

# **ZIPK4T2/ZIPK8T2 User Manual**

## **Speco Gray Series Kits**

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## **Welcome**

Thank you for purchasing this surveillance system.

Please read this manual carefully before installing and operating the cameras and the NVR (network video recorder).

If technical assistance is needed, please contact Speco Technologies Technical Support.

Phone: 1-800-645-5516 option 3

Email: [techsupport@specotech.com](mailto:techsupport@specotech.com)

# Important Safeguards and Warnings

Please carefully read the following instructions to avoid personal injuries and prevent the equipment and other devices from being damaged.

**1. Power source (note: please use the power supply that was included)**

Never operate the equipment by using an unspecified power supply.

**1. Never push objects of any kind through the openings on the recorder**

Never push objects of any kind through the openings on the NVR to avoid electric shock or other accidents.

**2. Avoid dusty areas**

Do not put the equipment in a dusty area.

**3. Do not place the equipment in a rainy or humid environment**

Do not place the recorder in a humid environment like a basement. If the equipment comes accidentally in contact with water, please unplug the power cable and immediately contact support.

**4. Keep the surface of the equipment clean and dry**

Use a soft, damp cloth to clean the outer case of the recorder (do not use liquid aerosol cleaners)

**5. Do not operate if any problems are found**

If there are any strange smell or sounds coming from the recorder, unplug the power cable and contact support.

**6. Do not try to remove the upper cover**

**Warning:** Do not remove the cover of the recorder while power is connected, to avoid electric shock.

**7. Handle with care**

Handle the unit gently as rough physical handling may cause malfunction.

### **8. Use standard lithium battery**

After disconnecting power, if the system clock does not continue to work, please replace the standard 3V lithium battery on the main board.

**Warning:** Turn off the unit before replacing the batteries. Please properly dispose of the used batteries.

### **9. Put the equipment in a place with good ventilation**

The recorder can produce a large amount of heat during operation. Install or put the equipment in a place with good ventilation.

### **10. The included power adapter can only be used for the single recorder. Do not connect more equipment to the power adapter.**

### **11. Prevent water from splashing on the equipment. Do not place objects containing water on the equipment.**

### **12. Electrical safety**

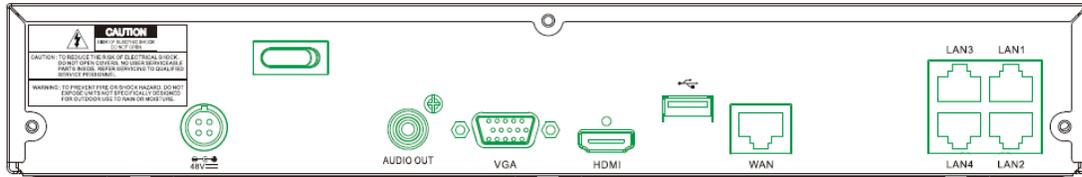
All installation and operation here should conform to local electrical safety codes. The product must be grounded to reduce the risk of electric shock. Speco Technologies assumes no liability or responsibility for all the fires or electric shock caused by improper handling or installation.

### **13. Qualified personnel**

All examination and repair work should be done by the qualified service personnel. Speco Technologies is not liable for any problems caused by unauthorized modifications or attempted repair.

# Chapter 1 Product Overview

## 1.1 Rear Panel



(4-channel recorder shown for reference)

Item	Physical Port	Connection Method
1	Power Switch	Startup and shutdown
2	Power Port	Connect the included power supply
3	USB Port	Connect USB devices, such as USB mouse and USB flash drive.
4	HDMI Port	Connect to a monitor or TV
5	VGA Port	Connect to a monitor with VGA port
6	Audio Out	Audio signal output, RCA port
7	WAN Port	Network interface to router
8	LAN Ports	Network interface to IP cameras. Also provides power to IP cameras.

## 1.2 Remote Control (For Reference Only)

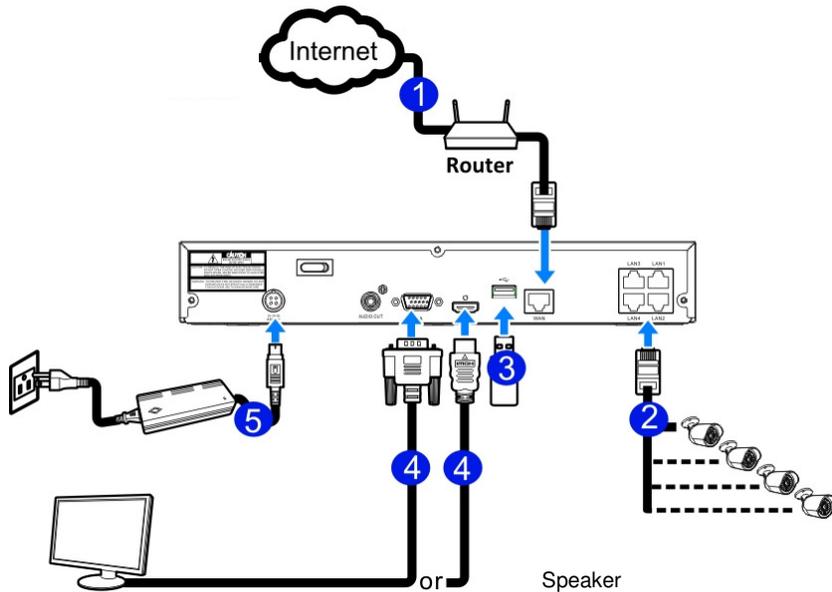
No.	Icon	Description
1	1-4	Numeric keys Press to display channel 1~4
3	ALL	Press to display all channels Multiple display mode
4	Menu	Press to enter or exit the Main Menu
5	Mute	Mute On/off

6	Submenu	Go to submenu
7	▲	Up arrow key
8	SEL	Press to enter the selected menu item and edit the setting
9	◀▶	Left/Right key
10	▼	Down arrow key
11	◀◀	Press to rewind during video playback
12	▶▶	Press to fast forward during video playback
13	▶	Press to play recorded video or enter the playback search menu
14	●	Press to start manual recording
15	■	Press to stop manual recording or stop the video playback
16	■	Press to pause the video playback or enter frame-playback mode

Table 2-1

# Chapter 2 NVR Installation & Connection

## 2.1 Connection Diagram

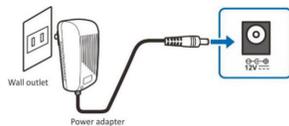


(4-channel recorder connection shown for reference)

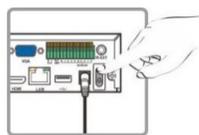
## 2.2 Power Supply Connection

**Caution:** Use only the supplied power adapter that was included in the package

Connect one end of the power adapter to the power connector on the back of the NVR. Plug the other end of the power adapter into the wall outlet.



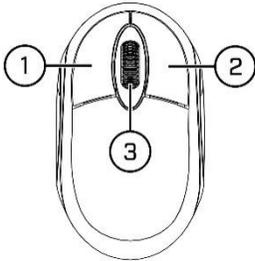
Press the Power switch to turn on the power.



---

# Chapter 3 NVR Common Operations

## 3.1 Using the Supplied Mouse



### 1. Left Button:

- Click to select menu options.
- During live viewing in split-screen view, double-click on a channel to view it in full-screen. Double-click the channel again to return to split-screen viewing.
- Click up on a channel in Live View to open the Camera Quick Toolbar.
- General click and drag actions

### 2. Right Button:

- Click once to open the Task bar in the Live View screen. View Task bar on [4.2.2 Taskbar](#)
- Click to go back / close menus.

### 3. Scroll Wheel:

- General scrolling actions.
- While hovering over the volume control panel, scroll to turn system volume up / down.

### 3.2 Using the Virtual Keyboard

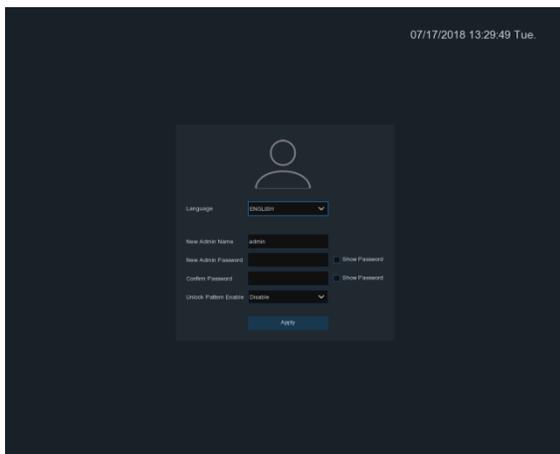
The virtual keyboard will pop up on the screen when data needs to be entered.

Click to toggle the keyboard to upper case and more punctuation



### 3.3 Password

When the recorder is powered on for the first time, a password is required to set. Please make sure to remember the username and password and save them in a secure place.



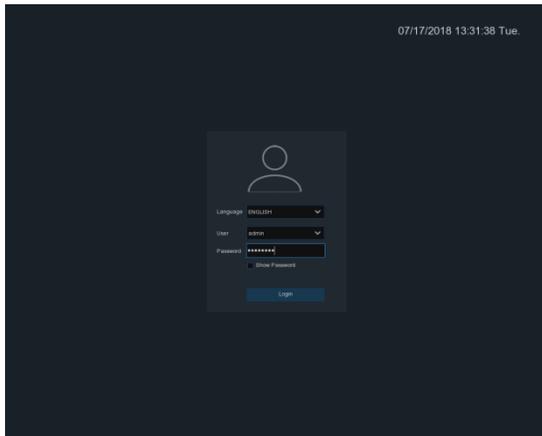
**Language:** Choose an OSD language

**New Admin Name:** set the user name.

**New Admin Password:** set the admin password. The password must be a combination of 8 characters.

**Confirm Password:** Enter the password again.

Click **Apply** to confirm the setup and go to the login interface. Enter the user name & password to log in.



**NOTE:** If the password is forgotten or lost, please contact support to reset the password.

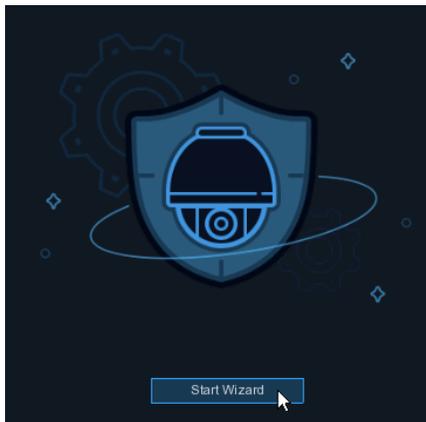
# Chapter 4 Start up

## 4.1 Start Wizard

The Startup Wizard will help configure the system and get the system up and running quickly.

### 4.1.1 Start Wizard

Click the [Start Wizard](#) button to proceed to the next step



### 4.1.2 Network Configuration

Wizard ✕

Network

Local Connection

DHCP	<input checked="" type="checkbox"/>
IP Address	<input type="text" value="192.168.006.028"/>
Subnet Mask	<input type="text" value="255.255.255.000"/>
Gateway	<input type="text" value="192.168.006.001"/>

DNS

DNS1	<input type="text" value="192.168.001.001"/>
DNS2	<input type="text" value="008.008.008.008"/>

Port

Web Port	<input type="text" value="00080"/>
Client Port	<input type="text" value="09000"/>
RTSP Port	<input type="text" value="00554"/>

UPNP

Next
Cancel

Check the **DHCP** box if the recorder is connected to a network with DHCP capability. A router typically has DHCP. The router will assign the network parameters automatically when DHCP is enabled on the recorder. To manually assign parameter values, see below:

**IP Address:** The IP address identifies the recorder in the network. It consists of four groups of numbers between 0 to 255, separated by periods. For example, “192.168.001.100”.

**Subnet Mask:** Subnet mask is a network parameter which defines a range of IP addresses that can be used in a network. If IP address is like a street where you live then subnet mask is like a neighborhood. The subnet address also consists of four groups of numbers, separated by periods. For example, “255.255.000.000”.

**Gateway:** This address allows the unit to access the Internet. The format of the **Gateway** address is the same as the **IP Address**. For example, “192.168.001.001”.

**DNS1/DNS2:** DNS1 is the primary DNS server and DNS2 is a backup DNS server. It is usually enough just to enter the DNS1 server address.

## Port

**Web Port:** This is the port that will be used to log in remotely to the NVR (e.g. using the Web Client). If the default port 80 is already being used by other applications, it must be changed.

**Client Port:** This is the port that the NVR will use to send information through (e.g. using the mobile app). If the default port 9000 is already taken by other applications, it must be changed.

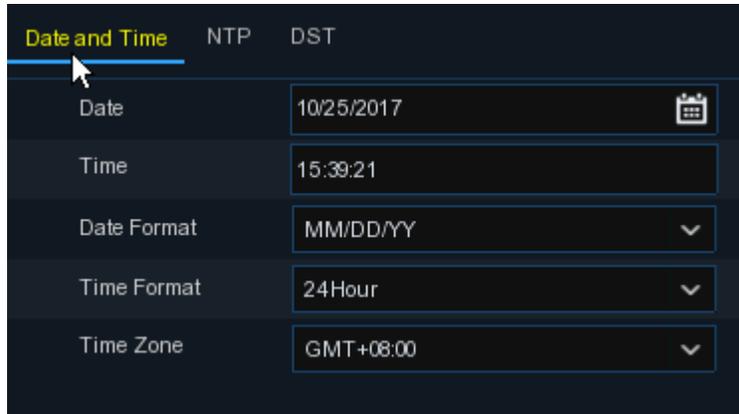
**RTSP Port:** This is the port that will be used to transmit real-time streaming video to other devices (e.g. using a streaming Media player.).

**UPNP:** To log in remotely to the NVR using the Web Client, port forwarding must be completed in the router. Enable this option if the router supports the UPnP protocol. In this case, port forwarding does not need to be configured manually on the router.

### 4.1.3 Date/Time

## Date and Time

Click on the calendar icon to set the current system date.



**Date:** Click on the calendar icon to set the system date.

**Time:** Click to set the system time.

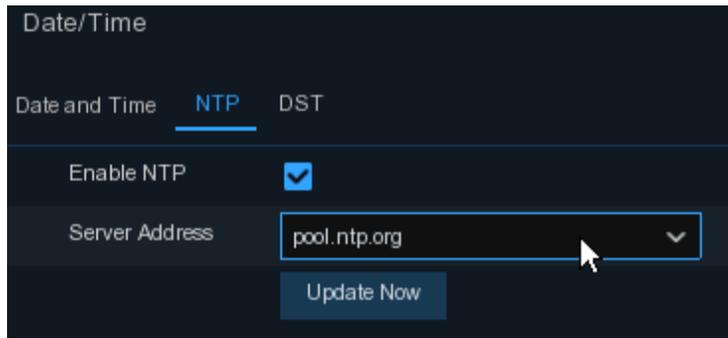
**Date Format:** Choose from the drop down menu to set preferred date format.

**Time Format:** Choose time format between 24Hour and 12Hour.

**Time Zone:** Set the correct time zone.

## NTP

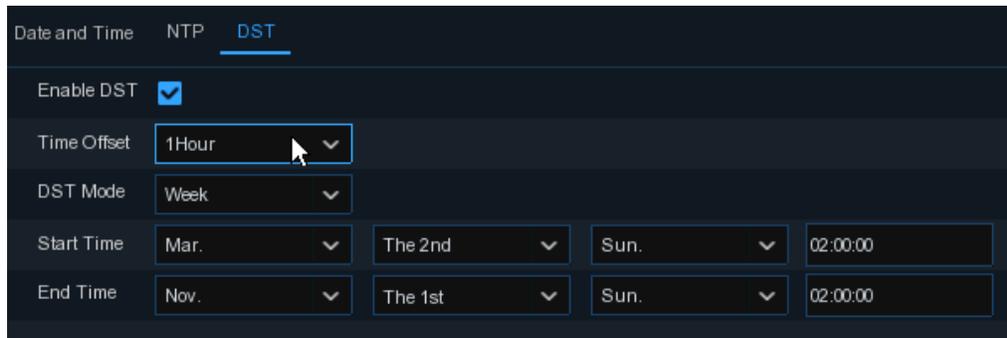
NTP stands for Network Time Protocol. This feature allows the date and time to be synchronized automatically on the NVR over the Internet. The NVR needs to be connected to the Internet for this feature to work.



Check the “**NTP**” box, and select the NTP server.

## DST

DST stands for Daylight Saving Time.



**DST:** Enable if Daylight Saving Time (DST) is observed in the time zone where the system is installed.

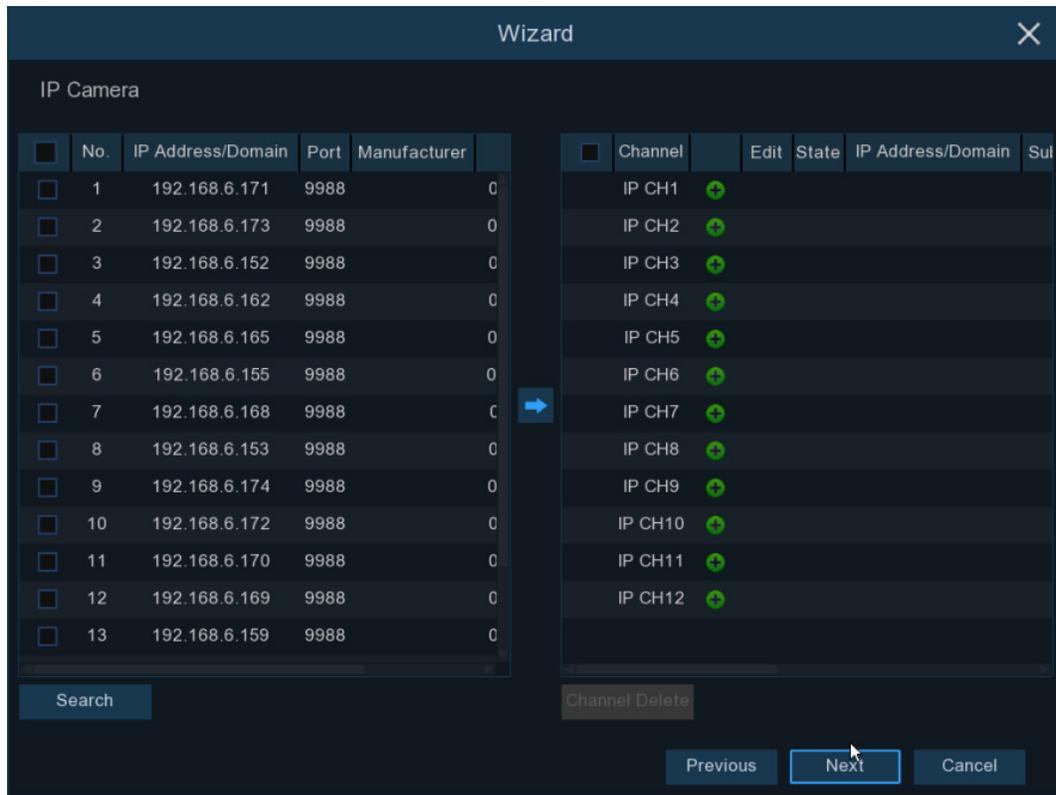
**Time Offset:** Select the amount of time to offset for DST (normally 1 hour)

**Time Mode:** Choose to set the daylight saving time in weeks or in days

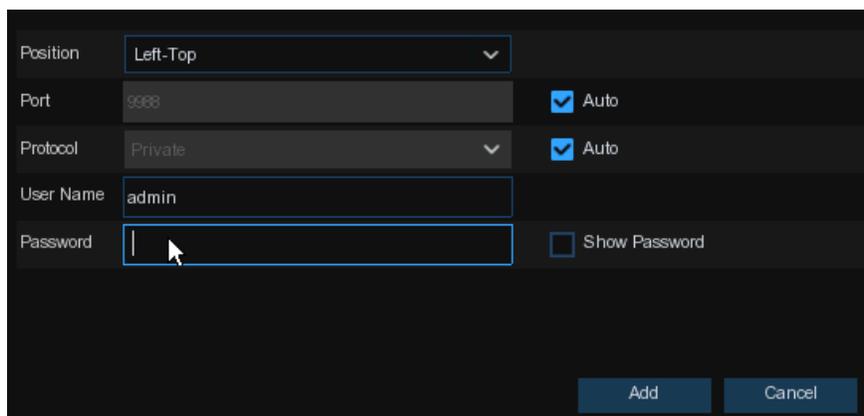
**Start Time/End Time:** Set the start time and end time for DST

### 4.1.4 IP Camera

IP cameras can be added to the NVR through this menu if the included cameras are not connected directly to the PoE ports on the back of the NVR.

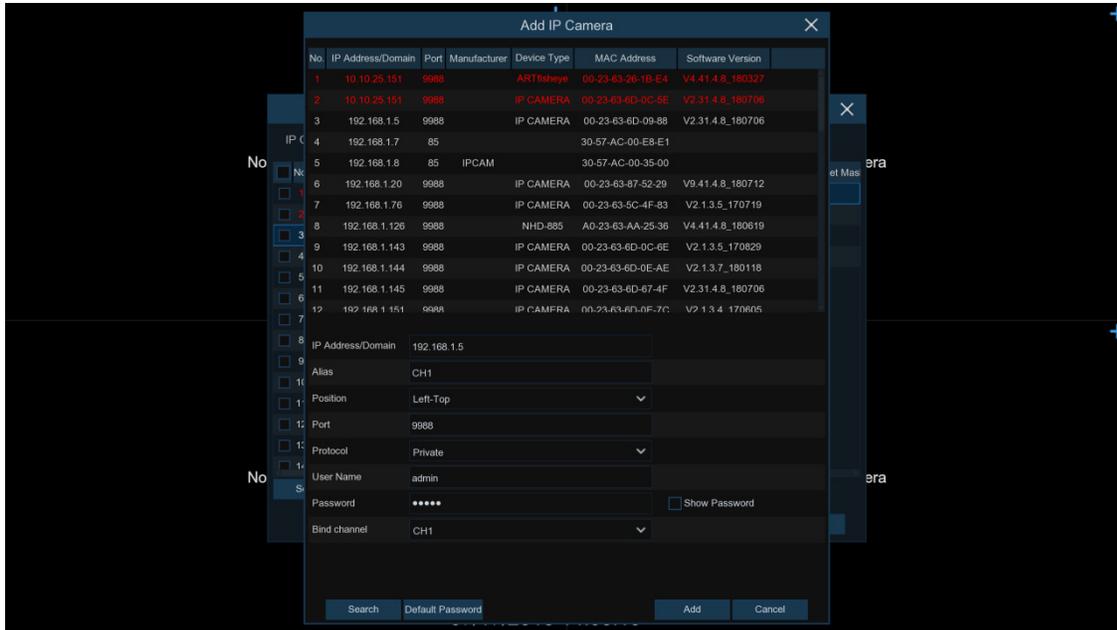


Click **Search** to search IP cameras in the same network. Choose the IP camera(s) to add, and then click the  icon to add to the NVR.



Enter the camera's user name & password to add the camera(s). The default credentials are admin/admin.

Click the **+** button to add an individual IP camera to a single channel.



Click **Search** button to search IP cameras, and then click one of the IP camera in the device list.

**IP Address/Domain:** IP address or domain name of the IP camera

**Alias:** Name of the IP camera

**Position:** Position to display the camera name on the screen.

**Port:** Port of the IP camera

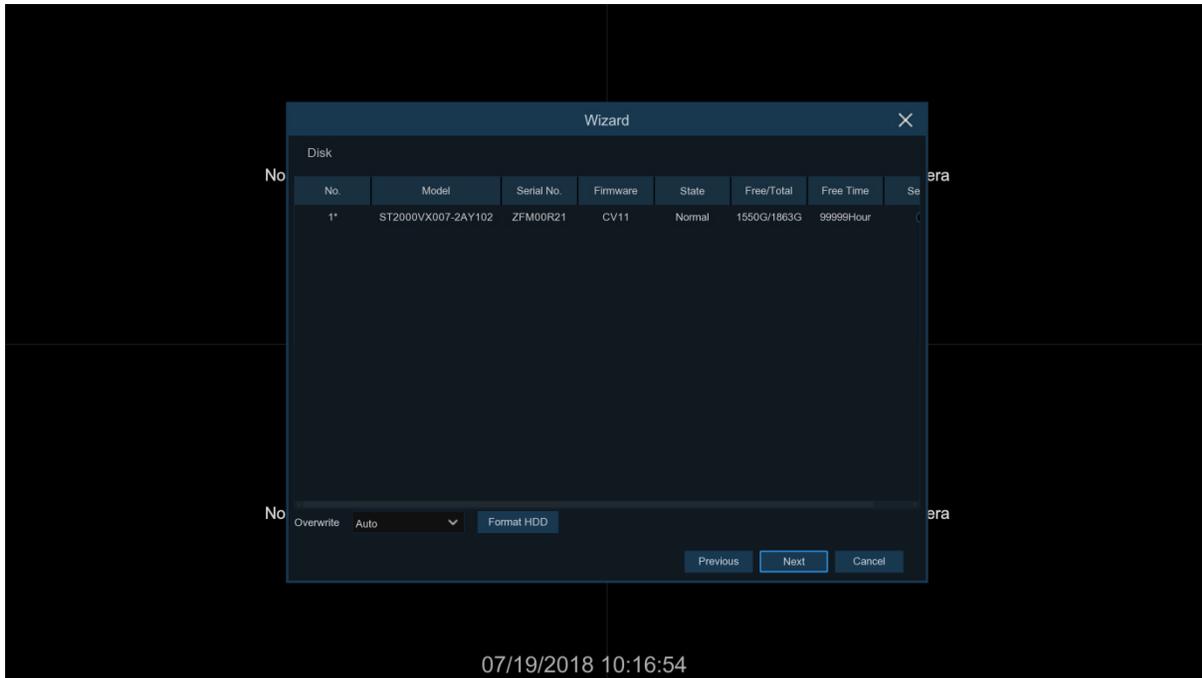
**Protocol:** Choose the protocol of the IP camera from the drop down menu

**User Name:** User Name of the IP camera

**Password:** Password of the IP camera

**Bind channel:** Choose a channel of the NVR to associate the camera to

### 4.1.5 Disk

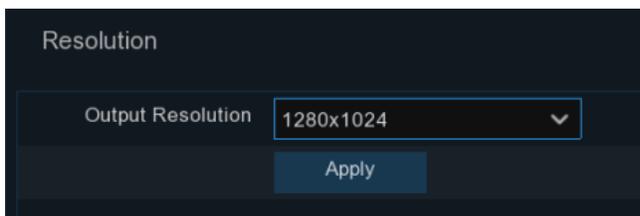


The NVR comes with a preinstalled HDD. If for any reason, the HDD needs to be formatted, select the HDD and then click the **Format HDD** button.

**Overwrite:** Use this option to overwrite the old recordings on the HDD when the HDD gets full. For example, if the option 7 days is chosen then only the last 7 days of recorded data are kept on the HDD. To prevent overwriting any old recordings, select Disable. If this function is disabled, please check the HDD status regularly to make sure the HDD is not full.

### 4.1.6 Resolution

Select the appropriate resolution for the monitor. The NVR also supports automatic adjustment of the output resolution to match the best resolution for the monitor when the system starts up.



### 4.1.7 Mobile

Scan the QR code with the mobile app to view the NVR remotely through a smartphone.

The screenshot shows a 'Mobile' configuration page with the following details:

P2P ID	
P2P ID	RSV1907010420595

Local Connection	
IP Address	192.168.6.28
Subnet Mask	255.255.255.0

Port	
Web Port	80
Client Port	9000

A QR code is displayed on the right side of the page, which can be scanned to access the NVR remotely.

### 4.1.8 Summary

Check “**Don't show this window next time**” to not display the Start Wizard again when the system is rebooted next time. Click **Finish** button to save & exit.

