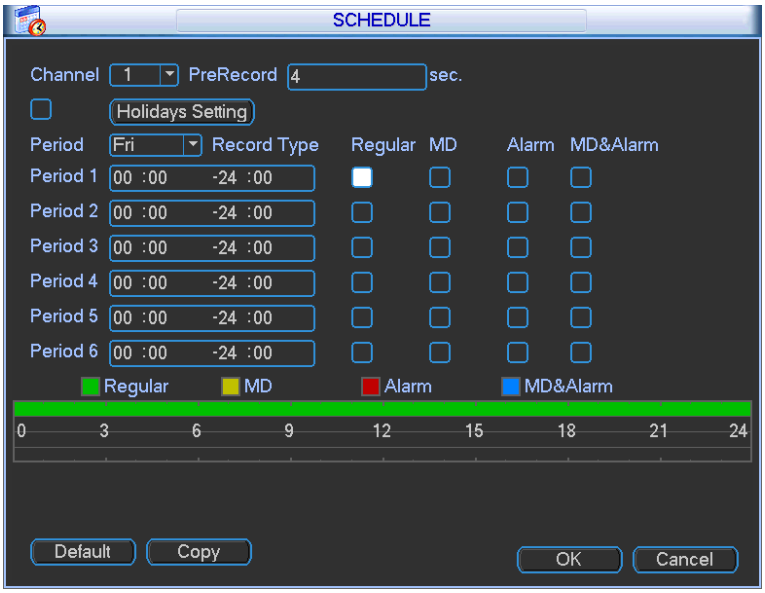


Figure 3-38

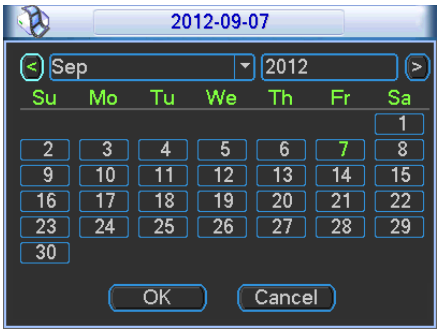


Figure 3-39

3.5.3.1 Quick Setup

Copy function allows you to copy one channel setup to another. After setting in channel 1, click Copy button, you can see current channel name is grey such as channel 1. Now you can select the channel you wan to paste such as channel 5/6/7. If you wan to save 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 succeeded.

3.5.4 Network

Here is for you to input network information. See Figure 3-40.

- Network Mode: It includes multiple address, fault tolerance, and load balancing.
  - ✧ Multiple-address mode: eth1 and eth2 and etc operate separately (Max support 4 network ports). You can use the services such as HTTP, RTP service via eth1/2/3/4. Usually you need to set one default card (default setup is eth1) to request the auto network service form the device-end such as DHCP, email, FTP and etc.
  - ✧ Network fault-tolerance: In this mode, device uses bond0 to communicate with the external devices. You can focus on one host IP address. At the same time, you need to set one master card. Usually there is only one running card (master card).System can enable alternate card when the master card is malfunction. The system is shown as offline once all cards are offline.

- ✧ Load balance: In this mode, device uses bond0 to communicate with the external device. All cards are working now and bearing the network load. Their network load are general the same. The system is shown as offline once these cards are all offline.

Important

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

- Ethernet Card Name: In the multiple address modes, you can select the Ethernet card name from the dropdown list.
- Default Ethernet port: Please select after you enabled multiple access function.
- IP address: Here you can use up/down button (▲▼) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
- DHCP: It is to auto search IP. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- IP version: There are two options: IPv4 and IPv6. Right now, system supports these two IP address format and you can access via them.
- 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 support maximal 20 users. 0 means there is no connection limit.
- 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.

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

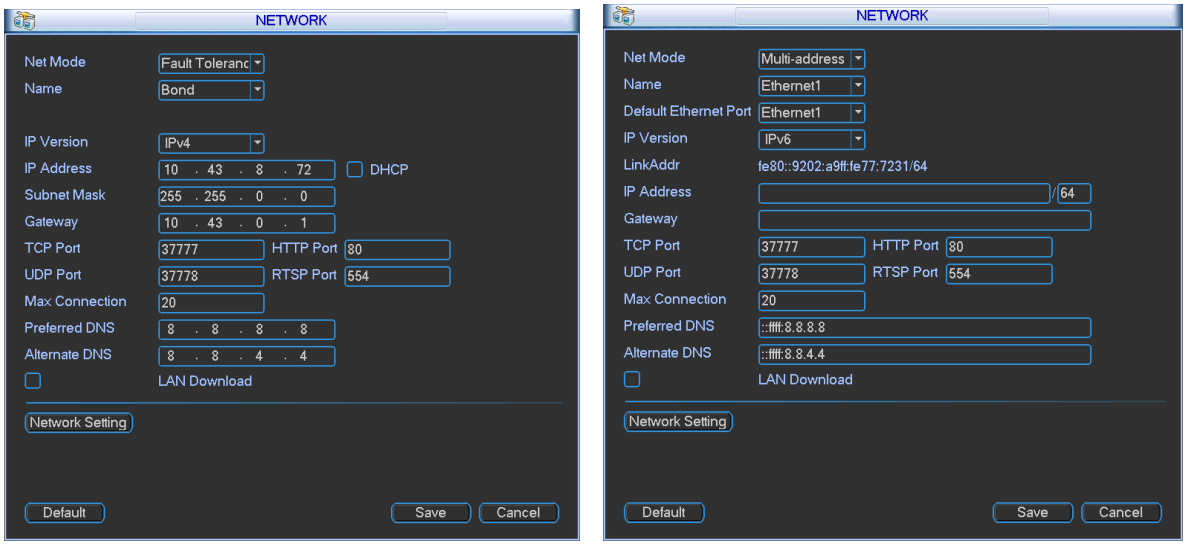


Figure 3-40

3.5.4.1 Network Setting

Network setting interface is shown as in Figure 3-41. Please draw a circle to enable corresponding function and then double click current item to go to setup interface.

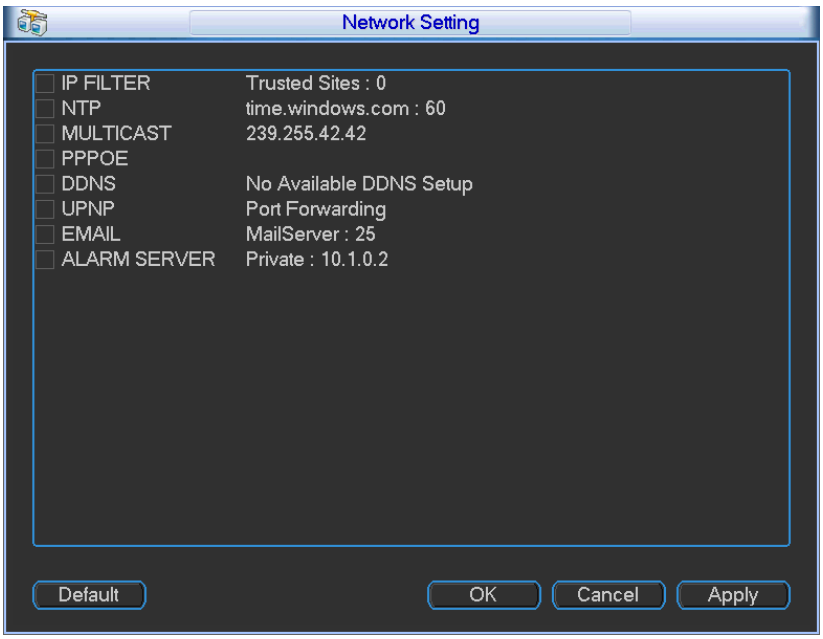


Figure 3-41

3.5.4.2 IP Filter

IP filter interface is shown as in Figure 3-42. You can add IP in the following list. System supports IPv4 and IPv6 both. The list supports max 64 IP addresses.

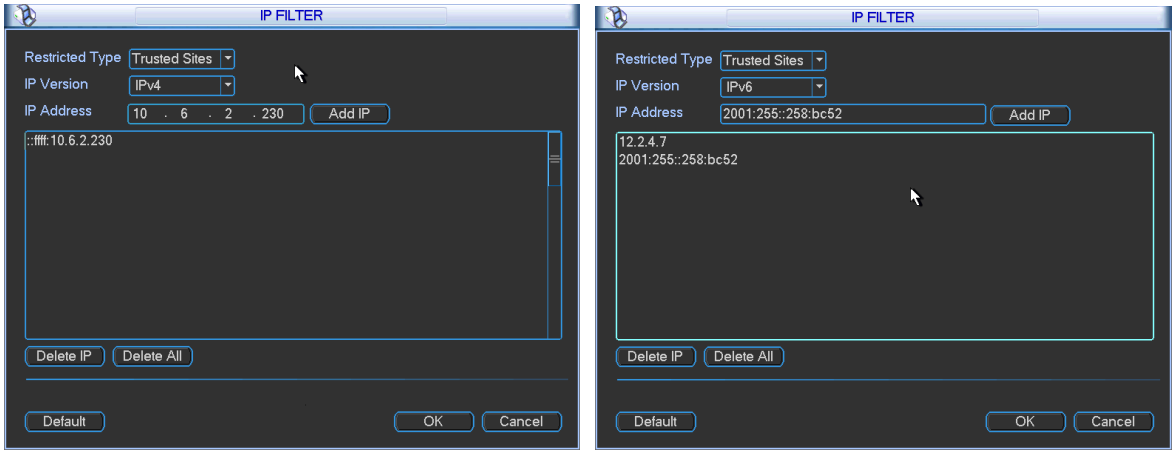


Figure 3-42

3.5.4.3 NTP Setup

You need to install SNTP server (Such as Absolute Time Server) in your PC first. In Windows XP OS, you can use command “net start w32time” to boot up NTP service.

NTP setup interface is shown as in Figure 3-43.

- 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

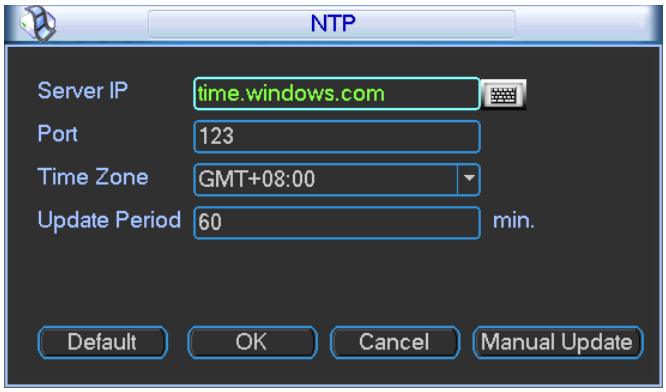


Figure 3-43

3.5.4.4 Multiple Cast Setup

Multiple-cast setup interface is shown as in Figure 3-44.

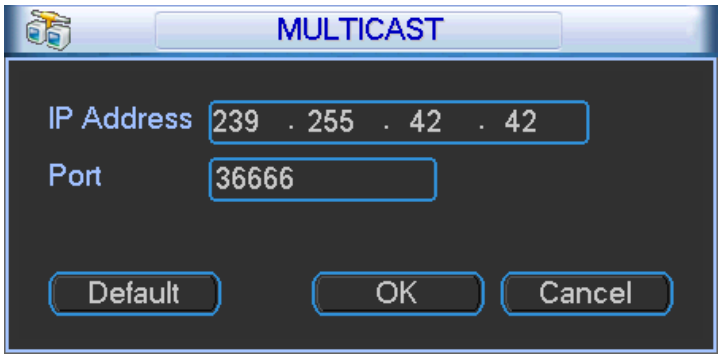


Figure 3-44

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

224.0.0.13 PIMv2 router

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

- Like the single broadcast address of RFC1918
- Can not 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 logged in the Web, the Web can automatically get multiple cast address and add it to the multiple cast groups. You can enable real-time monitor function to view the view.

3.5.4.5 PPPoE

PPPoE interface is shown as in Figure 3-45.

Input “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider). Click save button, you need to restart to activate your configuration.

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

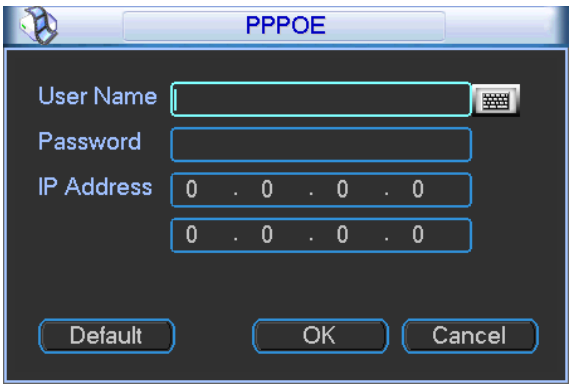


Figure 3-45

3.5.4.6 DDNS Setup

DDNS setup interface is shown as in Figure 3-46.

You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).
In network DDNS, please select DDNS type and highlight enable item. And then please input your PPPoE name you get from you IPS and server IP (PC with DDNS). Click save button and then reboot system.
Click save button, system prompts for rebooting to get all setup activated.
After rebooting, open IE and input the domain name.
Now you can open DDNSServer web search page.

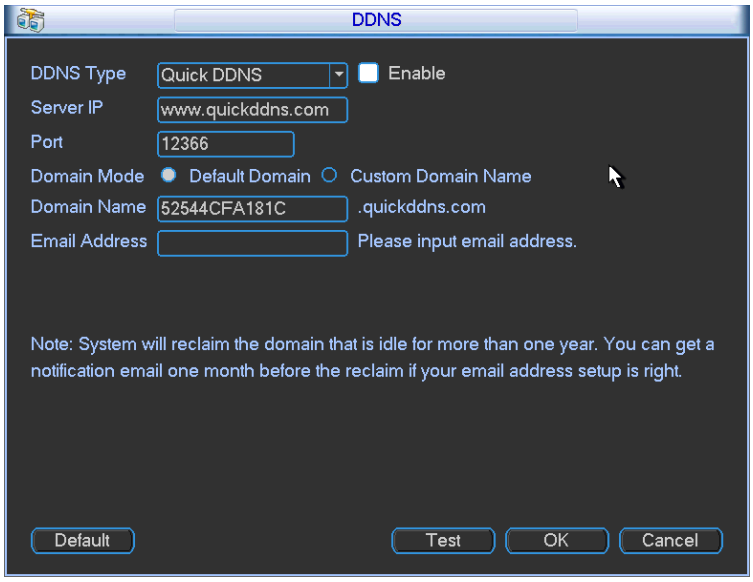


Figure 3-46

Please note DDNS type includes: CN99 DDNS, NO-IP DDNS, DVRID, and Dyndns DDNS. All the DDNS can be valid at the same time, you can select as you requirement.
Private DDNS function shall work with special DDNS server and special Professional Surveillance Software (PSS).

Quick DDNS and Client-end Introduction

1) Background Introduction

Device IP is not fixed if you use ADSL to login 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 realizes the bonding of the domain name and the IP address. Right now, current DDNS server is for our own devices only. 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 MAC address) for your option. You can also use customized valid domain name (has not registered.).

3) Operation

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

- Server address：DVRID.com
- Port number：80
- Domain name：There are two modes: Default domain name and customized 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 domain name to login installed of the device IP.

- User name: It 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.

3.5.4.7 UPNP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 3-40. Double click the UPNP item in Figure 3-40, you can see the following interface. See Figure 3-47.

- UPNP on/off ：Turn on or off the UPNP function of the device.
- Status: When the UPNP is offline, it shows as “Searching”. When the UPNP works it shows “Success”
- Router LAN IP: It is the router IP in the LAN.
- WAN IP: It is the router IP in the WAN.
- Port Mapping list： The port mapping list here is the one to one relationship with the router’s port mapping setting.
- Enable Switch ☑ : ：It shows that the function of port mapping is enabled in 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 it to add the mapping relationship.
- Delete: Click it to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 3-48.

Important:

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

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

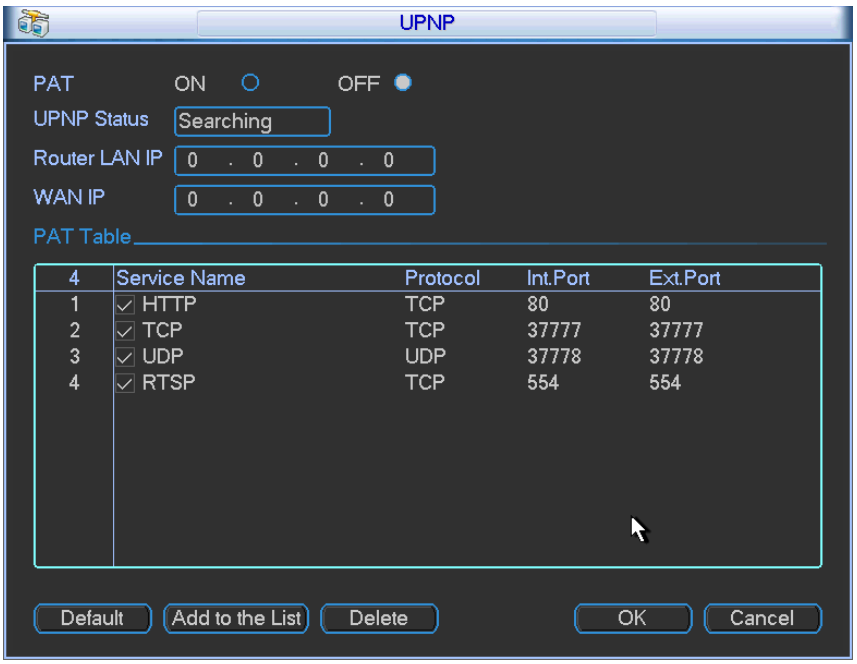


Figure 3-47

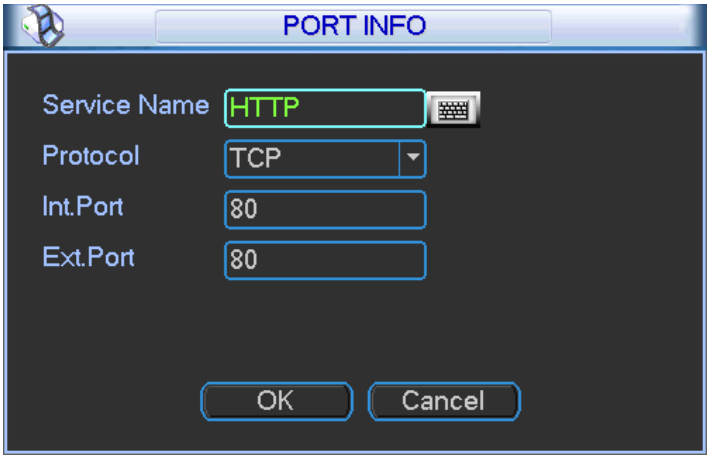


Figure 3-48

3.5.4.8 Email

The email interface is shown as below. See Figure 3-49.

- 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 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 support English character and Arabic number. Max 32-digit.
- 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 the 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. 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 3-50.

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.

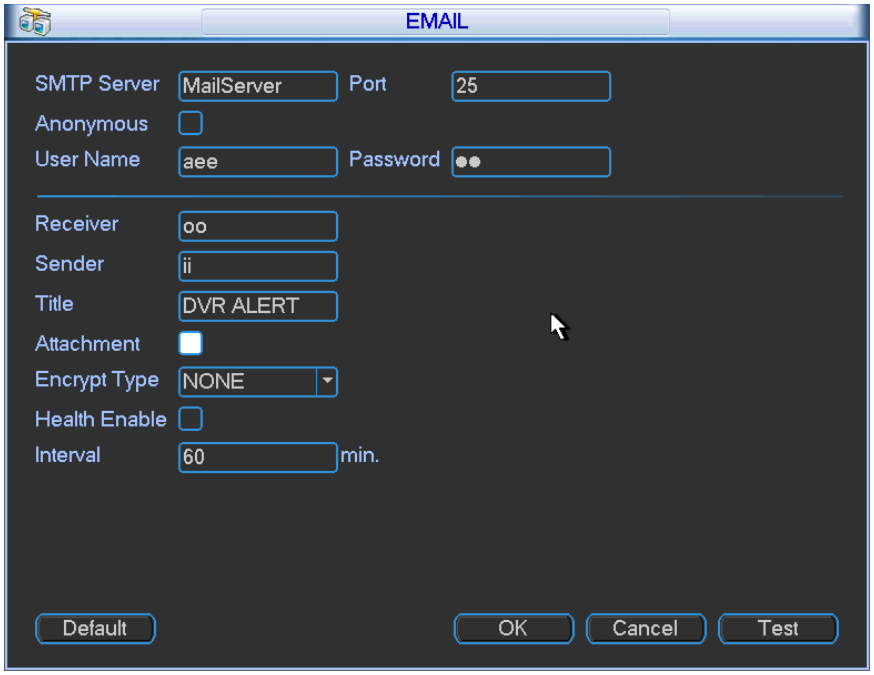


Figure 3-49

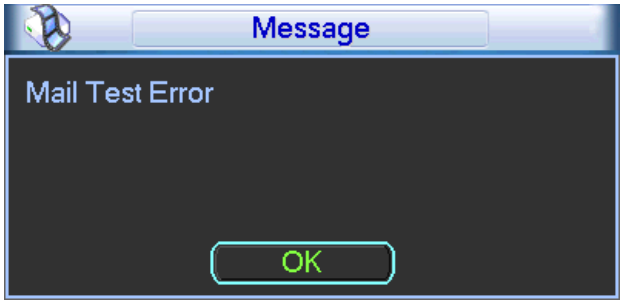


Figure 3-50

3.5.4.9 Alarm center

It provides alarm center host IP, port and alarm upload time setup. The interface is reserved for the users to develop this function. See Figure 3-51.

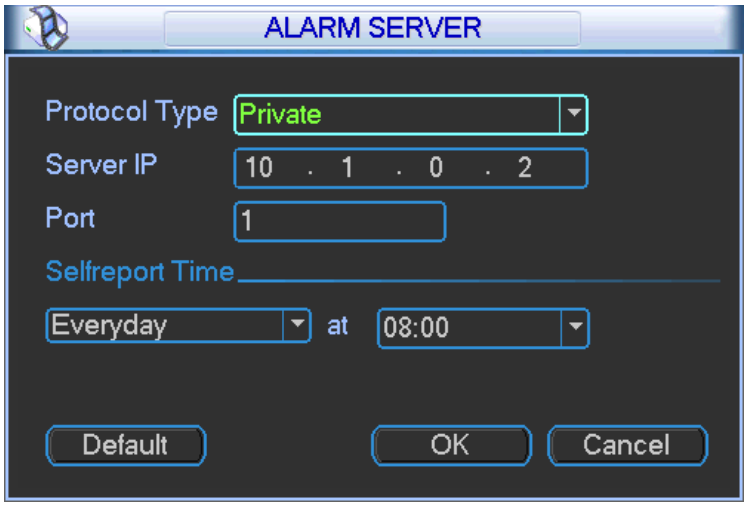


Figure 3-51

3.5.5 Alarm

In the main menu, from Setting to Alarm, you can see alarm setup interface. See Figure 3-52.

