



PS-7900SI/MI Series DVR

USER MANUAL

Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC.



2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Description on Laser Specification

The optical disc drive such as DVD Super Multi (Double Layer) Drive 22X that is used in this computer is equipped with laser. The classification label with the following sentence is affixed to the surface of the drive.

CLASS 1 LASER

PRODUCT TO IEC60825-1

LASER KLASSE 1

The drive with the above label is certified by the manufacturer that the drive complies with the requirement for laser product on the date of manufacturing pursuant to article 21 of Code of Federal Regulations by the United States of America, Department of Health & Human Services, Food and Drug Administration.

In other countries, the drive is certified to comply with the requirement pursuant to IEC 60825-1 and EN 60825-1 on class 1 laser product.

This computer is equipped with the optical disc drive in the following list according to the model.

Safety Warnings and Cautions

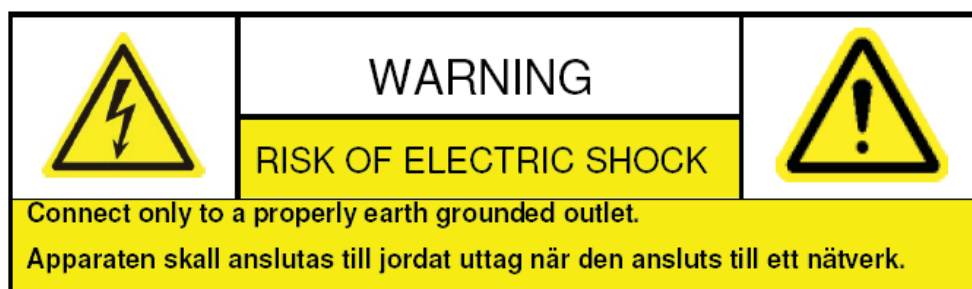
Please pay attention to the following warnings and cautions:



Hazardous Voltage may be present: Special measures and precautions must be taken when using this device. Some potentials (voltages) on the device may present a hazard to the user. This device should only be used by the Employees from our company with knowledge and training in working with these types of devices that contain live circuits.



Power Supply Hazardous Voltage: AC mains voltages are present within the power supply assembly. This device must be connected to a UL approved, completely enclosed power supply, of the proper rated voltage and current. **No user serviceable parts inside the power supply.**

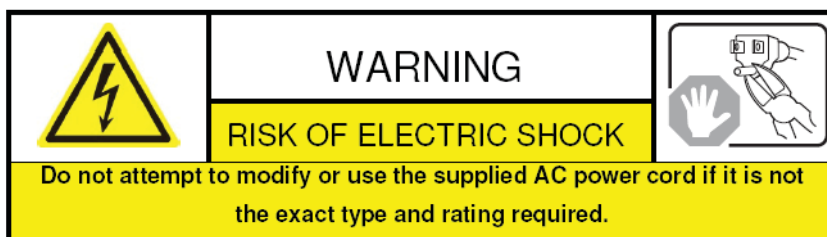


System Grounding (Earthing): To avoid shock, ensure that all AC wiring is not exposed and that the earth grounding is maintained. Ensure that any equipment to which this device will be attached is also connected to properly wired grounded receptacles and are approved medical devices.



Power Connect and Disconnect: The AC power supply cord is the main disconnect device to mains (AC power). The socket outlet shall be installed near the equipment and shall be readily accessible.

Installation and Maintenance: Do not connect/disconnect any cables to or perform installation/maintenance on this device during an electrical storm.



Power Cord Requirements: The connector that plugs into the wall outlet must be a grounding-type male plug designed for use in your region. It must have certification marks showing certification by an agency in your region. The connector that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13, female connector. See the following website for more information <http://kropla.com/electric2.htm>.



Lithium Battery: This device contains a Lithium Battery. There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the vendor's instructions and in accordance with local environmental regulations.

Perchlorate Material: Special handling may apply. See

www.dtsc.ca.gov/hazardouswaste/perchlorate. This notice is required by California Code of Regulations, Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials. This device includes a battery which contains perchlorate material.

Taiwan battery recycling:



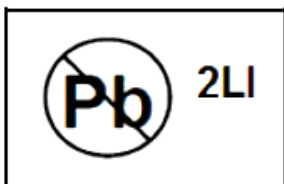
Please recycle batteries.



Thermal and Mechanical Injury: Some components such as heat sinks, power regulators, and processors may be hot; care should be taken to avoid contact with these components.

Electro Magnetic Interference: This equipment has not been tested for compliance with emissions limits of FCC and similar international regulations. This device is not, and may not be, offered for sale or lease, or sold, or leased until authorization from the United States FCC or its equivalent in other countries has been obtained. Use of this equipment in a residential location is prohibited. This equipment generates, uses and can radiate radio frequency energy which may result in harmful interference to radio communications. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is required to take measures to eliminate the interference or discontinue the use of this equipment.

Lead Content:



Please recycle this device in a responsible manner. Refer to local environmental regulations for proper recycling; do not dispose of device in unsorted municipal waste.

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.

This manual is applicable to PS-7904SI, PS-7908SI, PS-7916SI; PS-7904MI, PS-7908MI and PS-7916MI series DVR.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual. We will readily improve or update the products or procedures described in the manual.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Product Key Features

General

- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- Each channel supports dual-stream.
- Independent configuration for each channel, including resolution, frame rate, bit rate, image quality, etc.
- Input and output video quality is configurable.
- Normal and event recording parameters configurable per individual camera.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Watermark technology.

Local Monitoring

- Simultaneous HDMI, VGA and CVBS outputs.
- HDMI/VGA output at up to 1920×1080P resolution.
- 1/4/6/8/9/16-division live view is supported, and the display sequence of screens is adjustable.
- Live view screen can be switched in group, and manual switch and automatic cycle view is also provided, the interval of automatic cycle can be adjusted.
- Quick setting menu is provided for live view.
- The selected live view channel can be shielded.
- Motion detection, tamper-proof, video exception and video loss alarm functions.
- Privacy mask.
- Multiple PTZ protocols supported; setting and calling of PTZ preset, patrol and pattern.
- Zooming in by clicking the mouse and PTZ tracing by dragging mouse.

HDD Management

- 1 SATA hard disk can be connected to PS-7900SI and PS-7904MI, and 2 SATA hard disks to PS-7908MI/PS-7916MI, with a maximum of 4TB storage capacity for each disk.
- 8 network disks (8 NAS disks, or 7 NAS disks+1 IP SAN disk) can be connected.
- HDD group management.
- Support HDD standby function.
- HDD property: redundancy, read-only, read/write (R/W).
- HDD quota management; different capacity can be assigned to different channel.

Recording and Playback

- Holiday recording schedule configuration.
- Normal and event video encoding parameters.
- Multiple recording types: manual, normal, and motion.
- 8 recording time periods with separated recording types.
- Pre-record and post-record for motion detection for recording, and pre-record time for schedule and manual recording.
- Searching record files by event.
- Customization of tags, searching and playing back by tags.
- Locking and unlocking record files.
- Local redundant recording.

- Searching and playing back record files by channel number, recording type, start time, end time, etc.
- Smart search for the selected area in the video.
- Zooming in when playback.
- Playing reversely.
- Support pause, speed up, speed down, skip forward, and skip backward when playback, locating by dragging the mouse.
- Up to 4/8/16-ch synchronous playback at 4CIF resolution.

Backup

- Export video data by USB or SATA .storage device.
- Export video clips when playback.
- Management and maintenance of backup devices.

Alarm and Exception

- Configurable arming time of alarm input/output.
- Alarm for video loss, motion detection, tampering, abnormal signal, video input/output standard mismatch, illegal login, network disconnected, IP confliction, abnormal record, HDD error, and HDD full, etc.
- Alarm event triggers full screen monitoring, audio alarm, notifying surveillance center and sending email.
- Automatic restore when system is abnormal.

Other Local Functions

- Operable by mouse, or IR remote control.
- Three-level user management; admin user is allowed to create many operating accounts and define their operating permission, which includes the limit to access any channel.
- Operation, exceptions and log recording and searching.
- Import and export of device configuration information.

Network Functions

- 1 self-adaptive 10M/100M network interface.
- IPv6 is supported.
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, SNMP, UPnP™, NFS, and iSCSI are supported.
- TCP, UDP and RTP for unicast.
- Remote search, playback, download, locking and unlocking of the record files, and downloading files broken transfer resume.
- Remote parameters setup; remote import/export of device parameters.
- Remote viewing of the device status, system logs and alarm status.
- Remote locking and unlocking of control panel and mouse.
- Remote HDD formatting and program upgrading.
- Remote system restart.
- RS-485 transparent channel transmission.
- Alarm event and exception information can be sent to the remote host.
- Remotely start/stop recording.
- Upgrade by remote FTP server.
- Remote PTZ control.
- Two-way audio and voice broadcasting.

- Embedded WEB server.

Development Scalability:

- SDK for Windows and Linux system.
- Source code of application software for demo.
- Development support and training for application system.

TABLE OF CONTENTS

Product Key Features.....	6
CHAPTER 1.....	13
Introduction.....	13
1.1 Front Panel.....	14
1.2 IR Remote Control Operations	15
1.3 USB Mouse Operation.....	17
1.4 Input Method Description.....	17
1.5 Rear Panel	19
1.6 Starting Up and Shutting Down the Device	20
CHAPTER 2.....	22
Getting Started	22
CHAPTER 3.....	27
Live View.....	27
3.1 Introduction of Live View.....	28
3.2 Operations in Live View Mode.....	29
3.2.1 Using the Mouse in Live View.....	29
3.2.2 Using an Auxiliary Monitor	30
3.2.3 Quick Setting Toolbar in Live View Mode.....	30
3.3 Adjusting Live View Settings	33
3.4 Channel-zero Encoding.....	35
3.5 User Logout	36
CHAPTER 4.....	37
PTZ Controls	37
4.1 Configuring PTZ Settings.....	38
4.2 Setting PTZ Presets, Patrols & Patterns	38
4.2.1 Customizing Presets.....	38
4.2.2 Calling Presets	39
4.2.3 Customizing Patrols.....	40
4.2.4 Calling Patrols.....	42
4.2.5 Customizing Patterns	43
4.2.6 Calling Patterns.....	44
4.3 PTZ Control Toolbar	45
CHAPTER 5.....	46
Record Settings.....	46
5.1 Configuring Encoding Parameters.....	47
5.2 Configuring Record Schedule.....	49
5.3 Configuring Motion Detection Record.....	53
5.4 Manual Record.....	56
5.5 Configuring Holiday Record	57
5.6 Configuring Redundant Record.....	60
5.7 Configuring HDD Group for Record.....	61

5.8 Files Protection	63
CHAPTER 6.....	66
Playback.....	66
6.1 Playing Back Record Files.....	67
6.1.1 Playing Back by Channel.....	67
6.1.2 Playing Back by Time	70
6.1.3 Playing Back by Normal Video Search.....	71
6.1.4 Playing Back by Event Search.....	74
6.1.5 Playing Back by Tag.....	77
6.1.6 Playing Back by System Log.....	81
6.2 Auxiliary Functions of Playback	83
6.2.1 Playing Back Frame by Frame	83
6.2.2 Smart Search	83
6.2.3 Digital Zoom.....	85
CHAPTER 7.....	87
Backup.....	87
7.1 Backing up Record Files.....	88
7.1.1 Quick Export.....	88
7.1.2 Backing up by Normal Video Search	90
7.1.3 Backing up by Event Search.....	93
7.1.4 Backing up Video Clips.....	96
7.2 Managing Backup Devices	98
CHAPTER 8.....	102
Alarm Settings.....	102
8.1 Setting Motion Detection.....	103
8.2 Detecting Video Loss.....	106
8.3 Detecting Video Tampering	107
8.4 Handling Exceptions.....	108
8.5 Setting Alarm Response Actions	109
CHAPTER 9.....	110
Network Settings	110
9.1 Configuring General Settings	111
9.2 Configuring Advanced Settings.....	111
9.2.1 Configuring PPPoE Settings.....	111
9.2.2 Configuring DDNS	112
9.2.3 Configuring NTP Server.....	115
9.2.4 Configuring SNMP	116
9.2.5 Configuring UPnP™.....	116
9.2.6 Configuring Remote Alarm Host	118
9.2.7 Configuring Multicast.....	118
9.2.8 Configuring RTSP	119
9.2.9 Configuring Server and HTTP Ports	119
9.2.10 Configuring Email	120
9.3 Checking Network Traffic	123

9.4 Network Detection	124
9.4.1 Testing Network Delay and Packet Loss	124
9.4.2 Exporting Network Packet	124
9.4.3 Checking Network Status	126
9.4.4 Checking Network Statistics	127
CHAPTER 10	128
HDD Management	128
10.1 Initializing HDDs	129
10.2 Managing Network HDD	131
10.3 Managing HDD Group	134
10.3.1 Setting HDD Groups	134
10.3.2 Setting HDD Property	135
10.4 Configuring Quota Mode	137
10.5 Checking HDD Status	139
10.6 Checking S.M.A.R.T. Information	140
10.7 Configuring HDD Error Alarms	141
CHAPTER 11	142
Camera Settings	142
11.1 Configuring OSD Settings	143
11.2 Configuring Privacy Mask	144
11.3 Configuring Video Parameters	145
CHAPTER 12	146
Device Management and Maintenance	146
12.1 Viewing System Information	147
12.1.1 Viewing Device Information	147
12.1.2 Viewing Camera Information	147
12.1.3 Viewing Record Information	147
12.1.4 Viewing Network Information	148
12.1.5 Viewing HDD Information	148
12.2 Searching & Exporting Log Files	150
12.3 Importing/Exporting Configuration Files	152
12.4 Upgrading System	154
12.4.1 Upgrading by Local Backup Device	154
12.4.2 Upgrading by FTP	154
12.5 Restoring Default Settings	156
CHAPTER 13	157
Others	157
13.1 Configuring General Settings	158
13.2 Configuring DST Settings	159
13.3 Configuring More Settings	160
13.4 Managing User Accounts	161
13.4.1 Adding a User	161
13.4.2 Deleting a User	163
13.4.3 Editing a User	164

13.4.4 Changing Password of Admin	165
13.5 Logging out/Shutting down/Rebooting Device	166
CHAPTER 14.....	167
Appendix	167
Glossary	168
FAQ	169

CHAPTER 1

Introduction

1.1 Front Panel

The front panel of PS-7900SI/PS-7900MIseries is shown in Figure 1.1.

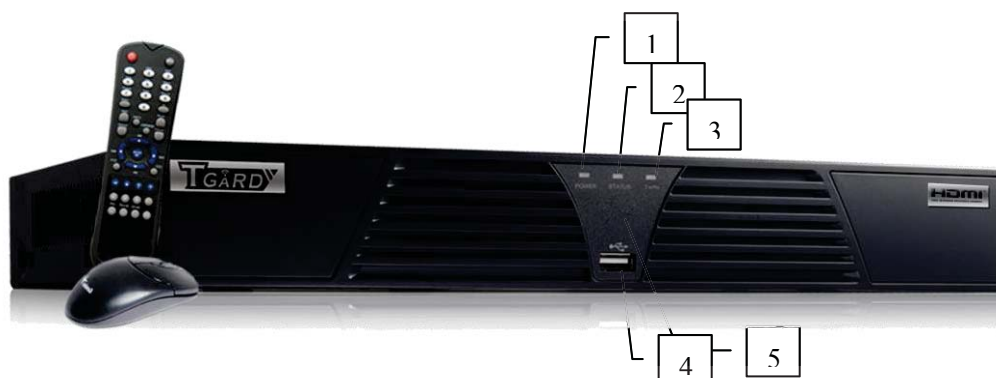


Figure 1.1 Front Panel

Table 1.1 Description of Control Panel Buttons

N o.	Name	Function Description
1	POWER	POWER indicator turns green when DVR is powered up.
2	STATUS	STATUS indicator lights in red when HDD is reading/writing.
3	Tx/Rx	Tx/Rx indicator blinks green when network connection is functioning properly.
4	USB Interface	Connects USB mouse or USB flash memory devices.
5	IR Receiver	IR receiver for IR remote.

1.2 IR Remote Control Operations

The device may also be controlled with the included IR remote control, shown in Figure 1.2.

Note: Batteries (2×AAA) must be installed before operation.

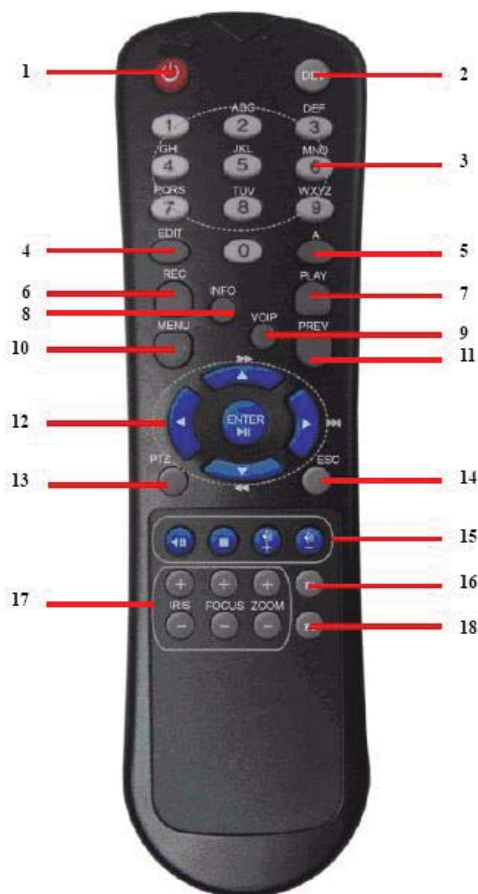


Figure 1.2 Remote Control

Table 1.2 Description of the IR Remote Control Buttons

No.	Name	Description
1	POWER	Power on/off the device.
2	DEV	Enables/Disables Remote Control.
3	Alphanumeric Buttons:	Switching to the corresponding channel in Live view or PTZ Control mode. Inputting numbers and characters in Edit mode. Switching between different channels in All-day Playback mode.
4	EDIT Button	Editing text fields. When editing text fields, it will also function as a Backspace button to delete the character in front of the cursor. On checkbox fields, pressing the EDIT button will <i>tick</i> the checkbox. In Playback mode, it can be used to generate video clips for backup.
5	A Button	Switching between input methods (upper and lowercase alphabet, symbols and numeric input).
6	REC Button	Entering the Manual Record settings menu.

No.	Name	Description
		In PTZ control settings, press the REC button and then you can call a PTZ preset by pressing Numeric button.
7	PLAY Button	Entering the All-day Playback menu.
8	INFO Button	Reserved.
9	VOIP Button	Selecting all items on the list; In live view or playback mode, it can be used to switch between main and spot video output.
10	MENU Button	Back to the Main menu (after successful login). Pressing and holding the button for 5 seconds will turn off audible key beep.
11	PREV Button	Switching between single screen and multi-screen mode.
12	DIRECTION/ENTER Buttons	Navigating between different fields and items in menus. In Playback mode, the Up and Down button are used to speed up and slow down recorded video. The Left and Right button will select the next and previous day of recordings. In live view mode, these buttons can be used to cycle through channels.
13	PTZ Button	Enter the PTZ Control mode.
14	ESC Button	Back to the previous menu Pressing for arming/disarming the DVR in Live View mode.
15	RESERVED	Reserved.
16	F1 Button	Selecting all items on the list when used in a list field. In PTZ Control mode, it will turn on/off PTZ light.
17	PTZ Control Buttons	Adjusting the iris, focus and zoom of a PTZ camera.
18	F2 Button	Cycle through tab pages.

Troubleshooting Remote Control:

Note: Make sure you have installed batteries properly in the remote control. And you have to aim the remote control at the IR receiver on the front panel.

If there is no response after you press any button on the remote, follow the procedure below to troubleshoot.

Steps:

1. Go to Menu > Settings > General > More Settings by operating the mouse.
2. Check and remember device ID#. The default ID# is 255. This ID# is valid for all the IR remote controls.
3. Press the DEV button on the remote control.
4. Enter the device ID# from step 2.
5. Press the ENTER button on the remote.

If the remote control is operating properly, but there is still no response from the remote, please check the following:

1. Batteries are installed correctly and the polarities of the batteries are not reversed.
2. Batteries are fresh and not out of charge.
3. IR receiver is not obstructed.

If the remote still can't function properly, please change a remote and try again, or contact the device provider.

1.3 USB Mouse Operation

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can also be used with this device. To use a USB mouse:

1. Plug USB mouse into one of the USB interfaces on the front panel of the device.
2. The mouse should automatically be detected. If in a rare case that the mouse is not detected, the possible reason may be that the two devices are not compatible, please refer to the recommended device list from your provider.

The operation of the mouse:

Table 1.3 Description of the Mouse Control

Name	Action	Description
Left-Click	Single-Click	Live view: Select channel and show the quick set menu. Menu: Select and enter.
	Double-Click	Live view: Switch single-screen and multi-screen.
	Click and Drag	PTZ control: pan, tilt and zoom. Tamper-proof, privacy mask and motion detection: Select target area. Digital zoom-in: Drag and select target area. Live view: Drag channel/time bar.
Right-Click	Single-Click	Live view: Show menu. Menu: Exit current menu to upper level menu.
Scroll-Wheel	Scrolling up	Live view: Previous screen. Right-click Menu: Previous item.
	Scrolling down	Live view: Next screen. Right-click Menu: Next item.





1.4 Input Method Description








Figure 1.3 Soft Keyboard

Description of the buttons on the soft keyboard:

Table 1.4 Description of the Soft Keyboard Icons

Icons	Description	Icons	Description
	English		Capital English
	Numbers		Symbols

	Lowercase/Uppercase		Backspace
	Space		Enter
	Exit		

1.5 Rear Panel

The rear panels of PS-7900SI/PS-7900MI series are shown in Figure 1.4, Figure 1.5 and Figure 1.6.



Figure 1.4 Rear Panel of PS-7904SI



Figure 1.5 Rear Panel of PS-7916SI

Note: The rear panel of PS-7908SI provides 8 video input interfaces.

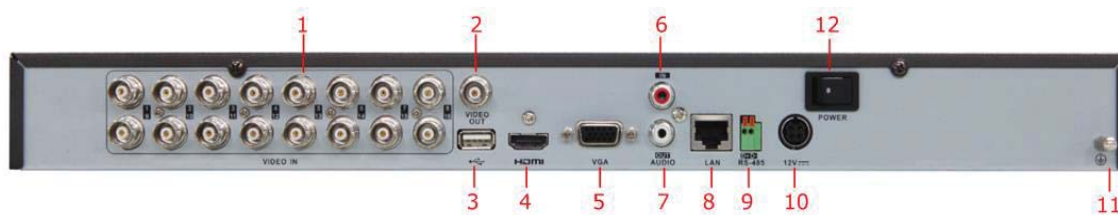


Figure 1.6 Rear Panel of PS-7916MI

Note: The rear panel of PS-7908MI provides 8 video input interfaces.

Table 1.5 Description of Rear Panel

No.	Item	Description
1	VIDEO IN	BNC connector for analog video input.
2	VIDEO OUT	BNC connector for video output.
3	USB Interface	Connects USB mouse or USB flash memory devices.
4	HDMI	HDMI video output.
5	VGA	DB15 connector for VGA output. Display local video output and menu.
6	AUDIO IN	RCA connector for audio input.
7	AUDIO OUT	RCA connector for audio output.
8	LAN Interface	Connector for LAN (Local Area Network).
9	RS-485 Interface	Connector for RS-485 devices. Connect the D+ and D- terminals to T+ and T- of PTZ receiver respectively.
10	12V	12VDC power supply.
11	POWER	Switch for turning on/off the device.
12	GND	Ground(needs to be connected when DVR starts up)

1.6 Starting Up and Shutting Down the Device

Purpose:

Proper startup and shutdown procedures are crucial to expanding the life of the device.

Before you start:

Check that the voltage of the extra power supply is the same with the device's requirement, and the ground connection is working properly.

Starting up the device:

Steps:

1. Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device.
2. Press the **POWER** button on the rear panel. The Power indicator LED should turn green indicating that the unit begins to start up.

Shutting down the device:

Steps:

1. Enter the Shutdown menu.
Menu > Shutdown

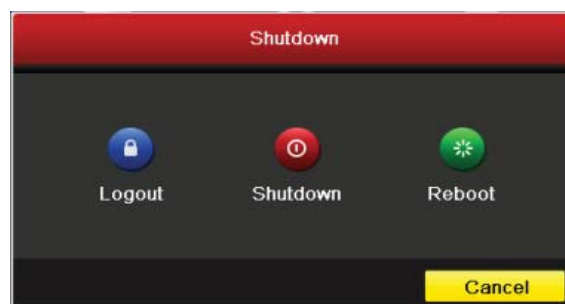


Figure 1.7 Shutdown Menu

2. Click the **Shutdown** button to enter the following dialog box:



Figure 1.8 Dialog Box for Shutdown

3. Click the **Yes** button. The following message box pops up:

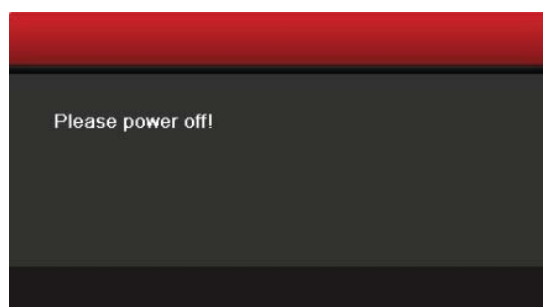


Figure 1.9 Message Box for Power Off

4. Turn off the power switch on the rear panel of DVR.

Rebooting the device

In the Shutdown menu (Figure 1.7), you can also click **Reboot** to reboot the device.

C H A P T E R 2

Getting Started

The Setup Wizard can walk you through some important settings of the device. By default, the Setup Wizard starts once the device has loaded.

Operating the Setup Wizard:

1. Select the system resolution from the drop-down menu. The default resolution is 1280×1024/60Hz.
Click **Apply** to save the resolution settings.

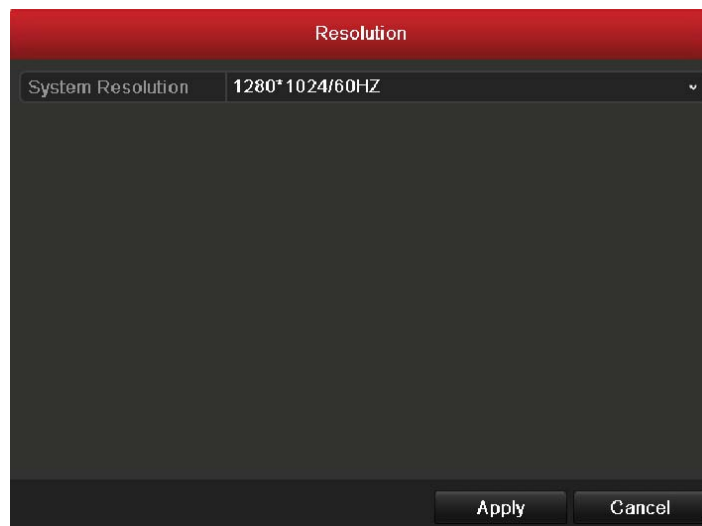


Figure 2.1 Start Wizard Interface

2. Check the checkbox to enable Setup Wizard when device starts. Click **Next** to continue the setup wizard.

You can also click **Cancel** to exit the Setup Wizard, or use the Setup Wizard next time by leaving the “Start wizard when DVR starts?” checkbox checked and exit.

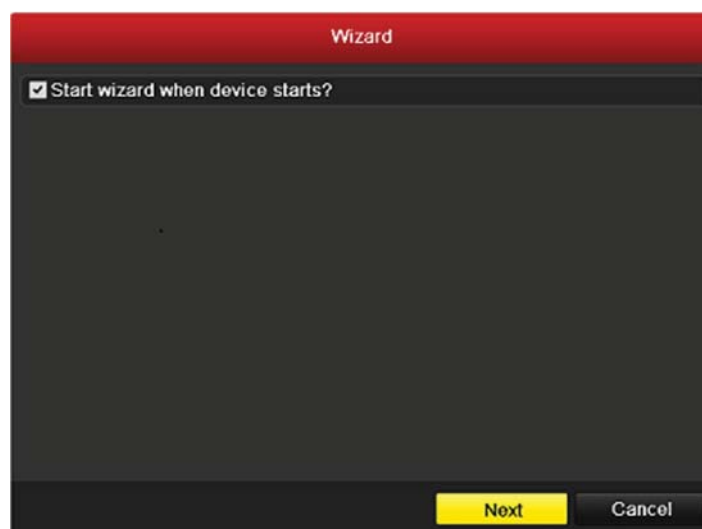


Figure 2.2 Start Wizard Interface

3. Click **Next** button on the Wizard window to enter the **Login** window, as shown in Figure 2.3.
 - 1) Enter the admin password. By default, the password is 12345.
 - 2) To change the admin password, check the **New Admin Password** checkbox. Enter the new password and confirm the password in the given fields.

Wizard	
Admin Password	*****
New Admin Password	<input checked="" type="checkbox"/>
New Password	*****
Confirm	*****
<div>Previous Next Cancel</div>	

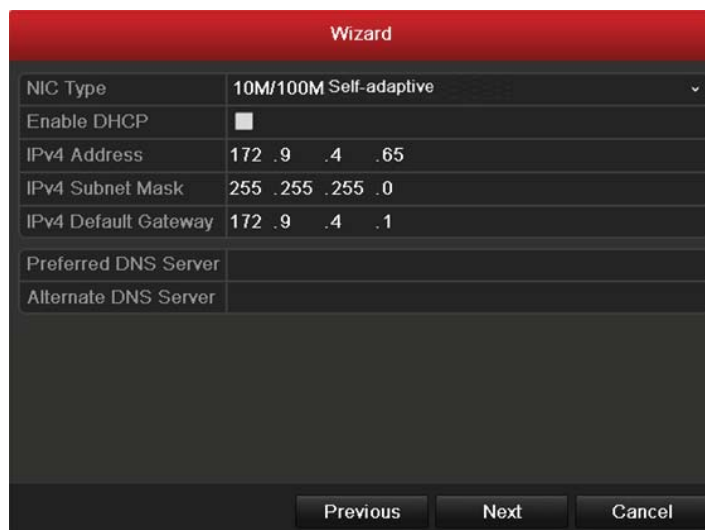
Figure 2.3 Login Window

- Click the **Next** button to enter the **Date and Time** settings window, as shown in Figure 2.4.
Set the time zone, date format, system date and system time.

Wizard	
Time Zone	(GMT+08:00) Beijing, Urumqi, Singapore
Date Format	MM-DD-YYYY
System Date	06-24-2011
System Time	16:18:12
<div>Previous Next Cancel</div>	

Figure 2.4 Date and Time Settings

- Click **Next** button which takes you back to the **Network** Setup Wizard window, as shown in Figure 2.5.
Set the network parameters, including the NIC type, IPv4 address, IPv4 subnet mask, default gateway, etc. You can enable the DHCP to automatically obtain an IP address and other network settings from that server.



