

# SENTIENT<sup>•</sup>PRO

SUPERIOR SECURITY



**A19RQ / A20RQ**

# **USER'S MANUAL**

V1.0 11.2014

# Welcome

Thank you for purchasing our **A-HD CCTV kit**.

This user's manual is designed to be a reference tool for the operation of your system.

Do not worry; you do not have to read this entire manual to be up and running. There should be a quick start guide found with your DVR device, which will show you how to setup the connections to the DVR correctly and how to setup a remote monitoring connection.

Here you can find information about the corresponding DVR's features and functions, as well as a detailed menu tree.

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

# BEFORE YOU BEGIN

## Important Safeguards and Warnings

### 1 . Electrical safety

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

### 2 . Transportation security

- Heavy stress, violent vibration or water splash should be avoided during transportation, storage and installation.

### 3 . Installation

- Keep upright. Handle with care.
- Do not apply power to the DVR before completing installation.
- Do not place objects on top of the DVR

### 4 . Qualified engineers needed

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

### 5 . Environment

- The DVR should be installed in a cool, dry place away from direct sunlight and inflammable or explosive substances, etc.
- This product should be transported, stored and operated in an environment ranging from 0°C to 55 °C.
- Do not place heavy objects on top of the DVR.
- Avoid locations that are subjected to heavy vibrations, e.g. next to a washing machine.

### 6. Accessories

- Be sure to use all the accessories available in the Sentient range.
- Before installation, please open the package and check all the components are included.
- Contact your local Maplin outlet if something is broken or missing in your package.

### 7. Lithium battery

- Improper battery use may result in fire, explosion, or personal injury.
- When replacing the battery, please make sure you use the same model. (CR2032 Motherboard battery).

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## 4 FAQ

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# 1 FEATURES & QUICK SETUP

## 1.1 Overview

The Sentient A-HD DVR kits are an excellent high definition 720p digital monitoring product designed for security surveillance for a small business or home. One of the main features that make this type DVR standout from all others is its ability to transmit high speed video data from the camera to the device up to 500 metres away. This is very useful if you are trying to get the camera to cover a larger area.

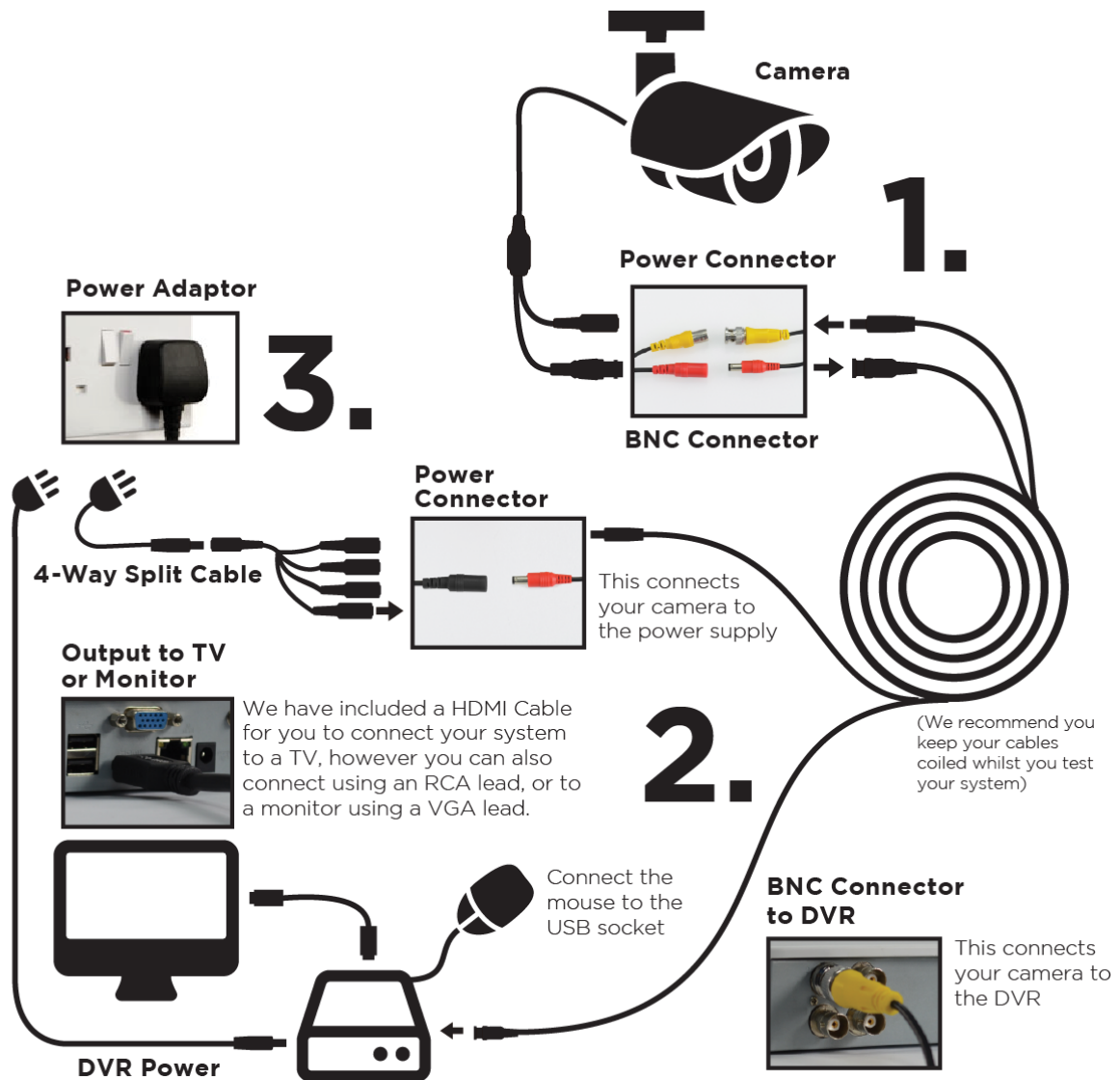
The DVR has an embedded Linux operating system to maintain reliable and stable operation. It utilises the best H.264 compression algorithm in the industry and G.711 audio compression technology gives high quality, low bit stream sound that captures audio in high detail. Unique frame by frame play function is suitable for detailed analysis. It has various functions such as record, playback and monitor, which can work simultaneously together to can guarantee audio-video synchronisation. The DVRs in this range has advanced network data transmission function technology.

## 1.2 Features

- **Real-time monitoring:** BNC analog output, VGA and HDMI ports are provided so you can use a display monitor to view live and recorded footage. System Supports simultaneous VGA/HDMI video output.
- **Storage function:** Uses a special data encryption format to avoid video data compromisation and keeps the system secure from unauthorised access and malicious attempts to damage system software.
- **Compression format:** Supports multiple-channel audio and video recording. Internal hardware decodes the audio and video signal from each channel to maintain video and audio synchronisation.
- **Backup function:** Backup and save video footage & snapshot backup to an external USB device (such as flash disk, portable HDD, burner). You are also able to remotely transfer and store data to a remote computer if you have setup a remote connection to the DVR.
- **Record playback function Supports :**
  - Simultaneous real-time recording to independent channels. Supports search, forward play, network monitor, record search, download, and more.
  - Various playback modes: slow play, fast play, backward play and frame by frame play.

- Time title overlay so that you can view an accurate time of recorded/live event.
- Specified zone enlargement (i.e. select motion detection areas).
- **Remote network operation connection**  
Connect to your DVR via a smart phone or smart tablet, to remotely monitor your CCTV system, through our simple setup process.

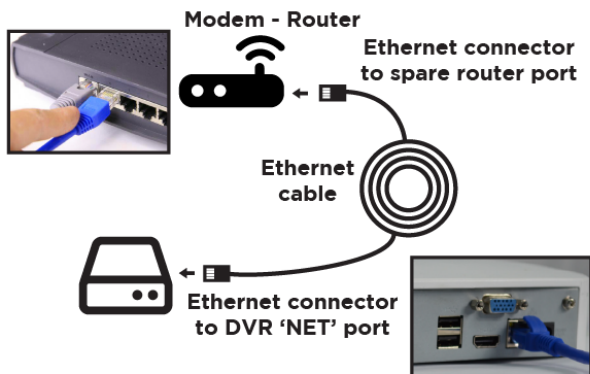
### 1.3 Quick Setup Diagram



## 1.4 Smart Phone Setup for Live View & Remote Playback

For the convenience of monitoring your Sentient security system on the move via your smart phone we have provided a quick and simple remote connection setup service. Please follow the steps below closely to successfully setup the connection for live view and remote playback.

- 1. Internet connection**  
Connect the Ethernet cable into the 'Net' port on the rear of the device, then connect the other end into one of the spare ports on your modem-router, as shown below.



- 2. Enable P2P on your DVR**  
Turn the power on to the DVR device. When it has fully booted up, from the main menu select 'Setup', then 'Network' and finally 'P2P'. See image below:



Click the 'Enable' box to enable the P2P connection on the device.



Click 'OK' to save.

- 3. Download and install Sentient Pro app to your smart phone**  
To be taken to the app download link please scan the QR code below that corresponds to the type of smartphone device that you use:



ANDROID APP



IOS (APPLE) APP

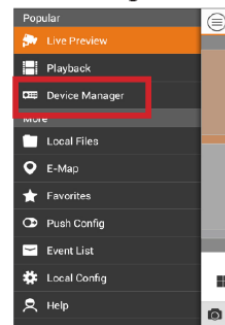


- 4. Operating Sentient Pro smartphone app**  
When you have completed installation of the app to your smartphone, open the app.

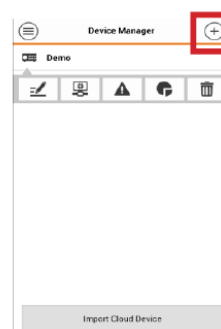
### 4a. Select drop down main menu



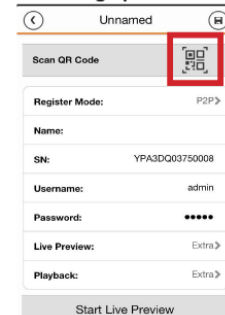
### 4b. Select 'Device Manager'



### 4c. Add new device



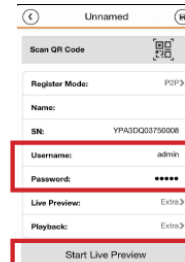
### 4d. Select QR code icon to bring up scanner



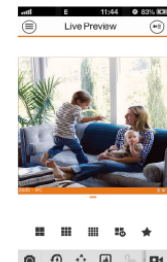
### 4e. Scan QR code shown in the P2P section of the Network menu (you can scan the QR code shown on the monitor screen).



### 4f. Please input: Username: admin Password: 888888 Then select 'Start Live Preview'



### 4g. You will now be able to view the live camera feeds from your DVR



**Success! You should now be fully setup.**



## 1.5 Specifications

	Parameter	4-Channel
System	Main Processor	High-performance industrial embedded micro controller
	OS	Embedded LINUX
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously
	Interface	User-friendly graphical user interface
	Input Devices	Front panel, USB mouse, remote control
	Input Method	Arabic number, English character, donation and extension Chinese (optional)
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.
Compression Standard	Video Compression	H.264
	Audio Compression	G711A, G711U , PCM
Video monitor	Video Input	4-CH composite video input: (NTSC/PAL) BNC (1.0V <sub>P-P</sub> , 75Ω)
	Video Output	1-ch VGA output. 1-ch HDMI output. Supports VGA/HDMI video output at the same time.
	Video Standard	Supports PAL/NTSC.
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel
	Video Partition	1/4 windows (Optional)
	Monitor Touring	Supports monitor tour functions such as alarm, motion detection, and schedule auto control.
	Resolution (PAL/NTSC)	PAL/NTSC Real-time monitor: 720P 1280 x 720
		Playback: All-ch: 720P 1280*720, 960H 960 x576/960x480, D1 704x576/704x480, HD1 352x576/352x480, 2CIF 704x288/704x240, CIF 352x288/ 352x240 , QCIF 176x144/176x120
		Supports dual streams: extra stream resolution CIF 352x288/ 352x240, QCIF 176x144/176x120.
	Image Quality	6-level image quality (Adjustable)
	Privacy mask	Supports one privacy mask of user-defined size in full screen. Supports max 4 zones.
	Image Information	Channel information, time information and privacy mask zone.

	TV Adjust	Adjust TV output zone suitable to anamorphic video.
	Channel Lock	Cover secret channel with black screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio		N/A
Hard disk	Hard Disk	1 built-in SATA port. Supports 1 HDD up to 4TB
	Hard Disk Occupation	Video: 56-900MByte/h
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.
	Storage Mode	Supports channel record quota setup
	Recording Length	1 to 120 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.
	Record Search	Various search engines such as time, type and channel.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Supports file continuous play, when a file is end system auto plays the next file in the current channel
	Playback Way	Supports mark playback
	Multi-channel Playback	There is 1/4/9/16-channel playback mode. (It may vary due to different series.)
	Window Zoom	Switch between self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.
Backup function	Backup Mode	HDD backup
		Supports peripheral USB backup device. (Flash disk, portable disk and etc.)
		Supports network download and save
		View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to initiate remote maintenance.

Network Function	Network control	View alarm information such as motion detection and video loss via client.
		Supports network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Bidirectional audio.
		Zero-channel encoding
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record, external alarm or screen message prompt.
	Video Loss	Alarm can activate screen message prompt.
Interface	USB Interface	2 USB 2.0 ports.
	RS485	PTZ control port. Supports various protocols.
	Network connection	1 RJ45 10M/100M self-adaptable Ethernet port
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Supports various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Supports user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR
	Power	DC 12V

General Parameter	Power Consumption	≤15W (With adapter, exclude HDD)
	Working Temperature	0°C— +55°C
	Working Humidity	10%—90%
	Air Pressure	86kpa—106kpa
	Dimension	SMART 1U case. 205(W) x205 (D) x41mm(H)
	Weight	1.25KG (Excluding HDD)
	Installation Mode	Desktop installation

## 2 Top and Rear Panels

This section provides information about front panel and rear panel.

### 2.1 Top Panel

The top panel is shown as below. See Figure 2-1.

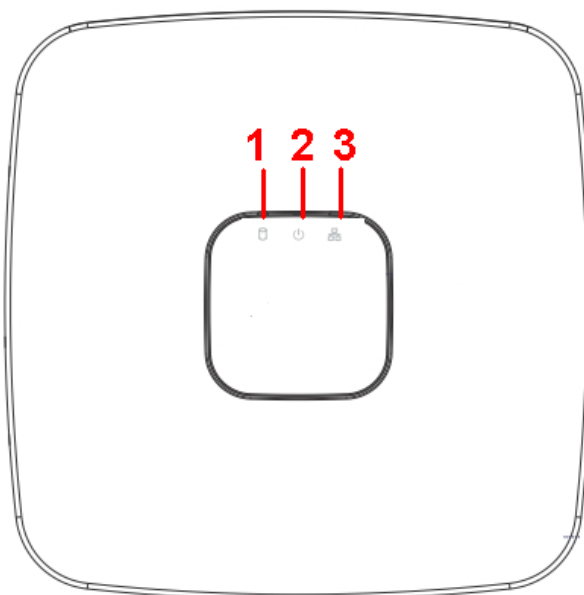


Figure 2-1

Please refer to the following sheet for detailed information:

SN	Name	Function
1	HDD status indicator light	The red lights up when the HDD malfunctions.
2	Power indicator light	The red lights up when the power connection is OK.
3	Network status indicator light	The red light lights up when network connection is lost.

## 2.2 Rear Panel

See Figure 2-2 for the rear panel view for the 4 Channel DVR.

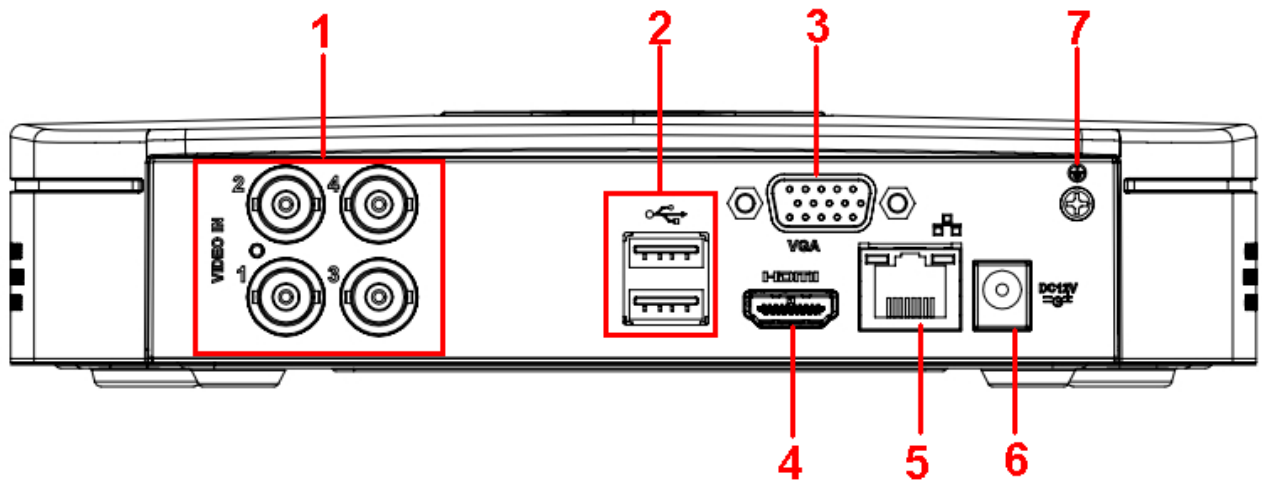






Figure 2-2

Please refer to the following sheet for detailed information:

SN	Icon	Name	Note
1	VIDEO IN	Video input port	Connect to analog camera, video input signal.
2		USB2.0 port	Connect to USB storage device, mouse, burning DVD-ROM, etc.
3	VGA	VGA video output port	VGA video output port. Output analogue video signal. Can connect to the monitor to view analogue video output.
4	HDMI	High definition media interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the display monitor with a HDMI port
5		Network port	100M Ethernet port
6		Power input port	Input 12V DC.
7		GND	Ground end

## 2.3 Mouse Operation

Please refer to the following sheet for mouse operation instruction:

Left click mouse	When you have selected one menu item, left click mouse to view menu content.
	Modify checkbox or motion detection status.
	Click the 'Combo' box to pop up dropdown list
	In the input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalised). Here the ← stands for backspace button. _ stands for space button.
	In English input mode: _ stands for input a backspace icon and ← stands for deleting the previous character.
	<p>The image shows two keyboard layouts. The top layout is a standard QWERTY keyboard with a backspace key (←) and a space key (_). The bottom layout is a similar keyboard but with a different backspace key (←) and a space key (_).</p>
	In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.
Double left click mouse	Implement special control operation such as double click one item in the file list to playback the video.
	In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.
Right click mouse	In real-time monitor mode, this action pops up shortcut menu.
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

## 3 Overview of Navigation and Controls

Before operation, please make sure:

- You have properly installed all the cable connections.
- The provided input power and the device power are matched.
- The external power should be DC 12V or AC90~264V 50+2% Hz.
- Always use the stable current, if necessary using a UPS system is one of the best alternative measures.

### 3.1 Login, Logout & Main Menu

#### 3.1.1 Login

After system has booted up, system pops up the startup wizard, see Figure 3-1.



Figure 3-1

Click the Cancel button; you can go to the system login interface.

The system login interface is shown as in Figure 3-2.

System consists of four accounts:

- **Username:** admin. **Password:** admin. (administrator, local and network)
- **Username:** 888888. **Password:** 888888. (administrator, local only)
- **Username:** 666666. **Password:** 666666 (Lower authority user who can only monitor, playback, backup and etc.)
- **Username:** default. **Password:** default (hidden user). Hidden user 'default' is for system use only and can not be deleted. When there is no login user, hidden user 'default' is the automatic login user name & password. You can set some rights (such as monitor) for this user so that you can view some video channel views without fully logging in.

You can use USB mouse, front panel, or keyboard to input.



Input method: Click the image of the keyboard to switch between numeral, English character (small/capitalized) and denotation.

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

Failure to login in after three attempts will result in the system alarm being triggered and after five failed logins the account will be locked!

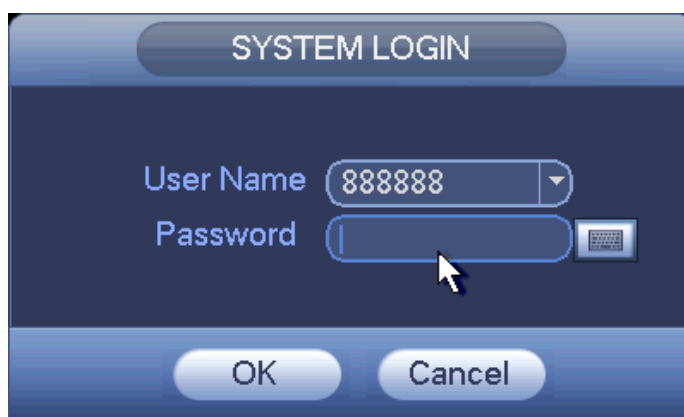


Figure 3-2

Click OK button, you can go to General interface. See Figure 3-3.



Figure 3.3

Click Next button, you will then go to network interface. See Figure 3-4 for detailed information.

Figure 3-4 shows the NETWORK configuration window. The window is titled "NETWORK". It contains the following fields and controls:

- Net Mode:** Multi-address (dropdown)
- Default Ethernet Port:** Ethernet1 (dropdown)
- Ethernet Card:** Ethernet1 (dropdown)
- IP Version:** IPv4 (dropdown)
- MAC Address:** 20:13:10:13:16:33 (text field)
- Mode:** STATIC (selected), DHCP (radio button)
- IP Address:** 10 . 15 . 6 . 145 (text field)
- Subnet Mask:** 255 . 255 . 0 . 0 (text field)
- Default Gateway:** 10 . 15 . 0 . 1 (text field)
- Preferred DNS:** 10 . 1 . 2 . 80 (text field)
- Alternate DNS:** 10 . 1 . 2 . 81 (text field)
- MTU:** 1500 (text field)
- LAN Download:** (unchecked checkbox)

Buttons at the bottom: Default, Pre Step, Next Step, Cancel.

Figure 3-4

Click Next button, you will then go to Schedule interface. See Figure 3-5 for detailed information.

Figure 3-5 shows the SCHEDULE configuration window. The window is titled "SCHEDULE". It contains the following fields and controls:

- Record / Snapshot:** (Tabs)
- Channel:** 1 (dropdown)
- PreRecord:** 4 (text field) s
- Redundancy:** (unchecked checkbox)
- Legend:** Regular (checked), MD, Alarm, MD&Alarm
- Schedule Grid:** Rows: All, Sun, Mon, Tue, Wed, Thu, Fri, Sat, Holiday. Columns: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24. All rows show a green bar across the entire width, indicating a "Regular" schedule.
- Buttons:** Default, Copy, Apply, Pre Step, Finished, Cancel.

Figure 3-5

Click Finish button, system will pop up a dialogue box. Click the OK button, the startup wizard will now be complete. See Figure 3-6.



Figure 3-6

### 3.1.2 Auto Resume after Power Failure

The system can automatically backup video and resume previous working status after power failure.

### 3.1.3 Replace Button Battery

Please make sure to use the same battery model if possible.

We recommend replace battery regularly (e.g. after one-year) to guarantee system time accuracy.

**Note: Before replacement, please save the system setup, otherwise, you may lose the data completely!**

## 3.2 Live Viewing

After you have logged in, the system is in live viewing mode. You can see system date, time and channel name. If you want to change system date and time, you can refer to general settings (Main Menu->Setting->System->General). If you want to modify the channel name, please refer to the display settings (Main Menu->Camera->CAM name).

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

#### Tips

- Preview drag: If you want to change position of channel 1 and channel 16 when you are previewing, you can left click mouse in the channel 1 and then drag to channel 16, release mouse you can switch channel 1 and channel 16 positions.

- Use mouse middle button to control window split: You can use mouse middle button to switch window split amount.

### 3.2.1 Preview Control

The preview control function has the following features:

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

You can follow the contents listed below for the operation instructions:



### 3.2.2 Preview control interface


Move you mouse to the top centre of the video of current channel, you will see that the system pops up the preview control interface. See Figure 3-7. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.