- Alarm in: Here is for you to select channel number.
- Event type: There are four types. Local input/IPC external/IPC offline alarm.
  - Local input alarm: The alarm signal system detects from the alarm input port.
  - IPC external alarm: It 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 record, PTZ, snap and etc. The alarm can last until the IPC and the NVR connection resumes.
- Enable: Please you need to highlight this button to enable current function.
- Type: normal open or normal close.
- Period: It 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 and the non-business day. 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 occurred, system can activate the PTZ operation. The PTZ activation lasts an anti-dither period.
  - In the Pan/Tilt/Zoom interface (Main menu->Setting-> Pan/Tilt/Zoom), please set video channel, speed dome protocol and etc.
  - Select the channel of current speed dome as current monitor video and the right click mouse to select Pan/Tilt/Zoom item. Now you can set preset, tour pattern.
  - In Figure 3-53, click “select” button, you can see an interface is shown as in Figure 3-54. Here you can set the activation operation such as preset tour, pattern and enable.
- Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal activation stays 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 can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email

and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin 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 number here is the device alarm output port. You can select the corresponding ports(s) so that system can activate the corresponding alarm device(s) when an alarm occurred.
- Latch: When the anti-dither time ended, the channel alarm you select in the alarm output may 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 you disable the alarm event function directly.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Alarm upload: System can upload the alarm signal to the network (including alarm centre and the WEB) if you enabled current function. 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 set alarm centre information.
- Send email: System can send out the alarm signal via the email to alert you when alarm occurs.
- Record channel: you can select proper channel to record alarm video (Multiple choices).
  - You need to set alarm record mode as Schedule in Record interface (Main Menu->Advanced->Record). Please note the manual record has the highest priority. System record all the time no matter there is an alarm or not if you select Manual mode.
  - 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 can not 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 occurred. 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 alarm occurs. System supports 1/8-window tour. Please go to chapter 3.5.7 Display for tour interval setup. Please note the tour setup here has higher priority than the tour setup you set in the Display interface. Once there two tours are both enabled, system can enable the alarm tour as you set here when an alarm occurred. If there is no alarm, system implements the tour setup in the Display interface.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when alarm occurs.

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

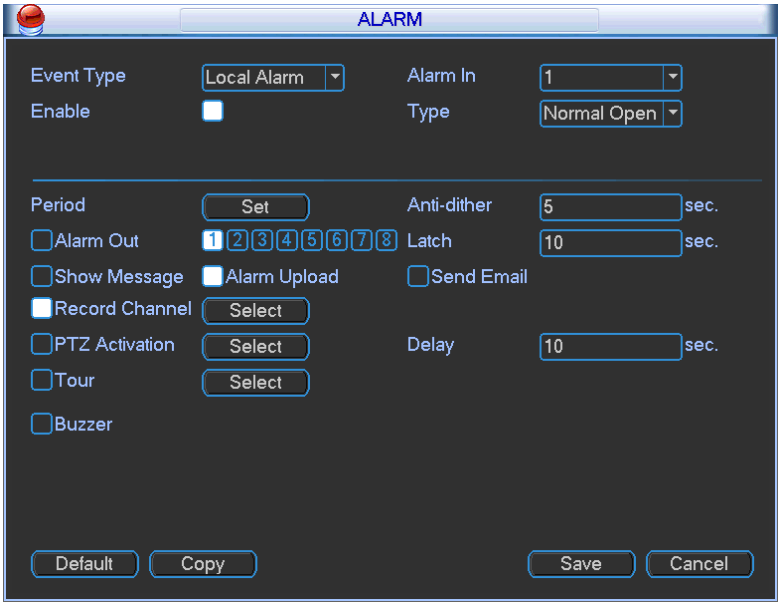


Figure 3-52

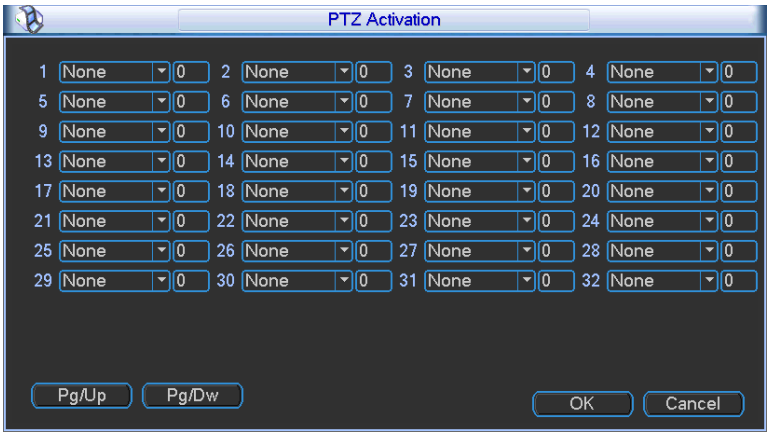


Figure 3-53

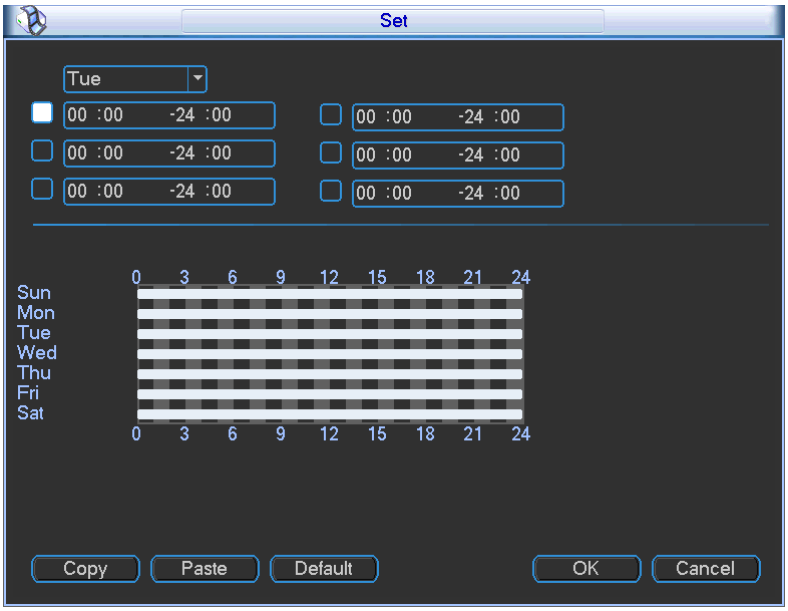


Figure 3-54

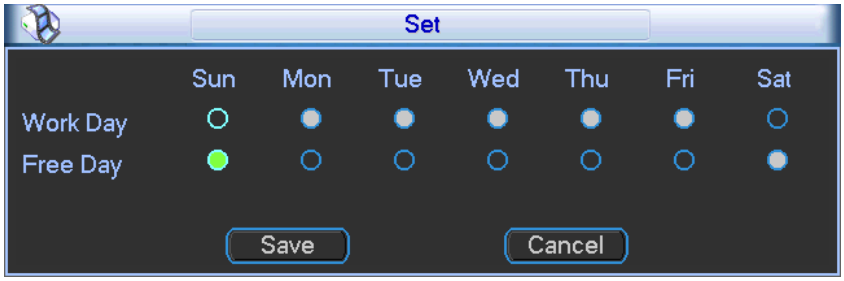


Figure 3-55

3.5.6 Detect

Go to Detect Menu

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 3-56.There is three detection types: motion detection, video loss, camera masking.

- The video loss has no detection region and sensitivity setup and camera masking has no detection region setup.
- You can see motion detect icon if current channel has enabled motion detect alarm.
- You can drag you mouse to set motion detect region without Fn button. Please click OK button to save current region setup. Right click mouse to exit current interface.

Motion Detect

Detection menu is shown as below. See Figure 3-56.

- 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 motion detect function.
- Region: Click select button, the interface is shown as in Figure 3-57. Here you can set motion detection zone. There are 396(PAL)/330(NTSC) small zones. The green zone is current cursor position. Grey zone is the motion detection zone. Black zone 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 click save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.
- Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.
- Period: Click set button, you can see an interface is shown as in Figure 3-59. Here you can set for business day and non-business day. In Figure 3-59 click set button, you can see an interface is shown as in Figure 3-60. Here you can set your own setup for business day and non-business day.
- Anti-dither: System only memorizes one event during the anti-dither period. The value ranges from 5s to 600s.
- Alarm output: when an alarm occurs, system enables peripheral alarm devices.
- Latch: when motion detection complete, 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 alarm you in the local host screen if you enabled this function.

- 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 email to alert you when alarm occurs.
- Record channel: System auto activates motion detection channel(s) to record once an alarm occurs. Please make sure you have set MD record in Schedule interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 3-58. Click PgUp/PgDn to set more channels.
- Record Delay: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
- Tour: Here you can enable tour function when alarm occurs. System one-window tour. Please go to chapter 3.5.7 Display for tour interval setup.

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

Note:

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

In Figure 3-57, 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 button to exit.

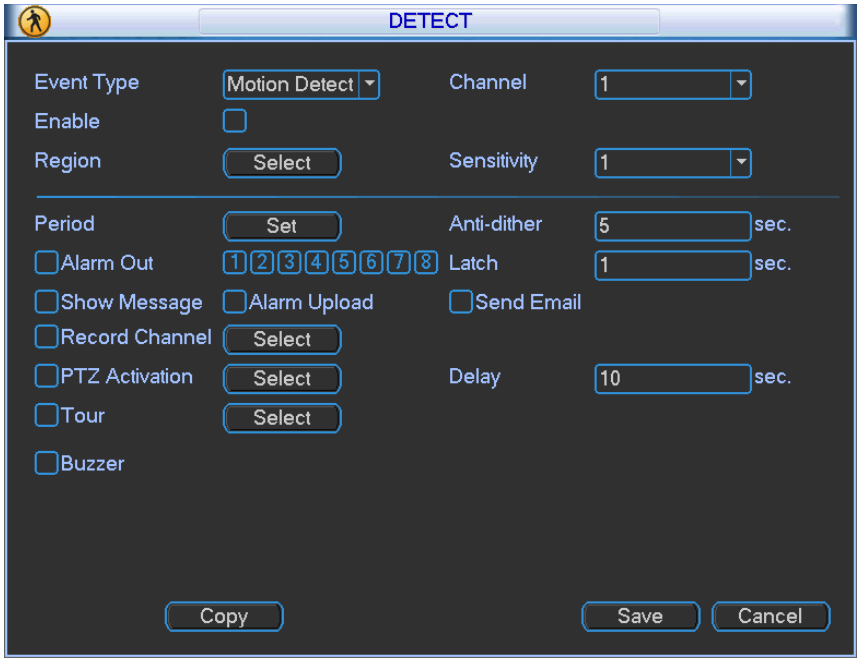


Figure 3-56

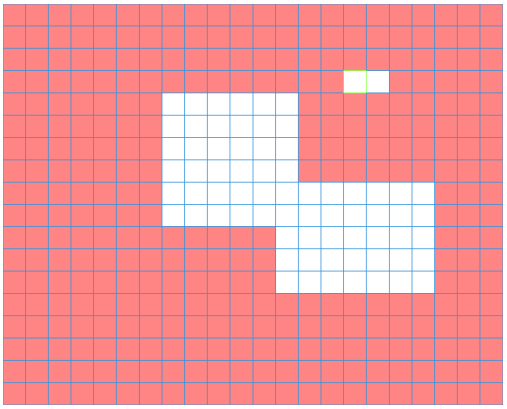


Figure 3-57

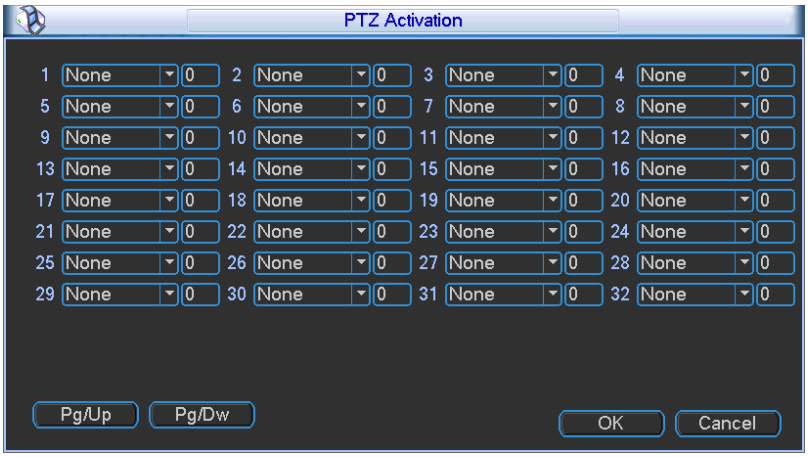


Figure 3-58

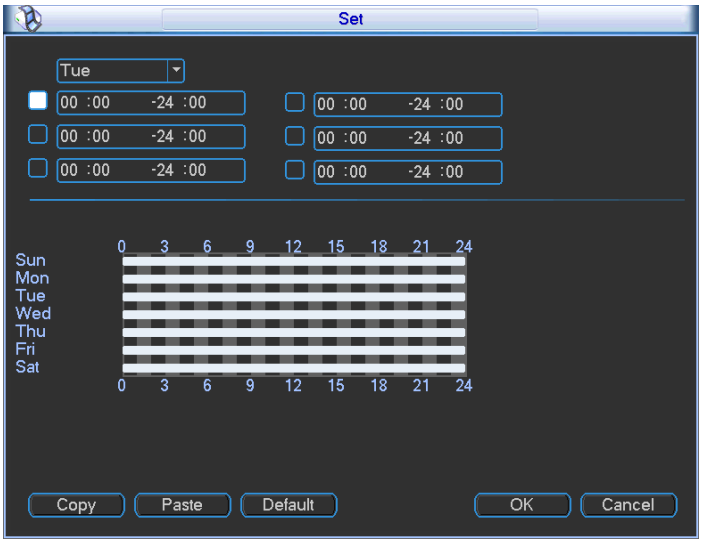


Figure 3-59

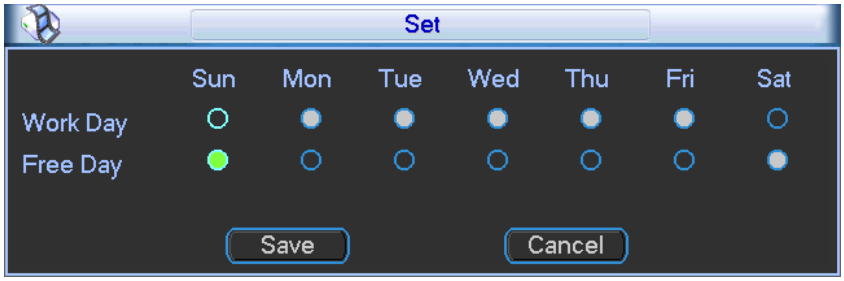


Figure 3-60

Video Loss

In Figure 3-56, select video loss from the type list. You can see the interface is shown as in Figure 3-61.This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

Tips:

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

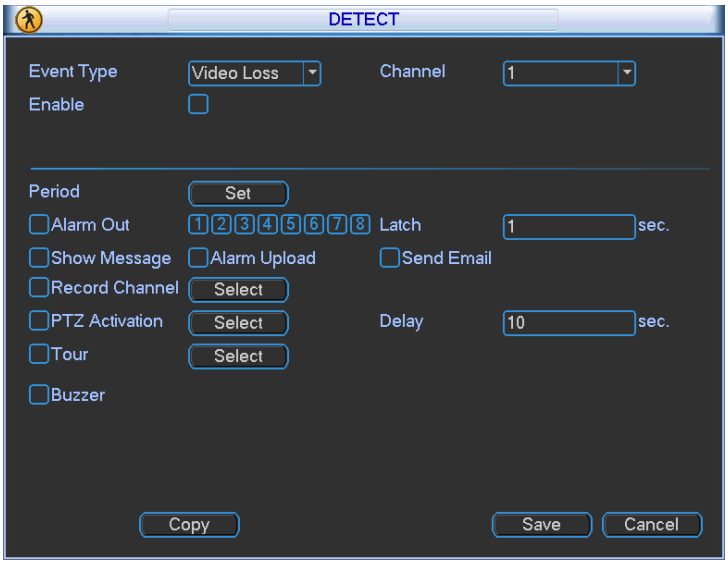


Figure 3-61

Camera Masking

When someone viciously masks the lens, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Camera masking interface is shown as in Figure 3-62. You can enable alarm output channel and then enable show message function.

Tips:

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

Note:

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

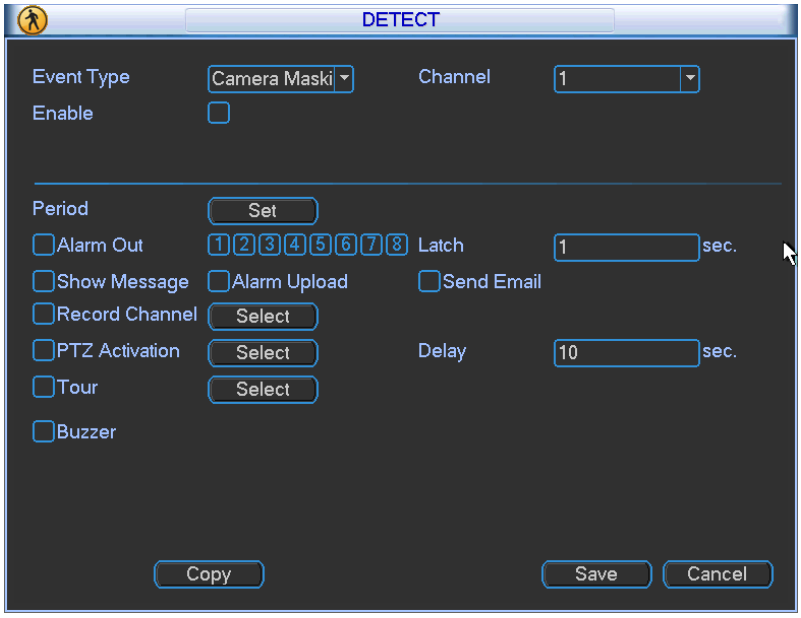


Figure 3-62

3.5.7 Display

Display setup interface is shown as below. See Figure 3-63.

- Channel name: Here is for you to modify channel name. System max support 25-digit (The value may vary due to different series). Please note all your modification here only applies to NVR local end. You need to open web or client end to refresh channel name.
- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to channel name or not when system is playback.
- Screen mode: You can select from the dropdown list.
- Screen2 display enable: Check the box here to display the second screen. The second screen can realize 4-channel decode in one window.
- Screen number: You can select from the dropdown list.
- Resolution: There are two options: 1280×1024(default),1920×1080. **Please note the system needs to reboot to activate current setup.**
- Enable tour: Activate tour function.
- Interval: System supports 1/4/8/9/16-window tour. Input proper interval value here. The value ranges from 5-120 seconds. In tour process, you can use mouse or click Shift to turn on window switch function. Stands for opening switch function, stands for closing switch function.
- Monitor tour type: System support 1/8-window tour.
- Alarm tour type: System support 1/8-window tour.
- Encode mode: You can use this function for different environments when the device has HD decode card. Decode display: The HD decode card decodes the data and then display on the screen 3 to screen 6.

Please highlight icon to select the corresponding function.

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

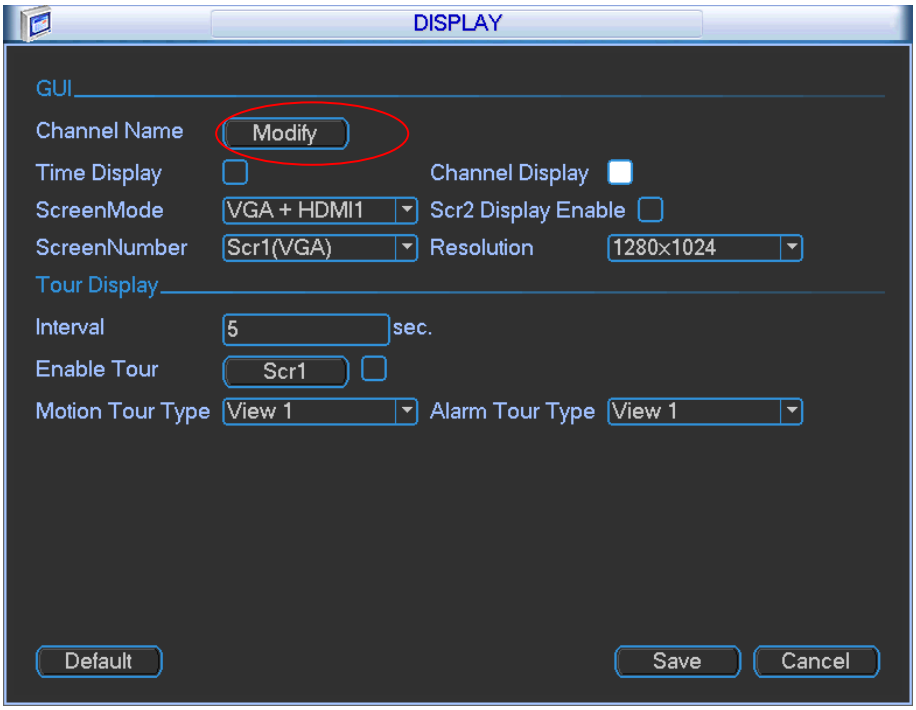


Figure 3-63

In Figure 3-63, click modify button after channel. You can see an interface shown as in Figure 3-64. Click PgUp/PgDn to view more channels. Please note all your modification here applies to local end only. You need to refresh web or client-end to get the latest channel name. System max support 25-digital character.

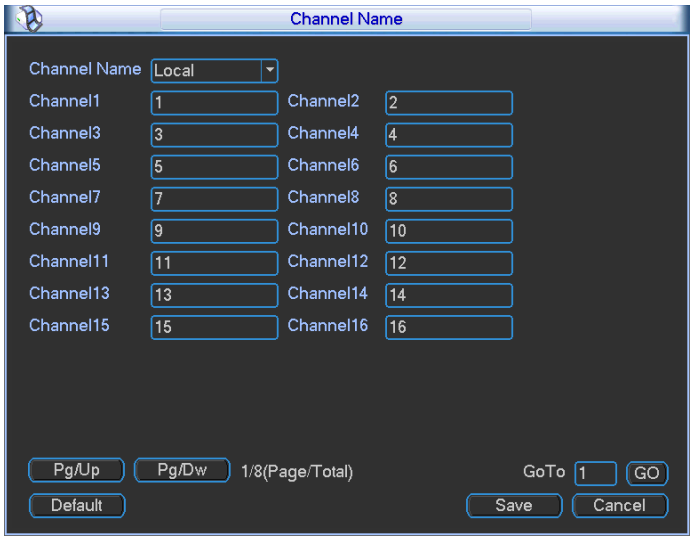


Figure 3-64

In tour mode, you can see the following interface. On the right corner, right click mouse, you can control the tour. There are two icons:  stands for enabling window switch and  stands for disabling window function. See Figure 3-65.

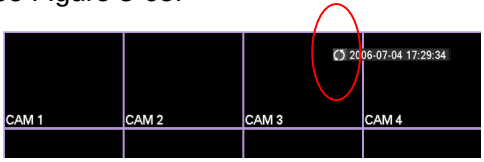


Figure 3-65

3.5.8 Default

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

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

Please highlight icon to select the corresponding function.
After all the setups please click OK button, system goes back to the previous menu.
Warning!
System menu color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!

3.6 Remote Device

In the main menu, click the Remote Device icon to go to the corresponding interface.
The remote device interface is shown as in Figure 3-66.

- Device search: Click it to search IP address.
- Add: Click it to connect to the selected device and add it to the Added device list. Support Batch add.
- Show filter: You can use it to display the specified devices from the added device.
- 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 default port number is 4000 if the manufacture is Private. The default user name is **admin** and password is **1234**.
- Edit：Click Edit button you can go to Figure 3-67. Here you can change the searched IP address. Please note this function is for IP from private manufacturer.