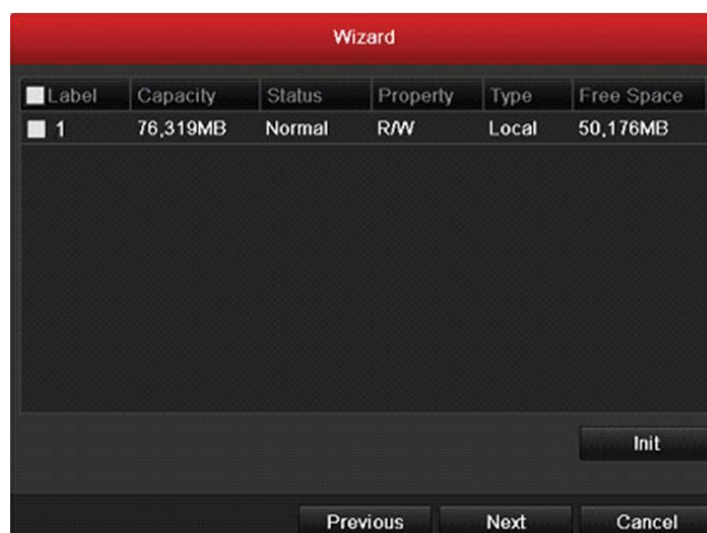
The screenshot shows a 'Wizard' window for network configuration. It contains the following fields:

NIC Type	10M/100M Self-adaptive
Enable DHCP	<input type="checkbox"/>
IPv4 Address	172 .9 .4 .65
IPv4 Subnet Mask	255 .255 .255 .0
IPv4 Default Gateway	172 .9 .4 .1
Preferred DNS Server	
Alternate DNS Server	

At the bottom, there are three buttons: 'Previous', 'Next', and 'Cancel'.

Figure 2.5 Network Configuration

6. Click **Next** button to enter the **HDD Management** window, shown in Figure 2.6.
To initialize the HDD, click the **Init** button. Initialization removes all the data saved in the HDD.



The screenshot shows a 'Wizard' window for HDD management. It contains a table with the following data:

Label	Capacity	Status	Property	Type	Free Space
1	76,319MB	Normal	R/W	Local	50,176MB

Below the table, there is an 'Init' button. At the bottom, there are three buttons: 'Previous', 'Next', and 'Cancel'.

Figure 2.6 HDD Management

7. Click **Next** button to enter the **Record Settings** window, as shown in Figure 2.7.
 - 1) Select the camera to configure.
 - 2) Check the checkbox to enable **Start Recording**.
 - 3) Select the recording mode to Normal or Motion Detection.



Figure 2.7 Record Settings

-
- 4) Click **Copy** to copy the record settings of the current camera to other camera (s) if needed, as shown in Figure 2.8.



Figure 2.8 Copy Record Settings

-
- 5) Click **OK** to return to the **Record Settings** window.
8. Click **OK** to complete the startup Setup Wizard.

C H A P T E R 3

Live View




3.1 Introduction of Live View

Live view shows you the video image getting from each camera in real time. The device automatically enters Live View mode when powered on. It is also at the very top of the menu hierarchy, thus pressing the ESC many times (depending on which menu you're on) brings you to the Live View mode.

Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can know whether the channel is recorded, or whether there are alarms occur as soon as possible.

Table 3.1 Description of Live View Icons

Icons	Description
	Alarm (video loss, tampering, motion detection or sensor alarm)
	Record (manual record, schedule record, motion detection or alarm triggered record)
	Alarm & Record

3.2 Operations in Live View Mode

In live view mode, the following functions can be realized:

- **Single Screen:** showing only one screen on the monitor.
- **Multi-screen:** showing multiple screens on the monitor simultaneously.
- **Auto-switch:** the screen is auto switched to the next one. And you must set the dwell time for each screen on the configuration menu before enabling the auto-switch.
Menu>Configuration>Live View>Dwell Time.
- **All-day Playback:** play back the recorded videos for current day.
- **Start Recording:** start all-day normal recording or motion detection recording for all channels.
- **Aux/Main output switch:** the DVR will check the connection of the output interfaces to define the main and auxiliary output interfaces. When both HDMI and VGA are connected, or either one is connected, it is used as the auxiliary video output for live view, playback, recording and PTZ controls; When both HDMI and VGA are not connected, it is used as the main video output for live view playback, recording, PTZ control and menu operations.

When the aux output is enabled, you can do some basic operation on the live view mode for the Aux output, while no operation is allowed for the main output.

3.2.1 Using the Mouse in Live View

In the live view mode, use the mouse to right-click on the window to access the following menu:

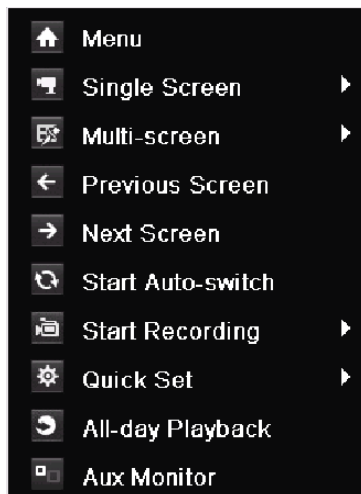


Figure 3.1 Right-click Menu

Table 3.2 Mouse Operation in Live View

Name	Description
Menu	Enter the main menu of the system by right clicking the mouse.
Single Screen	Switch to the single full screen by choosing channel number from the dropdown list.
Multi-screen	Adjust the screen layout by choosing from the dropdown list.
Previous Screen	Switch to the previous screen.

Next Screen	Switch to the next screen.
Start/Stop Auto-switch	Enable/disable the auto-switch of the screens.
Start Recording	Start all-day normal recording or motion detection recording for all channels.
Quick Set	Set the video output mode to Standard, Bright, Gentle or Vivid.
All-day Playback	Play back the video of the selected channel.
Aux Monitor	Switch to the auxiliary output mode and the operation for the main output is disabled.

Note: The *dwell time* of the live view configuration must be set before using **Start Auto-switch**.

Note: If you enter Aux monitor mode and the Aux monitor is not connected, the mouse operation is disabled; you need to switch back to the Main output with the **VOIP** button and **Enter** button on IR remote control.

Note: If the corresponding camera supports intelligent function, the Reboot Intelligence option is included when right-clicking mouse on this camera.

3.2.2 Using an Auxiliary Monitor

Certain features of the Live View are also available while in an Aux monitor. These features include:

- **Single Screen:** Switch to a full screen display of the selected camera. Camera can be selected from a dropdown list.
- **Multi-screen:** Switch different display layout options. Layout options can be selected from a dropdown list.
- **Next Screen:** When displaying less than the maximum number of cameras in Live View, clicking this feature will switch to the next set of displays.
- **PTZ:** Enter PTZ Control mode.
- **Main Monitor:** Enter Main operation mode.

Note: In the live view mode of the main output monitor, the menu operation is not available while Aux output mode is enabled.



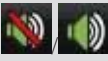


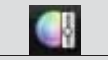

3.2.3 Quick Setting Toolbar in Live View Mode

On the screen of each channel, there is a quick setting toolbar which shows when you right-click mouse on the camera.



Figure 3.2 Quick Settings Toolbar

Table 3.3 Description of Quick Setting Toolbar Icons

Icons	Description	Icons	Description	Icons	Description
	Enable Manual Record		Instant Playback		Mute/Audio on
	PTZ Control		Digital Zoom		Image Settings
	Close				



Instant Playback only shows the record in last five minutes. If no record is found, it means there is no record during the last five minutes.



Digital Zoom can zoom in the selected area to the full screen. You can left-click and draw to select the area for zooming in, as shown in Figure 3.3.



Figure 3.3 Digital Zoom



Image Settings icon can be selected to enter the Image Settings menu.

Steps:

- Set the period of a day for configuring independent image parameters so as to satisfy different light conditions, e.g., daylight and night time. Two periods can be configured. When you have configured Period 1, the Period 2 is remained as the *Other Time*.
- Select the mode from the drop-down menu according to different light conditions.
Four modes are selectable:
 - Standard:** in general lighting conditions (default).
 - Indoor:** the image is relatively smoother.
 - Dim Light:** the image is smoother than the other three modes.
 - Outdoor:** the image is relatively clearer and sharper. The degree of contrast and saturation is high.

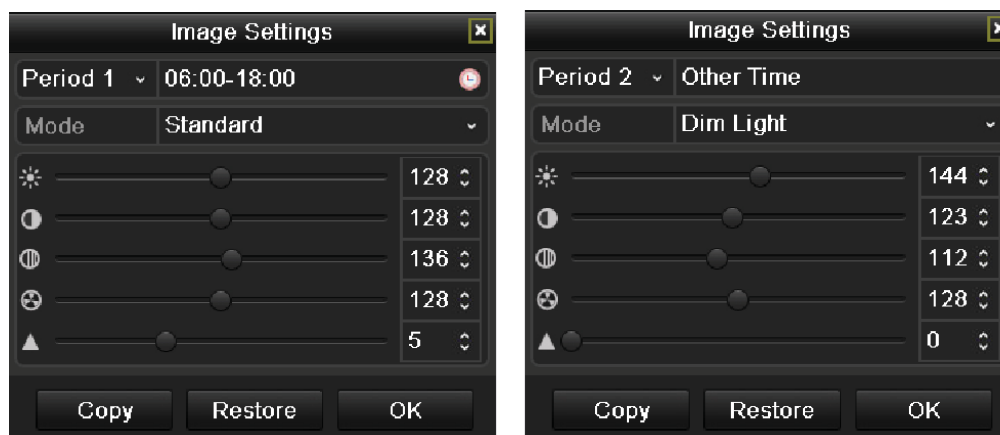


Figure 3.4 Image Settings

3. Adjust the image parameters including the brightness, contrast, saturation, hue and sharpness by moving the sliding bar or increasing/decreasing the value.
Note: The adjustable value range for the brightness, contrast, saturation and hue is 0~ 255 and for the sharpness is 0~ 15.
4. Copy image parameters.
 - 1) If you want to copy the image parameters of the current camera to other camera (s), click the **Copy** button to enter the **Copy to** interface:

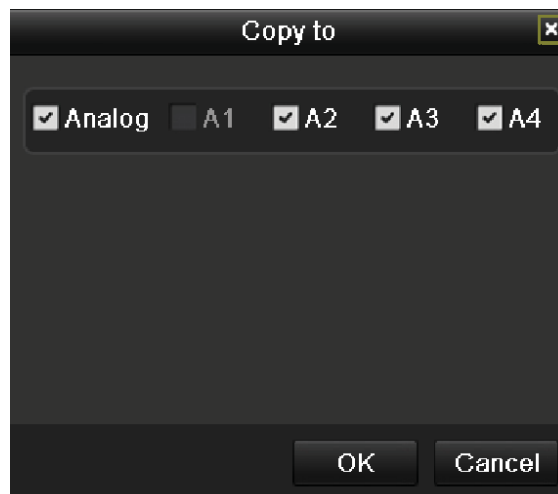


Figure 3.5 Copy Image Settings to Other Camera (s)

- 2) Select the camera (s) to be configured with the image settings. You can also click the checkbox of Analog to select all cameras.
- 3) Click the **OK** button to finish the Copy settings.

Note: You can click the **Restore** button to restore the current image settings to default parameters.

3.3 Adjusting Live View Settings

Purpose:

Live View settings can be customized according to different needs. You can configure the output interface, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc.

Steps:

1. Enter the Live View Settings interface.

Menu> Configuration> Live View



Figure 3.6 Live View-General

The settings available in this menu include:

- **Video Output Interface:** Select the output to configure the settings for. Two output interfaces are selectable: VGA/HDMI and Main CVBS.
- **Live View Mode:** Select the display mode of live video to 1×1 or 2×2.
- **Dwell Time:** The time in seconds to *dwell* between switching of channels when enabling auto-switch in Live View.
- **Enable Audio Output:** Enable/disable audio output for the selected video output.

Notes:

1. When the VGA/HDMI output interface is used as the main video output and the **Audio Output** for the VGA/HDMI output interface is enabled, the VGA/HDMI audio and AUDIO OUT can be used for live view, playback and two-way audio.
2. When the VGA/HDMI output is used as the main video output and the **Audio Output** for the VGA/HDMI output interface is disabled, the VGA/HDMI output provides no audio and the AUDIO OUT is used for two-way audio.
3. When the CVBS output is used as the main video output, the VGA/HDMI audio is provided for Aux video output in live view, and the AUDIO OUT is used as the main video output (for live view, playback or two-way audio).

- **Event Output:** Select the output to show event video.
- **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.

2. Setting Camera Order

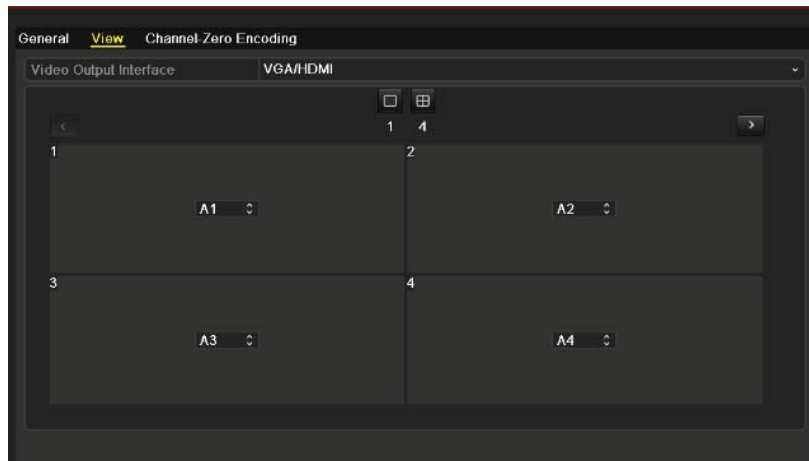


Figure 3.7 Live View- Camera Order

To set the camera order:

- 1) Click the **View** tab to enter the camera order settings interface.
- 2) Select the video output
- 3) Click the up and down button at each screen to select the channel you would like to display.
Setting an 'X' means the channel will not be displayed.
- 4) Click the **Apply** button to save the setting.

3.4 Channel-zero Encoding

Purpose:

Sometimes you need to get a remote view of many channels in real time from web browser or CMS (Client Management System) software, in order to decrease the bandwidth requirement without affecting the image quality, channel-zero encoding is supported as an option for you.

Steps:

1. Enter the **Live View** Settings interface.
Menu> Configuration> Live View
2. Select the **Channel-Zero Encoding** tab.

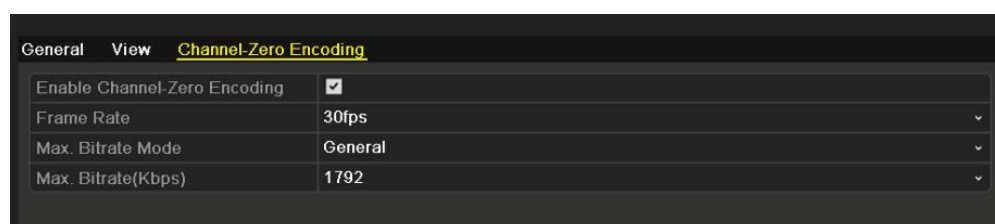


Figure 3.8 Live View- Channel-Zero Encoding

3. Check the checkbox after **Enable Channel-Zero Encoding**.
4. Configure the Frame Rate, Max. Bitrate Mode and Max. Bitrate.

After you set the Channel-Zero encoding, you can get a view in the remote client or IE browser of all the channels in one screen.

3.5 User Logout

Purpose:

After logging out, the monitor turns to the live view mode and if you want to do some operation, you need to enter user name and password to log in again.

Steps:

1. Enter the Shutdown menu.

Menu>Shutdown

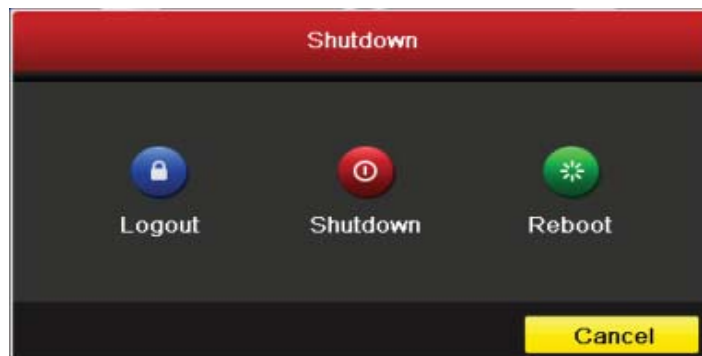


Figure 3.9 Shutdown

2. Click **Logout**.

Note: After you have logged out the system, menu operation on the screen is invalid. It is required a user name and password to login the system.

C H A P T E R 4

PTZ Controls

4.1 Configuring PTZ Settings

Purpose:

Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you control the PTZ camera.

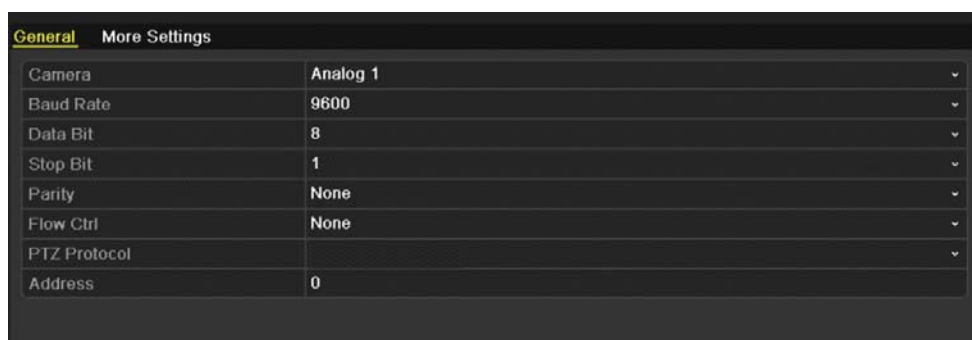
Before you start:

Check that the PTZ and the device are connected properly through RS-485 interface.

Steps:

1. Enter the PTZ Settings interface.

Menu>Camera>PTZ>General



General More Settings	
Camera	Analog 1
Baud Rate	9600
Data Bit	8
Stop Bit	1
Parity	None
Flow Ctrl	None
PTZ Protocol	
Address	0

Figure 4.1 PTZ- General

2. Choose the camera for PTZ setting in the **Camera** dropdown list.

3. Enter the parameters of the PTZ camera.

Note: All the parameters should be exactly the same as the PTZ camera parameters. Only PTZ Protocol can be set for network cameras.

Example: If the PTZ camera has a Baud rate as 115200, you should input 115200 in the Baud rate field.

4. Click **Copy** if you want to configure same settings to other PTZ cameras.
5. Click **Apply** button to save the settings.

4.2 Setting PTZ Presets, Patrols & Patterns

Before you start:

Please make sure that the presets, patrols and patterns should be supported by PTZ protocols.

4.2.1 Customizing Presets

Purpose:

Follow the steps to set the Preset location which you want the PTZ camera to point to when an event takes place.

Steps:

1. Enter the PTZ Control interface.

Menu>Camera>PTZ>More Settings

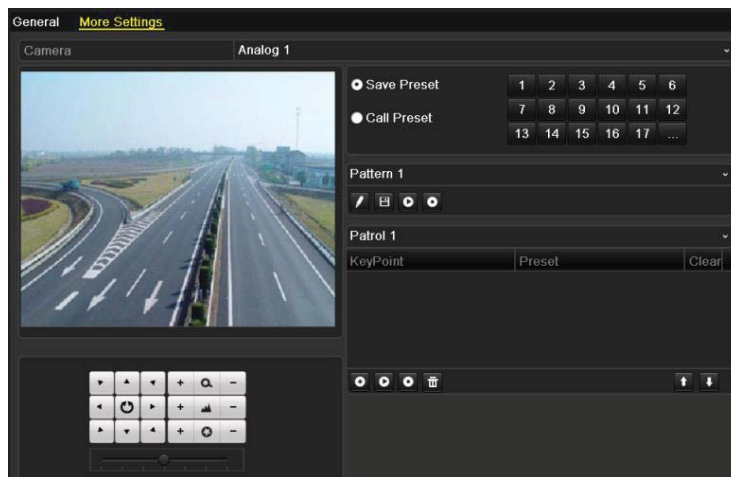


Figure 4.2 PTZ- More Settings

2. Use the directional button to wheel the camera to the location where you want to set preset.
3. Click the round icon before **Save Preset**.
4. Click the preset number to save the preset.

Repeat the steps 2-4 to save more presets. If the number of the presets you want to save is more than 17, you can click [...] and choose the available numbers.

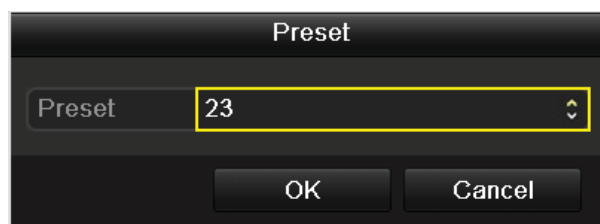


Figure 4.3 More Presets

4.2.2 Calling Presets

Purpose:

This feature enables the camera to point to a specified position such as a window when an event takes place.

Call preset in the PTZ setting interface:

Steps:

1. Enter the PTZ Control interface.
Menu>Camera>PTZ>More Settings
2. Check the round icon before **Call Preset**.

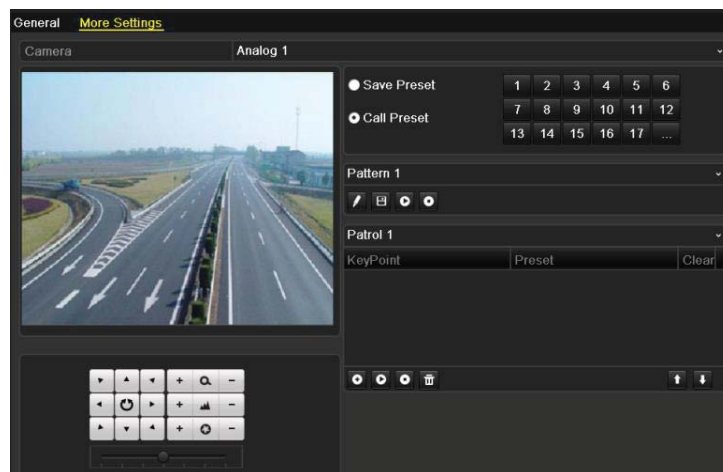


Figure 4.4 PTZ- Call Preset

3. Choose the preset number.

Call preset in live view mode:

Steps:


1. Click the PTZ Control icon  in the quick setting bar to enter the PTZ setting menu in live view mode.



Figure 4.5 PTZ Toolbar


2. Choose **Camera** in the list on the menu.
3. Choose preset in the **Preset** list.

4.2.3 Customizing Patrols

Purpose:

Patrols can be set to move the PTZ to different key points and have it stay there for a set duration before moving on to the next key point. The key points are corresponding to the presets. The presets can be set following the steps above in *Customizing Presets*.

Steps:

1. Enter the PTZ Control interface.
Menu>Camera>PTZ>More Settings
2. Select patrol number.
3. Select the  under Patrol option box to add key points for the patrol.

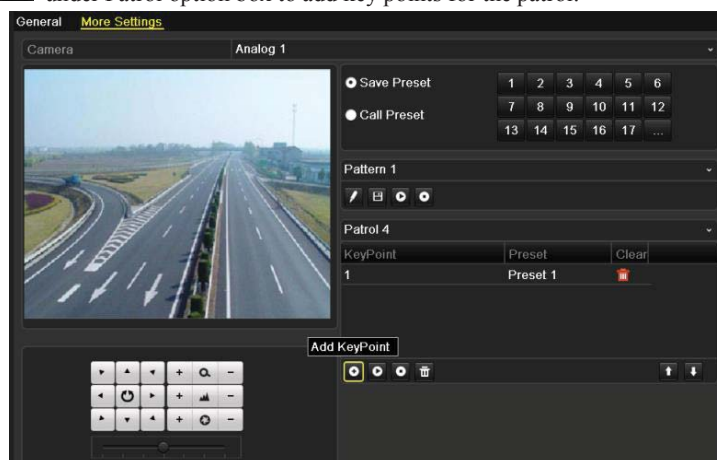


Figure 4.6 PTZ- Add Key Point

4. Configure key point parameters, such as the key point No., duration of staying for one key point and speed of patrol. The key point is corresponding to the preset. The **Key Point No.** determines the order at which the PTZ will follow while cycling through the patrol. The **Duration** refers to the time span to stay at the corresponding key point. The **Speed** defines the speed at which the PTZ will move from one key point to the next.

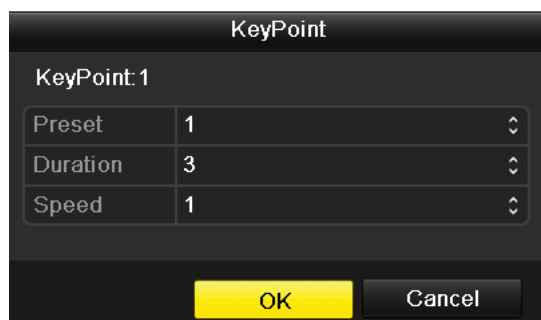


Figure 4.7 Key point Configuration


5. Click **OK** to save the key point to the patrol.
- Repeat the above steps to add more key points.
- You can also delete all the key points by clicking the trash icon .



Figure 4.8 KeyPoints Deletion

4.2.4 Calling Patrols

Purpose:

Calling a patrol makes the PTZ to move according the predefined patrol path.

Calling patrol in the PTZ setting interface:

Steps:

1. In the PTZ setting interface.
Menu> Camera> PTZ> More Settings
2. Select the patrol number, and then click to call the patrol.
3. Click to stop it.

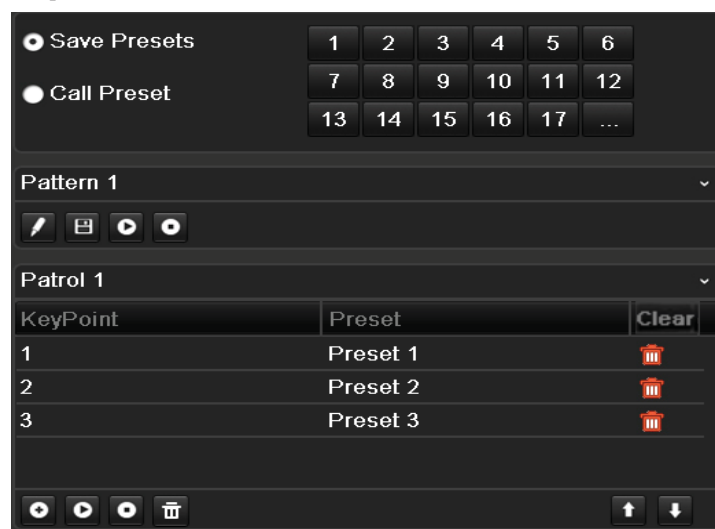


Figure 4.9 Calling Patrol

Calling preset in live view mode:

Steps:


1. Press PTZ control on the IR remote, or click PTZ Control icon  on the quick setting toolbar, to show the PTZ control toolbar.
2. Choose **Patrol** on the control bar.
3. Click the patrol you want to call.



Figure 4.10 PTZ Toolbar- Patrol

4.2.5 Customizing Patterns

Purpose:

Patterns can be set by recording the movement of the PTZ. You can call the pattern to make the PTZ movement according to the predefined path.

Steps:

1. Enter the PTZ Control interface.
Menu>Camera>PTZ>More Settings
2. Choose pattern number in the option box.

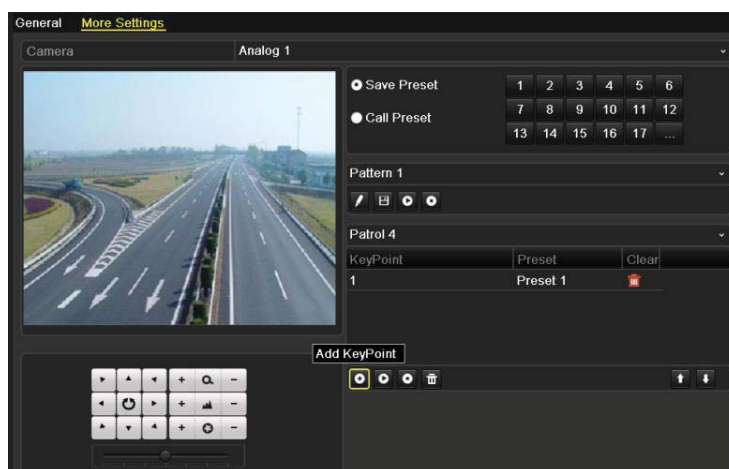




Figure 4.11 PTZ- Pattern

3. Click , and use your mouse to drag the image or click the eight directional buttons in the control box

under the image to move the PTZ camera.

The movement of the PTZ is recorded as the pattern.

4. Click  to save the pattern.

Repeat the above steps to save more patterns.



4.2.6 Calling Patterns

Purpose:

Follow the procedure to move the PTZ camera according to the predefined patterns.

Calling pattern in the PTZ setting interface

Steps:

1. Enter the PTZ Control interface.
2. Select the pattern number.
3. Click , then the PTZ moves according to the pattern. Click  to stop it.

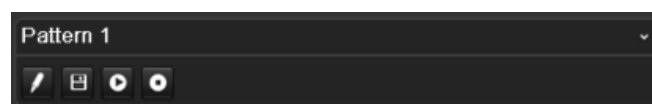




Figure 4.12 PTZ- Calling Pattern

Call pattern in live view mode.

Steps:

1. In the live view mode, press PTZ control on the IR remote control, or click PTZ Control icon  on the quick setting toolbar.
2. And then choose **Pattern** on the control bar.
3. Double click the pattern number you want to call, or you can select the pattern number and click  to call the pattern.

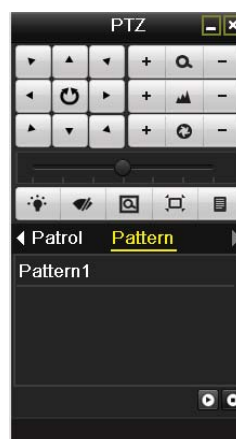


Figure 4.13 PTZ Toolbar- Pattern

4.3 PTZ Control Toolbar

In the Live View mode, you can press the PTZ Control button on the IR remote control, or choose the PTZ


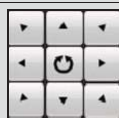

















Control icon  to enter the PTZ toolbar.



Figure 4.14 PTZ Toolbar

Table 4.1 Description of the PTZ toolbar icons

Icon	Description	Icon	Description	Icon	Description
	Direction button and the auto-cycle button		Zoom+, Focus+, Iris+		Zoom-, Focus-, Iris-
	The speed of the PTZ movement		Light on/off		Wiper on/off
	3D-Zoom		Image Centralization		Preset
	Patrol		Pattern		Menu
	Previous item		Next item		Start pattern/patrol
	Stop the patrol or pattern movement		Minimize windows		Exit

C H A P T E R 5

Record Settings

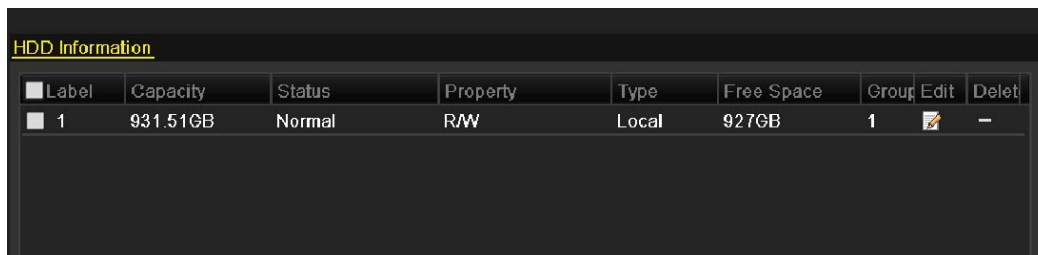
5.1 Configuring Encoding Parameters

Purpose:

By configuring the encoding parameters you can define the transmission stream type, the resolution and so on.