Figure 3-7

You can refer to the following sheet for detailed information:

SN	Name	Function
1	Realtime playback	<ul style="list-style-type: none"> <li>• This isto playback the previous 5-60 minutes record of current channel.</li> <li>• Please go to the Main Menu-&gt;Setting-&gt;System-&gt;General to set real-time playback time.</li> <li>• System may pop up a dialogue box if there is no such record in current channel.</li> </ul>
2	Digital zoom	<ul style="list-style-type: none"> <li>• This isto zoom into specified zone of current channel. It supports multiple channel zoom.</li> <li>• Click the button:  and the button will then be shown like this: </li> </ul>

		<p>Drag the mouse to select a zone(green box will appear), you can view an interface shown below:</p>  <p>Put the curser at the centre of the zone you want to zoom in, hold down the scroll wheel and move the mouse.</p>
3	Manual record function	<p>This isto backup the video of current channel to the USB device. System cannot backup the video from multiple channels at the same time.</p> <ul style="list-style-type: none"> <li>• Click this button to start recording to USB device.</li> <li>• Click it again and the system stops recording. You will then be able to find the file on the USB device.</li> </ul>
4	Manual Snapshot	<p>Click this button to take a single frame snapshot of the video footage, up to 5 times. The snapshot will be saved to the USB device or HDD.</p> <p>You can go to the search interface to view</p>
5	Mute	<p>Click this button to mute audio. Click it again to enable the audio function when in preview.</p> <p>Please note this function is for one-window mode only.</p>

### 3.3 Right Click Menu

On the preview interface, right click mouse, you can view menu interface shown as in Figure 3-8.

**Tip:** After you go to the corresponding interface, right click mouse to go back to the upper-level.

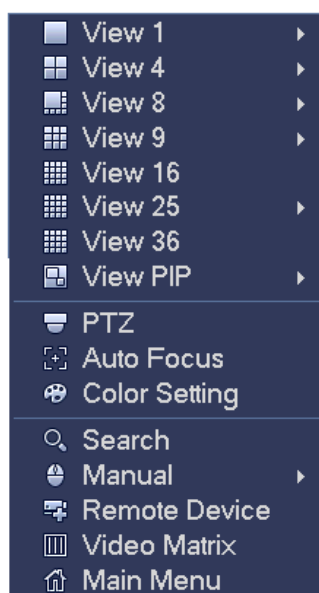


Figure 3-8

### 3.3.1 Window Switch

System supports 1/4-window. You can select from the dropdown list. See Figure 3-9.

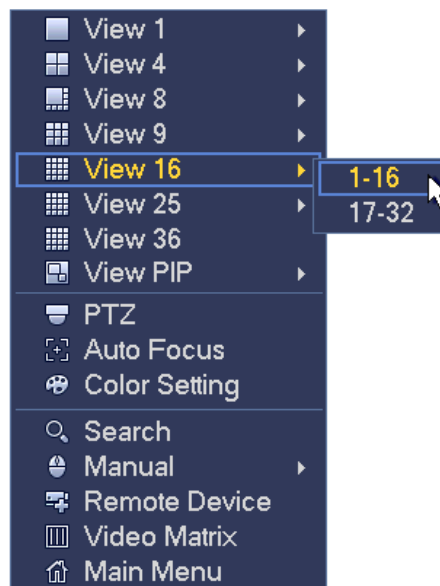


Figure 3-9

### 3.3.2 PIP

PIP stands for Picture-In-Picture, which is a function that allows you to have a smaller window, inside the main window-1, showing footage from another camera. The smaller window still supports playback, digital zoom, general play controls, etc.

- **Window switch:** Double click the small window, you can switch the position of the large window and the small window.
- **Small-window drag:** Left click the small window, you can drag it to any position you desire.
- **Digital zoom:** Move the mouse to the margin, you can drag to zoom in or out.

On the preview interface of the channel 1, right click mouse and then select channel 3, you can overlay video from channel 3 on the channel 1. See Figure 3-10 and Figure 3-11.

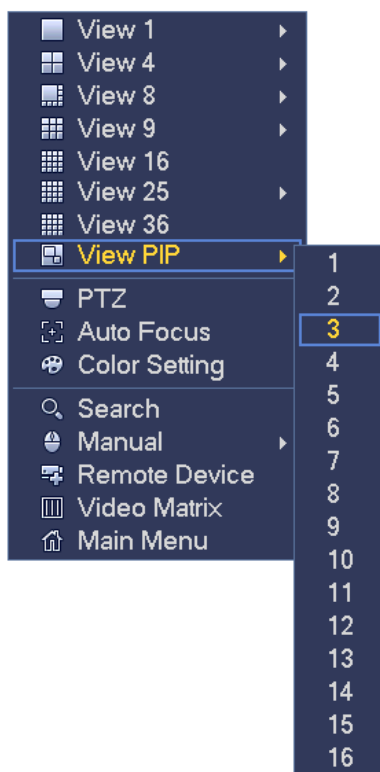




Figure 3-10



Figure 3-11

Go to the window-1 mode, on the navigation bar, click  , you can see the video on the large window and the video from the next channel is the default video in the small window.

If you have set the PIP function, you can click  to view the last edited PIP video.

### 3.3.3 Colour

Here you can set hue, brightness, contrast, saturation, gain, white level, color mode and etc. See Figure 3-21.



Figure 3-21

Please refer to the following sheet for detailed information:

Item	Note
Period	There are two periods in one day. You can set different sharpness, brightness, and contrast setup for the different periods.
Effective Time	Check the box here to enable this function and then set period time.
Sharpness	<ul style="list-style-type: none"><li>• The value here is to adjust the clarity of the edges within the video.</li><li>• The value ranges from 0 to 100. The larger the value is, the clearer the edge is and vice versa.</li><li>• Please note there will be image noise if the value is too high. The default value is 50 and the recommended value ranges from 40 to 60.</li></ul>
Brightness	<ul style="list-style-type: none"><li>• This is to adjust monitor window brightness. The value ranges from 0 to 100. The default value is 50.</li><li>• The larger the number, the brighter the video is.</li><li>• When you input the value here, the brightness and the dark sections of the video will be adjusted accordingly. You can use this function when the whole</li></ul>



	<p>video is too dark or too bright.</p> <ul style="list-style-type: none"> <li>• Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.</li> </ul>
Contrast	<ul style="list-style-type: none"> <li>• This is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50.</li> <li>• The larger the number, the higher the contrast is. You can use this function when the whole video brightness is OK but the contrast is not totally correct.</li> <li>• Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.</li> </ul>
Saturation	<ul style="list-style-type: none"> <li>• This is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50.</li> <li>• The larger the number, the strong the color is.</li> <li>• This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate.</li> <li>• Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.</li> </ul>
Gain	<p>The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the lower the noise. But the brightness is also too low in the dark environments. It can enhance the video brightness if the value is high. But the video may become too noisy.</p>
Colour Mode	<p>It includes several modes such as standard, color, bright, gentle. Select a color mode, the sharpness, brightness, contrast, etc. can automatically switch to corresponding setup.</p>

## 3.4 Navigation Bar


You need to go to the Main menu->Setting->System->General to enable navigation bar function; otherwise you can not see the following interface.

The navigation bar is shown as below. See Figure 3-22.



Figure 3-22


### 3.4.1 Main Menu

Click button  to go to the main menu interface.

### 3.4.2 Output Screen

Select corresponding window-split mode and output channels.

### 3.4.3 Favorites

Click  , system pops up the following interface. See Figure 3-23. Click one item, you can view saved favorite channel split mode and channel number. Please note, right now the favorite scheme names are after the window split mode.

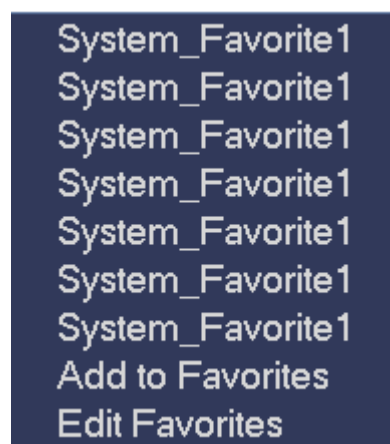


Figure 3-23

In Figure 3-23, click Add to favorites; you will see the following interface. See Figure 3-24. Here you can input a customised favorites name. System supports a maximum of 31-characters. Click OK button, you can save current favorites name.

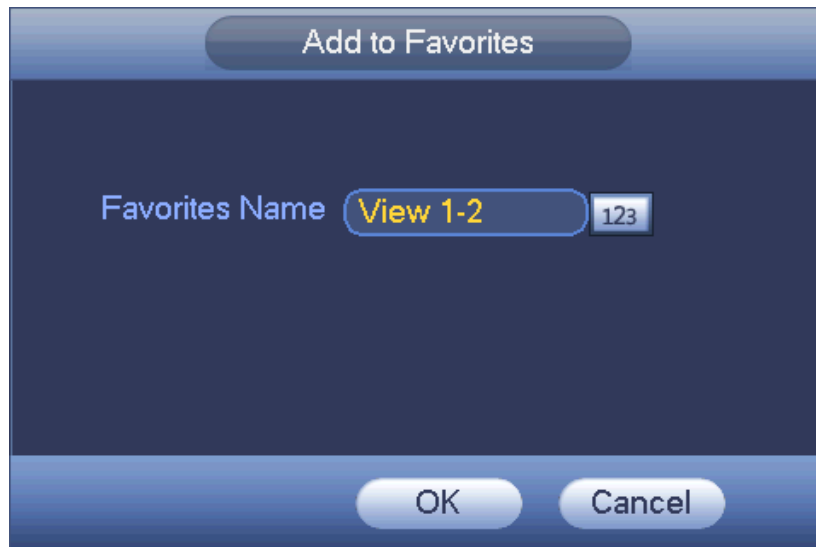


Figure 3-24

In Figure 3-23, click Edit favorites; you can see an interface shown as in Figure 3-25. Check the corresponding box and then select Delete. You will now be able to remove specified item(s).



Figure 3-25

Double click a name; you can change its name. See Figure 3-26. Input a new name and then click OK button.



Figure 3-26

### 3.4.4 Channel Tree

This is to set channel setup. The interface is shown as below. See Figure 3-27.

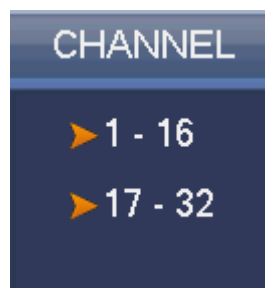


Figure 3-27

The one level includes 16 channels. See Figure 3-28.

You can left click to select a channel on the tree and then drag it to the preview window on the left pane. Once the channel is on the preview window, the channel number on the channel tree becomes grey and becomes null (can not be selected).

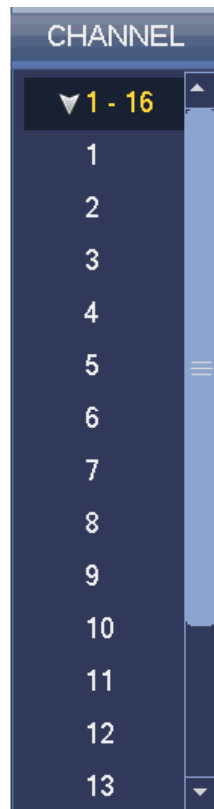



Figure 3-28


### 3.4.5 Tour

Click Button  to enable tour, the icon becomes , you will see the tour is in process.


### 3.4.6 PTZ

Click , the system will go to the PTZ control interface.


### 3.4.7 Colour

Click button , the system will go to the colour interface.


### 3.4.8 Search


Click button , the system will go to the search interface.

### 3.4.9 Alarm Status

Click button , the system will go to the status interface. This is to view the device's and channel's status.

### 3.4.10 Channel Info

Click button , system will go to the channel information setup interface. This is to view information of the corresponding channel. See Figure 3-29.




Channel	Motion	Video Loss	Tampering	Record Status	Record Mode	Resolution	Frame Rate	Bit Rate(K)
1					Manual	960*576	25	95
2					Regular	960*576	25	23
3					Regular	960*576	25	95
4					Regular	960*576	25	69
5					Regular	960*576	25	23
6					Regular	960*576	25	70
7					Regular	960*576	25	68
8					Regular	960*576	25	70
9					Regular	960*576	25	70
10					Regular	960*576	25	120
11					Regular	960*576	25	69
12					Regular	960*576	25	71
13					Regular	960*576	25	71
14					Regular	960*576	25	70
15					Regular	960*576	25	70
16					Regular	960*576	25	71
17					Regular	1920*1080	25	8071
18					Regular	1280*960	25	4062
19	--	--	--		Regular	1280*720	30	0


Refresh

Figure 3-29


### 3.4.11 Remote Device

Click button , system will go to the remote device interface.


### 3.4.12 Network

Click button , system will go to the network interface. This is to set network IP address, default gateway, etc.

### 3.4.13 HDD Manager

Click button , system will go to the HDD manager interface. This is to view and manage HDD information.

### 3.4.14 USB Manager

Click button , system will go to the USB manager interface. This is to view USB information, backup video, and to update.

### 3.5 USB Device Auto Pop-up

After you inserted the USB device, system can auto detect it and pop up the following dialogue box. It allows you to conveniently backup file, log, configuration or update system. See Figure 3-30.



Figure 3-30

### 3.6 Main Menu

The main menu interface is shown as below. See Figure 3-31.

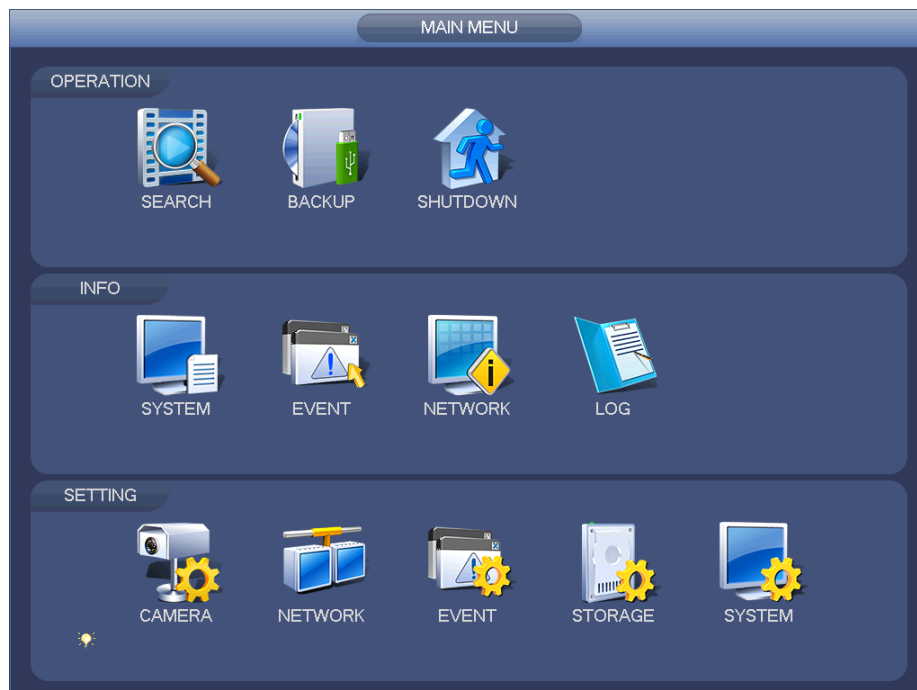


Figure 3-31

## 3.7 Operation

### 3.7.1 Search

Click the search button in the main menu, search interface is shown below. See Figure 3-32.

Usually there are three file types:

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

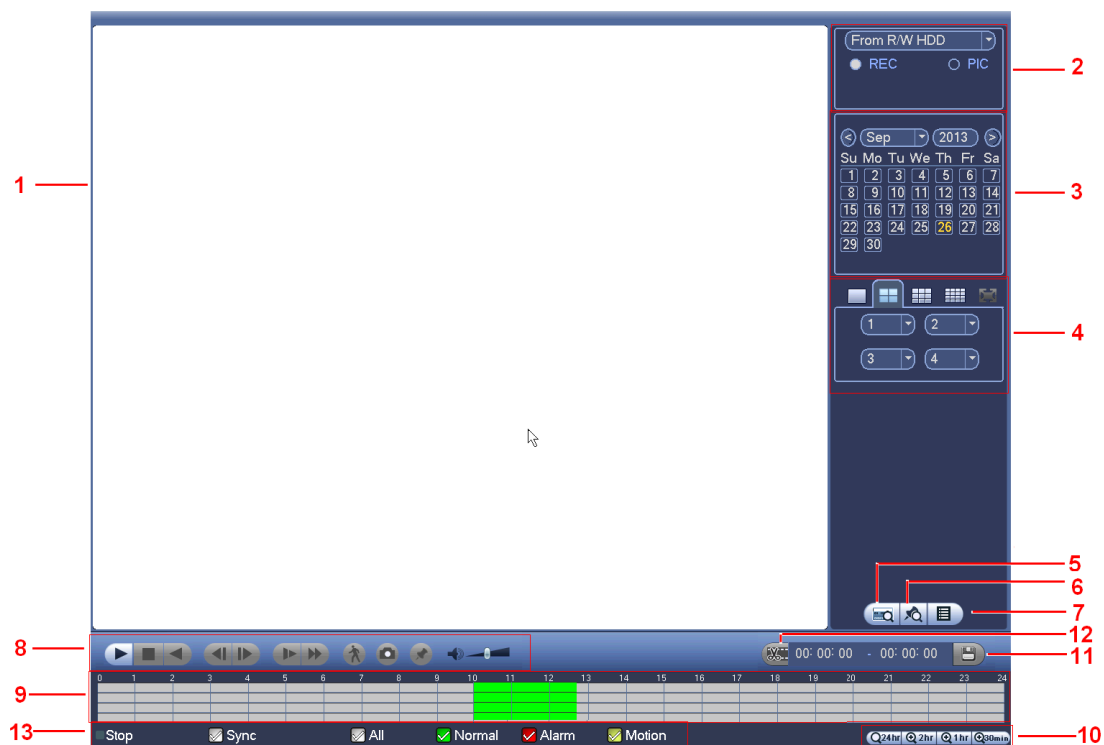










Figure 3-32

SN	Name	Function
1	Display Window	<ul style="list-style-type: none"> <li>• Displays the searched picture or file</li> <li>• Supports 1/4– window playback</li> </ul>
2	Search Type	<ul style="list-style-type: none"> <li>• Select to search the picture or the recorded file.</li> <li>• You can select to play from the read-write HDD, from peripheral device or from the redundancy HDD.</li> <li>• Before you select to play from the peripheral device, please connect the corresponding peripheral device. You can view all record files of the root directory of the peripheral device. Click the Browse button; you can select the file you want to play.</li> </ul> <p><b>Important:</b>  <b>Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures on the redundancy HDD.</b></p>
3	Calender	<ul style="list-style-type: none"> <li>• The blue highlighted date means there is picture or file.</li> </ul>




		<p>Otherwise, there is no picture or file.</p> <ul style="list-style-type: none"> <li>In any play mode, click the date you want to see, you can see the corresponding record file trace in the time bar.</li> </ul>
4	Playback mode and channel selection pane	<ul style="list-style-type: none"> <li>Playback mode: 1/4 <ul style="list-style-type: none"> <li>In 1-window playback mode: you can select 1-4 channels.</li> <li>In 4-window playback mode: you can select 4 channels according to your requirement.</li> </ul> </li> <li>The time bar will change once you modify the playback mode or the channel options.</li> </ul>
5	Card number search	<p>The card number search interface is shown below. Here you can view card number/field setup bar. You can implement the advanced search.</p> 
6	Mark file list button	<p>Click this to go to mark file list interface. You can view all mark information of current channel by time.</p> <p>Please note only the product of this icon supports mark function.</p>
7	File list switch button	<ul style="list-style-type: none"> <li>Double click this and you will be able to view the picture/record file list of current day.</li> <li>The file list displays the first channel of the recorded file.</li> <li>The system can display a max of 128 files in one time. Use the &lt;   and   &gt; or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback.</li> <li>You can input the period in the following interface to begin accurate search.</li> <li>File type: R - regular record; A - external alarm; M – Motion detect record.</li> </ul>  <ul style="list-style-type: none"> <li>Lock file. Click the file you want to lock and click the button  to lock. The file you have locked will not be overwritten.</li> <li>Search locked file: Click the button  to view the locked file.</li> </ul>
8	Playback control pane	<p>▶/  </p> <p><b>Play/Pause</b></p> <p>There are three ways for you to begin playback:</p> <ol style="list-style-type: none"> <li>The play button</li> <li>Double Click the valid period in the time bar.</li> <li>Double click the item in the file list.</li> </ol> <p>In slow play mode, click this to switch between play/pause.</p>
		<p>■</p> <p><b>Stop</b></p>
		<p>◀</p> <p><b>Reverse Play</b></p> <ul style="list-style-type: none"> <li>In normal play mode, left click the button, the file begins reverse play. Click it again to pause current play.</li> <li>In backward play mode, click ▶/   to restore normal play.</li> </ul>
		<p> ◀ / ▶ </p> <p>In playback mode, click these buttons to play the next or the previous section. You can click them continuously when you are watching the files from</p>

			<p>the same channel. In normal play mode, when you pause the current play, you can click ►   and   ◀ to begin frame by frame playback.</p> <p>In frame by frame playback mode, click ►/   to restore normal playback.</p>
		►	<p><b>Slow play</b></p> <p>In playback mode, click it to initiate various slow play modes such as slow play 1, slow play 2, etc.</p>
		►►	<p><b>Fast forward</b></p> <p>In playback mode, click to initiate various fast play modes such as fast play 1, fast play 2, etc.</p>
			<p><b>Smart search</b></p>
			<p>The volume of the playback</p>
			<ul style="list-style-type: none"> <li>Click the snapshot button in the full-screen mode, the system can snapshot 1 picture.</li> <li>System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create a path. Click Start button, the snapshot picture can be saved to the specified path.</li> </ul>
			<p><b>Mark button.</b></p>
9	Time bar	<ul style="list-style-type: none"> <li>This is to display the record type and its period in current search criteria.</li> <li>In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar.</li> <li>Use the mouse to click one point on the color zone in the time bar, system begins playback.</li> <li>The time bar begins at 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.</li> <li>The green color stands for the regular record file. The red color stands for the external alarm record file. The yellow stands for the motion detect record file.</li> </ul>	
10	Time bar unit	<ul style="list-style-type: none"> <li>The option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record.</li> <li>The time bar begins with 0 o'clock when you are setting the configuration.</li> <li>The time bar zooms in the period of the current playback time when you are playing the file.</li> </ul>	
11	Backup	<ul style="list-style-type: none"> <li>Select the file(s) you want to backup from the file list. You can check from the list. Then click the backup button, now you can see the backup menu. System supports a customised path setup. After selecting or creating a new folder, click the Start button to begin the backup operation. The record file(s) will be saved in the specified folder.</li> <li>Check the file again you can cancel current selection. System max supports to display 32 files from one channel.</li> <li>After you click on record file, click the Backup button, you will be able to save it.</li> </ul> <p>For one device, if there is a backup in process, you can not start a new backup operation</p>	

		<ul style="list-style-type: none"> <li>•</li> </ul>
12	Clip	<ul style="list-style-type: none"> <li>• This isto edit the file</li> <li>• Please play the file you want to edit and then click this button when you want to edit. You can will the corresponding slide bars in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time.</li> <li>• After you set, you can click Clip button again to edit the second period. You will see the slide bar restore its previous position.</li> <li>• Click Backup button after clip, you can save current contents in a new file.</li> <li>• You can clip for one channel or multiple-channel. The multiple-channel click operation is similar with the one-channel operation.</li> </ul> <p>Please note:</p> <ul style="list-style-type: none"> <li>• <b>System max supports 1024 files backup at the same time.</b></li> <li>• <b>You can not operate clip operation if there is any file has been checked in the file list.</b></li> </ul>
13	Record type	In any play mode, the time bar will change once you modify the search type.
<b>Other Functions</b>		
14	Smart search	<ul style="list-style-type: none"> <li>• When system is playing, you can select a zone in the window to begin smart search. Click the motion detect button to begin play.</li> <li>• Once the motion detect play has begun, click button again will terminate current motion detect file play.</li> <li>• There is no motion detect zone by default.</li> <li>• If you select to play other file in the file list, system switches to motion detect play of other file.</li> <li>• During the motion detect play process, you can not implement operations such as change time bar, begin backward playback or frame by frame playback.</li> </ul>
15	Other channel synchronisation switch to play when playing back	When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.
16	Digital zoom	When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to digital zoom in or out. You can right click mouse to exit.
17	Manually switch channel when in playback	<ul style="list-style-type: none"> <li>• During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse.</li> <li>• This function is null if there is no record file or system is in smart search process.</li> </ul>

#### ○ Smart Search

During the multiple-channel playback mode, double click one channel and then click the button,  system begins smart search. System supports 396 (22x18 PAL) and 330 (22x15 NTSC) zones. Please left click mouse to select smart search zones. See Figure 3-33.

