Megapixall Vimage Series NVRs

Network Video Recorder User's Manual

Table of Contents

1 Features and Specifications 10

1.1 Overview 10

1.2 Features 10

1.3 Specifications 11

2 Front Panel and Rear Panel 14

2.1 Front Panel 14

2.1.1 1U Series 14
2.1.2 2U Series 16

2.2 Rear Panel 19

2.2.1 1 U Series 19
2.2.2 2 U Series 20

2.3 Bidirectional talk 22

2.3.1 Device-end to PC-end 22
2.3.2 PC-end to the device-end 23

2.4 Mouse Operation 23

2.5 Remote Control 25

3 HDD Installation 28

3.1 1U Series 28

3.2 2U Series 29

4 Network Connection 31

2U Series Connection 31

5 System Capability 32

6 GUI Operation 33

6.1 Login 33

6.2 Right Click Menu 34

6.3 Main Menu 34

6.4 Search & Playback 35

6.5 Information 38

6.5.1 HDD Information 38
6.5.2 BPS 39
6.5.3 Log 40
6.5.4 Version 41
6.5.5 Online Users 41

6.6 Setting 42

6.6.1 General 42
6.6.2 Encode 44
6.6.3 Schedule 45
6.6.4 RS232 46
6.6.5 Network 47
6.6.5.1 Advanced Setup 48
6.6.5.2 IP Filter 48
6.6.5.3 NTP Setup 49
6.6.5.4 Multiple Cast Setup 49
6.6.5.5 PPPoE 50
6.6.5.6 DDNS Setup 51
6.6.5.7 UPNP 51
6.6.5.8 Email 53
6.6.5.9 FTP 54
6.6.5.1 Alarm center 55
6.6.6 Alarm 56
6.6.7 Detect 58
6.6.8 PTZ 61

6.6.9 Display 63
6.6.10 Default 64
6.7 Advanced 65
6.7.1 HDD Management 65
6.7.2 Abnormity 68
6.7.3 Alarm Output 69
6.7.4 Manual Record 69
6.7.4.1 Manual record menu 69
6.7.4.2 Basic operation 69
6.7.4.3 Enable/disable record 70
6.7.4.4 Enable all channel recording 70
6.7.4.5 Stop all channel recording 71
6.7.5 Account 71
6.7.5.1 Modify Password 72
6.7.5.2 Add/Modify Group 73
6.7.5.3 Add/Modify User 73
6.7.6 Auto Maintenance 74
6.7.7 Remote Device 74
6.7.8 Config File Backup 74
6.8 Shutdown 75
7 Quick Configuration Tool 76
7.1 Overview 76
7.2 Operation 76
8 Web 79
8.1 General Introduction 79
8.1.1 Preparation 79
8.1.2 Log in 79
8.2 Main Interface 80
8.2.1 Monitor Channel Menu Tree 81
8.2.2 System Menu 83
8.2.3 Monitor Window Switch 83

8.2.4 Preview Window Switch 83
8.2.5 PTZ Control 83
8.2.6 Color and More Setup 85
8.3 Configuration 86
8.3.1 System Information 86
8.3.1.1 Version Information 86
8.3.1.2 HDD information 87
8.3.1.3 Log 87
8.3.2 System Configuration 88
8.3.2.1 General Setup 88
8.3.2.2 Encoding configuration 91
8.3.2.3 Schedule 92
8.3.2.4 RS232 93
8.3.2.5 Network 94
Advanced setup 95
8.3.2.6 Alarm 102
8.3.2.1 Detect 104
8.3.2.2 PTZ 106
8.3.2.3 Default & Backup 106
8.3.3 Advanced 107
8.3.3.1 HDD Management 107
8.3.3.2 Abnormity 109
8.3.3.3 Alarm I/O 110
8.3.3.4 Record 111
8.3.3.5 Account 112
8.3.3.6 Auto Maintenance 113
8.3.3.7 Remote device 114
8.3.4 Additional Function 114
8.3.4.1 Auto register 114
8.3.4.2 DNS 115
8.4 Search 116
8.5 Alarm 117
8.6 About 119
8.7 Log out 119

9 FAQ 120

10 Appendix A HDD Capacity Calculation 125

11 Appendix B Compatible SATA HDD 126

12 Appendix C Compatible USB List 128

13 Appendix D Compatible Displayer List 130

14 Appendix E No-IP DDNS 131

Appendix H Toxic or Hazardous Materials or Elements 138

Welcome

Thank you for purchasing our network video recorder!
This quick start guide is designed to be a reference tool for your system.
Please open the accessory bag to check the items one by one in accordance with the list below. Contact your local retailer ASAP if something is missing or damaged in the bag.

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 environment ranging from 0℃ to 55 ℃

6. 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.

7. 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!

Before your operation please read the following instructions carefully.

- **Installation environment**

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

- **Accessories**

Check the following accessories after opening the box：

- **Please refer to the packing list in the box ***

Component Name	1U Series	2U Series	Quantity
NVR	■	■	1
7-pin SATA cable	■	■	1
Power cable	■	■	1
Network cable	■	■	1
Remote control	□	■	1
Black optical mouse	■	■	1
Power adapter	■	□	1
Quick start guide	■	■	1
Product warranty card	■	■	1
Product certificate card	■	■	1
CD	■	■	1
Plastic pad	■	■	4

1 Features and Specifications

1.1 Overview

It is a high performance network video recorder. This series product support local preview, multiple-window display, recorded file local storage, remote control and mouse shortcut menu operation, and remote management and control function. All these functions support this series product to be used in various situations.

This series product supports centre storage, front-end storage and client-end storage. The monitor zone in the front-end can be set in anywhere. Working with other front-end devices such as IPC, NVS, this series product can establish a strong surveillance network via the CMS. In the network system, there is only one network cable from the monitor centre to the monitor zone in the whole network. There is no audio/video cable from the monitor centre to the monitor zone. The whole project is featuring of simple connection, low-cost, low maintenance work.

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

1.2 Features

User Management	• ·Each group has different management powers that can be edited freely. Every user belongs to an exclusive group.
Storage	• Via corresponding setup (such as alarm setup and schedule setup), you can backup related audio/video data in the network video recorder. • Support Web record and record local video and storage the file in the client end.
Alarm	• Respond to external alarm simultaneously (within 200MS), based on user's pre-defined relay setup, system can process the alarm input correctly and prompt user by screen and voice (support pre-recorded audio). • Support central alarm server setup, so that alarm information can remotely notify user automatically. Alarm input can be derived from various connected peripheral devices. • Alert you via EMAIL.

	• Through network, sending audio/video data compressed by IPC or NVS to client-ends, then the data will be decompressed and display. If bandwidth is big enough, latency is less than 500ms
Network Monitor	• Support max 10 connections • Transmit audio/video data by HTTP, TCP, UDP, MULTICAST, RTP/RTCP and etc. • Transmit some alarm data or alarm info by SMTP. • Support WEB access in WAN.
Window Split	• Adopt the video compression and digital process to show several windows in one monitor. Support 1/4/9/16-window display.
Record	• Support schedule record function. Save the recorded files in the HDD, client-end PC, or network storage server. You can search or playback the saved files at the local-end or via the Web.
Backup	• Support network backup, USB record backup function, the recorded files can be saved in network storage server, peripheral USB device, burner and etc.
Network Management	• Supervise NVR configuration and control power via Ethernet. • Support management via WEB.
Peripheral Equipment Management	• Support peripheral equipment management such as protocol setup and port connection. • Support transparent data transmission through RS232/RS485. • Support switch between NTSC and PAL.
Auxiliary	• Support real-time system resources information and running statistics display. • Support log file. • Local GUI output. Shortcut menu operation via mouse. • IR control function. Shortcut menu operation via remote control. • Support IPC or NVS remote video preview and control.

1.3 Specifications

Parameter	Specification	
	1U Series	**2U Series**
System Resources	Max. support 16-ch standard definition with the transmission rate of 2mbps for each channel; 8-channel 720P, with the transmission rate of 4mbps for each channel; 4-channel 1080P, with the transmission rate of 8mbps for each channel; Support 20 online users at the same time, The image delay time of each channel is under 500ms.	

Operation System	Embedded Linux real-time operation system	
Operation Interface	WEB/Local GUI	
Video Compression	H.264/MPEG4	
Encode Capacity	For H.264, it max supports 16*D1, 8*720,4*1080P.	
Audio Compression	G.711a	
Video Output	1-channel VGA analog video output.	
Video Input	4/8/16-ch network compression digital video input	
HDMI	1-ch HDMI output.	
Audio Input	N/A	1-ch bidirectional audio input
Audio Output	N/A	1-channel bidirectional talk output.
Window Split	4/9/16-window	
Multiple-channel Playback	Max 16-channel playback.	
Alarm Input	4/8/16-ch alarm input.	
Alarm Output	3-ch alarm output	6-ch alarm output
	Relay output. Relay （DC 30V 1A，AC 125V 0.5A（Activation output）） Including one controllable DC +12V output.	
Storage	2 built-in SATA port s	8 built-in SATA ports
	N/A	1 peripheral eSATA port
RS232 Port	One RS232 port to debug transparent COM data.	
RS485 port	One RS485 port to control PTZ. Support various protocols.	
USB Port	2 peripheral USB ports.	4 peripheral USB port.

Network Connection	One RJ45 10/100M/1000M self-adaptive Ethernet port.	
Power Port	One power port, power adapter. Input DC 12V.	One power port, AC100～240V 50+2% Hz.
Power Button	One power button in the rear panel.	
Power Button	One power button in the front panel.	
IR Remote Control Receiver	N/A	One IR remote control receiver in the front panel.
Clock	Built-in clock.	
Indication Light	16 record status indication lights One power status indication light. One alarm status indication light. One network status indication light. One HDD status indication light.	16 record status indication lights One system running status indication light. One remote control indication light.
Power Consumption	＜12W(Exclude HDD)	＜40W(Exclude HDD)
Working Temperature	0℃～+50℃	
Working Humidity	10%－90%	
Air pressure	86kpa－106kpa	
Dimension	440mm*300mm*42.6mm	440mm*460mm*89mm
Weight	1.5～2.5 KG（Exclude HDD）	5.5～6.5KG（Exclude HDD）
Installation	Desk installation/Rack installation	

2 Front Panel and Rear Panel

2.1 Front Panel

2.1.1 1U Series

The -1U series NVR front panel is shown as below. See Figure 2-1.

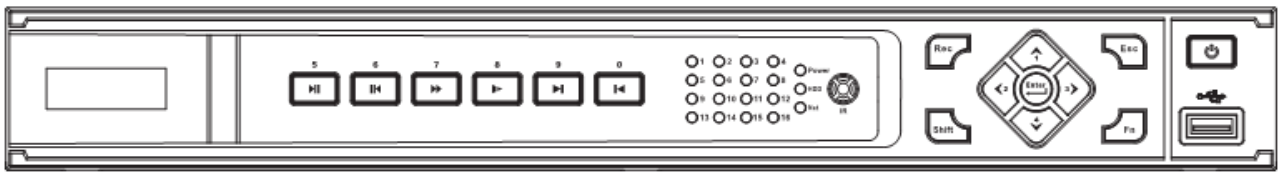


Figure 2-1

Please refer to the following sheet for detail information.

Name	Icon	Function
Power button	⏻	Power button, press this button for three seconds to boot up or shut down NVR.
Number button	0-9	Input Arabic number Switch channel
Shift	Shift	In textbox, click this button to switch between numeral, English(Small/Capitalized),donation and etc.
		Enable or disable tour.
Up/ Down	▲ ▼	Activate current control, modify setup, and then move up and down.
		Increase/decrease numeral.
		Assistant function such as PTZ menu.
Left/ Right	◀ ▶	Shift current activated control, and then move left and right.
		When playback, click these buttons to control playback bar.
ESC	ESC	Go to previous menu, or cancel current operation.
		When playback, click it to restore real-time monitor mode.
Enter	ENTER	Confirm current operation
		Go to default button

		Go to menu
Record	REC	Manually stop/start recording, working with direction keys or numeral keys to select the recording channel.
Slow play	▮▸	Multiple slow play speeds or normal playback.
Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color.
		Backspace function: in numeral control or text control, press it for 1.5seconds to delete the previous character before the cursor.
		In motion detection setup, working with Fn and direction keys to realize setup.
		In text mode, click it to switch between numeral, English character(small/capitalized) and etc.
		In HDD management interface, you can click it to switch HDD record information and other information (Menu prompt)
		Realize other special functions.
Fast play	▸▸	Various fast speeds and normal playback.
Play previous	•	In playback mode, playback the previous video
Play Next	•	In playback mode, playback the next video In menu setup, go to down ward of the dropdown list
Reverse/Pause	II◀	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
Play/Pause	▶II	In normal playback click this button to pause playback In pause mode, click this button to resume playback.
Window switch	**Mult**	Click it to switch one-window/multiple-window.
USB port	⇽	To connect USB storage device, USB mouse.
Power indication light	PWR	Power indication light

Record light	1-16	It becomes on when system is recording.
IR Receiver	IR	It is to receive the signal from the remote control.
HDD abnormity indicator	**HDD**	The red light is for the HDD abnormity
Network abnormity indicator	**Net**	The red light is for the network abnormity

2.1.2 2U Series

The 2U series NVR front panel is shown as in Figure 2-2.

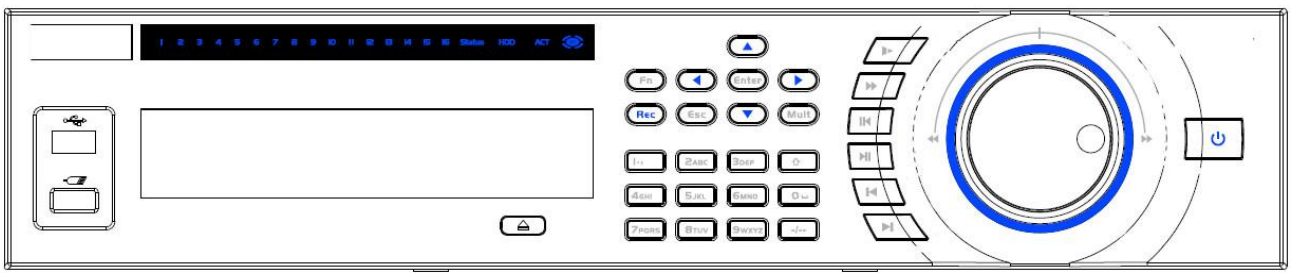


Figure 2-2

Please refer to the following sheet for detail information.

Name	Icon	Function
Power button	⏻	Power button, press this button for three seconds to boot up or shut down NVR.
Number button	0-9	Input Arabic number Switch channel
Input number more than 10	**-/--**	If you want to input a number more than 10, please click this button and then input.
Shift	⬆	In textbox, click this button to switch between numeral, English(Small/Capitalized),donation and etc.
		Enable or disable tour.
Up/ Down	▲、▼	Activate current control, modify setup, and then move up and down.

		Increase/decrease numeral.
		Assistant function such as PTZ menu.
Left/ Right	◄ ►	Shift current activated control, and then move left and right.
		When playback, click these buttons to control playback bar.
ESC	ESC	Go to previous menu, or cancel current operation.
		When playback, click it to restore real-time monitor mode.
Enter	ENTER	Confirm current operation
		Go to default button
		Go to menu
Record	REC	Manually stop/start recording, working with direction keys or numeral keys to select the recording channel.
Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color
		Backspace function: in numeral control or text control, press it for 1.5seconds to delete the previous character before the cursor.
		In motion detection setup, working with Fn and direction keys to realize setup.
		In text mode, click it to switch between numeral, English character(small/capitalized) and etc.
		In HDD management interface, you can click it to switch HDD record information and other information (Menu prompt)
		Realize other special functions.
Fast play	▸▸	Various fast speeds and normal playback.
Slow play	▸	Multiple slow play speeds or normal playback.
Play previous	◂❙	In playback mode, playback the previous video
Play Next	▸❙	In playback mode, playback the next video In menu setup, go to down ward of the dropdown list

Reverse/Pause	II◀	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
Play/Pause	▶II	In normal playback click this button to pause playback In pause mode, click this button to resume playback.
Window switch	**Mult**	Click it to switch one-window/multiple-window.
Shuttle(outer ring)		In real-time monitor mode it works as left/right direction key. Playback mode, counter clockwise to forward and clock wise to backward.
Jog(inner dial)		Up/down direction key. Playback mode, turn the inner dial to realized frame by frame playback. (Only applies to some special versions.)
USB port		To connect USB storage device, USB mouse.
Remote control indication light	ACT	Remote control indication light
Status indication light	Status	If there is Fn indication light, current status indication light is null.
Power indication light	PWR	Power indication light
Record light	1-16	For 4/8/16 ch series ,it becomes on when system is recording.
IR Receiver	IR	It is to receive the signal from the remote control.

2.2 Rear Panel

2.2.1 1 U Series

The 1U series NVR real panel is shown as in Figure 2-3.



Figure 2-3

Please refer to the following sheet for detailed information.

Port Name		Connection	Function
	USB port.		Connect to USB mouse.
	Network port		10M/100M self-adaptive Ethernet port. Connect to the network cable.
RS232	232 debug COM.		It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High Definition Multimedia Interface		High definition video signal output port. Transmit the clear video and multiple-track data (Uncompressed)to the device of HDMI(High definition media interface)
VGA	VGA video output port	VGA	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
1～16	Alarm input port. 1～16	I/O port	● Four groups of alarm input ports. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
	Alarm input port ground end		Alarm input ground end.

Port Name		Connection	Function
NO1～NO3 C1～C3	1-3-ch alarm output port		• 3 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3）).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. NO：Normal open alarm output port. • C：Alarm output public end.
A	RS485 communication port		RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B			RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
DC 12V	Power port		Input 12V DC.
Power button			Power on/off button.

2.2.2 2 U Series

The 2U series rear panel is shown as below. See Figure 2-4.

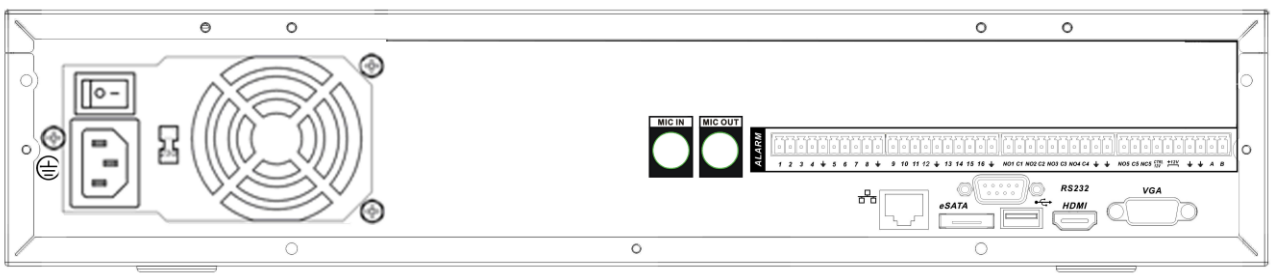


Figure 2-4

Please refer to the following sheet for detailed information.

Port Name		Connection	Function
Power button			Power on/off button.
Power input port			Input AC 220
MIC OUT	Audio output port	RCA	Audio output port. Output analog audio signal to the devices such as sound box.
MIC IN	Audio input port	RCA	Bidirectional talk input port. Receive the analog signal from the devices such as speaker or pickup.

Port Name		Connection	Function
1～16	Alarm input port. 1～16	I/O port	● Four groups of alarm input ports. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). ● When your alarm input device is using external power, please make sure the device and the NVR have the same ground.
⏚	Ground end		Alarm input ground end.
NO1～NO5 C1～C5 NC5	Alarm output port 1～5		5 groups of alarm output ports. (Group 1：port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3.group 4: port NO4～C4、Group 5：port NO5、C5、NC5).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. NO：Normal open alarm output port. C：Alarm output public end. NC: Normal close alarm output port.
A	RS485 port		RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
B			RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
CTRL 12V			Controllable 12V power output. It is to control the on-off relay output. You can use it to enable device alarm function. It can also be used as the power input for some alarm devices such as the smoke detector.
+12V			+12V power output port. It is to provide the power to the peripheral devices such as camera or alarm device. The connected device current shall be less than 1A.

Port Name		Connection	Function
	Network port		10M/100M self-adaptive Ethernet port. Connect to the network cable.
eSATA	eSATA port		The external SATA port. It can be connected to the peripheral devices of SATA port. Please pay attention to the HDD jumper when you connect the external HDD.
	USB port.		Connect to USB mouse.
RS232	232 debug COM.		It is for general COM debug to configure IP address or transfer transparent COM data.
HDMI	High definition multimedia interface		High definition video signal output port. Transmit the clear video and multiple-track data (Uncompressed)to the device of HDMI(High definition media interface)
VGA	VGA video output port	VGA	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.

2.3 Bidirectional talk

2.3.1 Device-end to PC-end

Device Connection

Please connect the speaker or the pickup to the first audio input port in the device rear panel. Then connect the earphone or the sound box to the audio output port in the PC.

Login the Web and then enable the corresponding channel real-time monitor.

Please refer to the following interface to enable bidirectional talk.



Figure 2-5

Listening Operation

At the device end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the pc-end.

2.3.2 PC-end to the device-end

Device Connection

Connect the speaker or the pickup to the audio output port in the PC and then connect the earphone or the sound box to the first audio input port in the device rear panel.

Login the Web and then enable the corresponding channel real-time monitor.

Please refer to the above interface (Figure 2-5) to enable bidirectional talk.

Listening Operation

At the PC-end, speak via the speaker or the pickup, and then you can get the audio from the earphone or sound box at the device-end.

2.4 Mouse Operation

Please refer to the following sheet for mouse operation instruction.

Left click mouse	When you have selected one menu item, left click mouse to view menu content.
	Modify checkbox or motion detection status.
	Click combo box to pop up dropdown list

	In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. __ stands for space button. In English input mode: _stands for input a backspace icon and ← stands for deleting the previous character.   In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.  When input special sign, you can click corresponding numeral in the front panel to input. For example, click numeral 1 you can input"/" , or you can click the numeral in the on-screen keyboard directly.
Double left click mouse	Implement special control operation such as double click one item in the file list to playback the video.
	In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.
Right click mouse	In real-time monitor mode, pops up shortcut menu.
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

2.5 Remote Control

The remote control interface is shown as in Figure 2-4.

Please note remote control is not our standard accessory and it is not included in the accessory bag.

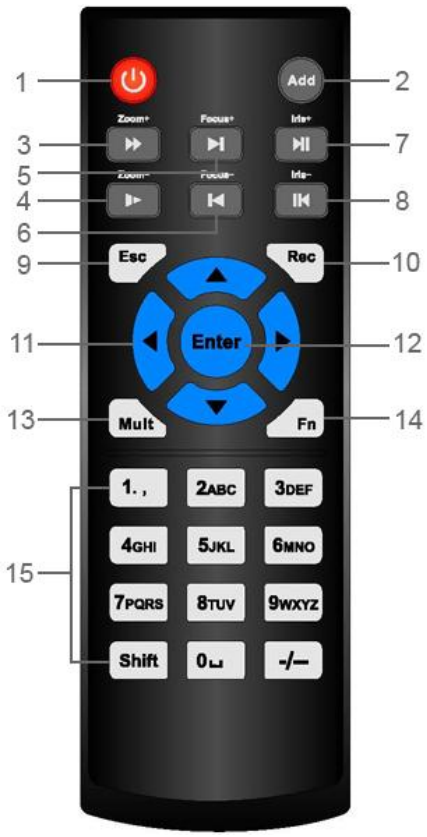


Figure 2-6

Please refer to the following sheet for detailed information.

Serial Number	Name	Function
1	Power button	Click it to boot up or shut down the device.
2	Address	Click it to input device number, so that you can control it.
3	Forward	Various forward speeds and normal speed playback.
4	Slow play	Multiple slow play speeds or normal playback.

5	Next record	In playback mode, playback the next video.
6	Previous record	In playback mode, playback the previous video.
7	Play/Pause	In pause mode, click this button to realize normal playback.
		In normal playback click this button to pause playback.
		In real-time monitor mode, click this button to enter video search menu.
8	Reverse/pause	Reverse playback pause mode, click this button to realize normal playback.
		In reverse playback click this button to pause playback.
9	Cancel	Go back to previous menu or cancel current operation (close upper interface or control)
10	Record	Start or stop record manually In record interface, working with the direction buttons to select the record channel. Click this button for at least 1.5 seconds, system can go to the Manual Record interface.
11	Direction keys	Switch current activated control, go to left or right. In playback mode, it is to control the playback process bar. Aux function(such as switch the PTZ menu)
12	Confirm /menu key	go to default button go to the menu
13	Multiple-window switch	Switch between multiple-window and one-window.
14	Auxiliary key	In 1-ch monitor mode: pop up assistant function：PTZ control

		and Video color.
		Switch the PTZ control menu in PTZ control interface.
		In motion detection interface, working with direction keys to complete setup.
15	0-9 number key	Input password, channel or switch channel.
		Shift is the button to switch the input method.

Figure 2-1

3 HDD Installation

For the first time install, please be aware that whether the HDDs have been installed.
Strongly recommended to use the HDDs which we suggest you to use (high speed HDD that above 7200 rounds), we do not suggest you to use PC specified HDD.

3.1 1U Series

Pleas follow the steps listed below to install the HDD.



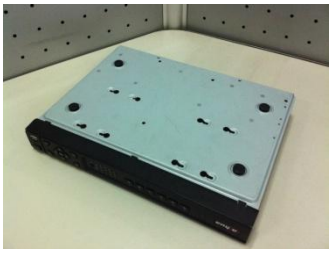
① Remove screws on the rear panel and the side panel.



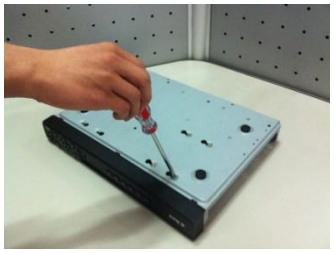
②Fix the four screws on the HDD (rotate three rounds)



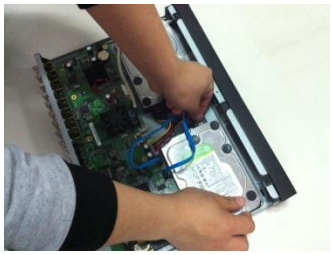
③Place the HDD in accordance to the four holes.



④Turn the device upside down and then insert the screws to the bayonet and fix them
.



⑤ Fix the HDD on the bottom panel.



⑥ Insert the HDD wire and power cable



⑦ Uncover the box cover.



⑧Fix the screws on the rear & side panel.

3.2 2U Series



① Unscrew the screws on the rear panel and cover the upper cover.



② Place the HDDs on the HDD bracket and fix the HDD on the bracket with four screws.



③ Use data cable to connect main board and HDD port, then connect the power (the other end) cable to the HDD port.



④ After wires are connected, place the upper cover on the device and twist the screws on the rear panel.

Important

Before you replace the HDD, please make sure you have shut down the device and unplug the power cable!

4 Network Connection

2U Series Connection

Please refer to the following figure for 2U series connection.

.

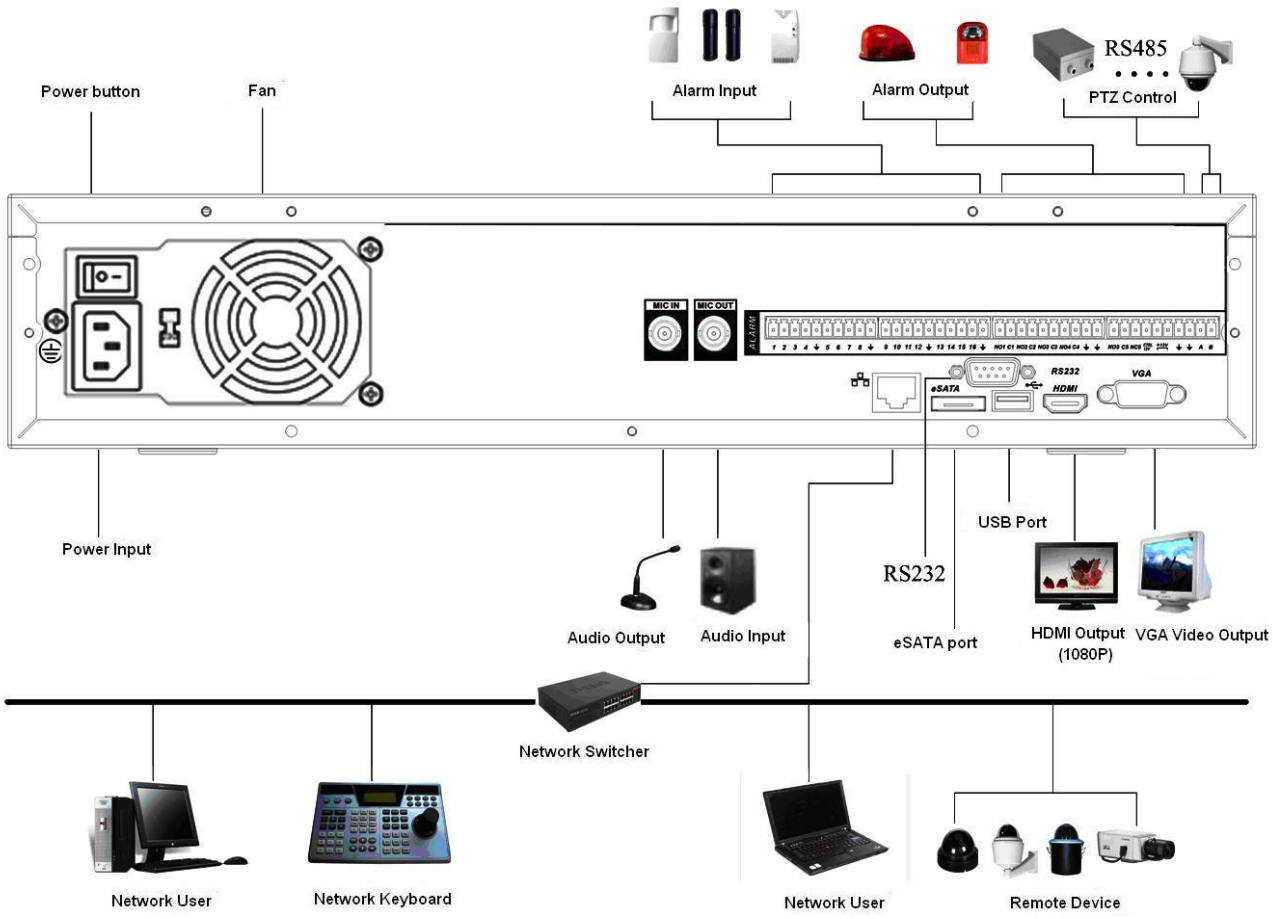


Figure 4-1

5 System Capability

The max. system capability that this product series supports is 16-CH standard definition with transmission rate 2mbps every channel or 4-ch high definition with transmission rate 8mbps. The delay time for switch-in is under 500ms every channel.

Model	**System capability**
4-ch series	Max. switch-in: 4-channel standard definition device with each channel max. supports 2 Mbps or 2-ch 720P or 1-ch 1080P.
8-ch series	Max. switch-in: 8-channel standard definition device with each channel max. supports 2 Mbps or 4-ch 720P or 2-ch 1080P.
16-ch series	Max. switch-in: 16-channel standard definition device with each channel max. supports 8-channel 720P /4Mbps or 4-ch 1080P.

Definition:

The standard definition device: the devices whose encoding resolution is under D1;

The high definition device: the devices whose encoding resolution is above 720P.

6 GUI Operation

Connect the device to the monitor, insert the mouse and connect the power cable. Push the on/off button in the rear panel and then you can see the analog video output. You can use the mouse to implement some simple GUI operation. Please refer to the following chapter for detail information. All the operations listed below are based on our 16-ch series device.

6.1 Login

After device booted up, the system is in multiple-channel display mode. See Figure 6-1.
You can overlay the corresponding date, time and channel name on each screen. You can refer to the following sheet for channel record or alarm status information.