Before you start:

1. Make sure that the HDD has already been installed. If not, please install a HDD and initialize it.
(Menu>HDD>General)



Label	Capacity	Status	Property	Type	Free Space	Group	Edit	Delete
1	931.51GB	Normal	R/W	Local	927GB	1		

Figure 5.1 HDD- General

2. Check the storage mode of the HDD
 - 1) Click **Advance** to check the storage mode of the HDD.
 - 2) If the HDD mode is *Quota*, please set the maximum record capacity and maximum picture capacity. For detailed information, see *Chapter 10.5 Configuring Quota Mode*.
 - 3) If the HDD mode is *Group*, you should set the HDD group. For detailed information, see *Chapter 5.9 Configuring HDD Group for Recording*.



Storage Mode	
Mode	Group
Record on HDD Group	1
<input checked="" type="checkbox"/> Analog	<input checked="" type="checkbox"/> A1 <input checked="" type="checkbox"/> A2 <input checked="" type="checkbox"/> A3 <input checked="" type="checkbox"/> A4

Figure 5.2 HDD- Advanced

Steps:

1. Enter the Record settings interface to configure the encoding parameters:
Menu>Record>Encoding



Record Substream		
Camera	Analog 1	
Encoding Parameters	Main Stream(Normal)	Main Stream(Event)
Stream Type	Video & Audio	Video & Audio
Resolution	CIF	CIF
Bitrate Type	Variable	Variable
Video Quality	Low	Low
Frame Rate	25(PAL)/30(NTSC)	25(PAL)/30(NTSC)
Max. Bitrate Mode	General	General
Max. Bitrate(Kbps)	512	512
Max. Bitrate Range Recommended	336-560(Kbps)	336-560(Kbps)
Pre-record	5s	
Post-record	5s	
Expired Time (day)	0	
Redundant Record	<input checked="" type="checkbox"/>	
Record Audio	<input checked="" type="checkbox"/>	

Figure 5.3 Encoding Parameters-Main Stream

2. Set encoding parameters for main stream

- 1) Select **Record** to enter the main stream settings interface.
- 2) Select the camera for configuration.
- 3) Configure the following parameters for the Main Stream (Normal) and the Main Stream (Event):
 - **Stream Type:** Set the stream type to be Video or Video & Audio.
 - **Resolution:** Set recording at resolution of 4CIF, 2CIF, CIF or QCIF selectable.
 - **Bitrate Type:** Set the bitrate type to be Variable or Constant.
 - **Video Quality:** Set the video quality of recording, with 6 levels configurable.
 - **Frame Rate:** Set the frame rate of recording.
 - **Max. Bitrate Mode:** Set the mode to General or Customize (32-3072).
 - **Max Bitrate (Kbps):** Select or customize the maximum bit rate for recording.
 - **Max. Bitrate Range Recommended:** A recommended Max. bitrate range is provided for reference.
- 4) Configure the pre-record, post-record time, expired time, redundant record (this option is only available when the HDD mode is *Group*) and whether you want to record audio.
 - **Pre-record:** The time you set to record before the scheduled time or event. For example, when an alarm triggered the recording at 10:00, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
 - **Post-record:** The time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
 - **Expired Time:** The expired time is the longest time for a record file to be kept in the HDD, if the deadline is reached, the file will be deleted. You can set the expired time to 0, and then the file will not be deleted. The actual keeping time for the file should be determined by the capacity of the HDD.
 - **Redundant Record:** Enabling redundant record means you save the record files in the redundant HDD. See *Chapter 5.8 Configuring Redundant Record*.
 - **Record Audio:** Check the checkbox to record the sound, or uncheck to record the image without sound.

Note: The **Redundant Record** option is only available when the HDD mode is *Group*. The

redundant record is to decide whether you want the camera to save the record files in the redundant HDD. You must configure the redundant HDD in HDD settings. For detailed information, see *Chapter 10.4.2 Setting HDD Property*.

- 5) If you want to copy the current main stream settings to other camera (s), click **Copy** to enter the Copy Camera interface. Select the camera (s) and click **OK** to finish the copy settings.



Figure 5.4 Copy Camera Settings

- 6) On the Record settings interface, click **Apply** to save the settings.

Note: You can click the **Restore** button to restore the current main stream settings to the default parameters.

3. Set encoding parameters for sub-stream

- 1) Click the **Substream** tab to enter the Substream settings interface.



Figure 5.5 Encoding Parameters-Sub-stream

- 2) Configure the parameters for the sub-stream. Refer to the step of main stream settings.
- 3) Click **Apply** to save the settings.

Note: You can click the **Restore** button to restore the current sub-stream settings to the default parameters.

- 4) If you want to copy the current sub-stream settings to other camera (s), click **Copy** to enter the Copy Camera interface. Select the camera (s) and click **OK** to finish the copy settings.

5.2 Configuring Record Schedule

Purpose:

Set the record schedule, and then the camera automatically starts/stops recording according to the configured schedule.

Steps:

1. Enter the Record Schedule interface.
Menu>Record>Schedule
2. Configure Record Schedule
 - 1) Click **Schedule** to enter the record schedule settings interface.

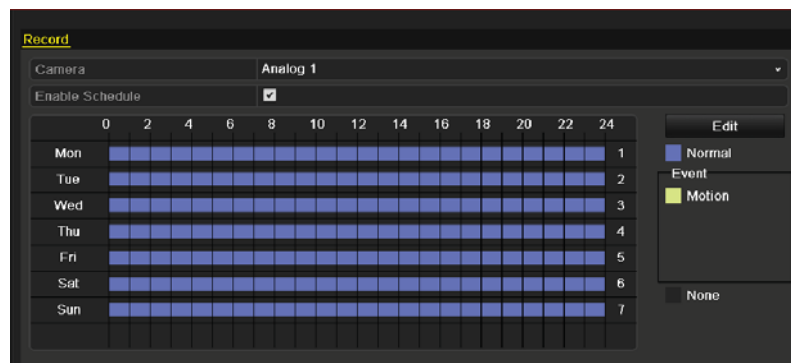


Figure 5.6 Record Schedule

- 2) Choose the camera you want to configure.
 - 3) Check the check box after the **Enable Schedule** item.
- There are two ways to configure the record schedule.

Task 1: Edit the Schedule

Steps:

- 1) Click **Edit**.
- 2) In the message box, you can choose the day which you want to set schedule.
- 3) To schedule an all-day recording, check ☒ checkbox to enable all-day recording.
- 4) Set the Type in the dropdown list, including Normal and Motion.

Note: To enable Motion triggered recording, you must configure the motion detection settings as well. For detailed information, refer to *Chapter 8.1* and *Chapter 8.2*.

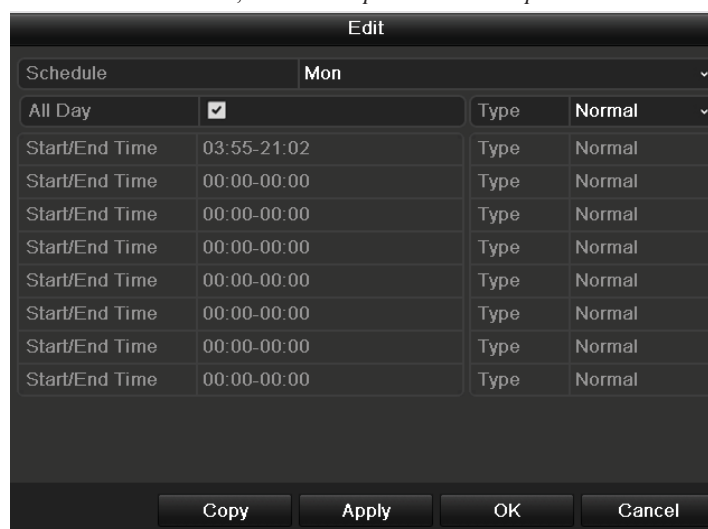


Figure 5.7 Edit Schedule

- 5) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time and Type.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

Repeat the above steps 2)-5) to schedule recording for other days in the week. If the schedule can also be set to other days, click **Copy**.

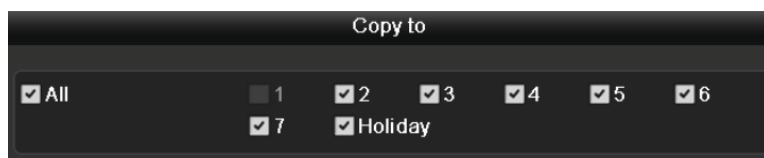


Figure 5.8 Copy Schedule to Other Days

Note: The **Holiday** option is available in the Schedule dropdown list when you have enabled holiday schedule in **Holiday settings**. Refer to *Chapter 5.6 Configuring Holiday Record and Capture*.

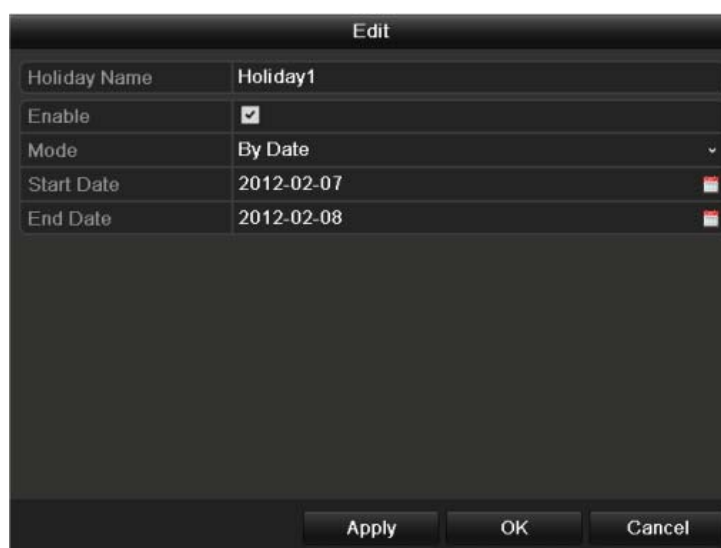


Figure 5.9 Holiday Settings

- 6) Click **OK** to save setting and back to upper level menu.

Task 2: Draw the Schedule

Steps:

- 1) Click the icon on the right to select a record type, including Normal, Motion and None.

Note: To enable Motion triggered recording, you must configure the motion detection settings. For detailed information, refer to *Chapter 8.1* and *Chapter 8.2*.

- 2) Use the mouse to drag and draw time periods.

Note: Up to 8 periods can be configured for each day.

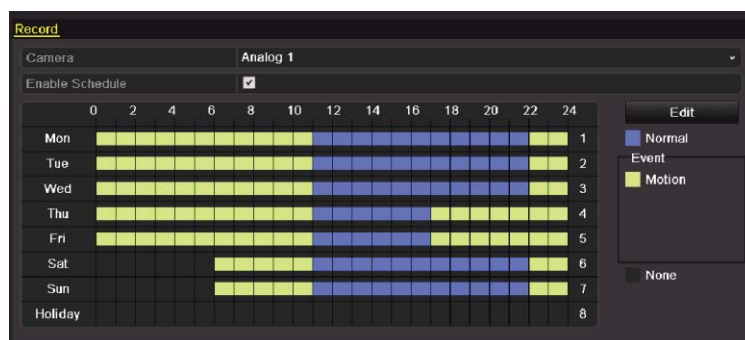


Figure 5.10 Draw the Schedule

- 3) You can repeat the above steps to set schedule for other channels. If the settings can also be used to other channels, click **Copy** to enter the Copy Camera interface and then choose the channel to which you want to copy.



Figure 5.11 Copy Schedule to Other Channels

- 4) Click **Apply** in the Record Schedule interface to save the settings.

5.3 Configuring Motion Detection Record

Purpose:

Follow the steps to set the motion detection parameters. In the live view mode, once a motion detection event takes place, the device can analyze it and do many actions to handle it. Enabling motion detection function can trigger certain channels to start recording, or trigger full screen monitoring, audio warning, notify the surveillance center and so on. In this chapter, you can follow the steps to schedule a record which triggered by the detected motion.

Steps:

1. Enter the Motion Detection interface.

Menu>Camera>Motion



Figure 5.12 Motion Detection

2. Configure Motion Detection:

- 1) Choose camera you want to configure.
- 2) Check the checkbox after **Enable Motion Detection**.
- 3) Drag and draw the area for motion detection by mouse. If you want to set the motion detection for all the area shot by the camera, click **Full Screen**. To clear the motion detection area, click **Clear**.

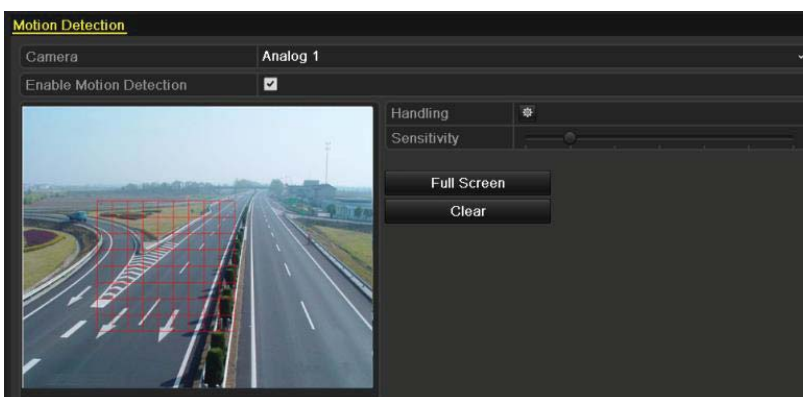


Figure 5.13 Motion Detection- Mask

- 4) Click **Handling**, and the message box for channel information will pop up.



Figure 5.14 Motion Detection Handling

- 5) Select the channels which you want the motion detection event to trigger recording.
 - 6) Click **Apply** to save the settings.
 - 7) Click **OK** to back to the upper level menu.
 - 8) Exit the Motion Detection menu.
3. Enter Schedule settings interface.
- Menu> Record> Schedule>Record Schedule

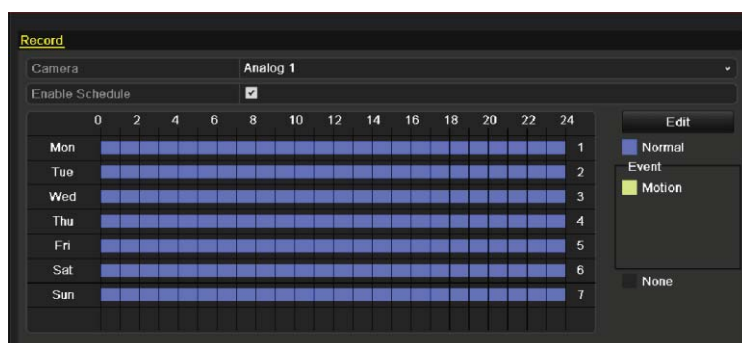
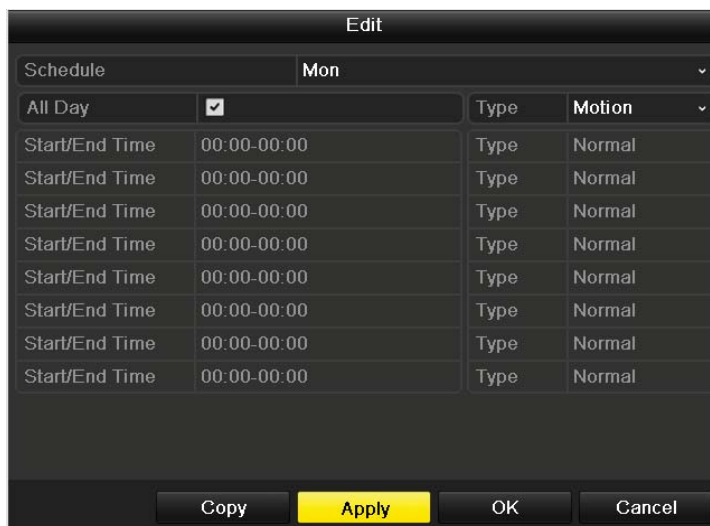


Figure 5.15 Record Schedule

- 1) Check the checkbox after the **Enable Schedule** item.
- 2) Click **Edit**.

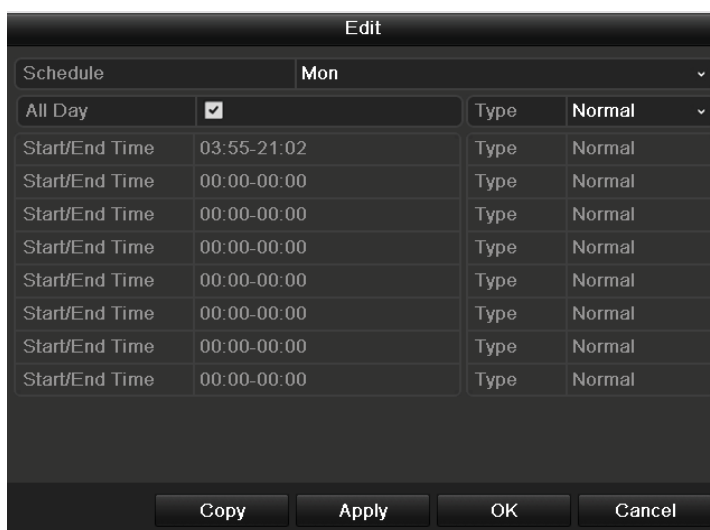


Edit			
Schedule		Mon	
All Day	<input checked="" type="checkbox"/>	Type	Motion
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal

Copy Apply OK Cancel

Figure 5.16 Edit Schedule- Motion Detection

- 3) In the message box, you can choose the day to which you want to set schedule.
- 4) Set the **Type** as **Motion**.
- 5) To schedule an all-day recording, check the checkbox after the **All Day** item.



Edit			
Schedule		Mon	
All Day	<input checked="" type="checkbox"/>	Type	Normal
Start/End Time	03:55-21:02	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal

Copy Apply OK Cancel

Figure 5.17 Edit Schedule- All Day

- 6) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.
- Note:** Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.
- Repeat the above steps 3)-6) to schedule motion detection triggered recording for all the week. If the schedule can also be set to other days, click **Copy**.



Figure 5.18 Copy Schedule to Other Days

7) Click **OK** to back to upper level menu.

If you can to copy the same schedule settings to other camera (s), click **Copy** to enter the Copy Camera interface, and then select the camera (s) you want to copy.



Figure 5.19 Copy Schedule to Other Channels

5.4 Manual Record

Purpose:

Follow the steps to set parameters for the manual record. When using manual record, you need to manually cancel the record. The manual recording is prior to the scheduled recording.

Steps:

1. Enter the Manual settings interface.
Menu> Manual

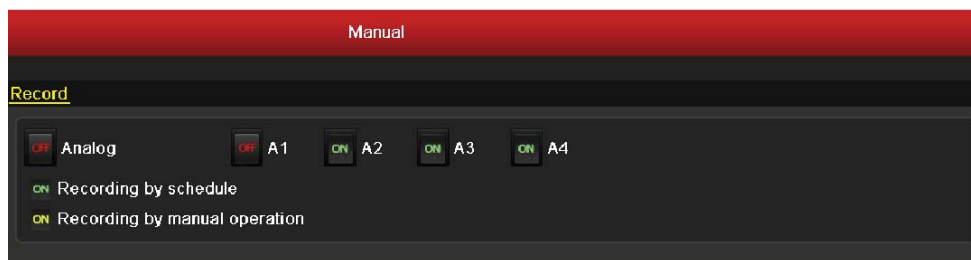


Figure 5.20 Manual Record

2. Enable recording for camera (s).

Click the status button beside each camera number to change **OFF** to **ON**, or you can enable recording for all cameras by clicking the status bar before **Analog** to change it to **ON**.

3. Set recording mode to manual.

By default, the camera is enabled with recording by schedule (**ON**). Click the **ON** status bar to change it to **OFF** and click again to enable the recording to manual (**ON**).

ON: recording by schedule.

ON: recording by manual operation.

Note: After rebooting, all the manual records enabled are canceled.

5.5 Configuring Holiday Record

Purpose:

You may want to have different plan for recording on holiday. Follow the steps to configure the record schedule on holiday for that year.

Steps:

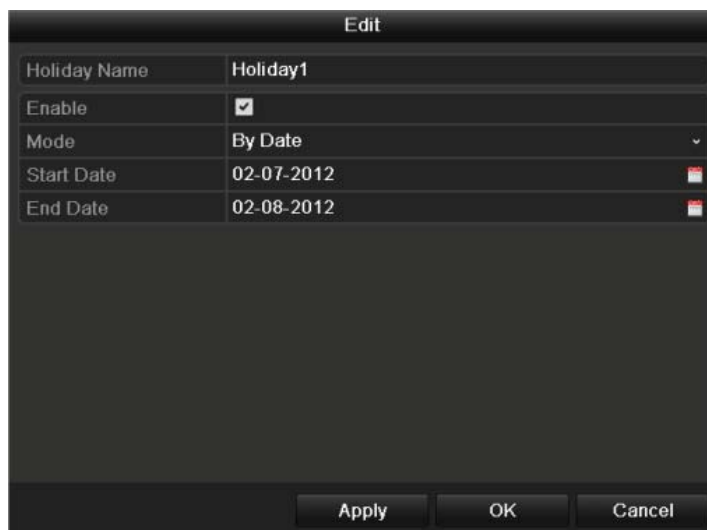
1. Enter the Record setting interface.
Menu>Record
2. Choose **Holiday** on the left bar.

Holiday Settings					
No.	Holiday Name	Status	Start Date	End Date	Edit
1	Holiday1	Disabled	02-07-2012	02-08-2012	
2	Holiday2	Disabled	1.Jan	1.Jan	
3	Holiday3	Disabled	1.Jan	1.Jan	
4	Holiday4	Disabled	1.Jan	1.Jan	
5	Holiday5	Disabled	1.Jan	1.Jan	
6	Holiday6	Disabled	1.Jan	1.Jan	
7	Holiday7	Disabled	1.Jan	1.Jan	
8	Holiday8	Disabled	1.Jan	1.Jan	
9	Holiday9	Disabled	1.Jan	1.Jan	
10	Holiday10	Disabled	1.Jan	1.Jan	
11	Holiday11	Disabled	1.Jan	1.Jan	
12	Holiday12	Disabled	1.Jan	1.Jan	

Figure 5.21 Holiday Settings

3. Enable Edit Holiday schedule.

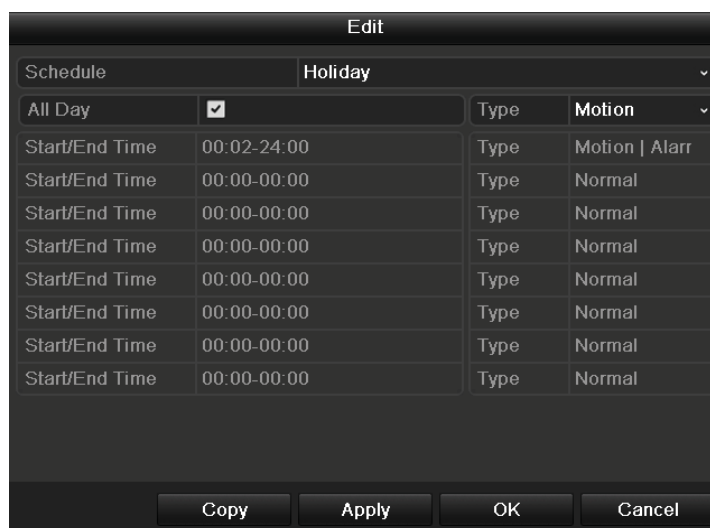
1) Click to enter the Edit interface.



Edit	
Holiday Name	Holiday1
Enable	<input checked="" type="checkbox"/>
Mode	By Date
Start Date	02-07-2012
End Date	02-08-2012
<div> <div>Apply</div> <div>OK</div> <div>Cancel</div> </div>	

Figure 5.22 Edit Holiday Settings

- 2) Check the checkbox after **Enable**.
 - 3) Select Mode from the dropdown list.
There are three different modes for the date format to configure holiday schedule.
 - 4) Set the start and end date.
 - 5) Click **Apply** to save settings.
 - 6) Click **OK** to exit the Edit interface.
4. Enter Record Schedule settings interface.
- Menu> Record> Schedule
- 1) Select **Record**.
 - 2) Check the checkbox after **Enable Schedule**.
 - 3) Click **Edit**.
 - 4) Select **Holiday** from the **Schedule** dropdown list.



Edit			
Schedule		Holiday	
All Day	<input checked="" type="checkbox"/>	Type	Motion
Start/End Time	00:02-24:00	Type	Motion Alarr
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
Start/End Time	00:00-00:00	Type	Normal
<div> <div>Copy</div> <div>Apply</div> <div>OK</div> <div>Cancel</div> </div>			

Figure 5.23 Edit Schedule- Holiday

- 5) Select **Motion** from the **Type** dropdown list.
- 6) If you need all day recording, check the **All Day** checkbox. Otherwise leave it blank.

7) Set start/end time for holiday schedule.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

In the time table of the channel, both holiday schedule and normal day schedule are displayed.

Repeat the above steps 4)-7) to set Holiday schedule for other channel. If the holiday schedule can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

5.6 Configuring Redundant Record

Purpose:

Enabling redundant recording, which means saving the record files not only in the R/W (read/write) HDD but also in the redundant HDD, will effectively enhance the data safety and reliability.

Note: You must set the Storage mode in the HDD advanced settings to Group before you set the HDD property to Redundant. For detailed information, please refer to *Chapter 10.4 Managing HDD Group*. There should be at least another HDD (NetHDD) which is in R/W mode.

Steps:

1. Enter HDD Information interface.

Menu> HDD

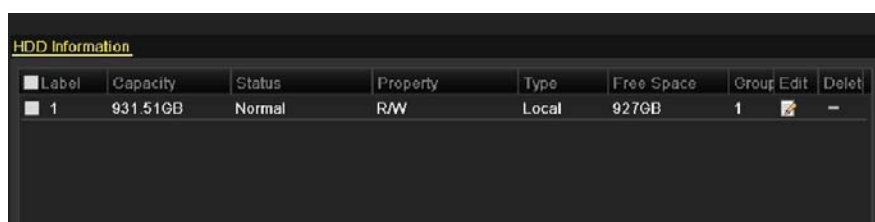


Figure 5.24 HDD General

2. Select the **HDD** and click  to enter the Local HDD Settings interface.

- 1) Set the HDD property to Redundant.

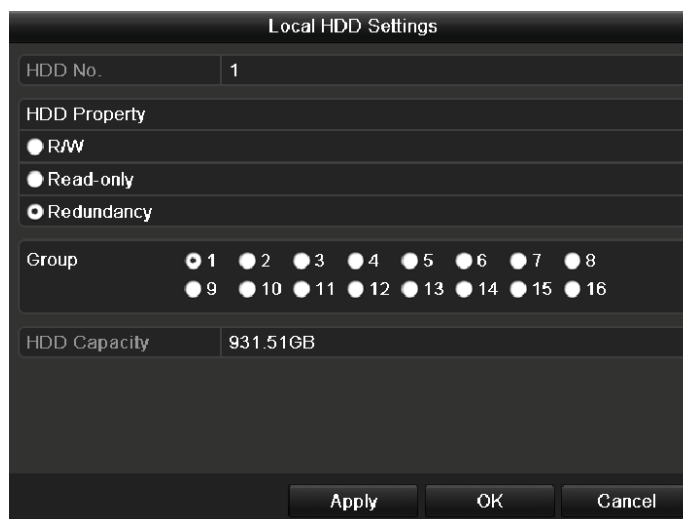


Figure 5.25 HDD General-Editing

- 2) Click **Apply** to save the settings.
- 3) Click **OK** to back to the upper level menu.
3. Enter the Record setting interface.
Menu> Record> Encoding
 - 1) Select **Record**.

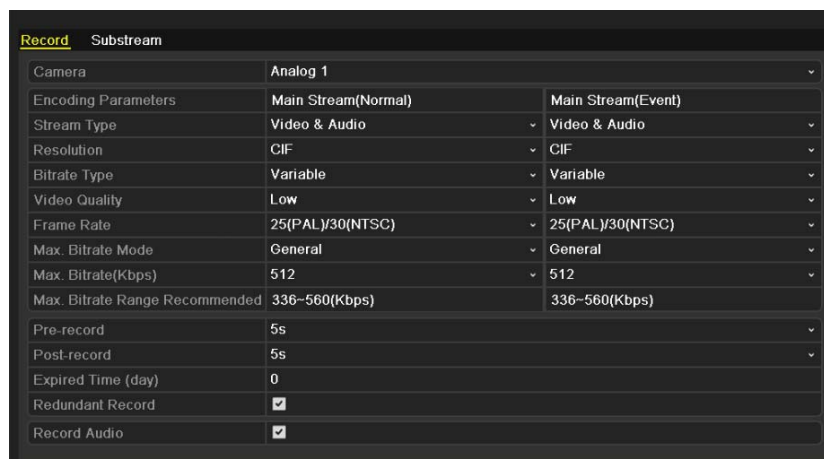


Figure 5.26 Encoding Record

- 2) Select Camera you want to configure.
- 3) Check the checkbox of the **Redundant Record**.
- 4) Click **Apply** to save settings and back to the upper level menu.

Repeat the above steps2)-4) for configuring other channels.

5.7 Configuring HDD Group for Record

Purpose:

You can group the HDDs and save the record files in certain HDD group.

Steps:

1. Enter HDD setting interface.

Menu>HDD

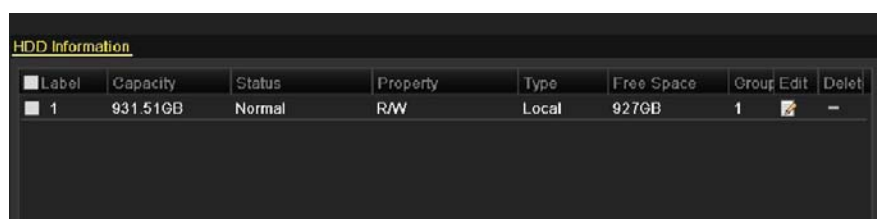


Figure 5.27 HDD-General

2. Select **Advanced** on the left bar.
Check whether the storage mode of the HDD is Group. If not, set it to Group. For detailed information, please refer to *Chapter 10.4 Managing HDD Group*.
3. Select **General** in the left bar.
Click to enter editing interface.
4. Configuring HDD group.
 - 1) Choose a group number for the HDD group.
 - 2) Click **Apply** and then in the pop-up message box, click **Yes** to save your settings.
 - 3) Click **OK** to back to the upper level menu.

Repeat the above steps3-4 to configure more HDD groups.

5. Choose the Channels which you want to save the record files in the HDD group.
 - 1) Select **Advanced** on the left bar.

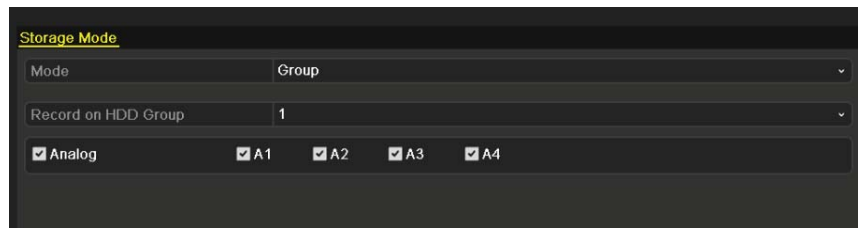


Figure 5.28 HDD-Advanced

- 2) Choose Group number in the dropdown list of **Record on HDD Group**.
 - 3) Check the channels you want to save in this group.
 - 4) Click **Apply** to save settings.

Note: After having configured the HDD groups, you can configure the Recording settings following the procedure provided in *Chapter 5.2-5.6*.

