# HD Analog Recorder
# User's Manual

Model No. CJ-HDR104

CJ-HDR108

**Version 1.0.4**

# Table of Contents

# 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 DVR features and functions, as well as a detailed menu tree.

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

# Important Safeguards and Warnings

### 1．Electrical safety

All installation and operation here should conform to your local electrical safety codes.
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.
This series product shall be transported, storage and used in the specified environments.

### 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!

# 1 FEATURES AND SPECIFICATIONS

## 1.1 Overview

This series product is an excellent digital monitor product designed for security field. It adopts embedded Linux OS to maintain reliable operation. It is easy to use and can realize surveillance function after some simple setups. 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 security network to realize strong network and remote monitor function. It can realize HD monitor without changing current cable layout

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 monitor**

It has analog output port, VGA port and HDMI port. You can use monitor or displayer to realize surveillance function.

System supports VGA/HDMI output at the same time.

- **Storage function**

Special data format to guarantee data security and can avoid 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 flash 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 specified zone enlargement.

- **Network operation**

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

- **Alarm activation function**

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 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.

- **PTZ control**

Support PTZ decoder via RS485.
Support various decode protocols to allow the PTZ to control the speed dome.

- **Intelligent operation**

Mouse operation function
In the menu, support copy and paste setup function

- **UPnP**

It is to establish the mapping relationship between the LAN and the WAN via the UPnP protocol.

**Slight function differences may be found due to different series.**

## 1.3  Specifications

### 1.3.1  CJ-HDR104 / CJ-HDR108

| Model | | CJ-HDR104 | CJ-HDR108 |
|---|---|---|---|
| **Video / Audio IF** | | | |
| Video Input | | 4 CH, BNC | 8 CH, BNC |
| Type | HDCVI | 720p/ 1080p HDCVI | |
| | Analog | NTSC/PAL | |
| Video Output | | 1 HDMI, 1 VGA | |
| Audio Input | | 1 CH, RCA | |
| Audio Output | | 1 CH, RCA | |
| Two-way Talk | | Reuse audio input/output CH1 | |
| **Display** | | | |
| Output Resolution | | 1920×1080, 1280×1024, 1280×720, 1024×768 | |
| Multiscreen Mode | | 1/4 | 1/4/8/9 |
| 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.711 | |
| Record Rate* | Main Stream | 1080P (1~12/15fps)/ 720P/ 960H/ D1 (1~25/30fps) |
| | Extra Stream | CIF/ QCIF (1~25/30fps), D1 (1~12/15fps) |
| Bit Rate | 96~4096Kb/s | |
| Record Mode | Manual, Schedule(Regular(Continuous), MD), Stop | |
| Record Interval | 1~60 min (default: 60 min), Pre-record: 1~30 sec, Post-record: 10~300 sec | |
| **Alarm /Event** | | |
| Trigger Events | Recording, PTZ, Tour, Video Push, Email, FTP, Snapshot, Buzzer & Screen tips | |
| Video Detection | Motion Detection, MD Zones: 396(22×18), Video Loss & Camera Blank | |
| **Playback & Backup** | | |
| Sync Playback | 1/4 | 1/4/9 |
| Search Mode | Time/Date, MD & 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 | |
| Backup Mode | USB Device/Network | |
| **Network** | | |
| Network Interface | RJ-45 port (10/100M) | |
| Network Functions | HTTP, IPv4/IPv6, TCP/IP, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, SNMP, P2P | |
| Max. User Access | 128 users | |
| Mobile Device | iPhone, iPad, Android | |
| **HDD** | | |
| Type | 1 SATA port, up to 6TB | |
| **External Interface** | | |
| USB Interface | 2 ports(1 Rear), USB2.0 | |
| RS485 Camera Interface | 1 port, For PTZ Control | |
| **General Specifications** | | |
| Power Supply | DC12V/4A | |
| Power Consumption | 10W (without HDD) | |
| Working Environment | -10°C~+55°C / 10%~90%RH / 86~106kpa | |
| Dimension(W×D×H) | Mini 1U, 325mm×255mm×55mm | |
| Weight | 1.5KG (without HDD) | |

*- Auto Reboot (once a week)*

*-Recording rate of CH 1 or CH 5 set at 1080p (16~25/30fps), will only allow*

*the other channels to record at 1080P (1~7fps) or 720p (1~15fps).*

# 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-HDR104 / CJ-HDR108
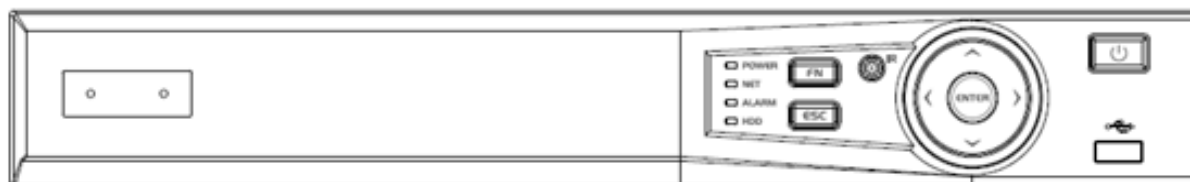
The front panel is shown as below. See Figure 2-1.



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<br>Down | ▲/▼ | • Activate current controls, and then move up, move down or jump.<br>• Change setup, increase/decrease numeral.<br>• Assistant function such as PTZ menu.<br>• Switch channel when playback. |
| Left<br>Right | ◄/► | • Switch current activated controls, move up and down.<br>• When device is in 1-channel playback mode, use it to control playback control bar process. |
| Cancel | ESC | • Go to previous menu, or cancel current operation (Close the top interface or controls).<br>• When playback, click it to restore real-time monitor mode. |
| Confirm | ENTER | • Confirm current operation<br>• Go to default button<br>• Go to the menu. |
| Assistant | FN | • One-window monitor mode, click this button to display assistant function: PTZ control and image color.<br>• In menu control interface click to switch PTZ control menu.<br>• In motion detection setup, working with Fn and direction keys to realize setup.<br>• Backspace function: in numeral control or text control, press it for 1.5seconds to delete the previous character before the cursor.<br>• In HDD information interface, click to switch HDD record time and other information.<br>• Realize other special functions. |
| Power indicator | POWER | Light turns on when power connection is OK. |

| Name | Icon | Function |
|------|------|----------|
| Network indicatior | NET | Light turns on when network connection is abnormal. |
| Alarm indicator | ALARM | Light turns on when alarm occurs. |
| HDD indicator | HDD | HDD error occurs or HDD capacity is below specified threshold value or HDD being overwritten.<br>The light turns on to alert you, please check HDD status at the GUI. |

## 2.2  Rear Panel

### 2.2.1  CJ-HDR104 / CJ-HDR108

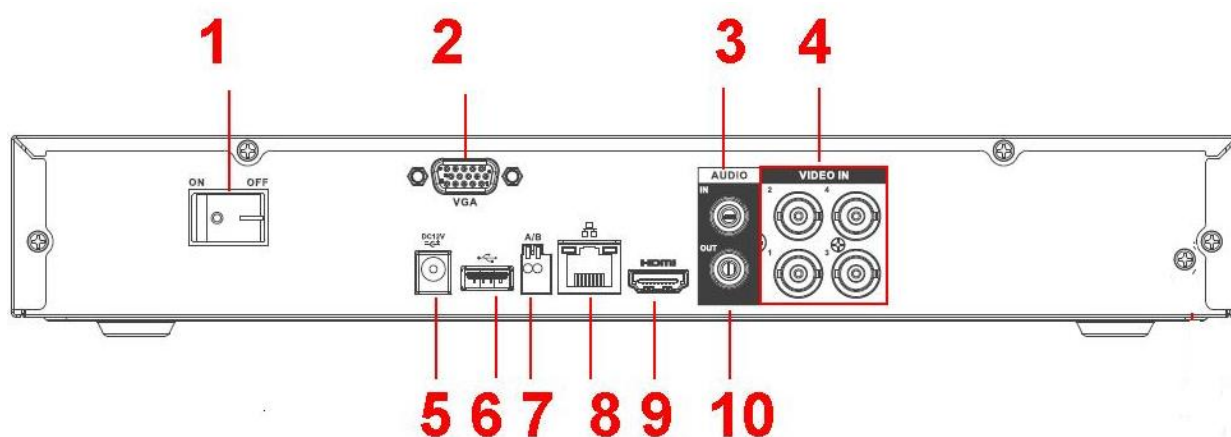The 4-channel series rear panel is shown as below. See Figure 2-2.



Figure 2-2

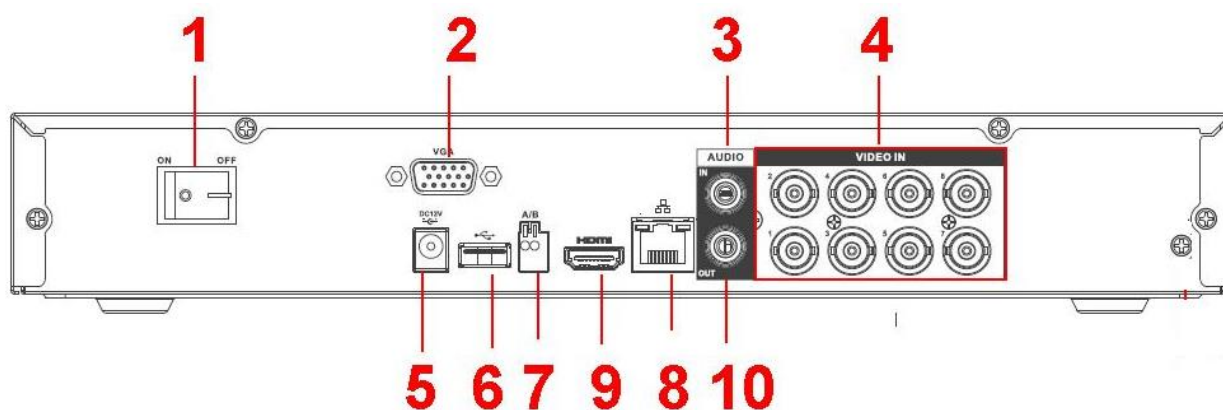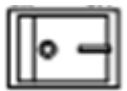The 8-channel series rear panel is shown as below. See Figure 2-3.



Figure 2-3

Please refer to the following sheet for detailed information.

| SN | Icon | Name | Note |
|----|------|------|------|
| 1 | | Power on-off button | Power on/off button. |

5

| 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 speaker. |
| 4 | VIDEO IN | Video input port | Connect to analog camera, video input signal. |
| 5 | DC 12V | Power input port | Input 12V DC. |
| 6 | ⏚ | USB2.0 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.It is the cable B. You can connect to the control devices such as speed dome PTZ. |
| 8 | ⛁ | Network port | 100M Ethernet port |
| 9 | 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. |
| 10 | AUDIO OUT | Audio output port | Connect to video output device such as sound box. |

## 2.3 Connection Sample

### 2.3.1 CJ-HDR104 / CJ-HDR108

Please refer to Figure 2-4 for connection sample.

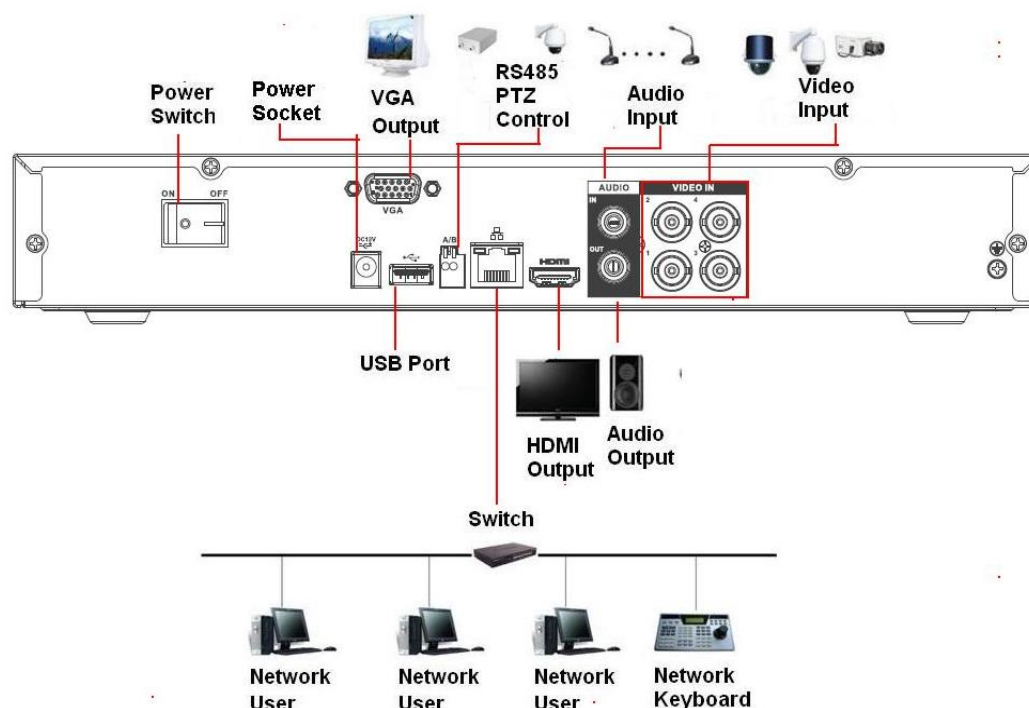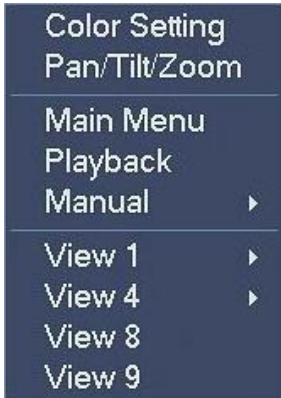The following figure is based on the 4-channel series product.



Figure 2-4

## 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 |
| | 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.<br><br>![keyboard panel: ! ? @ # $ % = + * - _ ← 1 2 3 / q w e r t y u i o p / 4 5 6 / a s d f g h j k l : Enter 7 8 9 / z x c v b n m , . Shift ␣ 0 &] |
| Double left click mouse | Implement special control operation such as double click one item in the file list to playback the video. |
| | In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode. |
| Right click mouse | In real-time monitor mode, pops up shortcut menu: color setting, Pan/Tilt/Zoom, main menu, playback, manual, one-window, four-window, eight-window and nine-window. Among which, Pan/Tilt/Zoom and color setting applies for current selected channel. If you are in multiple-window mode, system automatically switches to the corresponding channel.<br><br>Color Setting<br>Pan/Tilt/Zoom<br>Main Menu<br>Playback<br>Manual ▸<br>View 1 ▸<br>View 4 ▸<br>View 8<br>View 9 |
| | Exit current menu without saving the modification. |
| Press middle button | 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 | Normal mouse rolling operation in live view<br>• Rolling forward and backward for Channel or Window switching. |
| | Click on Enlarge button in the Live View menu bar for digital zoom.<br>• Rolling backward to zoom in<br>• Rolling forward to zoom out |

# 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 Rear Panel

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

You can refer to the Appendix for recommended HDD brand. Please use HDD of 7200rpm or higher. Please follow the instructions below to install hard disk.

### 3.3.1 CJ-HDR104 / CJ-HDR108

The series DVR has one SATA HDD.
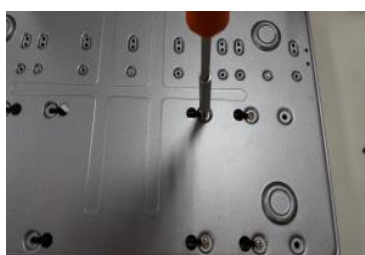
① Loosen the screws of the upper cover and side panel.

②Fix four screws in the HDD (Turn just three rounds).

③Place the HDD in accordance with the four holes in the bottom.

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



⑤Fix the HDD firmly.



⑥Connect the HDD cable and power cable.



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



⑧Secure the screws in the rear panel and the side panel.

**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.

## 3.4 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 equipments 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 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/NTSC1.0$V_{P-P}$ , 75Ω）output, a VGA output and 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

These series products audio input port adopt BNC 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 or RCA). 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  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.

## 3.8   Other Interfaces

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

# 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 blank screen for awhile. 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 Shutdown

**Note**

- When you see corresponding dialogue box "System is shutting down…" 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 log out.

- Main menu (**RECOMMENDED**): From Main Menu -> Operation -> Shutdown, select Shut Down button. Click OK button, you can see device shuts down.
- 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 shutdown 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  Startup Wizard

After device successfully booted up, it goes to startup wizard.
Click Cancel/Next button, you can see system goes to login interface.
**Tips**
Check the Startup checkbox here, system goes to startup wizard again when it boots up the next time.
Cancel the Startup button, system goes to the login interface directly when it boots up the next time.



Figure 4-1

Click Cancel button or Next Step button, system goes to login interface. See Figure 4-2.
System consists of two accounts:
- **Username**: ADMIN.  **Password**: 12345. (administrator, local and network)
- **Username**: default. **Password**: default (hidden user). Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.



Figure 4-2

**Note:**
**For security reason, please modify password after you first login.**
Within 30 minutes, three times login failure will result in system alarm and five times login failure will result in account lock!

Click OK button, you can go to General interface. See Figure 4-3.
For detailed information, please refer to chapter 4.10.5.1.



Figure 4-3

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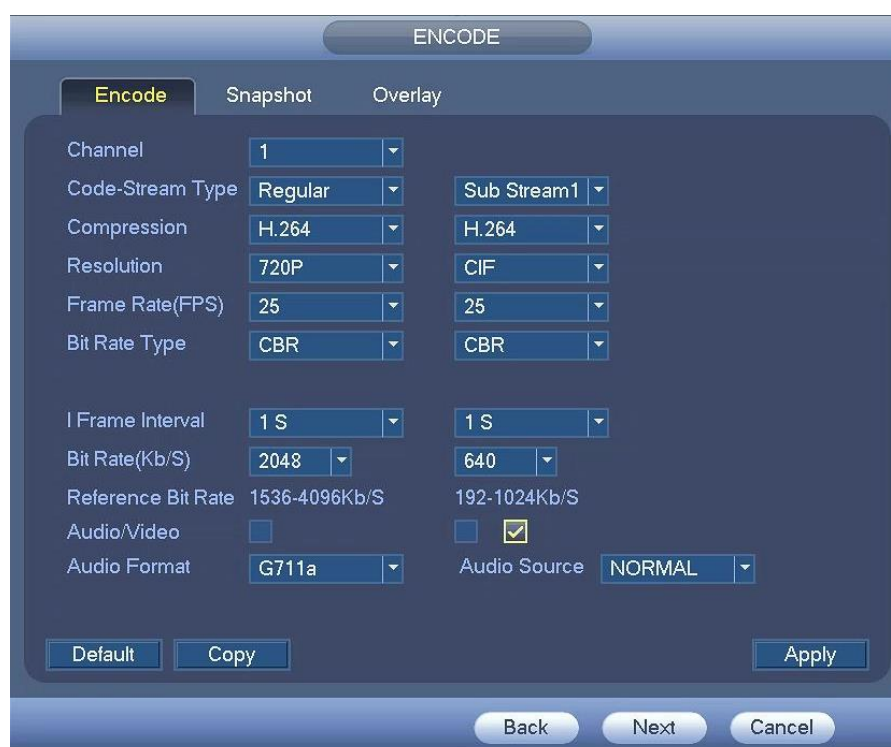For detailed information, please refer to chapter 4.10.1.2.



Figure 4-4

Click Next button, you can go to Schedule interface. See Figure 4-75.
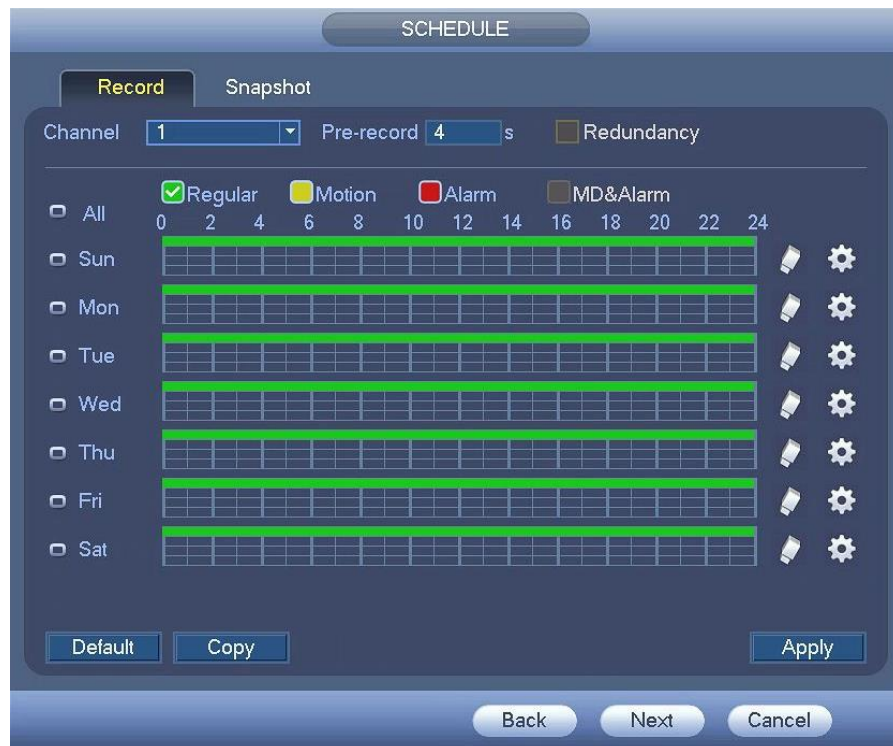For detailed information, please refer to chapter 4.10.4.1.



Figure 4-5

Click Next button, you can go to Record interface. See Figure 4-76.
For detailed information, please refer to chapter 4.10.4.3.



Figure 4-6

Click Next button, you can go to Network interface. See Figure 4-7.
For detailed information, please refer to chapter 4.9.3.



Figure 4-7

Click Finished button, system pops up a dialogue box. Click the OK button, the startup wizard is
complete. See Figure 4-8.



Figure 4-8

## 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 No. If you want to change system date and time, you can refer to general settings
(Main Menu -> Setting -> General -> General). If you want to modify the channel name, please refer
to the display settings (Main Menu -> Setting -> Camera -> CAM Name).

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

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

**Preview Control**

The preview control function has the following features.

- Support preview playback.
   - ✧ In the preview desktop, system can playback previous 5-60 minutes record of current channel. Please go to the Main Menu -> Setting -> 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 centre of the video of current channel, you can see system pops up the preview control interface. See Figure 4-9 .If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.
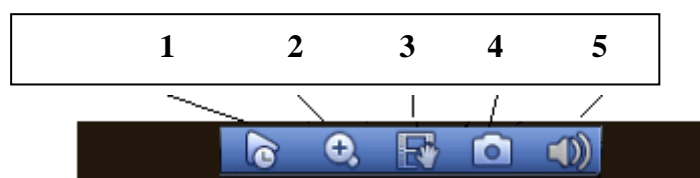


Figure 4-9  Analog Channel

1) Realtime playback

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

Please go to the Main menu -> Setting -> 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) Digital 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 show as Figure 4-10.

Figure 4-10

● Put the middle button at the centre of the zone you want to zoom in, and move the mouse, you can view an interface shown as in Figure 4-11.
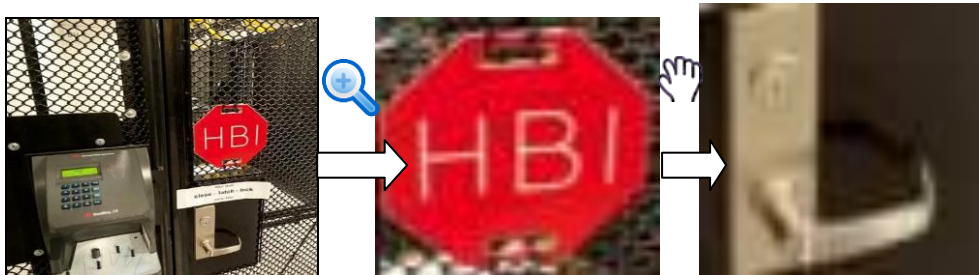

Figure 4-11

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

3) Manual record function

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

Click button ![icon], system begins recording. Click it again, system stops recoridng. You can find the record file on the flash disk.

4) Manual Snapshot

Click ![icon] to snapshot 1-5 times. The snapshot file is saved on the USB device or HDD. You can go to the Playback interface (chapter **Error! Reference source not found.**) to view.

5) Mute (For analog channel only)

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

Please note this function is for one-window mode only or the max-size window of the 8-window mode.

## 4.4 Right-Click Menu

On the preview interface, right click mouse, you can view menu interface shown as in Figure 4-12.

**Tips**

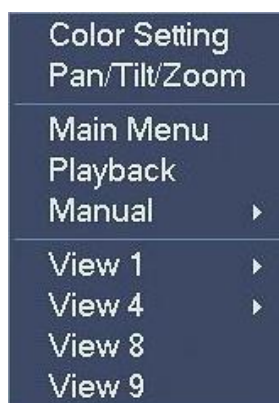After you go to the corresponding interface, right click mouse to go back to the upper-level.