The screenshot shows a 'Summary' configuration page with the following details:

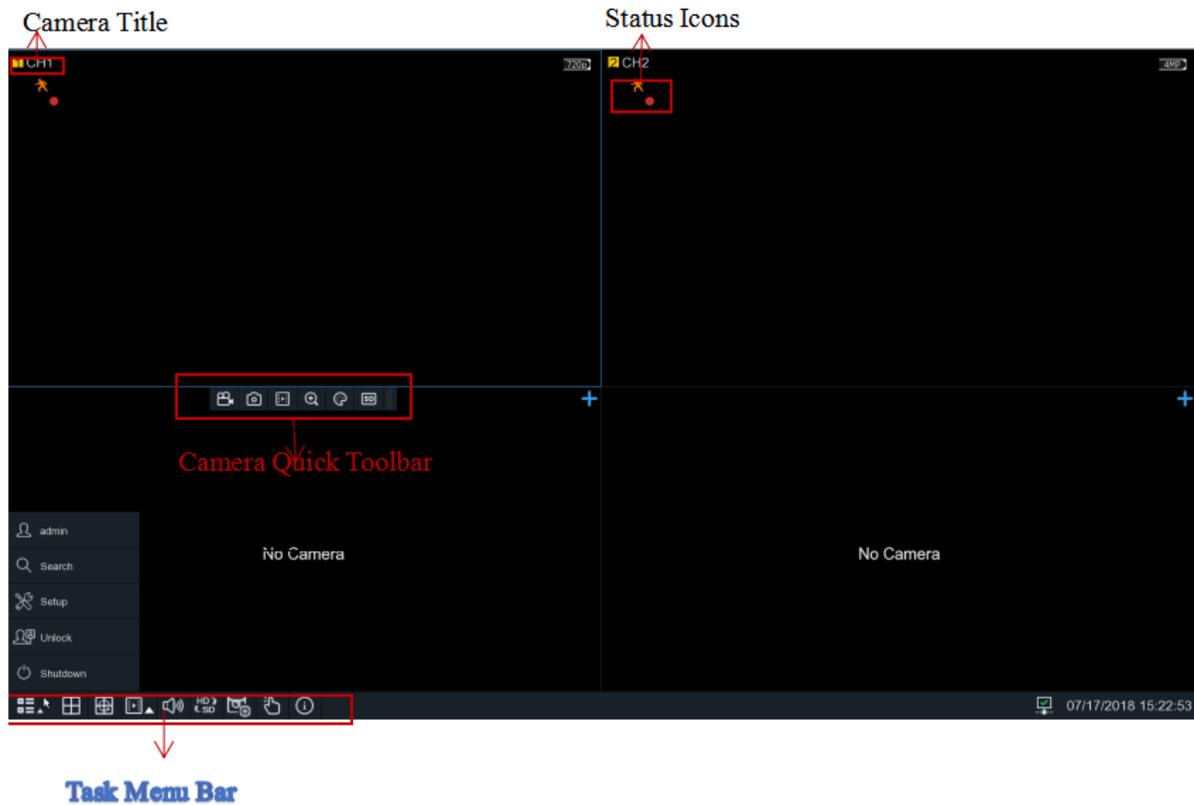
System	
Resolution	1920x1080
Date/Time	04/10/2017 16:18:17, GMT+08:00
NTP	OFF
DST	OFF

Network	
DHCP	ON
IP Address	192.168.6.28
Subnet Mask	255.255.255.0
Gateway	192.168.6.1
DNS1	192.168.1.1
DNS2	8.8.8.8

At the bottom of the page, there is a checkbox labeled "Don't show this window next time." which is currently unchecked.

## 4.2 Live View Screen Overview



### Status Icons



This indicates that the NVR is currently recording.



This icon appears when motion has been detected.



The icon indicates that the external I/O alarm device has been triggered



This icon indicates an HDD error



This icon indicates the HDD is unformatted



This icon indicates the HDD is full.

 This icon indicates the HDD is read-only.

**No Camera:** IP camera is not connected.

 Click to open **Quick Add** menu to add IP camera

 Click to edit current IP camera

## 4.2.1 Camera Quick Toolbar

In live view, click the left button of the mouse on a channel to display the Camera Quick Toolbar.



 Click to manually record the channel immediately. If the manually recording is in process, the icon will be in red color. Click one more time to stop manual record.

 Click to save a snapshot of the current camera image.

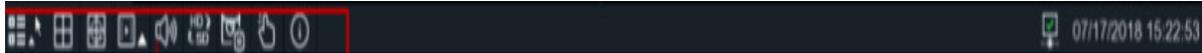
 Click to play the last 5 minutes of recording of this channel

 Click to zoom into the channel.

 Click to adjust the image settings of the channel. These parameters can be adjusted: Hue, Brightness, Contrast, and Saturation of the image.

 To switch the live view video stream between HD & SD. HD is the main stream and SD is the sub stream.

## 4.2.2 Task bar



 Click to open the Start Menu

 Click to choose different layout for live view

 Click to start viewing channels in a sequence

 Quick playback. If chosen, the recording for all channels from the beginning of the day will start playing back. If the arrow is clicked, playback from the last 5s, 10s, 30s, 1min, and 5min can be chosen.

 Click to adjust the audio volume

 Click to switch all IP channels between main stream and sub stream for live view

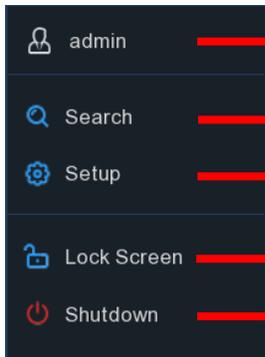
 Click to switch among real-time, balanced, or smooth view. The view effect modes affect only the live view video quality by bitrate and frame rate but do not affect the recording quality.

 Click to start or stop Manual Record and Manual Alarm.

 Click to view system information, channel information, record info and network state.

 This icon will appear if the network is disconnected.

## 4.2.3 Start Menu



To switch to another user. To enable multiple users, see [5.6.3 Multi-user](#).

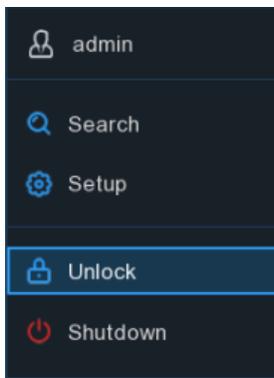
Search & Playback. See [Chapter 6 Search, Playback & Backup](#)

NVR System Setup. See [Chapter 5 NVR System Setup](#)

Lock & unlock screen. See [4.2.3.1 Unlock and Lock Screen](#).

Shutdown, reboot & logout. See [4.2.3.2 Shutdown](#).

### 4.2.3.1 Unlock and Lock Screen

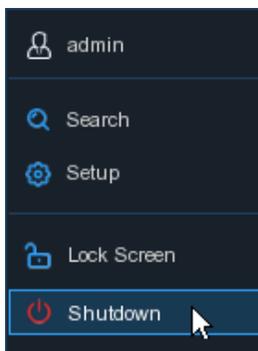


The screen will be locked to protect unauthorized OSD operation if there is no user interaction after 1 minute.

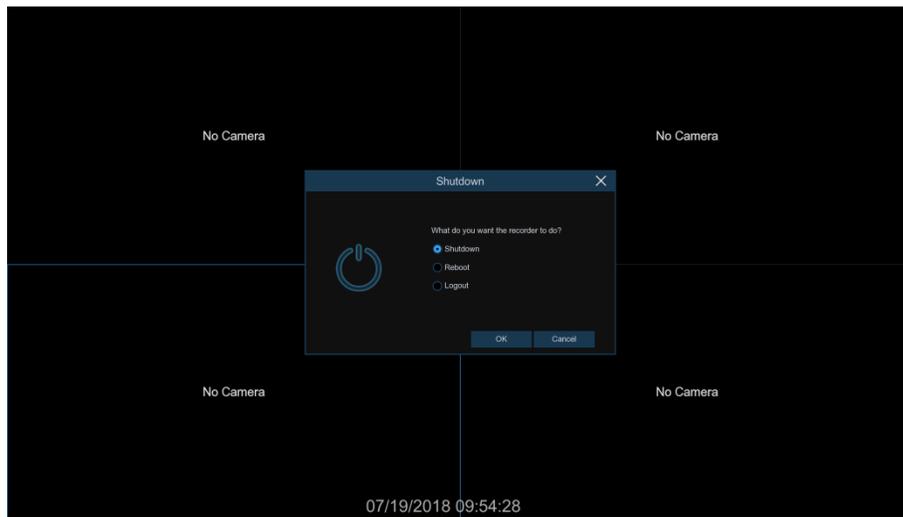
If necessary, the screen can be locked manually. To do so, go to the Start Menu, and then click the Lock Screen icon  to lock the system immediately.

If the system is locked, click the Unlock icon  to unlock the system for further operation.

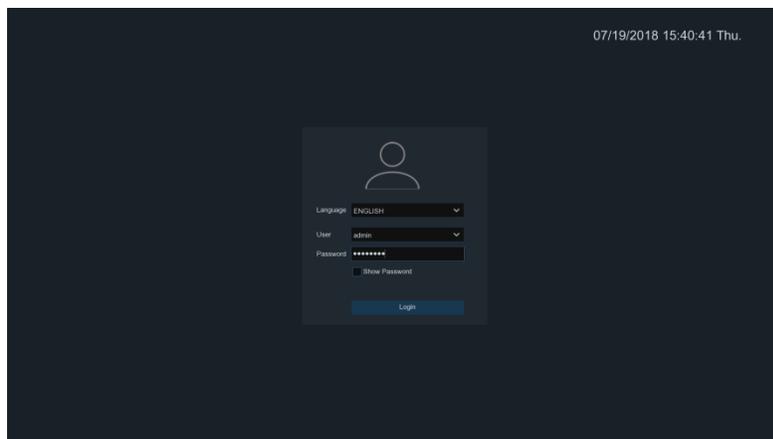
### 4.2.3.2 Shutdown



Click the **Shutdown** button from Start Menu, and then check the desired operation. Click **OK**. The system will require the admin password to continue.

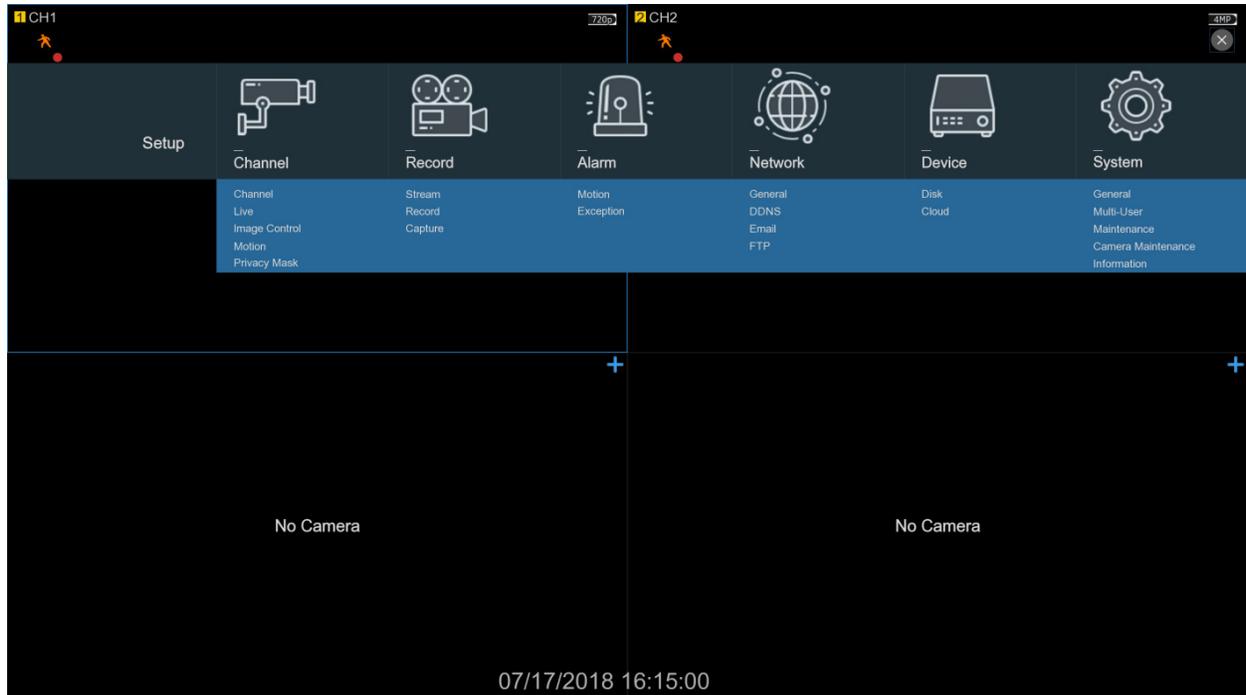


If **Logout** is chosen, the live view screen will disappear. Log in to the system again for operation.



# Chapter 5 System Setup

Go to [Start Menu](#)→[Setup](#).



## 5.1 Channel

Available options in this section are: camera configuration, live view display, manage IP cameras, adjust IP camera's image, motion setup, and privacy mask setup.

### 5.1.1 IP Channels

No.	Edit	State	IP Address/Domain	Subnet Mask	Port	Manufacturer	Device Type	Protocol	MAC Address	Software Version
CH1			192.168.1.5	255.255.255.0	9988		IP CAMERA	Private	00-23-63-6D-09-88	V2.31.4.8_180706
CH2			192.168.1.143	255.255.255.0	9988		IP CAMERA	Private	00-23-63-6D-0C-6E	V2.1.3.5_170829
CH3										
CH4										

Click **Search** to search for IP cameras on the local network. Click **Add** to add an individual IP camera or click **Add All** to add all IP cameras. Note that this should be used only for channels where the IP camera isn't connected directly to the PoE port on the back of the NVR.

IP Address/Domain	192.168.1.151
Alias	CH17
Position	Left-Top
Port	9988
Protocol	Private
User Name	admin
Password	<input type="password"/> <input type="checkbox"/> Show Password
Bind channel	CH17

Search Add Cancel

Click **Search** button to search for IP cameras, and then click one of the IP cameras in the device list.

**IP Address/Domain:** IP address or domain name of the IP camera

**Alias:** Nickname of the channel

**Position:** Position to display the camera name on the screen.

**Port:** Port of the IP camera (leave it at default unless it was specifically changed previously on the camera)

**Protocol:** Choose the protocol of the IP camera from the drop down menu (leave it at default)

**User Name:** User Name of the IP camera (default: admin)

**Password:** Password of the IP camera (default: admin)

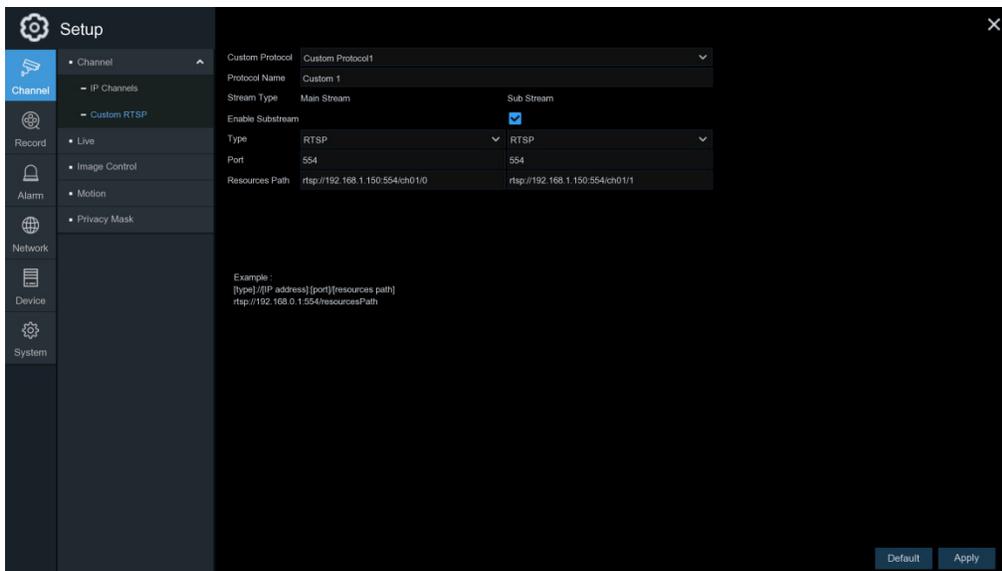
**Bind channel:** Choose a channel of the NVR to attach the camera to

**Auto Assign IP to Camera(s):** If for any reason, the IP camera's IP address was set to a different network segment as the NVR's internal camera network segment, this option can be used to change the camera back to the network segment that the NVR recognizes.

**Channel Delete:** Choose one or more IP cameras, and click this button to delete them from the channels.

### 5.1.2 Custom RTSP

Custom RTSP URLs can be used to get video streams from 3<sup>rd</sup> party IP cameras where their respective RTSP URLs are known.



**Custom Protocol:** Maximum of 10 custom protocols can be supported.

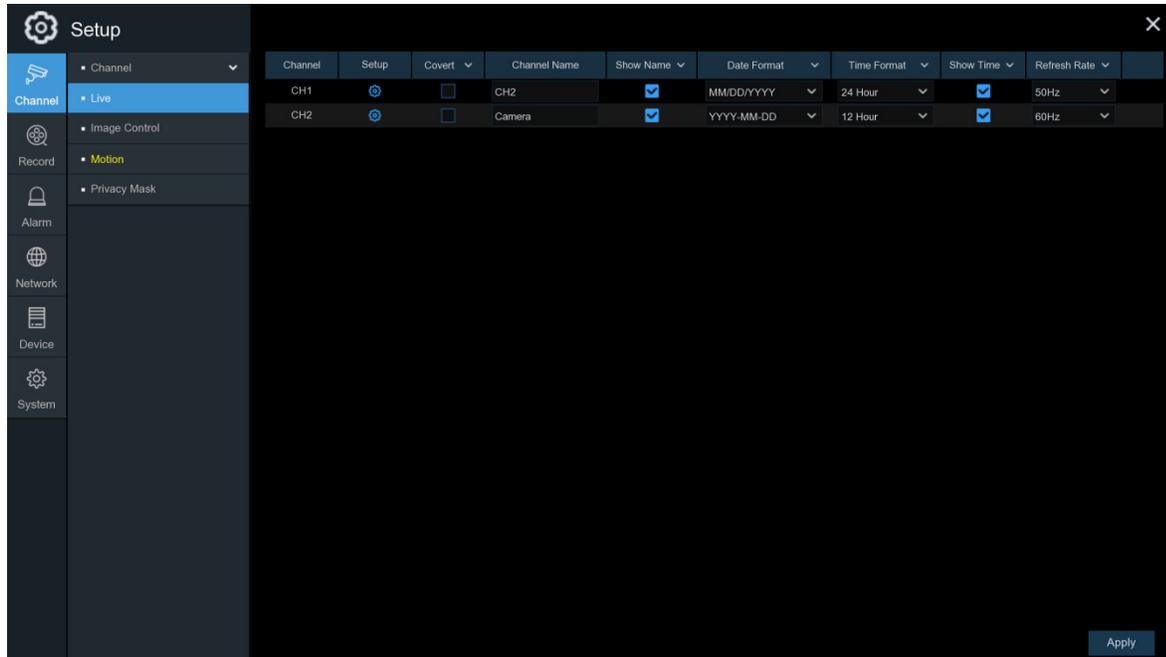
**Protocol Name:** Give a name to the custom protocol that's being used.

**Enable Substream:** Check the box to enable the sub-stream.

**Port:** Enter the RTSP port of the IP camera.

**Resources Path:** Enter the RTSP URL of the IP camera.

## 5.1.3 Live



**Channel Name:** Nickname of the IP camera.

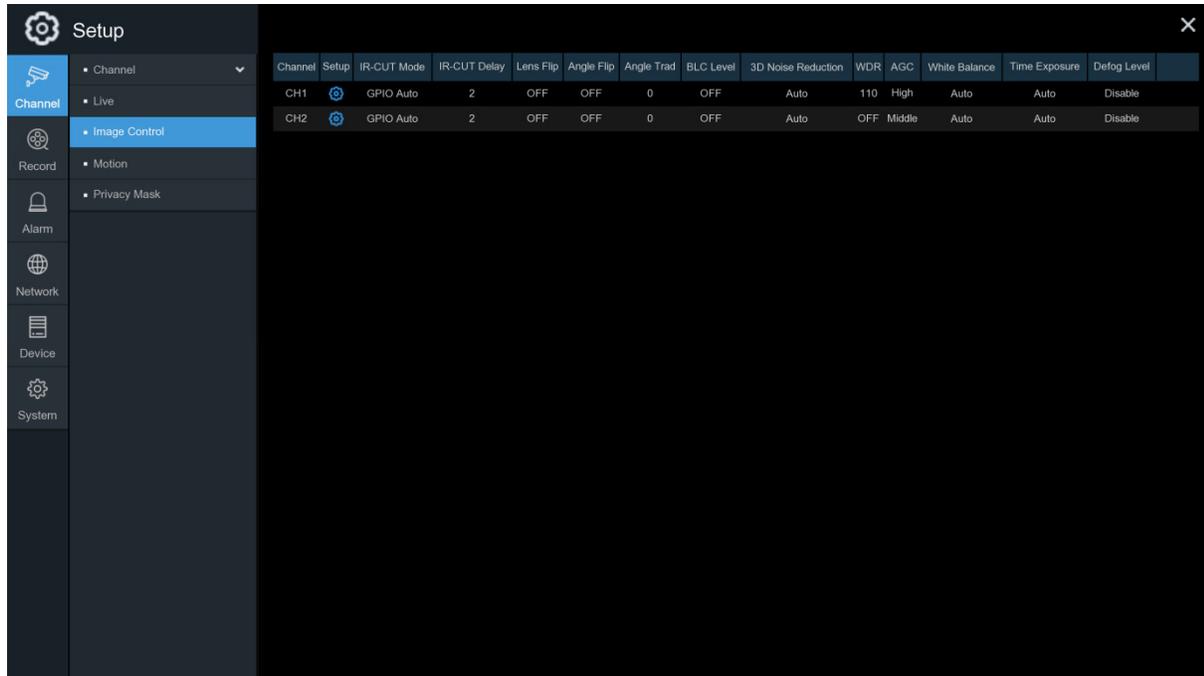
**Setup:** Click the icon to go to the setup page.

The image shows a camera configuration interface with various settings. Red arrows point from descriptive text to specific UI elements. The settings include:

- Channel:** CH17 (dropdown) → Choose a channel to configure
- Channel Name:** IP CH17 (text input) → Give a name to the camera
- Date Format:** MM/DD/YYYY (dropdown) → Date format to display for the camera
- Time Format:** 24 Hour (dropdown) → Time format to display for the camera
- Refresh Rate:** 50Hz (dropdown) → Refresh Rate of the camera (60Hz should be used for North America)
- Camera Type:** AUTO (dropdown) → Choose a camera type (Auto, AHD, TVI, CVI) for analog camera
- EQ Level:** AUTO (dropdown)
- Convert**
- Show Name** → To show the camera name in live view screen
- Show Time** → To show the system time in live view screen
- HUE:** Slider at 32 → Adjust the Hue value for the image color
- BRIGHT:** Slider at 23 → Adjust the Bright value for the image color
- CONTRAST:** Slider at 27 → Adjust the Contrast value for the image color
- SATURATION:** Slider at 20 → Adjust the Saturation value for the image color

At the bottom of the settings panel, there is a **Default** button. Below the panel, instructions state: "Click **Default** to load default settings. Click **Apply** to save settings. Right click on the mouse to exit."

## 5.1.4 Image Control

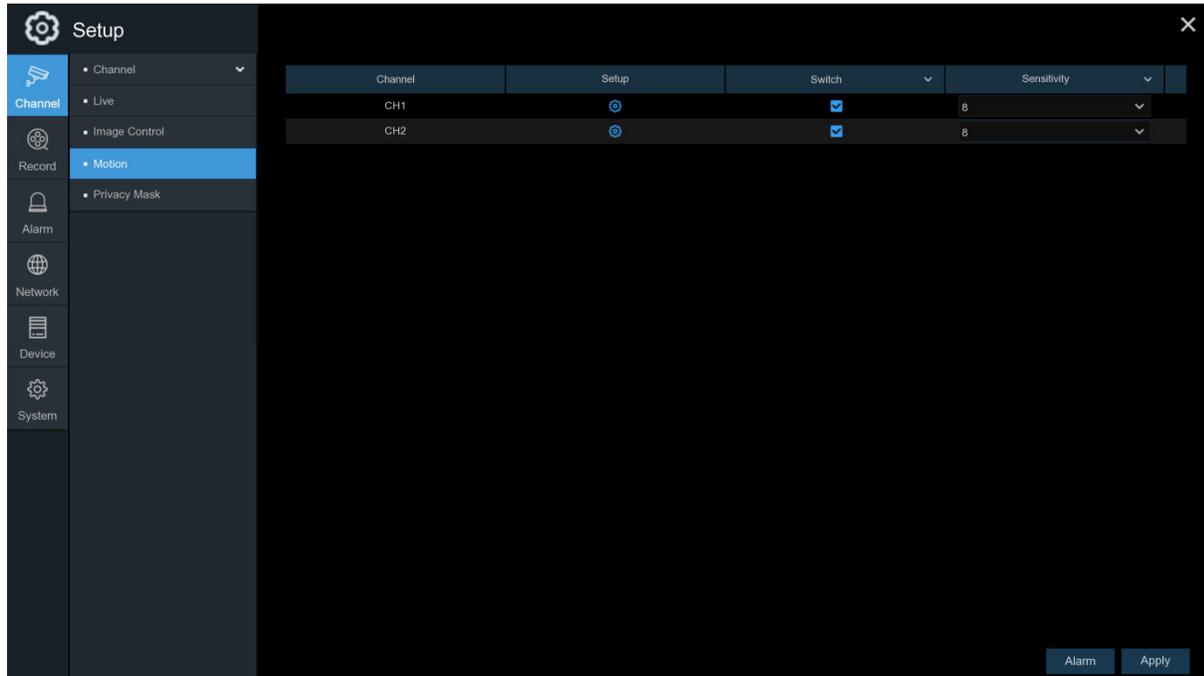


**Setup:** Click the icon to go to the setup page.

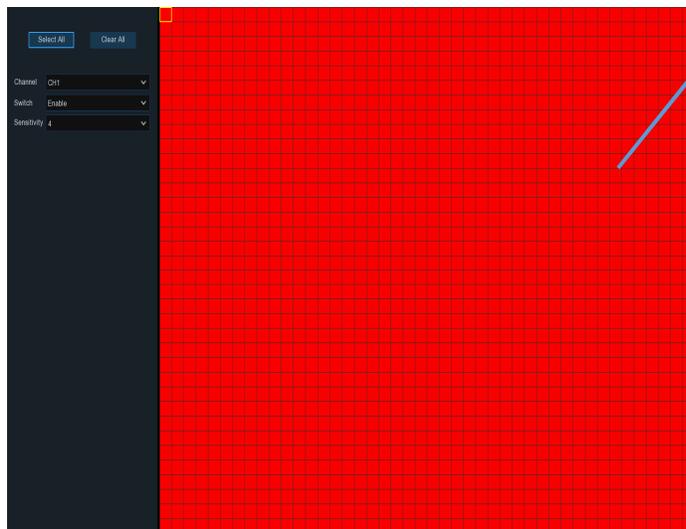
Channel	CH17	▼	→	Choose a channel to configure
IR-CUT Mode	GPIO Auto	▼	→	Select the desired built-in IR cut filter mode to ensure the camera works properly both in the day and night.
IR-CUT Delay	<input type="range" value="2"/>	2	→	Set the delay time of mode switching
<input type="checkbox"/> Lens Flip	<input type="checkbox"/> Angle Flip		→	Check to enable lens flip and angle flip
Angle Trad	0	▼	→	Set the flip angle
Back Light	Enable	▼	→	To enable or disable Backlight compensation
BLC Level	Low	▼	→	Choose the backlight compensation level
3D Noise Reduction	Auto	▼	→	To enable or disable 3D noise reduction function
Level	<input type="range" value="128"/>	128	→	Set the 3D noise reduction level
WDR	Enable	▼	→	Enable to allow WDR
Level	<input type="range" value="128"/>	128	→	Set the WDR level
AGC	Middle	▼	→	Automatic Gain Control
White Balance	Auto	▼	→	Configure white balance
Shutter	Auto	▼	→	Set the shutter mode
Time Exposure	1/8	▼	→	Choose the exposure time of the camera
Defog Mode	Auto	▼	→	Use in foggy environments to improve the video quality

## 5.1.5 Motion

Configure motion detection options in this section.