5.8 Files Protection

Purpose:

You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

Protect file by locking the record files:

Steps:

1. Enter Playback setting interface.

Menu> Playback

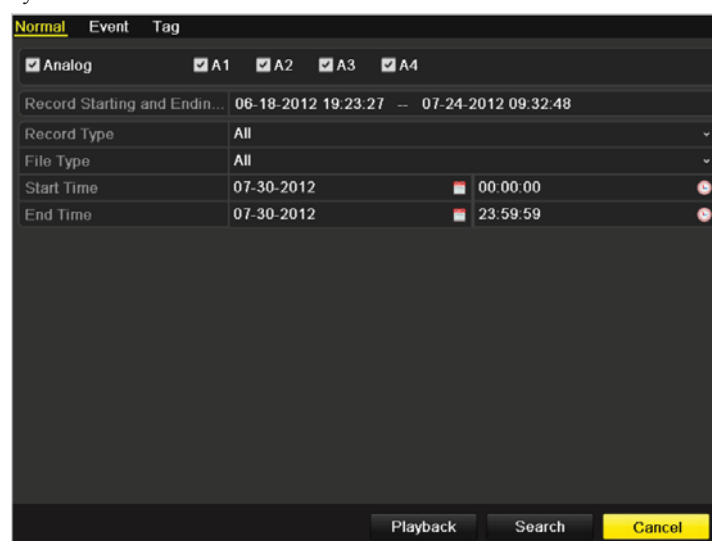


Figure 5.29 Playback

2. Select the channels you want to investigate by checking the checkbox to ☒.
3. Configure the record type, file type and start/end time.
4. Click **Search** to show the results.

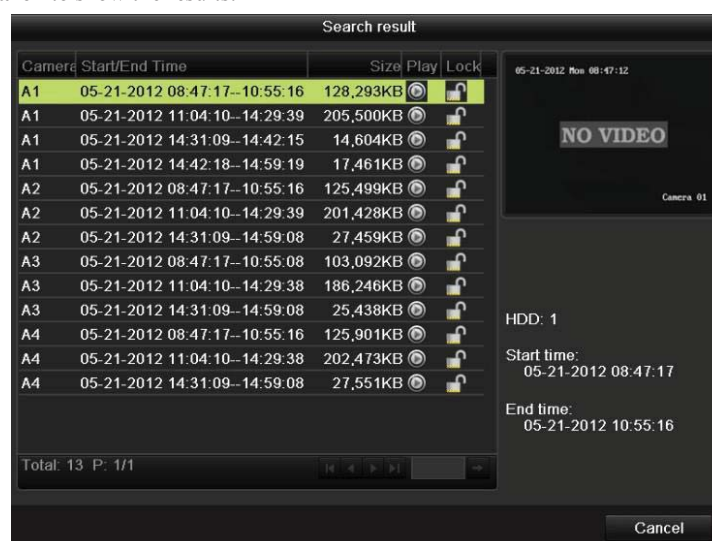




Figure 5.30 Playback- Search Result

5. Protect the record files.

- 1) Find the record files you want to protect, and then click the  icon which will turn to , indicating that the file is locked.

Note: The record files of which the recording is still not completed can't be locked.

- 2) Click  to change it to  to unlock the file and the file is not protected.

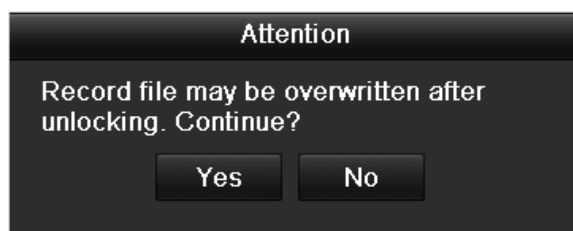


Figure 5.31 Unlocking Attention

Protect file by setting HDD property to Read-only

Note: To edit HDD property, you need to set the storage mode of the HDD to Group. See *Chapter 10.4 Managing HDD Group*.

Steps:

1. Enter HDD setting interface.

Menu> HDD

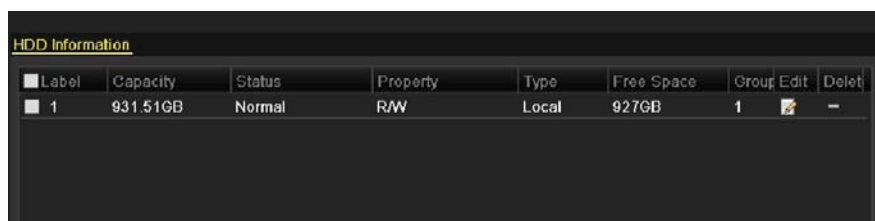


Figure 5.32 HDD General

2. Click  to edit the HDD you want to protect.

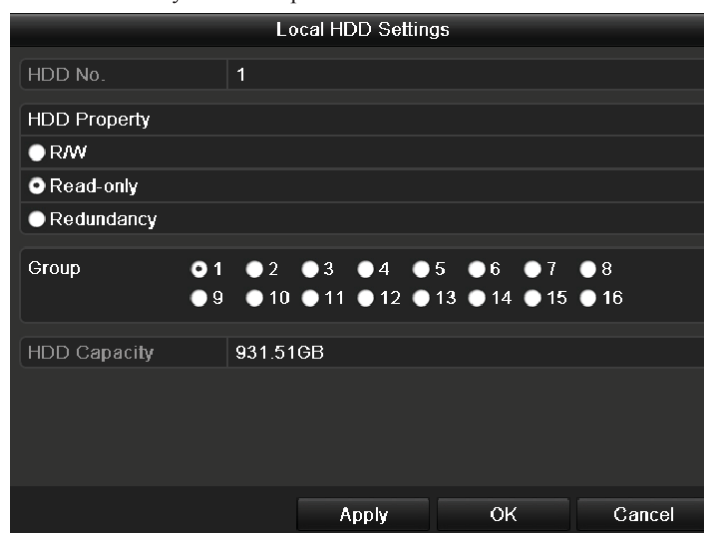


Figure 5.33 HDD General- Editing

3. Set the HDD to Read-only.
4. Click **OK** to save settings and back to the upper level menu.

Note: You can't save any files in a Read-only HDD. If you want to save files in the HDD, change the property to R/W.

Note: If there is only one HDD and is set to Read-only, the device can't record any files. Only live view mode is available.

If you set the HDD to Read-only when the device is saving files in it, then the file will be saved in next R/W HDD. If there is only one HDD, the recording will be stopped.

CHAPTER 6

Playback

6.1 Playing Back Record Files


6.1.1 Playing Back by Channel

Purpose:

Play back the recorded video files of a specific channel in the live view mode. Channel switch is supported.

Instant playback by channel:

Steps:

Choose a channel in live view mode using the mouse and click the  button in the quick setting toolbar.

Note: Only record files recorded during the last five minutes on this channel will be played back.



Figure 6. 1 Instant Playback Interface

All-day Playback by channel

1. Enter the All-day Playback interface.

Mouse: right click a channel in live view mode and select All-day Playback from the menu, as shown in Figure 6.2.

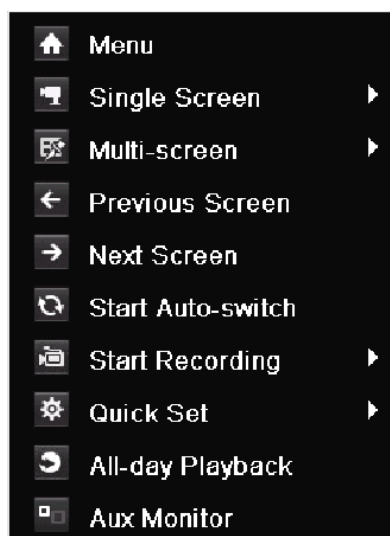


Figure 6. 2 Right-click Menu under Live View

Press **PLAY** button on the IR remote control to play back record files of the channel under single-screen live view.

Under multi-screen live view, record files of the top left channel (not masked) will be played back.

Note: Pressing numerical buttons will switch playback to the corresponding channels during playback process.

2. Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing progress, as shown in Figure 6.3.



Figure 6. 3 All-day Playback Interface

The channel and time selection menu displays by moving the mouse to the right of the playback interface.

Click the channel(s) if you want to switch playback to another channel or execute simultaneous playback of multiple channels, as shown in Figure 6.4.



Figure 6.4 All-day Playback Interface with Channel List

Dates marked in colors:

- 11 : No record files in this day.
- 19 : There is record file(s) in this day (not current day).
- 20 : There is only event recording file(s) in this day (not current day).
- 10 : Mouse cursor is located.



Figure 6.5 Toolbar of All-day Playback

Table 6.1 Detailed Explanation of All-day-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on /Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
	Pause reverse play/ Reverse play/ Single-frame reverse play		Pause play/ Play/ Single-frame play		Stop		Speed up
	Previous day		Next day		Hide		Exit
	Process bar		Video type bar				

Notes:

- Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
- About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.2 Playing Back by Time

Purpose:

Play back video files recorded in specified time duration. Multi-channel simultaneous playback and channel switch are supported.

Steps:

1. Enter playback interface.
Menu>Playback
2. Set search conditions and click the **Playback** button to enter Playback interface.

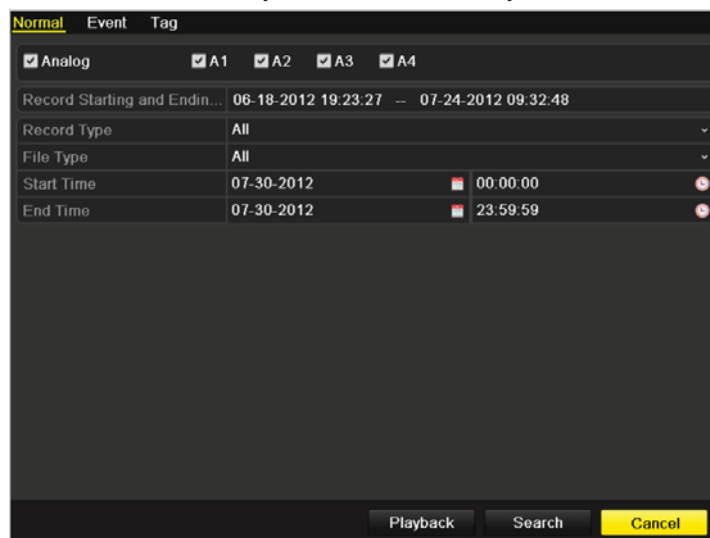


Figure 6.6 Video Search by Time

In the Playback interface:

The toolbar in the bottom part of Playback interface can be used to control playing process, as shown in Figure 6.7.




















Figure 6.7 Interface of Playback by Time





Figure 6.8 Toolbar of Playback by Time

Table 6.2 Detailed Explanation of Playback-by-time Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
	Pause reverse play/Reverse play/Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Speed up
	Video search		Exit		Hide		Progress bar
	Video type bar						

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar:  represents normal recording (manual or schedule);  represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.3 Playing Back by Normal Video Search

Purpose:

Play back video files searched out by restricting recording type and recording time. The video files in the result list are played back sequentially and channel switch is supported. Recording types contain Normal, Motion and Manual.

Steps:

1. Enter Record File Search interface.
Menu>Playback
Set search condition and click **Search** button to enter the Search Result interface.

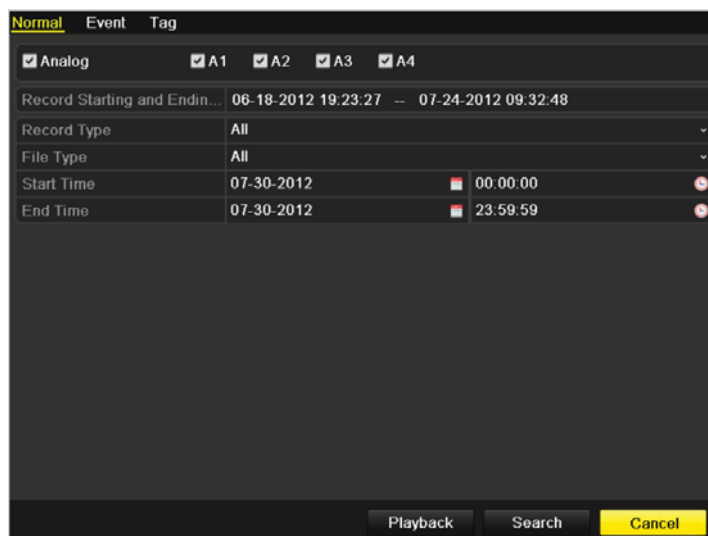


Figure 6.9 Normal Video Search

2. Choose a record file you want to play back.

If there is only one channel in the search result, clicking  button takes you to Full-screen Playback interface of this channel.

If more than one channel is optional, clicking  button takes you to step 3 and step 4.

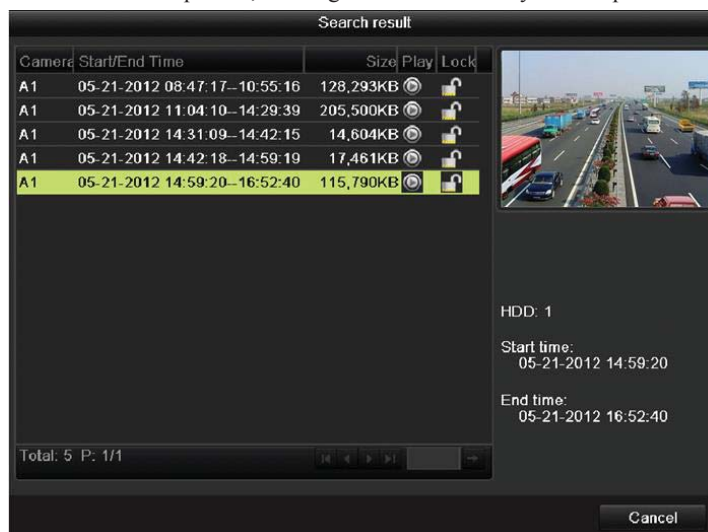


Figure 6.10 Result of Normal Video Search

3. Choose channels for simultaneous playback.

Note: Optional channels for simultaneous playback are the same as the channels chosen to search record files in step 1. And the channel with the recorded file selected in step 2 is the main channel during multi-channel playback and it is displayed at the upper left corner.

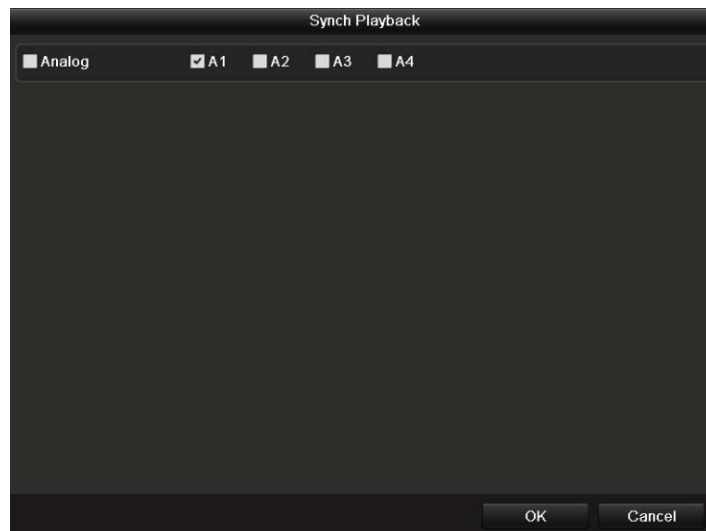


Figure 6. 11 Select Channels for Synchronous Playback

4. Synchronous Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.



Figure 6. 12 4-ch Synchronous Playback Interface

The hidden list of recorded files displays by moving the mouse to the right of the playback interface.



Figure 6.13 4-ch Synchronous Playback Interface with Video List



Figure 6.14 Toolbar of Normal Playback

Table 6.3 Detailed Explanation of Normal Playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
	Pause reverse play/Reverse play/ Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Speed up
	Previous file		Next file		Video search		Exit
	Hide toolbar		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.4 Playing Back by Event Search

Purpose:

Play back record files on one or several channels searched out by restricting event type (motion detection).

Channel switch is supported.

Steps:

1. Enter the playback interface.
Menu>Playback
2. Select **Event** tab to enter the Event Playback interface.
3. Select **Motion** as the event type.
4. Set the start time and end time of the record files.
5. Select the camera (s) for searching.

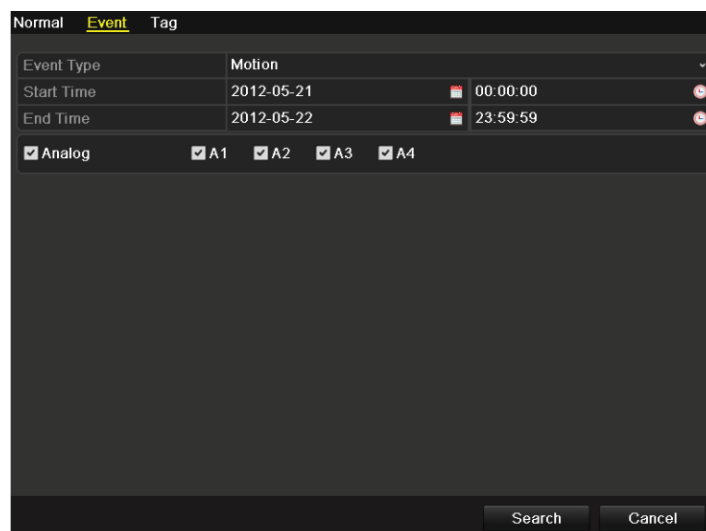


Figure 6. 15 Video Search by Motion

6. Click **Search** button to enter the Search Result interface.

The Pre-play and post-play can be configured. The **Pre-play** refers to the time configured before the defined start time of event search, and the **Post-play** refers to the time configured after the defined end time of event search. For example, when the start time and end time of event search are set to 12:00:00 - 13:00:00, and the pre-play and post-play time is set to 30s and 20s respectively, then the actual playback of event video file is 11:59:30 ~ 13:00:20.

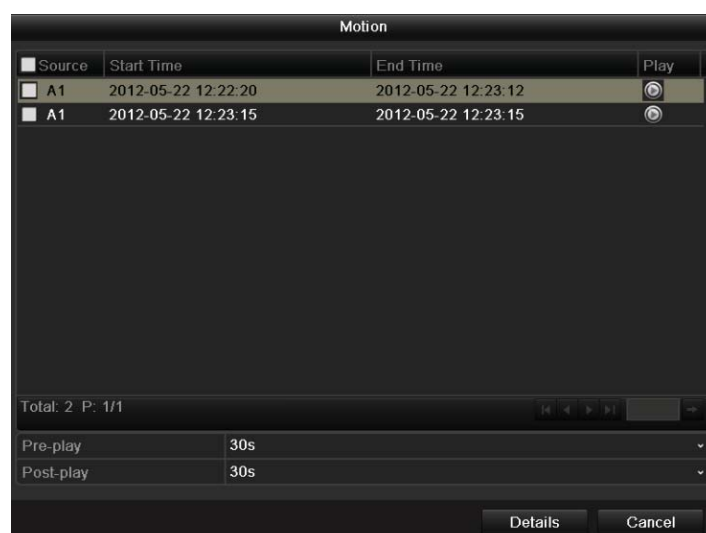


Figure 6. 16 Video Search Result by Motion

7. You can select an item from the list and click **Details** to view detailed information of the record file, e.g. start time, end time, file size, etc.

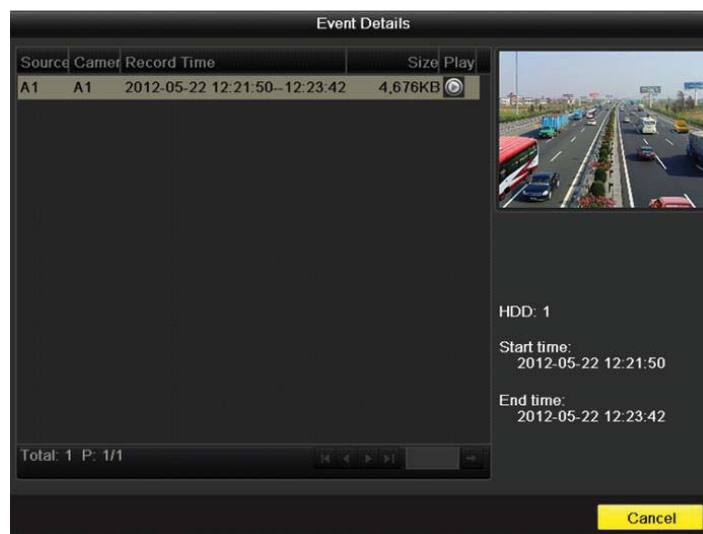


Figure 6. 17 Event Details


8. Or you can directly click the  button of each file item to enter its playback interface. The toolbar in the bottom part of Playback interface can be used to control playing process.



Figure 6.18 Interface of Playback by Event (1)

The hidden list of events will be displayed by moving the mouse to the right of the playback interface.



Figure 6.19 Interface of Playback by Event (2)



Figure 6.20 Toolbar of Playback by Event

Table 6.4 Detailed Explanation of Playback-by-event Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
	Pause reverse play/Reverse play/Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Speed up
	Previous event		Next event		Event search		Exit
	Hide		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.5 Playing Back by Tag

Purpose:


Video tag allows you to record related information like people and location of a certain time point during playback. You are also allowed to use video tag(s) to search for record files and position time point.

Before playing back by tag:

1. Enter Playback interface.



Figure 6.21 Interface of Playback by Time

Click  button to add default tag.

Click  button to add customized tag and input tag name.

Note: Max. 64 tags can be added to a single video file.

2. Tag management.

Click  button to check, edit and delete tag(s).



Figure 6.22 Tag Management Interface

Steps:

1. Enter Playback interface.

Menu>Playback

Click **Tag** tab to enter Playback by Tag interface.

Choose channels, tag type and time, and click **Search** to enter Search Result interface.

Note: Two tag types are selectable: *All* and *Tag Keyword*. Input keyword if you choose *Tag Keyword*.

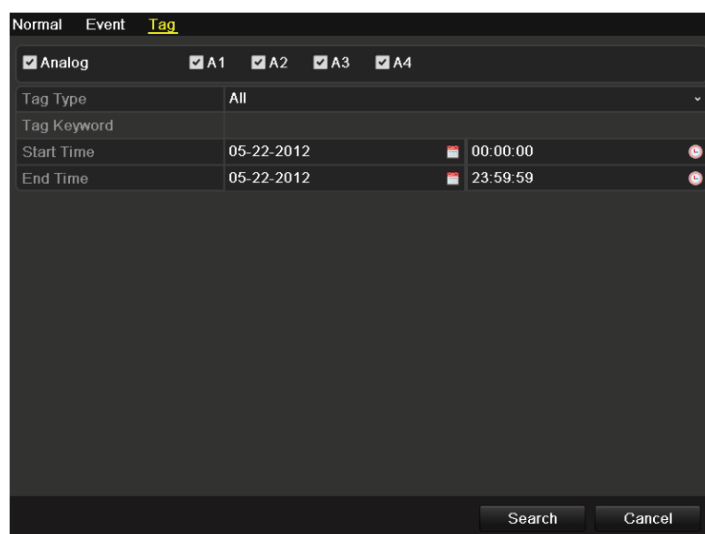


Figure 6. 23 Video Search by Tag

2. Set playback conditions and tag management.

Choose the tag name of the recorded file you want to play back; it can be edited or deleted.

Pre-play and post-play time can be set according to actual needs.

Note: Pre-play time and post-play time is added to the time point of the tag.



Camer	HDI	Tag Name	Tag Time	Edit	Del	Play
A1	1	TAG	05-22-2012 09:53:33			
A1	1	a	05-22-2012 09:53:39			
A1	1	TAG	05-22-2012 09:54:05			
A1	1	TAG	05-22-2012 09:54:11			

Figure 6. 24 Result of Video Search by Tag

3. Playback by tag.


Choose a tag and click  button to play back the related record file.



Figure 6.25 Interface of Playback by Tag

The hidden list of tags will be displayed by moving the mouse to the right of the playback interface.










Figure 6.26 Interface of Playback by Tag with Video List





Figure 6.27 Toolbar of Playback by Tag

Table 6.5 Detailed Explanation of Playback-by-tag Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow down
	Pause reverse play/Reverse play/Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Speed up

	Previous tag		Next tag		Tag search		Exit
	Hide		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar:  represents normal recording (manual or schedule);  represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.1.6 Playing Back by System Log

Purpose:

Play back record file(s) associated with channels after searching system logs.

Steps:

1. Enter Log Search interface.

Menu>Maintenance>Log Search



Figure 6. 28 System Log Search Interface

2. Set search time and type and click **Search** button.

Log Search						
Start Time	04-26-2012		00:00:00			
End Time	04-26-2012		23:59:59			
Major Type	All					
Minor Type	All					
No.	Major Type	Time	Minor Type	Paramet...	Play	Details
36	Operation	04-26-2012 08:51:20	Remote Operati...	Image	—	✓
37	Operation	04-26-2012 08:51:21	Remote Operati...	Image	—	✓
38	Operation	04-26-2012 08:51:23	Remote Operati...	Image	—	✓
39	Operation	04-26-2012 08:51:46	Remote Operati...	Image	—	✓
40	Operation	04-26-2012 08:52:13	Local Operation:...	N/A	⏮	✓
41	Operation	04-26-2012 08:52:14	Local Operation:...	N/A	⏮	✓
42	Operation	04-26-2012 08:52:15	Local Operation:...	N/A	⏮	✓
43	Operation	04-26-2012 08:52:17	Local Operation:...	N/A	⏮	✓
44	Operation	04-26-2012 08:52:26	Local Operation:...	N/A	⏮	✓
45	Operation	04-26-2012 08:52:28	Local Operation:...	N/A	⏮	✓
46	Exception	04-26-2012 09:14:02	IP Camera Disc...	N/A	⏮	✓
47	Operation	04-26-2012 09:16:22	Local Operation:...	N/A	—	✓
48	Exception	04-26-2012 09:18:37	IP Conflicted	N/A	—	✓
Total: 94 P: 1/1						

Figure 6. 29 Result of System Log Search

- Choose a log with record file and click  button to enter Playback interface.

Note: If there is no record file at the time point of the log, the message box “No result found” will pop up.

The toolbar in the bottom part of Playback interface can be used to control playing process.



Figure 6. 30 Interface of Playback by Log






6.2 Auxiliary Functions of Playback

6.2.1 Playing Back Frame by Frame

Purpose:

Play video files frame by frame, in order to check image details of the video when abnormal events happen.

Steps:

Go to Playback interface. If you choose playback of the record file: click button  and  until the speed changes to *Single* frame and one click on the playback screen represents playback of one frame. If you choose adverse playback of the record file: click button  and  until the speed changes to *Single* frame and one click on the playback screen represents adverse playback of one frame. It is also feasible to use button  in toolbar.

6.2.2 Smart Search

Purpose:

In order to locate motion detection event easily and accurately in the playback progress bar, you are allowed to analyze a certain area (scene) dynamically, and to get all of the related motion detection events that occurred in this area.

Steps:

1. Go to All-day Playback interface and play the video.



Figure 6. 31 Interface of All-day Playback

2. Right-click mouse and select **Smart Search** to go to analysis area selection interface.

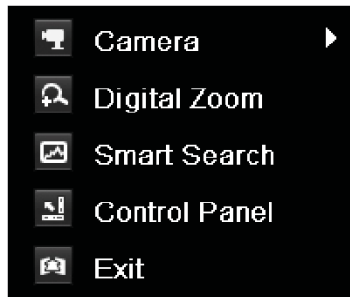




Figure 6.32 Right-click Menu in All-day Playback Interface

3. You can click button  to set the full screen as target searching area. After drawing area(s), click button  to execute smart search in this area.

Note: Multi-area and full-screen searching modes are supported.

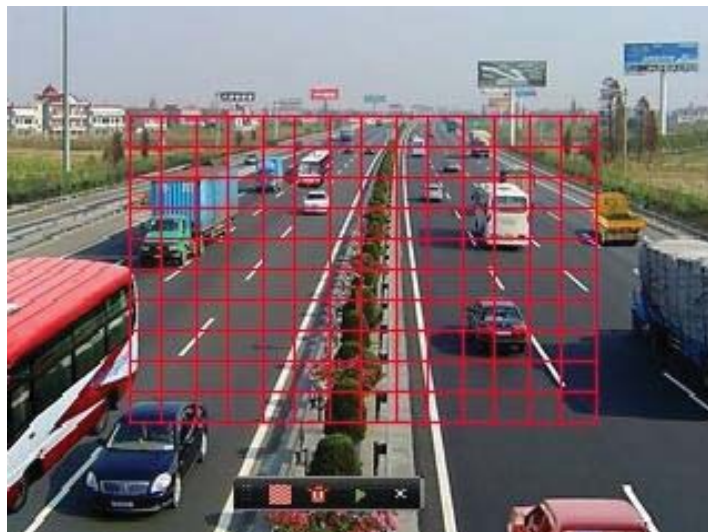


Figure 6.33 Draw Area of Smart Search

Results of intelligent analysis:

Video type bar:

: Normal record file;

: Event record file;

: Dynamic record file.

The hidden list of record files display when moving the mouse to the right of the playback interface.



Figure 6.34 Smart Search Result with Video List



Figure 6.35 Toolbar of Smart Search Playback

Table 6.6 Detailed Explanation of Smart-search-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow down
	Pause reverse play/Reverse play/Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Speed up
	Previous smart search result		Next smart search result		Video search		Exit
	Hide		Progress bar		Video type bar		Smart search bar

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion, alarm, motion | alarm, motion & alarm).

6.2.3 Digital Zoom

Steps:

1. Right click the mouse on a channel under playback and choose Digital Zoom to enter Digital Zoom

interface.

2. Use the mouse to draw a red rectangle and the image within it will be enlarged up to 16 times.



Figure 6.36 Draw Area for Digital Zoom

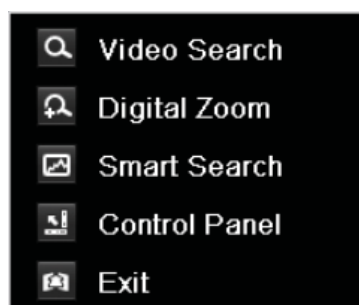








Figure 6.37 Right-click Menu in Playback Mode

Right-click menu:

Note: This menu differs slightly from one playback interface to another.

Table 6.7 Detailed Explanation of Right-click Menu under Playback

Button	Function
	Switch camera for playback
	Return to Search interface
	Enter Digital Zoom interface
	Smart Search against a specified area
	Show & hide control interface
	Return to Live View interface

CHAPTER 7

Backup

7.1 Backing up Record Files

Before you start:

Please insert the backup device(s) into the device.

7.1.1 Quick Export

Purpose:

Export record files to backup device(s) quickly.

Steps:

1. Enter Video Export interface.

Menu>Export>Normal



Figure 7.1 Quick Export Interface

2. Choose the channel(s) you want to back up and click **Quick Export** button.

Notes:

1. The time duration of record files on a specified channel cannot exceed 24 hours. Otherwise, the message box "Max. 24 hours are allowed for quick export." will pop up.
2. The number of channels for synchronous export cannot exceed 4. Otherwise, the message box "Max. 4 channels are allowed for synchronous quick export." will pop up.



Figure 7.2 Quick Export using USB1-1

- In the Export interface, choose backup device and click **Export** button to start exporting.

Note: Here we use USB Flash Drive and please refer to the next section Normal Backup for more backup devices supported by the device.

- Stay in the Exporting interface until all record files are exported to the USB flash drive.



Figure 7.3 Export Finished

- Check backup result.

Choose the record file in Export interface and click button  to check it.

Note: The Player player.exe will be exported automatically during record file export.



Figure 7.4 Checkup of Quick Export Result Using USB1-1

7.1.2 Backing up by Normal Video Search

Purpose:

The record files can be backup to various devices, such as USB devices (USB flash drives, USB HDDs, USB writer) and SATA writer.