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

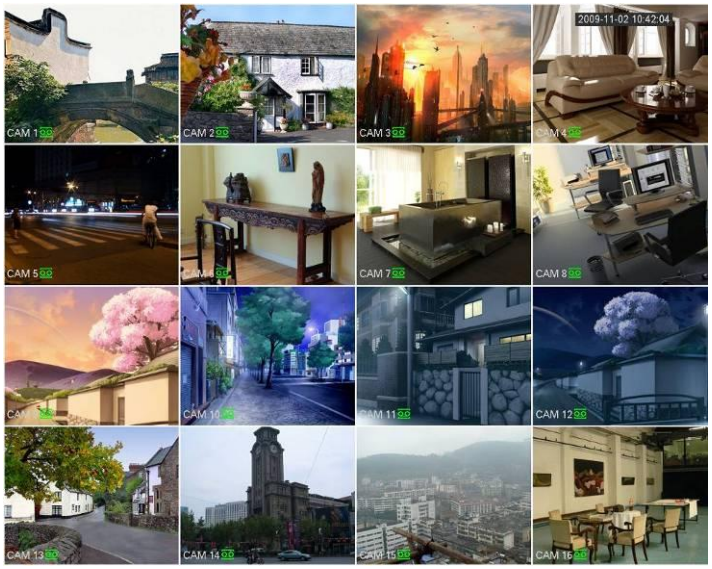


Figure 6-1

Right click mouse, you can see the login interface. Please input user name and password. See Figure 6-2.
System consists of four accounts:

- **Username:** admin. **Password:** admin.
- **Username:** 888888. **Password:** 888888.
- **Username:** 666666. **Passwords:** 666666.
- **Username**: default.

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.

Within 30 minutes, three times login failure will result in system alarm and five times login failure will result in account lo



Figure 6-2

6.2 Right Click Menu

After you logged in the device, right click mouse, you can see the short cut menu. Please see Figure 6-3.

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

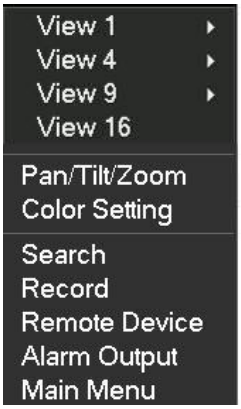


Figure 6-3

6.3 Main Menu

After you logged in, the system main menu is shown as below. See Figure 6-4. There are total six icons: search, Information, setting, backup, advanced and shutdown. Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.

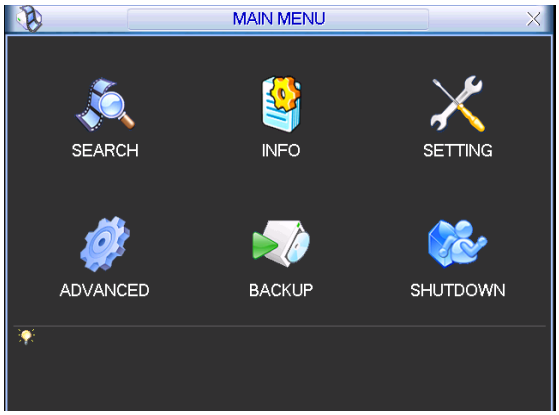


Figure 6-4

6.4 Search & Playback

Click search button in the main menu, search interface is shown as below. See Figure 6-5.
Usually there are three file types:

- R: Regular recording file.
- A: External alarm recording file.
- M: Motion detection recording file

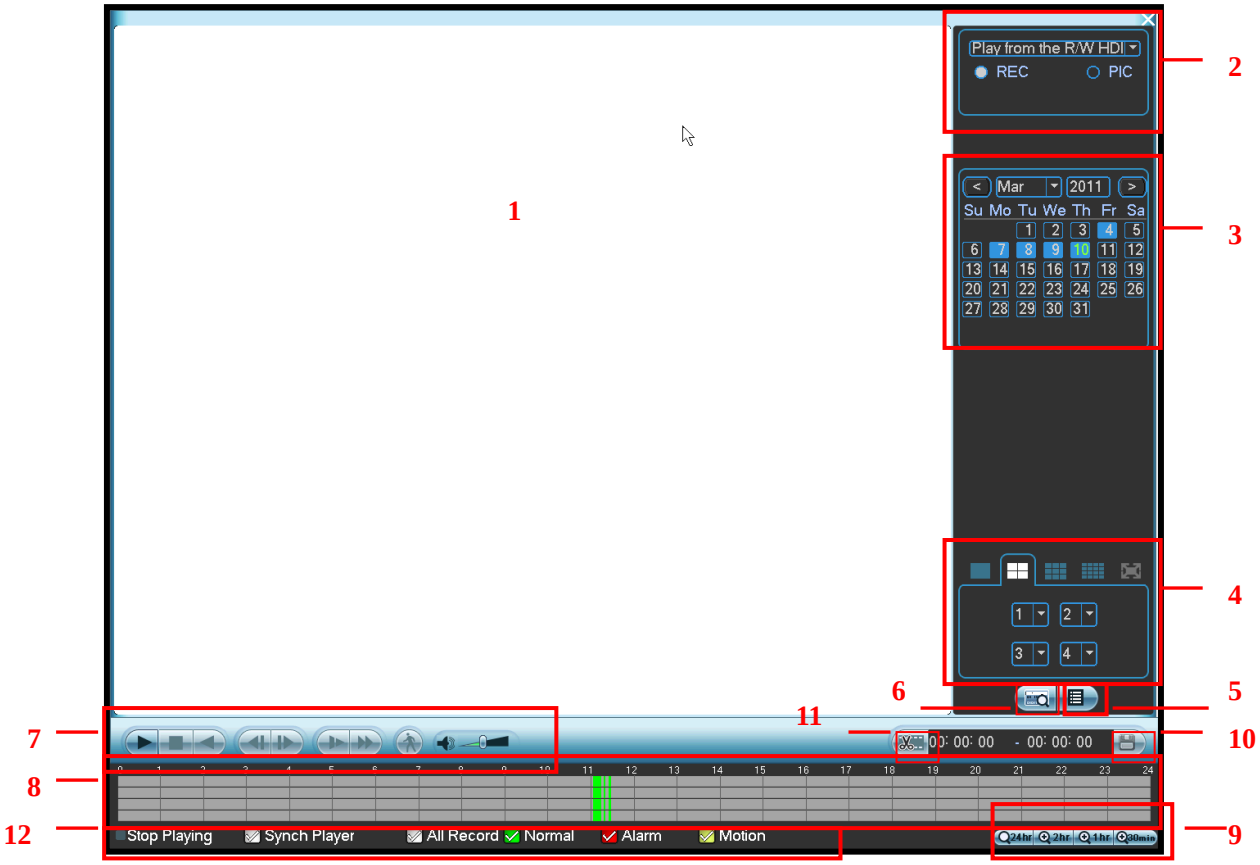
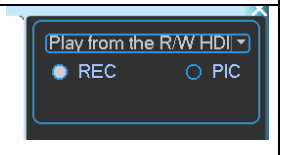
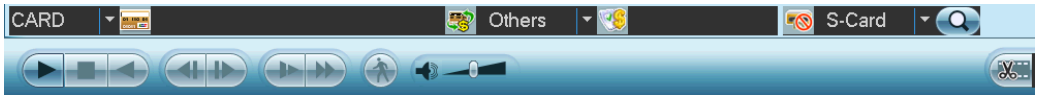


Figure 6-5

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.
2	Search type	●Here you can select to search the picture or the recorded file. ●When there is displayed picture on the left pane, you can set the corresponding setup 
3	Calendar	●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.

<table>
<tr><td>4</td><td>Playback mode and channel selection pane.</td><td colspan="2">●Playback mode：1/4/9/16. (It may vary due to different series.)
✧ In 1-window playback mode: you can select 1-16 channels.
✧ In 4-window playback mode: you can select 4 channels according to your requirement.
✧ In 9-window playback mode, you can switch between 1-9 and 10-16 channels.
✧ In 16-window playback mode, you can switch between1-16 and 17-32 channels.
●The time bar will change once you modify the playback mode or the channel option.</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 the ▲/▼ or 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.
</td></tr>
<tr><td rowspan="6">7</td><td rowspan="6">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</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>
</table>

			Smart search
			The volume of the playback
			Click the snapshot button in the full-screen mode, the system can snapshot 1 picture per second.
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 when you want to edit. You can see the corresponding slide bar in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time. Click this button again and then save current contents in a new file. .	
12	Record type	In any play mode, the time bar will change once you modify the search type.	
13	Smart search	● When 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.	
Other Functions			
14	Other channel synchronization switch to play when playback	When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.	

15	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 hardware version. Some series NVRs do not support some functions or playback speeds.

6.5 Information

Here is for you to view system information. There are total five items: HDD (hard disk information), BPS (data stream statistics), Log and version, and online user. See Figure 6-6.

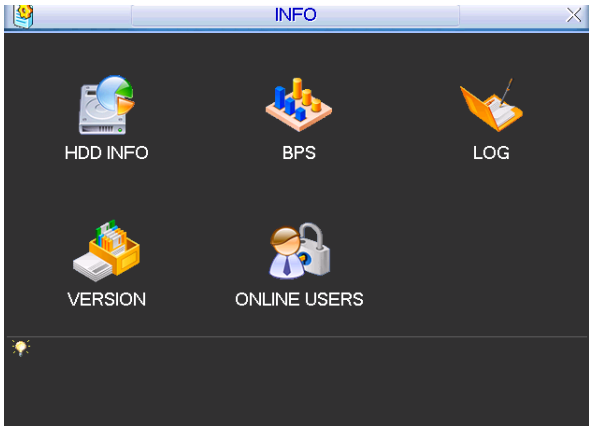


Figure 6-6

6.5.1 HDD Information

Here is to list hard disk type, total space, free space, and status. See Figure 6-7.

For 1U series product there are max 2 HDDs. For S series product there are max 8 HDDs.

○ 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.

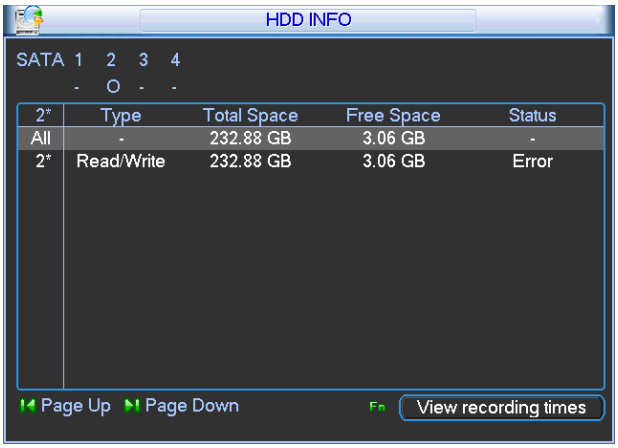


Figure 6-7

In Figure 6-7, click view record d time button, HDD record time information interface is shown as in Figure 6-8.



Figure 6-8

Parameter	Function
SATA	1-4 here means there are 4 HDDS. For 1U series product there are max 2 HDDs. For 2U series product there are max 8 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.
Type	The corresponding HDD property.
Total space	The HDD total capacity.
Free space	The HDD free capacity.
Status	HDD can work properly 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,

6.5.2 BPS

Here is for you to view current video data stream (KB/s) and occupied hard disk storage (MB/h). See Figure 6-9.

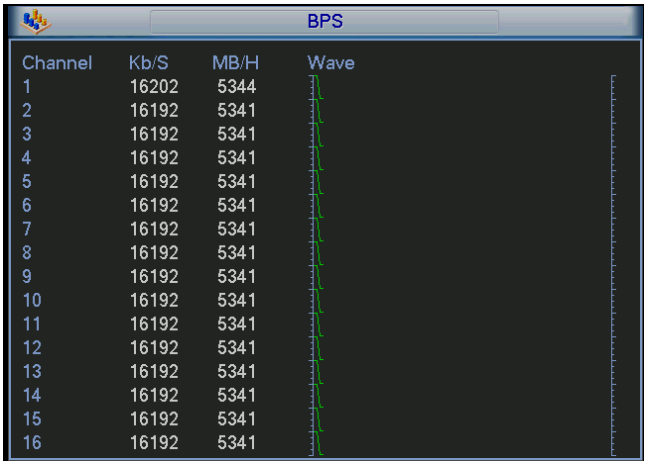


Figure 6-9

6.5.3 Log

Here is for you to view system log file. System lists the following information. See Figure 6-10.

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

Please select start time and end time, then click search button. You can view the log files.

System max displays 100 logs in one page. It can max save 1024 log files.

Please page up/down button to view if there are more than ten files.

System also supports the backup function; you can click the backup button to save the log files in the USB devices.

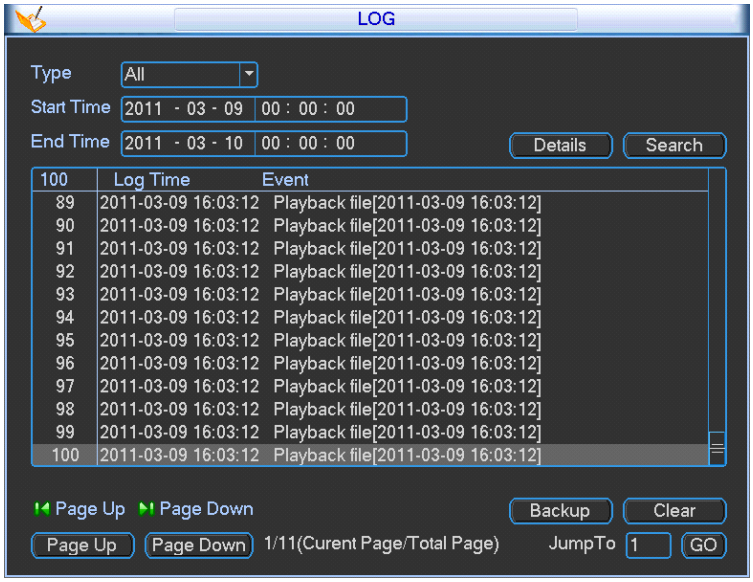


Figure 6-10

Click the Details button or double click the log item, you can view the detailed information. See Figure 6-11.

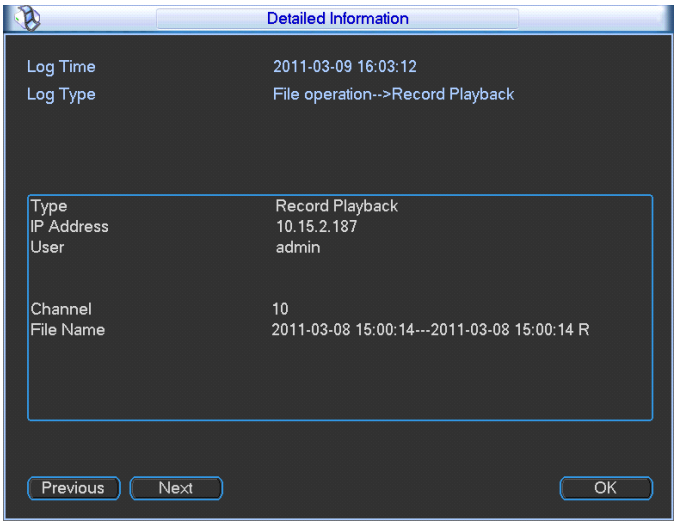


Figure 6-11

6.5.4 Version

Here is for you to view some version information. See Figure 6-12.

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

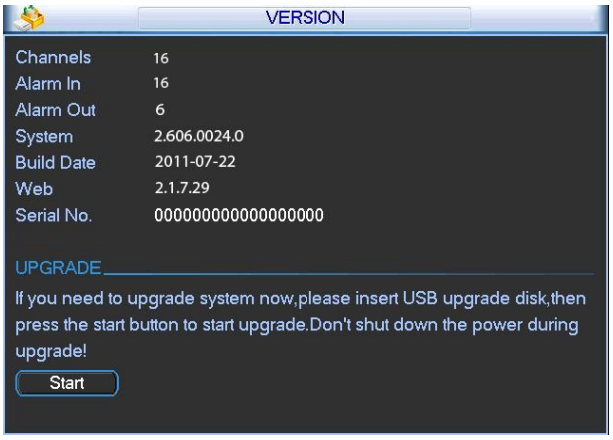


Figure 6-12

6.5.5 Online Users

Here is for you manage online users connected to the local device. See Figure 6-13.

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

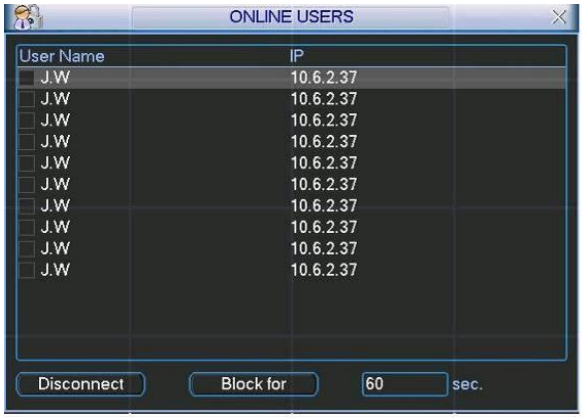


Figure 6-13

6.6 Setting

In main menu, highlight setting icon and double click mouse. System setting interface is shown as below. See Figure 6-14.

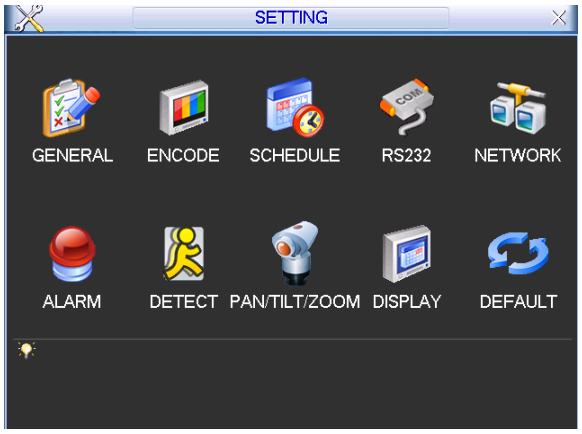


Figure 6-14

Important

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

6.6.1 General

General setting includes the following items. See Figure 5-3.

- 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 6-16. Here you can set start time and end time by setting corresponding week setup. In Figure 6-16, enable date button, you can see an interface is shown as in Figure 5-5. 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: System supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight difference maybe found in various series.)
- 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 60 to 120 minutes. Default value is 60 minutes.
- NVR 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.
- Video standard: There are two formats: NTSC and PAL.
- 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.
- 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.
- Device ID: Please input a corresponding device name here.

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.

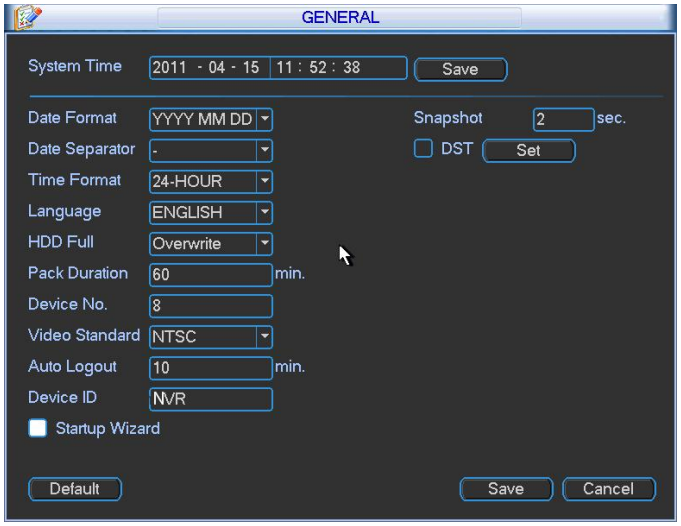


Figure 6-15

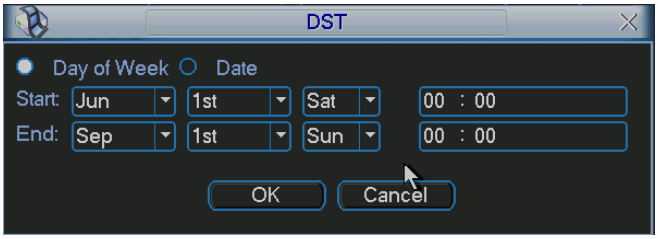


Figure 6-16

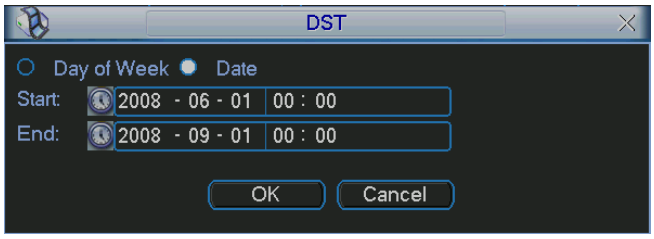


Figure 6-17

6.6.2 Encode

Encode setting includes the following items. See Figure 6-18.

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: System supports H.264.
- Resolution: The mainstream resolution type is IPC's encoding config. Generally there are D1/720P/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 6-19.
- ✧ 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.

Please highlight icon to select the corresponding function.

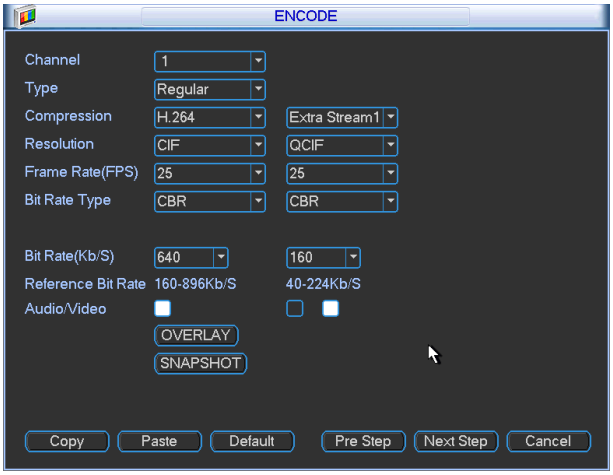


Figure 6-18

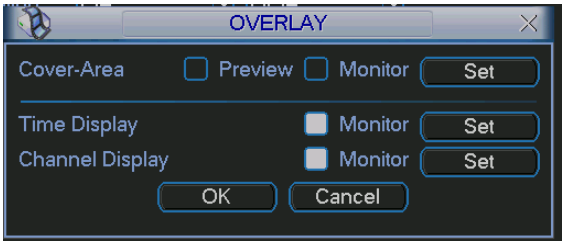


Figure 6-19

6.6.3 Schedule

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 6-20.

- 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.
- Redundancy: System supports redundancy backup function. It allows you backup recorded file in two disks. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (Main menu->Advanced->HDD Management)
- Snapshot: You can enable this function to snapshoot image when alarm occurs.
- Record types: There are four types: regular, motion detection (MD), Alarm, MD & alarm.

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.

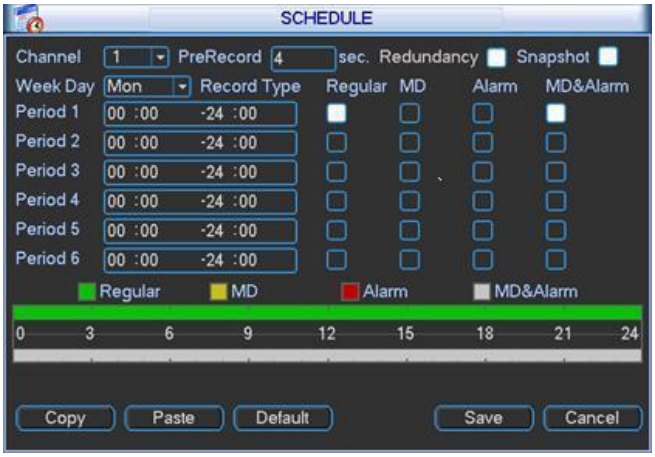


Figure 6-20

Shortcut settings:

Users can copy the settings of channel A to channel B to achieve the same configuration effect.E.g. choose channel 1 and click the copy button after relevant settings are done, then paste to channel3, you can find that the configuration of channel3 is the same as that of channel1.

Users can save the configuration of each channel respectively or save the configuration all at once ultimately.

6.6.4 RS232

RS232 interface is shown as below. There are five items. See Figure 6-21.

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

System default setup is:

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

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

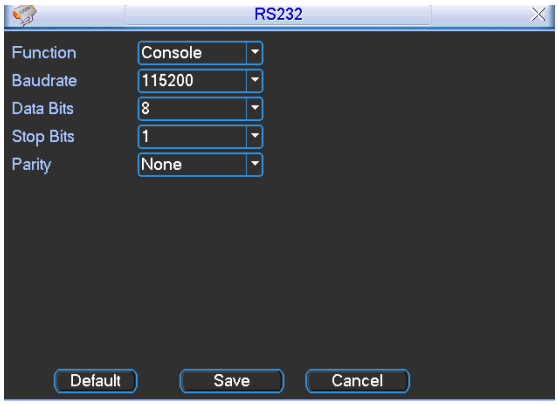


Figure 6-21

6.6.5 Network

Here is for you to input network information. See Figure 6-22.

- IP address: Here you can input IP 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/Subnet mask /Gateway.
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- RTSP port: Default value is 554.
- 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.

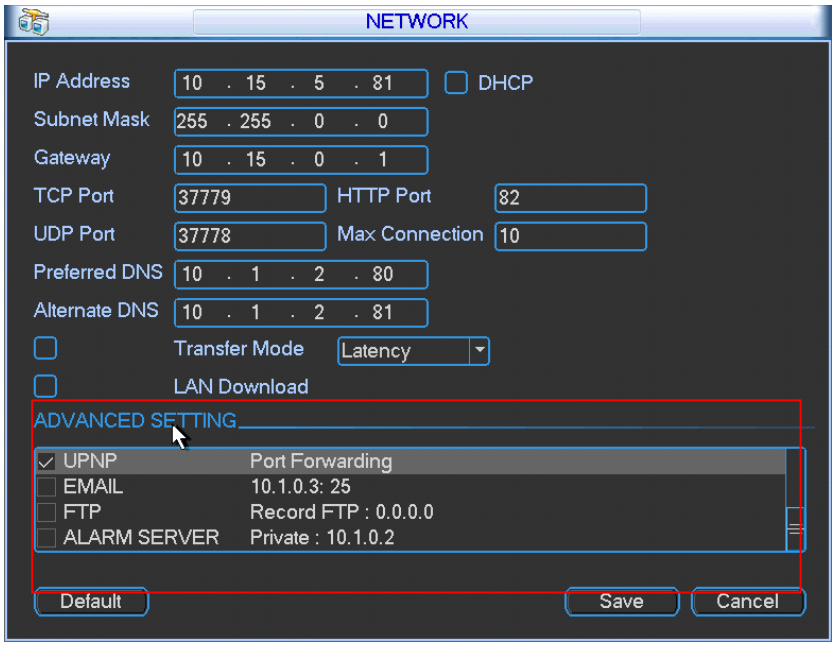


Figure 6-22

6.6.5.1 Advanced Setup

Advanced setup interface is shown as in Figure 6-23. Please draw a circle to enable corresponding function and then double click current item to go to setup interface.

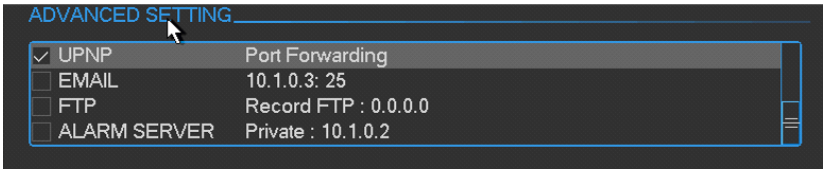


Figure 6-23

6.6.5.2 IP Filter

IP filter interface is shown as in Figure 6-24. You can add IP in the following list. The list supports max 64 IP addresses.

Please note after you enabled this function, only the IP listed below can access current NVR.

If you disable this function, all IP addresses can access current NVR.

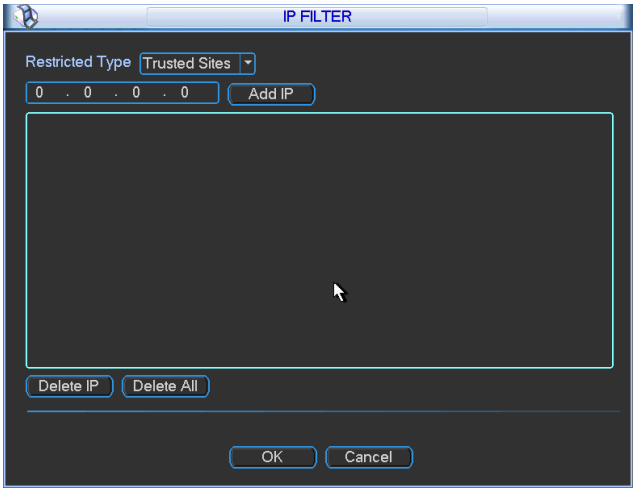


Figure 6-24

6.6.5.3 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 6-25.

- 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.

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

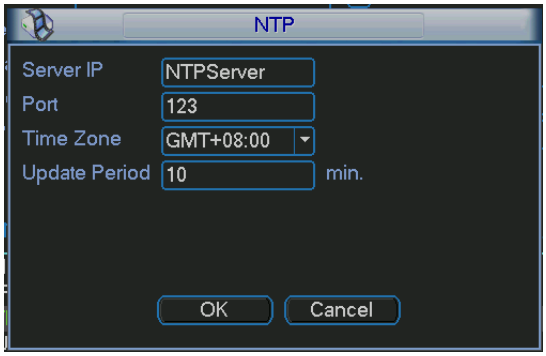


Figure 6-25

6.6.5.4 Multiple Cast Setup

Multiple-cast setup interface is shown as in Figure 6-26.

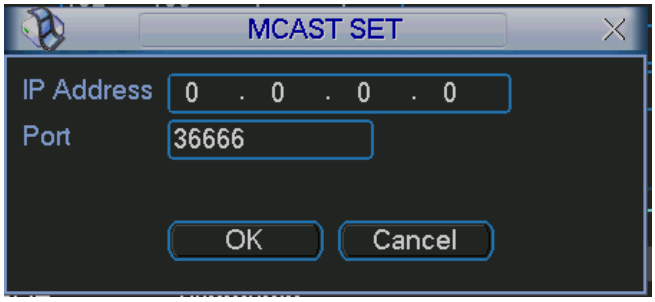


Figure 6-26

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.

Please note multiple cast function applies to special series only.

6.6.5.5 PPPoE

PPPoE interface is shown as in Figure 6-27.

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.

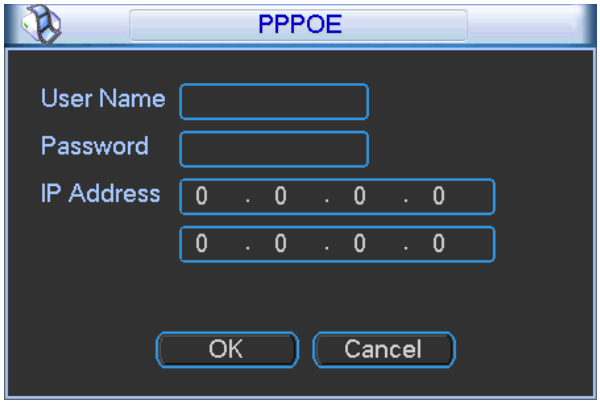


Figure 6-27

6.6.5.6 DDNS Setup

DDNS setup interface is shown as in Figure 6-28.

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. Them 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.