Figure 4-12

### 4.4.1 Color

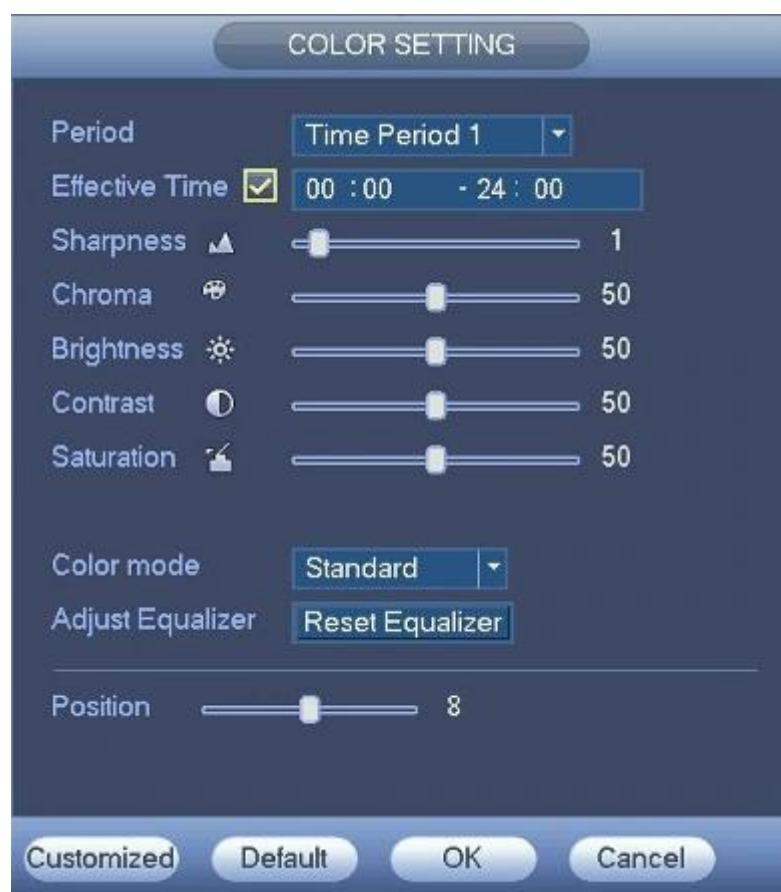Here you can set brightness, contrast, saturation, chroma, color mode and etc. See Figure 4-13.



Figure 4-13

Please refer to the following sheet for detailed information.

| Item | Note |
|------|------|
| Period | There are two periods in one day. You can set different sharpness, brightness, and contrast setup for different periods. |
| Effective Time | Select the checkbox here to enable this function and then set period time. |

| Item | Note |
|------|------|
| Sharpness | The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60. |
| Chroma | It is to adjust monitor video brightness and darkness level. The default value is 50.<br>The bigger the value is, the large the contrast between the bright and dark section is and vice versa. |
| Brightness | It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50.<br>The larger the number, the bright 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.<br>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. |
| Saturation | It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50.<br>The larger the number, the strong 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. |
| 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. |
| Adjust Equalizer | Click reset button, device can automatically adjust to the best display effect. |
| Position | It is to adjust the image position on the screen. The value here refers to the pixel. The default pixel value is 8. |
| Customized | Click it to set customized color mode. |

### 4.4.2  PTZ Control

The PTZ setup is shown as in See Figure 4-14.

Please note the commend 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, scan, pattern aux function, light and wiper, rotation and etc.

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

You can 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 4-14

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-15. 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 4-15

| Name | Function key | function | Shortcut key | Function key | function | Shortcut key |
|------|------|------|------|------|------|------|
| Zoom | ⊖ | Near | ▐▶ | ⊕ | Far | ▶▶ |
| Focus | ⊖ | Near | ▏◀ | ⊕ | Far | ▶▏ |
| Iris | ⊖ | close | ▌▌◀ | ⊕ | Open | ▶ ▌▌ |

In Figure 4-14, click ▶ to open the menu, you can set preset, tour, pattern, scan and etc. See Figure 4-16.



Figure 4-16

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 can not be selected once the current function is null.

Right click mouse or click the ESC button at the front panel to go back to the Figure 4-14.

| 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 scan. See Figure 4-17.



Figure 4-17

**Preset Setup**

In Figure 4-17, click preset button and use eight direction arrows to adjust camera to the proper position. The interface is shown as in Figure 4-18.

Click Set button and then input preset number.

Click Set button to save current preset.

Figure 4-18

**Tour Setup**

In Figure 4-17, click tour button.

Input tour value and preset No. Click Add preset button to add current preset to the tour. See Figure 4-19.

**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 4-19

**Pattern Setup**

In Figure 4-17, click Pattern button and input pattern number.

Click Begin button to start direction operation. Or you can go back to Figure 4-14 to operate zoom/focus/iris/direction operation.

In Figure 4-17, click End button.

Figure 4-20

**Scan Setup**

In Figure 4-17, click Scan button.

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 4-21

### 4.4.2.2 Call PTZ Function

**Call Preset**

In Figure 4-16, input preset value and then click [icon] to call a preset. Click [icon] again to stop call.

**Call Pattern**

In Figure 4-16, input pattern value and then click [icon] to call a pattern. Click [icon] again to stop call.

**Call Tour**

In Figure 4-16, input tour value and then click [icon] to call a tour. Click again [icon] to stop call.

**Auto Scan**

In Figure 4-16, input Scan value and then click ![icon] to call a tour. Click again ![icon] to stop call.

**Auto Pan**

In Figure 4-16, click ![icon] to enable the camera to rotate.

System supports preset, tour, pattern, scan, rotate, light 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 ![icon], 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 4-22.
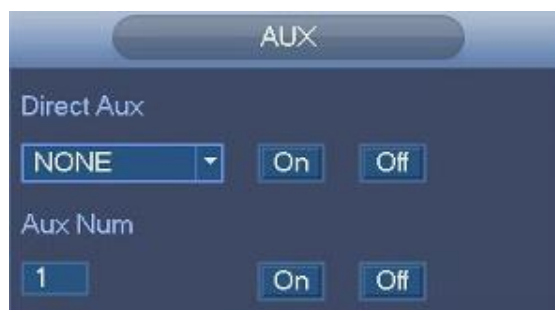


Figure 4-22

### 4.4.3 Playback

Please refer to chapter **Error! Reference source not found.** for detailed information.

### 4.4.4 Manual Record

Please refer to chapter 4.10.4.3.1 for detailed information.

### 4.4.5 Window Switch

System supports 1/4-window. You can select from the dropdown list. See Figure 4-23.

Figure 4-23

## 4.5 Navigation Bar

You need to go to the Main menu -> Setting -> General -> General to enable navigation bar function; otherwise you can not see the following interface.
The navigation bar is shown as below. See Figure 4-24.



Figure 4-24

### 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 Tour

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

### 4.5.4 Favorites

Click , system pops up the favorites schemes. Click one item, you can view saved favorite channel split mode and channel number. See Figure 4-25.
Please note, right now the favorite scheme name after the window split mode.



Figure 4-25

### 4.5.5 Channel

Click ⊞, system goes to the Channel interface.

### 4.5.6 PTZ

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

### 4.5.7 Color

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

### 4.5.8 Playback

Click button 🔍, system goes to Playback interface. Please refer to chapter **Error! Reference source not found.**

### 4.5.9 Alarm Status

Click button ⚠, system goes to alarm status interface. It is to view device status and channel status. Please refer to chapter 4.10.3.

### 4.5.10 Channel Info

Click button 📹, system goes to the channel information setup interface. It is to view information of the corresponding channel. See Figure 4-26.

| Channel | Motion | Video Loss | Mask | Record Status | Record Mode | Resolution | Frame Rate | Bit Rate(K |
|---------|--------|-----------|------|---------------|-------------|------------|-----------|-----------|
| 1 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 66 |
| 2 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 68 |
| 3 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 69 |
| 4 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 68 |
| 5 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 68 |
| 6 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 70 |
| 7 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 66 |
| 8 | ● | ⚠ | ● | ▸■ | Regular | 1280*720 | 25 | 53 |

Refresh

Figure 4-26

### 4.5.11 Network

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

### 4.5.12 HDD Manager

Click ![icon], system goes to the HDD manager interface. It is to view and manage HDD information. Please refer to chapter 4.10.4.2.

### 4.5.13 USB Manager

Click ![icon], system goes to the USB Manager interface. It is to view USB information, backup and update. Please refer to chapter 4.8.2, chapter 4.9.4, chapter **Error! Reference source not found.**, and chapter 4.10.5.9 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 4-27. Please refer to chapter 4.8.2, chapter 4.9.4, chapter **Error! Reference source not found.**, and chapter 4.10.5.9 for detailed information.



Figure 4-27

## 4.7  Main Menu

The main menu interface is shown as below. See Figure 4-28.

Figure 4-28

## 4.8 Operation

### 4.8.1 Playback

Click Playback button in the main menu, Playback interface is shown as below. See Figure 4-29.

Usually there are three file types:

- R: Regular recording file.
- A: External alarm recording file.
- M: Motion detection recording file
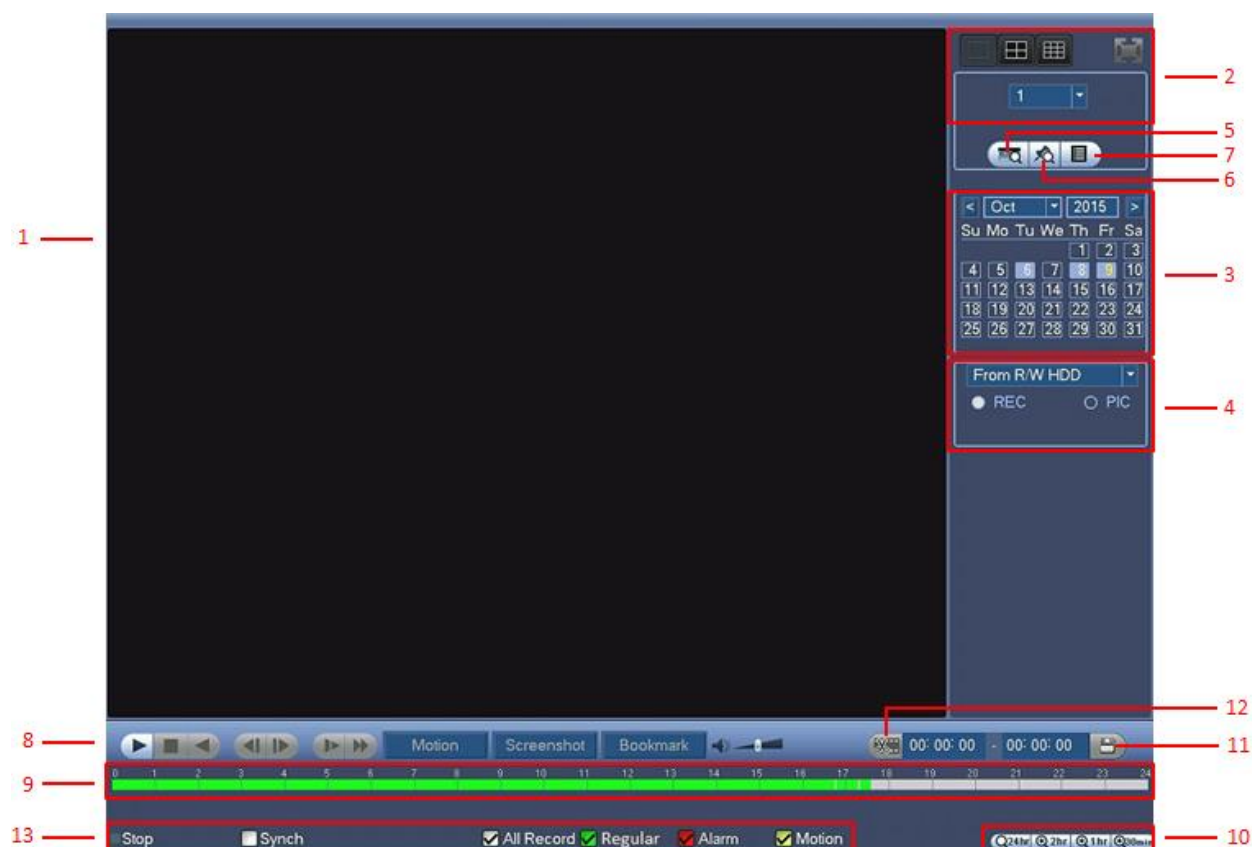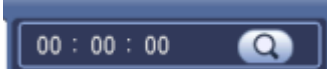
Figure 4-29

Please refer to the following sheet for more information.

| SN | Name | Function |
|---|---|---|
| 1 | Display window | ● Here is to display the playback picture or file.<br>● Support 1/4/9/16-window playback. |
| 2 | Playback mode and channel selection pane. | ● Playback mode：1/4/9. (It may vary due to different series.)<br>◇ In 1-window playback mode: you can select 1-4 or 1-8 channels.<br>◇ In 4-window playback mode: you can select 4 channels according to your requirement.<br>◇ In 9-window playback mode, you can switch between 1-8 channels.<br>●The time bar will change once you modify the playback mode or the channel option. |
| 3 | Calendar | ● The blue highlighted date means there is picture or file. Otherwise, there is no picture or file.<br>● 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 | ● Here you can select to playback the picture or the recorded file.<br>● You can select to play from the read-write HDD, from peripheral device or from redundancy HDD.<br>● 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.<br>**Important**<br>● **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 | The card record search interface is shown as below. Here you can view card number/field setup bar. You can implement advanced search.  |
|---|---|---|
| 6 | Mark file list button | Click it to go to mark file list interface. You can view all bookmark 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. |
| 7 | File list switch button | ● Double click it, you can view the picture/record file list of current day.<br>● The file list is to display the first channel of the record file.<br>● 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.<br>● You can input the period in the following interface to begin accurate search.<br>● File type：R—regular record； A—external alarm record； M—Motion detect record.<br><br>● Lock file. Click the file you want to lock and click the button  to lock. The file you locked will not be overwritten.<br>● Search locked file: Click the button  to view the locked file.<br>● Return: Click button , system goes back to the calendar and channel setup interface.<br>Please note:<br>● For the file that is writing or overwriting, it cannot be locked. |
| 8 | Playback control pane. | ►/ II | Play/Pause<br>There are three ways for you to begin playback.<br>● The play button<br>● Double click the valid period of the time bar.<br>● Double click the item in the file list.<br>In slow play mode, click it to switch between play/pause. |

| | | ►/ II | Play/Pause<br>There are three ways for you to begin playback.<br>● The play button<br>● Double click the valid period of the time bar.<br>● Double click the item in the file list.<br>In slow play mode, click it to switch between play/pause. |
|---|---|---|---|
| | | ■ | Stop |
| | | ◄ | Backward play<br>In normal play mode, left click the button, the file begins backward play. Click it again to pause current play.<br>In backward play mode, click ►/ II to restore normal play. |
| | | ◄│ /│► | 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.<br>In normal play mode, when you pause current play, you can click ◄│ and │► to begin frame by frame playback.<br>In frame by frame playback mode, click ►/ II to restore normal playback. |
| | | ▶· | Slow play<br>In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc. |
| | | ►► | Fast forward<br>In playback mode, click to realize various fast play modes such as fast play 1,fast play 2 and etc. |
| | | Note: The actual play speed has relationship with the software version. | |

| | | | |
|---|---|---|---|
| | | Motion | Smart search |
| | | 🔊 ━▬ | The volume of the playback |
| | | Screenshot | Click the Screenshot button in the full-screen mode, the system can snapshot 1 picture.<br>System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path. |
| | | Bookmark | Bookmark button.<br>Please note this function is for some series product only. Please make sure there is a mark button in the playback control pane.<br>You can refer to chapter 4.8.1.3 for detailed information. |
| 9 | Time bar | | ● It is to display the record type and its period in current playback criteria.<br>● In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar.<br>● Use the mouse to click one point of the color zone in the time bar, system begins playback.<br>● 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.<br>● 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 | | ● The option includes: 24hr, 12hr, 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.<br>● 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 | | ● 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.<br>● Check the file again you can cancel current selection. System max supports to display 32 files from one channel.<br>● After you clip on record file, click Backup button you can save it.<br>● For one device, if there is a backup in process, you cannot start a new backup operation. |
| 12 | Video Clip | | ● It is to edit the file.<br>● 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.<br>● 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.<br>● Click Backup button after clip, you can save current contents in a new file.<br>● You can clip for one channel or multiple-channel. The multiple-channel click operation is similar with the one-channel operation.<br>Please note:<br>● **System max supports 1024 files backup at the same time.**<br>● **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 | ● When system is playing, you can select a zone in the window to begin smart search. Click the Motion button to begin play. <br>● Once the motion detect play has begun, click button again will terminate current motion detect file play. <br>● There is no motion detect zone by default. <br>● If you select to play other file in the file list, system switches to motion detect play of other file. <br>● During the motion detect play process, you cannot implement operations such as change time bar, begin backward playback or frame by frame playback. <br>● 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 | Digital zoom | When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit. |
| 17 | Manually switch channel when playback | During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse. <br>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 4-30.
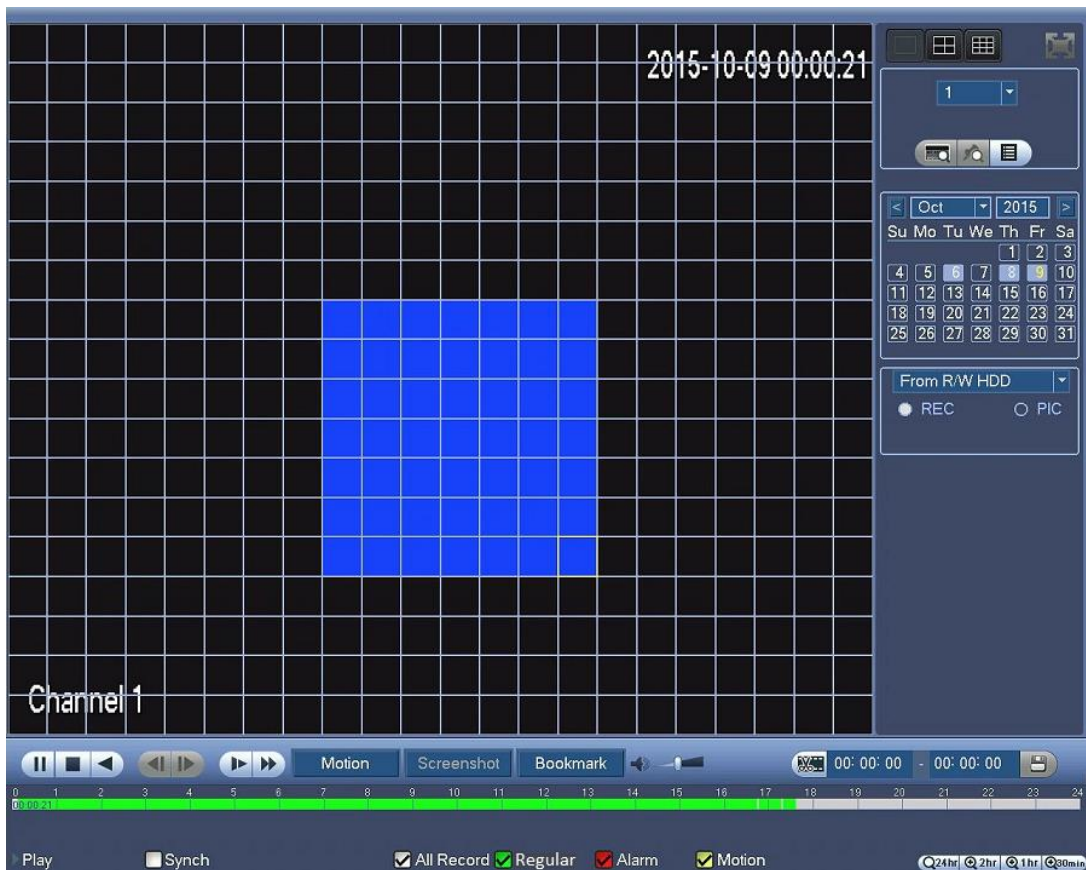
Figure 4-30

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

search playback.

**Important**

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

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 4-31 For example,

input time 14:00.00 and then click Search button ![Q], you can view all the record files after 14:00.00

(The records includes current time.). See image on the right side of the Figure 4-31 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 4-31

### 4.8.1.3 Mark Playback

**Please make sure your purchased device support this function. You can use this function only if you can see the mark playback icon on the Playback interface (Figure 4-29).**

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

● Add Mark

When system is playback, click Mark [Bookmark] button, you can go to the following interface. See Figure 4-32.



Figure 4-32

● Playback Mark

During 1-window playback mode, click mark file list button in Figure 4-29, 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, systems can playbacks 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.

● Mark Manager

Click the mark manager button  on the Playback interface (Figure 4-29); you can go to Mark Manager interface. See Figure 4-33. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.
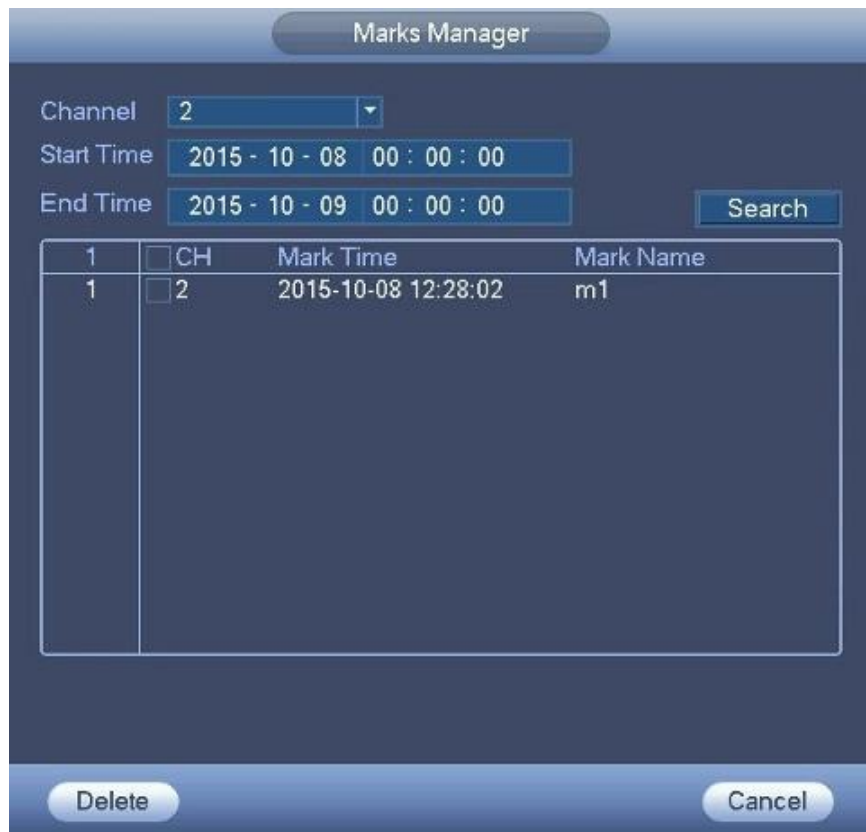


Figure 4-33

● 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 need to pause current playback. System resume playback after you exit mark management interface.

● If the mark file you want to playback has been removed, system begin playbacking from the first file in the list.

### 4.8.2  Backup

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

Click backup button, you can see an interface is shown as in Figure 4-34. Here is for you to view devices information.

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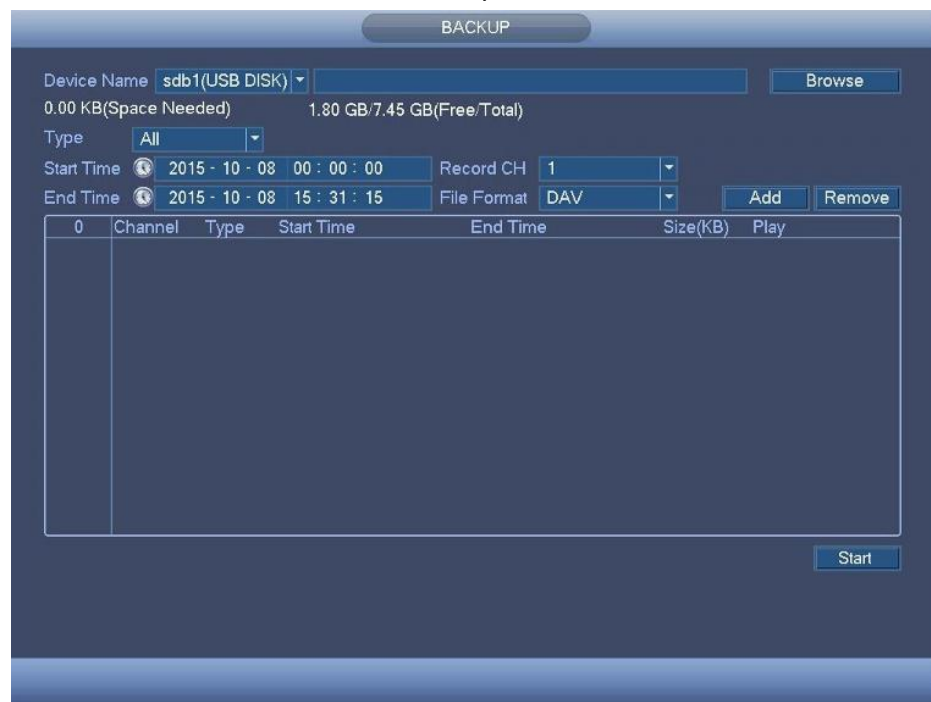


Figure 4-34

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

Click add button, system begins search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 4-36.



Figure 4-35

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

Click Start button, system begins copy. At the same time, the Start button becomes Stop button. You can view the remaining time and process bar at the left bottom. See Figure 4-36.



Figure 4-36

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 4-28, select Shut Down, you can go to the following interface. See Figure 4-37.
There are three options: Shutdown/Logout/Restart. See Figure 4-37.
For the user who does not have the shut down right, please input corresponding password to shut down.

