

HD Analog Recorder User's Manual

Model No. CJ-HDR216A
CJ-HDR416A

Version 1.0.0

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Welcome

Thank you for purchasing our HD Analog Recorder (DVR)!

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

Here you can find information about this series standalone DVR features and functions, as well as a detailed menu tree.

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

Cybersecurity Recommendations

Cybersecurity Recommendations

Mandatory actions to be taken towards cybersecurity

1. Change Passwords and Use Strong Passwords:

The number one reason systems get “hacked” is due to having weak or default passwords. It is recommended to change default passwords immediately and choose a strong password whenever possible. A strong password should be made up of at least 8 characters and a combination of special characters, numbers, and upper and lower case letters.

2. Update Firmware

As is standard procedure in the tech-industry, we recommend keeping DVR firmware up-to-date to ensure the system is current with the latest security patches and fixes.

“Nice to have” recommendations to improve your network security

1. Change Passwords Regularly

Regularly change the credentials to your devices to help ensure that only authorized users are able to access the system.

2. Change Default HTTP and TCP Ports:

- Change default HTTP and TCP ports for systems. These are the two ports used to communicate and to view video feeds remotely.
- HTTP port can be changed to any set of numbers between 1-65535. And TCP port can be changed to any set of numbers between 1025-65535. Avoiding the default ports reduces the risk of outsiders being able to guess which ports you are using.

3. Enable HTTPS/SSL:

Set up an SSL Certificate to enable HTTPS. This will encrypt all communication between your devices and recorder.

4. Enable IP Filter:

Enabling your IP filter will prevent everyone, except those with specified IP addresses, from accessing the system.

5. Forward Only Ports You Need:

- Only forward the HTTP and TCP ports that you need to use. Do not forward a huge range of numbers to the device. Do not DMZ the device's IP address.

6. Limit Features of Guest Accounts:

If your system is set up for multiple users, ensure that each user only has rights to features and functions they need to use to perform their job.

7. UPnP:

- UPnP will automatically try to forward ports in your router or modem. Normally this would be a good thing. However, if your system automatically forwards the ports and you leave the credentials defaulted, you may end up with unwanted visitors.
- If you manually forwarded the HTTP and TCP ports in your router/modem, this feature should be turned off regardless. Disabling UPnP is recommended when the function is not used in real applications.

8. SNMP:

Disable SNMP if you are not using it. If you are using SNMP, you should do so only temporarily, for tracing and testing purposes only.

9. Multicast:

Multicast is used to share video streams between two recorders. Currently there are no known issues involving multicast, but if you are not using this feature, deactivation can enhance your network security.

10. Check the Log:

If you suspect that someone has gained unauthorized access to your system, you can check the system log. The system log will show you which IP addresses were used to login to your system and what was accessed.

11. Physically Lock Down the Device:

Ideally, you want to prevent any unauthorized physical access to your system. The best way to achieve this is to install the recorder in a lockbox, locking server rack, or in a room that is behind a lock and key.

12. Security Cautions:

Take appropriate measures to avoid the following security breaches when using this product.

- Leaks of private information
- Unauthorized use of this product
- Unauthorized interference or suspension of the use of this product

Take the following measures to avoid security breaches:

- Configure the access point that connects your mobile device to this product to use encryption for all wireless communication.
- Do not use passwords that could be easily guessed by a third party. If you keep a record of your passwords, protect that record. Change passwords regularly.

- If you lose your mobile device, change the password used to access this product.
- Take care when performing important security related operations such as initializing settings, etc.
- To prevent disclosure of personal information, enable the screen lock or similar security feature on your mobile device.
- When submitting the product for repair, make a note of any important information stored in the product, as this information may be erased or changed as part of the repair process.
- Before handing the product over to a third party for repair or other purposes, make a backup of your harddisk files, perform a factory data reset to erase any data stored in the product and erase the harddisk memory. Use only trusted repair services authorized by Panasonic.
- This product can store your private/confidential information. To protect your privacy/confidentiality, we recommend that you erase information from the memory before you dispose of, transfer, or return the product.
- If your mobile device will no longer be used with the product, delete your mobile device's registration from the product and delete the corresponding app from your mobile device.

Additionally, note the following.

- Communications may be interrupted depending on network conditions and wireless signal quality.
- This product may be used in ways that violate the privacy or publicity rights of others. You are responsible for the ways in which this product is used.

Important Safeguards and Warnings

1 . Electrical safety

All installation and operation here should conform to your local electrical safety codes. The product must be grounded to reduce the risk of electric shock. We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2 . Transportation security

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

3 . Installation

Keep upwards. Handle with care.
Do not apply power to the DVR before completing installation.
Do not place objects on the DVR.

4 . Qualified engineers needed

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

5 . Environment

The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

6 . Accessories

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

7 . Lithium battery

Improper battery use may result in fire, explosion, or personal injury!
When replace the battery, please make sure you are using the same model!
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

1 FEATURES AND SPECIFICATIONS

1.1 Overview

The standalone series DVR is an excellent digital monitor product designed for security field.

It adopts embedded Linux OS to maintain reliable operation. Popular H.264 compression algorithm and G.711a audio compression technology realize high quality, low bit stream. Unique frame by frame play function is suitable for detailed analysis. It has various functions such as record, playback, monitor at the same time and can guarantee audio video synchronization. This series product has advanced technology and strong network data transmission function.

This series device adopts embedded design to achieve high security and reliability. It can work in the local end, and at the same time, when connecting it to the professional surveillance software (PSS), it can connect to the security network to realize strong network and remote monitor function.

This series product can be widely used in various areas such as banking, telecommunication, electric power, interrogation, transportation, intelligent resident zone, factory, warehouse, resources, and water conservancy.

1.2 Features

This series product has the following features:

- **Real-time surveillance**

Support VGA port and HDMI port. Realize the surveillance through displayer. Support HDMI, VGA, and TV output at the same time.

- **Storage function**

Special data format to guarantee data security and can remove the risk of the vicious data modification.

- **Compression format**

Support multiple-channel audio and video. An independent hardware decodes the audio and video signal from each channel to maintain video and audio synchronization.

- **Backup function**

Support backup operation via USB port (such as U disk, portable HDD, burner). Client-end user can download the file to local HDD to backup via network.

- **Record & playback function**

Support each channel real-time record independently, and at the same time it can support playback, forward play, network monitor, record search, download and etc.

Support various playback modes: slow play, fast play, backward play and frame by frame play.

Support time title overlay so that you can view event accurate occurred time.

Support customized zoom function during the preview.

- **Network operation**

Support network remote real-time monitor, remote record search and remote PTZ control.

- **Alarm activation function (CJ-HDR416A only)**

Several relay alarm outputs to realize alarm activation and on-site light control.

The alarm input port and output has the protection circuit to guarantee device safety.

- **Communication port**

RS485 port can realize alarm input and PTZ control.

RS232 port (CJ-HDR416A only) can connect to keyboard to realize central control, and can also connect to PC COM to upgrade system and realize maintenance, and matrix control.

Standard Ethernet port can realize network access function.

The dual-network port has the multiple-access, fault-tolerance, load-balance setup mode.

- **PTZ control**

Support PTZ decoder via RS485.

- **Intelligent operation**

Mouse operation function.

In the menu, support copy and paste setup function.

- **UPnP (Universal Plug and Play)**

Establish mapping connection between LAN and WAN via UPnP protocol.

Slight function differences may be found due to different series.

1.3 Specifications

Model		CJ-HDR216A
Video/Audio IF		
Video Input		16 CH, BNC
Type	HDCVI	720P/1080P
	Analog	PAL/NTSC
Video Output		1 HDMI, 1 VGA
Audio Input		1 CH, RCA

Audio Output	1 CH, RCA	
Two-way Talk	Reuse audio input/output CH 1	
Display		
Output Resolution	1920×1080, 1280×1024, 1280×720, 1024×768	
Multiscreen Mode	1/4/8/9/16	
Privacy Masking	4 rectangular zones (each camera)	
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording	
Video/Audio Format		
Video/Audio Compression	H.264/G.711a	
Record Rate*	Main Stream	1280*1440/1080P/1080N/720P/960H/D1/HD1/BCIF/CIF/QCIF (1~25/30fps)
	Sub Stream	D1/CIF/QCIF (1~15fps)
Bit Rate	1Kbps~6144Kbps per channel	
Record Mode	Manual, Schedule (Regular, Continuous), Alarm, MD, Stop	
Record Interval	1~60 min (default: 60 min), Pre-record: 0~30 sec, Post-record: 10~300 sec	
Alarm/Event		
Trigger Events	Recording, PTZ, Tour, Email, FTP, Snapshot, Buzzer, Show Message, Alarm Upload, Video Matrix and Log	
Video Detection	Motion Detection, MD Zones: 396 (22×18)/330 (22×15), Video Loss, Tampering	
Playback & Backup		
Sync Playback	1/4/9/16	
Search Mode	Time/Date, Alarm, MD and Exact Search (accurate to second)	
Playback Functions	Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next camera, Previous camera, Full screen, Repeat, Shuffle, Backup selection, Digital zoom, Customized playback, Splice playback	
Backup Mode	USB Device/Network	
Network		
Network Interface	RJ-45 port (1000M)	
Network Functions	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, DDNS, FTP, SNMP, EZ Remote	
Max. User Access	128 users	
Mobile Device	iPhone, iPad, Android	
HDD		

Type	2 SATA ports, up to 8TB for each disk
External Interface	
USB Interface	2 ports (1 rear), 1 USB2.0, 1 USB3.0
RS485 Camera Interface	1 port, for PTZ Control
General Specifications	
Power Supply	DC12V/4A
Power Consumption	<15W (without HDD)
Working Environment	-10°C~+55°C/0%~90%RH
Dimension (WxDxH)	1U, 375mm×288.95mm×53mm
Weight	1.74kg (without HDD)

- For channel 1, channel 5, channel 9 and channel 13, the change of the frame rate to 16fps or more at 1080P and above, will update the frame rate settings of other channels to 15fps.
- Recommended to schedule a weekly reboot.

Model		CJ-HDR416A
Video/Audio IF		
Video Input		16 CH, BNC
Type	HDCVI	720P/1080P
	Analog	PAL/NTSC
Video Output		2 HDMI, 1 VGA, 1 BNC
Audio Input		4 CH, BNC
Audio Output		1 CH, BNC
Two-way Talk		1 Mic In, 1 Mic Out, BNC
Display		
Output Resolution		1920×1080, 1280×1024, 1280×720, 1024×768
Multiscreen Mode		1/4/8/9/16
Privacy Masking		4 rectangular zones (each camera)
OSD		Camera title, Time, Video loss, Camera lock, Motion detection, Recording
Video/Audio Format		
Video/Audio Compression		H.264/G.711a

Record Rate*	Main Stream	1080P/1080N/720P/960H/D1/HD1/BCIF/CIF/QCIF (1~25/30fps)
	Sub Stream	D1/CIF/QCIF (1~15fps)
Bit Rate		1Kbps~6144Kbps per channel
Record Mode		Manual, Schedule (Regular, Continuous), Alarm, MD, Stop
Record Interval		1~60 min (default: 60 min), Pre-record: 0~30 sec, Post-record: 10~300 sec
Alarm/Event		
Alarm Input		16 CH
Relay Output		6 CH
Trigger Events		Recording, PTZ, Tour, Email, FTP, Alarm Output, Snapshot, Buzzer, Show Message, Alarm Upload, Video Matrix and Log
Video Detection		Motion Detection, MD Zones: 396 (22x18)/330 (22x15), Video Loss, Tampering
Playback & Backup		
Sync Playback		1/4/9/16
Search Mode		Time/Date, Alarm, MD and Exact Search (accurate to second)
Playback Functions		Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next camera, Previous camera, Full screen, Repeat, Shuffle, Backup selection, Digital zoom, Customized playback, Splice playback
Backup Mode		USB Device/Network
Network		
Network Interface		RJ-45 port (1000M)
Network Functions		HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, DDNS, FTP, SNMP, EZ Remote
Max. User Access		128 users
Mobile Phone		iPhone, iPad, Android
HDD		
Type		4 SATA ports, up to 8TB for each disk
External Interface		
USB Interface		3 ports (2 rear), 1 USB2.0, 2 USB3.0

RS232	1 port, for PC communication & keyboard
RS485	1 port, for PTZ control
RS422	1 port, for PTZ control
General Specifications	
Power Supply	AC 100~240V, 50/60 Hz
Power Consumption	<30W (without HDD)
Working Environment	-10°C~+55°C/0%~90%RH
Dimension(WxDxH)	1.5U, 440mm×418.7mm×76mm
Weight	4.73kg (without HDD)

- For channel 1, channel 5, channel 9 and channel 13, the change of the frame rate to 16fps or more at 1080P, will update the frame rate settings of other channels to 15fps.

- Recommended to schedule a weekly reboot.

2 Overview and Controls

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

2.1 Front Panel

2.1.1 CJ-HDR216A

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

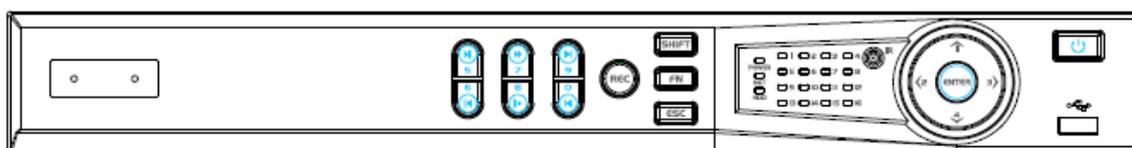


Figure 2-1

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

Name	Icon	Function
Power button		Press this button to boot up or shut down the device.
USB port		Connect to USB2.0 storage device, mouse and etc.
Up/1 Down/4		<ul style="list-style-type: none"> • Activate current controls, and then move up, move down or jump. • Change setup, increase/decrease numeral. • Assistant function such as PTZ menu. • Switch channel when playback.
Left/2 Right/3		<ul style="list-style-type: none"> • Switch current activated controls, move up and down. • When device is in 1-channel playback mode, use it to control playback control bar process.
Play/Pause/5		When playback, click it to pause, click it again to play again.
Reverse/Pause/6		When playback, click it to begin reverse play.
Fast forward/7		When playback, it supports various fast forward speeds and normal playback.
Slow playback/8		When playback, it supports various slow playback speeds and normal playback.
Play next/9		When playback, click it to view the next record.
Play previous/0		When playback, click it to view the previous record.
Record indicator	1~16	It is to display system is recording or not. The light becomes on when system is recording.
Cancel	ESC	<ul style="list-style-type: none"> • Go to previous menu, or cancel current operation (Close the top interface or controls). • When playback, click it to restore real-time monitor mode.
Confirm	ENTER	<ul style="list-style-type: none"> • Confirm current operation. • Go to default button. • Go to the menu.

Name	Icon	Function
Assistant	FN	<ul style="list-style-type: none"> • One-window monitor mode, click this button to display assistant function: PTZ control and image color. • In menu control interface click to switch PTZ control menu. • In motion detection setup, working with FN and direction keys to realize setup. • Backspace function: in numeral control or text control, press it for 1.5 seconds to delete the previous character before the cursor. • Realize other special functions.
Shift	SHIFT	In textbox, click it to switch between numeral, English character (small/capitalized) and etc.
Record	REC	<ul style="list-style-type: none"> • It is to start/stop record manually. • In record control interface, working with the direction buttons to select the record channel.
Power indicator	POWER	Light turns on when power connection is OK.
Network indicator	NET	Light turns on when network connection is abnormal.
HDD indicator	HDD	Light turns on when HDD is abnormal.

2.1.2 CJ-HDR416A

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

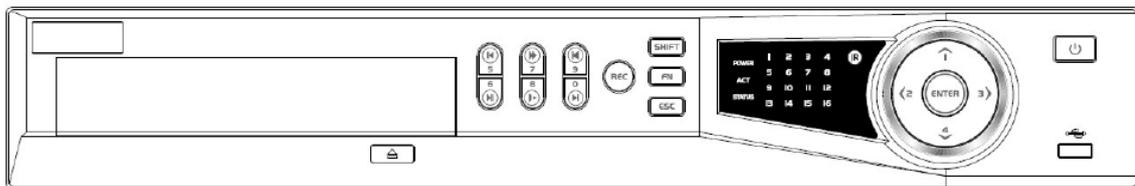


Figure 2-2

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

Name	Icon	Function
Power button		Press this button to boot up or shut down the device.
USB port		Connect to USB2.0 storage device, mouse, DVD burner and etc.
Up/1 Down/4		<ul style="list-style-type: none"> • Activate current controls, and then move up, move down or jump. • Change setup, increase/decrease numeral. • Assistant function such as PTZ menu. • Switch channel when playback.
Left/2 Right/3		<ul style="list-style-type: none"> • Switch current activated controls, move up and down. • When device is in 1-channel playback mode, use it to control playback control bar process.
Play/Pause/6		When playback, click it to pause, click it again to play again.

Name	Icon	Function
Reverse/Pause/5		When playback, click it to begin reverse play.
Fast forward/7		When playback, it support various fast forward speeds and normal playback.
Slow playback/8		When playback, it support various slow playback speeds and normal playback.
Play next/0		When playback, click it to view the next record.
Play previous/9		When playback, click it to view the previous record.
Record indicator light	1 ~ 16	It is to display system is recording or not. The light becomes on when system is recording.
Cancel	ESC	<ul style="list-style-type: none"> Go to previous menu, or cancel current operation (Close the top interface or controls). When playback, click it to restore real-time monitor mode.
Confirm	ENTER	<ul style="list-style-type: none"> Confirm current operation. Go to default button. Go to the menu.
Assistant	FN	<ul style="list-style-type: none"> One-window monitor mode, click this button to display assistant function: PTZ control and image color. In menu control interface, click to switch PTZ control menu. In motion detection setup, working with FN and direction keys to realize setup. Backspace function: in numeral control or text control, press it for 1.5 seconds to delete the previous character before the cursor. Realize other special functions.
Shift	SHIFT	<ul style="list-style-type: none"> In text mode, click it to switch between numeral, English character (small/capitalized) and etc. During tour process, click it to enable/disable tour function. Click it to auto adjust resolution when device boots up.
Record	REC	<ul style="list-style-type: none"> It is to start/stop record manually. In record control interface, working with the direction buttons to select the record channel.
CDROM		This button is inapplicable. Please do not press it with too much force.

2.2 Rear Panel

2.2.1 CJ-HDR216A

The rear panel is shown as below. See Figure 2-3.

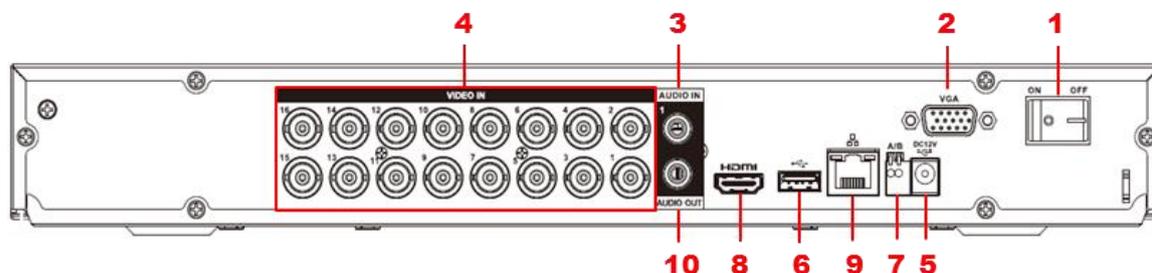
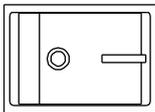


Figure 2-3

Please refer to the following sheet for detailed information.

SN	Icon	Name	Note
1		Power switch	Power on/off button.
2	VGA	VGA video output port	VGA video output port. Output analog video signal. Can connect to the monitor to view analog video output.
3	AUDIO IN	Audio input port	Connect to audio input device such as microphone or other audio input device.
4	VIDEO IN	Video input port	Connect to analog camera, video input signal.
5		Power input port	Input 12V DC.
6		USB3.0 port	Connect to USB storage device, mouse, burning DVD-ROM and etc.
7	A	RS485 (RS-485) communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.
	B		RS485_B port. It is the cable B. You can connect to the control devices such as speed dome PTZ.
8	HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device.
9		Network port	1000M Ethernet port.
10	AUDIO OUT	Audio output port	Connect to audio output device such as sound box.

2.2.2 CJ-HDR416A

This rear panel is shown as below. See Figure 2-4.

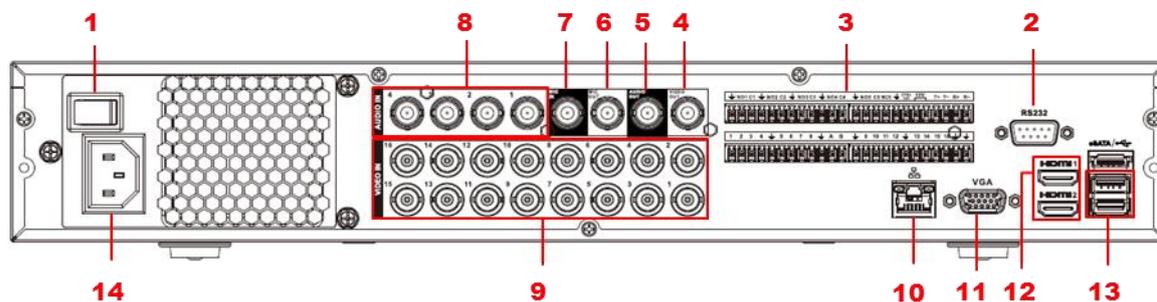


Figure 2-4

Please refer to the following sheet for detailed information.

SN	Icon	Name	Note
1		Power switch	Power on/off button.
2	RS-232	RS-232 debug COM.	It is for general COM debug to configure IP address or transfer transparent COM data.
3	1~16	Alarm input port 1~16	<ul style="list-style-type: none"> There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from 9 to 12, and the fourth group is from 13 to 16. They are to receive the signal from the external alarm source. There are two types; NO (normal open)/NC (normal close). When your alarm input device is using external power, please make sure the device and the DVR have the same ground.
	NO1~NO5	Alarm output port 1~5	<ul style="list-style-type: none"> 5 groups of alarm output ports. (Group 1: port NO1~C1, Group 2: port NO2~C2, Group 3: port NO3~C3, Group 4: port NO4~C4, Group 5: port NO5, C5, NC5). Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. NO: Normal open alarm output port. C: Alarm output public end. NC: Normal close alarm output port.
	C1~C5		
	NC5		
A		RS-485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.

SN	Icon	Name	Note
	B		RS485_B port. It is the cable B. You can connect to the control devices such as speed dome PTZ.
	T+, T-, R+, R-	Four-wire full-duplex 485 port	Four-wire full-duplex 485 port. T+, T- is the output wire. R+, R- is the input wire.
	CTRL 12V	Control power output	Controller 12V power output. It is to control the on-off alarm relay output.
4	VIDEO OUT	Video output port	Connect to video output devices such as TV.
5	AUDIO OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box.
6	MIC OUT	Audio output port	Audio output port. It is to output the analog audio signal to the devices such as the sound box. <ul style="list-style-type: none"> ● Bidirectional talk output. ● Audio output on 1-window video monitor. ● Audio output on 1-window video playback.
7	MIC IN	Audio input port	Bidirectional talk input port. It is to receive the analog audio signal output from the devices such as mike phone, pickup.
8	AUDIO IN	Audio input port	It is to receive the analog audio signal output from the devices such as mike phone, pickup.
9	VIDEO IN	Video input port	Connect to analog camera to input video signal.
10		Network port	1000M Ethernet port.
11	VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
12	HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device.
13		USB3.0 port	USB3.0 port. Connect to mouse, USB storage device, USB burner and etc.

SN	Icon	Name	Note
14		Power socket	Power socket.

2.3 Connection Sample

2.3.1 CJ-HDR216A

Please refer to Figure 2-5 for connection sample.

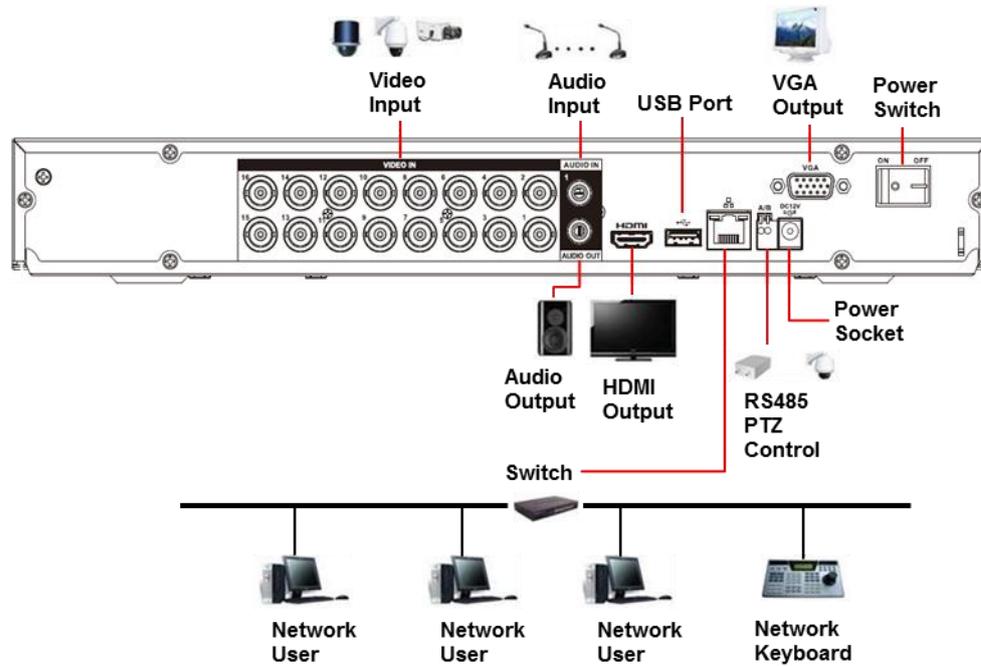


Figure 2-5

2.3.2 CJ-HDR416A

Please refer to Figure 2-6 for connection sample.

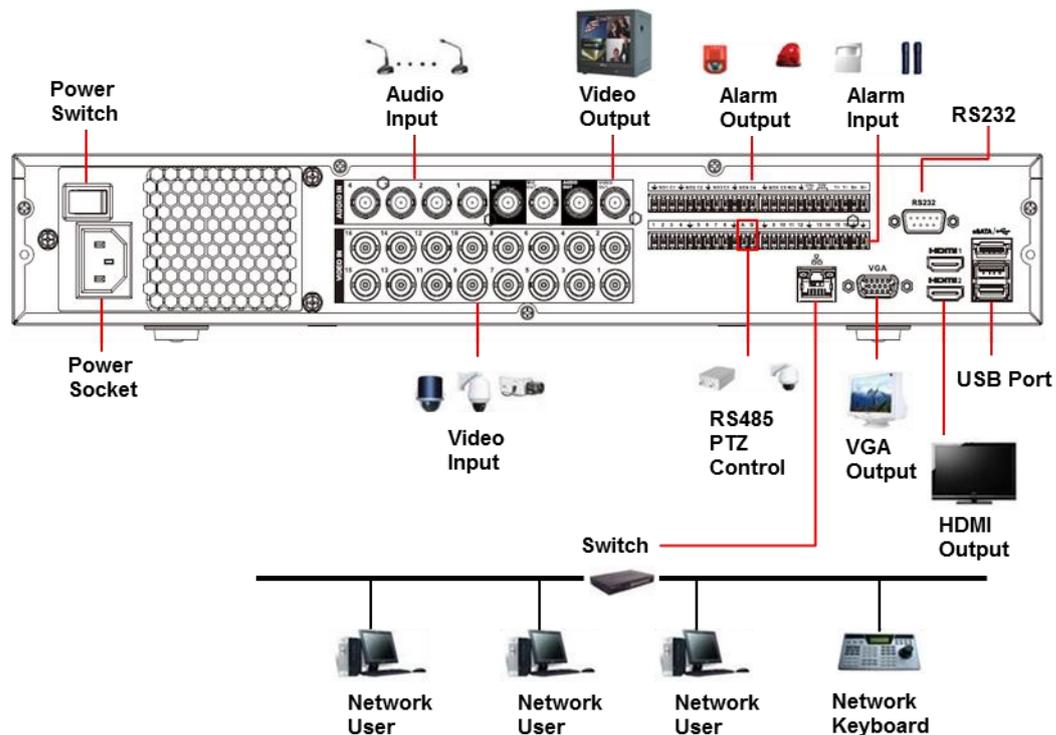
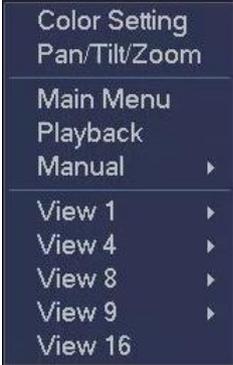


Figure 2-6

2.4 Mouse Control

Left click mouse	System pops up password input dialogue box if you have not logged in. In real-time monitor mode, you can go to the main menu.
	When you have selected one menu item, left click mouse to view menu content.
	Implement the control operation.
	Modify checkbox or motion detection status.
	Click combo box to pop up drop down list.

	<p>In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. _ stands for space button.</p> 
Double click left 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	<p>In real-time monitor mode, pops up shortcut menu: Color Setting, Pan/Tilt/Zoom, Main Menu, Playback, Manual, one-window, four-window, eight-window, nine-window and sixteen-window. Among which, Pan/Tilt/Zoom and color setting applies for current selected channel.</p> 
	Exit current menu without saving the modification.
Scroll mouse	In numeral input box: Increase or decrease numeral value.
	Switch the items in the checkbox.
	Page up or page down.
Move mouse	Select current control or move control.
Drag mouse	Select motion detection zone.
	Select privacy mask zone.
Mouse rolling	<p>In live view</p> <ul style="list-style-type: none"> Rolling forward to zoom in. Rolling backward to zoom out.

2.5 Virtual Keyboard & Front Panel

2.5.1 Virtual Keyboard

The system supports two input methods: numeral input and English character (small and capitalized) input.

Move the cursor to the text column, the text is shown as blue, input button pops up on the right. Click that button to switch between numeral input and English input (capitalized and small), use SHIFT to shift between small character and capitalized character.

2.5.2 Front Panel

Move the cursor to the text column. Click FN key to delete the previous character before the cursor and use direction keys to select number you wanted. Please click ENTER button to confirm current input.

3 Installation and Connections

Note: All the installation and operations here should conform to your local electric safety rules.

3.1 Check Unpacked DVR

When you receive the DVR from the forwarding agent, please check whether there is any visible damage. The protective materials used for the package of the DVR can protect most accidental clashes during transportation. Then you can open the box to check the accessories.

Please check the items in accordance with the list. Finally you can remove the protective film of the DVR.

3.2 About Front Panel and Top Cover

The model in the front panel is very important; please check according to your purchase order.

The label in the top cover is very important too. Usually we need you to represent the serial number when we provide the service after sales.

3.3 HDD Installation

Important

Shut down the device and then unplug the power cable before you open the case to replace the HDD!

All figures listed below for reference only!

Please use HDD of 7200rpm or higher. Usually we do not recommend the HDD for the PC. Please follow the instructions listed below to install hard disk.

3.3.1 CJ-HDR216A

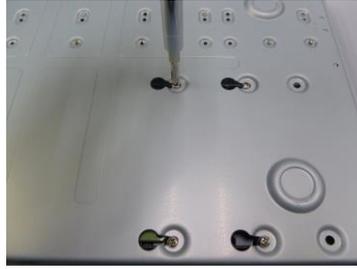
This DVR has two SATA HDDs.



- ① Loosen the screws of the upper cover.
- ② Fix four screws in the HDD (Turn just three rounds).
- ③ Place the HDD in accordance with the four holes at the bottom.



④ Turn the device upside down and then turn the screws in firmly.



⑤ Fix the HDD firmly.



⑥ Connect the HDD cable and power cable.



⑦ Put the cover in accordance with the clip and then place the upper cover back.



⑧ Secure the screws in the rear panel.

3.3.2 CJ-HDR416A

This DVR max has four SATA HDDs.



① Loosen the screws of the upper cover.



② Line up the HDD to the four holes of the HDD bracket.



③ Use four screws to fix HDD.



④ Unfasten the HDD power cable.



⑤ Use the special data cable to connect the HDD and the SATA port.



⑥ Insert the HDD power cable. Close the chassis and fix the screws to secure firmly.

Important

- You can connect the HDD data cable and the power cable first and then fix the HDD in the device.
- Please pay attention to the front cover. It adopts the vertical sliding design. You need to push the clip first and then put down.

3.3.3 Rack Installation (CJ-HDR416A only)

The DVR occupies 1.5U rack units of vertical rack space.

- Use twelve screws to fix the unit.
- Please make sure the indoor temperature is below 35°C (95°F).
- Please make sure there is 15cm (6 inches) space around the device to guarantee sound ventilation.
- Please install from the bottom to the top.
- If there are more accessories connected in the rack, please take precaution measures in case the rack power is overload.

3.4 Connecting Power Supply

Please check input voltage and device power button match or not.

We recommend you use UPS to guarantee steady operation, DVR life span, and other peripheral equipment operation such as cameras.

3.5 Connecting Video Input and Output Devices

3.5.1 Connecting Video Input

The video input interface is BNC. The input video format includes: PAL/NTSC BNC (1.0V_{P-P}, 75Ω).

The input video format: BNC (0.8VP-P, 75Ω).

The video signal should comply with your national standards.

The input video signal shall have high SNR, low distortion; low interference, natural color and suitable lightness.

Guarantee the stability and reliability of the camera signal:

The camera shall be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

The camera and the DVR should have the same grounding to ensure the normal operation of the camera.

Guarantee stability and reliability of the transmission line:

Please use high quality, sound shielded BNC. Please select suitable BNC model according to the transmission distance.

If the distance is too long, you should use twisted pair cable, and you can add video compensation devices or use optical fiber to ensure video quality.

You should keep the video signal away from the strong electromagnetic interference, especially the high tension current.

Keep connection lugs in well contact:

The signal line and shielded wire should be fixed firmly and in well connection. Avoid dry joint, lap welding and oxidation.

3.5.2 Connecting Video Output

Video output includes a BNC (PAL/NTSC, 1.0VP- P, 75Ω) output, a VGA output and a HDMI output.

System supports BNC, VGA and HDMI output at the same time.

When you are using pc-type monitor to replace the monitor, please pay attention to the following points:

- To defer aging, do not allow the pc monitor to run for a long time.
- Regular demagnetization will keep device maintain proper status.
- Keep it away from strong electromagnetic interference devices.

Using TV as video output device is not a reliable substitution method. You also need to reduce the working hour and control the interference from power supply and other devices. The low quality TV may result in device damage.

3.6 Connecting Audio Input & Output, Bidirectional Audio**3.6.1 Audio Input**

BNC port is adopted for audio input port.

Due to high impedance of audio input, please use active sound pick-up.

Audio transmission is similar to video transmission. Try to avoid interference, dry joint, loose contact and it shall be away from high tension current.

3.6.2 Audio Output

The audio output signal parameter is usually over 200mv 1KΩ (BNC). It can directly connect to low impedance earphone, active sound box or amplifier-drive audio output device.

If the sound box and the pick-up cannot be separated spatially, it is easy to arouse squeaking. In this case you can adopt the following measures:

- Use better sound pick-up with better directing property.
- Reduce the volume of the sound box.
- Using more sound-absorbing materials in decoration can reduce voice echo and improve acoustics environment.
- Adjust the layout to reduce happening of the squeaking.

3.7 Alarm Input and Output Connection (CJ-HDR416A only)

Please read the followings before connecting.

1. Alarm input

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

- b. Grounding signal is needed for alarm input.
- c. Alarm input needs the low level voltage signal.
- d. Alarm input mode can be either NC (Normal Close or NO (Normal Open)
- e. When you are connecting two DVRs or you are connecting one DVR and one other device, please use a relay to separate them,

2. Alarm output

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

3. How to connect PTZ decoder

- a. Ensure the decoder has the same grounding with DVR, otherwise you may not control the PTZ. Shielded twisted wire is recommended and the shielded layer is used to connect to the grounding.
- b. Avoid high voltage. Ensure proper wiring and some thunder protection measures.
- c. For too long signal wires, 120Ω should be parallel connected between A, B lines on the far end to reduce reflection and guarantee the signal quality.
- d. “485 A, B” of DVR cannot parallel connect with “485 port” of other device.
- e. The voltage between of A,B lines of the decoder should be less than 5v.

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

Improper grounding may result in chip damage.

3.7.1 Alarm Input and Output Details

Important

Please refer to the specifications for the alarm input and output channel amount. Do not merely count the alarm input and out channel amount according to the ports on the rear panel.

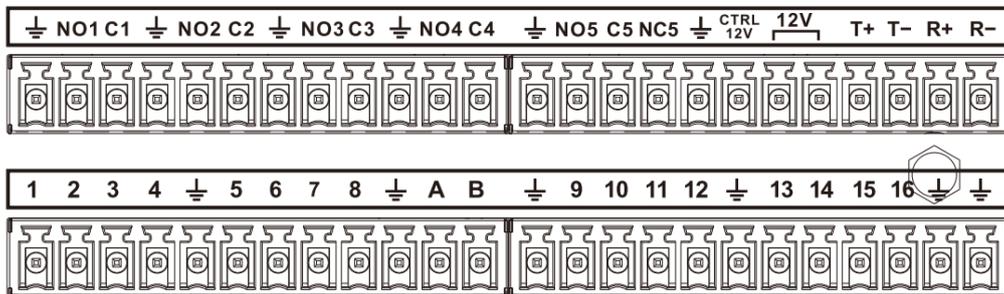


Figure 3-1

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16	Alarm input port 1~16. The alarm becomes active in low voltage.
NO1 C1,	There are 5 groups of alarm output ports.

NO2 C2, NO3 C3, NO4 C4, NO5 C5 NC5	<ul style="list-style-type: none"> ● NO: Normal open alarm output port. ● C: Alarm output public end. ● NC: Normal close alarm output port.
CTRL 12V	Control power output. For external alarm, you need to close the device power to cancel the alarm. Voltage current: 500mA.
12V	Rated current. Voltage current: 500mA.
	Earth cable.
A/B	RS485 communication port. They are used to control devices such as decoder. 120Ω should be parallel connected between A, B lines if there are too many PTZ decoders.
T+,T-,R+,R-	They are four-wire full-duplex RS485 port T+ T-: output wire R+ R-: input wire

3.7.2 Alarm Input Port

Please refer to the following sheet for more information.

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

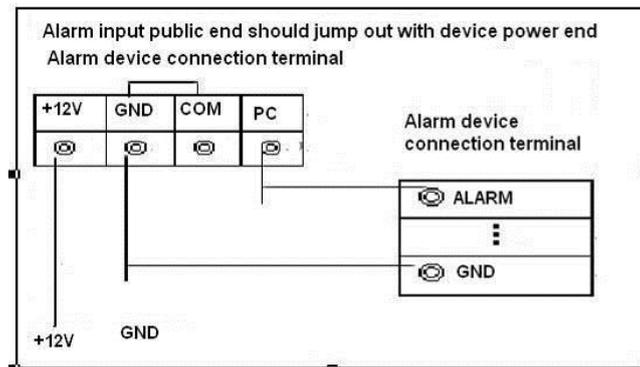


Figure 3-2

3.7.3 Alarm Output Port

- Provide external power to external alarm device.
- To avoid overloading, please read the following relay parameters sheet carefully.
- RS485 A/B cable is for the A/B cable of the PTZ decoder.
- T+, T-, R+, R- are four-wire double duplex RS485 port.

T+ T-: output wire

R+ R-: input wire

Relay Specification

Model: HFD23-005-1ZS		
Contact arrangement	1Z	
Contact resistance	100mΩ (0.1A 6VDC)	
Contact material	AgNi+	
Contact rating (Res. Load)	0.5A 125VAC / 1A 30VDC	
Max. switching voltage	125VAC / 60VDC	
Max. switching current	2A	
Max. switching power	62.5VA / 30W	
Max. applicable load	1mA 5V	
Mechanical endurance	1 x 10 ⁷ times (300 times/min)	
Electrical endurance	1 x 10 ⁵ times (30 times/min)	
Insulation resistance	1000MΩ (500VDC)	
Dielectric strength	Between coil and contacts	1000VAC 1min
	Between open contacts	400VAC 1min
Operate time (at nomi. volt.)	≤5ms	
Release time (at nomi. volt.)	≤5ms	
Bounce time (at nomi. volt.)	Approx. 5ms	
Temperature rise (at nomi. volt.)	≤65K	
Shock resistance	98m/s ²	
Vibration resistance	10Hz – 55Hz 3.3mm DA	
Humidity	98%RH, 40°C	
Ambient temperature	-30°C - 70°C	
Unit weight	Approx. 2.2g	
Termination	PCB (DIP)	
Construction	Sealed plastic	

3.8 RS485

When the DVR receives a camera control command, it transmits that command up the coaxial cable to the PTZ device. RS485 is a single-direction protocol; the PTZ device can't return any data to the unit. To enable the operation, connect the PTZ device to the RS485 (A,B) input on the DVR.

Since RS485 is disabled by default for each camera, you must enable the PTZ settings first. This series DVRs support multiple protocols such as Pelco-D, Pelco-P.

To connect PTZ devices to the DVR:

1. Connect RS485 A, B on the DVR rear panel.
2. Connect the other end of the cable to the proper pins in the connector on the camera.
3. Please follow the instructions to configure a camera to enable each PTZ device on the DVR.

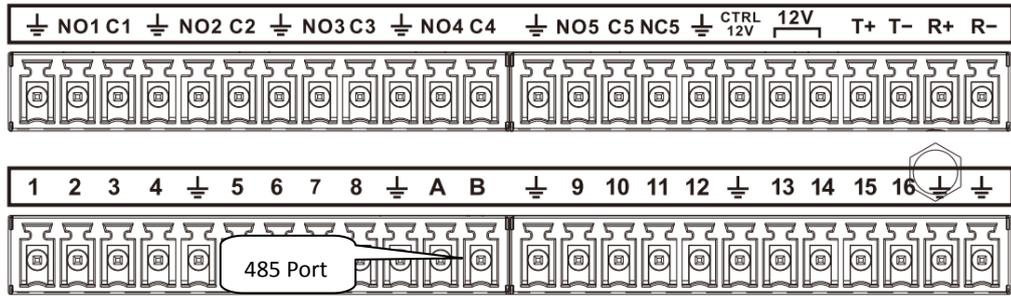


Figure 3-3

3.9 Other Interfaces

There are still other interfaces on the DVR, such as USB ports.

4 Overview of Navigation and Controls

4.1 Boot up and Shutdown

4.1.1 Boot up

Before the boot up, please make sure:

- The rated input voltage matches the device power on-off button. Please make sure the power wire connection is OK. Then click the power on-off button.
- Always use the stable current, if necessary UPS is a best alternative measure.

Please follow the steps listed below to boot up the device.

- Connect the device to the monitor and then connect a mouse.
- Connect power cable.
- Click the power button at the front or rear panel and then boot up the device. After device booted up, the system is in multiple-channel display mode by default.

Note

After start up, there is black screen for a while. This is due to HDD file scanning function while monitor search for display source. After file scanning is done, information of "System is initializing, please wait..." will display.

4.1.2 Shut Down

Note

- When you see corresponding screen "Saving data...", do not click power on-off button directly.
- Do not unplug the power cable or click power on-off button to shutdown device directly when device is running (especially when it is recording).

There are three ways for you to shut down.

- Main menu (**RECOMMENDED**): From MAIN MENU -> OPERATION -> SHUTDOWN, select Shut Down button.
- From power on-off button on the front panel. Press the power on-off button on the DVR front panel for more than 3 seconds to shut down the device.
- From power on-off button on the rear panel.

4.1.3 Auto Resume after Power Failure

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

4.1.4 Replace Button Battery

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

We recommend replace battery regularly (such as one-year) to guarantee system time accuracy.

Note

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

4.2 Initial Settings

If it is your first time to use the device, please set a login password of **admin** (system default user).

Note

For your device safety, please keep your login password of **admin** well after the initialization steps, and change the password regularly.

4.2.1 Device Initialization

1. After boot up device, device displays Device Initialization interface. See Figure 4-1.

The screenshot shows the 'Device Initialization' screen with three steps: 1. Enter Password (highlighted), 2. Unlock Pattern, and 3. Password Protection. The 'Enter Password' step includes a 'User' field with 'admin', a 'Password' field, a 'Confirm Password' field, and a 'Prompt Question' field. A 'Next' button is at the bottom right. A note specifies password requirements: 8 to 32 characters, including letters, numbers, and symbols, with at least two kinds of them, and excluding special symbols like ' " ; & '.

Figure 4-1

2. Set login password of **admin**.
 - User: The default user name is **admin**.
 - Password/Confirm Password: The password ranges from 8 to 32 characters. It can contain letters, numbers and special characters (excluding “”, “””, “,”, “.”, “&”) . The password shall contain at least two categories. Usually we recommend the strong password.
 - Prompt Question: If you set the prompt question here. On the login interface, hover over , device can display the corresponding prompt question for you to remind the password.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. We also recommend you change your password periodically especially in the high security system.