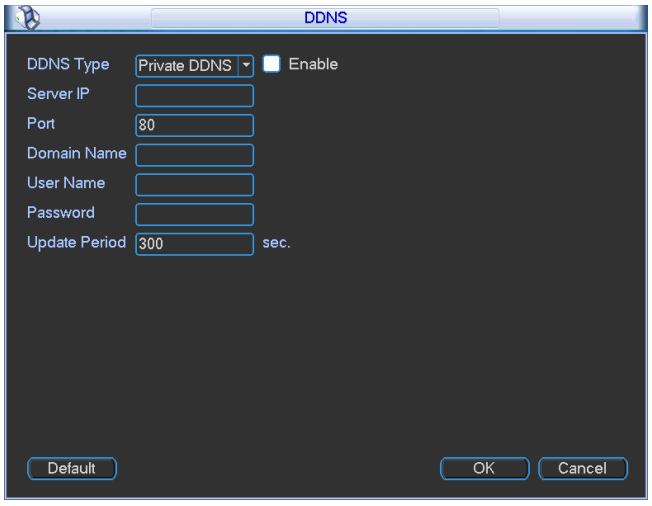


Figure 6-28

Please note NNDS type includes: CN99 DDNS、NO-IP DDNS、Private DDNS、Dyndns DDNS and sysdns 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).

6.6.5.7 UPNP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 6-22. Double click the UPNP item in Figure 6-22, you can see the following interface. See Figure 6-29.

- UPNP on/off ：Turn on or off the UPNP function of the device.

- Status: When the UPNP is offline, it shows as “Unknown”. 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 6-30.

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.

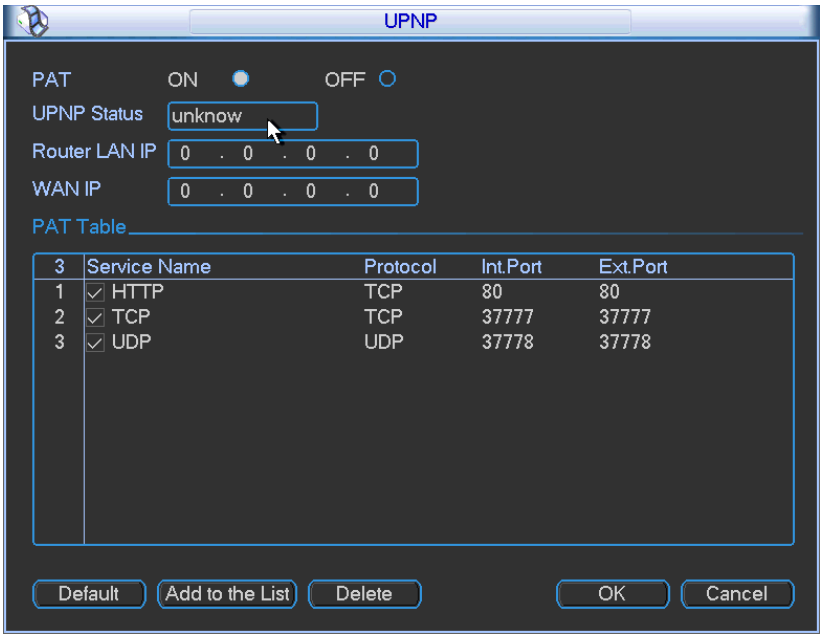


Figure 6-29

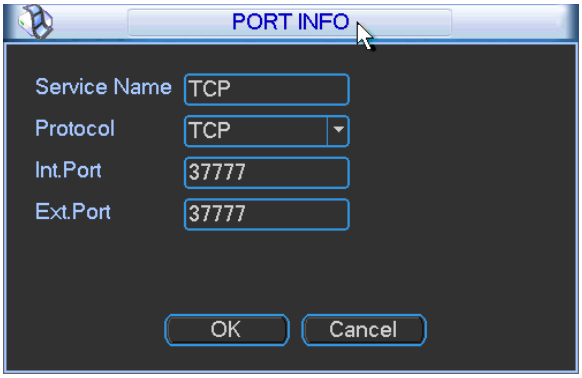


Figure 6-30

6.6.5.8 Email

The email interface is shown as below. See Figure 6-31.

- 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 6-32.

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.

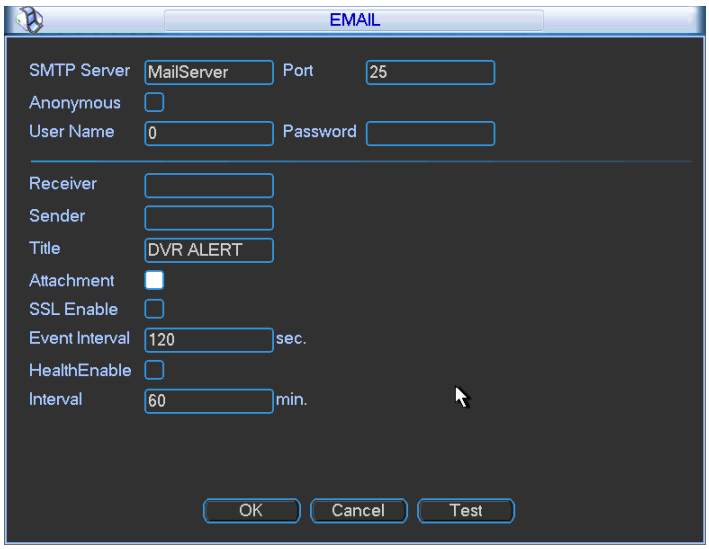


Figure 6-31

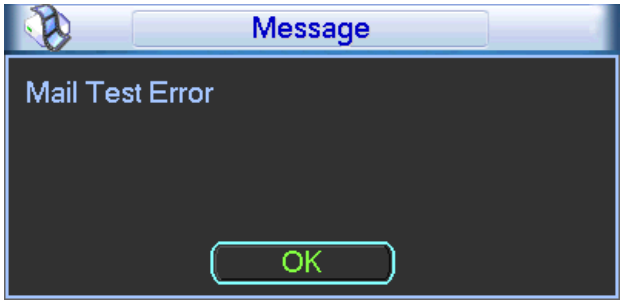


Figure 6-32

6.6.5.9 FTP

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

Please install Ser-U FTP SERVER first. From “start” -> “program” -> Serv-U FTP Server -> Serv-U Administator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 6-33.

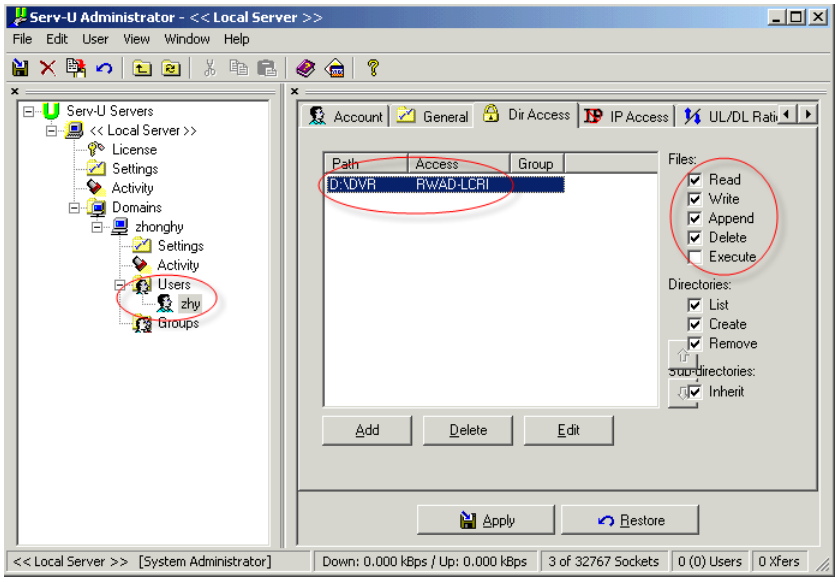


Figure 6-33

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

For example, you can login user ZHY to FTP://10.10.7.7 and then test it can modify or delete folder or not. See Figure 6-34.



Figure 6-34

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

In Figure 6-22, select FTP and then double click mouse. You can see the following interface. See Figure 6-35.

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

Here you can input FTP server address, port and remote directory. When remote directory is null, system automatically create folders according to the IP, time and channel.

User name and password is the account information for you to login the FTP.

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

After completed channel and weekday setup, you can set two periods for one each channel.

Click the Test button, you can see the corresponding dialogue box to see the FTP connection is OK or not. See Figure 6-36.

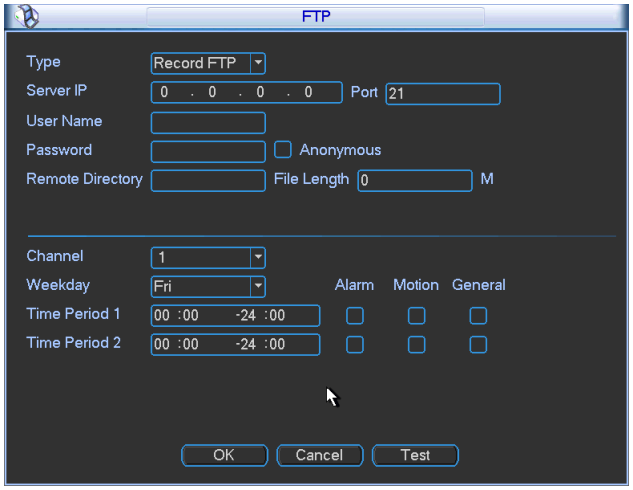


Figure 6-35



Figure 6-36

6.6.5.1 Alarm center

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

6.6.6 Alarm

In the main menu, from Setting to Alarm, you can see alarm setup interface. See Figure 6-37.

Alarm setup:

Alarm interface is shown as below. See Figure 6-37.

- Alarm in: Here is for you to select channel number.
- Event type: There are two types. One is local input and the other is network input.
- Type: normal open or normal close.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour& pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 6-38.
- Period: Click set button, you can see an interface is shown as in Figure 6-39. Here you can set for business day and non-business day. In Figure 6-39, click set button, you can see an interface is shown as in Figure 6-40. Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time.
- 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: you can select proper channel to record alarm video (Multiple choices). At the same time you need to set alarm record in schedule interface (Main Menu->Setting->Schedule) and select schedule record in manual record interface (Main Menu->Advance->Manual Record).
- Latch: Here is for you to set proper delay duration. Value ranges from 10 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Tour: Here you can enable tour function when alarm occurs. System supports one-window tour. Please go to chapter 5.3.9 Display for tour interval setup.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when alarm occurs.

For snapshot operation, please refer to chapter 4.4.2.

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

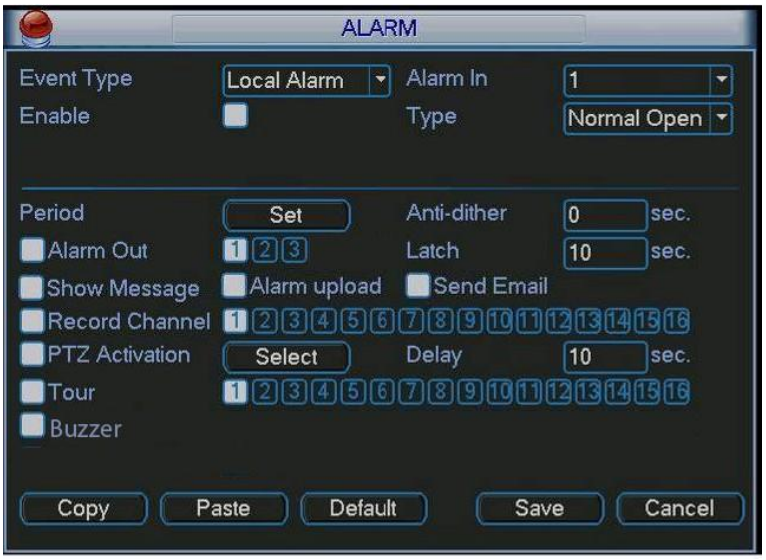


Figure 6-37

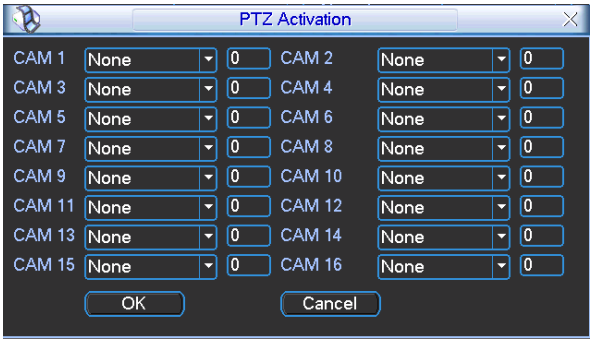


Figure 6-38

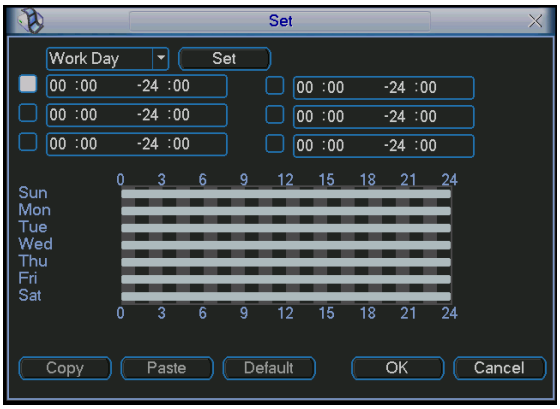


Figure 6-39

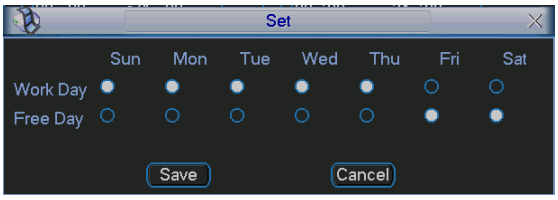


Figure 6-40

6.6.7 Detect

Go to Detect Menu

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 6-41.There is three detection types: motion detection, video loss, camera masking.

Motion Detect

Detection menu is shown as below. See Figure 6-41

- Event type: from the dropdown list you can select motion detection type.
- Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
- Region: Click select button, the interface is shown as in Figure 6-42. 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.
- 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.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 6-43.
- Period: Click set button, you can see an interface is shown as in Figure 6-44. Here you can set for business day and non-business day. In Figure 6-44 click set button, you can see an interface is shown as in Figure 6-45. Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour: Here you can enable tour function when alarm occurs. System one-window tour. Please go to chapter 5.3.9 Display for tour interval setup.
- Snapshot: You can enable this function to snapshoot image when alarm occurs.

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 6-42, 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.

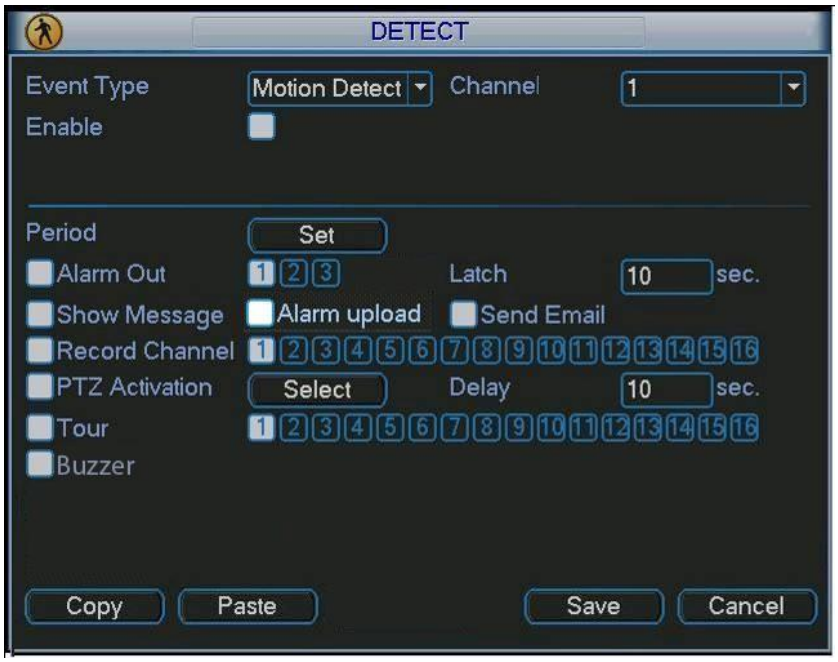


Figure 6-41

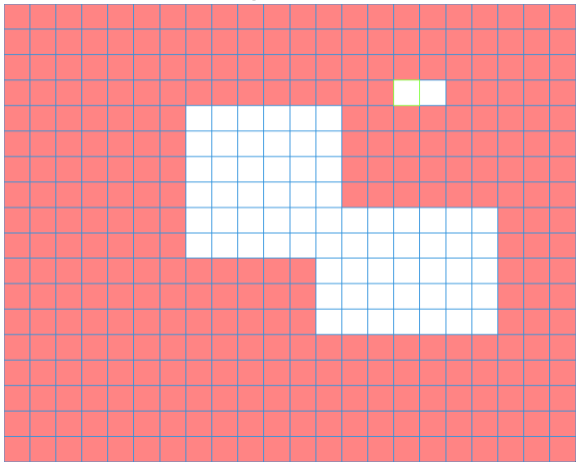


Figure 6-42

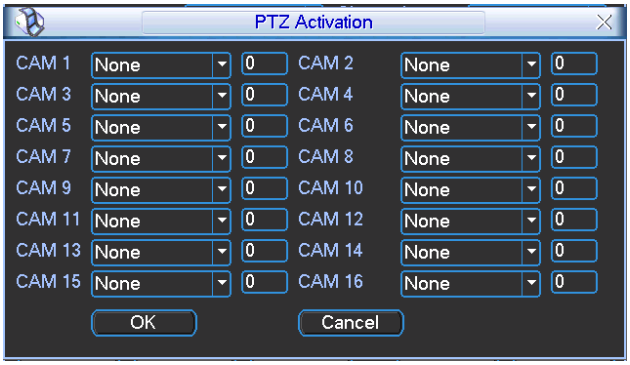


Figure 6-43

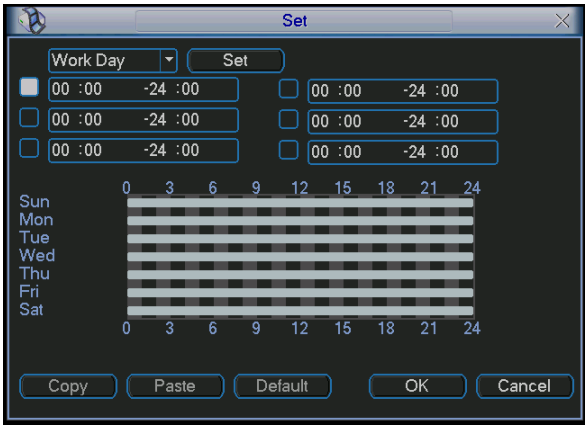


Figure 6-44

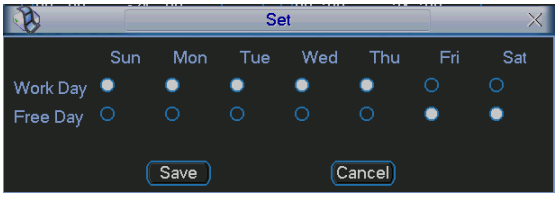


Figure 6-45

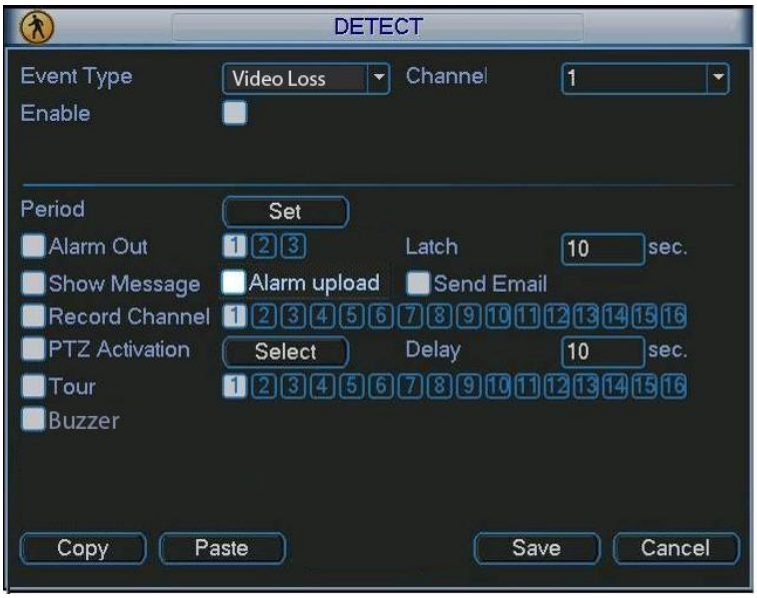
Video Loss

In Figure 6-41, select video loss from the type list. You can see the interface is shown as in CFigure 6-46.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 activation operation when video loss occurs.

Please refer to chapter 4.5.2 motion detection for detailed information.



CFigure 6-46

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 6-47.

Tips:

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

Please refer to chapter 4.5.2 motion detection for detailed information.

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.

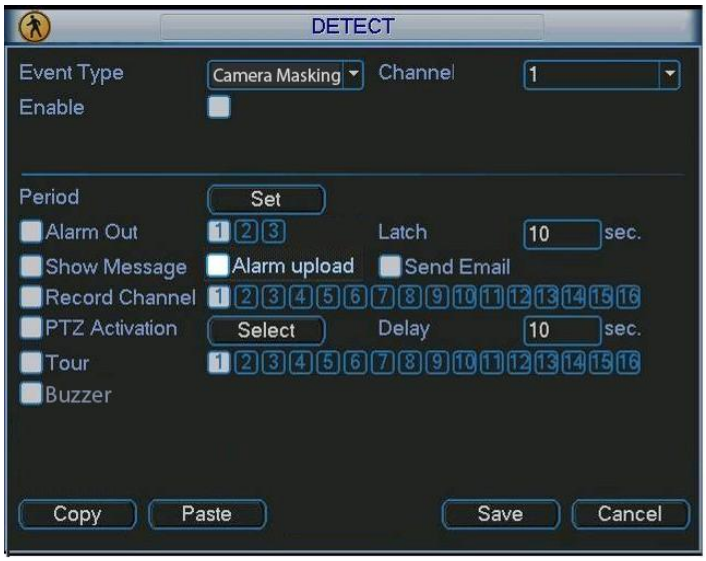


Figure 6-47

6.6.8 PTZ

Note: All the operations here are based on PELCOD protocol. For other protocols, there might be a little difference.

Cable Connection

Please follow the procedures below to go on cable connection

- Connect the dome RS485 port to NVR 485 port.
- Connect dome video output cable to NVR video input port.
- Connect power adapter to the dome.

PTZ Setup

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

- PTZ and decoder connection is right. Decoder address setup is right.
- Decoder A (B) line connects with NVR A (B) line.

Boot up the NVR, input user name and password.

In the main menu, click setting, and then click Pan/Tilt Control button. The interface is shown as in Figure 6-48. Here you can set the following items:

- Channel: select the current camera channel.
- Protocol: select corresponding PTZ protocol(such as PELCOD)
- Address: default address is 1.
- Baud rate: select corresponding baud rate. Default value is 9600.
- Data bits: select corresponding data bits. Default value is 8.
- Stop bits: select corresponding stop bits. Default value is 1.
- Parity: there are three options: odd/even/none. Default setup is none.

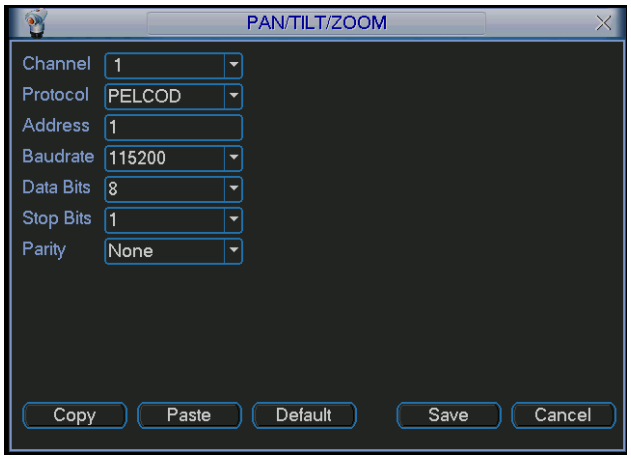


Figure 6-48

After completing all the setting please click save button.

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

Click Pan/Tilt/Zoom, the interface is shown as below. See Figure 6-49.

Here you can set the following items:

- Step: value ranges fro 1 to 8.
- Zoom
- Focus
- Iris

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



Figure 6-49

In Figure 6-49, please click direction arrows to adjust PTZ position. There are total 8 direction arrows.



Figure 6-50

Here is a sheet for you reference.

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

6.6.9 Display

Display setup interface is shown as below. See Figure 6-51.

- Transparency: Here is for you to adjust transparency. The value ranges from 128 to 255.
- 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.
- Resolution: There are four options: 1280×1024(default),1280×720,1024×768,800×600. 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.

Please highlight icon to select the corresponding function.

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

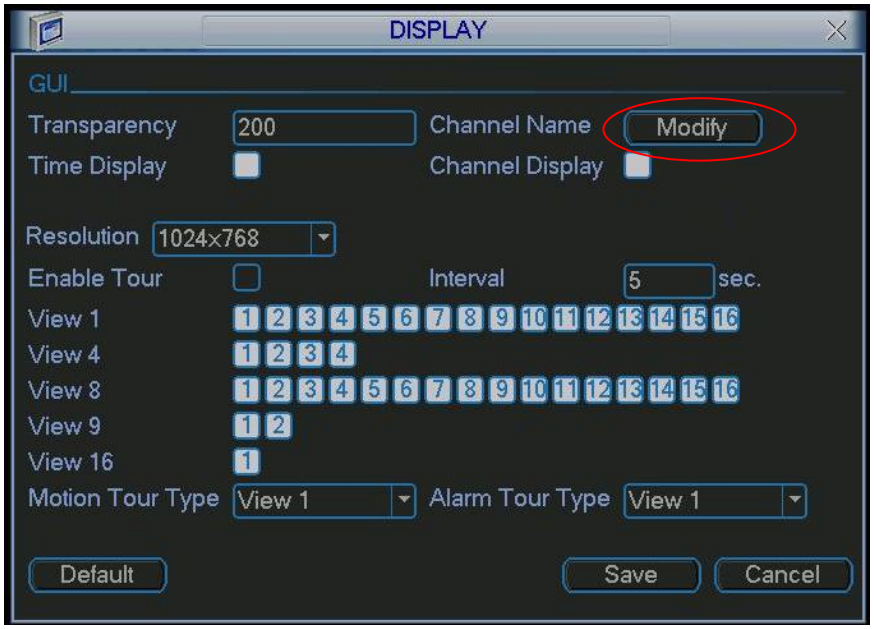


Figure 6-51

In Figure 6-51, click modify button after channel. You can see an interface shown as in Figure 6-52. 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 6-52

In tour mode, you can see the following interface. On the right corner, right click mouse or click shift button, you can control the tour. There are two icons: stands for enabling window switch and stands for disabling window function. See Figure 6-53.

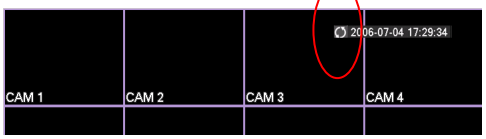


Figure 6-53

6.6.10 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!

6.7 Advanced

Double click advanced icon in the main window, the interface is shown as below. See Figure 6-54.There2 are total eight function keys: HDD management, alarm output, abnormity, manual record, account, auto maintenance, TV adjust and video matrix.

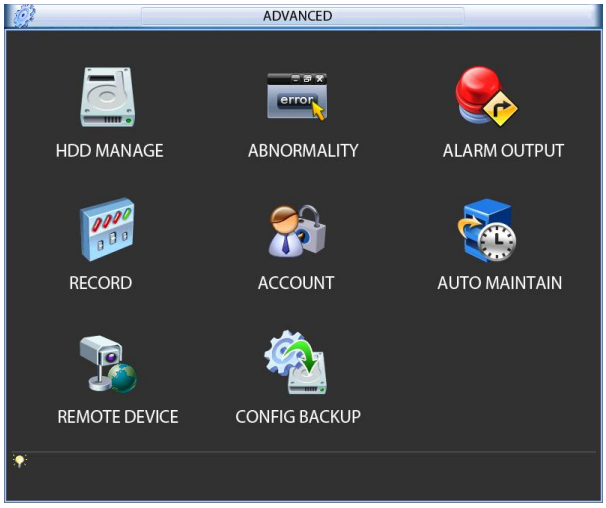


Figure 6-54

6.7.1 HDD Management

Here is for you to view and implement hard disk management. See Figure 6-55.

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 错误!未找到引用源。. (This interface is just like the abnormity setup). Please refer to chapter 5.5.2 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.

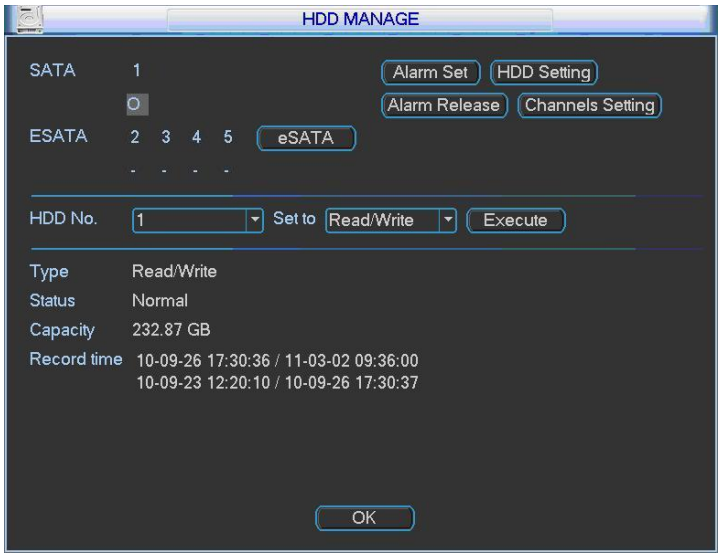


Figure 6-55

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 and self-defined disks, other types of hard disks cannot be set as HDD Group.

Important:

- e-SATA also supports this function, you can manage e-SATA hard disk as local hard disk.
- 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 Settings" at the top right corner of the Figure 6-55, system will pop up an interface as below. See Figure 6-56.

The number of hard disk from 1 to 12 is shown in the "HDD No." column. If there is a mark  in the front of the number, 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 check the box of the hard disk, and then choose the corresponding HDD Group number and save the settings.

In Figure 6-56, you can see the system has two working hard disks at the 6th and 7th position, and the 6th position hard disk belongs to HDD Group 1, the 7th position hard disk belongs to HDD Group 2.

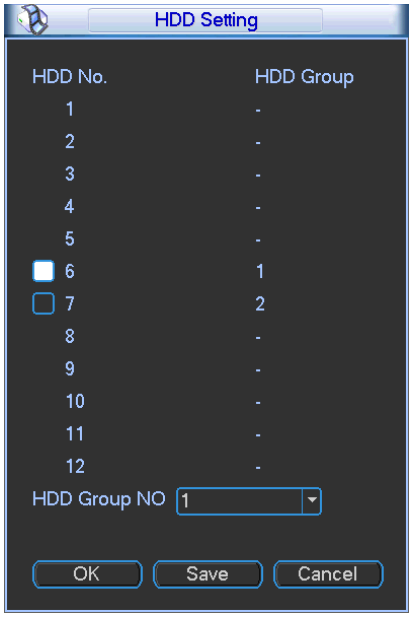


Figure 6-56

In Figure 6-57, you can see the 6th and 7th position hard disks both belong to HDD Group 2.

Important

Once you change the HDD Group settings, system will pack the records and snapshots, and then reboot.