**Setup:** Click the icon to go to the setup page.



### Motion Detection Area:

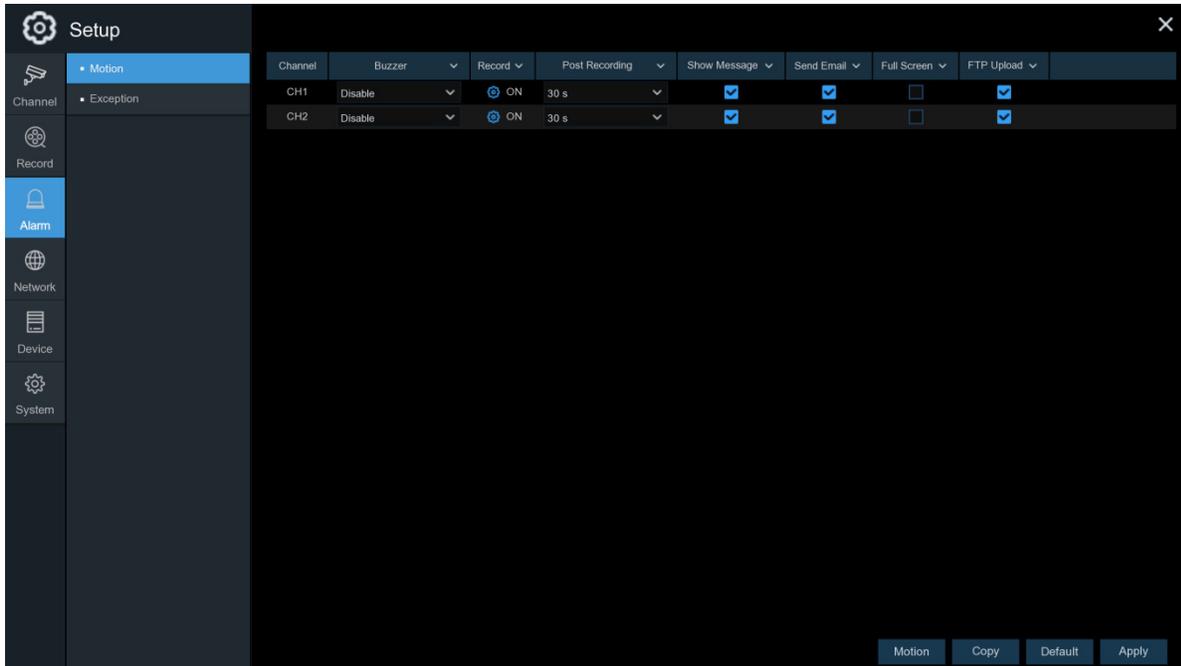
The whole screen is marked for motion detection (red blocks) as default. To disable motion detection on a certain area, click the grid cursor and then drag the mouse to unmark the area into transparent blocks. After setup is completed, right click on the mouse to return and click **Save** to complete the motion zone setup.

**Switch:** Enable or disable motion detection.

**Sensitivity:** Set the sensitivity level. Level 1 the lowest sensitivity level while level 8 is the highest sensitivity level.

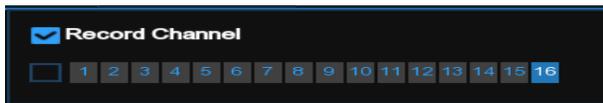
## 5.1.6 Alarm

Click the **Alarm** button to configure the motion detection alarm actions:



**Buzzer:** The NVR can use its internal buzzer to emit an alarm tone. The buzzer duration can be set here.

**Record:** Click the icon to choose which channel(s) should be recorded when motion detection is triggered.



**Post Recording:** Set how long after the motion event occurs that the NVR will continue to record. The recommended recording length is 30 seconds but it can be set as high as 5 minutes.

**Show Message:** Check the box to display the icon on the live view screen when motion is detected.

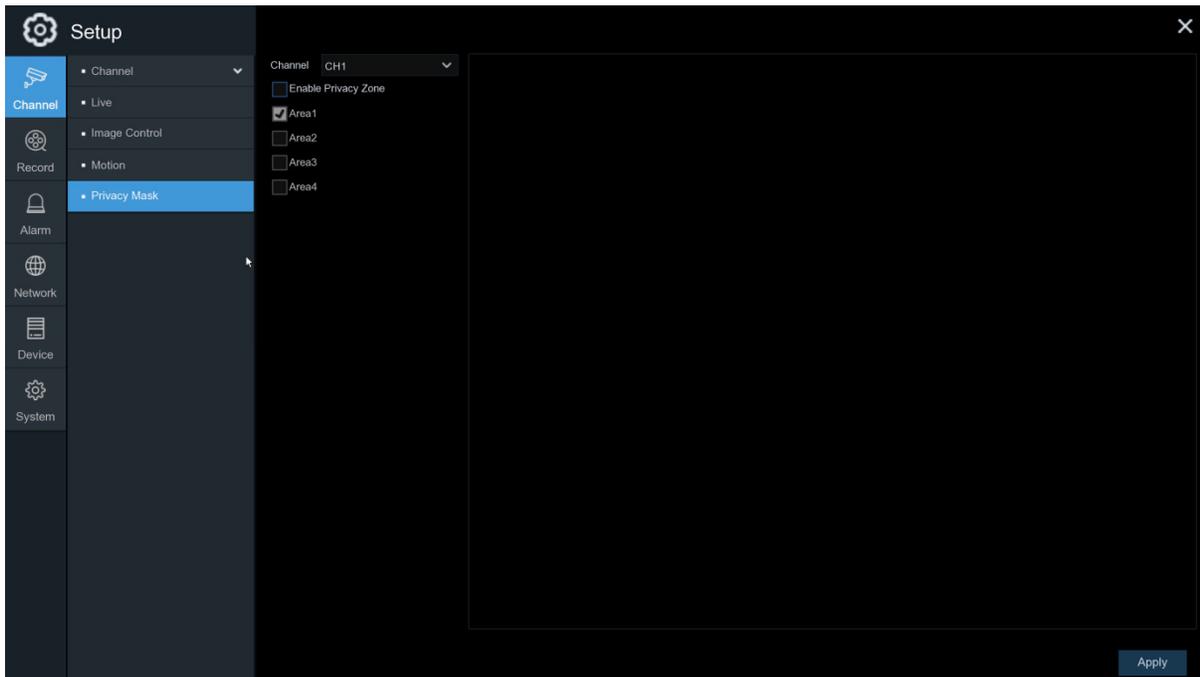
**Send Email:** Select to let the NVR send an email when the motion is detected. Email must be set up first in the Network section in order for this to work.

**Full Screen:** If this function is enabled and a motion is detected in a channel, that channel will go to full screen.

**FTP Upload:** To upload alarm images to an FTP server when motion is detected. To set up FTP, see [5.4.4 FTP](#).

## 5.1.7 Privacy Mask

Privacy mask can be used to cover certain areas of the image where viewing/recording is not desired. Up to 4 privacy zones in any size and location on the camera image can be set up. Enable Privacy Zone, and choose the number of zones that are needed. The zone(s) appear as red outlined boxes. Click the bottom right corner of the box and drag it to any size to create the privacy zone. Click Apply to save.

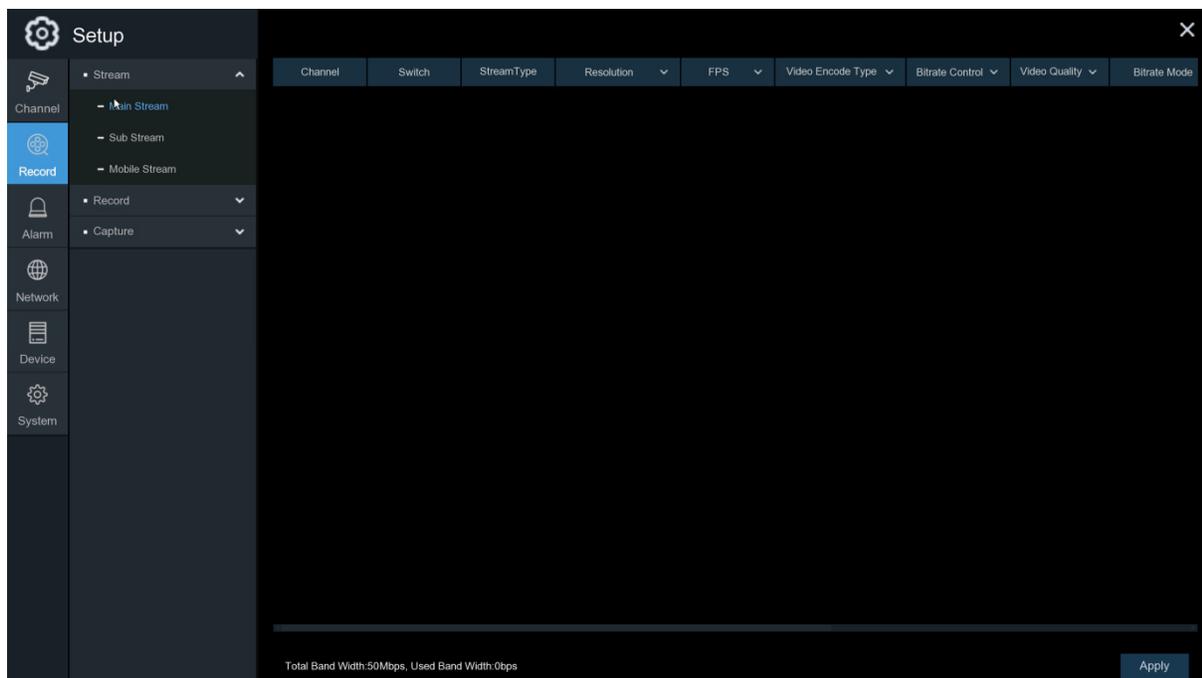


## 5.2 Record

This section allows for configuration of recording settings.

### 5.2.1 Stream

The IP cameras have multiple simultaneous streams which are used for different purposes. The main stream defines the recording video quality which will be saved in the HDD. The sub stream defines the video quality for remote access viewing, such as the web client. The mobile stream defines the video quality for remote viewing with the mobile app.



**Resolution:** This parameter defines how large the recorded image will be.

**FPS:** This parameter defines the frame rate (frames per second) that will be recorded.

**Video Encode Type:** Compression codec of the IP camera.

**Bitrate Control:** Bitrate determines the actual video quality. Constant bitrate (**CBR**) is more suitable for scenes with low contrast or where there isn't much movement. For more complex scenes or scenes with more movement, variable bitrate (**VBR**) is more suitable. If the bitrate is set too low for the given resolution, pixilation will start to occur.

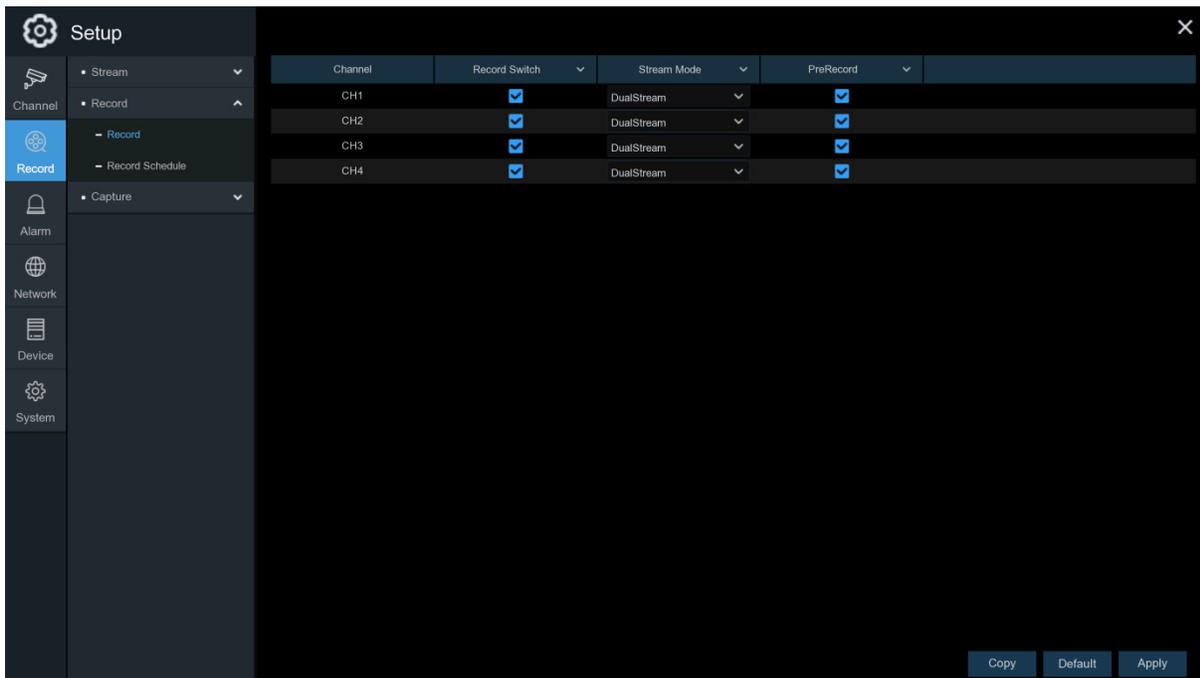
**Bitrate Mode:** To set a custom bitrate value, choose the **User-defined** mode. To have the system set a recommended bitrate value based on the selected resolution of the stream, choose the **Predefined** mode.

**Bitrate:** Set the bitrate value. Note that higher bitrate values will result in higher image quality, but will also consume more storage space on the HDD.

## 5.2.2 Record

Configuration of the channel recording parameters.

### 5.2.2.1 Record



**Record Switch:** Check to enable recording for the channel.

**Stream Mode:** Choose the recording quality. If DualStream is chosen, the system will record both the main stream and the sub stream.

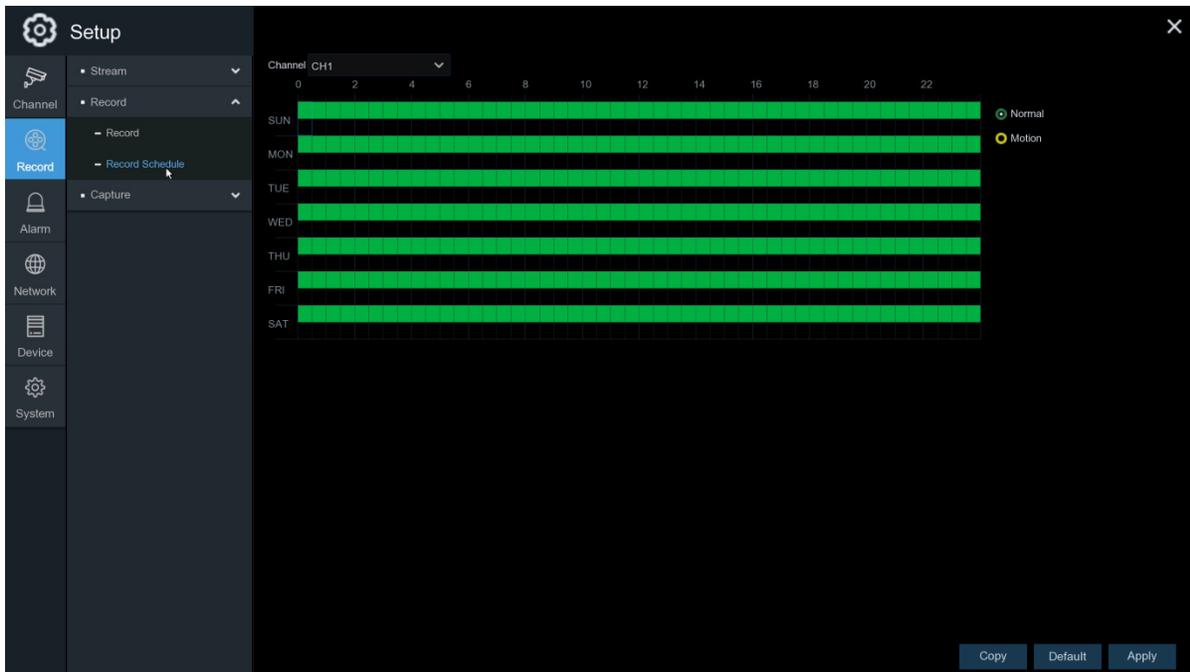
**PreRecord:** If this option is enabled, the NVR will store recorded video a few seconds before a motion event occurs.

### 5.2.2.2 Record Schedule

Set a recording schedule for normal (continuous) and/or motion recording. To set the recording mode, click on the mode (Normal or Motion) and then drag the cursor to mark the time slots. The recording schedule must be set for each channel. Use the **Copy** function to set the same schedule as the initial channel that was set, for all other channels. Click **Apply** to save the settings.

**Channel:** Select the channel to set its recording schedule.

**Normal:** Continuous recording (green markers).



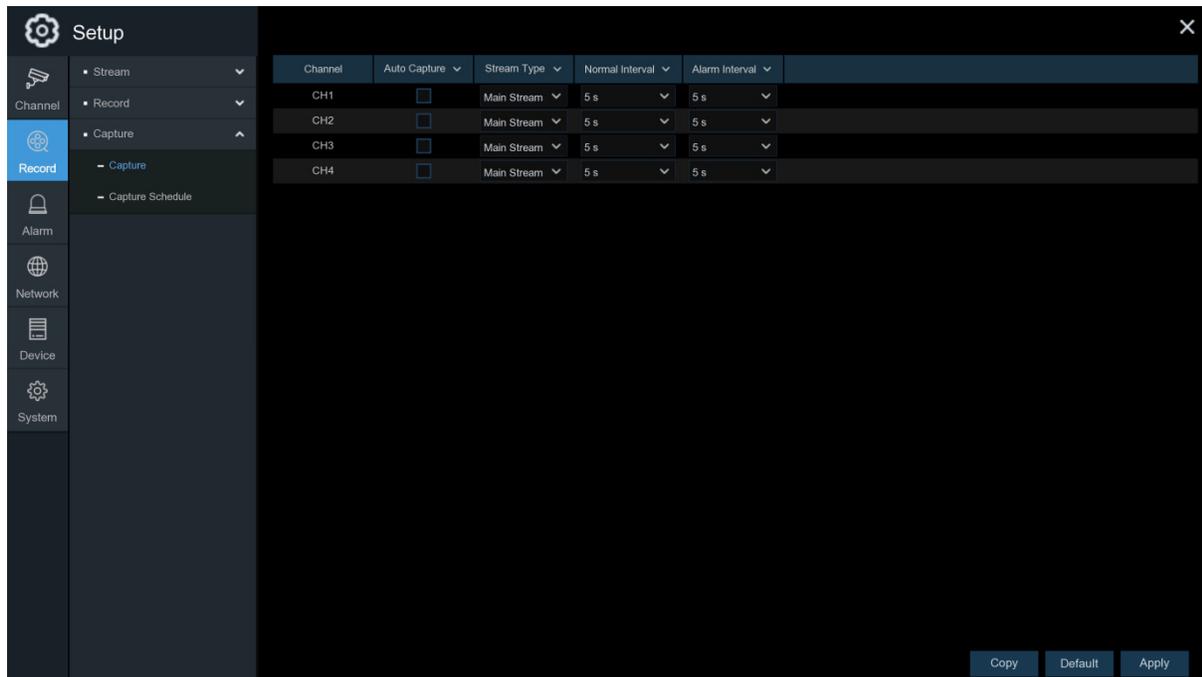
**Motion:** Motion recording (yellow markers).

**No Recording:** An unmarked time slot means that there is no recording scheduled for that time slot.

## 5.2.3 Capture

This section allows for configuration of image capture (snapshot) settings.

### 5.2.3.1 Capture



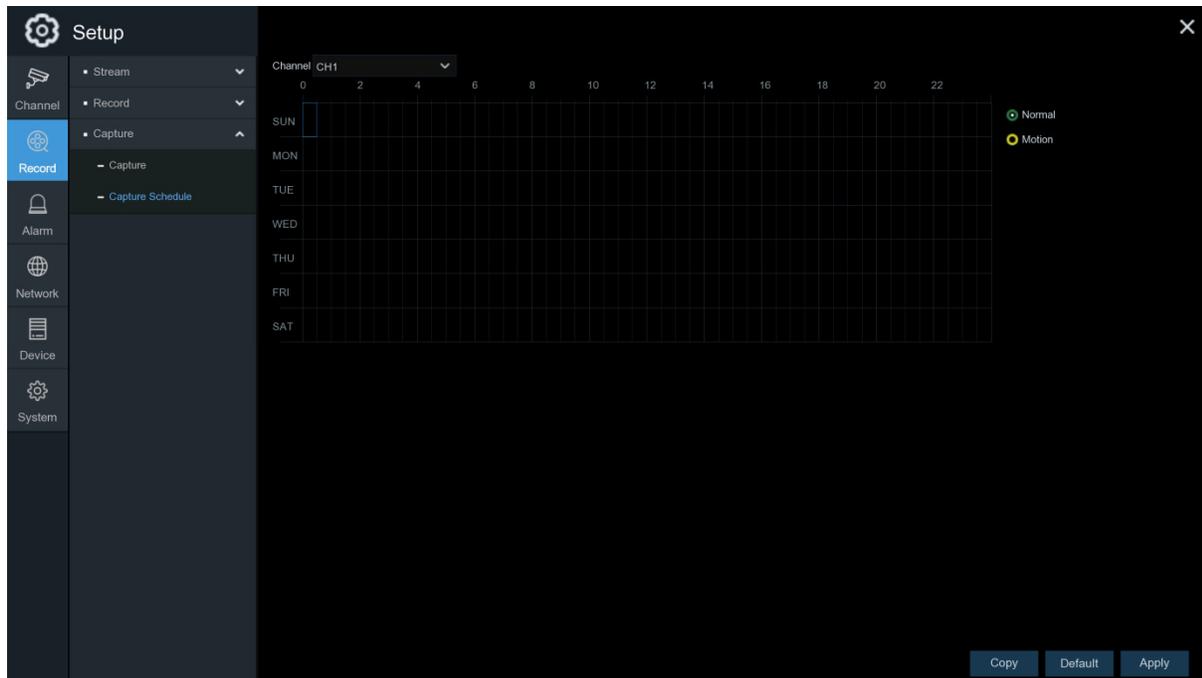
**Auto Capture:** Enable or disable automatic capturing for the channel.

**Stream Type:** Select the image resolution between main stream or sub stream.

**Normal Interval:** Time interval to capture an image during continuous recording.

**Alarm Interval:** Time interval to capture an image when motion is triggered.

### 5.2.3.2 Capture Schedule



**Channel:** Select the channel to set its capture schedule.

**Normal:** Continuous capture (green markers).

**Motion:** Motion capture (yellow markers).

**No Capture:** An unmarked time slot means that there is no capture scheduled for that time slot. A snapshot can still be captured manually on the channel by the operator.

## 5.3 Alarm

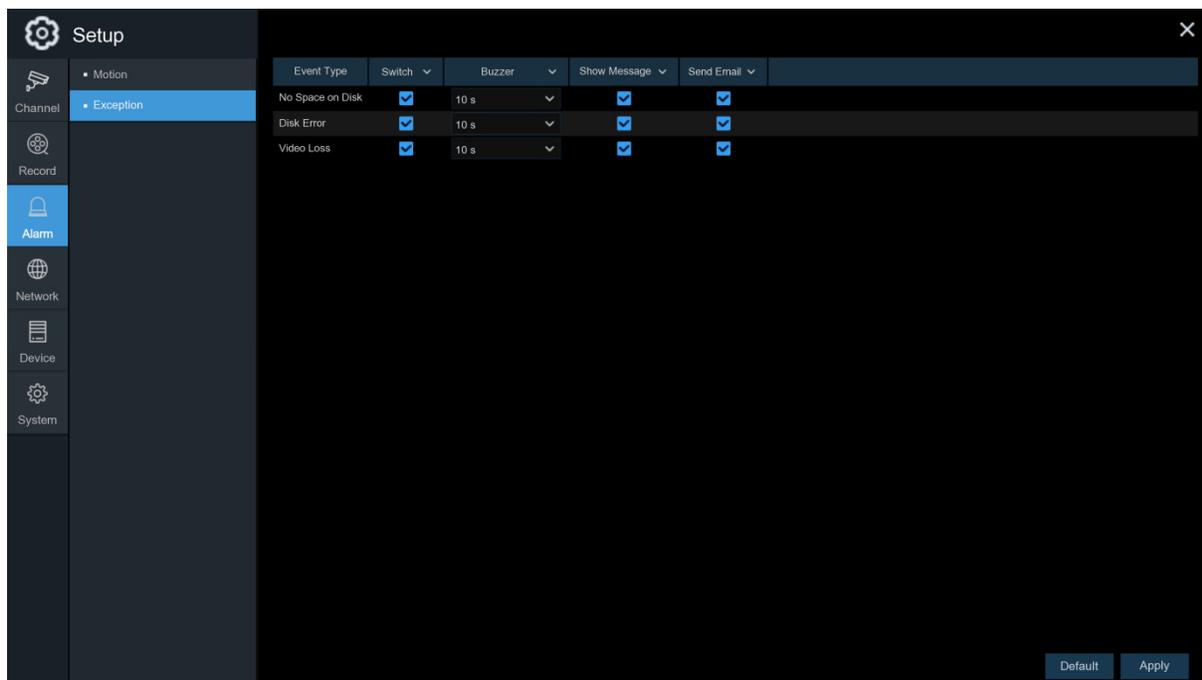
This section allows for configuration of alarm parameters.

### 5.3.1 Motion

Refer to [5.1.6 Alarm](#)

### 5.3.2 Exception

The NVR can detect different types of errors to notify the operator.



**Event Type:** Select the event type from the options below:

- **No Space on Disk:** When an HDD is full.
- **Disk Error:** If the HDD is not detected properly.
- **Video Loss:** If a camera is not connected properly.

**Switch:** Check the box to enable the monitoring of the event.

**Buzzer:** Set the buzzer duration when an event occurs (Off/10s/20s/40s/60s). To disable the buzzer, select **OFF**.

**Show Message:** Check the box to display a message on the screen when an event occurs.

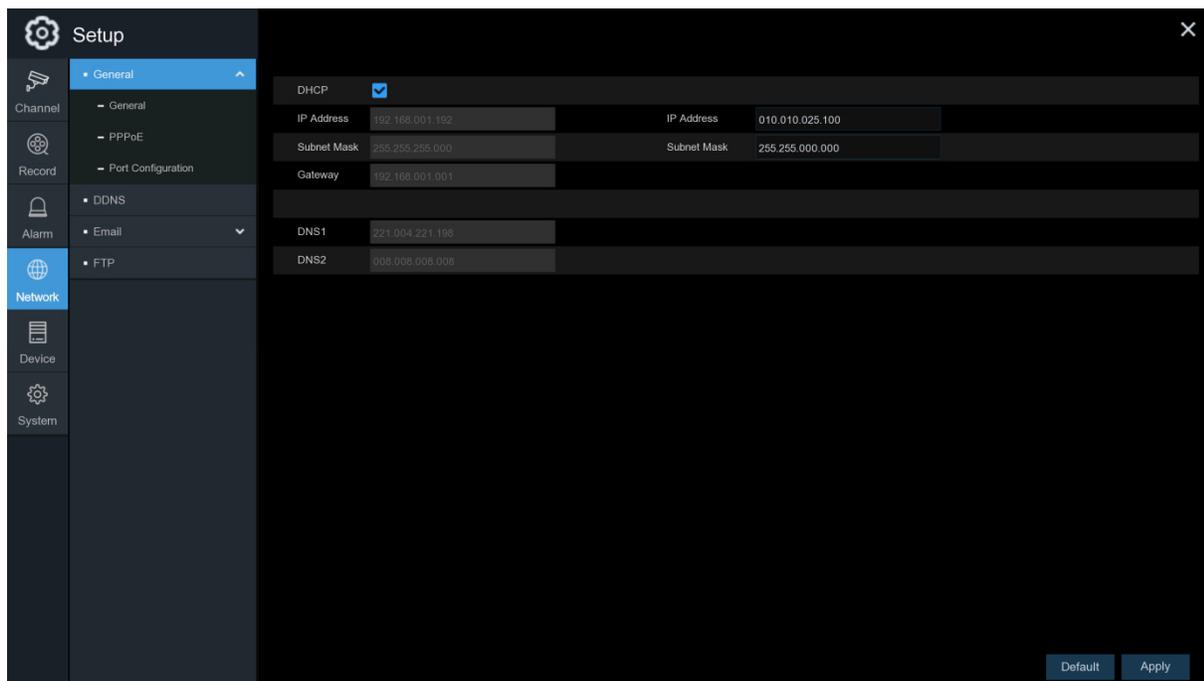
**Send Email:** Lets the NVR send an email when an event occurs.

## 5.4 Network

Configure network settings of the NVR.