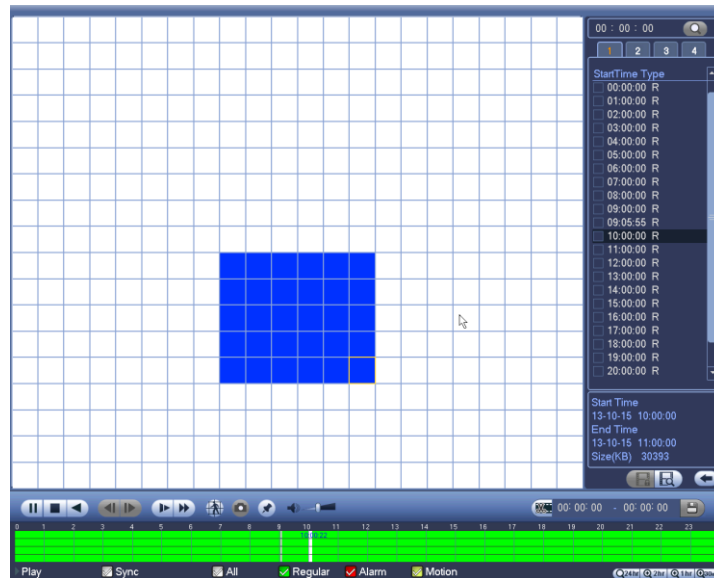




Figure 3-33

Click the  button, you can go to the smart search playback. Click it again, system stops smart search playback.

#### Important:

- **System does not support motion detect zone setup during the full-screen mode.**
- **During the multiple-channel playback, system stops playback of rest channels if you implement one-channel smart search.**
- **Accurate playback by time**

Select records from one day, click the list, you can go to the file list interface. You can input time at the top right corner to search records by time. See image on the left side of the Figure 3-34 For

example, input time 11:00.00 and then click Search button , you can view all the record files after 11:00.00 (The records includes current time.). See image on the right side of the Figure 3-34 Double click a file name to playback.

#### Note:

- After you searched files, system implement accurate playback once you click Play for the first time.
- System does not support accurate playback for picture.
- System supports synchronization playback and non-synchronous playback. The synchronisation playback supports all channels and non-synchronous playback only supports accurate playback of currently selected channel.

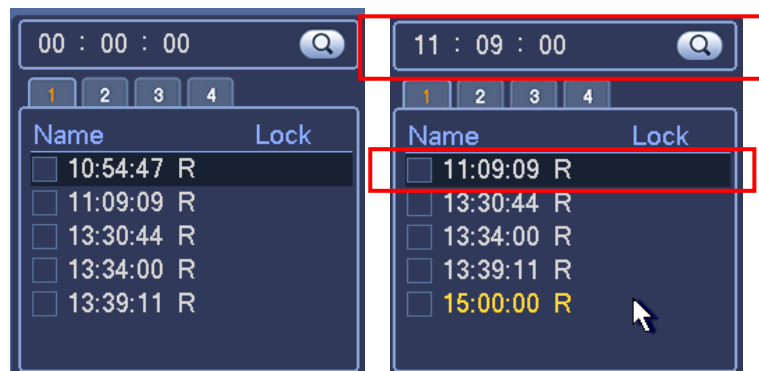



Figure 3-34

- **Mark Playback**

When you are playback record, you can mark the record when there is important information. After playback, you can use time or the mark key words to search corresponding record and then play. This is very easy for you to get the important video information.

- **Add Mark:** When the system is in playback mode, click the mark button  and you can go to the following interface. See figure 3-35.

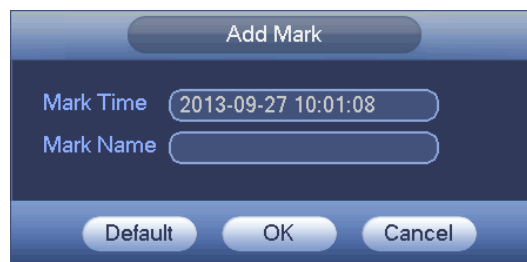




Figure 3-35

- **Playback Mark:** During 1-window playback mode, click mark file list button  in Figure 3-32, you will go to mark file list interface. Double click one marked file, you will begin playback from the marked time.
- **Play before mark time:** Here you can set to begin playback from previous No. seconds of the mark time.

**Note:**

Usually the system can playback previous number of seconds of the recording, if there is a video record file as such. Otherwise the system will playback from the previous X seconds when there is that type of video record.

- **Mark manager:** Click the mark manager button  on the Search interface (Figure 3-32); you will go to Mark Manager interface. See Figure 3-36. The System can manage all the recorded mark information of current channel by default. You can view all mark information of the current channel by the time.

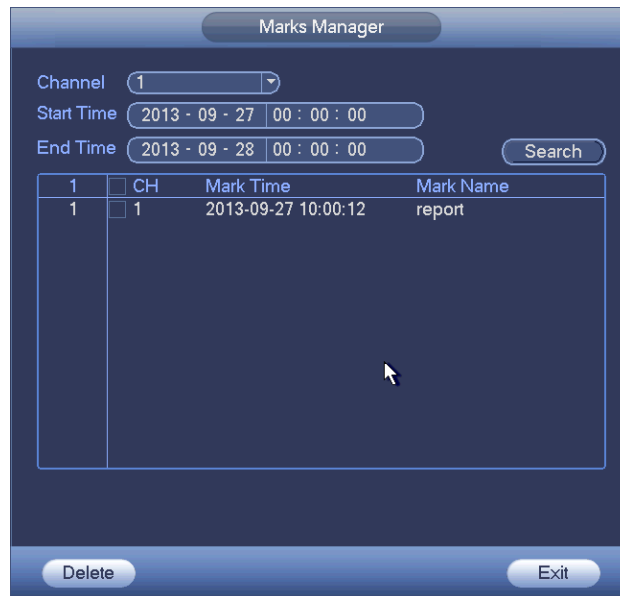


Figure 3-36

- **Modify:** Double click one mark information item, you will see that the system pops up a dialogue box for you to change mark information. You can only change mark name here.
- **Delete:** Here you can check the mark information item you want to delete and then click Delete button, you can remove one mark item.

**Note:**

- After you go to the mark management interface, system needs to pause current playback. System resumes playback after you exit the mark management interface.
- If the mark file you want to play has been removed, system will begin playback from the first file in the list.

### 3.7.2 Backup

DVR supports CD-RW, DVD burner, USB device backup, network download and eSATA. Here we introduce USB, eSATA backup. You can refer to Chapter 5 Web Client Operation for network download backup operation.

Click the backup button, you will see an interface is shown as in Figure 3-37. Here is for you to view devices information.

You can view backup device name and its total space and free space. The device includes CD-RW, DVD burner, USB device, flash disk, eSATA backup.

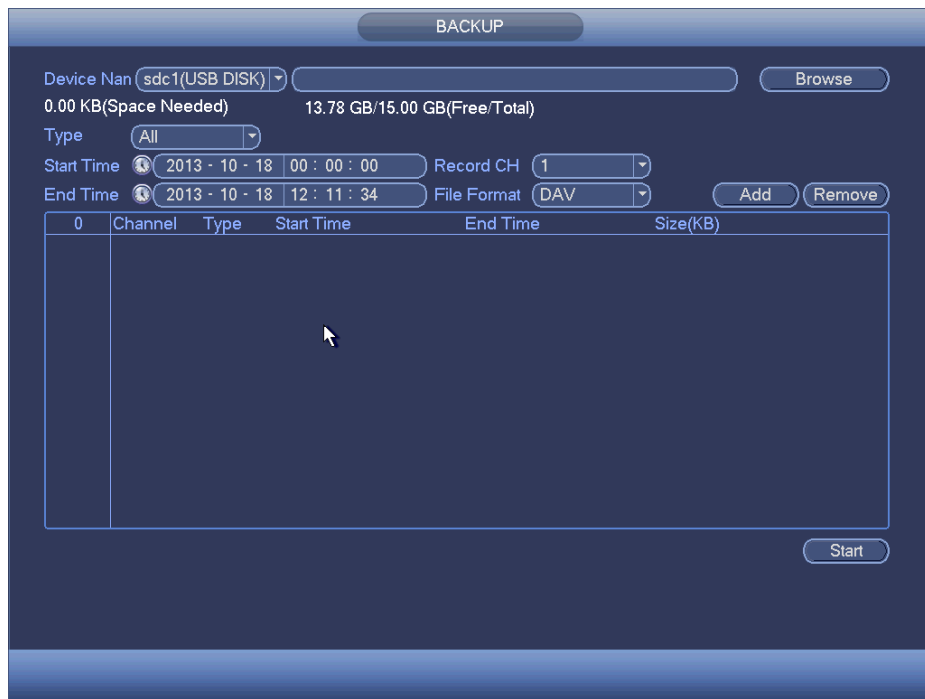


Figure 3-37

Select backup device and then set the channel, file start time and end time.

Click the add button (Shown in Figure 3-38), system begins search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 3-39.

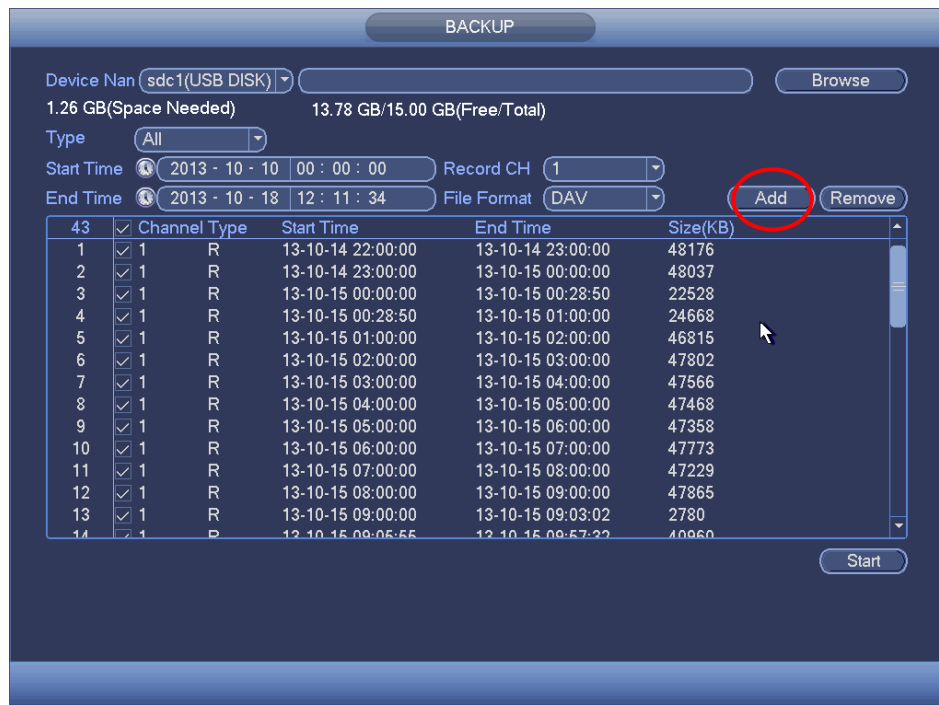


Figure 3-38

System only backup files with a ✓ before channel name. You can use Fn or cancel button to delete ✓ after file serial number.

Click the Start button, system begins copy. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom. See Figure 3-39.

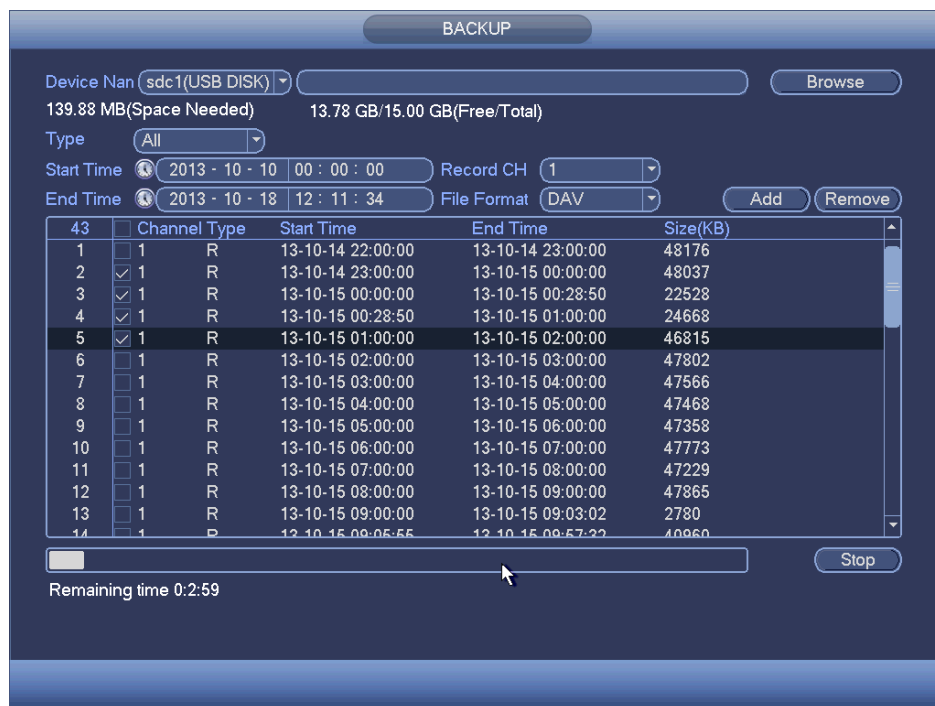


Figure 3-39

When the system completes backup, you will see a dialogue box prompting successful backup.

**File format:** Click the file format; you can see there are two options: DAV/ASF. The file name format usually is: *Channel number+Record type+Time*. In the file name, the YDM format is **Y+M+D+H+M+S**. File extension name is **.dav**.

#### Tip:

During backup process, you can click ESC to exit current interface for other operation. The system will not terminate backup process.

#### Note:

When you click the stop button during the burning process, the stop function becomes activated immediately. For example, if there are ten files, when you click the stop button the system just backs-up five files, system only saves the previous 5 files in the device (But you can view ten file names).

### 3.7.3 Shut Down

In Figure 3-31, select Shut Down, you can go to the following interface. There are three options: Shutdown/logout/reboot. See Figure 3-40.

For the user who does not have the shut down rights on their profile, please input corresponding password to shut down.





Figure 3-40

## 3.8 Information

### 3.8.2 System Info

Here is for you to view system information. There are total four items: HDD (hard disk information), record, BPS (data stream statistics), version. See Figure 3-41.



Figure 3-41

- **HDD Information**

Here is to list hard disk type, total space, free space, video start time and status. See Figure 3-42.

- SATA: 1-8 here means system max supports 8 HDDS (It depends on the product you purchased). O means current HDD is normal. X means there is error. - means

there is no HDD. If disk is damaged, system shows as “?” . Please remove the broken hard disk before you add a new one.

- SN: You can view the HDD amount the device connected to. ● means the second HDD is current working HDD.
- Type: The corresponding HDD properties.
- Total space: The HDD total capacity.
- Free space: The HDD free capacity.
- Status: HDD can work properly or not.
- SMART: Display HDD information. See Figure 3-43.



Figure 3-42

Double click on HDD information; you will see the HDD SMART information. See Figure 3-43.

Smart Info

Port 5  
 Modle ST2000VX000-1CU164  
 Serial No. W1E54HJW  
 Status Error

Describe:

Smart ID	Attribute	Threshold	Value	Worst	Status
1	Read Error Rate	6	120	99	OK
3	Spin Up Time	0	97	96	OK
4	Start/Stop Count	20	100	100	OK
5	Reallocated Sector Count	10	100	100	OK
7	Seek Error Rate	30	59	55	OK
9	Power On Hours Count	0	100	100	OK
10	Spin-up Retry Count	97	100	100	OK
12	Power On/Off Count	20	100	100	OK
184	Unkown Attribute	99	100	100	OK
187	Reported Uncorrect	0	100	100	OK
188	Unkown Attribute	0	100	100	OK
189	High Fly Writes	0	96	96	OK
190	Airflow Temperature Cel	45	61	43	Error
191	G-Sense Error Rate	0	100	100	OK
192	Power-Off Retract Cycle	0	100	100	OK
193	Load/Unload Cycle Count	0	100	100	OK

Figure 3-43

- **Record Info**

This isto view record start and end time. See Figure 3-44

INFO

SYSTEM EVENT NETWORK LOG

HDD  
**RECORD**  
 BPS  
 VERSION

SATA 1 2 3 4 5 6 7 8  
 ○ - - - ○ - - -

	Start Time	End Time
All	2000-12-31 04:06:00AM	2013-10-21 03:24:20PM
1	2013-10-16 12:31:51AM	2013-10-16 10:41:16AM
	2013-10-14 09:48:12PM	2013-10-15 12:27:43AM
	2013-10-15 12:27:43AM	2013-10-15 09:55:08AM
	2013-10-15 09:55:04AM	2013-10-15 12:47:56PM
	2013-10-15 12:47:53PM	2013-10-16 12:31:58AM
2*	2000-12-31 04:06:00AM	2000-12-31 06:42:22AM
	2013-10-14 02:23:53PM	2013-10-16 10:41:05AM
	2013-10-18 10:11:41AM	2013-10-21 03:24:20PM

Figure 3-44

- **BPS**

Here is for you to view current video data stream (KB/s) and occupied hard disk storage (MB/h). See Figure 3-45.

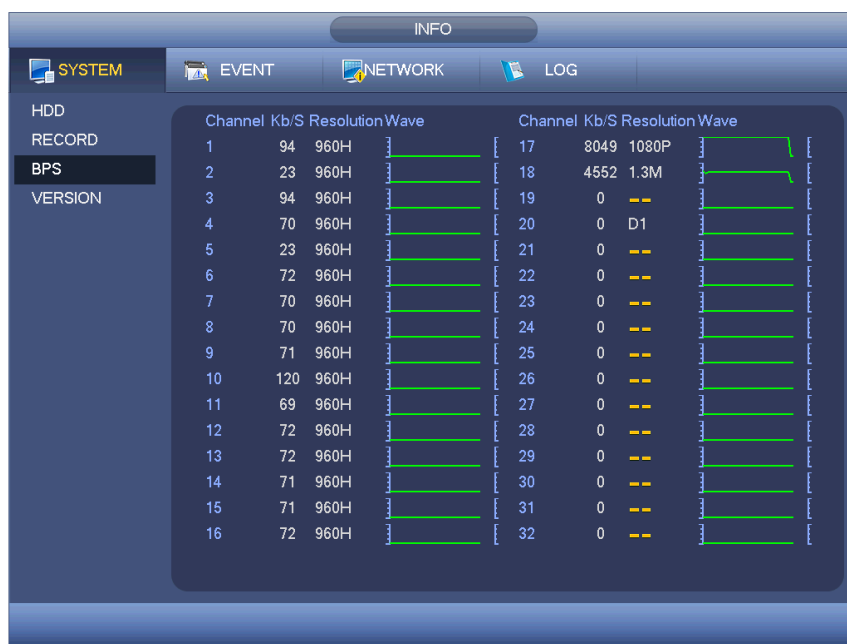


Figure 3-45

- **Version**

Here is for you to view some version information such as version number, built date, serial number, etc. See Figure 3-46.



Figure 3-46

### 3.8.3 Event

This is to display device & channel status. See Figure 3-47.



Figure 3-47

### 3.8.4 Network

- **Online Users**

Here is for you to manage online users. See Figure 3-48.

You can disconnect one user or block one user if you have proper system right. Max disconnection setup is 65535 seconds.

System will try to detect to see there is any newly added or deleted user in each five seconds and refresh the list automatically.

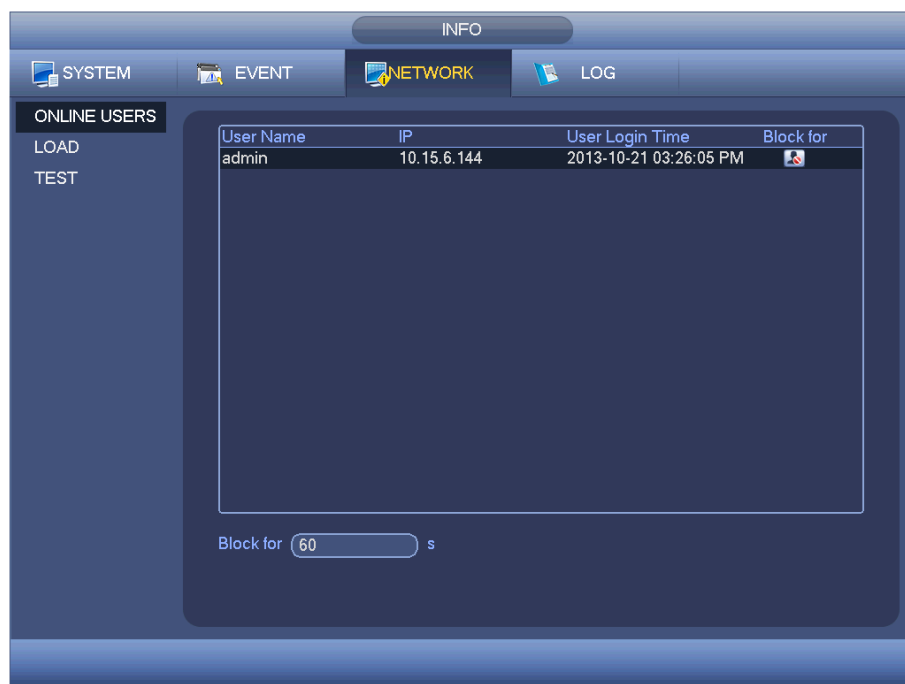


Figure 3-48

- **Network Load**

Network load is shown in Figure 3-49. Here you can view the follow statistics of the device network adapter.

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




Figure 3-49

- **Network Test**

Network test interface is shown in Figure 3-50.

- Destination IP: Please input valid IPV4 address or domain name.
- Test: Click it to test the connection with the destination IP address. The test results can display average delay and packet loss rate and you can also view the network status as OK, bad, no connection, etc.
- Network Sniffer backup: Please insert USB2.0 device and click the Refresh button, you can view the device on the following column. You can use the dropdown list to select peripheral device. Click Browse button to select the snap path. The steps here are same as preview backup operation.

You can view all connected network adapter names (including Ethernet, PPPoE, WIFI, and 3G), you can click the button  on the right panel to begin Sniffer. Click the grey stop button to stop. Please note system can not Sniffer several network adapters at the same time.


After Sniffer begins running, you can exit to implement corresponding network operation such as login WEB, monitor. Please go back to the Sniffer interface to click  to stop Sniffer. System can save the packets to the specified path. The file is named after “Network adapter name+time”. You can use software such as **Wireshark** to open the packets on the PC for the professional engineer to solve complicated problems.



Figure 3-50

### 3.8.5 Log

Here is for you to view system log file. System lists the following information. See Figure 3-51.

Log types include system operation, configuration operation, data management, alarm event, record operation, account manager, log clear, file operation and etc. It optimises the reboot log. There are only three types: normal reboot, abnormal reboot and protection reboot. 0x02, 0x03, 0x04 is included in the protection reboot type.

- **Start time/end time:** Please select start time and end time, then click search button. You can view the log files in a list. System max displays 100 logs in one page. It can save a maximum of 1024 log files. Please use page up/down button on the interface or the front panel to view more.
- **Backup:** Please select a folder you want to save; you can click the backup button to save the log files. After the backup, you can see there is a folder named **Log\_time** on the backup path. Double click the folder, you can see the log file
- **Details:** Click the Details button or double click the log item, you can view the detailed information. See Figure 3-52. Here you can use the rolling bar to view information, or you can use Page up/Page down to view other log information.