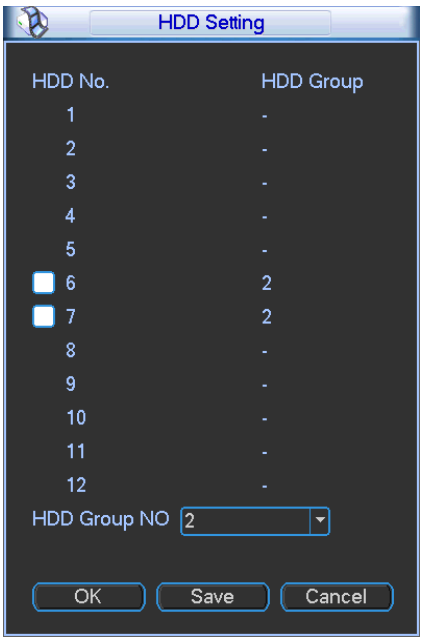


Figure 6-57

Channels Setting

Click the button named with “Channels Settings” at the top right corner of the Figure 6-55, system will pop up an interface shown as in Figure 6-58.

When you are setting the configurations of the channels setting, please select relevant channels first (such as channel 1 to 16), and then select the HDD Group NO. Please click the Save button to save current setup.

The Figure 6-58 and Figure 6-59 show that channels 1 to 16 are associated to HDD Group NO 1, and channels 17 to 32 are associated to HDD Group NO 2. Therefore the records of channels 1 to 16 are stored into the hard disk(s) which belong to HDD Group NO 1, and the records of channels 17 to 32 are stored into the hard disk(s) which belong to HDD Group NO 2.

Important

Once you change the HDD Group settings, system will pack the records and snapshots, and then reboot.

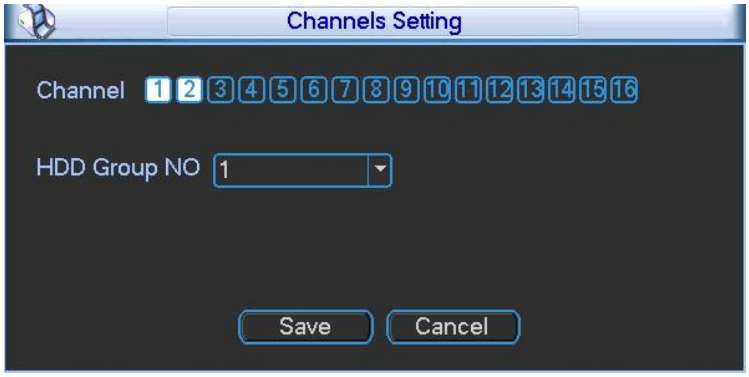


Figure 6-58

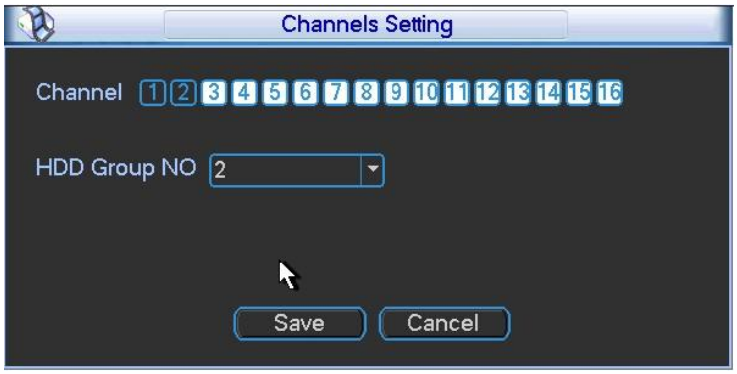


Figure 6-59

6.7.2 Abnormity

Abnormity interface is shown as in Figure 6-60.

- Event type: There are several options for you such as disk error, no disk, disconnection, IP conflict and etc.
- Alarm output: Please select alarm activation output port (multiple choices).
- Latch: Here you can set corresponding delaying time. The value ranges from 10s-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.

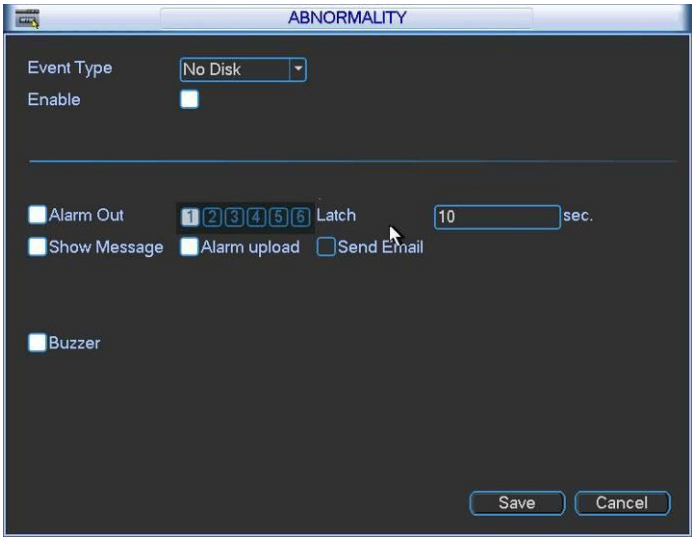


Figure 6-60

6.7.3 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 6-61.

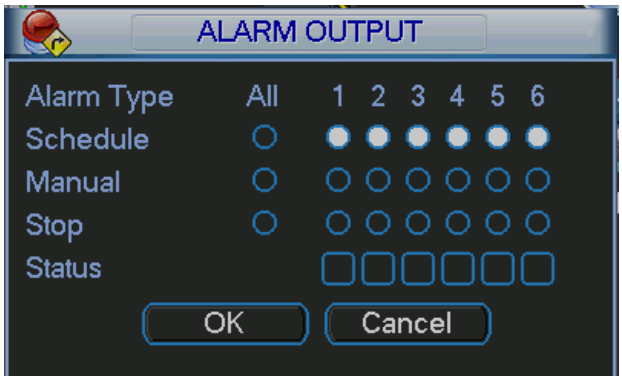


Figure 6-61

6.7.4 Manual Record

Note:

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

6.7.4.1 Manual record menu

There are two ways for you to go to manual record menu.

- Right click mouse or in the main menu, Advanced->Manual Record.
- In live viewing mode, click record button in the front panel or record button in the remote control.

Manual record menu is shown as in Figure 6-62.

6.7.4.2 Basic operation

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 6-62

6.7.4.3 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 6-63.



Figure 6-63

6.7.4.4 Enable all channel recording

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

- All channel schedule record

Please highlight "ALL" after "Schedule". See Figure 6-64.

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.

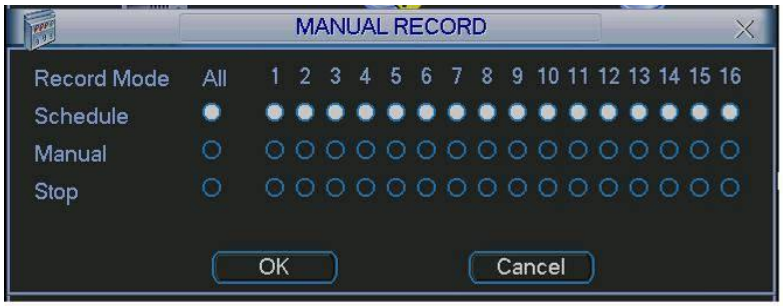


Figure 6-64

- All channel manual record

Please highlight “ALL” after “Manual.” See Figure 6-65.

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 6-65

6.7.4.5 Stop all channel recording

Please highlight “ALL” after “Stop”. See Figure 6-66.

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



Figure 6-66

6.7.5 Account

Here is for you to implement account management. See Figure 6-67. 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/888888/666666 and hidden user “default”. Except user 6666, 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.

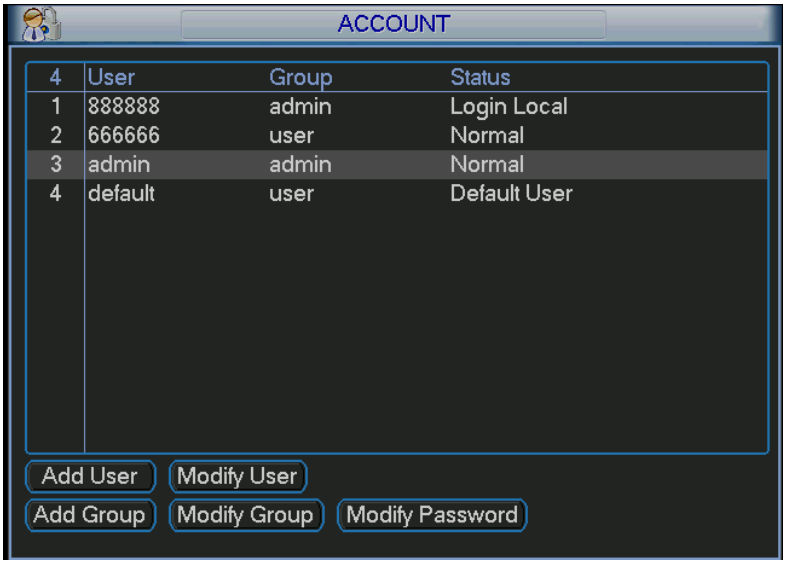


Figure 6-67

6.7.5.1 Modify Password

Click password button, the interface is shown as in Figure 6-68.

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.

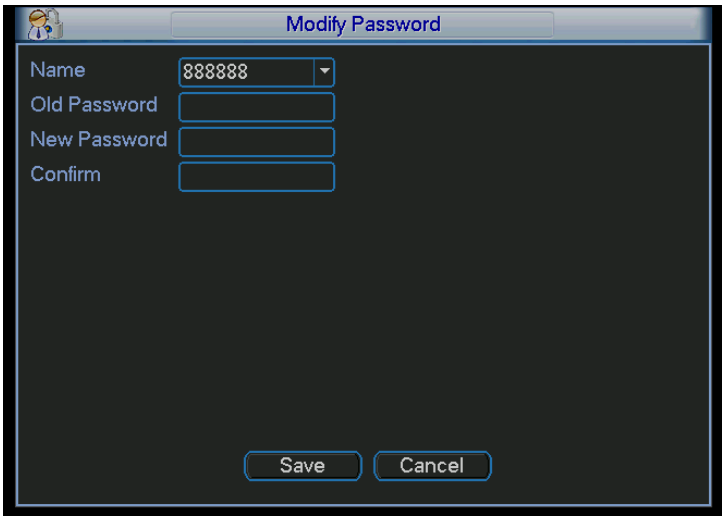


Figure 6-68

6.7.5.2 Add/Modify Group

Click add group button, the interface is shown as below. See Figure 6-69.

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

There are total 60 rights such as control panel, shut down, real-time monitor, playback, record, record file backup, PTZ, user account, system information view, alarm input/output setup, system setup, log view, clear log, upgrade system, control device and etc.

The modify group interface is similar to the Figure 6-69.

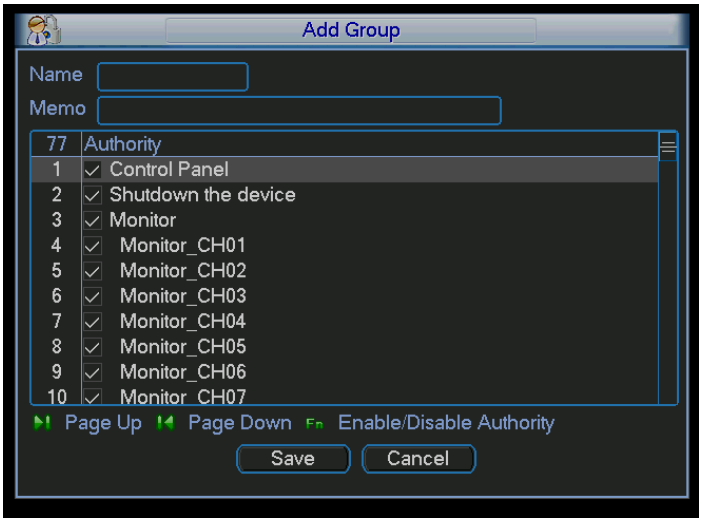


Figure 6-69

6.7.5.3 Add/Modify User

Click add user button, the interface is shown as in Figure 6-70.

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 6-70.

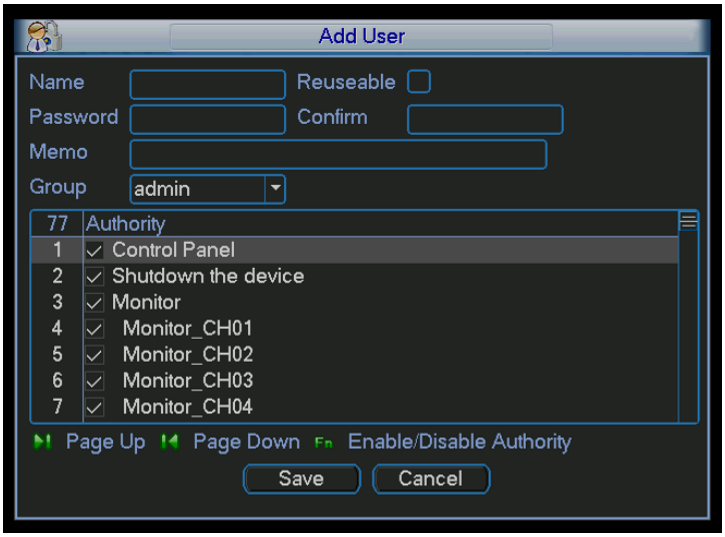


Figure 6-70

6.7.6 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 6-71.

You can select proper setup from dropdown list.

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

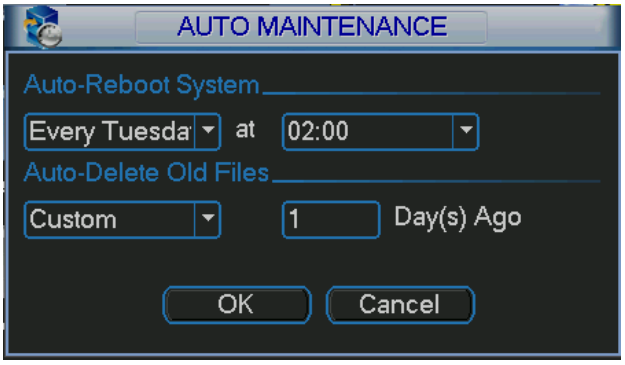


Figure 6-71

6.7.7 Remote Device

The remote device interface is shown as in Figure 6-72. Here you can set IPC IP address, port, remote device channel number, user name and its password.

IPC port number is 37777; remote device channel number is 1 by default. IPC user name is admin and password is admin.

The 4-ch device max. supports 4-ch D1 IPC or 2-ch 720P IPC or 1-ch 1080P IPC.

The 8-ch device max. supports 8-ch D1 IPC or 4-ch 720P IPC or 2-ch 1080P IPC.

The 16-ch device max. supports 16-ch D1 IPC or 8-ch 720P IPC or 4-ch 1080P IPC.

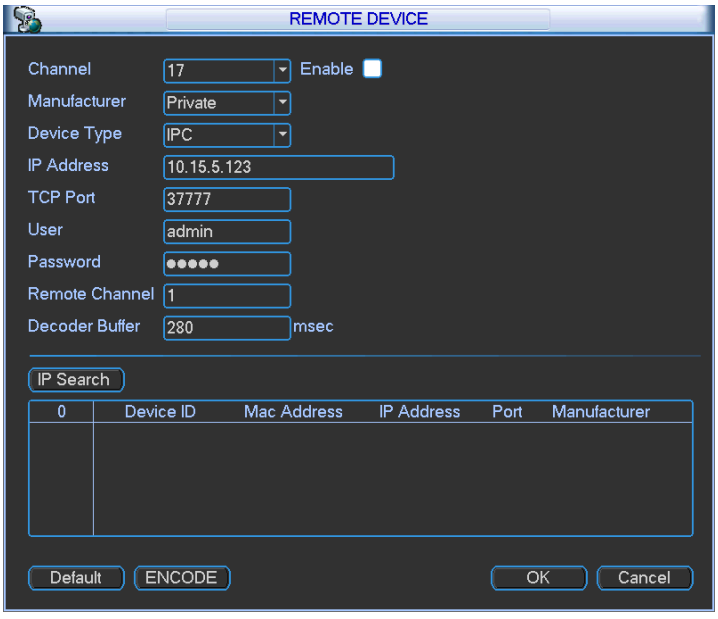


Figure 6-72

6.7.8 Config Backup

The configuration file backup interface is shown as below. See Figure 6-73.
This function allows you to copy current system configuration to other devices.

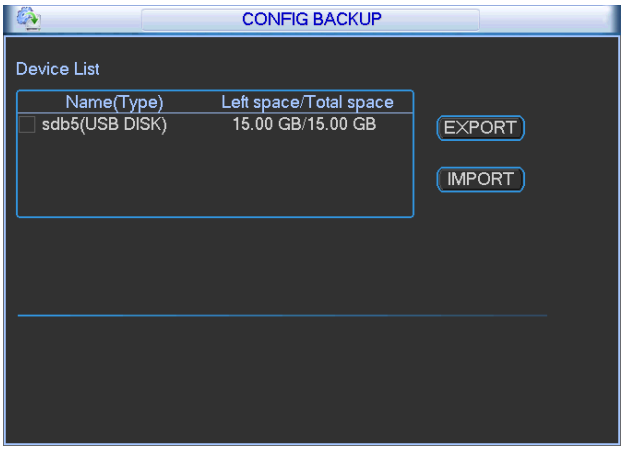


Figure 6-73

6.8 Shutdown

Double click shutdown button, system pops up a dialogue box for you to select. See Figure 6-74.

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

If you shut down the device, there is a process bar for your reference, system waits for 3 seconds and then shut down (You can not cancel).
Please note, sometimes you need to input the proper password to shut down the device.

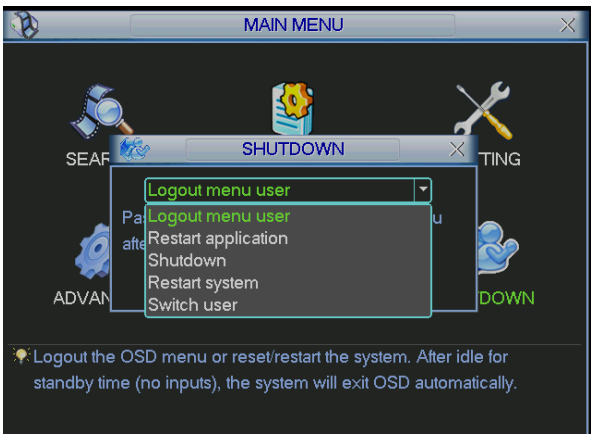


Figure 6-74

7 Quick Configuration Tool

7.1 Overview

Quick configuration tool can search current IP address, modify IP address. At the same time, you can use it to upgrade the device.

Please note the tool only applies to the IP addresses in the same segment.

7.2 Operation

Double click the “ConfigTools.exe” icon, you can see an interface is shown as in Figure 7-1.

In the device list interface, you can view device IP address, port number, subnet mask, default gateway, MAC address and etc.

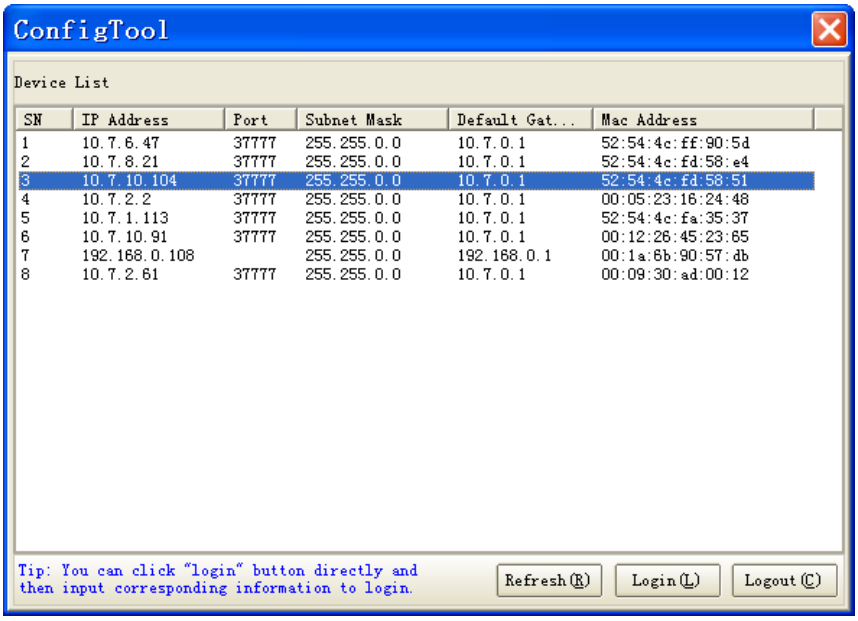


Figure 7-1

Select one IP address and then right click mouse, you can see an interface is shown as in Figure 7-2.

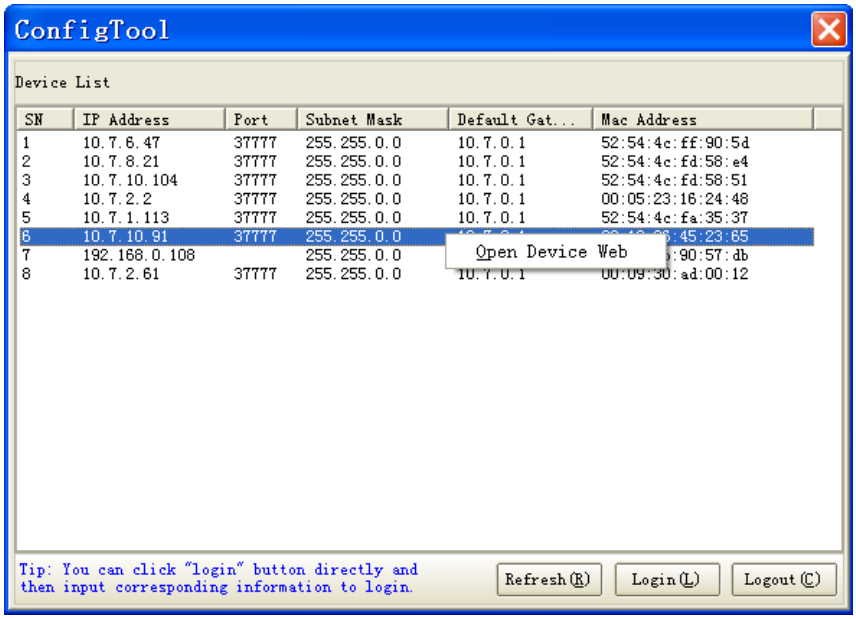


Figure 7-2

Select the “Open Device Web” item; you can go to the corresponding web login interface. See Figure 7-3.

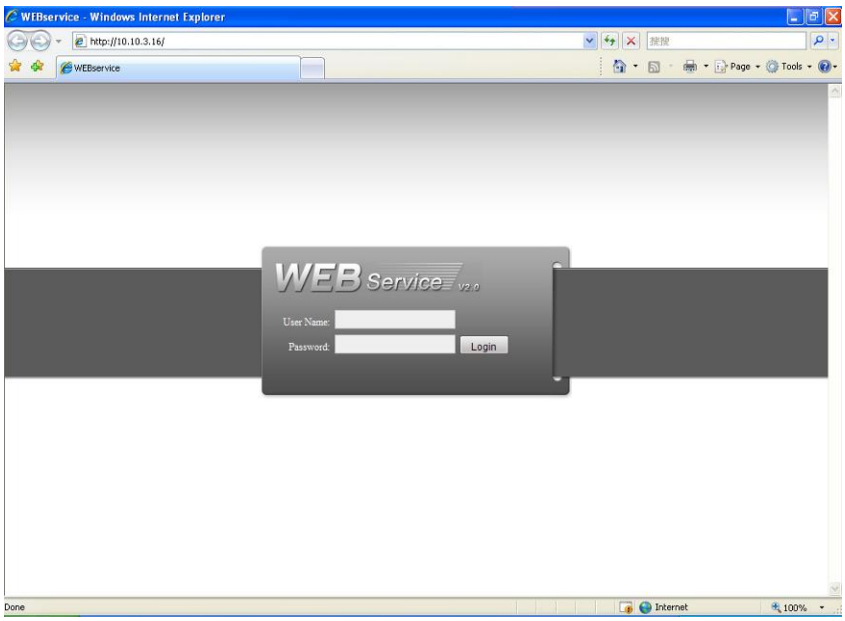


Figure 7-3

If you want to modify the device IP address without logging in the device web interface, you can go to the configuration tool main interface to set.

In the configuration tool search interface (Figure 7-1), please select a device IP address and then double click it to open the login interface. Or you can select an IP address and then click the Login button to go to the login interface. See Figure 7-4.

In Figure 7-4, you can view device IP address, user name, password and port. Please modify the corresponding information to login.

Please note the port information here shall be identical with the port value you set in TCP port in Web Network interface. Otherwise, you can not login the device.

If you are use device background upgrade port 3800 to login, other setups are all invalid.



Figure 7-4

After you logged in, the configuration tool main interface is shown as below. See Figure 7-5.

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

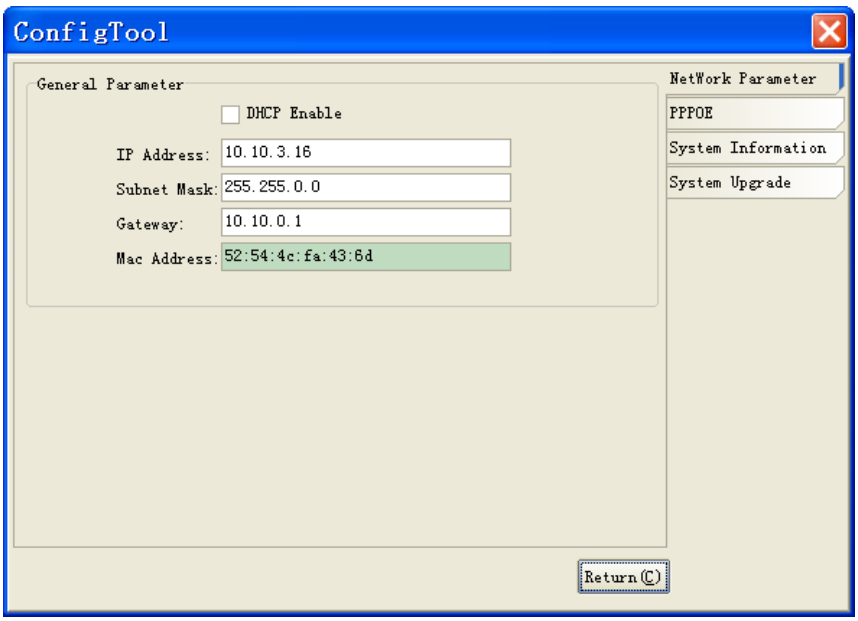

ConfigTool
General Parameter
DHCP Enable
IP Address:
10.10.3.16
Subnet Mask:
255.255.0.0
Gateway:
10.10.0.1
Mac Address:
52:54:4c:fa:43:6d
NetWork Parameter
PPPOE
System Information
System Upgrade
Return(C)

Figure 7-5

8 Web

8.1 General Introduction

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

Important

The following operation is based on 16-channel series device.

8.1.1 Preparation

Before log in, please make sure:

Step1: PC and NVR connection is OK.

Step2: 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.)

Step3: Use order ping ***.***.***.***(NVR IP address) to check connection is OK or not.

8.1.2 Log in

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

For example, if your NVR IP address is 192.168.1.108, then please input http:// 192.168.1.108 in IE address column. See Figure 7-1.

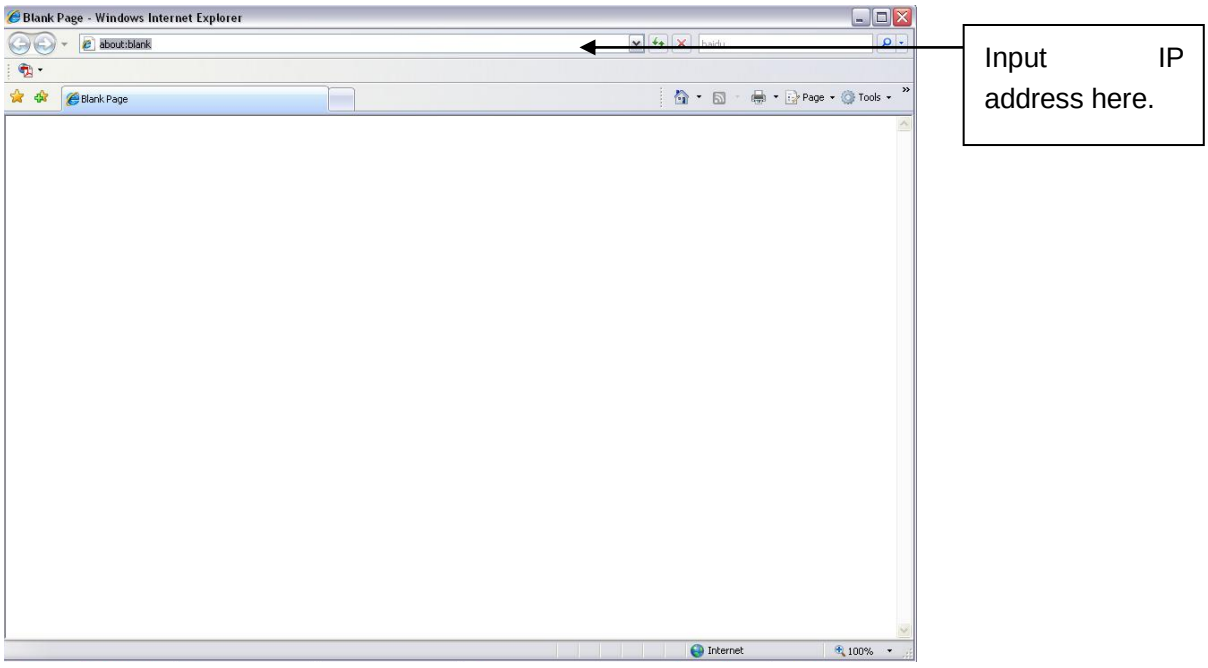


Figure 8-1 IE Interface

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 7-2.

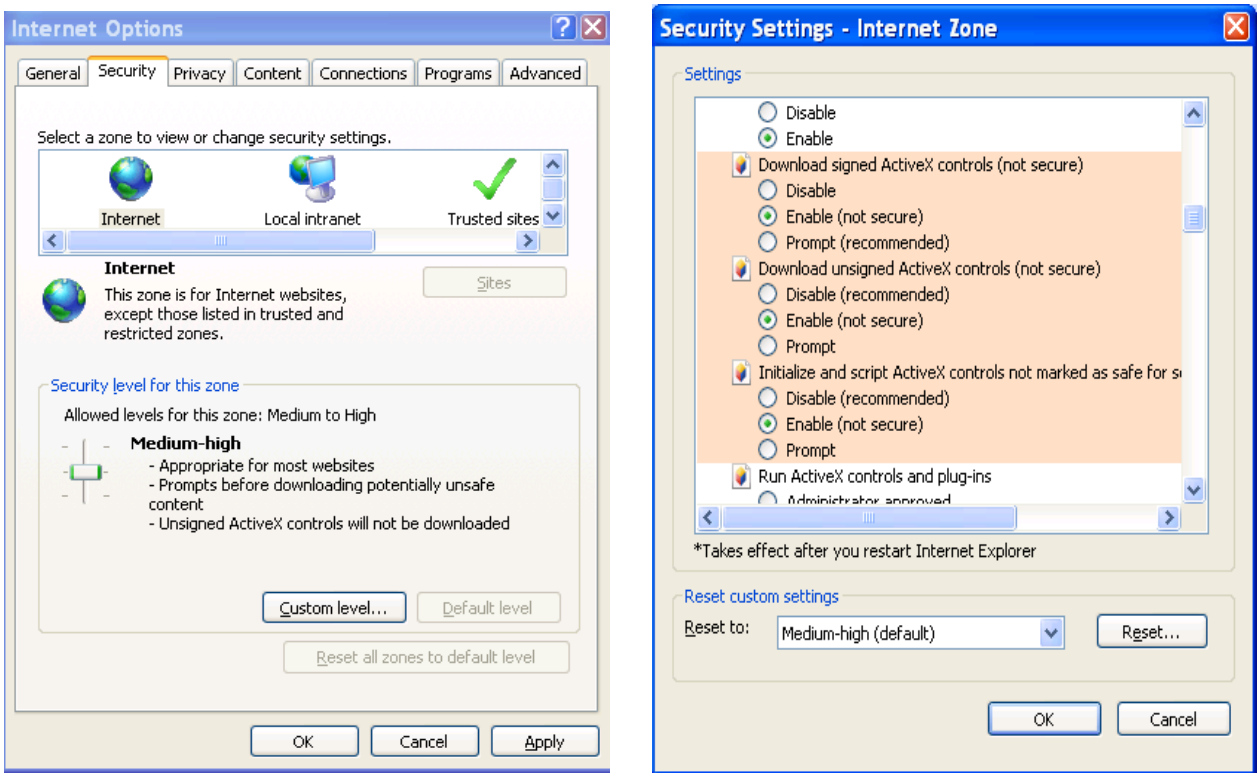


Figure 8-2 IE Safety Setup

After installation, the interface is shown as below. See Figure 7-3.