### 5.4.1 General

#### 5.4.1.1 General



Check the **DHCP** box if connecting to a DHCP server (a router typically provides this). The router will assign automatically all the network parameters for the NVR. If parameters are known already and to manually configure the parameters, see below:

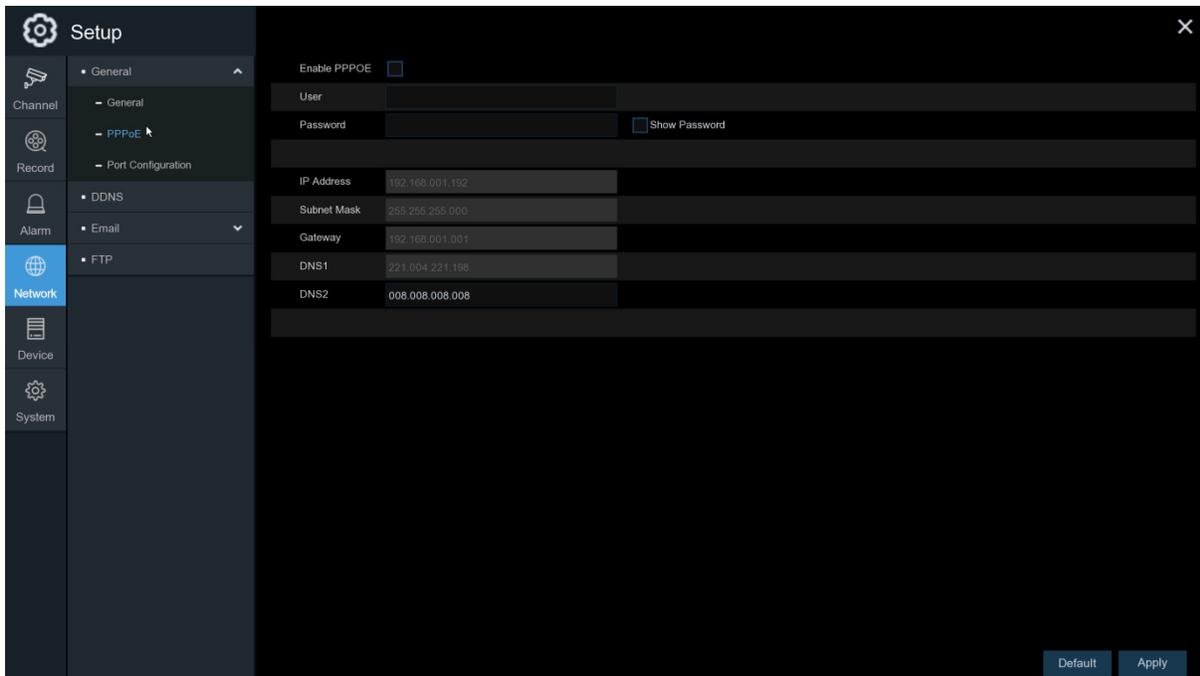
**IP Address:** The IP address identifies the NVR in the network. It consists of four groups of numbers between 0 to 255, separated by periods. For example, “192.168.001.100”.

**Subnet Mask:** Subnet mask is a network parameter which defines a range of IP addresses that can be used in a network. If IP address is like a street where you live then subnet mask is like a neighborhood. The subnet address also consists of four groups of numbers, separated by periods. For example, “255.255.000.000”.

**Gateway:** The gateway allows the NVR to access the Internet. The format of the **Gateway** address is the same as the **IP Address**. For example, “192.168.001.001”.

**DNS1/DNS2:** DNS1 is the primary DNS server and DNS2 is a backup DNS server. It is usually sufficient just to enter the DNS1 server address.

### 5.4.1.2 PPPoE

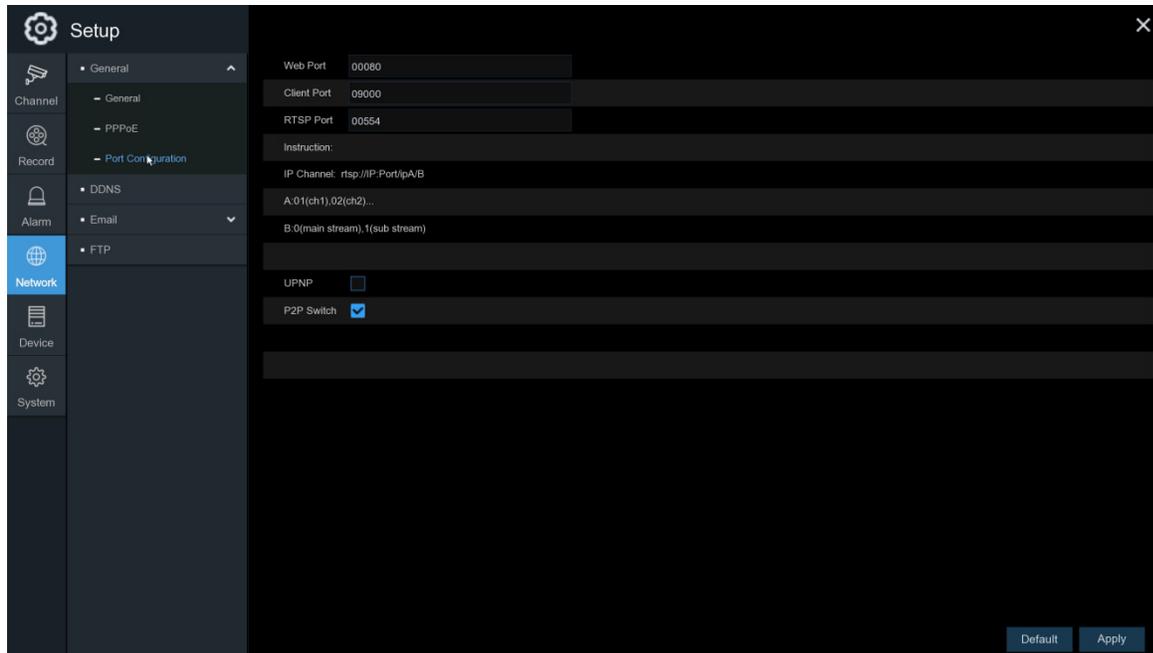


This is a protocol used for networks using DSL.

Check the “Enable PPPOE” box and then enter the User name & Password of PPPoE.

Click **Apply** to save and the system will reboot to activate the PPPoE setting.

### 5.4.1.3 Port Configuration



**Web Port:** This is the port that will be used to log in remotely to the NVR (e.g. using the Web Client). If the default port 80 is already taken by other applications, please change it.

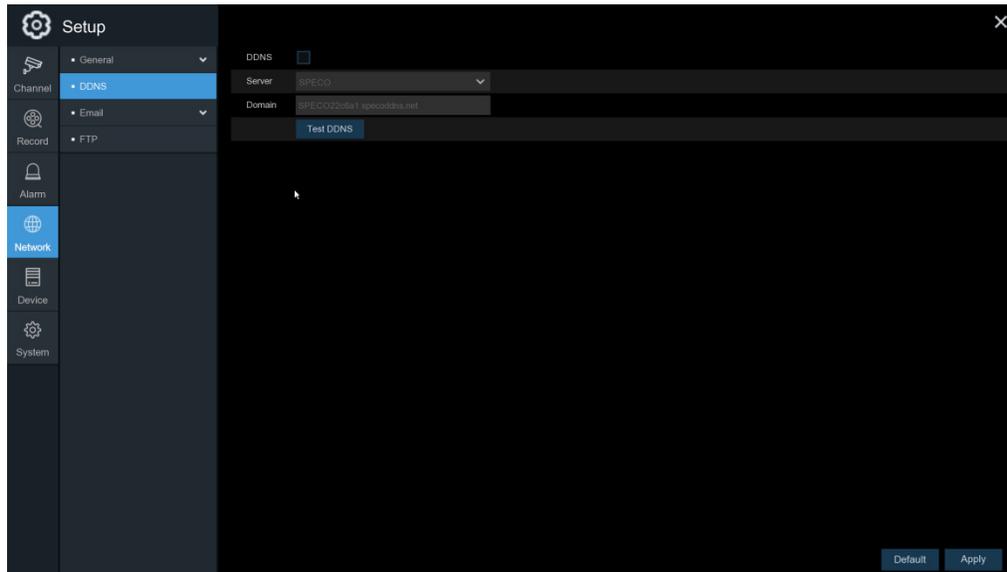
**Client Port:** This is the port that the NVR will use to send information through. If the default port 9000 is already taken by other applications, please change it.

**RTSP Port:** This is the port that the NVR uses to transmit real-time streaming to other devices. If the default port 554 is already taken by other applications, please change it.

**UPNP:** To log in remotely to the NVR using a web browser through DDNS, port forwarding must be set up in the router. Enable this option if the router supports UPnP. UPnP must be enabled on both the NVR and the router. If UPnP is used, port forwarding does not have to be configured manually on the router. If the router does not support UPnP, make sure port forwarding is configured manually.

## 5.4.2 DDNS

Configure DDNS settings. Speco Technologies provides a free DDNS service. By using DDNS, the external remote IP address of the device does not have to be known to remotely access the NVR.



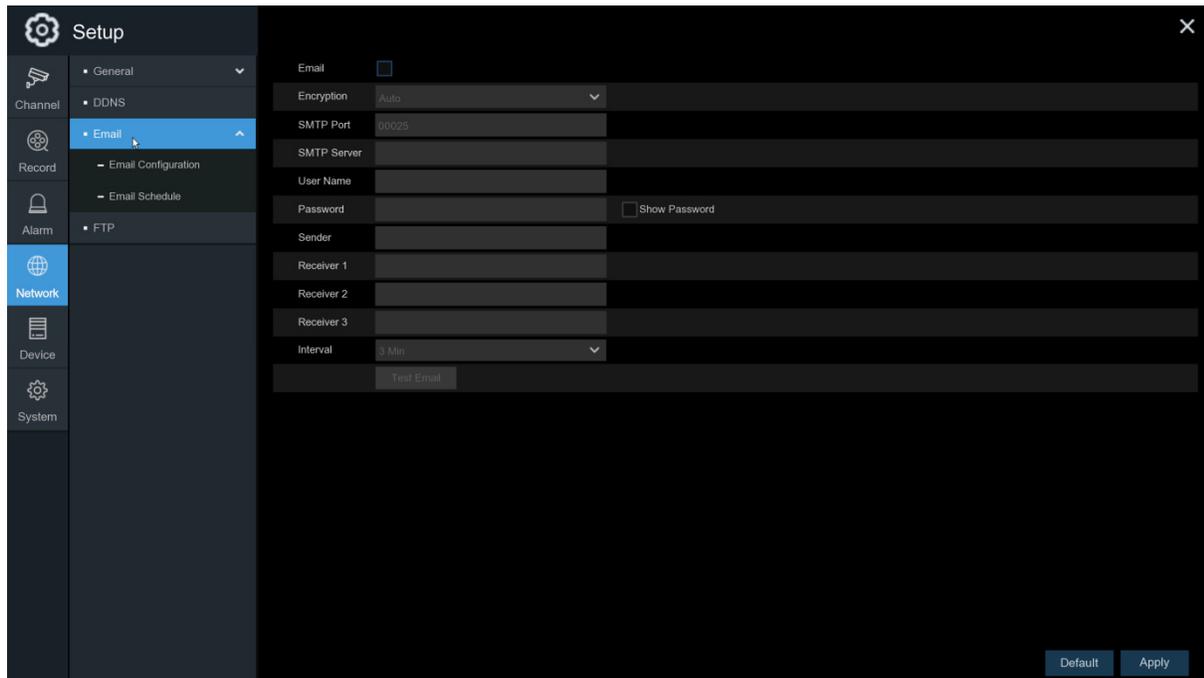
**DDNS:** Check to enable DDNS.

**Domain:** specoXXXXXX.specoddns.net. The last 6 characters “XXXXXX” are the last 6 characters of the NVR’s Mac address.

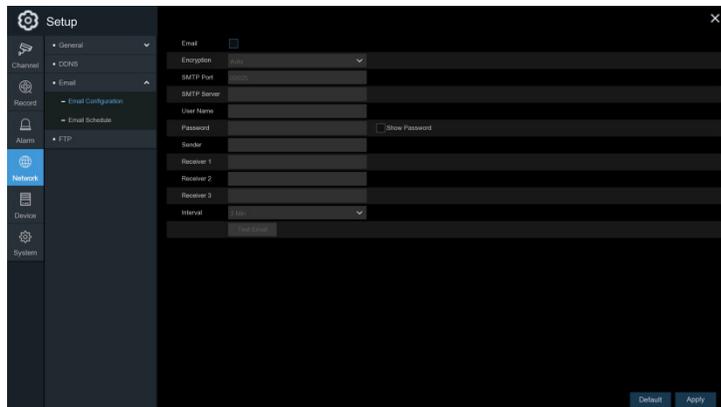
After all parameters are entered, click **Test DDNS** to test the DDNS settings. If the test result is “Network is unreachable or DNS is incorrect”, please check if the Internet is working correctly and that port forwarding or UPnP was configured properly.

## 5.4.3 Email

Configure email settings. If configured, the system will send an email when motion is triggered, HDD becomes full, HDD is in error state, or Video Loss occurs.



### 5.4.3.1 Email Configuration



**Email:** Check to enable the function.

**Encryption:** Enable if the email server requires the SSL or TLS verification. If unsure, set to **Auto**.

**SMTP Port:** Enter the SMTP port of the email server that will be used to send the email.

**SMTP Server:** Enter the SMTP server address of the email service.

**User Name:** Enter the email address of the sender.

**Password:** Enter the password of the email address.

**Password:** Display name of the sender.

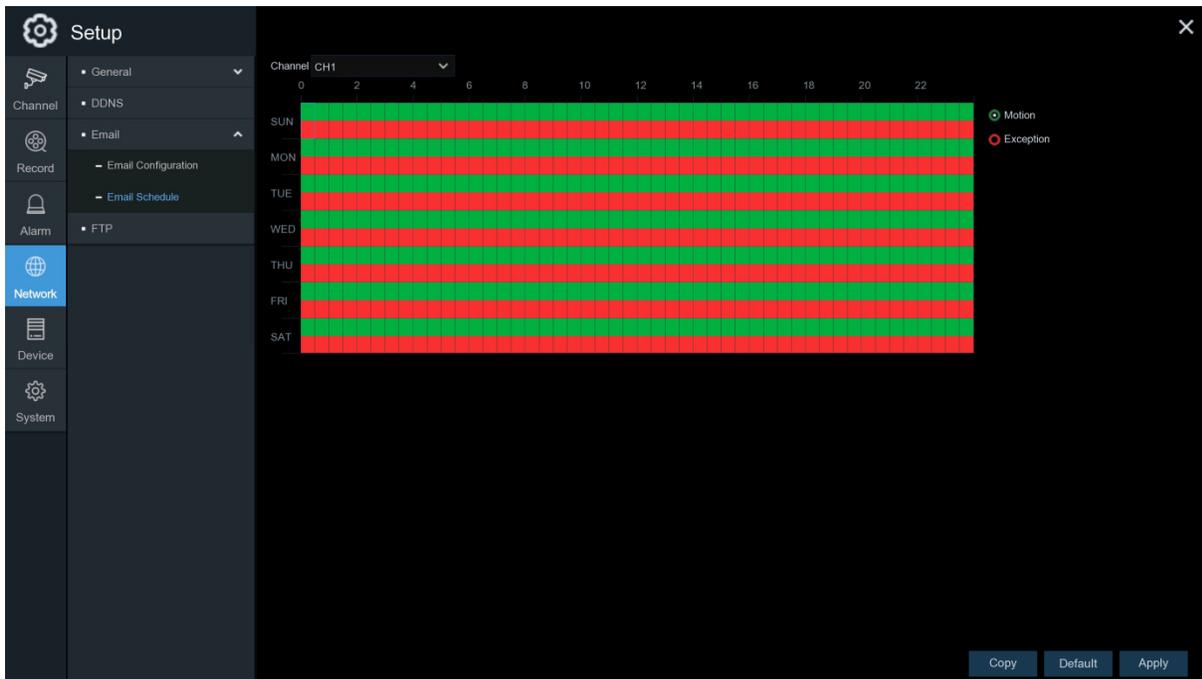
**Receiver 1~3:** Enter the email address(es) that will receive the notifications.

**Interval:** Configure the length of the time interval between the notification emails from the NVR.

To make sure all settings are correct, click **Test Email**. The system will send an automated email message to the email addresses that were specified.

### 5.4.3.2 Email Schedule

The schedule must be set in order for email notifications to be sent properly..



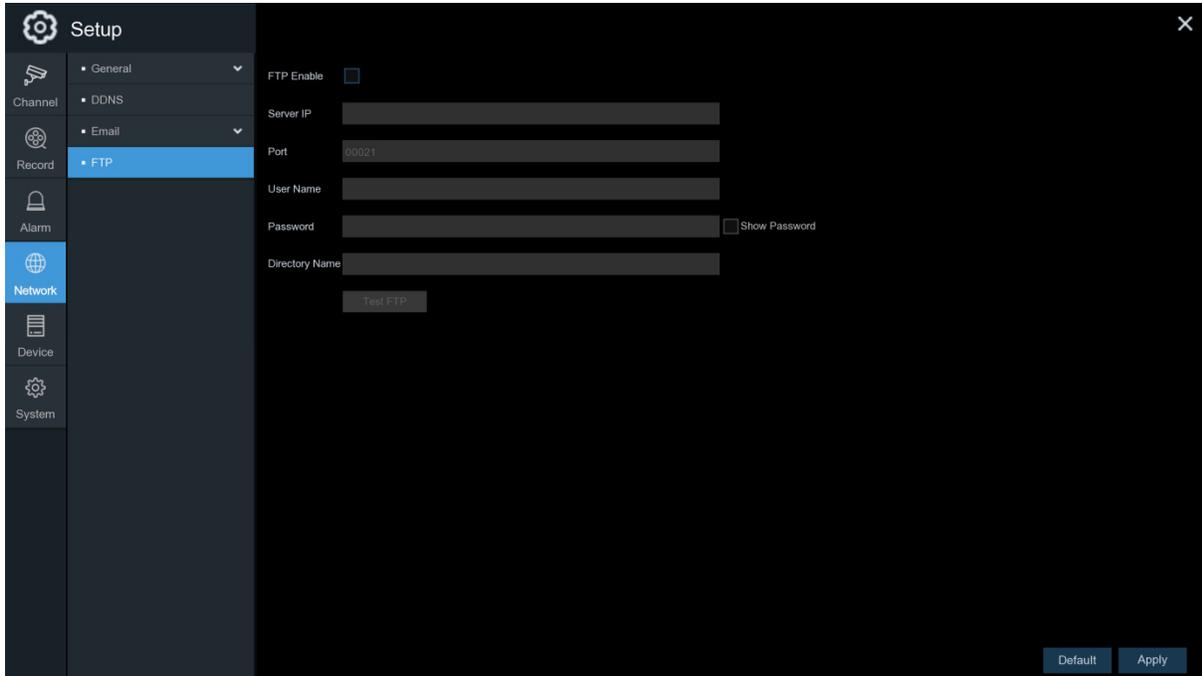
Color codes:

**Green:** Motion detection.

**Red:** Exception (HDD full, HDD error, or Video Loss).

## 5.4.4 FTP

Snapshots can be uploaded to an existing FTP server configured through this section.



**FTP Enable:** Click to enable the FTP function.

**Server IP:** Enter the FTP server IP address or domain name.

**Port:** Enter the FTP port for file upload.

**Name/ Password:** Enter the user name and password.

**Directory Name:** Enter the default directory name for the FTP file uploads.

**Test FTP:** Click to test the FTP settings.

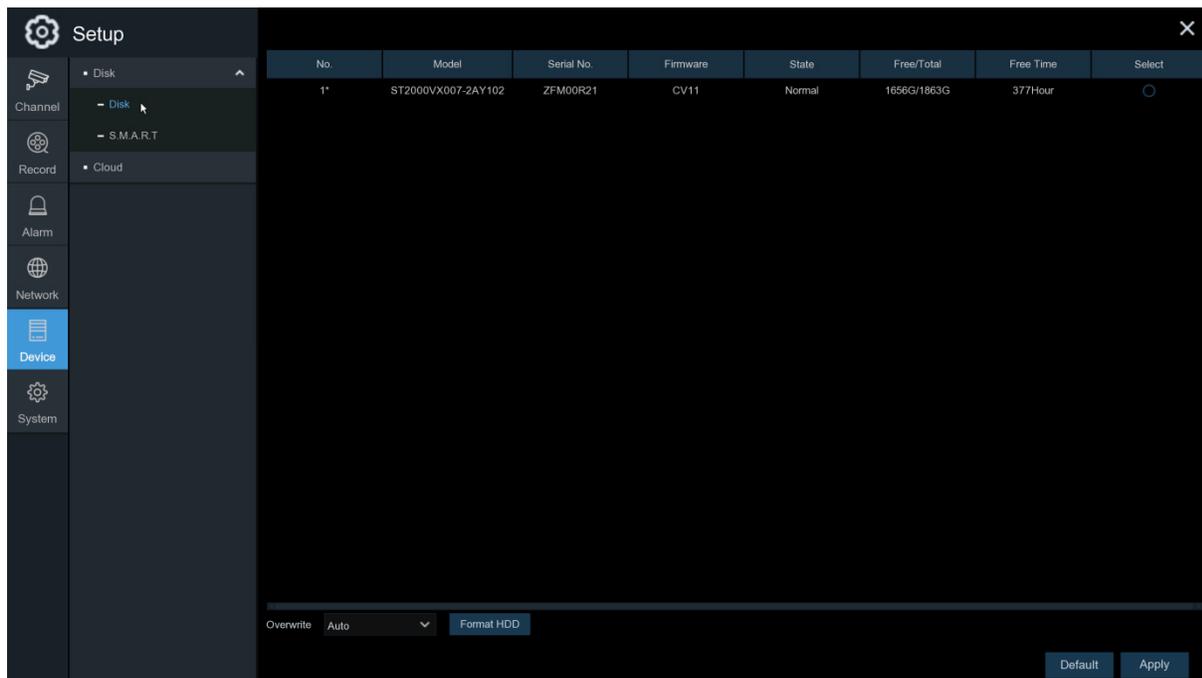
## 5.5 Device

Disk and Cloud configuration.

### 5.5.1 Disk

#### 5.5.1.1 Disk

Check and configure the internal HDD(s). The HDD already comes formatted with the system. Format the HDD only when necessary for some reason.

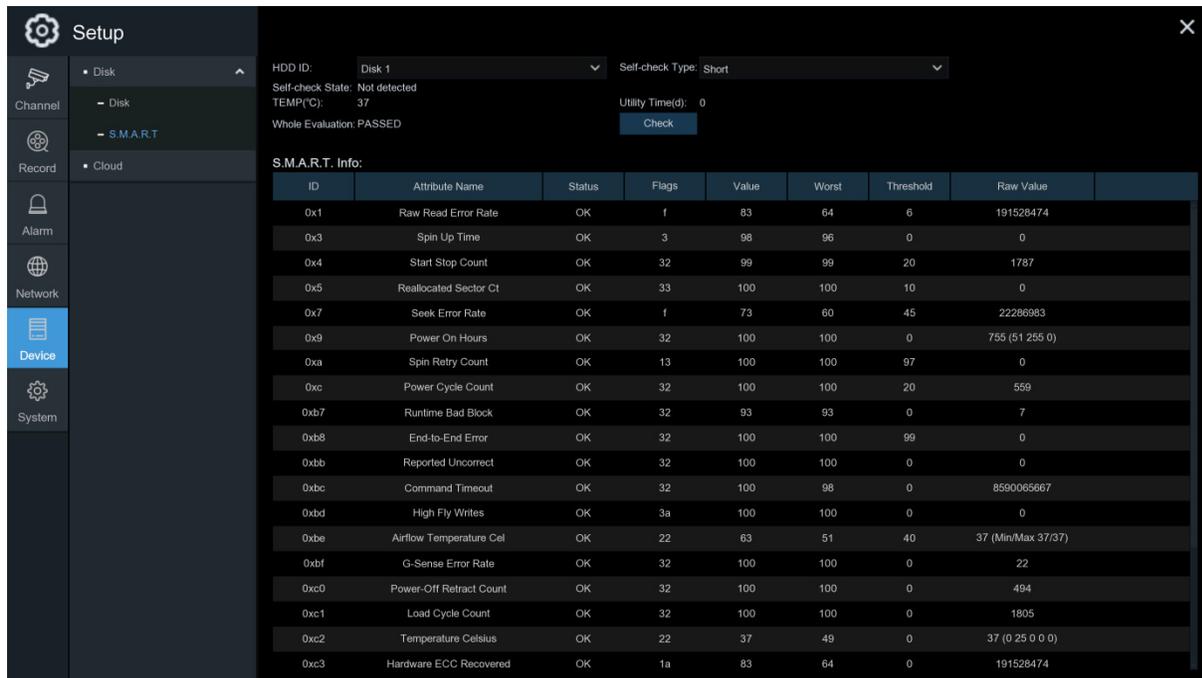


**Format HDD:** Select the HDD and click **Format HDD**. To start formatting, enter the user name and password and then click **OK**.

**Overwrite:** Use this option to overwrite the old recordings on the HDD when the HDD is full. For example, if the 7 days is chosen, then only the last 7 days recordings are kept on the HDD. To prevent overwriting any old recordings, select **OFF**. If this function is disabled, please check the HDD status regularly to make sure the HDD is not full. Recording will be stopped if HDD is full.

### 5.5.1.2 S.M.A.R.T

This function can be used to display technical information on the installed hard. Tests can be performed (there are three types available) to evaluate and detect potential drive errors.



**Whole Evaluation not passed, continue to use the disk:** If for some reason the hard drive has detected a fault (such as one or more bad sectors), you can instruct the NVR to continue saving to the drive.

**Self-check Type:** There are three types available:

**Short:** This test verifies major components of the hard drive such as read/write heads, electronics and internal memory.

**Long:** This is a longer test that verifies the above as well as performing a surface scan to reveal problematic areas (if any) and forces bad sector relocation.

**Conveyance:** This is a very quick test that verifies that the mechanical parts of the hard drive are working.

**Note:** When performing a test, the NVR will continue to work as normal. If an HDD S.M.A.R.T error is found, the HDD can continue to be used, but there will be a risk to lose recording data. At this point, the HDD may have to be replaced. Contact support when this occurs.

## 5.5.2 Cloud

Dropbox can be used to upload snapshots for motion alarms. Note that email must be configured and the HDD must have free space in order for Dropbox to work properly.

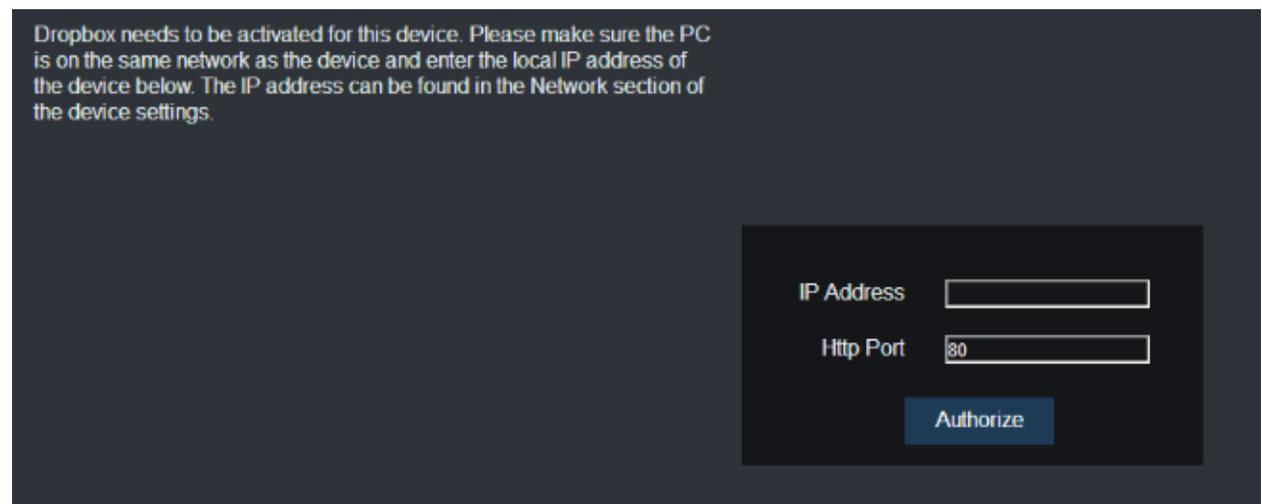
**Cloud Storage:** Check to enable the Dropbox function.