3. Click Next. Device goes to Unlock Pattern interface. See Figure 4-2.

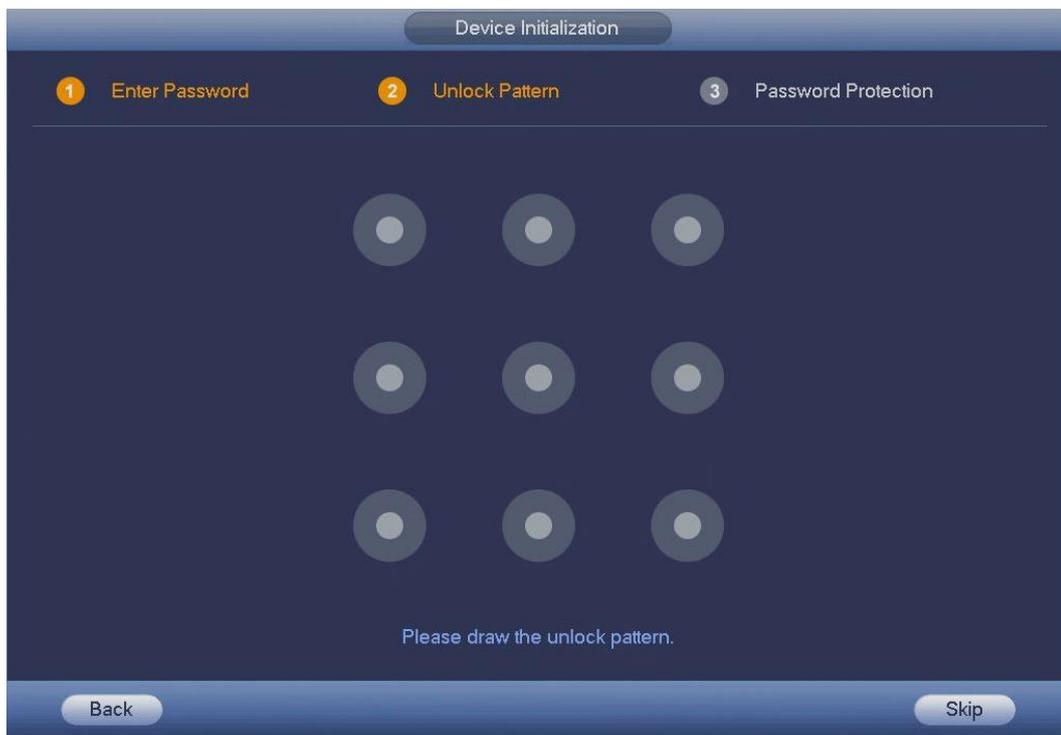


Figure 4-2

4. Set unlock pattern.

After set unlock pattern, device goes to Password Protection interface. See Figure 4-3.

Note

- The unlock pattern shall at least contain 4 grids.
- Device adopts unlock pattern to login by default if you have set pattern here. If there is no unlock pattern, please input the password to login.
- Click Skip if there is no need to set unlock pattern.

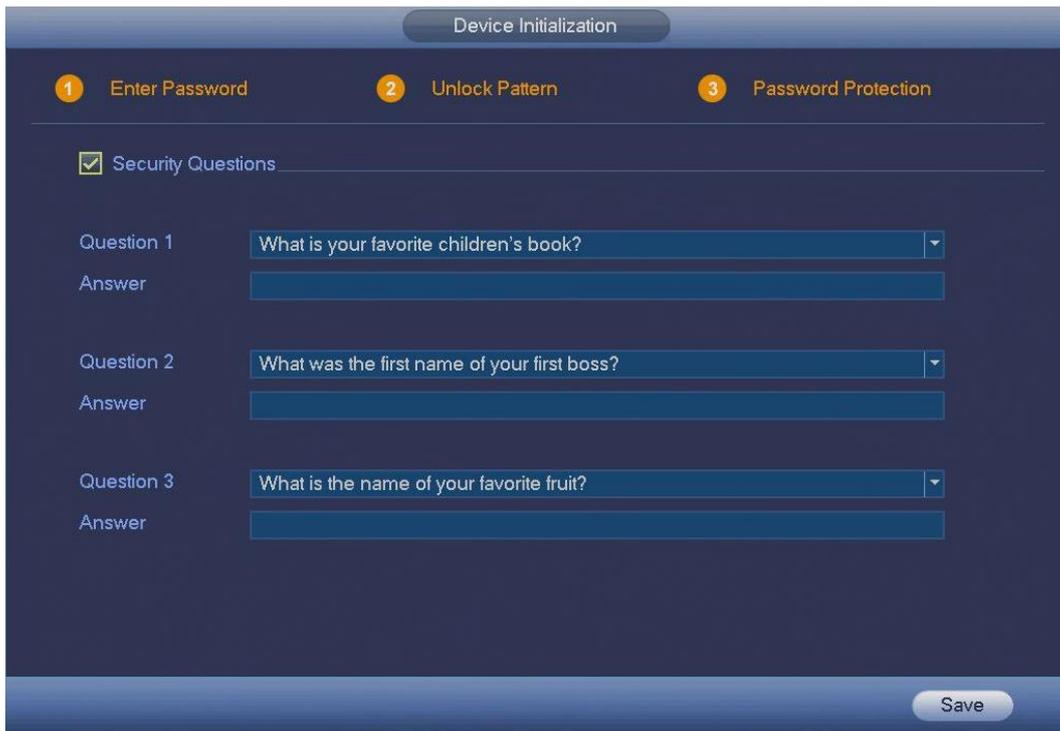


Figure 4-3

5. Set security questions.

Note

- After setting the security questions here, you can answer the security questions to reset admin password. Refer to chapter 4.2.2 Reset Password for detailed information.
- Cancel the security questions box and then click Save button to skip this step.

Set security questions and corresponding answers. Properly answer the questions to reset admin password. In case you have not input security question here or you need to update the security question information, please go to the main menu -> SETTING -> SYSTEM -> ACCOUNT to set.

6. Click Save to complete the device initialization setup.

Device goes to Startup Wizard interface. Refer to chapter 4.2.3 Startup Wizard for detailed information.

4.2.2 Reset Password

If you forgot **admin** password, you can reset the password by answering the security questions.

1. Go to the device login interface. See Figure 4-4 or Figure 4-5.
 - If you have set unlock pattern, device displays unlock pattern login interface. See Figure 4-4. Click Forgot Unlock Pattern, device goes to Figure 4-5.
 - If you have not set unlock pattern, device displays password interface. See Figure 4-5.

Note

Click Switch User button in Figure 4-4 or click the user name in Figure 4-5 and then select a user from the dropdown list, you can login via other account.



Figure 4-4



Figure 4-5

CAUTION

- Continuous five times login failure will result in account lock!
Please reboot the device or wait for 5 minutes to try again if your account has been locked.

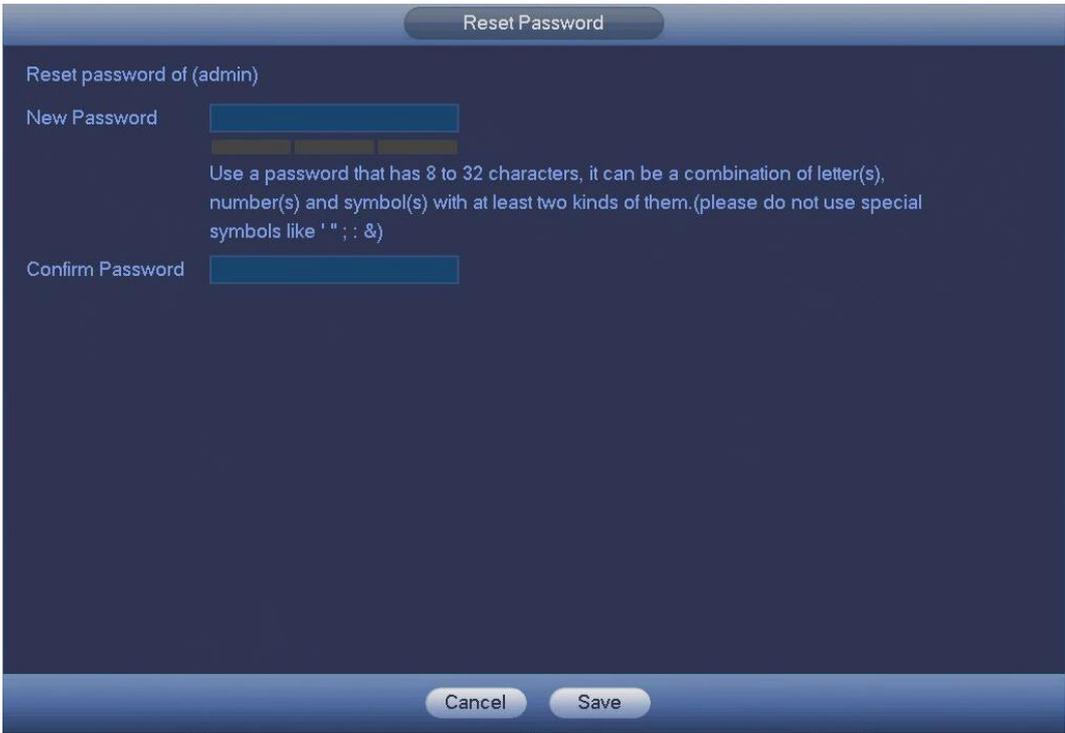
2. Click  to reset login password by security questions (local menu only). See Figure 4-6. Please input the correct answers here.



The screenshot shows a 'Reset Password' dialog box. At the top, there is a title bar with the text 'Reset Password'. Below the title bar, there is a dropdown menu labeled 'Reset Type' with 'Security Questions' selected. The main area contains three questions, each with a dropdown menu for the question and a text input field for the answer. The questions are: 'Question 1: What is your favorite children's book?', 'Question 2: What was the first name of your first boss?', and 'Question 3: What is the name of your favorite fruit?'. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Next'.

Figure 4-6

3. Click Next button.
Device displays Reset Password interface. See Figure 4-7.



The screenshot shows a 'Reset Password' dialog box. At the top, there is a title bar with the text 'Reset Password'. Below the title bar, there is a text label 'Reset password of (admin)'. The main area contains two text input fields: 'New Password' and 'Confirm Password'. Below the 'New Password' field, there is a text instruction: 'Use a password that has 8 to 32 characters, it can be a combination of letter(s), number(s) and symbol(s) with at least two kinds of them.(please do not use special symbols like ' ' ; : &)'. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Save'.

Figure 4-7

4. Input new password and then confirm.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. The password shall be at least 8-digit containing at least two types of the following categories: letters, numbers and symbols. We also recommend you change your password periodically especially in the high security system.

5. Click Save button to complete the reset setup.

4.2.3 Startup Wizard

Tips

Check the Startup checkbox in Figure 4-8, system goes to startup wizard again when it boots up the next time.

Uncheck the checkbox, system goes to the login interface directly when it boots up the next time.



Figure 4-8

Click Cancel button to exit startup.

Or click Next button to go to GENERAL interface, see Figure 4-9.

For detailed information, please refer to chapter 4.10.5.1.



Figure 4-9

Click Next button, you can go to ENCODE interface. See Figure 4-10.
For detailed information, please refer to chapter 4.10.1.2.

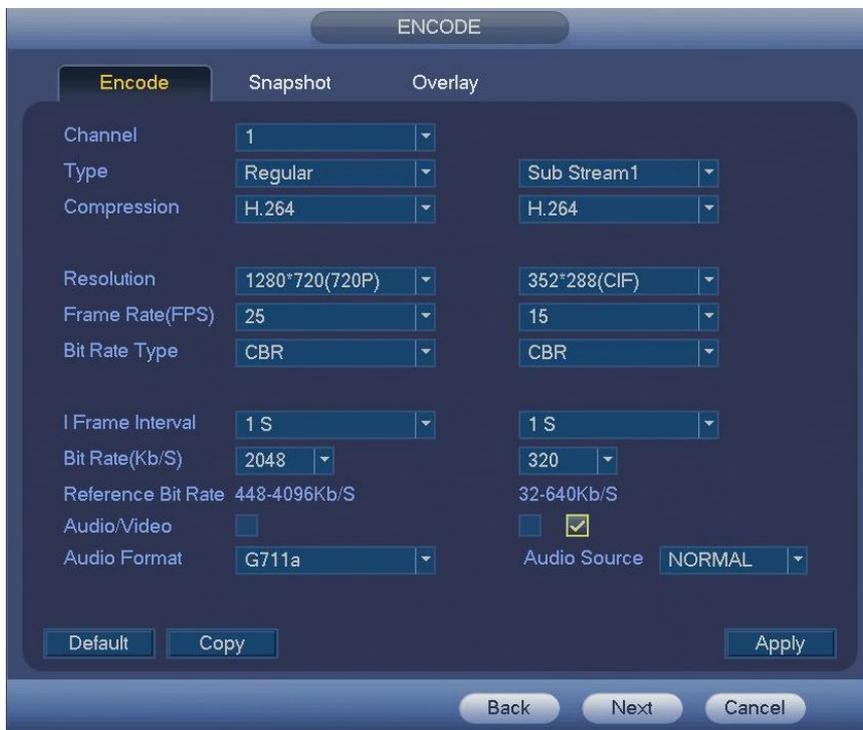


Figure 4-10

Click Next button, you can go to SCHEDULE interface. See Figure 4-11.
For detailed information, please refer to chapter 4.10.4.2.

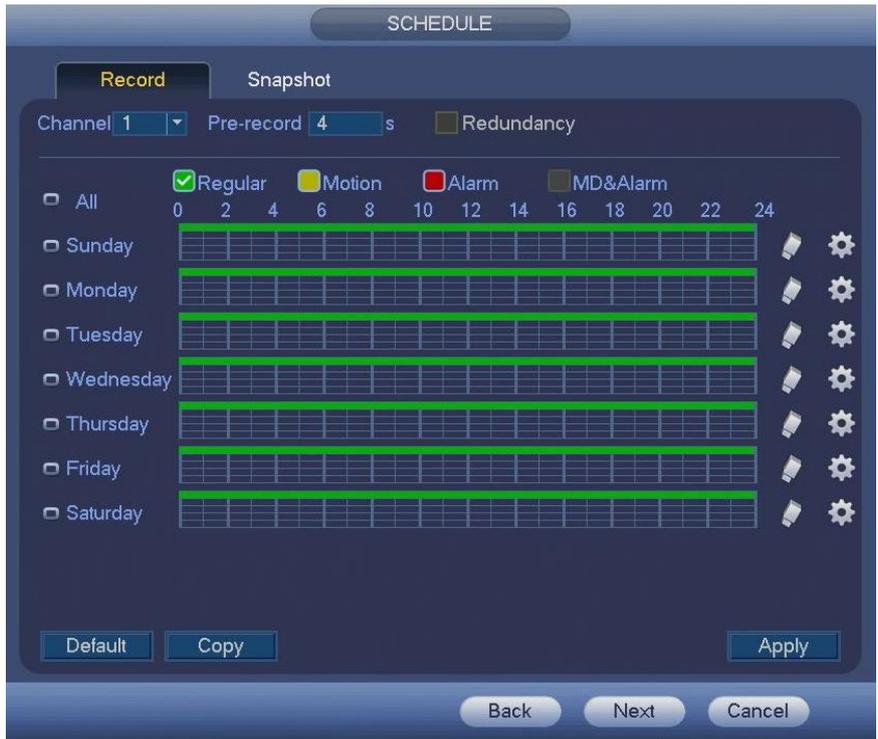


Figure 4-11

Click Next button, you can go to RECORD interface. See Figure 4-12.
 For detailed information, please refer to chapter 4.10.4.4.



Figure 4-12

Click Next button, you can go to NETWORK interface. See Figure 4-13.
 For detailed information, please refer to chapter 4.9.3.



Figure 4-13

Click Finished button, system pops up a dialogue box. Click the OK button, the startup wizard is complete. See Figure 4-14.



Figure 4-14

4.3 Manual Record

4.3.1 Live Viewing

After you logged in, the system is in live viewing mode. You can see system date, time, channel name and window number. If you want to change system date and time, you can refer to general settings (MAIN MENU -> SETTING -> SYSTEM -> GENERAL -> Date&Time). If you want to modify the channel name, please refer to the display settings (MAIN MENU -> SETTING -> CAMERA -> CHANNEL NAME).

SN	Icon	Function
1		When current channel is recording, system displays this icon.

SN	Icon	Function
2		When motion detection alarm occurs, system displays this icon.
3		When video loss alarm occurs, system displays this icon.
4		When current channel is in monitor lock status, system displays this icon.

Tips

- Preview drag: If you want to change position of channel 1 and channel 2 when you are previewing, you can left click mouse in the channel 1 and then drag to channel 2, release mouse you can switch channel 1 and channel 2 positions.

4.3.2 Preview Control

The preview control function has the following features.

- Support preview playback.
 - ◇ In the preview mode, system can playback previous 5-60 minutes record of current channel. Please go to the MAIN MENU -> SETTING -> SYSTEM -> GENERAL -> General to set real-time playback time.
 - ◇ Support drag and play function. You can use your mouse to select any playback start time.
 - ◇ Support playback, pause and exit function.
 - ◇ Right now, system does not support slow playback and backward playback function.
- Support digital zoom function.
- Support real-time backup function.

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

Preview control interface

Move you mouse to the top center of the video of current channel, you can see system pops up the preview control interface. See Figure 4-15. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.

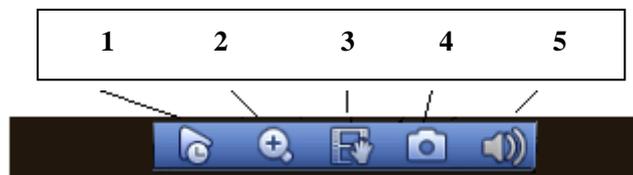


Figure 4-15

1) Realtime Play

It is to playback the previous 5-60 minutes record of current channel.

Please go to the MAIN MENU -> SETTING -> SYSTEM -> GENERAL -> General to set real-time playback time.

System may pop up a dialogue box if there is no such record in current channel.

2) Zoom

It is to zoom in specified zone of current channel. It supports zoom in function of multiple-channel.

Click  button, the button is shown as .

There are two ways for you to zoom in.

- Drag the mouse to select a zone, you can view an interface shown as Figure 4-16.



Figure 4-16

- Put the middle button at the center of the zone you want to zoom in, and move the mouse, you can view an interface shown as in Figure 4-17.



Figure 4-17

Right click mouse to cancel zoom and go back to the original interface.

3) Realtime Backup

It is to backup the video of current channel to the USB device. System cannot backup the video of multiple-channel at the same time.

Click  button, system begins recording. Click it again, system stops recording. You can find the record file on the flash disk.

4) Manual Snap

Click  to snapshot 1-5 times. The snapshot file is saved on the USB device or HDD. You can go to the Playback interface (chapter 4.8.1) to view.

5) Silent

Click to mute. Click again to enable audio function when preview.

Please note this function is for one-window mode only.

4.4 Right-Click Menu

On the preview interface, right click mouse, you can view menu interface shown as in Figure 4-18.

Note

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

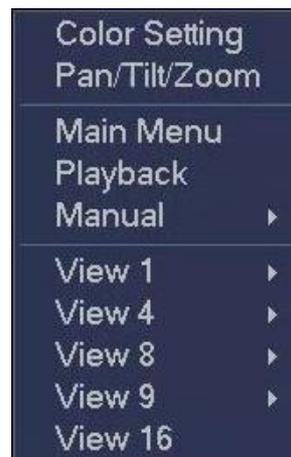


Figure 4-18

- Color Setting: Set video corresponding information.
- Pan/Tilt/Zoom: Click it to go to PTZ interface.
- Main Menu: Go to system main menu interface.
- Playback: Click it to go to playback interface to search and playback a record file.
- Manual: Enable/disable record channel.
- Window split mode: You can select window amount and then select channels.

4.4.1 Color Setting

Here you can set sharpness, chroma, brightness, contrast, saturation, color mode and etc. See Figure 4-19.



Figure 4-19

Please refer to the following sheet for detailed information.

Item	Note
Period	There are two periods in one day. You can set different colour setup for different periods.
Effective Time	Check the box here to enable this function and then set period time.
Sharpness	The value here is to adjust the edge of the video. The value ranges from 0 to 15. 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 1. The recommended value is 1.
Chroma	It is to adjust monitor video brightness and darkness level. The default value is 50. The bigger the value is, the larger the contrast between the bright and dark section is and vice versa.
Brightness	It is to adjust monitor window brighter. The value ranges from 0 to 100. The default value is 50. The larger the number, the brighter the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from

Item	Note
	40 to 60.
Contrast	<p>It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50.</p> <p>The larger the number, 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.</p>
Saturation	<p>It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50.</p> <p>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.</p>
Color mode	It includes several modes such as standard, soft, bright, colorful, bank. Select a color mode, the sharpness, brightness, contrast and etc. can automatically switch to corresponding setup.
EQ	<p>Click  or  to adjust image equalization value.</p> <p>Click reset button , system can auto adjust the video to the best effect.</p>
Position	It is to adjust the image position on the screen. The value here refers to the pixel. The default pixel value is 16.
Customized	Click it to set customized color mode.

4.4.2 PTZ Control

The PTZ setup is shown as in See Figure 4-20.

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

The PTZ operation is only valid in one-window mode.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, pattern, auto scan, auto pan, flip, reset, aux config and etc.

Speed is to control PTZ movement speed. The value ranges from 1 to 8. The speed 8 is faster than speed 1.

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

brightness.

The PTZ rotation supports 8 directions. If you are using direction buttons on the front panel, there are only four directions: up/down/left/right.



Figure 4-20

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-21. Please make sure your protocol supports this function and you need to use mouse to control.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. It can realize PTZ automatically. The smaller zone you dragged, the higher the speed.



Figure 4-21

Name	Function key	Function	Shortcut key	Function key	Function	Shortcut key
Zoom		Near			Far	
Focus		Near			Far	
Iris		Close			Open	

In Figure 4-20, click to open the menu, you can set preset, tour, pattern, auto scan and etc. See Figure 4-22.



Figure 4-22

Please refer to the following sheet for detailed information.

Please note the above interface may vary due to different protocols. The button is grey and cannot be selected once the current function is null.

Right click mouse or click the ESC button at the front panel to close PTZ interface.

Icon	Function	Icon	Function
	Preset		Flip
	Tour		Reset
	Pattern		Aux Config
	Auto Scan		Aux on-off button
	Auto Pan		Go to menu

4.4.2.1 PTZ Function Setup

Click , you can go to the following interface to set preset, tour, pattern, and border. See Figure 4-23.



Figure 4-23

Preset Setup

In Figure 4-23, click Preset tab and use eight direction arrows to adjust camera to the proper position. The interface is shown as in Figure 4-24.

Click Set button and then input preset number.

Click Set button to save current preset.



Figure 4-24

Tour Setup

In Figure 4-23, click Tour tab.

Input tour value and preset number. Click Add Preset button to add current preset to the tour. See Figure 4-25.

Tips

Repeat the above steps to add more presets to the tour. Click Del Preset button to remove it from the tour. Please note some protocols do not support delete preset function.



Figure 4-25

Pattern Setup

In Figure 4-23, click Pattern tab and input pattern number.

Click Start button to start direction operation. Or you can go back to Figure 4-20 to operate zoom/focus/iris/direction operation.

In Figure 4-26, click End button.



Figure 4-26

Scan Setup

In Figure 4-23, click Border tab.

Use direction buttons to set camera left limit and then click Left button.

Use direction buttons to set camera right limit and then click Right button. Now the scan setup process is complete.



Figure 4-27

4.4.2.2 Call PTZ Function

Call Preset

In Figure 4-22, input preset value and then click  to call a preset. Click  again to stop call.

Call Pattern

In Figure 4-22, input pattern value and then click  to call a pattern. Click  again to stop call.

Call Tour

In Figure 4-22, input tour value and then click  to call a tour. Click again  to stop call.

Auto Scan

In Figure 4-22, input scan value and then click  to call a tour. Click again  to stop call.

Auto Pan

In Figure 4-22, click  to enable the camera to rotate.

System supports preset, tour, pattern, scan, rotate and etc. function.

Note

- Preset, tour and pattern all need the value to be the control parameters. You can define it as you require.

- You need to refer to your camera user's manual for Aux definition. In some cases, it can be used for special process.

Aux Config



Click , system goes to the following interface. The options here are defined by the protocol. The aux number is corresponding to the aux on-off button of the decoder. See Figure 4-28.

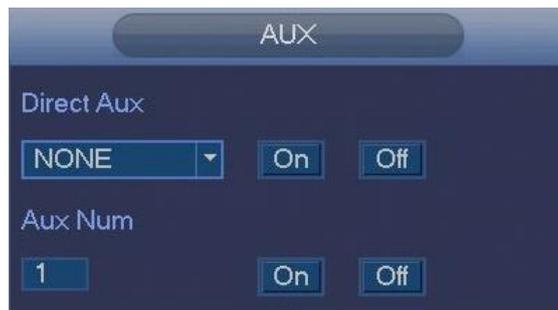


Figure 4-28

4.4.3 Playback

Please refer to chapter 4.8.1 for detailed information.

4.4.4 Manual Record

Please refer to chapter 4.10.4.4.1 for detailed information.

4.4.5 Window Switch

System supports 1/4/8/9/16-window. You can select from the dropdown list. See Figure 4-29.

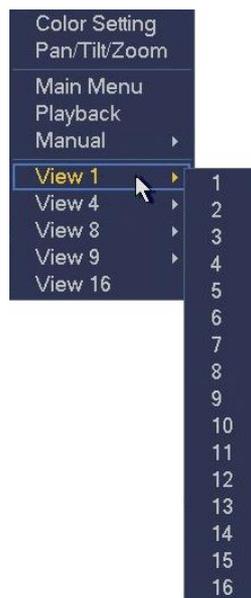


Figure 4-29

4.5 Navigation Bar

You need to go to the MAIN MENU -> SETTING -> SYSTEM -> GENERAL -> General to enable navigation bar function; otherwise you cannot see the following interface. The navigation bar is shown as below. See Figure 4-30.



Figure 4-30

4.5.1 Main Menu

Click button  to go to the main menu interface.

4.5.2 Output Screen

Select corresponding window-split mode and output channels.

4.5.3 Previous/Next Screen

Click  to go to the previous screen, click  to go to the next screen. For example, if you are using 4-split mode, the first screen is displaying the channel 1-4, click , you can view channel 5-8.

4.5.4 Tour

Click button  to enable tour, the icon becomes , you can see the tour is in process.

4.5.5 Favorites

Click , system pops up add/edit favorites. See Figure 4-31



Figure 4-31

4.5.6 Channel

Click , system goes to the Channel interface.

4.5.7 Pan/Tilt/Zoom

Click , system goes to the PTZ control interface. Please refer to chapter 4.4.2.

4.5.8 Color Setting

Click button , system goes to the color interface. Please refer to chapter 4.4.1.

4.5.9 Playback

Click button , system goes to playback interface. Please refer to chapter 4.8.1.

4.5.10 Event

Click button , system goes to alarm status interface. Please refer to chapter 4.10.3.

4.5.11 Channel Info

Click button , system goes to the channel information setup interface. It is to view information of the corresponding channel. See Figure 4-32.



The screenshot shows a web interface titled "CHANNEL INFO" with a table of 16 channels. Each channel has a status bar with icons for Motion, Video Loss, Camera, Record Status, and Record Mode. The table columns are Channel, Motion, Video Loss, Camera..., Record Status, Record Mode, Resolution, Frame Rate, and Bit Ra. All channels are configured with Regular Record Mode, 1280*720 Resolution, and 25 Frame Rate. A Refresh button is located at the bottom left of the interface.

Channel	Motion	Video Loss	Camera...	Record Status	Record Mode	Resolution	Frame Rate	Bit Ra
1	●	▲	●	■	Regular	1280*720	25	
2	●	▲	●	■	Regular	1280*720	25	
3	●	▲	●	■	Regular	1280*720	25	
4	●	▲	●	■	Regular	1280*720	25	
5	●	▲	●	■	Regular	1280*720	25	
6	●	▲	●	■	Regular	1280*720	25	
7	●	▲	●	■	Regular	1280*720	25	
8	●	▲	●	■	Regular	1280*720	25	
9	●	▲	●	■	Regular	1280*720	25	
10	●	▲	●	■	Regular	1280*720	25	
11	●	▲	●	■	Regular	1280*720	25	
12	●	▲	●	■	Regular	1280*720	25	
13	●	▲	●	■	Regular	1280*720	25	
14	●	▲	●	■	Regular	1280*720	25	
15	●	▲	●	■	Regular	1280*720	25	
16	●	▲	●	■	Regular	1280*720	25	

Figure 4-32

4.5.12 Network

Click , system goes to the network interface. It is to set network IP address, default gateway and etc. Please refer to chapter 4.10.2.

4.5.13 HDD Manage

Click , system goes to the HDD Manage interface. It is to view and manage HDD information. Please refer to chapter 4.10.4.3.

4.5.14 USB Manage

Click , system goes to the USB Manage interface. It is to view USB information, backup and update. Please refer to chapter 4.8.2 Backup, chapter 4.9.4 Log, chapter 4.10.5.8 Import/Export and chapter 4.10.5.10 Upgrade for detailed information.

4.6 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 4-33. Please refer to chapter 4.8.2 Backup, chapter 4.9.4 Log, chapter 4.10.5.8 Import/Export and chapter 4.10.5.10 Upgrade for detailed information.



Figure 4-33

4.7 Main Menu

The main menu interface is shown as below. See Figure 4-34.



Figure 4-34

4.8 Operation

4.8.1 Playback

Click PLAYBACK button in the main menu, Playback interface is shown as below. See Figure 4-35.

Usually there are three file types:

- N: Normal recording file.
- A: External alarm recording file.
- M: Motion detection recording file

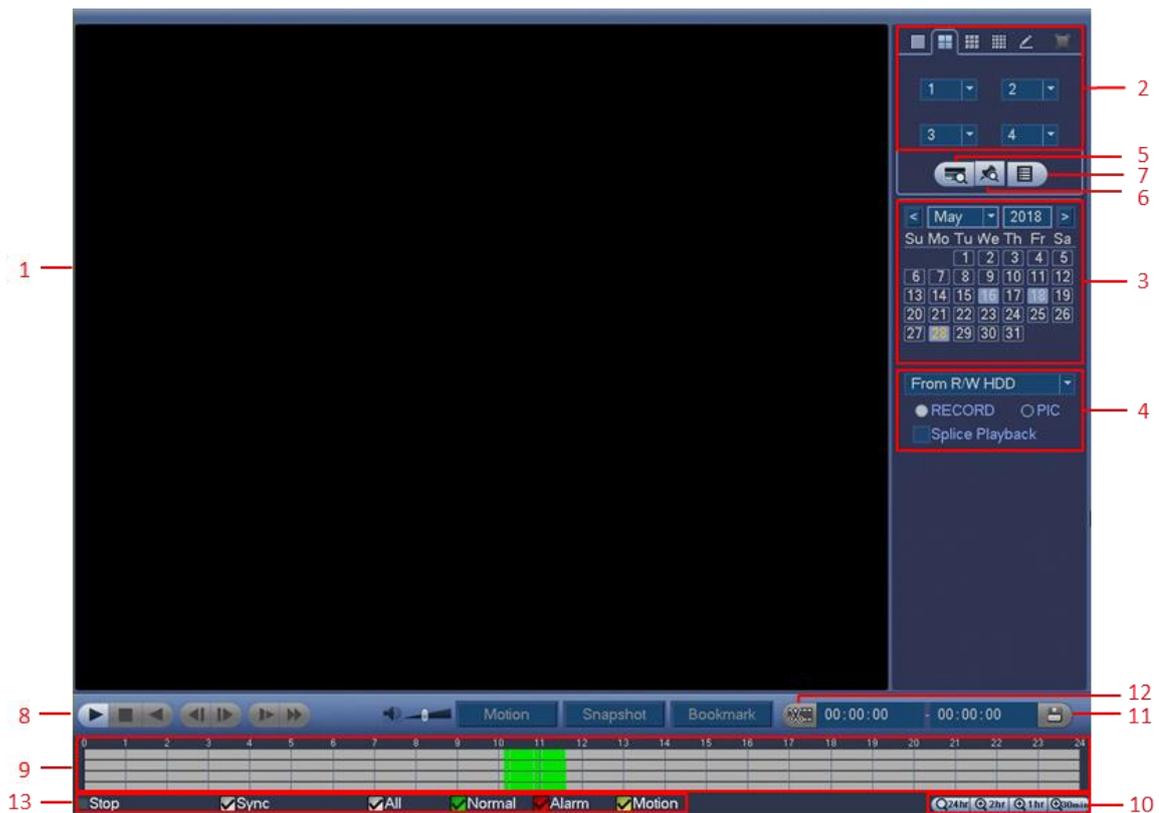
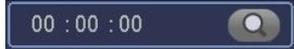
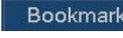


Figure 4-35

Please refer to the following sheet for more information.

SN	Name	Function
1	Display window	<ul style="list-style-type: none"> ● Here is to display the playback picture or file. ● Support 1/4/9/16-window playback.
2	Playback mode and channel selection pane.	<ul style="list-style-type: none"> ● Playback mode: 1/4/9/16. ◇ In 1-window playback mode: you can select 1-16 channels. ◇ In 4-window playback mode: you can select 4 channels according to your requirement. ◇ In 9-window playback mode: you can switch between 1-8 and 9-16 channels. ◇ In 16-window playback mode: you can switch between 1-16 channels. ◇ In customized mode, you can select one or more channel(s) you want to playback at the same time. See chapter 4.8.1.4. ● The time bar will change once you modify the playback mode or the channel option.
3	Calendar	<ul style="list-style-type: none"> ● The blue highlighted date means there is picture or file. Otherwise, there is no picture or file. ● In any play mode, click the date you want to see, you can see the corresponding record file trace in the time bar.

4	Playback type	<ul style="list-style-type: none"> ● Here you can select to playback the picture or the recorded file. ● You can select to play from the read-write HDD, from peripheral device or from redundancy HDD. ● 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. ● Check the box here; you can enable splice playback function. Please refer to chapter 4.8.1.5 for detailed information. <p>Important</p> <ul style="list-style-type: none"> ● 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. 	
5	Card record search	<p>The card record search interface is shown as below. Here you can view card number/field setup bar. You can implement advanced search.</p> 	
6	Mark file list button	<p>Click it to go to mark file list interface. You can view all mark information of current channel by time. Please refer to chapter 4.8.1.3 for detailed information. Please note only the product of this icon supports mark function.</p>	
7	File list switch button	<ul style="list-style-type: none"> ● Click it, you can view the picture/record file list of current day. ● The file list is to display the first channel of the record file. ● The system can display max 128 files in one time. Use the ◀ and ▶ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback. ● You can input the period in the following interface to begin accurate search. ● File type: R—regular record; A—external alarm record; M—motion detect record.  <ul style="list-style-type: none"> ● Lock file. Click the file you want to lock and click the button  to lock. The file you locked will not be overwritten. ● Search locked file: Click the button  to view the locked file. 	
8	Playback control pane		<p>Play/Pause </p> <p>There are three ways for you to begin playback.</p> <ul style="list-style-type: none"> ● The play button. ● Click the valid period of the time bar. ● Double click the item in the file list. <p>In slow play mode, click it to switch between play/pause.</p>
			<p>Stop</p>

			<p>Play Backward In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ► to restore normal play.</p>
			<p>In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. In normal play mode, when you pause current play, you can click ◀ and ▶ to begin frame by frame playback. In frame by frame playback mode, click ► to restore normal playback.</p>
			<p>Slow Playback In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2 and etc.</p>
			<p>Fast Playback In playback mode, click to realize various fast play modes such as fast play 1, fast play 2 and etc.</p>
	<p>Note: The actual play speed has relationship with the software version.</p>		
		<p>Smart search</p>	
		<p>The volume of the playback</p>	
		<p>Click the Snapshot button in the full-screen mode, the system can snapshot 1 picture. System supports custom snap picture saved path. Please connect the peripheral device first, click Snapshot button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.</p>	
		<p>Bookmark button. You can refer to chapter 4.8.1.3 for detailed information.</p>	
<p>9</p>	<p>Time bar</p>	<ul style="list-style-type: none"> ● It is to display the record type and its period in current playback criteria. ● In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar. ● Use the mouse to click one point of the color zone in the time bar, system begins playback. ● The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file. ● The green color stands for the regular record file. The red color stands for the external alarm record file. The yellow stands for the motion detect record file. 	

10	Time bar unit	<ul style="list-style-type: none"> ● The option includes: 24hr, 2hr, 1hr and 30min. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record. ● The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.
11	Backup	<ul style="list-style-type: none"> ● 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 customized path setup. After select or create new folder, click the Start button to begin the backup operation. The record file(s) will be saved in the specified folder. ● Check the file again you can cancel current selection. System max supports to display 32 files from one channel. ● After you clip on record file, click Backup button you can save it. ● For one device, if there is a backup in process, you cannot start a new backup operation.
12	Video Clip	<ul style="list-style-type: none"> ● It is to edit the file. ● Please play the file you want to edit and then click this button when you want to edit. You can see the corresponding slide 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. ● After you set, you can click Video Clip button again to edit the second period. You can see the slide bar restore its previous position. ● Click Backup button after clip, you can save current contents in a new file. ● You can clip for one channel or multiple-channel. The multiple-channel click operation is similar with the one-channel operation. <p>Note</p> <ul style="list-style-type: none"> ● System max supports 1024 files backup at the same time. ● You cannot operate clip operation if there is any file has been checked in the file list.
13	Record type	In any play mode, the time bar will change once you modify the playback type.
Other Functions		
14	Smart search	<ul style="list-style-type: none"> ● When system is playing, you can select a zone in the window to begin smart search. Click the Motion button to begin play. ● Once the motion detect play has begun, click button again will terminate current motion detect file play. ● There is no motion detect zone by default. ● If you select to play other file in the file list, system switches to motion detect play of other file. ● During the motion detect play process, you cannot implement operations such as change time bar, begin backward playback or frame by frame playback. ● Please refer to chapter 4.8.1.1 Smart Search for detailed operation.

15	Other channel synchronization switch to play when playback	When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.
16	Sync	In pane 13 of Figure 4-35, click Sync button, you can playback the files of different channels occurred at the same time.
17	Digital zoom	When the system is in playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.
18	Manually switch channel when playback	During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse. This function is null if there is no record file or system is in smart search process.

4.8.1.1 Smart Search

During the multiple-channel playback mode, double click one channel and then click the **Motion** button, system begins smart search. System supports 396 (22*18 PAL) and 330 (22*15 NTSC) zones. Please left click mouse to select smart search zones. See Figure 4-36.

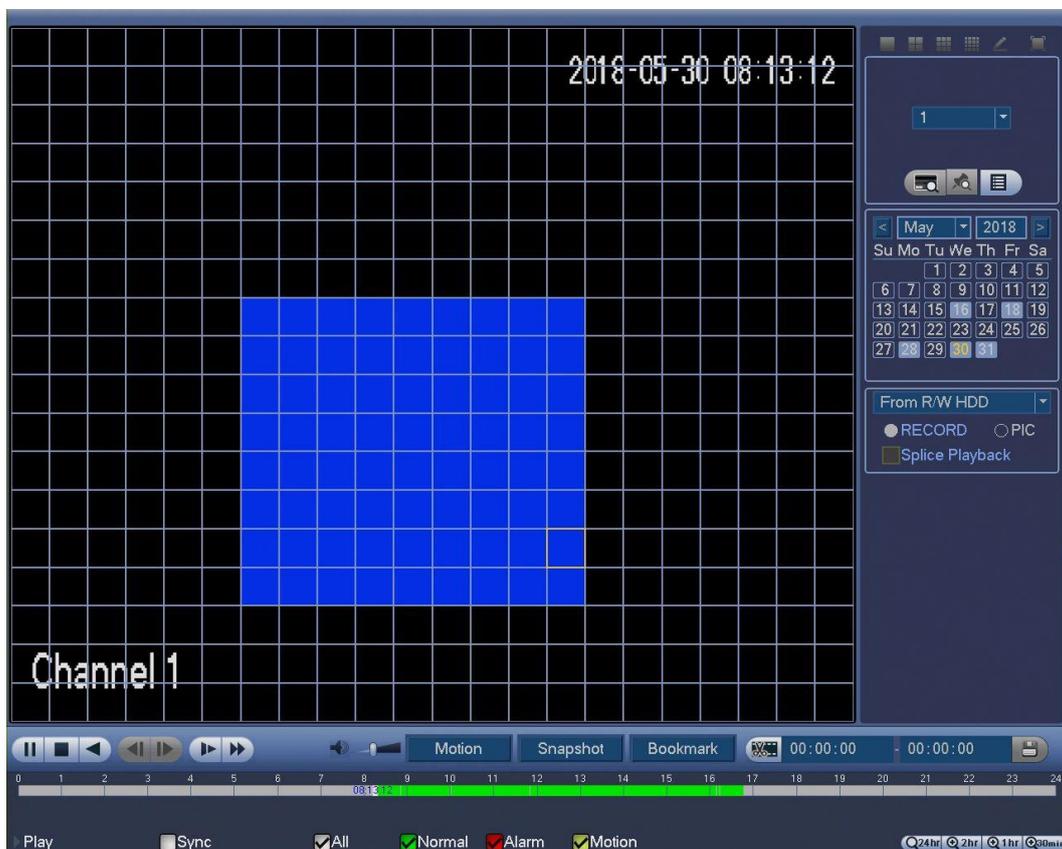


Figure 4-36

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

Note

- 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.

4.8.1.2 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 4-37. For example, input time 14:44.00 and then click Search button , you can view all the record files after 14:44.00 (The records includes current time). See image on the right side of the Figure 4-37. 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 synchronization playback supports all channels and non-synchronous playback only supports accurately playback of current select channel.

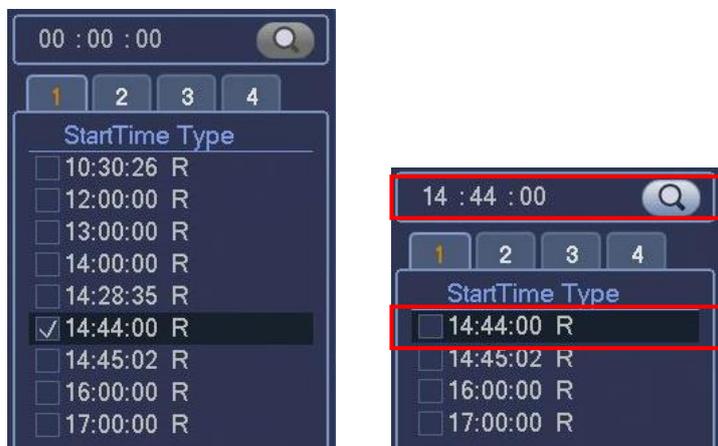


Figure 4-37

4.8.1.3 Bookmark Playback

When 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. It is very easy for you to get the important video information.

- Add Mark

During playback, click **Bookmark** button, you can go to the following interface.

See Figure 4-38.



Figure 4-38

- Playback Mark

During 1-window playback mode, click mark file list button  in Figure 4-35, you can go to mark file list interface. Double click one mark file, you can begin playback from the mark time.

- Play before Mark Time

Here you can set to begin playback from previous N seconds of the mark time.

Note

Usually, system can playback previous N seconds record if there is such kind of record file. Otherwise, system playbacks from the previous X seconds when there is such as kind of record.

- Marks Manager

Click the Marks Manager button,  on the Playback interface (Figure 4-35); you can go to Mark Manager interface. See Figure 4-39. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.

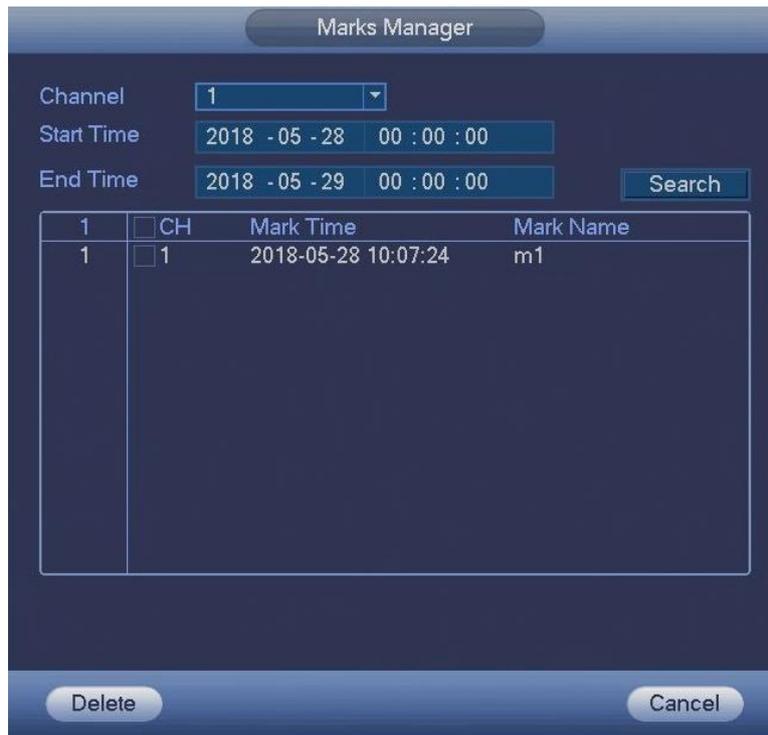


Figure 4-39

- **Modify**

Double click one mark information item, you can see system pops up a dialogue box for you to change mark information. You can only change mark name here.

- **Delete**

Here you can select 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 mark management interface.
- If the mark file you want to playback has been removed, system begins playback from the first file in the list.

4.8.1.4 Customized Playback

You can select one or more channel(s) to playback at the same time.

From MAIN MENU -> OPERATION -> PLAYBACK or you can right click mouse on the preview interface and then select Playback, you can go to Figure 4-35.

In pane 2, click , you can see the following interface. See Figure 4-40.



Figure 4-40

Now you can select one or more channel(s) and then click  to search record(s).

System supports one or more channels. The window split mode can auto adjust according to the channel amount. System max supports 16-split.

Click  button to select all channels at the same time.

Click , system begins playback.

4.8.1.5 Splice Playback

For the large record file, you can use splice playback function to play the same file in several sections at the same time. It is very convenient for you to find the video footages you desire.