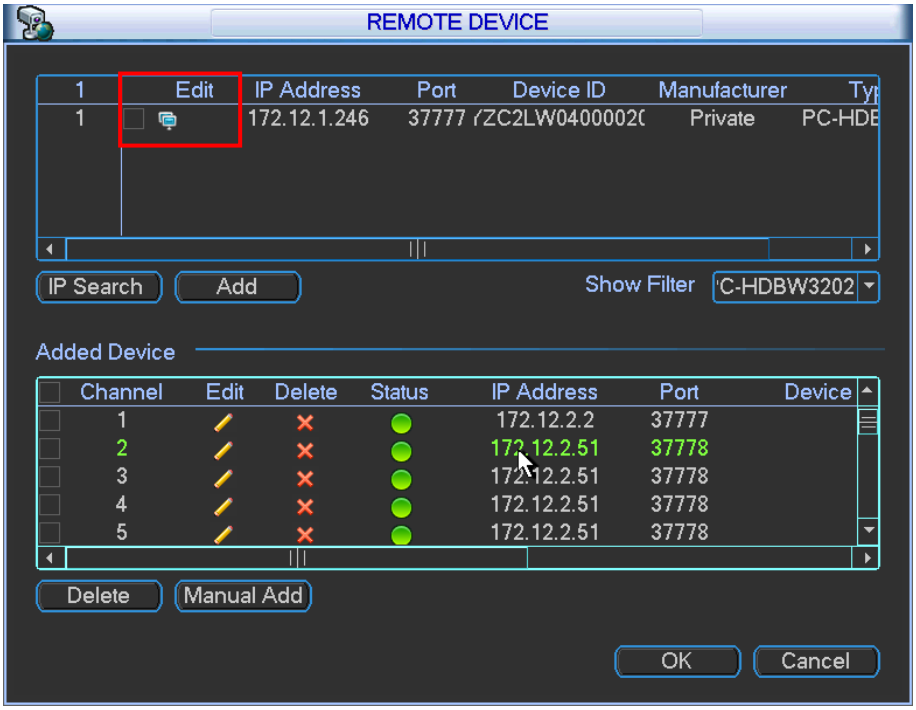


Figure 3-66

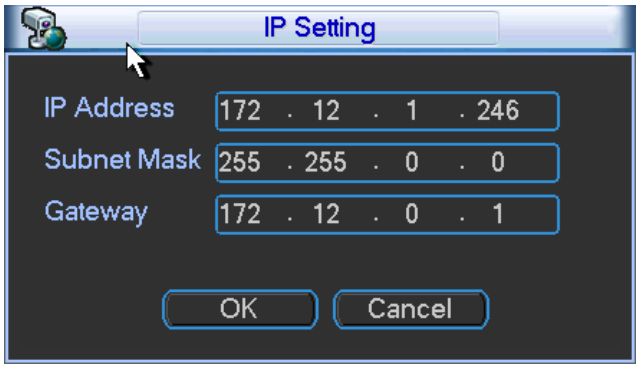


Figure 3-67

Click the Manual Add button; you can go to the following interface. See Figure 3-68.
This series product max supports 32-channel standard definition video/high definition non-real-time video and the transmission rate is 1mbps per channel. It can also max supports 4-channel high definition video and the transmission rate is 8mbps. The delay time of each channel is below 500ms.

This series product supports the IPC from many popular manufactures such as Sony, Hitachi, Axis, Samsung, and WatchNET MPIX.

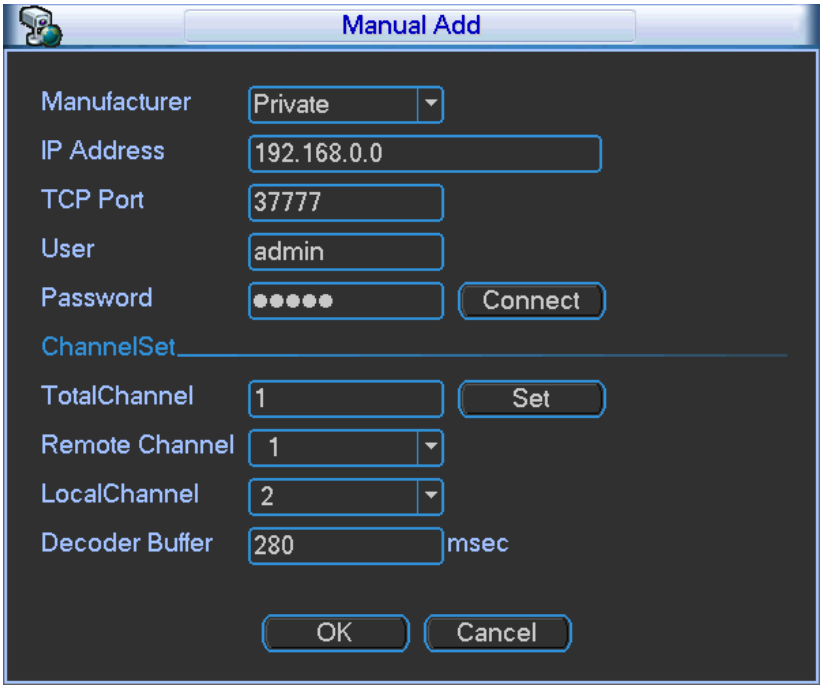


Figure 3-68

3.7 Advanced

Double click advanced icon in the main window, the interface is shown as below. See Figure 3-69.There are total eight function keys: HDD management, alarm output, abnormity, manual record, account, auto maintenance, configuration backup and RAID management.

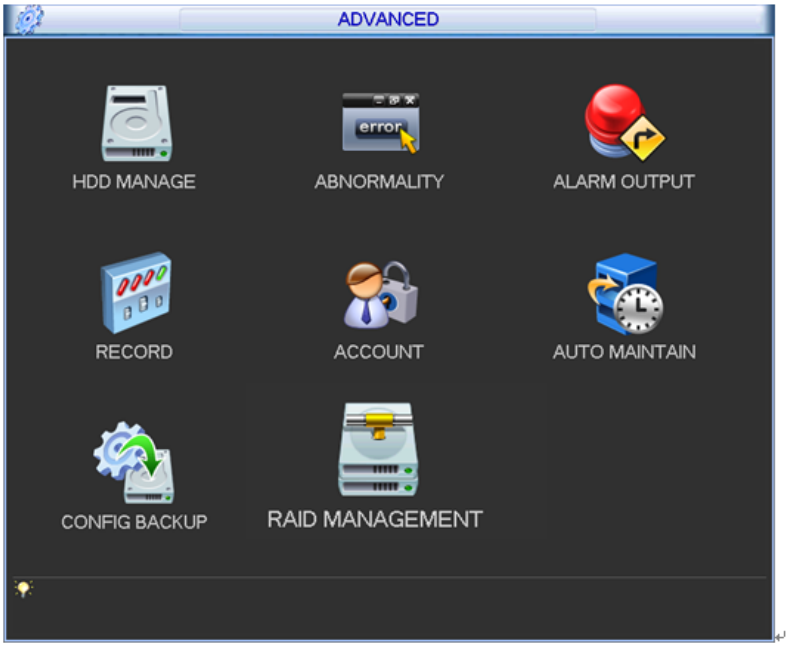


Figure 3-69

3.7.1 HDD Management

Here is for you to view and implement hard disk management. See Figure 3-70.

You can see 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 alarm set button, the interface is shown as below. See Figure 3-71. (This interface is just like the abnormity setup). Please refer to chapter 3.7.2 for detailed information.
- HDD operation: You can select HDD mode from the dropdown list such as read-only or you can erase all data in the HDD. Please note system needs to reboot to get all the modification activated.

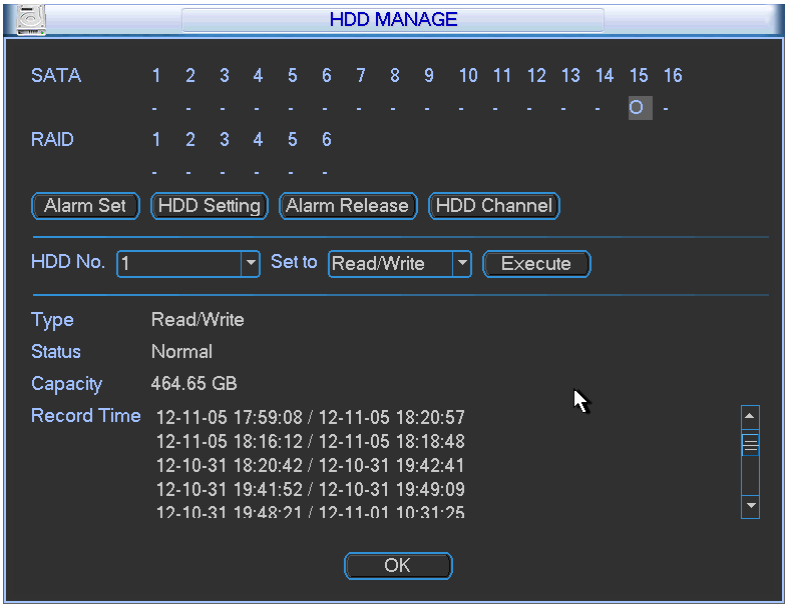


Figure 3-70

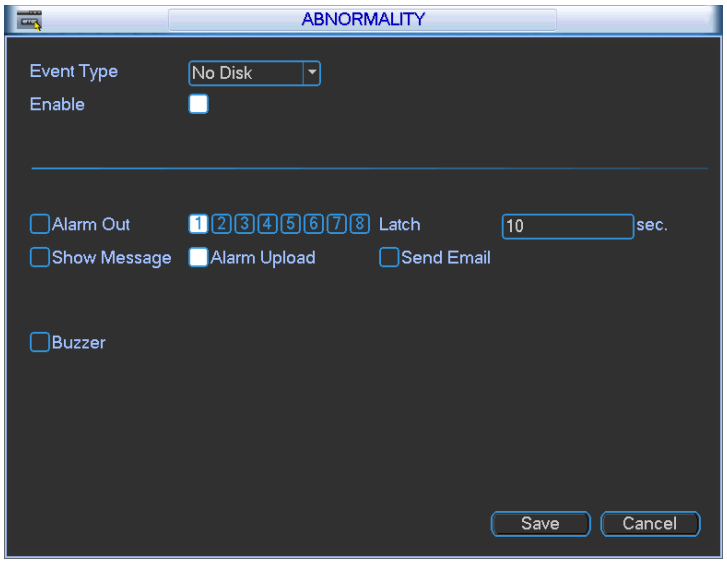


Figure 3-71

For the HDD group setup operation, please note:

- Each channel's records can be stored into the specified HDD Group.
- Each HDD Group is corresponding to several hard disks, while one hard disk is only included in one HDD Group.
- Each channel is only corresponding with one HDD Group, while one HDD Group can store records from several channels.

- HDD Group is only available for read-write HDD, other types of hard disks cannot be set as HDD Group.

Important:

- Current series software version can only set the HDD group operation of the read-write HDDs. It is not for the redundancy HDD.

HDD Setting

Click the button “HDD Setting” in Figure 3-70, system will pop up an interface as below. See Figure 3-72.

The number of hard disk from 1 to 16 is shown in the “HDD No.” column. If the HDD number is highlighted, it means this interface have access to the hard disk, otherwise it does not have access to the hard disk.

The “HDD Group” column lists the HDD Group number of current hard disk.

When you are setting the HDD Group, please choose the corresponding HDD Group number from the dropdown list and save the settings.

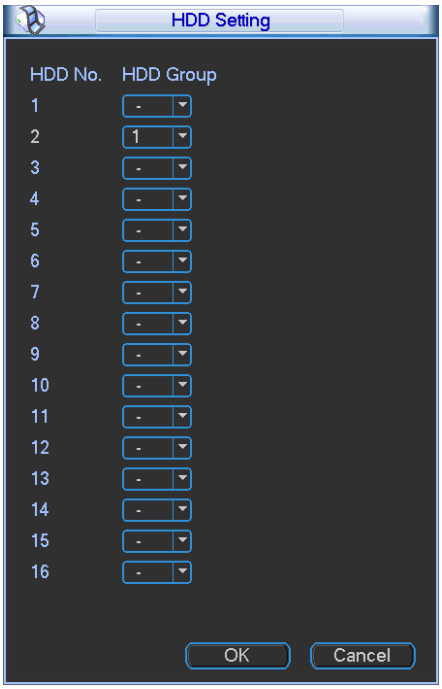


Figure 3-72

Important

HDD group here refers to the HDD port number it does not change in case you replace the HDD. System needs to reboot to activate current setup after you set new HDD setup.

HDD Channel Setting

Click the button named with “Channel Setting” in Figure 3-70, system will pop up an interface shown as in Figure 3-73.

Channel:: Here you can view the channel amount of the NVR.

Group name: It is the serial number of the HDD group management. If you set HDDs as group 1 and group 2, you can see there are only two HDD group numbers: Group 1 and Group 2.

Important

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

- Once you change the HDD Group settings, system will pack the records and then begin record again!
- After you removed one HDD channel group, corresponding channel record will be saved on the HDD of the same group.

Figure 3-73

3.7.2 Abnormality

Abnormality interface is shown as in Figure 3-74.

- Event type: There are several options for you such as disk error, no disk, disconnection, IP conflict, MAC conflict, redundant power and etc.
- Alarm output: Please select alarm activation output port (multiple choices).
- Latch: Here you can set corresponding delaying time. The value ranges from 1s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Show message: system can pop up the message in the local screen to alert you when alarm occurs.
- 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 email to alert you when alarm occurs.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when alarm occurs.

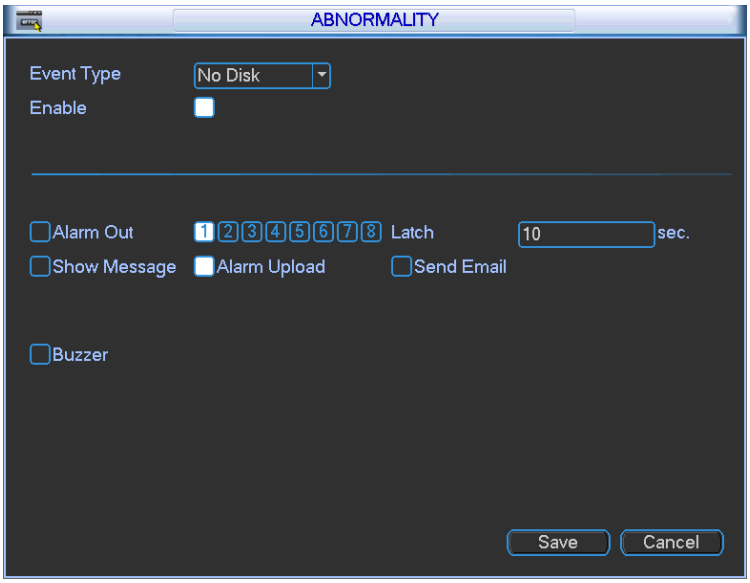


Figure 3-74

3.7.3 Alarm Output

Here is for you to set proper alarm output.

Please highlight icon to select the corresponding alarm output.

After all the setups please click OK button, system goes back to the previous menu. See Figure 3-75.

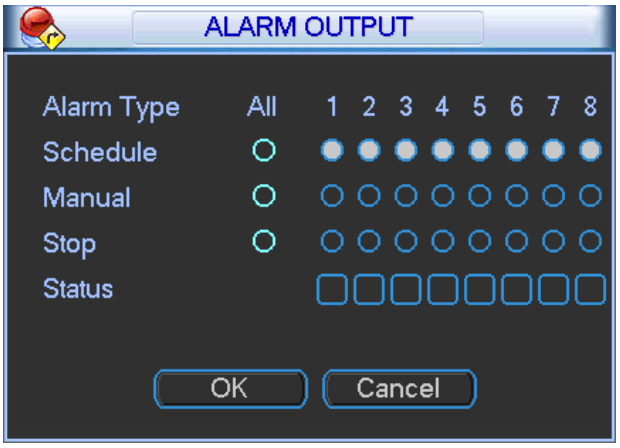


Figure 3-75

3.7.4 Manual Record

Note:

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

3.7.4.1 Manual record menu

Right click mouse on the preview mode or in the main menu, from Advanced->Manual Record, you can see manual record menu is shown as in Figure 3-76. You can click the PgUp/PgDn button to view more channels.

3.7.4.2 Basic operation

There are two modes: main stream and extra stream. There are three statuses: schedule/manual/stop. Please highlight icon "○" to select corresponding channel.

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

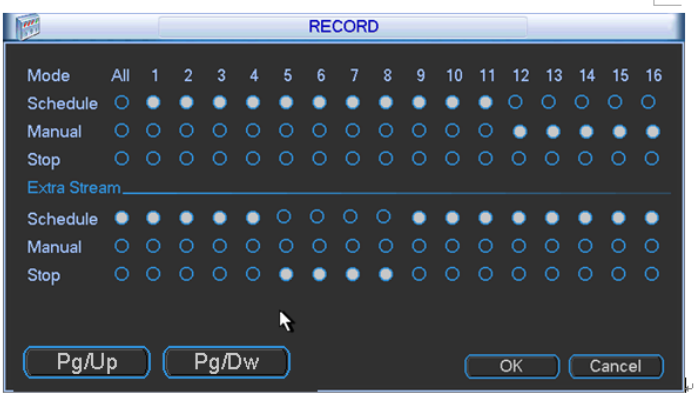


Figure 3-76

3.7.4.3 Enable/disable record

Please check current channel status: “○” means it is not in recording status, “●” means it is in recording status.

You can use mouse or direction key to highlight channel number. See Figure 3-77.

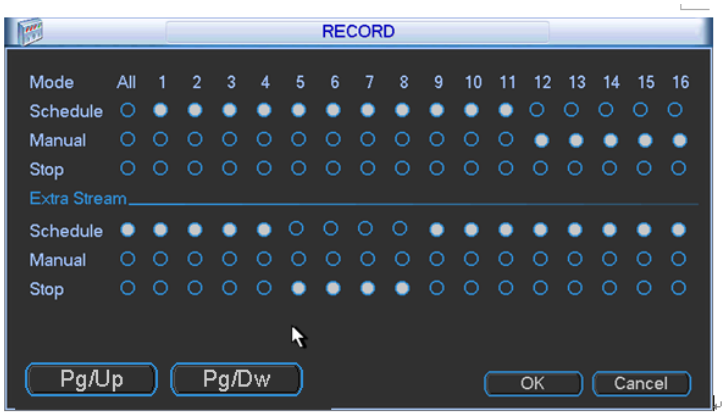


Figure 3-77

3.7.4.4 Enable all channel recording

Highlight ○ below All, you can enable all channel recording.

- All channel schedule record

Please highlight “ALL” after “Schedule”. See Figure 3-78.

When system is in schedule recording, all channels will record as you have previously set (Main menu->Setting->Schedule).

The corresponding indication light in front panel will turn on.

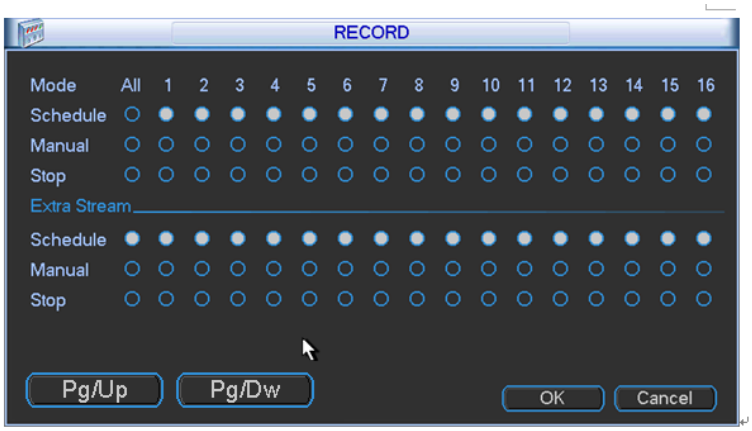


Figure 3-78

- All channel manual record

Please highlight “ALL” after “Manual.” See Figure 3-79.

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.

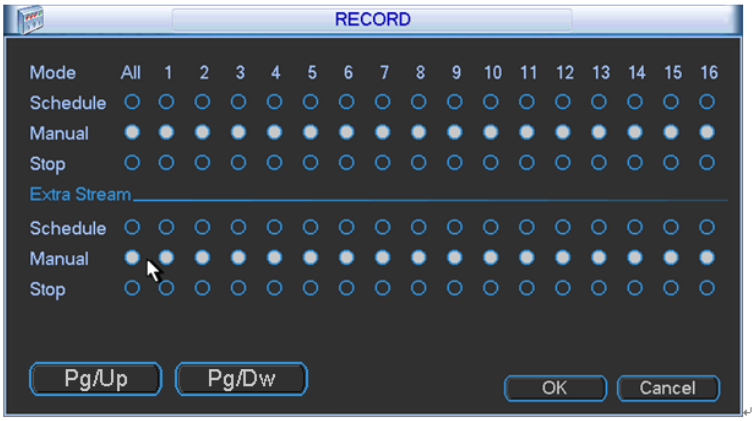


Figure 3-79

3.7.4.5 Stop all channel recording

Please highlight "ALL" after "Stop". See Figure 3-80.

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

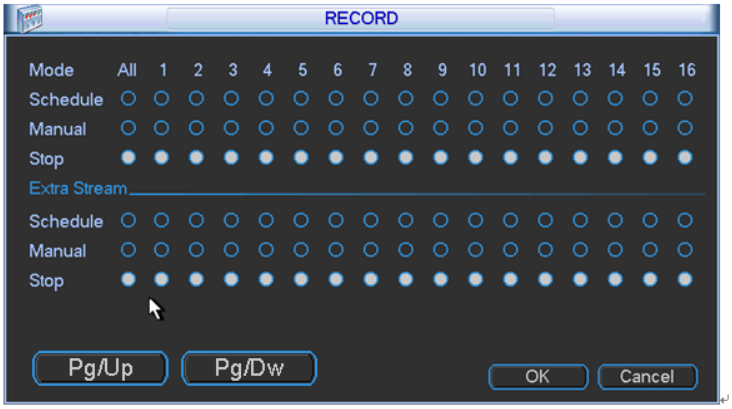


Figure 3-80

3.7.5 Account

Here is for you to implement account management. See Figure 3-81. Here you can:

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

For account management please note:

- For the user account name and the user group, the string max length is 6-byte. The backspace in front of or at the back of the string is invalid. There can be backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.

- The user name and group name can consist of eight bytes. One name can only be used once. There are four default users: admin/user/guest and hidden user “default”. Except user guest, other users have administrator right.
- Hidden user “default” is for system interior use only and can not be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.
- One user should belong to one group. User right can not exceed group right.
- About reusable function: this function allows multiple users use the same account to login.