Figure 4-37

## 4.9  Information

It is for you to view sysem info, event info, and network info and log info.

### 4.9.1  System Info

Here is for you to view system information. There are total four items: HDD Info (hard disk information), record info, BPS (data stream statistics), version. See Figure 4-38.



Figure 4-38

4.9.1.1  HDD Information

Here is to list hard disk type, total space, free space and status. See Figure 4-39.

● SN: You can view the HDD amount the device connected to. ＊ means the second HDD is current

working HDD.

- Type: The corresponding HDD properties.

- Total space: The HDD total capacity.

- Free space: The HDD free capacity.

- Status: HDD can work properly or not.

- SMART: Display HDD information. See Figure 4-39.



Figure 4-39

Double click on HDD information; you can see the HDD SMART information. See Figure 4-40.



Figure 4-40

## 4.9.1.2 Record Info

It is to view record start time and end time. See Figure 4-41.



Figure 4-41

## 4.9.1.3 BPS

Here is for you to view current video data stream (KB/s), resolution and etc. See Figure 4-42.



Figure 4-42

### 4.9.1.4 Version

Here is for you to view some version information such as version number, built date, serial number and etc. See Figure 4-43.



Figure 4-43

### 4.9.2 Event

It is to display device status and channel status. See Figure 4-44.



Figure 4-44

### 4.9.3 Network

4.9.3.1 Online Users

Here is for you to manage online users. See Figure 4-45.

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 4-45

4.9.3.2 Network Load

Network load is shown as in Figure 4-46. Here you can view the follow statistics of the device network adapter.

Here you can view information of all connected network adapters. The connection status is shown as offline if connection is disconnected. Click one network adapter, you can view the flow statistics such as send rate and receive rate at the top panel.
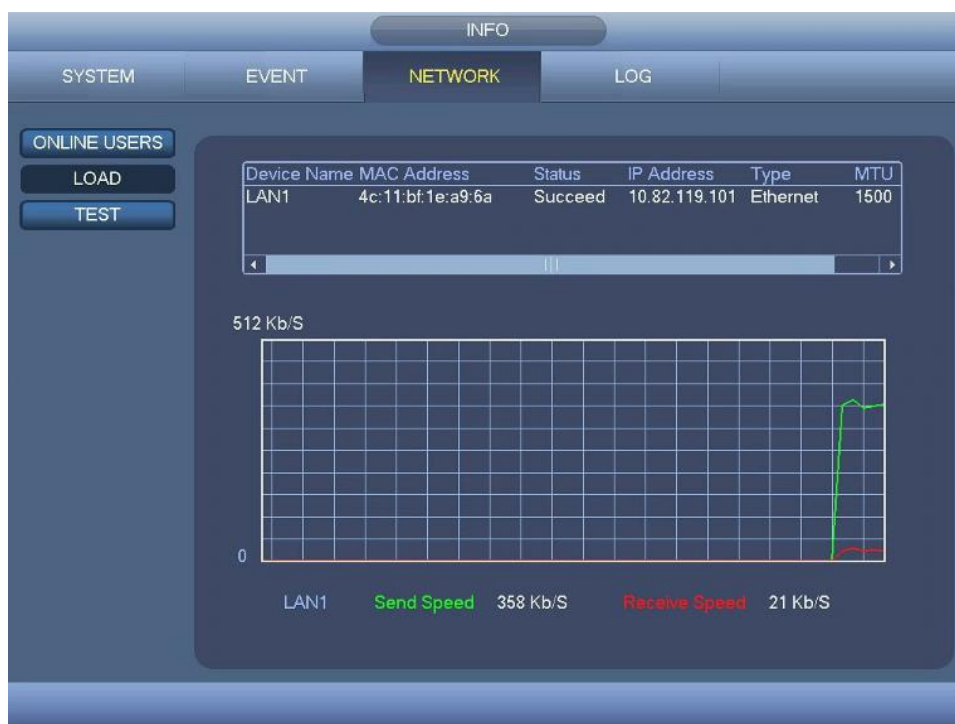
Figure 4-46

### 4.9.3.3 Network Test

Network test interface is shown as in Figure 4-47.

- 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 USB2.0 device and click the Refresh button, you can view the device on the following column. You can use the dropdown list to select peripheral device. Click Browse button to select the snap path. The steps here are same as preview backup operation.

You can view all connected network adapter names (including Ethernet, PPPoE, WIFI, and 3G), you can

click the button [icon] on the right panel to begin Sniffer.Please note system can not 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 [icon] 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 4-47

### 4.9.4  Log

Here is for you to view system log file. System lists the following information. See Figure 4-48.
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: Pleased select start time and end time, then click search button. You can view the log files in a list. System max displays 100 logs in one page. It can max save 1024 log files. Please use page up/down button on the interface or the front panel to view more.
- Backup: Please select a folder you want to save; you can click the backup button to save the log files. After the backup, you can see there is a folder named Log_time on the backup path. Double click the folder, you can see the log file
- Details: Double click the log item, you can view the detailed information. See Figure 4-49. Here you can use rolling bar to view information, or you can use Page up/Page down to view other log information.

Figure 4-48

Select an item on the list and then double click the log item, you can view the detailed information such as log time, log type, log user, IP address and etc. See Figure 4-49.



Figure 4-49

## 4.10 Setting

It is for you to set general, network, event, storage, camera and etc.

**4.10.1 Camera**

Here you can set audio/video property, camera property and channel name, channel type.

### 4.10.1.1  Image

For analog channel, the camera interface is shown as in Figure 4-50.

- Channel: Select a channel from the dropdown list.
- 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 strong 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 bright 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 large 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 100. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
- 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.
- 2D NR: It is 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.
- 3D Denoise: 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. The larger the value is, the better the effect is.

Figure 4-50

### 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  Video

Video setting includes the following items. See Figure 4-51.

- Channel: Select the channel you want.
- Type: Please select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- Compression: System supports H.264.
- Resolution: 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 bitrate value in the combo box.
- Video/audio: You can enable or disable the video/audio.
- 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.

Figure 4-51

4.10.1.2.2  Snapshot

Here you can set snapshot mode, image size, quality and snapshot frequency. See Figure 4-52.

● 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.
● 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 4-52

4.10.1.2.3 Overlay

Overlay interface is shown as in Figure 4-53.

● 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.

● Monitor/Preview: privacy mask has two types. Monitor and Preview. Monitor means the privacy mask zone can not be view by the user when system is in monitor status. Preview means the privacy mask zone can not be viewed by user when system is in preview status.

● 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.

● 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 4-54. 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 4-54 and Figure 4-53 respectively to complete the setup.

Please select the checkbox ▣ to select the corresponding function.



Figure 4-53

Figure 4-54

4.10.1.2.4  Channel Name

It is to modify channel name. It max supports 31-character. See Figure 4-55.



Figure 4-55

4.10.1.2.5  Channel Type

It is to set channel type. It supports coaxial/UTP. See Figure 4-56.

Figure 4-56

### 4.10.2 Network

4.10.2.1   TCP/IP

The interface is shown as in Figure 4-57.

- MTU: It is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes. Please note MTU modification may result in network adapter reboot and network becomes off. That is to say, MTU modification can affect current network service. System may pop up dialog box for you to confirm setup when you want to change MTU setup. Click OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the DVR shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for reference only.

   ✧   1500: Ethernet information packet max value and it is also the default value. It is the typical setup when there is no PPPoE or VPN. It is the default setup of some router, switch or the network adapter.
   ✧   1492: Recommend value for PPPoE.
   ✧   1468: Recommend value for DHCP.

- LAN download: System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.
- 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.
- IP address: Here you can use up/down button (▲▼) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.

53

- DHCP: It is to auto search IP. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information.  Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- Default gateway: Here you can input the default gateway. Please note system needs to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section. That is to say, the specified length of the subnet prefix shall have the same string.
- Preferred DNS server: DNS server IP address.
- Alternate DNS server: DNS server alternate address.

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



Figure 4-57

### 4.10.2.2  Connection

The connection setup interface is shown as in Figure 4-58.
- Max connection: system support maximal 128 users. 0 means there is no connection limit.
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- HTTPS port: Default value is 443.
- RTSP port: Default value is 554.

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

Figure 4-58

### 4.10.2.3 PPPoE

PPPoE interface is shown as in Figure 4-59.

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

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



Figure 4-59

## 4.10.2.4 DDNS Setup

DDNS setup interface is shown as in Figure 4-60.

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

In network DDNS, please select DDNS type and select the ENABLE checkbox to enable function. Then please input your PPPoE name you get from you IPS and server IP (PC with DDNS). Click OK button and then reboot system.

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

After rebooting, open IE and input as below:

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

e.g.: http：//10.6.2.85/DVR _DDNS/webtest.htm.)

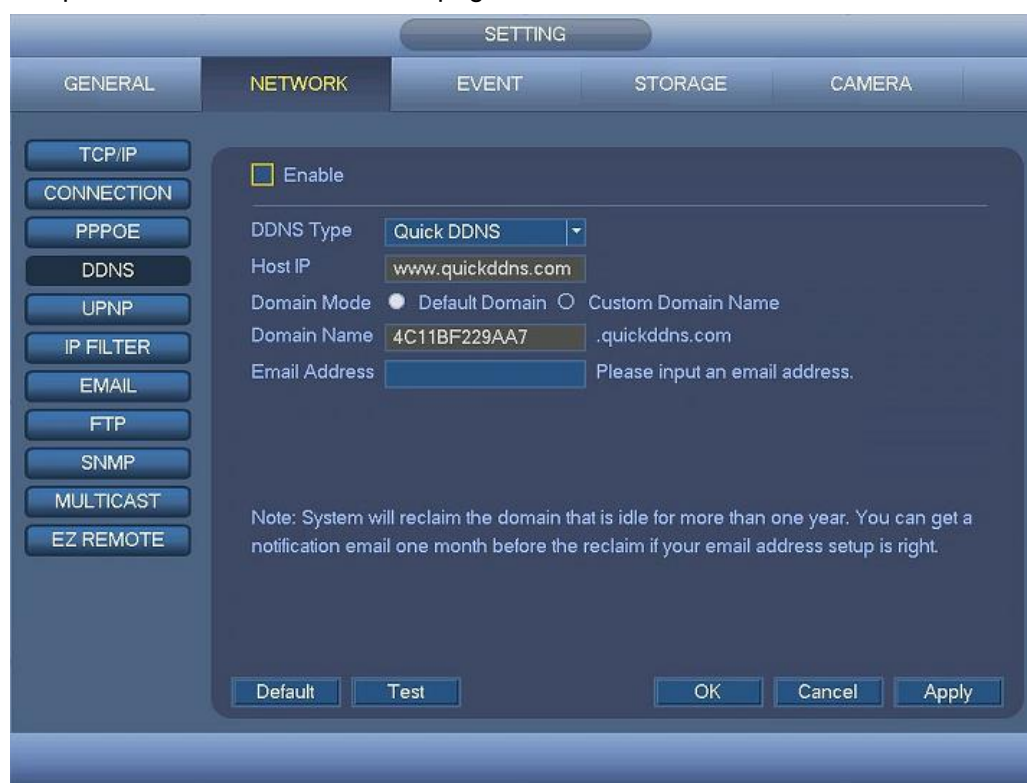Now you can open DDNSServer web search page.

Figure 4-60

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

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

**Quick DDNS and Client-end Introduction**

**1) Background Introduction**

Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the DVR via the registered domain name. Besides the general DDNS, the Quick DDNS works with the device from the manufacturer so that it can add the extension function.

**2) Function Introduction**

The quick DDNS client has the same function as other DDNS client end. It realizes the bonding of the domain name and the IP address. Right now, current DDNS server is for our own devices only. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name,

password or the ID registration on the server. At the same time, each device has a default domain name (Generated by MAC address) for your option. You can also use customized valid domain name (has not registered.).

**3) Operation**

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

- Server address：www.quickddns.com

- Port number：80

- Domain name：There are two modes: Default domain name and custom domain name.

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

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

**Important**

- Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in server attack.

- System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.

### 4.10.2.5 UPnP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 4-57. See Figure 4-61.

- UPNP Enable ：Select to enable the UPNP function of the device.
- Status: When the UPNP is offline, it shows as "Disable". When the UPNP works it shows "Enable"
- Router LAN IP: It is the router IP in the LAN.
- WAN IP: It is the router IP in the WAN.
- Port Mapping list： The port mapping list here is the one to one relationship with the router's port mapping setting.
- List：
    - ✧ Service name：Defined by user.
    - ✧ Protocol：Protocol type
    - ✧ Internal port：Port that has been mapped in the router.
    - ✧ External port：Port that has been mapped locally.
- Default: UPNP default port setting is the HTTP, TCP and UDP of the DVR.

Double click one item; you can change the corresponding mapping information. See Figure 4-62.

**Important:**

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

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

Figure 4-61



Figure 4-62

### 4.10.2.6 IP Filter

IP filter interface is shown as in Figure 4-63. You can add IP in the following list. The list supports max 64 IP addresses. System supports valid address of IPv4 and IPv6. **Please note system needs to check the validity of all IPv6 addresses and implement optimization.**

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 can not access current DVR.

- Enable: Select the checkbox here, you can select the trusted site function and blocked sites function. You can not see these two modes if the Enable button is grey.
- Start address/end address: Select one type from the dropdown list, you can input IP address in the start address and end address. Now you can click Add IP address or Add IP section to add.

a) For the newly added IP address, it is in enable status by default. Remove the √ 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 4-64. 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.

**Note:**

● If you enabled trusted sites, only the IP in the trusted sites list can access the device.

● If you enabled blocked sites, the IP in the blocked sites can not access the device.
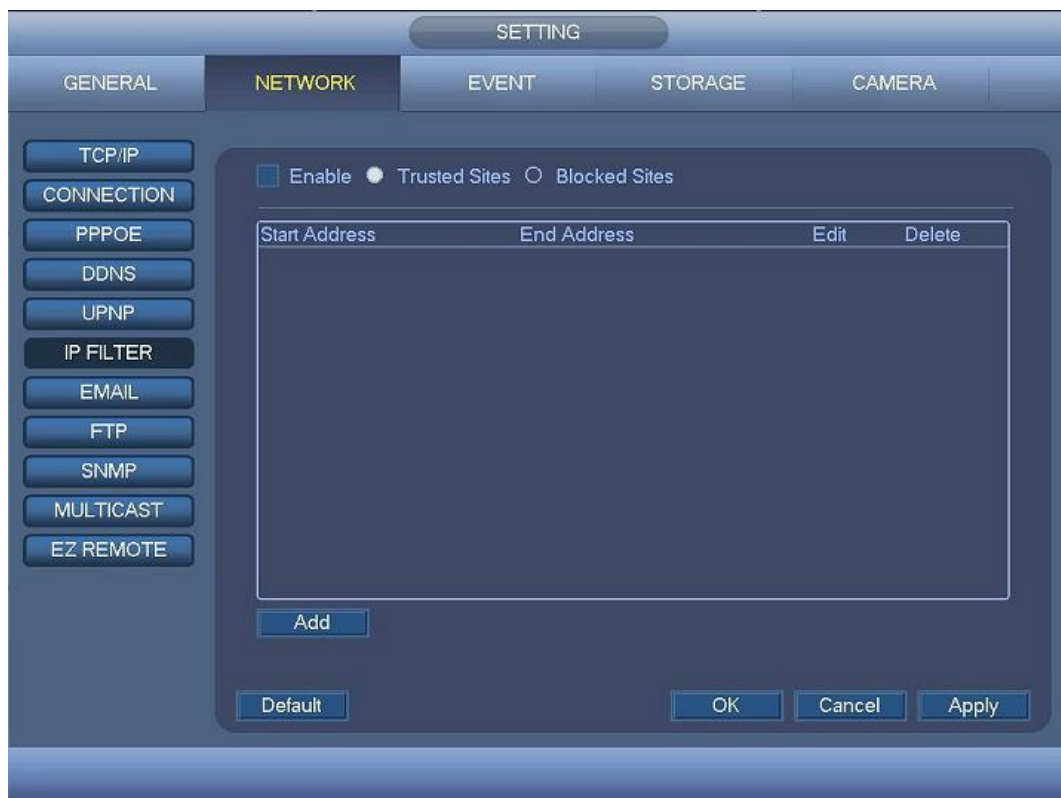
● System supports add MAC address.



Figure 4-63

Figure 4-64

### 4.10.2.7 Email

The email interface is shown as below. See Figure 4-65.

- 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 32-digit.
- Encryption Type: Please select if support for SSL 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 abnormity event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormity events, which may result in heavy load for the email server.

Figure 4-65

### 4.10.2.8 FTP

You need to download or buy FTP service tool (such as Ser-U FTP SERVER) to establish FTP service. Please install Ser-U FTP SERVER first. From "start" -> "program" -> Serv-U FTP Server -> Serv-U Administrator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 4-66.
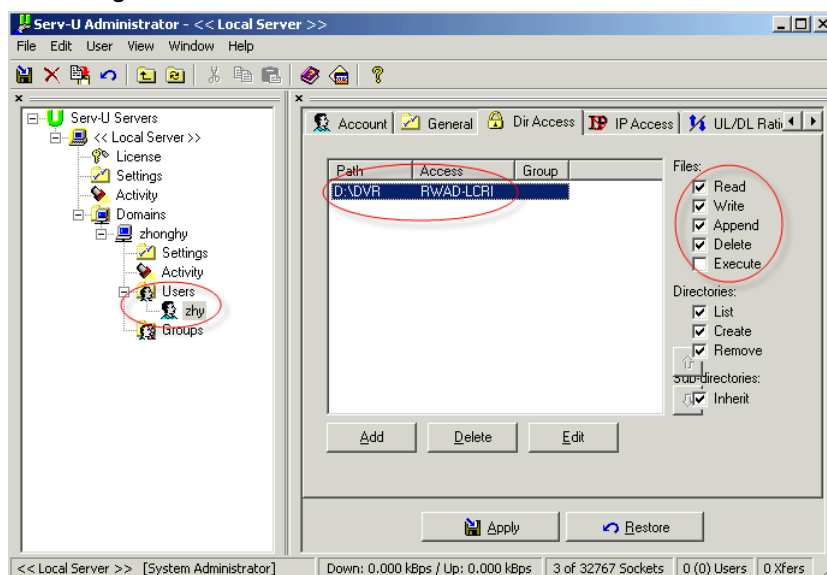


Figure 4-66

You can use a PC or FTP login tool to test setup is right or not.
For example, you can login user ZHY to H140H140H140HTUFTP://10.10.7.7UTH  and then test it can modify or delete folder or not.  See Figure 4-67.
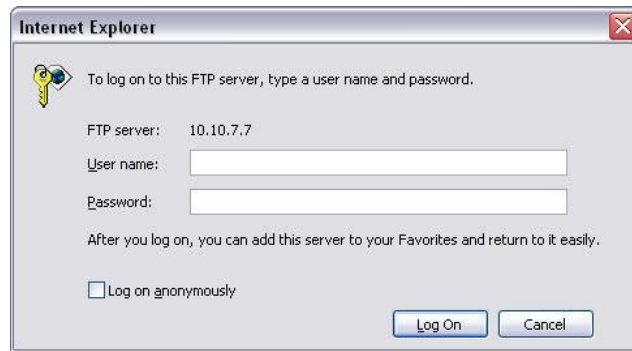
Figure 4-67

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

FTP interface is shown as in Figure 4-68.

Please select the checkbox  to enable the FTP function.

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

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

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

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

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



Figure 4-68

4.10.2.9 SNMP
SNMP is an abbreviation of Simple Network Management Protocol. It provides the basic network
management frame of the network management system. The SNMP widely used in many environments.
It is used in many network device, software and system.
You can set in the following interface. See Figure 4-69.



Figure 4-69

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

- In Figure 4-69, select the checkbox to enable the SNMP function. Input the IP address of the PC
  than is running the software in the Trap address. You can use default setup for the rest items.
- Compile the above mentioned two MIB file via the software MIB Builder.
- Run MG-SOFT MIB Browser to load the file from the previous step to the software.
- Input the device IP you want to manage in the MG-SOFT MIB Browser. Please set the
  corresponding version for your future reference.
- Open the tree list on the MG-SOFT MIB Browser; you can get the device configuration. Here you
  can see the device has how many video channels, audio channels, application version and etc.

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

### 4.10.2.10 Multicast

Multicast setup interface is shown as in Figure 4-70.



Figure 4-70

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

● IP multiple cast group address

-224.0.0.0-239.255.255.255

-"D" address space

   ● The higher four-bit of the first byte="1110"

● Reserved local multiple cast group address

-224.0.0.0-224.0.0.255

-TTL=1 When sending out telegraph

-For example

224.0.0.1    All systems in the sub-net

224.0.0.2    All routers in the sub-net

224.0.0.4    DVMRP router

224.0.0.5    OSPF router

224.0.0.13 PIMv2 router

● Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

   ● Like the single broadcast address of RFC1918

   ● Can not be used in Internet transmission

   ● Used for multiple cast broadcast in limited space.

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

Multiple cast IP: 235.8.8.36

Multiple cast PORT: 3666.

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

Please note multiple cast function applies to special series only.

## 4.10.2.11 EASY REMOTE

The EASY REMOTE interface is shown as in Figure 4-71.

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



Figure 4-71

### 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 4-72.There is three detection types: motion detection, video loss, tampering.

- The video loss has no detection region and sensitivity setup and tampering has no detection region setup.
- You can see motion detect icon if current channel has enabled motion detect alarm.
- You can drag you mouse to set motion detect region. Please click OK button to save current region setup. Right click mouse to exit current interface.
- For digital channel, the detect function refers to support detection function of the front-end and support local activation function. The front-end can get enable/disable status, sensitivity and region setup. You can get corresponding prompt if front-end can not get the above information. You can change front-end setup if it can get.

    4.10.3.1.1  Motion Detect

After analysis video, system can generate an alarm when it detected moving item.

Detection menu is shown as below. See Figure 4-72.

- Channel: Select a channel from the dropdown list to set motion detect function.
- Enable: Select the checkbox to enable motion detect function.
- Region: Click Setup button, the interface is shown as in Figure 4-73. Here you can set motion detection zone. There are four zones for you to set. Please select a zone first and then left drag the mouse to select a zone. The corresponding color zone displays different detection zone. You can click Fn button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember click OK button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.
- Period: Click set button, you can see an interface is shown as in Figure 4-75. 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 4-75, Select icon ▭ of several dates, all checked items can be edited together. Now the icon is shown as ∞.

  ✧ In Figure 4-75. Click button Setup after one date or a holiday, you can see an interface shown as in Figure 4-76. There are six period for setup (00:00 – 24:00) and is able to copy the setup period to everyday from (Mon -> Sun).

- Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function.
- Send email: System can send out email to alert you when an alarm occurs.
- Record channel: System auto activates motion detection channel(s) to record once an alarm occurs. Please make sure you have set MD record in Schedule interface(Main Menu -> Setting -> 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 "Setup" button, you can see an interface is shown as in Figure 4-74.
- Delay: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.

● Tour: Here you can enable tour function when alarm occurs. System one-window tour.
● Snapshot: You can enable this function to snapshoot image when a motion detect alarm occurs.
● Buzzer: Select the checkbox to enable the function. The buzzer beeps when alarm occurs.

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

**Note:**
In motion detection mode, you can not use copy/paste to set channel setup since the video in each channel may not be the same.
In Figure 4-73, you can use left click mouse and then drag it to set a region for motion detection. Click Fn to switch between arm/withdraw motion detection. After setting, click Enter to exit.



Figure 4-72



Figure 4-73

Figure 4-74



Figure 4-75

Figure 4-76

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 4-72, select video loss from the type list. You can see the interface is shown as in Figure 4-77.This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

**Tips:**

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

Please refer to chapter 4.10.3.1.1 motion detection for detailed information.

Figure 4-77

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 4-78. You can enable "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 detection for detailed information.

**Note:**

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

● About 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 4-78

### 4.10.3.2 Abnormality

There are two types: HDD/Network.

&#9671; HDD: HDD error, no HDD, no space. See Figure 4-79 and Figure 4-80.

&#9671; Network: Disconnect, IP conflict, MAC conflict. See Figure 4-81.

● Show message: system can pop up the message in the local screen to alert you when alarm occurs.

● Alarm upload: System can upload the alarm signal to the network (including alarm centre) if you enabled current function. For disconnection event, IP conflict event and MAC conflict event, this function is null.

● Send email: System can send out email to alert you when alarm occurs.

● Buzzer: Select the checkbox to enable this function. The buzzer beeps when an alarm occurs.