On the main menu, click PLAYBACK button, or right click mouse and then select Playback. On the right pane, check the box to enable splice playback function, and then set channel, date, split mode. The splice playback interface is shown as below. Each section has a small triangle; you can adjust it to set time. See Figure 4-41.



Figure 4-41

Note

Select split mode, so that the record can be spliced in several sections.

Select splice file.

- Click Playback, system playbacks from the first of current date by default.
- Click time bar, system playbacks from the time you click.
- Click , you can select on the file list.

Note

- The splice playback is for 1-window playback mode.

- System supports 1/4/8/16-split mode.
- The min period of each section is 5 minutes. For the record is less than 20 minutes, if you select 4-split mode (or more than 4-split mode), system can auto adjust so that the each section period is 5 minutes. In this situation, some channel may have no video.

4.8.2 Backup

DVR support CD-RW, DVD burner, USB device backup and network download. Here we introduce USB backup. You can refer to chapter 5 WEB OPERATION for network download backup operation.

Click BACKUP button in the main menu, you can see an interface is shown as in Figure 4-42. 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 and flash disk backup.

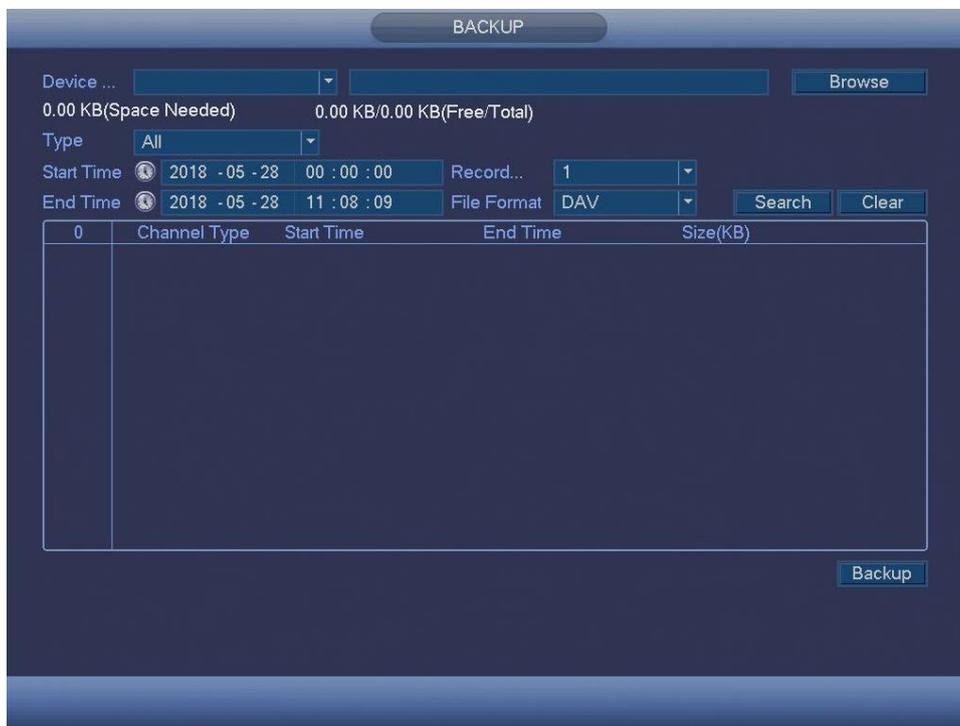


Figure 4-42

Select backup device and then set channel, file start time and end time. Click Search button, system begins search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 4-43.

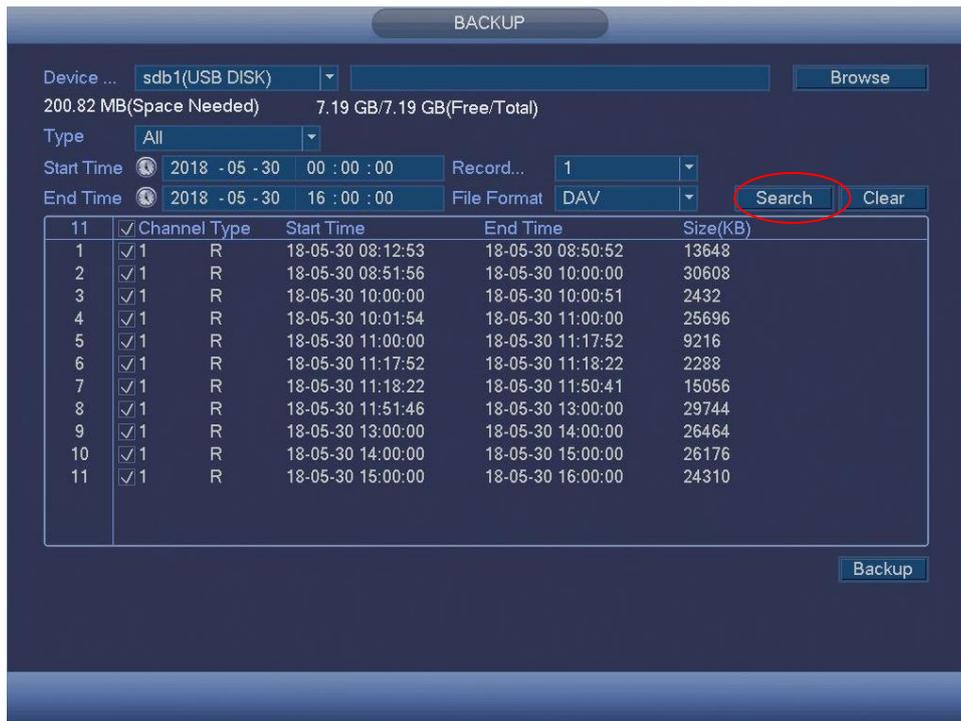


Figure 4-43

System only backup files with a ✓ before channel name. You can use FN or uncheck the item to delete ✓ after file serial number.

Click Backup 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 4-44.

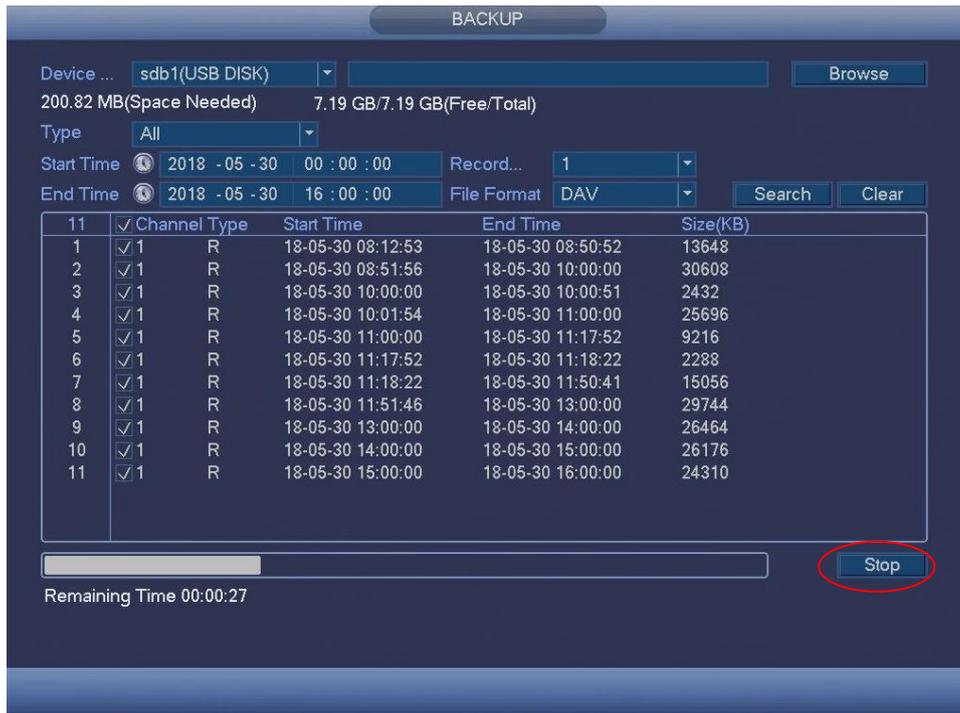


Figure 4-44

When the system completes backup, you can 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.

Tips

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

4.8.3 Shut Down

In Figure 4-34, select SHUTDOWN, you can go to the following interface. See Figure 4-45.

There are three options: Shut Down/Log Out/Manual Reboot.

For the user who does not have the shut down right, please input corresponding password to shut down.



Figure 4-45

4.9 Information

4.9.1 System

Here is for you to view system information. There are total six items: HDD INFO (hard disk information), RECORD INFO, REC ESTIMATE, BPS (data stream statistics), DEVICE STATUS (CJ-HDR416A only) and VERSION. See Figure 4-46.



Figure 4-46

4.9.1.1 HDD Information

Here is to list hard disk type, total space, free space and status. See Figure 4-47.

- SN: You can view the HDD amount the device connected to. * means the second HDD is currently 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.
- S.M.A.R.T: Display HDD information. See Figure 4-48.



Figure 4-47

Double click on HDD information; you can see the HDD S.M.A.R.T information. See Figure 4-48.

S.M.A.R.T Info

Port 1
 Model WDCWD20PURX-64P6ZY0
 No. WD-WCC4M3202991
 Status OK
 Describe:

Smart ID	Attribute	Threshold	Value	Worst Value	Status
1	Read Error Rate	51	200	200	OK
3	Spin Up Time	21	193	167	OK
4	Start/Stop Count	0	100	100	OK
5	Reallocated Sector Count	140	200	200	OK
7	Seek Error Rate	0	200	200	OK
9	Power On Hours Count	0	94	94	OK
10	Spin-up Retry Count	0	100	100	OK
11	Calibrate Retry Count	0	100	100	OK
12	Power On/Off Count	0	100	100	OK
192	Power-Off Retract Cycle	0	200	200	OK
193	Load/Unload Cycle Count	0	200	200	OK
194	Temperature	0	116	98	OK
196	Reallocated Event Count	0	200	200	OK
197	Current Pending Sector Count	0	200	200	OK
198	Off-line Scan Uncorrectable Count	0	100	253	OK
199	Ultra ATA CRC Error Rate	0	200	200	OK

Figure 4-48

4.9.1.2 Record Info

It is to view record start time and end time. See Figure 4-49.

INFO

SYSTEM EVENT NETWORK LOG

HDD INFO
RECORD INFO
 REC ESTIMATE
 BPS
 DEVICE STATUS
 VERSION

SATA 1 2 3 4
 O - - -

	Start Time	End Time
All	2018-02-09 09:19:15	2018-06-21 15:42:49
1*	2018-02-09 09:19:15	2018-02-09 09:21:35
	2018-02-26 09:18:28	2018-02-26 09:25:56
	2018-04-26 15:35:32	2018-04-28 13:58:45
	2018-04-30 08:10:11	2018-05-04 12:45:06
	2018-05-04 11:45:04	2018-05-04 19:20:34
	2018-05-07 08:13:19	2018-05-07 14:42:47
	2018-05-07 14:36:09	2018-05-08 17:34:09
	2018-05-10 07:40:18	2018-05-11 17:35:54
	2018-05-14 14:47:37	2018-05-14 15:06:59
	2018-06-20 08:37:10	2018-06-21 15:42:49

Figure 4-49

4.9.1.3 Record Estimate

System can calculate the record time based on the HDD space, or you can input the

record time you want to calculate the HDD space you need. See Figure 4-50.



Figure 4-50

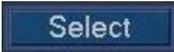
Click  after the channel name, system pops up Edit dialogue box. See Figure 4-51. You can input resolution, frame rate, bit rate, record time of the corresponding channel, system can calculate the record time based on the channel setup and HDD space.



Figure 4-51

- **Calculate the record period based on the HDD space**

Check the channel you want to record file.

Click Known Space and then click the  button to select HDD. Click OK button.

Now you can see the record period (such as 5 days). See Figure 4-52.



Figure 4-52

- **Calculate the HDD space based on the record period**

Check the channel you want to record file.

Input days(s) you want to records, system can auto calculate the HDD space needed (such as 2.477TB). See Figure 4-53.



Figure 4-53

4.9.1.4 BPS

Here is for you to view current video data stream (Kb/S), resolution and etc. See Figure 4-54.

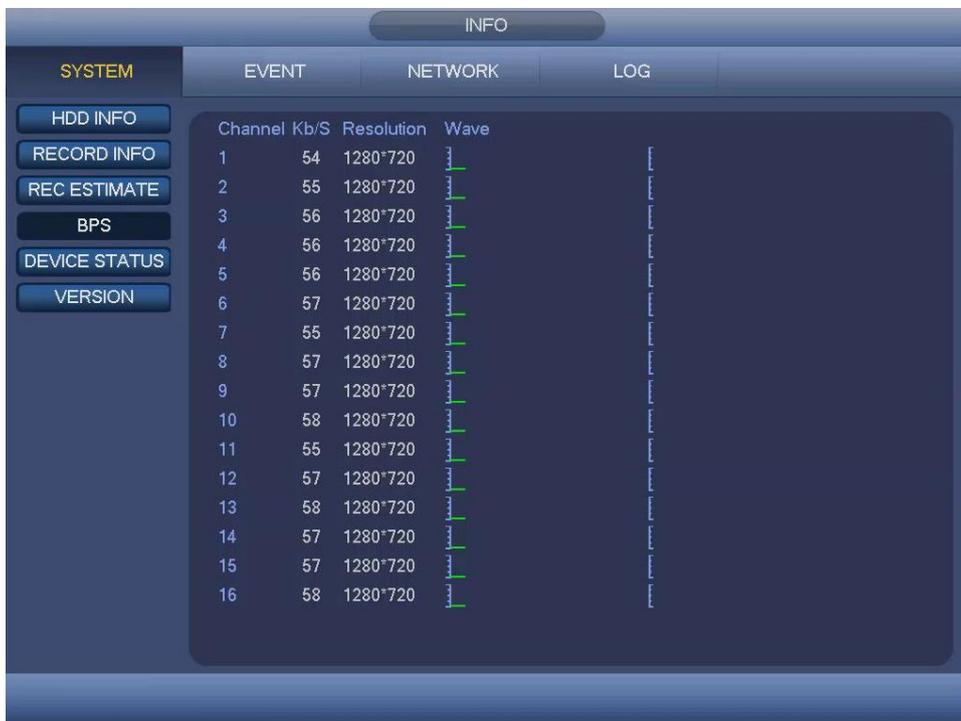


Figure 4-54

4.9.1.5 Device Status (CJ-HDR416A only)

It is to view device status information. See Figure 4-55.



Figure 4-55

4.9.1.6 Version

Here is for you to view some version information such as version number, built date, serial number and etc. See Figure 4-56. Please note the following information is for reference only.



Figure 4-56

4.9.2 Event

It is to display alarm status. See Figure 4-57.



Figure 4-57

4.9.3 Network

4.9.3.1 Online Users

Here is for you to manage online users. See Figure 4-58.

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

System detects there is any newly added or deleted user in each five seconds and refresh the list automatically.



Figure 4-58

4.9.3.2 Network Load

Network load is shown as in Figure 4-59. 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 'Failed' if connection is disconnected. Click one network adapter, you can view the flow statistics such as send rate and receive rate at the top panel.

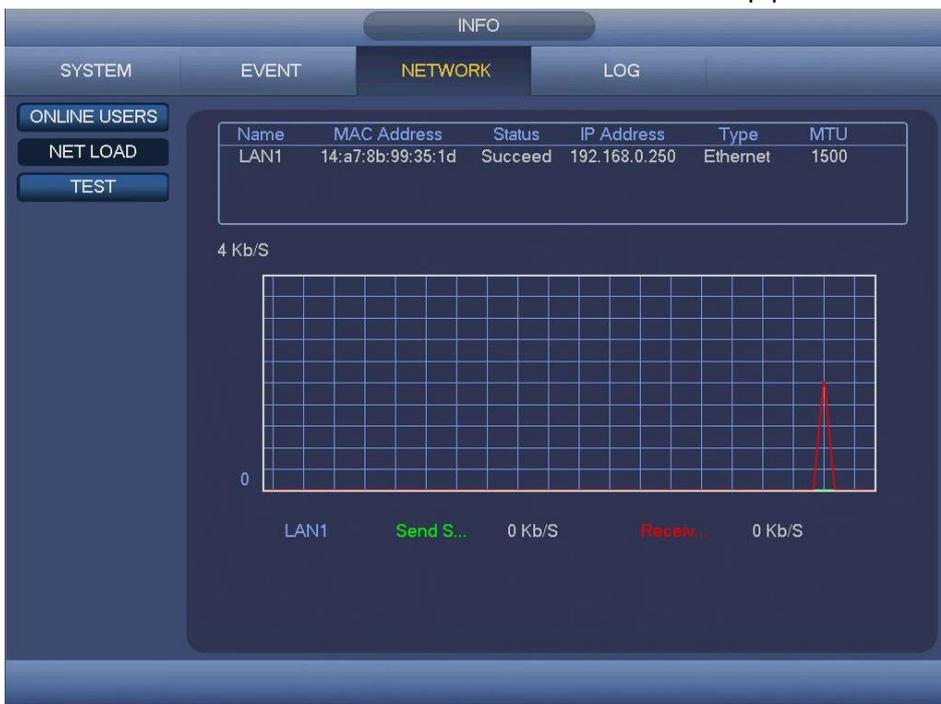


Figure 4-59

4.9.3.3 Network Test

Network test interface is shown as in Figure 4-60.

- 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 and etc.
- Network Sniffer Packet backup: Please insert USB 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), you can click the button  on the right panel to begin Sniffer. Please note system cannot Sniffer several network adapters at the same time.

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



Figure 4-60

4.9.4 Log

4.9.4.1 Local Log

Here is for you to view system log file. System lists the following information. See Figure 4-61.

Log types include system operation, configuration operation, alarm event, record operation, account manager, log clear and etc. It optimized 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 max save 1024 log files. Please use left/right 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 4-62. Here you can use rolling bar to view information, or you can use Previous/Next to view other log information.



Figure 4-61

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 and etc. See Figure 4-62.

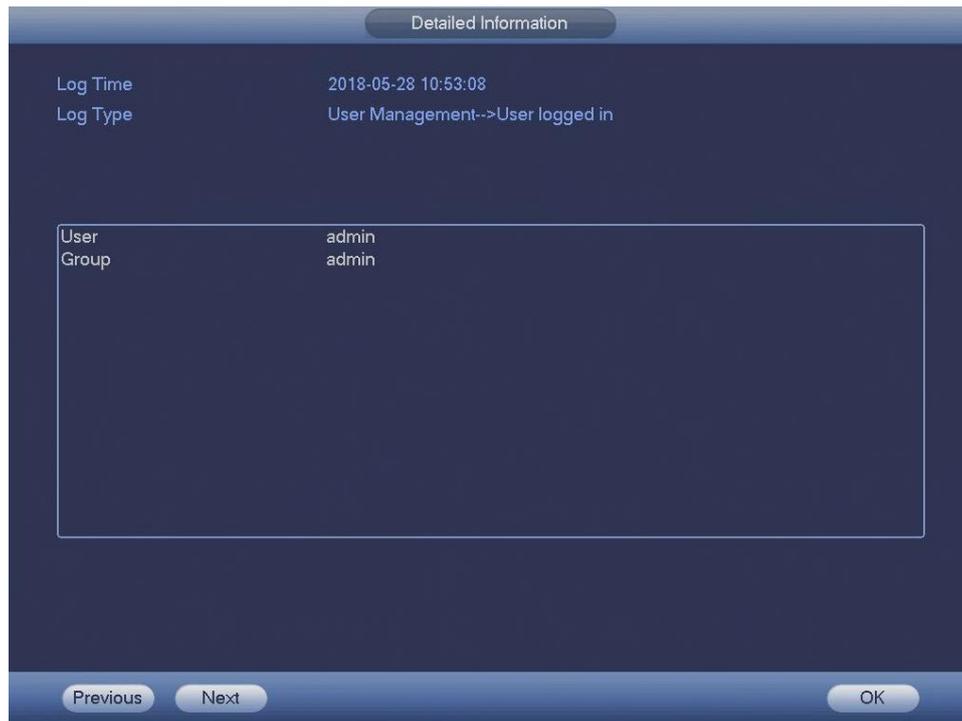


Figure 4-62

Note

- If there is no HDD, system max supports 1024 logs.
- If you have connected to the unformatted HDD, system max supports 5000 logs.
- If you have connected to the formatted HDD, system max supports 500000 logs.
- System operation logs are saved in system memory. Other types of logs are saved in the HDD. If there is no HDD, other types of logs are saved in the system memory too.
- The logs are safe when you format the HDD. But the logs may become loss once you removed the HDD.

4.10 Setting

4.10.1 Camera

4.10.1.1 Image

The camera interface is shown as in Figure 4-63.

- Alarm Channel: Select a channel from the dropdown list.
- Cable Type: It is to set the cable type of the corresponding analog channel. When the setup here matches the actual cable you are using, you can get the best image effect. The default setup is COAXIAL.
 - ✧ COAXIAL: When the corresponding channel is using coaxial cable, please select COAXIAL.
 - ✧ UTP: When the corresponding channel is using UTP cable, please select UTP. Usually we recommend 100Ohm UTP cable.
- Saturation: It 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:** It 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:** It 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.
- **Chroma:** It is to adjust monitor video brightness and darkness level. The default value is 50. The bigger the value is, the larger the contrast between the bright and dark section is and vice versa.
- **Sharpness:** The value here is to adjust the edge of the video. The value ranges from 0 to 15. 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 1. The recommended value is 1.
- **Image Enhance:** It is to enhance video quality. The larger the value is, the clearer the video is. But the noise may become large too.
- **NR:** It is to process the multiple-frame (at least two frames). It is to use the frame information between the following two frames to reduce noise. And it is also to process the noise of the single image. The video may become soft after process. The larger the value is, the better the effect is.



Figure 4-63

4.10.1.2 Encode

It is to set video bit stream, picture bit stream, video overlay parameter and etc.

4.10.1.2.1 Encode

Video setting includes the following items. See Figure 4-64.

- Channel: Select the channel you want.
- Type: Please select from the dropdown list. There are three options: Regular/MD/Alarm. You can set the various encode parameters for different record types.
- Compression: System supports H.264.
- Resolution: System supports various resolutions, you can select from the dropdown list. Please note the option may vary due to different series.
- Frame Rate: It ranges from 1f/s to 30f/s in NTSC mode and 1f/s to 25f/s in PAL mode.
- Bit Rate Type: System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- I Frame Interval: Here you can set the P frame amount between two I frames. The value ranges from 1s to 2s, default value is 1s. Recommended value is frame rate *2.
- Bit Rate: You can select bit rate value in the combo box.
- Reference Bit Rate: Recommended bit rate value according to the resolution and frame rate you have set.
- Audio/Video: You can enable or disable the audio/video.
- Audio Format: Please select from the dropdown list. There are three options: G711a/G711u/PCM.

- Audio Source: Please select from the dropdown list. There are two options: NORMAL/HDCVI. For normal mode, the audio signal is from the Audio In port. For HDCVI mode, the audio signal is from the coaxial cable of the camera.

Note (CJ-HDR416A only):

When channel type is AUTO, audio source of HDCVI is not supported.



Figure 4-64

4.10.1.2.2 Snapshot

Here you can set snapshot mode, image size, quality and snapshot frequency. See Figure 4-65.

- Mode: There are two modes: timing and trigger. If you set 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.
- Snapshot Frequency: It is for you to set timing (schedule) snapshot interval.



Figure 4-65

4.10.1.2.3 Overlay

Overlay interface is shown as in Figure 4-66.

- Cover-Area: Here is for you to set cover area. You can drag your mouse to set proper section size. Or you can use the direction buttons and FN button on the front panel to set the zone size too. In one channel video, system max supports 4 zones in one channel.
- Preview/Record: Privacy mask has two types: Preview and Record. Preview means the privacy mask zone cannot be viewed by user when system is in preview status. Record means the privacy mask zone cannot 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 4-67. You can see current channel number is grey. Please click on the number to select the channel or you can select ALL. Please click the OK button in Figure 4-67 and the Save button in Figure 4-66 to complete the setup.

Please select the checkbox to select the corresponding function.



Figure 4-66



Figure 4-67

4.10.1.3 Channel Name

It is to modify channel name. It max supports 63-character. See Figure 4-68.



Figure 4-68

4.10.1.4 Channel Type

It is to set channel type. See Figure 4-69.

Note

If there is no connected channel, the channel type here just displays previous connection record. System supports self-adaptive after camera connection.



Figure 4-69

4.10.2 Network

4.10.2.1 TCP/IP

The interface is shown as in Figure 4-70.

- 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. It is for you to access in the LAN. It is read-only.
- DHCP: It is to auto search IP. When enable DHCP function, you cannot modify IP Address/Subnet Mask/Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP Address/Subnet Mask/Gateway display as zero. You need to disable DHCP function to view current IP information.
- IP Address: Here you can input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
- 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.
- Preferred DNS server: DNS server IP address.
- Alternate DNS server: DNS server alternate address.
- MTU: It is to set MTU value of the network adapter. The value ranges from 1280-1500 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 dialogue 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 it is also the default value. It is the typical setup when there is no VPN. It is the default setup of some router, switch or the network adapter.
- ✧ 1468: Recommend value for DHCP.

Click Apply or Save to complete setup.



Figure 4-70

4.10.2.2 Connection

The connection setup interface is shown as in Figure 4-71.

- Max Connection: The max login client amount. The value ranges from 0 to 128. The default setup is 128.
- 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 setup of the above five ports. Please make sure the port values here do not conflict.



Figure 4-71

4.10.2.3 DDNS

DDNS (Dynamic Domain Name Server) is to dynamically refresh the DNS domain name and IP address if the device IP address has changed frequently. The user can use the domain to access the device.

Preparation

Before the operation, make sure the device supports DNS type and go to the DDNS service provider website to register the domain name via the PC.

Note

After you successfully registered and logged in the DDNS website, you can view all connected device information of current login user.

DDNS setup interface is shown as in Figure 4-72.

- DDNS Type/ Host IP:
 - ✧ Dyndns DDNS is members.dyndns.org.
 - ✧ NO-IP DDNS is dynupdate.no-ip.com.
 - ✧ CN99 DDNS is members.3322.org.
- Domain Name: The domain name registered on the DDNS service provider website.
- User Name/Password: Input the user name and password got from the DDNS service provider. Make sure you have logged in the DDNS service provider website to register an account (user name and password).
- Interval: After DDNS boots up, it sends out refresh query regularly. The unit is minute. Click Apply or Save to complete setup. Open a browser and input domain name, click

Enter button.

The setting is right if you can view device Web interface. Otherwise, please check the parameters.



Figure 4-72

4.10.2.4 IP Filter

To enhance device network security and protect device data, please set the access right of the IP host (IP host here refers to the IP PC or the server). After you enabled trusted sites function, only the IP listed below can access current DVR.

If you enable blocked sites function, the following listed IP addresses cannot access current DVR.

Step 1 From MAIN MENU -> SETTING -> NETWORK -> IP FILTER.

Enter IP Filter interface. See Figure 4-73.

Step 2 Check the Enable box.

Select trusted sites/blocked sites.

- Enable trusted site function and then add the whitelist.
- Enable blocked site function and then add the blacklist.

Step 3 Set parameters.

- 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 or Add IP Section to add. System supports max 64 IP addresses.
 - a) For the newly added IP address, it is in enable status by default. Remove the \checkmark before the item, and then current item is not in the list.
 - b) System max supports 64 items.
 - c) Address column supports IPv4 or IPv6 format. If it is IPv6 address, system can

optimize it. For example, system can optimize aa: 0000: 00: 00aa: 00aa: 00aa: 00aa: 00aa as aa:: aa: aa: aa: aa: aa: aa.

- d) System automatically removes space if there is any 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 4-74. 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.

Step 4 Click Apply or Save to complete setup.

- 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 cannot access the device.



Figure 4-73



Figure 4-74

4.10.2.5 Email

The email interface is shown as below. See Figure 4-75.

- 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.
- Receiver: Please input receiver email address here. System max supports 3 email boxes. System automatically filters same addresses if you input one receiver repeatedly.
- Sender: Please input sender email box here.
- Subject: Please input email subject here. System support English character and Arabic number. Max 63-character.
- Encrypt Type: System supports SSL and TLS encryption.
- Interval: The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.
- Health Enable: Please select the checkbox 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 checkbox 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 4-75

4.10.2.6 FTP

It is to backup record file or image to the FTP to storage or view.

Before the operation, please download or purchase the FTP service tool and install on the PC.

Note

For the FTP user, please set FTP folder write right, otherwise system cannot upload the image.

Step 1 From MAIN MENU -> SETTING -> NETWORK -> FTP, enter FTP interface. See Figure 4-76.

Step 2 Set parameters.

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.

- Host IP: The host IP you have installed the FTP server.
- Port: The default setup is 21.
- User Name/Password: The account for you to access the FTP server.
- Remote Directory: The folder you created under the root path of the FTP according to the corresponding rule.

- ◇ If there is no remote directory, system can auto create different directories according to the IP, time and channel.
- ◇ If there is remote directory, system can create corresponding folder under the FTP root path and then create different folders according to IP address, time and

- channel.
- File Length: 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.
 - Snapshot: It is the image upload interval. If the image upload interval is larger than the image snapshot frequency, system just uploads the lasted image.
 - ✧ If the image interval is 5 seconds and the snapshot frequency is 2 seconds, system will send out the latest image at the buffer at 5 seconds.
 - ✧ If the image upload interval is smaller than the snapshot frequency, system will upload at the snapshot frequency. For example, if the image interval is 5 seconds and the snapshot frequency is 10 seconds, system will send out the image at 10 seconds.
 - ✧ From MAIN MENU -> SETTING -> CAMERA -> ENCODE -> Snapshot to set snapshot frequency.
 - Channel: Select a channel from the dropdown list and then set week, period and record type.
 - Day: Please select from the dropdown list and for each day, you can set two periods.
 - Type: Please select uploaded record type (Alarm/Motion/Regular). Please check the box to select upload type.
- Step 3 Click the Test button, you can see the corresponding dialogue box to see the FTP connection is OK or not.
- Step 4 Click Apply or Save to complete setup.



Figure 4-76

4.10.2.7 SNMP

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

- Install corresponding software tool such as MIB Builder and MG-SOFT MIB Browser.
- Contact technical engineer to get two MIB files of the current version.

Step 1 From MAIN MENU -> SETTING -> NETWORK -> SNMP.

Enter SNMP interface. See Figure 4-77.



Figure 4-77

Step 2 Set parameters.

- Enable: Check the box to enable SNMP function.
- Version: Check the box and then select version. DVR can process the corresponding version information.
- SNMP Port: The agent applications listening port on the DVR.
- Read/Write Community: The read/write community string the agent applications supports.
- Trap Address: The Trap information destination address of the agent applications on the DVR.
- Trap Port: The Trap information destination port of the agent applications on the DVR.

Step 3 In Figure 4-77, 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.

Step 4 Compile the above mentioned two MIB file via the software MIB Builder.

Step 5 Run MG-SOFT MIB Browser to load the file from the previous step to the software.

Step 6 Input the device IP you want to manage in the MG-SOFT MIB Browser. Please set the corresponding version for your future reference.

Step 7 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 and etc.

4.10.2.8 UPnP

You can map the relationship between the LAN and the WAN to access the device on the LAN through the IP address on the WAN.

Preparation for configuration

- Login the router to set the WAN port to enable the IP address to connect into the WAN.
- Enable the UPnP function at the router.
- Connect the Device with the LAN port on the router to connect into the LAN.

Step 1 Select MAIN MENU > SETTING > NETWORK > TCP/IP, configure the IP address into the router IP address (such as 192.168.1.101), or enable the DHCP function to obtain an IP address automatically.

Step 2 Select MAIN MENU > SETTING > NETWORK > UPnP.
The UPnP interface is displayed. See Figure 4-78.



Figure 4-78

Step 3 Check the box to enable UPnP function. Configure the settings for the UPnP parameters. See the following table

Parameter	Description
PAT	Enable the UPnP function.
Status	Indicates the status of UPnP function. <ul style="list-style-type: none"> ● Offline: Searching. ● Online: Success.
LAN IP	After mapping succeeded, the system obtains IP address automatically without performing any configurations.
WAN IP	After mapping succeeded, the system obtains IP address automatically without performing any configurations.
PAT Table	<p>The settings in PAT table correspond to the UPnP PAT table on the router.</p> <ul style="list-style-type: none"> ● Service Name: Name of network server. ● Protocol: Type of protocol. ● Int. Port: Internal port that is mapped on the device. ● Ext. Port: External port that is mapped on the router. <p>Note</p> <ul style="list-style-type: none"> ● To avoid the conflict, when setting the external port, try to use the ports from 1024 through 5000 and avoid popular ports from 1 through 255 and system ports from 256 through 1023. ● When there are several devices in the LAN, please reasonably arrange the ports mapping to avoid mapping to the same external port. ● When establishing a mapping relationship, please ensure the mapping ports are not occupied or limited. ● The internal and external ports of TCP and UDP must be the same and cannot be modified.
Modify	Click  to modify the external port. See Figure 4-79.
Default	UPnP default port setting is the HTTP, TCP and UDP of the DVR.



Figure 4-79

Step 4 Click Apply to complete the settings.

In the browser, enter http://WAN IP: External IP port. You can visit the LAN Device.

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.

4.10.2.9 Multicast

When you are accessing the device and view the video, the error occurs if the connected device amount has reached the threshold. In this situation, please set multicast IP to use multicast protocol to access.

Multicast setup interface is shown as in Figure 4-80.

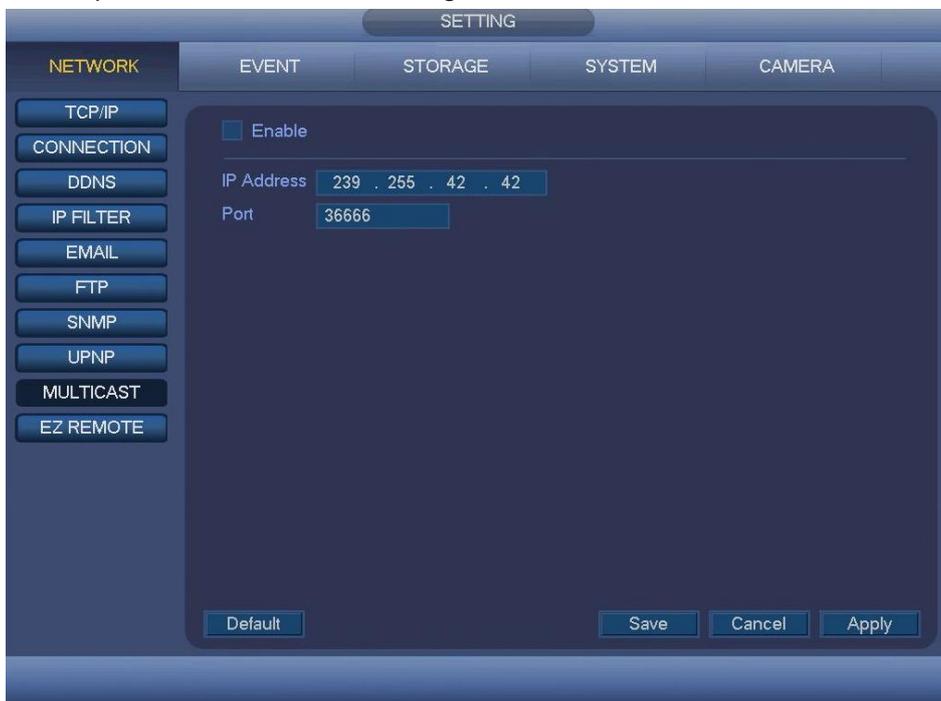


Figure 4-80

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

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

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

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

- Like the single broadcast address of RFC1918
- Cannot be used in Internet transmission
- Used for multiple cast broadcast in limited space.

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

For example:

Multiple cast IP: 235.8.8.36

Multiple cast Port: 3666.

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

4.10.2.10 EZ Remote

The EZ Remote interface is shown as in Figure 4-81.

You can use you cell phone to scan the QR to add the device via the client on the cell phone.



Figure 4-81

4.10.3 Event

4.10.3.1 Detect

In the main menu, from SETTING -> EVENT -> DETECT, you can see motion detect interface. See Figure 4-82. There are three detection types: Motion Detect, 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 your mouse to set motion detect region. Please click OK button to save current region setup. Right click mouse to exit current interface.

4.10.3.1.1 Motion Detect

After analysis video, system can generate an alarm when the detected moving signal reached the sensitivity you set here.

Motion Detect interface is shown as below. See Figure 4-82.

- Alarm Channel: Select a channel from the dropdown list to set motion detect function.
- Region: Click Set button, the interface is shown as in Figure 4-83. 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 press 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 press ESC button to exit current setup. Do remember click Save button to save current setup. If you press ESC button to exit the region setup interface system will not save your zone setup.
- Enable MD: Check the box here to enable motion detect function.
- Enable PIR: PIR function help enhance the motion detect accuracy and validity. It is to filter the false alarm triggered by leaves, small fly and insects. The PIR detection zone is smaller than the camera angle of view. The PIR function is enabled by default if the connected remote device supports the PIR function. When the PIR function is on, motion detection function is on by default. The motion detect event occurs when these two function are enabled at the same time. If the PIR function is disabled, check the enable box to enable the general motion detect function.

Note

- ◇ The channel type shall be CVI if you want to enable PIR function.
- ◇ If the remote device does not support PIR function, the PIR item on the interface is grey or is hiding. That is to say, the PIR function is null.
- ◇ The interface does not display PIR enable state if current DVR does not support PIR function
- Period: Click Set button, you can see an interface is shown as in Figure 4-85. 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 4-85, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as .

✧ In Figure 4-85, click  button after one date or a holiday, you can see an interface shown as in Figure 4-86. There are six period for setup (00:00 – 24:00) and is able to copy the setup period to everyday from (Monday -> Sunday).

- Anti-Dither: Here you can set anti-dither time. The value ranges from 0 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- Alarm Out (CJ-HDR416A only): When an alarm occurs, system enables peripheral alarm devices.
- Latch (CJ-HDR416A only): When motion detection completes, system auto delays detecting for a specified time. The value ranges from 0-300 (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 center) 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 -> STORAGE -> SCHEDULE) and schedule record in manual record interface (MAIN MENU -> SETTING -> STORAGE -> 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 Set button, you can see an interface is shown as in Figure 4-84.
- 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 an 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: Select the checkbox to enable this function. The buzzer beeps when an alarm occurs.
- Log: Check the box here, system can record motion detect log.
- Test: Click it to test current motion detect setup (do not need to save). Click Set button after Region, you can set motion detect area.

Please select the checkbox 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 cannot use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 4-83, 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 ESC to exit.

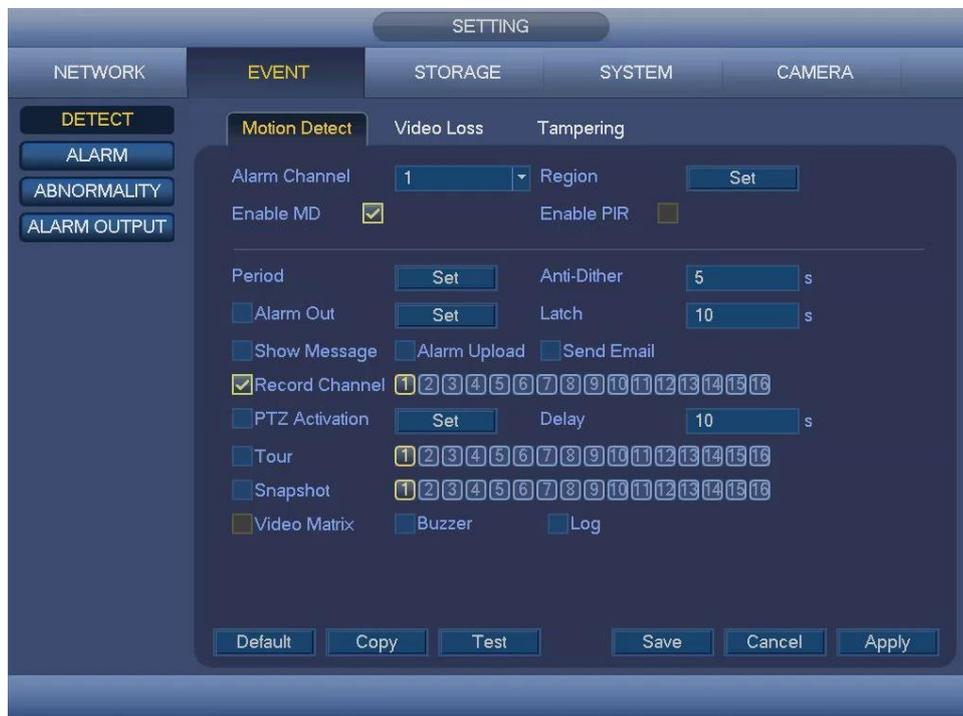


Figure 4-82



Figure 4-83



Figure 4-84



Figure 4-85



Figure 4-86

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

4.10.3.1.2 Video Loss

In Figure 4-82, select video loss from the type list. You can see the interface is shown as in Figure 4-87. This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

Note

You can enable preset/tour/pattern activation operation when video loss occurs. Please refer to chapter 4.10.3.1.1 Motion Detect for detailed information.



Figure 4-87

4.10.3.1.3 Tampering

When someone viciously masks the lens, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Tampering interface is shown as in Figure 4-88. You can enable “Alarm Out” 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. Please refer to chapter 4.10.3.1.1 Motion Detect for detailed information.

Note

- In Detect interface, copy/paste function is only valid for the same type, which means you cannot copy a channel setup in video loss mode to tampering mode.
- About the 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 4-88

4.10.3.2 Alarm (CJ-HDR416A only)

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 shown as in Figure 4-89.

- Local: The alarm signal system detects from the alarm input port.
- Alarm In: Here is for you to select channel number.
- Enable: Select the checkbox to enable current function.
- Device Type: normal open or normal close.
- Period: Click Set button, you can see an interface is shown as in Figure 4-91. There are two ways for you to set periods. There are max 6 periods in one day.

✧ In Figure 4-91, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as .

✧ In Figure 4-91. Click Set button after one date or a holiday, you can see an interface shown as in Figure 4-92.

- Anti-dither: Here you can set anti-dither time. Here you can set anti-dither time. The value ranges from 0 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither

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

- Alarm Out: The number here is the device alarm output port. You can select the corresponding ports(s) so that system can activate the corresponding alarm device(s) when an alarm occurred.
- Latch: Here is for you to set proper delay duration. Value ranges from 0 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- 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 center) if you enabled current function.
- Send Email: System can send out email to alert you when an 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 -> SETTING -> STORAGE -> RECORD).
- PTZ Activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour & pattern when there is an alarm. Click Set button, you can see an interface is shown as in Figure 4-90.
- Tour: Here you can enable tour function when an 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 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 an 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: Select the checkbox to enable this function. The buzzer beeps when alarm occurs.
- Log: Check the box here, system can record local alarm log.

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



Figure 4-89



Figure 4-90

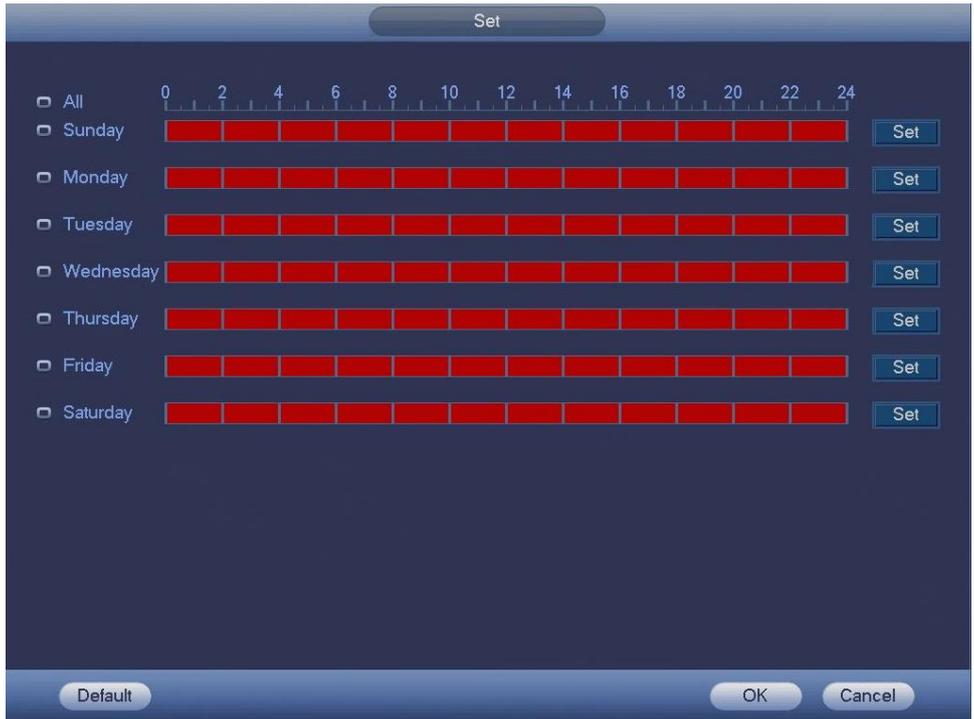


Figure 4-91



Figure 4-92

4.10.3.3 Abnormality

There are three types: HardDisk/Network/Device.

- ✧ HardDisk: HDD Error, No HDD, HDD No Space. See Figure 4-93 and Figure 4-94.