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

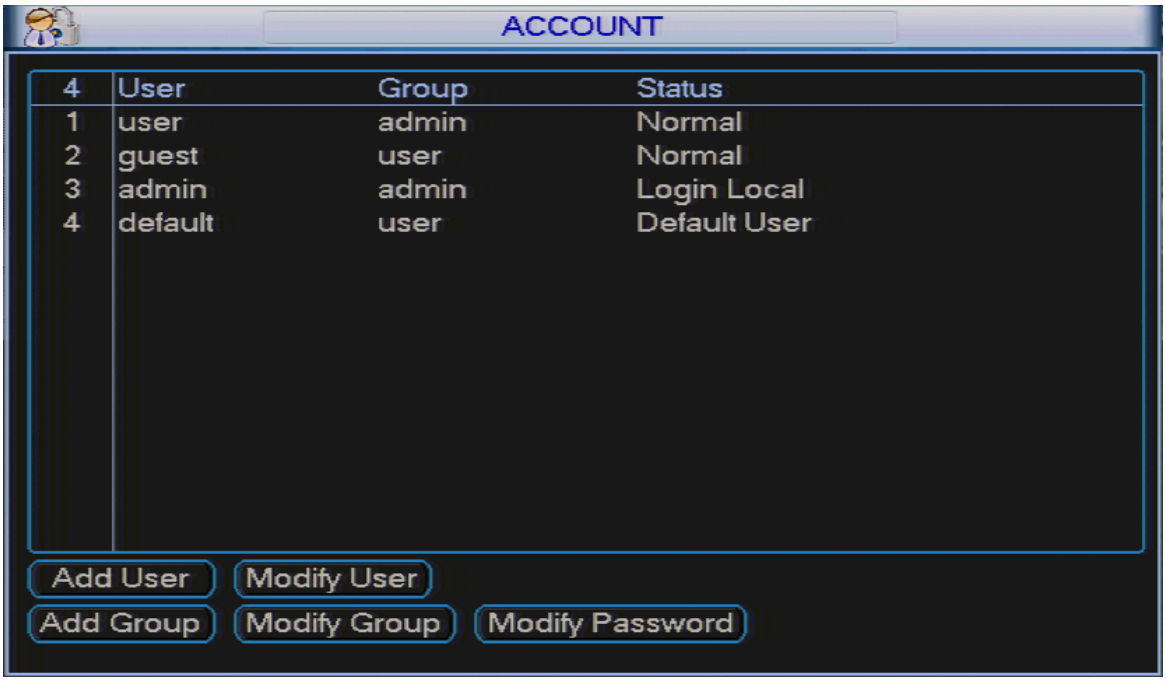


Figure 3-81

3.7.5.1 Modify Password

Click password button, the interface is shown as in Figure 3-82.

Here you can modify account password.

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.

For the users of user account right, it can modify password of other users.

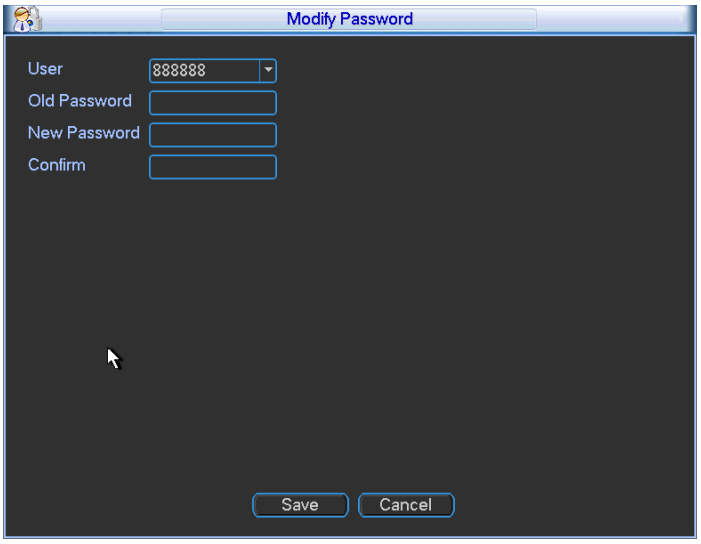


Figure 3-82

3.7.5.2 Add/Modify Group

Click add group button, the interface is shown as below. See Figure 3-83.

Here you can input group name and then input some memo information if necessary.

There are total 29 rights. The modify group interface is similar to the Figure 3-83.

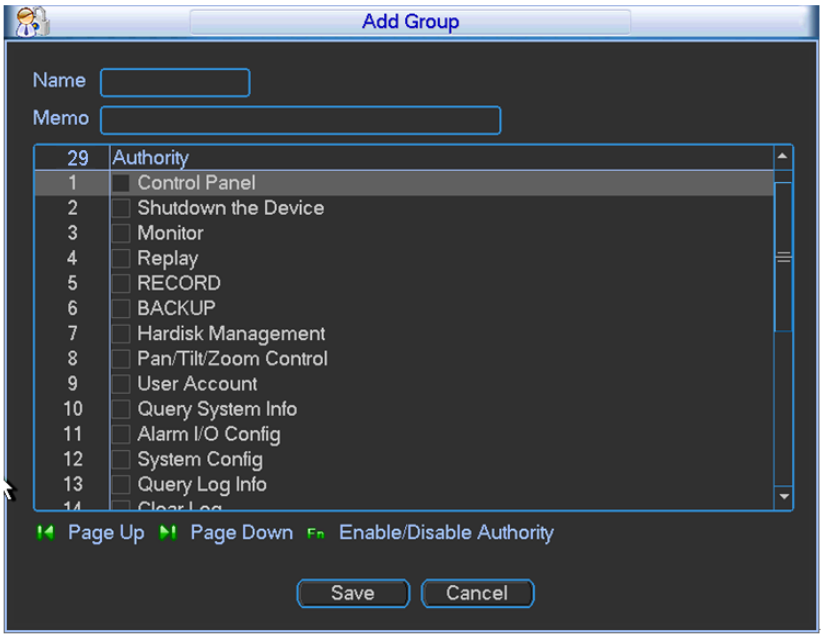


Figure 3-83

3.7.5.3 Add/Modify User

Click add user button, the interface is shown as in Figure 3-84.

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 lower than the admin account.

The modify user interface is similar to Figure 3-84.

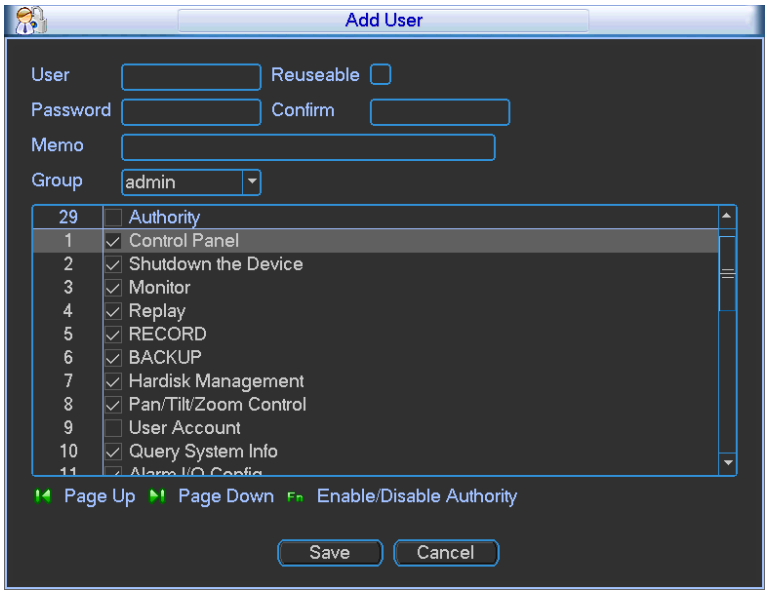


Figure 3-84

3.7.6 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 3-85.

You can select proper setup from dropdown list.

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

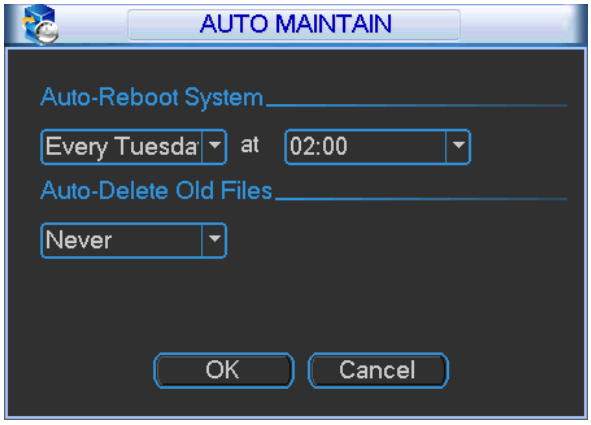


Figure 3-85

3.7.7 Config Backup

The configuration file backup interface is shown as below. See Figure 3-86.

This function allows you to copy current system configuration to other devices.

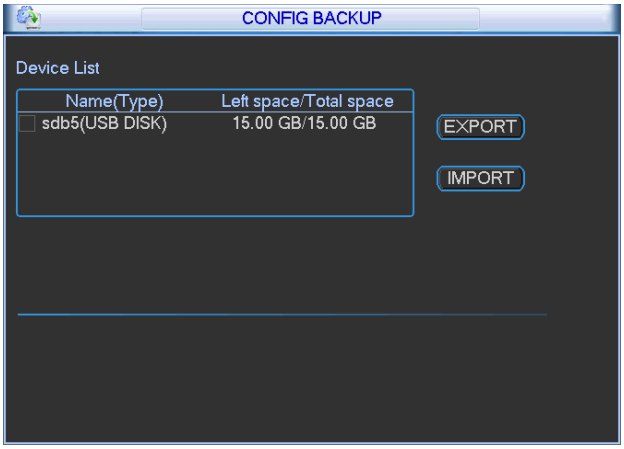


Figure 3-86

3.7.8 RAID Management

This interface is for you to manage RAID disk, display RAID name, type, free space, total space, status and etc. You can add or delete RAID disk here. See Figure 3-87.

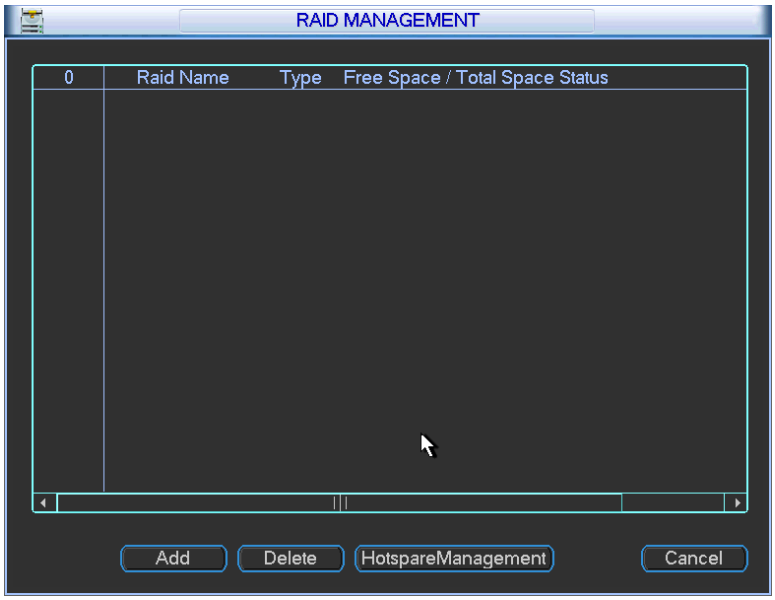


Figure 3-87

Click Hotspare management button in Figure 3-87, you can go to the following interface to add or delete hotspare disk. See Figure 3-88.

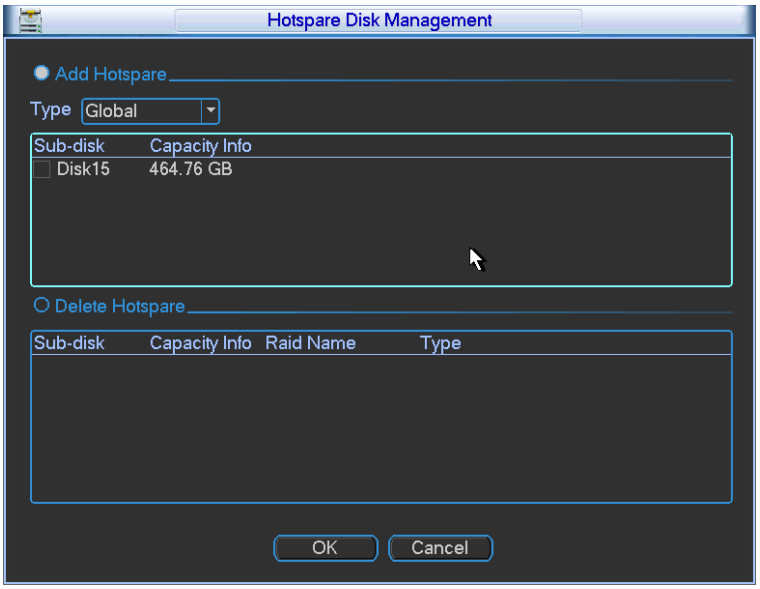


Figure 3-88

3.8 Shutdown

Double click shutdown button, system pops up a dialogue box for you to select. See Figure 3-89.

- 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, you can see system begins saving data and then shut down. Please note, you can view the corresponding dialogue box if you have no right to turn off the device.

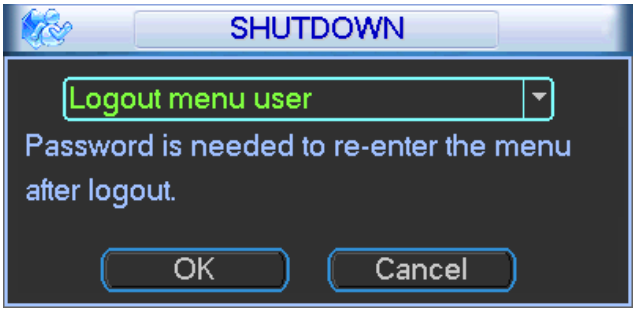


Figure 3-89

4 System Upgrade

There are two ways for you to update the NVR: you can use update tool of the Windows or the flash drive.

Please visit our website or contact our technical engineer to get the update tool for Windows.

You can use REC upgrade or ConfigTool. Please update manually if the ConfigTool can not find the device.

Please follow the steps listed below to use the REC Upgrade tool. See Figure 4-1.

1) Open the update tool and input device IP address and TCP port value (Usually it is 3777). The application layer software did not enable successfully if you can not update via port 3777. Then you can use port 3800 to update.
2) Click the Login button on the right side, system pops up a dialogue box. Here you can input user name (admin) and password (admin). Click the OK button, you can login. And you can see the Login button becomes Logout.
3) Click the Open files button and then select the upgrade file, click the BIOS button to update.

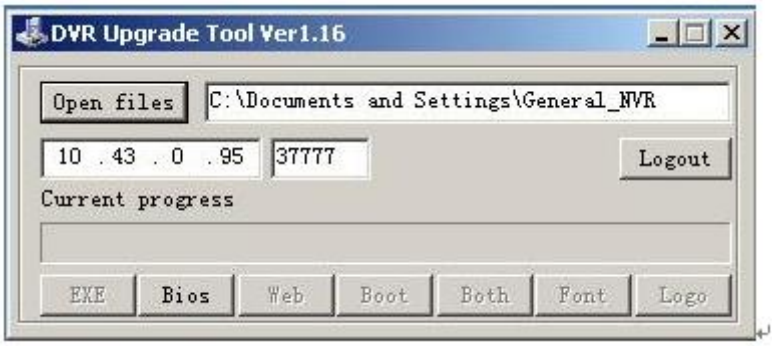


Figure 4-1

Or, you can use the flash drive to update. Please copy the update file to the flash drive and make sure the update file is update.bin. Insert the flash drive to one of the USB port. From the Main menu-Info->Version, click the Start button to begin update. See Figure 4-2. Please note the following figure is based on our 128-channel series product and it is for reference only.

Figure 4-2

5 WEB OPERATION

5.1 General Introduction

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

5.1.1 Preparation

Before log in, please make sure:

- PC and NVR connection is OK.
- You have set PC IP address, NVR IP address, subnet mask and gateway. (Please set the IP address of the same section for the PC and NVR. Please input corresponding gateway and subnet mask if there are routers.) This series product max supports 4 network adapters. The default setup is eth1:192.168.1.108, eth2:192.168.1.101, eth3:192.168.1.102 and eth4:192.168.1.103.
- Use order ping ***.***.***.***(NVR IP address) to check connection is OK or not.

5.1.2 Log in

Open the IE and then input the NVR IP address in the address column.

For example, if your NVR IP address is 10.10.3.16, then please input http:// 10.10.3.16 in IE address column. See Figure 5-1.

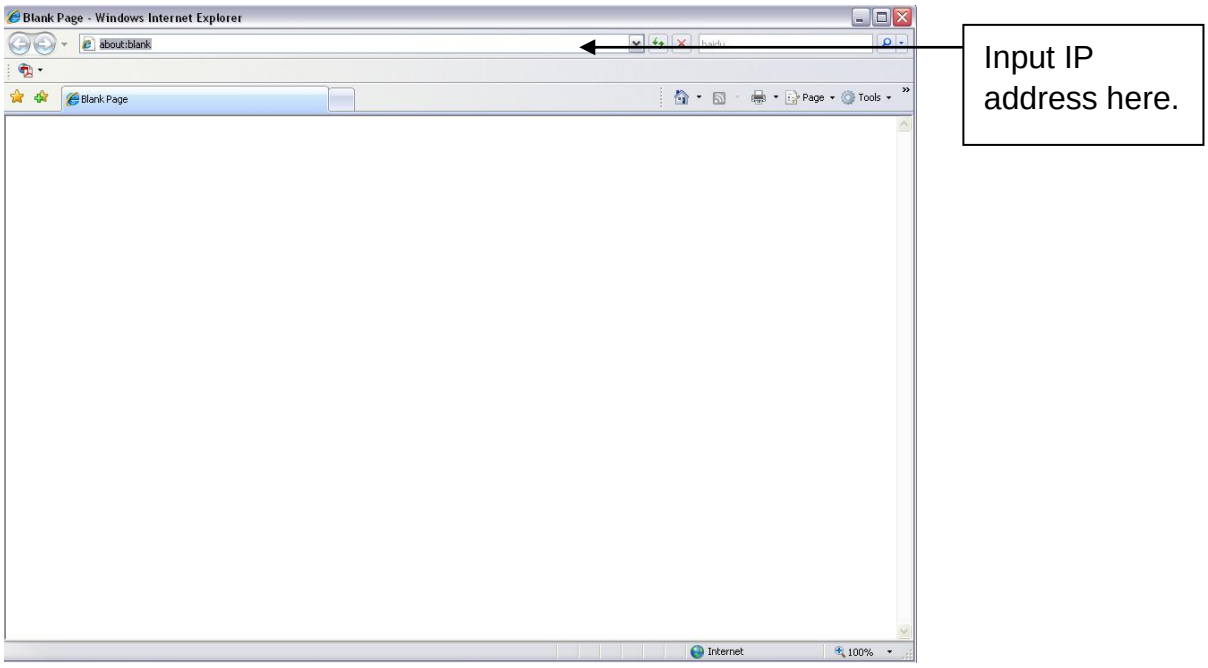


Figure 5-1 IE Interface

System pops up warning information to ask you whether 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 5-2.

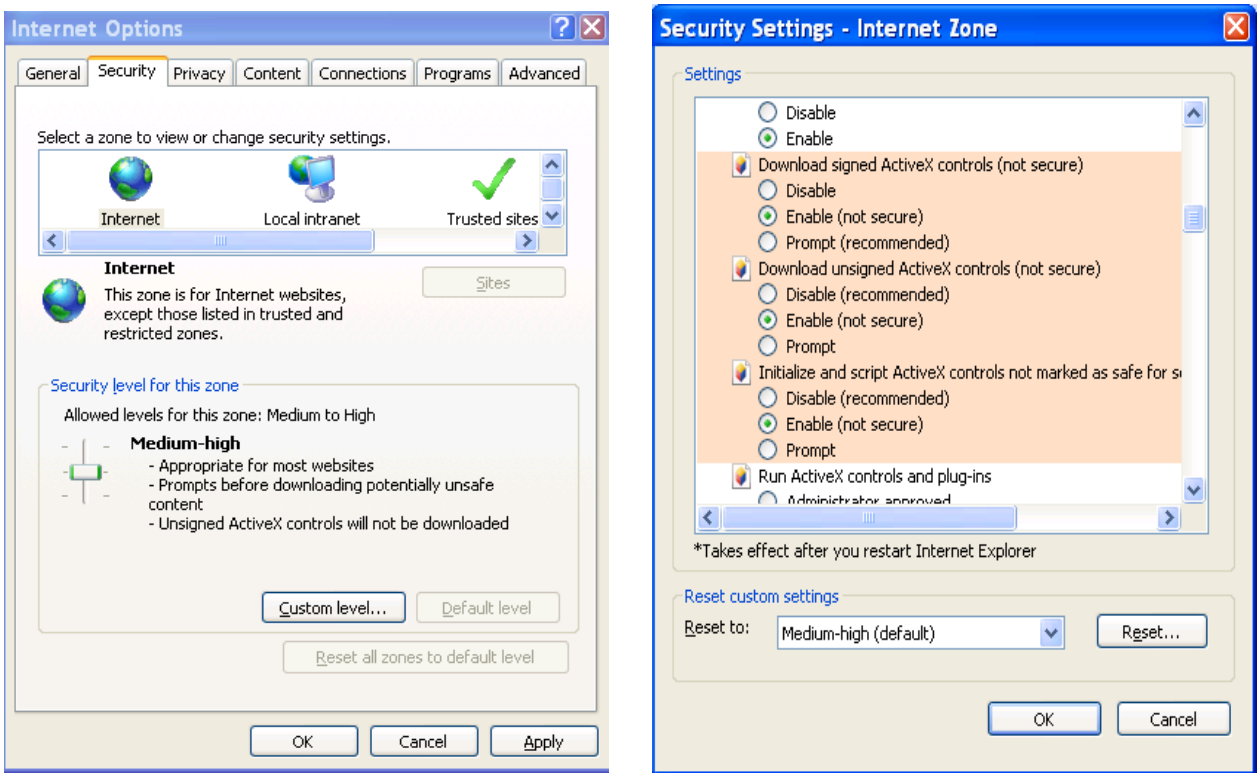


Figure 5-2 IE Safety Setup

After installation, the interface is shown as below. See Figure 5-3.

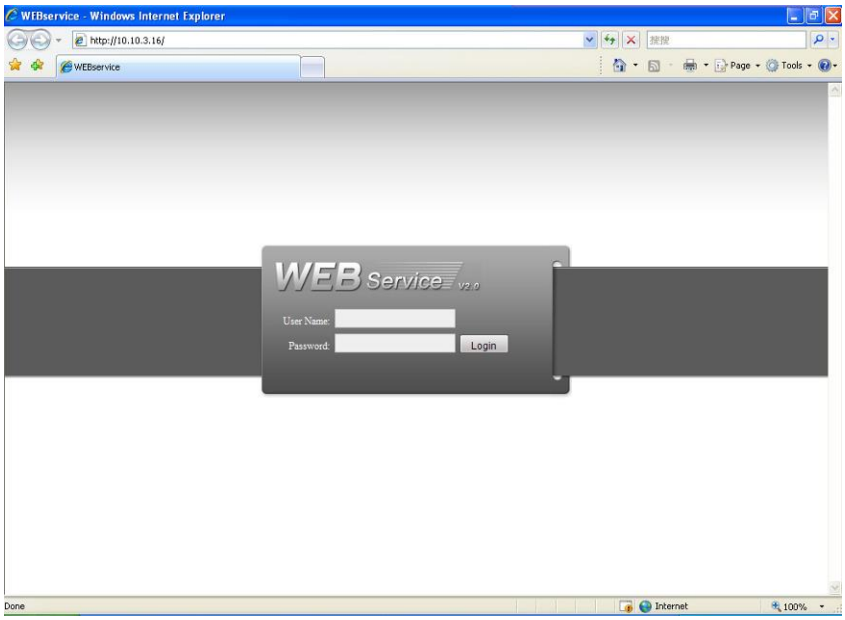


Figure 5-3 Login interface

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.