**Alarm Detection:** Check to enable Dropbox uploads for the specified channel.

**Driver Name:** Custom name for the channel for indication on the uploaded file name.

**Activate Cloud:** Click to send an authentication email to the receiver email address that was specified in the email configuration section.

**Note:** When the Activate Cloud button is pressed, an email will be sent to the receiver email address with a link to authenticate the NVR with Dropbox. Make sure that the PC that's accessing the link is on the same local network as the NVR. Click on the link to bring up this screen:



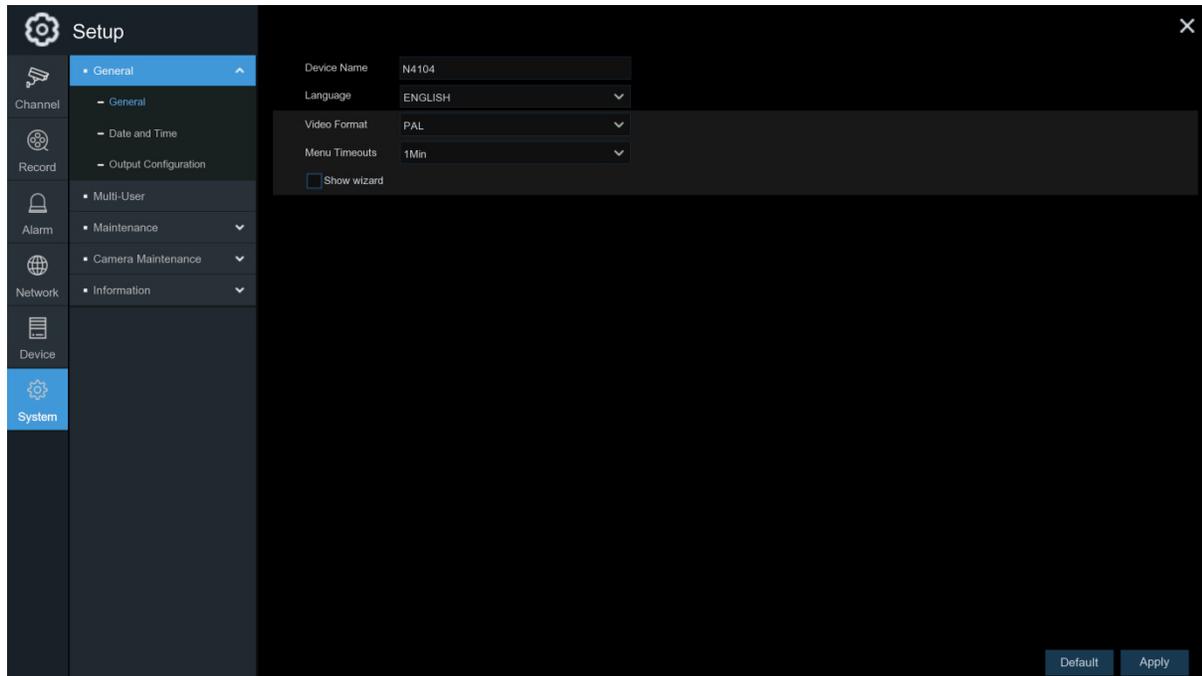
Make sure to click on the link within 3 minutes of receiving the email. Enter the local IP address of the NVR in the IP Address field (e.g. <http://192.168.0.XXX>) and specify the correct HTTP port. Click Authorize.

Enter the user name and password of the NVR. The browser will redirect to Dropbox. Log in to Dropbox as necessary. Go to account settings and then the Connected apps tab. If Dropbox was activated properly, under the Linked apps section, there will show an app called “DVRCloudStorage”.

## 5.6 System

General system configuration

### 5.6.1 General



**Device Name:** Enter the desired name for the NVR. The name can include both letters and numbers.

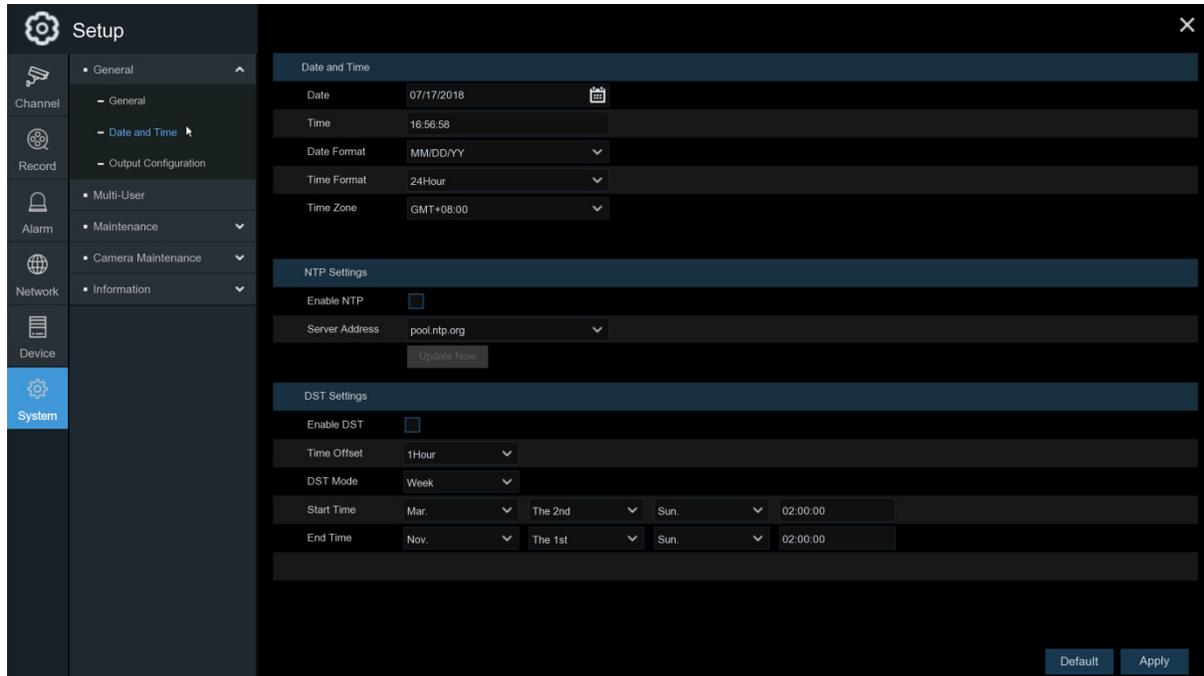
**Language:** Select a language for the system menus to be displayed in. Multiple languages are available.

**Video Format:** Select the correct video standard for the region. NTSC is the standard for North America.

**Menu Timeouts:** Click the drop-down menu to select the time NVR will exit the Main Menu when idle. This can be disabled by selecting “OFF” (password protection will be temporarily disabled).

**Show Wizard:** Click the checkbox if to display the Startup Wizard each time the unit is turned on or rebooted.

### 5.6.1.1 Date and Time



#### Date & Time

**Date:** Click the calendar icon to change the date.

**Time:** Click the box to change the time.

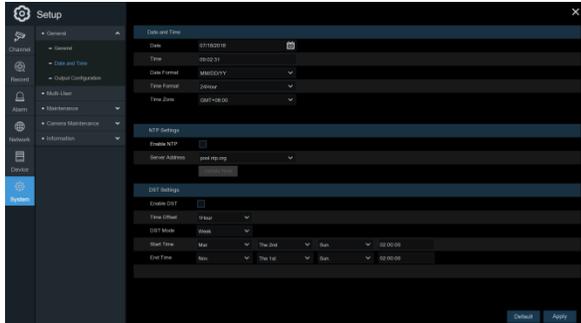
**Date Format:** Select the preferred date format.

**Time Format:** Select the preferred time format.

**Time Zone:** Select the applicable time zone.

### 5.6.1.2 NTP Settings

The NTP (Network Time Protocol) function allows the NVR to automatically sync its clock with a time server over the Internet. This gives it the ability to constantly have an accurate time setting (the NVR will periodically sync automatically).

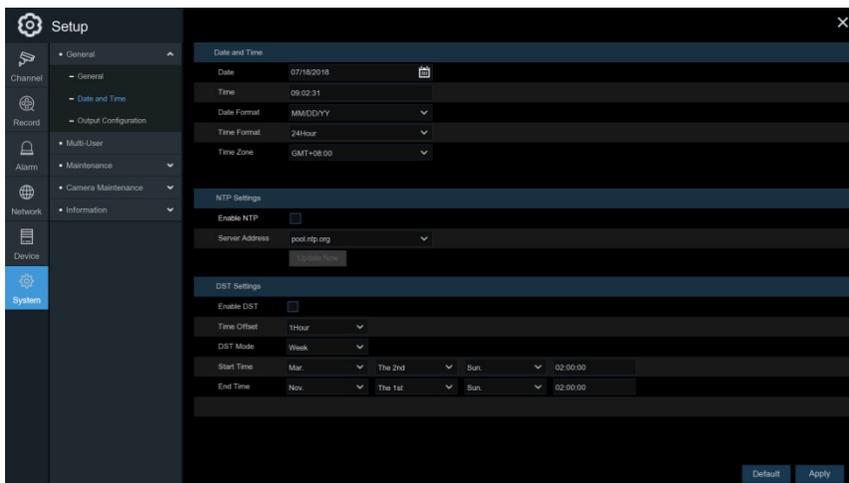


Check to enable the **NTP**, and select a **Server Address**, click Update Now to manually sync the date & time.

Click **Apply** to save the settings.

### 5.6.1.3 DST Settings

DST (Daylight Saving Time) configuration.



**Enable DST:** If Daylight Saving Time applies to the time zone or region, check this option.

**Time Offset:** Select the amount of time that Daylight Saving has increased by in the time zone. This is typically 1 hour.

**Enable DST:** Select when Daylight Saving starts and ends:

**Week:** Select the month, a particular day and time when Daylight Saving starts and ends.

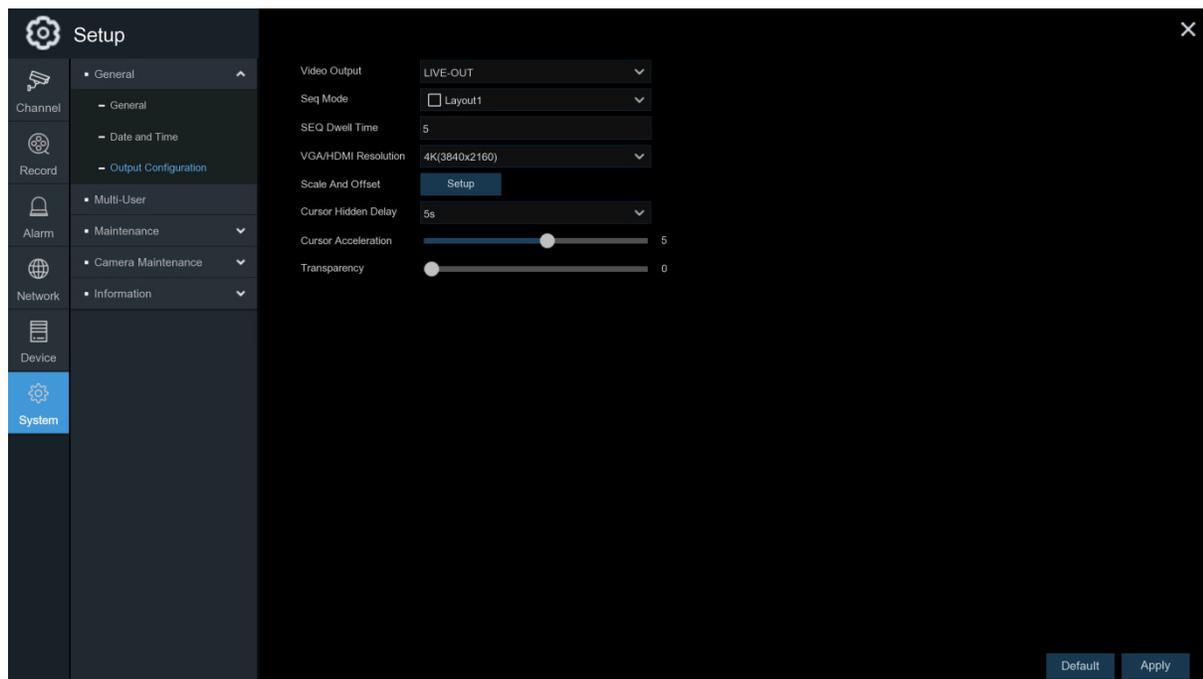
**Date:** Select the start date (click the calendar icon), end date and time when Daylight Saving starts and ends.

**Start Time / End Time:** Set the start time and end time for Daylight Saving.

**Note:** For the US, DST starts at 2am local time on the second Sunday in March and ends at 2am on the first Sunday in November.

## 5.6.2 Output Configuration

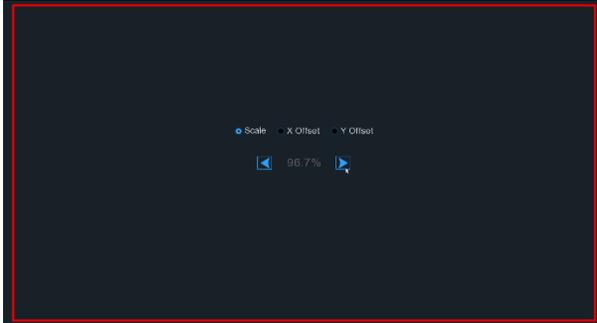
Configure video output parameters.



**SEQ Dwell Time:** Enter in seconds the maximum length of time to display a video channel in sequence mode before displaying the next video channel (300 seconds is the maximum).

**VGA/HDMI Resolution:** Select a display resolution that is suitable for the monitor or TV. 1920 x 1080 will suit most displays. If the monitor supports 4K resolution, select either 2K (2560 x 1440) or 4K (3840 x 2160) to take advantage of the higher resolution.

**Scale and Offset:** The NVR supports adjusting the size & position of the display screen to match the monitor or TV. Click **Setup** to adjust.



**Scale:** To adjust the size of the displayed screen by scale.

**X Offset:** To move the displayed screen to left or right.

**Y Offset:** To move the displayed screen to up or down.

Click once or long press the left button of the mouse on the arrow to adjust the size and position. The scroll wheel of the mouse can also be used. Click the right button of the mouse to exit and then click **Apply** to save the modifications.

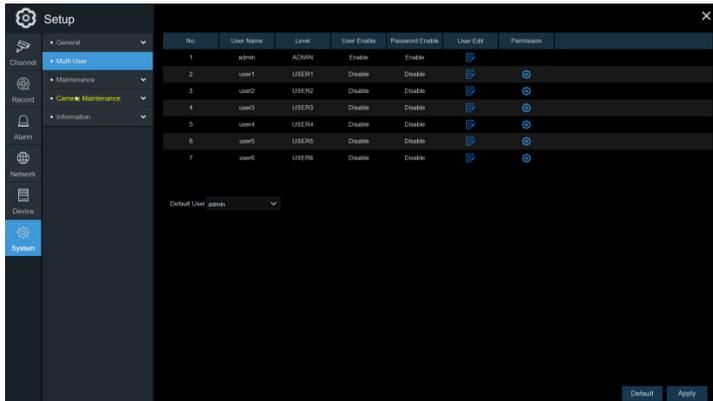
**Cursor Hidden Delay:** Click the drop-down menu to select the time the NVR will hide the mouse cursor when idle. This can be disabled by selecting "OFF".

**Cursor Acceleration:** To adjust the speed of the mouse cursor.

**Transparency:** Click and hold the slider left or right to change how transparent the Menu Bar and Main Menu will appear on-screen. Adjust accordingly.

## 5.6.3 Multi-user

Configure the user name, password and user permission.

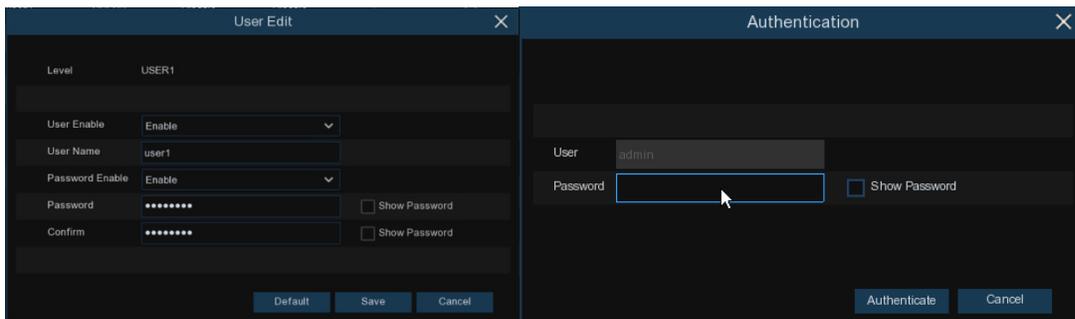


The system supports the following account types:

- **ADMIN — System Administrator:** The administrator has full control of the system, and can change both administrator and user passwords and enable/disable password protection.
- **USER — Normal User:** Users only have access to live viewing, search, playback, and other functions. Specific permissions can be granted to individual users.

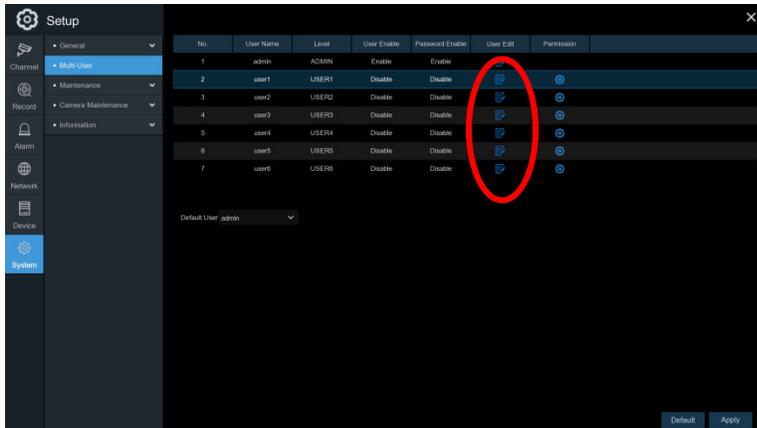
### 5.6.3.1 Changing Password

To change the password for the administrator or user accounts, click the User Edit icon . The password must have 8 characters and can contain a mixture of numbers and letters. Enter the new password again to confirm, and then click **Save** to save the new password. The old password will need to be entered to authenticate.

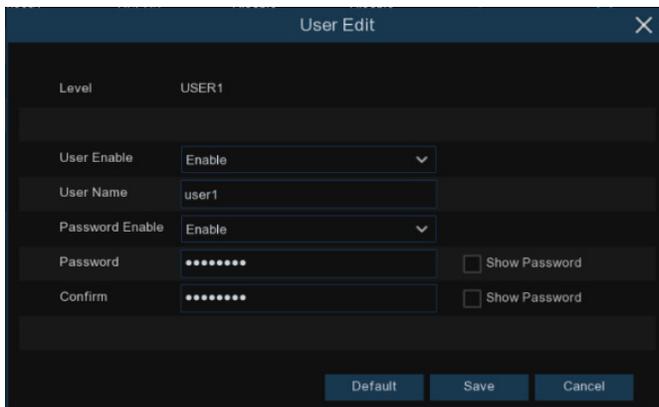


**Password Enable:** It's strongly recommended to enable the password to protect the unit and privacy.

### 5.6.3.2 Add New Users



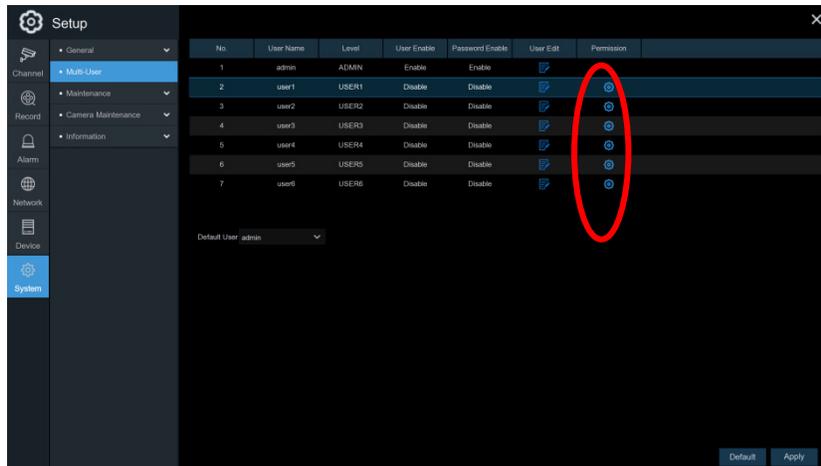
1. Select one of the user accounts that is currently disabled and then click the User Edit icon .



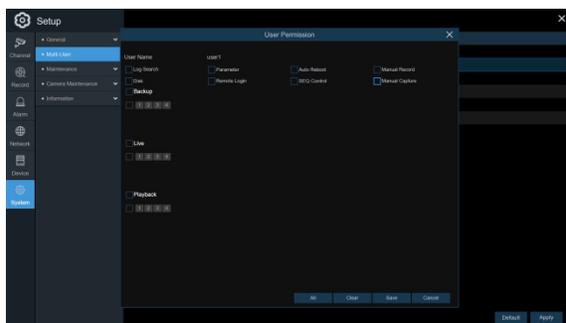
2. Select **Enable** from the drop-down next to **User Enable**.
3. Click the field next to **User Name** to change the user name for the account.
4. Select **Enable** from the drop-down next to **Password Enable**.
5. Click the field next to **Password** to enter the desired password.
6. Click the field next to **Confirm** to reenter the password.
7. Click **Save**. The Admin password will need to be entered to authenticate.

### 5.6.3.3 Setting User Permissions

The administrator account is the only account that has full control of all system functions. Specific functions can be enabled or disabled for every user account.



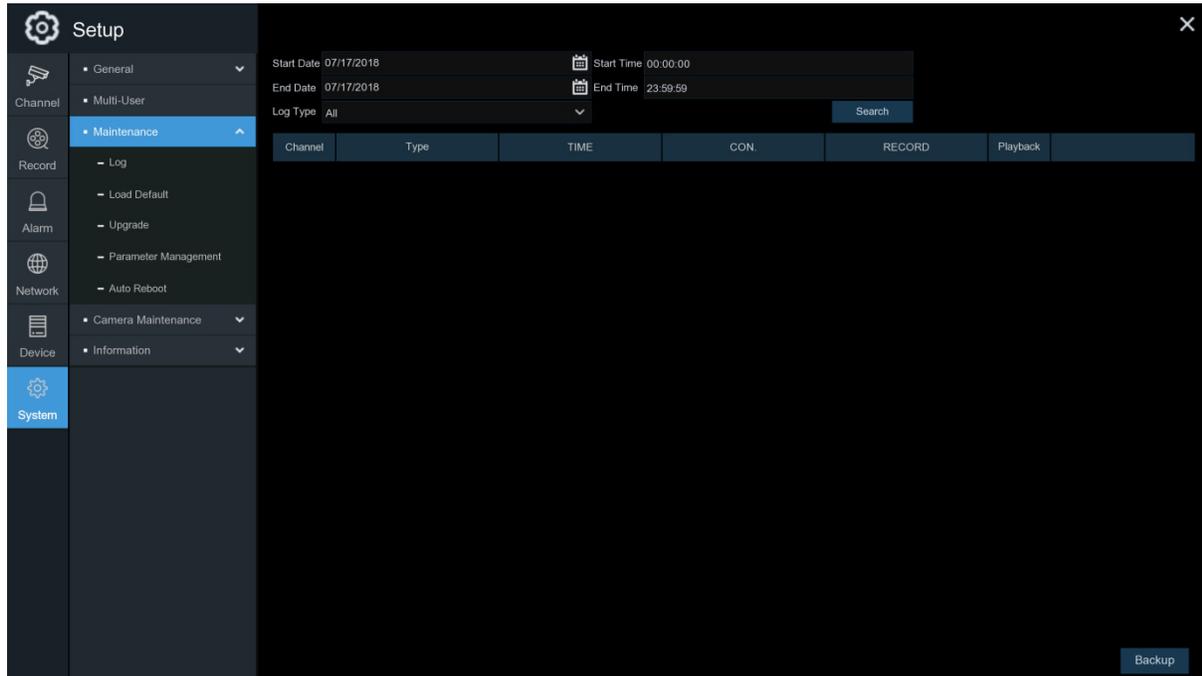
1. Click the edit icon under the Permission tab.



2. Check the boxes next to any system menus or capabilities for the user to access. Click **All** to check all boxes. Click **Clear** to check none of the boxes.
3. Click **Save** to save your modifications.

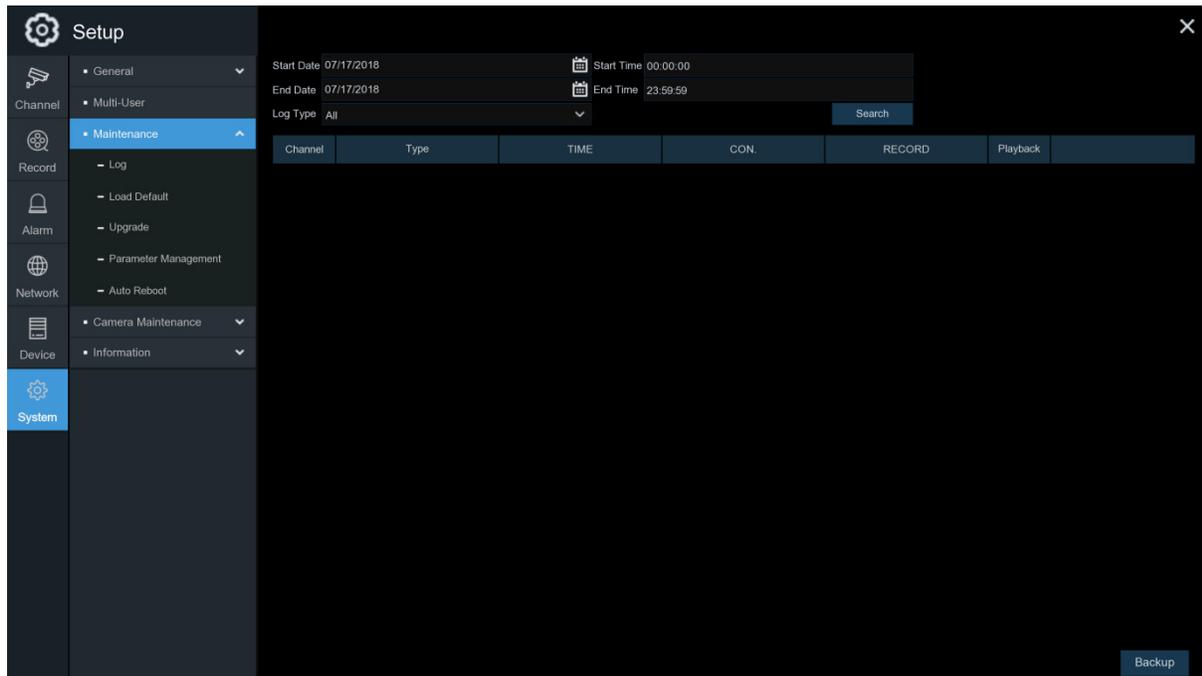
## 5.6.4 Maintenance

In this section, the available parameters are: system log, factory default, firmware upgrade, export & import system parameters, and system auto reboot.



### 5.6.4.1 Log

The system log shows important system events, such as motion alarms and system warnings. Easily create a backup file of the system log for a set time period to a USB flash drive.