Backup using USB flash drives, USB HDDs, USB writer and SATA writer

Steps:

1. Enter Export interface.

Menu>Export>Normal



Figure 7.5 Normal Video Search for Backup

2. Set search conditions and click **Search** button to enter the search result interface.
3. Select record files you want to back up.

Click button  to play the record file if you want to check it.

Check the checkbox before the record files you want to back up.

Note: The size of the currently selected files is displayed in the lower-left corner of the window.

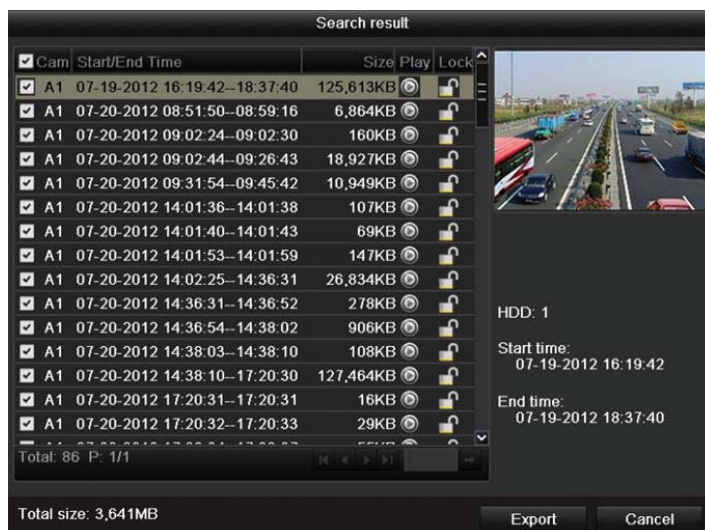


Figure 7.6 Result of Normal Video Search for Backup

4. Export the record files.

Click **Export** button and start backup.

Note: If the inserted device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drives or USB HDDs via the device. USB writer and SATA writer cannot be formatted.



Figure 7.7 Export by Normal Video Search using USB Flash Drive



Figure 7.8 Export by Normal Video Search using USB Writer

Stay in the Exporting interface until all record files are exported with pop-up message box “Export finished”.

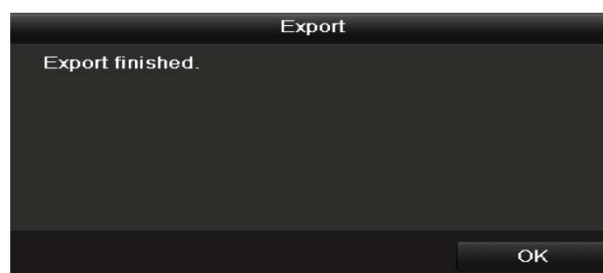


Figure 7.9 Export Finished

5. Check backup result.

Choose the record file in Export interface and click button  to check it.

Note: The Player player.exe will be exported automatically during record file export.



Figure 7.10 Checkup of Export Result using USB Flash Drive



Figure 7. 11 Checkup of Export Result using USB Writer

7.1.3 Backing up by Event Search

Purpose:

Back up event-related record files using USB devices (USB flash drives, USB HDDs, USB writer), or SATA writer. Quick Backup and Normal Backup are supported.

Steps:

1. Enter Export interface.
Menu>Export>Event
2. Select **Motion** as the event type.
3. Set the start time and end time of the record files.
4. Select the camera (s) for searching.

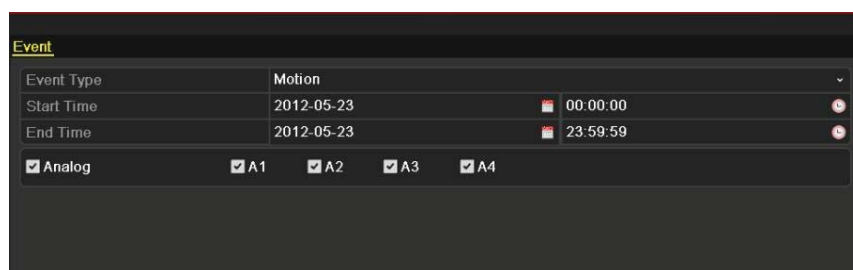


Figure 7.12 Event Search for Backup

5. Click **Search** button to enter the Search Result interface.

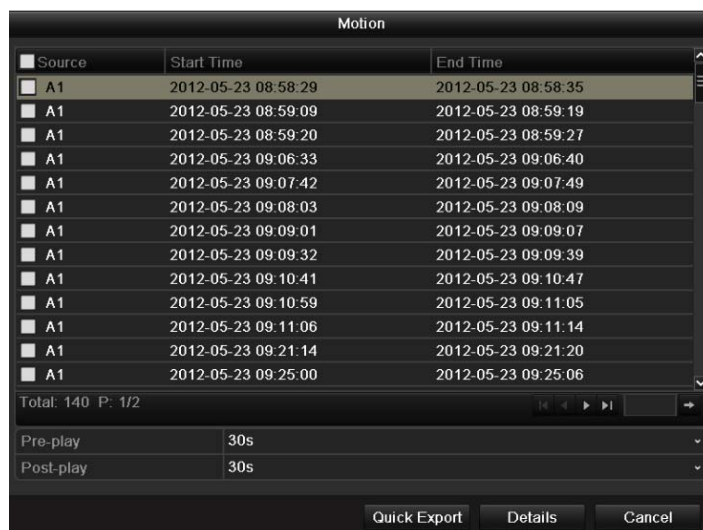


Figure 7.13 Result of Event Search

6. Select record files to export.

- Select motion detection event (s) from the list and click **Quick Export** button to enter the Export interface, as shown in Figure 7.15.
- (1) Click the **Details** button to enter the interface with detailed information of the record file, e.g., start time, end time, file size, etc.

Note: The size of the currently selected files is displayed in the lower-left corner of the window.

- (2) Select record file (s) from the list and click **Export** button to enter the Export interface, as shown in Figure 7.15.



Figure 7.14 Event Details Interface

7. Export the selected record files.

Click the **Export** button and start backing up.

Note: If the inserted USB device is not recognized:

- Click the Refresh button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drive or USB HDDs via the device.



Figure 7.15 Export by Event Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message "Export finished".

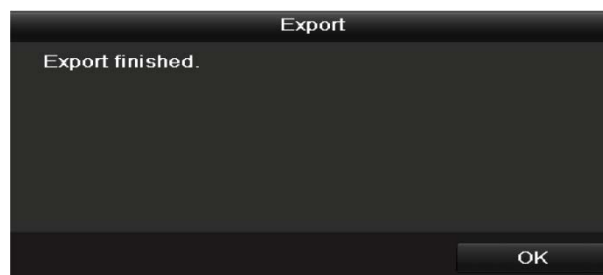


Figure 7.16 Export Finished

8. Check backup result.

Choose the record file in Export interface and click button  to check it.

Note: The Player player.exe will be exported automatically during record file export.

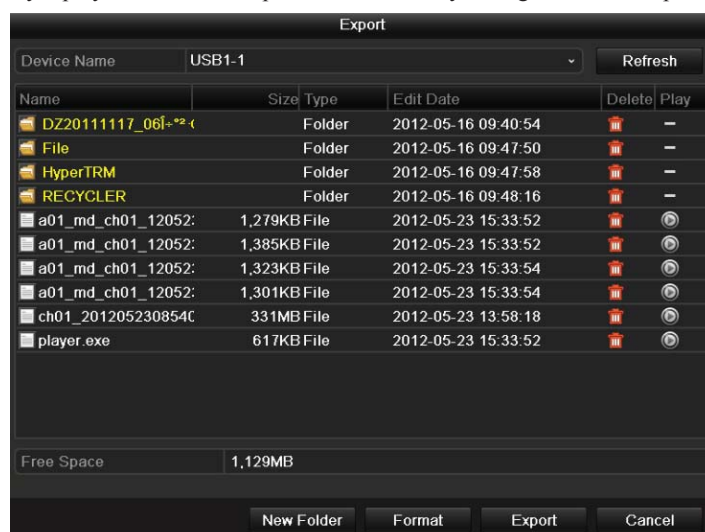


Figure 7.17 Checkup of Event Export Result Using USB Flash Drive

7.1.4 Backing up Video Clips



Purpose:

You may also select video clips to export directly during Playback, using USB devices (USB flash drives, USB HDDs, USB writer), or SATA writer.

Steps:

1. Enter Playback interface.

Please refer to *Chapter 6*.

2. During playback, use buttons  and  in the playback toolbar to start or stop clipping record file(s).
3. Exit Playback interface after finishing clipping and you will then be prompted to save the clips.

Note: A maximum of 30 clips can be selected for each channel.



Figure 7.18 Interface of Playback by Time

4. Click **Yes** to save video clips and enter Export interface, or click **No** to quit and do not save video clips.

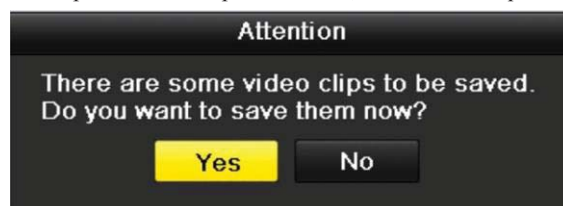


Figure 7.19 Attention to Video Clip Saving

5. Export the video clips.

Click **Export** button and start backing up.

Note: If the inserted USB device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drive or USB HDDs via the device.

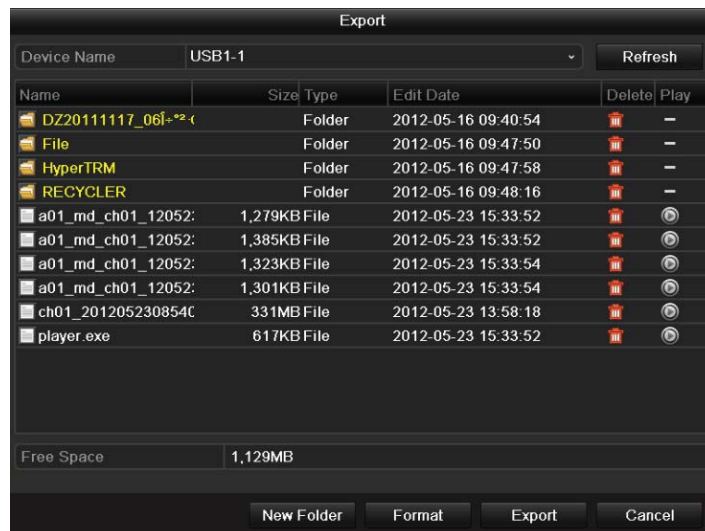


Figure 7.20 Export Video Clips Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

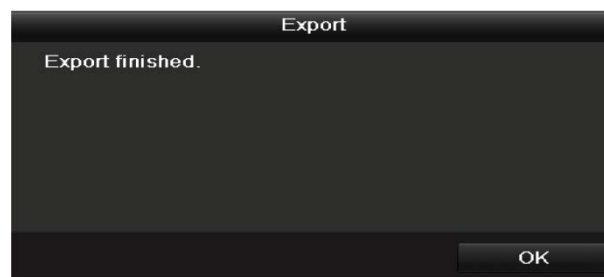


Figure 7.21 Export Finished

6. Check backup result.

Note: The Player player.exe will be exported automatically during record file export.

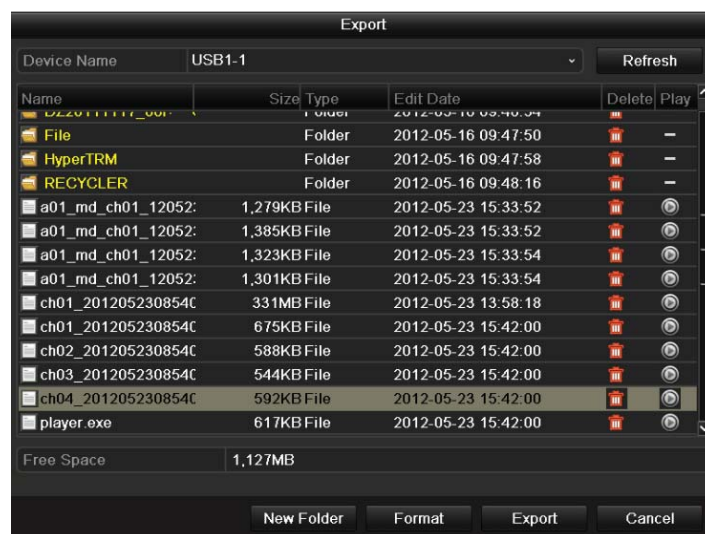


Figure 7.22 Checkup of Video Clips Export Result Using USB Flash Drive

7.2 Managing Backup Devices

Management of USB flash drives, and USB HDDs.

1. Enter Search Result interface of record files.

Menu>Export>Normal

Set search condition and click **Search** button to enter Search Result interface.

Note: At least one channel shall be selected.



Figure 7.23 Normal Video Search

2. Select record files you want to back up.

Click **Export** button to enter Export interface.

Note: At least one record file shall be selected.

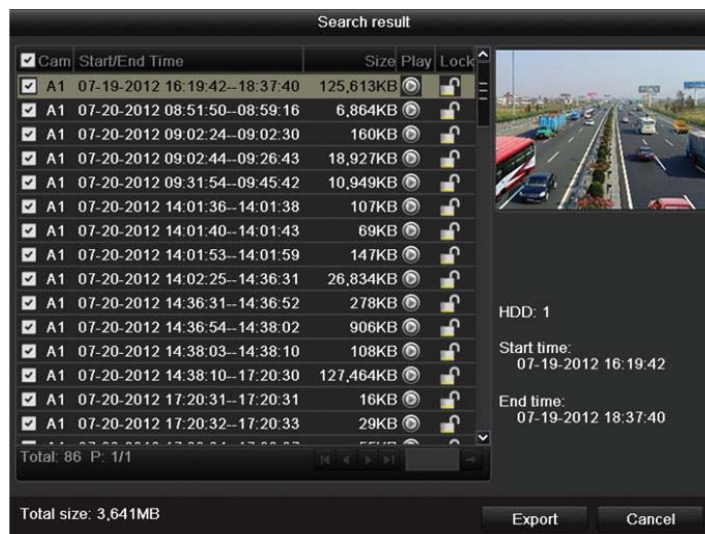


Figure 7.24 Result of Normal Video Search for Backup

3. Backup device management.

Click **New Folder** button if you want to create a new folder in the backup device.

Select a record file or folder in the backup device and click button  if you want to delete it.

Select a record file in the backup device and click button  to play it.

Click **Format** button to format the backup device.

Note: If the inserted USB device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

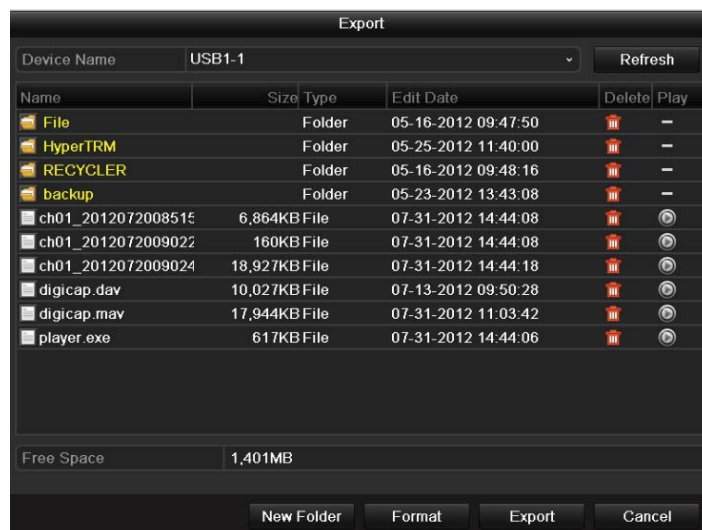


Figure 7.25 USB Flash Drive Management

Management of USB writers and SATA writers

1. Enter Search Result interface of record files.

Menu>Export>Normal

Set search condition and click **Search** button to enter Search Result interface.

Note: At least one channel shall be selected.



Figure 7.26 Normal Video Search for Backup

2. Select record files you want to back up.

Click **Export** button to enter Export interface.

Note: At least one record file shall be selected.

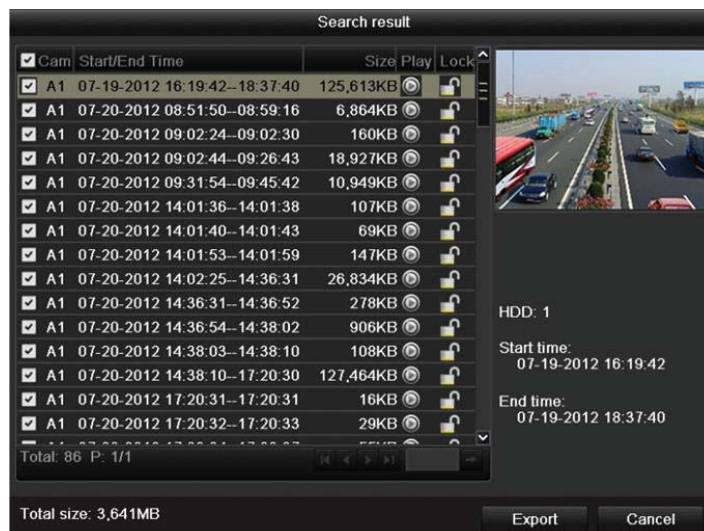


Figure 7.27 Result of Normal Video Search for Backup

3. Backup device management.

Click **Erase** button if you want to erase the files from a re-writable CD/DVD.

Note: There must be a re-writable CD/DVD when you make this operation.

Note: If the inserted USB writer or SATA writer is not recognized:

- Click the **Refresh** button.
- Reconnect device.

- Check for compatibility from vendor.



Figure 7.28 USB Writer Management

C H A P T E R 8

Alarm Settings

8.1 Setting Motion Detection

Steps:

1. Enter Motion Detection interface and choose a camera you want to set motion detection.

Menu> Camera> Motion

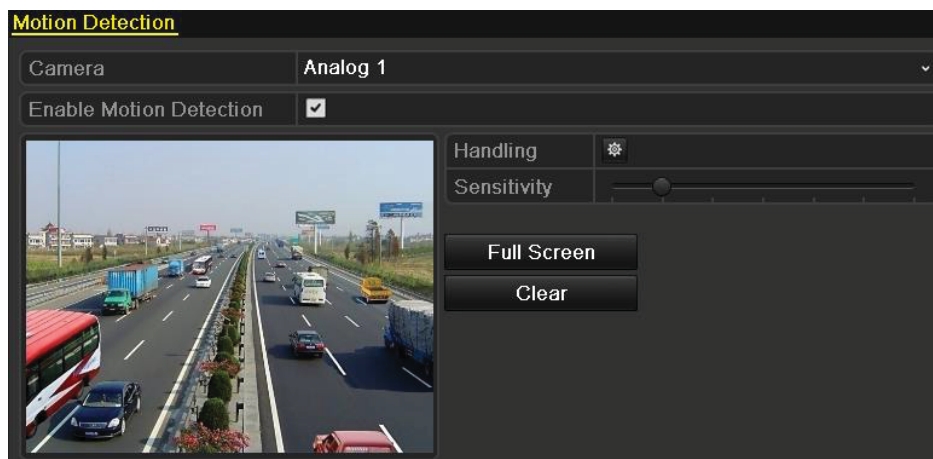



Figure 8.1 Motion Detection Setup Interface

2. Set motion detection area and sensitivity.

- 1) Check the checkbox of **Enable Motion Detection** to enable motion detection, use the mouse to draw detection area(s) and drag the sensitivity bar to set sensitivity.
- 2) Click the  icon of **Handling** to set alarm response actions.

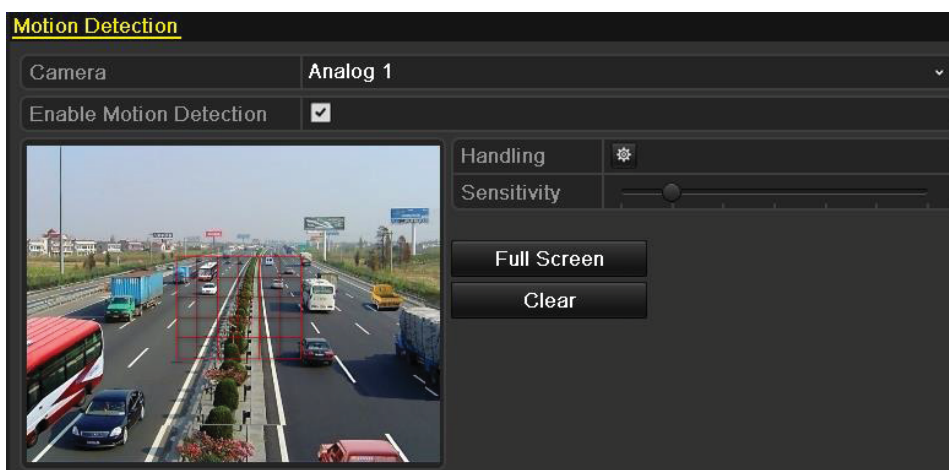


Figure 8.2 Set Detection Area and Sensitivity

3. Click **Trigger Channel** tab and select one or more channels which will start to record or become full-screen monitoring when motion alarm is triggered.

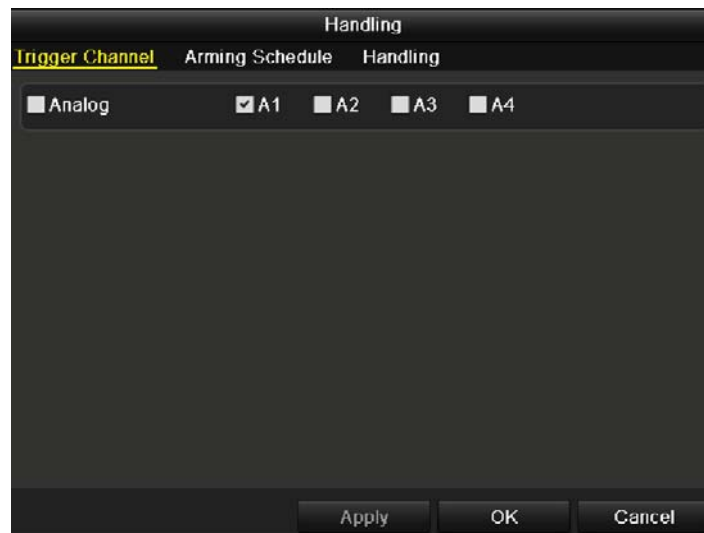


Figure 8.3 Set Trigger Camera of Motion Detection

4. Set up arming schedule of the channel.

- 1) Select **Arming Schedule** tab to set the channel's arming schedule.
- 2) Choose one day of a week and up to eight time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

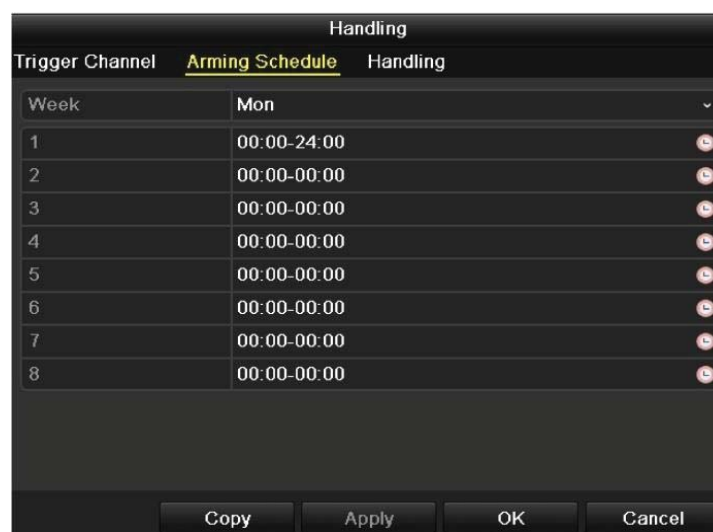


Figure 8.4 Set Arming Schedule of Motion Detection

5. Click **Handling** tab to set up alarm response actions of motion alarm (please refer to *Chapter 8.5*).

- 1) Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.
 - 2) Click the **OK** button to complete the motion detection settings of the channel.
6. If you want to set up motion detection for another channel, repeat the above steps or just copy the above settings to it.

Note: You are not allowed to copy the "Trigger Channel" action.



Figure 8.5 Copy Settings of Motion Detection

8.2 Detecting Video Loss

Purpose:

Detect video loss of a channel and take alarm response action(s).

Steps:

1. Enter Video Loss interface of Camera Management.

Menu> Camera> Video Loss

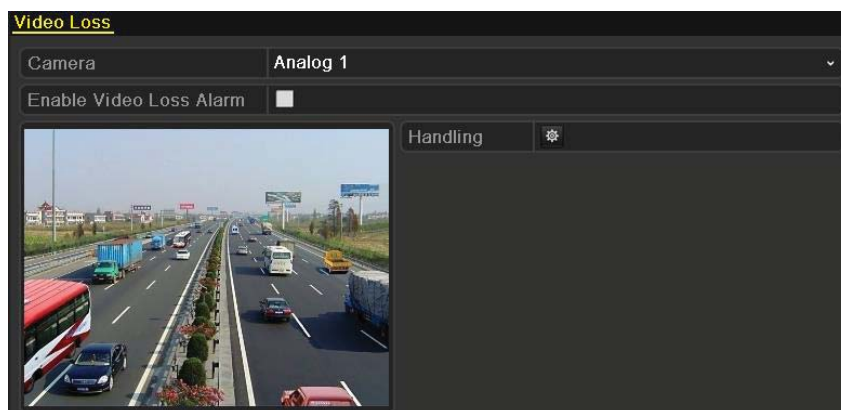



Figure 8.6 Video Loss Setup Interface

2. Select a channel you want to detect.
3. Check the checkbox of **Enable Video Loss Alarm**.
4. Click the  icon of **Handling** to enter the Handling interface.
5. Set the arming schedule and alarm response actions. Please refer to **Step4** and **Step5** of *Chapter 8.1 Setting up Motion Detection Alarm*.

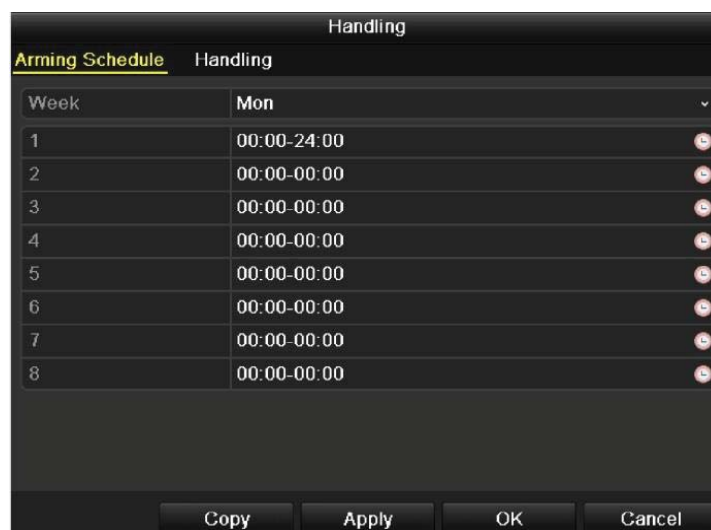


Figure 8.7 Set Arming Schedule of Video Loss

6. Click **Apply** to save the video loss alarm settings.

8.3 Detecting Video Tampering

Purpose:

Trigger alarm when the lens is covered and take alarm response action(s).


Steps:

1. Enter Video Tampering interface of Camera Management.

Menu> Camera> Tamper-proof



Figure 8.8 Tamper-proof Setup Interface

2. Select a channel you want to detect video tampering.
3. Move the sensitivity bar and choose a proper sensitivity level.
4. Click the  icon of **Handling** to enter the Handling interface.
5. Set the arming schedule and alarm response actions. Please refer to **Step4** and **Step5** of *Chapter 8.1 Setting up Motion Detection Alarm*.
6. If you want to set video loss handling method for another channel, repeat above steps or click **Copy** to copy the above settings to it.

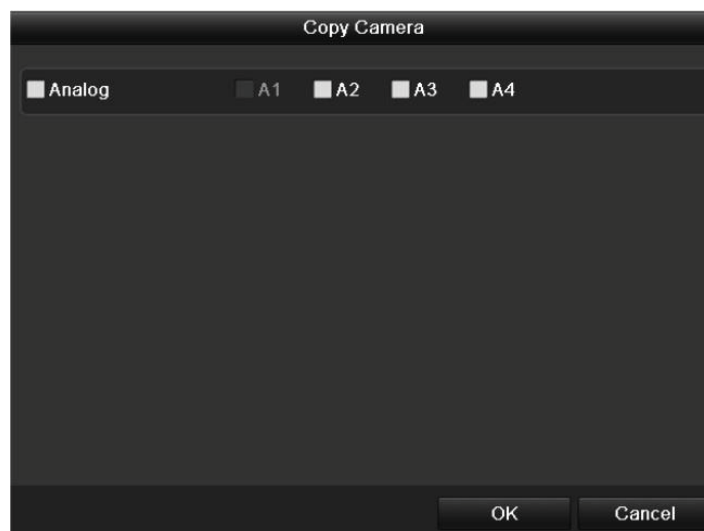


Figure 8.9 Copy Settings of Video Tampering

8.4 Handling Exceptions

Purpose:

Exception settings refer to the handling method of various exceptions, e.g.,

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error, unformatted HDD, etc.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Abnormal Video Signal:** Unstable video signal.
- **Input / Output Video Standard Mismatch:** I/O video standards do not match.
- **Record Exception:** No space for saving recorded file.

Steps:

Enter **Exceptions** interface of System Configuration and handle various exceptions.

Menu> Configuration> Exceptions

Please refer to *Chapter 8.5* for detailed alarm response actions.



Figure 8.10 Exceptions Setup Interface

8.5 Setting Alarm Response Actions

Purpose:

The alarm response actions will be activated when an exception occurs, including Full Screen Monitoring, Audible Warning, Notify Surveillance Center, and Send Email.

Full Screen Monitoring

When an alarm event (motion detection/tamper-proof/video loss detection) is triggered, the local monitor (HDMI/VGA or BNC monitor) display in full screen the video image from the alarming channel configured for full screen monitoring.

If alarms are triggered simultaneously in several channels, their full-screen images will be switched at an interval of 10 seconds (default dwell time). A different dwell time can be set by going to Menu>Configuration>Live View>Full Screen Monitoring Dwell Time.

Auto-switch will terminate once the alarm stops and you will be taken back to the Live View interface.

Note: For motion detection alarm, you must select the channel(s) you want to make full screen monitoring (Menu>Camera>Motion>Handling>Trigger Channel).

Audible Warning

Trigger an audible *beep* when an alarm is detected.

Notify Surveillance Center

Sends an exception or alarm signal to remote alarm host when an event occurs. The alarm host refers to the PC installed with Remote Client.

Note: The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Chapter 9.2.6* for details of alarm host configuration.

Send Email

Send an email with alarm information to a user or users when an alarm event is detected.

Please refer to *Chapter 9.2.10* for details of Email configuration.

C H A P T E R 9

Network Settings

9.1 Configuring General Settings

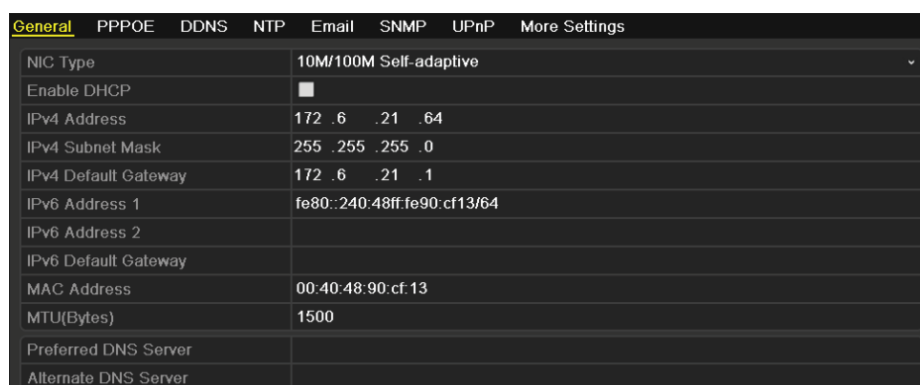
Purpose:

Network settings must be properly configured before you operate device over network.