5.2 Main Interface

NVR web main interface is shown as in Figure 5-4.

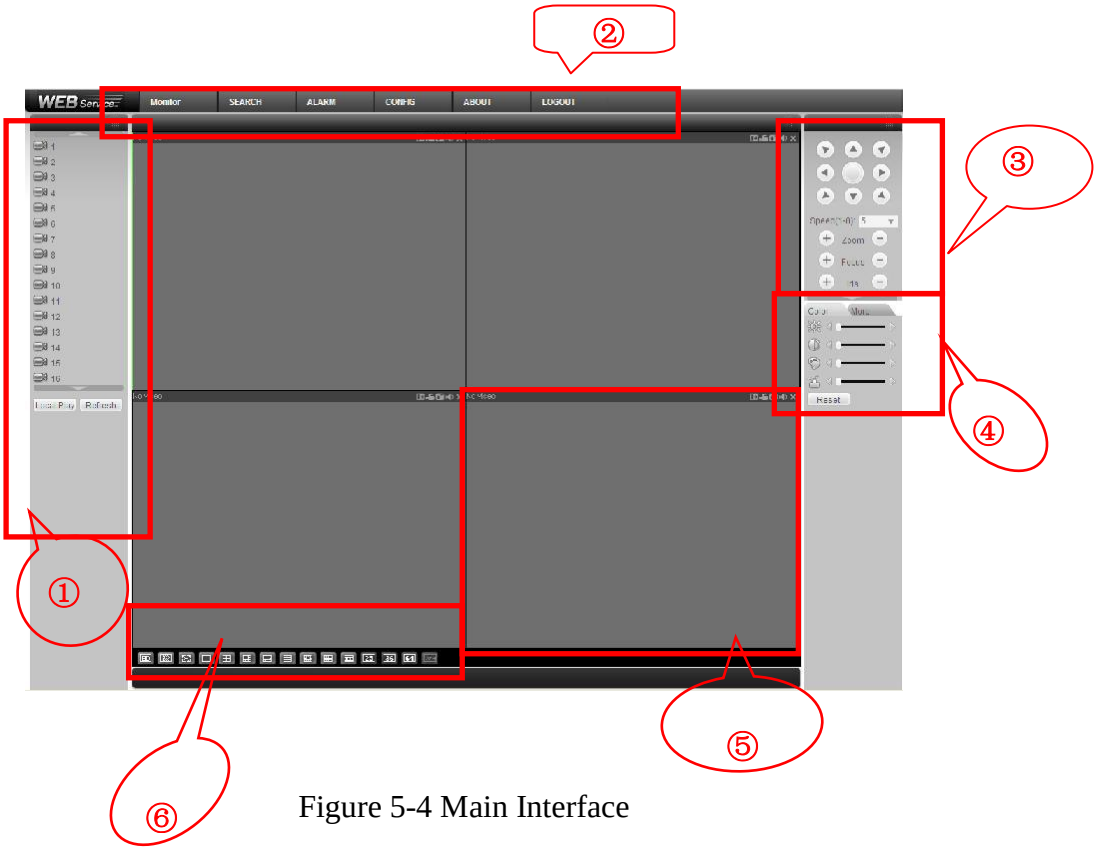


Figure 5-4 Main Interface

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

5.2.1 Monitor Channel Menu Tree

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

Please note the following figure is for reference only.

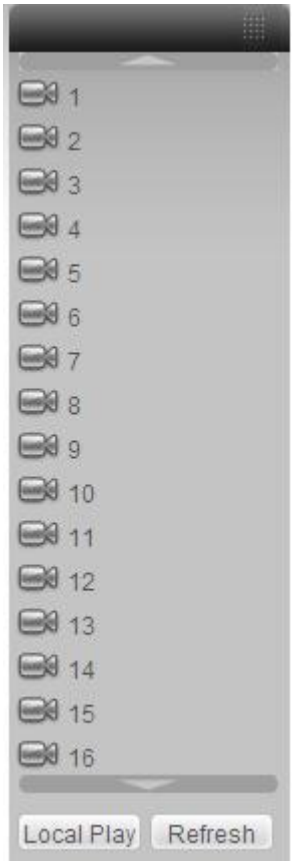


Figure 5-5 Monitor Channel Menu Tree

Please refer to the following sheet for detailed information.

Parameter	Function
CAM 1 to CAM 128(64)	Channel 1 to channel 128(64).
Local play	Click local play button to select file to play in PC.
Refresh	Click this button to refresh monitor channel name.

Please left click one monitor to view real-time video, the monitor window is shown as in Figure 5-6.

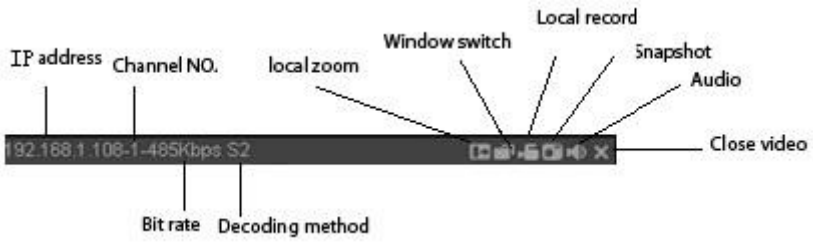


Figure 5-6 Real-time Monitor

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. **Please initial version does not support this function.**
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 snapshoot important video. All images are memorized in system folder: \ picture download (default). **Please initial version does not support this function.**
Audio	Turn on or off audio.
Close video	Close video in current window.

5.2.2 System Menu

System menu is shown as in Figure 5-7.

Please refer to chapter 5.3 Configuration, chapter 5.4 Search, chapter 5.5 Alarm, chapter 5.6 About, chapter5.7 Log out for detailed information.

Figure 5-7 System Menu

5.2.3 Monitor Window Switch

The monitor window switch interface is shown as in Figure 5-8.

Figure 5-8 Monitor Window Switch

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

----It is video quality adjustment button. It has relationship with decode via software.


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

5.2.4 Preview Window Switch

The preview window switch interface is shown as in Figure 5-9.

NVR series products **do not** support this function.

Figure 5-9 Preview Window Switch

5.2.5 PTZ Control

Before PTZ operation, please make sure you have properly set PTZ protocol.

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

Please 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.

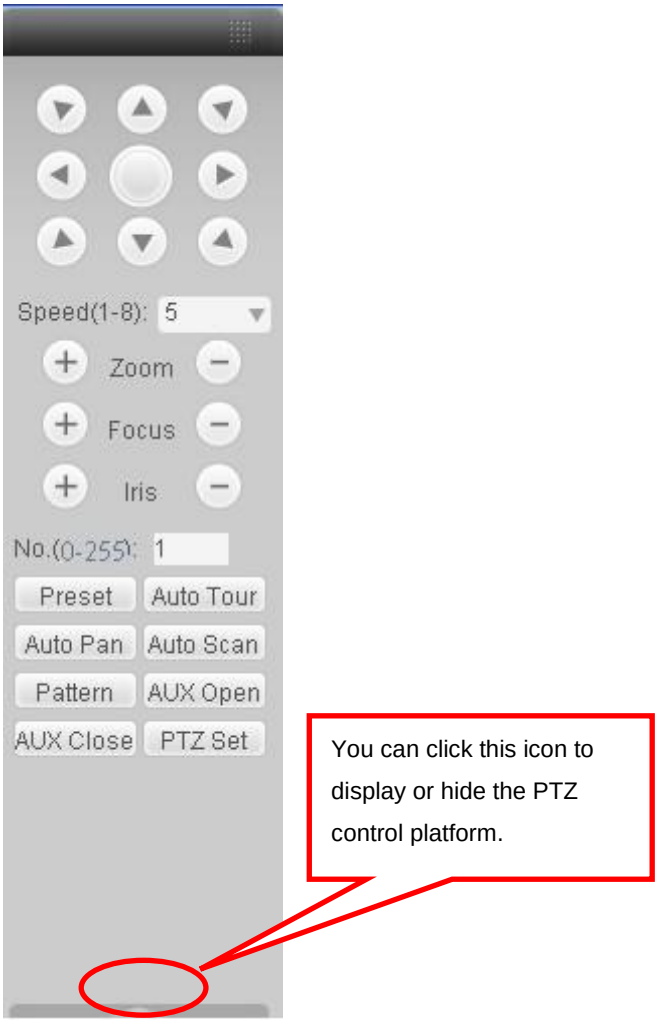


Figure 5-10 PTZ Interface

Click PTZ set button, the interface is shown as in Figure 5-11.

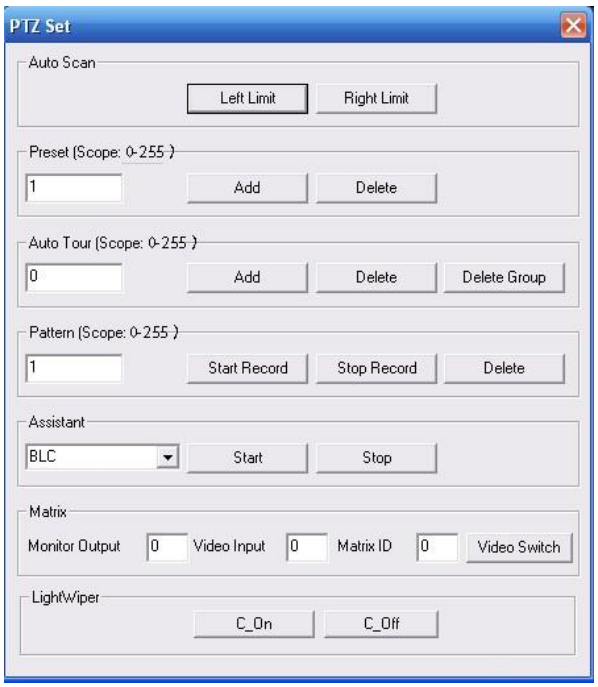


Figure 5-11 PTZ Setup

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, you have 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. Please note the peripheral device shall support this function.

5.2.6 Color and More Setup

Color and other setup interface are shown as in Figure 5-12.

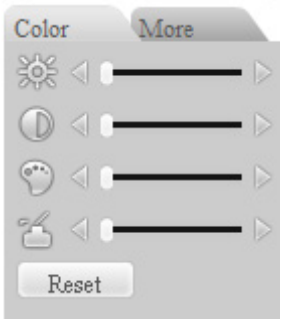


Figure 5-12 Color

Please refer to the following sheet for detailed information.

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

Click more button, the interface is shown as in Figure 5-13.

Figure 5-13 Color and More

Please refer to the following sheet for detailed information.

Parameter		Function
More	Picture Path	Click picture path button, system pops up an interface for you to modify path.
	Record Path	Click record path button, system pops up an interface for you to modify path.
	Reboot	Click this button to reboot device. If there is local use logged in the system menu, or the Web logged in user has no right to reboot the device system pops up a dialogue box to alert you.
	Record format	Here you can select record format. It includes DAV, ASF.

5.3 Configuration

5.3.1 System Information

5.3.1.1 Version Information

Here you can view device hardware feature and software version information. Please note the following figure is based on our 128-channel series product and it is for reference only. See Figure 5-14.

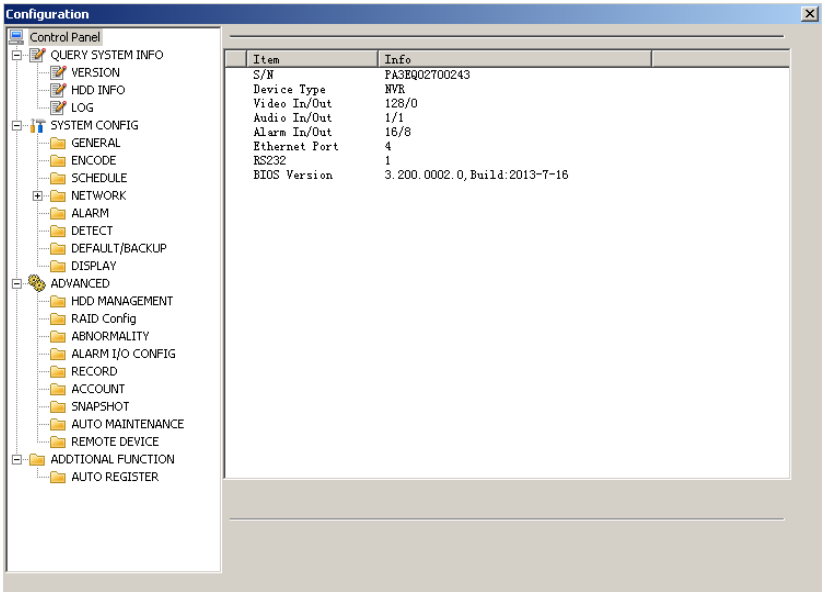


Figure 5-14 Version Information

5.3.1.2 HDD information

Here you can view local storage status such as free capacity and total capacity. See Figure 5-15.

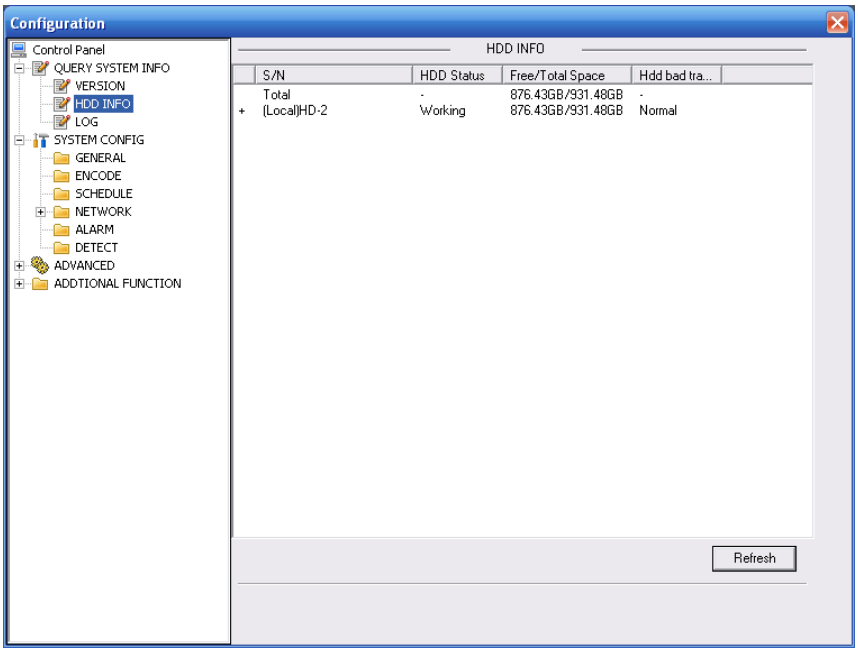


Figure 5-15 HDD Information

5.3.1.3 Log

Here you can view system log. See Figure 5-16.

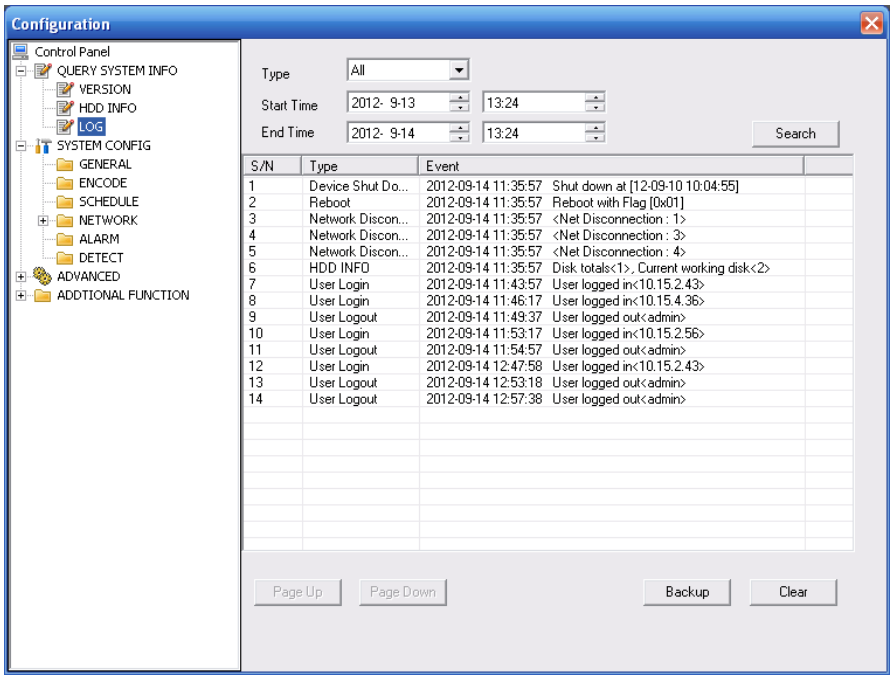


Figure 5-16 Log

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.

5.3.2 System Configuration

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

5.3.2.1 General Setup

Here you can set system time, record length, video format and etc. See Figure 5-17.

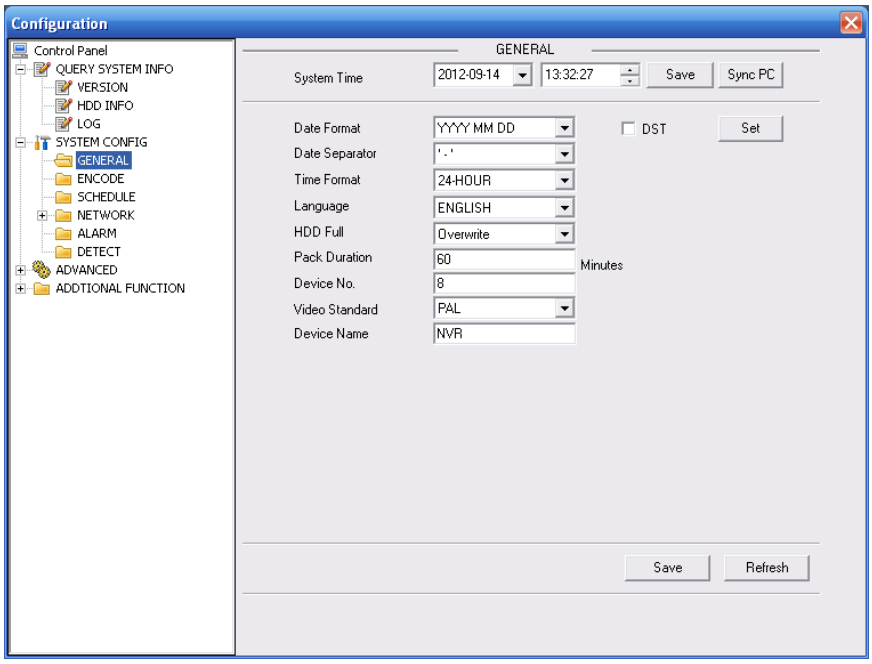


Figure 5-17 General Setup

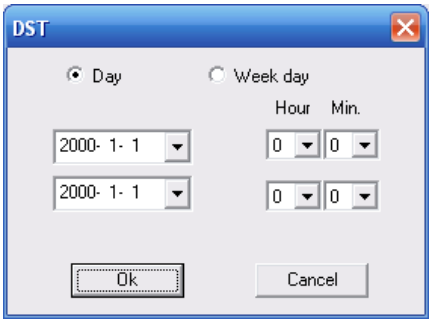


Figure 5-18 DST

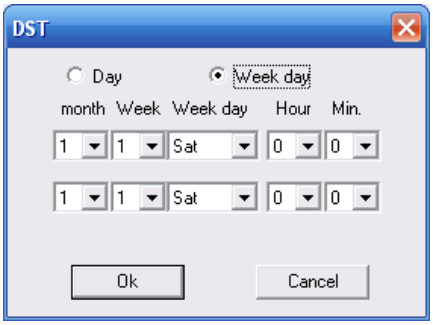


Figure 5-19 DST

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 5-18and Figure 5-19.
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.

5.3.2.2 Encode

The encode interface is shown as in Figure 5-20.

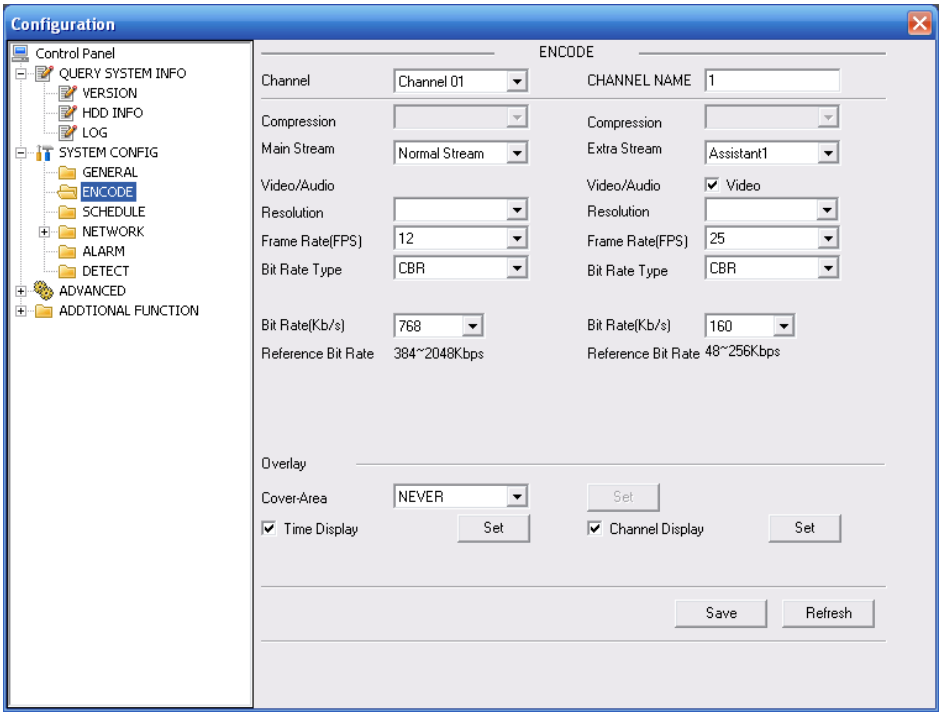


Figure 5-20 Encode

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	Sysem supports MJPG and H.264.

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/BCIF/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 bit value, the better the image quality. Reference bit is an ideal range for you to set bit rate.
Overlay (Cover area)	• Here you can privacy mask the specified video in the monitor video. • One channel max supports 4 privacy mask zones. The privacy mask includes two options: Never/monitor. Never: It means do not enable privacy mask function. Monitor: the privacy mask zone can not 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.

5.3.2.3 Schedule

Here you can set different periods for various days. There are max six periods in one day. See Figure 5-21.