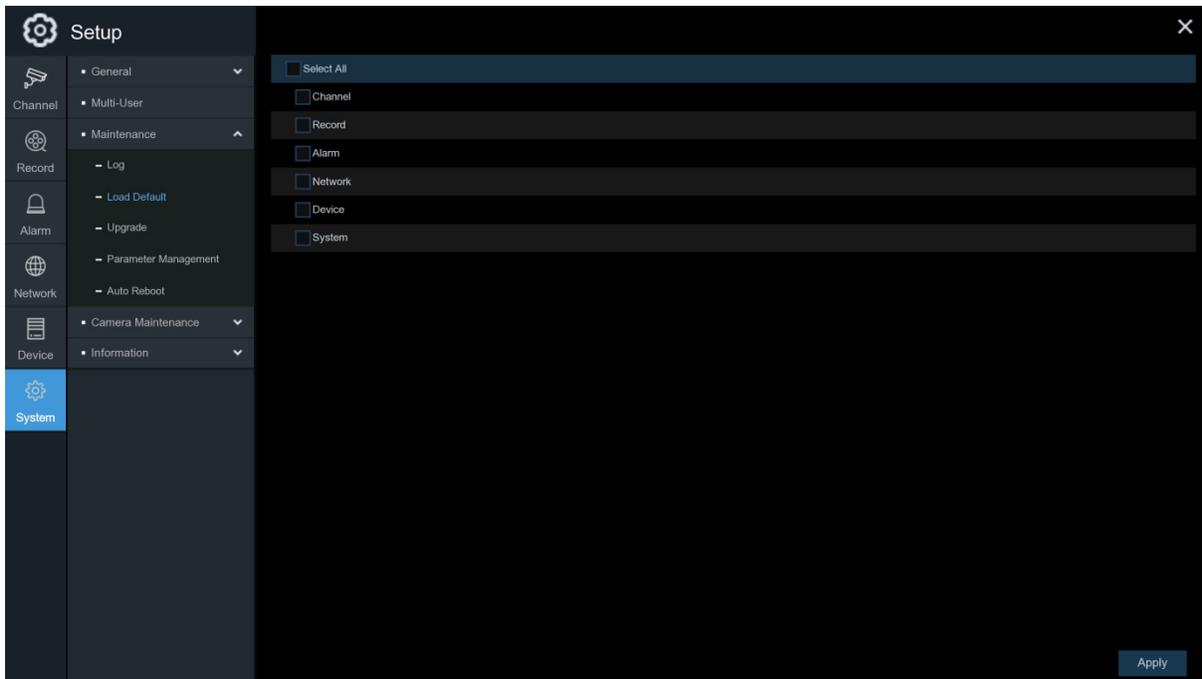
### Log Searching and Backing Up:

1. Click the field next to **Start Date** & **Start Time** to choose the starting date & time.
2. Click the field next to **End Date** & **End Time** to choose the end date & time.
3. Select the type of events to search for from the drop down next to **Log Type**, or select **All** to see the entire system log for the selected time period.
4. Click **Search**.
5. Browse system log events from the search period:
  - Video events can be played back instantly by clicking in the **Playback** column. Right-click to return to the search results.
  - Use the **⏪ ⏩ / ⏴ ⏵** buttons in the bottom-right corner of the menu to move between pages of system log events.

6. Click **Backup** to create a backup of the system log for the search period. Please make sure the flash drive has been connected to the NVR's USB port.
7. When the backup drive menu appears, navigate to the folder for the backup file to be saved in, and then click **OK** to begin.

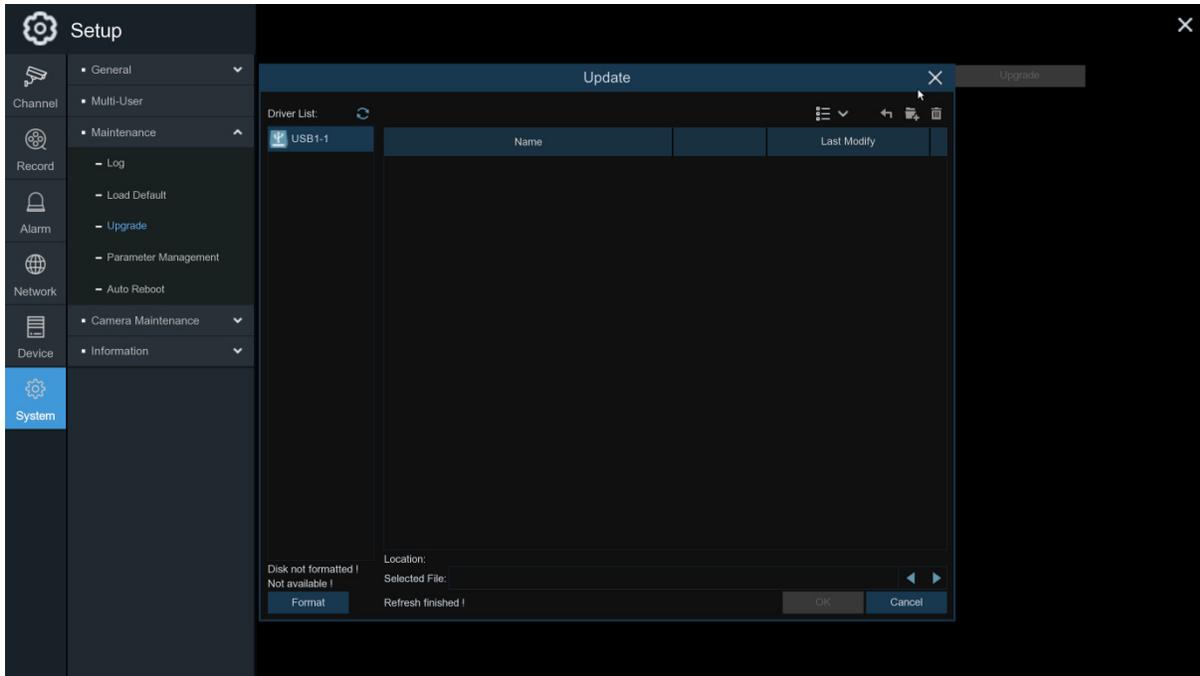
### 5.6.4.2 Load Default

Reset the NVR settings to its factory default state. Restoring default settings will not delete recordings and snapshots saved to the hard drive.



Check the items to restore, or check **Select All** to choose all items. Click **Apply** to load default settings of the chosen items.

### 5.6.4.3 Upgrade



1. Copy the firmware file (.sw file) to the USB flash drive and insert the flash drive into the NVR's USB port.
2. Click the Select File button to choose the firmware file in the USB flash drive, and then Click **OK**.
3. Click the **Upgrade** button to start the system upgrade. The system upgrade will last around 5-10 minutes. Do **NOT** power off the NVR or remove the USB from the NVR during this process.

### 5.6.4.4 Parameter Management

Export the main menu settings to a USB flash drive or import settings from a flash drive to the NVR.

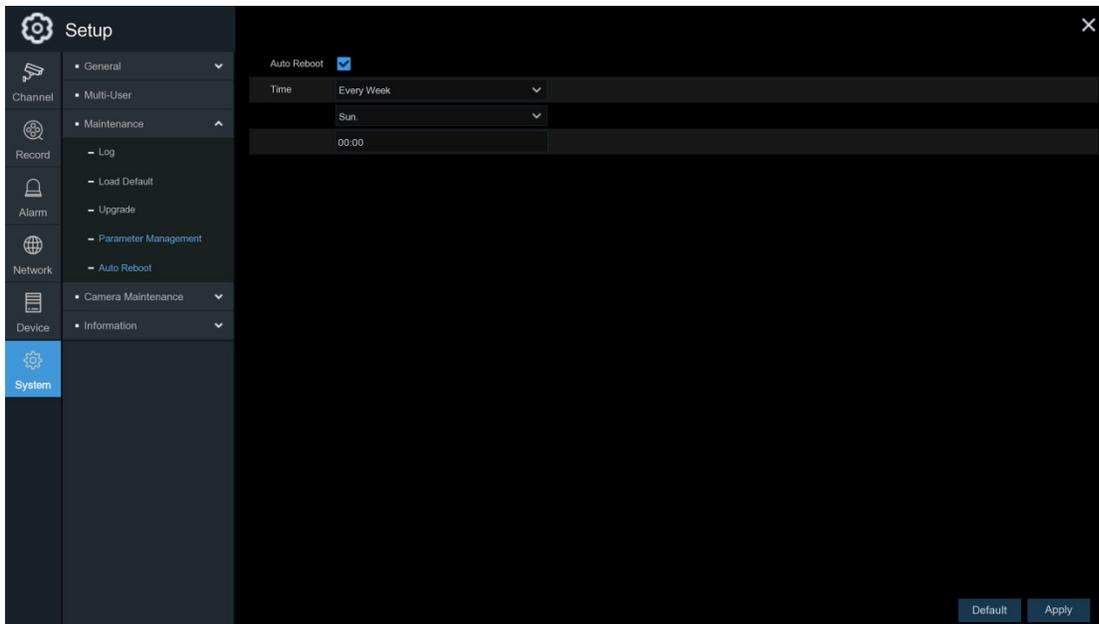


**Save Settings:** Click to save the NVR current system settings to the USB flash drive. Enter the Admin password to authenticate.

**Load Settings:** Click **Load Settings** button to navigate to the system settings file to import from the USB flash drive. Enter the Admin password to authenticate.

### 5.6.4.5 Auto Reboot

This menu allows the system to auto reboot the NVR regularly.

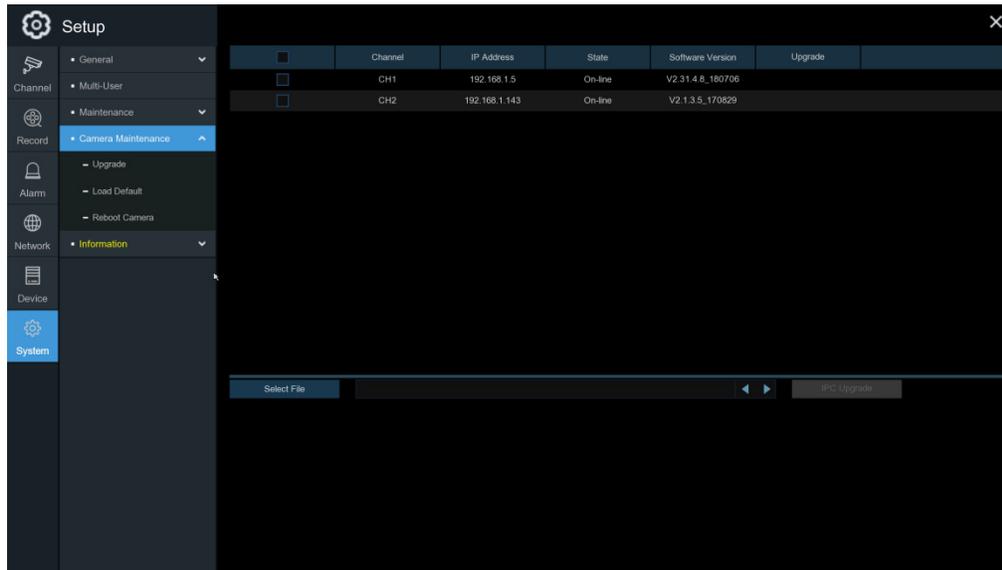


**Auto Reboot:** Check to enable.

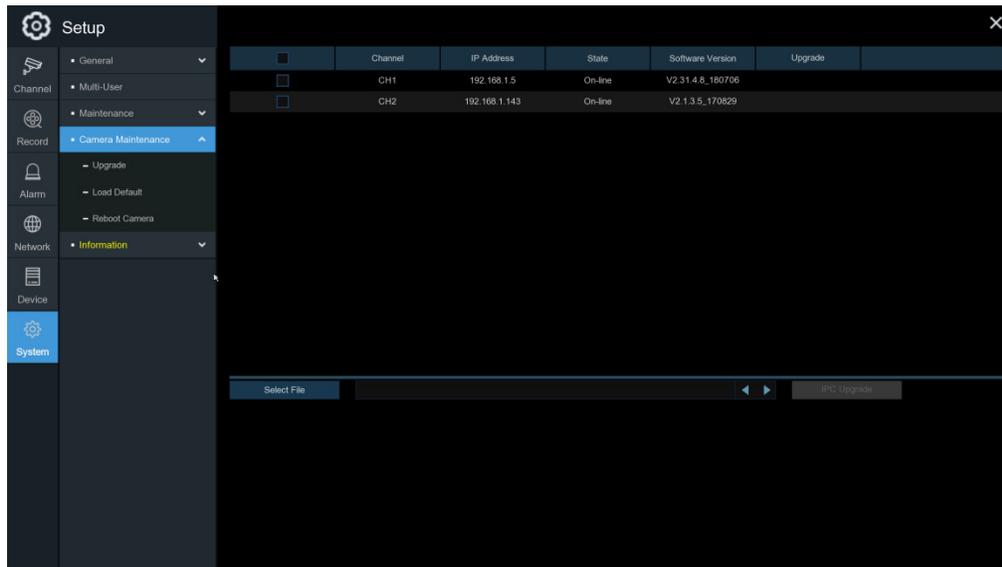
**Time:** Set the NVR to reboot by day, week or month.

## 5.6.5 Camera Maintenance

For the IP camera that was included within the system, this menu allows IP camera's firmware to be updated and the default settings to be restore.



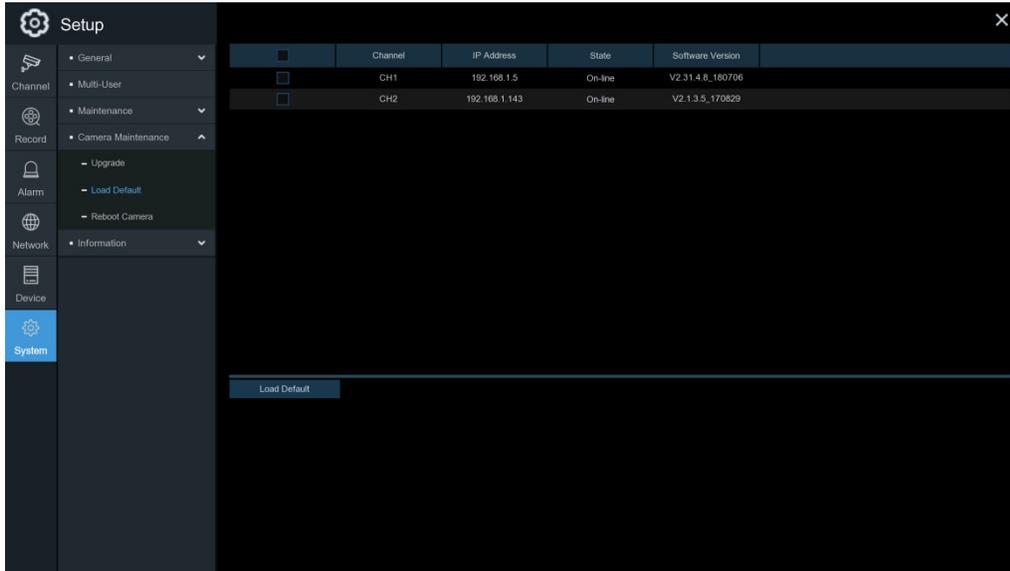
### 5.6.5.1 Upgrade IP Camera



1. Choose one of the IP cameras to upgrade.
2. Click **Select File**, select the update file from the USB flash drive, then click **OK**.

- Click the camera Upgrade button to start the upgrade. Enter the Admin password to authenticate.  
Do **NOT** power off the NVR and IP camera or remove the USB during the process.

### 5.6.5.2 Load Default Settings for IP Camera



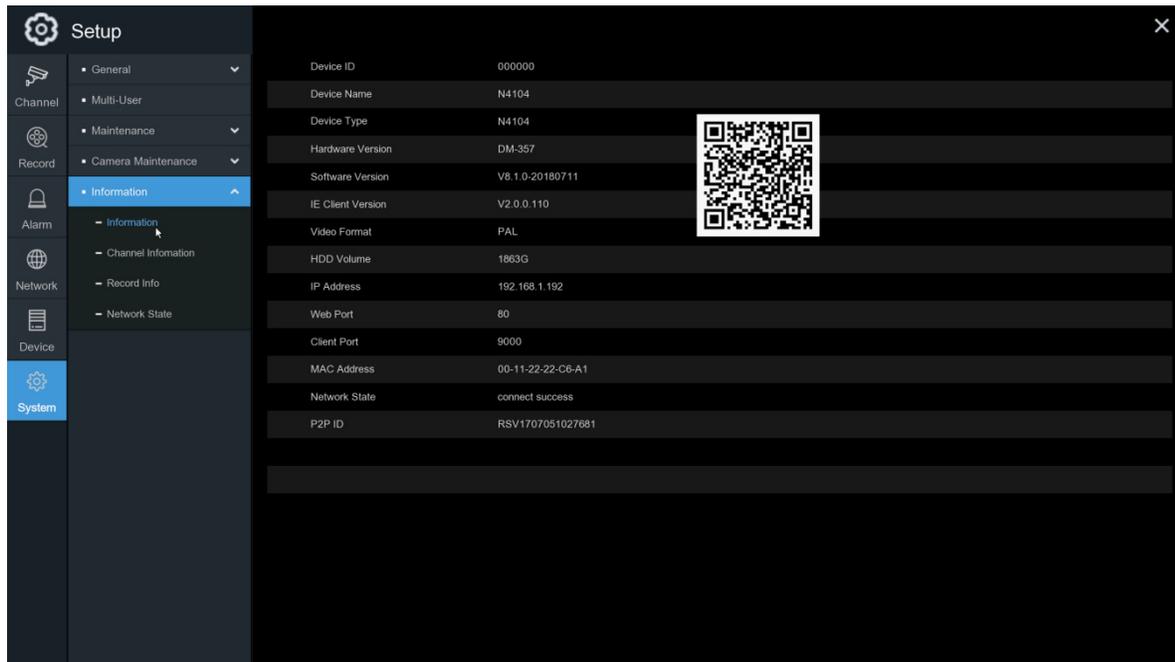
- Choose the IP cameras to restore back to factory settings.
- Click **Load Default** to restore settings. Enter the Admin password to authenticate.

## 5.6.6 System Information

This section displays the system information, channel information, record information & network status.

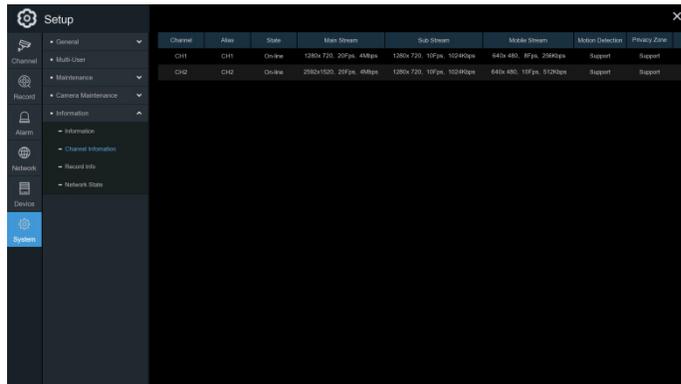
### 5.6.6.1 Information

View system information such as device model name, IP address, MAC address, firmware version and more.



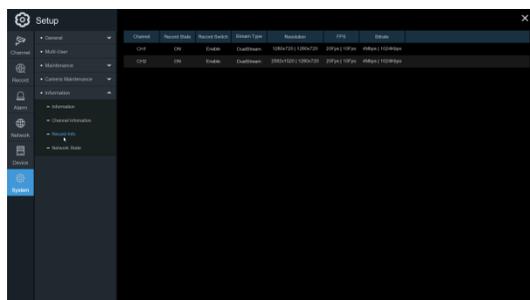
Scan the QR code on this page with the Speco Gray mobile app to remotely view the NVR.

### 5.6.6.2 Channel Information



View channel information for each connected camera such as the nickname, main stream and sub stream recording specifications, motion detection status, and privacy mask.

### 5.6.6.3 Record Information



View recording information for each connected camera such as bit rate, stream type, recording resolution and frame rate (FPS).

### 5.6.6.4 Network State



View network information.

**Total Bandwidth:** Shows the NVR's total available bandwidth that can be used by IP cameras.

**Used Bandwidth:** Shows the used bandwidth of IP cameras.

# Chapter 6 Search, Playback & Backup

The Search function provides the ability to search for and play previously recorded videos as well as snapshots that are stored on the NVR's hard drive. There is a choice of playing video that matches the recording schedule, manual recordings or motion events only. The Backup function provides the ability to save important events (both video and snapshots) to a USB flash drive.

## 6.1 Using Search Function

Click  **Search** in the Start Menu to enter search section.



1. **Search Options:** the system provides various search & playback methods: General, Events, Sub-periods, and Pictures.
2. **Search Date:** search by a date.
3. **Search Type:** the system provides different search types to narrow the search.
4. **Channel Selection:** choose the channels to search & play.

5. **Video Playback Controls:** to control the video playback.



 Enlarge the video playback to full screen

 Rewind, x2, x4, x8 and x16

 Slow Play, 1/2, 1/4 and 1/8, 1/16 speed

 Play

 Pause

 Play frame by frame. Click once to play a frame of the video

 Stop

 Fast Forward, x2, x4, x8 and x16

 Digital Zoom: Click and then click-and-drag on the image during playback to zoom in on the selected area. Right-click to return to regular playback.

 Video Clip. Quickly save a section of video to a USB flash drive. View more on [6.1.1.1 Video Clip Backup](#)

 Save Video Clip.

 Volume Control: scroll the slider bar to increase or decrease volume.

 Snapshots: to capture a snapshot image to a USB flash drive. If the video playback is in split-screen view, select the channel to capture, and then click the  icon to save the snapshot.

**6. Timeline:** Recordings are shown with colored bars to represent different types of recording (legend shown in the bottom-right corner of the display). Use the time frame options

() to view a smaller or larger time period.

**Different types of recording shown in different colors:**

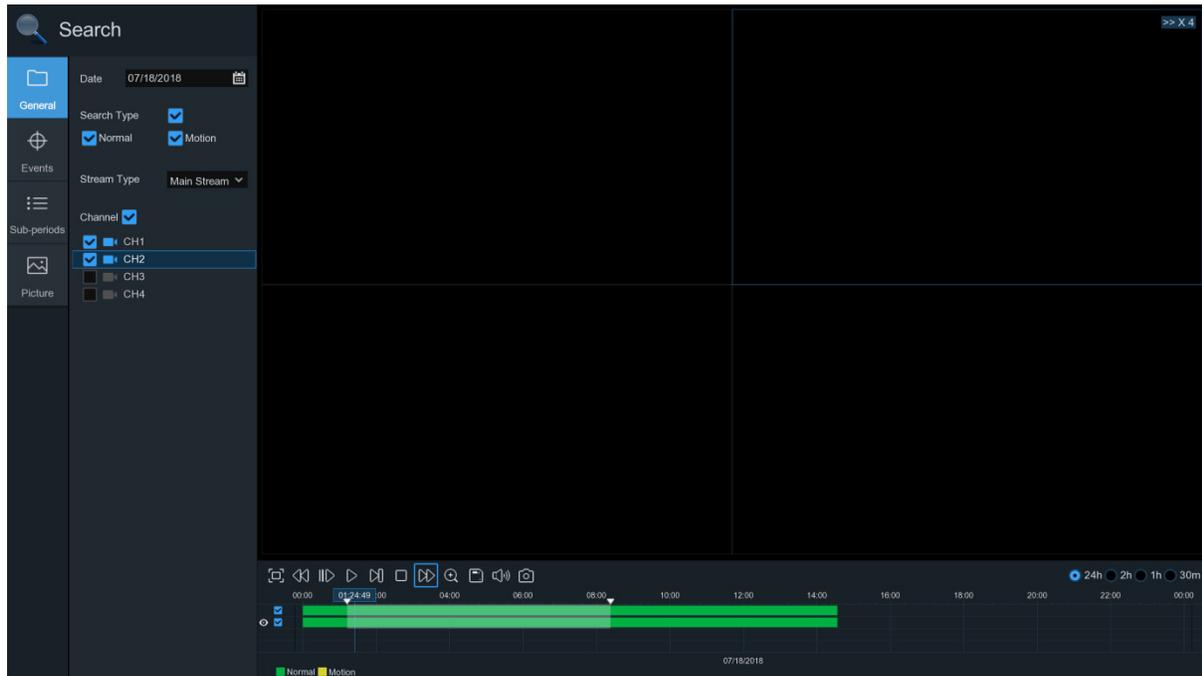
Continuous Recording in **Green** color;

Motion Recording in **Yellow** color;

**7. Playback Status:** displays the video playback status.

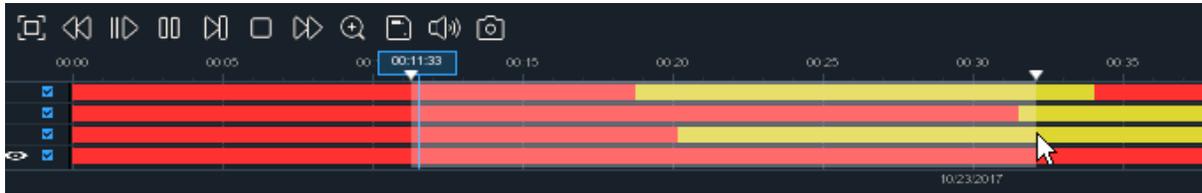
## 6.1.1 Search & Play Video in General

This menu gives an option to search & play recording for a selected date.

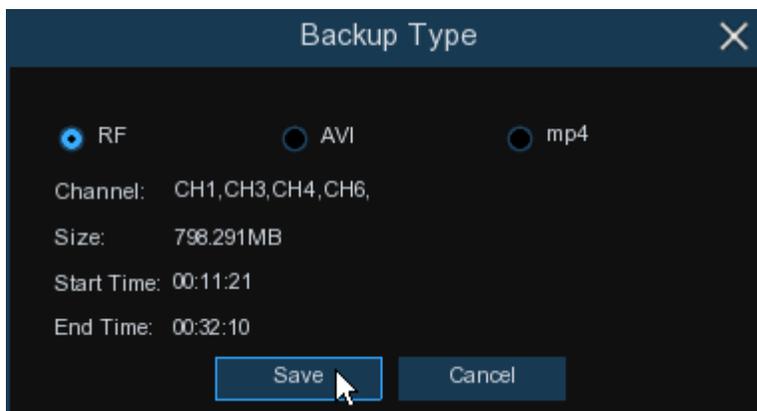


1. Select a date to search for video recording from the calendar. Dates with recordings will be underlined.
2. Choose a search type.
3. Check channels to search, or check **Channel** to search all connected channels.
4. The search result will display on the timeline from 00:00 to 24:00.
5. Click  button to start playback.
6. Control the playback with buttons on **Video Playback Controls**.
7. Use the time frame options ( 24h  2h  1h ) to view a smaller or larger time period.
8. To quickly save a section of the video during playback to a USB flash drive, use the  **Video Clip** backup function.