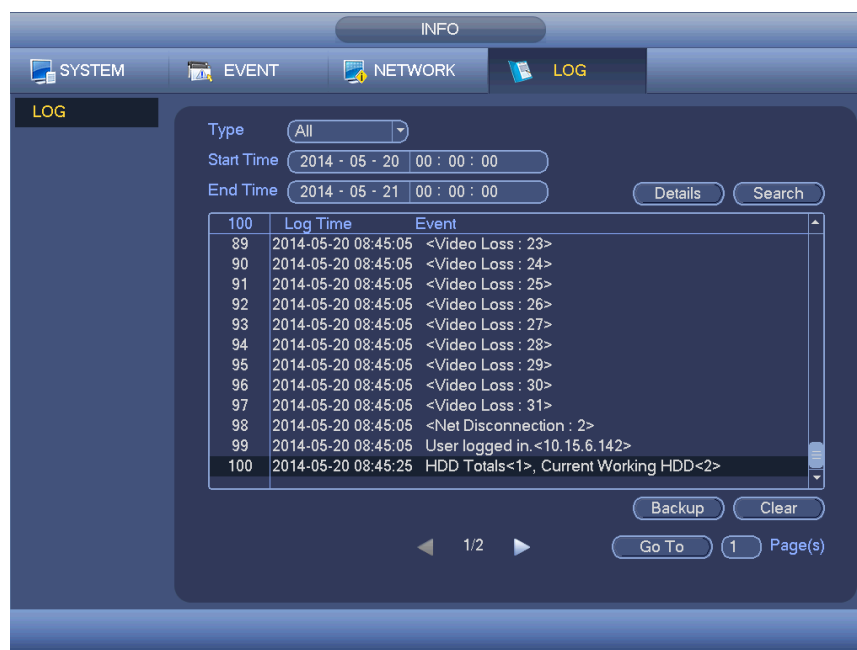


Figure 3-51

Select an item on the list and then click the Details button or double click the log item, you can view the detailed information such as log time, log type, log user, IP address, etc. See Figure 3-52.





Figure 3-52

- **Remote Log:**

In this interface, you can search the IPC log information of the corresponding channel. It includes IPC online, offline, etc. See Figure 3-53.

You can select a channel from the dropdown list and then set start time and end time. Click search button, you can view the remote connection log of current channel. You can select another channel (doe not need to click Search button again), you can view remote connection log.

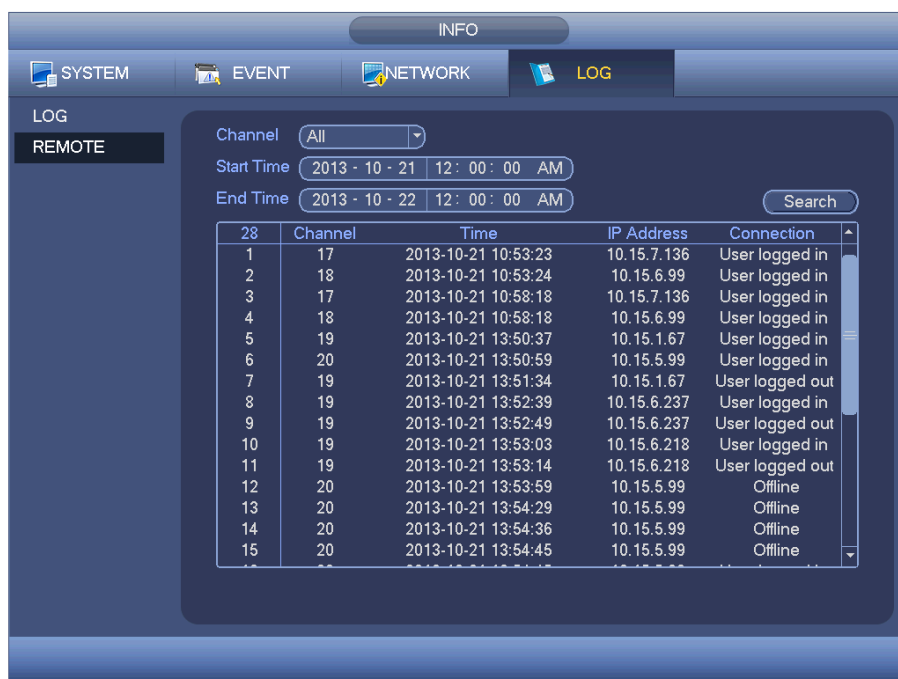


Figure 3-53

## 3.9 Setting

### 3.9.2 Camera: Remote Device (for digital channel only)





- **Remote Device:** In the main menu, from Camera ->Remote, you can go to an interface shown as in Figure 3-54. Here you can add/delete remote device and view its corresponding information.
  - Device search: Click it to search IP address. It includes device IP address, port, device name, manufacturer, type. Use your mouse to click the item name, you can refresh display order. Click IP address, system displays IP address from small to large. Click IP address again, you can see icon, system displays IP address from large to small. You can click other items to view information conveniently.
  - Add: Click it to connect to the selected device and add it to the Added device list. It supports Batch add. **You can see the corresponding dialogue box if all digital-channel has connected to the front-end. System can not add new device if the device you want to add has the same IP and TCP port as the device in the list.**
  - Show filter: You can use it to display the specified devices from the added device.
  - Edit: Click button  or double click a device in the list, you can change channel setup.
  - Delete: Please select one device in the Added device list and then click  to remove.
  - Status:  means connection is OK and  means connection failed.
  - Delete: Select a device on the Added device list, click Delete button, system disconnect device first and then remove its name from the list.
  - Manual add: Click it to add the IPC manually. The port number is 37777. The default user name is admin and password is admin.



Figure 3-54

Click the Manual Add button; you can go to the following interface. See Figure 3-57. Channel number: The dropdown list here displays unconnected channel number. You can go to Figure 3-56 to set remote channel connection.

Please note:

- System default IP address is 192.168.0.0 if you do not input IP address. System will not add current IP address.
- You cannot add two or more devices in the Manual Add interface (Figure 3-57). Click the OK button, system connects to the corresponding front-end device of current channel on the interface.





The image shows a 'Manual Add' configuration window with a dark blue background. It contains several input fields for configuring a channel connection. The fields are: Channel (dropdown menu showing '25'), Manufacturer (dropdown menu showing 'Private'), IP Address (text box showing '192.168.0.0'), TCP Port (text box showing '37777'), User (text box showing 'admin'), Password (password field with five dots), Remote Channel (text box showing '1'), and Decoder Buffer (text box showing '280' with 'msec' next to it). At the bottom of the window are two buttons: 'OK' and 'Cancel'.

Figure 3-55

- **Channel Status**

Here you can view the IPC status of the corresponding channel such as motion detect, video loss, tampering, alarm and etc. See Figure 3-55B.

- IPC Status  - Front end does not support channel.  - Front end supports.



There is an alarm event at the front end.



- Connection status:  - Connection succeeded.  - Connection failed.
- Refresh: Click it to get latest front-end channel status.



Figure 3-55B

- **Firmware**

This isto view channel, IP address, manufacturer, type, system version, SN, video input, audio input, external alarm, etc. See Figure 3-56.



Figure 3-56

- **Remote Upgrade**

This isto update the camera.

From main **menu->setting->camera->remote**, the interface is shown below. See Figure 3-57.

Click the Browse button and then select the upgrade file. Then select a channel (or you can select device type filter to select several devices at the same time.)

Click the Start upgrade button to update. You will see the corresponding dialogue once the upgrade is finished.



Figure 3-57

#### ○ Image

The image interface is shown below. See Figure 3-58 (analog channel) and Figure 3-59 (digital channel).

- Channel: Select a channel from the dropdown list.
- Saturation: This is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the stronger the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
- Brightness: This is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number is, the brighter the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- Contrast: This is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure. The recommended value ranges from 40 to 60.

- Sharpness: The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clearer the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
- Mirror: This is to switch video up and bottom limit. This function is disabled by default.
- Flip: This is to switch video left and right limit. This function is disabled by default.
- BLC: This includes several options: BLC/WDR/HLC/OFF.
  - BLC: The device auto exposures according to the environments situation so that the darkest area of the video is cleared.
  - WDR: For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time. The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.
  - HLC: After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.
  - OFF: This is to disable the BLC function. Please note this function is disabled by default.
- Profile: This is to set the white balance mode. It has effect on the general hue of the video. This function is on by default. You can select the different scene mode such as auto, sunny, cloudy, home, office, night, disable and etc to adjust the video to the best quality.
  - Auto: The auto white balance is on. System can auto compensate the color temperature to make sure the video color is proper.
  - Sunny: The threshold of the white balance is in the sunny mode.
  - Night: The threshold of the white balance is in the night mode.
  - Customised: You can set the gain of the red/blue channel. The value ranges from 0 to 100.
- Day/night. This is to set device color and the B/W mode switch. The default setup is auto.
  - Color: Device outputs the color video.
  - Auto: Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not).
  - B/W: The device outputs the black and white video.
  - Sensor: This is to set when there is peripheral connected IR light.



Figure 3-58



Figure 3-59

- **Encode**

This is to set the video bit stream, picture bit stream, video overlay parameter, etc.

- **Video**

Video setting includes the following items. See Figure 3-60.

- **Channel:** Select the channel you want.

- Type: Please select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- Compression: System supports H.264 and MJPEG.
- Resolution: For analog channel, system supports various resolutions, you can select from the dropdown list. Please note the option may vary due to different series. For digital channel, This is the resolution of the connected network camera.
- Frame rate: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- Bit rate type: System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Video/audio: You can enable or disable the video/audio.
- Audio: Please select from the dropdown list.



Figure 3-60

- **Snapshot**

Here you can set snapshot mode, picture size, quality and frequency. See Figure 3-61.

- Snapshot mode: There are two modes: regular and trigger. If you set the timing mode, you need to set snapshot frequency. If you set trigger snapshot, you need to set snapshot activation operation.
- Image size: Here you can set snapshot picture size.
- Image quality: Here you can set snapshot quality. The value ranges from 1 to 6.



- Interval: This is for you to set timing (schedule) snapshot interval.



Figure 3-61

- Overlay

Overlay Interface is shown in Figure 3-62

- Cover area: Here is for you to set cover area. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel.
- Preview/monitor: privacy mask has two types. Preview and Monitor. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.
- Time display: You can select system displays time or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
- Channel display: You can select system displays channel number or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
- Copy: After you complete the setup, you can click Copy button to copy current setup to other channel(s). You can see an interface is shown as in Figure 3-63. You can see current channel number is grey. Please check the number to select the channel or you can check the box ALL. Please click the OK button in Figure 3-63 and Figure 3-62 respectively to complete the setup.

Please highlight icon  to select the corresponding function.



Figure 3-62



Figure 3-63

- **Channel Name**  
This is to modify channel name. Supports a maximum of 31-characters. See Figure 3-64



Figure 3-64

- Channel Type

This is to set channel type. Each channel supports analog connection/analog HD connection/network camera connection (Slight function differences may be found). The network camera connection shall begin with the last channel. Please note DVR needs to restart to activate new setup. See Figure 3-65.



Figure 3-65

### 3.9.3 Network

#### ○ TCP/IP

The single and double network adapter interface are shown as in Figure 3-66.

- Network Mode: Includes multiple access, fault tolerance, and load balancing.
  - Multiple-address mode: eth0 and eth1 operate separately. You can use the services such as HTTP, RTP service via eth0 or the eth1. Usually you need to set one default card (default setup is eth0) to request the auto network service from the device-end such as DHCP, email, FTP and etc. In multiple-address mode, system network status is shown as offline once one card is offline.
  - Network fault-tolerance: In this mode, device uses bond0 to communicate with the external devices. You can focus on one host IP address. At the same time, you need to set one master card. Usually there is only one running card (master card). System can enable alternate card when the master card is malfunction. The system is shown as offline once these two cards are both offline. Please note these two cards shall be in the same LAN.
  - Load balance: In this mode, device uses bond0 to communicate with the external device. The eth0 and eth1 are both working now and bearing the network load. Their network load are general the same. The system is shown as offline once these two cards are both offline. Please note these two cards shall be in the same LAN.
- Default Network Card: Please select eth0/eth1/bond0 (optional) after enable multiple-access function.
- Main Network Card: Please select eth0/eth1 (optional).after enable multiple access function.
- IP Version: There are two options: IPv4 and IPv6. Right now, system supports these two IP address format and you can access via them.
- MAC address: The host in the LAN can get a unique MAC address. This is for you to access in the LAN. This is read-only.
- IP address: Here you can use up/down button (▲▼) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
- Default gateway: Here you can input the default gateway. Please note system needs to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section. That is to say, the specified length of the subnet prefix shall have the same string.
- DHCP: This is to auto search IP. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- MTU: This is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes. Please note MTU modification may result in network adapter reboot and network becomes off. That is to say, MTU

modification can affect current network service. System may pop up dialog box for you to confirm setup when you want to change MTU setup. Click OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the DVR shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for reference only.

- 1500: Ethernet information packet max value and This is also the default value. This is the typical setup when there is no PPPoE or VPN. This is the default setup of some router, switch or the network adapter.
  - 1492: Recommend value for PPPoE.
  - 1468: Recommend value for DHCP.
- Preferred DNS server: DNS server IP address.
  - Alternate DNS server: DNS server alternate address.
  - Transfer mode: Here you can select the priority between fluency/video qualities.
  - LAN download: System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.
  - LAN download: System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.

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

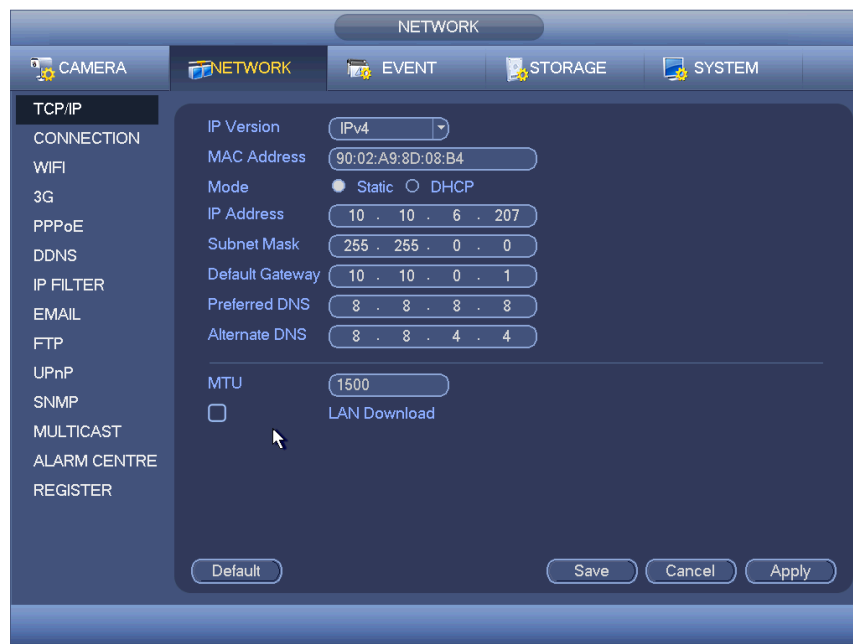


Figure 3-66

- **Connection**

The connection setup interface is shown in Figure 3-68.

- Max connection: system support maximal 128 users. 0 means there is no connection limit.
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- HTTPS port: Default value is 443.
- RTSP port: Default value is 554.

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



Figure 3-68

- **WIFI**

The WIFI interface is shown as below. See Figure 3-69.

- Auto connect WIFI: Check the box here, system automatically connects to the previous WIFI hotspot.
- Refresh: You can click it to search the hotspot list again. It can automatically add the information such as the password if you have set it before.
- Disconnect: Here you can click it to turn off the connection.
- Connect: Here you can click it to connect to the hotspot. System needs to turn off current connection and then connect to a new hotspot if there is connection of you selected one.



Figure 3-69

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

Please note:

- After successfully connecting, you will see WIFI connection icon at the top right corner of the preview interface.
- When the hotspot verification type is WEP, system displays as AUTO since the device can not detect its encryption type.
- System does not support verification type WPA and WPA2. The display may become abnormal for the verification type and encryption type.

After device successfully connected to the WIFI, you can view the hotspot name, IP address, subnet mask, default gateway, etc.

- **3G**  
3G setup interface is shown below. See Figure 3-70. Please refer to the following contents for the parameter information.
  - Pane 1: Display 3G signal intensity after you enabled 3G function.
  - Pane 2: Display 3G module configuration information after you enabled 3G function.
  - Pane 3: Display 3G module status information after you enabled 3G function.

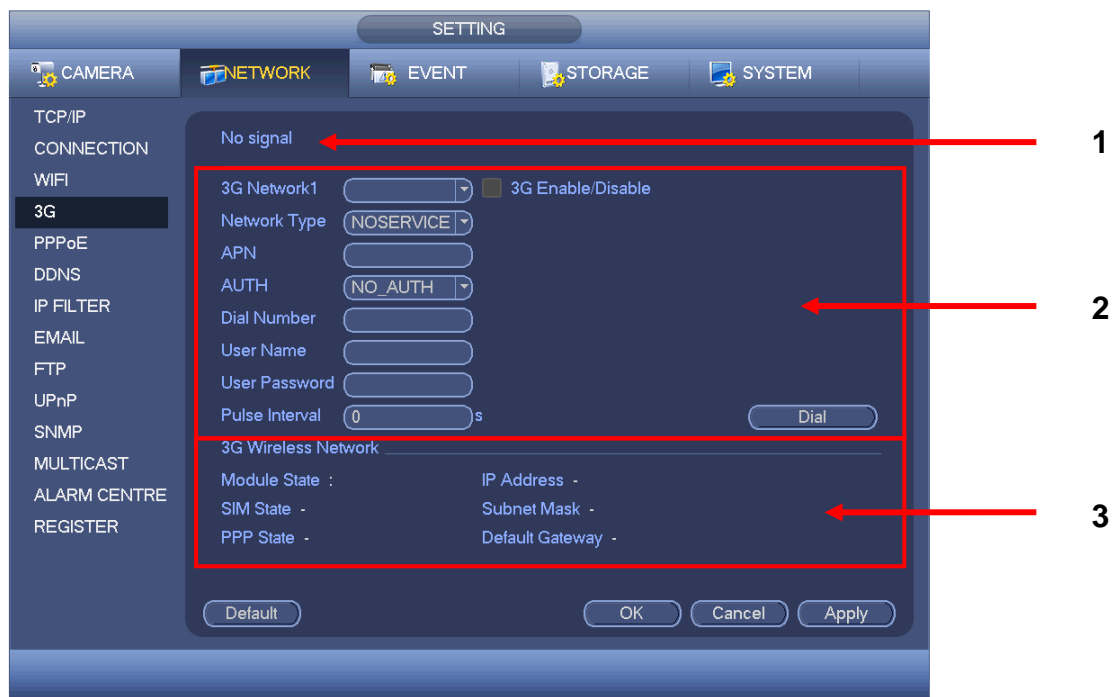


Figure 3-70

This is to display current wireless network signal intensity such as EVDO, CDMA1x, WCDMA, WCDMA, EDGE, etc.

- 3G module: This is to display current wireless network adapter name.
- 3G Enable/Disable: Check the box here to enable 3G module.
- Network type: There are various network types for different 3G network modules. You can select according to your requirements.
- APN: This is the wireless connection server. This is to set you access the wireless network via which method.
- AUTH: This is the authentication mode. It supports PAP/CHAP.
- Dial number: Please input 3G network dialup number you got from your ISP.
- User name: This is the user name for you to login the 3G network.
- Password: This is the password for you to login the 3G network.
- Pulse interval: You can set dialup duration. Once you disable the extra stream, the connection time begins. For example, if you input 5 seconds here, then 3G network connection period is 5 seconds. The device automatically disconnect when time is up. If there is no extra stream, 3G network connection is valid all the time. If the alive time is 0, then the 3G network connection is valid all the time.
- Dial: Here you can enable or disable 3G network connection/disconnection manually.
- 3G wireless network: Here is to display wireless network status, SIM card status, dial status. If the 3G connection is OK, then you can see the device IP address the wireless network automatically allocates.



- **PPPoE**

PPPoE interface is shown as in Figure 3-71.

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

Click save button, you need to restart to activate your configuration.

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



Figure 3-71

- **DDNS Setup**

DDNS setup interface is shown as in Figure 3-72.

You need a PC with a fixed IP on the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

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

Click save button, system prompts for rebooting to get all setup activated.

After rebooting, open IE and input as below:

**http: //(DDNS server IP)/(virtual directory name)/webtest.htm**

e.g.: [http://10.6.2.85/DVR\\_DDNS/webtest.htm](http://10.6.2.85/DVR_DDNS/webtest.htm).)

Now you can open DDNSServer web search page.



Figure 3-72

Please note DDNS type includes: CN99 DDNS, NO-IP DDNS, Quick DDNS, DynDNS DDNS and sysDNS DDNS. All the DDNS can be valid at the same time, you can select as you requirement.

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

### Quick DDNS and Client-end Introduction:

1. Background Introduction: Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the DVR via the registered domain name. Besides the general DDNS, the Quick DDNS works with the device from the manufacturer so that it can add the extension function.
2. Function Introduction: The quick DDNS client has the same function as other DDNS client end. It can bond the domain name and the IP address. Right now, current DDNS server is for our own devices only. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name, password or the ID registration on the server. At the same time, each device has a default domain name (Generated by MAC address) for your option. You can also use customized valid domain name (has not registered).
3. Operation: Before you use Quick DDNS, you need to enable this service and set proper server address, port value and domain name.
  - Server address: [www.quickddns.com](http://www.quickddns.com)

- Port number: 80
- Domain name: There are two modes: Default domain name and customised domain name.

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

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

**Important:**

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

- **IP Filter**

IP filter interface is shown as in Figure 3-73. You can add IP in the following list. The list supports max 64 IP addresses. System supports valid address of IPv4 and IPv6.

**Please note system needs to check the validity of all IPv6 addresses and implement optimisation.**

After you enabled trusted sites function, only the IP listed below can access current DVR. If you enable the blocked sites to function, the following listed IP addresses can not access current DVR.

- Enable: Highlight the box here, you can check the trusted site function and blocked sites function. You can not see these two modes if the Enable button is grey.
- Type: You can select trusted site and blacklist from the dropdown list. You can view the IP address on the following column.
- Start address/end address: Select one type from the dropdown list, you can input IP address in the start address and end address. Now you can click Add IP address or Add IP section to add.
  - a) For the newly added IP address, it is in enabled status by default. Remove the ✓ before the item, and then current item is not in the list.
  - b) System supports a maximum of 64 items.
  - c) Address column supports IPv4 or IPv6 format. If it is IPv6 address, system can optimise it. For example, system can optimize aa:0000: 00: 00aa: 00aa: 00aa: 00aa as aa:: aa: aa: aa: aa: aa: aa.
  - d) System automatically removes space if there is any space before or after the newly added IP address.

- e) System only checks start address if you add IP address. System check start address and end address if you add IP section and the end address shall be larger than the start address.
  - f) System may check newly added IP address exists or not. System does not add if input IP address does not exist.
- Delete: Click it to remove specified item.
  - Edit: Click it to edit start address and end address. See Figure 3-74. System can check the IP address validity after the edit operation and implement IPv6 optimization.
  - Default: Click it to restore default setup. In this case, the trusted sites and blocked sites are both null.

**Notes:**

- If you enabled trusted sites, only the IP in the trusted sites list can access the device.
- If you enabled blocked sites, the IP in the blocked sites can not access the device.
- System supports add MAC address.

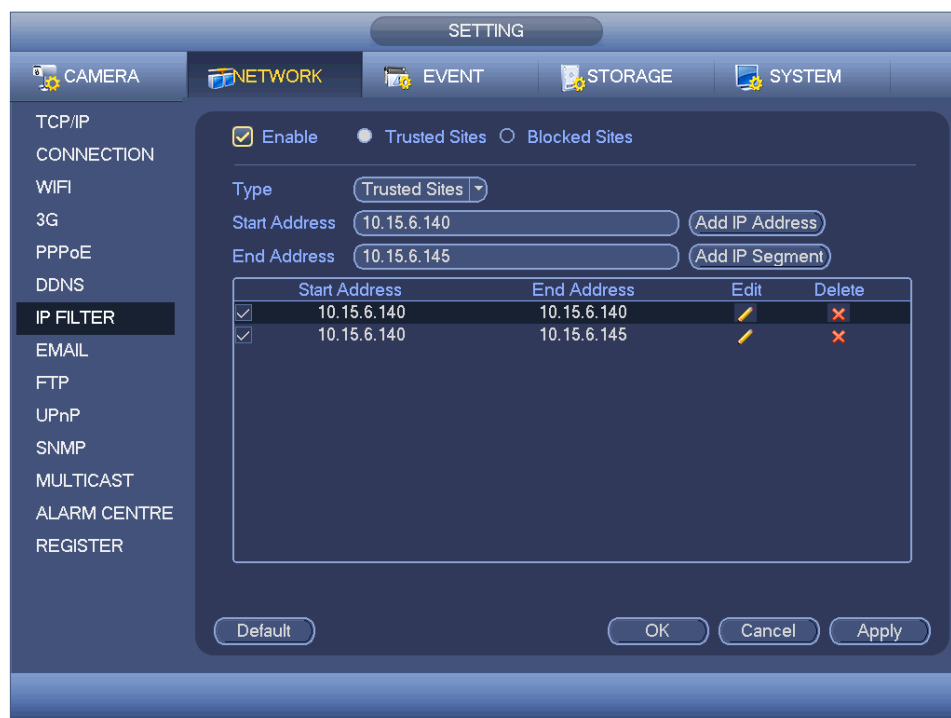


Figure 3-73

Figure 3-74

#### ○ **Email**

The email interface is shown as below. See Figure 3-75.