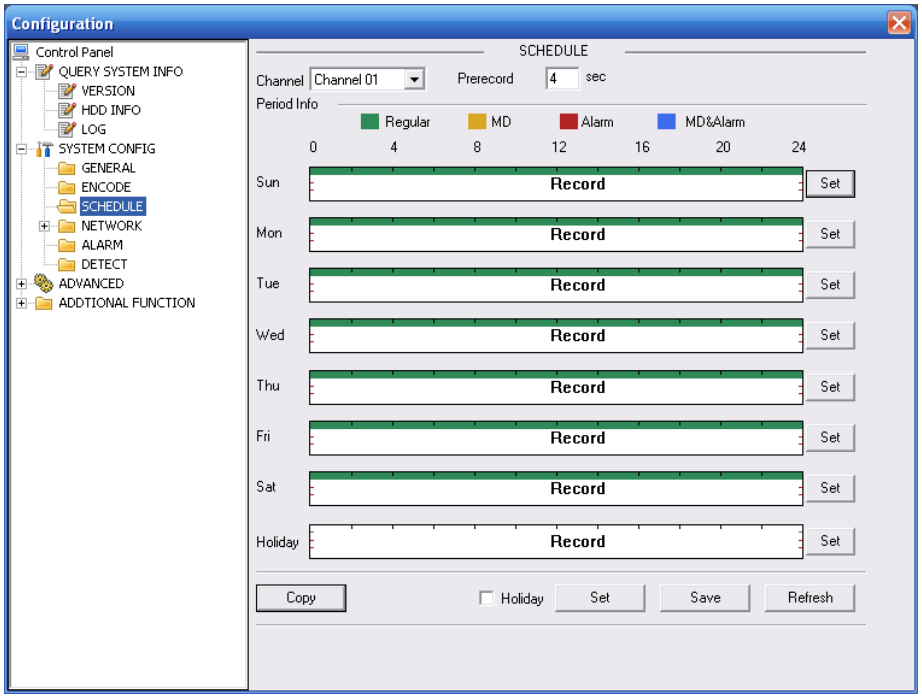


Figure 5-21 Schedule

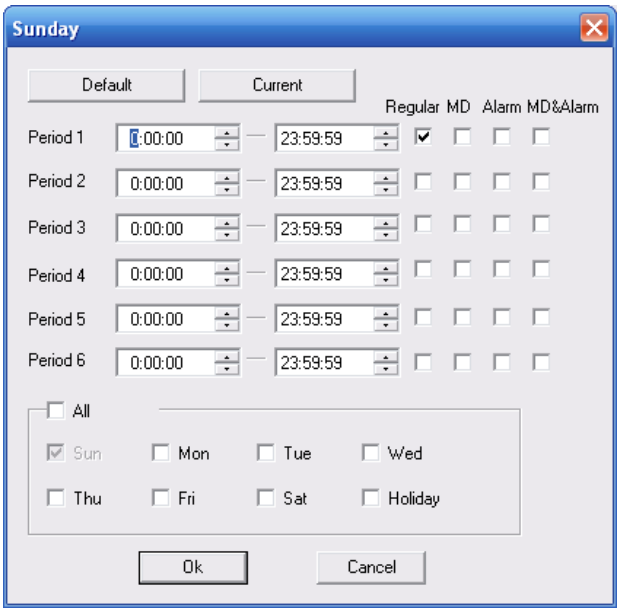


Figure 5-22 Schedule Time

Figure 5-23 Copy

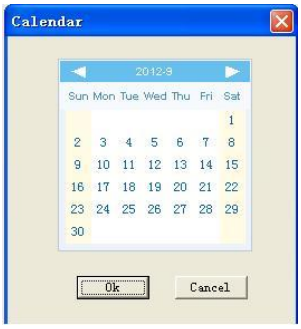


Figure 5-24

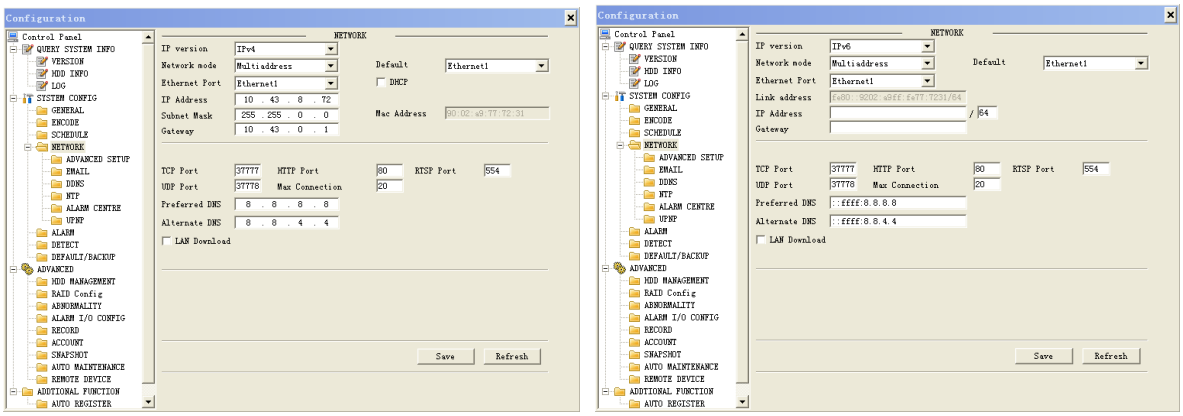
Please refer to the following sheet for detailed information.

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 video before activating the record operation into the file. (Depends on data size).
Setup	In Figure 5-21, click set button, you can go to the corresponding setup interface. See Figure 5-22. Please set schedule period and then select corresponding record type: schedule, motion detection, and alarm. 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 5-21 and then click save to save current time period setup.
Holiday	Click Set button, system pops up a dialogue box shown as in Figure 5-24. Here you can set holiday date. Check the box, it means current chann shall record as your holiday setup. Please go to the Period interface t set the holiday date record setup.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more (all) channels. The interface is shown as in Figure 5-23. Please note the following figure is based on our 128-channel series product and it is for reference only.

5.3.2.4 Network

Network interface is shown as in Figure 5-25.

System supports IPv4 and IPv6 addresses both.



IPv4 IPv6

Figure 5-25 Network

Please refer to the following sheet for detailed information.

Parameter	Function
IP version	Here you can select IP address format. There are two modes: IPv6/IPv4.

Parameter	Function
Network mode	It includes multiple-address, fault tolerance and load balance.
Default card	You need to select default network card if the network mode is multiple-address.
Ethernet port	You need to select Ethernet port here if the network mode is multiple-address.
DHCP	It is to auto search IP. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify.
IP Address	Please input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
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.
Preferred DNS serv	DNS server IP address.
Alternate DNS serv	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.

Advanced setup

The remote host can choose multi-cast and PPPOE to set. See Figure 5-26.

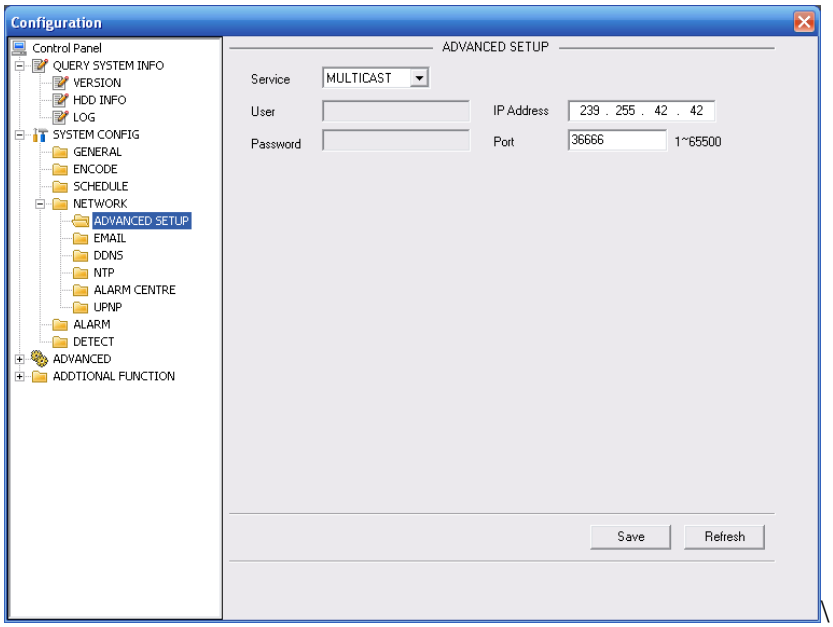


Figure 5-26 Network

Parameter		Function
Remote host	PPPOE	• Input the user name and password which ISP(Internet service supplier) provided and 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 succeed, get the current IP address and visit this IP address via WEB.

Email

The email interface is shown as in Figure 5-27.

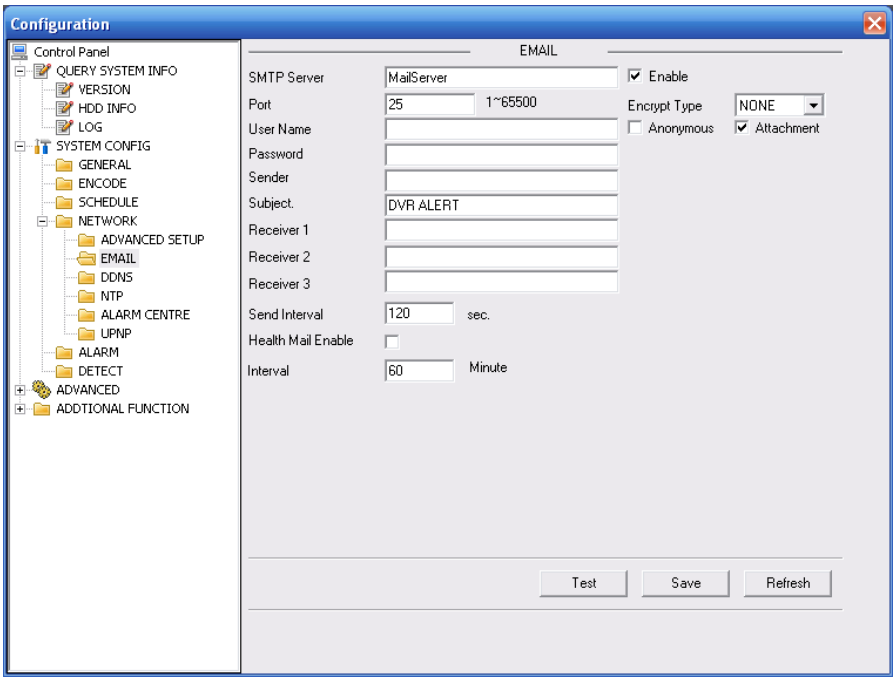


Figure 5-27 Email

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 5.3.2.4.) to set the server IP that can parse the domain.
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 5-28.

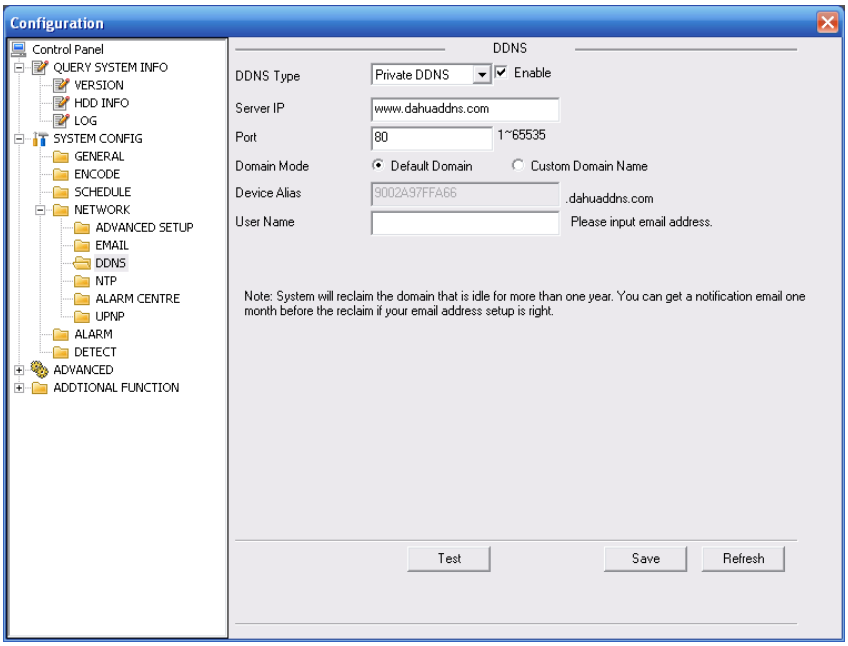


Figure 5-28 DDNS

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. The private DDNS protocol means you use our self-defined private protocol to realize DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.
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.

Quick DDNS and Client-end Introduction

1) Background Introduction

Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the DVR 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 realizes the bonding of the domain name and the IP address. Right now, current DDNS server is for our own devices only. 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 MAC address) for your option. You can also use customized valid domain name (has not registered.).

3) Operation

Before you use Quick 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 customized 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 domain name to login installed of the device IP.

- User name: It 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.

NTP

The NTP interface is shown as in Figure 5-29.

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

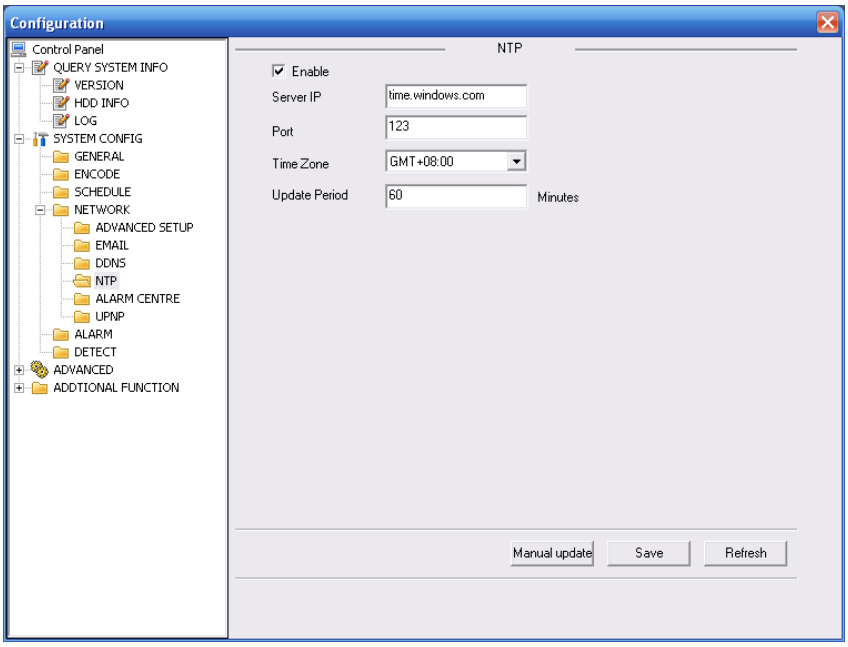


Figure 5-29 NTP

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.

Parameter	Function
Time Zone	Device current time zone.
Update Interval	Time update interval value.

Alarm Centre

Alarm centre interface is shown as below. See Figure 5-30.

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

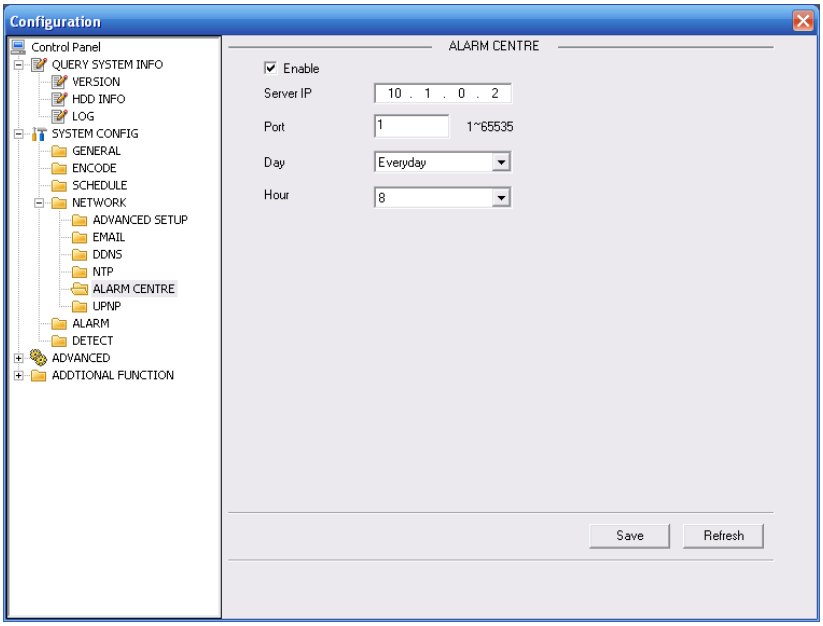


Figure 5-30 Alarm Centre

UNPN

Go to the UPnP interface, you can see an image is shown as in Figure 5-31.

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.

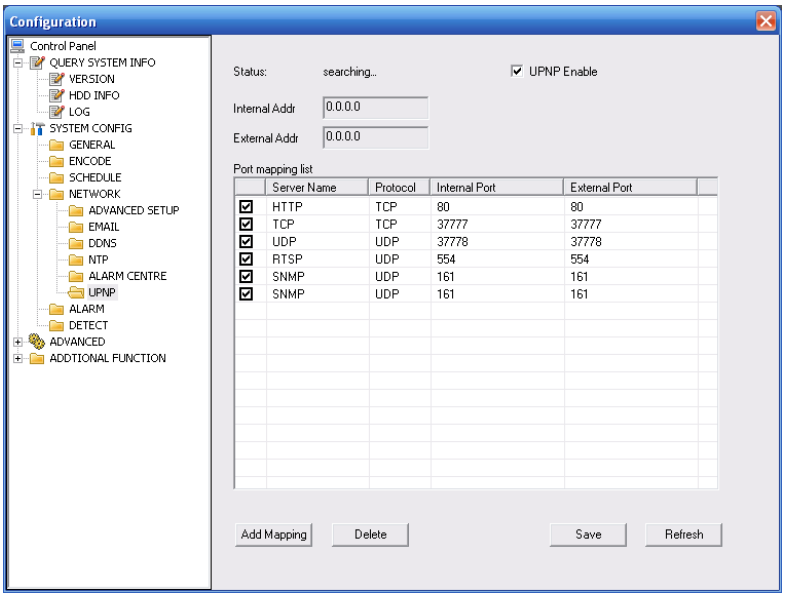


Figure 5-31 UNPN

5.3.2.5 Alarm

Alarm setup interface is shown as in Figure 5-32.

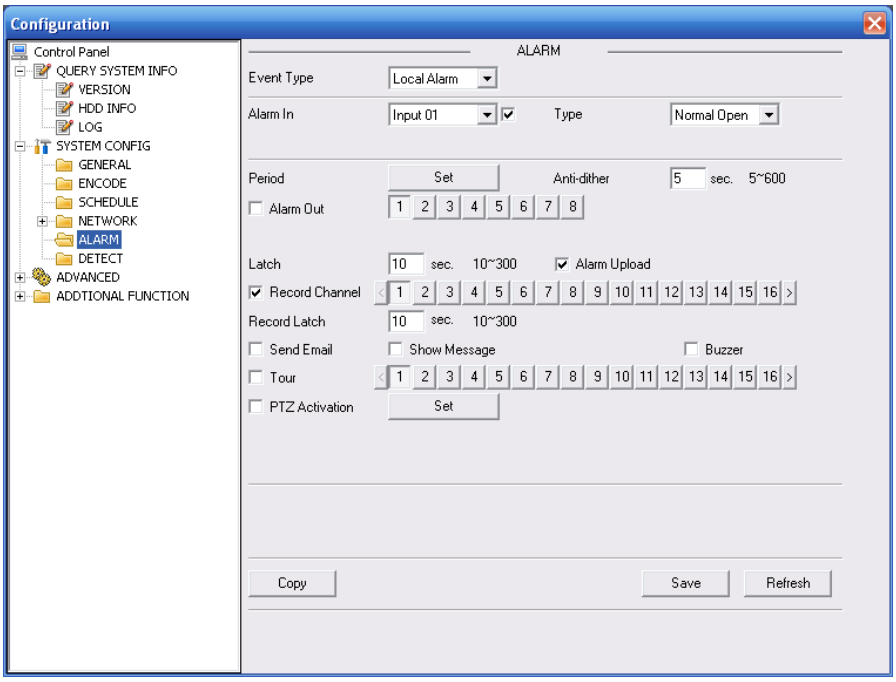


Figure 5-32 Alarm Setup

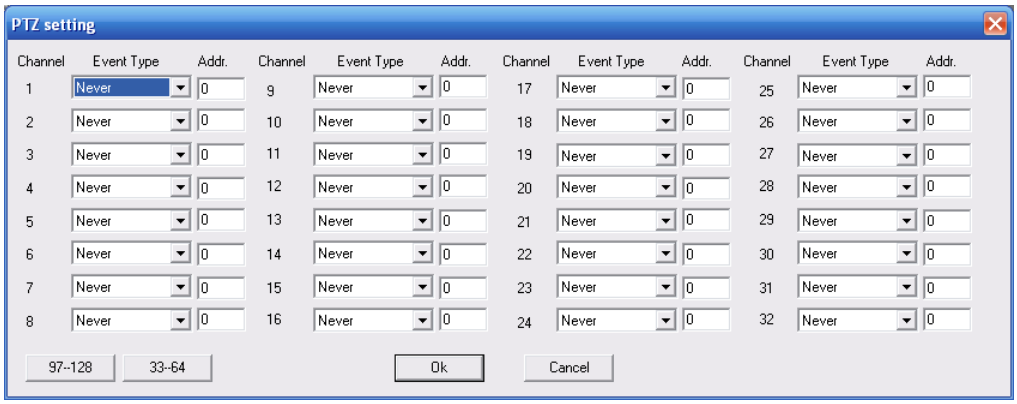


Figure 5-33 PTZ Setup

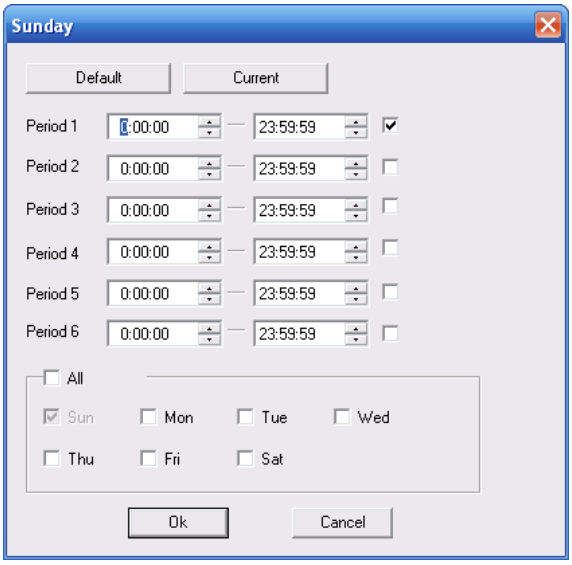


Figure 5-34

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	● Event type: There are four types. Local input/IPC external/IPC offline alarm. ➢ Local input alarm: The alarm signal system detects from the alarm input port. ➢ Network input alarm: It is the alarm signal from the network. ➢ IPC external alarm: It 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 record, PTZ, snap and etc. The alarm can last until the IPC and the NVR connection resumes.
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 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.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0 to 15s.

Parameter	Function
Relay Out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when 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 end The value ranges from 10 seconds to 300 seconds.
Record Channel	System auto activates current channel to record once 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 alarm ended. Th value ranges from 10s to 300s.
Email	Please draw a circle to enable email function. System can send out email to alert you when alarm occurs and ends.
Screen display	After enabled, alarm info will be prompted out on 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 occurs. Such as go to preset x when there is an alarm. • The PTZ configuration events include preset, tour, and pattern.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more (all) channels.

5.3.2.1 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 5-35.