- ✧ Network: Net Disconnection, IP Conflicted, MAC Conflicted. See Figure 4-95.
- ✧ Device (CJ-HDR416A only): High temperature, fan speed abnormal. See Figure 4-96.
- Less Than: System can alarm you when the HDD space is less than the threshold you set here (For HDD No Space type only).
- Alarm Out (CJ-HDR416A only): Please select alarm activation output port (multiple choices).
- Latch (CJ-HDR416A only): Here you can set corresponding delaying time. The value ranges from 0s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Temperature Too High: In Device interface (Figure 4-96), select Temperature Too High from the dropdown list, and then input the max temperature. The value ranges from 30°C ~ 99°C. Device can trigger an alarm once the case temperature is higher than the value you set.
- Fan Speed Abnormal: In Device interface (Figure 4-96), select Fan Speed Abnormal from the dropdown list, and then click the OK button after the Fan calibration. It can correct fan manually. Please note we recommend this function after you replaced or maintained the fan.
- Show Message: System can pop up the message in the local screen to alert you when an alarm occurs.
- Alarm Upload: System can upload the alarm signal to the network (including alarm center) 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 an alarm occurs.
- Buzzer: Select the checkbox to enable this function. The buzzer beeps when alarm occurs.
- Log: Check the box here, system can record HDD event log.



Figure 4-93



Figure 4-94



Figure 4-95



Figure 4-96

4.10.3.4 Alarm Output (CJ-HDR416A only)

Here is for you to set proper alarm output such as auto, manual. See Figure 4-97.

Please select the checkbox to select the corresponding alarm output.
Click Apply or Save to complete setup.



Figure 4-97

4.10.4 Storage

4.10.4.1 Basic

It is to manage HDD storage space.

Besides startup wizard and configuration wizard, from MAIN MENU -> SETTING -> STORAGE -> BASIC, you can also go to the following interface.

Step 1 From MAIN MENU -> SETTING -> STORAGE -> BASIC.

Enter Basic interface, see Figure 4-98.

Step 2 Set parameters.

- HDD Full: It is to select working mode when hard disk is full. There are two options: stop recording or overwrite.
 - ◇ Stop Record: If current HDD is full while there is no idle HDD, then system stops recording,
 - ◇ Overwrite: If the current HDD is full while there is no idle HDD, then system overwrites the previous files.

Note

DVR does not overwrite the locked files.

- Pack Mode: Here is for you to specify record duration. There are two ways for you to set.
 - ◇ Time Length: It is to pack according to time. The value ranges from 1 to 60 minutes. Default value is 60 minutes.
 - ◇ File Length: It is to pack according to file length. The default setup is 1024M. The

value ranges from 128M to 2048M.

- Auto-Delete Old Files:
 - ◇ Never: Do not auto delete old files.
 - ◇ Customized: input customized period here, system can auto delete corresponding old files.

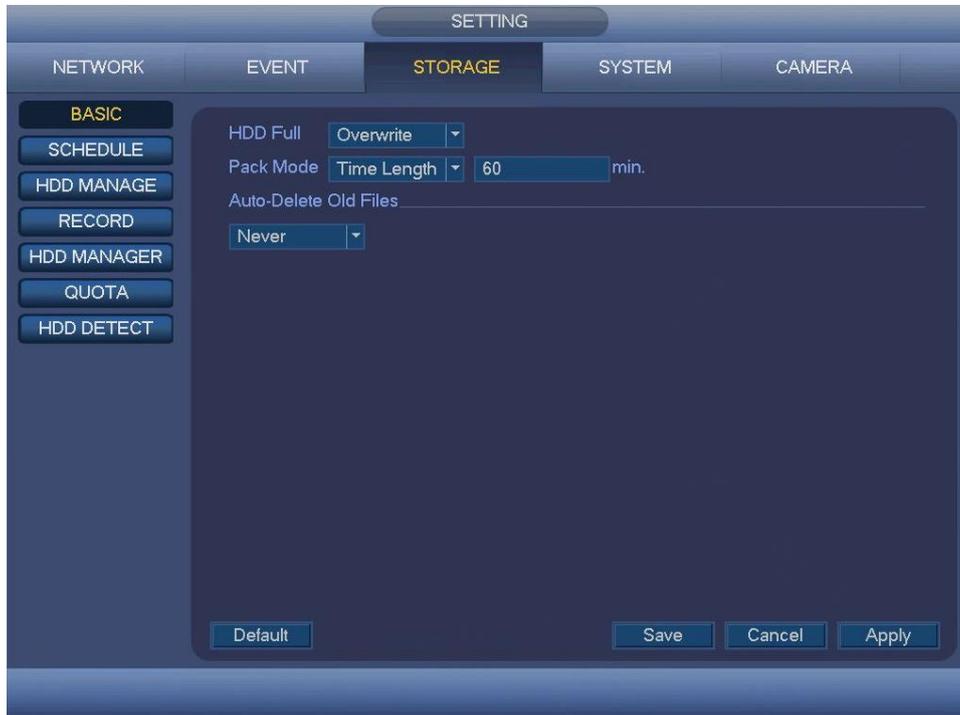


Figure 4-98

4.10.4.2 Schedule

4.10.4.2.1 Record

Note

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 4-102.

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/Motion/Alarm/MD (motion detect) & Alarm.
- 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 -> SETTING -> SYSTEM -> GENERAL -> Holiday) to add holiday first. Otherwise you cannot see this item.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 0 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. You can select the checkbox to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (MAIN MENU -> SETTING -> STORAGE -> HDD MANAGE). **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 4-103. There are four record types: Regular, Motion, Alarm, MD & Alarm.

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

- ✧ Select a channel you want to set. See Figure 4-99.

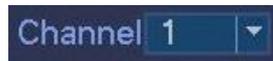


Figure 4-99

- ✧ Set record type. See Figure 4-100.



Figure 4-100

- ✧ Please draw manually to set record period. There are six periods in one day. See Figure 4-101.

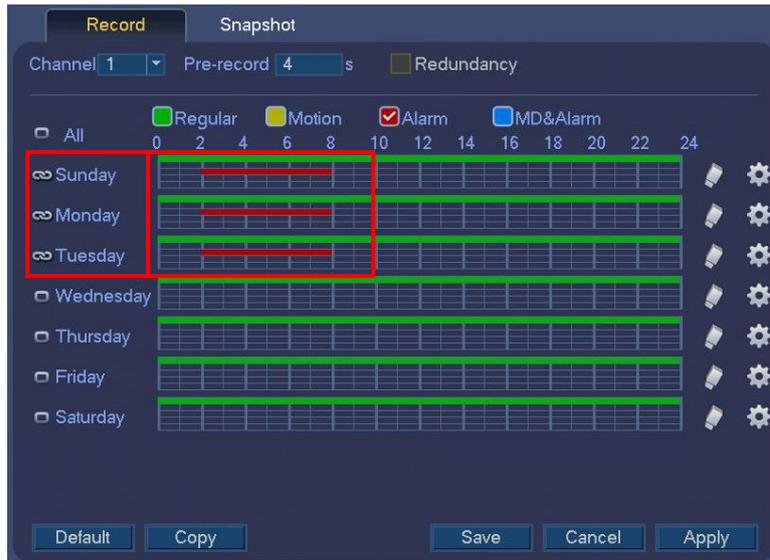


Figure 4-101

Please select the checkbox 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 blue 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.

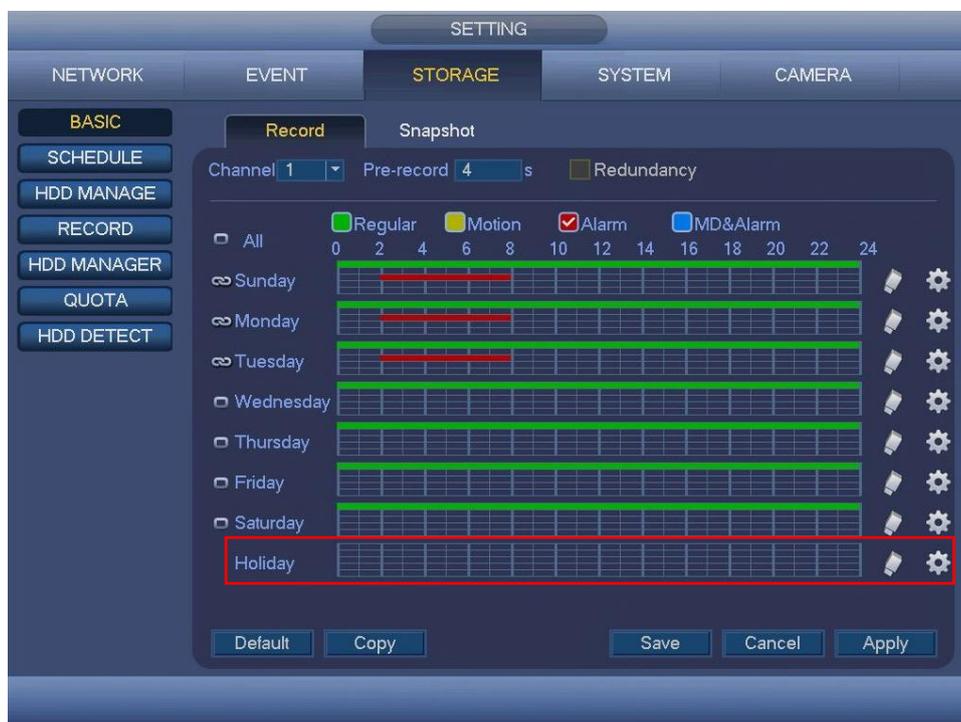


Figure 4-102



Figure 4-103

4.10.4.2.1.1 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 4-104. 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 4-104

4.10.4.2.1.2 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 select the checkbox to enable redundancy function.

- In the main menu, from SETTING -> STORAGE -> HDD MANAGE, 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 cannot record video.

Note

- If current channel is not recording, current setup gets activated when the channel begin recording the next time.
- If current channel is recording now, 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.

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 MANAGE). 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.

4.10.4.2.2 Snapshot

4.10.4.2.2.1 Schedule Snapshot

- On the preview interface, right click mouse and then select Manual -> Record, or in the main menu, from SETTING -> STORAGE -> RECORD, select the checkbox to enable snapshot function of corresponding channels. See Figure 4-105.
- In main menu, from SETTING -> CAMERA -> ENCODE -> Snapshot interface, here you can input snapshot mode as timing, image size, image quality and snapshot frequency. See Figure 4-106.
- In main menu, from SETTING -> STORAGE -> SCHEDULE -> Snapshot interface, please enable snapshot function. See Figure 4-107.

Please refer to the following figure for detailed information.



Figure 4-105

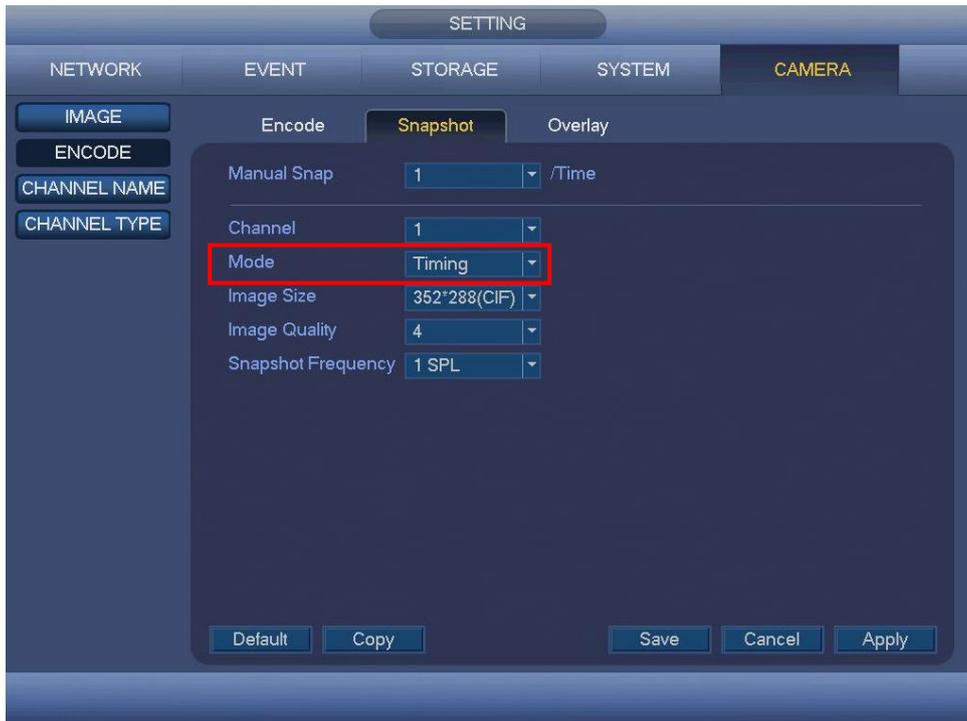


Figure 4-106

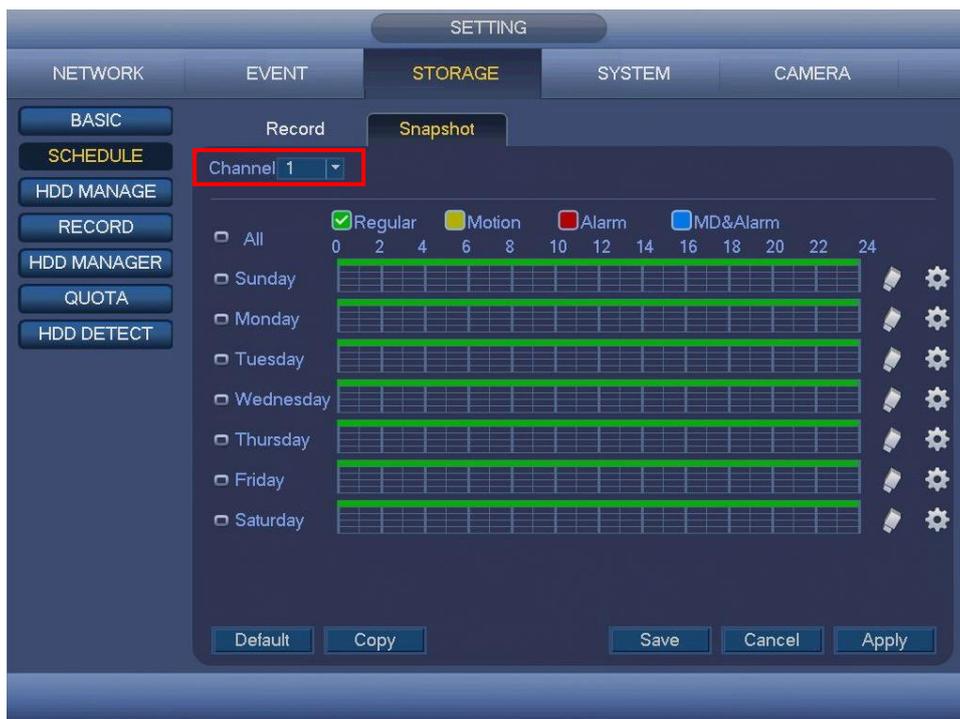


Figure 4-107

4.10.4.2.2.2 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, image size, image quality and snapshot frequency. See Figure 4-108.
- In main menu, from SETTING -> EVENT -> DETECT, please enable snapshot function for specified channels (Figure 4-109). Or In main menu, from SETTING -> EVENT -> ALARM (Figure 4-110) please enable snapshot function for specified channels.

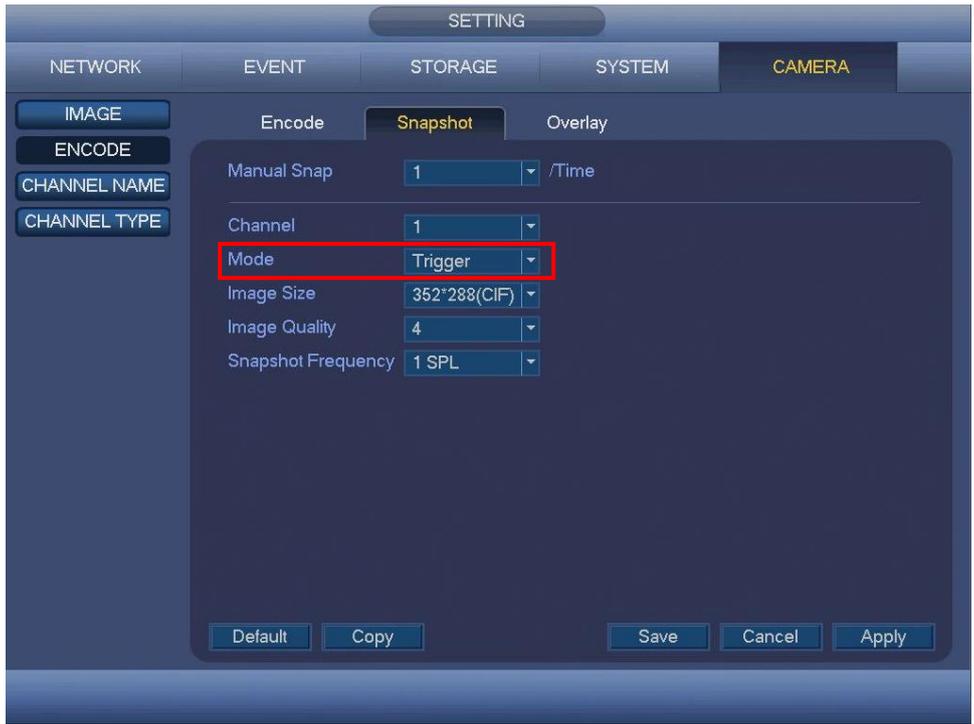


Figure 4-108

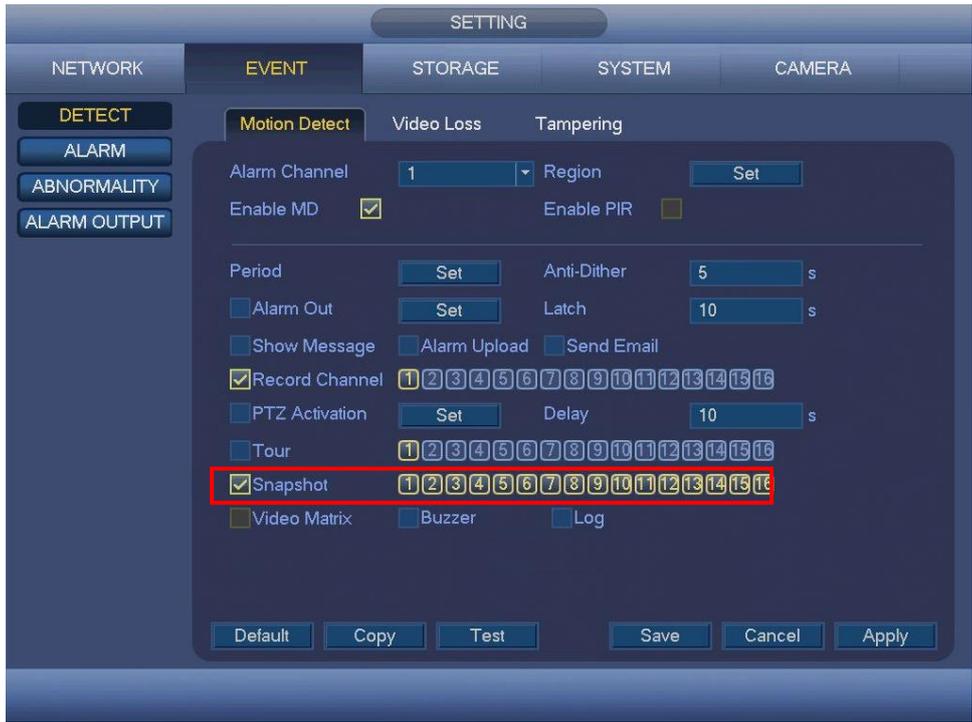


Figure 4-109

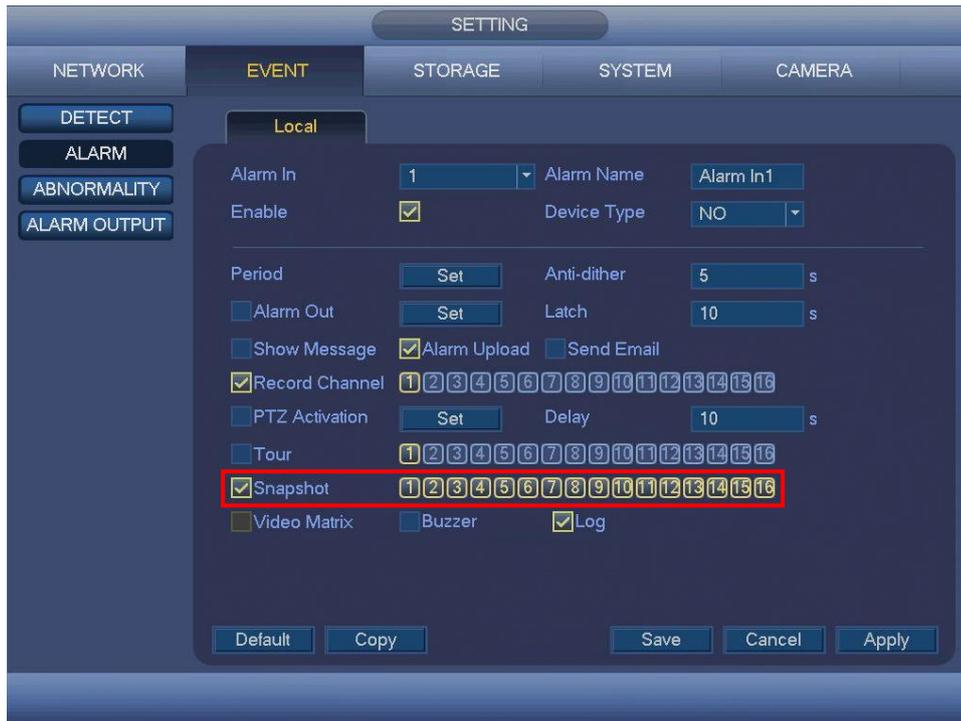


Figure 4-110

4.10.4.2.2.3 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 an alarm occurs, and otherwise system just operates the schedule snapshot.

4.10.4.2.2.4 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 4-111. Please boot up corresponding FTP server. Please enable schedule snapshot (chapter 4.10.4.2.2.1) or activation snapshot (chapter 4.10.4.2.2.2) first, now system can upload the image file to the FTP server.

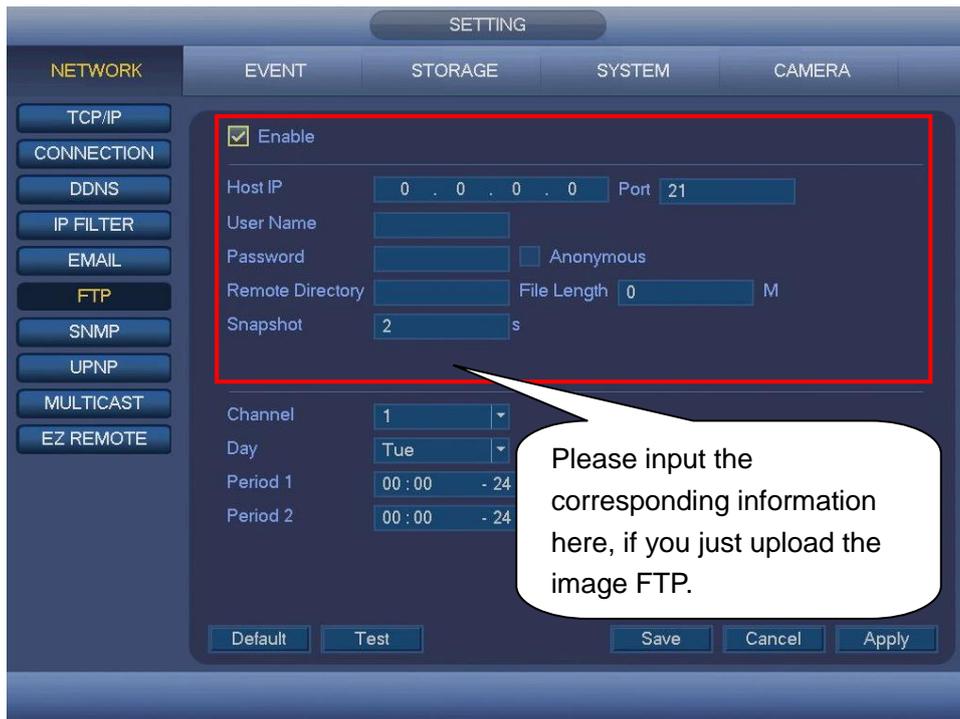


Figure 4-111

4.10.4.3 HDD Manage

Here is for you to view and implement hard disk management. See Figure 4-112. 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 4-112

4.10.4.4 Record

4.10.4.4.1 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 REC button in the front panel.

System supports main stream and sub stream. There are three statuses: Auto/Manual/Stop. See Figure 4-113. Please select the icon “○” to select corresponding channel.

- Auto: Channel records as you have set in recording setup (MAIN MENU -> SETTING -> STORAGE -> SCHEDULE)
- Manual: The highest priority. After manual setup, all selected channels will begin ordinary recording.
- Stop: Current channel stops recording.
- All: Select All button after the corresponding status to enable/disable all-channel auto/manual record or enable/disable all channels to stop record.



Figure 4-113

4.10.4.4.2 Snapshot Operation

Select the corresponding box to enable/disable schedule snapshot function. See Figure 4-114.

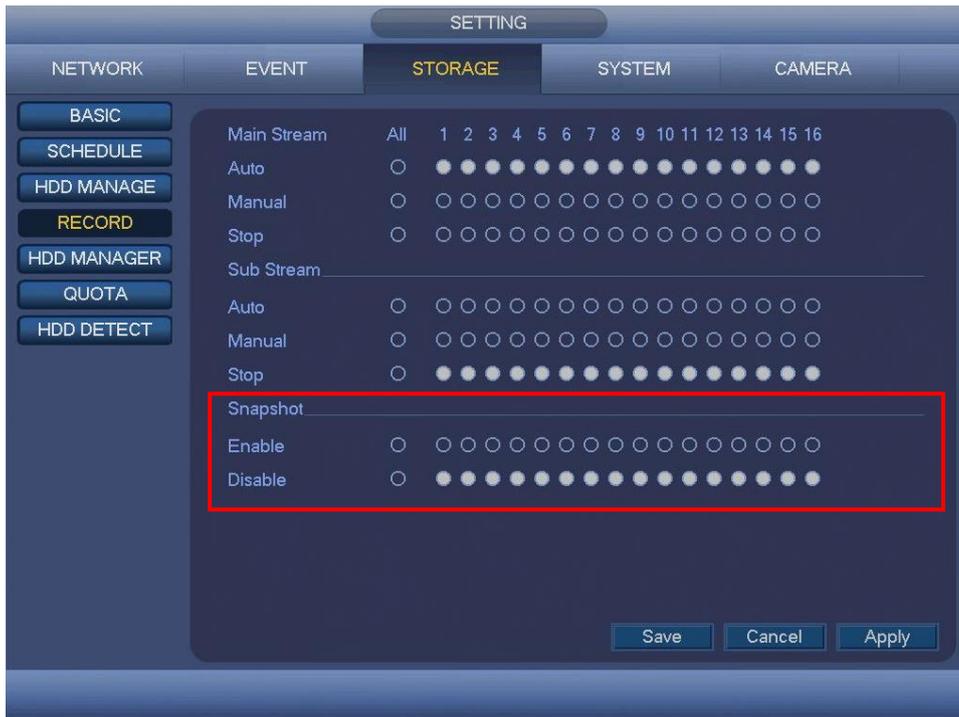


Figure 4-114

Tips

You can select All button after the corresponding status to enable/disable all-channel snapshot function.

4.10.4.5 HDD Manager (CJ-HDR416A only)

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

CAUTION

HDD group and quota mode cannot be valid at the same time. System needs to restart once you change the mode here.

Step 1 From MAIN MENU -> SETTING -> STORAGE -> HDD MANAGER -> HDD Setting.

Enter HDD Setting interface. See Figure 4-115.

Step 2 Set parameters.

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



Figure 4-115

- Step 3 Select the correspond group from the dropdown list.
- Step 4 Click Main Stream/Sub Stream/Snapshot tab to set corresponding HDD group information. See Figure 4-116 through Figure 4-118.



Figure 4-116



Figure 4-117



Figure 4-118

Step 5 Click Apply or Save to complete setup.

4.10.4.6 Quota (CJ-HDR416A only)

It is to set channel storage capacity.

CAUTION

- HDD group and quota mode cannot be valid at the same time.
- System needs to restart once you change the mode here.

Step 1 From MAIN MENU -> SETTING -> STORAGE -> QUOTA.
Enter Quota interface. See Figure 4-119.



Figure 4-119

- Step 2 Select a channel from the dropdown list and then select corresponding HDD quota.
- Step 3 Click Apply or Save to complete setup.
- Step 4 Click Statistics to view HDD capacity you set for each channel. See Figure 4-120.

	Channel	Quota
1	Other Channels	1.81 TB

Figure 4-120

4.10.4.7 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.
- Full Detect adopts Windows mode to scan. It may take a long time and may affect the HDD that is recording.

4.10.4.7.1 Manual Detect

The Manual Detect interface is shown as below. See Figure 4-121.

Please select detect type and HDD. Click Start Detect to begin. You can view the corresponding detect information. See Figure 4-122.

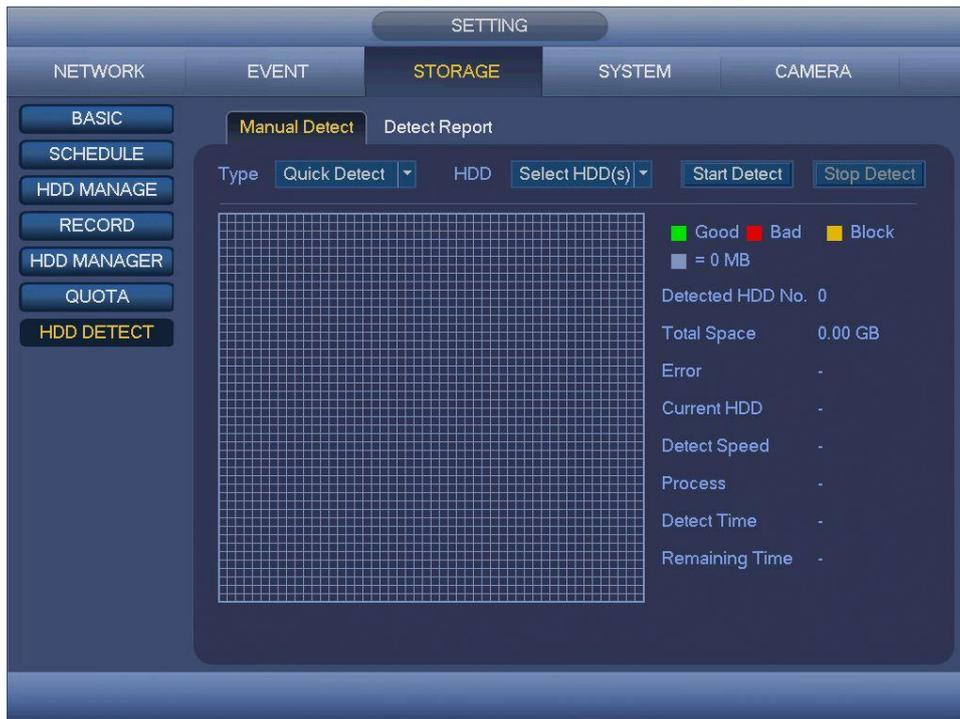


Figure 4-121

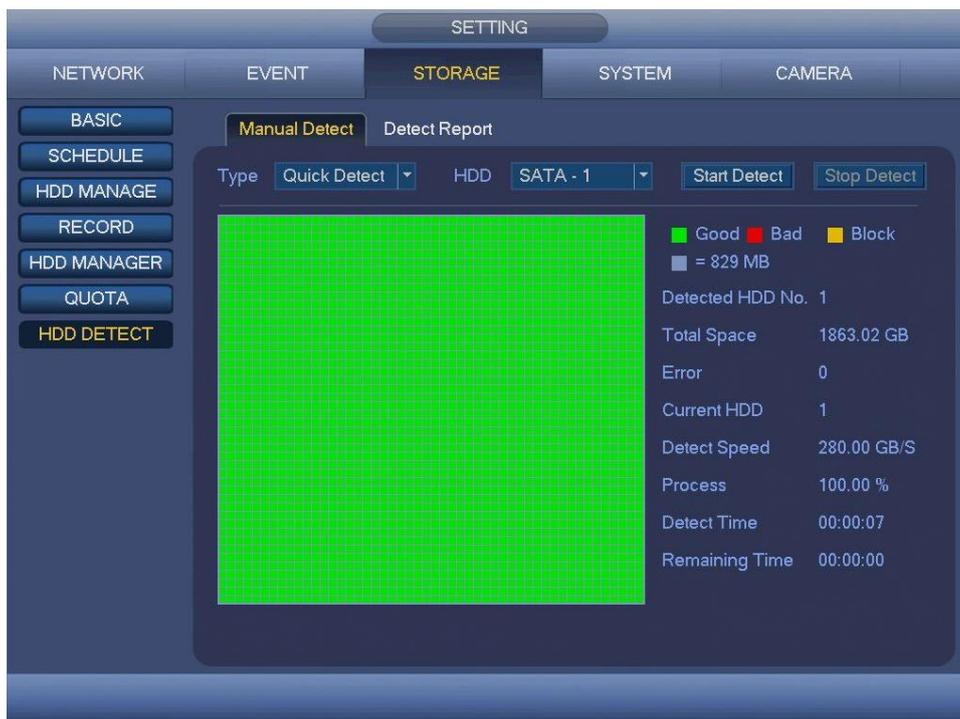


Figure 4-122

4.10.4.7.2 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 4-123.



Figure 4-123

Click the item you can see the detailed information such as detect result. See Figure 4-124.

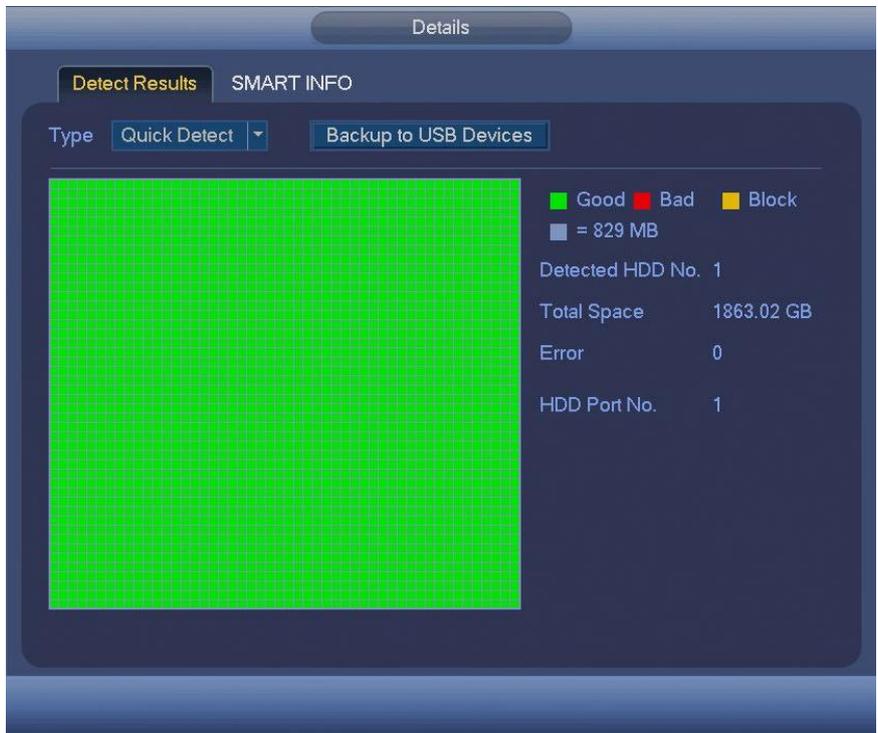


Figure 4-124

4.10.5 System

4.10.5.1 General

4.10.5.1.1 General

General setting includes the following items. See Figure 4-125.

- Device Name: Please input a corresponding device name here.
- Device No.: Here you can set device number.
- Language: System supports various languages: English, Vietnamese, Thai.
- Video Standard: There are two formats: NTSC and PAL.
- Realtime Play: 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 login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- Monitor Channels when logout: Here you can set channels you want to view when your account has logged out. Click the button and then cancel the channel name box, you need to login to view the corresponding video. The channel window displays  in preview interface.
- Navigation Bar: Check the box here, system displays the navigation bar on the interface.
- Startup Wizard: Once you select the checkbox 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 Sensitivity: You can set double click speed via dragging the slide bard. You can Click Default button to restore default setup.

Click Apply or Save to complete setup.



Figure 4-125

4.10.5.1.2 Date and Time

The interface is shown as in Figure 4-126.

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

Click Apply or Save to complete setup.



Figure 4-126

4.10.5.1.3 Holiday

Holiday setup interface is shown as in Figure 4-127. Click Add New Holidays button, you can input new holiday information. See Figure 4-128. Here you can set holiday name, repeat mode and start/end time.

Note

- When you enable holiday settings and schedule setup at the same time, holiday setting has the priority. If the selected day is a holiday, then system records as you set in holiday setting. If it is not a holiday, system records as you set in Schedule interface.
- Please note there is no year setup on the holiday setup. For example, if you set 30th May, 2018 as a holiday, then the date of 30th May in each year will be set as a holiday.



Figure 4-127

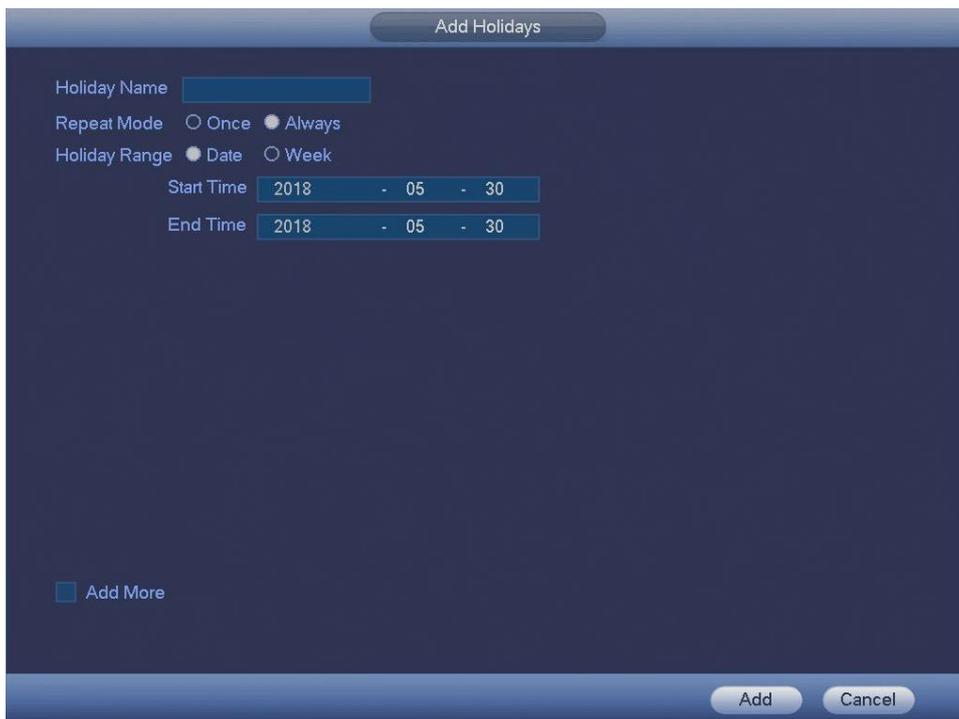


Figure 4-128

4.10.5.2 Display

4.10.5.2.1 Display

Display setup interface is shown as below. See Figure 4-129.

- Time Display: You can select to display time or not when system is playback.
- Channel Display: You can select to display channel name or not when system is playback.
- Original rate: Check the box here, the video can be displayed at its actual size.
- Transparency: Here is for you to adjust transparency. The value ranges from 0% to 100%.
- 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.
- Video Matrix: Check the box to enable video matrix function.

Please select the checkbox to select the corresponding function.

Click Apply or Save to complete setup.



Figure 4-129

4.10.5.2.2 TV Adjust (CJ-HDR416A only)

Here is for you to adjust TV output setup. See Figure 4-130.

Please drag slide bar to adjust each item.

Click Apply or Save to complete setup.



Figure 4-130

4.10.5.2.3 Tour Setup

Here you can activate tour function. Click Tour Setup tab, you can see an interface shown as in Figure 4-131.

- Enable: Select the checkbox to enable this function.
- Interval: System supports 1/8-window tour. Input proper interval value here. The value ranges from 5-120 seconds. It is for schedule tour/alarm/motion detect tour.
- Monitor Tour Type: System supports 1/8-window tour.
- Window Split: You can select window split mode from the dropdown list.
- Channel Group: It 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 max supports 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.  means the tour function is enabled and  means tour function is disabled.
- On the navigation bar, click  or  to enable/disable tour function.



Figure 4-131

4.10.5.2.4 Multi Preview

Click Multi Preview tab, you can go to the following interface. See Figure 4-132. Here you can enable and set multi preview encoding function so that you can view several video sources at one channel.

- Enable: This function is disabled by default. Select the checkbox to enable this function so that you can control the multi preview encoding function at the Web.
- Compression: System default setup is H.264.
- Resolution: The resolution value may vary due to different device capabilities. Please select from the dropdown list.
- Frame Rate: The frame rate value may vary due to different device capabilities. Please select from the dropdown list.
- Bit Rate: The bit rate value may vary due to different device capabilities and frame rate setups. Please select from the dropdown list.
- Save: Click the Save button to save current setup. If this function is disabled, you cannot operate multi preview encoding function at the Web, the video is black or null even you operate when the function is disabled. After you enabled this function, login the Web and you can select multi preview encoding mode at the right corner of the

interface . Select a mode; you can view the local preview video.



Figure 4-132

4.10.5.3 Video Matrix

Here you can set matrix output channel and its interval. You can set HDMI2 port tour and its interval See Figure 4-133.

- Enable: Check the box here to enable this function.
- Interval: Input proper interval value here.
- Resolution: The resolution of the tour window. Please note this function is for HDMI only.
- Split: You can select window split mode from the dropdown list. For HDMI, it supports 1/4/9/16-split mode.
- Add: Under specified window split mode, click it to add channel group. See Figure 4-134.
- Modify: Double click a channel or select a channel and then click Modify button, you can change current channel setup. See Figure 4-135.
- 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.

Click Apply or Save to complete setup.



Figure 4-133

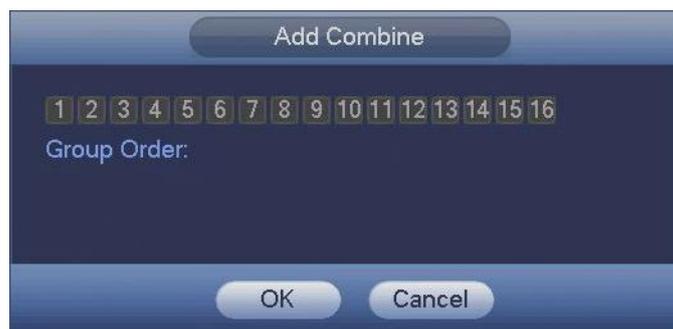


Figure 4-134



Figure 4-135

4.10.5.4 RS232 (CJ-HDR416A only)

RS232 interface is shown as below. There are five items. See Figure 4-136.

- 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.
- Check: There are five choices: None/Odd/Even/Mark/Space.

System default setup is:

- Function: Console
- Baud Rate: 115200
- Data Bit: 8
- Stop Bit: 1
- Check: None

Click Apply or Save to complete setup.



Figure 4-136

4.10.5.5 Pan/Tilt/Zoom

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 4-137.

- Control Mode: You can select control mode from the dropdown list. There are two options: Serial/HDCVI. For HDCVI series product, please select HDCVI. The control signal is sent to the PTZ via the coaxial cable. For the serial mode, the control signal is sent to the PTZ via the RS485 port.
- Protocol: If the control mode is HDCVI, please select HDCVI protocol. The default setup is HD-CVI.

- Address: Input corresponding PTZ address.
- Baud Rate: Select baud rate.
- Data Bit: Select data bit.
- Stop Bit: Select stop bit.
- Check: There are five choices: None/Odd/Even/Mark/Space.

Click Apply or Save to complete setup.



Figure 4-137

4.10.5.6 Account

It is to manage users and user group, set admin security questions.

Note

- For the user name, the string max length is 31-byte, and for the user group, the string max length is 15-byte. The user name can only contain English letters, numbers and “_”, “@”, “.”.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. The user authorities shall be smaller than group authorities (The **admin** user authorities are set by default).
- For group or user management, there are two levels: admin and user. The user name shall be unique and one user shall only belong to one group.

4.10.5.6.1 Add User

Step 1 From MAIN MENU -> SETTING -> SYSTEM -> ACCOUNT -> User.

Enter User interface. See Figure 4-138.



Figure 4-138

- Step 2 Click Add User button in Figure 4-138.
The interface is shown as in Figure 4-139.



Figure 4-139

- Step 3 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.

Note

For convenient user management, usually we recommend the general user right is lower than the admin account.

- Step 4 Click the Set button after Period, you can set valid period to use current account. See Figure 4-140.



Figure 4-140

- Step 5 Click Set button, you can set six periods in one day. See Figure 4-141.
- Step 6 Check the box after the period, you can enable current setup.

Note

Check the box before the week; it is to save period settings to selected week day.



Figure 4-141

Step 7 Click OK button.

4.10.5.6.2 Modify User

From MAIN MENU -> SETTING -> SYSTEM -> ACCOUNT -> User, click , you can go to the following interface to change user information. See Figure 4-142.



Figure 4-142

For **admin** user, you can enable/disable unlock pattern, change password prompt question, set security questions. See Figure 4-143.

The screenshot shows the 'Modify User' window for the 'admin' user. The 'Unlock Pattern' checkbox is checked, and the 'Security Ques...' button is visible. The 'Authority' section is set to 'System', and all checkboxes for system components are checked.