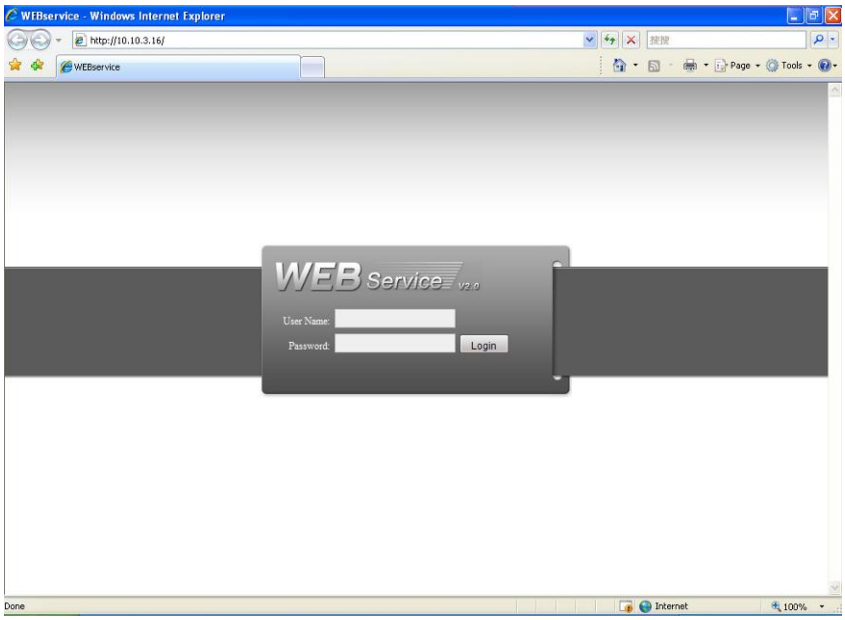


Figure 8-3 Login interface

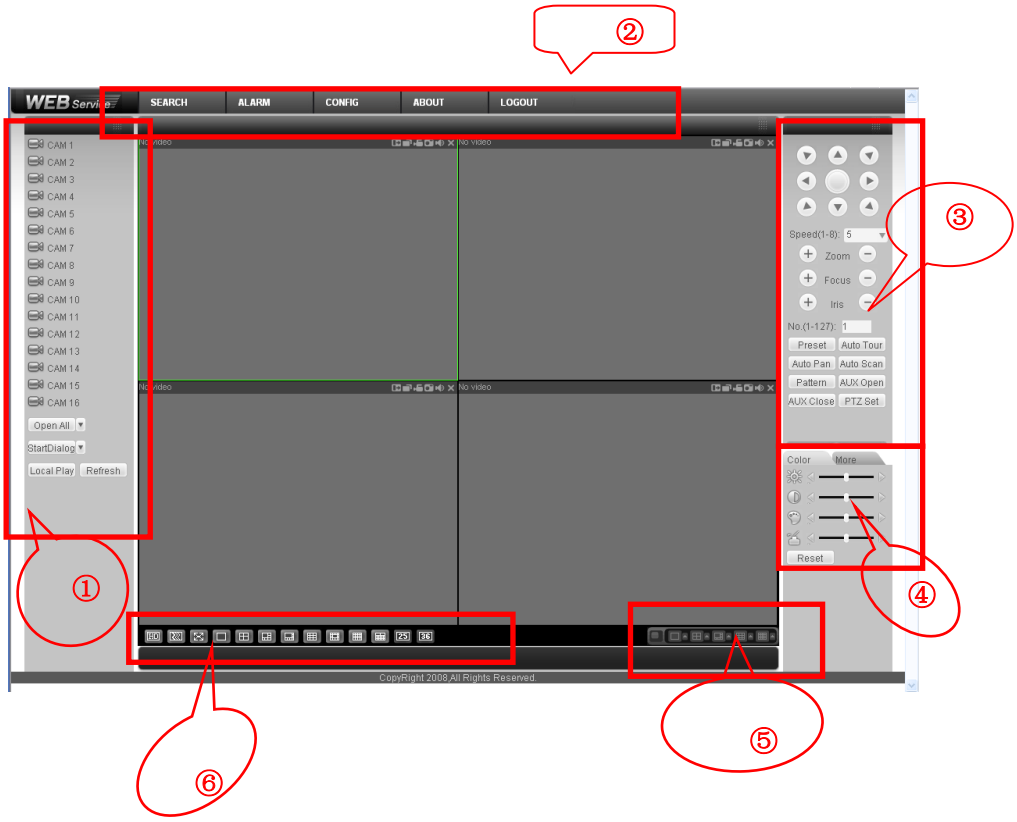
Please input your user name and password.

Default factory name is admin and password is admin.

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

8.2 Main Interface

NVR web main interface is shown as in Figure 7-4.



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

8.2.1 Monitor Channel Menu Tree

The monitor channel menu tree is shown as in Figure 7-5.



Figure 8-4 Monitor Channel Menu Tree

Please refer to the following sheet for detailed information.

Parameter	Function
CAM 1 to CAM 16	channel 1 to channel 16
Open all /close all	Click this button to open all video channels. Once all video channels are open, it becomes close all button.
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 8-5.

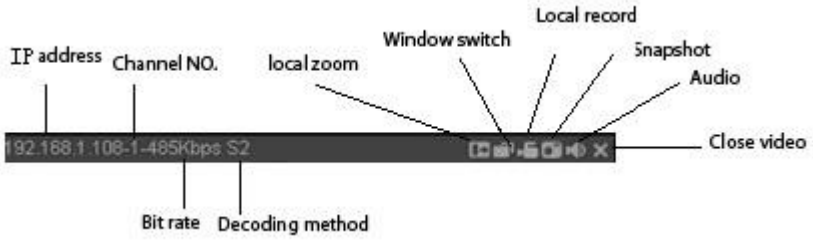


Figure 8-5 Real-time Monitor

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

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

8.2.2 System Menu

System menu is shown as in .Figure 7-7.

Please refer to chapter 7.3 Configuration, chapter 7.4 Search, chapter 7.5 Alarm, chapter 7.6 About, chapter 7.7 Log out for detailed information.



Figure 8-6 System Menu

8.2.3 Monitor Window Switch

The monitor window switch interface is shown as in Figure 7-8.



Figure 8-7 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.

8.2.4 Preview Window Switch

The preview window switch interface is shown as in Figure 7-9.

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



Figure 8-8 Preview Window Switch

8.2.5 PTZ Control

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to chapter 7.3.2.6 PTZ).

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.

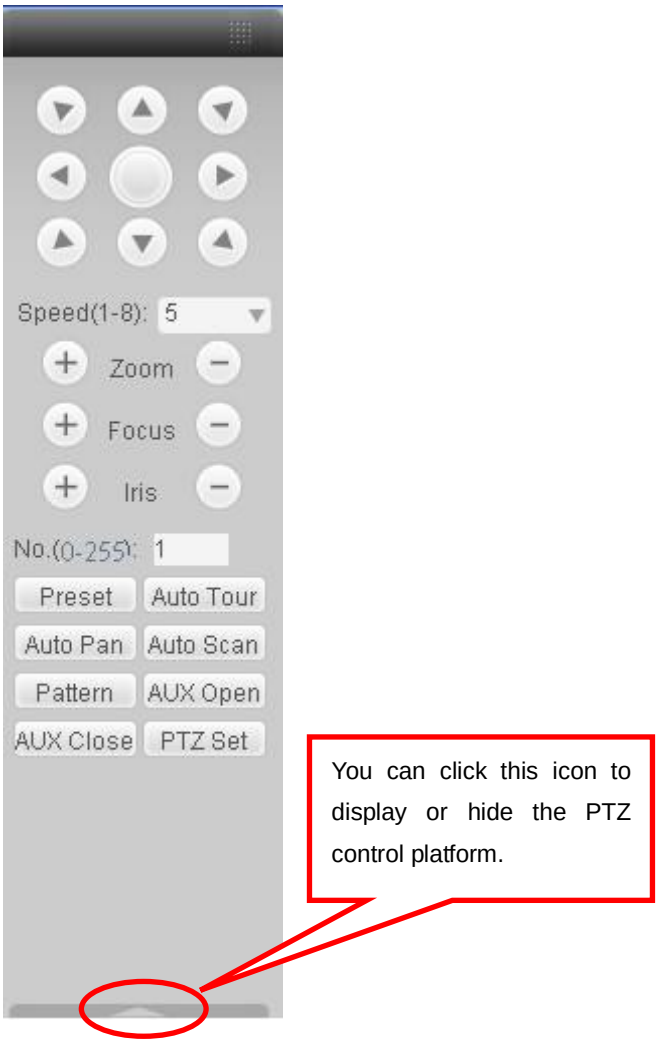


Figure 8-9 PTZ Interface

Click PTZ set button, the interface is shown as in Figure 7-11.

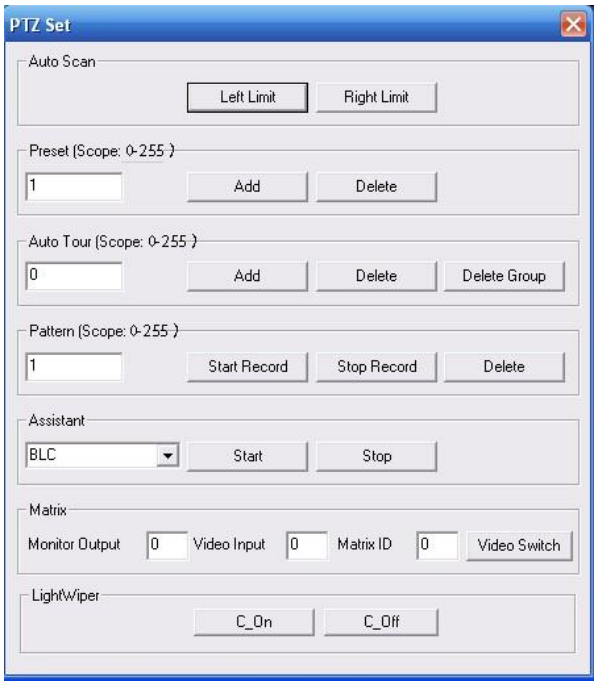


Figure 8-10 PTZ Setup

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.

8.2.6 Color and More Setup

Color and other setup interface are shown as in Figure 8-11.

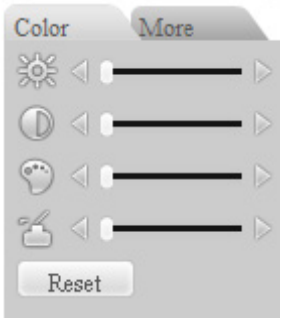


Figure 8-11 Color

Please refer to the following sheet for detailed information.

Parameter		Function	
Video setup		It is to adjust monitor video brightness.	Note:

		It is to adjust monitor video contrast ness.	All the operation here applies to WEB end only.
		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 8-12.

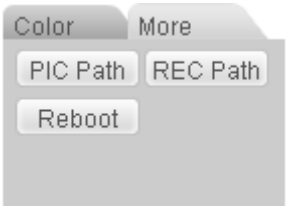


Figure 8-12 Color and More

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.

8.3 Configuration

8.3.1 System Information

8.3.1.1 Version Information

Here you can view device hardware feature and software version information. See Figure 8-13.

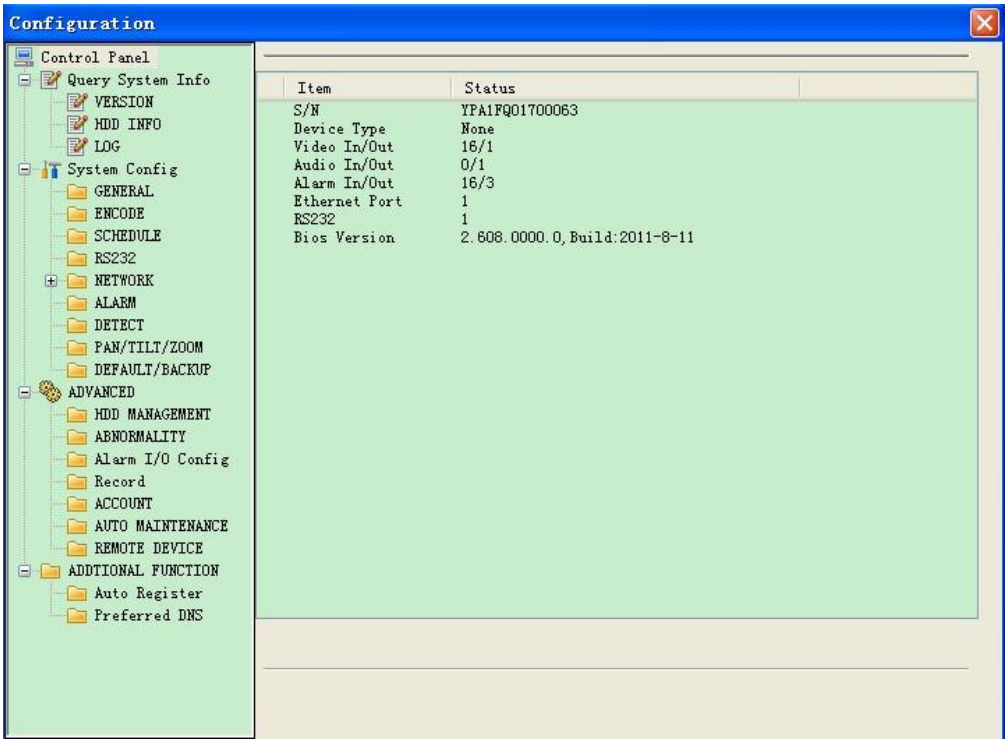


Figure 8-13 Version Information

8.3.1.2 HDD information

Here you can view local storage status such as free capacity and total capacity. See Figure 8-14.

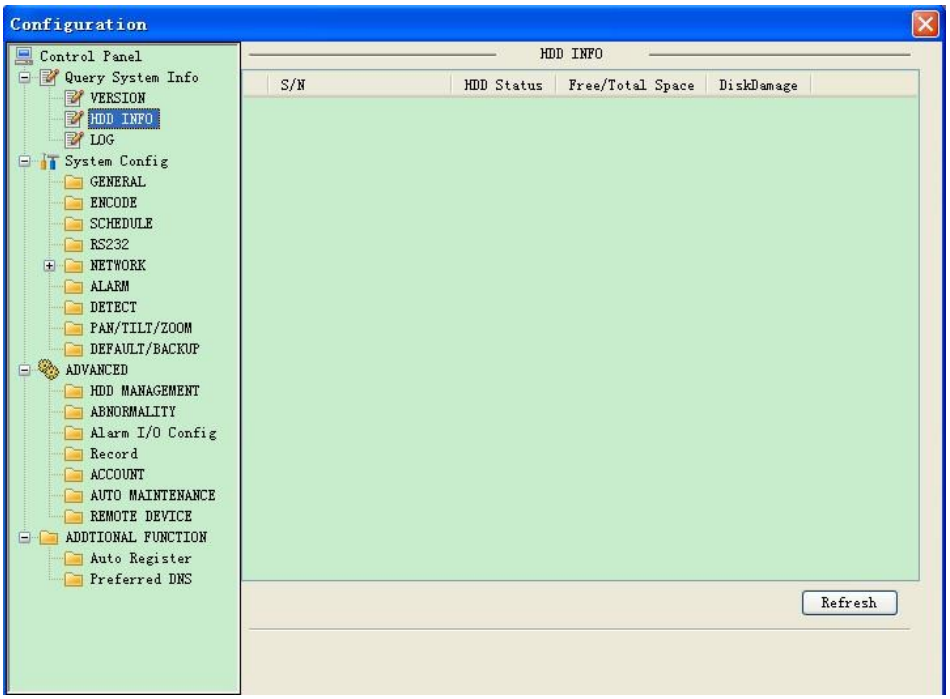


Figure 8-14 HDD Information

8.3.1.3 Log

Here you can view system log. See Figure 8-15

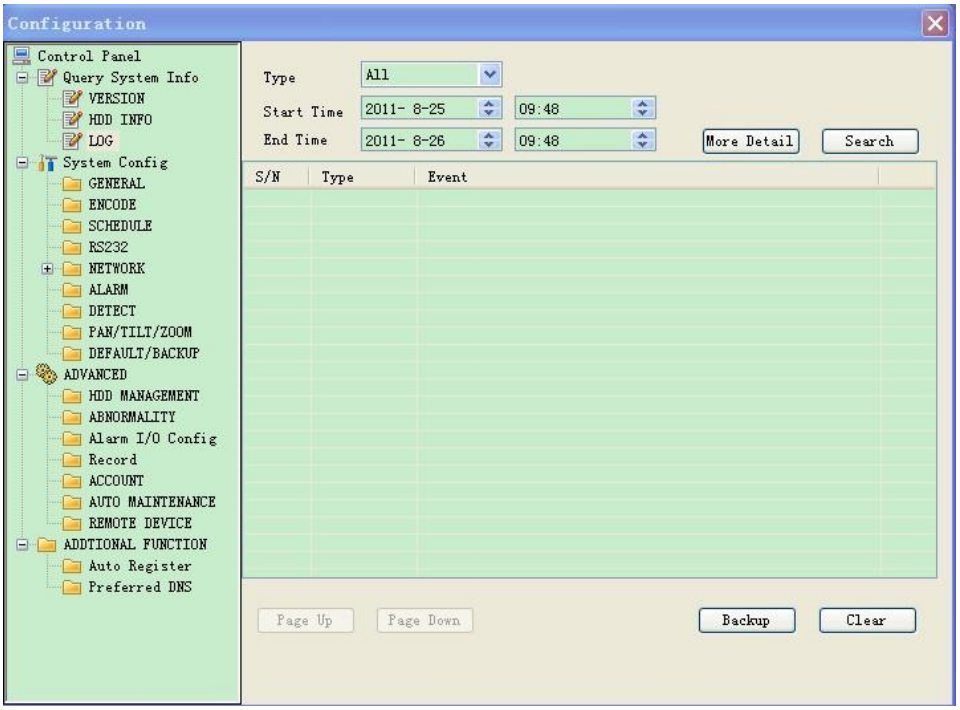


Figure 8-15 Log

Please refer to the following sheet for log parameter information.

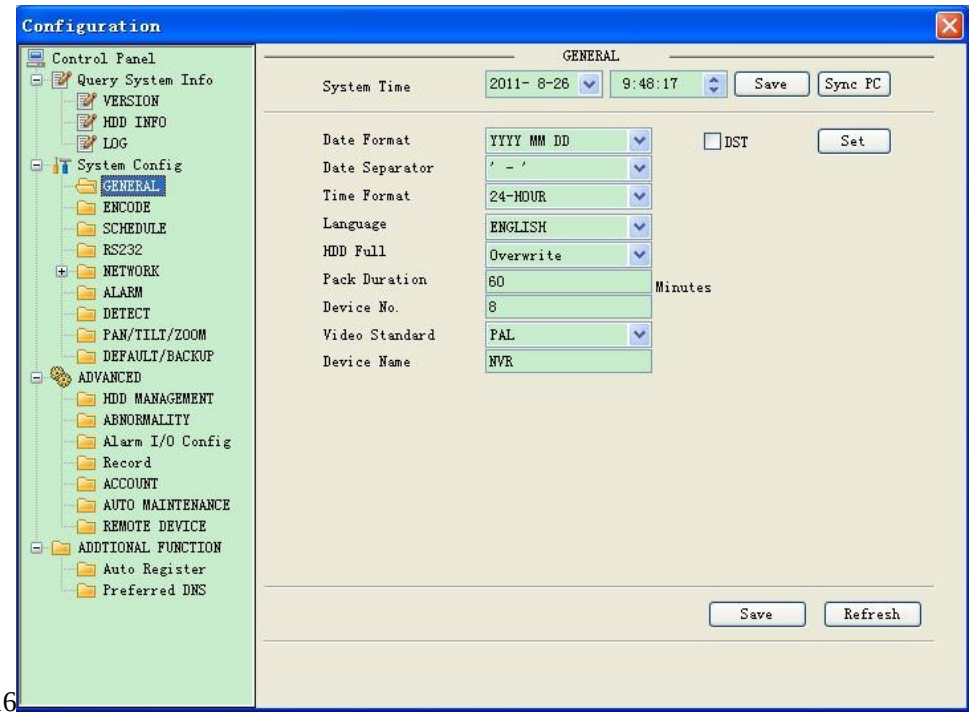
Parameter	Function
Type	Log types include: system operation, configuration operation, data management, alarm event, record operation, user management, log clear and file operation.
Start time	Set time to start search.
Finish time	Set time to finish search
Search	You can select log type from the drop 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.

8.3.2 System Configuration

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

8.3.2.1 General Setup

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



8-16

Figure 8-16.

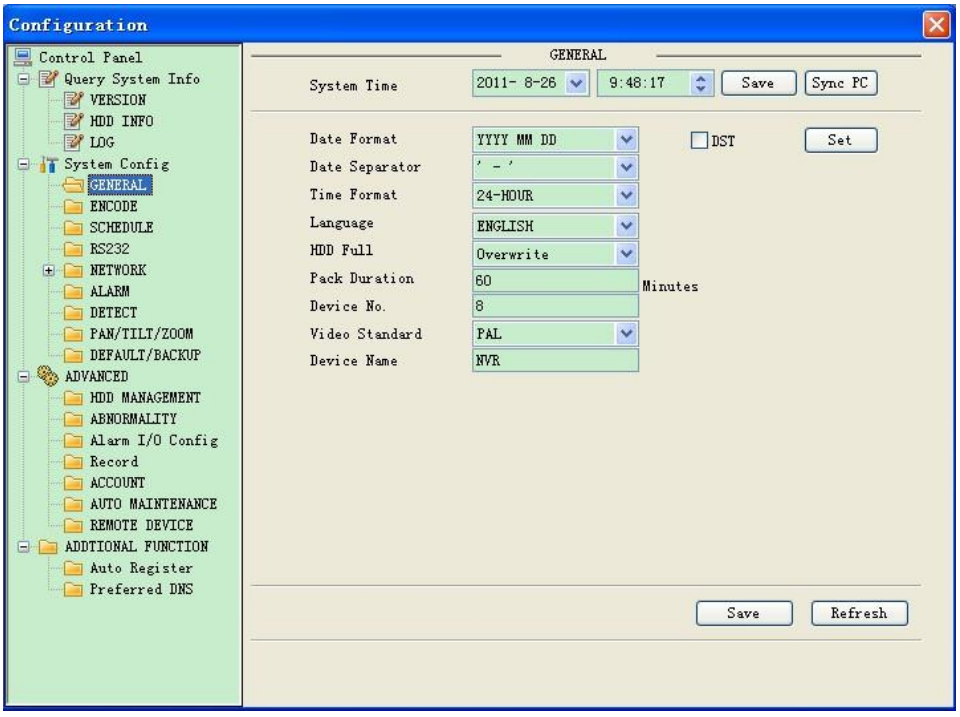


Figure 8-16 General Setup

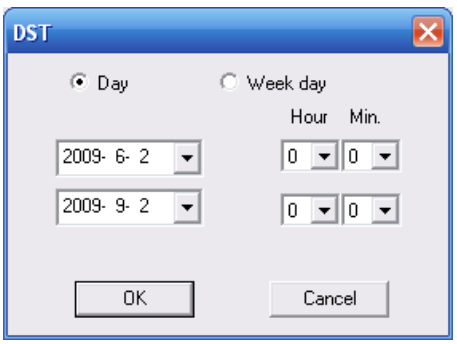


Figure 8-17 DST

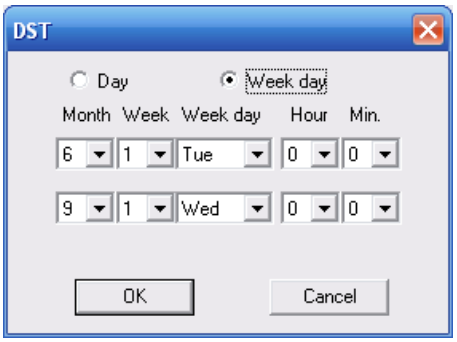


Figure 8-18 DST

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 7-19 and Figure 7-20.
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.

8.3.2.2 Encode

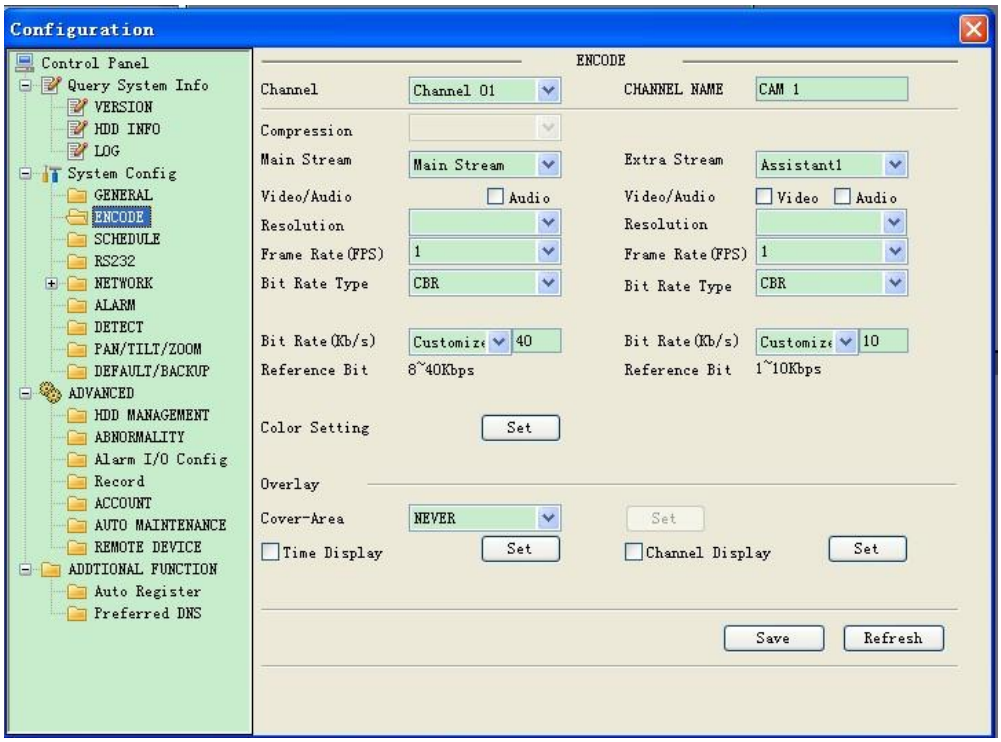


Figure 8-19

Parameter	Function
Channel	Select the corresponding channel.
Channel Name	Display the current channel ID. You can also modify the channel ID here.
Encoding mode	The device does not support it.
Audio / video	For the main stream, recorded file only contains video by default. You need to draw a circle here to enable audio function. For extra stream, you need to draw a circle to select the video first and then select the audio if necessary.
Resolution	Main code stream types are D1/HD1/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.

8.3.2.3 Schedule

Here you can set different periods for various days. There are max six periods in one day. See Figure 8-20.

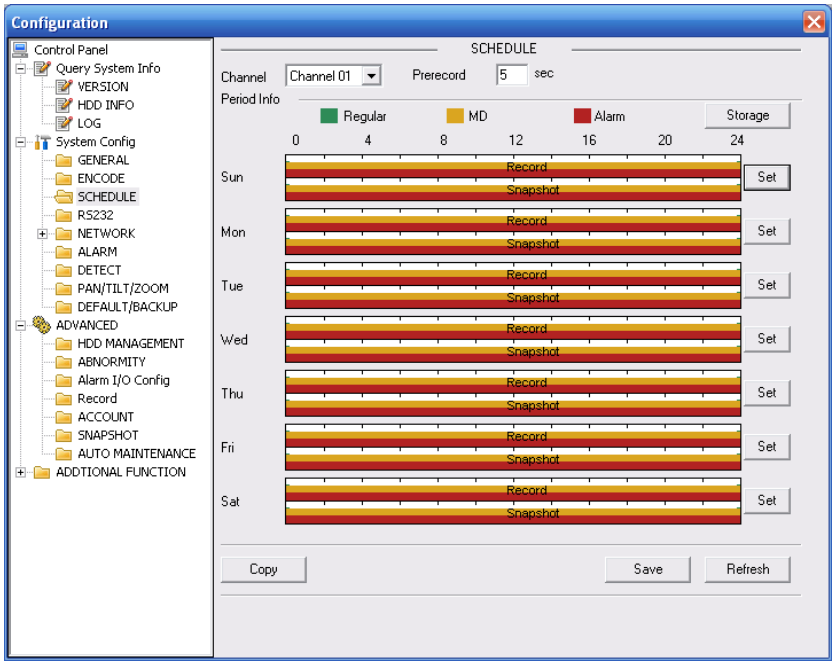


Figure 8-20 Schedule

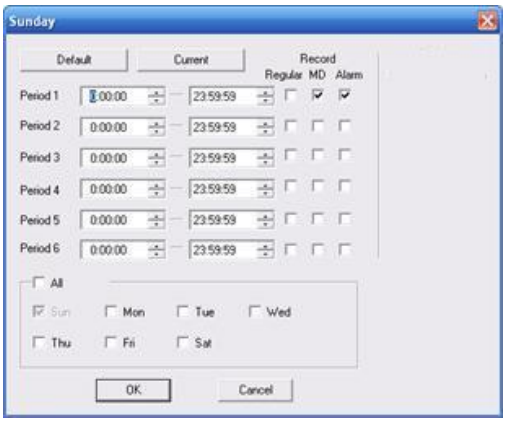


Figure 8-21 Schedule Time

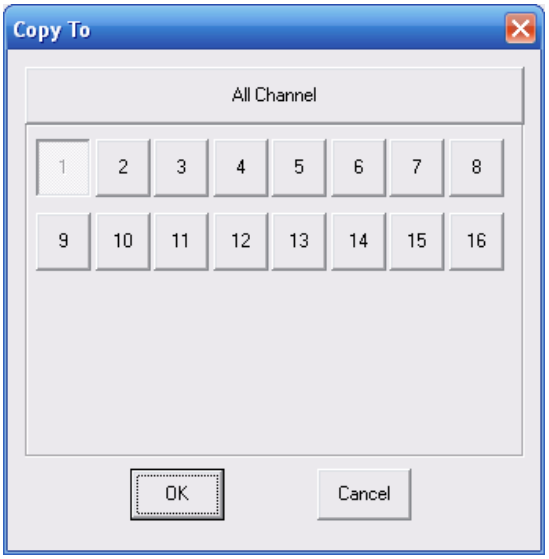


Figure 8-22 Copy

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 8-20, click set button, you can go to the corresponding setup interface. 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 8-20 and then click save to save current time period 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 7-23.

8.3.2.4 RS232

The RS232 interface is shown as in Figure 8-23.