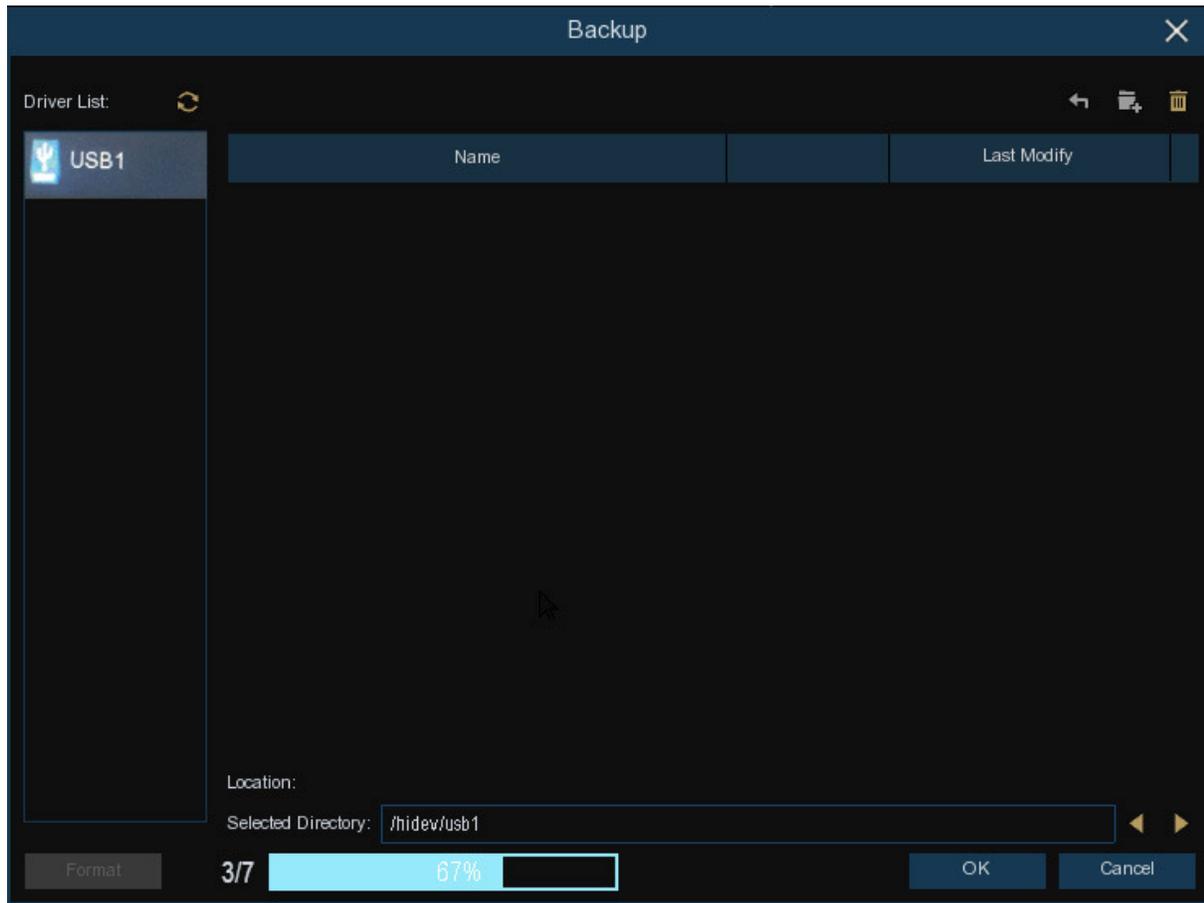
### 6.1.1.1 Video Clip Backup



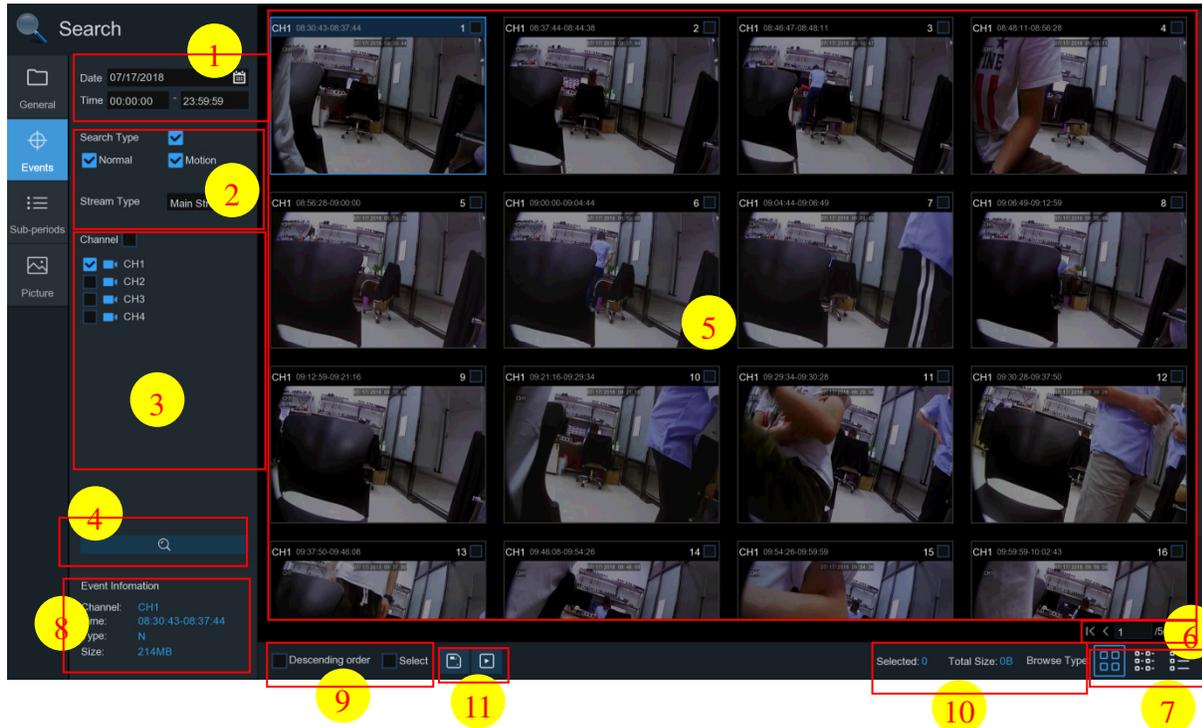
1. Insert the USB flash drive to the NVR.
2. Start a playback.
3. Click the  icon.
4. Check the desired channel(s).
5. Move the mouse cursor to the time where the clip should start.
6. Click and drag the cursor to the time where the clip should end.
7. Click  to save the video clip.
8. Select a file type for the backup files and then click the **Save** button to save the video clips. Make sure the USB drive has enough space to save the video clips.



9. Navigate to the folder where the backup files will be saved.
10. Click **OK** to begin. The progress bar at the bottom of the window will show the progress of the backup.



## 6.1.2 Event Search, Playback & Backup



### To search, play & back up for events:

1. Choose the date & time to search.
2. Check the recording types to search for, or check **Search Type** to choose all.
3. Choose the channels to search, or check **Channel** to choose all channels.
4. Click the  icon to start search.
5. Events fitting the search criteria will be displayed. Double click the left button of the mouse on one of the events to play the video immediately.
6. Click  icons in the bottom-right corner of the menu to browse between pages of events, or enter the specific page to browse.
7. The search results can be displayed in multiple formats. Choose between 3 formats:

 **Thumbnails view.** View the snapshots of the events.

 **Detailed view.** Details of the events will be listed.

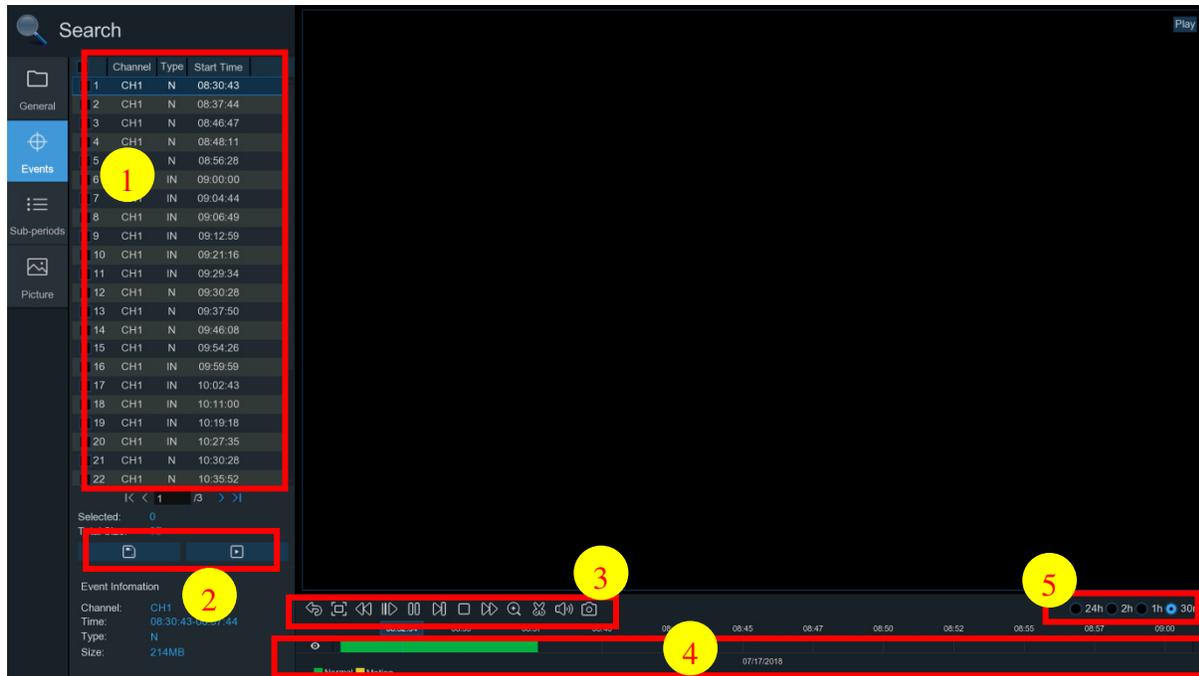
	Channel	Type	Date	Start Time	End Time	Size	Playback	Lock
<input type="checkbox"/> 1	CH1	MINS	10/23/2017	00:00:00	00:00:45	6MB		
<input type="checkbox"/> 2	CH1	MINS	10/23/2017	00:00:45	00:18:30	150MB		
<input type="checkbox"/> 3	CH1	MINS	10/23/2017	00:18:30	00:44:03	217MB		
<input type="checkbox"/> 4	CH1	MINS	10/23/2017	00:44:03	01:10:48	227MB		
<input type="checkbox"/> 5	CH1	MINS	10/23/2017	01:10:48	01:19:22	72MB		
<input type="checkbox"/> 6	CH1	MINS	10/23/2017	01:19:22	01:35:37	138MB		
<input type="checkbox"/> 7	CH1	MINS	10/23/2017	01:35:37	01:43:32	67MB		
<input type="checkbox"/> 8	CH1	MINS	10/23/2017	01:43:32	02:01:12	150MB		
<input type="checkbox"/> 9	CH1	MINS	10/23/2017	02:01:12	02:25:38	207MB		
<input type="checkbox"/> 10	CH1	MINS	10/23/2017	02:25:38	02:43:17	150MB		
<input type="checkbox"/> 11	CH1	MINS	10/23/2017	02:43:17	03:02:08	160MB		
<input type="checkbox"/> 12	CH1	MINS	10/23/2017	03:02:08	03:08:37	55MB		

 **List view.** Displays the list of the events.

<input type="checkbox"/> 1 CH1 00:00:00	<input type="checkbox"/> 2 CH1 00:00:45	<input type="checkbox"/> 3 CH1 00:18:30	<input type="checkbox"/> 4 CH1 00:44:03	<input type="checkbox"/> 5 CH1 01:10:48	<input type="checkbox"/> 6 CH1 01:19:22	<input type="checkbox"/> 7 CH1 01:35:37	<input type="checkbox"/> 8 CH1 01:43:32
<input type="checkbox"/> 9 CH1 02:01:12	<input type="checkbox"/> 10 CH1 02:25:38	<input type="checkbox"/> 11 CH1 02:43:17	<input type="checkbox"/> 12 CH1 03:02:08	<input type="checkbox"/> 13 CH1 03:08:37	<input type="checkbox"/> 14 CH1 03:10:01	<input type="checkbox"/> 15 CH1 03:14:54	<input type="checkbox"/> 16 CH1 03:42:12
<input type="checkbox"/> 17 CH1 04:07:23	<input type="checkbox"/> 18 CH1 04:19:35	<input type="checkbox"/> 19 CH1 04:36:40	<input type="checkbox"/> 20 CH1 05:00:20	<input type="checkbox"/> 21 CH1 05:24:12	<input type="checkbox"/> 22 CH1 05:45:55	<input type="checkbox"/> 23 CH1 06:04:07	<input type="checkbox"/> 24 CH1 06:14:27
<input type="checkbox"/> 25 CH1 06:41:12	<input type="checkbox"/> 26 CH1 06:44:25	<input type="checkbox"/> 27 CH1 07:01:42	<input type="checkbox"/> 28 CH1 07:20:43	<input type="checkbox"/> 29 CH1 07:31:23	<input type="checkbox"/> 30 CH1 07:48:04	<input type="checkbox"/> 31 CH1 08:17:33	<input type="checkbox"/> 32 CH1 08:40:16
<input type="checkbox"/> 33 CH1 08:50:34	<input type="checkbox"/> 34 CH1 09:07:05	<input type="checkbox"/> 35 CH1 09:25:12	<input type="checkbox"/> 36 CH1 09:44:07	<input type="checkbox"/> 37 CH1 09:46:08	<input type="checkbox"/> 38 CH1 10:00:52	<input type="checkbox"/> 39 CH1 10:14:18	<input type="checkbox"/> 40 CH1 10:34:42
<input type="checkbox"/> 41 CH1 10:45:57	<input type="checkbox"/> 42 CH1 11:12:48	<input type="checkbox"/> 43 CH1 11:20:27	<input type="checkbox"/> 44 CH1 11:48:18	<input type="checkbox"/> 45 CH1 12:07:25	<input type="checkbox"/> 46 CH1 12:30:12	<input type="checkbox"/> 47 CH1 12:44:43	<input type="checkbox"/> 48 CH1 12:55:49
<input type="checkbox"/> 49 CH1 13:06:48	<input type="checkbox"/> 50 CH1 13:30:46	<input type="checkbox"/> 51 CH1 13:37:51	<input type="checkbox"/> 52 CH1 13:57:01	<input type="checkbox"/> 53 CH1 14:10:24	<input type="checkbox"/> 54 CH1 14:11:16	<input type="checkbox"/> 55 CH1 14:18:12	<input type="checkbox"/> 56 CH1 14:35:26
<input type="checkbox"/> 57 CH1 14:40:31	<input type="checkbox"/> 58 CH1 14:44:42	<input type="checkbox"/> 59 CH1 14:48:36	<input type="checkbox"/> 60 CH1 15:15:44	<input type="checkbox"/> 61 CH1 15:39:06	<input type="checkbox"/> 62 CH1 16:01:07	<input type="checkbox"/> 63 CH1 16:16:00	<input type="checkbox"/> 64 CH1 16:24:41
<input type="checkbox"/> 65 CH1 16:27:29	<input type="checkbox"/> 66 CH1 16:43:47	<input type="checkbox"/> 67 CH1 16:45:43	<input type="checkbox"/> 68 CH1 17:01:14	<input type="checkbox"/> 69 CH1 17:05:03	<input type="checkbox"/> 70 CH1 17:28:30	<input type="checkbox"/> 71 CH1 17:54:23	<input type="checkbox"/> 72 CH1 18:08:49
<input type="checkbox"/> 73 CH1 18:36:07	<input type="checkbox"/> 74 CH1 18:44:14	<input type="checkbox"/> 75 CH1 18:57:14	<input type="checkbox"/> 76 CH1 19:07:37	<input type="checkbox"/> 77 CH1 19:12:12	<input type="checkbox"/> 78 CH1 19:35:50	<input type="checkbox"/> 79 CH1 19:50:34	<input type="checkbox"/> 80 CH1 20:01:42
<input type="checkbox"/> 81 CH1 20:25:40	<input type="checkbox"/> 82 CH1 20:34:32	<input type="checkbox"/> 83 CH1 20:49:48	<input type="checkbox"/> 84 CH1 21:04:51	<input type="checkbox"/> 85 CH1 21:21:09	<input type="checkbox"/> 86 CH1 21:42:12	<input type="checkbox"/> 87 CH1 21:47:36	<input type="checkbox"/> 88 CH1 22:02:49
<input type="checkbox"/> 89 CH1 22:29:59	<input type="checkbox"/> 90 CH1 22:39:14	<input type="checkbox"/> 91 CH1 22:54:42	<input type="checkbox"/> 92 CH1 22:57:45	<input type="checkbox"/> 93 CH1 23:08:03	<input type="checkbox"/> 94 CH1 23:22:59	<input type="checkbox"/> 95 CH1 23:35:50	

- When an event is selected, the event information will be shown on the bottom left corner of the screen.
- Check the box next to each event to select files, or check the box next to **Select** to select all events on the page.
- The number of selected files and the total size information will be displayed at the right bottom of the screen.
- After selecting file(s), click the  icon to save the video to a USB flash drive. Or click the  icon to play the video.

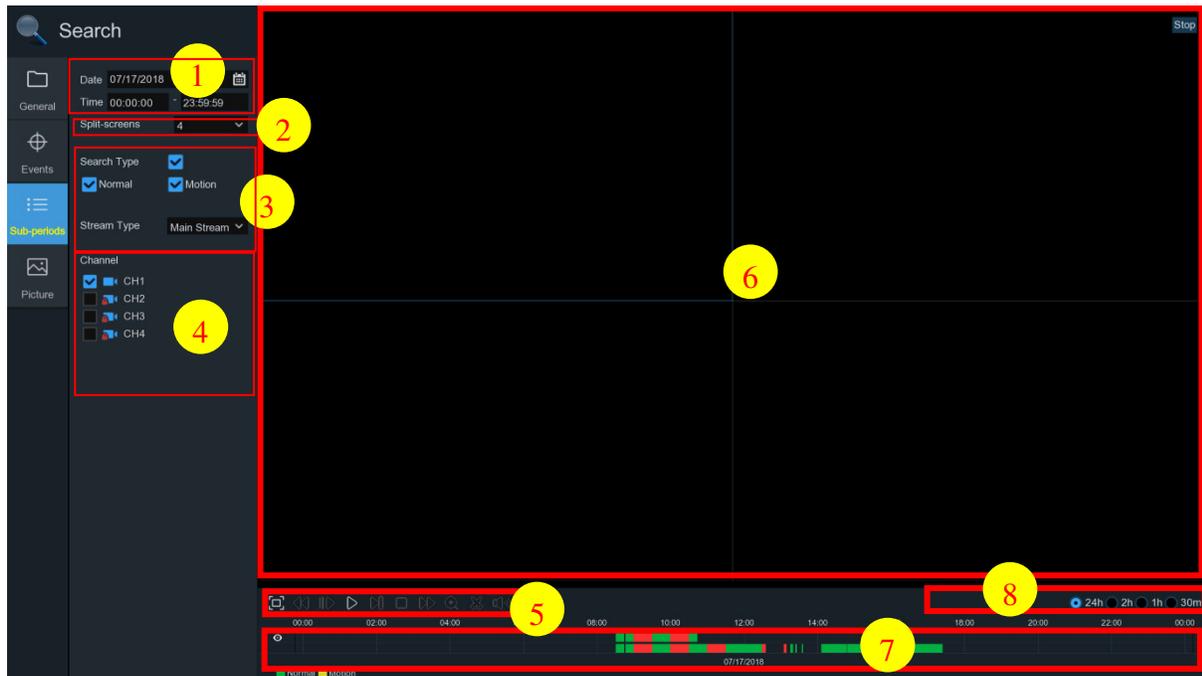
### 6.1.2.1 Event Playback Control



1. Event List. Select events from here.
2. Click to save selected event clips to a USB flash drive. Click to play the video.
3. Control the playback with buttons on **Video Playback Controls**. Click or right-click on the mouse to exit playback and return to the event search window.
4. The event that's currently playing will be displayed on the timeline.
5. Use the time frame options ( 24h  2h  1h  30m) to view a smaller or larger time period.

### 6.1.3 Sub-periods Playback

Sub-periods playback allows for playing back multiple continuous recordings and motion events simultaneously from a single channel. With continuous and motion recordings, the video is divided evenly depending on the split-screen mode that has been selected. For example, if the video is an hour long and you have selected Split-screens x 4, each split-screen will play for 15 minutes.



**To search & play video in sub-periods:**

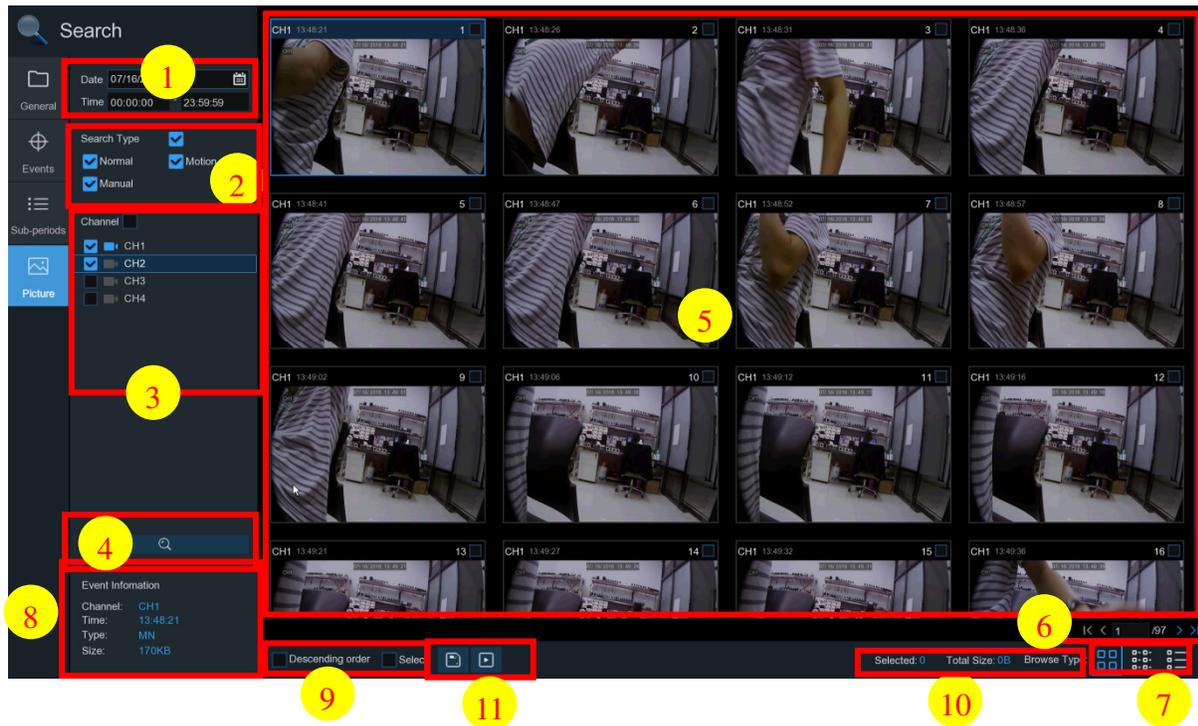
1. Choose the date & time.
2. Choose the number of split-screens to play the videos in.
3. Check the recording types to search for, or check **Search Type** to choose all.
4. Choose the channels to search. Please note that this function only supports to search & play one channel at a time.
5. Click the play button  to start playing. Control the playback with buttons on **Video Playback Controls**.
6. Videos from the channel in different timelines will play in the split screen view.
7. Select a view to display the time of the video playing on that view. The color bar on the top of the timeline indicates the time span of the view that was selected. The color bar on the bottom of the timeline indicates the time span for the entire timeline.



8. Use the time frame options (  24h  2h  1h  30m ) to view a smaller or larger time period.

## 6.1.4 Picture Search & View

Search and view snapshots.



### To search, play & back up pictures:

1. Choose the date & time.
2. Select the types to search for, or check **Search Type** to choose all.
3. Choose the channels to search, or check **Channel** to choose all channels.
4. Click  to start search.
5. Images that fit the search criteria will be displayed. Double click one of the pictures to get a larger view.

6. Click  icons in the bottom-right corner of the menu to browse between pages of pictures, or enter the specific page.

7. Switch between different views by clicking on the icons at the right bottom corner of the screen:

 Thumbnails view. Displays the thumbnails of the events.

 List view. The events will be displayed in list.



 Detailed view. Displays the details of the files.

	Channel	Type	Date	Time	Size	Playback
<input type="checkbox"/> 1	CH1	MIN	10/24/2017	00:00:00	160KB	
<input type="checkbox"/> 2	CH1	MIN	10/24/2017	00:12:01	201KB	
<input type="checkbox"/> 3	CH1	MIN	10/24/2017	00:21:20	401KB	
<input type="checkbox"/> 4	CH1	MIN	10/24/2017	00:24:38	111KB	
<input type="checkbox"/> 5	CH1	MIN	10/24/2017	00:37:25	167KB	
<input type="checkbox"/> 6	CH1	MIN	10/24/2017	00:55:58	210KB	

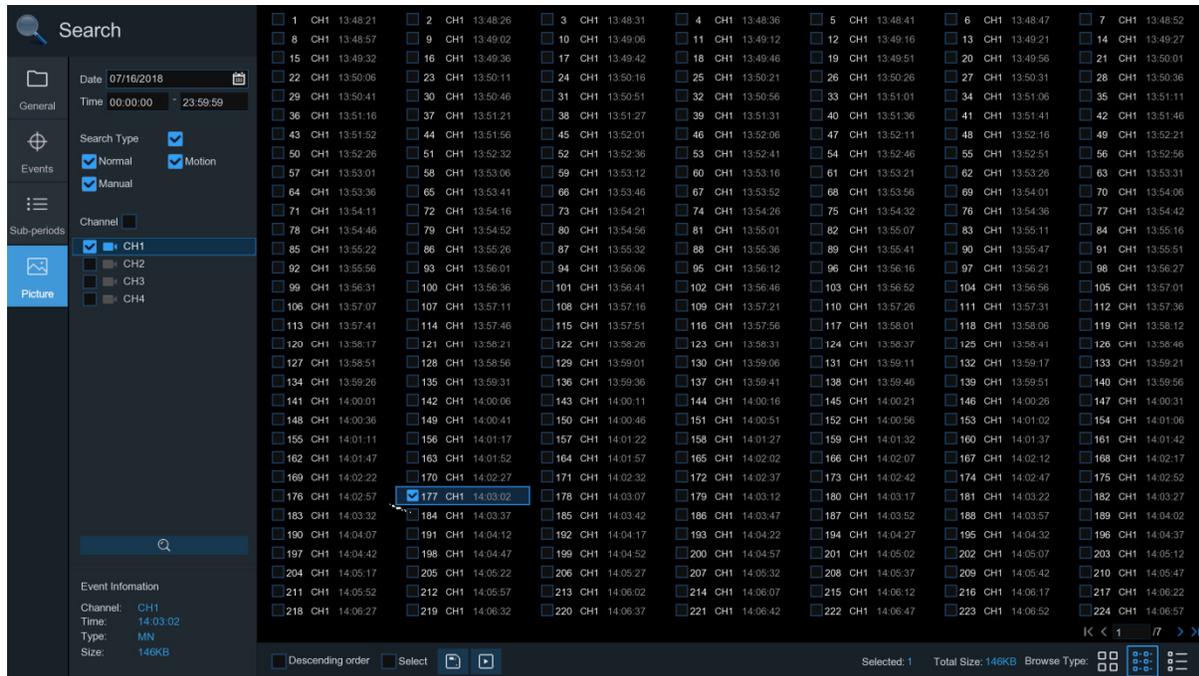
8. Select a file to display the picture information on the bottom left corner of the screen.

9. Check the box next to the events to select files, or check the box next to **Select** to select all pictures on the page.

10. The number of selected files and total size information will be displayed at the bottom right of the screen.

11. After selecting files, click the  button to save the pictures to a USB flash drive. Or click  to go into the picture preview control window.

### 6.1.4.1 Picture Preview Control



1. Picture List - select the pictures here.
2. Click to save selected pictures to a USB flash drive. Click to view the pictures in a slide show.
3. Press button to exit the preview control window and go back to the picture search window.

Press button to pause, press to resume slide show.

Press button to display previous snapshot or group of snapshots, press to display the next snapshot or group of snapshots.

Click to view a single snapshot at a time, click to view four snapshots at a time, and click to view nine snapshots at a time.

## Chapter 7 Remote Access via Web Client

The NVR can be remotely accessed in various ways on a Windows PC or a Mac. The methods are as follows:

- Internal local network
  - Internet Explorer using local IP address of NVR
  - Speco Gray Viewer (included on CD or download) application using local IP address of NVR or P2P ID of NVR
  - Speco Gray Viewer plug-in for Safari on Mac using local IP address or P2P ID
- External
  - Internet Explorer: go to <http://gray.specotech.com> and enter P2P ID (note that with this method, system setup options will not be available)
  - Internet Explorer using DDNS
  - Speco Gray Viewer using P2P ID
  - Speco Gray Viewer plug-in for Safari on Mac using P2P ID or DDNS

### 7.1 Basic System Environment Requirements

The minimum requirements for hardware and OS required to run the Web Client are below.