Figure 4-143

- Check the box to enable unlock pattern and then click , click Save to change unlock pattern.
- Set security question.

Step 1 Click Security Questions, enter the following interface. See Figure 4-144.

Security Questions

Please set a security question so that you can find the password of (admin) again.

Question 1

Answer

Question 2

Answer

Question 3

Answer

Figure 4-144

Step 2 Input answers and then click Set button.

After successfully set security questions, you can answer the security questions to reset admin password.

Note

Select security questions from the dropdown list and then input the proper answers, click Delete button to reset security questions and answers again.

4.10.5.6.3 Change Password

In Figure 4-142, check the Modify Password box, you can change password. Please input old password, and then input new password twice to confirm.

- Password/confirm password: The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “”, “”, “”, “”, “”, “&”). The password shall contain at least two categories. Usually we recommend the strong password.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. We also recommend you change your password periodically especially in the high security system.

4.10.5.6.4 Add Group

Step 1 From MAIN MENU -> SETTING -> SYSTEM -> ACCOUNT -> Group.
Enter Group interface. See Figure 4-145.



Figure 4-145

- Step 2 Click Add Group button in Figure 4-145.
Enter Add group the interface. See Figure 4-146.
- Step 3 Input group name and then input some memo information if necessary. Check the box to select authorities.



Figure 4-146

4.10.5.7 Auto Maintain

It is to set auto-reboot time during the spare period if the device is running for a long time. It is to enhance device operation speed. Or you can set fan running mode (CJ-HDR216A only). It is to reduce the noise and enhance fan lifecycle. See Figure 4-147.

After all the setups please click Save button.

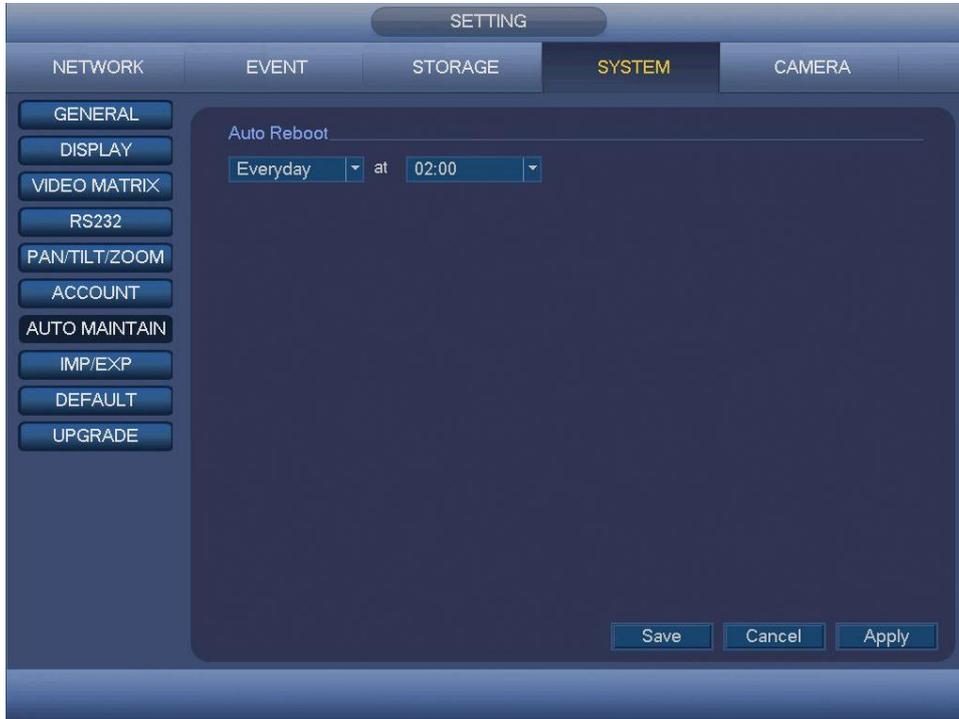


Figure 4-147

4.10.5.8 Import/Export

The configuration file backup is shown as below. See Figure 4-148.

This function allows you to import/export system configuration. You can use this function when there are several devices need 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 import, system needs to reboot to activate 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.

Note

- System cannot open Import/Export interface again if there is backup operation in the process.
- System refreshes device when you go to the Import/Export every time and set current directory as the root directory of the peripheral device.

- If you go to the Import/Export interface first and then insert the peripheral device, please click Refresh button to view the newly added device.



Figure 4-148

4.10.5.9 Default

You can select the checkbox to restore default factory setup. See Figure 4-149.

- All
- Camera
- Network
- Event
- Storage
- System

Please select the checkbox to select the corresponding function. Click Apply or Save to set. Click Factory Default button, you can restore factory default setup.

CAUTION

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



Figure 4-149

4.10.5.10 Upgrade

Please insert the USB device (make sure it contains the update file) to the device. Select UPGRADE button to browse the update file. Click Start, system begins the upgrade. See Figure 4-150.



Figure 4-150

5 WEB OPERATION

Slightly difference may be found in the interface due to different series.

5.1 Network Connection

Before Web client operation, please check the following items:

- Step 1 Network connection is right.
- Step 2 DVR and PC network setup is right. Please refer to chapter 4.10.2 Network (MAIN MENU -> SETTING -> NETWORK)
- Step 3 Use order ping *****.***.***.***** (* is DVR IP address) to check connection is OK or not. Usually the return TTL value should be less than 255.

Note

- Device default IP address is 192.168.0.250.
- Current series product supports various browsers such as Safari, Firefox browser, Google browser. Device supports multiple-channel monitor, PTZ control, DVR parameter setup on the Apple PC.

5.2 Device Initialization

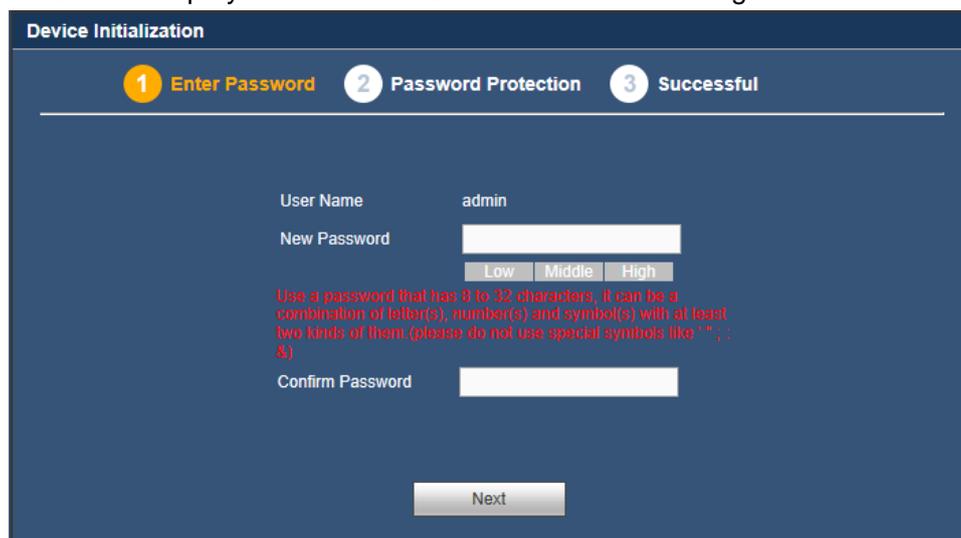
If it is your first time to use the device, please set a login password of **admin** (system default user).

Note

For your device safety, please keep your login password of **admin** well after the initialization steps, and change the password regularly.

- Step 1 Open the browser and then input the device IP address in the address column.
- Step 2 Click Enter button.

Device displays device initialization interface. See Figure 5-1.



The screenshot shows the 'Device Initialization' screen with a progress bar at the top indicating three steps: 1. Enter Password (active), 2. Password Protection, and 3. Successful. The 'Enter Password' section includes a 'User Name' field with 'admin' entered, a 'New Password' field with a strength indicator (Low, Middle, High), and a 'Confirm Password' field. A red warning message is displayed below the password fields: 'Use a password that has 8 to 32 characters, it can be a combination of letter(s), number(s) and symbol(s) with at least two kinds of them (please do not use special symbols like " ; : &)'. A 'Next' button is located at the bottom of the form.

Figure 5-1

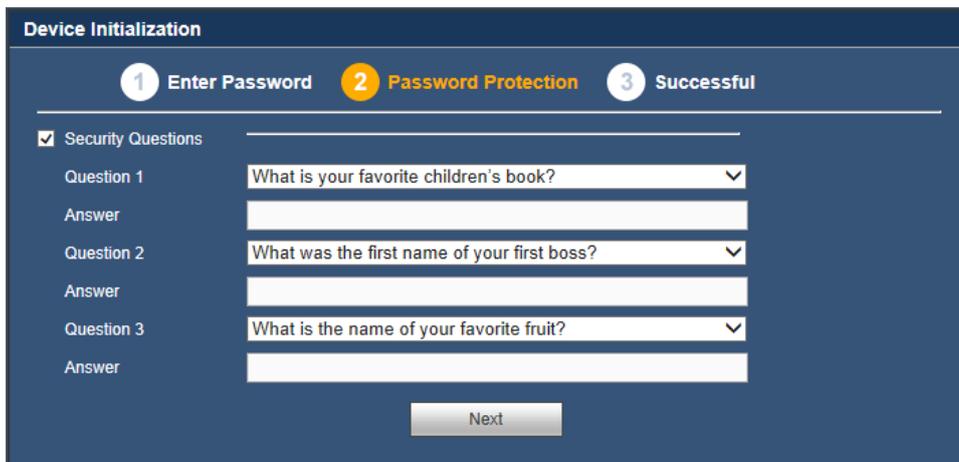
Step 3 Set login password of **admin**.

- User Name: The default user name is **admin**.
- New Password/Confirm Password: The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “”, “'”, “;”, “:”, “&”). The password shall contain at least two categories. Usually we recommend the strong password.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. We also recommend you change your password periodically especially in the high security system.

Step 4 Click Next, device goes to the following interface. See Figure 5-2.



The screenshot shows a 'Device Initialization' screen with three progress indicators at the top: '1 Enter Password', '2 Password Protection' (highlighted in orange), and '3 Successful'. Below the indicators, there is a checkbox labeled 'Security Questions' which is checked. Underneath, there are three question-answer pairs. Each question is displayed in a dropdown menu, and the answer is entered in a text field. The questions are: 'Question 1: What is your favorite children's book?', 'Question 2: What was the first name of your first boss?', and 'Question 3: What is the name of your favorite fruit?'. At the bottom center, there is a 'Next' button.

Figure 5-2

Step 5 Set security questions.

Note

- After setting the security questions here, you can answer the security questions to reset **admin** password. Refer to chapter 5.4 Reset Password for detailed information.
- Cancel the security questions box and then click Next button to skip this step.

Security Questions: Set security questions and corresponding answers. Properly answer the questions to reset **admin** password. In case you have not input security question here or you need to update the security question information, please go to the local main interface -> SETTING -> SYSTEM -> ACCOUNT -> Security Questions to set.

Step 6 Click Ok to complete the device initialization setup. See Figure 5-3.

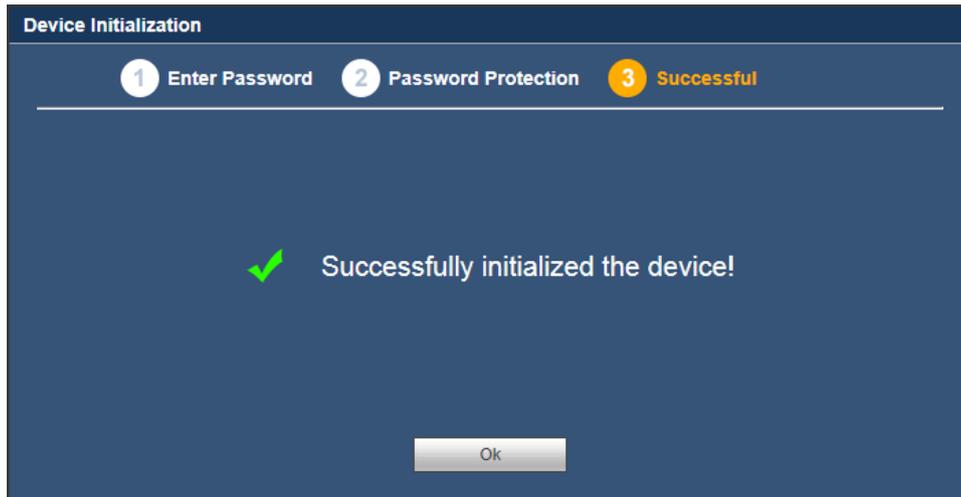


Figure 5-3

5.3 Login

Step 1 Open IE and input DVR address in the address column.

System pops up warning information to ask you whether install control or not. See Figure 5-4.

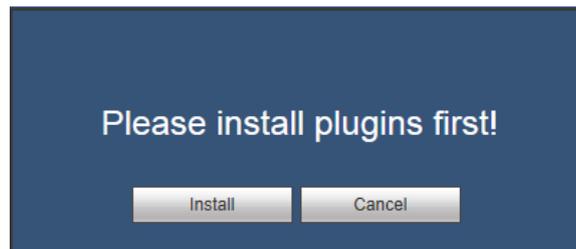


Figure 5-4

Step 2 Please click Install button, system can auto run the installation. Or follow the prompts to save the installation package and install. After installation, the interface is shown as below. See Figure 5-5.



Figure 5-5

Step 3 Please input user name and password.

Note

- Device factory default user name is **admin**. The password is that you set during initialization process. For your device safety, please change the admin password regularly and keep it well.
- Check the plain text to view the input password.
- There are two login types: LAN/WAN. For the difference of these two modes, please refer to chapter 5.9 WAN Login.

Step 4 Click Login.

Enter the preview interface.

Note

Delete old plug-in when you want to upgrade new version. Go to C:\Program Files (x86)\webrec\WEB30\WebView_L" and run uninstallation tool uninst.exe, device automatically deletes the old plug-in.

5.4 Reset Password

If you forgot **admin** password, you can reset the password by answering the security questions at the local menu interface.

5.5 LAN Mode

For the LAN mode, after you logged in, you can see the main window. See Figure 5-6.

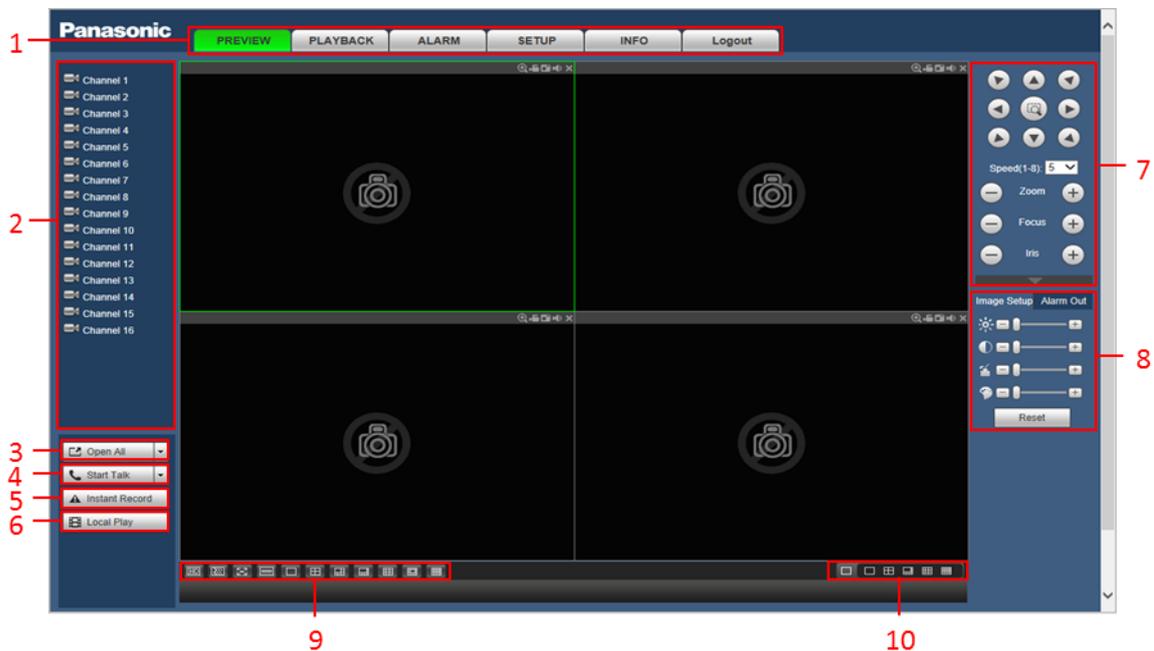


Figure 5-6

This main window can be divided into the following sections.

- Section 1: There are six function buttons: PREVIEW (chapter 5.6), PLAYBACK (chapter 5.12), ALARM (chapter 5.13), SETUP (chapter 5.10), INFO (chapter 5.11) and Logout (chapter 5.14).

- Section 2: These are channel numbers.
- Section 3: Open All button. Open All button is to enable/disable all-channel real-time monitor. Click it the button becomes green. See Figure 5-7.



Figure 5-7

Please refer to Figure 5-8 for main stream and sub stream switch information.

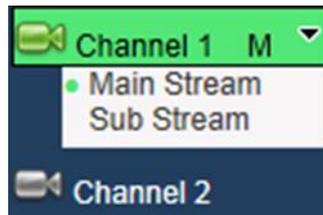


Figure 5-8

- Section 4: Start Talk button. You can click this button to enable audio talk. Click **【▼】** to select bidirectional talk mode. There are four options: DEFAULT, G711a, G711u and PCM. After you enable the bidirectional talk, the Start talk button becomes End Talk button and it becomes green. See Figure 5-9.

Please note if audio input port from the device to the client-end is using the first channel audio input port. During the bidirectional talk process, system will not encode the audio data from the 1-channel.

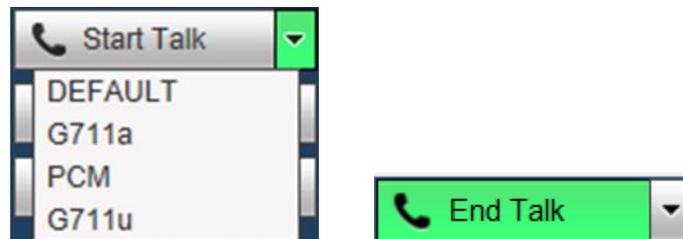


Figure 5-9

- Section 5: Instant record button. Click it, the button becomes green and system begins manual record. See Figure 5-10. Click it again, system restores previous record mode.



Figure 5-10

- Section 6: Local Play button. The Web can playback the saved (Extension name is .dav) files in the PC-end. Click Local Play button, system pops up the following interface for you to select local play file. See Figure 5-11.

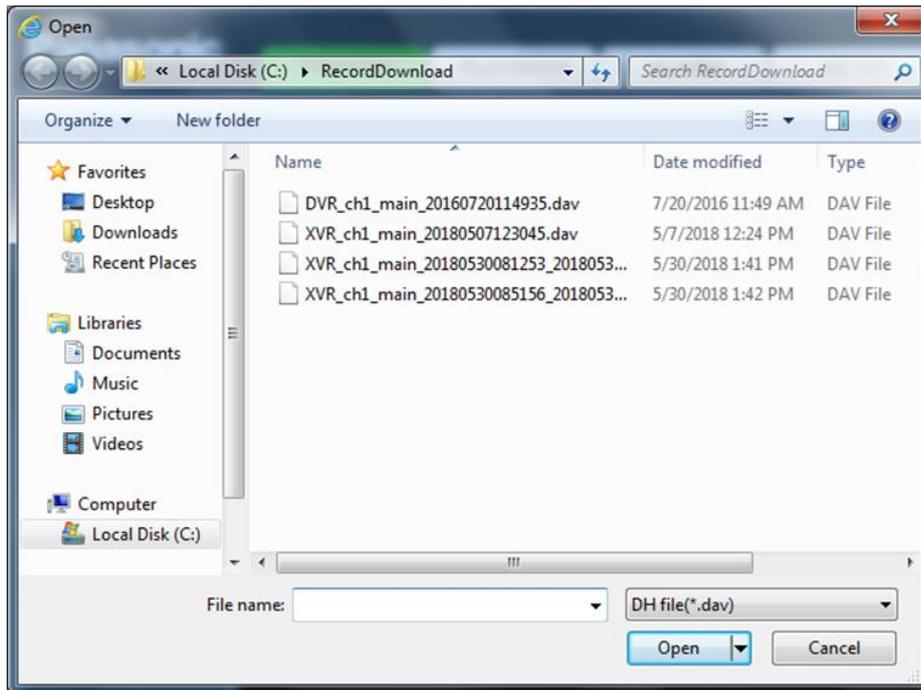


Figure 5-11

- Section 7: PTZ operation panel. Please refer to chapter 5.7 for detailed information.
- Section 8: Image setup. Please refer to chapter 5.8 for detailed information.
- Section 9: From the left to the right, you can see video quality/fluency/full screen/video latency/1-window/4-window/6-window/8-window/9-window/13-window/16-window. You can set video fluency and real-time feature priority.
- Section 10: Multi Preview. This function allows you to view several-channel in one window. It supports 1/4-channel mode. Please go to chapter 5.10.5.2.4 Multi Preview to enable multi preview function first.

5.6 Preview

In section 2, left click the channel name you want to view, you can see the corresponding video in current window.

On the top left corner, you can view device IP, channel number, network monitor bit stream and stream type. See Figure 5-12.

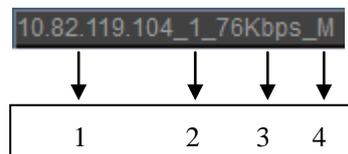


Figure 5-12

On the top right corner, there are five function buttons. See Figure 5-13.

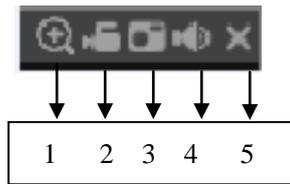


Figure 5-13

- 1: Zoom: Click this button and then left drag the mouse in the zone to zoom in. Right click mouse system restores original status.
- 2: Record: When you click local record button, the system begins recording and this button becomes highlighted. You can go to system folder RecordDownload to view the recorded file.
- 3: Snapshot: You can snapshot important video. All images are memorized in system client folder PictureDownload (default).
- 4: Audio: Turn on or off audio (It has no relationship with system audio setup).
- 5: Close: Close video.

5.7 PTZ

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to chapter 5.10.5.5).

There are eight direction keys. In the middle of the eight direction keys, there is a 3D intelligent positioning key.

Click 3D intelligent positioning key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	<ul style="list-style-type: none"> ● Select Scan from the dropdown list. ● Click Set button, you can set scan left and right limit. ● Use direction buttons to move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit.
Preset	<ul style="list-style-type: none"> ● Select Preset from the dropdown list. ● Turn the camera to the corresponding position and Input the preset value. Click Add button to add a preset.
Tour	<ul style="list-style-type: none"> ● Select Tour from the dropdown list. ● Input preset value in the column. Click Add preset button, you have added one preset in the tour. ● Repeat the above procedures you can add more presets in one tour. ● Or you can click delete preset button to remove one preset from the tour.

Parameter	Function
Pattern	<ul style="list-style-type: none"> Select Pattern from the dropdown list. You can input pattern value and then click Start button to begin PTZ movement such as zoom, focus, iris, direction and etc. Then you can click Add button to set one pattern.
AUX	<ul style="list-style-type: none"> Please input the corresponding aux value here. You can select one option and then click AUX on or AUX off button.
Light Wiper	You can turn on or turn off the light/wiper.

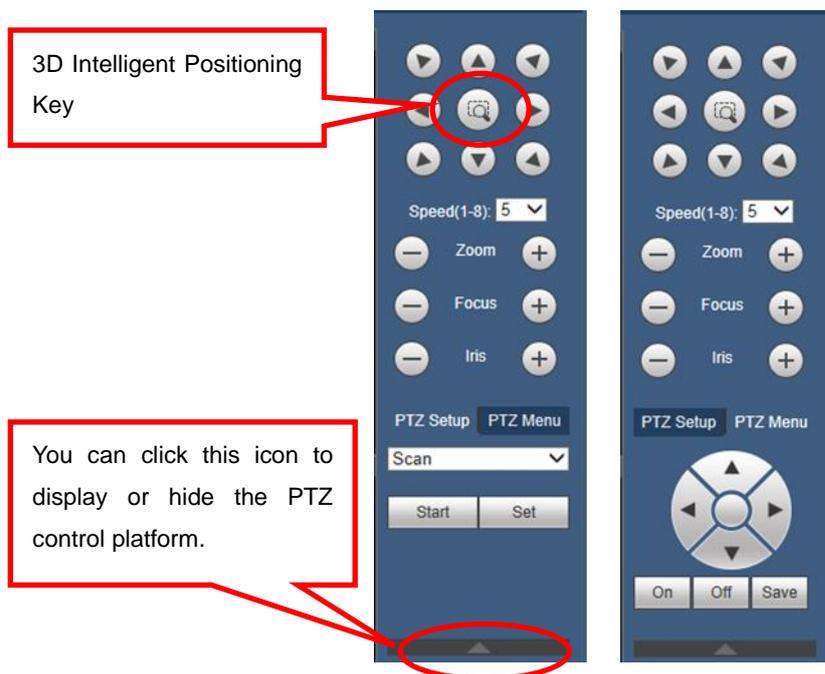


Figure 5-14

5.8 Image Setup/Alarm Output

Select one monitor channel video and then click Image Setup button in section 8, the interface is shown as Figure 5-15.

5.8.1 Image Setup

Here you can adjust its brightness, contrast, saturation, and chroma. (Current channel border becomes green).

Or you can click Reset button to restore system default setup.

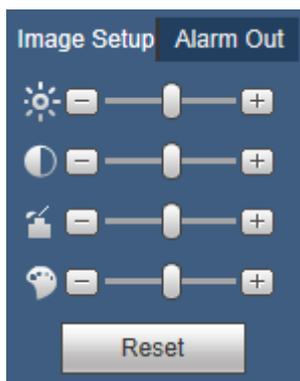


Figure 5-15

5.8.2 Alarm Output

Here you can enable or disable the alarm signal of the corresponding port. See Figure 5-16.



Figure 5-16

5.9 WAN Login

In WAN mode, after you logged in, the interface is shown as below. See Figure 5-17.

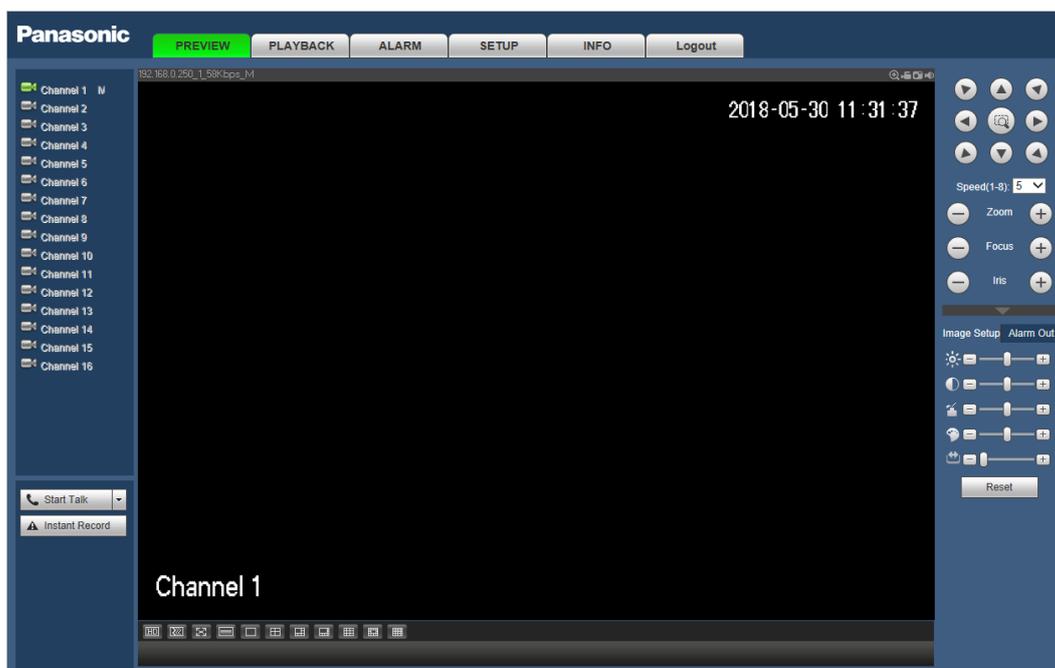


Figure 5-17

Please refer to the following contents for LAN and WAN login difference.

- 1) In the WAN mode, system opens the main stream of the first channel to monitor by default. The Open All/Close All button on the left pane is null.
- 2) You can select different channels and different monitor modes at the bottom of the interface.

IMPORTANT

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

3) Multiple-channel monitor, system adopts extra stream to monitor by default. Double click one channel, system switches to single channel and system uses main stream to monitor. You can view there are two icons at the left top corner of the channel number for you reference. M stands for main stream. S stands for sub stream (extra stream).

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

Note

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

5.10 Setup

Here is to introduce DVR basic setups and system configurations.

5.10.1 Camera

5.10.1.1 Conditions

Here you can view device property information. The setups become valid immediately after you set. See Figure 5-18.

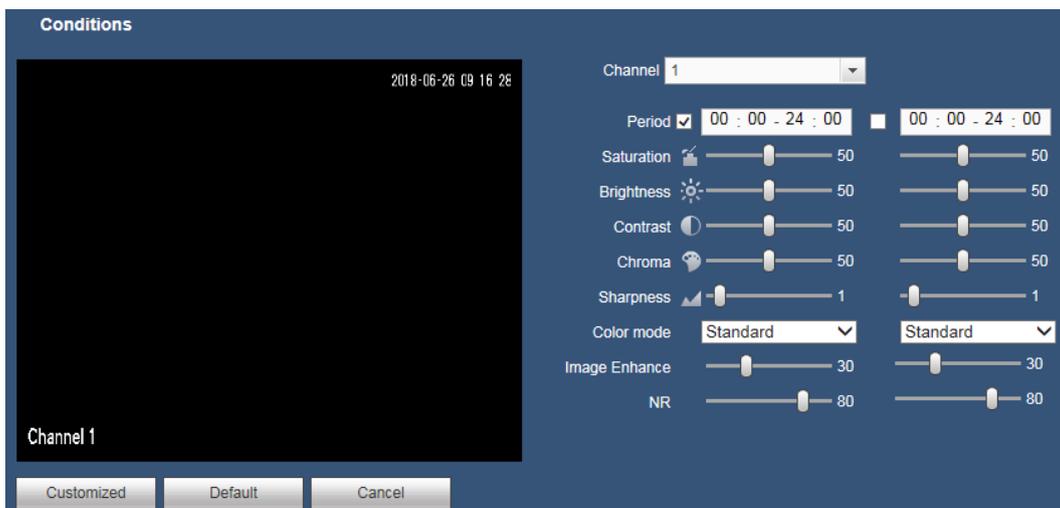


Figure 5-18

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel from the dropdown list.
Period	It divides one day (24 hours) to two periods. You can set different chroma, brightness, and contrast for different periods.
Sharpness	It is to adjust monitor video sharpness level. The default value is 1. The bigger the value is, the video image becomes sharper.
Brightness	It is to adjust monitor window brightness. 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 value ranges from 0 to 100. The recommended value ranges from 40 to 60.
Contrast	It 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.
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number is, 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.
Chroma	It is to adjust monitor video brightness and darkness level. The default value is 50. The bigger the value is, the larger the contrast between the bright and dark section is and vice versa.
Color Mode	It includes several modes such as standard, soft, bright, colorful, bank. You can select corresponding color mode here, you can see chroma, brightness, contrast and etc will adjust accordingly.
Image Enhance	It is to enhance video quality. The larger the value is, the clearer the video is. But the noise may become large too.
NR	It is to process the multiple-frame (at least two frames). It is to use the frame information between the following two frames to reduce noise. And it is also to process the noise of the single image. The video may become soft after process. The larger the value is, the better the effect is.

5.10.1.2 Encode

5.10.1.2.1 Encode

The encode interface is shown as below. See Figure 5-19.

The screenshot shows the 'Encode' configuration interface with the following settings:

- Channel:** 1
- Main Stream:**
 - Code-Stream Type: Regular
 - Compression: H.264
 - Resolution: 1280*720(720P)
 - Frame Rate(FPS): 25
 - Bit Rate Type: CBR
 - Bit Rate: 2048 Kb/S
 - Reference Bit Rate: 448-4096Kb/S
 - I Frame Interval: 1s
 - Audio Enable:
 - Audio Format: G711a
 - Audio Source: NORMAL
- Sub Stream:**
 - Video Enable:
 - Compression: H.264
 - Resolution: 352*288(CIF)
 - Frame Rate(FPS): 15
 - Bit Rate Type: CBR
 - Bit Rate: 320 Kb/S
 - Reference Bit Rate: 32-640Kb/S
 - I Frame Interval: 1s
 - Audio Enable:
 - Audio Format: G711a
 - Audio Source: NORMAL

Buttons at the bottom: Copy, Save, Refresh, Default.

Figure 5-19

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel from the dropdown list.
Video Enable	Select the checkbox here to enable sub stream video. This item is enabled by default.
Code-Stream Type	It includes regular stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events. System supports active control frame function (ACF). It allows you to record in different frame rates. For example, you can use high frame rate to record important events, record scheduled event in lower frame rate and it allows you to set different frame rates for motion detection record and alarm record.
Compression	The main bit stream supports H.264. The sub stream supports H.264. H.264 is the general compression algorithm.
Resolution	It is to set video resolution. The higher the resolution is, the better the video quality is.
Frame Rate	PAL: 1~25f/s; NTSC: 1~30f/s.
Bit Rate	<ul style="list-style-type: none"> ● Main stream: You can set bit rate here to change video

	<p>quality. The large the bit rate is, the better the quality is. Please refer to recommend bit rate for the detailed information.</p> <ul style="list-style-type: none"> ● Sub stream: In CBR, the bit rate here is the max value. In dynamic video, system needs to low frame rate or video quality to guarantee the value. The value is null in VBR mode.
Reference Bit Rate	Recommended bit rate value according to the resolution and frame rate you have set.
I Frame Interval	<p>Here you can set the P frame amount between two I frames. The value ranges from 1s to 2s. Default value is 1s.</p> <p>Recommended value is frame rate *2.</p>
Audio Source	<p>Please select from the dropdown list. There are two options: Normal/HDCVI. In the normal mode, the audio signal comes from the Audio In. In the HDCVI mode, the audio signal comes from the coaxial cable of the camera.</p> <p>Note (CJ-HDR416A only): When channel type is AUTO, audio source of HDCVI is not supported.</p>

5.10.1.2.2 Snapshot

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

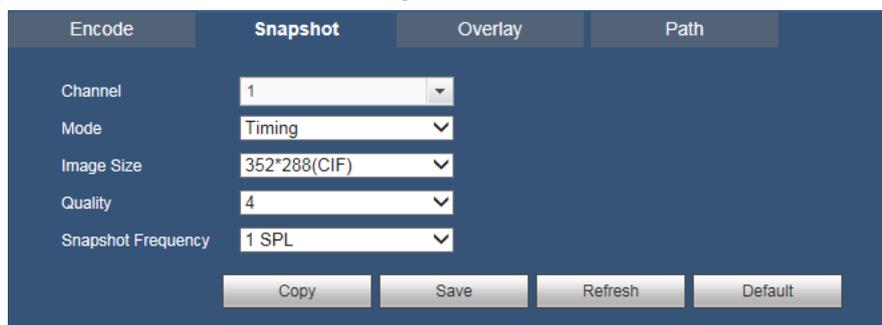


Figure 5-20

Please refer to the following sheet for detailed information.

Parameter	Function
Snapshot type	<p>There are two modes: Timing (schedule) and Trigger.</p> <ul style="list-style-type: none"> ● Timing snapshot is valid during the specified period you set. ● Trigger snapshot only is valid when motion detect alarm, tampering alarm or local activation alarm occurs.
Image Size	Supports 960H, D1, HD1, BCIF, CIF, QCIF.
Quality	It is to set the image quality. There are six levels.
Snapshot Frequency	<p>It is to set snapshot frequency. The value ranges from 1 SPL to 7 SPL.</p> <p>Or you can set customized value. The max setup is 3600s/picture.</p>

Copy	Click it; you can copy current channel setup to other channel(s).
------	---

5.10.1.2.3 Overlay

The video overlay interface is shown as in Figure 5-21.

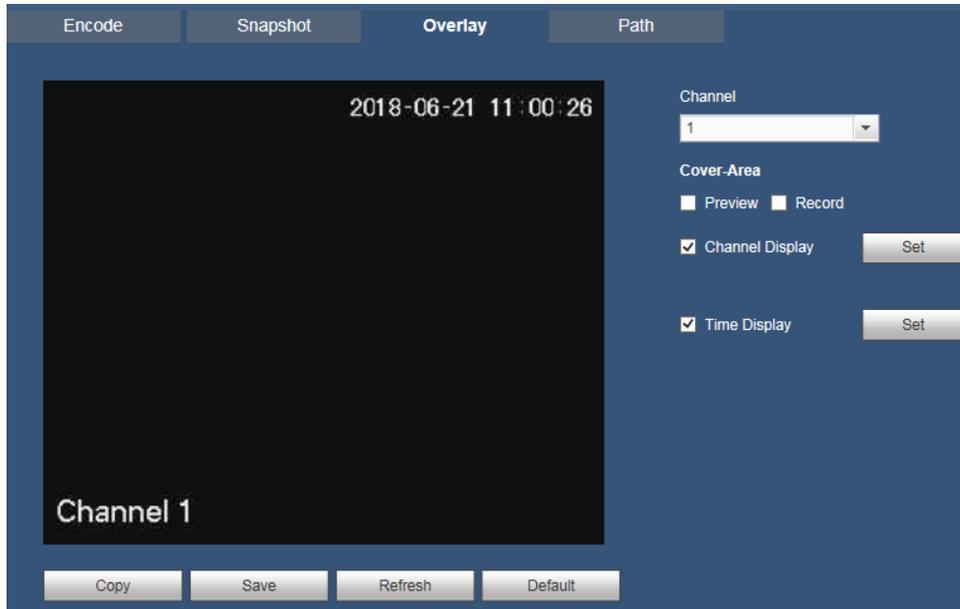


Figure 5-21

Please refer to the following sheet for detailed information.

Parameter	Function
Cover-Area	Check Preview or Record first. Click Set button, you can privacy mask the specified video in the preview or monitor video. System max supports 4 privacy mask zones.
Channel Display	You can enable this function so that system overlays channel information in video window. You can use the mouse to drag the channel title position. You can view channel title on the live video of the Web or the playback video.
Time Display	You can enable this function so that system overlays time information in video window. You can use the mouse to drag the time title position. You can view time title on the live video of the Web or the playback video.

5.10.1.2.4 Path

The storage path interface is shown as in Figure 5-22.

Here you can set snap image saved path ( in the preview interface) and the record

storage path ( in the preview interface).The default setup is C:\PictureDownload and C:\RecordDownload.

Please click the Save button to save current setup.



Encode	Snapshot	Overlay	Path
	Snapshot Path	C:\PictureDownload\	Browse
	Record Path	C:\RecordDownload\	Browse
		Save	Default

Figure 5-22

5.10.1.3 Channel Name

Here you can set channel name. See Figure 5-23.



Camera Name	
Channel 1	Channel 1
Channel 2	Channel 2
Channel 3	Channel 3
Channel 4	Channel 4
Channel 5	Channel 5
Channel 6	Channel 6
Channel 7	Channel 7
Channel 8	Channel 8
Channel 9	Channel 9
Channel 10	Channel 10
Channel 11	Channel 11
Channel 12	Channel 12
Channel 13	Channel 13
Channel 14	Channel 14
Channel 15	Channel 15
Channel 16	Channel 16
	Save Refresh Default

Figure 5-23

5.10.1.4 Channel Type

Here you can set channel type. See Figure 5-24.

Note

If there is no connected channel, the channel type here just displays previous connection record. System supports self-adaptive after camera connection.

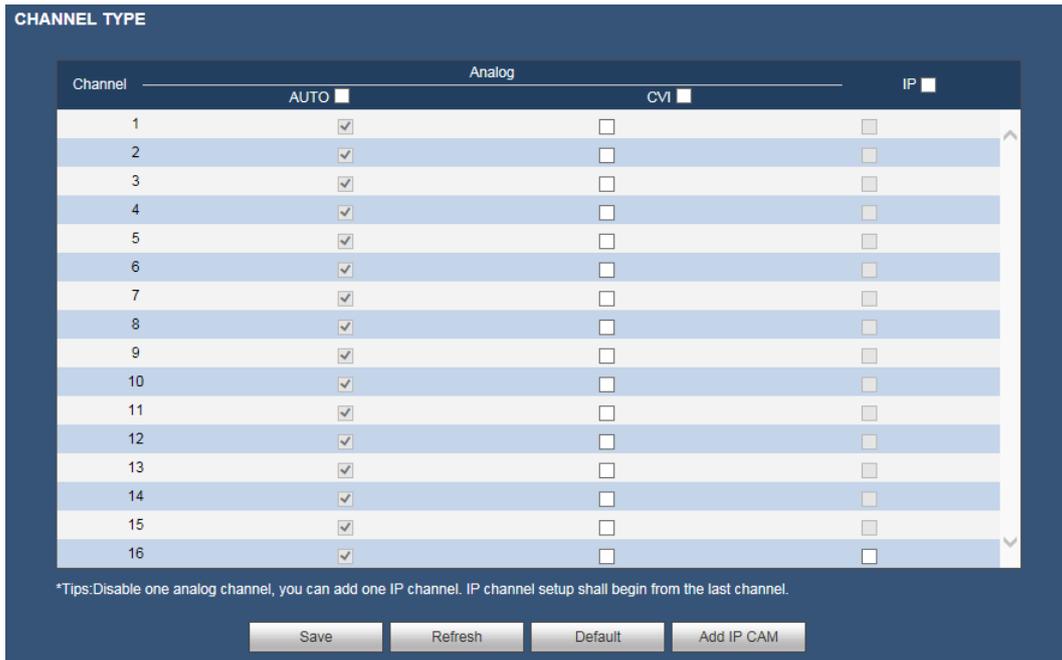


Figure 5-24

5.10.2 Network

5.10.2.1 TCP/IP

The single-Ethernet port interface is shown as in Figure 5-25.

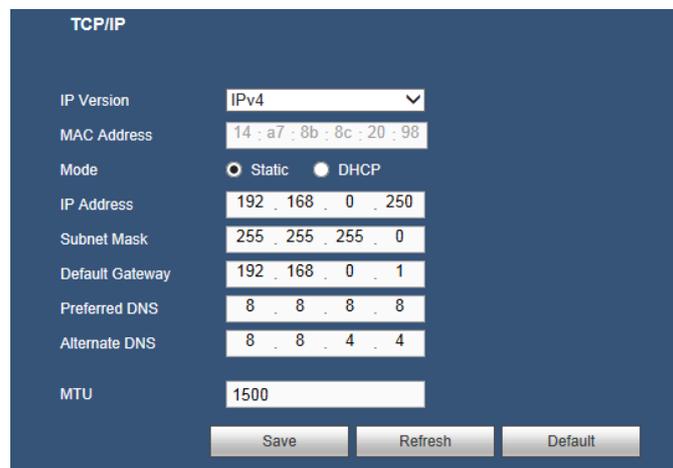


Figure 5-25

Please refer to the following sheet for detailed information.

Parameter	Function
IP Version	It is to select IP version. IPv4 or IPv6. You can access the IP address of these two versions.
MAC Address	It is to display host MAC address.
Mode	There are two modes: static mode and the DHCP mode. <ul style="list-style-type: none"> The IP/subnet mask/gateway are null when you select the DHCP mode to auto search the IP.

	<ul style="list-style-type: none"> ● If you select the static mode, you need to set the IP/subnet mask/gateway manually. ● If you select the DHCP mode, you can view the IP/subnet mask/gateway from the DHCP. ● If you switch from the DHCP mode to the static mode, you need to reset the IP parameters.
IP Address	Please use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.
Preferred DNS	DNS IP address.
Alternate DNS	Alternate DNS IP address.
MTU	<p>It is to set MTU value of the network adapter. The value ranges from 1280-1500 bytes. The default setup is 1500 bytes.</p> <p>The following MTU value is for reference only.</p> <ul style="list-style-type: none"> ● 1500: Ethernet information packet max value and it is also the default value. It is the typical setup when there is no VPN. It is the default setup of some router, switch or the network adapter. ● 1468: Recommend value for DHCP. ● 1450: Recommended value for VPN.
<p>For the IP address of IPv6 version, default gateway, preferred DNS and alternate DNS, the input value shall be 128-digit. It shall not be left in blank.</p>	

5.10.2.2 Connection

The connection interface is shown as in Figure 5-26.

The screenshot shows a configuration page for the 'Connection' tab, specifically for 'HTTPS'. The page has a dark blue background. It contains several input fields with their current values and ranges:

- Max Connection: 128 (0~128)
- TCP Port: 37777 (1025~65535)
- UDP Port: 37778 (1025~65535)
- HTTP Port: 80 (1~65535)
- HTTPS Port: 443 (1~65535) with an 'Enable' checkbox checked.
- RTSP Port: 554 (1~65535)
- RTSP Format: rtsp://<User Name>:<Password>@<IP Address>:<Port>/cam/realmonitor?channel=1&subtype=0
channel: Channel, 1-8; subtype: Code-Stream Type, Main Stream 0, Sub Stream 1.

At the bottom, there are three buttons: 'Save', 'Refresh', and 'Default'.

Figure 5-26

Please refer to the following sheet for detailed information.