- SMTP server: Please input your email SMTP server IP here.
- Port: Please input corresponding port value here.
- User name: Please input the user name to login the sender email box.
- Password: Please input the corresponding password here.
- Sender: Please input sender email box here.
- Title: Please input email subject here. System support English character and Arabic number. Max 32-digit.
- Receiver: Please input receiver email address here. System supports a maximum of 3 email boxes. System automatically filters same addresses if you input one receiver repeatedly.
- SSL enable: System supports SSL encryption box.
- Interval: The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.
- Health email enable: Please check the box here to enable this function. This function allows the system to send out the test email to check the connection is OK or not.
- Interval: Please check the above box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here. Click the Test button, you can see the corresponding dialogue box to see the email connection is OK or not.

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



Figure 3-75

#### ○ **FTP**

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

Please install Ser-U FTP SERVER first. From “start” -> “program” -> Serv-U FTP Server -> Serv-U Administrator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 3-76.

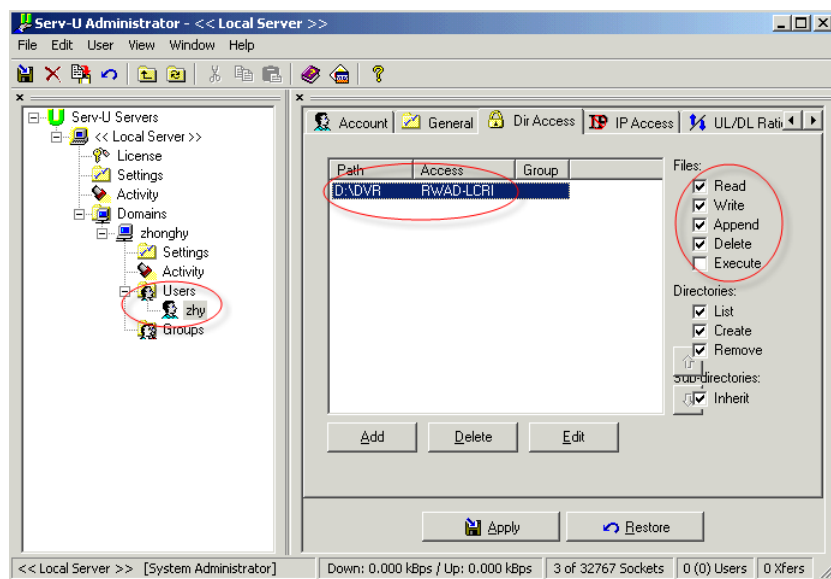


Figure 3-76

You can use a PC or FTP login tool to test setup is right or not. For example, you can login user ZHY to [FTP://10.10.7.7](ftp://10.10.7.7) and then test it can modify or delete folder or not. See Figure 3-77.

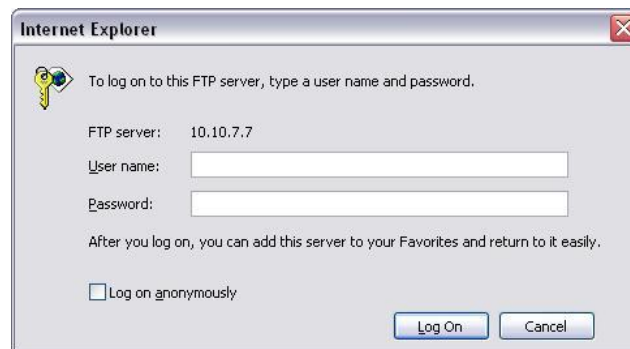


Figure 3-77

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

FTP interface is shown as in Figure 3-78.

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

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

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

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

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

Click the Test button, you can see the corresponding dialogue box to see the FTP connection is OK or not.



Figure 3-78

#### ○ UPnP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 3-66. See Figure 3-79.

- UPNP on/off: Turn on or off the UPNP function of the device.
- Status: When the UPNP is offline, it shows as “Unknown”. When the UPNP works it shows “Success”
- Router LAN IP: It is the router IP in the LAN.
- WAN IP: It is the router IP in the WAN.
- Port Mapping list: The port mapping list here is the one to one relationship with the router’s port mapping setting.
- List:
  - Service name: Defined by user.
  - Protocol: Protocol type
  - Internal port: Port that has been mapped in the router.
  - External port: Port that has been mapped locally.
- Default: UPNP default port setting is the HTTP, TCP and UDP of the DVR.
- Add to the list: Click it to add the mapping relationship.
- Delete: Click it to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 3-80.

#### **Important:**

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



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



Figure 3-79

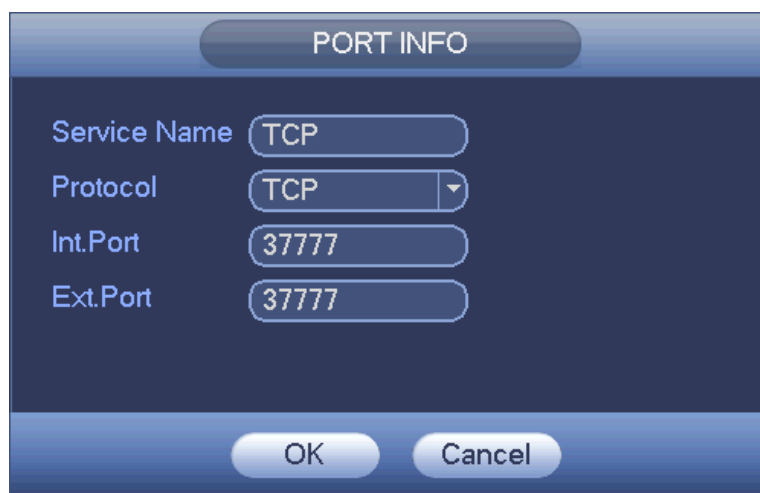


Figure 3-80

- **SNMP**

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

You can set in the following interface. See Figure 3-81



Figure 3-81

Please enable the SNMP function. Use the corresponding software tool (MIB Builder and MG-SOFT MIB Browser). You still need two MIB file: BASE-SNMP-MIB, DVR-SNMP-MIB) to connect to the device. You can get the device corresponding configuration information after successfully connection.

Please follow the steps listed below to configure:

- In Figure 3-81, check the box to enable the SNMP function. Input the IP address of the PC than is running the software in the Trap address. You can use default setup for the rest items.
- Compile the above mentioned two MIB file via the software MIB Builder.
- Run MG-SOFT MIB Browser to load the file from the previous step to the software.
- Input the device IP you want to manage in the MG-SOFT MIB Browser. Please set the corresponding version for your future reference.
- Open the tree list on the MG-SOFT MIB Browser; you can get the device configuration. Here you can see the device has how many video channels, audio channels, application version, etc.

**Note:** Port conflict occurs when SNMP port and Trap port are the same.

#### ○ **Multicast**

Multicast setup interface is shown as in Figure 3-82.

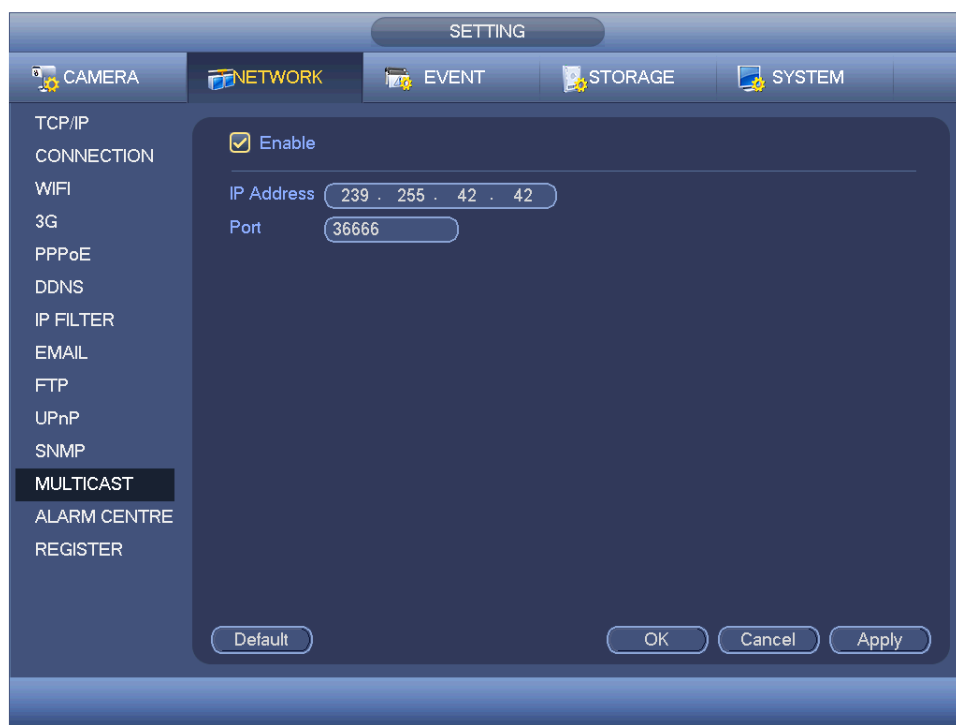


Figure 3-82

- IP multiple cast group address:  
-224.0.0.0-239.255.255.255 -“D” address space

The higher four-bit of the first byte=”1110”

- Reserved local multiple cast group address  
-224.0.0.0-224.0.0.255  
-TTL=1 When sending out telegraph -For example  
224.0.0.1 All systems in the sub-net 224.0.0.2 All routers in the sub-net  
224.0.0.4 DVMRP router  
224.0.0.5 OSPF router  
224.0.0.13 PIMv2 router
- Administrative scoped addressees  
-239.0.0.0-239.255.255.255 - Private address space
  - Like the single broadcast address of RFC1918
  - Can not be used in Internet transmission
  - Used for multiple cast broadcast in limited space.

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

Multiple cast IP: 235.8.8.36

Multiple cast PORT: 3666.

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

- **Alarm Centre**

This interface is reserved for you to develop. See Figure 3-83.

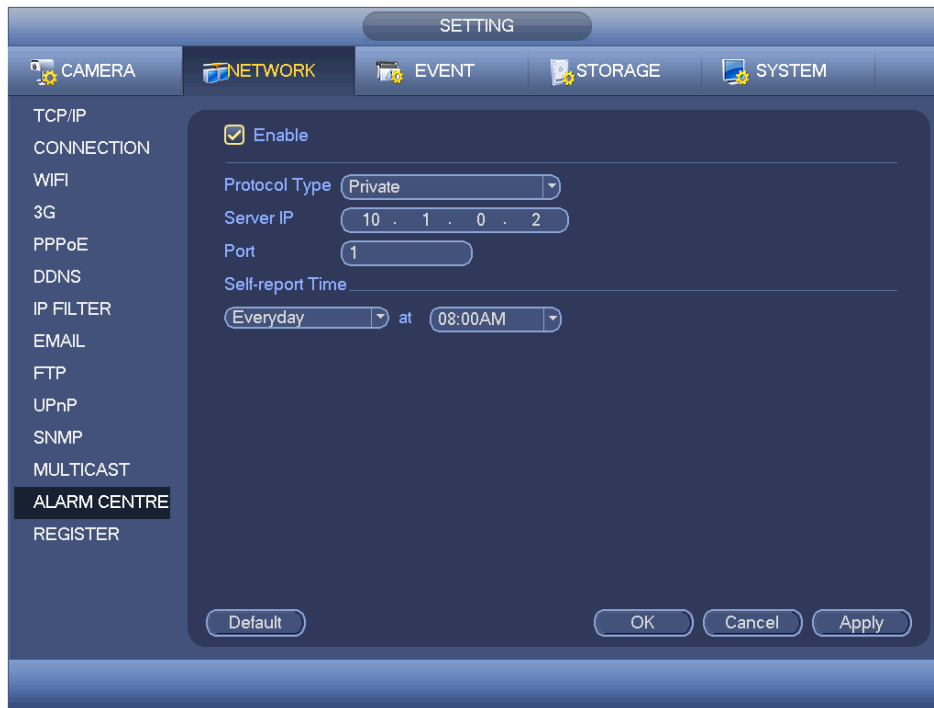


Figure 3-83

- **Auto register**

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

Please follow the steps listed below to use this function.

Please set proxy server address, port, and sub-device name at the device-end. Please enable the auto register function, the device can auto register to the proxy server.

1. The setup interface is shown as in Figure 3-84.

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



Figure 3-84

2. The proxy server software developed from the SDK. Please open the software and input the global setup. Please make sure the auto connection port here is the same as the port you set in the previous step.
3. Now you can add device. Please do not input default port number such as the TCP port in the mapping port number. The device ID here shall be the same with the ID you input in Figure 3-84. Click Add button to complete the setup.
4. Now you can boot up the proxy server. When you see the network status is Y, it means your registration is OK. You can view the proxy server when the device is online.

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

○ **P2P**

The P2P interface is shown as in Figure 3-85. You can visit **www.easy4ip.com** to scan the QR code to login.






Figure 3-85

### 3.9.4 Event

- Detect: In the main menu, from Setting->Event->Detect, you can see motion detect interface. See Figure 3-86. There are three detection types: motion detection, video loss, tampering.
  - The video loss has no detection region and sensitivity setup and tampering has no detection region setup.
  - You can see motion detect icon if current channel has enabled motion detect alarm.
  - You can drag you mouse to set motion detect region. Please click OK button to save current region setup. Right click mouse to exit current interface.
- Motion Detect: After analysis video, system can generate a video loss alarm when the detected moving signal reached the sensitivity you set here. Detection menu is shown as below. See Figure 3-86.
  - Event type: From the dropdown list you can select motion detection type.
  - Channel: Select a channel from the dropdown list to set motion detect function.
  - Enable: Check the box here to enable motion detect function.
  - Region: Click select button, the interface is shown as in Figure 3-90. Here you can set motion detection zone. There are four zones for you to set. Please select a zone first and then left drag the mouse to select a zone. The corresponding color zone displays different detection zone. You can click Fn button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone.

After you completed the setup, please click ENTER button to exit current setup. Do remember click save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup. The analog channel supports 4 zones. For the digital channel, please make sure your network camera supports 4 zones. Otherwise, there is only one zone.

- Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.
- Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seen as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- Period: Click set button, you can see an interface is shown as in Figure 3-89. Here you can set motion detect period. System only enables motion detect operation in the specified periods. It is not for video loss or the tampering. There are two ways for you to set periods. Please note system only supports 6 periods in one day.

In Figure 3-89, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as . Click  to delete a record type from one period.

In Figure 3-89. Click button after one date or a holiday, you can see an interface shown as in Figure 3-90. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

- Alarm output: when an alarm occurs, system enables peripheral alarm devices.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function.

- Send email: System can send out email to alert you when an alarm occurs.
- Record channel: System auto activates motion detection channel(s) to record once an alarm occurs. Please make sure you have set MD record in Schedule interface (Main Menu->Setting->Schedule) and schedule record in manual record interface (Main Menu->Advanced->Manual Record)
- PTZ activation: Here you can set PTZ movement when an alarm occurs. Such as go to preset, tour & pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 3-88.
- Record Delay: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
- Tour: Here you can enable tour function when alarm occurs. System one-window tour.
- Snapshot: You can enable this function to snapshot image when a motion detect alarm occurs.
- Video matrix Check the box here to enable this function. When an alarm occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.
- Voice prompts: Check the box here to trigger audio broadcast function. You can select specified audio file here. System can play the audio file once the corresponding event occurs.

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

**Note:**

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

In Figure 3-87, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between arm/withdraw motion detection. After setting, click enter button to exit.





Figure 3-86

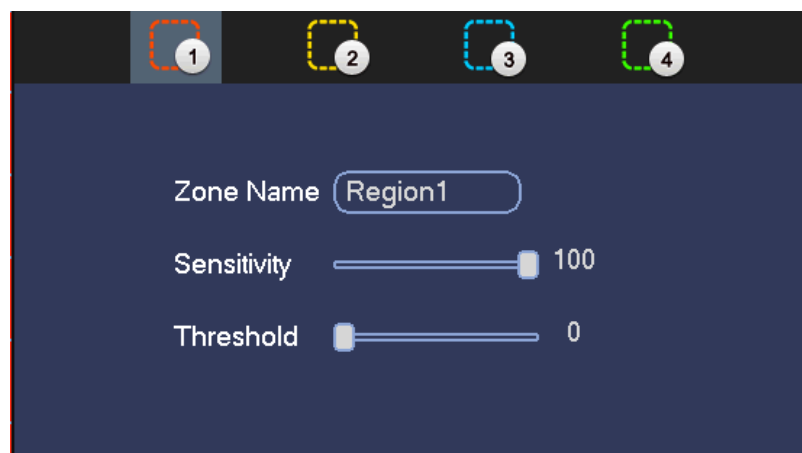


Figure 3-87

PTZ Activation					
CAM 1	None	0	CAM 2	None	0
CAM 3	None	0	CAM 4	None	0
CAM 5	None	0	CAM 6	None	0
CAM 7	None	0	CAM 8	None	0
CAM 9	None	0	CAM 10	None	0
CAM 11	None	0	CAM 12	None	0
CAM 13	None	0	CAM 14	None	0
CAM 15	None	0	CAM 16	None	0
CAM 17	None	0	CAM 18	None	0
CAM 19	None	0	CAM 20	None	0
CAM 21	None	0	CAM 22	None	0
CAM 23	None	0	CAM 24	None	0
CAM 25	None	0	CAM 26	None	0
CAM 27	None	0	CAM 28	None	0
CAM 29	None	0	CAM 30	None	0
CAM 31	None	0	CAM 32	None	0

OK
Cancel

Figure 3-88

Setup

0 2 4 6 8 10 12 14 16 18 20 22 24

☐ All ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

Setup Setup Setup Setup Setup Setup Setup

Default OK Cancel

Figure 3-89

Time Period

Current Date: Sun

Period 1	00 : 00 - 24 : 00	<input checked="" type="checkbox"/>
Period 2	00 : 00 - 24 : 00	<input type="checkbox"/>
Period 3	00 : 00 - 24 : 00	<input type="checkbox"/>
Period 4	00 : 00 - 24 : 00	<input type="checkbox"/>
Period 5	00 : 00 - 24 : 00	<input type="checkbox"/>
Period 6	00 : 00 - 24 : 00	<input type="checkbox"/>

Copy

☐ All ☒ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

Save

Figure 3-90

Motion detect here only has relationship with the sensitivity and region setup. It has no relationship with other setups.

- Video loss

In Figure 3-87, select video loss from the type list. You can see the interface is shown as in Figure 3-91. This function allows you to be informed when video loss phenomenon has occurred. You can enable alarm output channel and then enable show message function.

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



Figure 3-91

#### ■ Tampering

When someone masks the lens as part of an unauthorised or illegal activity, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Tampering interface is shown as in Figure 3-92. You can enable “Alarm output “or “Show message” function when tampering alarm occurs.

- Sensitivity: The value ranges from 1 to 6. It mainly concerns the brightness. The level 6 has the higher sensitivity than level 1. The default setup is 3.

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

#### **Notes:**

- In Detect interface, copy/paste function is only valid for the same type, which means you can not copy a channel setup in video loss mode to tampering mode.
- Default function: Since detection channel and detection type may not be the same, system can only restore default setup of current detect type. For example, if you click Default button at the tampering interface, you can only restore default tampering setup. It is null for other detect types.
- System only enables tampering function during the period you set here. It is null for motion detect or video loss type.



Figure 3-92

#### ○ Alarm

Before operation, please make sure you have properly connected alarm devices such as buzzer.

In the main menu, from Setting->Event->Alarm, you can see alarm setup interface. See Figure 3-93.




There are four alarm types. See Figure 3-93 to Figure 3-96.


- Local alarm: The alarm signal system detects from the alarm input port.
- Network alarm: It is the alarm signal from the network.
- IPC external alarm: It is the on-off alarm signal from the front-end device and can activate the local HDVR.
- IPC offline alarm: Once you select this item, system can generate an alarm when the front-end IPC disconnects with the local HDVR. The alarm can activate record, PTZ, snap and etc. The alarm can last until the IPC and the HDVR connection resumes.

#### Important:

- **If it is your first time to boot up the device, the disconnection status of the front-end network camera will not be regarded as offline. After one successfully connection, all the disconnection events will be regarded as IPC offline event.**
- **When IPC offline alarm occurs, the record and snapshot function of digital channel is null.**

- Alarm in: Here is for you to select channel number.
- Type: normal open or normal close.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour& pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 3-97.
- Period: Click set button, you can see an interface is shown as in Figure 3-98. There are two ways for you to set periods. There are max 6 periods in one day. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.


In Figure 3-98, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as . Click  to delete a record type from one period.

In Figure 3-98. Click button  after one date or a holiday, you can see an interface shown as in Figure 3-99. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

- Anti-dither: Here you can set anti-dither time. Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seen as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function.
- Send email: System can send out email to alert you when alarm occurs.
- Record channel: you can select proper channel to record alarm video (Multiple choices). At the same time you need to set alarm record in schedule interface (Main Menu->Setting->Schedule) and select schedule record in manual record interface (Main Menu->Advance->Manual Record).

- Latch: Here is for you to set proper delay duration. Value ranges from 10 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Tour: Here you can enable tour function when alarm occurs. System supports
  - 1/8-window tour. Please note the tour setup here has higher priority than the tour setup you set in the Display interface. Once there two tours are both enabled, system can enable the alarm tour as you set here when an alarm occurred. If there is no alarm, system implements the tour setup in the Display interface.
- Snapshot: System can snapshot the corresponding channel when an alarm occurs. Please note the activation snapshot has the higher priority than schedule snapshot. If you have enabled these two types at the same time, system can activate the activation snapshot when alarm occurs, and otherwise system just operates the schedule snapshot.
- Video matrix: Check the box here to enable this function. When an alarm occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.
- Voice prompts: Check the box here to trigger audio broadcast function. You can select specified audio file here. System can play the audio file once the corresponding event occurs.

**Note:** network alarm means the alarm signal from the TCP/IP. You can use NET SDK to activate network alarm. Comparing with the local alarm, there is no type, anti-dither, alarm upload function.

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

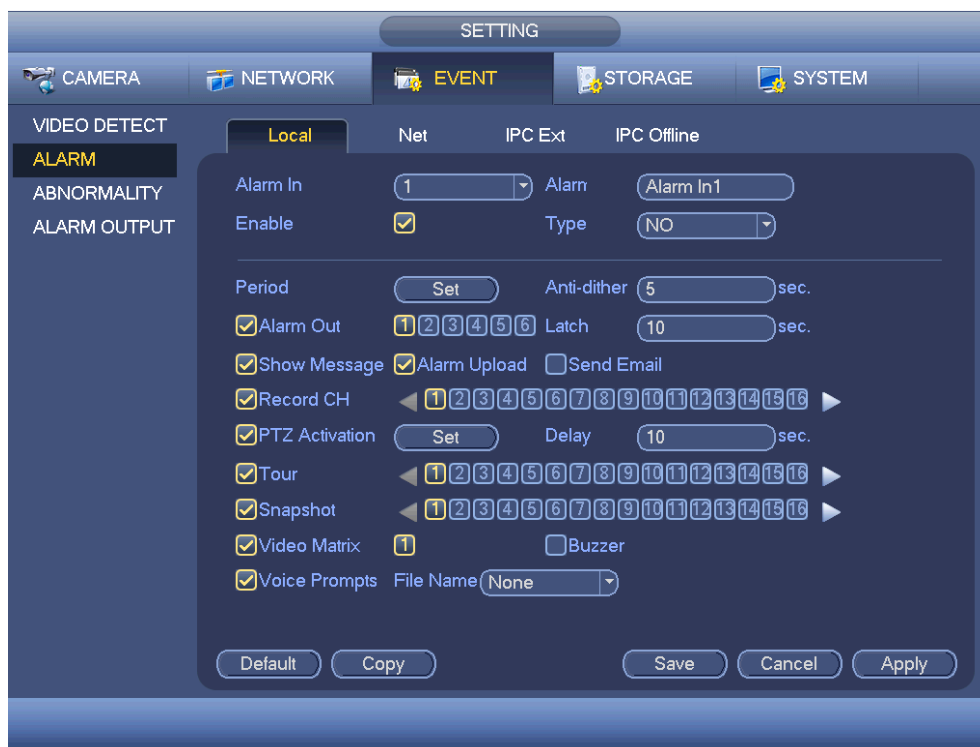


Figure 3-93



Figure 3-94



SETTING

CAMERA NETWORK **EVENT** STORAGE SYSTEM

VIDEO DETECT  
**ALARM**  
 ABNORMALITY  
 ALARM OUTPUT

Local Net **IPC Ext** IPC Offline

Channel: 32 Alarm:

Enable: ☒ Type: NC

---

Period:  Set Anti-dither: 0 sec.