Steps:

1. Enter the Network Settings interface.

Menu > Configuration > Network



General	PPPoE	DDNS	NTP	Email	SNMP	UPnP	More Settings
NIC Type	10M/100M Self-adaptive						
Enable DHCP	<input type="checkbox"/>						
IPv4 Address	172 . 6 . 21 . 64						
IPv4 Subnet Mask	255 . 255 . 255 . 0						
IPv4 Default Gateway	172 . 6 . 21 . 1						
IPv6 Address 1	fe80::240:48ff:fe90:cf13/64						
IPv6 Address 2							
IPv6 Default Gateway							
MAC Address	00:40:48:90:cf:13						
MTU(Bytes)	1500						
Preferred DNS Server							
Alternate DNS Server							

Figure 9. 1 General Network Settings Interface

2. Select the **General** tab.

3. In the **General Settings** interface:

You can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

If the DHCP server is available, you can click the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.

Note: The valid value range of MTU is 500 ~ 1500.

4. After having configured the general settings, click the **Apply** button to save the settings.

9.2 Configuring Advanced Settings

9.2.1 Configuring PPPoE Settings

Purpose:

Your device also allows access by Point-to-Point Protocol over Ethernet (PPPoE).

Steps:

1. Enter the **Network Settings** interface.
Menu > Configuration > Network
2. Select the **PPPoE** tab to enter the PPPoE Settings interface.

Enable PPPOE	<input type="checkbox"/>
User Name	
Password	

Figure 9.2 PPPoE Settings Interface

3. Check the **PPPoE** checkbox to enable this feature.
4. Enter **User Name**, **Password**, and **Confirm Password** for PPPoE access.

Note: The User Name and Password should be assigned by your ISP.

Enable PPPOE	<input checked="" type="checkbox"/>
User Name	test
Password	*****

Figure 9.3 PPPoE Settings Interface

5. Click the **Apply** button to save and exit the interface.
6. After successful settings, the system asks you to reboot the device to enable the new settings, and the PPPoE dial-up is automatically connected after reboot.

You can go to Menu>Maintenance>System Info>Network interface to view the status of PPPoE connection. Please refer to *Chapter 12.1 Viewing System Information* for PPPoE status.

9.2.2 Configuring DDNS

Purpose:

If your device is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access.

Prior registration with your ISP is required before configuring the system to use DDNS.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Select the **DDNS** tab to enter the DDNS Settings interface.

Enable DDNS	<input checked="" type="checkbox"/>
DDNS Type	IPServer
Server Address	
Device Domain Name	
User Name	
Password	
Confirm	

Figure 9.4 DDNS Settings Interface

3. Check the **DDNS** checkbox to enable this feature.
4. Select **DDNS Type**. Five different DDNS types are selectable: IPServer, DynDNS, PeanutHull, NO-IP and HiDDNS.
 - **IPServer:** Enter **Server Address** for IPServer.

Note: The **Server Address** should be the IP address of the PC that runs IPServer.

Enable DDNS	<input checked="" type="checkbox"/>
DDNS Type	IPServer
Server Address	172.5.22.122
Device Domain Name	
User Name	
Password	
Confirm	

Figure 9.5 IPServer Settings Interface

• **DynDNS:**

- 1) Enter **Server Address** for DynDNS (e.g. members.dyndns.org).
- 2) In the **Device Domain Name** text field, enter the domain obtained from the DynDNS website.
- 3) Enter the **User Name** and **Password** registered in the DynDNS website.

Enable DDNS	<input checked="" type="checkbox"/>
DDNS Type	DynDNS
Server Address	members.dyndns.org
Device Domain Name	123.dyndns.com
User Name	test
Password	*****
Confirm	*****

Figure 9.6 DynDNS Settings Interface

- **PeanutHull:** Enter User Name and Password obtained from the PeanutHull website.

Enable DDNS	<input checked="" type="checkbox"/>
DDNS Type	PeanutHull
Server Address	
Device Domain Name	
User Name	123.gicp.net
Password	*****
Confirm	*****

Figure 9.7 Peanut Hull Settings Interface

• **NO-IP:**

Enter the account information in the corresponding fields. Refer to the DynDNS settings.

- 1) Enter **Server Address** for NO-IP.
- 2) In the **Device Domain Name** text field, enter the domain obtained from the NO-IP website (www.no-ip.com).
- 3) Enter the **User Name** and **Password** registered in the NO-IP website.

Enable DDNS	<input checked="" type="checkbox"/>
DDNS Type	NO-IP
Server Address	no-ip.org
Device Domain Name	123.no-ip.org
User Name	test
Password	*****
Confirm	*****

Figure 9.8 NO-IP Settings Interface

- **HiDDNS:** You need to enter the **Server Address** and **Device Domain Name** for HiDDNS, and other fields are read only.

- 1) Enter the **Server Address** of the HiDDNS server: *www.hik-online.com*.
- 2) Enter the **Device Domain Name**. You can register the alias of the device domain name in the HiDDNS server first and then enter the alias to the **Device Domain Name** in the DVR; you can also enter the domain name directly on the DVR to create a new one.

Note: If a new alias of the device domain name is defined in the DVR, it will replace the old one registered on the server.

Enable DDNS	<input checked="" type="checkbox"/>
DDNS Type	HiDDNS
Server Address	www.hik-online.com
Device Domain Name	test
User Name	
Password	
Confirm	

Figure 9.9 HiDDNS Settings Interface

Register the device on the HiDDNS server.

- 1) Go to the HiDDNS website: *www.hik-online.com*.
- 2) Click [Register new user](#) to register a user account if you do not have one.
- 3) After registration is successful, use the account and password to log in.

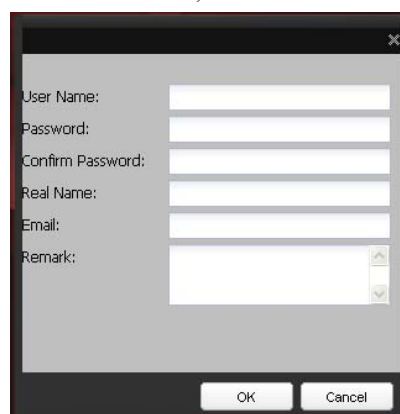

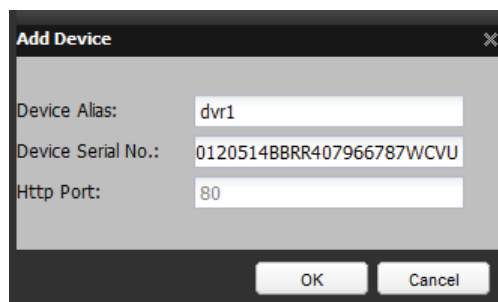


Figure 9.10 Register an Account

- 4) In the DDNS Management System interface, click the **Device Management** tab on the left menu bar and then click  to register the device.



The 'Add Device' dialog box contains the following fields:

Device Alias:	dvr1
Device Serial No.:	0120514BBRR407966787WCVU
Http Port:	80

Buttons: OK, Cancel

Figure 9.11 Register the Device

Note: Only lower-case English alphabet, numeric and '-' can be used in the alias of the device and the alias must be started with letters of the lower-case English alphabet.

- Click the **Apply** button to save and exit the interface.

9.2.3 Configuring NTP Server

Purpose:

A Network Time Protocol (NTP) Server can be configured on your device to ensure the accuracy of system date/time.

Steps:

- Enter the Network Settings interface.
Menu > Configuration > Network
- Select the **NTP** tab to enter the NTP Settings interface.

Enable NTP	<input checked="" type="checkbox"/>
Interval (min)	60
NTP Server	210.72.145.44
NTP Port	123

Figure 9.12 NTP Settings Interface

- Check the **Enable NTP** checkbox to enable this feature.
- Configure the following NTP settings:
 - Interval:** Time interval between the two synchronizing actions with NTP server. The unit is minute.
 - NTP Server:** IP address of NTP server.
 - NTP Port:** Port of NTP server.
- Click the **Apply** button to save and exit the interface.

Note: The time synchronization interval can be set from 1 to 10080min, and the default value is 60min. If the device is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the device is setup in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.

9.2.4 Configuring SNMP

Purpose:

You can use SNMP protocol to get device status and parameters related information.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Select the **SNMP** tab to enter the SNMP Settings interface.

Enable SNMP	<input type="checkbox"/>
SNMP Version	V2
SNMP Port	161
Read Community	public
Write Community	private
Trap Address	
Trap Port	162

Figure 9.13 SNMP Settings Interface

3. Check the **SNMP** checkbox to enable this feature.
4. Configure the SNMP settings.

Enable SNMP	<input checked="" type="checkbox"/>
SNMP Version	V2
SNMP Port	161
Read Community	public
Write Community	private
Trap Address	
Trap Port	162

Figure 9.14 Configure SNMP Settings

5. Click the **Apply** button to save and exit the interface.

Note: Before setting the SNMP, please download the SNMP software and manage to receive the device information via SNMP port. By setting the Trap Address, the device is allowed to send the alarm event and exception message to the surveillance center.

9.2.5 Configuring UPnP™

Purpose:

UPnP™ can permits the device seamlessly discover the presence of other network devices on the network and establish functional network services for data sharing, communications, etc. If you want to use the UPnP™ function to enable the fast connection of the device to the WAN via a router, you should configure the UPnP™ parameters of the device.

Before you start:

If you want to enable the UPnP™ function of the device, you must enable the UPnP™ function of the router to which your device is connected. When the network working mode of the device is set as multi-address, the

Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Select the **UPnP™** tab to enter the UPnP™ interface.

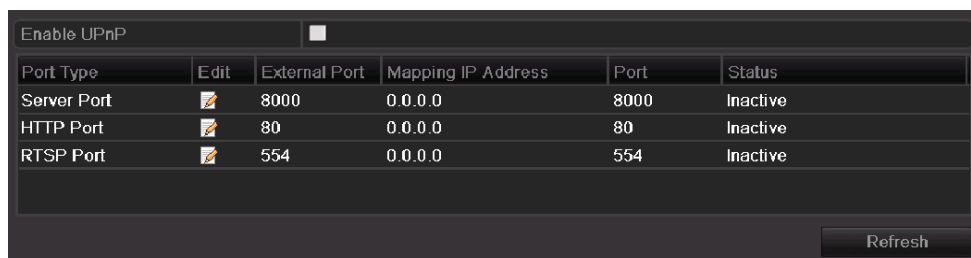


Figure 9.15 UPnP™ Settings Interface

3. Check checkbox to enable UPnP™.
4. Click to open the External Port Settings dialog box. Configure the external port No. for server port, HTTP port and RTSP port respectively.

Notes:

- 1) You can use the default port No., or change it according to actual requirements.
- 2) External Port indicates the port No. for port mapping in the router.

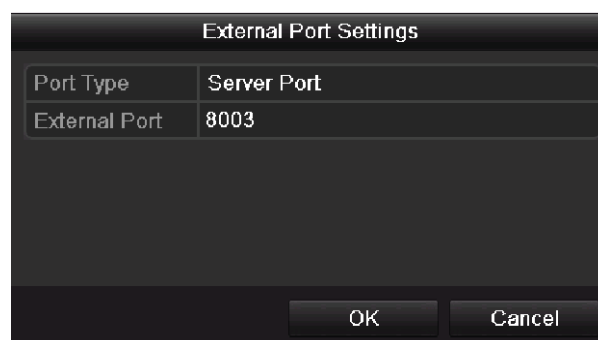


Figure 9.16 External Port Settings Dialog Box

5. You can click **Refresh** to get the latest status of the port mapping.

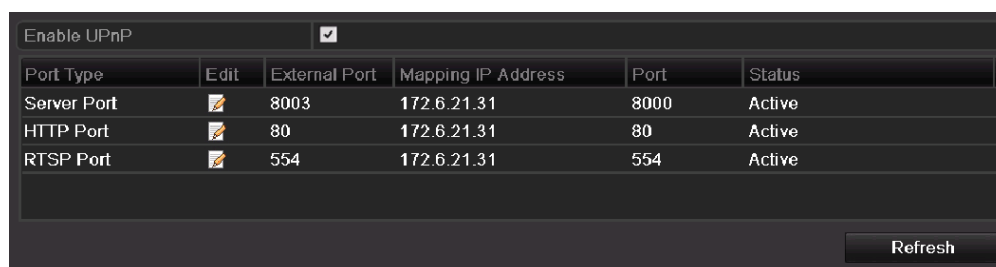


Figure 9.17 UPnP Settings Finished

6. Click the **Apply** button to save the settings.

9.2.6 Configuring Remote Alarm Host

Purpose:

With a remote alarm host configured, the device will send the alarm event or exception message to the host when an alarm is triggered. The remote alarm host must have the CMS (Client Management System) software installed.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.

Alarm Host IP	
Alarm Host Port	0
Server Port	8000
HTTP Port	80
Multicast IP	
RTSP Port	554

Figure 9.18 More Settings Interface

3. Enter **Alarm Host IP** and **Alarm Host Port** in the text fields.
The **Alarm Host IP** refers to the IP address of the remote PC on which the CMS (Client Management System) software (e.g., iVMS-4200) is installed, and the **Alarm Host Port** must be the same as the alarm monitoring port configured in the software (default port is 7200).

Alarm Host IP	172.5.8.111
Alarm Host Port	7200
Server Port	8000
HTTP Port	80
Multicast IP	
RTSP Port	554

Figure 9.19 Configure Alarm Host

4. Click the **Apply** button to save and exit the interface.

9.2.7 Configuring Multicast

Purpose:

The multicast can be configured to realize live view for more than the maximum number of cameras through network.

A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. It is recommended to use the IP address ranging from 239.252.0.0 to 239.255.255.255.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.

3. Set **Multicast IP**. When adding a device to the CMS (Client Management System) software, the multicast address must be the same as the device's multicast IP.

Alarm Host IP	172.5.8.111
Alarm Host Port	7200
Server Port	8000
HTTP Port	80
Multicast IP	239.252.2.50
RTSP Port	554

Figure 9.20 Configure Multicast

4. Click the **Apply** button to save and exit the interface.

9.2.8 Configuring RTSP

Purpose:

The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.

Steps:

1. Enter the Network Settings menu by clicking Menu > Configuration > Network.
2. Select the **More Settings** tab to enter the More Settings men.

Alarm Host IP	172.5.8.111
Alarm Host Port	7200
Server Port	8000
HTTP Port	80
Multicast IP	239.252.2.50
RTSP Port	554

Figure 9.21 RTSP Settings Interface

3. Enter the RTSP port in the text field of **RTSP Service Port**. The default RTSP port is 554, and you can change it according to different requirements.
4. Click the **Apply** button to save and exit the menu.

9.2.9 Configuring Server and HTTP Ports

Purpose:

You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.
3. Enter new **Server Port** and **HTTP Port**.

Alarm Host IP	
Alarm Host Port	
Server Port	8000
HTTP Port	80
Multicast IP	
RTSP Port	

Figure 9.22 Host/Others Settings Menu

4. Enter the Server Port and HTTP Port in the text fields. The default Server Port is 8000 and the HTTP Port is 80, and you can change them according to different requirements.
5. Click the **Apply** button to save and exit the interface.

Note: The Server Port should be set to the range of 2000-65535 and it is used for remote client software access. The HTTP port is used for remote IE access.

9.2.10 Configuring Email

Purpose:

The system can be configured to send an Email notification to all designated users if an alarm event is detected, a motion detection event is detected, etc.

Before configuring the Email settings, the device must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification.

Steps:

1. Enter the Network Settings interface.
Menu > Configuration > Network
2. Set the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu.

General	PPPOE	DDNS	NTP	Email	SNMP	UPnP	More Settings
NIC Type	10M/100M Self-adaptive						
Enable DHCP	<input type="checkbox"/>						
IPv4 Address	172 .6 .21 .64						
IPv4 Subnet Mask	255 .255 .255 .0						
IPv4 Default Gateway	172 .6 .21 .1						
IPv6 Address 1	fe80::240:48ff:fe90:cf13/64						
IPv6 Address 2							
IPv6 Default Gateway							
MAC Address	00:40:48:90:cf:13						
MTU(Bytes)	1500						
Preferred DNS Server	192.0.0.200						
Alternate DNS Server							

Figure 9.23 Network Settings Interface

3. Click the **Apply** button to save the settings.
4. Select the **Email** tab to enter the Email Settings interface.

Enable Server Authentica...	<input type="checkbox"/>
User Name	
Password	
SMTP Server	
SMTP Port	25
Enable SSL	<input type="checkbox"/>
Sender	
Sender's Address	
Select Receivers	Receiver 1 ▼
Receiver	
Receiver's Address	
Enable Attached Picture	<input type="checkbox"/>
Interval	2s

Figure 9.24 Email Settings Interface

5. Configure the following Email settings:

Enable Server Authentication (optional): Check the checkbox to enable the server authentication feature.

User Name: The user account of sender's Email for SMTP server authentication.

Password: The password of sender's Email for SMTP server authentication.

SMTP Server: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

SMTP Port: The SMTP port. The default TCP/IP port used for SMTP is 25.

Enable SSL (optional): Click the checkbox to enable SSL if required by the SMTP server.

Sender: The name of sender.

Sender's Address: The Email address of sender.

Select Receivers: Select the receiver. Up to 3 receivers can be configured.

Receiver: The name of user to be notified.

Receiver's Address: The Email address of user to be notified.

Enable Attached Pictures: Check the checkbox of **Enable Attached Picture** if you want to send email with attached alarm images.

Interval: The interval refers to the time between two actions of sending attached pictures.

Enable Server Authentica...	<input type="checkbox"/>
User Name	
Password	
SMTP Server	126.smtp.com
SMTP Port	25
Enable SSL	<input checked="" type="checkbox"/>
Sender	test01
Sender's Address	test01@126.com
Select Receivers	Receiver 1 ▼
Receiver	test02
Receiver's Address	test02@163.com
Enable Attached Picture	<input checked="" type="checkbox"/>
Interval	2s ▼

Figure 9.25 Configure Email Settings

6. Click the **Apply** button to save the Email settings.
7. You can click the **Test** button to test whether your Email settings work. The corresponding Attention message box will pop up.



Figure 9.26 Email Testing Attention

9.3 Checking Network Traffic

Purpose:

You can check the network traffic to obtain real-time information of device such as linking status, MTU, sending/receiving rate, etc.

Steps:

1. Enter the Network Traffic interface.

Menu > Maintenance > Net Detect

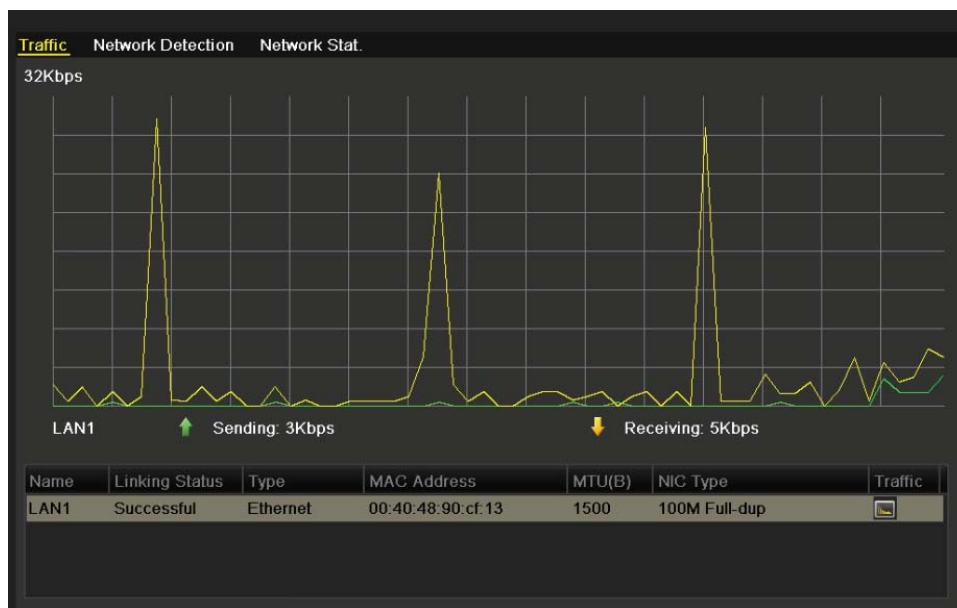


Figure 9.27 Network Traffic Interface

2. You can view the sending rate and receiving rate information on the interface. The traffic data is refreshed every 1 second.

9.4 Network Detection

Purpose:

You can obtain network connecting status of device through the network detection function, including network delay, packet loss, etc.

9.4.1 Testing Network Delay and Packet Loss

Steps:

1. Enter the Network Traffic interface.
Menu > Maintenance > Net Detection
2. Click the **Network Detection** tab to enter the Network Detection menu.

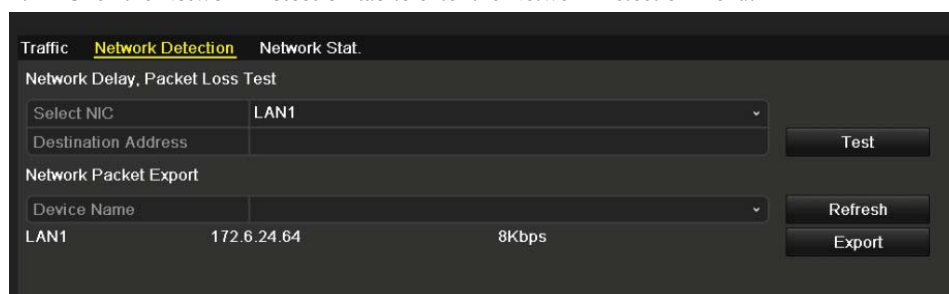


Figure 9.28 Network Detection Interface

3. Enter the destination address in the text field of **Destination Address**.
4. Click the **Test** button to start testing network delay and packet loss. The testing result pops up on the window. If the testing is failed, the error message box will pop up as well.

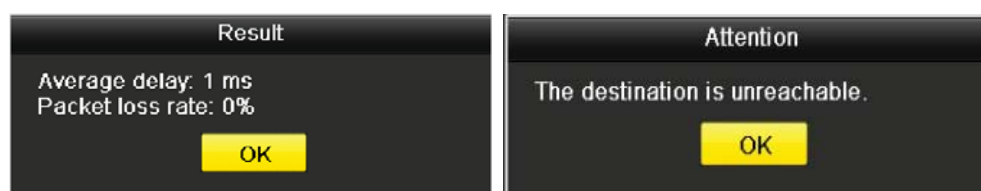


Figure 9.29 Testing Result of Network Delay and Packet Loss

9.4.2 Exporting Network Packet

Purpose:

By connecting the device to network, the captured network data packet can be exported to USB-flash disk and other local backup devices.

Steps:

1. Enter the Network Traffic interface.
Menu > Maintenance > Net Detection
2. Click the **Network Detection** tab to enter the Network Detection interface.

3. Select the backup device from the dropdown list of Device Name, as shown in Figure 9.27.

Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, please check whether it is compatible with the device. You can format the backup device if the format is incorrect.

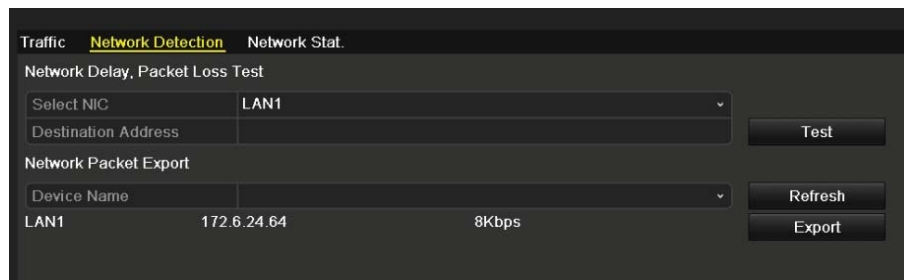


Figure 9.30 Export Network Packet

4. Click the **Export** button to start exporting.
5. After the exporting is complete, click **OK** to finish the packet export.



Figure 9.31 Packet Export Attention

Note: Up to 1M data can be exported each time.

9.4.3 Checking Network Status

Purpose:

You can also check the network status and quick set the network parameters in this interface.

Steps:

Click **Status** on the right bottom of the page.

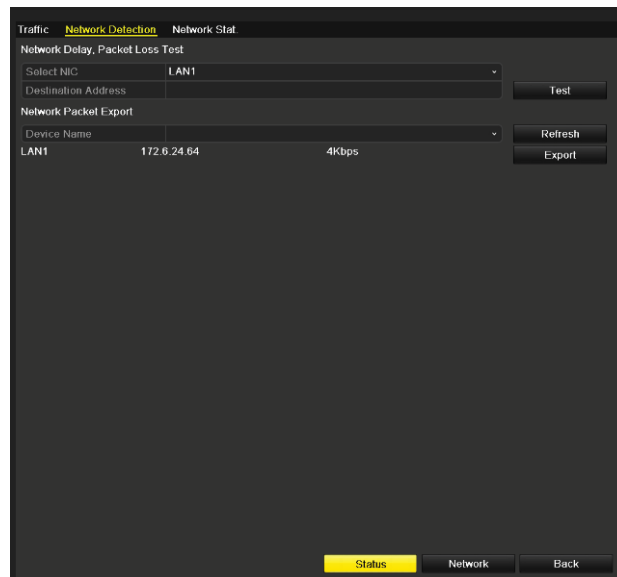


Figure 9.32 Checking Network Status

If the network is normal the following message box pops out.

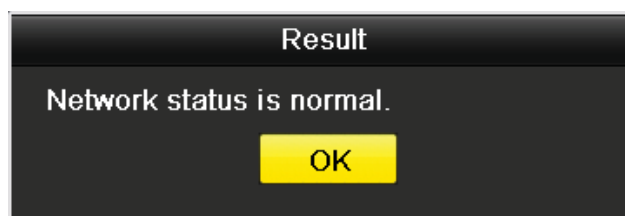
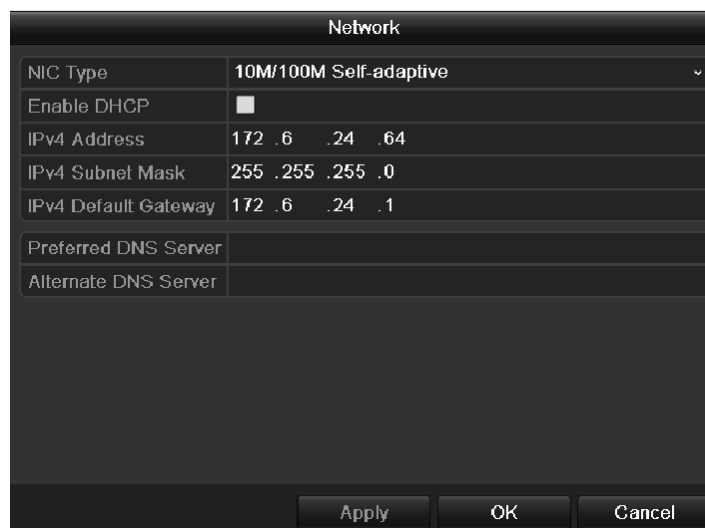


Figure 9.33 Network Status Checking Result

If the message box pops out with other information instead of this one, you can click **Network** button to show the quick setting interface of the network parameters.



Network	
NIC Type	10M/100M Self-adaptive
Enable DHCP	<input type="checkbox"/>
IPv4 Address	172 .6 .24 .64
IPv4 Subnet Mask	255 .255 .255 .0
IPv4 Default Gateway	172 .6 .24 .1
Preferred DNS Server	
Alternate DNS Server	

Apply OK Cancel

Figure 9.34 Network Parameters Configuration

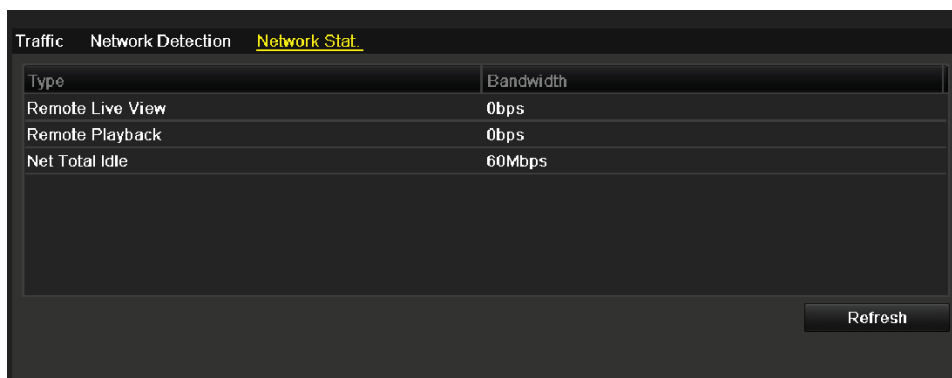
9.4.4 Checking Network Statistics

Purpose:

You can check the network statistics to obtain the real-time information of the device.

Steps:

1. Enter the Network Statistics interface.
Menu > Maintenance > Net Detect
2. Click the **Network Stat.** tab to enter the Network Statistics menu.



Type	Bandwidth
Remote Live View	0bps
Remote Playback	0bps
Net Total Idle	60Mbps

Refresh

Figure 9.35 Network Stat. Interface

3. View the bandwidth of Remote Live View, bandwidth of Remote Playback, bandwidth of Net Total Idle information.
4. Click **Refresh** button to get the latest bandwidth statistics.

CHAPTER 10

HDD Management

10.1 Initializing HDDs

Purpose:

A newly installed hard disk drive (HDD) must be initialized before it can be used with your device.