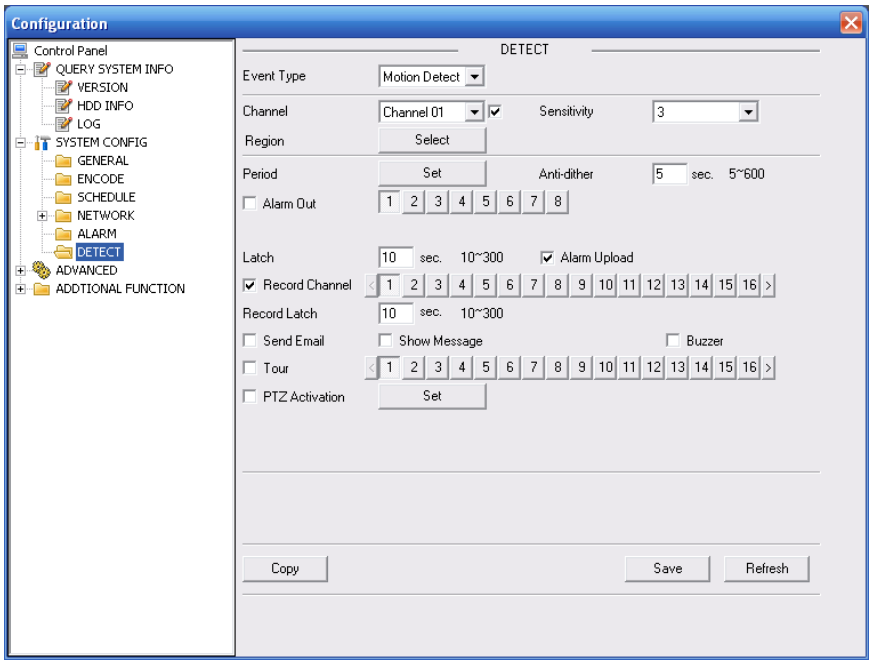


Figure 5-35 Detect

Please refer to the following sheet for detailed information.

Parameter	Function
Event type	Motion detect, video loss and video masking
Channel	select the channel to activate recording function
Sensitivity	System supports 6 levels. The sixth level has the highest sensitivity.
Enable button	Tick to enable
Region	There are 396(22X18) small zones. Blue area is the detection zone. Right click to view in full screen, click OK before 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 alarm occurred, system enables peripheral alarm device
Record channel	Select the recording channel (can be selected more than once); this channel will be activated to record when alarm occurs. Please note you need to set the motion detect record period in the Schedule interface (Main menu-Setting-Schedule) and go to the Record interface to set record mode as Auto (Main menu-Advanced-Record)
Send email	System can send out email to alert you when alarm occurs.
Tour	Here you can enable tour function when alarm occurs.

Parameter	Function
PTZ activation	Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm.

5.3.2.2 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 5-36.

Please note system can not restore some information such as network IP address.

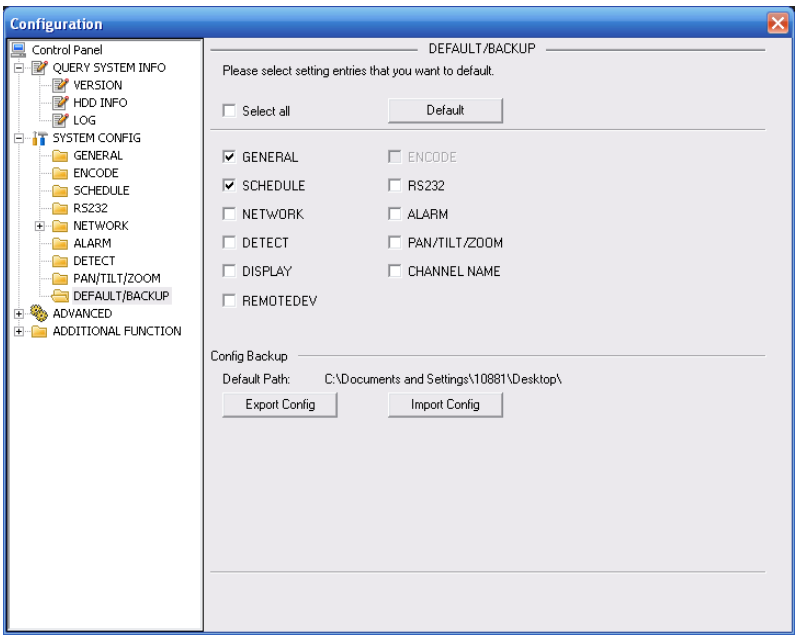


Figure 5-36 Default and Backup

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.

5.3.3 Advanced

5.3.3.1 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 5-37.

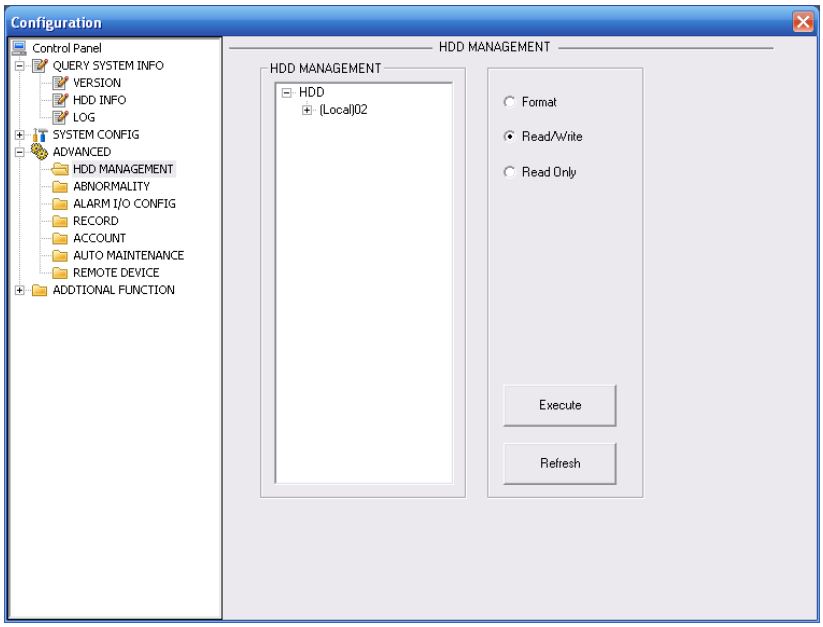


Figure 5-37 HDD Management

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.

5.3.3.2 RAID Management

This interface is for you to manage RAID disk, display RAID name, type, free space, total space, status and etc. You can add or delete RAID disk here. See Figure 5-38.

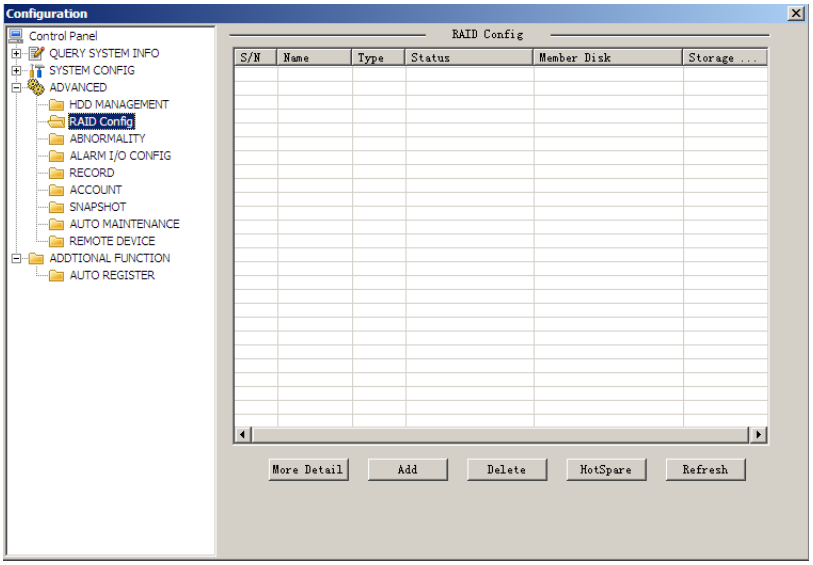


Figure 5-38

Click Hotspare management button in Figure 5-38, you can go to the following interface to add or delete hotspare disk. See Figure 5-41.

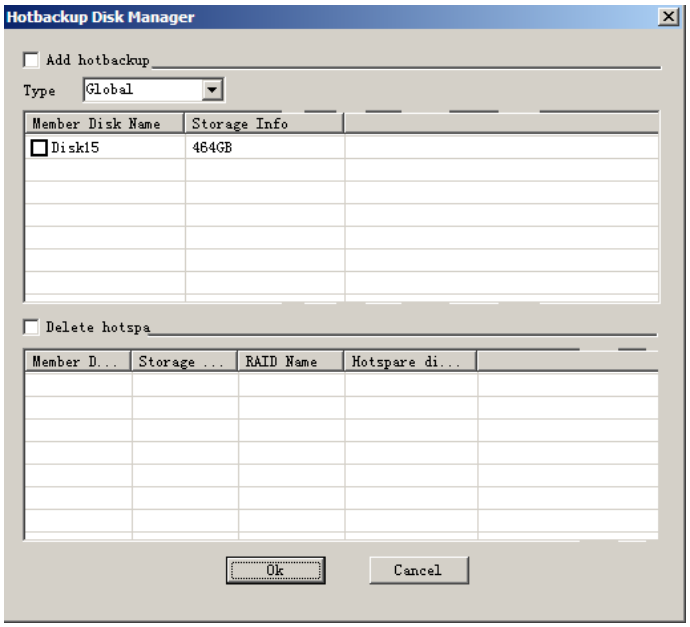


Figure 5-39

5.3.3.3 Abnormaliity

The interface is shown as in below. See Figure 5-40 and Figure 5-41.

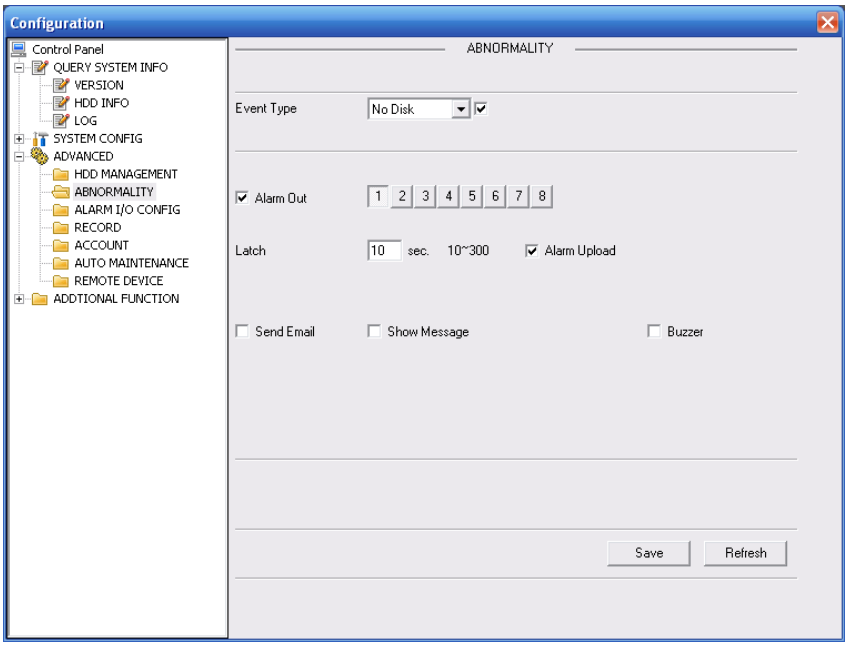


Figure 5-40 Abnormality -1

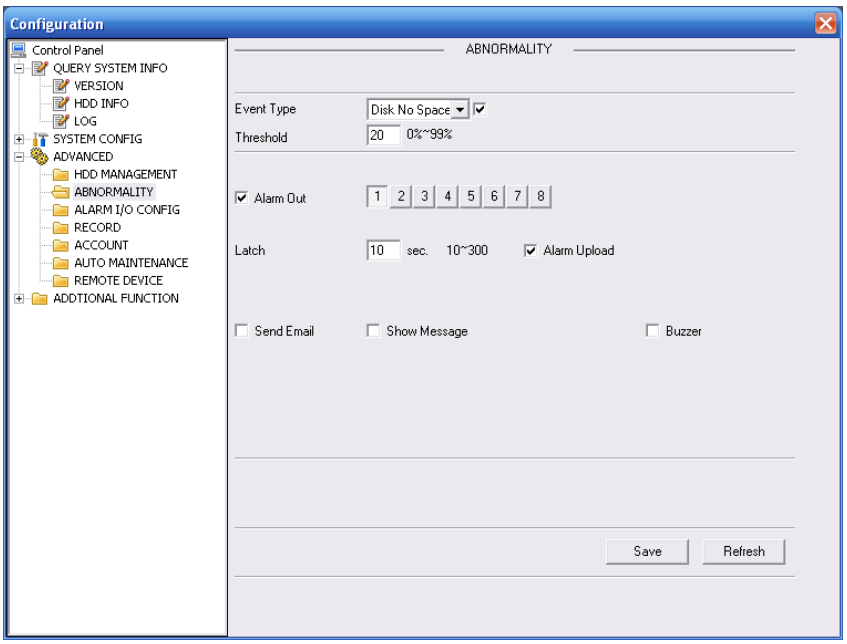


Figure 5-41 Abnormality -2

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 check the box here to enable this function. • Threshold: It refers to the HDD free space.
Normal Out	The corresponding alarm output channel when 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.
Send email	If you enable this function, system can send out email to alarm the specified user.
Show message	Once you check the box to enable this function, system can display the alarm icon on the right of the channel name at the local end.

5.3.3.4 Alarm I/O

Here you can search alarm output status. See Figure 5-42.

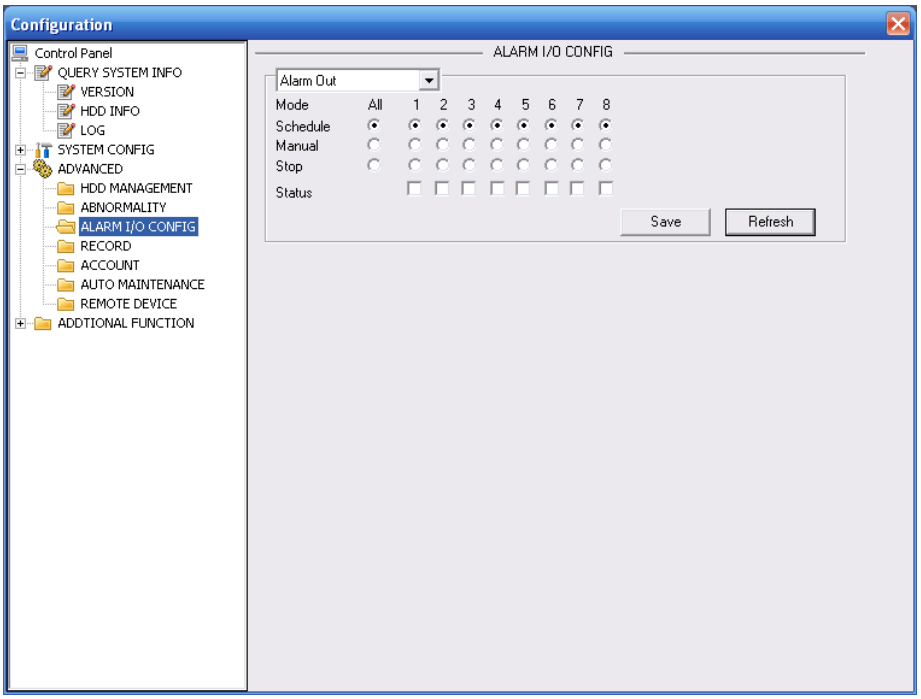


Figure 5-42 Alarm I/O Configuration

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 realize the connection between the alarm output port and the load.

Please refer to the following sheet for detailed information.

Parameter	Function
Alarm output	The value 1-8 here refers to alarm output channels. 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.

5.3.3.5 Record

Record control interface is shown as in Figure 5-43.

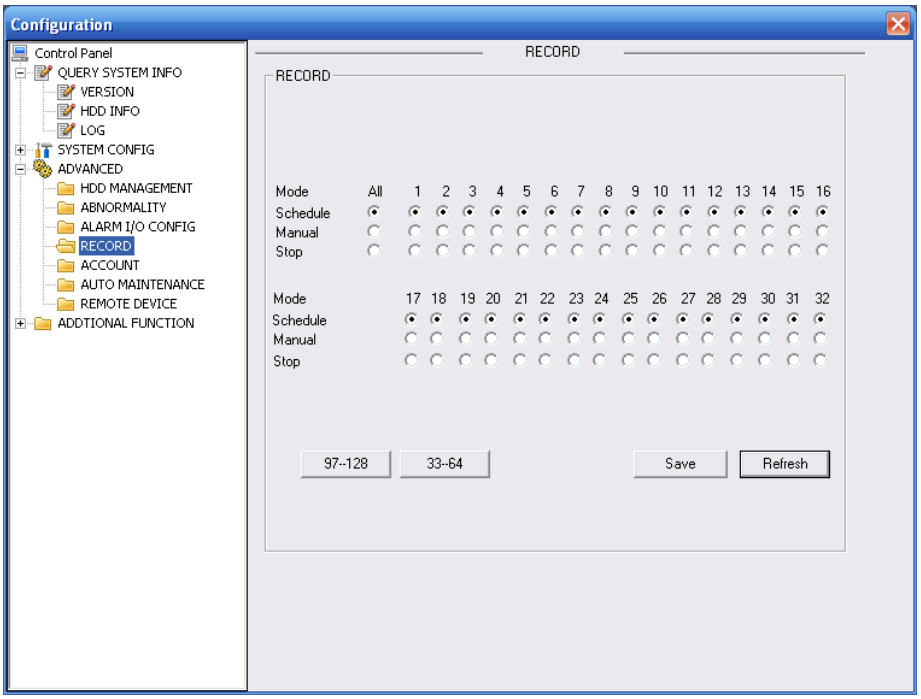


Figure 5-43 Record

Please refer to the following sheet for detailed information.

Parameter	Function
Schedule	System enables auto record function as you set in schedule setup (chapter 5.3.2.3).
Manual	Enable corresponding channel to record no matter what period applied in the record setup.
Stop	Stop current channel record no matter what period applied in the record setup.

5.3.3.6 Account

Here you can add, remove user or modify password. See Figure 5-44.

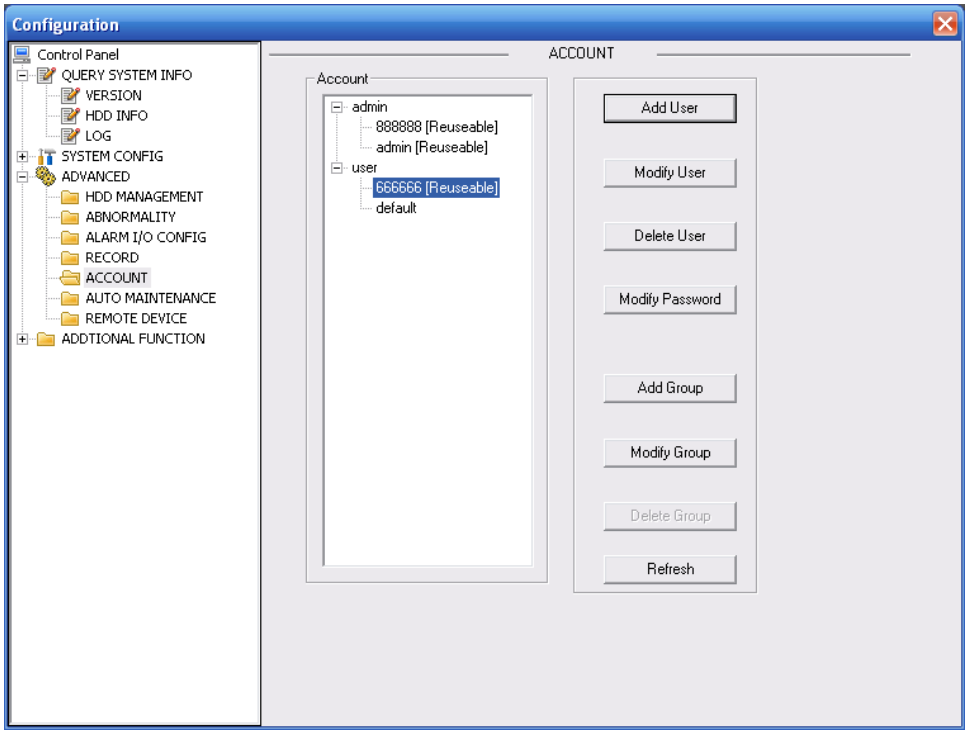


Figure 5-44 Account

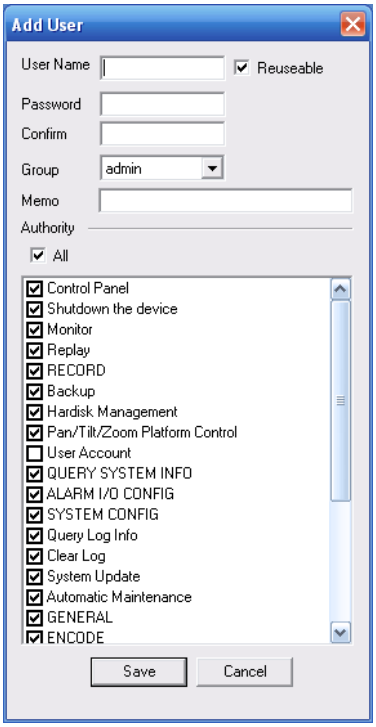


Figure 5-45 Add user

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.

5.3.3.7 Snapshot

Snapshot interface is shown as in Figure 5-46.

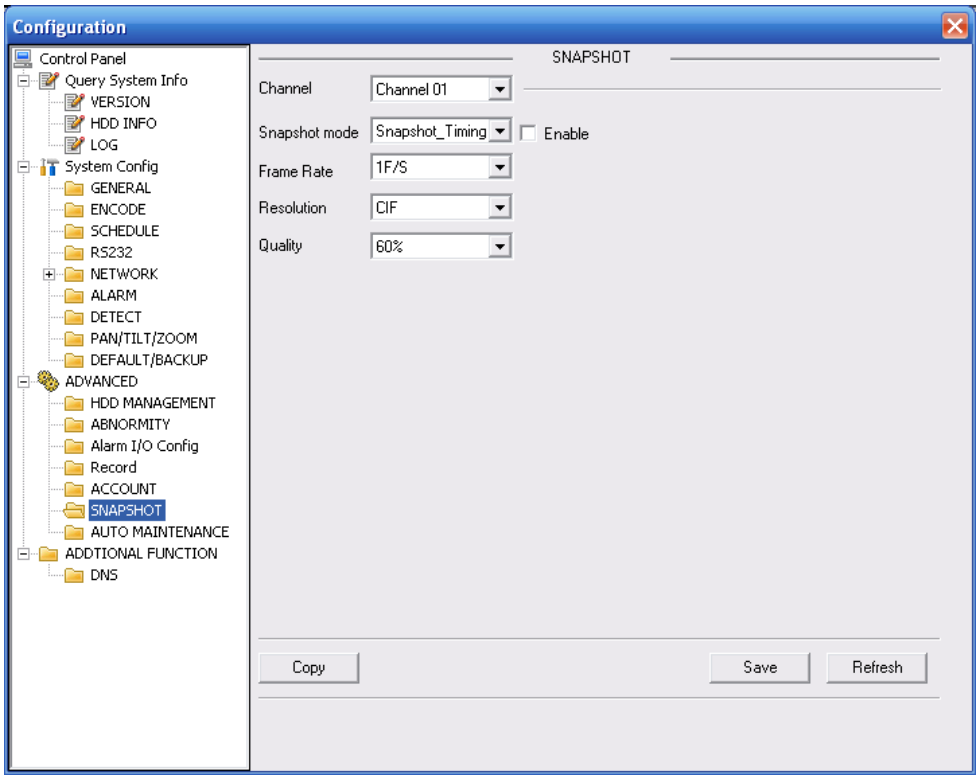


Figure 5-46

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	It is the monitor channel.
Snapshot mode	There are two modes: Timing and activation.
Frame rate	You can select from the dropdown list. The value ranges from 1f/s to 7f/s.
Resolution	You can select from the dropdown list.
Quality	You can select from the dropdown list. Here is for you to set video quality. There are six options: 10%, 30%, 50%, 60%, 80%, 100%. 100% is the best quality.