☒ Alarm Out 1 2 3 4 5 6 Latch: 1 sec.

☒ Show Message ☐ Send Email

☒ Record CH ◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ▶

☒ PTZ Activation  Set Delay: 10 sec.

☒ Tour ◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ▶

☒ Snapshot ◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ▶

☒ Video Matrix 1 ☐ Buzzer

☒ Voice Prompts File Name: When You Kr

Default Copy Save Cancel Apply

Figure 3-95

SETTING

CAMERA NETWORK **EVENT** STORAGE SYSTEM

VIDEO DETECT  
**ALARM**  
 ABNORMALITY  
 ALARM OUTPUT

Local Net IPC Ext **IPC Offline**

Channel: 32

Enable: ☒

---

☒ Alarm Out 1 2 3 4 5 6 Latch: 10 sec.

☒ Show Message ☐ Send Email

☒ Record CH ◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ▶

☒ PTZ Activation  Set Delay: 10 sec.

☒ Tour ◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ▶

☒ Snapshot ◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ▶

☒ Video Matrix 1 ☐ Buzzer

☒ Voice Prompts File Name: None

Default Copy Save Cancel Apply

Figure 3-96

The PTZ Activation dialog box contains a grid of 32 camera settings, arranged in two columns of 16 rows each. Each row represents a camera, labeled from CAM 1 to CAM 32. Each camera has a dropdown menu set to 'None' and a numeric input field set to '0'. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Camera	PTZ Mode	PTZ Preset
CAM 1	None	0
CAM 2	None	0
CAM 3	None	0
CAM 4	None	0
CAM 5	None	0
CAM 6	None	0
CAM 7	None	0
CAM 8	None	0
CAM 9	None	0
CAM 10	None	0
CAM 11	None	0
CAM 12	None	0
CAM 13	None	0
CAM 14	None	0
CAM 15	None	0
CAM 16	None	0
CAM 17	None	0
CAM 18	None	0
CAM 19	None	0
CAM 20	None	0
CAM 21	None	0
CAM 22	None	0
CAM 23	None	0
CAM 24	None	0
CAM 25	None	0
CAM 26	None	0
CAM 27	None	0
CAM 28	None	0
CAM 29	None	0
CAM 30	None	0
CAM 31	None	0
CAM 32	None	0

Figure 3-97

The Setup dialog box features a 24-hour timeline at the top, marked from 0 to 24 in increments of 2. Below the timeline, there are seven rows corresponding to the days of the week: All, Sun, Mon, Tue, Wed, Thu, and Sat. Each row contains a series of 12 yellow rectangular blocks, each representing a 2-hour time slot. To the right of each row is a 'Setup' button. At the bottom of the dialog are 'Default', 'OK', and 'Cancel' buttons.

Figure 3-98

Figure 3-99

○ **Abnormality**

There are two types: HDD & Network

- HDD: HDD error, no disk, no space. See Figure 3-100 and Figure 3-101.
  - Network: Disconnection, IP conflict, MAC conflict. See Figure 3-102.
- Alarm output: Please select alarm activation output port (multiple choices).
  - Less than: System can alarm you when the HDD space is less than the threshold you set here (For HDD no space type only).
  - Latch: Here you can set corresponding delaying time. The value ranges from 1s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
  - Show message: system can pop up the message in the local screen to alert you when alarm occurs.
  - Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function. For disconnection event, IP conflict event and MAC conflict event, this function is null.
  - Send email: System can send out email to alert you when alarm occurs.
  - Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.
  - Voice prompts: Check the box here to trigger audio broadcast function. You can select specified audio file here. System can play the audio file once the corresponding event occurs.



Figure 3-100




Figure 3-101



Figure 3-102

- **Alarm Output**

Here is for you to set proper alarm output such as schedule, manual.

Please highlight icon  to select the corresponding alarm output.

After all the setups please click OK button, system goes back to the previous menu. See Figure 3-103.



Figure 3-103

### 3.9.5 Storage

- Schedule





- Record


**Notes:**

- You need to have proper rights to implement the following operations. Please make sure the HDDs have been properly installed.
- After the system booted up, it is in default 24-hour regular mode. You can set record type and time in schedule interface.

In the main menu, from **Setting->Storage->Schedule**, you can go to schedule menu. See Figure 3-107.

Please note you need to go to **main menu->Setting->System->General->Holiday** to set holiday date first, otherwise, there is no holiday setup item.

- Channel: Please select the channel number first. You can select “all” if you want to set for the whole channels.
  -  : Sync connection icon. Select icon  of several dates, all checked items can be edited together. Now the icon is shown as .
  -  : Click it to delete a record type from one period.
- Record Type: Please check the box to select corresponding record type. There are four types: Regular/MD (motion detect)/Alarm/MD&Alarm.
- Week day: There are eight options: ranges from Saturday to Sunday and all.

- **Holiday:** It is to set holiday setup. Please note you need to go to the General interface (Main Menu->System->General) to add holiday first. Otherwise you can not see this item.
- **Pre-record:** System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- **Redundancy:** System supports redundancy backup function. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (Main menu->Setting->Storage->HDD Manager). Please note this function is null if there is only one HDD.
- **Period setup:** Click button  after one date or a holiday, you can see an interface shown as in Figure 3-108. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

Please following the steps listed below to draw the period manually.

- Select a channel you want to set. See Figure 3-104.



Figure 3-104

- Set record type. See Figure 3-105.



Figure 3-105

- Please draw manually to set record period. There are six periods in one day. See Figure 3-106.

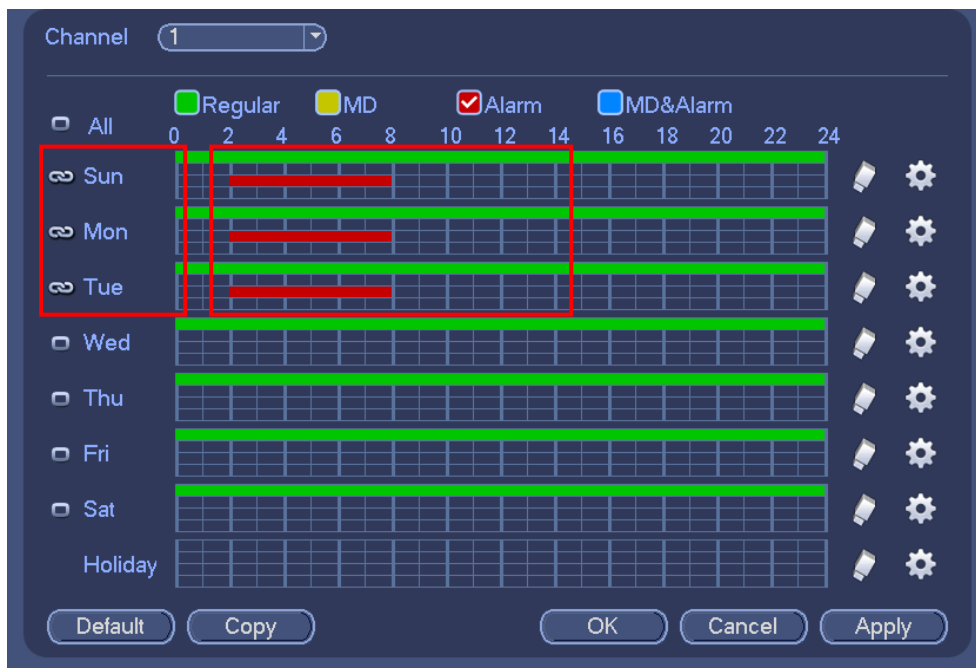



Figure 3-106

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

There are color bars for your reference. Green color stands for regular recording, yellow color stands for motion detection and red color stands for alarm recording. The white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will not record neither motion detect occurs nor the alarm occurs.

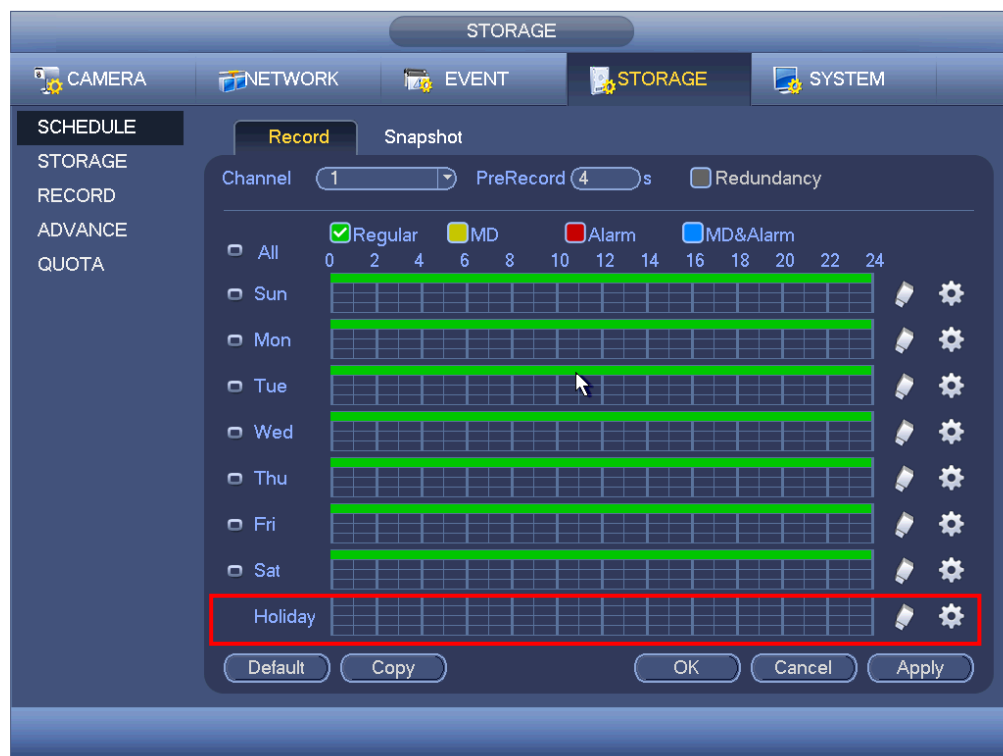


Figure 3-107





Figure 3-108

▪ Quick Setup:

Copy function allows you to copy one channel setup to another. After setting in channel 1, click Copy button, you can go to interface Figure 3-109. You can see current channel name is grey such as channel 1. Now you can select the channel you want to paste such as channel 5/6/7. If you want to save current setup of channel 1 to all channels, you can click the first box "ALL". Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.



Figure 3-109

▪ Redundancy:

Redundancy function allows you to memorize record file in several disks. When there is file damage occurred in one disk, there is a spare one in the other disk. You can use this function to maintain data reliability and safety.

- In the main menu, from **Setting->Storage-> Schedule**, you can highlight redundancy button to enable this function.
- In the main menu, from **Main menu->Setting->Storage->HDD Manager**, you can set one or more disk(s) as redundant. You can

select from the dropdown list. System auto overwrites old files once hard disk is full.

Please note only read/write disk or read-only disk can backup file and support file search function, so you need to set at least one read-write disk otherwise you can not record video.

**Note about redundancy setup:**

- If the current channel is not recording, current setup gets activated when the channel begin recording the next time.
- If the current channel is now recording, current setup will get activated right away, the current file will be packet and form a file, then system begins recording as you have just set.

After all the setups please click save button, system goes back to the previous menu. Playback or search in the redundant disk.

There are two ways for you to playback or search in the redundant disk.

- Set redundant disk(s) as read-only disk or read-write disk (Main menu->Setting->Storage->HDD Manager)). System needs to reboot to get setup activated. Now you can search or playback file in redundant disk.
  - Dismantle the disk and play it in another PC.
- Snapshot: Snapshot schedule
- On the preview interface, right click mouse and then select **Manual->Record**, or in the main menu, from **Setting->Storage->Record**, check the box to enable snapshot function of corresponding channels. See Figure 3-110.
  - In main menu, from **Setting->Camera->Encode->Snapshot interface**, here you can input snapshot mode as regular, size, quality and frequency. See Figure 3-111.
  - In main menu, from **Setting->Camera->Encode->Schedule interface**, please enable snapshot function. See interface on the right of Figure 3-112.

Please refer to the following figure for detailed information.

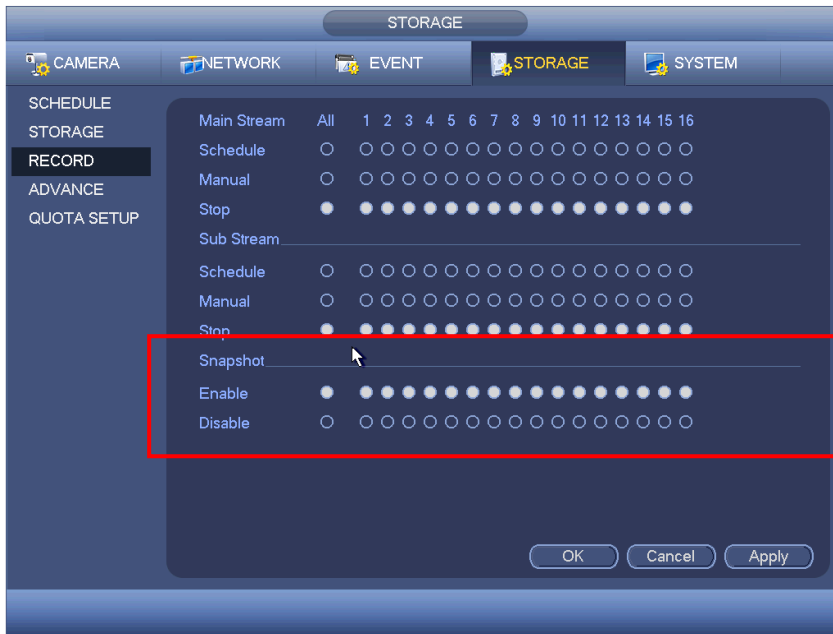


Figure 3-110

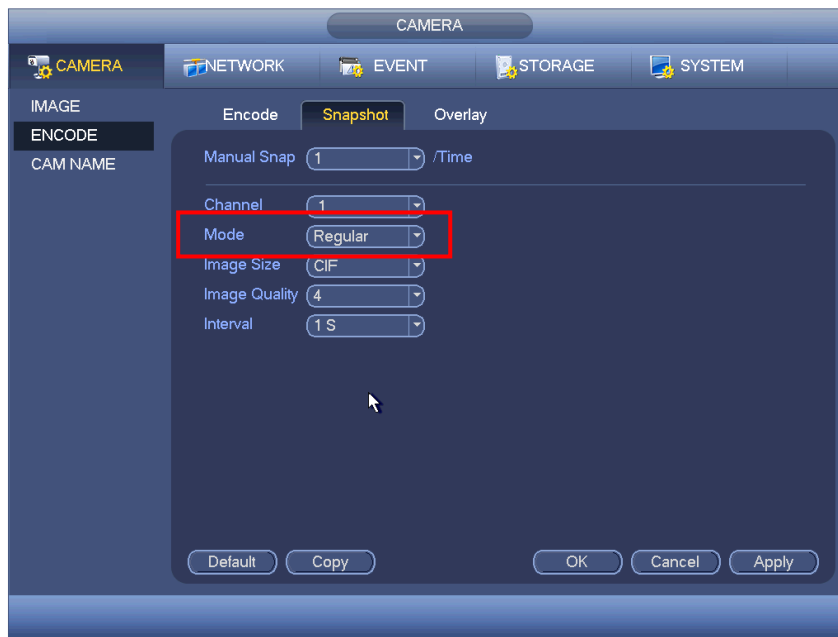


Figure 3-111

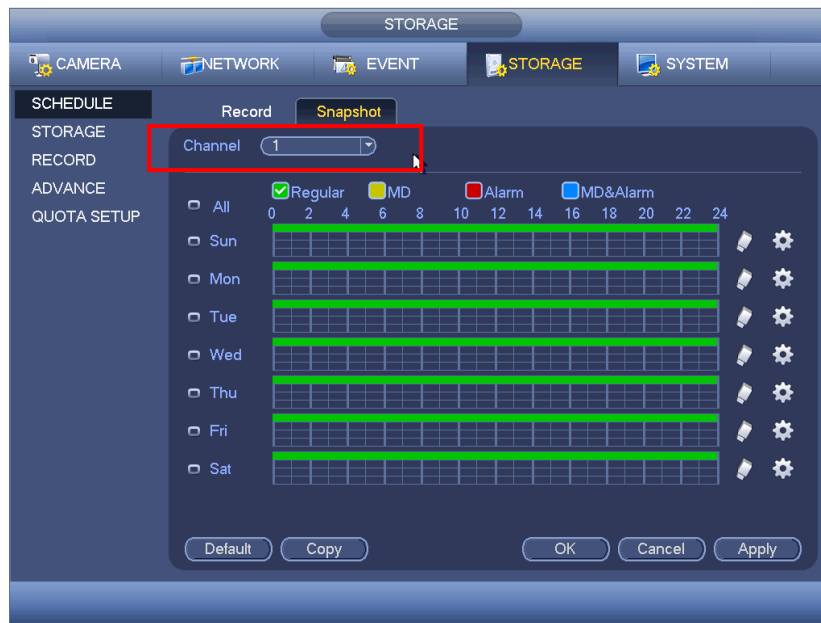


Figure 3-112

- **Snapshot: Trigger snapshot**  
Please follow the steps listed below to enable the activation snapshot function. After you enabled this function, system can snapshot when the corresponding alarm occurred.
  - In main menu, from **Setting->Camera->Encode->Snapshot interface**, here you can input snapshot mode as trigger, size, quality and frequency. See Figure 3-113.
  - In main menu, from **Setting->Event->Detect**, please enable snapshot function for specified channels (Figure 3-114). Or In main menu, from **Setting->Event->Alarm** (Figure 3-115) please enable snapshot function for specified channels.

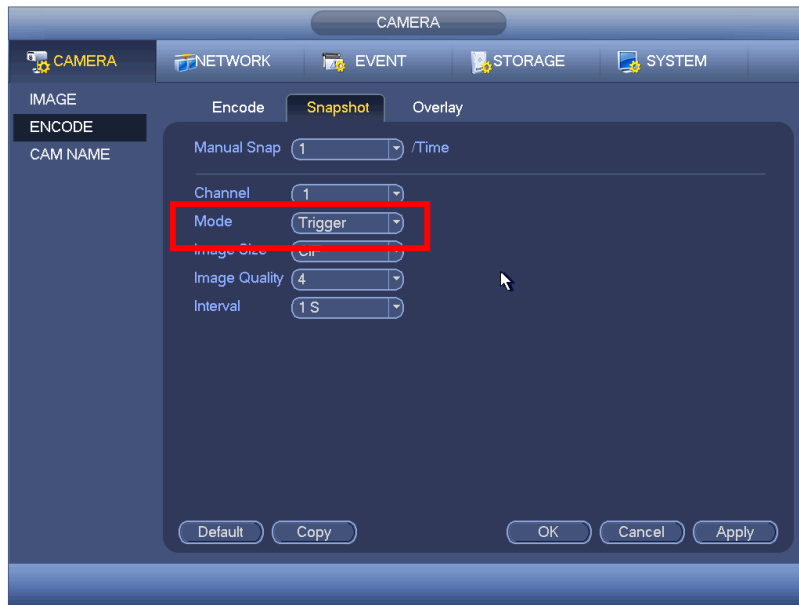


Figure 3-113

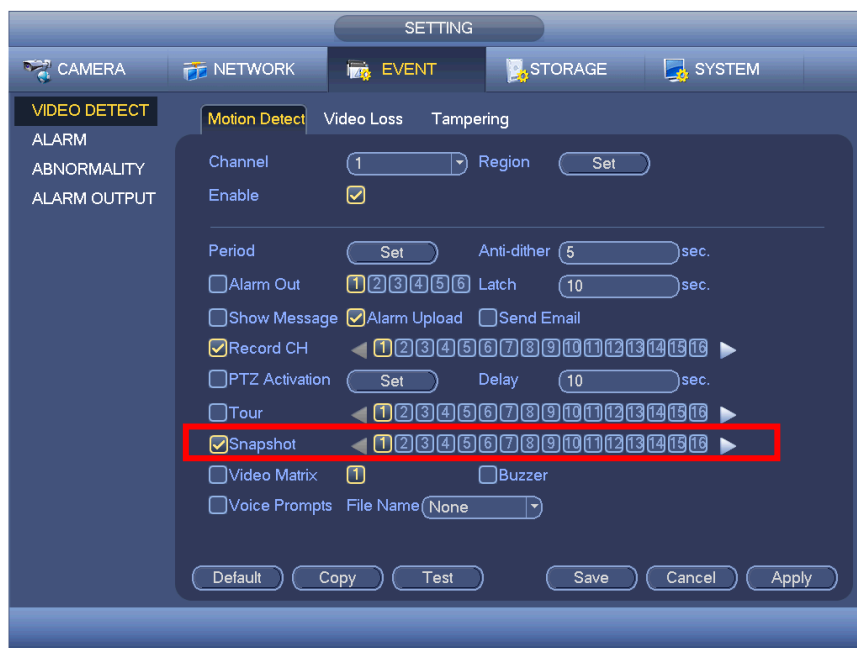


Figure 3-114

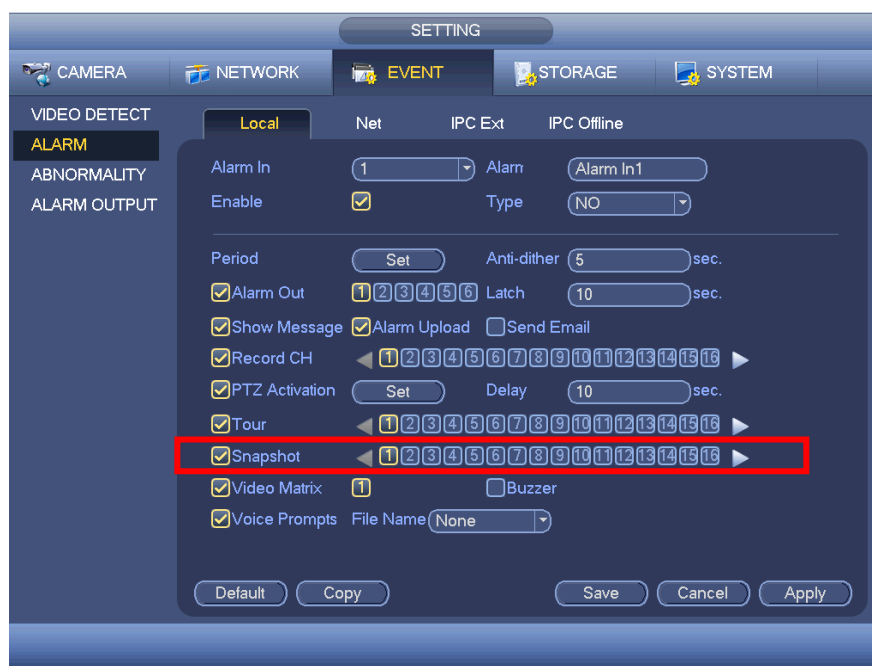


Figure 3-115

- **Snapshot: Priority**  
Please note the activation snapshot has the higher priority than schedule snapshot. If you have enabled these two types at the same time, system can activate the activation snapshot when alarm occurs, and otherwise the system just operates the scheduled snapshot.
- **Snapshot: Image FTP**  
In the main menu, from **Setting->Network->FTP**, you can set FTP server information. Please enable FTP function and then click save button. See Figure 3-116.

Please boot up corresponding FTP server.

Please enable schedule snapshot or activation snapshot first, now system can upload the image file to the FTP server.