Steps:

1. Enter the HDD Information interface.

Menu > HDD>General

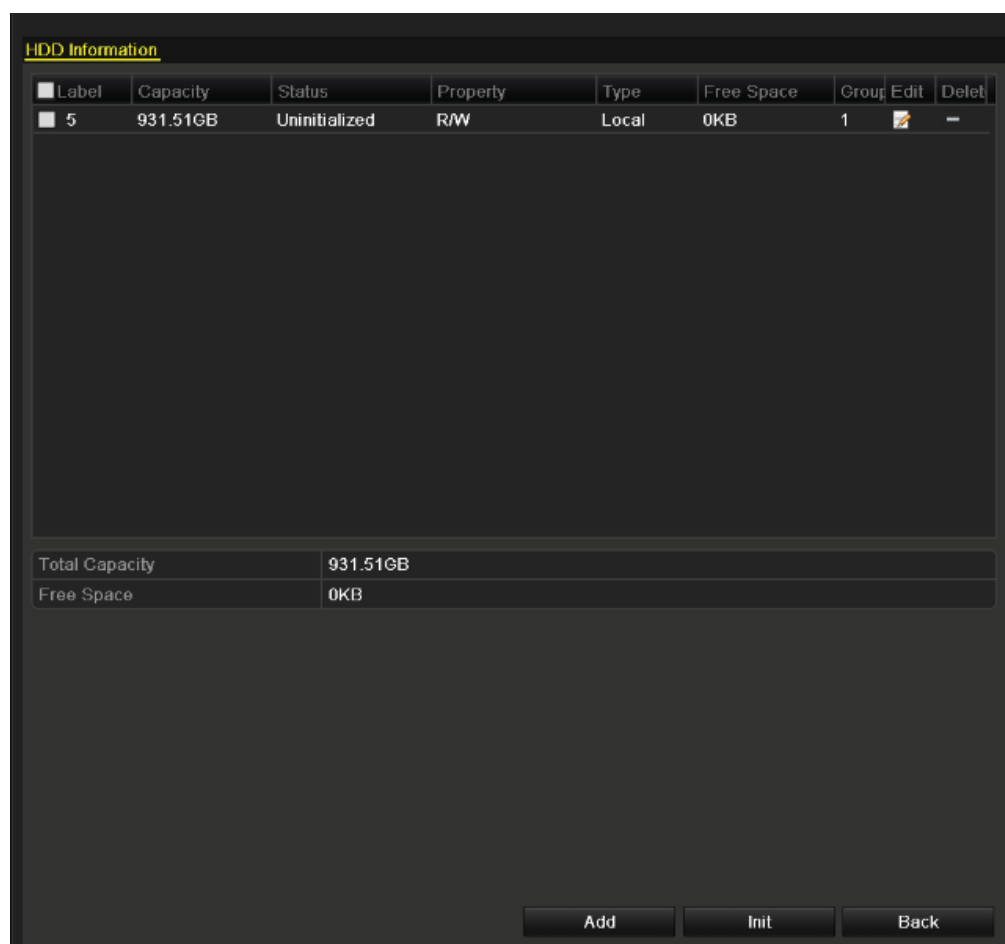


Figure 10.1 HDD Information Interface

2. Select the HDD to be initialized.
3. Click the **Init** button.

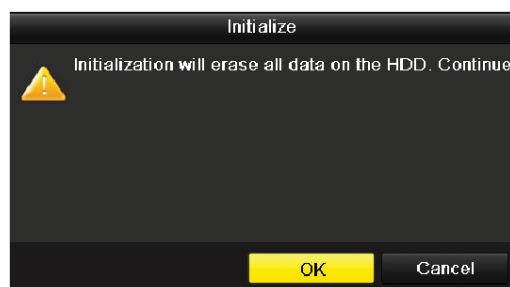


Figure 10.2 Confirm Initialization

4. Select the **OK** button to start initialization.

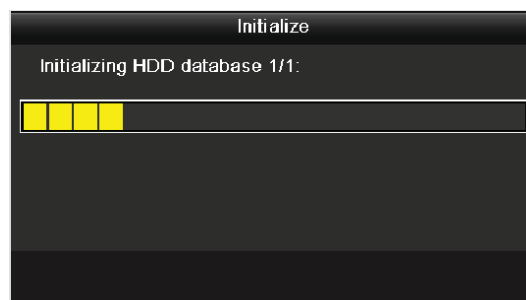


Figure 10.3 Start Initialization

5. After the HDD has been initialized, the status of the HDD will change from *Uninitialized* to *Normal*.

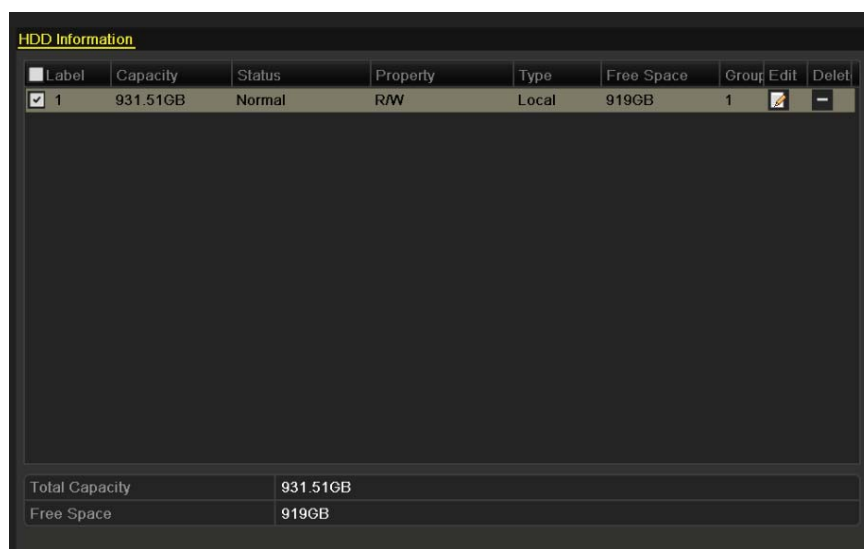


Figure 10.4 HDD Status Changes to Normal

Note: Initializing the HDD will erase all data on it.

10.2 Managing Network HDD

Purpose:

You can add the allocated NAS or disk of IP SAN to device, and use it as network HDD.

Steps:

1. Enter the HDD Information interface.

Menu > HDD > General

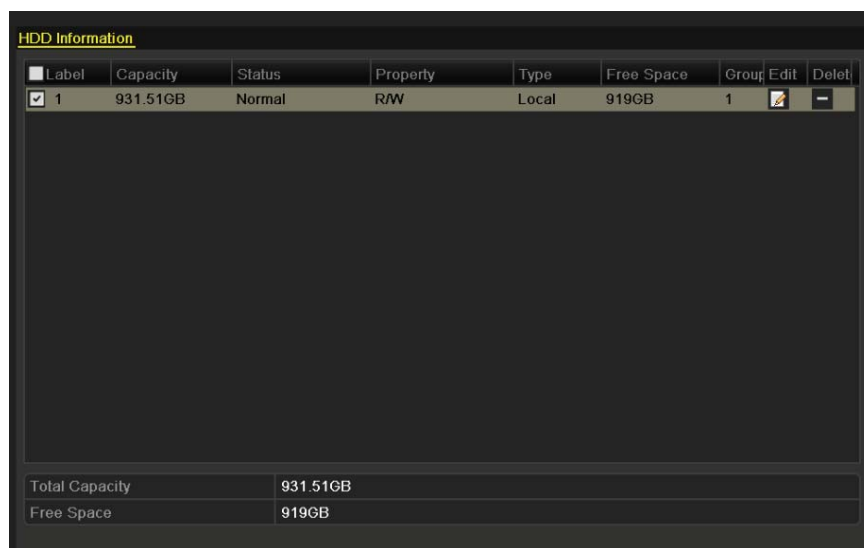


Figure 10.5 HDD Information Interface

2. Click the **Add** button to enter the Add NetHDD interface, as shown in Figure 10.6.

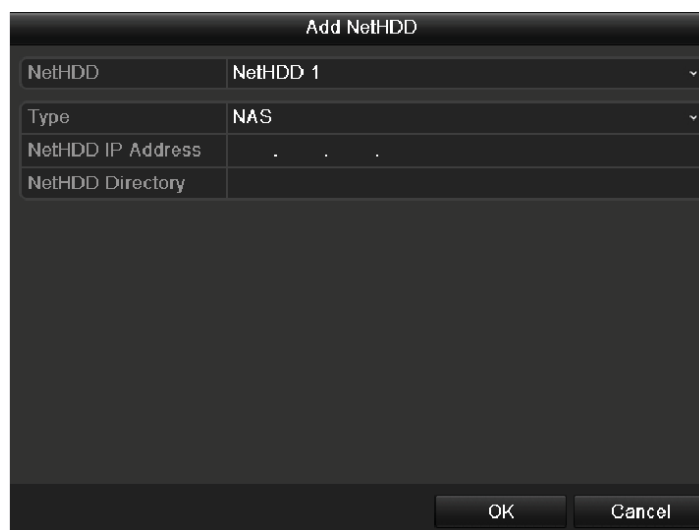
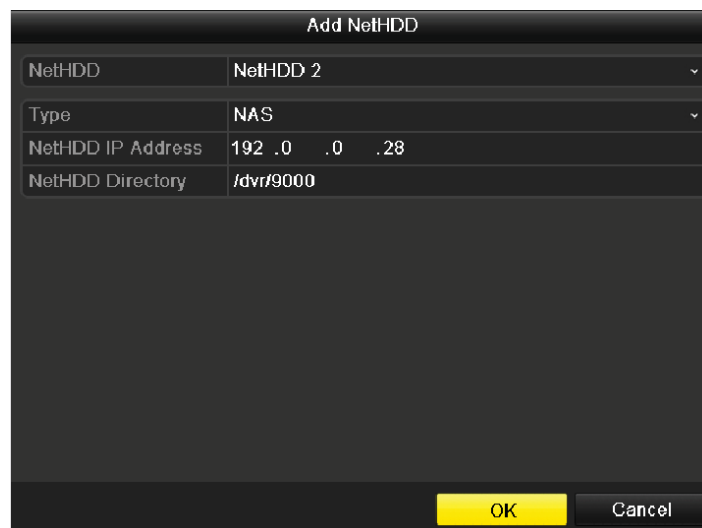


Figure 10.6 Adding NetHDD Interface

3. Add the allocated NetHDD.
4. Select the type to NAS or IP SAN.
5. Configure the NAS or IP SAN settings.
 - **Add NAS disk:**

- 1) Enter the NetHDD IP address in the text field.
- 2) Enter the NetHDD Directory in the text field.
- 3) Click the **OK** button to add the configured NAS disk.

Note: Up to 8 NAS disks can be added.



Add NetHDD	
NetHDD	NetHDD 2
Type	NAS
NetHDD IP Address	192 .0 .0 .28
NetHDD Directory	/dvr/9000
<div style="text-align: right;"> OK Cancel </div>	

Figure 10.7 Add NAS Disk

• **Add IP SAN:**

- 1) Enter the NetHDD IP address in the text field.
- 2) Click the **Search** button to the available IP SAN disks.
- 3) Select the IP SAN disk from the list shown below.
- 4) Click the **OK** button to add the selected IP SAN disk.

Note: Up to 1 IP SAN disk can be added.



Add NetHDD	
NetHDD	NetHDD 1
Type	IP SAN
NetHDD IP Address	172 .9 .2 .210
NetHDD Directory	iqn.2004-05.storos.t-8
No.	Directory
1	iqn.2004-05.storos.t-8
2	iqn.2004-05.storos.t-41
3	iqn.2004-05.storos.t-1000
<div style="text-align: right;"> Search OK Cancel </div>	

Figure 10.8 Add IP SAN Disk

6. After having successfully added the NAS or IP SAN disk, return to the HDD Information menu. The added NetHDD will be displayed in the list.

Note: If the added NetHDD is uninitialized, please select it and click the **Init** button for initialization.

HDD Information

<input type="checkbox"/> Label	Capacity	Status	Property	Type	Free Space	Group	Edit	Delete
<input type="checkbox"/> 1	931GB	Normal	R/W	Local	931GB	1		—
<input type="checkbox"/> 17	40,000MB	Normal	R/W	IP SAN	22,528MB	1		

Figure 10.9 Initialize Added NetHDD

10.3 Managing HDD Group

10.3.1 Setting HDD Groups

Purpose:

Multiple HDDs can be managed in groups. Video from specified channels can be recorded onto a particular HDD group through HDD settings.

Steps:

1. Enter the Storage Mode interface.
Menu > HDD > Advanced
2. Set the **Mode** to Group, as shown below:

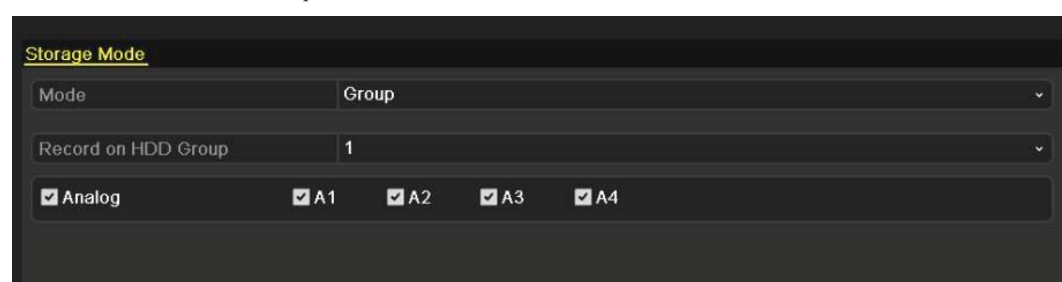


Figure 10.10 Storage Mode Interface

3. Click the **Apply** button and the following Attention box will pop up.

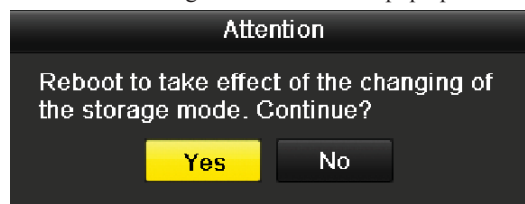



Figure 10.11 Attention for Reboot

4. Click the **Yes** button to reboot the device to activate the changes.
5. After reboot of device, enter the HDD Information interface.
Menu > HDD > General
6. Select HDD from the list and click the  icon to enter the Local HDD Settings interface.

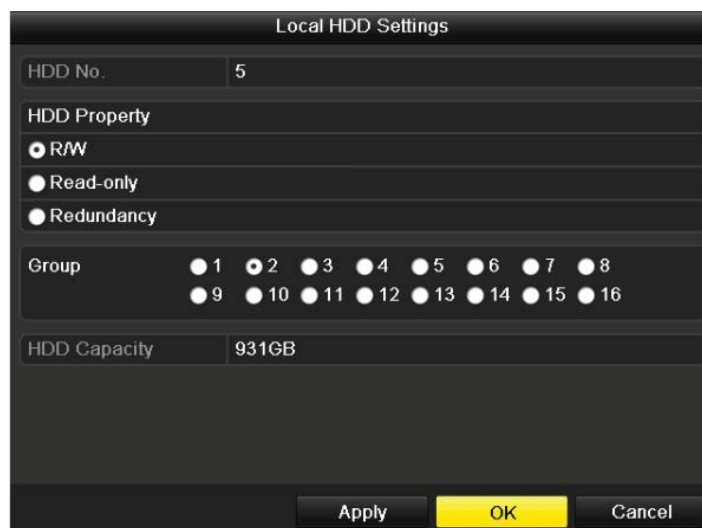


Figure 10.12 Local HDD Settings Interface

7. Select the Group number for the current HDD.

Note: The default group No. for each HDD is 1.

8. Click the **OK** button to confirm the settings.



Figure 10.13 Confirm HDD Group Settings

9. In the pop-up Attention box, click the **Yes** button to finish the settings.

10.3.2 Setting HDD Property

Purpose:

The HDD property can be set to redundancy, read-only or read/write (R/W). Before setting the HDD property, please set the storage mode to Group (refer to step1-4 of *Chapter 10.3.1 Setting HDD Groups*).

A HDD can be set to read-only to prevent important recorded files from being overwritten when the HDD becomes full in overwrite recording mode.

When the HDD property is set to redundancy, the video can be recorded both onto the redundancy HDD and the R/W HDD simultaneously so as to ensure high security and reliability of video data.

Steps:


1. Enter the HDD Information interface.
Menu > HDD > General
2. Select HDD from the list and click the  icon to enter the Local HDD Settings interface.



Figure 10.14 Set HDD Property

3. Set the HDD property to R/W, Read-only or Redundancy.
4. Click the **OK** button to save the settings and exit the interface.
5. In the HDD Information menu, the HDD property will be displayed in the list.

Note: At least 2 hard disks must be installed on your device when you want to set a HDD to Redundancy, and there is one HDD with R/W property.

10.4 Configuring Quota Mode

Purpose

Each camera can be configured with allocated quota for the storage of recorded files.

Steps

1. Enter the Storage Mode interface.
Menu > HDD > Advanced

2. Set the **Mode** to **Quota**.

Note: The device must be rebooted to enable the changes to take effect.



Figure 10.15 Storage Mode Settings Interface

3. Enter the storage capacity in the text field of **Max. Record Capacity (GB)**.

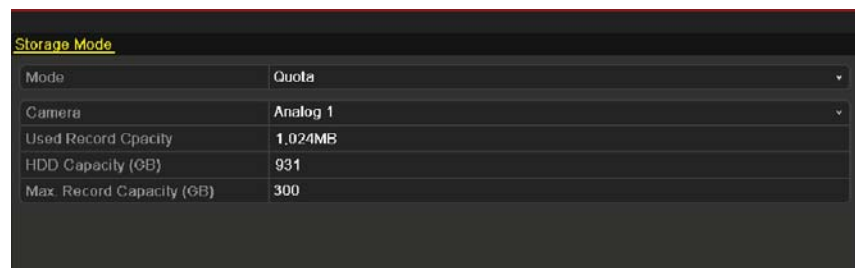


Figure 10.16 Configure Record Quota

4. You can copy the quota settings of the current camera to other cameras if required. Click the **Copy** button to enter the Copy Camera menu, as shown below.

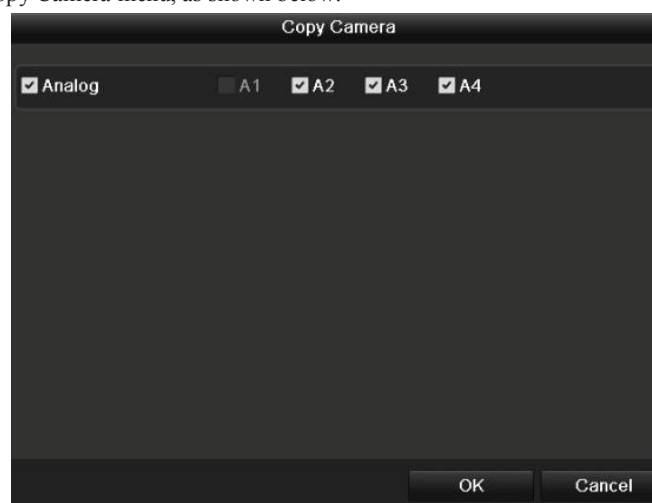


Figure 10.17 Copy Settings to Other Camera(s)

5. Select the camera (s) to be configured with the same quota settings. You can also click the checkbox of

Analog to select all cameras.

6. Click the **OK** button to finish the Copy settings and back to the Storage Mode interface.
7. Click the **Apply** button to apply the settings.

Note: If the quota capacity is set to 0, then all cameras will use the total capacity of HDD for recording.

10.5 Checking HDD Status

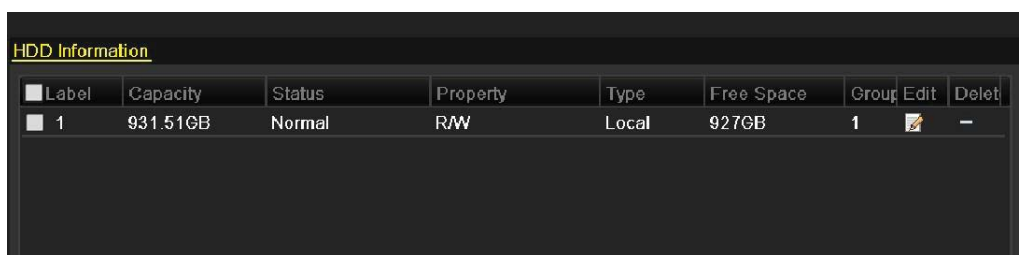
Purpose:

You may check the status of the installed HDDs on device so as to take immediate check and maintenance in case of HDD failure.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the HDD Information interface.
Menu > HDD>General
2. Check the status of each HDD which is displayed on the list.



Label	Capacity	Status	Property	Type	Free Space	Group	Edit	Delete
1	931.51GB	Normal	R/W	Local	927GB	1		—

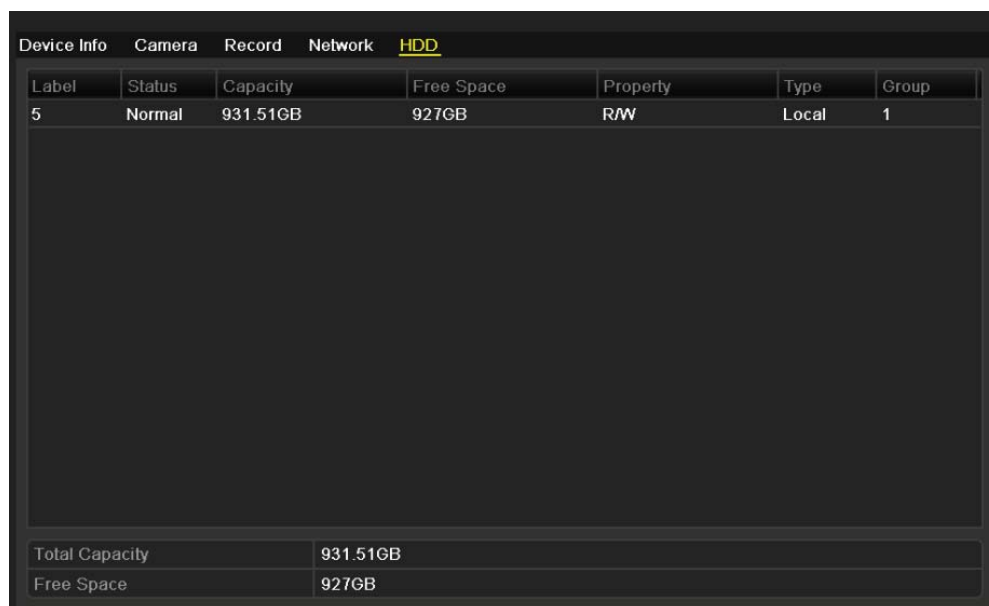
Figure 10.18 View HDD Status (1)

Note: If the status of HDD is *Normal* or *Sleeping*, it works normally. If the status is *Uninitialized* or *Abnormal*, please initialize the HDD before use. And if the HDD initialization is failed, please replace it with a new one.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the System Information interface.
Menu > Maintenance > System Info
2. Click the **HDD** tab to view the status of HDD displayed on the list.



Label	Status	Capacity	Free Space	Property	Type	Group
5	Normal	931.51GB	927GB	R/W	Local	1

Total Capacity	931.51GB
Free Space	927GB

Figure 10.19 View HDD Status (2)

10.6 Checking S.M.A.R.T. Information

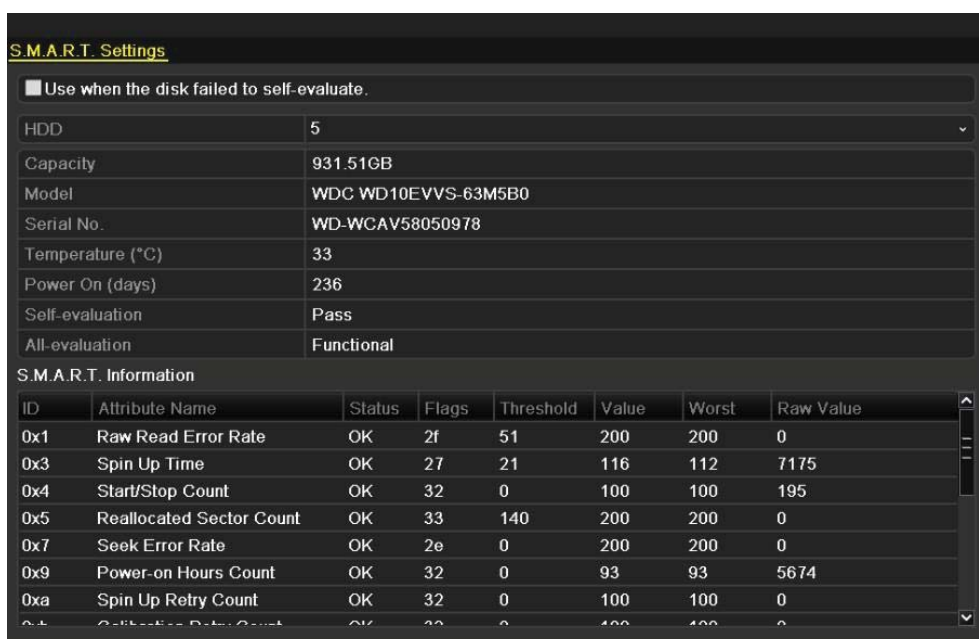
Purpose:

The S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is a monitoring system for HDD to detect and report on various indicators of reliability in the hopes of anticipating failures.

Steps:

1. Enter the S.M.A.R.T. Settings interface.
Menu > HDD > S.M.A.R.T.
2. Select the HDD to view its S.M.A.R.T. information list.

Note: If you want to use the HDD even when the S.M.A.R.T. checking is failed, you can check the checkbox before the **Use when the disk failed to self-evaluate** item.



S.M.A.R.T. Settings

☐ Use when the disk failed to self-evaluate.

HDD	5
Capacity	931.51GB
Model	WDC WD10EVVS-63M5B0
Serial No.	WD-WCAV58050978
Temperature (°C)	33
Power On (days)	236
Self-evaluation	Pass
All-evaluation	Functional

S.M.A.R.T. Information

ID	Attribute Name	Status	Flags	Threshold	Value	Worst	Raw Value
0x1	Raw Read Error Rate	OK	2f	51	200	200	0
0x3	Spin Up Time	OK	27	21	116	112	7175
0x4	Start/Stop Count	OK	32	0	100	100	195
0x5	Reallocated Sector Count	OK	33	140	200	200	0
0x7	Seek Error Rate	OK	2e	0	200	200	0
0x9	Power-on Hours Count	OK	32	0	93	93	5674
0xa	Spin Up Retry Count	OK	32	0	100	100	0

Figure 10.20 S.M.A.R.T. Settings Interface

10.7 Configuring HDD Error Alarms

Purpose:

You can configure the HDD error alarms when the HDD status is *Uninitialized* or *Abnormal*.

Steps:

1. Enter the Exception interface.
Menu > Configuration > Exceptions
2. Select the Exception Type to **HDD Error** from the dropdown list.
3. Click the checkbox(s) below to select the HDD error alarm type (s).

Note: The alarm type can be selected to: Audio Warning, Notify Surveillance Center, and Send Email. Please refer to *Chapter 8.5 Setting Alarm Response Actions*.



Figure 10.21 Configure HDD Error Alarm

4. Click the **Apply** button to save the settings.

C H A P T E R 11

Camera Settings

11.1 Configuring OSD Settings

Purpose:

You can configure the OSD (On-screen Display) settings for the camera, including date /time, camera name, etc.

Steps:

1. Enter the OSD Configuration interface.
Menu > Camera > OSD
2. Select the camera to configure OSD settings.
3. Edit the Camera Name in the text field.
4. Configure the Display Name, Display Date and Display Week by clicking the checkbox.
5. Select the Date Format, Time Format and Display Mode.



Figure 11.1 OSD Configuration Interface

6. You can use the mouse to click and drag the text frame on the preview window to adjust the OSD position.
7. Copy Camera Settings
 - 1) If you want to copy the OSD settings of the current camera to other cameras, click the **Copy** button to enter the Copy Camera interface, as shown in Figure 11.2.



Figure 11.2 Copy Settings to Other Cameras

- 2) Select the camera (s) to be configured with the same OSD settings. You can also click the checkbox of Analog to select all cameras.

- 3) Click the **OK** button to finish the Copy settings and back to the OSD Configuration interface.
 8. Click the **Apply** button to apply the settings.
- Note:** You can also click the **Restore** to restore the current OSD settings to the default parameters.

11.2 Configuring Privacy Mask

Purpose:

You are allowed to configure the four-sided privacy mask zones that cannot be viewed by the operator.

Steps:

1. Enter the Privacy Mask Settings interface.
Menu > Camera > Privacy Mask
2. Select the camera to set privacy mask.
3. Click the checkbox of **Enable Privacy Mask** to enable this feature.



Figure 11.3 Privacy Mask Settings Interface

4. Use the mouse to draw a zone on the window. The zones will be marked with different frame colors.
- Note:** Up to 4 privacy mask zones can be configured, and the size of each area can be adjusted.
5. The configured privacy mask zones on the window can be cleared by clicking the corresponding Clear Zone1-4 icons on the right side of the window, or click **Clear All** to clear all zones.



Figure 11.4 Set Privacy Mask Area

6. You can click the **Copy** button to copy the privacy mask settings of the current camera to other cameras.

Please refer to step 7 of *Chapter 11.1 Configuring OSD Settings*.

- Click the **Apply** button to save the settings.

Note: You can also click the **Restore** to restore the current OSD settings to the default parameters.

11.3 Configuring Video Parameters

Steps:

- Enter the Image Settings interface.
Menu > Camera > Image
- Select the camera to set image parameters.
- Set the period of a day for configuring independent image parameters so as to satisfy different light conditions, e.g., daylight and night time. Two periods can be configured. When you have configured Period 1, the Period 2 is remained as the *Other Time*.



Figure 11.5 Image Settings Interface

- Select the mode from the drop-down menu according to different light conditions.
Four modes are selectable:
 - Standard:** in general lighting conditions (default).
 - Indoor:** the image is relatively smoother.
 - Dim Light:** the image is smoother than the other three modes.
 - Outdoor:** the image is relatively clearer and sharper. The degree of contrast and saturation is high.
- Adjust the image parameters including the brightness, contrast, saturation, hue and sharpness by moving the sliding bar or increasing/decreasing the value.
Note: The adjustable value range for the brightness, contrast, saturation and hue is 0~ 255 and for the sharpness is 0~ 15.
- You can click the **Copy** button to copy the image settings of the current camera to other cameras. Please refer to step 7 of *Chapter 11.1 Configuring OSD Settings*.
- On the Image Settings interface, click the **Apply** button to save the settings.

Note: you can click the **Restore** button to restore the current image settings to default parameters.

C H A P T E R 1 2

Device Management and Maintenance

12.1 Viewing System Information

12.1.1 Viewing Device Information

Steps:

1. Enter the System Information interface.
Menu > Maintenance > System Info
2. Click the **Device Info** tab to enter the Device Information menu to view the device name, model, serial No. , firmware version and encoding version.

<u>Device Info</u>	Camera	Record	Network	HDD
Device Name	Embedded Net DVR			
Model	DS-7216HVI-SH			
Serial No.	1620120829BBRR410414910WCVU			
Firmware Version	V2.1.2, Build 120823			
Encoding Version	V5.0, Build 120822			

Figure 12.1 Device Information Interface

12.1.2 Viewing Camera Information

Steps:

1. Enter the System Information interface.
Menu > Maintenance > System Info
2. Click the **Camera** tab to enter the Camera Information menu to view the status of each camera.

Device Info							Camera	Record	Network	HDD
Camera No	Camera Name	Status	Motion Detection	Tamper-pro	Video Loss	Video Exce				
A1	Camera 01	Enabled	Used	Not used	Not used	Used				
A2	Camera 02	Enabled	Not used	Not used	Not used	Used				
A3	Camera 03	Enabled	Not used	Not used	Not used	Used				
A4	Camera 04	Enabled	Not used	Not used	Not used	Used				

Figure 12.2 Camera Information Interface

12.1.3 Viewing Record Information

Steps:

1. Enter the System Information interface.
Menu > Maintenance > System Info
2. Click the **Record** tab to enter the Record Information menu to view the recording status and encoding parameters of each camera.

Device Info Camera Record Network HDD								
Camera No	Recording	Stream Typ	Frame Rate	Bitrate(Kbps)	Resolution	Record Typ	Encoding P	Redundant
A1	Used	Video & Au	30fps	129/512	352*240(CIF)	Normal	Normal	No
A2	Used	Video & Au	30fps	116/512	352*240(CIF)	Normal	Normal	No
A3	Used	Video & Au	30fps	64/512	352*240(CIF)	Normal	Normal	No
A4	Used	Video & Au	30fps	64/512	352*240(CIF)	Normal	Normal	No

Figure 12.3 Record Information Interface

12.1.4 Viewing Network Information

Steps:

1. Enter the System Information interface.
Menu > Maintenance > System Info
2. Click the **Network** tab to enter the Network Information menu to view the network information.