Parameter	Function
Max Connection	It is the max Web connection for the same device. The value ranges from 0 to 128. The default setup is 128.
TCP Port	The default value is 37777. You can input the actual port number if

	necessary.
UDP Port	The default value is 37778. You can input the actual port number if necessary.
HTTP Port	The default value is 80. You can input the actual port number if necessary.
HTTPS Port	The default value is 443. You can input the actual port number if necessary.
RTSP Port	<ul style="list-style-type: none"> ● The default value is 554. Please leave it in blank if you are using default value. When you are using QuickTime or VLC, you can use the following format. BlackBerry cellphone support this function too. ● Real-time monitoring URL format: please require real-time RTSP media server, require channel number, and bit stream type in URL. You may need username and password. <p>URL format is: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0 username/password/IP and port.</p> <ul style="list-style-type: none"> ● Username: such as admin. ● Password: such as admin. ● IP: Device IP such as 10.7.8.122. ● Port: Port value. The default setup is 554. You can leave in blank if you are using default value. ● Channel: channel number. It starts with 1. If it is channel 2, then channel=2. ● Subtype: bit stream type. The main stream is 0 (subtype=0), subtype is 1 (subtype=1). <p>For example, if you want to get the sub stream of the channel 2, the URL is: rtsp://admin:admin@10.12.4.84:554/cam/realmonitor?channel=2&subtype=1</p> <p>If there is no authentication, there is no need to specify user name and password, you can use the following format: rtsp://ip:port/cam/realmonitor?channel=1&subtype=0</p>

5.10.2.3 HTTPS

In this interface, you can set to make sure the PC can successfully login via the HTTPS. It is to guarantee communication data security. The reliable and stable technology can secure the user information security and device safety. See Figure 5-27.

Note

- You need to implement server certificate again if you have changed device IP.
- You need to download root certificate if it is your first time to use HTTPS on current PC.



Figure 5-27

5.10.2.3.1 Create Server Certificate

If it is your first time to use this function, please follow the steps listed below.

In Figure 5-27, click **Create Server Certificate** button, input country name, state name and etc. Click Create button. See Figure 5-28.

Note

Please make sure the IP or domain information is the same as your device IP or domain name.

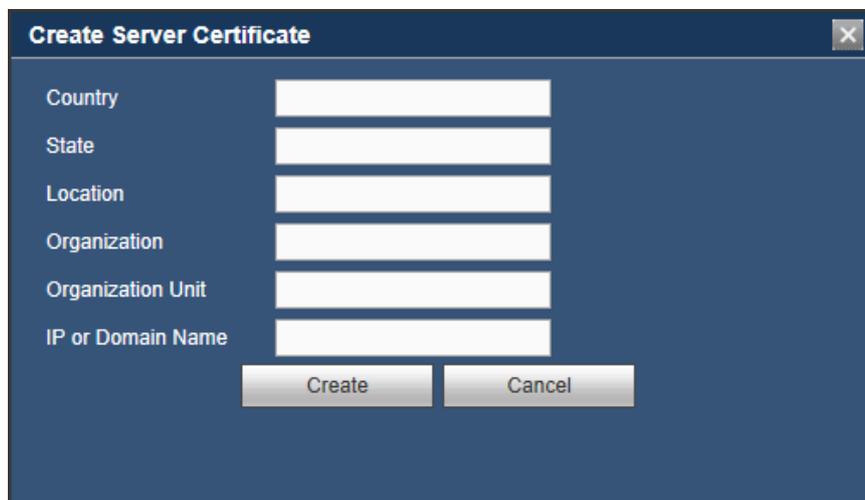


Figure 5-28

You can see the corresponding prompt. See Figure 5-29. Now the server certificate is successfully created.

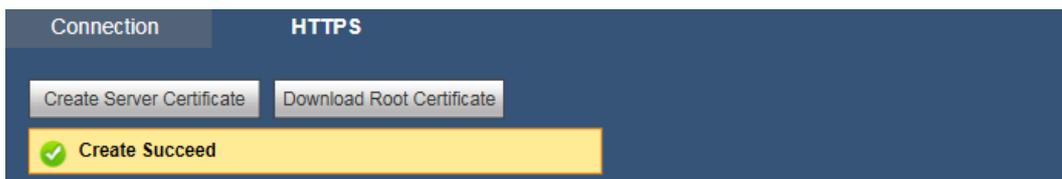


Figure 5-29

5.10.2.3.2 Download Root Certificate

In Figure 5-27, click **Download Root Certificate** button, system pops up a dialogue box. See Figure 5-30.



Figure 5-30

Click Open button, you can go to the following interface. See Figure 5-31.

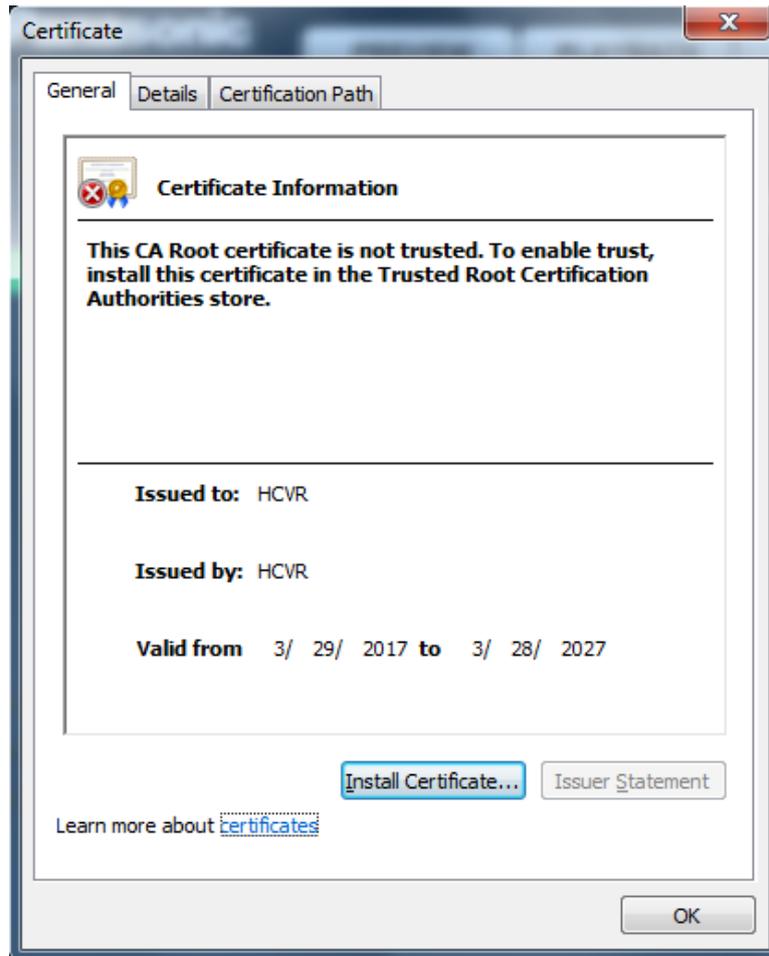


Figure 5-31

Click Install Certificate button, you can go to certificate wizard. See Figure 5-32.



Figure 5-32

Click Next button to continue. Now you can select a location for the certificate. See Figure 5-33.

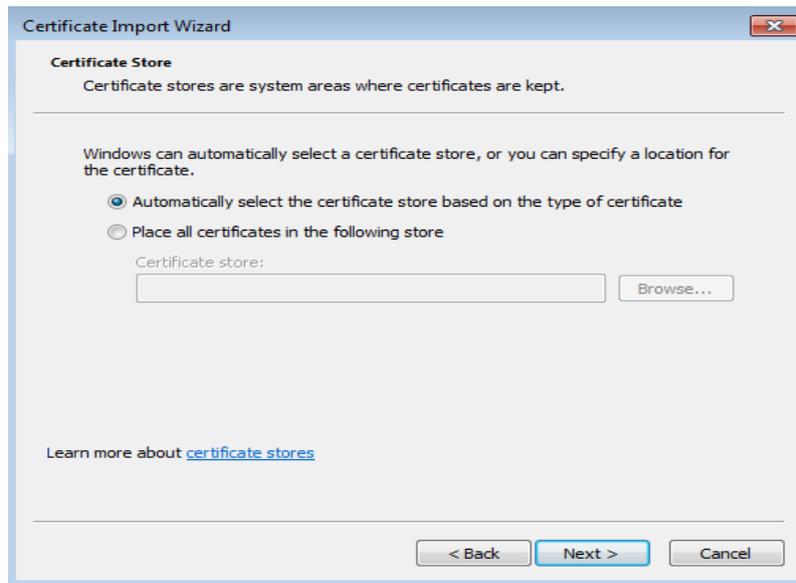


Figure 5-33

Click Next button, you can see the certificate import process is complete. See Figure 5-34.

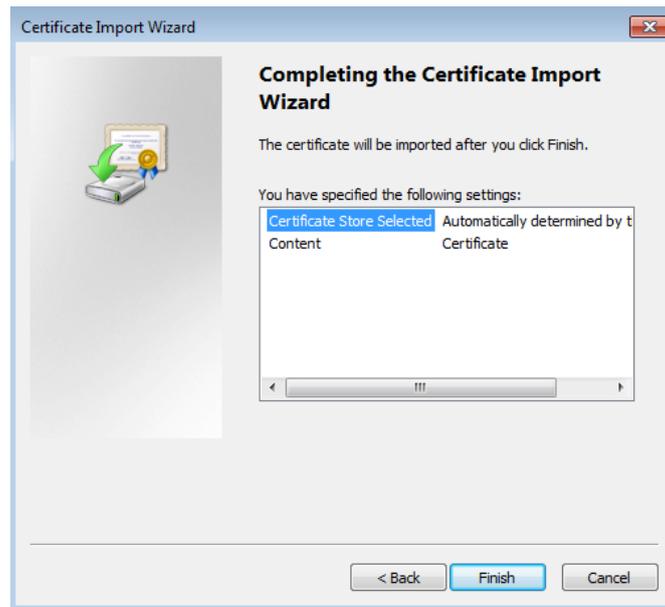


Figure 5-34

Click Finish button, you can see system pops up a security warning dialogue box. See Figure 5-35.



Figure 5-35

Click Yes button, system pops up the following dialogue box, you can see the certificate download is complete. See Figure 5-36.

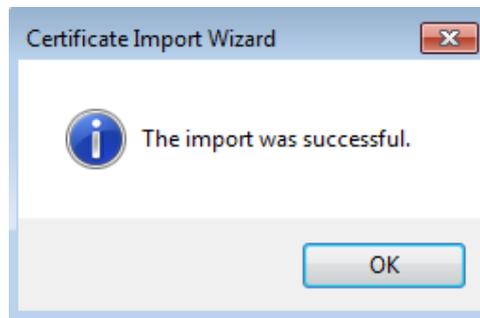


Figure 5-36

5.10.2.3.3 View and Set HTTPS port

From SETUP -> NETWORK -> CONNECTION, you can see the following interface. See Figure 5-37.

You can see HTTPS default value is 443.

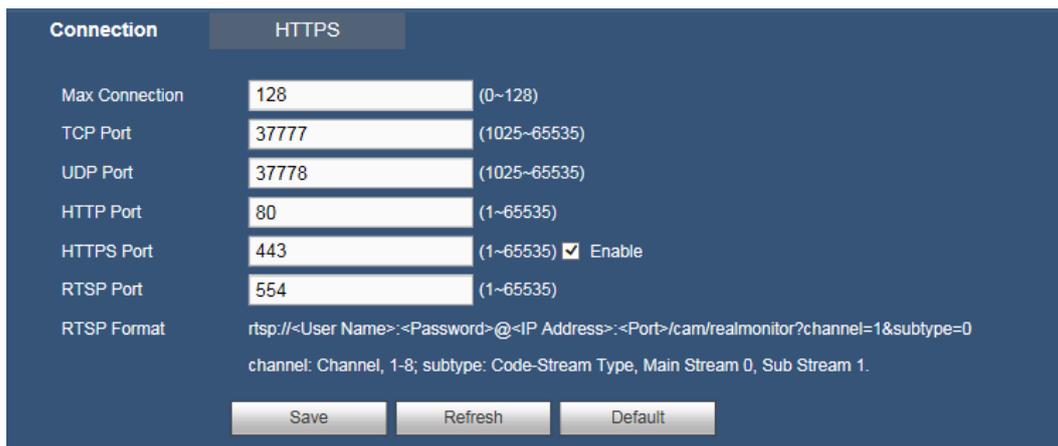


Figure 5-37

5.10.2.3.4 Login

Open the browser and then input http://xx.xx.xx.xx:port.

xx.xx.xx.xx: is your device IP or domain name.

Port is your HTTPS port. If you are using default HTTPS value 443, you do not need to

add port information here. You can input <https://xx.xx.xx.xx> to access.
Now you can see the login interface if your setup is right.

5.10.2.4 DDNS

The DDNS interface is shown as in Figure 5-38.

The DDNS is to set to connect the various servers so that you can access the system via the server. Please go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address has changed. Please select DDNS from the dropdown list (Multiple choices). Before you use this function, please make sure your purchased device support current function.

Figure 5-38

Please refer to the following sheet for detailed information.

Parameter	Function
DDNS Type	Server name and address provided by the DDNS service provider.
Host IP	<ul style="list-style-type: none"> ● Dyndns DDNS is members.dyndns.org. ● NO-IP DDNS is dynupdate.no-ip.com. ● CN99 DDNS is members.3322.org.
Domain Name	The domain name registered on the DDNS service provider website.
User Name	Input the user name and password got from the DDNS service provider. Make sure you have logged in the DDNS service provider website to register an account (user name and password).
Password	
Interval	After DDNS boots up, it sends out refresh query regularly. The unit is minute.

After setting, click Save button.

Input full domain name on the browser and click Enter button. The setting is right if you can view device Web interface. Otherwise, please check the parameters.

5.10.2.5 IP Filter

The IP filter interface is shown as in Figure 5-39.

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



Figure 5-39

5.10.2.6 Email

The email interface is shown as in Figure 5-40.

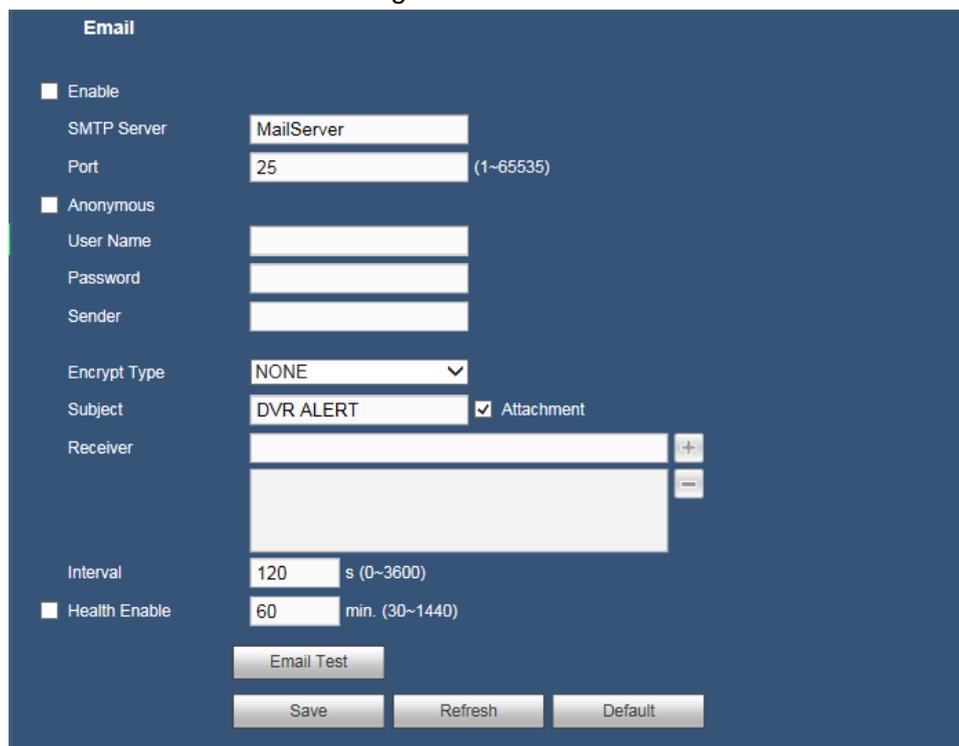


Figure 5-40

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Please select the checkbox here to enable email function.
SMTP Server	Input server address and then enable this function.
Port	Default value is 25. You can modify it if necessary.

Parameter	Function
Anonymous	For the server supports the anonymity function. You can auto login anonymously. You do not need to input the user name, password and the sender information.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Encrypt Type (Encryption mode)	You can select SSL, TLS or none.
Subject	Input email subject here.
Attachment	System can send out the email of the snapshot picture once you select the checkbox here.
Receiver	Input receiver email address here. Max three addresses. It supports SSL, TLS email box.
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. 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.
Update period (Interval)	This function allows the system to send out the test email to check the connection is OK or not. Please select the checkbox to enable this function and then set the corresponding interval. The value ranges from 30 minutes to 1440 minutes. System can send out the email regularly as you set here.
Health Enable	Please select the checkbox here to enable this function.
Email Test	The system will automatically send out an email once to test the connection is OK or not. Before the email test, please save the email setup information.

5.10.2.7 UPnP

It allows you to establish the mapping relationship between the LAN and the public network.

Here you can also add, modify or remove UPnP item. See Figure 5-41.

Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the DVR can auto detect it via the network.

Please refer to the following sheet for detailed information.

Parameter	Function	
Port Forwarding	Select the corresponding box to enable Port Forwarding function.	
Status	When the UPnP is offline, it shows as “Searching now...”. When the UPnP works it shows “Success”.	
LAN IP	It is the router IP in the LAN.	Device can auto get the IP address if the UPnP function succeeded. Do not need to set.
WAN IP	It is the router IP in the WAN.	
Port Mapping List	<p>It is the same information on the UPnP list of the router.</p> <ul style="list-style-type: none"> ● 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. <p>Note</p> <ul style="list-style-type: none"> ● 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. ● When there are several devices in the same LAN, please arrange the port mapping properly in case several devices are mapping to the same external port. ● Please make sure the mapping port is available. ● For the TCP and UDP, please make sure the internal port and external port are the same to guarantee the proper data transmission. 	
Modify	Click  , you can change WAN port value.	



Figure 5-41

5.10.2.8 SNMP

The SNMP interface is shown as in Figure 5-42.

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.

Preparation

- Install corresponding software tool such as MIB Builder and MG-SOFT MIB Browser.
- Contact technical engineer to get two MIB files of the current version.

Step 1 From main window -> SETUP -> NETWORK -> SNMP.

Enter SNMP interface is shown as in Figure 5-42.

Figure 5-42

Step 2 Check the Enable box to enable SNMP function. Trap address refers to the PC address that has installed MG-SOFT MIB Browser. The rest settings adopt default setup.

Parameter	Function
Enable	Please select the checkbox here to enable SNMP function.
SNMP Port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161.
Read Community	It is a read/write community string the applications support.
Write Community	
Trap Address	The destination address of the Trap information from the proxy program of the device.
Trap Port	The destination port of the Trap information from the proxy program of the device. It is for the gateway device and the client-end PC in the LAN to exchange the information. It is a non-protocol connection port. It has no effect on the network applications. It is a UDP port not TCP port. The value ranges from 1 to 165535..
SNMP Version	<ul style="list-style-type: none"> ● Select V1, system only processes the information of V1. ● Select V2, system only processes the information of V2.

- Step 3 Compile the above mentioned two MIB file via the software MIB Builder.
- Step 4 Run MG-SOFT MIB Browser to load the file from the previous step to the software.
- Step 5 Input the device IP you want to manage in the MG-SOFT MIB Browser. Please set the corresponding version for your future reference.
- Step 6 Open the tree list on the MG-SOFT MIB Browser; you can get the device configuration. It is to view the device has how many video channels, audio channels, application version and etc.

5.10.2.9 FTP

The FTP interface is shown as in Figure 5-43.

It is to backup record file or image to the FTP to storage or view.

Before the operation, please download or purchase the FTP service tool and install on the PC.

Note

For the FTP user, please set FTP folder write right, otherwise system cannot upload the image.

- Step 1 From main window -> SETUP -> NETWORK -> FTP.
Enter FTP interface. See Figure 5-43.

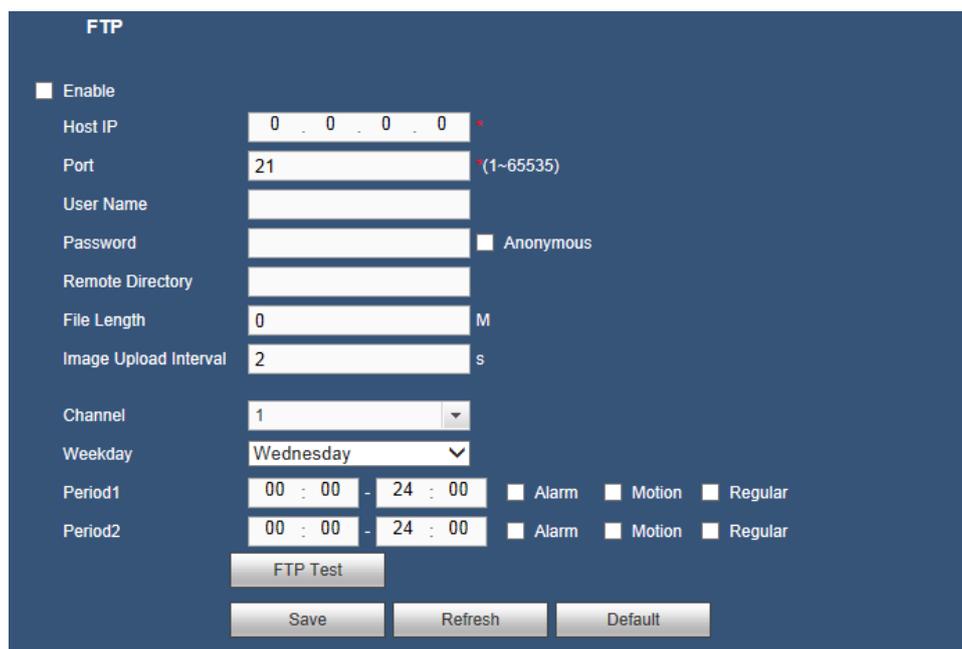


Figure 5-43

- Step 2 Check the box to enable FTP function.
- Step 3 Set parameters.

Parameter	Function
Host IP	The host IP you have installed the FTP server.
Port	The default setup is 21.

Parameter	Function
User Name/ Password	The account for you to access the FTP server.
Remote Directory	The folder you created under the root path of the FTP according to the corresponding rule. <ul style="list-style-type: none"> ● If there is no remote directory, system can auto create different directories according to the IP, time and channel. ● If there is remote directory, system can create corresponding folder under the FTP root path and then create different folders according to IP address, time and channel.
File Length	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.
Image Upload Interval	It is the image upload interval. If the image upload interval is larger than the image snapshot frequency, system just uploads the lasted image. <ul style="list-style-type: none"> ● If the image interval is 5 seconds and the snapshot frequency is 2 seconds, system will send out the latest image at the buffer at 5 seconds. ● If the image upload interval is smaller than the snapshot frequency, system will upload at the snapshot frequency. For example, if the image interval is 5 seconds and the snapshot frequency is 10 seconds, system will send out the image at 10 seconds. ● From main window -> SETUP -> CAMERA -> ENCODE -> Snapshot to set snapshot frequency.
Channel	Select a channel from the dropdown list and then set week, period and record type.
Weekday/Period	Please select from the dropdown list and for each day, you can set two periods.
Type	Please select uploaded record type (Alarm/motion detect/regular). Please check the box to select upload type.

Step 4 Click FTP Test.

- If the operation successful, device says FTP test successful.
- If the operation failed, device says FTP test failed. Please check network connection and settings.

Click Save to complete the setup.

5.10.2.10 Multicast

The multicast interface is shown as in Figure 5-44.

Multicast is a transmission mode of data packet. When there is multiple-host to receive the

same data packet, multiple-cast is the best option to reduce the broad width and the CPU load. The source host can just send out one data to transit. This function also depends on the relationship of the group member and group of the outer.

Parameter	Function
IP Address	The multicast IP address (244.0.0.0~239.255.255.255).
Port	The multicast port value (1025~65000).

MULTICAST

Enable

IP Address: 239 . 255 . 42 . 42 (224.0.0.0~239.255.255.255)

Port: 36666 (1025~65000)

Save Refresh Default

Figure 5-44

Click Save to complete the setup. Login and monitor.

Use Web to login, you can see the following interface. See Figure 5-45. Select login type as the Multicast from the dropdown list. After you logged in the Web, the Web can automatically get multiple cast address and add it to the multiple cast groups. You can enable real-time monitor function to view the video.

Panasonic

User Name: admin

Password: [Redacted]

Types: TCP, UDP, Multicast

Login Cancel

Figure 5-45

5.10.2.11 EZ Remote

The EZ Remote interface is shown as in Figure 5-46.



Figure 5-46

5.10.3 Event

5.10.3.1 Detect

This includes motion detect, video loss, and tampering.

5.10.3.1.1 Motion Detect

After analysis video, system can generate a motion detect alarm when the detected moving signal reached the sensitivity you set here.

The motion detect interface is shown as in Figure 5-47.

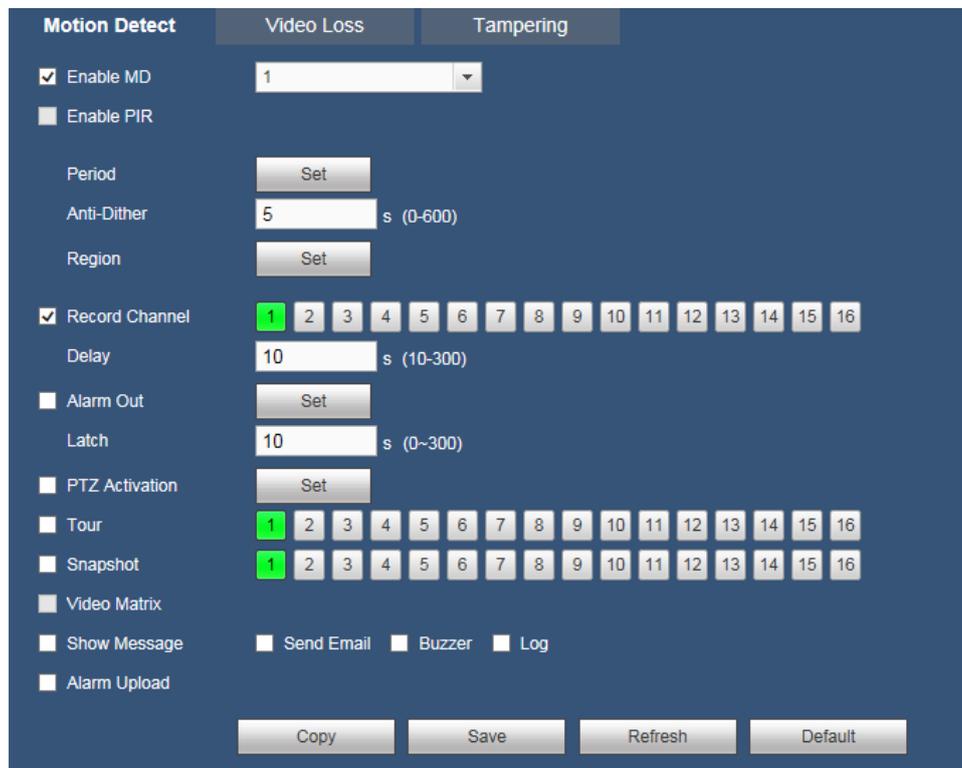


Figure 5-47

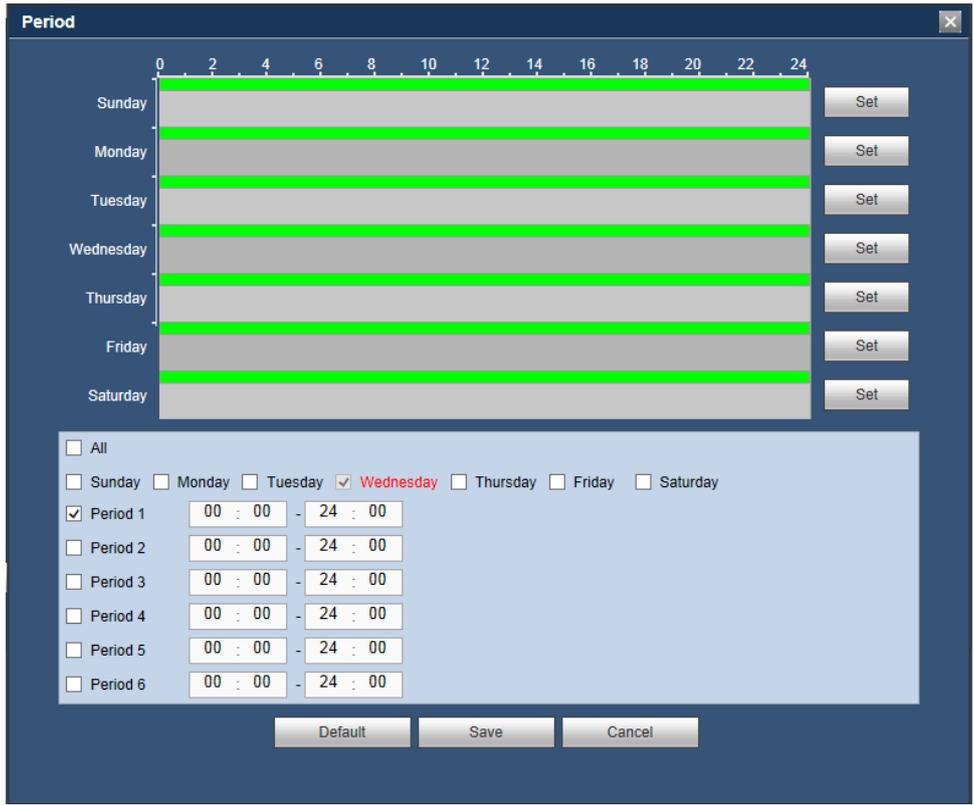


Figure 5-48

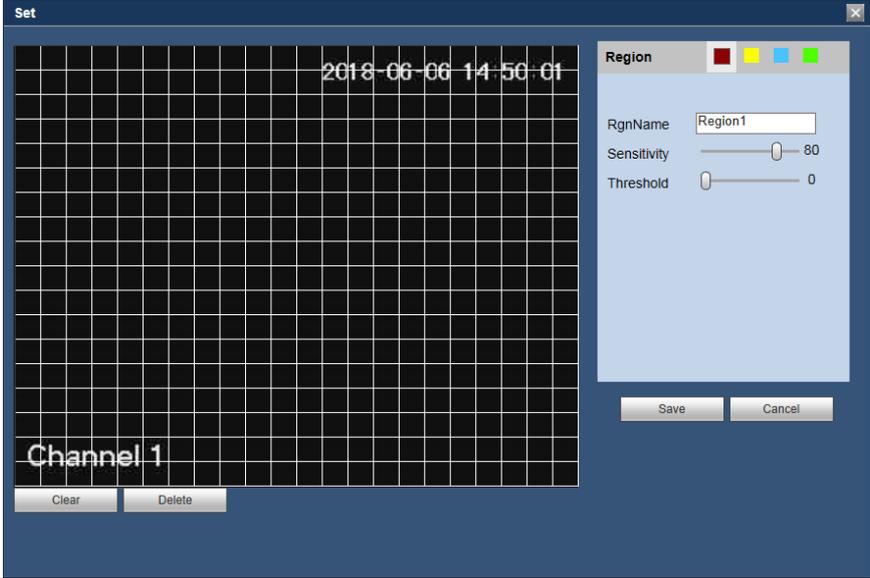


Figure 5-49

The image shows a 'PTZ Activation' dialog box with a close button in the top right corner. It contains a list of 16 channels, from Channel 1 to Channel 16. Each channel has a dropdown menu currently set to 'None' and a numeric input field set to '0'. At the bottom of the dialog, there are two buttons: 'Save' and 'Cancel'.

Channel	Dropdown	Value
Channel 1	None	0
Channel 2	None	0
Channel 3	None	0
Channel 4	None	0
Channel 5	None	0
Channel 6	None	0
Channel 7	None	0
Channel 8	None	0
Channel 9	None	0
Channel 10	None	0
Channel 11	None	0
Channel 12	None	0
Channel 13	None	0
Channel 14	None	0
Channel 15	None	0
Channel 16	None	0

Figure 5-50

Please refer to the following sheet for detailed information.

Parameter	Function
Enable MD	<p>You need to select the checkbox to enable motion detection function.</p> <p>Please select a channel from the dropdown list.</p>
Enable PIR	<p>PIR function help enhance the motion detect accuracy and validity. It is to filter the false alarm triggered by leaves, small fly and insects. The PIR detection zone is smaller than the camera angle of view.</p> <p>The PIR function is enabled by default if the connected remote device supports the PIR function. When the PIR function is on, motion detection function is on by default. The motion detect event occurs when these two function are enabled at the same time. If the PIR function is disabled, check the enable box to enable the general motion detect function.</p> <p>Note</p> <ul style="list-style-type: none"> ● The channel type shall be CVI if you want to enable PIR function. ● If the remote device does not support PIR function, the PIR

Parameter	Function
	item on the interface is grey or is hiding. That is to say, the PIR function is null.
Period	Motion detection function becomes activated in the specified periods. See Figure 5-48. There are six periods in one day. Please draw a circle to enable corresponding period. Click Save button, system goes back to motion detection interface. Please click Save button to exit.
Anti-Dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 600s.
Region	If you select motion detection type, you can click this button to set motion detection zone. The interface is shown as in Figure 5-49. 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.
Sensitivity (Tampering)	There are six levels. The sixth level has the highest sensitivity.
Record Channel	System auto activates motion detection channel(s) to record once an alarm occurs. Please note you need to set motion detect record period and go to STORAGE -> SCHEDULE to set current channel as schedule record.
Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Alarm Out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when an alarm occurs.
Latch	System can delay the alarm output for specified time after an alarm ended. The value ranges from 0s to 300s.
PTZ Activation	Here you can set PTZ movement when alarm occurs. Such as go to preset X. See Figure 5-50.
Tour	You need to select the checkbox here to enable this function. System begins 1-window or multiple-window tour display among the channel(s) you set to record when an alarm occurs.
Snapshot	You need to check the box here to enable this function. You can set corresponding channel to snapshot when motion detect alarm occurs.
Video Matrix	This function is for motion detect only. Check the box here to enable video matrix function. Right now system supports one-channel tour function. System takes "first come and first serve" principle to deal with the activated tour. System will process the new tour when a new alarm occurs after previous alarm ended. Otherwise it restores the previous output status before the alarm activation.

Parameter	Function
Show Message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
Buzzer	Select the checkbox here to enable this function. The buzzer beeps when an alarm occurs.
Log	Check the box here, system can record motion detect event log.
Alarm Upload	System can upload the alarm signal to the center (Including alarm center).

5.10.3.1.2 Video Loss

The video loss interface is shown as in Figure 5-51.

After analysis video, system can generate a video loss alarm when the detected moving signal reached the sensitivity you set here.

Please note video loss does not support anti-dither, sensitivity, region setup. For rest setups, please refer to chapter 5.10.3.1.1 Motion Detect for detailed information.

Figure 5-51

5.10.3.1.3 Tampering

The tampering interface is shown as in Figure 5-52.

After analysis video, system can generate a tampering alarm when the detected moving signal reached the sensitivity you set here.

For detailed setups, please refer to chapter 5.10.3.1.1 Motion Detect for detailed information.

Figure 5-52

5.10.3.2 Alarm (CJ-HDR416A only)

Before operation, please make sure you have properly connected alarm devices such as buzzer. The input mode is local alarm.

5.10.3.2.1 Local

The local alarm interface is shown as in Figure 5-53. It refers to alarm from the local device.

Figure 5-53

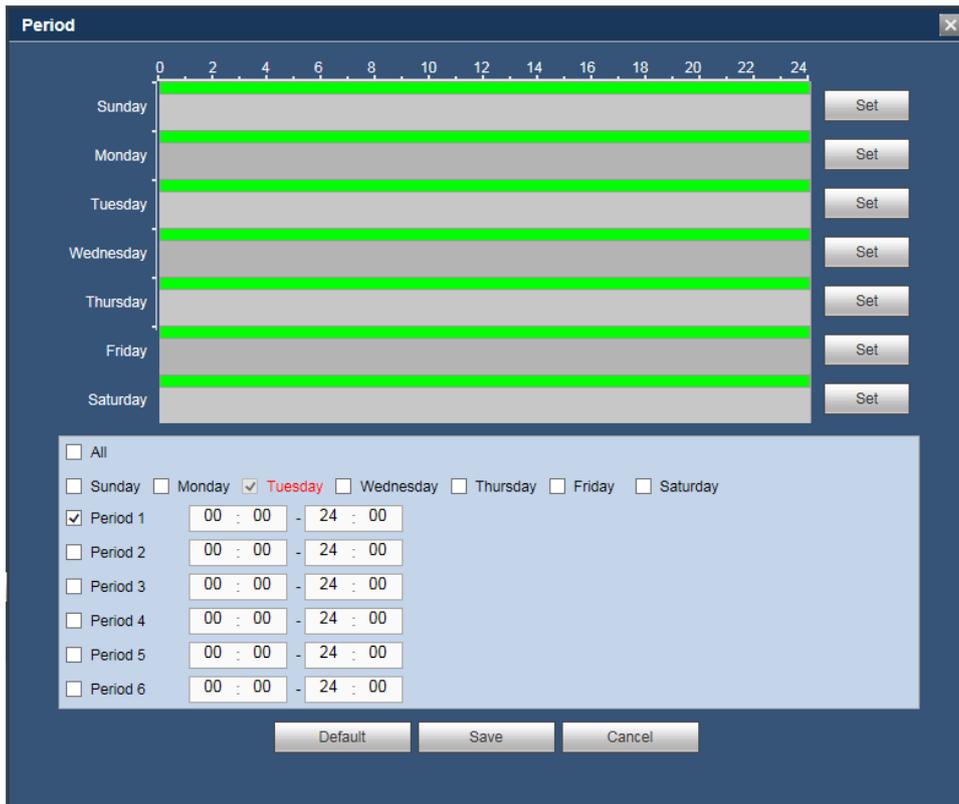


Figure 5-54

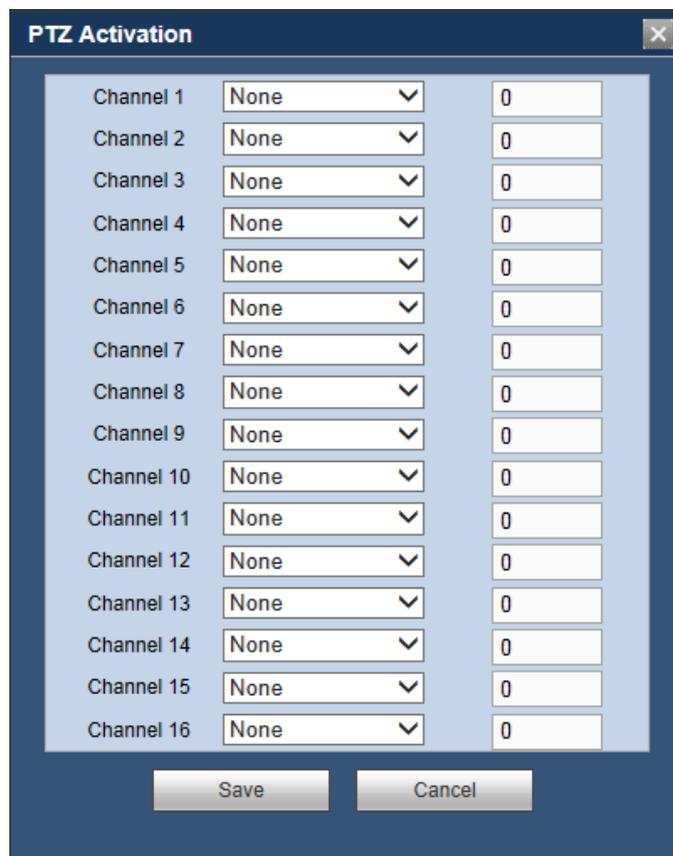


Figure 5-55

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to select the checkbox to enable this function. Please select a channel from the dropdown list.
Period	This function becomes activated in the specified periods. There are six periods in one day. Please check to enable corresponding period. See Figure 5-54. Select day. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. Click Save button, system goes back to local alarm interface, please click Save button to exit.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 600s.
Type	There are two options: Normal Open/Normal Close.
Record Channel	System auto activates motion detection channel(s) to record once an alarm occurs. Please note you need to set alarm record period and go to STORAGE -> Schedule to set current channel as schedule record.
Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Alarm Out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when an alarm occurs.
Latch	System can delay the alarm output for specified time after an alarm ended. The value ranges from 0s to 300s.
PTZ Activation	Here you can set PTZ movement when alarm occurs. Such as go to preset X. See Figure 5-55.
Tour	You need to select the checkbox here to enable this function. System begins 1-window or multiple-window tour display among the channel(s) you set to record when an alarm occurs.
Screenshot	You need to check the box here to enable this function. You can set corresponding channel to snapshot when motion detect alarm occurs.
Show Message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
Alarm Upload	System can upload the alarm signal to the center (Including alarm center).
Buzzer	Select the checkbox here to enable this function. The buzzer beeps when an alarm occurs.

5.10.3.3 Abnormality

It includes three types: HardDisk/Network/Device. See Figure 5-56 through Figure 5-58.

- HardDisk: It includes no disk, disk error, disk no space.
- Network: It includes net disconnection, IP conflict, and MAC conflict.
- Device (CJ-HDR416A only): It includes device temperature alarm and fan alarm.

The screenshot shows the 'HardDisk' configuration page. At the top, there are three tabs: 'HardDisk', 'Network', and 'Device', with 'HardDisk' selected. Below the tabs, the 'Event Type' is set to 'No HDD'. There are several checkboxes: 'Enable' (checked), 'Alarm Out' (checked), 'Show Message' (checked), and 'Alarm Upload' (checked). There are also checkboxes for 'Send Email' (unchecked), 'Buzzer' (checked), and 'Log' (checked). A 'Latch' field is set to '10' with a unit 's (0~300)'. A 'Set' button is located next to the 'Alarm Out' checkbox. At the bottom, there are 'Save' and 'Refresh' buttons.

Figure 5-56

The screenshot shows the 'Network' configuration page. At the top, there are three tabs: 'HardDisk', 'Network', and 'Device', with 'Network' selected. Below the tabs, the 'Event Type' is set to 'Disconnect'. There are several checkboxes: 'Enable' (checked), 'Alarm Out' (unchecked), 'Show Message' (unchecked), and 'Record Channel' (unchecked). There are also checkboxes for 'Send Email' (unchecked), 'Buzzer' (unchecked), and 'Log' (checked). A 'Latch' field is set to '10' with a unit 's (0~300)'. A 'Delay' field is set to '10' with a unit 's (10-300)'. A 'Set' button is located next to the 'Alarm Out' checkbox. A 'Record Channel' section contains 16 numbered buttons (1-16), with button '1' highlighted in green. At the bottom, there are 'Save' and 'Refresh' buttons.

Figure 5-57

The screenshot shows a configuration window for the 'Device' tab. It includes the following fields and controls:

- Event Type:** A dropdown menu set to 'Temperature Too High.'
- Alarm Name:** A text input field containing 'Case Temperature'.
- Max Temperature:** A text input field containing '60' with a '°C' symbol to its right.
- Enable:** A checked checkbox.
- Alarm Out:** An unchecked checkbox next to a 'Set' button.
- Latch:** A text input field containing '10' with 's (0~300)' to its right.
- Show Message:** An unchecked checkbox.
- Send Email:** An unchecked checkbox.
- Buzzer:** An unchecked checkbox.
- Log:** An unchecked checkbox.

At the bottom of the window are two buttons: 'Save' and 'Refresh'.

Figure 5-58

Please refer to the following sheet for detailed information.

Parameter	Function
Error Type	The abnormal events include: No HDD, HDD Error, No Space, Disconnect, IP Conflict, MAC Conflict, Temperature Too High and Fan Speed Abnormal. You can set one or more items here. Less than: You can set the minimum percentage value here (For disk no space only). The device can alarm when capacity is not sufficient.
Enable	Select the checkbox here to enable selected function.
Alarm Out	Please select corresponding alarm output channel when an alarm occurs. You need to select the checkbox to enable this function.
Latch	The alarm output can delay for the specified time after an alarm stops. The value ranges from 0s to 300s. The default setup is 10 seconds.
Temperature Too High	In Device interface (Figure 5-58), select Temperature Too high from the dropdown list, and then input the max temperature. The value ranges from 30°C ~ 99°C. Device can trigger an alarm once the case temperature is higher than the value you set.
Fan Speed Abnormal	In Device interface (Figure 5-58), select Fan Speed Abnormal from the dropdown list, and then click the OK button after the Fan calibration. It can correct fan manually. Please note we recommend this function after you replaced or maintained the fan.
Show Message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Send Email	If you enabled this function, system can send out an email to alert you when an alarm occurs.
Buzzer	Select the checkbox here to enable this function. The buzzer beeps when an alarm occurs.

Parameter	Function
Log	Check the box here, system can record the network event alarm log.
Alarm Upload	System can upload the alarm signal to the center (Including alarm center).

5.10.3.4 Alarm Output (CJ-HDR416A only)

5.10.3.4.1 General Alarm

It is to set alarm output mode. See Figure 5-59.