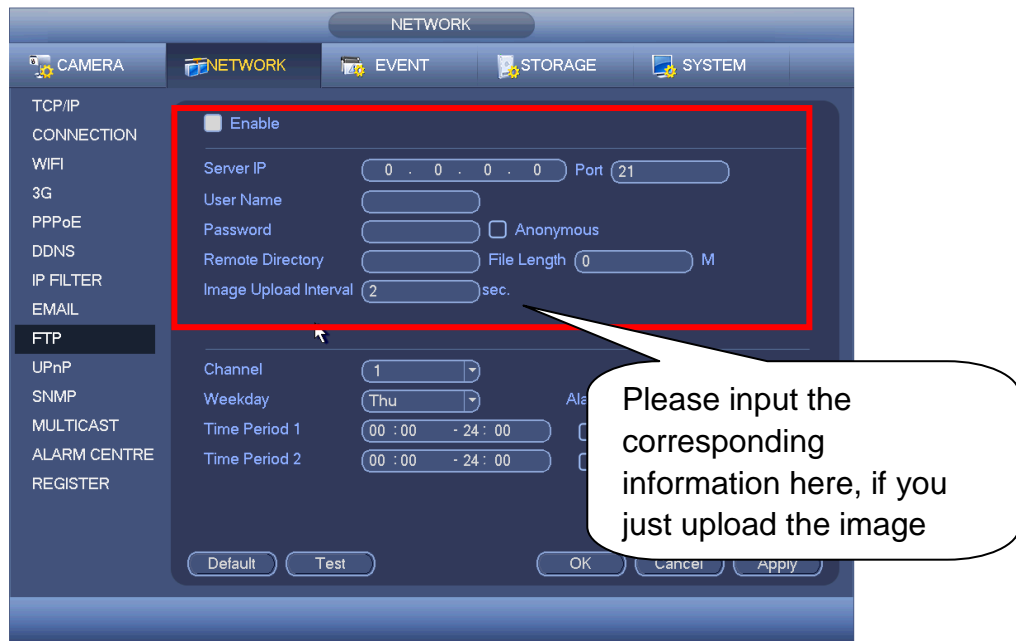


Figure 3-116

#### ○ HDD Manager

Here is for you to view and implement hard disk management. See Figure 3-117.

You can see current HDD type, status, capacity and etc. The operation includes format HDD, and change HDD property (read and write/read-only/redundancy).



Figure 3-117

- **Record**

- Record Control

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

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

- Right click mouse and then select **Manual->Record**.
- In the main menu, from **Setting->Storage->Record**.
- In live viewing mode, click record button in the front panel or record button in the remote control.

System supports main stream and sub stream. There are three statuses: schedule/manual/stop. See Figure 3-118. Please highlight icon “○” to select corresponding channel.

- Manual: The highest priority. After manual setup, all selected channels will begin ordinary recording.
- Schedule: Channel records as you have set in recording setup (Main Menu->Setting->System->>Schedule)
- Stop: Current channel stops recording.
- All: Check All button after the corresponding status to enable/disable all-channel schedule/manual record or enable/disable all channels to stop record.

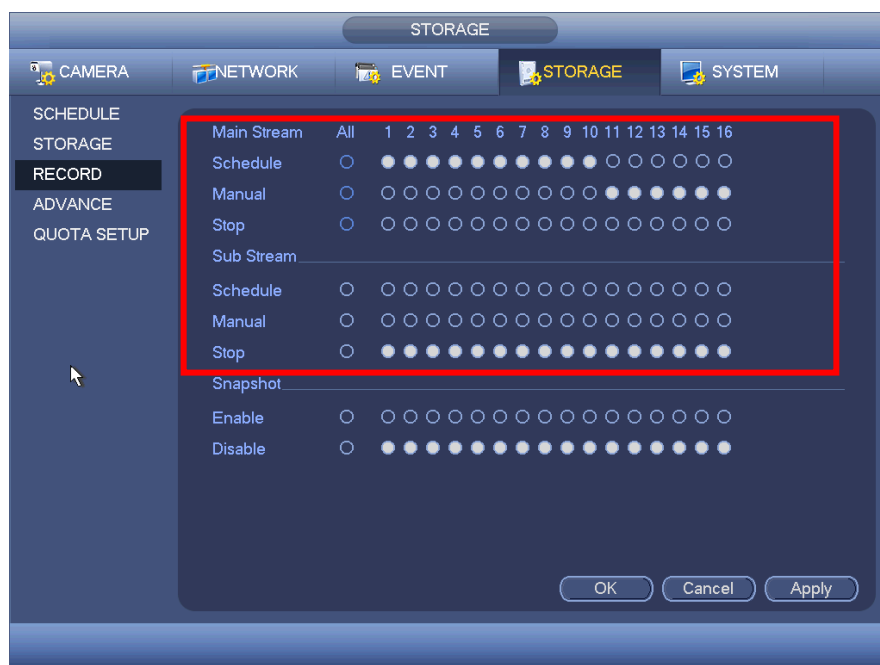


Figure 3-118



- Snapshot Operation:

Check the corresponding box to enable/disable schedule snapshot function. See Figure 3-119.

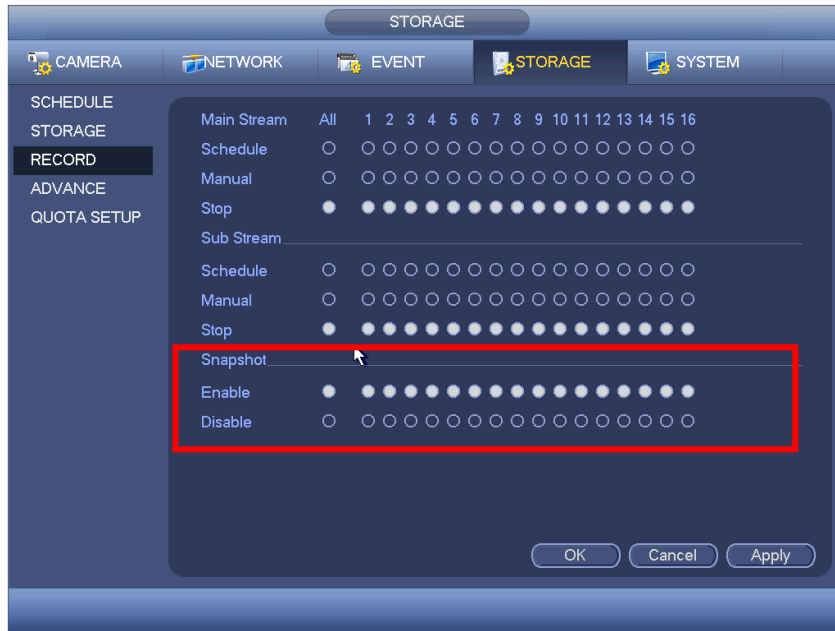


Figure 3-119

**Tips:** You can check All button after the corresponding status to enable/disable all-channel snapshot function.

- **Advanced**

It is to set HDD group, and HDD group setup for main stream, sub stream and snapshot operation

- HDD:

**Important: HDD group and quota mode can not be valid at the same time. System needs to restart once you change the mode here.**

The HDD group mode is shown as in Figure 3-120.

- HDD: Here you can view the HDD amount the device can support.
- Group: It lists the HDD Group number of current hard disk.



Figure 3-120

Please select the correspond group from the dropdown list and then click Apply button. Click main stream/sub stream/snapshot button to set corresponding HDD group information. See Figure 3-121.

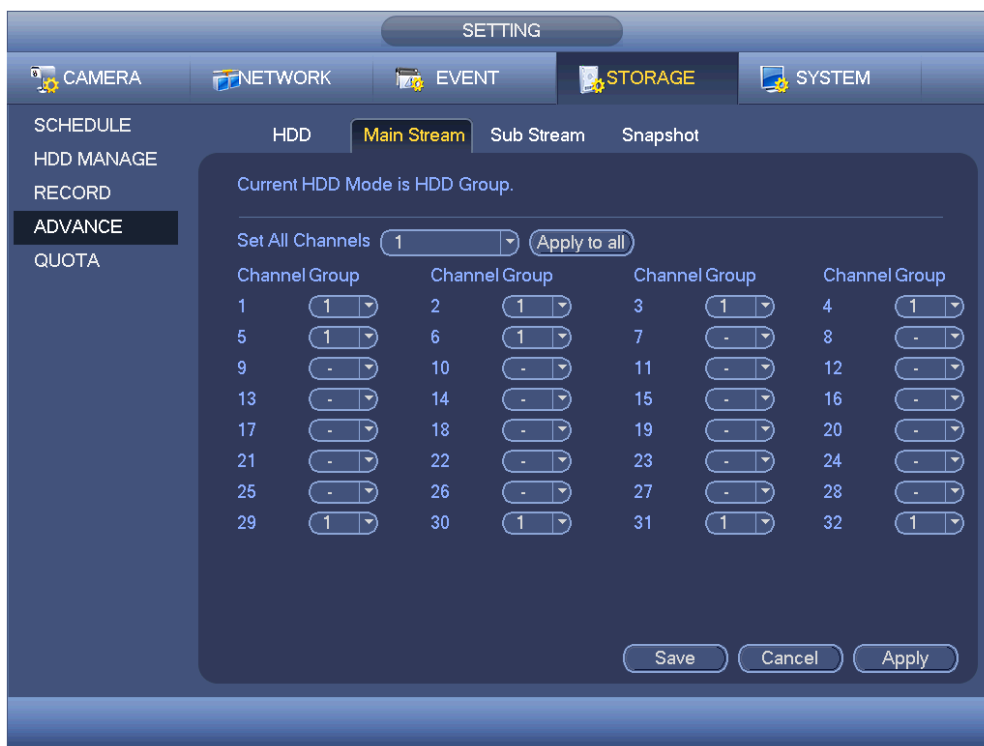


Figure 3-121

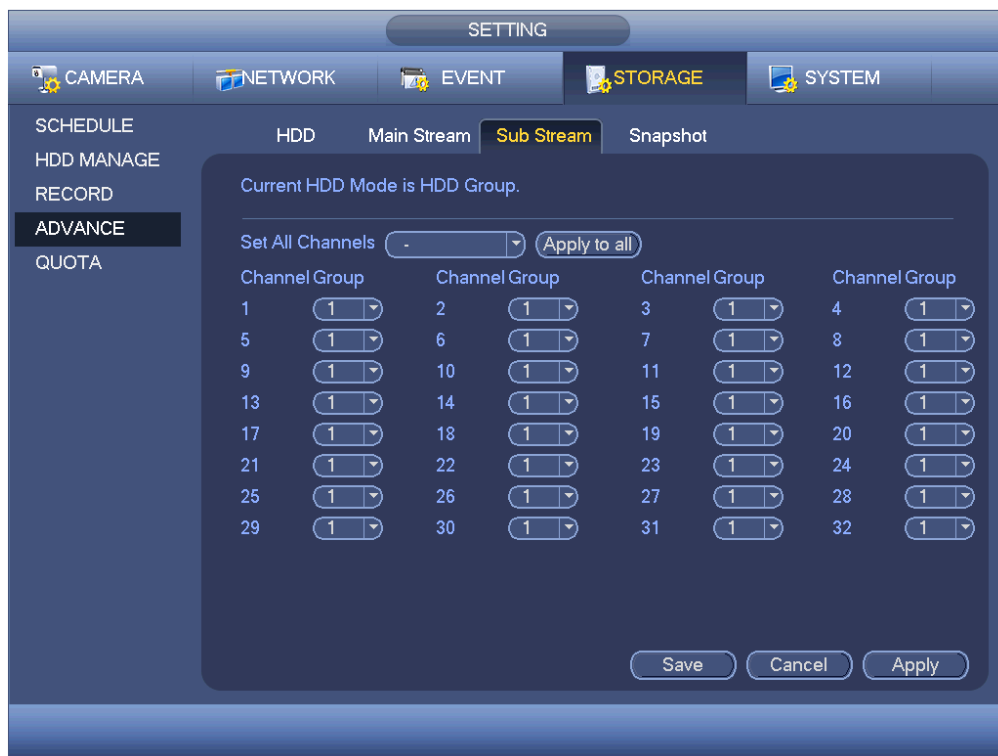


Figure 3-122

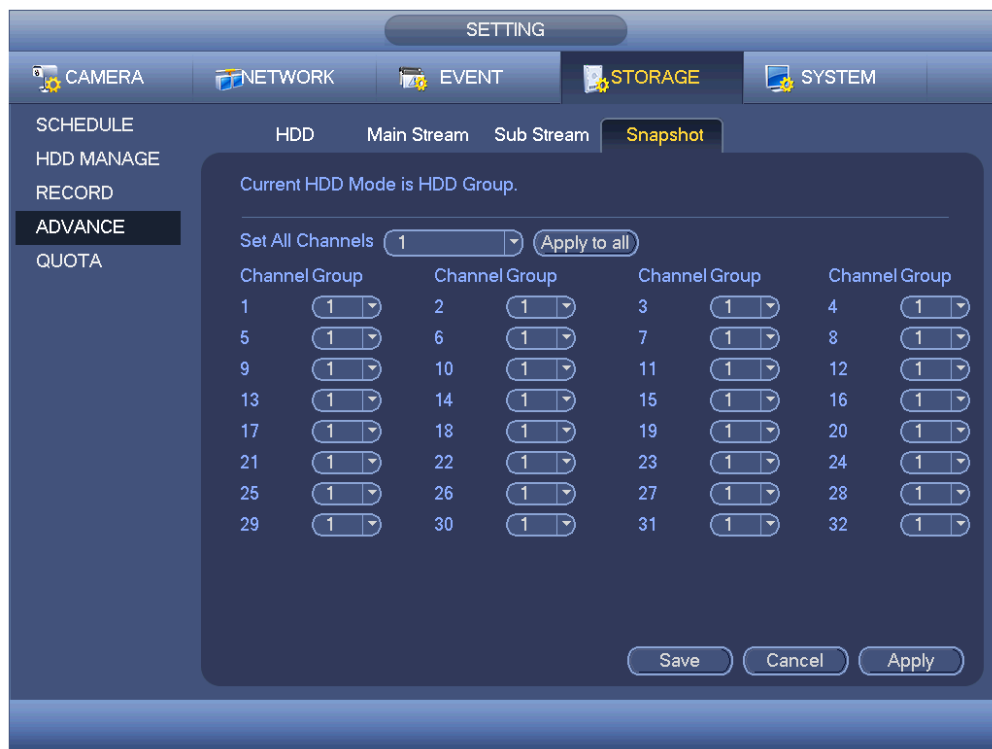


Figure 3-123

- **Quota**

Here you can set channel storage capacity. See Figure 3-124.

Select a channel from the dropdown list and then select corresponding HDD quota.



Figure 3-124

Click Quota Statistics, you can go to the following interface. You can view HDD capacity you set for each channel. See Figure 3-125.

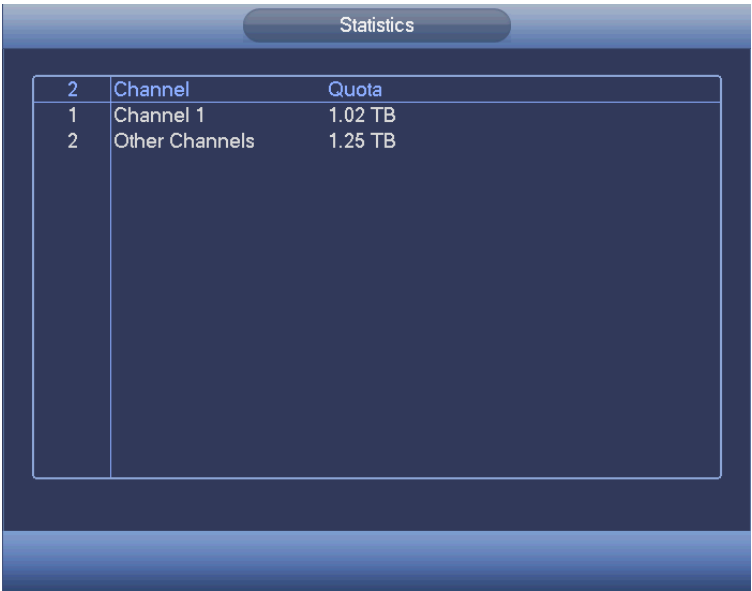


Figure 3-125

○ **HDD Detect**

The HDD detect function is to detect HDD current status so that you can clearly understand the HDD performance and replace the malfunction HDD.

There are two detect types:

- Quick detect is to detect via the universal system files. System can quickly complete the HDD scan. If you want to use this function, please make sure the HDD is in use now. If the HDD is removed from other device, please make sure the write-data once was full after it installed on current device.
- Global detect adopts Windows mode to scan. It may take a long time and may affect the HDD that is recording.

- Manual Detect:

The manual detect interface is shown as below. See Figure 3-126.

Please select detect type and HDD. Click start detect to begin. You can view the corresponding detect information.

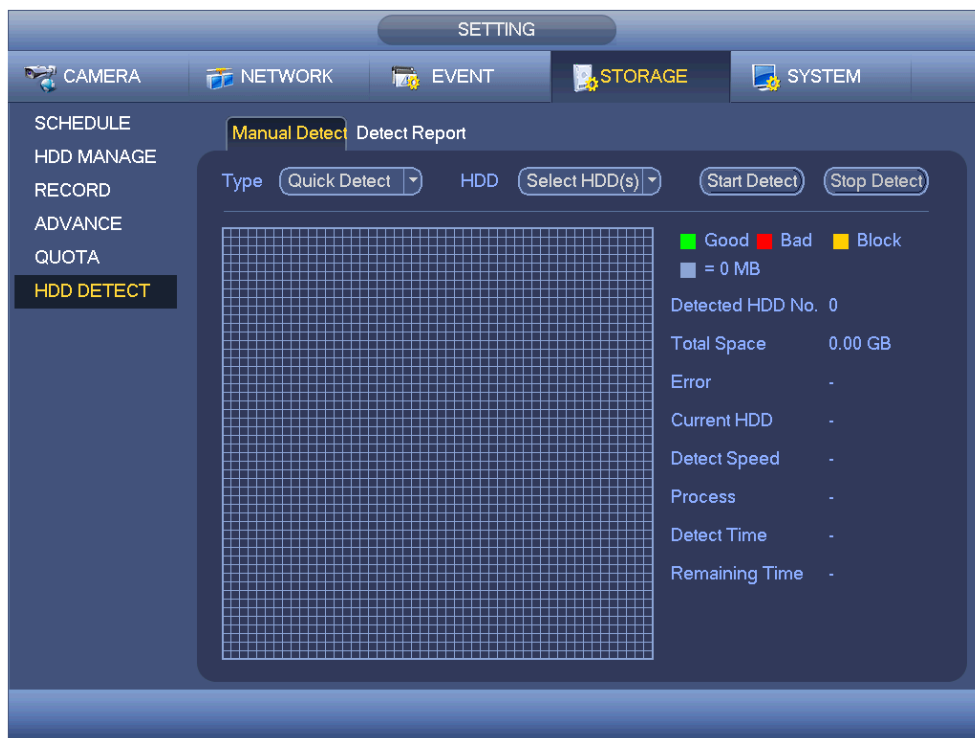


Figure 3-126

- Detect Report:

After the detect operation, you can go to the detect report to view corresponding information.

The detect report interface is shown as below. See Figure 3-127.

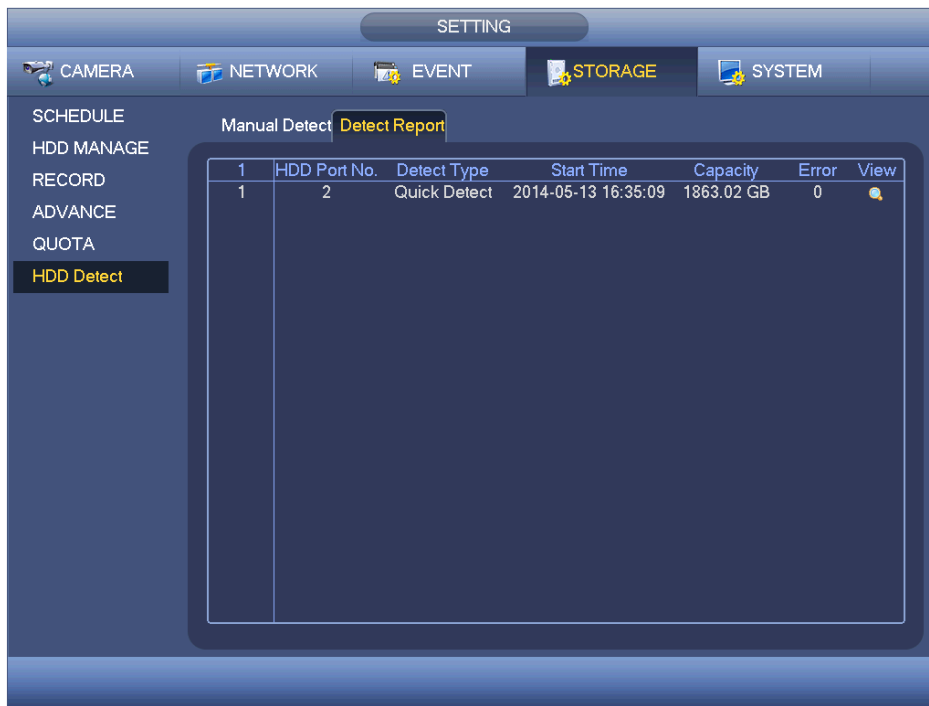


Figure 3-127

Click View, you can see the detailed information such as detect result, backup and S.M.A.R.T. See Figure 3-128 and Figure 3-129.

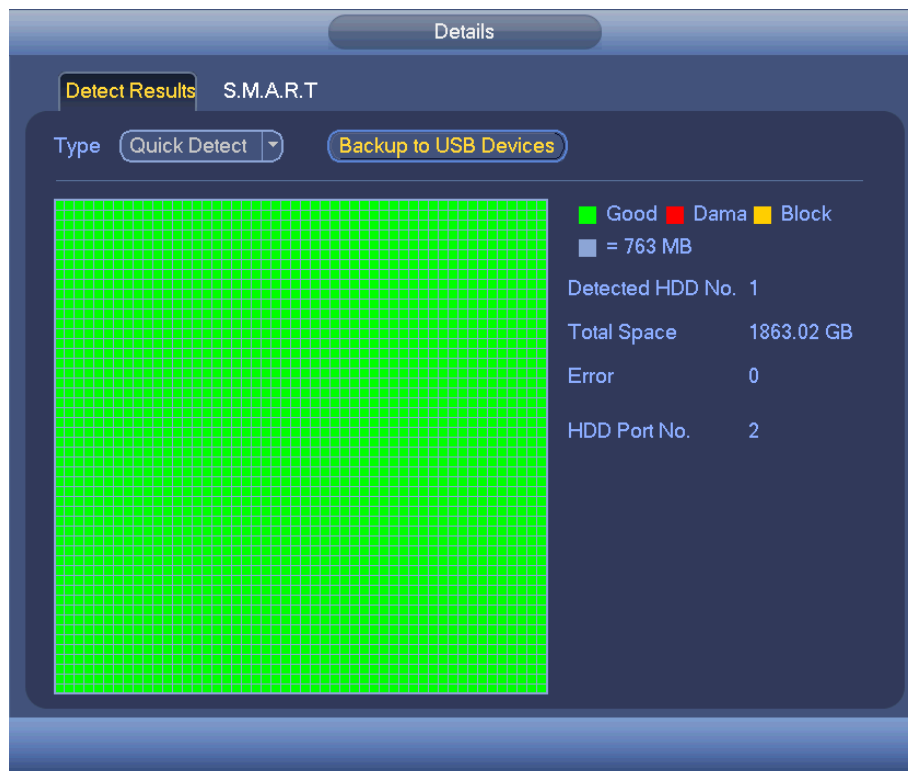


Figure 3-128



Figure 3-129

### 3.9.6 System

#### ○ General

##### ● Device

General setting includes the following items. See Figure 3-130.

- Device ID: Please input a corresponding device name here.
- Device No: Here you can set device number.
- Language: System supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional).
- Video standard: There are two formats: NTSC and PAL.
- HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
- Pack duration: Here is for you to specify record duration. The value ranges from 1 to 120 minutes. Default value is 60 minutes.
- Real-time playback: It is to set playback time you can view in the preview interface. The value ranges from 5 to 60 minutes.
- Auto logout: Here is for you to set auto logout interval once user login remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- Navigation bar: Check the box here, system displays the navigation bar on the interface.

- Startup wizard: Once you check the box here, system will go to the startup wizard directly when the system restarts the next time. Otherwise, it will go to the login interface.
- Mouse property: You can set double click speed via dragging the slide bar. You can click the Default button to restore default setup.



Figure 3-130

#### •Date and Time

The interface is shown as in Figure 3-131.

- Date format: There are three types: YYYY-MM-DD: MM-DD-YYYY or DD-MM-YYYY.
- Date separator: There are three denotations to separate the date: dot, beeline and solidus.
- DST: Here you can set DST time and date. Here you can set start time and end time by setting the corresponding week setup or by setting corresponding date setup.
- NTP: It is to set NTP server information.





Figure 3-131

- **Holiday**

Holiday setup interface is shown as in Figure 3-132. Click Add new holiday button, you can input new holiday information. See Figure 3-133. Here you can set holiday name, repeat mode and start/end time.