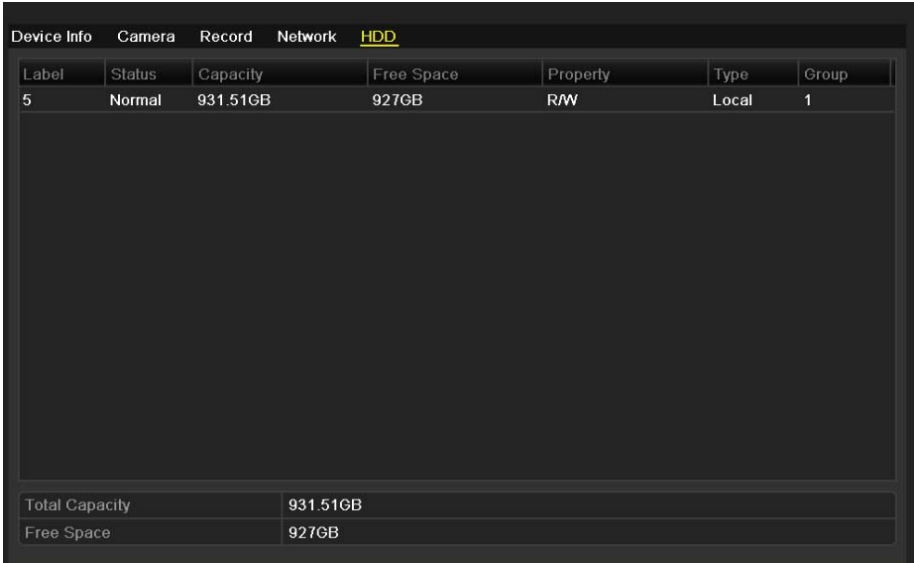
Device Info Camera Record Network HDD	
NIC	LAN1
IPv4 Address	172.6.24.64
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	172.6.24.1
IPv6 Address 1	fe80::240:48ff:fe90:cf13/64
IPv6 Address 2	
IPv6 Default Gateway	
Preferred DNS Server	0.0.0.0
Alternate DNS Server	0.0.0.0
Enable DHCP	Disabled
Enable PPPOE	Disabled
PPPOE Address	
PPPOE Subnet Mask	
PPPOE Default Gateway	

Figure 12.4 Network Information Interface

12.1.5 Viewing HDD Information

Steps:

1. Enter the System Information interface.
Menu > Maintenance > System Info
2. Click the **HDD** tab to enter the HDD Information menu to view the HDD status, free space, property, etc.



Device Info Camera Record Network <u>HDD</u>						
Label	Status	Capacity	Free Space	Property	Type	Group
5	Normal	931.51GB	927GB	R/W	Local	1
Total Capacity		931.51GB				
Free Space		927GB				

Figure 12.5 HDD Information Interface

12.2 Searching & Exporting Log Files

Purpose:

The operation, alarm, exception and information of the device can be stored in log files, which can be viewed and exported at any time.

Steps:

1. Enter the Log Search interface.

Menu > Maintenance > Log Search

The screenshot shows the 'Log Search' interface. At the top, there's a title bar 'Log Search'. Below it, there are four rows of search criteria: 'Start Time' (05-25-2012, 00:00:00), 'End Time' (05-25-2012, 23:59:59), 'Major Type' (All), and 'Minor Type' (All). Each row has a calendar icon and a clear button. Below the criteria is a table with columns: No., Major Type, Time, Minor Type, Parameter, Play, and Details. The table is currently empty. At the bottom left, it says 'Total: 0 P: 1/1'. At the bottom right, there are three buttons: 'Export', 'Search' (highlighted in yellow), and 'Back'.

No.	Major Type	Time	Minor Type	Parameter	Play	Details
-----	------------	------	------------	-----------	------	---------

Figure 12.6 Log Search Interface

2. Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.
3. Click the **Search** button to start searching log files.
4. The matched log files will be displayed on the list shown below.

Note: Up to 2000 log files can be displayed each time.



Log Search

Start Time	05-25-2012	00:00:00
End Time	05-25-2012	23:59:59
Major Type	All	
Minor Type	All	

No.	Major Type	Time	Minor Type	Parameter	Play	Details
1	Information	05-25-2012 08:55:25	HDD S.M.A.R.T.	N/A	—	✓
2	Operation	05-25-2012 08:55:26	Power On	N/A	—	✓
3	Information	05-25-2012 08:55:26	Local HDD Information	N/A	—	✓
4	Exception	05-25-2012 08:55:31	Input/Output Video Stan	N/A	⏮	✓
5	Information	05-25-2012 08:55:37	Start Recording	N/A	⏮	✓
6	Information	05-25-2012 08:55:38	Start Recording	N/A	⏮	✓
7	Information	05-25-2012 08:55:38	Start Recording	N/A	⏮	✓
8	Information	05-25-2012 08:55:38	Start Recording	N/A	⏮	✓
9	Operation	05-25-2012 08:56:38	Local Operation: Login	N/A	—	✓
10	Alarm	05-25-2012 09:11:24	Start Motion Detection	N/A	⏮	✓
11	Alarm	05-25-2012 09:11:31	Stop Motion Detection	N/A	⏮	✓
12	Alarm	05-25-2012 09:15:28	Start Motion Detection	N/A	⏮	✓
13	Alarm	05-25-2012 09:15:34	Stop Motion Detection	N/A	⏮	✓

Total: 29 P: 1/1

Figure 12.7 Log Search Results

5. You can click the  button of each log or double click it to view its detailed information. And you can also click the  button to view the related video files if available.

Log Information

Time	05-25-2012 08:55:31
Type	Exception--Input/Output Video Standard Mismatch
Local User	N/A
Host IP Address	N/A
Parameter Type	N/A
Camera No.	A1

Description:

N/A

Figure 12.8 Log Details

6. If you want to export the log files, click the **Export** button to enter the Export menu.



Figure 12.9 Export Log Files

7. Select the backup device from the dropdown list of **Device Name**.
8. Click the **Export** to export the log files to the selected backup device.

You can click the **New Folder** button to create new folder in the backup device, or click the **Format** button to format the backup device before log export.

Note:

- 1) Please connect the backup device to device before operating log export.
- 2) The log files exported to the backup device are named by exporting time, e.g.,
20110514124841logBack.txt.

12.3 Importing/Exporting Configuration Files

Purpose:

The configuration files of the device can be exported to local device for backup; and the configuration files of one device can be imported to multiple device devices if they are to be configured with the same parameters.

Steps:

1. Enter the Import/Export Configuration File interface.
Menu > Maintenance > Import/Export

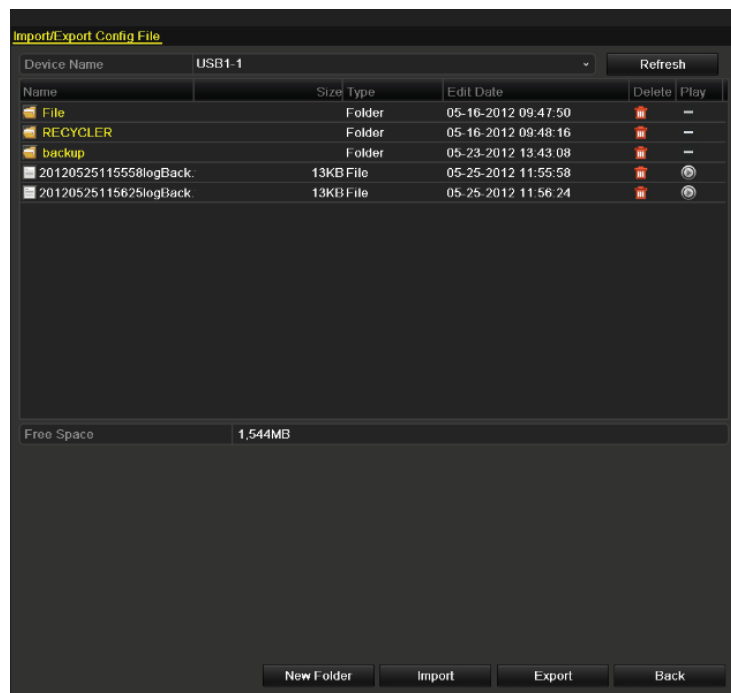


Figure 12.10 Import/Export Config File

2. Click the **Export** button to export configuration files to the selected local backup device.
3. To import a configuration file, select the file from the selected backup device and click the **Import** button.

After the import process is completed, you must reboot the device.

Note: After having finished the import of configuration files, the device will reboot automatically.

12.4 Upgrading System

Purpose:

The firmware on your device can be upgraded by local backup device or remote FTP server.

12.4.1 Upgrading by Local Backup Device

Steps:

1. Connect your device with a local backup device where the update firmware file is located.
2. Enter the Upgrade interface.
Menu > Maintenance > Upgrade
3. Click the **Local Upgrade** tab to enter the local upgrade menu.

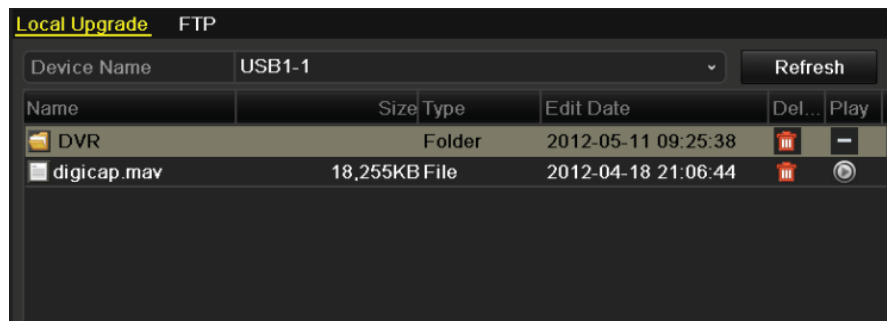


Figure 12.11 Local Upgrade Interface

4. Select the update file from the backup device.
5. Click the **Upgrade** button to start upgrading.
6. After the upgrading is complete, reboot the device to activate the new firmware.

12.4.2 Upgrading by FTP

Before you start:

Configure PC (running FTP server) and device to the same Local Area Network. Run the 3rd-party TFTP software on the PC and copy the firmware into the root directory of TFTP.

Steps:

1. Enter the Upgrade interface.
Menu > Maintenance > Upgrade
2. Click the **FTP** tab to enter the local upgrade interface.

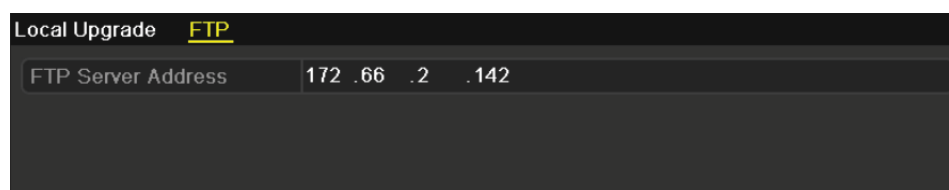


Figure 12.12 FTP Upgrade Interface

3. Enter the FTP Server Address in the text field.
4. Click the **Upgrade** button to start upgrading.
5. After the upgrading is complete, reboot the device to activate the new firmware.

12.5 Restoring Default Settings

Steps:

1. Enter the Default interface.

Menu > Maintenance > Default

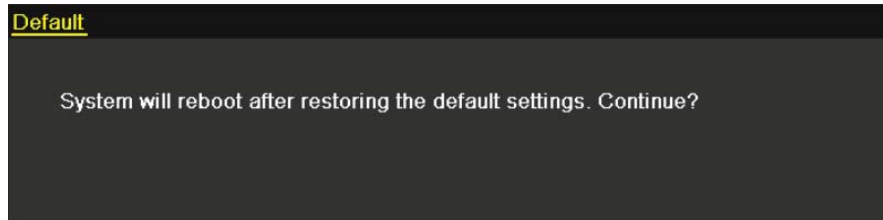


Figure 12.13 Restore Factory Default

2. Click the **OK** button to restore the default settings.

Note: Except the network parameters (including IP address, subnet mask, gateway, MTU and server port), all other parameters of the device will be restored to factory default settings.

C H A P T E R 1 3

Others

13.1 Configuring General Settings

Purpose:

You can configure the BNC output standard, VGA/HDMI output resolution, mouse pointer speed, etc.

Steps:

1. Enter the General Settings interface.
Menu > Configuration > General
2. Select the **General** tab.



Figure 13.1 General Settings Interface

3. Configure the following settings:
 - **Language:** The default language used is *English*.
 - **CVBS Output Standard:** Select the CVBS output standard to NTSC or PAL, which must be the same with the video input standard.
 - **Resolution:** Select the VGA/HDMI output resolution, which must be the same with the resolution of the monitor screen.
 - **Time Zone:** Select the time zone.
 - **Date Format:** Select the date format.
 - **System Date:** Select the system date.
 - **System Time:** Select the system time.
 - **Mouse Pointer Speed:** Set the speed of mouse pointer; 4 levels are configurable.
 - **Enable Wizard:** Enable/disable the Wizard when the device starts up.
 - **Enable Password:** Enable/disable the use of the login password.
4. Click the **Apply** button to save the settings.

13.2 Configuring DST Settings

Steps:

1. Enter the General Settings interface.
Menu > Configuration > General
2. Choose **DST Settings** tab.

General		DST Settings		More Settings	
<input type="checkbox"/> Auto DST Adjustment					
Enable DST	<input checked="" type="checkbox"/>				
From	Apr	1st	Sun	2	: 00
To	Oct	last	Sun	2	: 00
DST Bias	60 Minutes				

Figure 13. 2 DST Settings Interface

You can check the checkbox before the **Auto DST Adjustment** item.

Or you can manually check the Enable DST checkbox, and then you choose the date of the DST period.

13.3 Configuring More Settings

Steps:

1. Enter the General Settings interface.
Menu > Configuration > General
2. Click the **More Settings** tab to enter the More Settings interface.

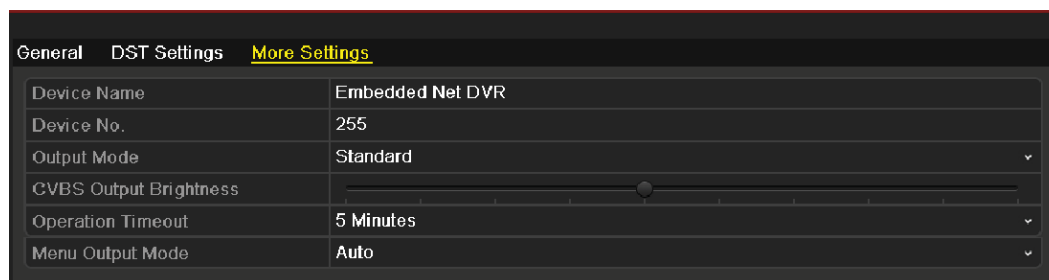


Figure 13.3 More Settings Interface

3. Configure the following settings:
 - **Device Name:** Edit the name of device.
 - **Device No.:** Edit the serial number of device. The Device No. can be set in the range of 1~255, and the default No. is 255.
 - **Output Mode:** Select the output mode to: Standard, Bright, Gentle or Vivid.
 - **CVBS Output Brightness:** Adjust the video output brightness.
 - **Operation Timeout:** Set timeout time for menu inactivity. E.g., when the timeout time is set to 5 *Minutes*, then the system will exit from the current operation menu to live view screen after 5 minutes of menu inactivity.
 - **Menu Output Mode:** Select the menu output mode to Auto, HDMI/VGA or Main CVBS.
4. Click the **Apply** button to save the settings.

13.4 Managing User Accounts

Purpose:

There is a default account in the device: *Administrator*. The *Administrator* user name is *admin* and the password is *12345*. The *Administrator* has the permission to add and delete user and configure user parameters.

13.4.1 Adding a User

Steps:

1. Enter the User Management interface.

Menu > Configuration > User

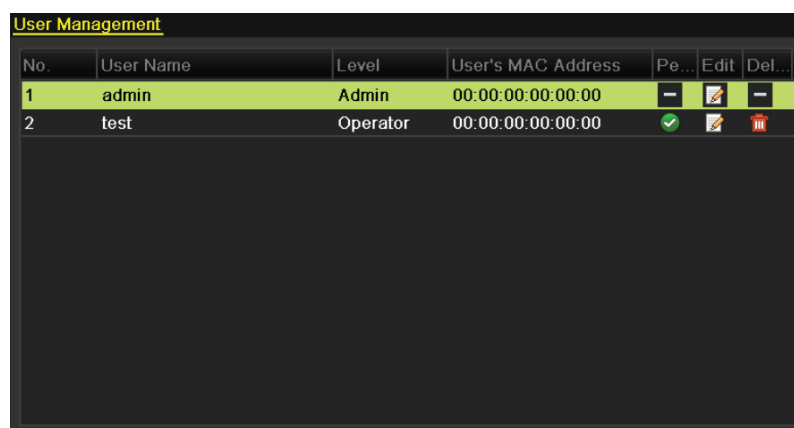
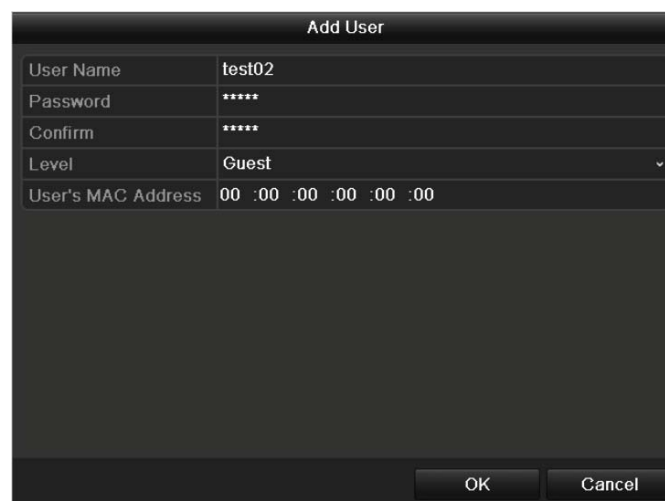


Figure 13.4 User Management Interface

2. Click the **Add** button to enter the Add User interface.



Add User	
User Name	test02
Password	*****
Confirm	*****
Level	Guest
User's MAC Address	00 :00 :00 :00 :00 :00

OK Cancel

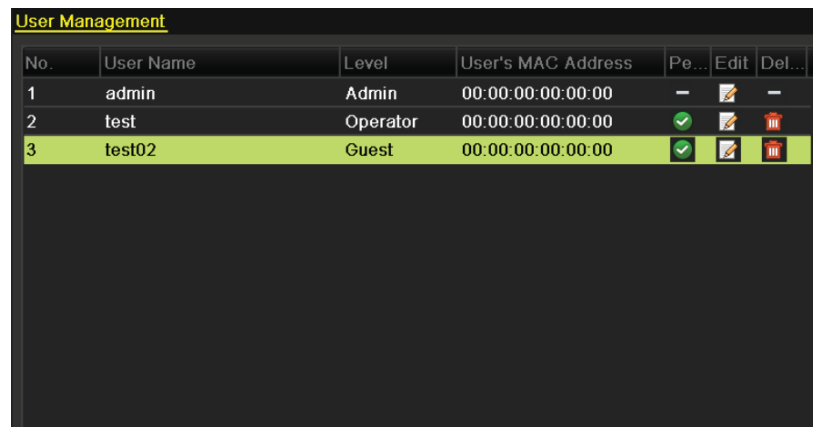
Figure 13.5 Add User Menu

3. Enter the information for new user, including **User Name**, **Password**, **Level** and **User's MAC Address**.
Level: Set the user level to Operator or Guest. Different user levels have different operating permission.

- **Operator:** The *Operator* user level has permission of Local Log Search in Local Configuration, Remote Log Search and Two-way Audio in Remote Configuration and all operating permission in Camera Configuration.
- **Guest:** The *Guest* user has permission of Local Log Search in Local Configuration, Remote Log Search in Remote Configuration and only has the local/remote playback in the Camera Configuration.

User's MAC Address: The MAC address of the remote PC which logs onto the device. If it is configured and enabled, it only allows the remote user with this MAC address to access the device.

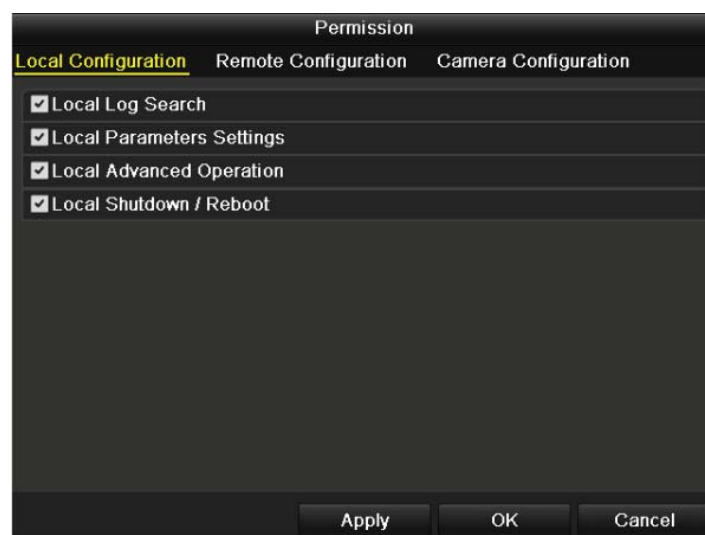
- Click the **OK** button to save the settings and go back to the User Management interface. The added new user will be displayed on the list, as shown in Figure 13.6.



No.	User Name	Level	User's MAC Address	Pe...	Edit	Del...
1	admin	Admin	00:00:00:00:00:00	—		—
2	test	Operator	00:00:00:00:00:00			
3	test02	Guest	00:00:00:00:00:00			

Figure 13.6 Added User Listed in User Management Interface

- Select the user from the list and then click the  button to enter the Permission settings interface.



Permission

Local Configuration Remote Configuration Camera Configuration

- ☒ Local Log Search
- ☒ Local Parameters Settings
- ☒ Local Advanced Operation
- ☒ Local Shutdown / Reboot

Apply OK Cancel

Figure 13.7 User Permission Settings Interface

- Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

Local Configuration

- Local Log Search: Searching and viewing logs and system information of device.
- Local Parameters Settings: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.

- Local Advanced Operation: Operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- Local Shutdown /Reboot: Shutting down or rebooting the device.

Remote Configuration

- Remote Log Search: Remotely viewing logs that are saved on the device.
- Remote Parameters Settings: Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Remote Serial Port Control: Configuring settings for RS-485 ports.
- Remote Video Output Control: Sending remote control panel signal.
- Two-Way Audio: Realizing two-way radio between the remote client and the device.
- Remote Alarm Control: Remotely arming (notify alarm and exception message to the remote client) and controlling the alarm output.
- Remote Advanced Operation: Remotely operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- Remote Shutdown/Reboot: Remotely shutting down or rebooting the device.

Camera Configuration

- Remote Live View: Remotely viewing live video of the selected camera (s).
- Local Manual Operation: Locally starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Remote Manual Operation: Remotely starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Local Playback: Locally playing back recorded files of the selected camera (s).
- Remote Playback: Remotely playing back recorded files of the selected camera (s).
- Local PTZ Control: Locally controlling PTZ movement of the selected camera (s).
- Remote PTZ Control: Remotely controlling PTZ movement of the selected camera (s).
- Local Video Export: Locally exporting recorded files of the selected camera (s).

Note: You should select the camera (s) on the Camera Configuration interface for the operation permission configured.

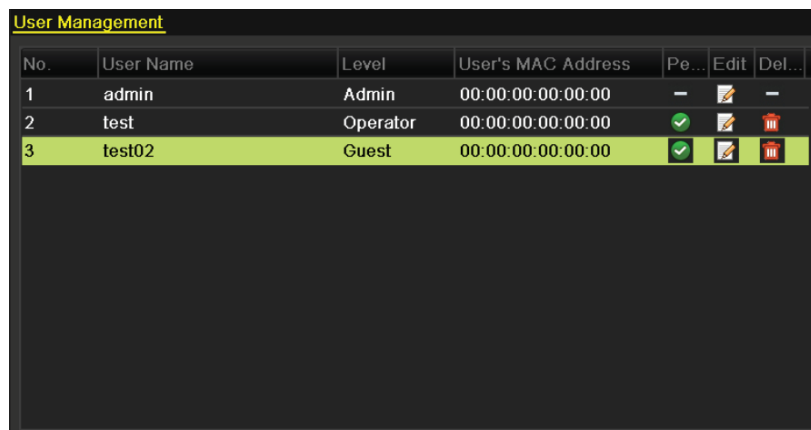
7. Click the **OK** button to save the settings and exit interface.

Note: Only the *admin* user account has the permission of restoring factory default parameters.

13.4.2 Deleting a User


Steps:

1. Enter the User Management interface.
Menu > Configuration > User
2. Select the user to be deleted from the list.



No.	User Name	Level	User's MAC Address	Pe...	Edit	Del...
1	admin	Admin	00:00:00:00:00:00	—		—
2	test	Operator	00:00:00:00:00:00			
3	test02	Guest	00:00:00:00:00:00			

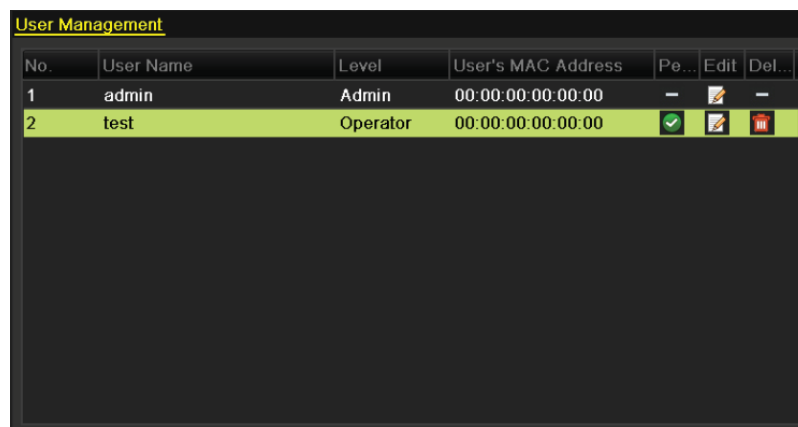
Figure 13.8 Delete a User

3. Click the  icon to delete the selected user.

13.4.3 Editing a User


Steps:

1. Enter the User Management interface.
Menu > Configuration > User
2. Select the user to be edited from the list.



No.	User Name	Level	User's MAC Address	Pe...	Edit	Del...
1	admin	Admin	00:00:00:00:00:00	—		—
2	test	Operator	00:00:00:00:00:00			

Figure 13.9 Edit a User

3. Click the  icon to enter the Edit User interface.



Edit User	
User Name	test
Change Password	<input checked="" type="checkbox"/>
Password	*****
Confirm	*****
Level	Operator
User's MAC Address	00 :00 :00 :00 :00 :00

Buttons: Apply, OK, Cancel

Figure 13.10 Edit User Interface

4. Edit the user information, including user name, password, level and MAC address.
5. Click the **OK** button to save the settings and exit the menu.

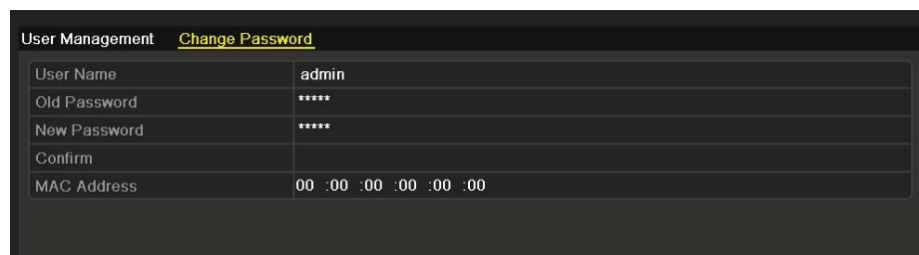
13.4.4 Changing Password of Admin

Purpose:

The password of the *admin* user account can be changed in the User Management menu.

Steps:

1. Enter the User Management interface.
Menu > Configuration > User
2. Click the **Change Password** tab to enter the Change Password menu.



User Management <u>Change Password</u>	
User Name	admin
Old Password	*****
New Password	*****
Confirm	
MAC Address	00 :00 :00 :00 :00 :00

Figure 13.11 Change Password

3. Enter the old password, new password and confirm password on the menu.
4. Click the **Apply** button to save the changes.

13.5 Logging out/Shutting down/Rebooting Device

Steps:

1. Enter the Shutdown interface.

Menu > Shutdown

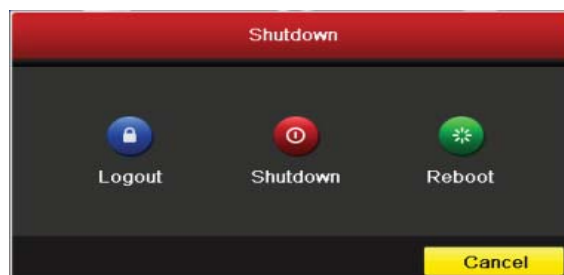


Figure 13.12 Shutdown Menu

2. Click the **Logout** button to log out, or
Click the **Shutdown** button to shut down the device, or
Click the **Reboot** button to reboot the device.

Note: After you have logged out the system, menu operation on the screen is invalid. It is required a user name and password to login the system.

CHAPTER 14

Appendix

Glossary

- **Dual Stream:** Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the device, with the main stream having a maximum resolution of 4CIF and the sub-stream having a maximum resolution of CIF.
- **DVR:** Acronym for Digital Video Recorder. A DVR is device that is able to accept video signals from analog cameras, compress the signal and store it on its hard drives.
- **HDD:** Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.
- **DHCP:** Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.
- **HTTP:** Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network
- **PPPoE:** PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.
- **DDNS:** Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.
- **Hybrid DVR:** A hybrid DVR is a combination of a DVR and NVR.
- **NTP:** Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.
- **NTSC:** Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60Hz.
- **NVR:** Acronym for Network Video Recorder. An NVR can be a PC-based or embedded system used for centralized management and storage for IP cameras, IP Domes and other DVRs.
- **PAL:** Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50Hz.
- **PTZ:** Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.
- **USB:** Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

FAQ

- **Why does my device make a beeping sound after booting?**

The possible reasons for the warning beep on the device are as follows:

- a) There is no HDD installed in the device.
- b) The HDD is not initialized.
- c) HDD error

To cancel the beeping sound and use the device without HDD, enter the Exception Settings interface. For detailed information, see Chapter Handling Exception.

- **Why does the device seem unresponsive when operating with the IR remote control?**

Please read through the section *Using the IR Remote Control*, and check:

- a) The batteries are installed correctly in the remote, making sure that the polarities of the batteries are not reversed.
- b) The batteries are fresh and are not out of power.
- c) The remote has not been tampered with.
- d) There are no fluorescent lamps in use nearby.

- **Why does the PTZ seem unresponsive?**

If the PTZ seem unresponsive, please check:

- a) The RS-485 cable is properly connected.
- b) The dome decoder type is correct.
- c) The dome decoder speed configuration is correct.
- d) The dome decoder address bit configuration is correct.
- e) That the main board RS-485 interface is not broken.

- **Why is there no video recorded after setting the motion detection?**

If there are no recorded video after setting the motion detection, please check:

- a) The recording schedule is setup correctly by following the steps listed in *Configuring Record*.
- b) The motion detection area is configured correctly (See *Configuring Motion Detection*).
- c) The channels are being triggered for motion detection (See *Configuring Motion Detection*).

- **Why doesn't the device detect my USB export device for exporting recorded files?**

There's a chance that the device and your USB device is not compatible. Please refer to our company's website to view a list of compatible devices.

- **My device is in Live View mode and the menu does not show up. It does not respond to the mouse or the IR remote control.**

Your device may be in auxiliary mode. This occurs when the **VOIP** button is pressed on IR remote control. To return to the previous mode of operation, press the **VOIP** button again and then press **Enter** button on the IR remote control.