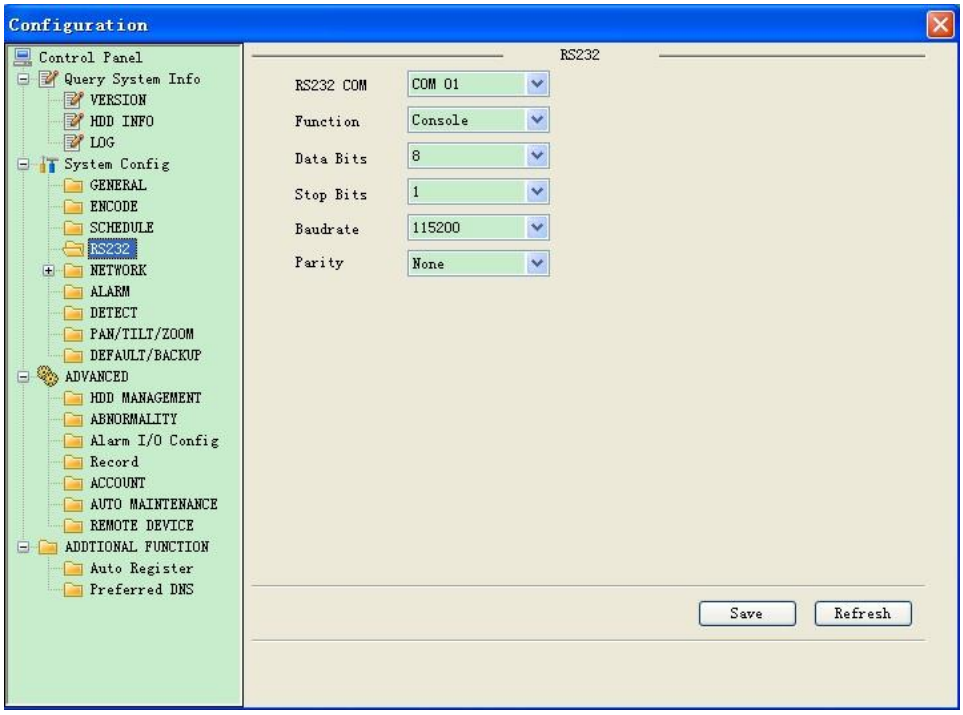


Figure 8-23 RS232

Please refer to the following sheet for detailed information.

Parameter	Function
RS232	There is only one option COM 01, corresponding to RS232.
Function	Console is for debug.
	Control keyboard: Switch between RS232 and control keyboard.
	Network keyboard: COM control protocol. You can use network keyboard to control NVR via COM.
	Transparent COM: Network user can communicate with RS232 COM device.
	PTZ matrix: PTZ matrix protocol. You can use the device to control the PTZ matrix.
Data Bit	The value ranges from 5 to 8.
Stop Bit	There are three options: 1/2.
Baud Bit	You can select corresponding baud bit here.
Parity	There are five options: none/odd /even/mark/space.

8.3.2.5 Network

Network interface is shown as in Figure 8-24.

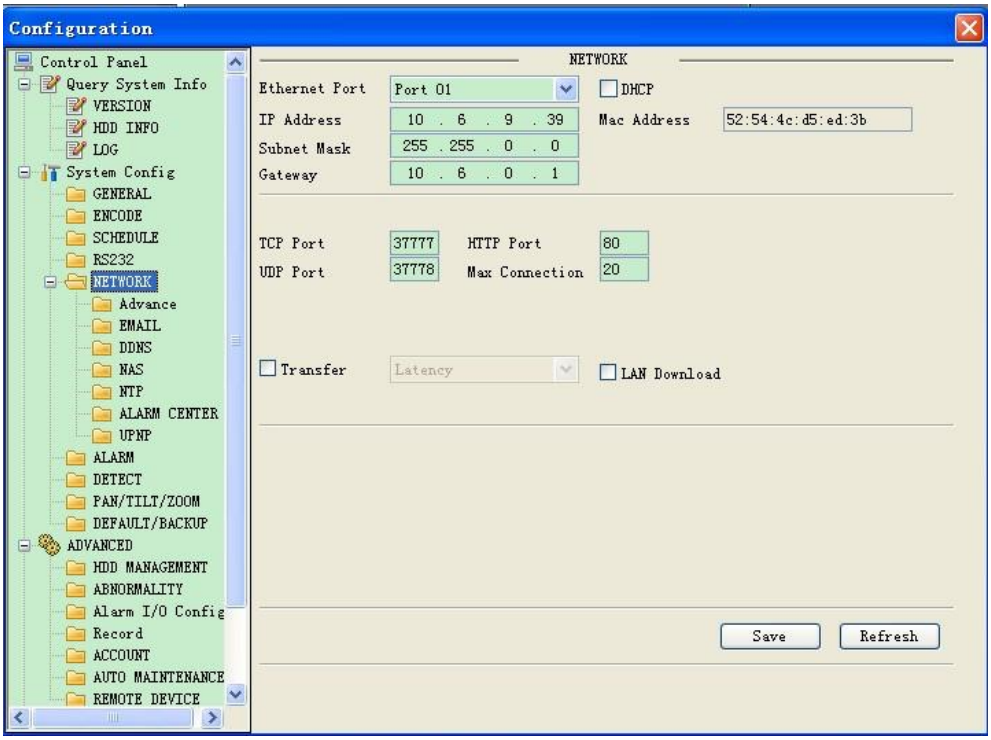


Figure 8-24 Network

Please refer to the following sheet for detailed information.

Parameter	Function
Ethernet	Please select the network card first.
DHCP	Dynamically get IP address. You can get the device IP from the DHCP server if you enabled this function.
Device ID	The ID for recognition in network
TCP Port	Default value is 37777.
HTTP Port	Default value is 80.
UDP Port	Default value is 37778.
Max Connection	Network user max amount. The value ranges from 1 to 10.
Network transmission QoS	You can set the priority between fluency and video quality. System can automatically adjust the bit stream according to the network bandwidth.

Advanced setup

The remote host can choose multi-cast and PPOE to set.

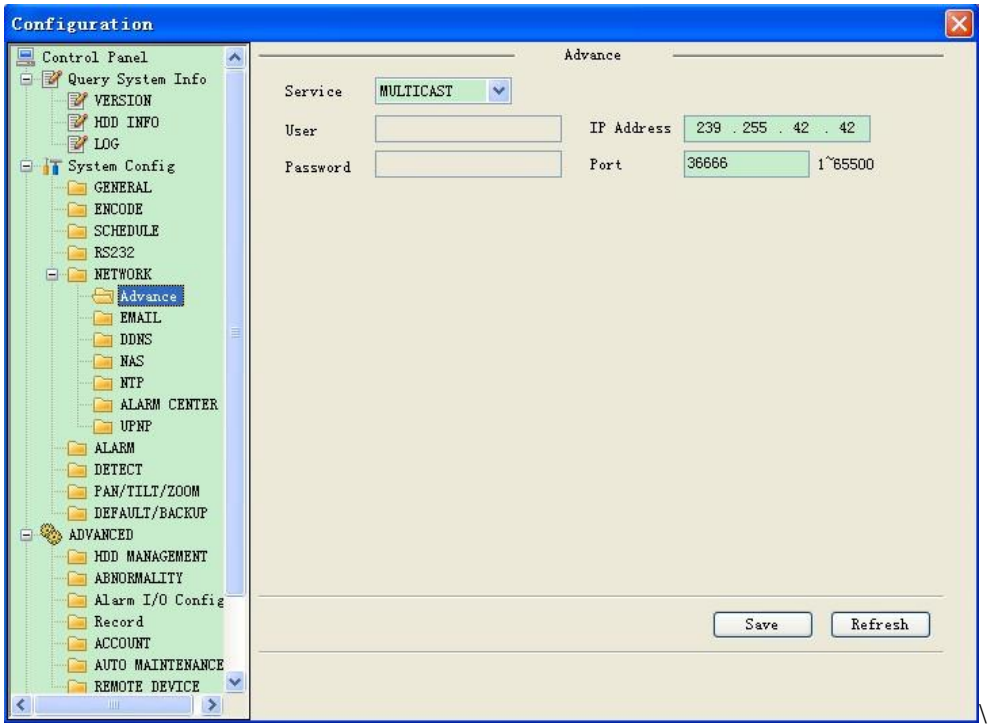


Figure 8-25 Network

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 8-26.

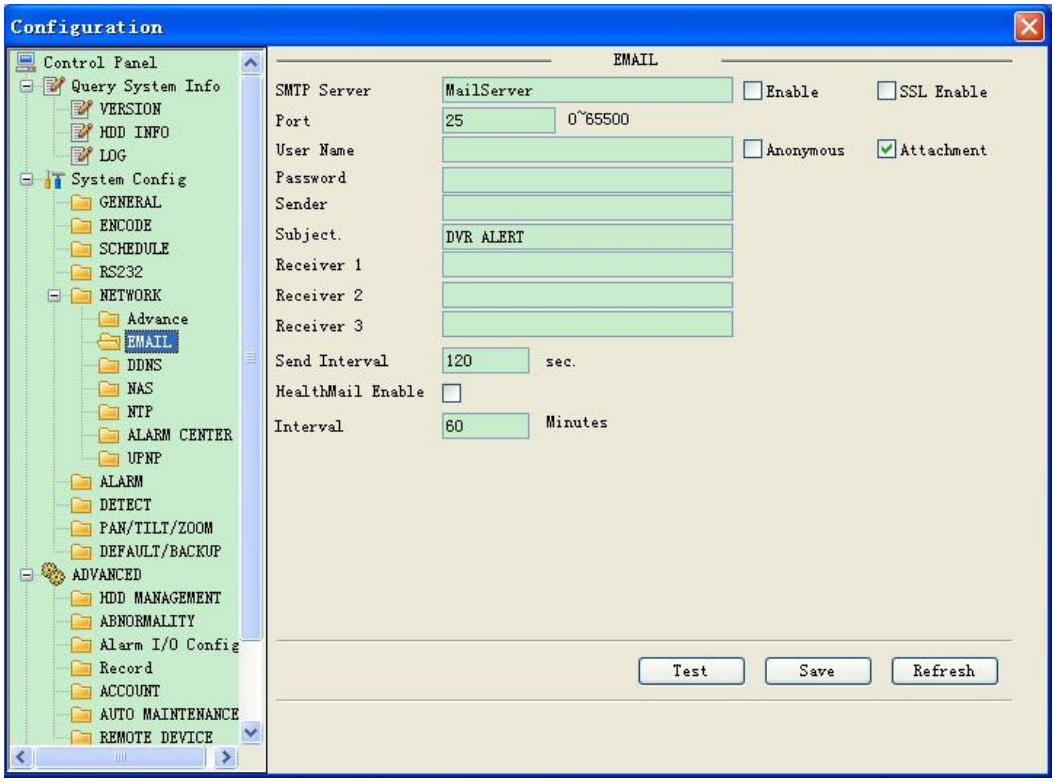


Figure 8-26 Email

Please refer to the following sheet for detailed information.

Parameter	Function
SMTP Server	Input server address and then enable this function. You can also input the corresponding server domain name here, but you need to go to DNS interface (chapter 7.3.4.1) to set the server IP that can parse the domain.
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 8-27.

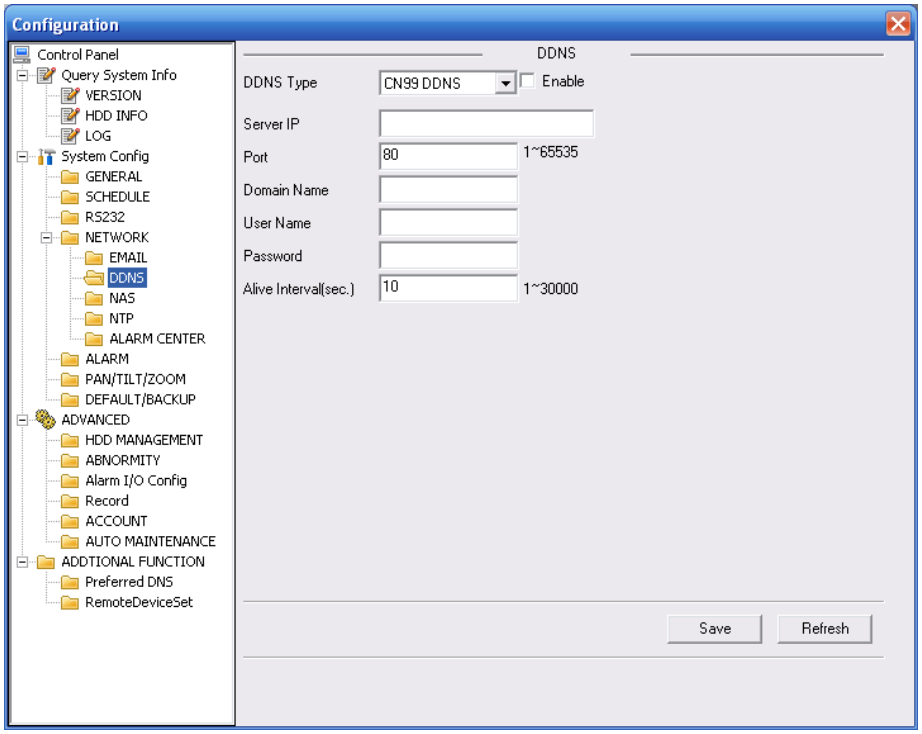


Figure 8-27 DDNS

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.

NAS

NAS interface is shown as in Figure 8-28

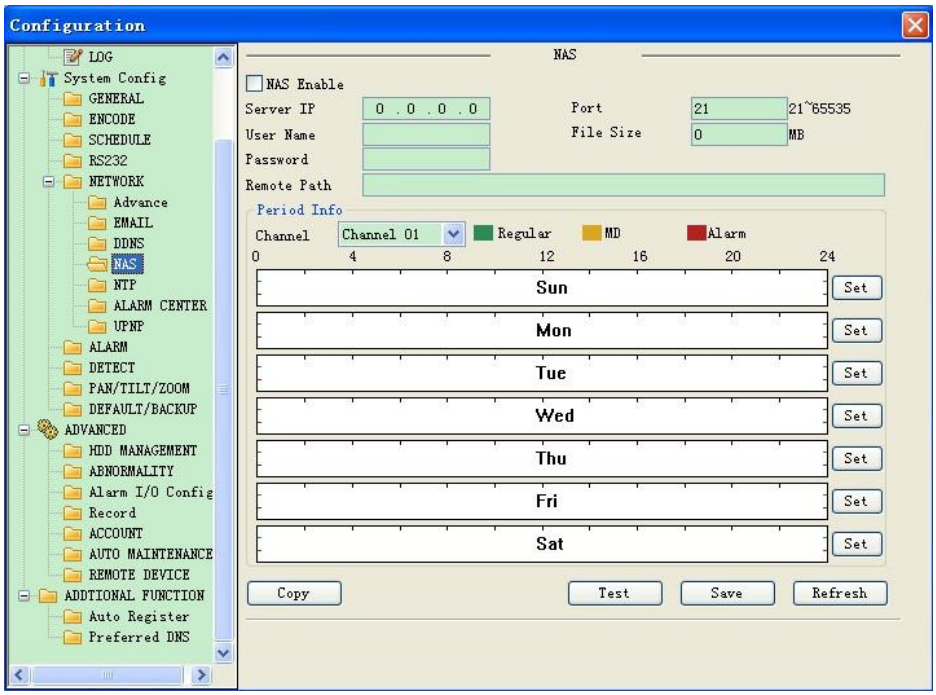


Figure 8-28 NAS

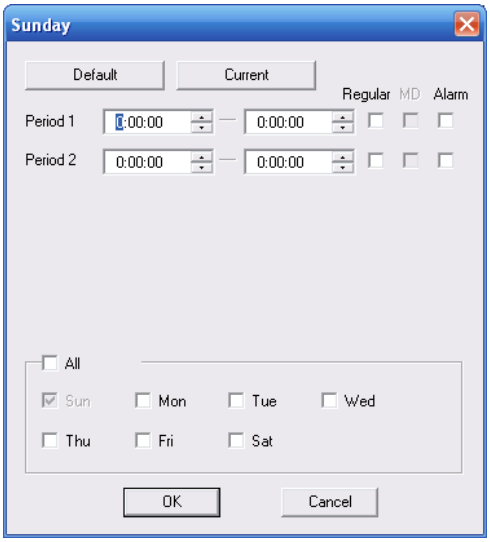


Figure 8-29 NAS Setup

Please refer to the following sheet for detailed information.

Parameter	Function
NAS enable	Please select network storage protocol and then enable NAS function. The network storage protocol includes FTP.
Server IP	Input remote storage server IP address.
Port	Input Remote storage server port number.
User Name	Log in user account.
File length	The max files length when you transfer the file. When the input value is 0, then system upload the whole files.

Parameter		Function
Password		The password you need to login the server.
Remote Path		Remote storage file path.
Period info.	Channel	Select a monitor channel .
	Setup	• In NAS interface, click set button, you can go to the corresponding setup interface. See Figure 7-29 • .Please set schedule period and then select corresponding record type: schedule/alarm. Please note device does not support motion detect record function now. • Please select date (Current setup applies to current day by default. You can draw a circle before the week to apply the setup to the whole week.) • After complete setup, please go back to Figure 7-28 and then click save to save current time period setup..
Copy		User can use this shortcut to copy the storage state of a channel to another (or all other channels)

NTP

The NTP interface is shown as in Figure 8-30.

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

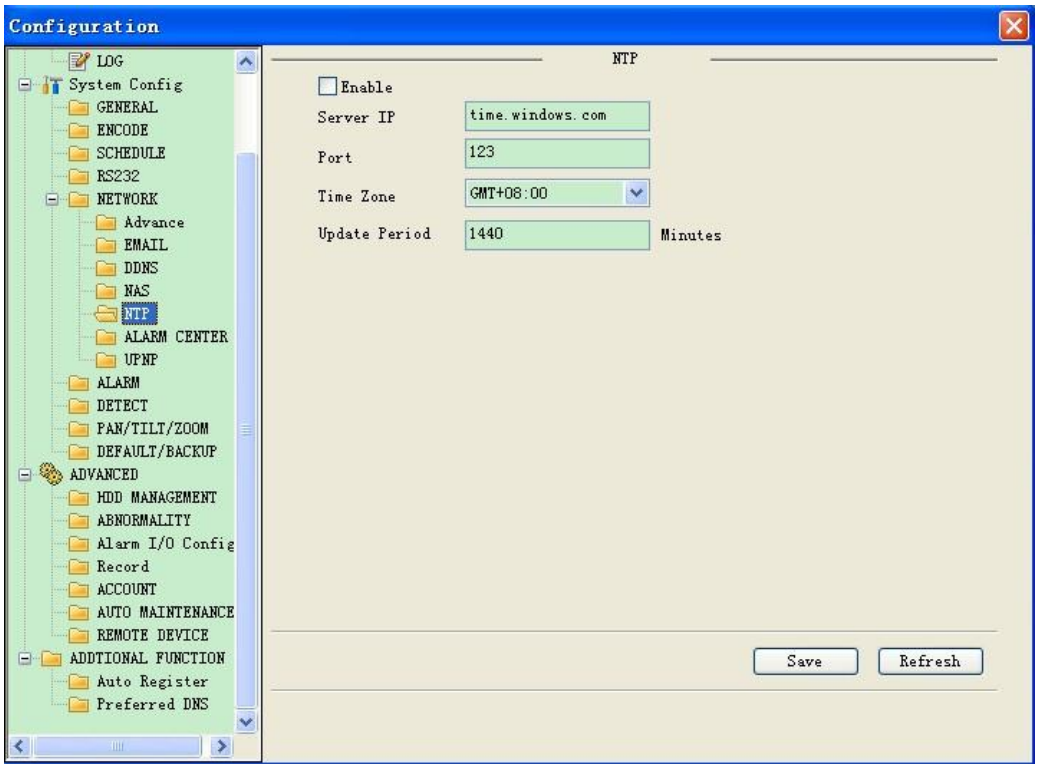


Figure 8-30 NTP

Please refer to the following sheet for detailed information.

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

Alarm Centre

Alarm centre interface is shown as below.

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

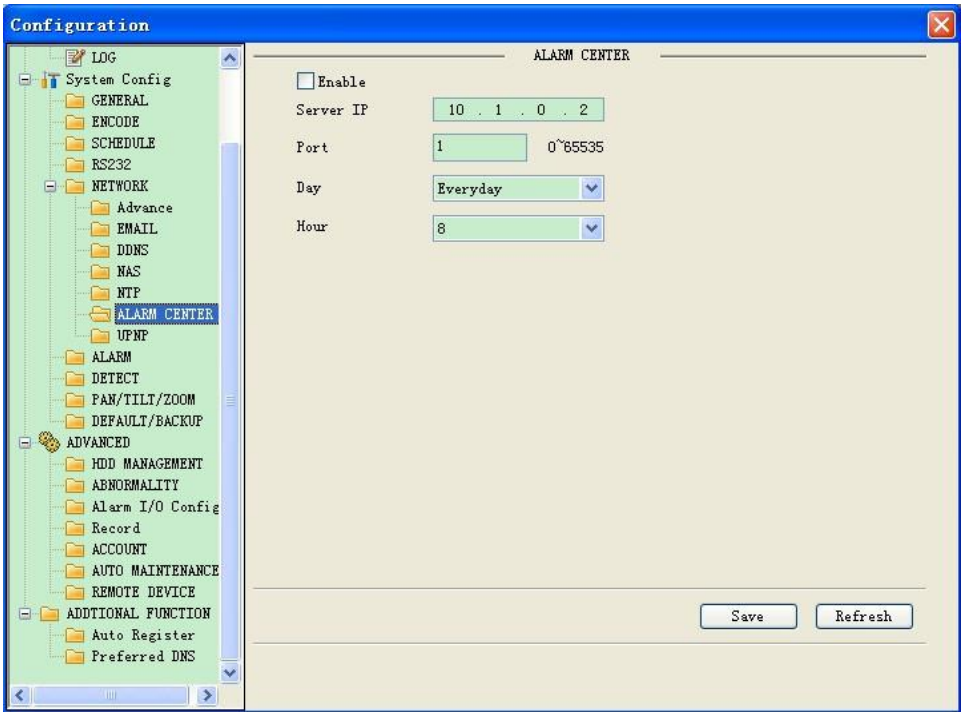


Figure 8-31

UNPN

Go to the UPnP interface, you can see an image is shown as in Figure 3-39.

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.

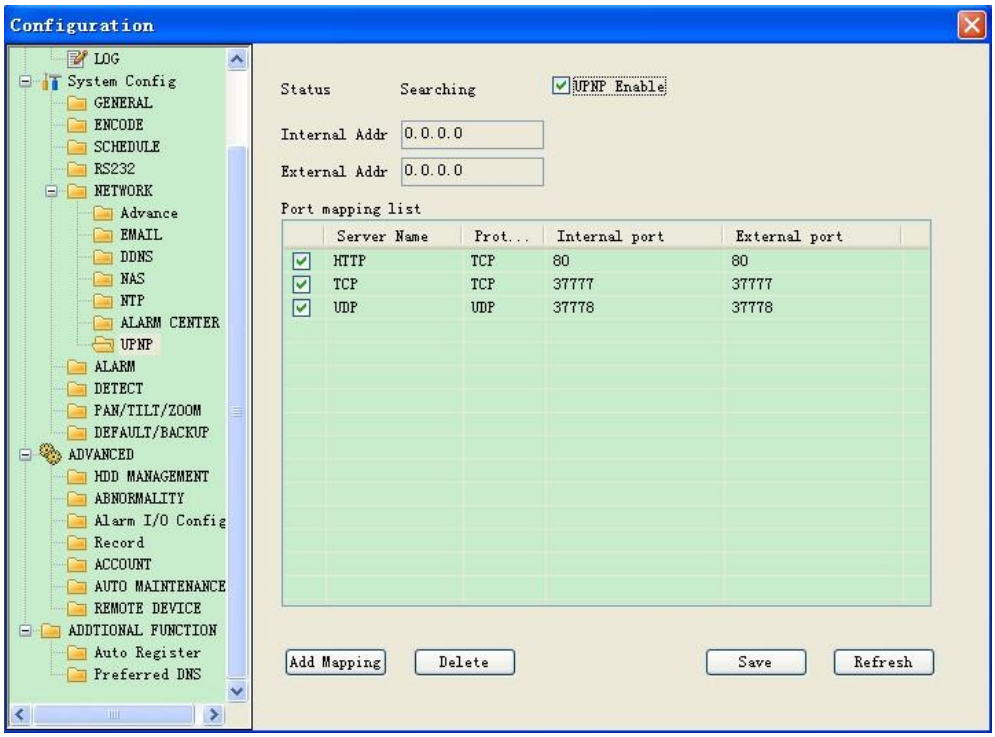


Figure 8-32 UNPN

8.3.2.6 Alarm

Alarm setup interface is shown as in Figure 8-33.

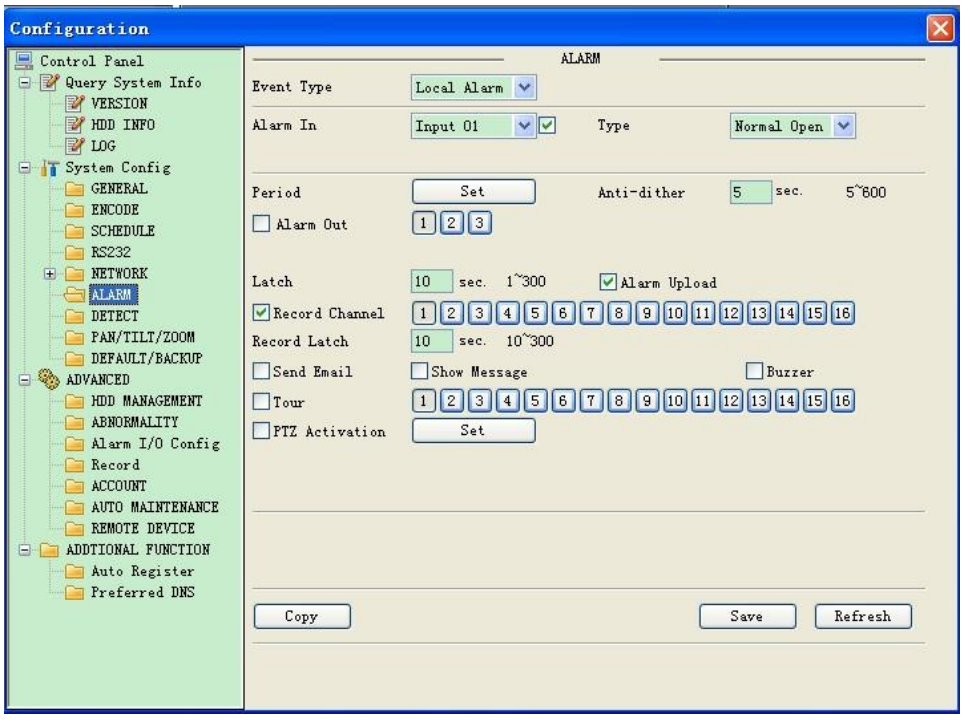


Figure 8-33 Alarm Setup



Figure 8-34 PTZ Setup

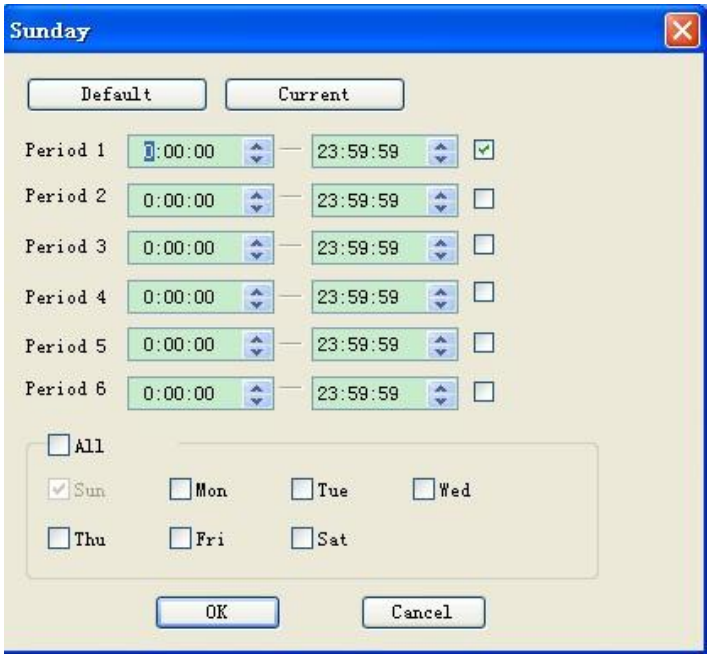


Figure 8-35

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	It includes local alarm/network alarm/other. Local alarm: Device detects alarm from input port. Network: Device detects alarm from network.
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.

Parameter	Function
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.
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 ende 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. T value ranges from 10s to 300s.
Email	Please draw a circle to enable email function. System can send e 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.
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.

8.3.2.1 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.

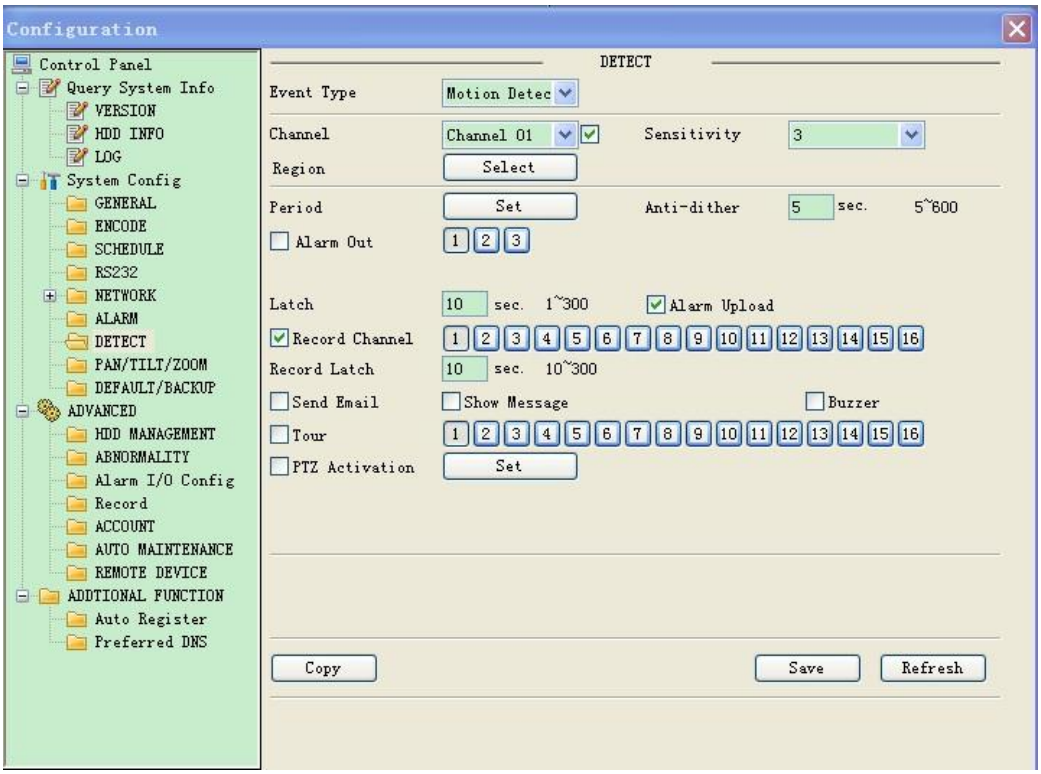


Figure 8-36 Detect

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 PAL22X18/NTSC22X15 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.
Latch	When motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
Send email	System can send out email to alert you when alarm occurs.
Tour	Here you can enable tour function when alarm occurs.
PTZ activation	Here you can set PTZ movement when alarm occurs. Such as go to preset,

Parameter	Function
	tour &pattern when there is an alarm.

8.3.2.2 PTZ

PTZ interface is shown as in Figure 8-37

Please note, before operation please make sure you have set speed dome address and the NVR and speed dome connection is OK.