5.3.3.8 Auto Maintenance

Here you can select auto reboot and auto delete old files interval from the dropdown list. See Figure 5-47.

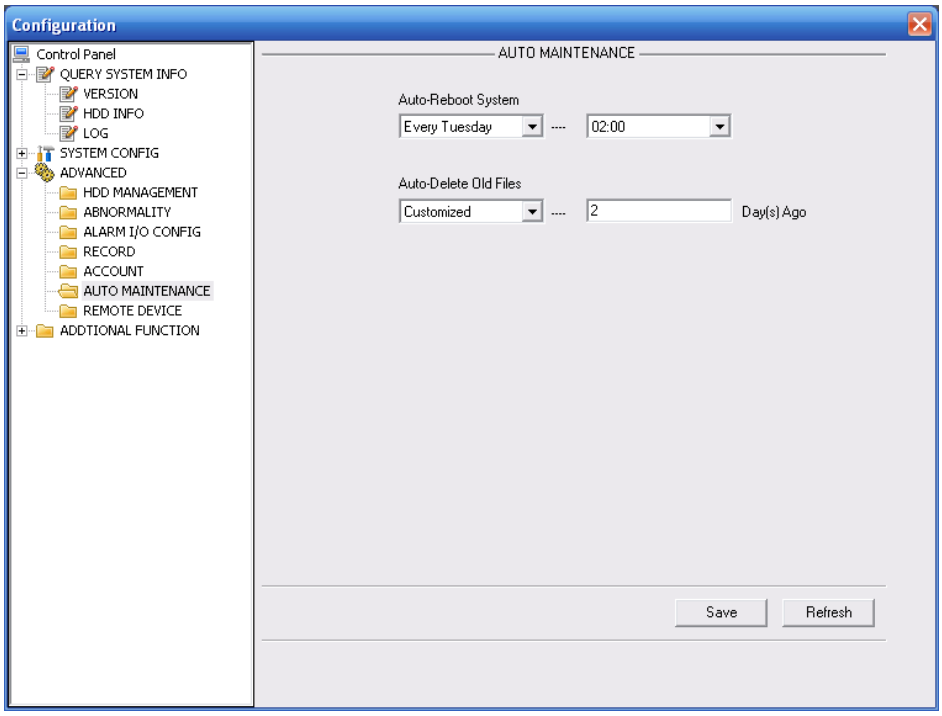


Figure 5-47 Auto Maintenance

5.3.3.9 Remote device

Remote device interface is shown as in Figure 5-48.

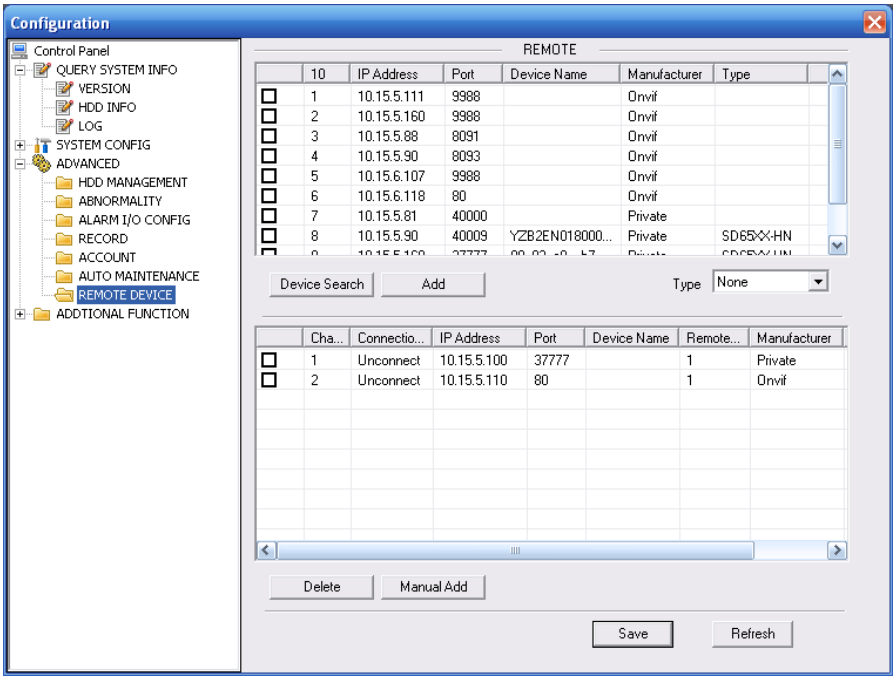


Figure 5-48 Remote device

Please refer to the following sheet for detailed information.

Parameter	Function
Remote device information	Here you can see searched remote device name, IP address, TCP port and manufacturer name.
Channel	Please select the local device channel number to connect to the remote device. You need to highlight the enable item to activate this function. Now you can see remote device type, IP address and etc.
Device search	Please click the Device Search button to search the all remote devices available. Please note system can only search the devices in the same segment and the device shall disable the firewall.
Type	Select remote device type here.
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.

5.3.4 Additional Function

5.3.4.1 Auto register

The auto register interface is shown as in Figure 5-49.

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.

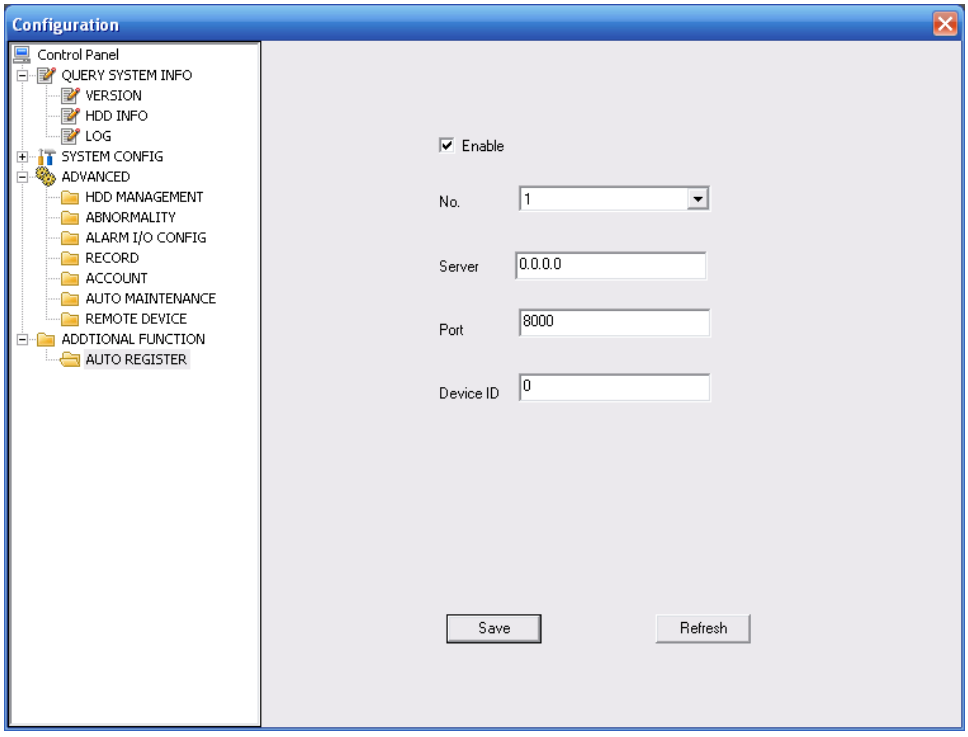


Figure 5-49 Auto register

5.4 Search

Click search button, you can see an interface is shown as in Figure 5-50.

Please set 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 system current date and the blue highlighted date means it has record files.

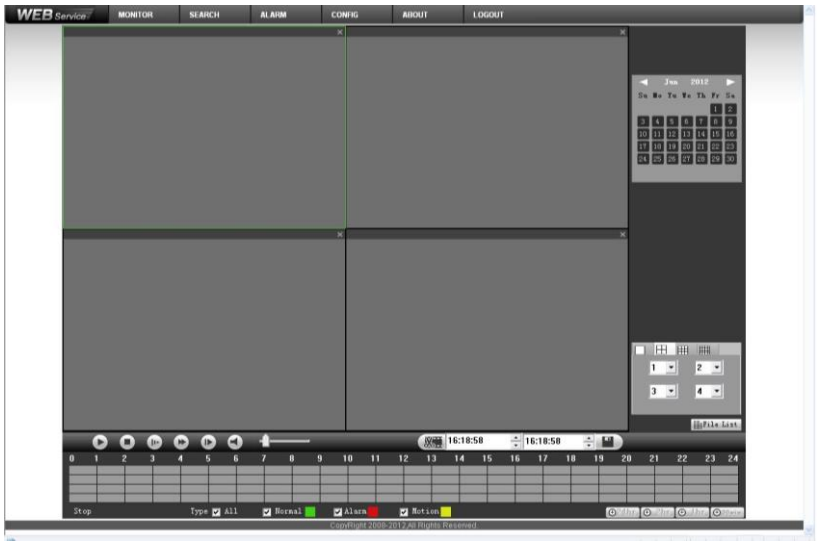


Figure 5-50 Search

Then please click search button, you can see the corresponding files in the list. See Figure 5-51.

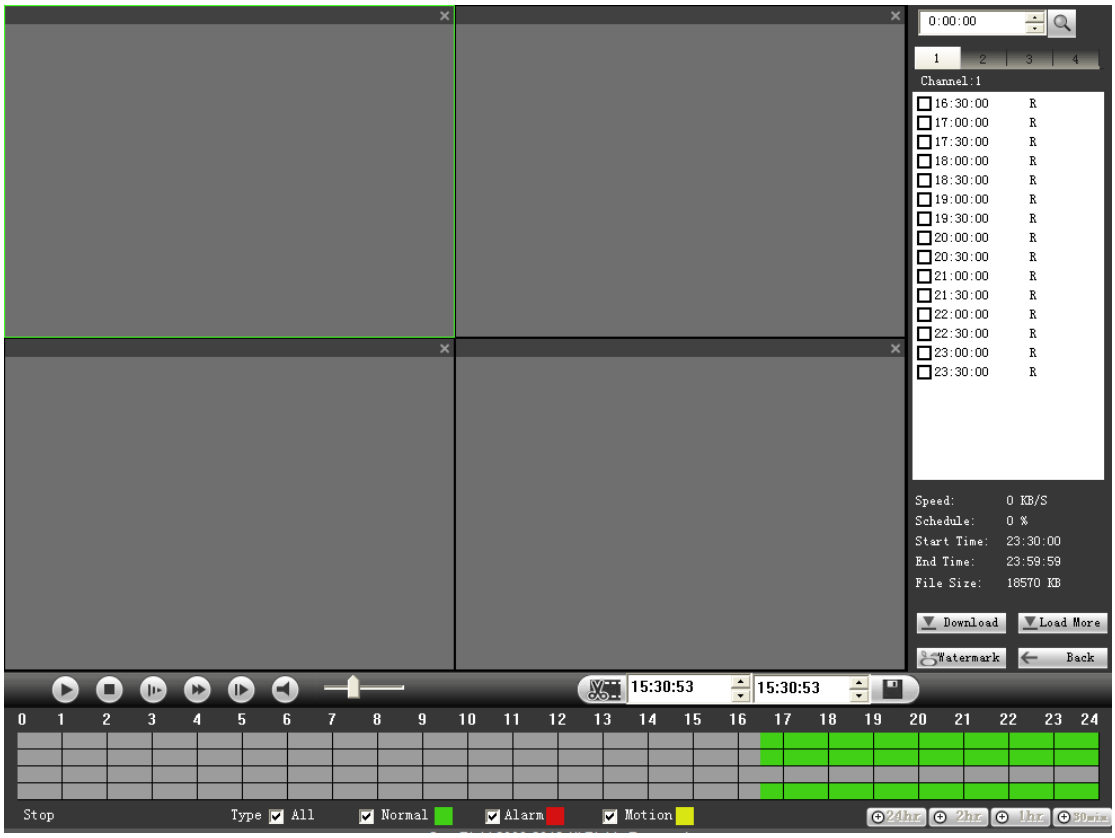


Figure 5-51

Select the file(s) you want to download and then click download button, system pops up a dialogue box shown as in Figure 5-52, then you can specify file name and path to download the file(s) to your local pc.

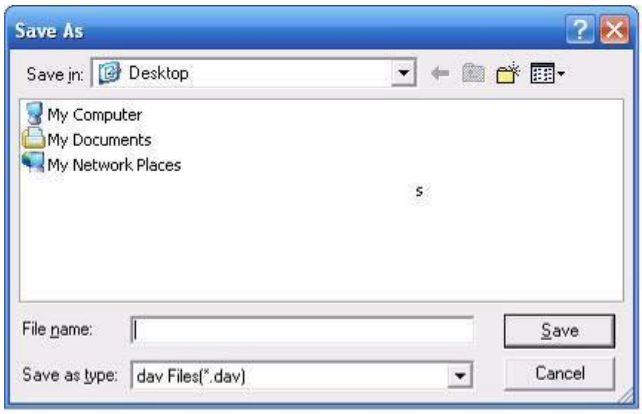


Figure 5-52

Load more

It is for you to search record or picture. You can select record channel, record type and record time to download. See Figure 5-53.

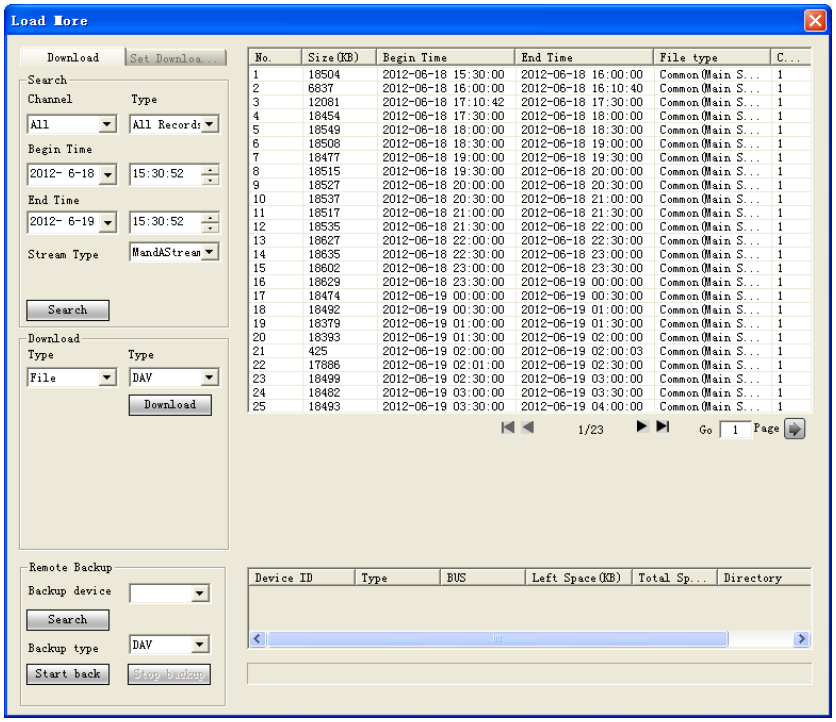


Figure 5-53

Remote backup

In Figure 5-53, there is a remote back pane at the left bottom of the pane. It allows you to backup the record or picture to your local USB storage media via the Web remotely. Click the search button; you can view the available storage device. See Figure 5-54. Please select from the dropdown list and then begin the backup. Please refer to chapter 5.2.6 to set device download path.

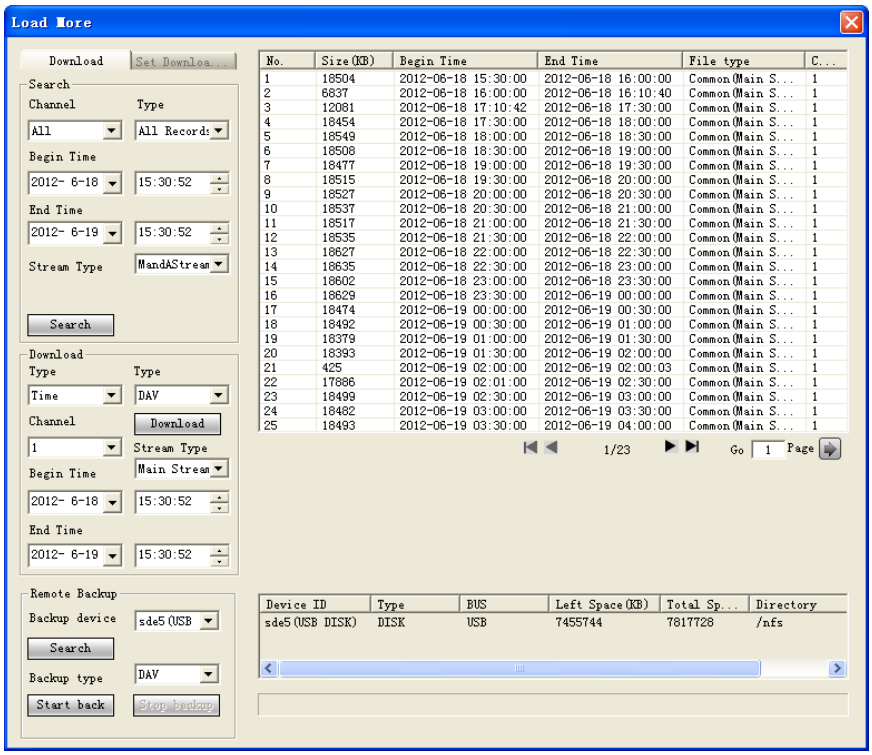


Figure 5-54

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

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

5.5 Alarm

Click alarm function, you can see an interface is shown as in Figure 5-55.

Here you can set device alarm type and alarm sound setup.

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

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

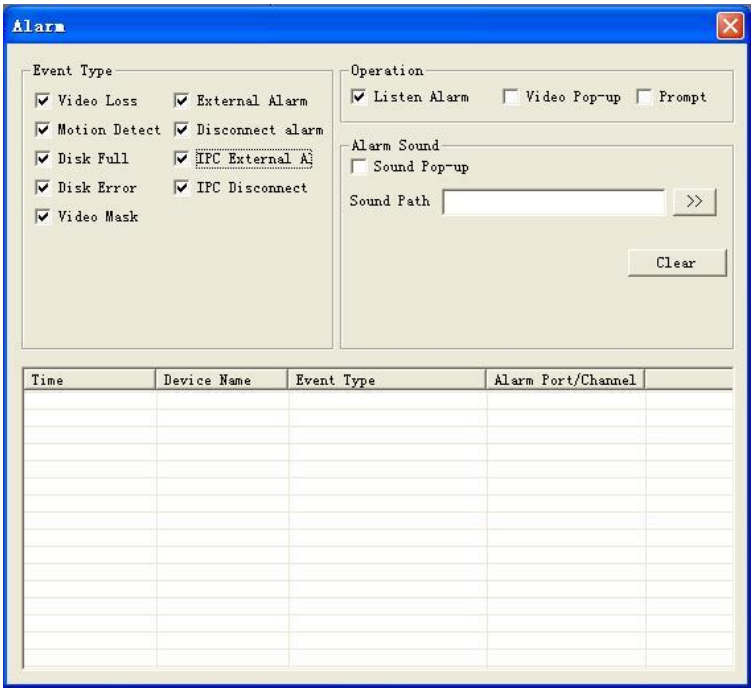


Figure 5-55 Alarm

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 occurs,
	Disk full	System alarms when disk is full.
	Disk error	System alarms when disk error occurs.
	Camera masking	System alarms when camera is viciously masking.
	External alarm	Alarm input device sends out an alarm.
	Offline alarm	NVR local-end offline alarm.
	IPC external alarm	It refers to the on-off alarm signal from the front-end device and can activate NVR local operation.
	IPC offline alarm	System can generate an alarm when the front-end IPC disconnects with the local NVR.
Operation	Listening alarm	System notifies web when alarm occurs (you select from the above event type), and then web can notify user.
	Video	When alarm occurs, system auto enables video monitor. This function only applies to 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 alarm occurs. You can specify as you wish.
	Path	Here you can specify alarm sound file.

5.6 About

Click about button, you can view the web information. See Figure 5-56.

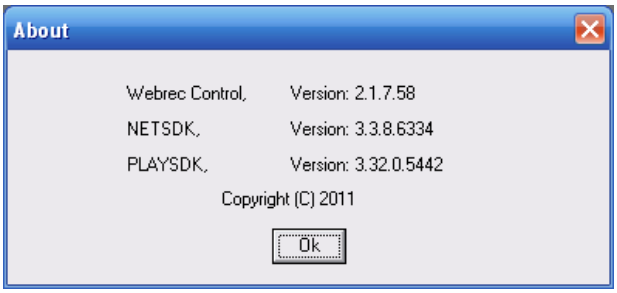


Figure 5-56 About

5.7 Log out

Click log out button, you can go back to log in interface. See Figure 5-57.

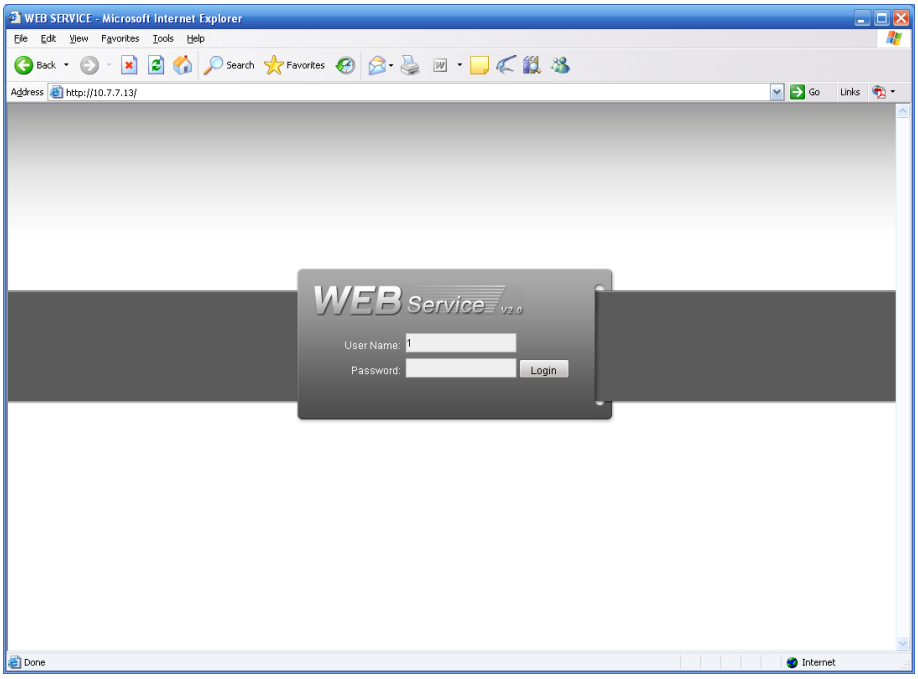


Figure 5-57 Alarm

Appendix H Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Sheet Metal(Case)	○	○	○	○	○	○
Plastic Parts（Panel）	○	○	○	○	○	○
Circuit Board	○	○	○	○	○	○
Fastener	○	○	○	○	○	○
Wire and Cable/Ac Adapter	○	○	○	○	○	○
Packing Material	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

Note

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

Note:

- **This manual is for reference only. Slight difference may be found in 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.**
- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local retailer for more information.**