Figure 4-79



Figure 4-80
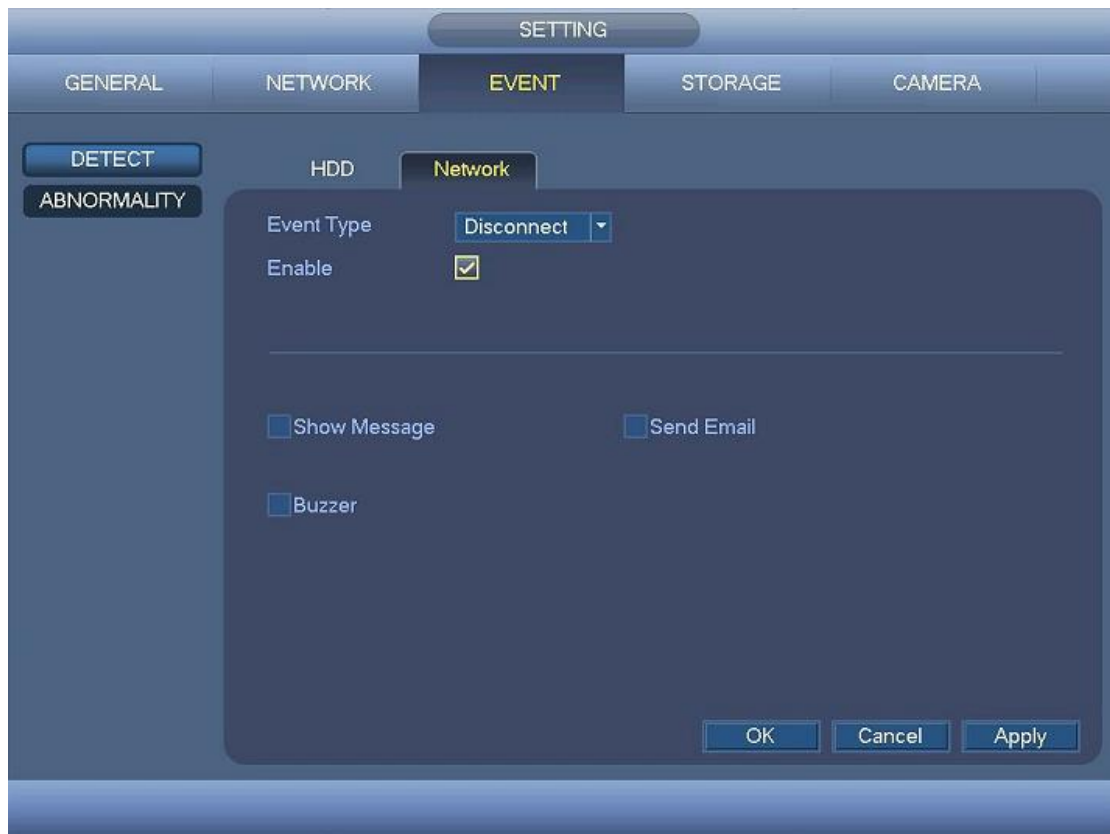
Figure 4-81

## 4.10.4 Storage

It is to set HDD management, storage parameters, set record plan and record control.

### 4.10.4.1  Schedule

It is for you to set record plan and snapshot plan.

4.10.4.1.1 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 4-85.

**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 select the checkbox to select corresponding record type. There are four types: Regular/ Motion / Alarm /MD (motion detect) & Alarm.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Holiday: It is to set holiday setup. Please note you need to go to the General interface (Main Menu->System->General) to add holiday first. Otherwise you can not see this item.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. You can 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 4-86.There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

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

 ✧ Select a channel you want to set. See Figure 4-82.



Figure 4-82

 ✧ Set record type. See Figure 4-83.



Figure 4-83

 ✧ Please draw manually to set record period. There are six periods in one day. See Figure 4-84.
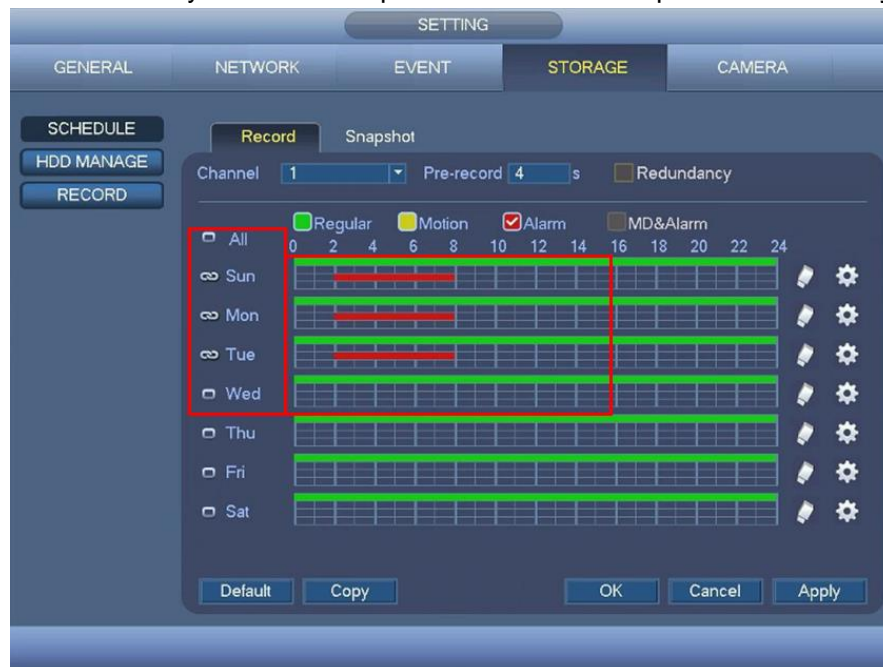


Figure 4-84

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 white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will not record neither motion detect occurs nor the alarm occurs.

Figure 4-85

Figure 4-86

4.10.4.1.1.1 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 4-87. 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 4-87

4.10.4.1.1.2 Redundancy

**Current series product does not support redundancy function.**

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 can not record video.

**Note**

**About redundancy setup:**

●  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, system goes back to the previous menu.

**Playback or search in the redundant disk.**

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

●  Set redundant disk(s) as read-only disk or read-write disk (Main menu -> Setting -> Storage -> HDD 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.

4.10.4.1.2 Snapshot

4.10.4.1.2.1 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 4-88.

● In main menu, from Setting -> Camera -> Encode -> Snapshot interface, here you can input snapshot mode as timing, image size, quality and snapshot frequency. See Figure 4-89.

● In main menu, from Setting -> Storage -> Schedule -> Snapshot interface, please enable snapshot function. See Figure 4-90.

Please refer to the following figures for detailed information.
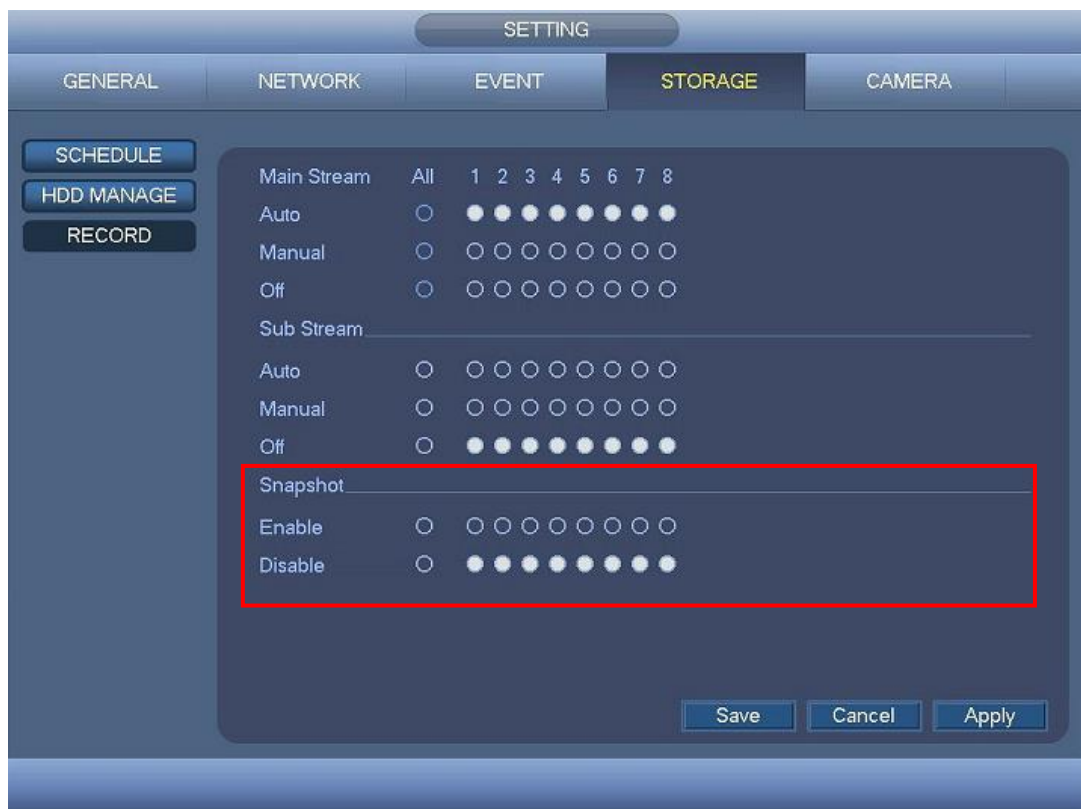


Figure 4-88
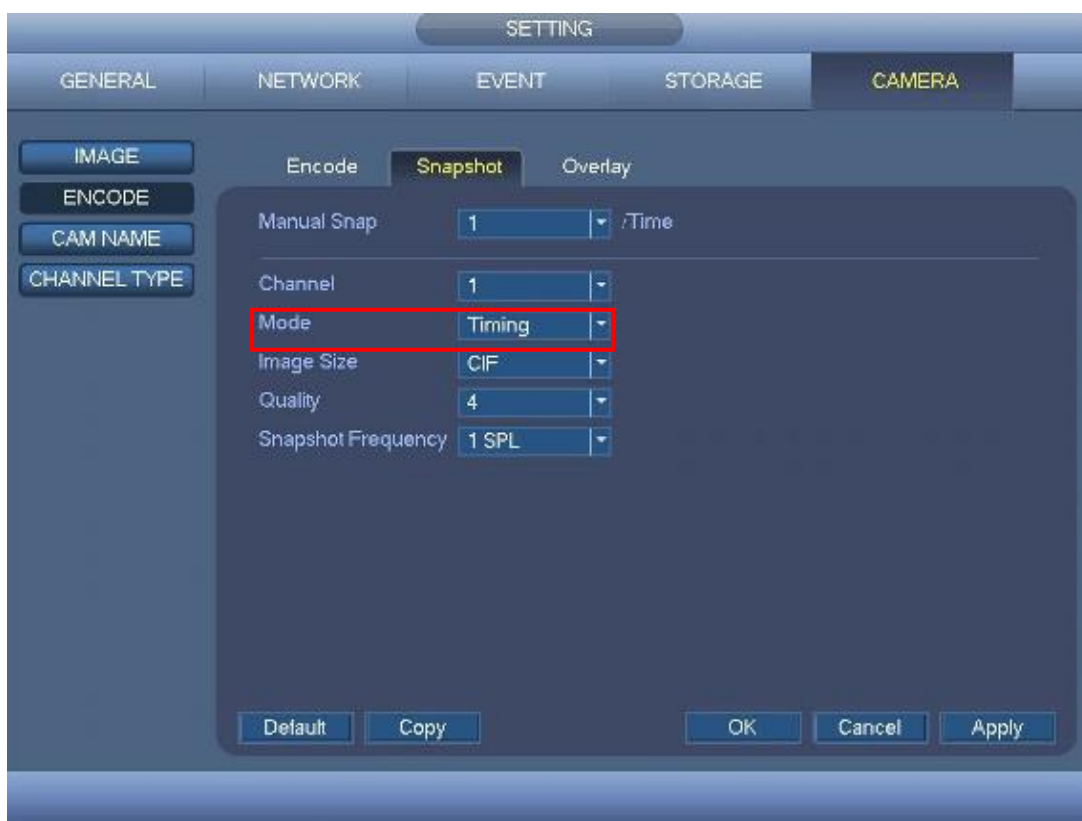
Figure 4-89



Figure 4-90

4.10.4.1.2.2 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, quality and snapshot frequency. See Figure 4-91.
- In main menu, from Setting -> Event -> Detect -> Motion Detect, please enable snapshot function for specified channels (Figure 4-92).
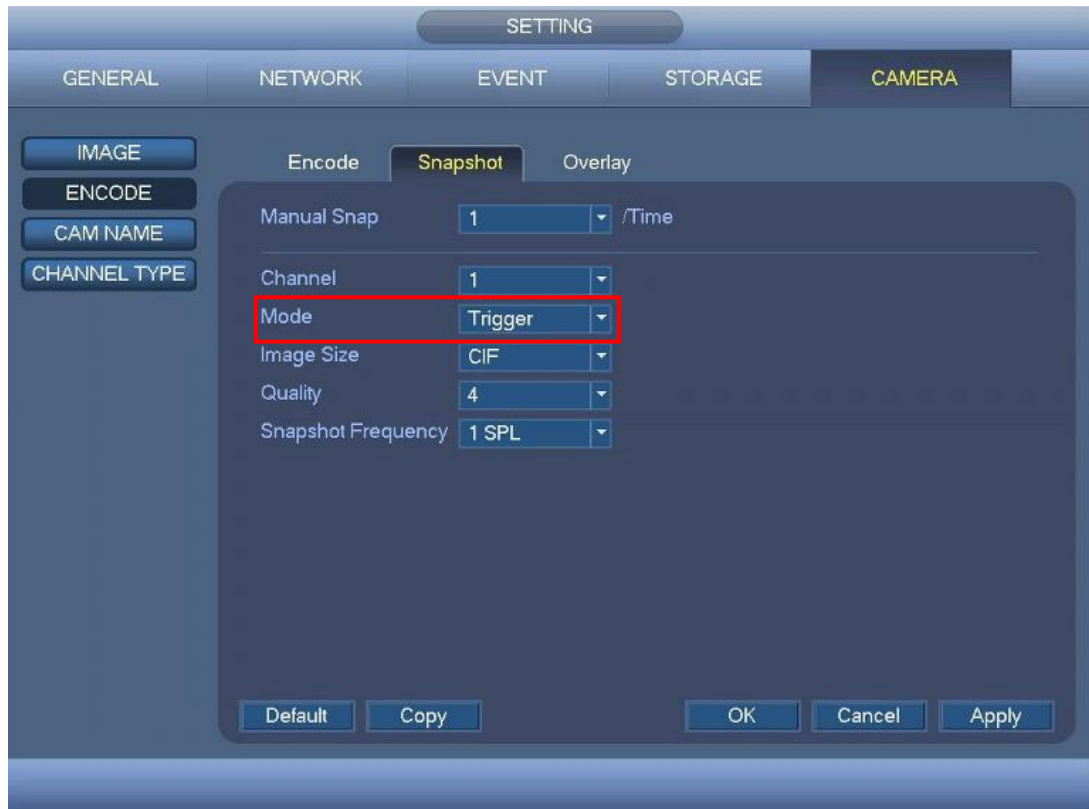


Figure 4-91
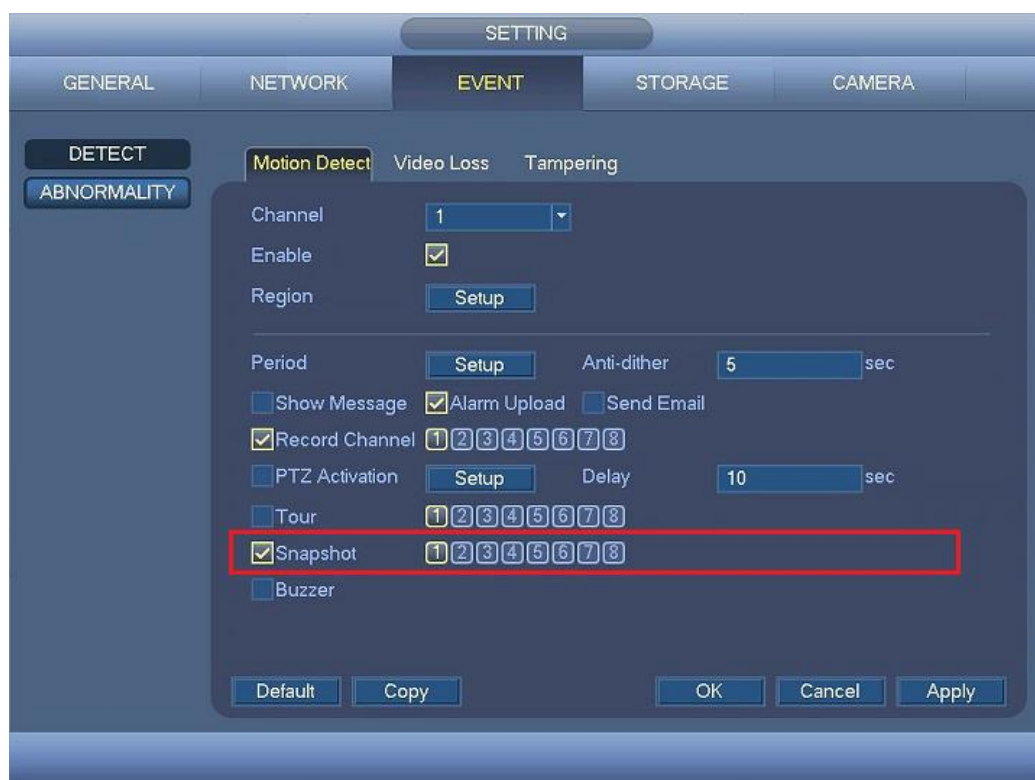
Figure 4-92

4.10.4.1.2.3 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 will activate the activation snapshot when alarm occurs, and otherwise system just operates the schedule snapshot.

4.10.4.1.2.4 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 4-93.

Please boot up corresponding FTP server.

Please enable schedule snapshot (Chapter 4.10.4.1.2.1) or activation snapshot (Chapter 4.10.4.1.2.2) first, now system can upload the image file to the FTP server.
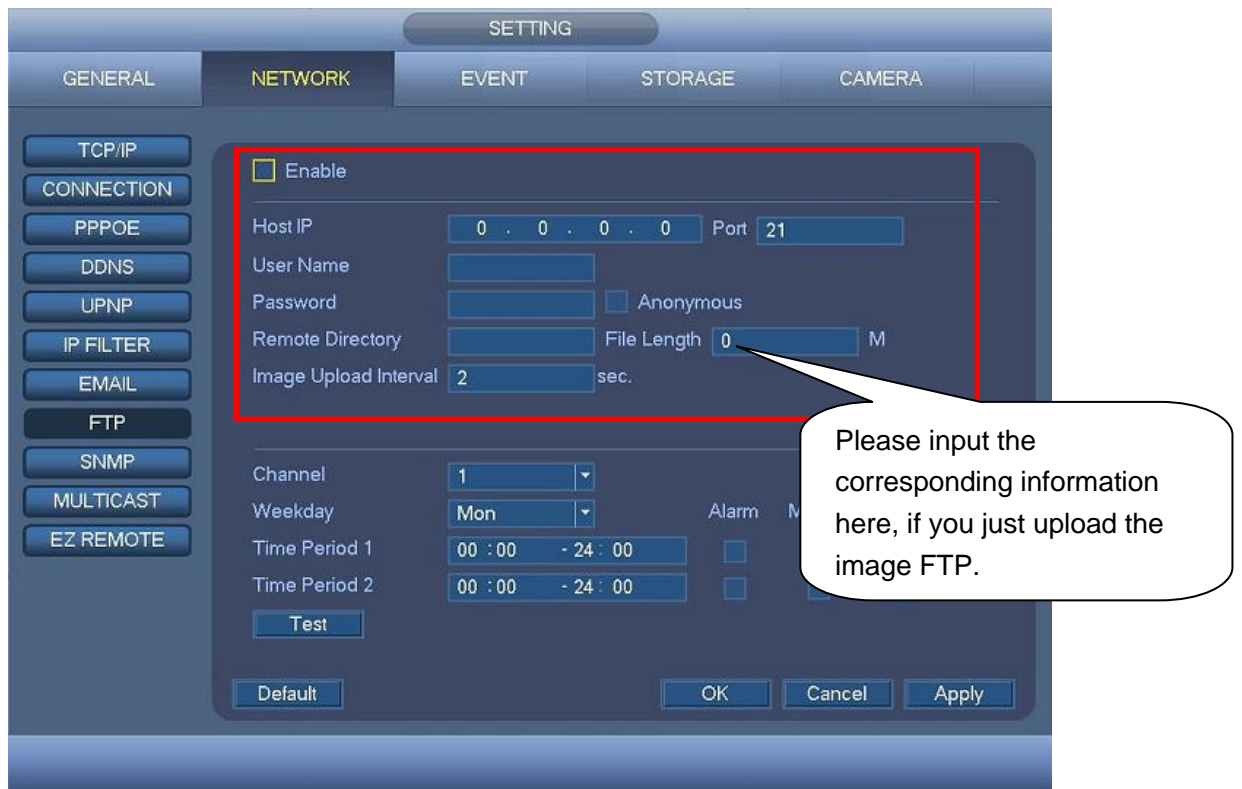
Figure 4-93

## 4.10.4.2  HDD Manage

Here is for you to view and implement hard disk management. See Figure 4-94.

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 4-94

## 4.10.4.3 Record

4.10.4.3.1 Record Control

⚠️**Caution:**

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

There are three ways for you to go to manual record menu.
- Right click mouse and then select Manual -> Record.
- In the main menu, from Setting -> Storage -> Record.
- In live viewing mode, click record button in the front panel.

System supports main stream and sub stream. There are three statuses: schedule/manual/stop. See Figure 4-95. Please select the icon "○" to select corresponding channel.
- Manual: The highest priority. After manual setup, all selected channels will begin ordinary recording.
- Auto: Channel records as you have set in recording setup (Main Menu-> Setting -> Storage -> Schedule)
- Off: Current channel stops recording.
- All: Select All button after the corresponding status to enable/disable all-channel schedule/manual record or enable/disable all channels to stop record.
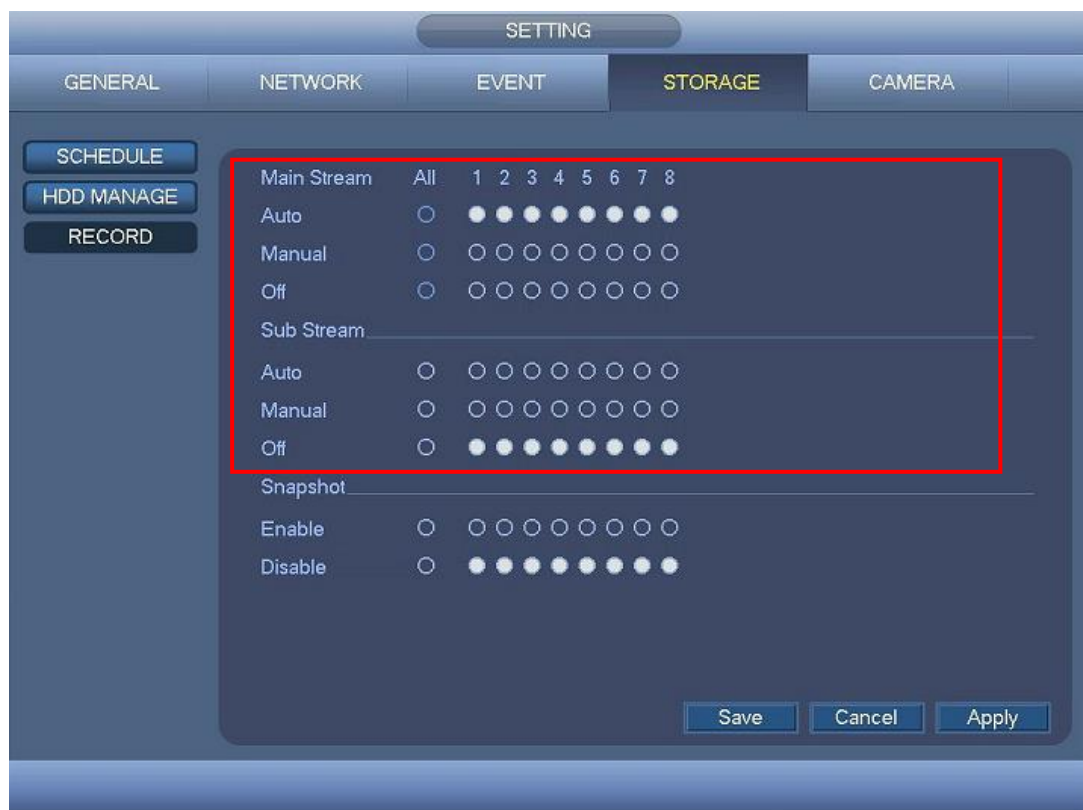


Figure 4-95

4.10.4.3.2  Snapshot Operation

Select the corresponding box to enable/disable schedule snapshot function. See Figure 4-96.
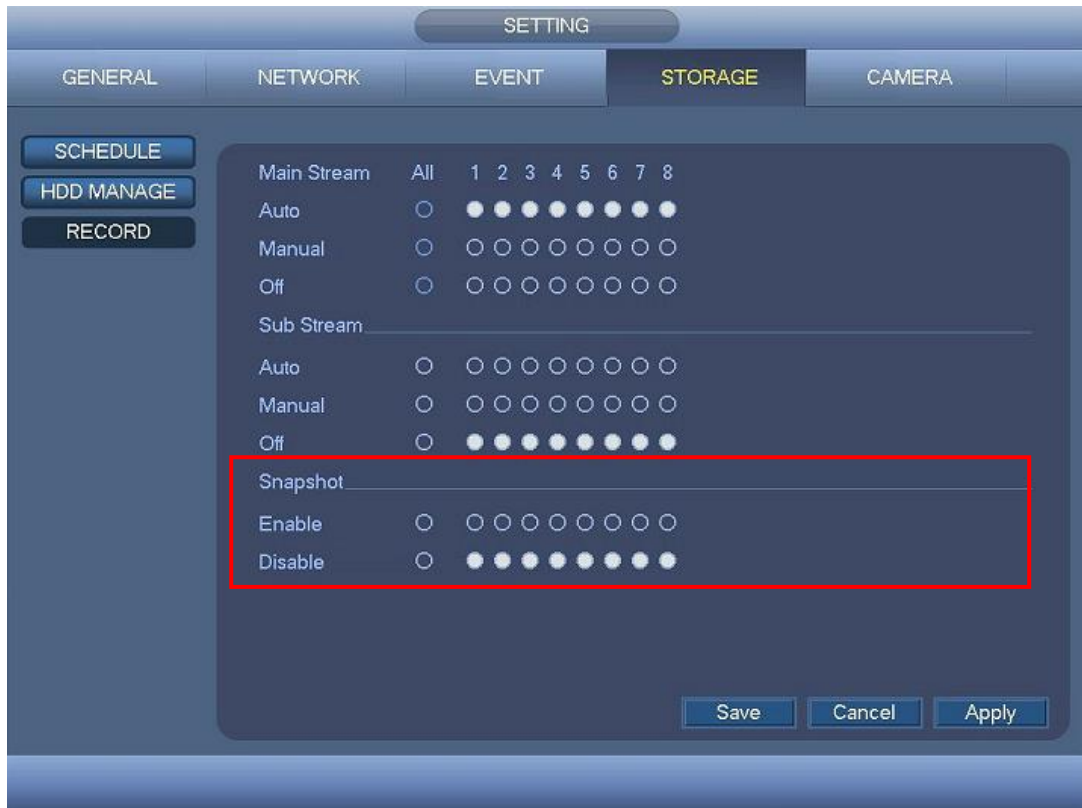


Figure 4-96

Tips

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


## 4.10.5 General

4.10.5.1   General

4.10.5.1.1  General

General setting includes the following items. See Figure 4-97.