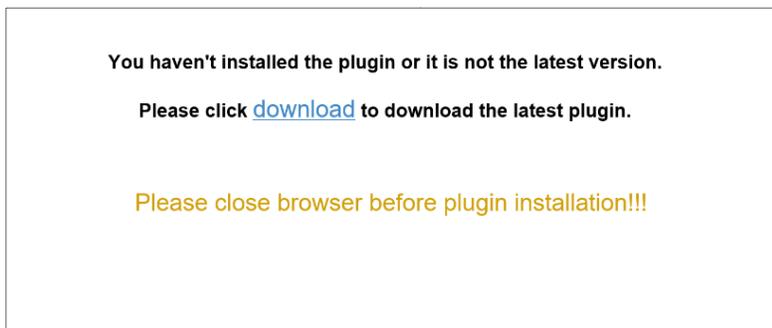
Item	Minimum	Recommended
CPU	Intel® Core™ i5 CPU	Intel® Core™ i5 CPU or higher
RAM	4G or more	8G or more
Hard Drive	500G or more	1000G or more
Display RAM	2G or more	4G or more

Display Resolution	1280*1024	1920*1080
OS	Windows 7 or above Mac OS X® 10.9 or above	
DirectX	DirectX 11	
Direct3D	Acceleration Function	
Ethernet Adapter	10/100/1000M Ethernet Adapter	
IE	Microsoft Internet Explorer (Ver. 11,10,9,8).	
Mac Safari	5.1 or above	

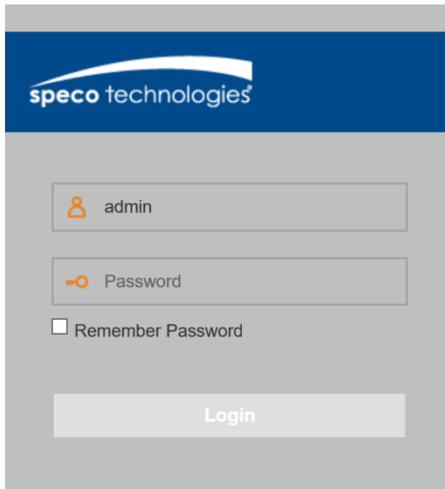
## 7.2 Web Plug-in Download and Installation

### For IE:

1. Launch IE on the PC and enter the NVR IP address or DDNS domain name (Host Name) in the address field.
2. When the client is run for the first time, the Active-X plug-in will need to be installed. Click [download](#) to download the plug-in and install to the PC.

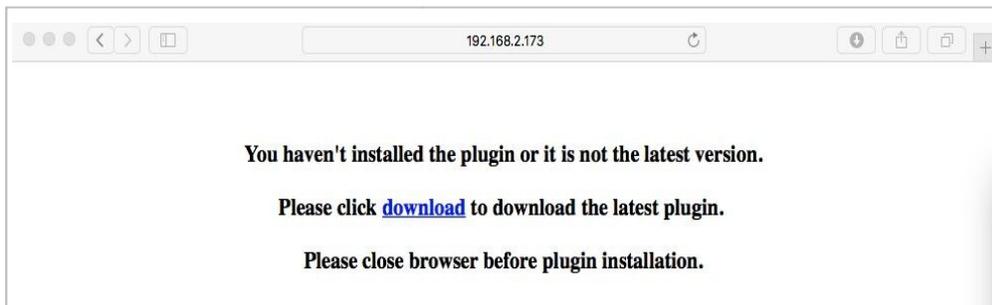


3. After installing the plug-in, close and launch the browser again, and repeat step 1 to open the login page. Enter the user name and password to log in.



## For Mac Safari:

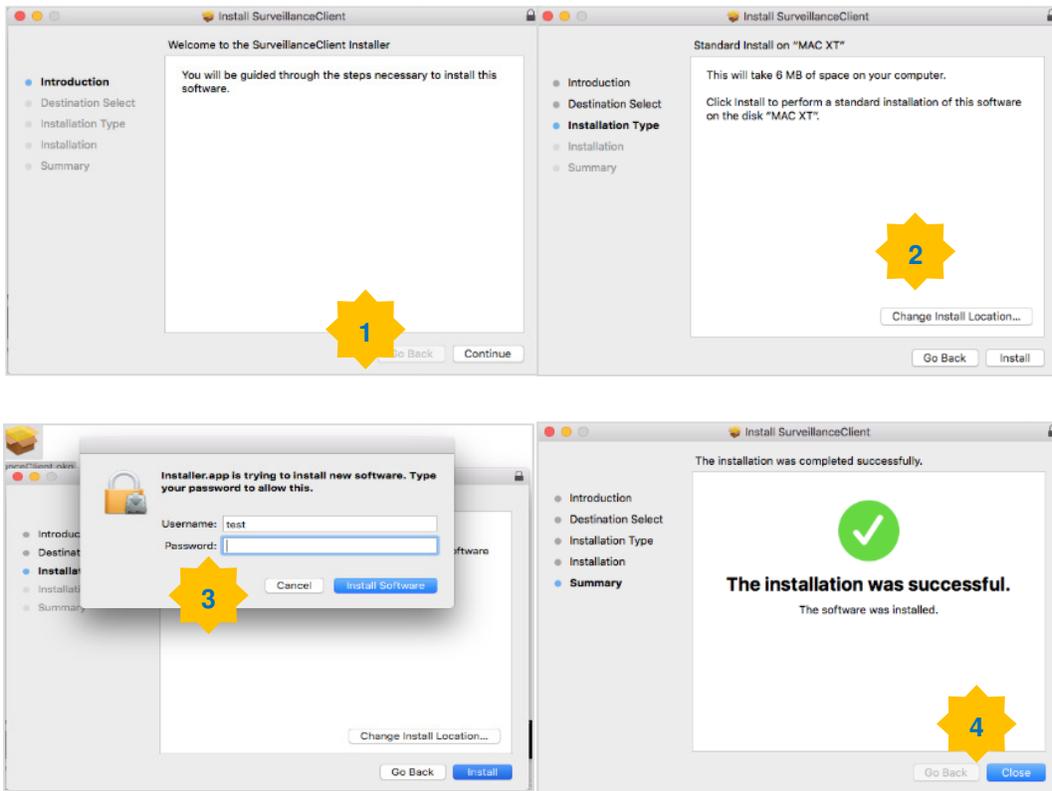
1. Launch Safari and enter the NVR IP address or DDNS domain name (Host Name) in the address field.



2. Download the plug-in (a .dmg file). Navigate to the downloaded file and double click on it.

3. Click on "Continue" --> "Install". Enter user name and password for the Mac, and

Click on "Install Software" --> "Close" to finish installation.



4. Close Safari and open it again to repeat step 1 to open the Web Client login page.

## 7.3 Web Client Manager

The system can be fully controlled through the web client interface.

### 7.3.1 Live Interface



#### 1- Channel List: Open the channel list for quick camera function

Click  to display the Channel List.

Click  to hide the Channel List.

  Turn the Live video stream on/off. The button is in blue color if the live video stream is on.

  Manual Recording buttons. Click to start manually recording live stream video. Click again to stop recording. Manual recordings are saved to the computer. While recording, the button is in blue color.

 Manual snapshot button. Click to save a snapshot of the current live display to the computer.

 Bitrate button. Set camera to use the main stream, sub stream or mobile stream..

## 2- Live Video Stream Options:

**Main stream:** View all live videos using high-quality main stream video settings.

**Sub stream:** View all live videos using middle-quality sub stream video settings.

**Mobile Stream:** View all live video using lower-quality mobile stream video settings to conserve bandwidth.

## 3- Main Menus:

**Live:** View live video from cameras.

**Playback:** View recorded video which is saved on the NVR's HDD.

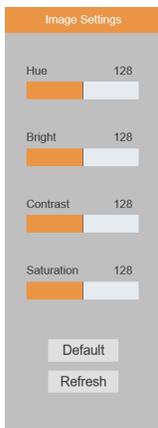
**Remote Setting:** Access the NVR system settings.

**Local Settings:** Set download locations for recordings and snapshots taken using the Web Client, and choose the file type for video files.

4- **Information:** Hover over to see system details.

5- **Exit.**

6- **Color Controls.** Click to display or hide the color controls.



7- Live View Control Buttons:



 Open the images on Live window.

 Close all Live channels

 Original Proportions: Shows live video at the original proportions

 Stretch: Stretch live video to fit the full area for each channel on screen.

 To enlarge the web client to full screen.

 Manual Recording: Click to start manually recording for all displayed channels. Click again to stop recording. Manual recordings are saved to the computer.

 Snapshot: Click to save snapshots of all current displayed channels to the computer.

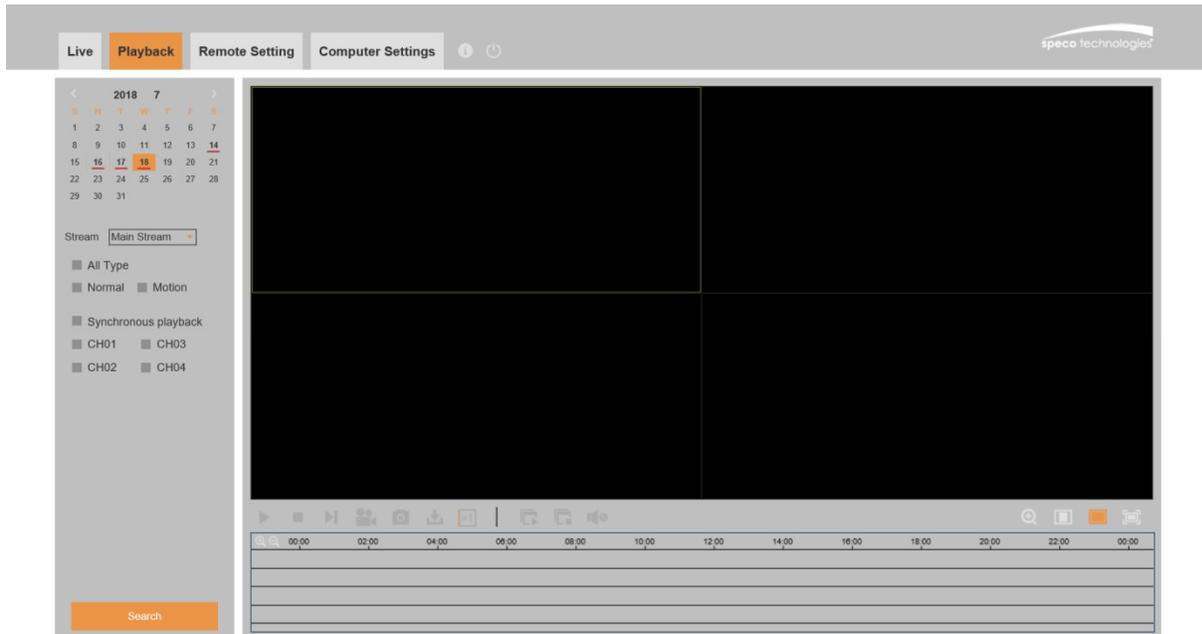
 Digital Zoom: Click on a live image, then click-and-drag over an area of the live image to enlarge. Right-click to return to the normal display.

 Volume Control.  Volume mute.

**8- Page View:** Click to select how many channels appear on the screen at a time.

### 7.3.2 Playback

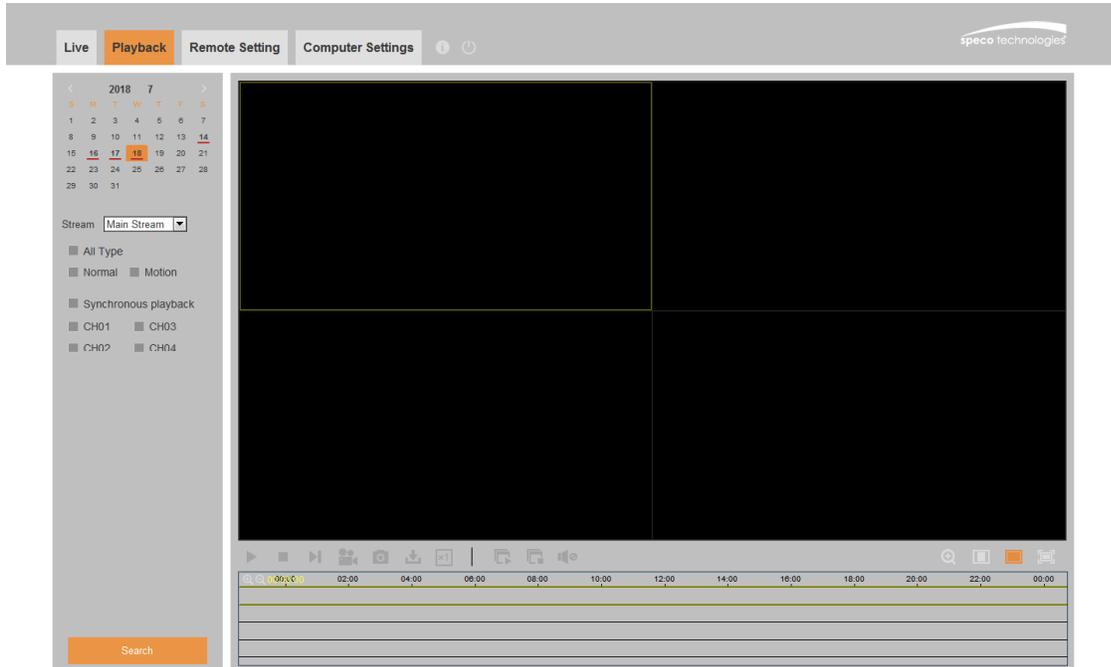
Search & play recording videos stored on the HDD of the NVR, and download the videos to the computer.



#### To search recordings:

1. Click **Playback** in the top-right corner of the window.
2. Select a day on the calendar to search for recordings from. Days with recordings appear with a red underline.
3. Select the recording type to search for from the drop down next to **Type**, or select **All** to search for all recordings.
4. Choose the video stream type to search & play. To play Sub stream recordings, make sure the NVR was set to record with Dual stream in section [5.2.2.1 Record](#).
5. Check the channels search for recordings. Check **Synchronous playback** to play all channels at the same time.
6. Click **Search**.
7. Recordings that fit the search criteria will be displayed in the timeline. Click a section of video to begin playback and click the ► play button.

### 7.3.2.1 Playback Control Buttons



 **Play the recordings**

 **Pause**

 **Stop**

 **Go Forward One Frame:** Move frame-by-frame through playback. Only available if the **Synchronous playback** option is not checked.

 Click on one of the channels which is being played and then click record to record the current video to the computer. Click again to stop recording.

 Click on one of the channels which is being played and then click button to take a snapshot and save to the computer.

 Opens the Download menu, which allows for downloading several video recordings at once.

	<input type="checkbox"/>	Start Time	End Time	Status	File Size
1	<input checked="" type="checkbox"/>	2017-10-25 00:00:00	2017-10-25 00:01:04	Completed	47.00M
2	<input checked="" type="checkbox"/>	2017-10-25 00:01:04	2017-10-25 00:06:56	2%	253.76M
3	<input type="checkbox"/>	2017-10-25 00:06:56	2017-10-25 00:12:48	Not Downloaded	253.71M
4	<input type="checkbox"/>	2017-10-25 00:12:48	2017-10-25 00:18:41	Not Downloaded	253.91M
5	<input type="checkbox"/>	2017-10-25 00:18:41	2017-10-25 00:24:34	Not Downloaded	253.64M
6	<input type="checkbox"/>	2017-10-25 00:24:34	2017-10-25 00:30:27	Not Downloaded	253.68M
7	<input type="checkbox"/>	2017-10-25 00:30:27	2017-10-25 00:36:18	Not Downloaded	253.75M
8	<input type="checkbox"/>	2017-10-25 00:36:18	2017-10-25 00:42:10	Not Downloaded	253.90M
9	<input type="checkbox"/>	2017-10-25 00:42:10	2017-10-25 00:48:03	Not Downloaded	253.74M
10	<input type="checkbox"/>	2017-10-25 00:48:03	2017-10-25 00:53:56	Not Downloaded	253.63M

10 1 / 10 Show from 1 to 10, total 95. Per page : 10

Start Download Stop Download

Choose the files to download and press **Start Download** button to begin. The download status will show. Press **Stop Download** to stop.

 **Playback Speed.** Click to choose the playback speed.

 **Play All Channels:** Click to play all channels that were chosen. Only available when the **Synchronous playback** option is not checked.

 **Stop All Channels:** Click to stop playing all channels. Only available when the **Synchronous playback** option is not checked.

 **Digital Zoom:** Click on a playing video, and then click-and-drag over an area of the video to enlarge. Right-click to return to the normal display.

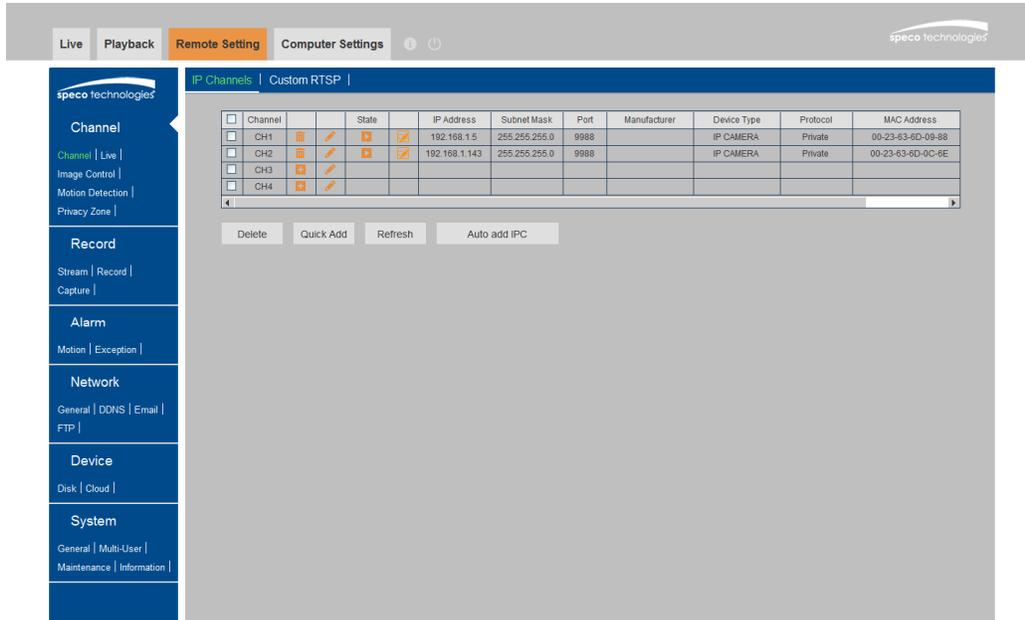
 **Original Proportions:** Shows the playing video at the original proportions

 **Stretch:** Stretch the playing video to fit the full area for each channel on screen.

 **To enlarge the web client to full screen.**

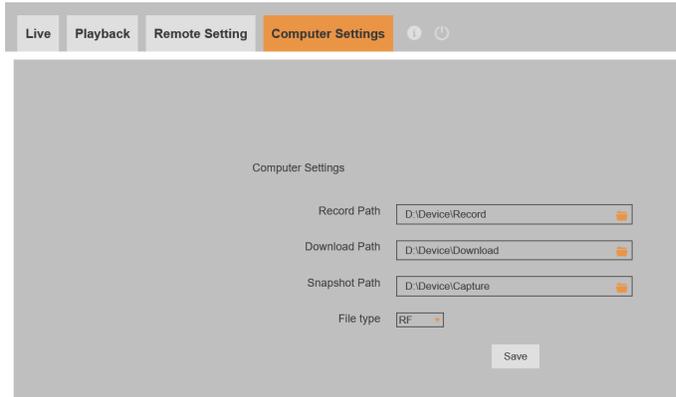
### 7.3.3 Remote Setting

Remotely configure the settings of the NVR. See “[Chapter 5 NVR System Setup](#)” for more details on the NVR settings..



## 7.3.4 Local Setting

Set download locations for recordings and snapshots taken using Web Client, and choose the file type for video files.



**Record Path:** Click  to browse for and select the folder for the manual video recordings to be saved on the computer.

**Download Path:** Click  to browse for and select the folder for the downloaded files to be saved on the computer.

**Snapshot Path:** Click  to browse for and select the folder for the snapshots to be saved on the computer.

**File Type:** Choose the preferred file type for manual recordings.

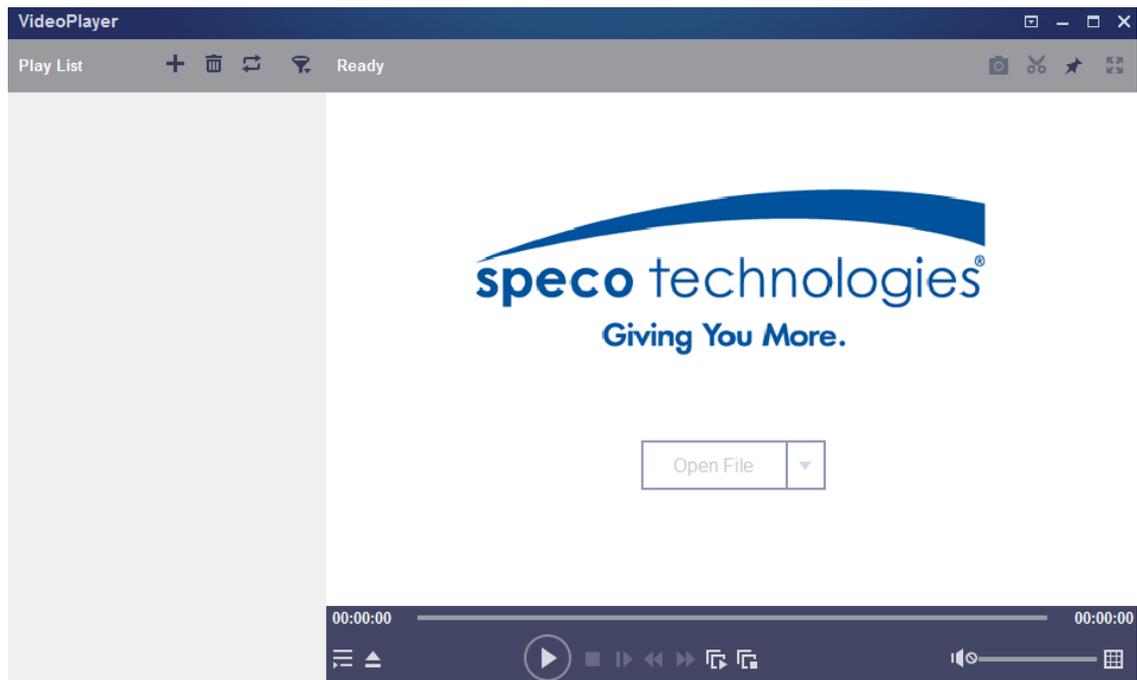
**Save:** Click to save the modifications.

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## Chapter 8 Viewing Exported Video on PC/Mac

Playing exported video files can be accomplished with the included video player. Install the video player that's on the CD. For Windows, choose the .exe file. For Mac, choose the .dmg file. After installation, follow the instructions below.

1. Run the Video Player.



2. Copy the backup files to the computer if desired or leave them on the flash drive.
3. Click **Open File** button or click **+** button on the Play List to load single or multiple video files. Supported file types are “.rf”, “.avi”, “.mp4”, “.264” and “.265” files. Click  to load a folder with backed-up videos.

## Video Player Control



### 1. Play List

 Add files

 Remove files

 To choose play mode: play a single file and stop; play all listed files by sequence; repeat one file; repeat all files.

 Filter by file name

### 2. Hide/Show Playlist

 Click to open files or load a folder.

## 3. Play Controls

 Play

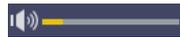
 Pause

 Stop

 Play frame by frame. Click once to play a frame of the video

 Slow Play, 1/2, 1/4 and 1/8, 1/16 speed

 Fast Forward, x2, x4, x8 and x16

4.  Volume control

 Multi-screen play. It allows for playing multiple videos simultaneously.

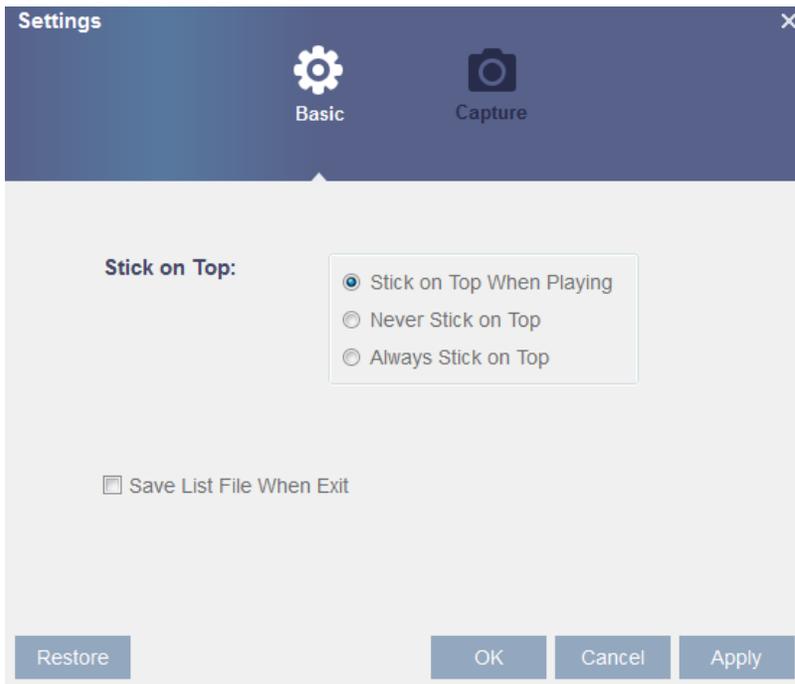
5.  Take snapshot

 Save a video clip to your computer. Press once to start, press again to end the video clip.

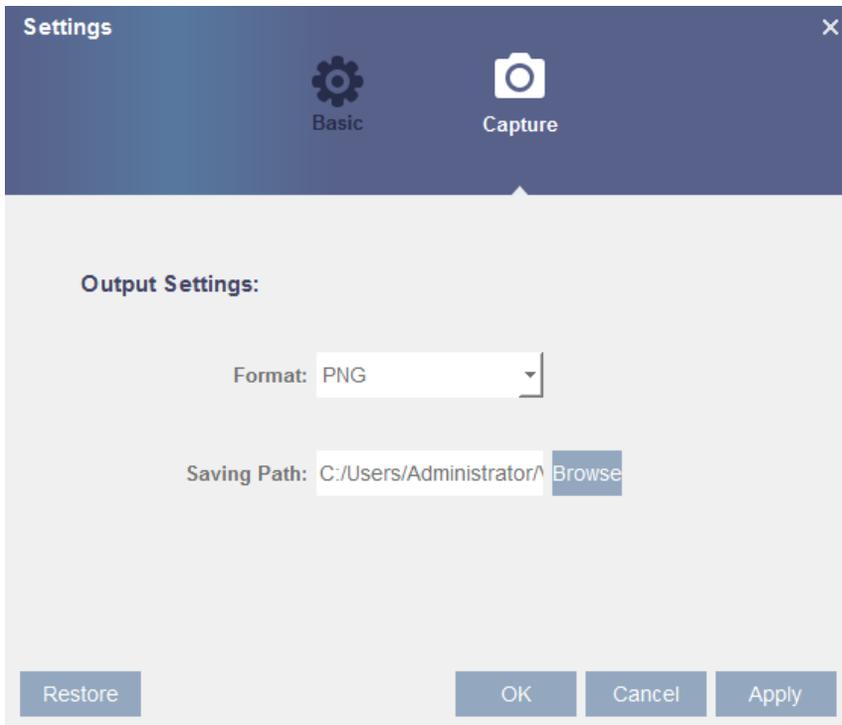
 Keep the video player on top

 Enlarge the video play screen to full screen

6.  **Advanced Setup Menu** allows configuration of settings.



**Basic Settings:** Set on-top mode



**Capture Settings:** Set the format and the path to save snapshots.

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# Chapter 9 Appendix

## 9.1 Troubleshooting

1. Q: What can I do if the system does not detect the HDD?

A: Check if the power supply system is properly connected and data cord and power cable are securely connected, and if something is wrong with the HDD interface.

2. Q: I have changed the password but forgot the new password, how can I access the system?

A: Contact support for a password reset.

3. Q: I see abnormal video signal or no video signal

A: Check the network cable connection at both the NVR side and the camera side to see if the cable is firmly connected to the port. Try a different cable and/or different PoE port if the problem persists.

4. Q: How to prevent NVR from overheating?

A: The NVR needs to dissipate heat while it is running. Please place the NVR in a place with good air circulation and away from heat sources.

5. Q: The remote control doesn't work.

A: Try aiming the remote control at the IR receiver on front panel. If it still doesn't work, please check if the batteries in the remote control are dying.

7. Q: Can I playback while recording?

A: Yes. The system supports the playback while recording.

8. Q: Can I clear some recorded data on the HDD?

A: In consideration of the file security, clearing random data is not allowed. If you want to remove all the records, you can format the HDD.

9. Q: Why can't I log into the NVR client?

A: Please check if the network connection settings are correct and RJ-45 port is with good contact. Check if the user credentials are correct.

10. Q: Why can't I stop recording by pressing the "STOP" button or click "Stop Recording"?

A: Pressing Stop or Stop Recording can only stop manual record. If you want to stop Scheduled recording for specific time period, please change the schedule setting.