

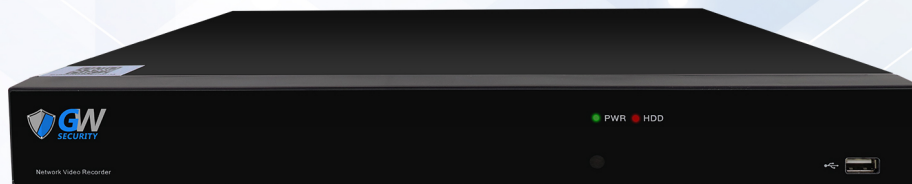
June 2023



# Quick Guide

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## GW55 Series NVR



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# SAFETY INSTRUCTIONS

Please read the following safety instructions carefully to avoid personal injuries and prevent damage to the equipment and other connected devices.

- The device should be used in compliance with local laws, electrical safety regulations, and fire prevention regulations.
- Use the power supply attached or specified by the manufacturer only. Never run the equipment with an unspecified power supply.
- Firmly connect the plug to the power socket. Do not connect several devices to one power adapter.
- Power off the device before connecting and disconnecting accessories and peripherals.
- The NVR should not be placed in a dusty environment.
- The NVR should be placed in an area with adequate ventilation, avoiding harsh sunlight. Do not expose the NVR to moisture or liquids. If the device gets wet, unplug the power supply, and contact your local dealer.
- The NVR has one or more HDD's which produce large amounts of heat during operation. Do not block the vents (on the top, bottom and both sides) for cooling the system during operation.
- Never place the NVR in an unstable location. The NVR may fall and cause serious personal injury or death.
- Keep the surface of the NVR clean and dry. Use a soft cloth to clean the outer case of NVR and do not use liquid or aerosol cleaners.
- If smoke, odor, or excessive noise are coming from the NVR, turn off the power immediately, unplug the power cable, and contact your local dealer.
- This product has a coin/button cell battery. If the battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- Keep new and used batteries away from children.
- Do not expose the battery to fire or a hot oven, or mechanically crush or cut the battery, which may cause an explosion.
- Do not leave the battery in an extremely high temperature environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.

# Contents

This **Quick Guide** has information and instructions for setting up and using the most common features and functions of the NVR. This guide contains the most relevant sections of the full NVR Manual. The full 400+ page version of the NVR Manual '**55 Series Manual 2023**' is available to view and download on our website: <https://gwsecurityusa.com/55-series-nvr/>

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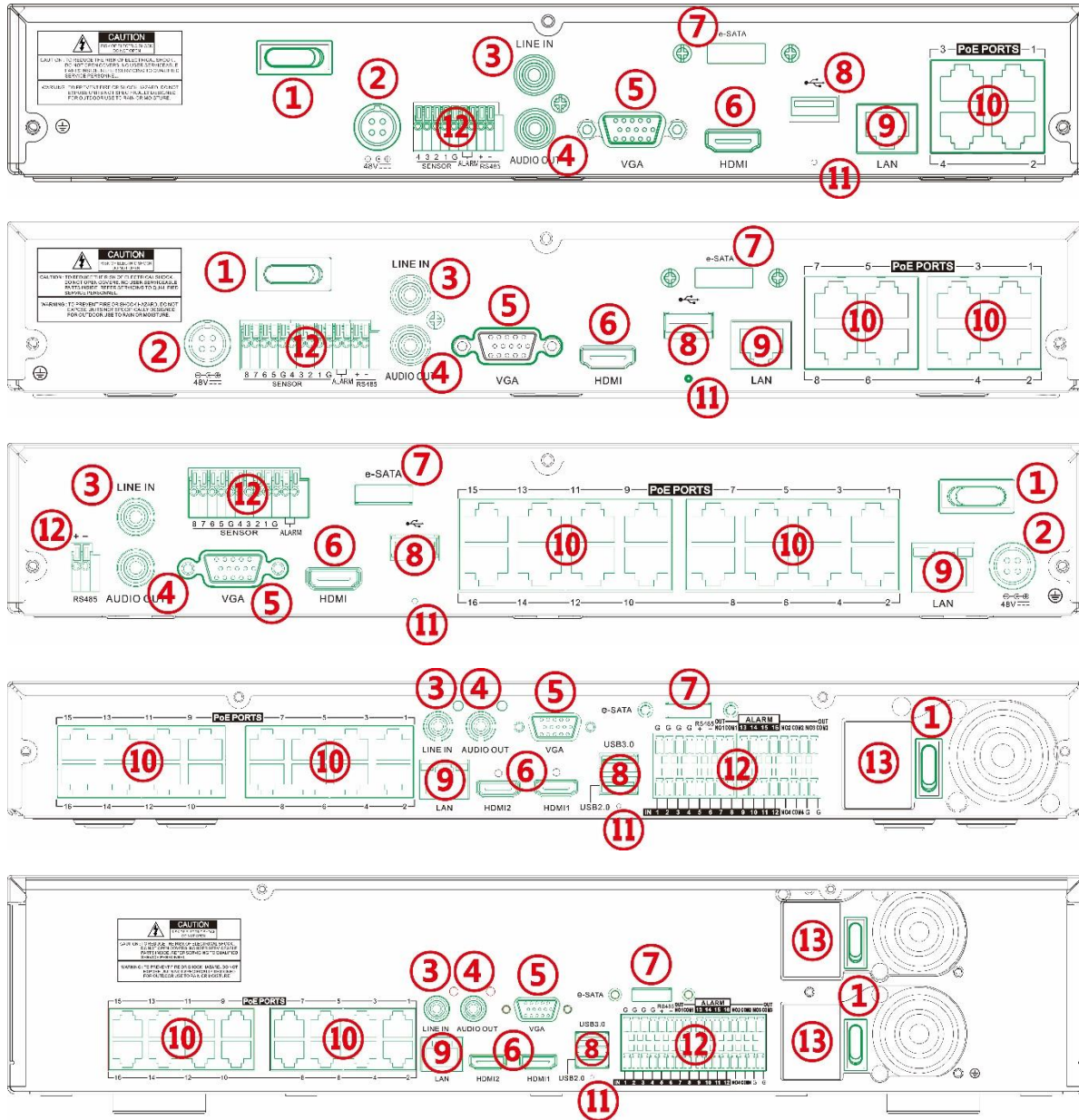
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# Chapter 1 Product Overview