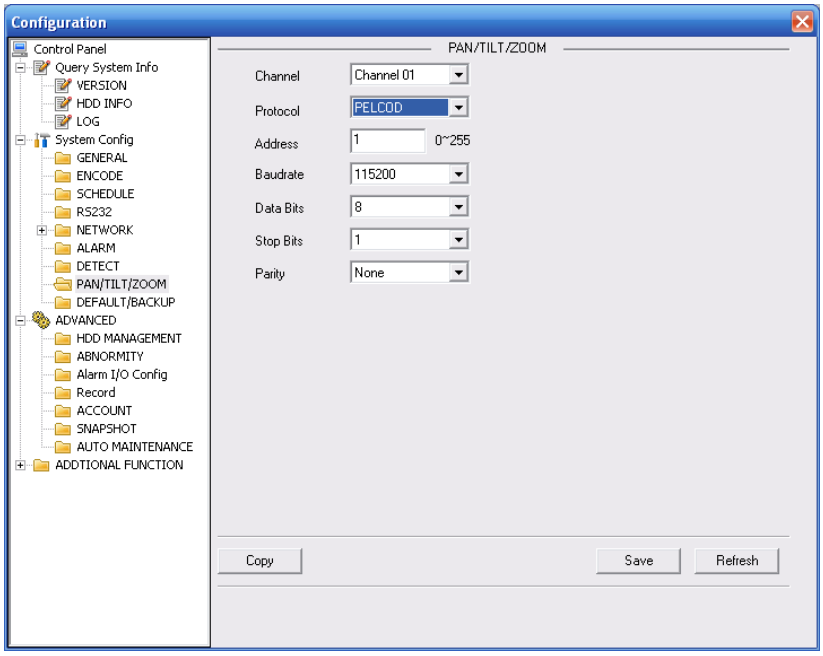


Figure 8-37 PTZ

Please refer to the following sheet for detailed information.

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

8.3.2.3 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 8-38.

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

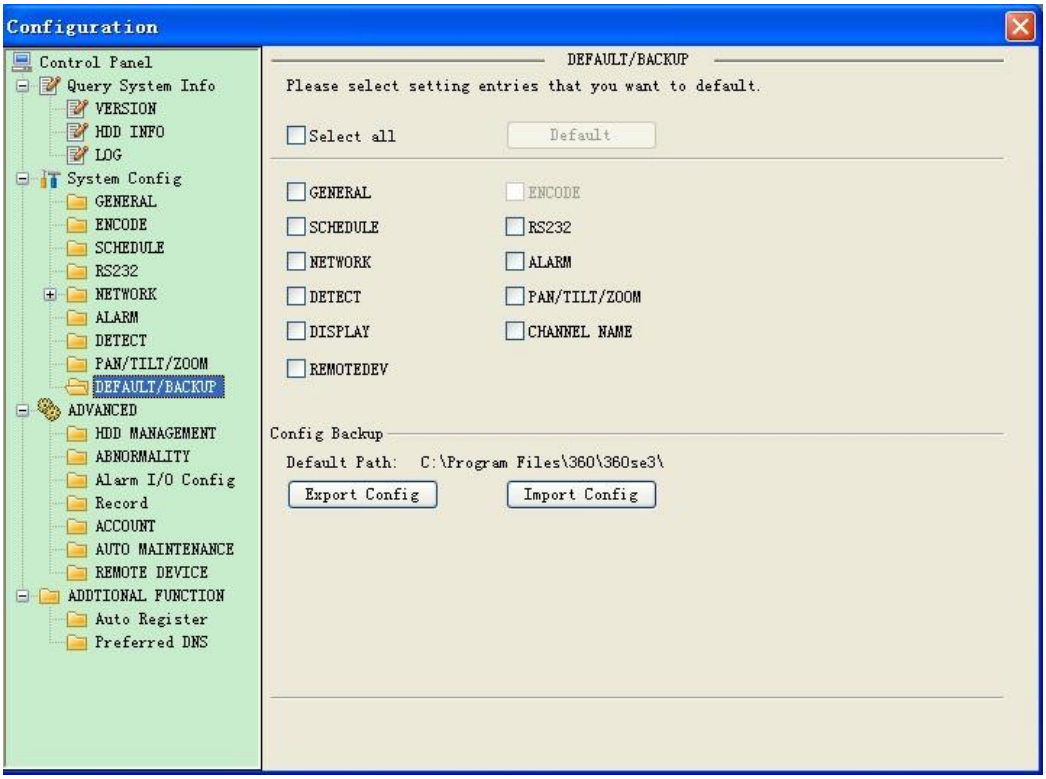


Figure 8-38 Default and Backup

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.

8.3.3 Advanced

8.3.3.1 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 8-39.

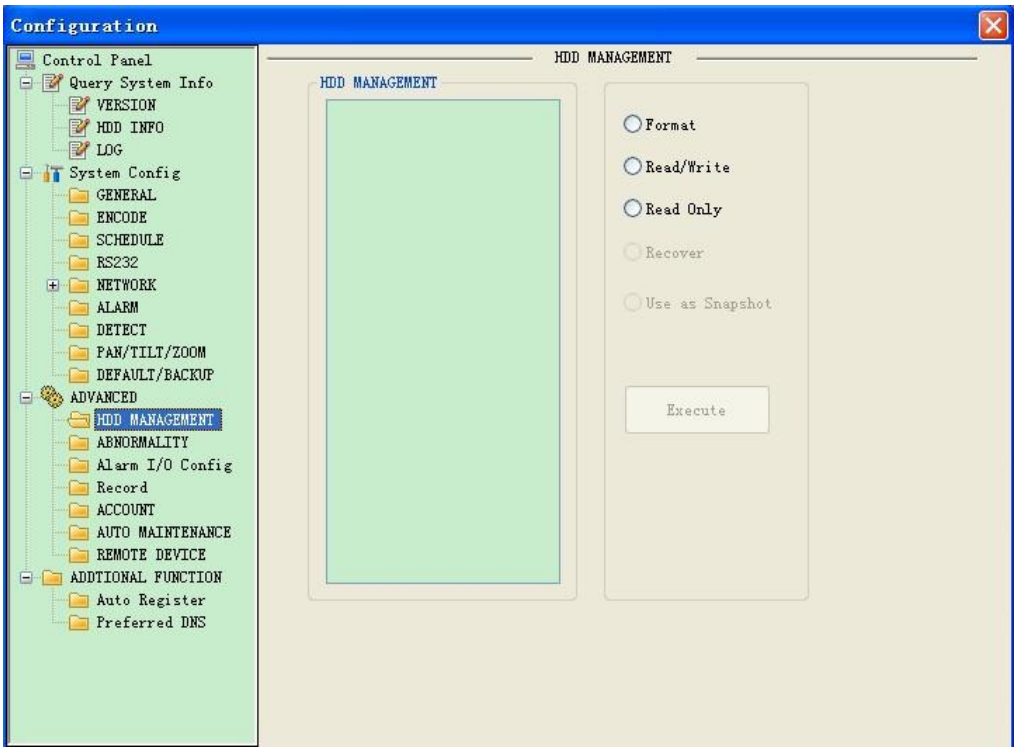
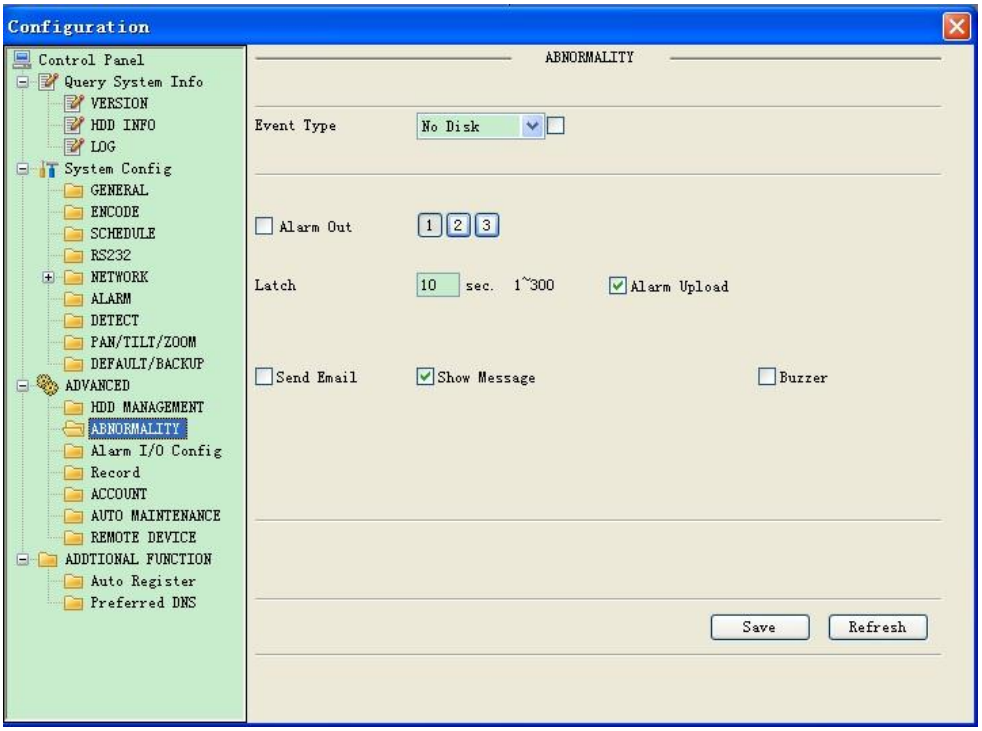


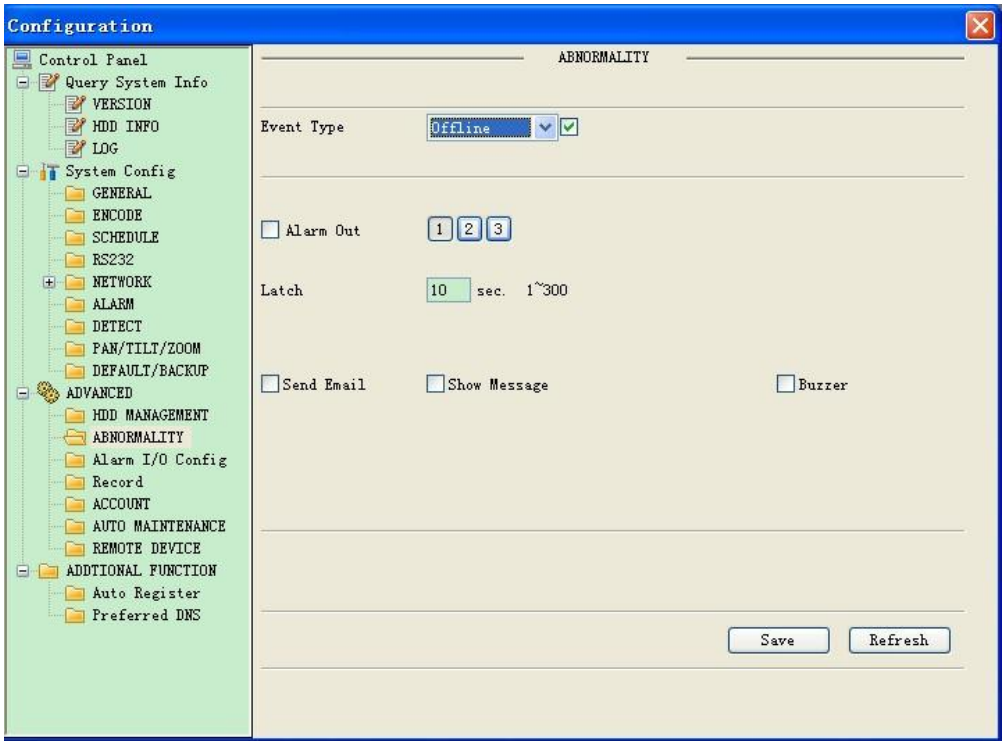
Figure 8-39 HDD Management

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.

8.3.3.2 Abnormity





Parameter	Function
Event Type	The abnormal events include: no disk, no space, disk error, offline, IP conflict. You need to draw a circle to enable this function. Threshold: It refers to the HDD free space.

Parameter	Function
Normal Out	The corresponding alarm output channel when alarm occurs. For 1U series product, there are three channels. For 2U series product, there are six channels. The 6th channel is the controllable +12V alarm output.
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.

8.3.3.3 Alarm I/O

Here you can search alarm output status. See Figure 8-40.

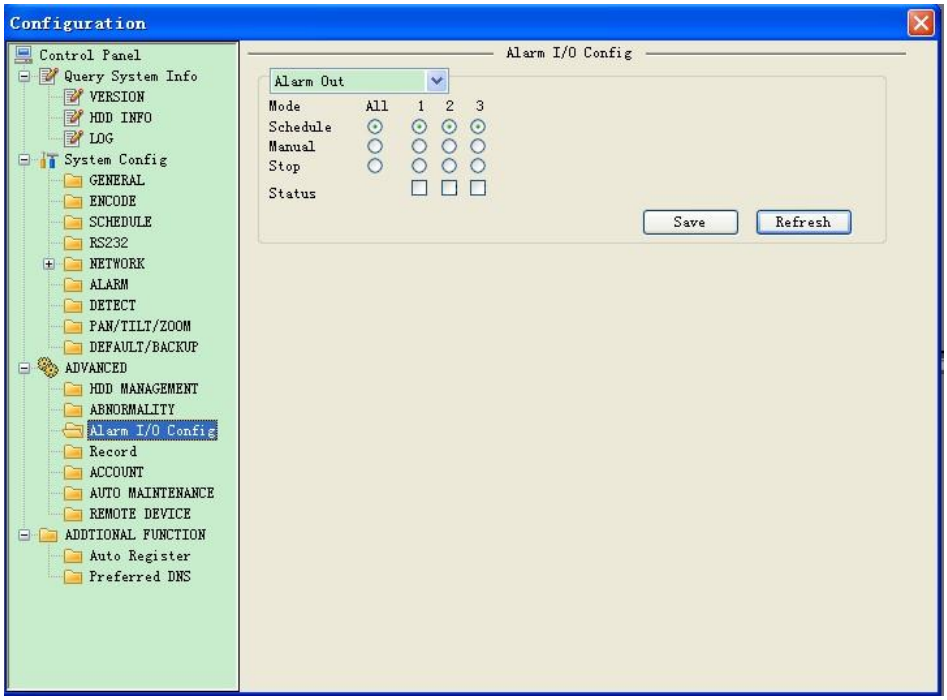


Figure 8-40 Alarm I/O Configuration

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	For 1U series product, there are three channels. For 2U series product, there are six channels. The 6th channel is the controllable +12V alarm output. 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.

8.3.3.4 Record

Record control interface is shown as in Figure 8-41.

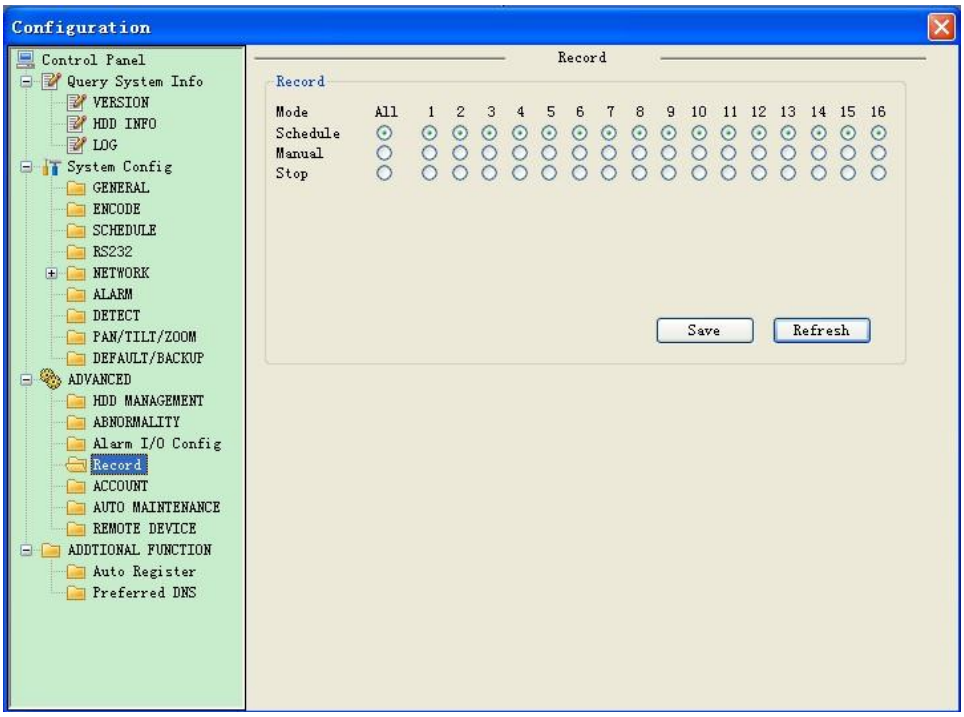


Figure 8-41 Record

Please refer to the following sheet for detailed information.

Parameter	Function
Schedule	System enables auto record function as you set in schedule setup (chapter 7.3.2.2).
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.

8.3.3.5 Account

Here you can add, remove user or modify password. See Figure 8-42.

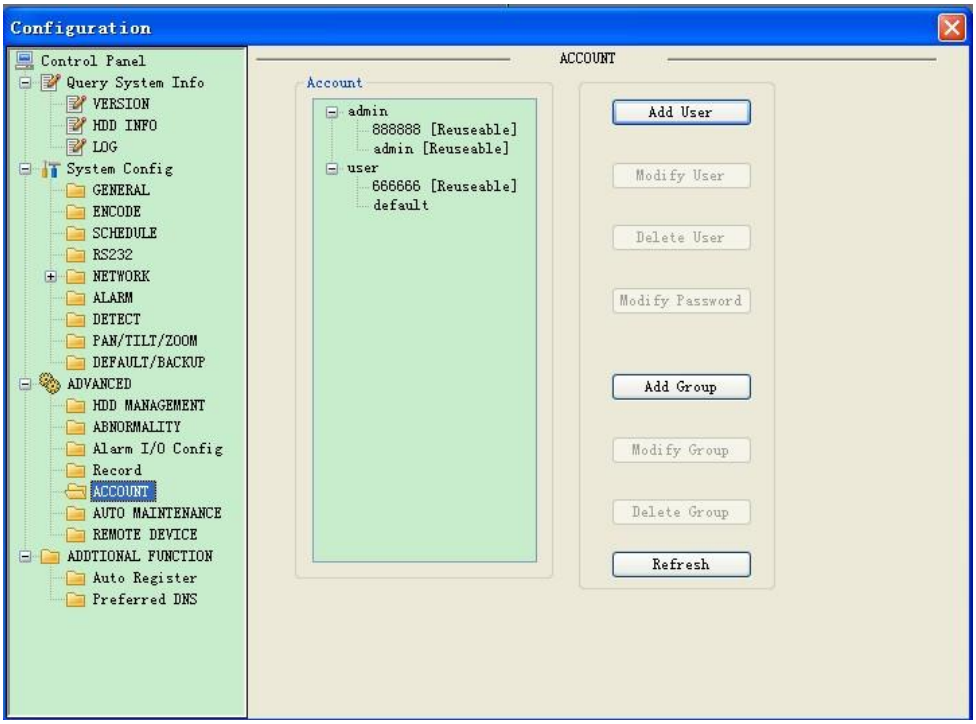


Figure 8-42 Account

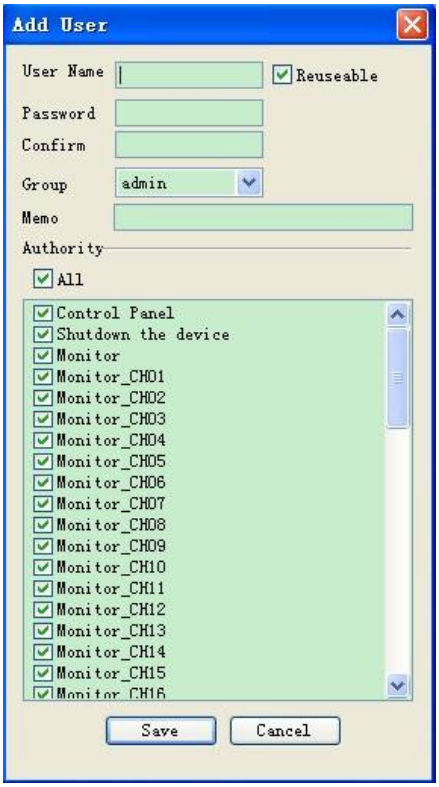


Figure 8-43 Add user

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.

8.3.3.6 Auto Maintenance

Here you can select auto reboot and auto delete old files interval from the dropdown list. See Figure 8-44.

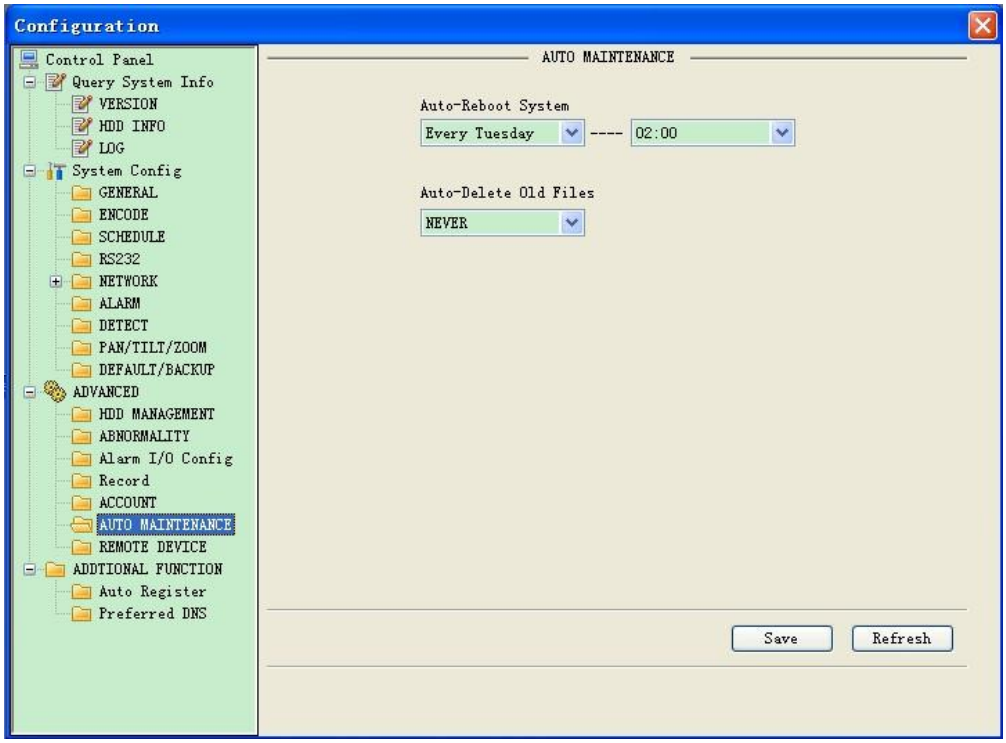


Figure 8-44 Auto Maintenance

8.3.3.7 Remote device

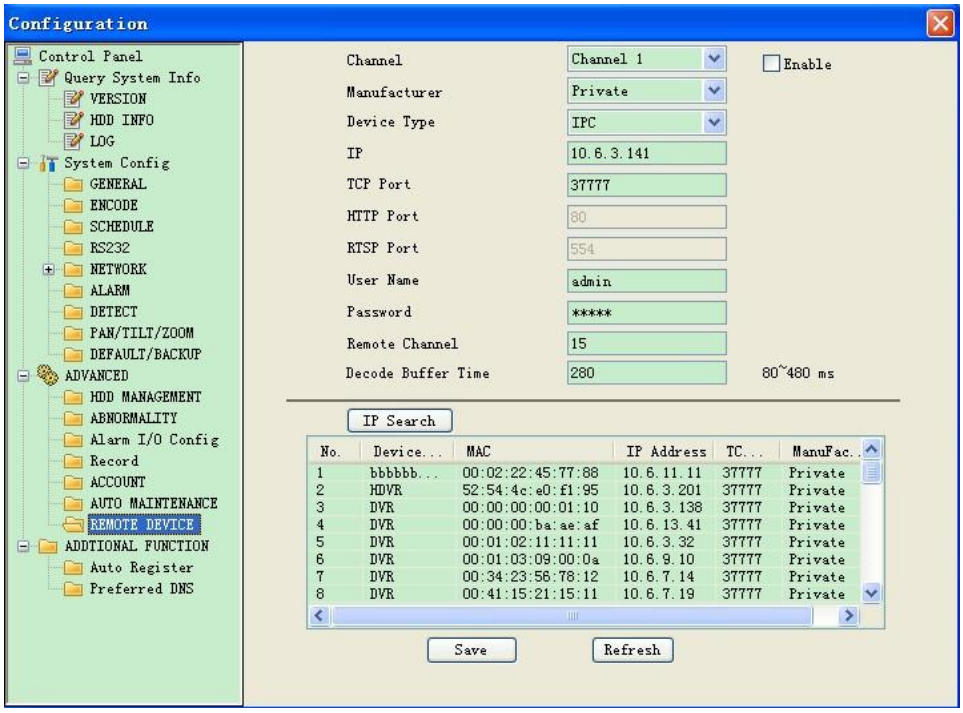


Figure 8-45 Remote device

Parameter	Function
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.
Resolution type	Choose the remote resolution type
IP address, port, remote channel.	Please input remote device IP address, port number, remote device channel number and account.
User, password	Please input account to login the remote device.
IP search	Please click the search IP 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.
Remote device information	Here you can view remote device name, Mac address, IP address and TCP port.

8.3.4 Additional Function

8.3.4.1 Auto register

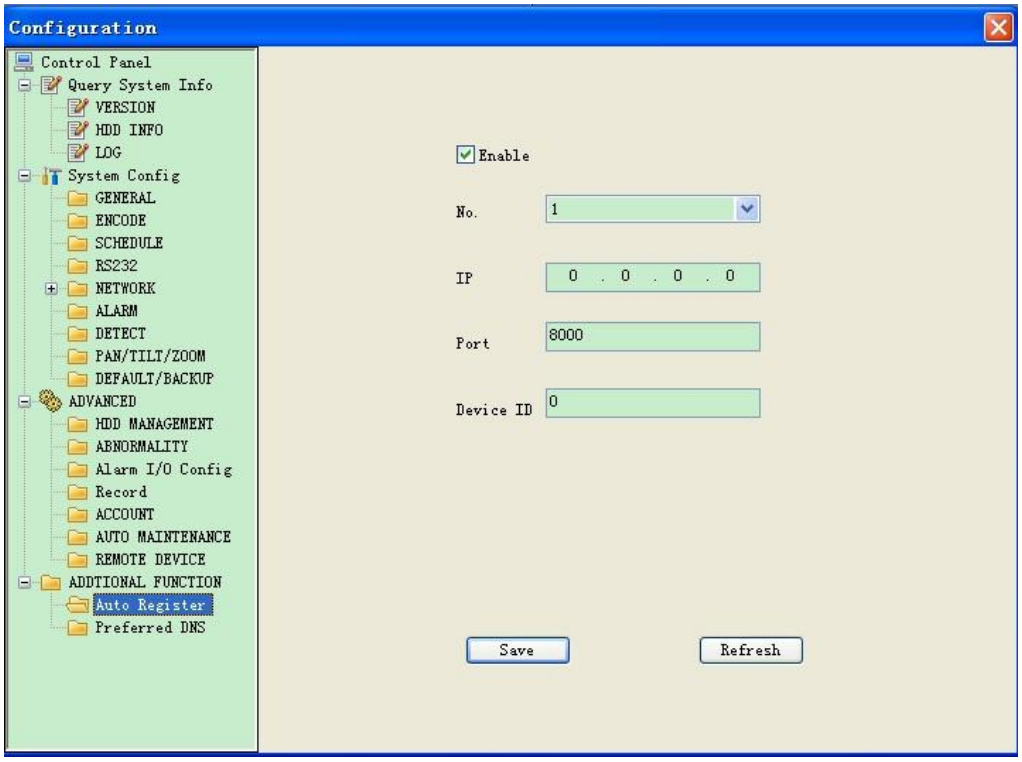


Figure 8-46 Auto register

8.3.4.2 DNS

Here you can set server or local operator DNS address. See Figure 3-34.

Once you input the domain name in SMTP server in the email interface (chapter 7.3.2.4 Network->email), you need to input the corresponding address here, otherwise the device can not parse the domain name.

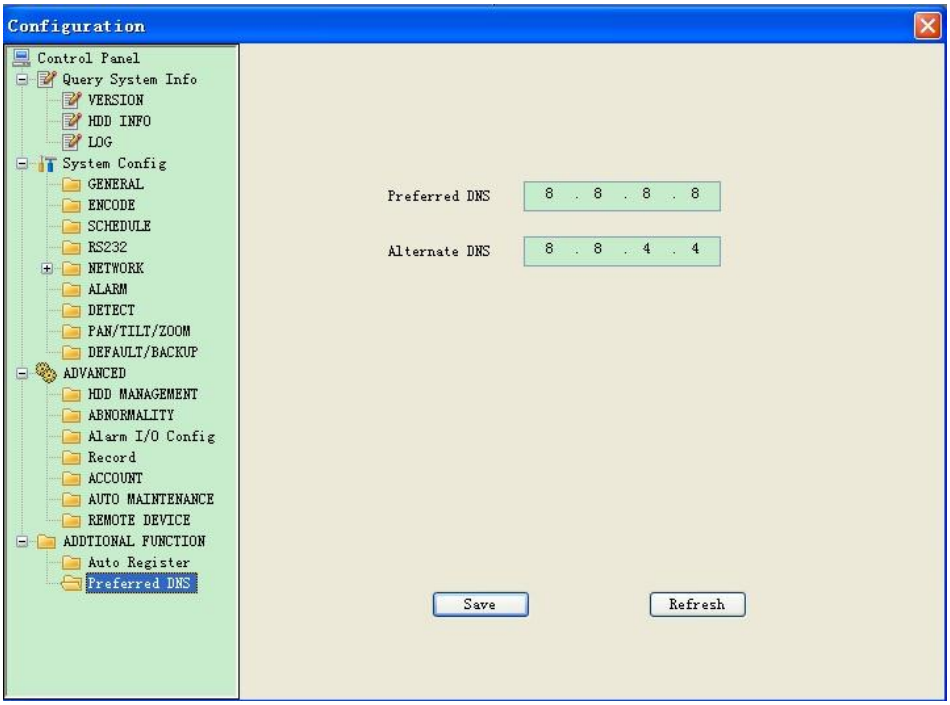


Figure 8-47 DNS

8.4 Search

Click search button, you can see an interface is shown as in Figure 8-48.

Please select record playback mode, and then select start time, end time and channel. Then please click search button, you can see the corresponding files in the list.

Select the file(s) you want to download and then click download button, system pops up a dialogue box , and then you can specify file name and path to download the file(s) to your local pc. Click OK to complete the download procedure.

Click play button, system plays the recorded file in the corresponding monitor channel. You can select several channels to play in multiple-channel.



Figure 8-48 Search Main Interface

Please refer to the following sheet for detailed information.

Type	Parameter	Function
Type	Record	Search general record, alarm record and motion detection record.

Type	Parameter	Function
	Alarm	Search alarm record.
	Motion Detection	Search motion detection record. This function is not available in current device.
	Local	Search local record.
	Snapshot	Search snapshot file. This function is not available in current device.
	Card	This function is not available in current device.
Parameters	Start time	Set the file start time.
	End time	Set the file end time.
	Channel	Select the channel from the dropdown list.
	The earliest recordings	Search the record files of the corresponding monitor channel. (It is invalid when selecting all channels.)
Operation	Search	Click this button you can view the recorded file matched your requirements.
	Playback	Select the file first and then click playback button to view the video.
	Download type	Download by file: Select the file(s) and then click download button. Download by time: Download the recorded file(s) within your specified period.
	Download	Select the file you need (multiple choices) and then click download button, you can see system pops up a dialogue box. Input the downloaded file name, specify the path and then click OK button. You can see system begins download and the download becomes stop button. There is a progress bar for your reference.
	Open local record	Select local record to play.
Multiple-channel playback		System supports playback one file in several monitor channels.