● Device Name: Please input a corresponding device name here.
● Device No: Here you can set device number.
● Language: System supports various languages: English, Vietnam, Thailand (All languages listed here are optional. Slight difference maybe found in various series.)
● Video standard: There are two formats: NTSC and PAL.
● HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop record or overwrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then the system stops recording, If the current HDD is full and then next HDD is not empty, then the system overwrites the previous files.
● Pack duration: Here is for you to specify record duration. The value ranges from 1 to 60 minutes. Default value is 60 minutes.
● 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.
- Navigation bar: If you select the checkbox here, system will display 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 the speed via dragging the slide bard.

You can Click Default button to restore default setup.



Figure 4-97

4.10.5.1.2  Date and Time
The interface is shown as in Figure 4-98.
- Date format: There are three types: YYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- Date separator: There are three denotations to separate date: dot, beeline and solidus.
- DST: Here you can set DST time and date. 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.

Figure 4-98

4.10.5.1.3 Holiday

Holiday setup interface is shown as in Figure 4-99. Click Add new holiday button, you can input new holiday information. See Figure 4-100. 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 Oct, 2012 as a holiday, then the date of 30th Oct in each year will be set as a holiday.
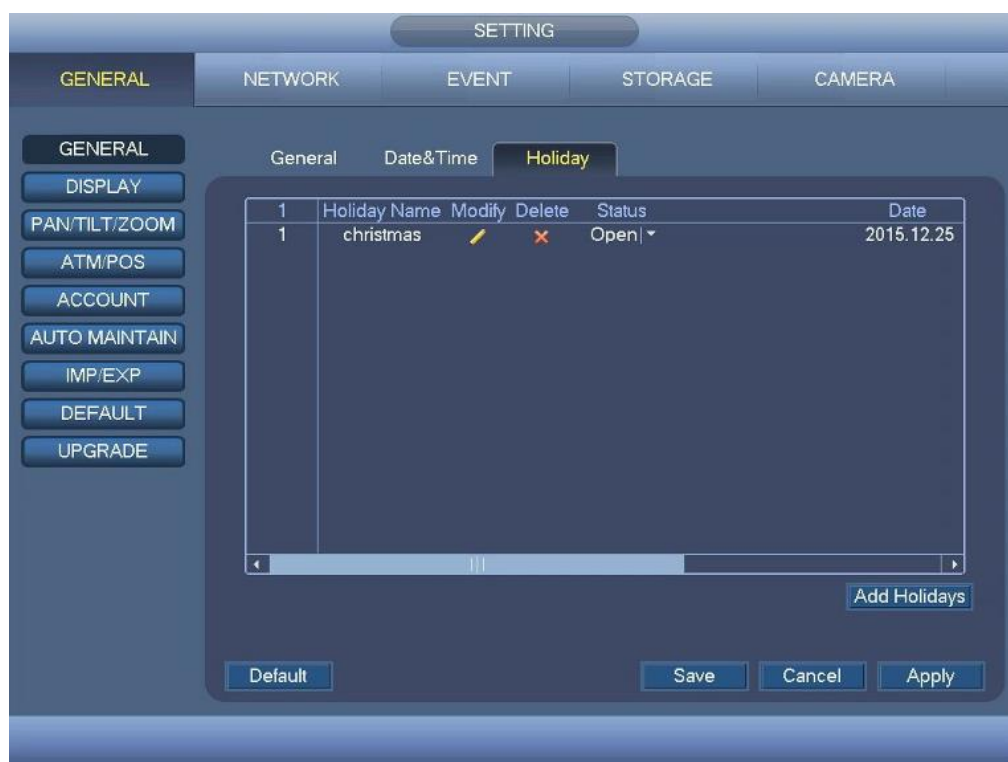
Figure 4-99
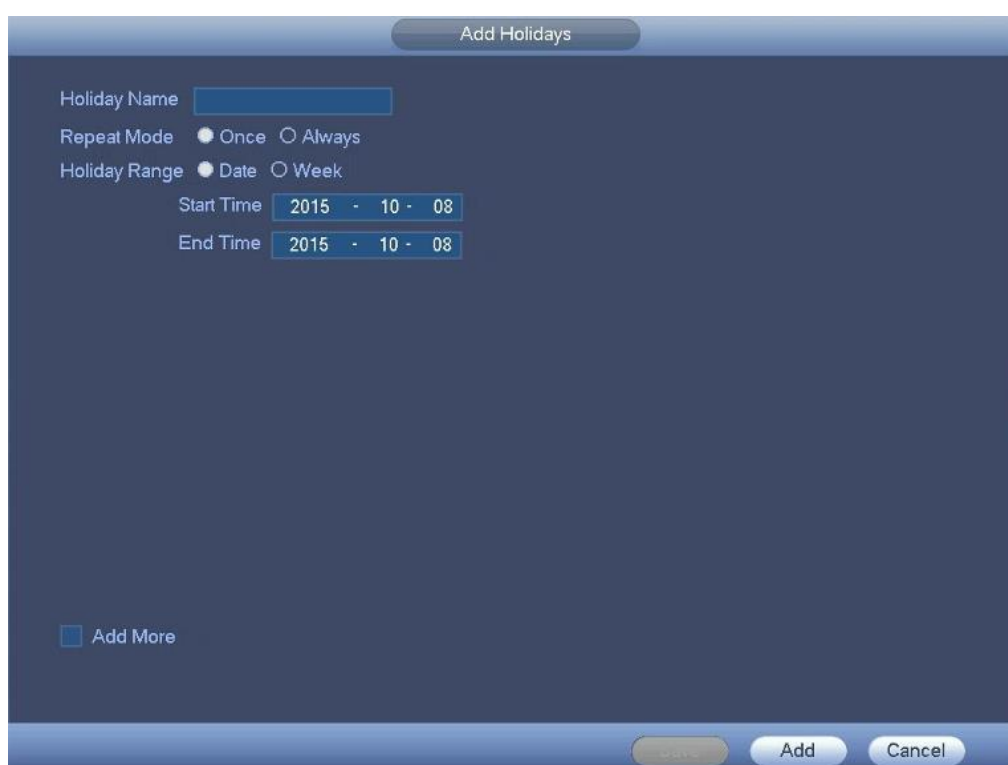


Figure 4-100

Figure 4-101

### 4.10.5.2   Display

It is to set display, tour, and zero-channel.

#### 4.10.5.2.1   Display

Display setup interface is shown as below. See Figure 4-102.

- 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%.
- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to channel name or not when system is playback.
- Image enhance: Select the checkbox to optimize the margin of the preview video.

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.

Figure 4-102

4.10.5.2.2  Tour

Here you can activate tour function. Click Setup button, you can see an interface shown as in Figure 4-103

- Monitor tour type:  System supports 1/8-window tour.
- Enable tour: Select the checkbox to enable this function.
- Interval: Input proper interval value here. The value ranges from 5-120 seconds. It is for schedule tour/alarm/motion detects tour.
- Window Split: You can select window split mode from the dropdown list.
- Window Split view: 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

  funciton is enabled and ⊘ meas tour funciton is disabled.

- On the navigation bar, click 🔲 or 🔳 to enable/disable tour function.

Figure 4-103

4.10.5.2.3 Zero-channel

Click zero-channel encoding button, you can go to the following interface. See Figure 4-104.Here you can enable and set zero-channel encoding function so that you can view several video sources at one channel.

- Enable: This function is disabled by default. Select the checkbox to enable this function so that you can control the zero-channel encoding 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 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 can not operate zero-channel 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 zero-channel encoding mode at the right corner of the interface . Select a mode; you can view the local preview video.

89

Figure 4-104

### 4.10.5.3 PTZ

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 4-105.

- 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 corresponding protocols such as HD-CVI.
- Address: input corresponding PTZ address.
- Baud rate: Select baud rate.
- Data bit: Select data bit.
- Stop bit: Select stop bit.
- Parity: There are five choices: none/odd/even/mark/space.

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

Figure 4-105

### 4.10.5.4  ATM/POS

The ATM/POS function is for financial areas. It includes Sniffer, information analysis and title overlay function. The Sniffer mode is network.

The network type interface is shown as below. See Figure 4-106.

Here we take the ATM/POS protocol to continue.

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

**With the protocol**

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



Figure 4-106

**Without the protocol**

For the ATM/POS without the protocol, the interface is shown as in Figure 4-107.

Source IP refers to host IP address that sends out information (usually it is the device host.)

Destination IP refers to other systems that receive information.

Usually you do not need to set source port and target port.

There are total four groups IP. The record channel applies to one group (optional) only.

Six frame ID groups verification can guarantee information validity and legal.



Figure 4-107

### 4.10.5.5 Account

Here is for you to implement account management. See Figure 4-108 and Figure 4-109. Here you can:

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

For account management please note:

- For the user account name and the user group, the string max length is 6-byte. The backspace in front of or at the back of the string is invalid. There can be backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are two default users: admin and hidden user "default". Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default"

automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

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

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



Figure 4-108

Figure 4-109

4.10.5.5.1 Add/Modify Group

Click add group button in Figure 4-109 , the interface is shown as below. See Figure 4-110.

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

There are total 15 rights such as account, system, offline user, default & upgrade, PTZ, info, manual control, backup, color, storage, event, network, camera, clear log and shutdown.

The modify group interface is similar to the Figure 4-110.



Figure 4-110

4.10.5.5.2  Add/Modify User

Click add user button in Figure 4-108 , the interface is shown as in Figure 4-111.

Please input the user name, password, select the group it belongs to from the dropdown list.

Then you can select the corresponding rights for current user.

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

The modify user interface is similar to Figure 4-111.



Figure 4-111

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

### 4.10.5.6  Auto Maintain

Here you can set auto-reboot time and auto-delete old files setup. You can set to delete the files for the specified days. See Figure 4-112.

You can select proper setup from dropdown list.

After all the setups please click OK button, system goes back to the previous menu.
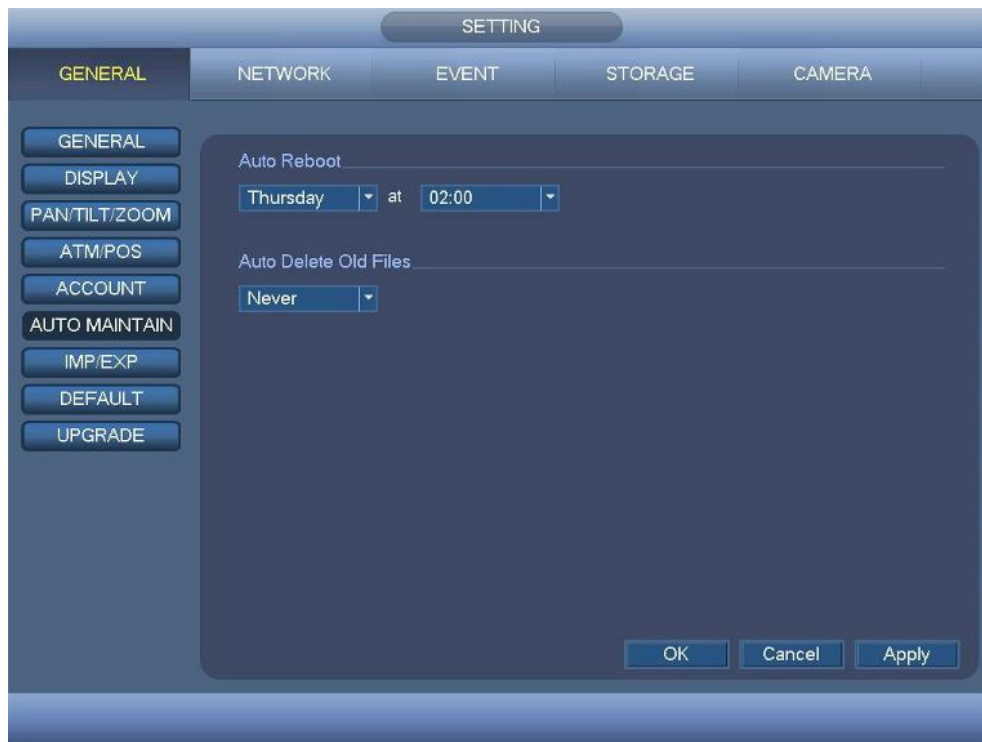
Figure 4-112

### 4.10.5.7  Import/Export

The Import/Export interface is shown as below. See Figure 4-113.

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 can not 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 4-113

4.10.5.8  Default
You can restore factory default setup to fix some problems when the device is running slowly.
Configuration error occurred.
From Main menu -> Setting -> General -> Default, you can go to the default interface.

Click Function Default icon, system pops up a dialogue box. You can select the checkbox ▣ to restore default factory setup. See Figure 4-114.
● All
● General
● Network
● Event
● Storage
● Camera

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

Figure 4-114

### 4.10.5.9 Upgrade

From Main menu -> Setting -> General -> Upgrade, you can go to the following interface. See Figure 4-115.

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

**Important**

**Please make sure the upgrade file name shall be update.bin.**



Figure 4-115

# 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:
- Network connection is right
- DVR and PC network setup is right. Please refer to network setup(Main menu->Setting->Network)
- Use order ping ***.***.***.***(* DVR IP address) to check connection is OK or not. Usually the return TTL value should be less than 255.
- 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 Login

Open IE and input DVR address in the address column. For example, if your DVR IP is 10.10.3.16, then please input http:// 10.10.3.16 in IE address column.

System pops up warning information to ask you whether install controls or not. Please click Install button. See Figure 5-1.
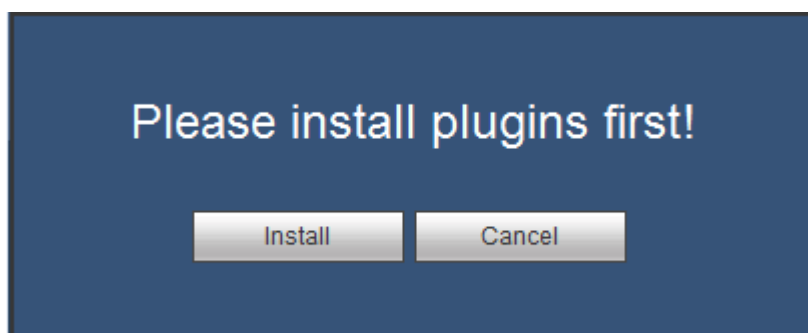


Figure 5-1

After installation, the interface is shown as below. See Figure 5-2.

Please input your user name and password.

Default factory name is ADMIN and password is 12345.

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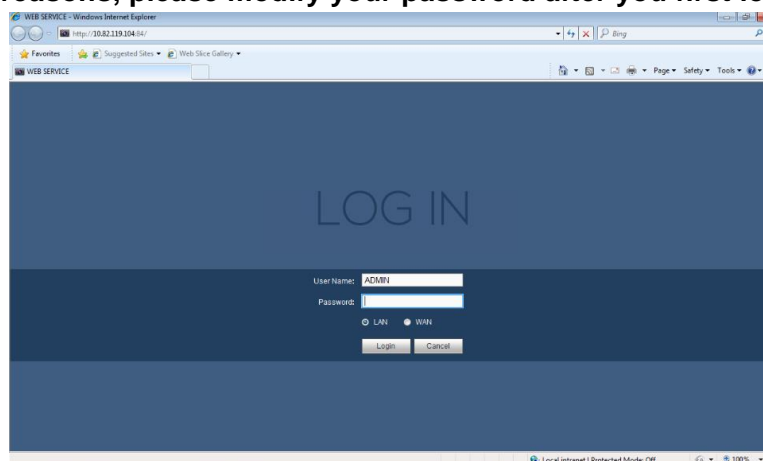


Figure 5-2

## 5.3 LAN Mode

For the LAN mode, after you logged in, you can see the main window. See Figure 5-3.
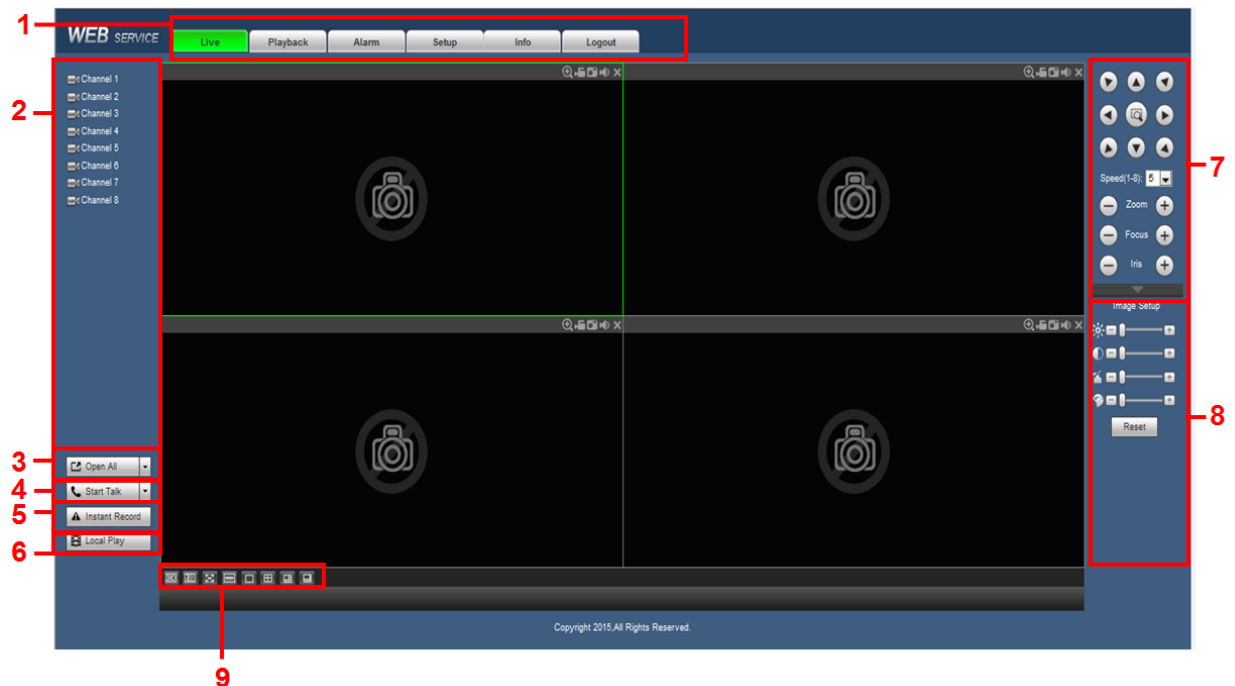


Figure 5-3

This main window can be divided into the following sections.

- Section 1: There are six function buttons: Live（chapter 5.4）, Playback (chapter 5.10), Alarm (chapter 5.11), Setup (chapter 5.8), Info (chapter 5.9), and Logout (chapter 5.12).
- Section 2: There are channel numbers.
- Section 3: Open all button is to enable/disable all-channel real-time monitor. Click it the button becomes green. See Figure 5-4.
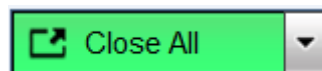


Figure 5-4

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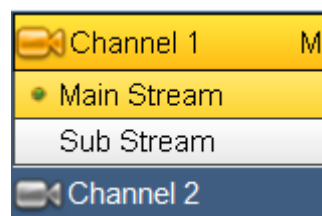


Figure 5-5

● Section 4: Start dialogue 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 5-6.

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 5-6

● Section 5: Instant record button. Click it, the button becomes green and system begins manual record. See Figure 5-7. Click it again, system restores previous record mode.



Figure 5-7

● 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 5-8.
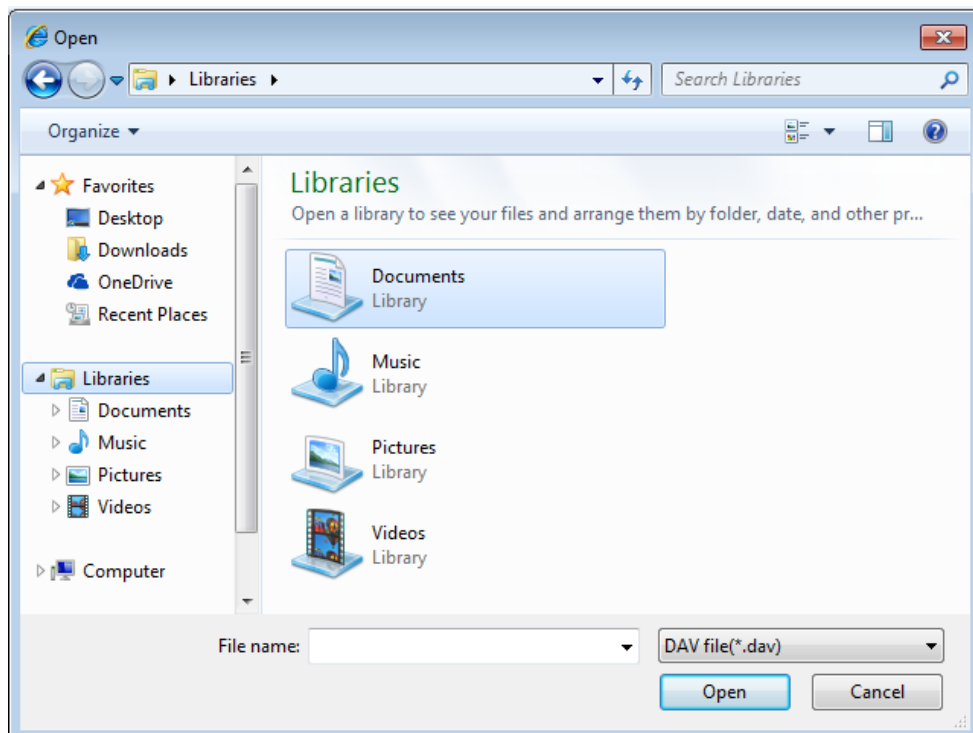


Figure 5-8

- Section 7: PTZ operation panel. Please refer to chapter 5.5 for detailed information.
- Section 8: Image setup .Please refers to chapter 5.6 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. You can set video fluency and real-time feature priority.
.

## 5.4  Live

 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 5-9.
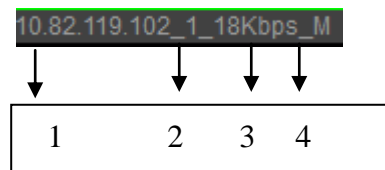


Figure 5-9

On the top right corner, there are five function buttons. See Figure 5-10.
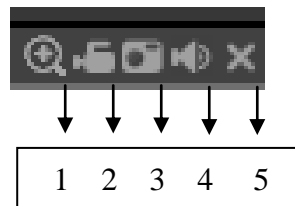


Figure 5-10

- 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: Screenshot: You can snapshoot 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 video.

## 5.5  PTZ

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to chapter 5.8.5.3).
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 | ● Select Scan from the dropdown list.<br>● Click Set button, you can set scan left and right limit.<br>● 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 | ● Select Preset from the dropdown list.<br>● Turn the camera to the corresponding position and Input the preset value. Click Add button to add a preset. |
| Tour | ● Select Tour from the dropdown list.<br>● Input preset value in the column. Click Add preset button, you have added one preset in the tour.<br>● Repeat the above procedures you can add more presets in one tour.<br>● Or you can click delete preset button to remove one preset from the tour. |
| Pattern | ● Select Pattern from the dropdown list.<br>● 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 | ● Please input the corresponding aux value here.<br>● You can select one option and then click AUX on or AUX off button. |
| Light and wiper | You can turn on or turn off the light/wiper. |
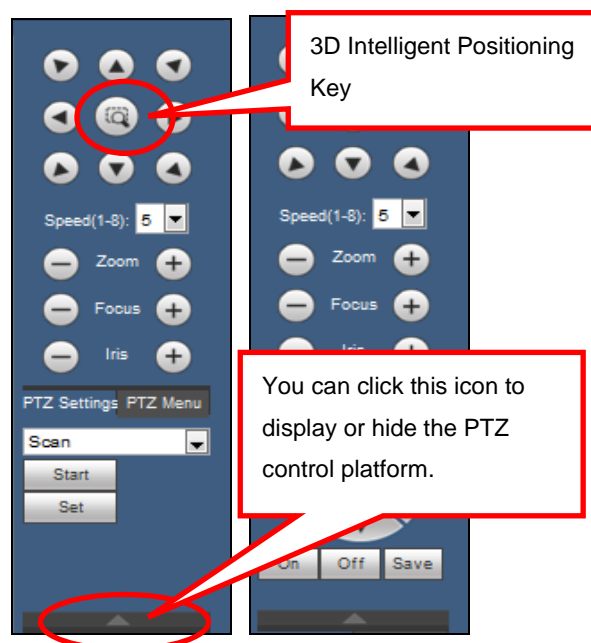


Figure 5-11

## 5.6 Image

Select one monitor channel video and then click Image button in section 8, the interface is shown as Figure 5-12.