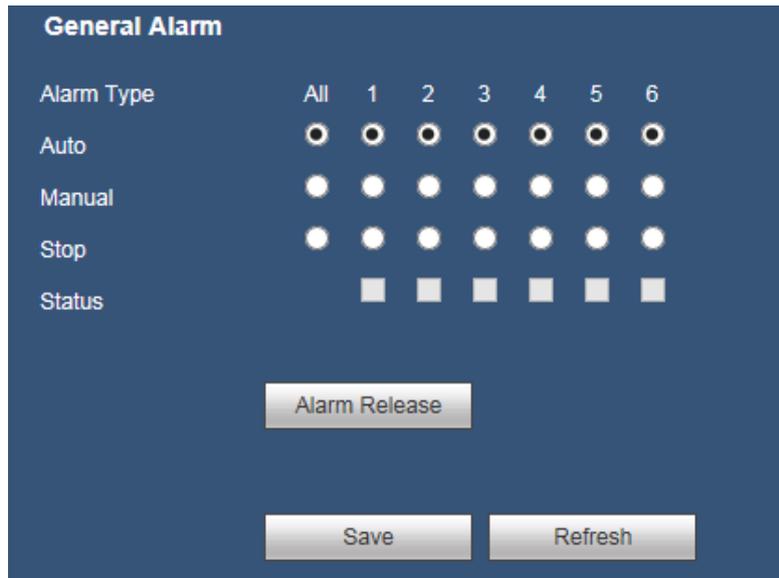


Figure 5-59

5.10.4 Storage

5.10.4.1 Basic

It is to manage HDD storage space.

Step 1 From main window -> SETUP -> STORAGE -> BASIC.

Enter Basic interface. See Figure 5-60.

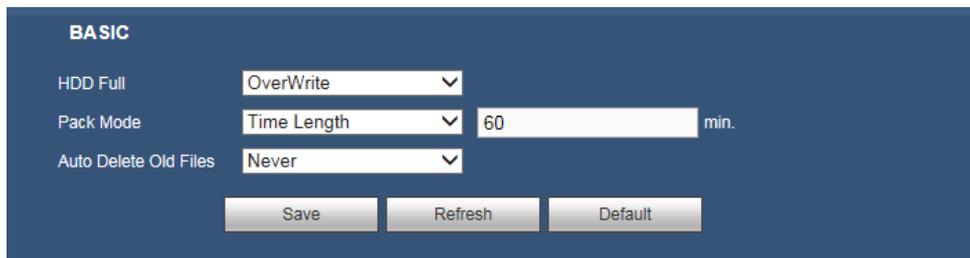


Figure 5-60

Step 2 Set parameters.

Parameter	Function
HDD Full	It is to select working mode when hard disk is full. There are two options: stop recording or rewrite. <ul style="list-style-type: none"> ● Stop Record: If current HDD is full while there is no idle HDD, then

Parameter	Function
	<p>system stops recording,</p> <ul style="list-style-type: none"> ● OverWrite: If the current HDD is full while there is no idle HDD, then system overwrites the previous files. <p>Note DVR does not overwrite the locked files.</p>
Pack Mode	<p>It is to specify record duration. There are two ways for you to set.</p> <ul style="list-style-type: none"> ● Time Length: It is to pack according to time. The value ranges from 1 to 60 minutes. Default value is 60 minutes. ● File Length: It is to pack according to file length. The default setup is 1024M. The value ranges from 128M to 2048M.
Auto Delete Old Files	<ul style="list-style-type: none"> ● Never: Do not auto delete old files. ● Customized: Input customized period here, system can auto delete corresponding old files.

5.10.4.2 Schedule

5.10.4.2.1 Record

In this interfaces, you can add or remove the schedule record setup. See Figure 5-61.

There are four record modes: Regular, Motion, Alarm and Motion&Alarm. There are six periods in one day.

You can view the current time period setup from the color bar.

- Green color stands for the regular record/snapshot.
- Yellow color stands for the motion detect record/snapshot.
- Red color stands for the alarm record/snapshot.
- Blue color stands for MD & alarm record/snapshot.

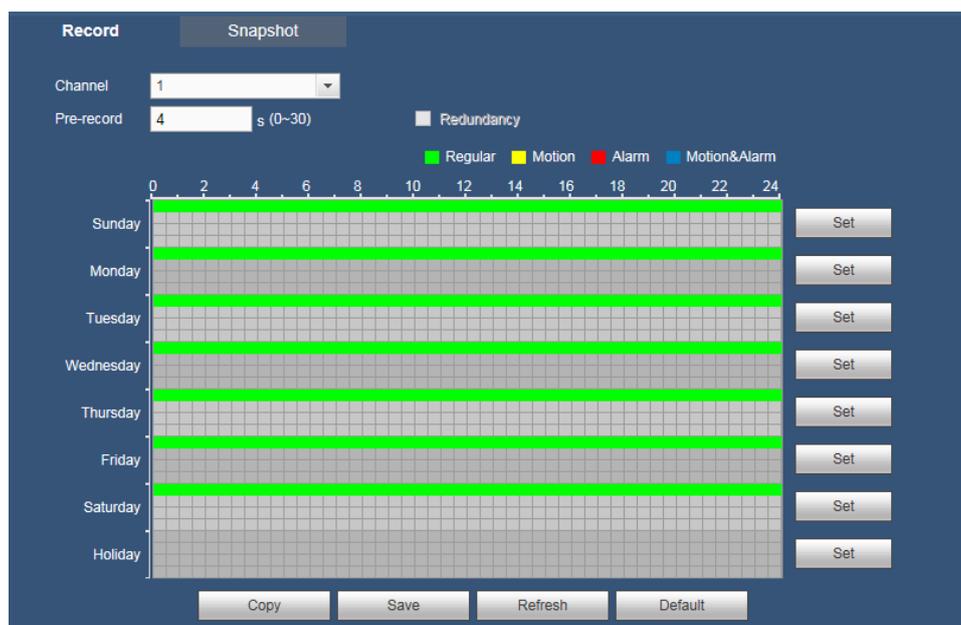


Figure 5-61

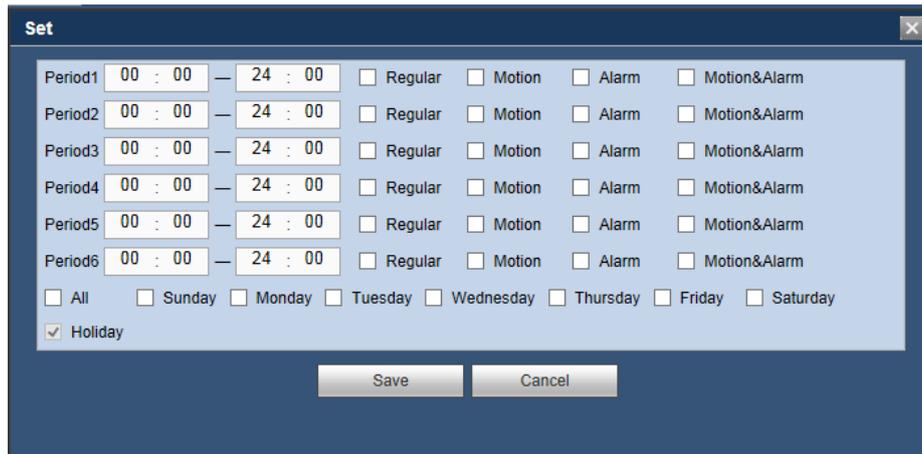


Figure 5-62

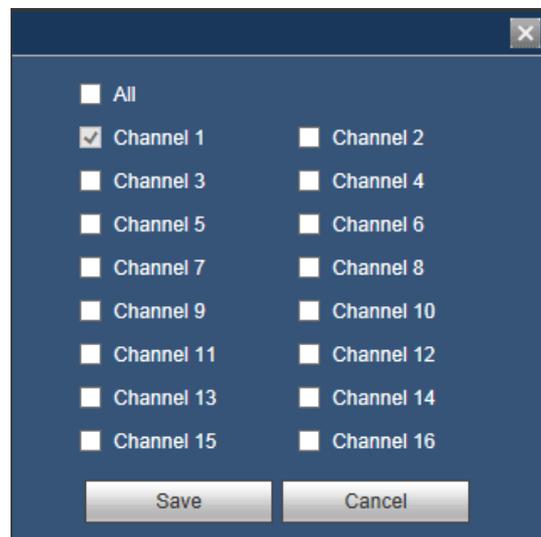


Figure 5-63

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel from the dropdown list.
Pre-record	Please input pre-record time here. The value ranges from 0 to 30.
Redundancy	Select the checkbox here to enable redundancy function. Please note this function is null if there is only one HDD.
Set (Sunday to Saturday)	Click the Set button, you can set record period. See Figure 5-62. There are six periods in one day. If you do not select the date at the bottom of the interface, current setup is for today only. Please click Save button and then exit.
Set (Holiday)	Click the Set button, you can set record period. See Figure 5-62. There are six periods in one day. If you check Holiday box, current channel shall record as your holiday setup here.

Parameter	Function
Copy	Copy function allows you to copy one channel setup to another. After setting in channel, click Copy button, you can go to interface Figure 5-63. 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 Save button to save current copy setup. Click the Save button in the Schedule interface, the copy function succeeded.

5.10.4.2.2 Snapshot

The Snapshot interface is shown as below. See Figure 5-64.

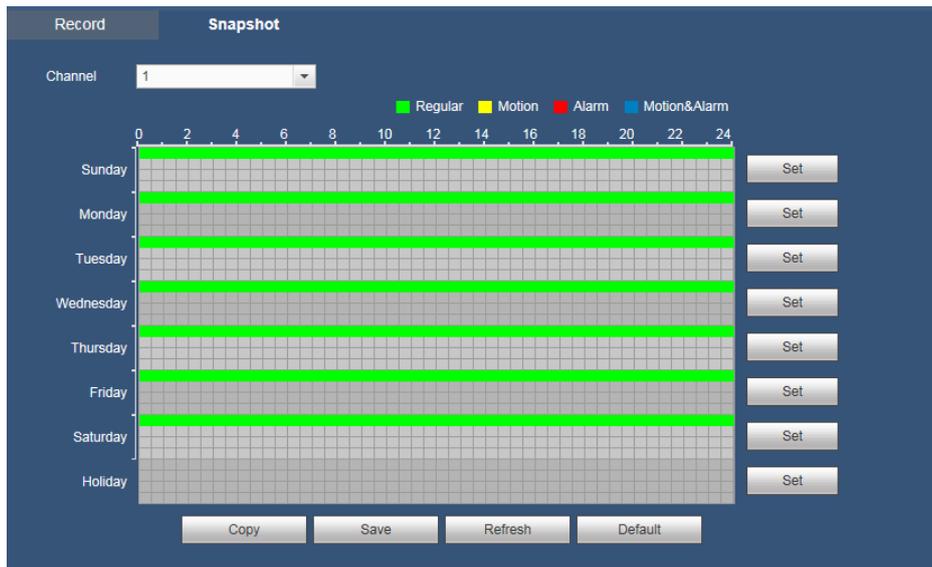


Figure 5-64

For detailed operation information, please refer to chapter 5.10.4.2.1.

5.10.4.3 HDD Manage

The interface is shown as in Figure 5-65. Here you can see HDD information. You can also operate the read-only, read-write, redundancy (if there are more than on HDD) and format operation.

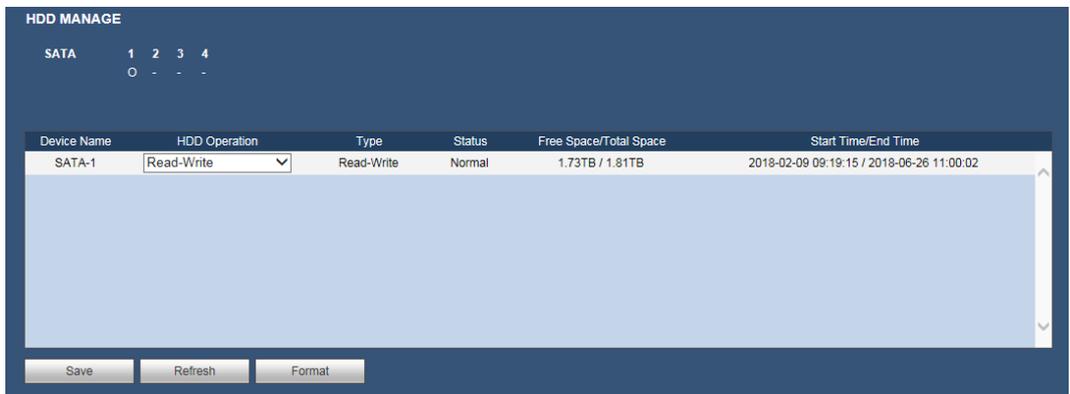


Figure 5-65

5.10.4.4 Record

The interface is shown as in Figure 5-66.

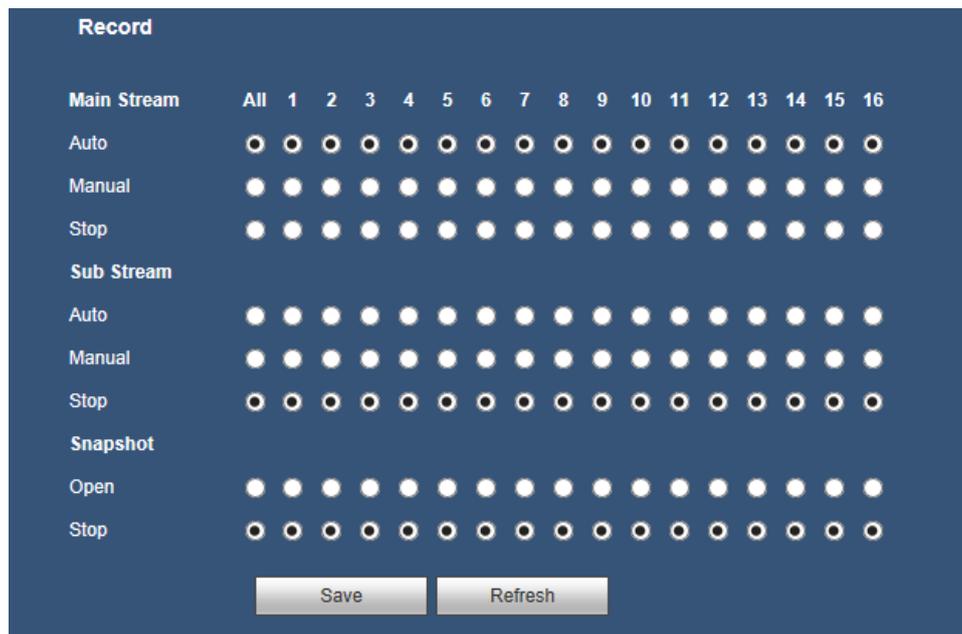


Figure 5-66

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Here you can view channel number. The number displayed here is the max channel amount of your device.
Status	There are three statuses: Auto, Manual, Stop
Auto	System enables auto record function as you set in schedule setup (regular, motion detect, alarm and MD & alarm).
Manual	It has the highest priority. Enable corresponding channel to record no matter what period applied in the record setup.
Stop	Stop current channel record no matter what period applied in the record setup.
Start all/ Stop all	Select the corresponding All button, you can enable or disable all channels record.

5.10.4.5 HDD Manager (CJ-HDR416A only)

5.10.4.5.1 HDD

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

CAUTION

HDD group and quota mode cannot be valid at the same time. System needs to restart

once you change the mode here.

Step 1 From main window -> SETUP -> STORAGE -> HDD Manager -> HDD.
Enter HDD interface. See Figure 5-67.

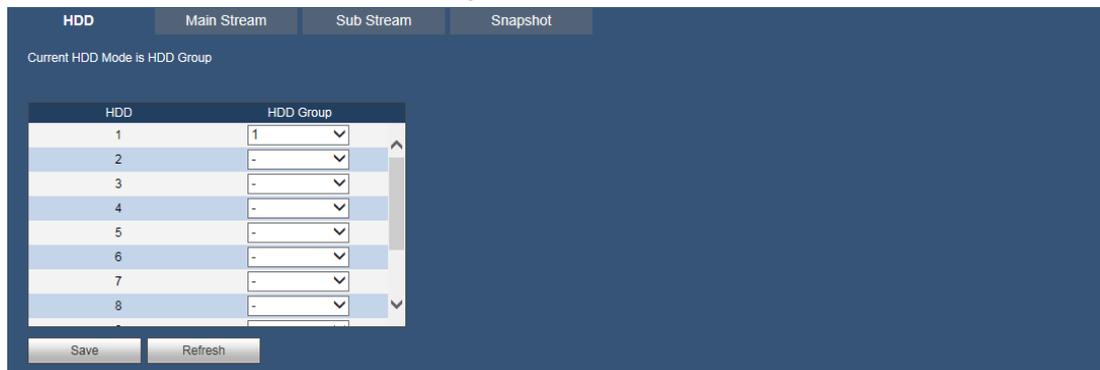


Figure 5-67

Step 2 Set a HDD group for current HDD.

Click OK. Device begins reboot.

Step 3 After set HDD group, click Main Stream/Sub Stream/Snapshot tab to save main stream, sub stream, snapshot image to different HDD group. See Figure 5-68, Figure 5-69, Figure 5-70.

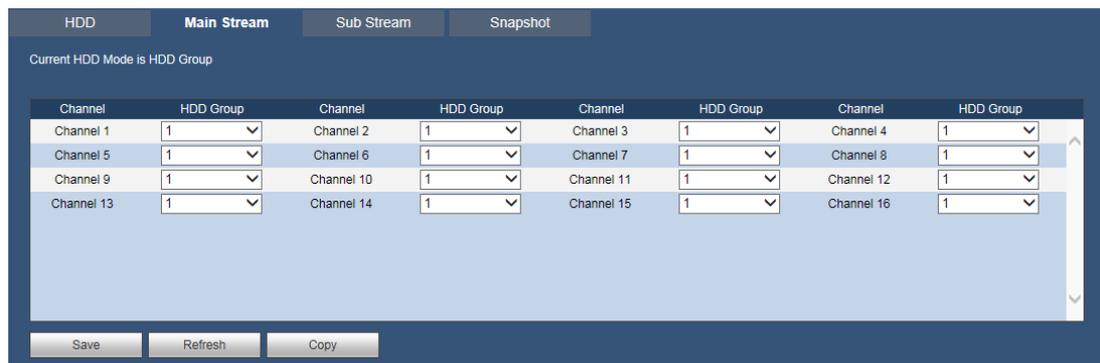


Figure 5-68

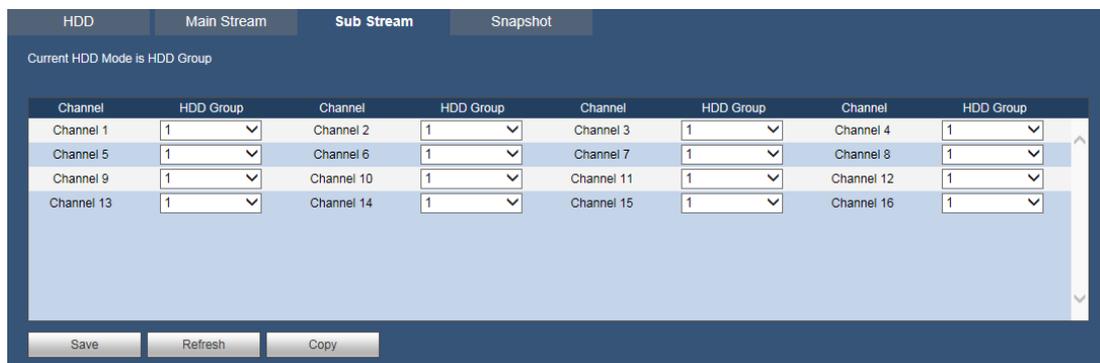


Figure 5-69

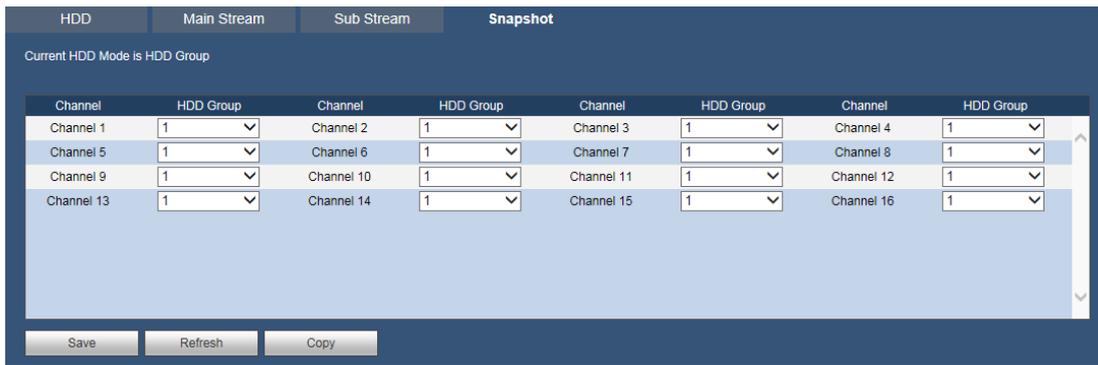


Figure 5-70

Step 4 Click Save to complete the setup.

5.10.4.6 Quota (CJ-HDR416A only)

It is to set channel storage capacity.

CAUTION

HDD group and quota mode cannot be valid at the same time. System needs to restart once you change the mode here.

Step 1 From main window -> SETUP -> STORAGE -> QUOTA.

Enter Quota interface. See Figure 5-71.

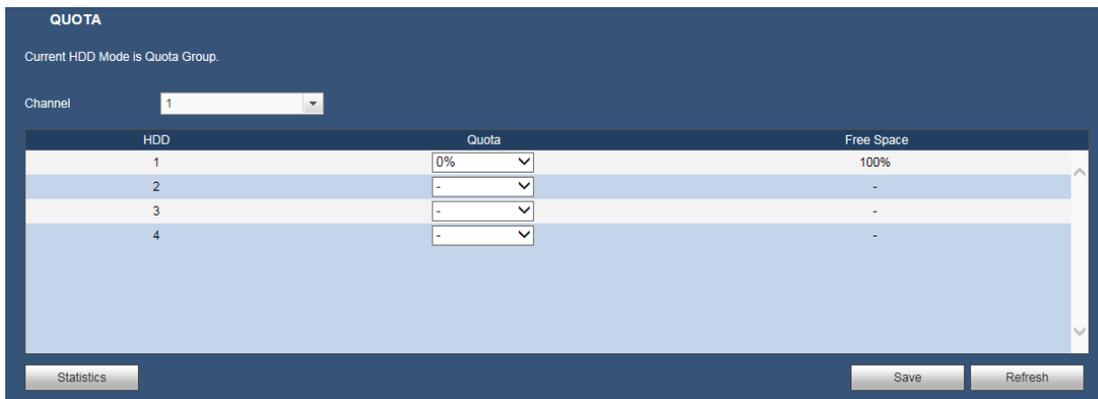


Figure 5-71

Step 2 Select a channel from the dropdown list and then select corresponding HDD quota.

Step 3 Click Save to complete setup.

Step 4 Click Statistics to view HDD capacity you set for each channel.

5.10.5 System

5.10.5.1 General

The general interface includes general, date/time and holiday setup.

5.10.5.1.1 General

The General interface is shown as in Figure 5-72.

Figure 5-72

Please refer to the following sheet for detailed information.

Parameter	Function
Device Name	It is to set device name.
Device No.	It is device channel number.
Language	You can select the language from the dropdown list. Please note the device needs to reboot to get the modification activated.
Video Standard	This is to display video standard such as PAL and NTSC.
Auto Logout	Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
Startup Wizard	Once you select the checkbox here, system will go to the startup wizard directly when the system restarts the next time. Otherwise, it will go to the login interface.
Navigation Bar	If you select the checkbox here, system will display the navigation bar on the interface.

5.10.5.1.2 Date and Time

The date and time interface is shown as in Figure 5-73.

Figure 5-73

Please refer to the following sheet for detailed information.

Parameter	Function
Date Format	Here you can select date format from the dropdown list.
Time Format	There are two options: 24-HOUR and 12-HOUR.
Time Zone	The time zone of the device.
System Time	It is to set system time. It becomes valid after you set.
Sync PC	You can click this button to save the system time as your PC current time.
DST	Here you can set day night save time begin time and end time. You can set according to the date format or according to the week format.
NTP	You can select the checkbox to enable NTP function.
NTP Server	<p>Set the time server address.</p> <ul style="list-style-type: none"> ● Check the NTP box to enable this function. ● Server: Input the server IP that installed the NTP server. ● Manual Update: Click it, you can sync DVR time with the NTP server manually. ● Port: System supports TCP transmission only. The port value is 123. ● Interval: It is to set the sync time interval between the DVR and the NTP server. The value ranges from 0 to 65535 minutes.
Port	It is to set the time server port.
Interval	It is to set the sync periods between the device and the time server.

5.10.5.1.3 Holiday Setup

Holiday setup interface is shown as in Figure 5-74.

Here you can click Add Holidays button to add a new holiday and then click Save button to save.

Note

Once the holiday settings is different the general date, the holiday settings has priority.

After successfully set holiday here, you can view holiday item in Schedule interface.

It is for you to set holiday schedule record/snapshot settings.

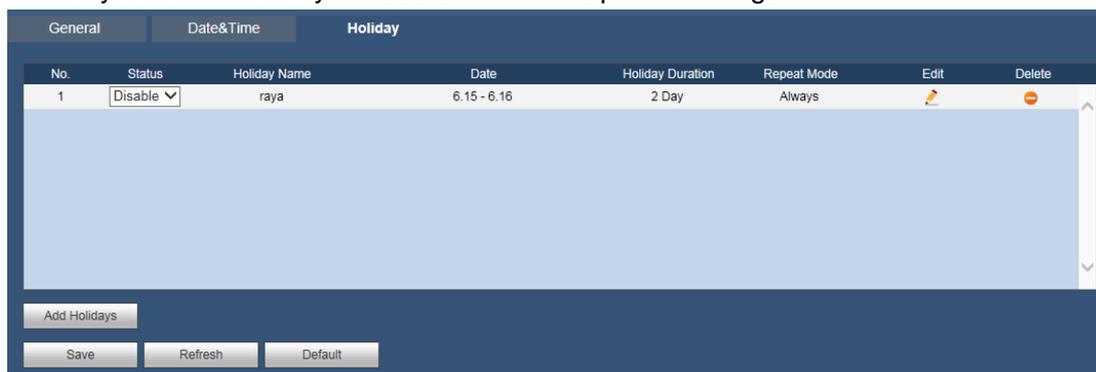


Figure 5-74

5.10.5.2 Display

Display interface includes Display, TV Adjust (CJ-HDR416A only), Tour and Multi Preview.

5.10.5.2.1 Display

Here you can set background color and transparency level. See Figure 5-75.

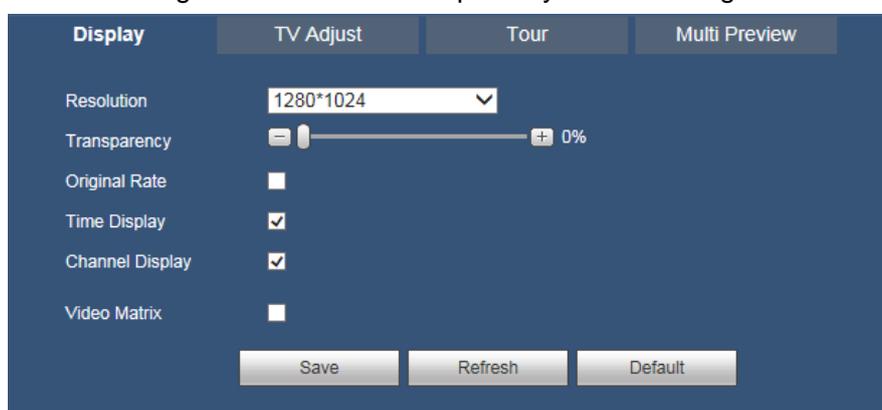


Figure 5-75

Please refer to the following sheet for detailed information.

Parameter	Function
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.
Transparency	Here is for you to adjust transparency. The value ranges from 0% to 100%.

Original Rate	Check the box here, the video can be displayed at its actual size.
Time Display/ Channel Display	Select the checkbox here, you can view system time and channel number on the monitor video.
Video Matrix	<ul style="list-style-type: none"> ● Check the box, select VGA or the HDMI as the video matrix output. The selected screen(s) only display(s) the channel video from the video matrix. Refer to chapter 5.10.5.3 Video Matrix for detailed information. ● Cancel the box, the VGA and HDMI output the same video.

5.10.5.2.2 TV Adjust (CJ-HDR416A only)

It is to set TV output region. See Figure 5-76.



Figure 5-76

5.10.5.2.3 Tour

The tour interface is shown as in Figure 5-77. Here you can set interval, window split and motion detect type.

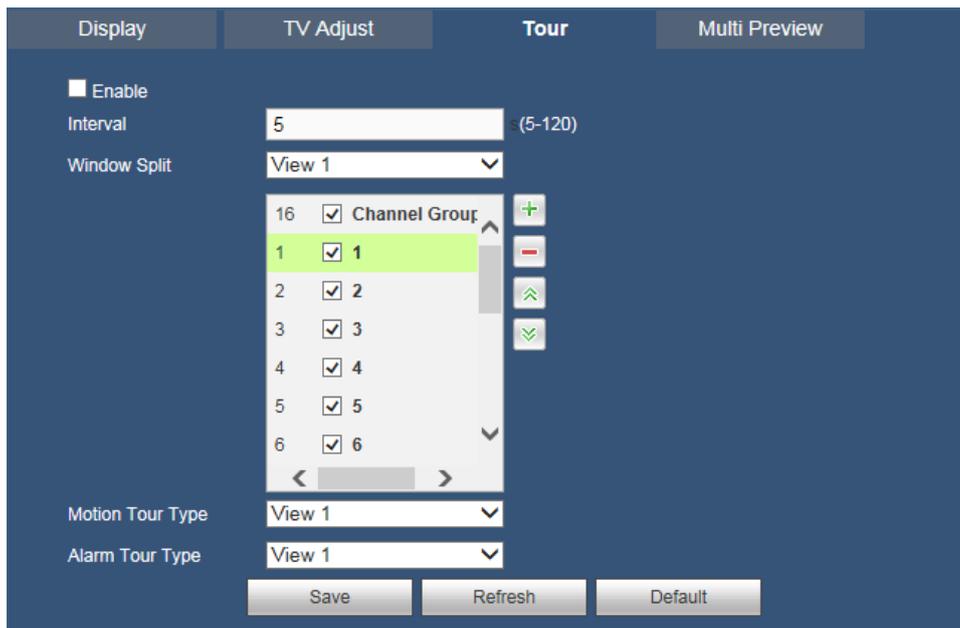


Figure 5-77

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Select the checkbox here to enable tour function.
Interval	Here is for you to adjust interval value. The value ranges from 5s to 120s. The default setup is 5s.
Window Split	Here you can set window mode and channel group. System can support 1/4/8/9/16-window according to device channel amount.
Motion Tour Type/ Alarm Tour Type	Here you can set motion detect tour/alarm tour window mode. System supports 1/8-window now.

5.10.5.2.4 Multi Preview

It is to enable and set multi preview function so that you can view several video sources at one channel from Web.

The interface is shown as in Figure 5-78.

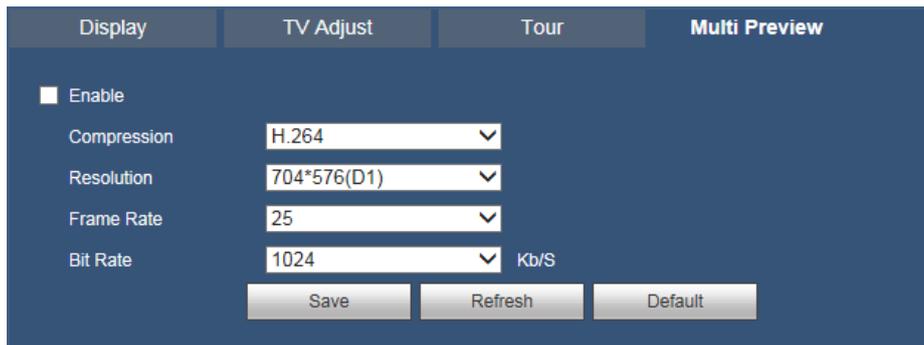


Figure 5-78

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	This function is disabled by default. Select the checkbox here to enable this function so that you can control the multi preview function at the Web.
Compression	System default setup is H.264. You can set according to device capability.
Resolution	The resolution value may vary due to different device capabilities. Please select from the dropdown list.
Frame Rate	The frame rate value may vary due to different device capabilities. Please select from the dropdown list.
Bit Rate	The default setup is 1024Kb/S. The bit rate value may vary due to different device capabilities and frame rate setups. Please select from the dropdown list.

5.10.5.3 Video Matrix

The interface is shown as in Figure 5-79.

Here you can set video output channel and interval.

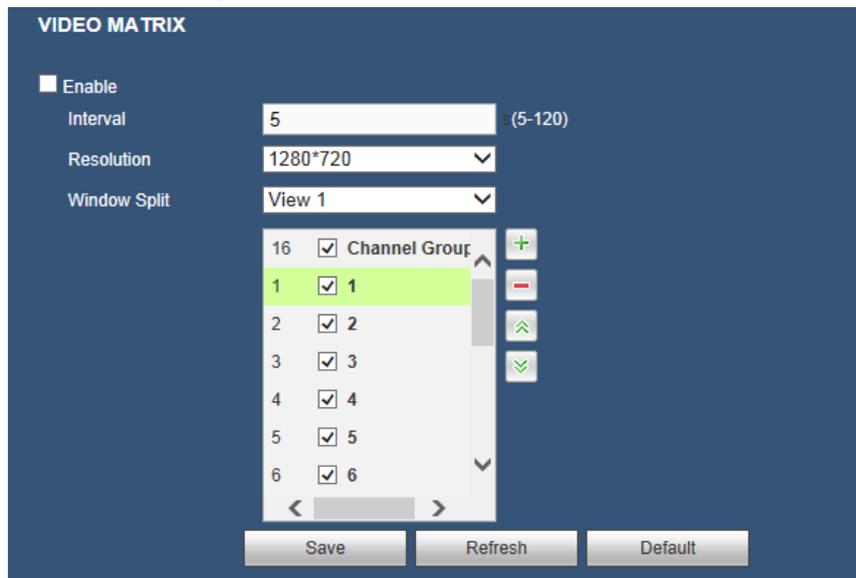


Figure 5-79

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Check the box here to enable this function.
Interval	It is to set the interval from current channel group to the next channel group.
Window Split	Support 1/4/9/16-window split.
Delete	Select a channel group and then click  to delete it.
Up/Down	Click  or  to adjust channel tour sequence.

Add Channel Group

Click , you can see system pops up the following dialogue box. See Figure 5-80.

Please select the channels and then click Save button.



Figure 5-80

Delete Channel group

Select a channel group and then click , you can delete it.

Modify Channel Group

Select a channel group and then double click, you can see the following interface. See Figure 5-81. You can change the setup and then click Save button.



Figure 5-81

Adjust Channel Group Sequence

Click  or  to change channel sequence.

5.10.5.4 RS232 (CJ-HDR416A only)

The RS232 interface is shown as in Figure 5-82.

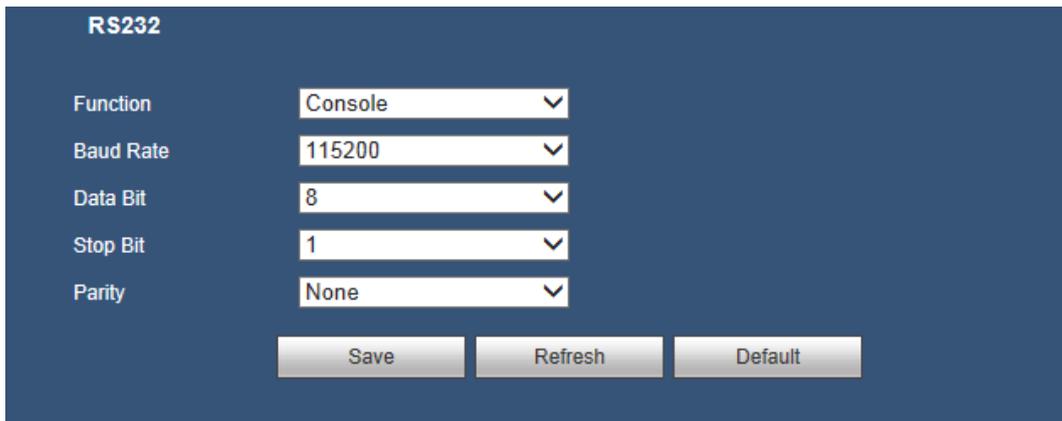


Figure 5-82

Please refer to the following sheet for detailed information.

Parameter	Function
Function	Select the corresponding dome protocol. Default setup is Console.
Baud Rate	Select the baud rate. Default setup is 115200.
Data Bit	The value ranges from 5 to 8. Default setup is 8.
Stop bit	There are three options: 1 / 1.5 / 2. Default setup is 1.
Parity	There are five options: None/Odd/Even/Mark/Space. Default setup is None.

5.10.5.5 PTZ

The PTZ interface is shown as in Figure 5-83.

Before setup, please check the following connections are right:

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

Click Save button after you complete setup, you can go back to the monitor interface to control speed dome.

The screenshot shows a configuration window titled "PAN/TILT/ZOOM". It contains the following fields and buttons:

Channel	1
Control Mode	HDCVI
Protocol	HD-CVI
Address	1
Baud Rate	9600
Data Bit	8
Stop Bit	1
Parity	None

Buttons: Copy, Save, Refresh, Default

Figure 5-83

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Select speed dome connected channel.
Control Mode	You can select control mode from the dropdown list. There are two options: Serial/HDCVI. For HDCVI series product, please select HDCVI. The control signal is sent to the PTZ via the coaxial cable. For the serial mode, the control signal is sent to the PTZ via the RS485 port.
Protocol	Please select protocol from the dropdown list.
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you cannot control the speed dome.
Baud Rate	Select the dome baud rate. Default setup is 9600.
Data Bit	Default setup is 8. Please set according to the speed dome dial switch setup.
Stop Bit	Default setup is 1. Please set according to the speed dome dial switch setup.
Parity	Default setup is none. Please set according to the speed dome dial switch setup.

5.10.5.6 Account

Note

- For the user name, the string max length is 31-byte, and for the user group, the string max length is 15-byte. The user name can only contain English letters, numbers and “_”、“@”、“.”.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. The user authorities shall be smaller than group authorities (The **admin** user authorities are set by default).
- For group or user management, there are two levels: admin and user. The user name shall be unique and one user shall only belong to one group.

5.10.5.6.1 User

From main window -> SETUP -> SYSTEM -> ACCOUNT, enter account interface. See Figure 5-84.



Figure 5-84

Add User

It is to add a name to group and set the user rights.

Step 1 Click Add User button.

Enter Add User interface. See Figure 5-85.

Step 2 Here you can input the user name and password and then select one group for current user.

Figure 5-85

Step 3 Click the Set button after the period. It is to set valid period to use current account. See Figure 5-86.

Figure 5-86

- Click Set to set the periods. Or you can draw on the interface directly. There are six periods in one day. Or you can input start time and end time directly.
- Check the box before the date, the settings are for the selected date(s).
- Check the box before the Period 1-6. It is to enable the period function.

Step 4 Click Save to complete the setup.

Note

Please note the user rights shall not exceed the group right setup. For convenient setup, please make sure the general user has the lower rights setup than the admin.

Modify User

It is to modify the user property, belonging group, password and rights. See Figure 5-87.

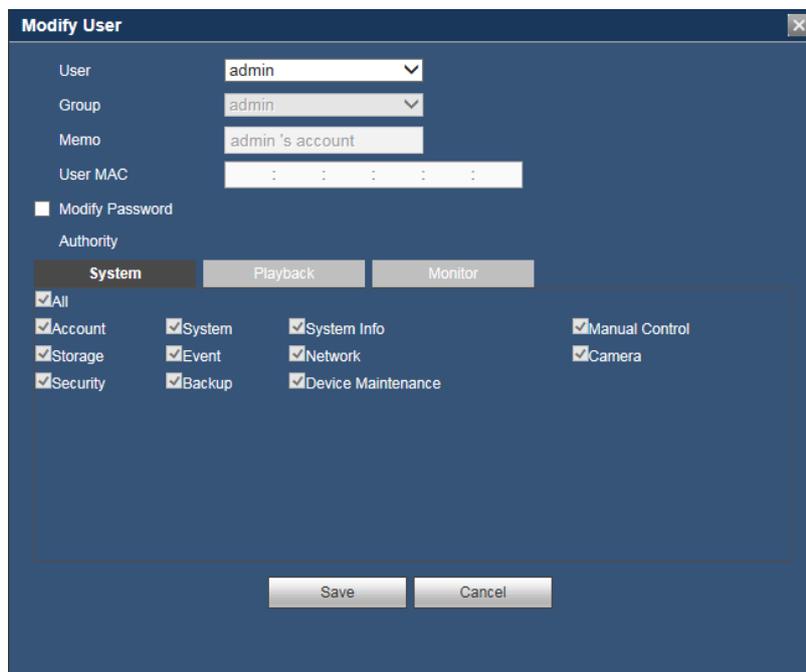


Figure 5-87

Modify Password

It is to modify the user password.

Step 1 In Modify User interface, click Modify Password box. See Figure 5-88.

Figure 5-88

- Step 2 Input old password, and then input new password and confirm.
 Step 3 Click Save button.

Note

The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “”, “””, “,””, “.””, “&”) . The password shall contain at least two categories. Usually we recommend the strong password.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. We also recommend you change your password periodically especially in the high security system.

5.10.5.6.2 Group

It is to add/remove group, modify group password and etc.

From main window -> SETUP -> SYSTEM -> ACCOUNT, click Group tab, the interface is shown as in Figure 5-89.

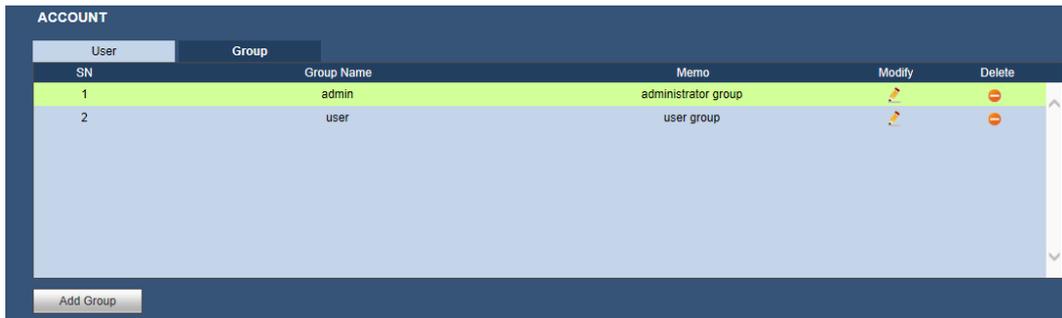


Figure 5-89

Add Group

It is to add group and set its corresponding rights.

Step 1 Click Add Group button. Enter Add Group interface. See Figure 5-90.

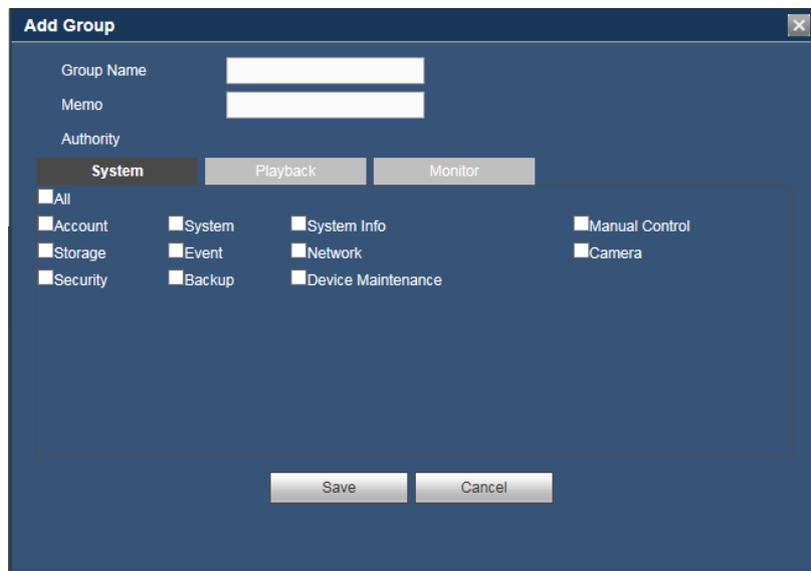


Figure 5-90

Step 2 Input the group name and then check the box to select the corresponding rights.

It includes: System, Playback and Monitor.

Step 3 Click Save button.

Modify Group

Step 1 Select a group and then click . See Figure 5-91.

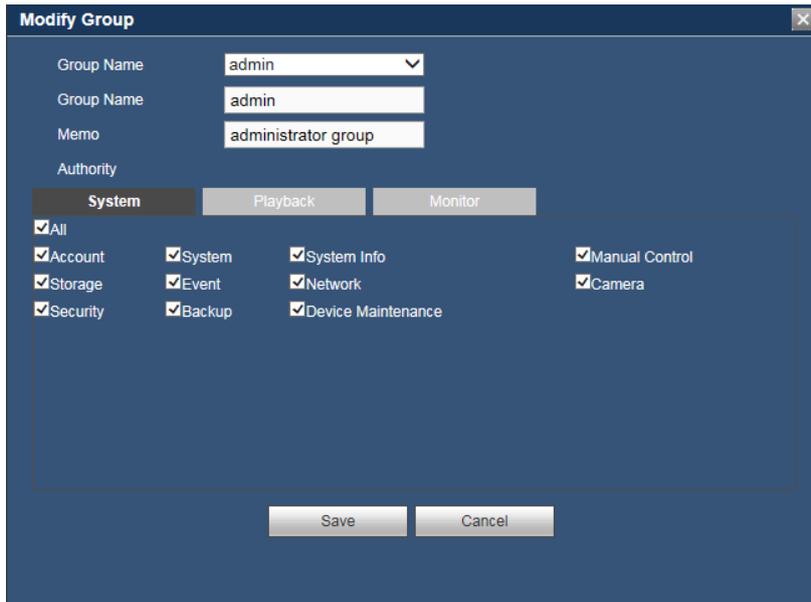


Figure 5-91

Step 2 Change corresponding information and then click Save button.