**Notes:**

- When you enable Holiday settings and schedule setup at the same time, the holiday setting has the priority. If the selected day is a holiday, then system records as you have setup the holiday setting. If it is not a holiday, system records how you have setup the Schedule interface.
- Please note, there is no year setup on the holiday setup. For example, if you set 30th Oct, 2012 as a holiday, then the date of 30th Oct in each year will be set as a holiday.

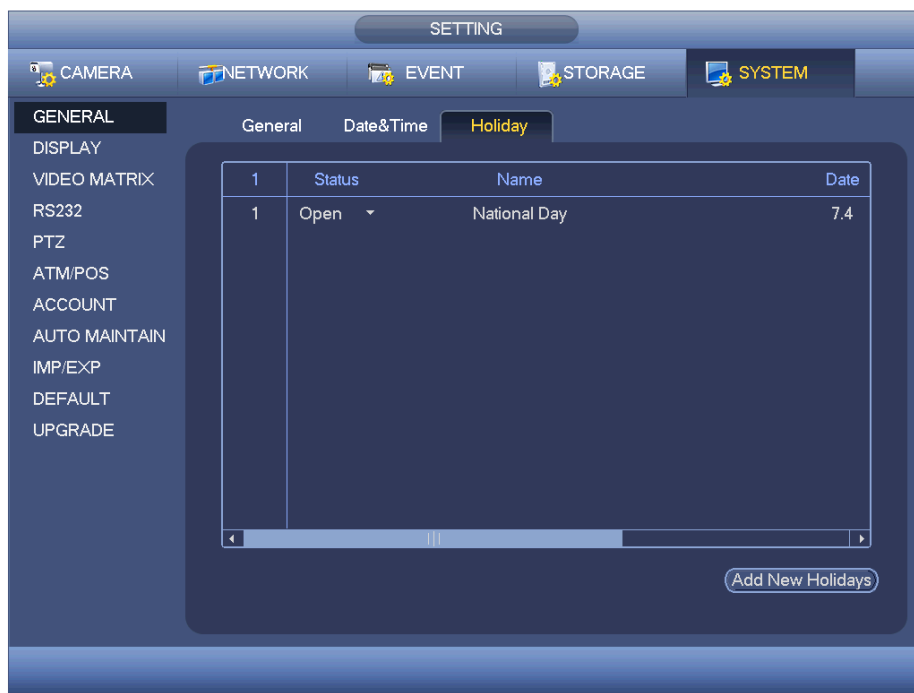


Figure 3-132

**Add New Holidays**

Holiday Name:

Repeat Mode: ☐ Once Only ☒ All-Year

Holiday Range: ☒ Date ☐ Week

Start Time: 2013 - 10 - 18

End Time: 2013 - 10 - 18

☐ Add More

Figure 3-133

- **Display**

- **Display**

Display setup interface is shown as below. See Figure 3-134.

- Transparency: Here is for you to adjust transparency. The value ranges from 128 to 255.
- Channel name: Here is for you to modify channel name. System max support 25-digits. Please note all your modification here only

applies to DVR local end. You need to open web or client end to refresh channel name.

- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to channel name or not when system is playback.
- Resolution: There are four options: 1920×1080, 1280×1024 (default), 1280× 720, 1024×768. Please note the system needs to reboot to activate current setup.
- Image enhance: Check the box; you can optimise the margin of the preview video.
- Preview denoise: This is to reduce the video noise and make it clearer. You can set the denoise level. The higher the level is, the clearer the video is.

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



Figure 3-134

#### ▪ TV Adjust

Here is for you to adjust TV output setup. See Figure 3-135. Please drag slide bar to adjust each item. After all the setups are complete please click OK button, system goes back to the previous menu.



Figure 3-135

#### ▪ Tour

Here you can activate tour function. Click the Setup button, you will see an interface shown as in Figure 3-136.

- Enable tour: Highlight box here to enable this function.
- Interval: System supports 1/8/-window tour. Input proper interval value here. The value ranges from 5-120 seconds. This is for the schedule tour/alarm/motion detect tour.
- Split: You can select window split mode from the dropdown list.
- Channel group: This is to display all channel groups on current split mode. You can edit and delete a channel group here.  
Double click an item in the list; you can edit its channel group setup. Right now system supports a maximum of 32.
- Add: Under specified window split mode, click it to add channel group.
- Delete: Click it to remove selected channel group.
- Move up: Click it to move current selected channel up.
- Move down: Click it to move current selected channel down.
- Default: Click it to restore default setup.

### Tips:







- Use mouse or Shift button to switch  and  button to enable /disable tour.  symbol means that the tour function is enabled and  meas tour function is disabled.
- On the navigation bar, click  or  to enable/disable tour function.



Figure 3-136

#### ▪ Zero-channel Encoding

Click zero-channel encoding button, you will then go to the following interface. See Figure 3-137. Here you can enable and set zero-channel encoding function so that you can view several video sources at one channel.

- Enable: This function is disabled by default. Check the box here to enable this function so that you can control the zero-channel encoding function at the WEB.
- Save: Click the Save button to save current setup. If this function is disabled, you cannot operate zero-channel encoding function via a remote internet connection, the video is black or null even if you operate when the function is disabled. After you have enabled this function, login into the web browser remote viewing interface and select zero-channel encoding mode at the

right corner of the interface . Select a mode; you can now view the local preview video.

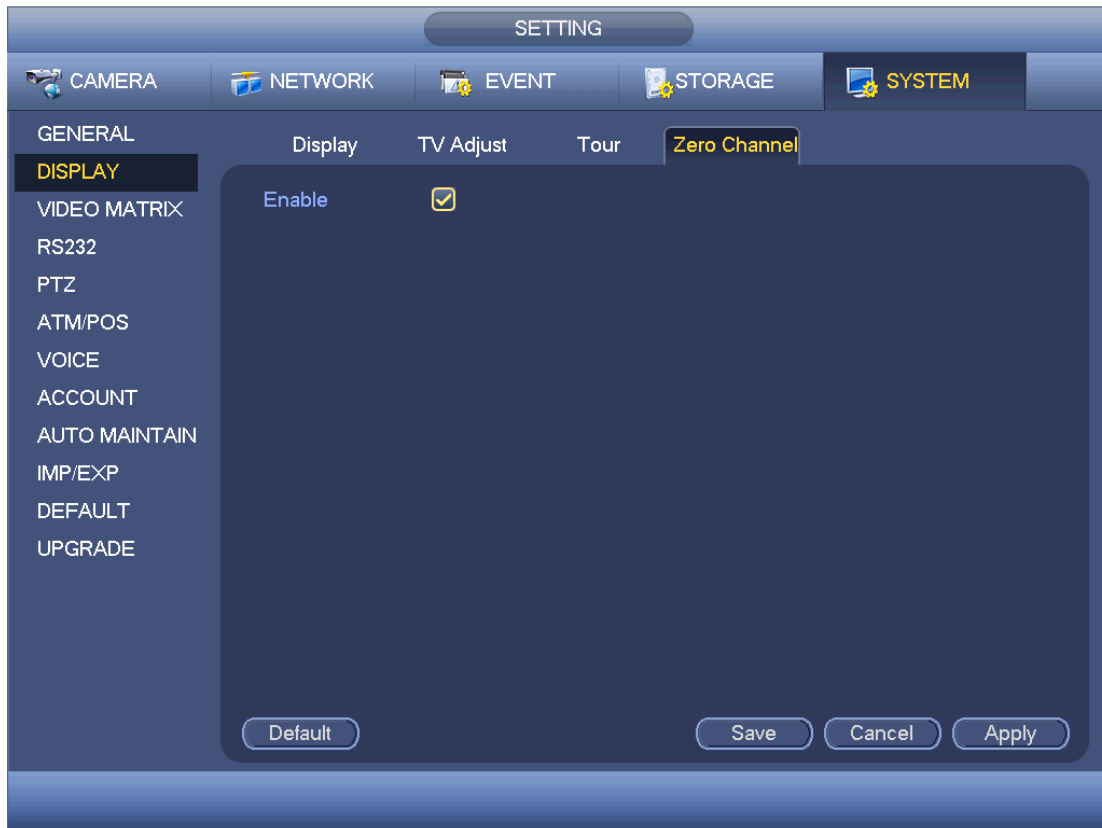


Figure 3-137

- **Video Matrix**

- **BNC**

Here you can set the matrix output channel and its interval. System supports 1/4-window and more with the SPOT tour. See Figure 3-138.



Figure 3-138

- HDMI

The HDMI interface is shown as in Figure 3-139. It is to set the HD video matrix output tour function of the HDMI port 2. You can set tour channel, resolution, and interval. System support 1/4-window tour.



Figure 3-139

#### ○ RS232

RS232 interface is shown as below. There are five items. See Figure 3-140.

- Function: There are various devices for you to select. Console is for you to use the COM or mini-end software to upgrade or debug the program. The control keyboard is for you to control the device via the special keyboard. Transparent COM (adapter) is to connect to the PC to transfer data directly. Protocol COM is for card overlay function. Network keyboard is for you to use the special keyboard to control the device. PTZ matrix is to connect to the peripheral matrix control.
- Baud rate: You can select proper baud rate.
- Data bit: You can select proper data bit. The value ranges from 5 to 8.
- Stop bit: There are two values: 1/2.
- Parity: There are five choices: none/odd/even/space mark.
- System default setup is:
  - Function: Console
  - Baud rate: 115200
  - Data bit: 8
  - Stop bit: 1
  - Parity: None

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





Figure 3-140

○ **PTZ**

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 3-141.

- PTZ type: There are two options: local/remote. Please select remote if you are connecting to the network PTZ.
- Protocol: Select corresponding PTZ protocol such as PELCO-D.
- Address: input corresponding PTZ address.
- Baud rate: Select baud rate.
- Data bit: Select data bit.
- Stop bit: Select stop bit.
- Parity: There are three choices: none/odd/even.

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



Figure 3-141

- **ATM/POS**

The ATM/POS function is for financially related monitoring areas. It includes Sniffer, information analysis and title overlay functions. The Sniffer mode includes COM and network.

- **COM Type**

The COM interface is shown as below. See Figure 3-142.

- Protocol: Please select from the dropdown list.
- Setting: Click COM setting button, the interface is shown as in RS232 interface. Please refer to Chapter 5.3.4 RS232.
- Overlay channel: Please select the channel you want to overlay the card number.
- Overlay mode: There are two options: preview and encode. Preview means overlay the card number in the local monitor video. Encode means overlay the card number in the record file.
- Overlay Position: Here you can select the proper overlay position from the dropdown list.

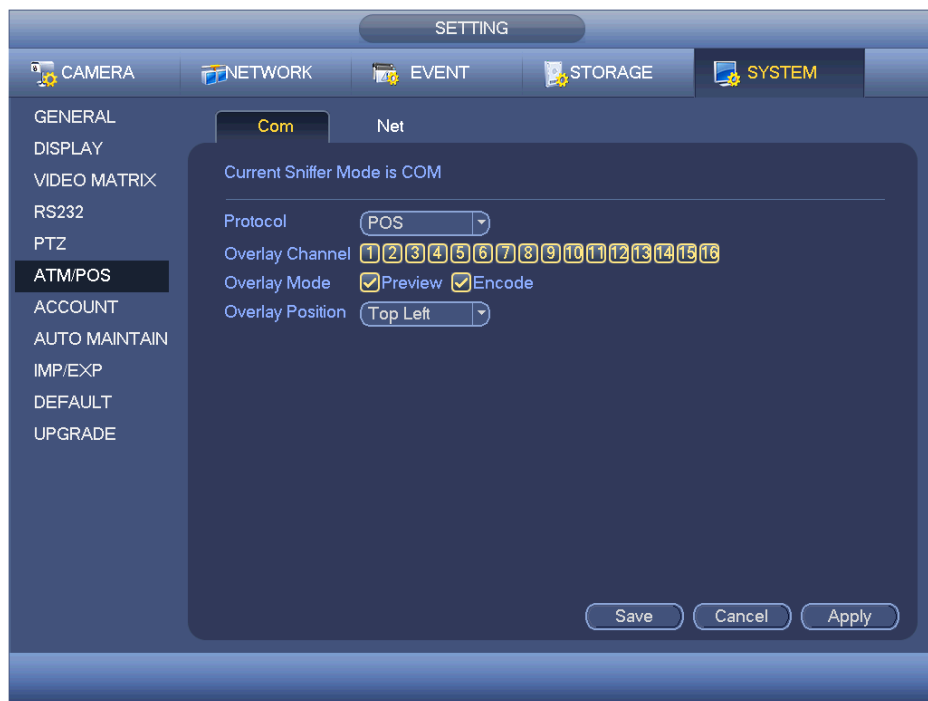


Figure 3-142

- **Network Type**

The network type interface is shown as below. See Figure 3-143. Here we take the ATM/POS protocol to continue.

There are two types: with or without the protocol according to client's requirements.

**With the protocol:**

For ATM/POS with the protocol, you just need to set the source IP, destination IP (sometimes you need to input corresponding port number).



Figure 3-143

### Without the protocol

- For the ATM/POS without the protocol, the interface is shown as in Figure 3-144.
- Source IP refers to host IP address that sends out information (usually it is the device host) .
- Destination IP refers to other systems that receive information.
- Usually you do not need to set source port and target port.
- There are total of four IP groups. The record channel applies to one group (optional) only. Six frame ID groups verification can guarantee information validity and legal.



Figure 3-144

#### ○ Voice

The audio function is to manage any audio files on the system and set the schedule play function. It allows you to carry out an audio broadcast activation function.

##### • File List

Here you can add audio file, listen to the audio file, or rename/delete audio file. Here you can also set audio volume. See Figure 3-145A.



Figure 3-145A

Click Add button, you can add audio file and import the audio file via the USB device. See Figure 3-145B.



Figure 3-145B

- **Schedule**

This menu is to set the schedule broadcast function. You can play the different audio files in the specified periods. See Figure 3-146.



Figure 3-146

#### ○ **Account**

This menu is for you to implement account management. See Figures 3-147 & 3-148.

Here you can:

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

For account management please note:

- For the user account name and the user group, the string max length is 6-bytes. The backspace in front of or at the back of the string is invalid. There can be a backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are four default users: admin/888888/666666 and hidden user "default". Except user 6666, other users have administrator right.
- Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

- One user should belong to one group. User right can not exceed group right.
- The reusable function: this function allows multiple users use the same account to login.
- The user account and MAC: When you add a new user, you can input the MAC address of current user, but only the user of the same MAC address can access the device remotely (MAC address is for the device of the same LAN). If you leave the MAC address item blank when you add a new user, the user of any MAC address can access the device remotely. You can set or change MAC address when you add or modify a user. The MAC address function is also valid for PSS login. Please note current function does not support IPV6.

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



Figure 3-147



Figure 3-148

- Add/Modify Group

Click the add group button, the interface is shown as below. See Figure 3-149.

Here you can input the group name and then input some memo information if necessary. There are a total of 98 rights to grant the selected group, such as control panel, shut down, real-time monitor, playback, record, record file backup, PTZ, user account, system information view, alarm input/output setup, system setup, log view, clear log, upgrade system, control device, etc.

The modify group interface is similar to the Figure 3-149.



Group Name

Memo

Authority

**System** Playback Monitor

☐ All  
☐ ACCOUNT  
☐ PTZ  
☐ COLOR  
☐ CAMERA  
☐ SYSTEM  
☐ INFO  
☐ STORAGE  
☐ CLEAR LOG  
☐ DISCONNECT USER  
☐ MANUAL CONTROL  
☐ EVENT  
☐ SHUTDOWN  
☐ DEFAULT&UPGRADE  
☐ BACKUP  
☐ NETWORK

Save Cancel

Figure 3-149

- Add/Modify User
  - Click the add user button, the interface is shown as in Figure 3-150.
  - Please input the user name, password, select the group it belongs to from the dropdown list.
  - Then you can check the corresponding rights for current user.
  - For convenient user management, usually we recommend the general user right is lower than the admin account.
  - The modify user interface is similar to Figure 3-153.

Figure 3-150

When you create a new user, you can input the corresponding MAC address of current user. If you leave this item blank, any MAC address user can share this user account to login. Please note system needs to check the validity of the MAC. Only the 12-digit 0-f format address can pass the validity verification. System only saves small character even you input capitalised one. You can see the corresponding prompt if there is any illegal input.

#### ○ **Auto Maintain**

Here you can set auto-reboot time and auto-delete old files setup. You can set to delete the files for the specified days. See Figure 3-151.

You can select proper setup from dropdown list.

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

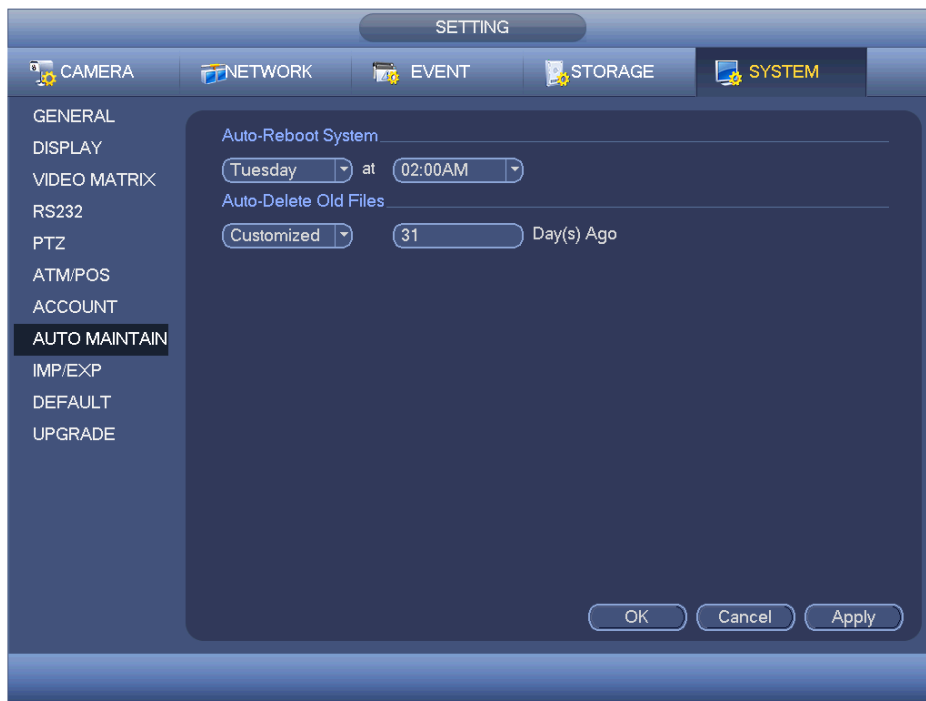


Figure 3-151

#### ○ **Config Backup**

The configuration file backup interface is shown as below. See Figure 3-152.

This function allows you to import/export system configuration. You can use this function when there are several devices needing the same setup.

- Export: Please connect the peripheral device first and then go to the following interface. Click Export button, you can see there is a corresponding "Config\_Time" folder. Double click the folder, you can view some backup files.
- Import: Here you can import the configuration files from the peripheral device to current device. You need to select a folder first. You can see a dialogue box asking you to select a folder if you are selecting a file. System pops up a dialogue box if there is no configuration file under current folder. After successfully importing, the system needs to reboot to activate a new setup.
- Format: Click Format button, system pops up a dialogue box for you to confirm current operation. System begins format process after you click the OK button.

#### **Notes:**


- System cannot open config backup interface again if there is backup operation in the process.

- System refreshes device when you go to the config backup every time and set the current directory as the root directory of the peripheral device.
- If you go to the configuration backup interface first and then insert the peripheral device, please click Refresh button to view the newly added device.



Figure 3-152

#### ○ **Default**

Click the default icon, the system will pop up a dialogue box. You can highlight  to restore default factory setup. See Figure 3-153.

- Camera
- Network
- Event
- Storage
- System

Please highlight icon  to select the corresponding function.

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

## Warning!

**System menu color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!**



Figure 3-153

### ○ Update

Here is for you to view hardware features, software version, built date, release SN information, etc. You can also update the system here. See Figure 3-154.

- Start: Please insert the USB device that have the update file to the device and then click the Start button to begin the update.

### Important:

**Please make sure the upgrade file name is 'update.bin'.**



Figure 3-154

## 4 FAQ

### 1. DVR can not boot up properly.

These are the possible reasons:

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

### 2. DVR often automatically shuts down or stops running.

These are the possible reasons:

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

### 3. System can not detect hard disk.

These are the possible reasons:

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

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

These are the possible reasons:

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

## **5. Real-time video color is distorted.**

These are the possible reasons:

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

## **6. Can not search local records.**

These are the possible reasons:

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

## **7. Video is distorted when searching local records.**

These are the possible reasons:

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

## **8. There is no audio when monitor.**

These are the possible reasons:

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

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

These are the possible reasons:

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

## **10. Time display is not correct.**

These are the possible reasons:

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



### **11. DVR can not control PTZ.**

These are the possible reasons:

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

### **12. Motion detection function does not work.**

These are the possible reasons:

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

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

These are the possible reasons:

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

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

These are the possible reasons:

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

### **15. Network connection is not stable.**

These are the possible reasons:

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

#### **16. Burn error /USB back error.**

These are the possible reasons:

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

#### **17. Keyboard can not control DVR.**

These are the possible reasons:

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

#### **18. Alarm signal can not been disarmed.**

These are the possible reasons:

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

#### **19. Record storage period is not enough.**

These are the possible reasons:

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

#### **20. Can not playback the downloaded file.**

These are the possible reasons:

- There is no media player.
- No DXB8.1 or higher graphic acceleration software.
- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

#### **21. Forgot local menu operation password or network password**

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

## **Daily Maintenance**

- Please use the brush to clean the board, socket connector and the chassis regularly.
- The DVR shall be soundly earthed in case there is audio/video disturbance. Keep the device away from the static voltage or induced voltage.
- Do not connect the TV to the local video output port (VOUT).It may result in an incorrect video output circuit.
- Always shut down the device properly. Please use the shutdown function in the menu, or you can press the power button in the rear pane for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
- Please make sure the device is away from the direct sunlight or other heating sources. Please keep the sound ventilation.
- Please check and maintain the device regularly.

### **Note:**

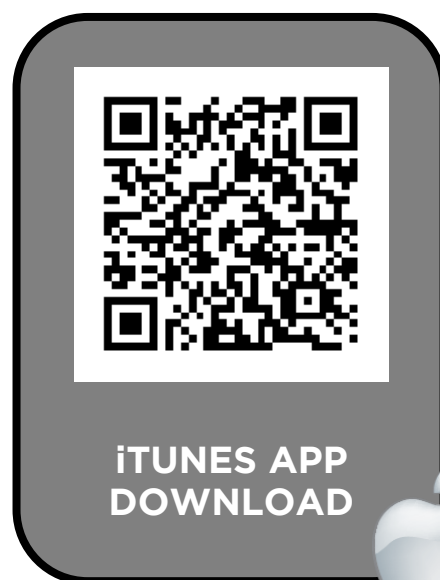
- **This manual is for reference only. Slight differences may be found when using the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks are the properties of their respective owners.**

# SENTIENT PRO MOBILE APP

To be able to remotely access your DVR from your mobile smart device please download one of our Sentient Pro apps from either the Google Play or iTunes stores.



Scan the QR codes below with you mobile smart device to be directed straight to the app download source:



To remotely access your DVR via a PC or computer workstation, connected to the internet, please scan the QR code below and register to our P2P website:

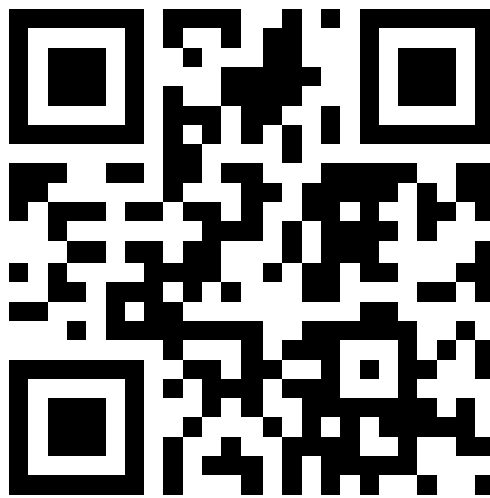
[www.sentient-connect.co.uk](http://www.sentient-connect.co.uk)



For more information about our DVRs and available cameras & accessories, please visit our website:

**[www.maplins.co.uk](http://www.maplins.co.uk)**

Alternatively scan this QR code with your smart phone to be directed instantly to our website.



Download our mobile apps to remotely operate your DVR on the move.