### 5.6.1 Image

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.
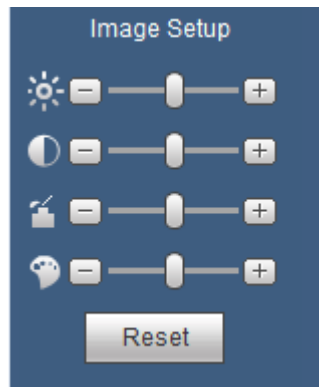


Figure 5-12

## 5.7 WAN Login

In WAN mode, after you logged in, the interface is shown as below. See Figure 5-13.
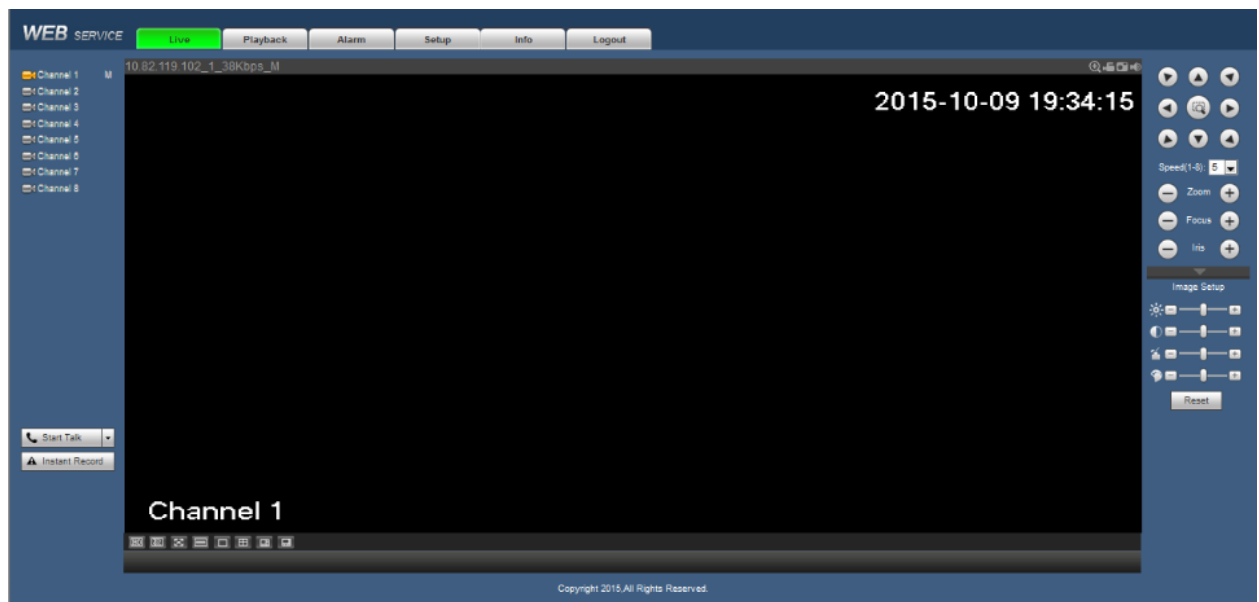


Figure 5-13

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/close button on the left pane is null.

2) You can select different channels and different monitor modes at the bottom of the interface. See Figure 5-14.
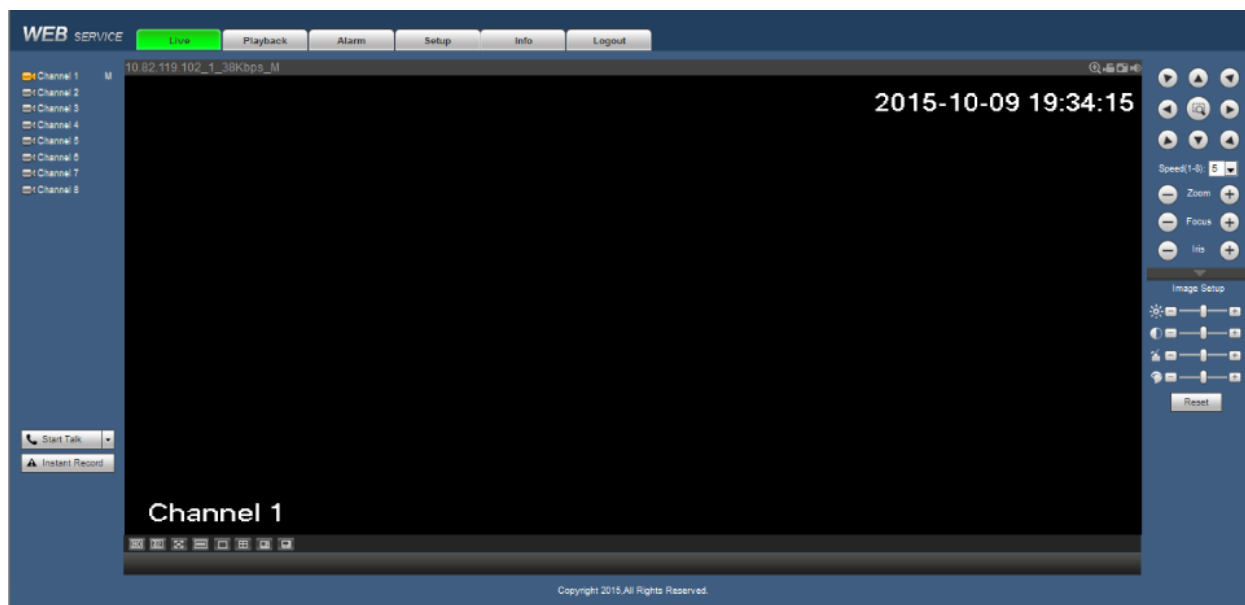
Figure 5-14

**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.

**Important**

● For multiple-channel monitor mode, system adopts extra stream to monitor by default. You can not modify manually. All channels are trying to synchronize. Please note the synchronization effect still depends on your network environments.

● For bandwidth consideration, system can not 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.

## 5.8 Setup

### 5.8.1 Camera

5.8.1.1 Conditions

Here you can view device property information. The setups become valid immediately after you set. See Figure 5-15 (analog channel).
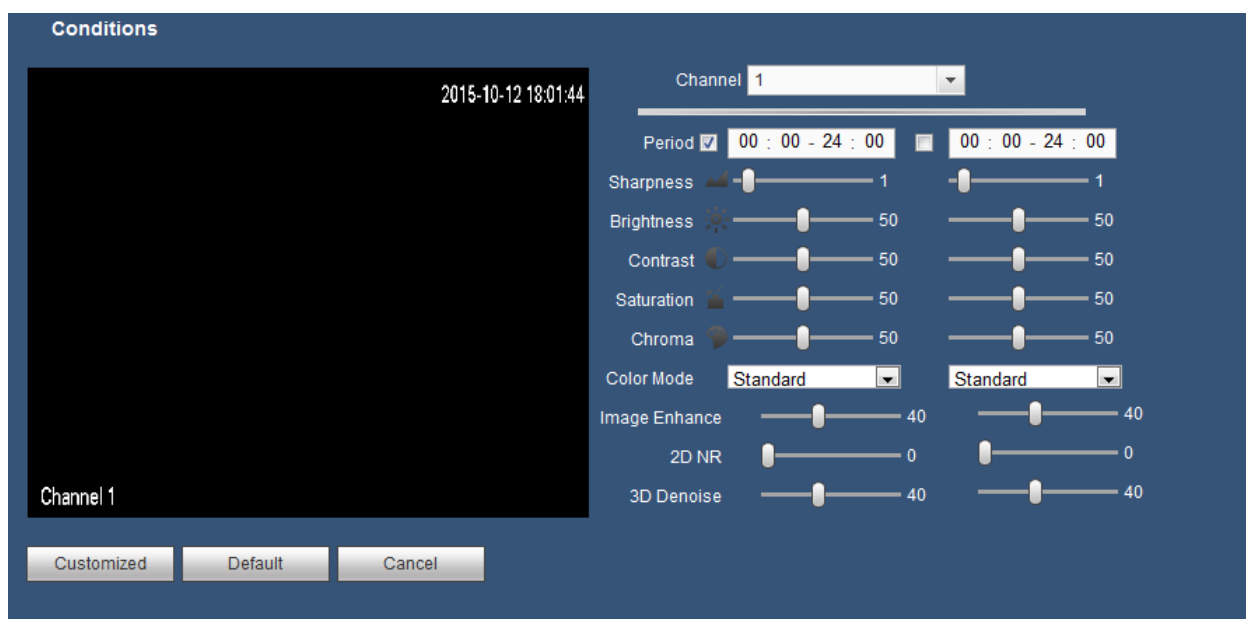
Figure 5-15

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 hue, brightness, and contrast for different periods. |
| Sharpness | It is to adjust monitor video sharpness level. The default value is 50.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 bright 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 strong 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 large 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 hue, brightness, and 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. |
| 2D NR | It is 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. |
| 3D Denoise | 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. The larger the value is, the better the effect is. |

### 5.8.1.2 Encode

#### 5.8.1.2.1 Encode

The encode interface is shown as below. See Figure 5-16.



Figure 5-16

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. |

107

| | |
|---|---|
| Code stream type | It includes regular stream, motion stream and alarm stream. You can select different encode frame rates from different recorded events.<br><br>System supports active control frame function (ACF). It allows you to record in different frame rates.<br><br>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 stream supports H.264.<br><br>The sub stream supports H.264. |
| Resolution | System supports various resolutions, you can select from the dropdown list. The main stream supports 1080P/720P/960H/D1/HD1/2CIF/CIF; the sub stream supports D1/CIF/QCIF. Please note the option may vary due to different series. |
| Frame Rate | PAL：1～25f/s；NTSC：1～30f/s. |
| Bit Rate | ● Main stream: You can set bit rate here to change video quality. The large the bit rate is, the better the quality is. Please refer to recommend bit rate for the detailed information.<br>● 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 | Here you can set the P frame amount between two I frames. The value ranges from 1s to 2s. Default value is 1s.<br><br>Recommended value is frame rate *2. |
| Audio source | 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. |
| Watermark enable | This function allows you to verify the video is tampered or not.<br><br>Here you can select watermark bit stream, watermark mode and watermark character. The max length is 85-digit. The character can only include number, character and underline. |

5.8.1.2.2 Snapshot

The snapshot interface is shown as in Figure 5-17.

Figure 5-17

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| Snapshot type | There are two modes: Timing (schedule) and Trigger.<br>● Timing snapshot is valid during the specified period you set.<br>● Trigger snapshot only is valid when motion detect alarm, tampering alarm or local activation alarm occurs. |
| Image size | Image size: supports D1, HD1, 2CIF and CIF |
| Quality | It is to set the image quality. There are six levels. |
| Snapshot Frequency | It is to set snapshot frequency. The value ranges from 1s to 7s. Or you can set customized value. The max setup is 3600s/picture. |
| Copy | Click it; you can copy current channel setup to other channel(s). |

5.8.1.2.3 Overlay

The video overlay interface is shown as in Figure 5-18.



Figure 5-18

Please refer to the following sheet for detailed information.

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

### 5.8.1.2.4 Path

The storage path interface is shown as in Figure 5-19.

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 5-19

## 5.8.1.3  Channel Name

Here you can set channel name. See Figure 5-20.

**Channel 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]

Save     Refresh     Default
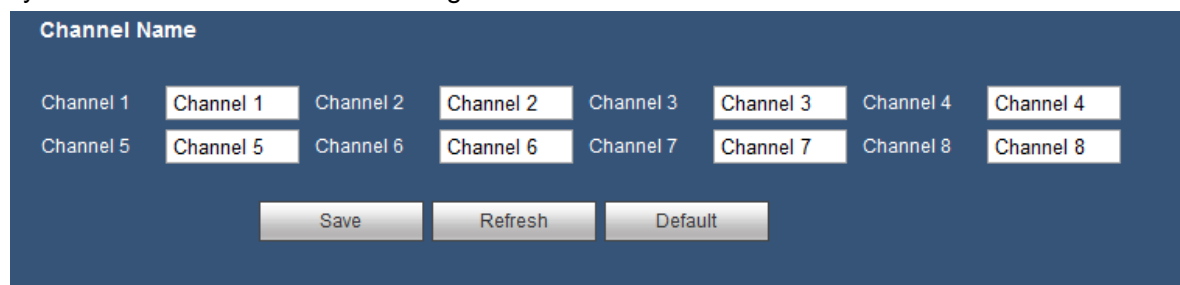
Figure 5-20

## 5.8.1.4  Channel Type

Here you can set channel type. See Figure 5-21.

Figure 5-21

### 5.8.2 Network
5.8.2.1 TCP/IP

The TCP/IP interface is shown as in Figure 5-22.



Figure 5-22

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| Mode | There are two modes: static mode and the DHCP mode.<br>● The IP/submask/gateway are null when you select the DHCP mode to auto search the IP.<br>● If you select the static mode, you need to set the IP/submask/gateway manually.<br>● If you select the DHCP mode, you can view the IP/submask/gateway from the DHCP.<br>● If you switch from the DHCP mode to the static mode, you need to reset the IP parameters.<br>● Besides, IP/submask/gateway and DHCP are read-only when the PPPoE dial is OK. |
| Mac Address | It is to display host Mac address. |
| IP Version | It is to select IP version. IPV4 or IPV6.<br>You can access the IP address of these two versions. |

| | |
|---|---|
| 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. |
| **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.** | |
| LAN  Download | System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed. |

### 5.8.2.2  Easy Remote

The EASY REMOTE interface is shown as in Figure 5-23.
You can scan the QR code to login the dveice in the WAN. Please refer to EASY REMOTE operation manual included in the resources CD for detailed information.



Figure 5-23

### 5.8.2.3  Connection
The connection interface is shown as in Figure 5-24.



Figure 5-24

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 1 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 | The default value is 443. You can input the actual port number if necessary. |
| RTSP port | The default value is 554. |

### 5.8.2.4 PPPoE

The PPPoE interface is shown as in Figure 5-25.

Input the PPPoE user name and password you get from the IPS (internet service provider) and enable PPPoE function. Please save current setup and then reboot the device to get the setup activated.

Device connects to the internet via PPPoE after reboot. You can get the IP address in the WAN from the IP address column.

**Please note, you need to use previous IP address in the LAN to login the device. Please go to the IP address item to via the device current device information. You can access the client-end via this new address.**
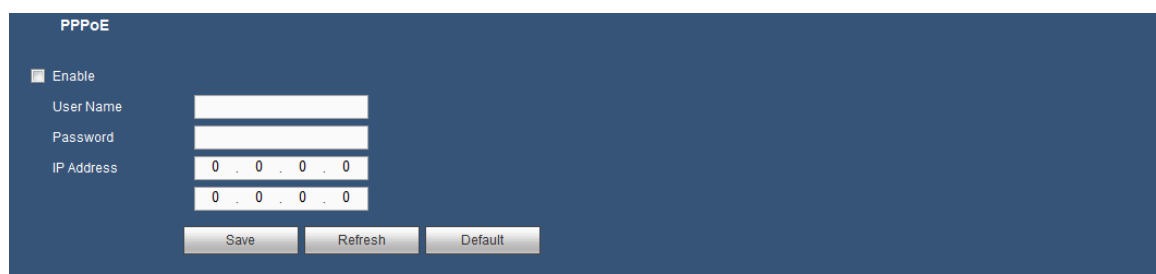


Figure 5-25

### 5.8.2.5 DDNS

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

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 5-26

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| DDNS Type | You can select DDNS protocol from the dropdown list and then enable DDNS function. |
| Server IP Address | DDNS server IP address |
| Domain Mode | Two modes: Default Domain or Custom Domain Name. |
| Domain Name | Your self-defined domain name. |
| Email Address | The email address you input to log in the server. |

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

● Server address：www.quickddns.com

● Port number：80

● Domain name：There are two modes: Default domain name and custom domain name.

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

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

**Important**

114

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

### 5.8.2.6  IP filter

The IP filter interface is shown as in Figure 5-27.

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 can not access current DVR.



Figure 5-27

### 5.8.2.7  Email

The email interface is shown as in Figure 5-28.



Figure 5-28

Please refer to the following sheet for detailed information.

| Parameter | Function |
|-----------|----------|
| Enable | Please select the checkbox here to enable email function. |

115

| Parameter | Function |
|---|---|
| SMTP Server | Input server address and then enable this function. |
| Port | Default value is 25. You can modify it if necessary. |
| 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 sent out a email once to test the connection is OK or not .Before the email test, please save the email setup information. |

## 5.8.2.8 FTP

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

It is to set FTP IP, port and etc for remote storage.

Please refer to chapter 4.10.2.8 for detailed information.

Figure 5-29

### 5.8.2.9 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 5-30.

- In the Windows OS, From Start->Control Panel->Add or remove programs. Click the "Add/Remove Windows Components" and then select the "Network Services" from the Windows Components Wizard.
- Click the Details button and then select the "Internet Gateway Device Discovery and Control client" and "UPnP User Interface". Please click OK to begin installation.
- Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the DVR can auto detect it via the "My Network Places"



Figure 5-30

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| Port Forwarding | Select the corresponding box to enable Port Forwarding function. |

| Parameter | Function |
|---|---|
| Status | Display UPnP function status. |
| Port mapping list | It is corresponding to the UPnP mapping information on the router. Select the checkbox before the service name to enable current PAT service. Otherwise, the service is null.<br>● Service name：Customzied name.<br>● Protocol：Protocol type.<br>● Internal port：The port mapped to the port.<br>● External port：The port current device needs to map.<br>● Device has three mapping items: HTTP/TCP/UDP.<br>**Note**<br>When you set the external port (outport) of the router, the value ranges from 1024 to 5000. Do not use port 1～255 or system port 256～1023, in case there is conflict. |

### 5.8.2.10  SNMP

The SNMP interface is shown as in Figure 5-31.

The SNMP allows the communication between the network management work station software and the proxy of the managed device. It is reserved for the 3$^{rd}$ party to develop.



Figure 5-31

Please refer to the following sheet for detailed information.

| 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 string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Please make sure the device and the proxy are the same.<br>The read community will read all the objects the SNMP supported in the specified name. The default setup is public. |

| Parameter | Function |
|---|---|
| Write Community | It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Please make sure the device and the proxy are the same.<br>The read community will read /write /access all the objects the SNMP supported in the specified name. The default setup is write. |
| 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. The default value is 162. |
| SNMP version | ● Select V1, system only processes the information of V1.<br>● Select V2, system only processes the information of V2. |

## 5.8.2.11 Multicast

The multicast interface is shown as in Figure 5-32.

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.



Figure 5-32

## 5.8.2.12 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 5-33.

**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 5-33

5.8.2.12.1  Create Server Certificate

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

In Figure 5-33, click [Create Server Certificate] button, input country name, state name and etc. Click
Create button. See Figure 5-34.

**Note**

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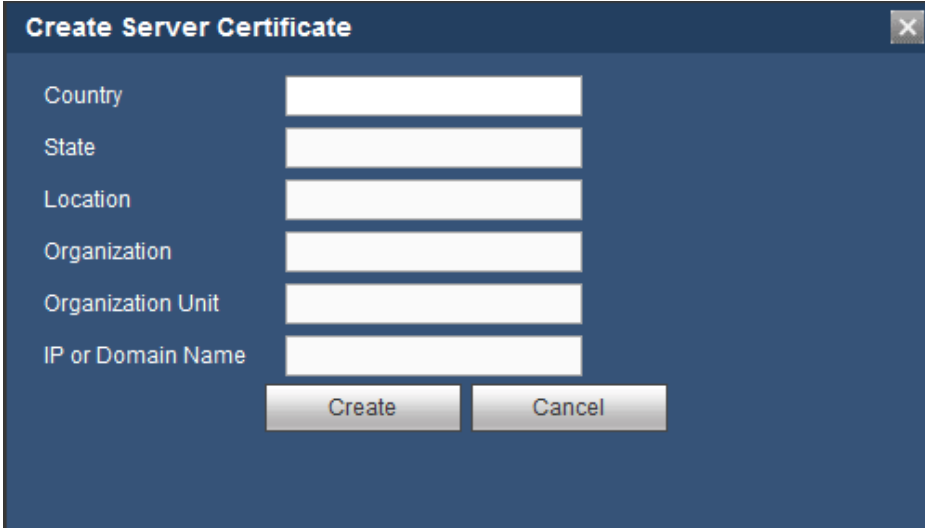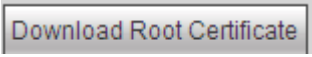


Figure 5-34

You can see the corresponding prompt. See Figure 5-35. Now the server certificate is successfully
created.



Figure 5-35

5.8.2.12.2  Download root certificate

In Figure 5-33, click [Download Root Certificate] button, system pops up a dialogue box. See Figure 5-36.
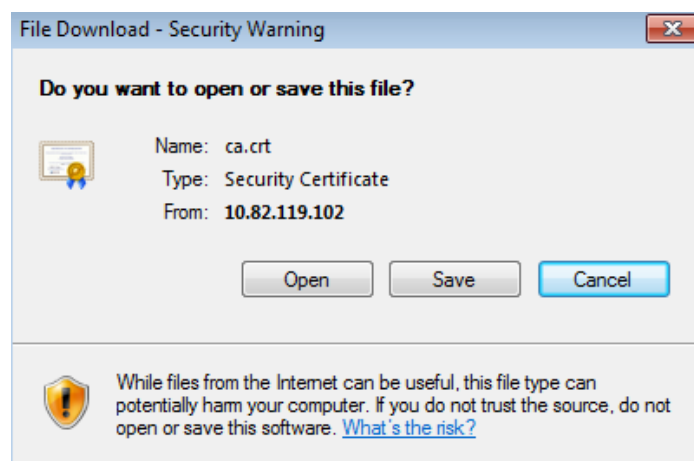


Figure 5-36

Click Open button, you can go to the following interface. See Figure 5-37.
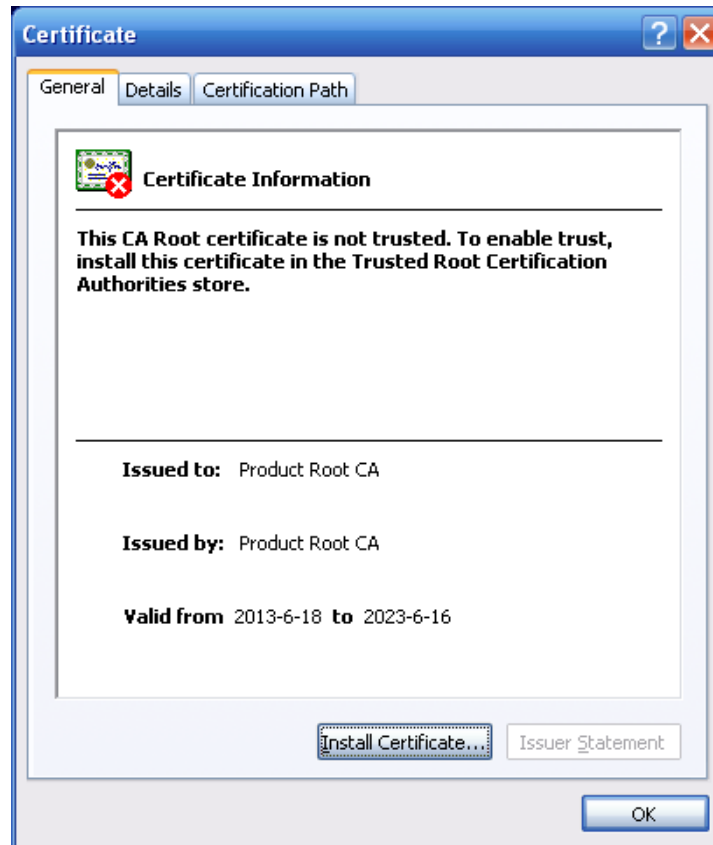


Figure 5-37

Click Install certificate button, you can go to certificate wizard. See Figure 5-38.