5.10.5.7 Auto Maintain

The Auto Maintain interface is shown as in Figure 5-92.

Click Manual Reboot button, you can restart device manually.

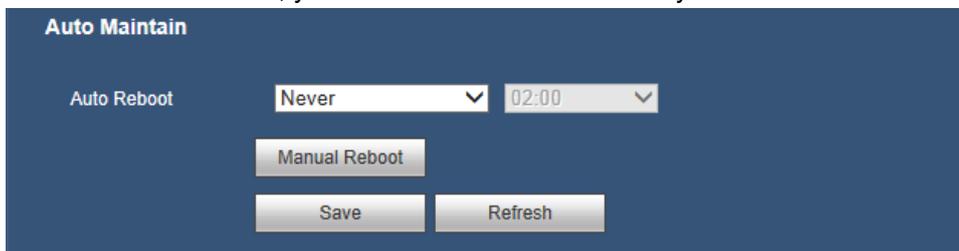


Figure 5-92

5.10.5.8 Import/Export

The interface is shown as in Figure 5-93.



Figure 5-93

Please refer to the following sheet for detailed information.

Parameter	Function
Import	It is to import the local setup files to the system.
Export	It is to export the corresponding Web setup to your local PC.

5.10.5.9 Default

Note

This function is for admin user only.

The default setup interface is shown as in Figure 5-94.

Here you can select Camera/Network/Event/Storage/System. Or you can select the Select All box to select all items.

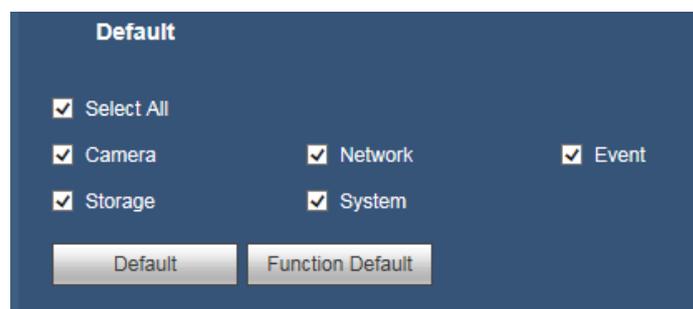


Figure 5-94

5.10.5.10 Upgrade

CAUTION

- During the upgrade process, do not unplug the power cable, network cable, or shutdown the device.
- Improper upgrade program may result in device malfunction!

The System Upgrade interface is shown as in Figure 5-95.

Please select the upgrade file and then click the Upgrade button to begin upgrade. Please note the file name shall be as *.bin.



Figure 5-95

5.11 Info

5.11.1 Version

The Version interface is shown as in Figure 5-96.

Here you can view device type, record channel, alarm input/output information, serial number, software version, release date and etc. Please note the following information is for reference only.

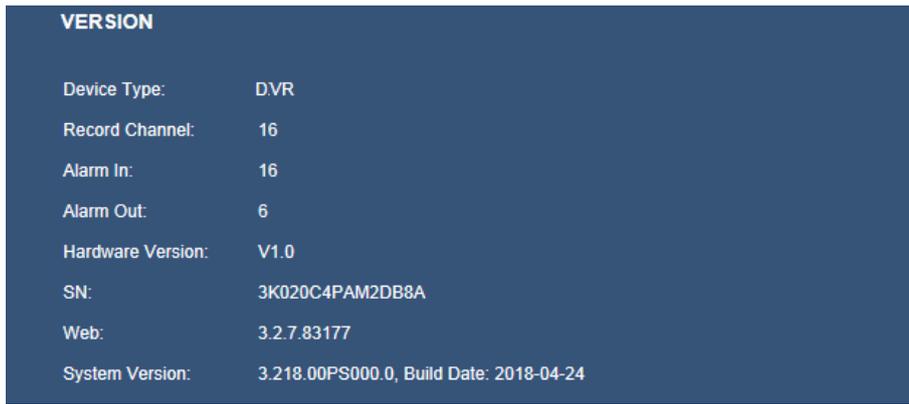


Figure 5-96

5.11.2 Log

Here you can view system log. See Figure 5-97.

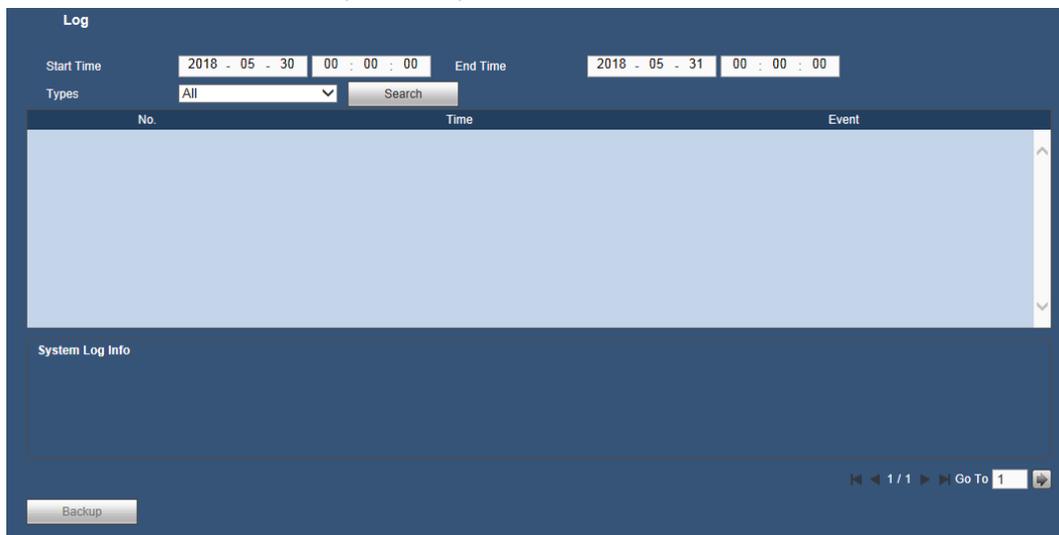


Figure 5-97

Please refer to the following sheet for log parameter information.

Parameter	Function
Start Time	Set the start time of the requested log.
End Time	Set the end time of the requested log.
Types	Log types include: All, System, Config Operation, Storage, Alarm, Record Operation, Account, Clear Log and Playback.
Search	You can select log type from the drop down list and then click Search button to view the list.
Detailed information	You can select one item to view the detailed information.
Backup	You can click this button to backup log files to current PC.

5.11.3 Online User

The Online User interface is shown as in Figure 5-98.

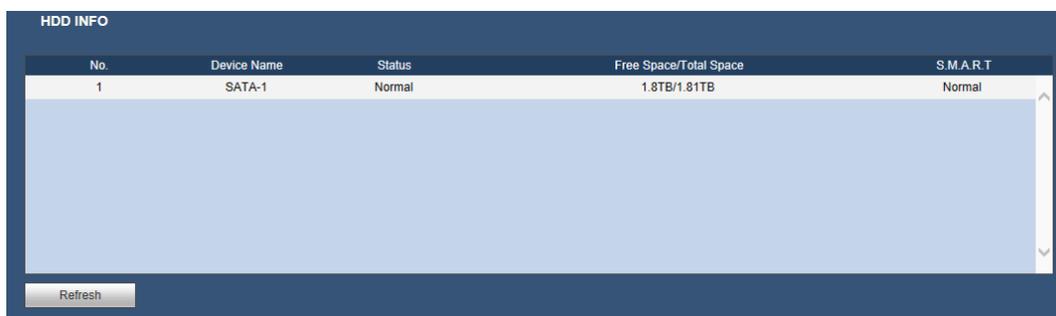


No.	User Name	Group Name	IP Address	User Login Time
1	admin	admin	192.168.0.190	2018-05-30 13:29:27

Figure 5-98

5.11.4 HDD Info

The HDD Info interface is shown as in Figure 5-99. Here you can view HDD information.



No.	Device Name	Status	Free Space/Total Space	S.M.A.R.T
1	SATA-1	Normal	1.8TB/1.81TB	Normal

Figure 5-99

5.12 Playback

Click PLAYBACK button, you can see an interface is shown as in Figure 5-100.

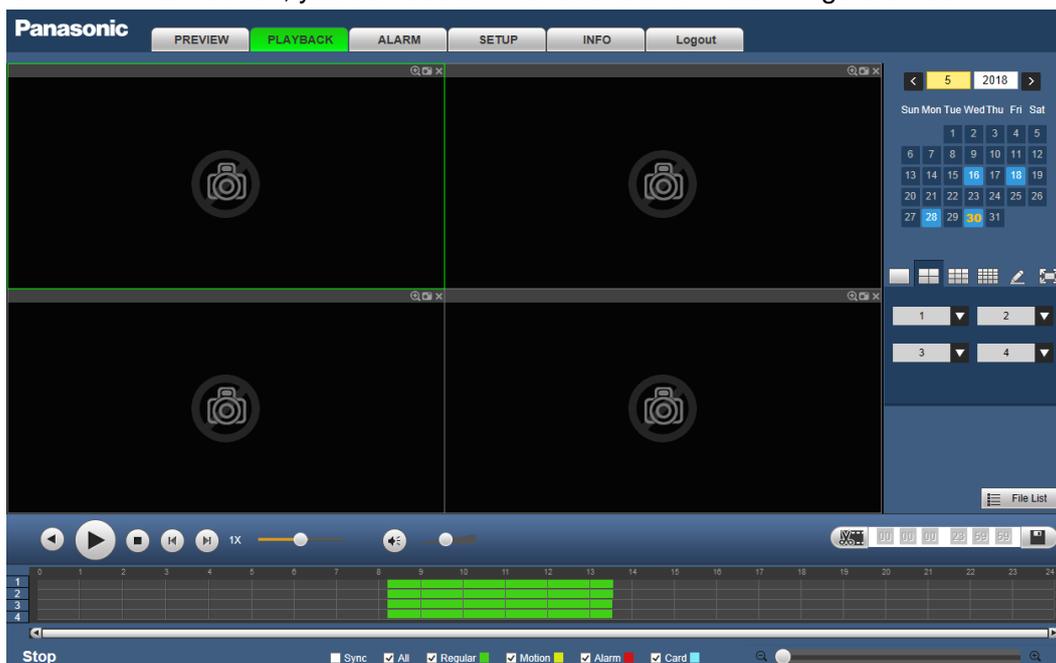


Figure 5-100

5.12.1 Playback Record

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

- Select Date

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

- Window Split

Select window split mode. Click  to display in full screen. Click ESC button to exit.

See Figure 5-101.



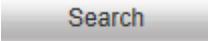
Figure 5-101

- Customized Playback

Click , you can see the following interface. See Figure 5-102.



Figure 5-102

Now you can select one or more channel(s) and then click  to search record(s).

System supports one or more channels. The window split mode can auto adjust according to the channel amount. System max supports 16-split.

Click  button to select all channels at the same time.

Click , system begins playback.

- Select Channel

1~n (n depends on your product channel amount) means main stream and 1(Sub)~n(Sub) (n depends on your product channel amount) means sub stream.

- Select Record Type

Select the corresponding box to select record type. See Figure 5-103.



Figure 5-103

5.12.2 File List

Click File List button, you can see the corresponding file(s) in the list. See Figure 5-104.

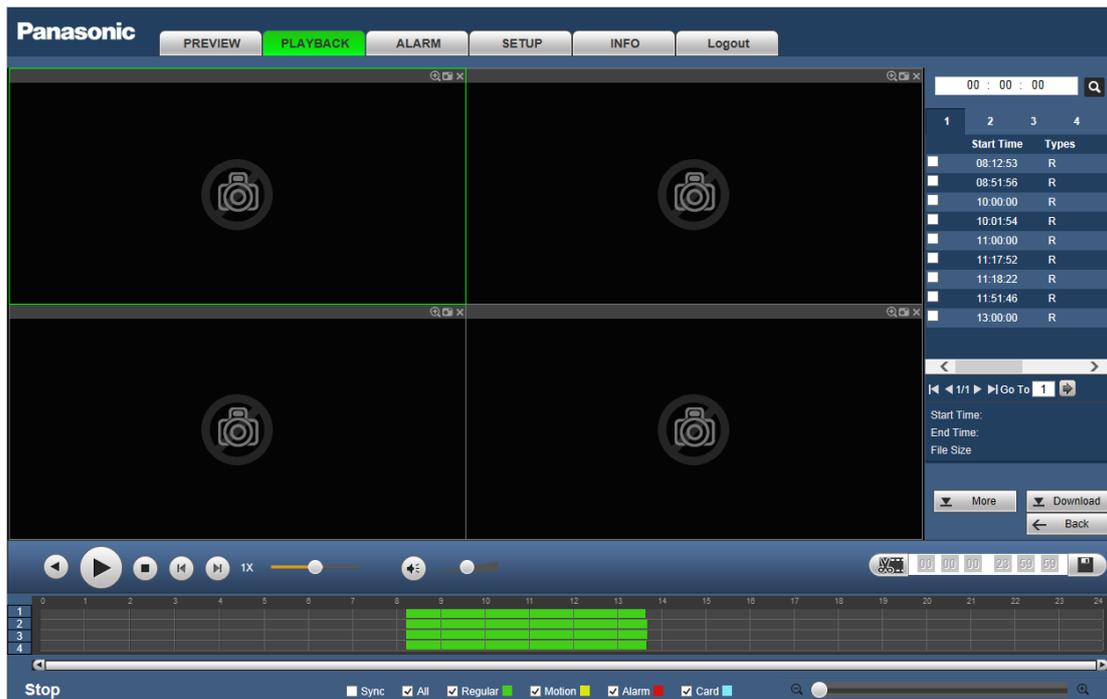


Figure 5-104

5.12.3 Playback

Select a file you want to play and then double click on the selected file for system begin playback. You can select to playback in full-screen. Please note for one channel, system cannot playback and download at the same time. You can use the playback control bar to implement various operations such as play, pause, stop, slow play, fast play and etc. See Figure 5-105.

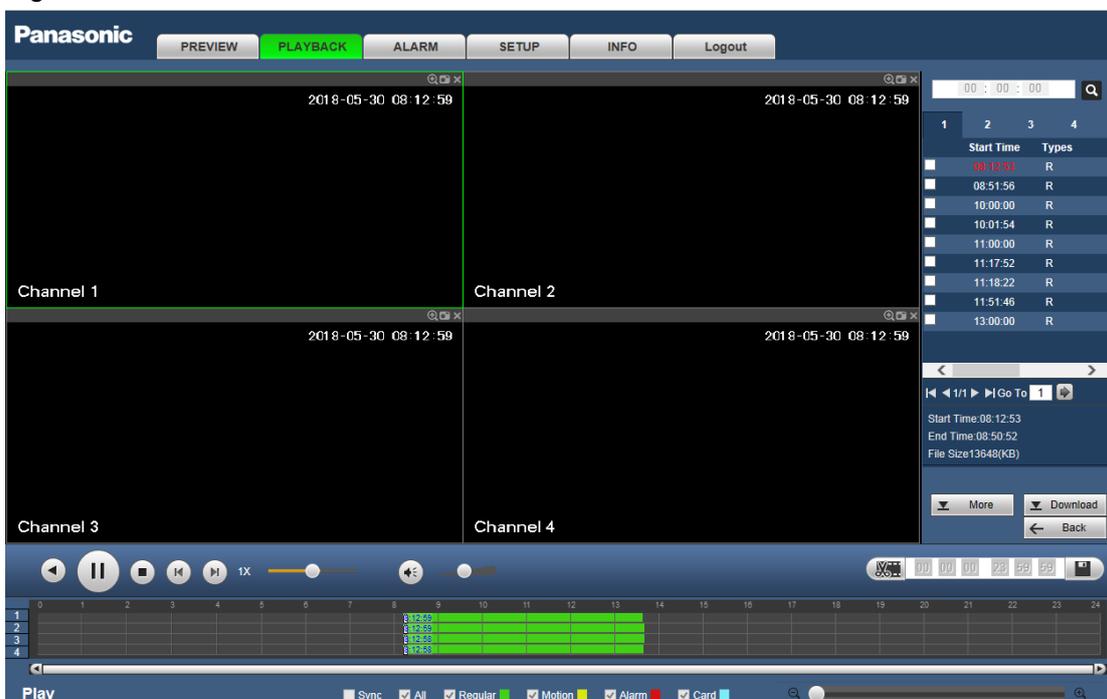


Figure 5-105

5.12.4 Download

Select the file(s) you want to download and then click Download button, you can see an interface shown as in Figure 5-106. The Download button becomes Stop button and there is a process bar for your reference. Please go to you default file saved path to view the files.

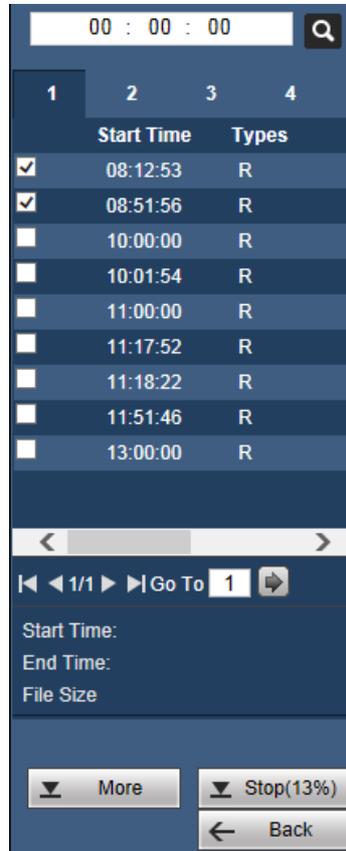


Figure 5-106

5.12.5 Load More

It is for you to search record or picture. You can select record channel, record type and record time to download.

5.12.5.1 Download By File

Select channel, type, bit stream type and then input start time and end time. Click Search button, the download by file interface is shown as in Figure 5-107.

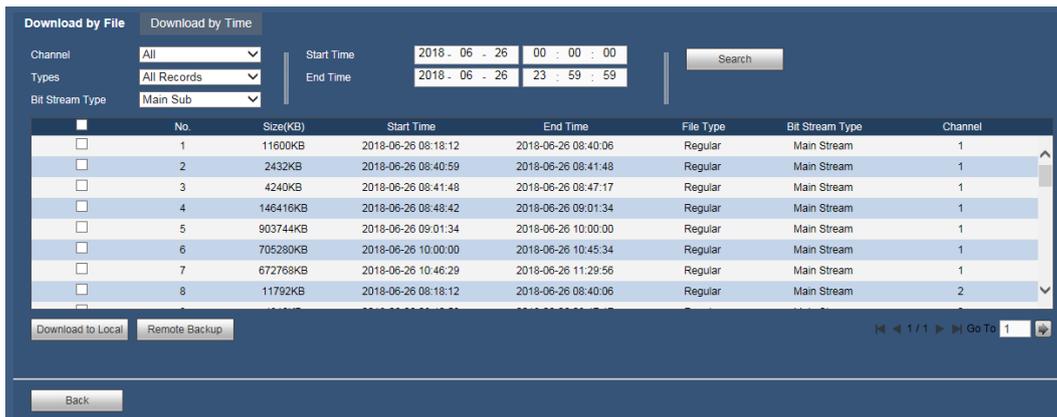


Figure 5-107

Check the file(s) you want to download and there are two options for you to save the file(s).

- Download to Local

Click Download to local, system pops up the following interface for you to set record format and saved path. See Figure 5-108.

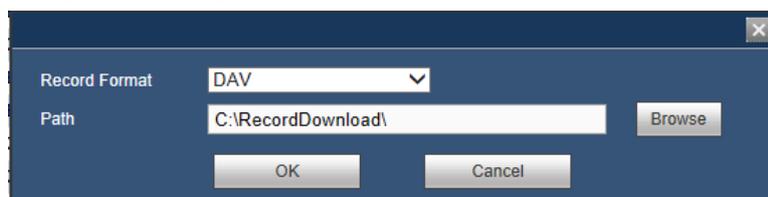


Figure 5-108

You can click OK to download and view the download process. After the download operation, you can see corresponding dialogue box.

- Remote Backup

Connect the corresponding peripheral device, and then click Remote Backup button, you can see the following interface. See Figure 5-109.

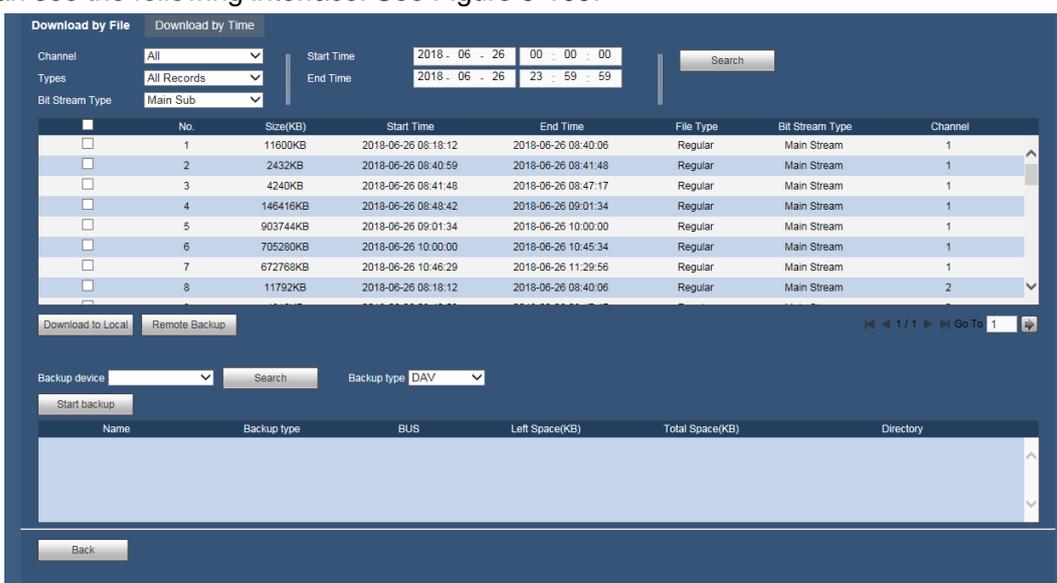


Figure 5-109

Select Backup device and backup type first and then click Start backup button. After the download operation, you can see corresponding dialogue box.

5.12.5.2 Download by Time

Select channel, bit stream type, start time and end time.

Click Download to Local button, you can see download by time interface is shown as in Figure 5-110.

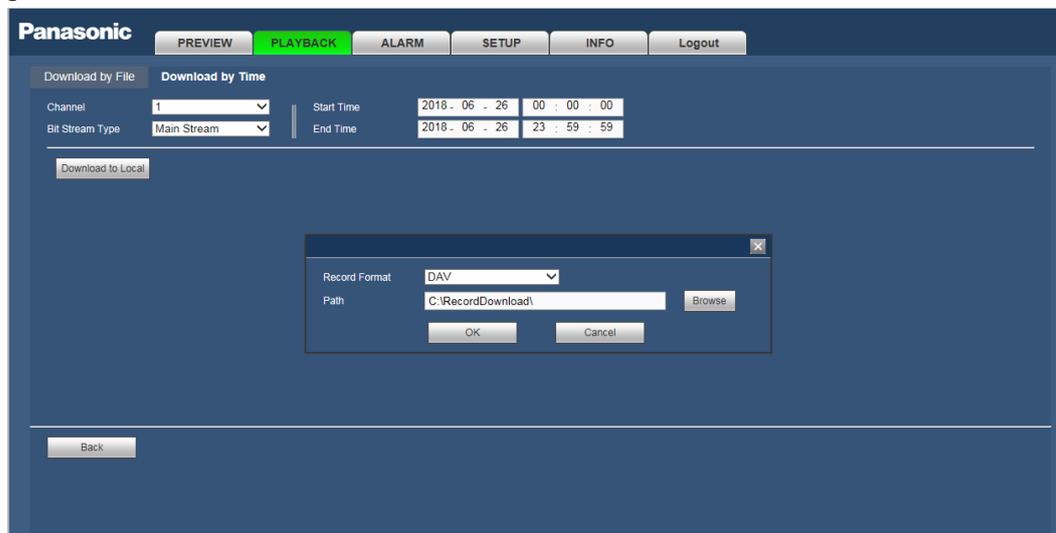


Figure 5-110

Set record format and saved path, you can click OK to download and view the download process. After the download operation, you can see corresponding dialogue box.

5.13 Alarm

Click Alarm function, you can see an interface is shown as Figure 5-111.

Here you can set device alarm type and alarm sound setup (Please make sure you have enabled audio function of corresponding alarm events.).

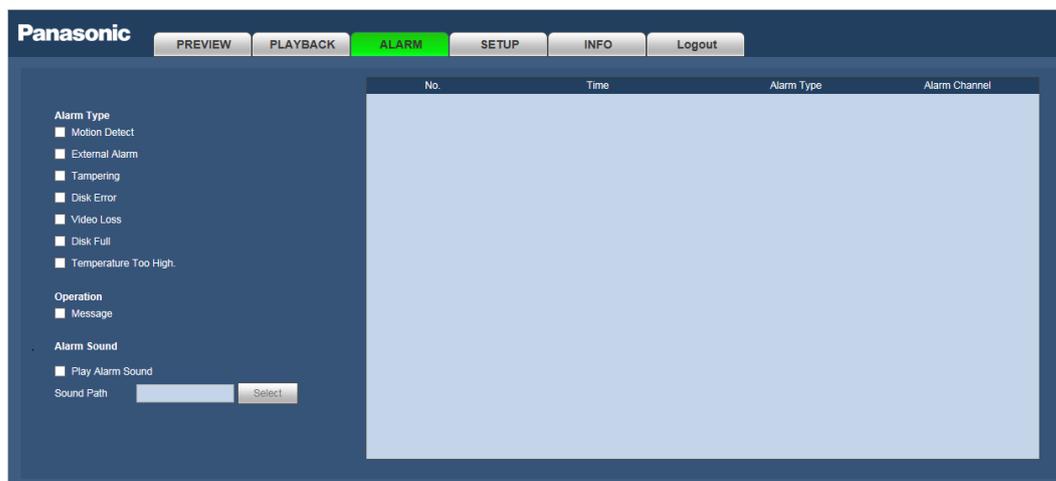


Figure 5-111

Please refer to the following sheet for detailed information.

Type	Parameter	Function
Alarm Type	Motion Detect	System alarms when motion detection alarm occurs.
	External Alarm (CJ-HDR416A only)	Alarm input device sends out alarm.
	Tampering	System alarms when camera is viciously masking.
	Disk Error	System alarms when disk error occurs.
	Video Loss	System alarms when video loss occurs.
	Disk Full	System alarms when disk is full.
	Temperature Too High	System alarms when temperature is too high.
Operation	Message	Select the checkbox here, system can automatically pops up an alarm icon on the Alarm button in the main interface when there is an alarm.
Alarm Sound	Play Alarm Sound	System sends out alarm sound when an alarm occurs. You can specify as you wish.
	Sound Path	Here you can specify alarm sound file.

5.14 Logout

Click Logout button, system goes back to log in interface. See Figure 5-112.

Input user name and password to login again.

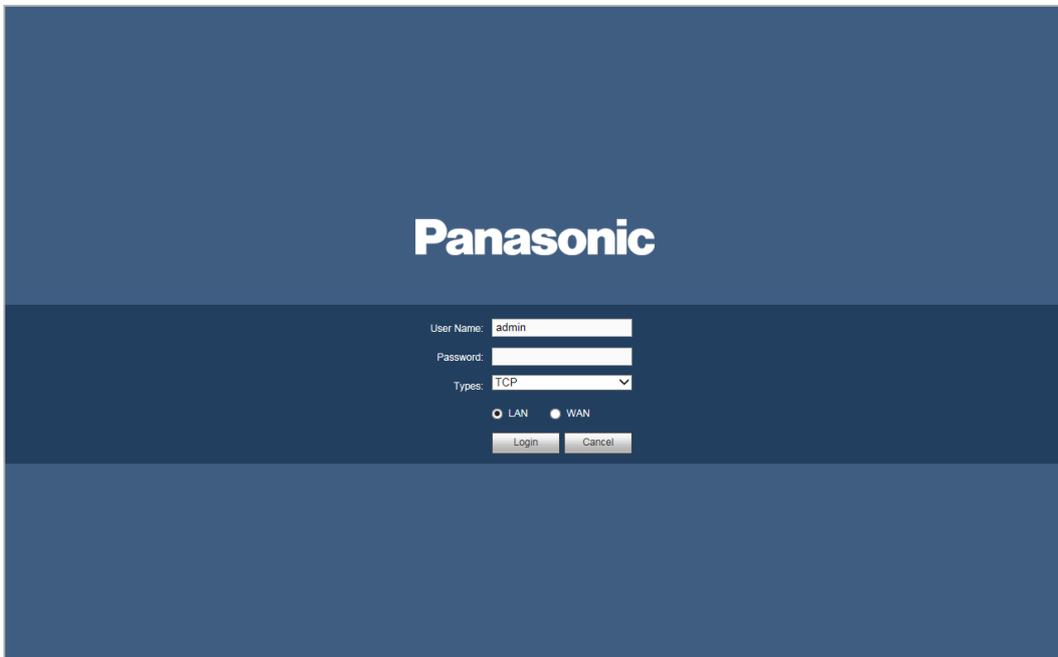


Figure 5-112

5.15 Un-install Web Control

You can go to “C:\Program Files (x86)\webrec\WEB30\WebView_L” and run un-installation tool, “uninst.exe” to un-install web control.

Please note, before you un-install, please close all web pages, otherwise the un-installation might result in error.

6 FAQ

1. DVR cannot boot up properly.

There are following possibilities:

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

2. How to restore factory default setup even I cannot login the user interface.

There are following possibilities:

- Please use the reset button to restore factory default setup. Please shut down the device, remove the top cover and front panel. Go to the mainboard and find the  button. Press , then boot up while pressing the button for 5 to 10 seconds. Device automatically restoring factory default setup and then reboot.

Note

Please make sure you purchased device has the reset button on the mainboard.

3. DVR often automatically shuts down or stops running.

There are following possibilities:

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

4. System cannot detect hard disk.

There are following possibilities:

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

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

There are following possibilities:

- Program is not compatible. Please upgrade to the latest version.

- Brightness is 0. Please restore factory default setup.
- There is no video input signal or it is too weak.
- Check privacy mask setup or your screen saver.
- DVR hardware malfunctions.

6. Real-time video color is distorted.

There are following possibilities:

- When using BNC output, NTSC and PAL setup is not correct. The real-time video becomes black and white.
- 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.

7. Cannot search local records.

There are following possibilities:

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

8. Video is distorted when searching local records.

There are following possibilities:

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

9. There is no audio when monitor.

There are following possibilities:

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

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

There are following possibilities:

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

11. Time display is not correct.

There are following possibilities:

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

12. DVR cannot control PTZ.

There are following possibilities:

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

13. Motion detection function does not work.

There are following possibilities:

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

14. Cannot log in client-end or web.

There are following possibilities:

- For Windows 98 or Windows ME user, please update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Please note right now, our 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.

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

There are following possibilities:

- Network fluency is not good.
- Client-end resources are limit.

- There is multiple-cast group setup in 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.

16. Network connection is not stable.

There are following possibilities:

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

17. Burn error/USB back error.

There are following possibilities:

- 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.
- Backup device must not have password/encryption protected.

18. Keyboard cannot control DVR.

There are following possibilities:

- 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.

19. Alarm signal cannot be disarmed.

There are following possibilities:

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

20. Alarm function is null.

There are following possibilities:

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

21. Record storage period is not enough.

There are following possibilities:

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

22. Cannot playback the downloaded file.

There are following possibilities:

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

23. Forget 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.

24. When I login via HTTPS, a dialogue says the certificate for this website is for other address.

Please follow chapter 5.10.2.3.1 to create server certificate.

25. When I login via HTTPS, a dialogue says the certificate is not trusted.

Please follow chapter 5.10.2.3.2 to download root certificate.

26. When I login via HTTPS, a dialogue says the certificate has expired or is not valid yet.

Please make sure your PC time is the same as the device time.

27. I connect the general analog camera to the device, there is no video output.

There are following possibilities:

- Check camera power supplying, data cable connection and etc.
- This series device does not support the analog camera of all brands. Please make sure the device supports general standard definition analog camera.

28. I connect the standard definition analog camera or the HDCVI camera to the device, there is no video output.

There are following possibilities:

- Check camera power supplying, or camera data cable connection.
- For the product supports analog standard definition camera/HD camera, you need to go to the MAIN MENU -> SETTING -> CAMERA -> Channel type to select corresponding channel type and then restart the DVR.

29. DDNS registration failed or cannot access the device domain name.

There are following possibilities:

- Check the device is connected to the WAN. If there is a router, please check the router to make sure the device IP is online.
- Check the corresponding protocol of the DDNS is enabled. Check the DDNS function is OK or not.
- Check DNS setup is right or not. Default Google DNS server is 8.8.8.8, 8.8.5.5. You can use different DNS provided by your ISP.

30. I connect the standard definition camera to the device, there is no video output.

There are following possibilities:

- Check the DVR supports standard definition signal or not. Only some series product supports analog standard definition signal, HDCVI signal input.
- Check channel type is right or not. For the product supports analog standard definition camera/HD camera, you need to go to the Main Menu -> SETTING -> CAMERA -> CHANNEL TYPE to select corresponding channel type (such as analog) and then restart the DVR. In this way, the DVR can recognize the analog standard definition.
- Check camera power supplying, or camera data cable connection.

Daily Maintenance

- Please use the brush to clean the board, socket connector and the chassis regularly.
- The device shall be soundly earthed in case there is audio/video disturbance. Keep the device away from the static voltage or induced voltage.
- Please unplug the power cable before you remove the audio/video signal cable, RS232 or RS485 cable.
- Do not connect the TV to the local video output port (VOUT). It may result in 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 front panel 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.

Appendix A HDD Capacity Calculation

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

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

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

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

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

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

In the formula:

h_i means the recording time for each day (hour)

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

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

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

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

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

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

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

You can refer to the following sheet for the file size in one hour per channel. (All the data listed below are for reference only.)

Bit stream size (max)	File size	Bit stream size (max)	File size
96K	42M	128K	56M
160K	70M	192K	84M
224K	98M	256K	112M
320K	140M	384K	168M

448K	196M	512K	225M
640K	281M	768K	337M
896K	393M	1024K	450M
1280K	562M	1536K	675M
1792K	787M	2048K	900M

Appendix Earthing

1. What is the surge?

Surge is a short current or voltage change during a very short time. In the circuit, it lasts for microsecond. In a 220V circuit, the 5KV or 10KV voltage change during a very short time (about microseconds) can be called a surge. The surge comes from two ways: external surge and internal surge.

- The external surge: The external surge mainly comes from the thunder lightning. Or it comes from the voltage change during the on/off operation in the electric power cable.
- The internal surge: The research finds 88% of the surge from the low voltage comes from the internal of the building such as the air conditioning, elevator, electric welding, air compressor, water pump, power button, duplicating machine and other device of inductive load.

The lightning surge is far above the load level the PC or the micro devices can support. In most cases, the surge can result in electric device chip damage, PC error code, accelerating the part aging, data loss and etc. Even when a small 20 horsepower inductive engine boots up or stops, the surge can reach 3000V to 50000V, which can adversely affect the electronic devices that use the same distribution box.

To protect the device, you need to evaluate its environment, the lightning affection degree objectively. Because surge has close relationship with the voltage amplitude, frequency, network structure, device voltage-resistance, protection level, ground and etc. The thunder proof work shall be a systematic project, emphasizing the all-round protection (including building, transmission cable, device, ground and etc.). There shall be comprehensive management and the measures shall be scientific, reliable, practical and economic. Considering the high voltage during the inductive thundering, the International Electro-technical Committee (IEC) standard on the energy absorbing step by step theory and magnitude classification in the protection zone, you need to prepare multiple precaution levels.

You can use the lightning rod, lightning strap or the lightning net to reduce the damage to the building, personal injury or the property,

- The lightning protection device can be divided into three types:
Power lightning arrester: There are 220V single-phrase lightning arrester and 380V three-phrase lightening arrester (mainly in parallel connection, sometimes use series connection) You can parallel connect the power lightning arrester in the electric cable to reduce the short-time voltage change and release the surge current. From the BUS to the device, there are usually three levels so that system can reduce the voltage and release the current step by step to remove the thunderstorm energy and guarantee the device safety. You can select the replaceable module type, the terminal connection type and portable socket according to your requirement.

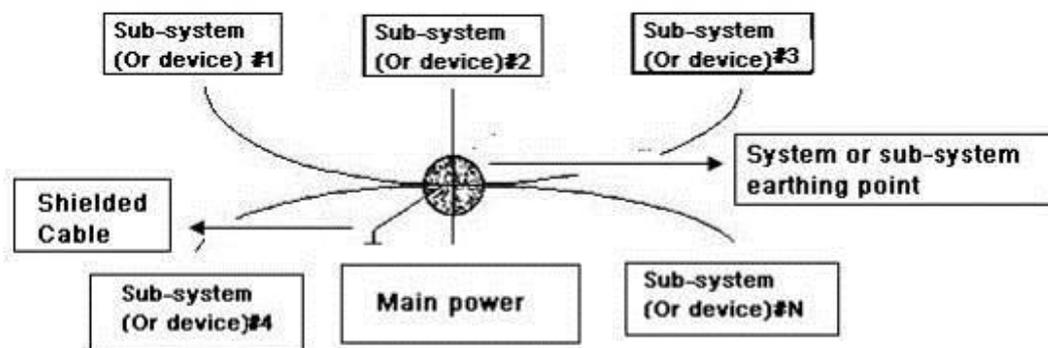
- Signal lightning arrester: This device is mainly used in the PC network, communication system. The connection type is serial connection. Once you connected the signal lightning arrester with the signal port, it can cut the channel of the thunderstorm to the device, and on the other hand, it can discharge the current to the ground to guarantee the device proper work. The signal lightning arrester has many specifications, and widely used in many devices such as telephone, network, analog communication, digital communication, cable TV and satellite antenna. For all the input port, especially those from the outdoor, you need to install the signal lightning arrester.
- Antenna feed cable lightning arrester: It is suitable for antenna system of the transmitter or the device system to receive the wireless signal. It uses the serial connection too.

Please note, when you select the lightning arrester, please pay attention to the port type and the earthing reliability. In some important environment, you need to use special shielded cable. Do not parallel connect the thunder proof ground cable with the ground cable of the lightning rod. Please make sure they are far enough and grounded respectively.

2. The earthing modes

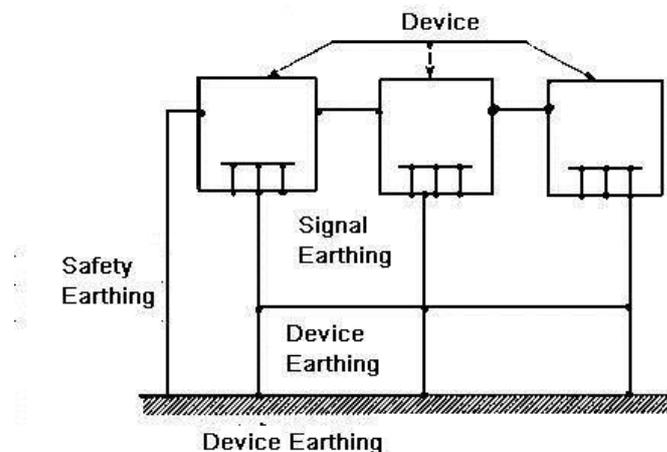
We all know the earthing is the most complicated technology in the electromagnetism compatibility design since there is no systematic theory or module. The earthing has many modes, but the selection depends on the system structure and performance. The following are some successfully experience from our past work.

One-point ground: In the following figure you can see there is a one-point ground. This connection provides common port to allow signal to be transmitted in many circuits. If there is no common port, the error signal transmission occurred. In the one-point ground mode, each circuit is just grounded only and they are connected at the same port. Since there is only one common port, there is no circuit and so, there is no interference.

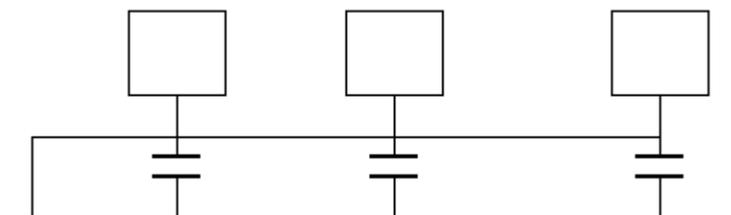


Multiple-point ground: In the following figure, you can see the internal circuit uses the chassis as the common point. While at the same time, all devices chassis use the earthing as the common port. In this connection, the ground structure can provide the lower ground resistance because when there are multiple-point grounds; each ground cable is as short as possible. And the parallel cable connection can reduce the total

conductance of the ground conductor. In the high-frequency circuit, you need to use the multiple-point ground mode and each cable needs to connect to the the ground. The length shall be less than the 1/20 of the signal wavelength.



Mixed ground: The mixed ground consists of the feature of the one-point ground and multiple-point ground. For example, the power in the system needs to use the one-point ground mode while the radio frequency signal requires the multiple-point ground. So, you can use the following figure to earth. For the direct current (DC), the capacitance is open circuit and the circuit is one-point ground. For the radio frequency signal, the capacitance is conductive and the circuit adopts multiple-point ground.



When connecting devices of huge size (the device physical dimension and connection cable is big comparing with the wave path of existed interference), then there are possibility of interference when the current goes through the chassis and cable. In this situation, the interference circuit path usually lies in the system ground circuit.

When considering the earthing, you need to think about two aspects: The first is the system compatibility, and the other is the external interference coupling into the earth circuit, which results in system error. For the external interference is not regular, it is not easy to resolve.

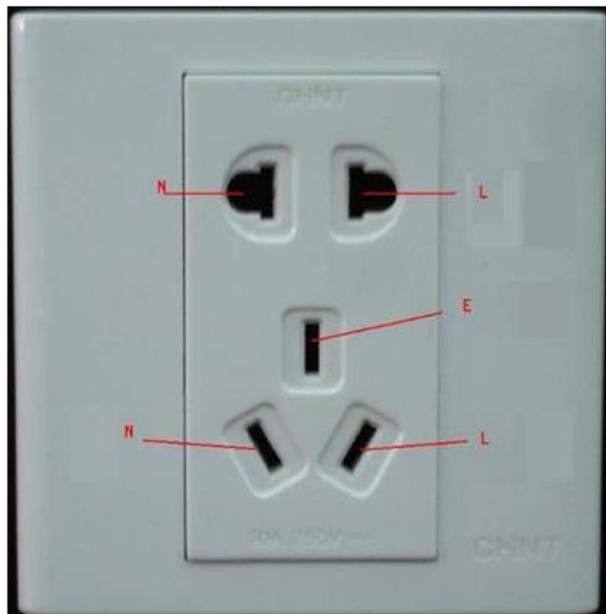
3. Thunder proof ground method in the monitor system

- The monitor system shall have sound thunder proof earthing to guarantee personnel safety and device safety.
- The monitor system working ground resistance shall be less than 1Ω.

- The thunder proof ground shall adopt the special ground cable from the monitor control room to the ground object. The ground cable adopts copper insulation cable or wire and its ground section shall be more than 20mm².
- The ground cable of the monitor system cannot short circuit or mixed connected with the strong alternative current cable.
- For all the ground cables from the control room to the monitor system or ground cable of other monitor devices, please use the copper resistance soft cable and its section shall be more than 4mm².
- The monitor system usually can adopt the one-point ground.
- Please connect the ground end of 3-pin socket in the monitor system to the ground port of the system (protection ground cable)

4. The shortcut way to check the electric system using the digital multimeter

For 220V AC socket, from the top to the bottom, E (ground cable), N (neutral cable), L(live cable). Please refer to the following figure.



There is a shortcut way to check these three cables connection are standard or not (not the accurate check).

Importance

In the following operations, the multimeter range shall be at 750V!

For E (earth cable)

Turn the digital multimeter to 750V AC, use your one hand to hold the metal end, and then the other hand insert the pen to the E port of the socket. See the following figure. If the multimeter shows 0, then you can see current earth cable connection is standard. If the value is more than 10, then you can see there is inductive current and the earth cable connection is not proper.



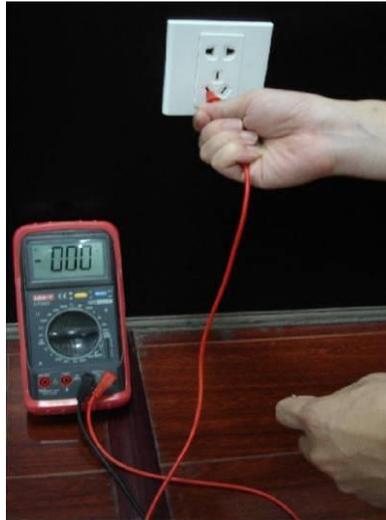
For L (live cable)

Turn the digital multimeter to 750V AC, use your one hand to hold the metal end, and then the other hand insert the pen to the L port of the socket. See the following figure. If the multimeter shows 120, then you can see current live cable connection is standard. If the value is less than 60, then you can see current live cable connection is not proper or it is not the live cable at all.



For N (Neutral cable)

Turn the digital multimeter to 750V AC, use your one hand to hold the metal end, and then the other hand insert the pen to the N port of the socket. See the following figure. If the multimeter shows 0, then you can see current N cable connection is standard. If the value is more than 10, then you can see there is inductive current and the neutral cable connection is not proper. If the value is 120, then you can know misconnected the neutral cable to the live cable.



Note

- **This manual is for reference only. Slight difference may be found in the user interface.**
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