During the playback process, you can see there are control buttons such as play, pause, stop. slow play and fast play in the play process bar. You can view current playback file channel name, time and data statistics.

8.5 Alarm

Click alarm function, you can see an interface is shown as in Figure 8-49.
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.

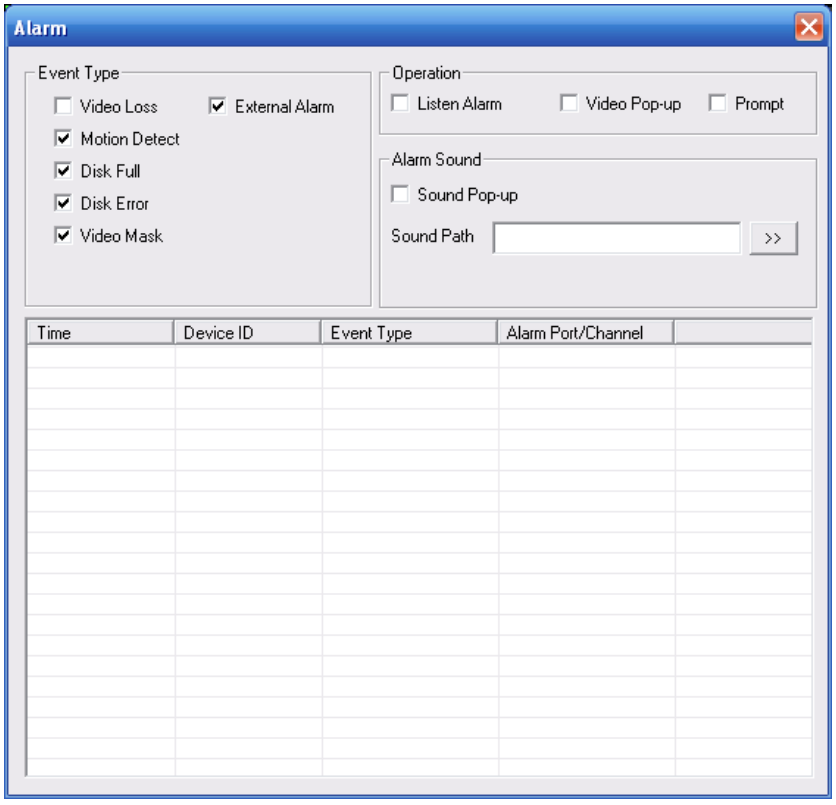


Figure 8-49 Alarm

Please refer to the following sheet for detailed information.

Type	Parameter	Function
Alarm Type	Video loss	System alarms when video loss occurs. This function is not available in current device.
	Motion detection	System alarms when motion detection alarm occurs, This function is not available in current device.
	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. This function is not available in current device.
	External alarm	Alarm input device sends out an alarm.
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.

Type	Parameter	Function
	Path	Here you can specify alarm sound file.

8.6 About

Click about button, you can view the web information. See Figure 7-47.



Figure 8-50 About

8.7 Log out

Click log out button, you can go back to log in interface. See Figure 7-48.

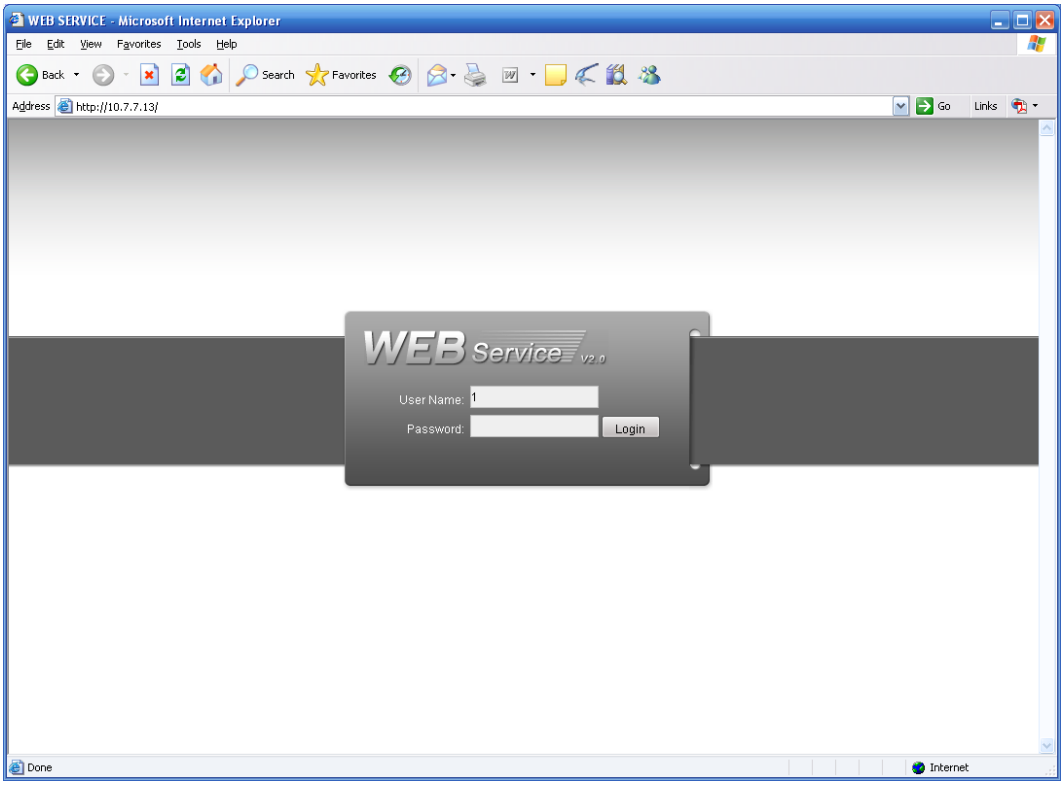


Figure 8-51 Alarm

9 FAQ

1. Device can not boot up properly.

There are following possibilities:

- Input power is not correct.
- Power connection is not correct.
- Power switch button is damaged.
- Program upgrade is wrong.
- HDD malfunction or something wrong with HDD ribbon.
- Seagate DB35.1，DB35.2，SV35 or Maxtor 17-g has compatibility problem. Please upgrade to the latest version to solve this problem.
- Front panel error.
- Main board is damaged.

2. Device often automatically shuts down or stops running.

There are following possibilities:

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

3. System can not detect hard disk.

There are following possibilities:

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

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

There are following possibilities:

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

5. Real-time video color is distorted.

There are following possibilities:

- When using BNC output, NTSC and PAL setup is not correct. The real-time video becomes black and white.
- Device and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.

- Device color or brightness setup is not correct.

6. Can not search local records.

There are following possibilities:

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

7. Video is distorted when searching local records.

There are following possibilities:

- Video quality setup is too low.
- Program read error, bit data is too small. There is mosaic in the full screen. Please restart the device to solve this problem.
- HDD data ribbon error.
- HDD malfunction.
- Device hardware malfunctions.

8. There is no audio when monitor.

There are following possibilities:

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

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

There are following possibilities:

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

10. Time display is not correct.

There are following possibilities:

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

11. Device can not control PTZ.

There are following possibilities:

- Front panel PTZ error
- PTZ decoder setup, connection or installation is not correct.
- Cable connection is not correct.
- PTZ setup is not correct.
- PTZ decoder and device protocol is not compatible.

- PTZ decoder and device address is not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control is not stable.
- The distance is too far.

12. Motion detection function does not work.

There are following possibilities:

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

13. Can not log in client-end or web.

There are following possibilities:

- For Windows 98 or Windows ME user, please update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Please note right now, our device is not compatible with Windows VISTA control.
- ActiveX control has been disabled.
- No dx8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with device program.

14. There is only mosaic no video when preview or playback video file remotely.

There are following possibilities:

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

15. Network connection is not stable.

There are following possibilities:

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

16. Burn error /USB back error.

There are following possibilities:

- Burner and device are in the same data cable.

- System uses too much CPU resources. Please stop record first and then begin backup.
- Data amount exceeds backup device capacity. It may result in burner error.
- Backup device is not compatible.
- Backup device is damaged.

17. Keyboard can not control device.

There are following possibilities:

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

18. Alarm signal can not been disarmed.

There are following possibilities:

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

19. Alarm function is null.

There are following possibilities:

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

20. Remote control does not work.

There are following possibilities:

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

21. Record storage period is not enough.

There are following possibilities:

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

22. Can not playback the downloaded file.

There are following possibilities:

- There is no media player.
- No DXB8.1 or higher graphic acceleration software.

- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. I forgot local menu operation password or network password

Please contact your local service engineer or our sales engineer for help. We can guide you to solve this problem.

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

There are following possibilities:

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

25. The displayed video is not complete.

Please cheek current resolution setup. If the current setup is 1920*1080, then you need to set the monitor resolution as 1920*1080.

26. There is no HDMI output.

There are following possibilities:

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

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

There are following possibilities:

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

Daily Maintenance

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

10 Appendix A HDD Capacity Calculation

Calculate total capacity needed by each device according to video recording (video recording type and video file storage time).

Step 1: According to Formula (1) to calculate storage capacity q_i that is the capacity of each channel needed for each hour, unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i means the bit rate, unit Kbit/s

Step 2: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity m_i, which is storage of each channel needed unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula:

h_i means the recording time for each day (hour)

D_i means number of days for which the video shall be kept

Step 3: According to Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the device during **scheduled video recording**.

$$q_T = \sum_{i=1}^{c} m_i \quad (3)$$

In the formula: c means total number of channels in one device

Step 4: According to Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in device during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^{c} m_i \times a\% \quad (4)$$

In the formula：$a\%$ means alarm occurrence rate

11 Appendix B Compatible SATA HDD

Manufacturer	Series	Model	Capacity	Port Mode
Seagate	Barracuda.10	ST3750640AS	750G	SATA
Seagate	Barracuda.10	ST3500630AS	500G	SATA
Seagate	Barracuda.10	ST3400620AS	400G	SATA
Seagate	Barracuda.10	ST3320620AS	320G	SATA
Seagate	Barracuda.10	ST3250620AS	250G	SATA
Seagate	Barracuda.10	ST3250820AS	250G	SATA
Seagate	Barracuda.10	ST3160815AS	160G	SATA
Seagate	Barracuda.10	ST380815AS	80G	SATA
Seagate	Barracuda.9	ST3160811AS	160G	SATA
Seagate	Barracuda.9	ST3120811AS	120G	SATA
Seagate	Barracuda.9	ST380811AS	80G	SATA
Seagate	Barracuda.9	ST380211AS	80G	SATA
Seagate	Barracuda.11	ST3750330AS	750G	SATA
Seagate	Barracuda.11	ST3500320AS	500G	SATA
Maxtor	DiamondMax 20	STM3320820AS	320G	SATA
Maxtor	DiamondMax 20	STM3250820AS	250G	SATA
Maxtor	DiamondMax 21	STM3160211AS	160G	SATA
Maxtor	DiamondMax 21	STM380211AS	80G	SATA
Maxtor	DiamondMax 21	STM340211AS	40G	SATA
Westem Digital	Cariar SE	WD3200JD	320G	SATA
Westem Digital	Cariar SE	WD3000JD	300G	SATA
Westem Digital	Cariar SE	WD2500JS	250G	SATA
Westem Digital	Cariar SE	WD2000JD	200G	SATA
Westem Digital	Cariar SE	WD1600JD	160G	SATA
Westem Digital	Cariar SE	WD1600JS	160G	SATA
Westem Digital	Cariar SE	WD1200JS	120G	SATA
Westem Digital	Cariar SE	WD800JD	80G	SATA
Westem Digital	Cariar	WD1600AABS	160G	SATA

Westem Digital	Cariar	WD800BD	80G	SATA
Westem Digital	Cariar SE16	WD7500KS	750G	SATA
Westem Digital	Cariar SE16	WD5000KS	500G	SATA
Westem Digital	Cariar SE16	WD4000KD	400G	SATA
Westem Digital	Cariar SE16	WD3200KS	320G	SATA
Westem Digital	Cariar SE16	WD2500KS	250G	SATA

12 Appendix C Compatible USB List

Manufacturer	Model	Capacity
Sandisk	Cruzer Micro	512M
Sandisk	Cruzer Micro	1G
Sandisk	Cruzer Micro	2G
Sandisk	Cruzer Freedom	256M
Sandisk	Cruzer Freedom	512M
Sandisk	Cruzer Fredom	1G
Sandisk	Cruzer Freedom	2G
Kingston	Data Traveler II	1G
Kingston	Data Traveler II	2G
Kingston	Data Traveler	1G
Kingston	Data Traveler	2G
Maxell	USB Flash Stick	128M
Maxell	USB Flash Stick	256M
Maxell	USB Flash Stick	512M
Maxell	USB Flash Stick	1G
Maxell	USB Flash Stick	2G
Kingax	Super Stick	128M
Kingax	Super Stick	256M
Kingax	Super Stick	512M
Kingax	Super Stick	1G
Kingax	Super Stick	2G
Netac	U210	128M
Netac	U210	256M
Netac	U210	512M
Netac	U210	1G
Netac	U210	2G
Teclast	Ti Cool	128M
Teclast	Ti Cool	256M

Teclast	Ti Cool	512M
Teclast	Ti Cool	1G
Teclast	Ti Cool	2G

13 Appendix D Compatible Displayer List

Brand	Model	Dimension (Unit: inch)
BENQ（LCD）	ET-0007-TA	19-inch (wide screen)
DELL（LCD）	E178FPc	17-inch
BENQ（LCD）	Q7T4	17-inch
BENQ（LCD）	Q7T3	17-inch
LENOVO（LCD）	LXB-L17C	17-inch
SANGSUNG（LCD）	225BW	22-inch (wide screen)
LENOVO(CRT)	LXB-FD17069HB	17-inch
LENOVO(CRT)	LXB-HF769A	17-inch
LENOVO(CRT)	LX-GJ556D	17-inch
Samsung (LCD)	2494HS	24-inch
Samsung (LCD)	P2350	23-inch
Samsung (LCD)	P2250	22-inch
Samsung (LCD)	P2370G	23-inch
Samsung (LCD)	2043	20-inch
Samsung (LCD)	2243EW	22-inch
LG（LCD）	W1942SP	19-inch
LG（LCD）	W2243S	22-inch
LG（LCD）	W2343T	23-inch
BENQ（LCD）	G900HD	18.5-inch
BENQ（LCD）	G2220HD	22-inch
PHILIPS（LCD）	230E	23-inch
PHILIPS（LCD）	220CW9	23-inch
PHILIPS（LCD）	220BW9	24-inch
PHILIPS（LCD）	220EW9	25-inch

14 Appendix E No-IP DDNS

Please double click DDNS to go to the configuration interface. You can see an interface is shown as in Figure 14-1.

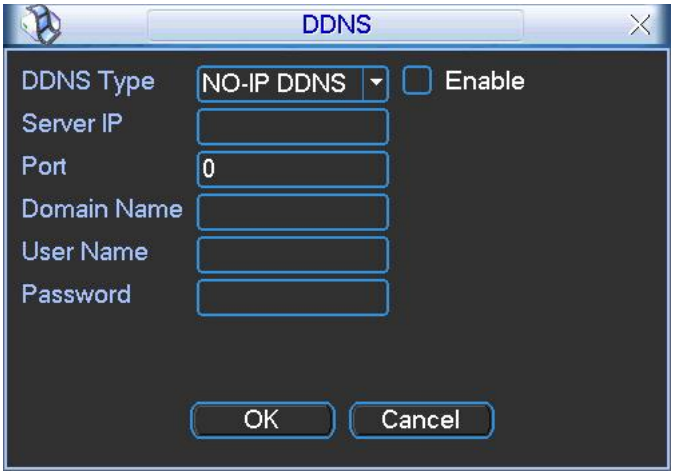


Figure 14-1

- DDNS Type: You can select from the dropdown list. There are five options: No-IP, DynDNS, CN99, Private and Oray.
- Server IP: You can use ping command to get server's IP
- Port: input server port here.
- Domain Name: Get the domain name you get from your DDNS service provider.
- User: Get the user name you get from your DDNS service provider.
- Password: Enter corresponding password.

Highlight the icon ☐ in front of Enable to enable the DDNS server configuration.

It's a system of dynamic DNS service. If you do not have a Static IP address on the Internet, you need to have a dynamic IP. It is to say your IP address changes after a certain period of time.

You can follow the steps listed below to display image on your device even your IP is dynamic.

You need to use a DDNS service and create a domain name that is not necessarily direct use the IP address.

After completed configuration in the device DDNS service can constantly inform the latest

device's connection IP, and modify its IP on the table of data from the server. Then we have a constant domain name in the Web browser, along with the HTTP port, send a request to identify the car IP of the domain name typed. The server will direct the domain name to the IP connection, thus allowing access to the device which does not have a fixed IP in the network.

Note: It is important to note that to gain access to the device in a local network, it is necessary to achieve the redirect the port of your modem or router to your device.

To receive domain name in the No-IP DDNS service, please follow the steps listed below.

1. Please visit www.no-ip.com; the page of No-IP appears as below. See Figure 14-2.



Figure 14-2

2. Left click mouse on the "Create Account" button, account Information interface is shown as in Figure 14-3.

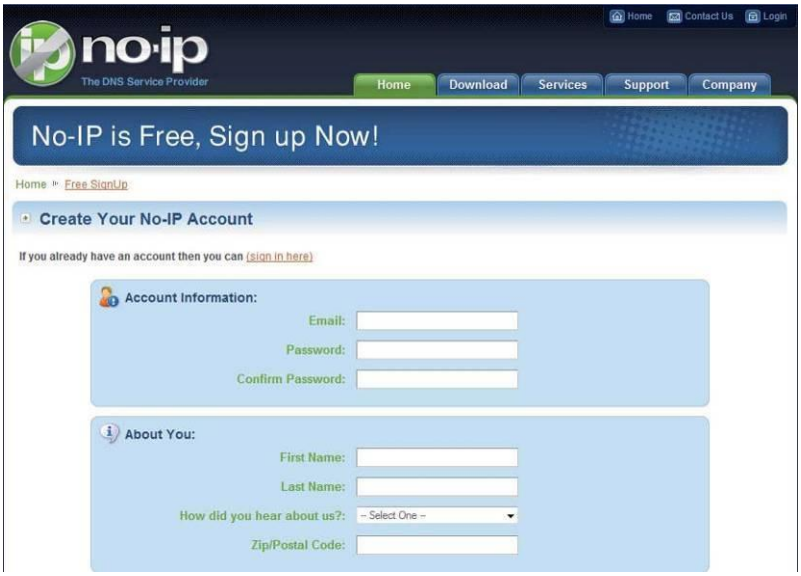


Figure 14-3

3. Fill in the requested fields and click I Accept button. Then you can get an email containing username and

password. You can use this account to access the service.

4. Open the e-mail sent by trusted rmação No-IP and double-click the link that is below the phrase "To activate your account please click the following URL:" in the body of the email. See Figure 14-4.

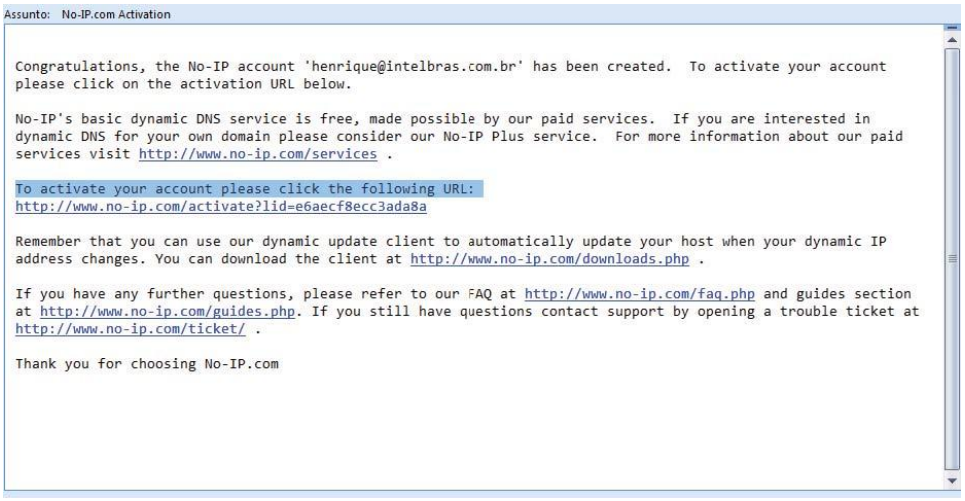


Figure 14-4

5. Now you can see an interface is shown as in Figure 14-5. You have successfully created an account.



Figure 14-5

6. In Figure 14-5, click to sign and enter the email address and password you get earlier. Click “login” to sign up, you can see the welcome interface and configuration option of account. See Figure 14-6. You can highlight manage host item.



Figure 14-6

7. The Manage Hosts interface is shown as in Figure 14-7. Click the Add Host button you can access the creation of a domain name.



Figure 14-7

8. In Figure 14-8, input corresponding host name in the filed. You can use this name to access device from an external network. In the field to the right of the name, select the desired area. This is your domain name for access to the device. Click “Create Host” button at the bottom of the page.

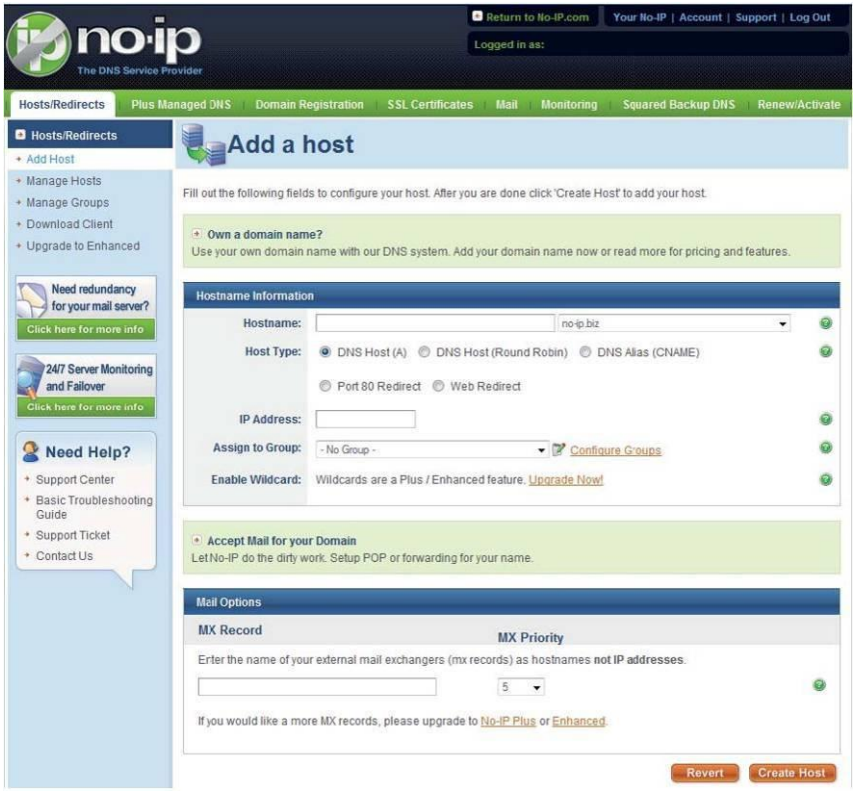


Figure 14-8

9. Now you can see an interface is shown as in Figure 14-9. Here you can view domain name and the computer's current IP setup. If you already have a domain name equal to gurado trusted, you must define another name for the host.

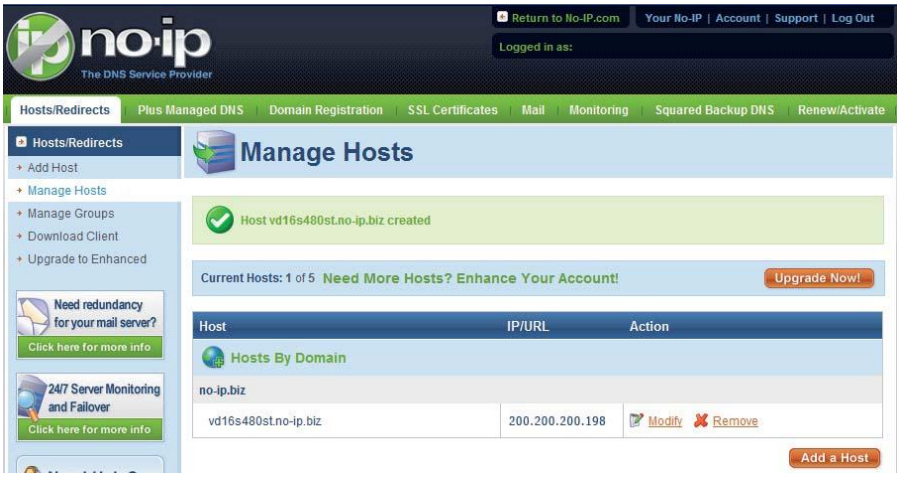


Figure 14-9

10. Now you need to define the definition of the server's IP in IP-device able to access this service DDNS. To get DDNS service, you need to have a computer connected to the Internet on the same network with device. Then please type the command dynupdate. no ping-ip.com at the command prompt, Windows ®. The server's IP will be displayed on the screen. See Figure 14-10. Your device can use this IP to find the No-IP server.

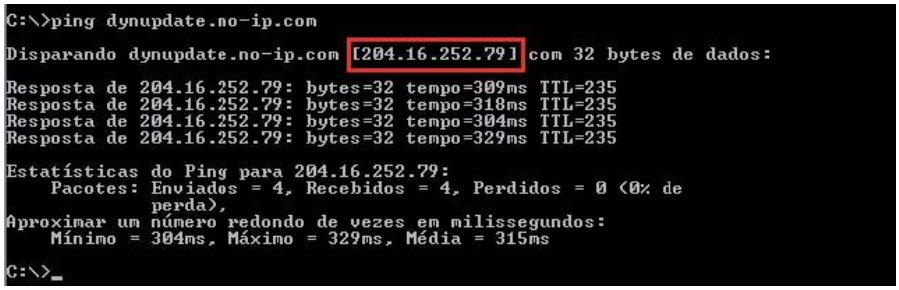


Figure 14-10

11. Please go to the device and access the MAIN MENU> SETTING> NETWORK> DDNS. Input server IP you get in the above step. Select the DDNS Type as No-IP DDNS and highlight the icon in front of Enable to enable the DDNS function. Now fill the fields as described below, and click OK to save current setup.

- **Server IP:** Enter the IP noted in step 10.
- **Port:** Enter the port 80.

• **Domain Name:** Enter the domain name created in step 8.

• **User:** Enter your username (email address) created in step 3.

• **Password:** Enter the password created in step 3.

The figure Configuration file of No-IP is shown as in Figure 14-11.

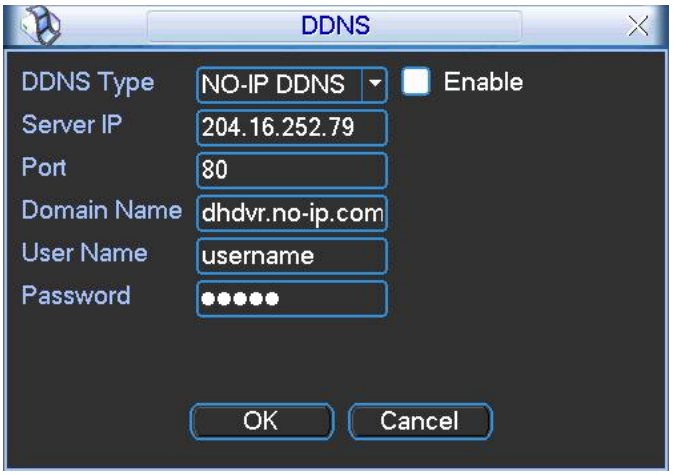


Figure 14-11

12. Now you have completed device setup. Open Internet Explorer ® in another foreign network with Internet access, unlike the network where the device is connected to, you need to follow the steps listed below:

1. Enter the address into your browser: http://nome the field created in step 8. For example: http://vd16s480st.no-ip.biz

2. If the device HTTP port is 80, just type the domain name. Otherwise, enter in the browser address as: http://nome the field created in Step 8: port number of HTTP. For example: http://vd16s480st.no-ip.biz:9090

3. Press Enter. The system will ask install application webrec.cab control or not. Please click Yes to perform a successful connection.

4. If the page does not appear on the computer screen, you need to lower your system safety setup. From Tools> Internet Options> Security, select Internet and then click Custom Level, you can enable ActiveX controls. See Figure 14-12 . Then open your browser and re-enter the domain name of the device.

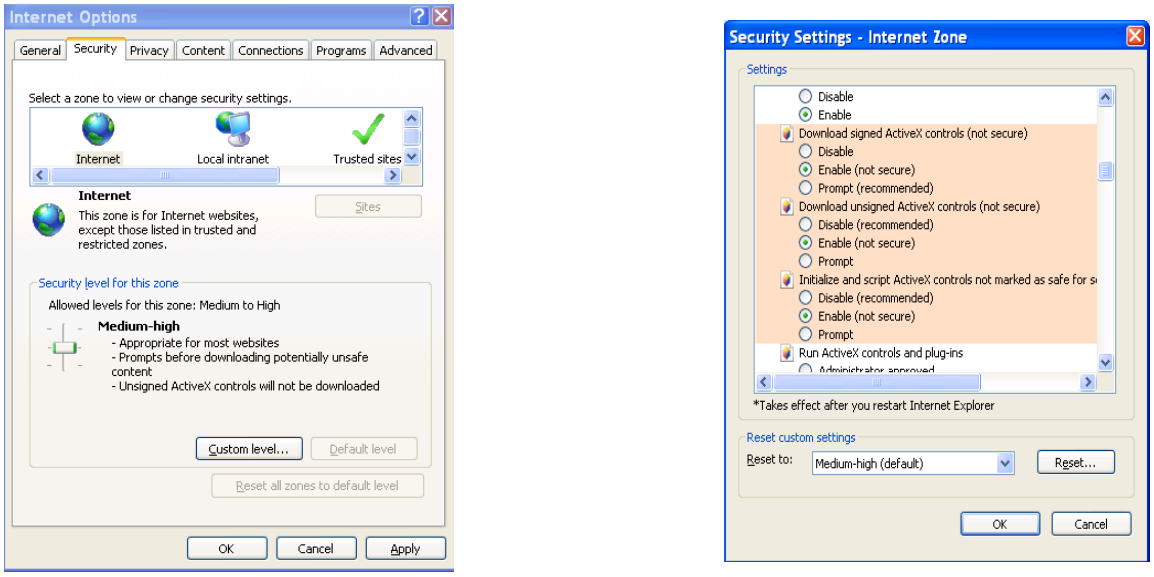

Internet Options
General
Security
Privacy
Content
Connections
Programs
Advanced
Select a zone to view or change security settings.
Internet
Local intranet
Trusted sites
Internet
This zone is for Internet websites, except those listed in trusted and restricted zones.
Sites
Security level for this zone
Allowed levels for this zone: Medium to High
Medium-high
- Appropriate for most websites
- Prompts before downloading potentially unsafe content
- Unsigned ActiveX controls will not be downloaded
Custom level...
Default level
Reset all zones to default level
OK
Cancel
Apply
Security Settings - Internet Zone
Settings
Disable
Enable
Download signed ActiveX controls (not secure)
Disable
Enable (not secure)
Prompt (recommended)
Download unsigned ActiveX controls (not secure)
Disable (recommended)
Enable (not secure)
Prompt
Initialize and script ActiveX controls not marked as safe for s
Disable (recommended)
Enable (not secure)
Prompt
Run ActiveX controls and plug-ins
*Takes effect after you restart Internet Explorer
Reset custom settings
Reset to:
Medium-high (default)
Reset...
OK
Cancel

Figure 14-12

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.**
- **Please visit our website or contact your local service engineer for more information.**