Figure 5-38

Click Next button to continue. Now you can select a location for the certificate. See Figure 5-39.
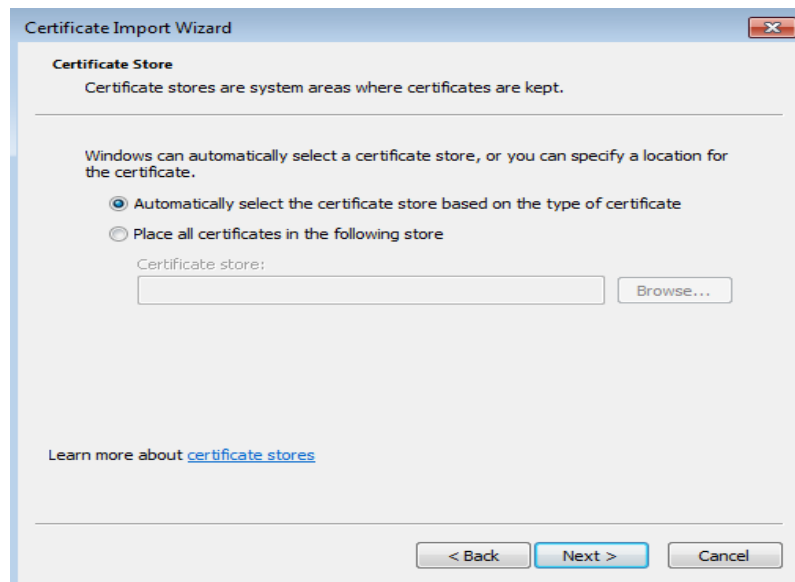
Figure 5-39

Click Next button, you can see the certificate import process is complete. See Figure 5-40.
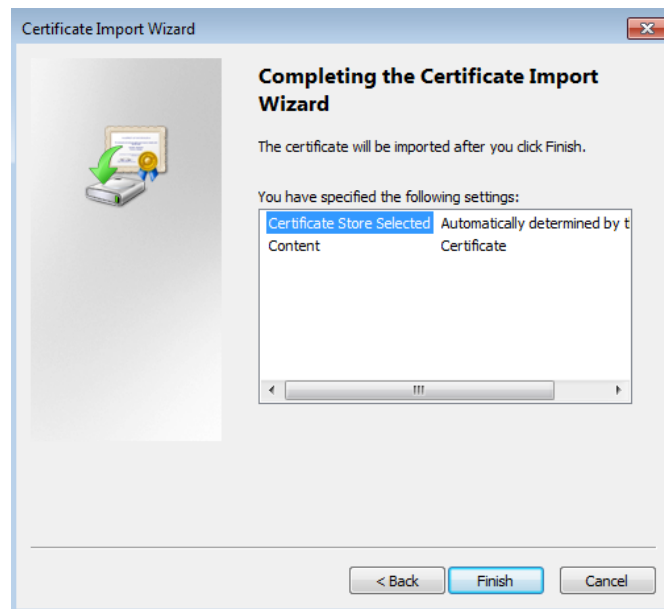


Figure 5-40

Click Finish button, you can see system pops up a security warning dialogue box.  See Figure 5-41.



Figure 5-41

Click Yes button, system pops up the following dialogue box, you can see the certificate download is complete. See Figure 5-42.
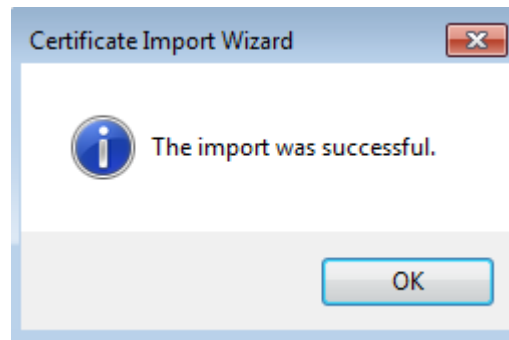


Figure 5-42

5.8.2.12.3  View and set HTTPS port
From Setup->Network->Connection, you can see the following interface. See Figure 5-43.
You can see HTTPS default value is 443.



Figure 5-43

5.8.2.12.4  Login
Open the browser and then input http://xx.xx.xx.xx:port.
xx.xx.xx.xx: is your device IP or domain mane.
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.

## 5.8.3   Event
5.8.3.1  Detect
5.8.3.1.1 Motion Detect
The motion detect interface is shown as in Figure 5-44.

Figure 5-44



Figure 5-45



Figure 5-46

Figure 5-47

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| Enable | You need to select the checkbox to enable motion detection function.<br>Please select a channel from the dropdown list. |
| Period | Motion detection function becomes activated in the specified periods. See Figure 5-45.<br>There are six periods in one day. Please draw a circle to enable corresponding period.<br>Click OK 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 5s to 600s. |
| Sensitivity | There are six levels. The sixth level has the highest sensitivity. |
| Region | If you select motion detection type, you can click this button to set motion detection zone. The interface is shown as in Figure 5-46. Here you can set motion detection zone. There are four zones for you to set. Please select a zone first and then left drag the mouse to select a zone. The corresponding color zone displays different detection zone. You can click Fn button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember click save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup. |
| 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. |

| Parameter | Function |
|---|---|
| PTZ Activation | Here you can set PTZ movement when alarm occurs. See Figure 5-47. |
| Tour | You need to select the checkbox here to enable this function. System begins 1-wiindow or multiple-window tour display among the channel(s) you set to record when an 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 centre (Including alarm centre. |
| Buzzer | Select the checkbox here to enable this function. The buzzer beeps when an alarm occurs. |

5.8.3.1.2 Video Loss

The video loss interface is shown as in Figure 5-48.

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 5.8.3.1.1 motion detect for detailed information.



Figure 5-48

5.8.3.1.3 Tampering

The tampering interface is shown as in Figure 5-49.

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 5.8.3.1.1 motion detect for detailed information.

Figure 5-49

## 5.8.3.2 Abnormality

It includes two types: HDD Error and Network Error. See Figure 5-50 and Figure 5-51.



Figure 5-50



Figure 5-51

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 and MAC conflict.<br><br>You can set one or more items here.<br><br>Less than: You can set the minimum percentage value here (For disk not space only). The device can alarm when capacity is not sufficient.<br><br>You need to draw a circle to enable this function. |
| Enable | Select the checkbox here to enable selected 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. |
| Alarm upload | System can upload the alarm signal to the centre (Including alarm centre. |
| Buzzer | Select the checkbox here to enable this function. The buzzer beeps when an alarm occurs. |

## 5.8.4 Storage

5.8.4.1 Schedule

In this interfaces, you can add or remove the schedule record/snapshot setup. See Figure 5-52.

There are four record modes: regular, motion detect, alarm and MD & 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.

Figure 5-52



Figure 5-53



Figure 5-54

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.** |
| Setup (Sunday to Saturday) | Click the Setup button, you can set record period. See Figure 5-53. 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. |
| Setup (Holiday) | Click the Setup button, you can set record period. See Figure 5-53. There are six periods in one day. |

| 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 5-54. You can see current channel name is grey such as channel 1. Now you can select the channel you wan to paste such as channel 5/6/7. If you wan to save current setup of channel 1 to all channels, you can click the first box "ALL". Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded. |

## 5.8.4.2 HDD Manage

The HDD Manage interface is shown as in Figure 5-55. 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 5-55

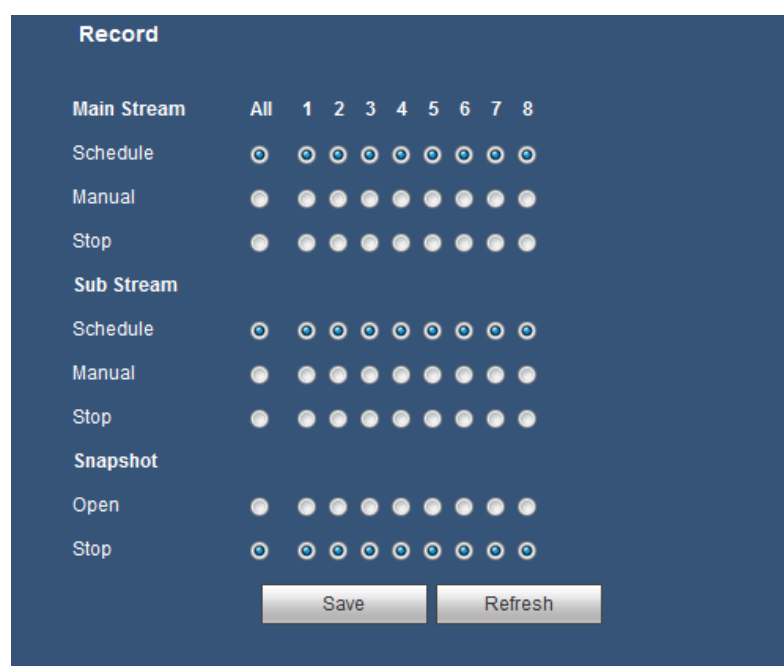## 5.8.4.3 Record

The interface is shown as in Figure 5-56.



Figure 5-56

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| Channel | Here you can view channel number.<br>The number displayed here is the max channel amount of your device. |
| Status | There are three status: schedule, manual and stop. |
| Schedule | System enables auto record function as you set in schedule setup (regular, motion detect, alarm and MD & alarm). |
| Manual | It has the highest priority.<br>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/<br>stop all | Select the corresponding All button; you can enable or disable all channels record. |

## 5.8.5  General

### 5.8.5.1  General

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

#### 5.8.5.1.1 General

The general interface is shown as in Figure 5-57.



Figure 5-57

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. |
| HDD full | Here is for you to select working mode when hard disk is full. There are two options: Stop Record or OverWrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files. |
| Pack duration | Here is for you to specify record duration. The value ranges from 1 to 120 minutes. Default value is 60 minutes. |
| 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. |

5.8.5.1.2 Date and time

The date and time interface is shown as in Figure 5-58



Figure 5-58

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-H and 12-H. |
|---|---|
| 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 | You can set the time server address. |
| Port | It is to set the time server port. |
| Interval | It is to set the sync periods between the device and the time server. |

5.8.5.1.3 Holiday Setup

Holiday setup interface is shown as in Figure 5-59.

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



Figure 5-59

### 5.8.5.2 Display

Display interface includes Display, Tour and Zero-Channel.

5.8.5.2.1 Display

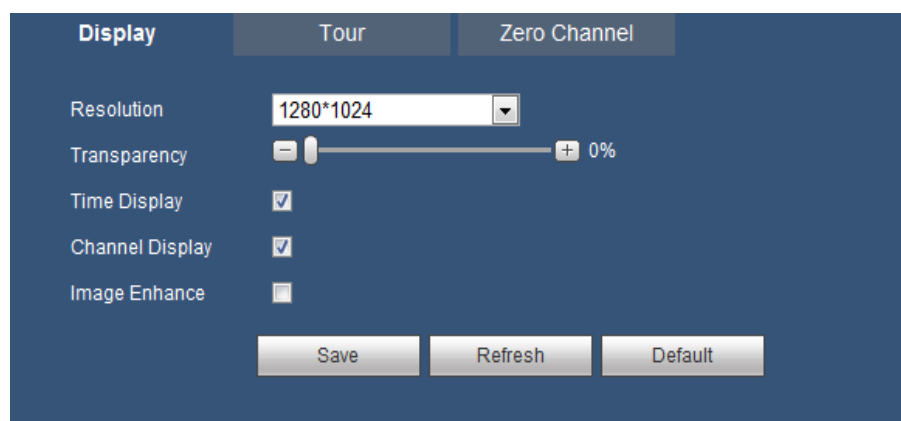Here you can set background color and transparency level. See Figure 5-60.

Figure 5-60

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%. |
| TimeDisplay/Channel Display | Select the checkbox here, you can view system time and channel number on the monitor video. |
| Image enhance | Select the checkbox, you can optimize the margin of the preview video. |

5.8.5.2.2 Tour

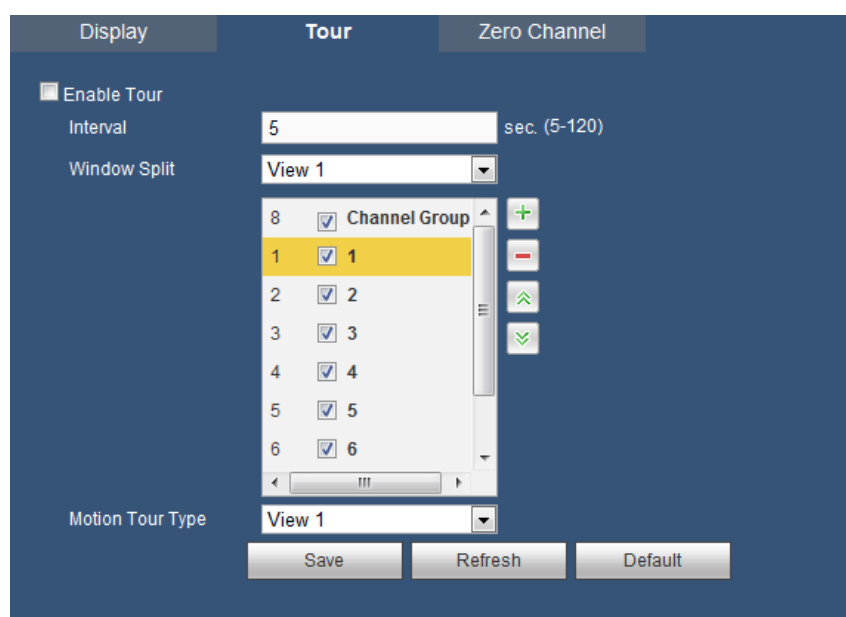The tour interface is shown as in Figure 5-61. Here you can set interval, window split and motion detect type.



Figure 5-61

Please refer to the following sheet for detailed information.

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

5.8.5.2.3 Zero Channel

The zero-channel interface is shown as in Figure 5-62. Here you can enable zero-channel function and set corresponding information.



Figure 5-62

Please refer to the following sheet for detailed information.

| Parameter | Function |
|---|---|
| Enable | Select the checkbox here to enable Zero Channel function. |
| Compression | System supports H.264. |
| Resolution | Please select from the dropdown list. System supports D1. |
| Frame rate | Please select from the dropdown list. The value ranges from 1-25(PAL) or 1-30(NTSC). |
| Bit rate | Please select from the dropdown list. |

5.8.5.3 PTZ

The PTZ interface is shown as in Figure 5-63.

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.

Figure 5-63

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 corresponding 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 can not 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. |

## 5.8.5.4  ATM/POS

The ATM/POS function is for financial areas. It includes Sniffer, information analysis and title overlay function. The Sniffer mode is network.

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

Here we take the ATM/POS protocol to continue.

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

**With the protocol**

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



Figure 5-64

**Without the protocol**

For the ATM/POS without the protocol, the interface is shown as in Figure 5-65.

Source IP refers to host IP address that sends out information (usually it is the device host.)

Destination IP refers to other systems that receive information.

Usually you do not need to set source port and target port.

There are total four groups IP. The record channel applies to one group (optional) only.

Six frame ID groups verification can guarantee information validity and legal.



Figure 5-65

## 5.8.5.5  Account

**Note:**

- For the character in the following user name or the user group name, system max supports 6-digits. The space in the front or at the end of the string is null. The valid string includes: character, number, and underline.
- The user amount default setup is 64 and the group amount default setup is 20. The factory default setup includes two levels: user and admin. You can set the corresponding group and then set the rights for the respective user in the specified groups.
- User management adopts group/user modes. The user name and the group name shall be unique. One user shall be included in only one group.

### 5.8.5.5.1 User

In this interface you can add/remove user and modify user name. See Figure 5-66.
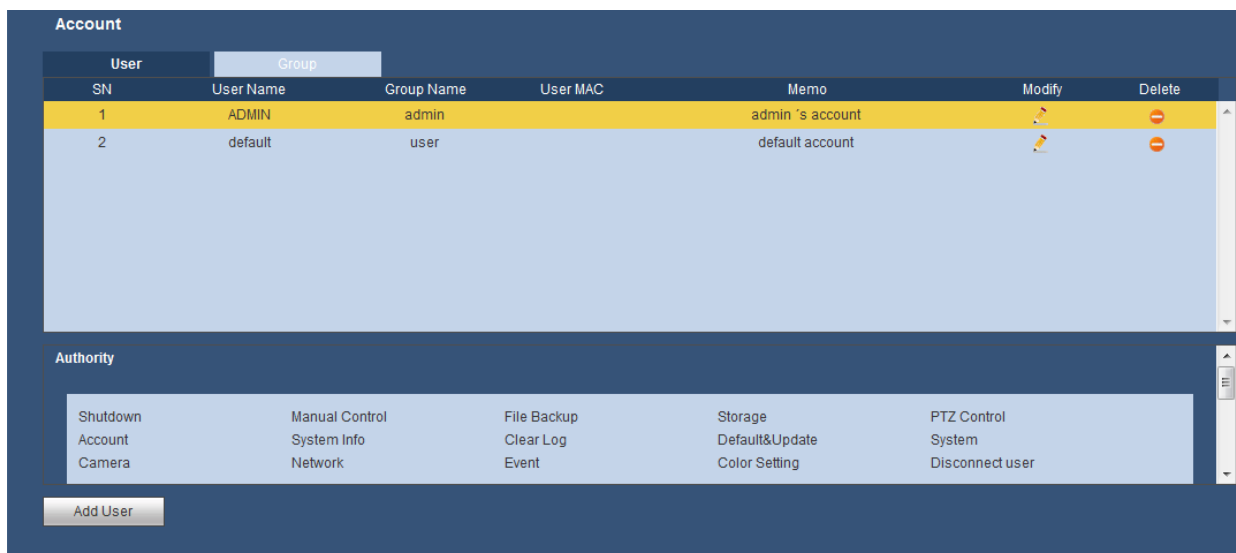


Figure 5-66

**Add user:** It is to add a name to group and set the user rights. See Figure 5-67.
There are two default users: ADMIN and hidden user "default". All users have administrator right.

Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

Here you can input the user name and password and then select one group for current user.
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.
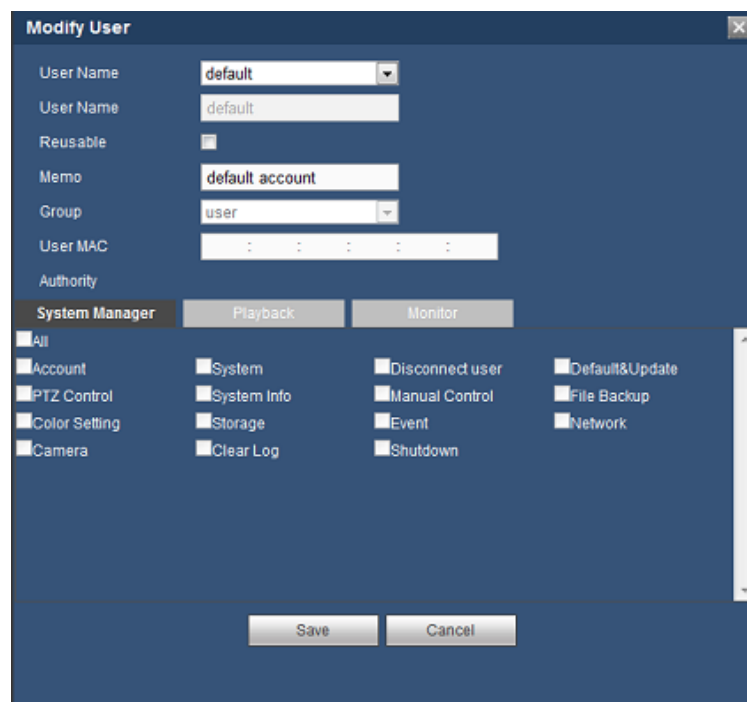
Figure 5-67

**Modify user**

It is to modify the user property, belonging group, password and rights. See Figure 5-68.

**Modify password**

It is to modify the user password. You need to input the old password and then input the new password twice to confirm the new setup. Please click the Save button to save.

Please note, the password ranges from 1-digit to 6-digit. It shall include the number only. For the user of the account rights, he can modify the password of other users.



Figure 5-68

5.8.5.5.2 Group

The group management interface can add/remove group, modify group password and etc.

The interface is shown as in Figure 5-69.
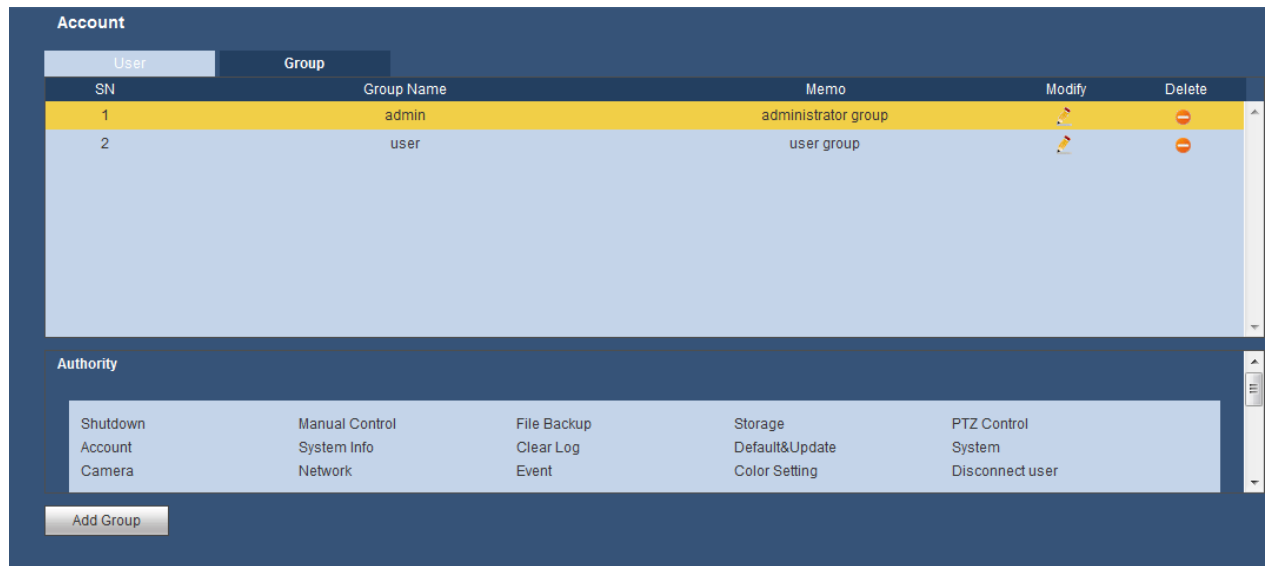


Figure 5-69

**Add group:** It is to add group and set its corresponding rights. See Figure 5-70.

Please input the group name and then select the checkbox to select the corresponding rights. It includes: shutdown/reboot device, live view, record control, PTZ control and etc.
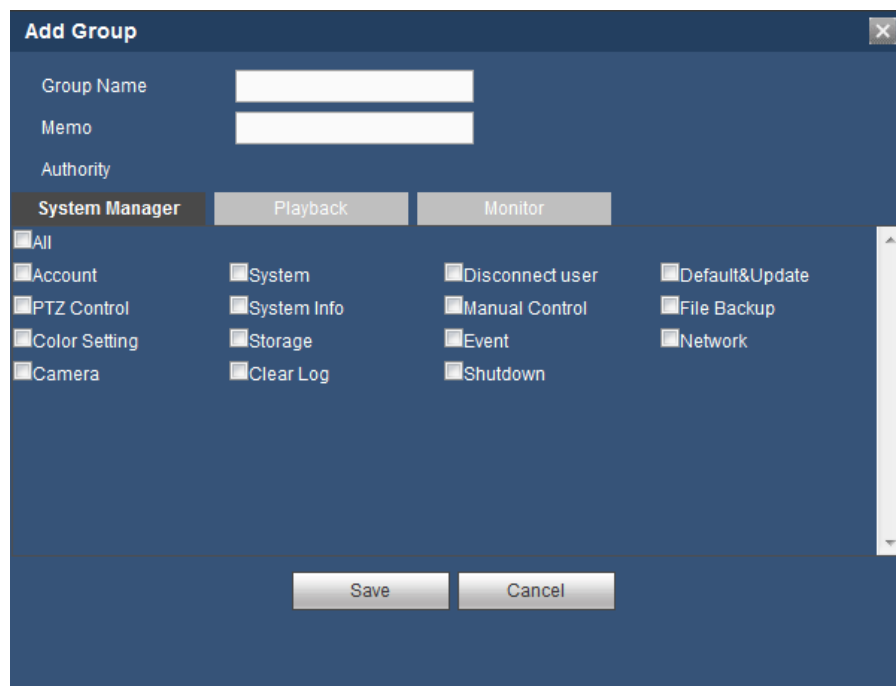


Figure 5-70

**Modify group**

Click the modify group button, you can see an interface is shown as in Figure 5-71.

Here you can modify group information such as remarks and rights.

Figure 5-71

### 5.8.5.6 Auto maintain

The auto maintain interface is shown as in Figure 5-72.

Here you can select auto reboot and auto delete old files interval from the dropdown list.

If you want to use the auto delete old files function, you need to set the file period.

Click Manual reboot button, you can restart device manually.



Figure 5-72

### 5.8.5.7 Import/Export

The interface is shown as in Figure 5-73.



Figure 5-73

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. |

### 5.8.5.8 Default
The default setup interface is shown as in Figure 5-74.
Here you can select Camera/Network/Event/Storage/System. Or you can select the All box to select all items.
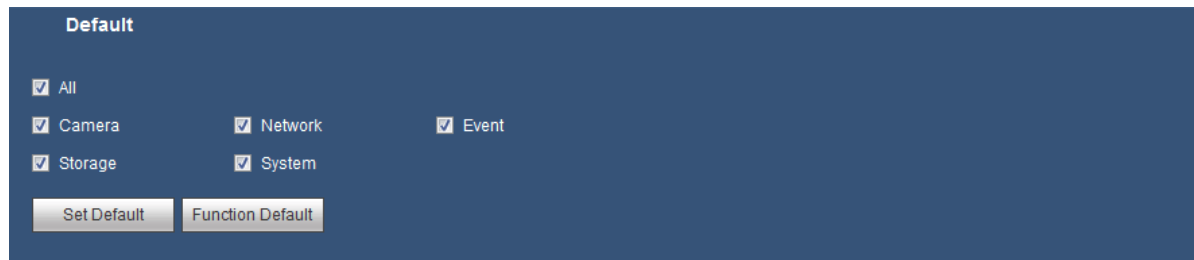


Figure 5-74

### 5.8.5.9 Upgrade
The upgrade interface is shown as in Figure 5-75.
Please select the upgrade file and then click the update button to begin update. Please note the file name shall be as *.bin. During the upgrade process, do not unplug the power cable, network cable, or shutdown the device.
**Important**
**Improper upgrade program may result in device malfunction!**
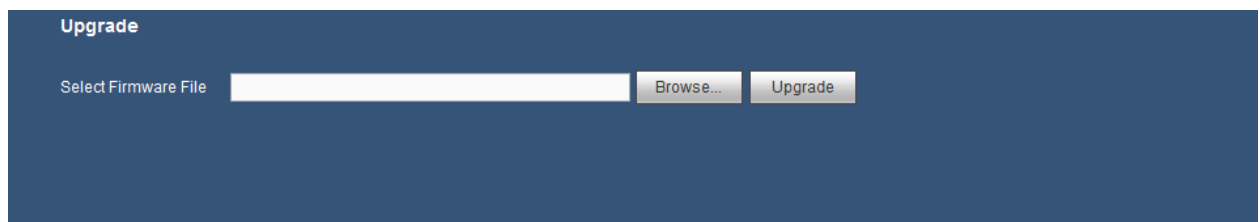


Figure 5-75

.

## 5.9 Info

### 5.9.1 Version
The version interface is shown as in Figure 5-76.
Here you can view record channel, alarm input/output information, serial number and software version.
Please note the following information is for reference only.

Figure 5-76

## 5.9.2 Log

Here you can view system log. See Figure 5-77.



Figure 5-77

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. |
| Type | Log types include: system operation, configuration operation, storage operation, alarm operation, record operation, account management, log clear and playback. |
| Search | You can select log type from the drop down list and then click search button to view the list.<br>You can click the stop button to terminate current search operation. |
| Detailed information | You can select one item to view the detailed information. |

| Parameter | Function |
|-----------|----------|
| Clear | You can click this button to delete all displayed log files. Please note system does not support clear by type. |
| Backup | You can click this button to backup log files to current PC. |

### 5.9.3 Online User

The online user interface is shown as in Figure 5-78.
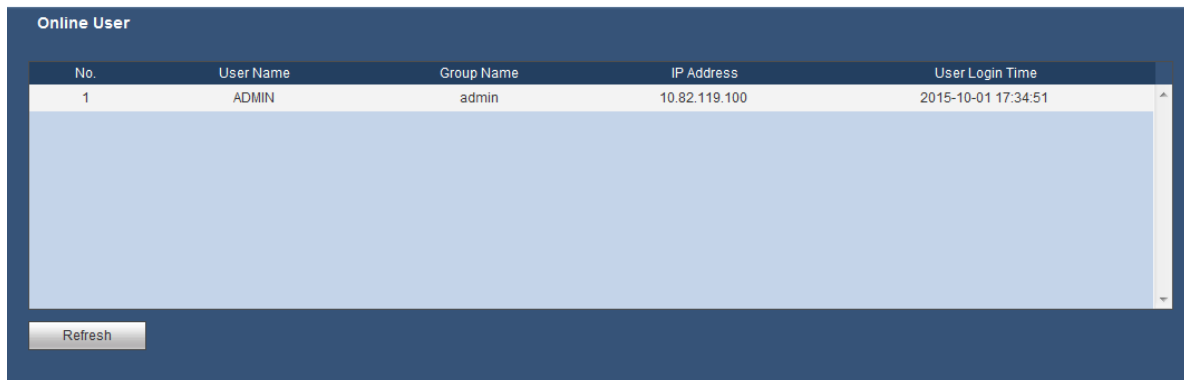


Figure 5-78

## 5.10 Playback

Click Playback button, you can see an interface is shown as in Figure 5-79.
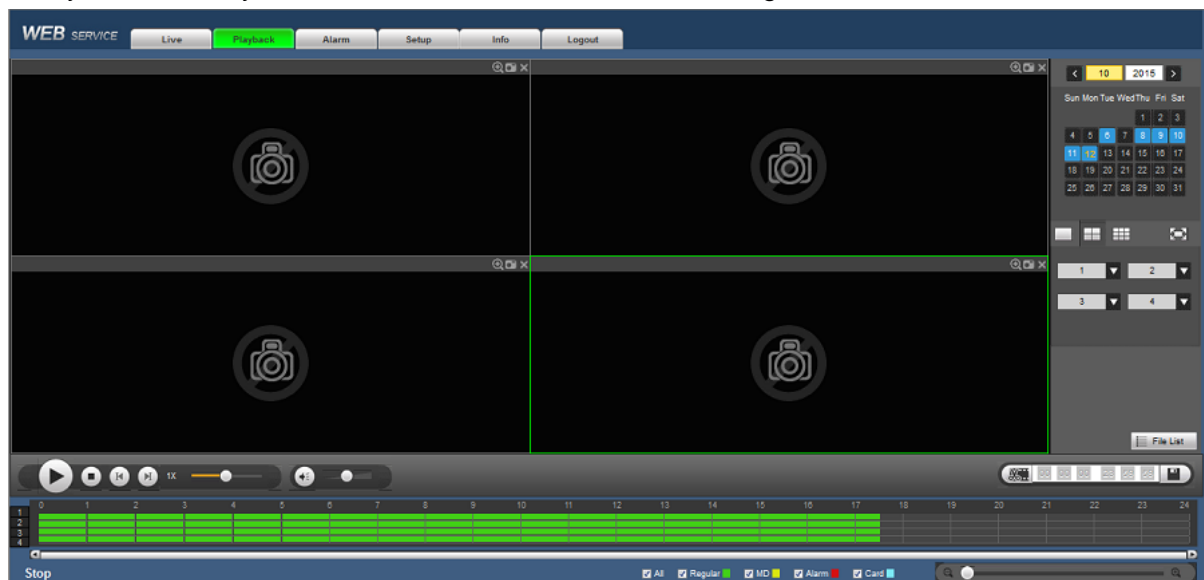


Figure 5-79

### 5.10.1 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 green 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 5-80.

Figure 5-80

● Select Channel

1～4 means main stream and A1～A4 means sub stream.

● Select Record Type

Select the corresponding box to select record type. See Figure 5-81.



Figure 5-81

## 5.10.2 File List

Click File list button, you can see the corresponding files in the list. See Figure 5-82.
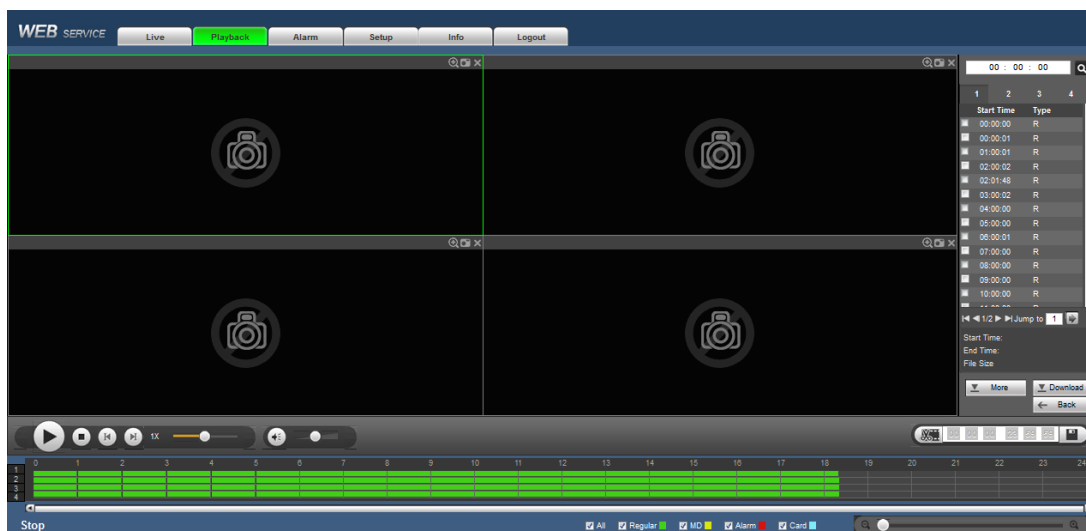


Figure 5-82

## 5.10.3 Playback

Select a file you want to play double click on the selected file for system to begin playback. You can select to playback in full-screen. Please note for one channel, system can not 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 5-83.
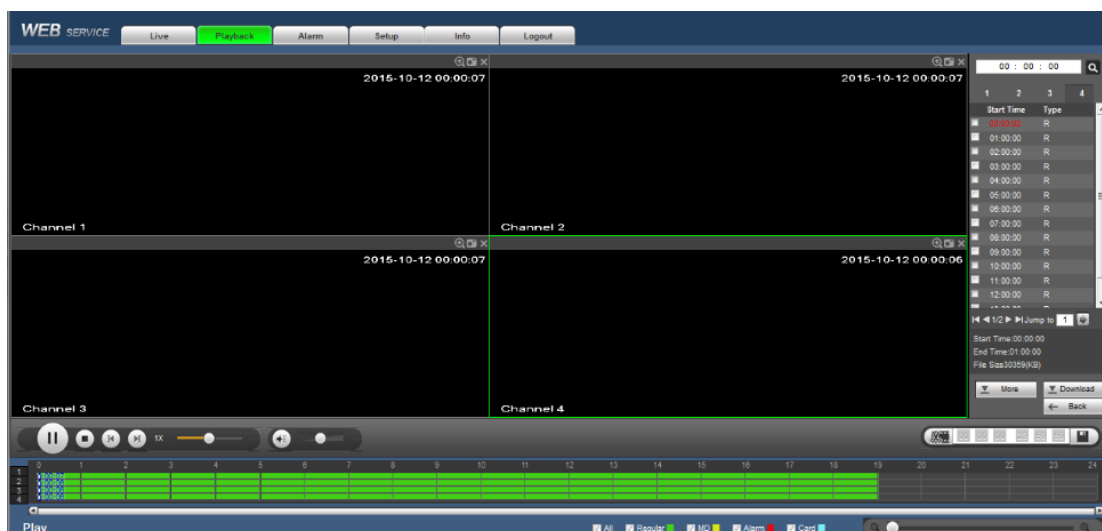
Figure 5-83

## 5.10.4 Download

Select the file(s) you want to download and then click download button, you can see an interface shown as in Figure 5-84. 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.
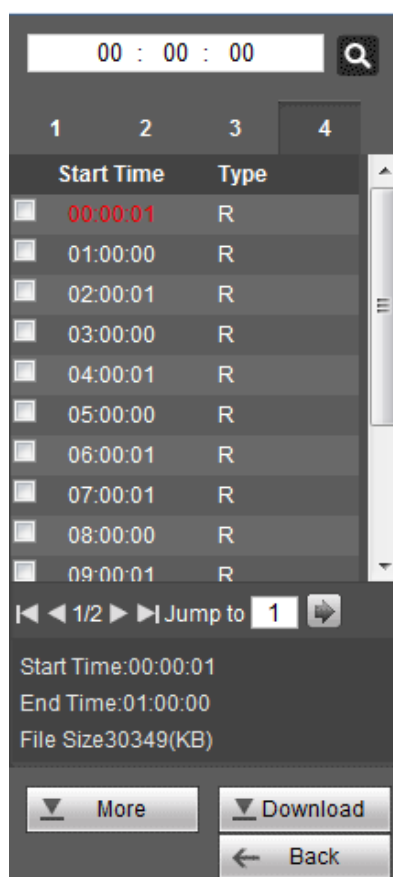


Figure 5-84

**5.10.5 Load more**

It is for you to search record or picture. You can select record channel, record type and record time to download. Or you can use watermark function to verify file.

### 5.10.5.1 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 5-85.
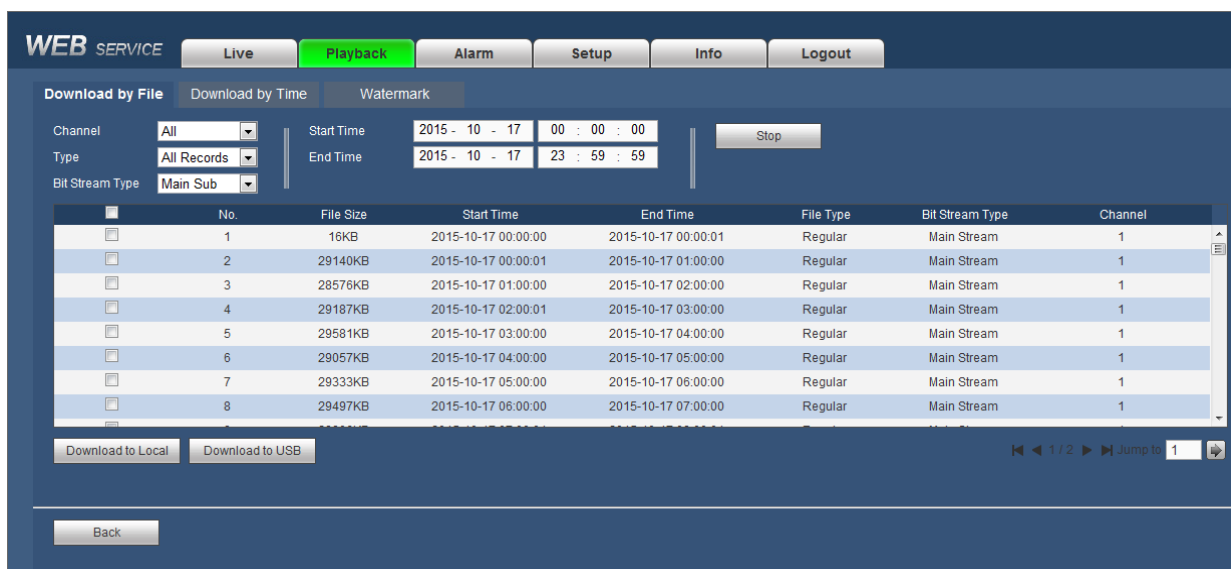


Figure 5-85

### 5.10.5.2 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 5-86.
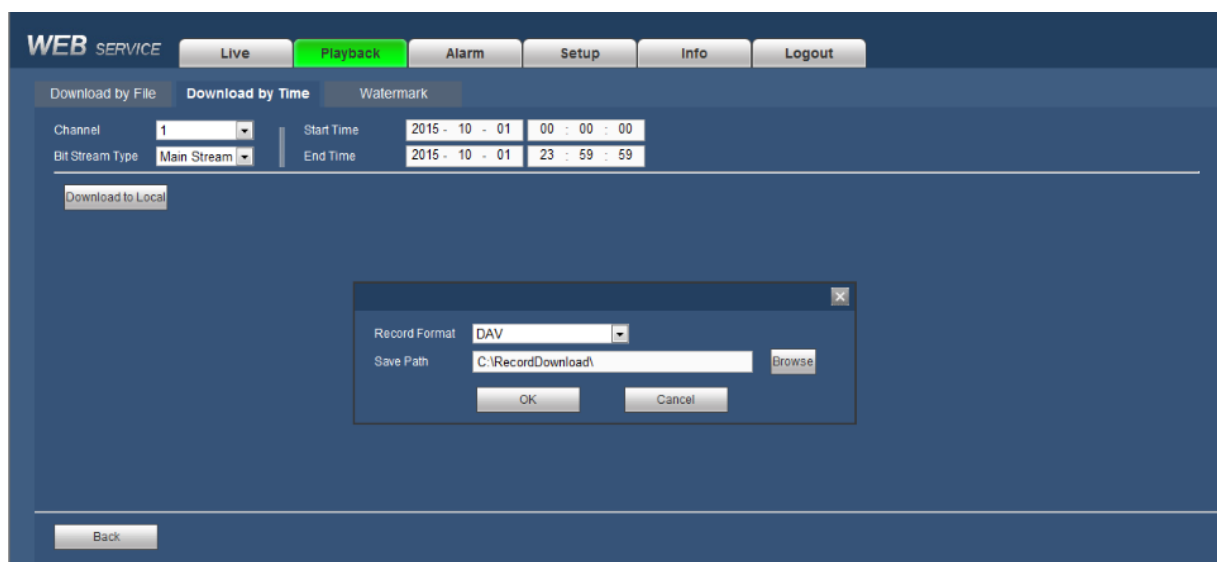


Figure 5-86

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 dialog box.

### 5.10.5.3 Watermark

Watermark interface is shown as In Figure 5-87. Please select a file and then click Verify button to see the file has been tampered with or not.
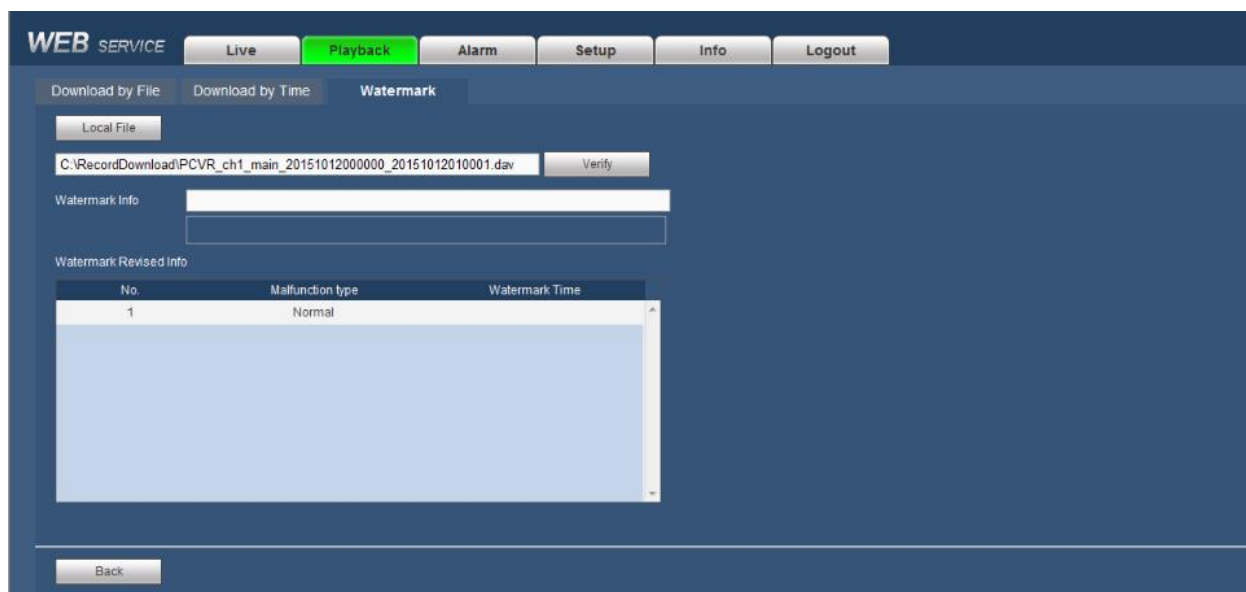


Figure 5-87

## 5.11 Alarm

Click alarm function, you can see an interface is shown as Figure 5-88.

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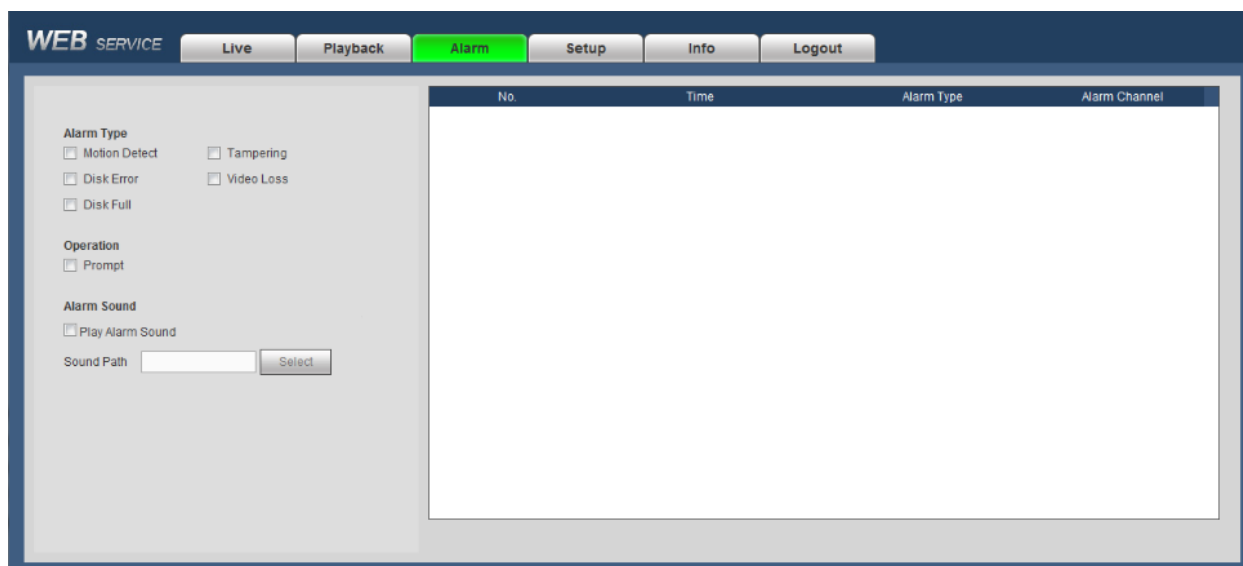


Figure 5-88

Please refer to the following sheet for detailed information.

| Type | Parameter | Function |
|------|-----------|----------|
| Alarm Type | Motion detect | System alarms when motion detection alarm occurs. |
| | Tampering | System alarms when camera is viciously masking. |

| Type | Parameter | Function |
|------|-----------|----------|
| | Disk error | System alarms when disk error occurs. |
| | Video loss | System alarms when video loss occurs. |
| | Disk full | System alarms when disk is full. |
| Operation | Prompt | 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. |

## 5.12 Log out

Click log out button, system goes back to log in interface. See Figure 5-89.
You need to input user name and password to login again.
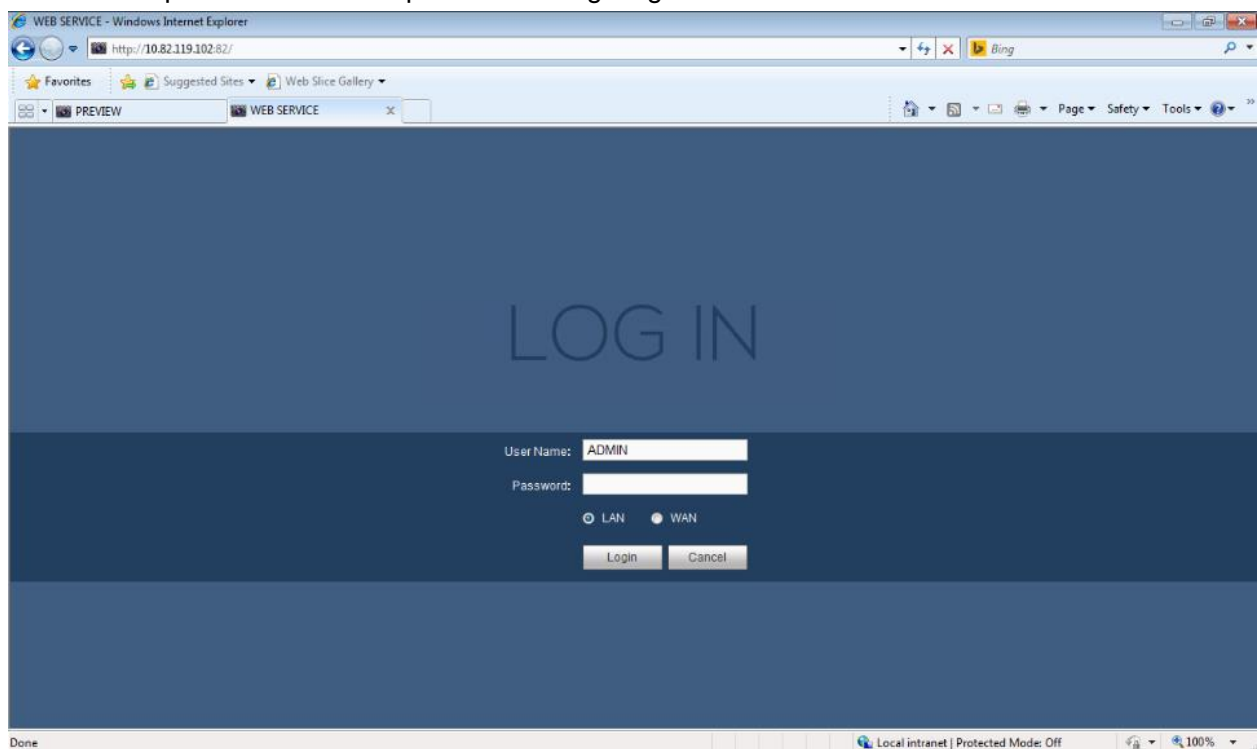


Figure 5-89

## 5.13 Un-install Web Control

You can use web un-install tool "uninstall web.bat" to un-install web control.
**Please note, before you un-installation, please close all web pages, otherwise the un-installation might result in error.**

# 6 FAQ

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

There are following possibilities:

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

**2. 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 wit the ribbon.
- Button power is not enough.
- Front video signal is not stable.
- Working environment is too harsh, too much dust.
- Hardware malfunction.

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

There are following possibilities:

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

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

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

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

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

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

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

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.

**15. 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.

**16. 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.

**17. Keyboard can not 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.

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

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

**19. Alarm function is null.**

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

**20. 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.

**21. Can not playback the downloaded file.**

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

**22. Forgot local menu operation password or network password**

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

**23. When I login via HTTPS, a dialogue says the certificate for this website is for other address.**
Please follow chapter 5.8.2.12.1 to create server certificate.

**24. When I login via HTTPS, a dialogue says the certificate is not trusted.**
Please follow chapter 5.8.2.12.2 to download root certificate.

**25. 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.


## 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 rear pane for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
● Please make sure the device is away from the direct sunlight or other heating sources. Please keep the sound ventilation.
● Please check and maintain the device regularly.

# 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.

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

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.

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

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**.

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

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)**.

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

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

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