## 1.1 Rear Panel



**\*All pictures above are for illustration purposes only. Your actual product may vary based on model.**



#	Item	Description
1	Power	Turn on or turn off the power to the NVR.
2	DC Power	Connect to the attached DC power supply.
3	LINE-IN	Audio line input. Connect to audio input device (microphone or sound pick up)
4	AUDIO OUT	Audio output. Connect to audio output device (loudspeaker).
5	VGA	Connect to a VGA monitor.
6	HDMI	Connect to HDMI display or monitor.
7	e-SATA	Connect to an external e-SATA storage device for recording or back up.
8	USB	Connect to USB device: USB mouse or USB flash drive.
9	LAN Port	RJ45 network interface. Connect to router or network switch.
10	PoE Ports	PoE network ports for IP camera connection.
11	RESET Button	Insert a small pin or paper clip – press and hold until the NVR beeps to default all settings including password.
12	Sensor, Alarm & RA485 Terminals	Sensor: Connect to external sensors. Alarm: Relay output, connect to external alarm device. RS485: Connect to PTZ device
13	AC Power Input	Connect to AC power cord.

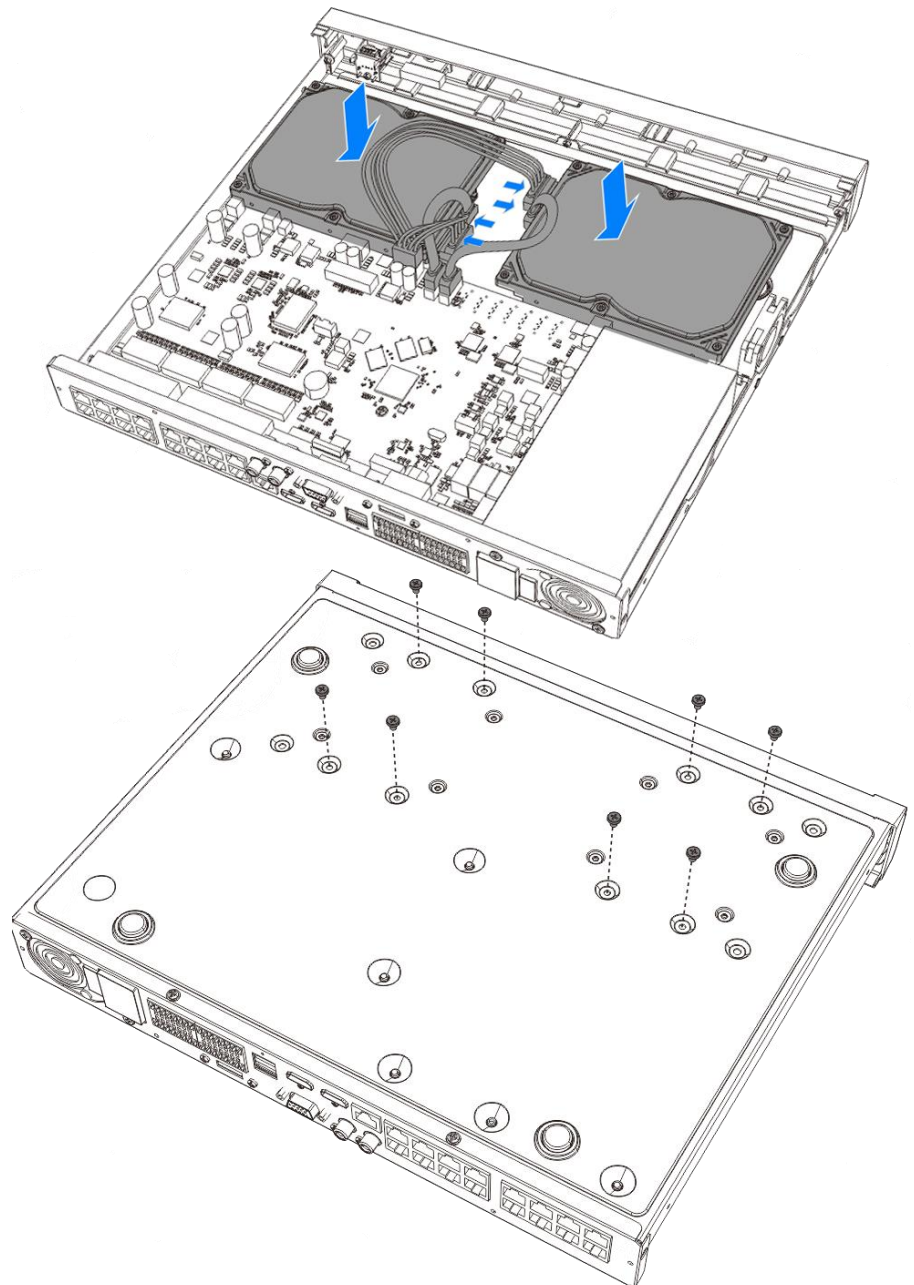
## 1.2 Remote Control

Button	Function
0-9	Numeric keys. Enter the channel number to display the channel directly.
ALL	Press to switch the channel display layout.
MENU	Press to display the Task Bar while in live view. Exit and back to the previous page while in system menu.
MUTE	Mute or activate the audio output volume.
SUBMENU	First press to display the Taskbar in Live View. Second press to display the Camera Quick Toolbar.
▲▼	Move upward or downward; Turn up or turn down the volume.
◀▶	Move left or right; Decrease or increase the parameter value in system settings menu.
SEL	To confirm the choice or setup.
◀◀	Rewind. Press to play video in fast rewind.
▶▶	Forward. Press to play video in fast forward.
▶	Play button. Enter search menu.
●	Manual record button.
■	Stop manual recording or stop the video playback. Press and hold 3 seconds to reset the VGA/HDMI output resolution to default value.
	Press to pause video play.

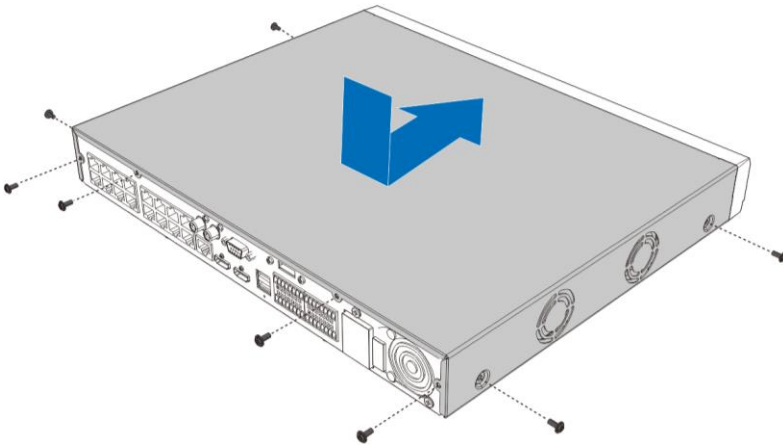
# Chapter 2 Installation & Connection

## 2.1 HDD Installation:

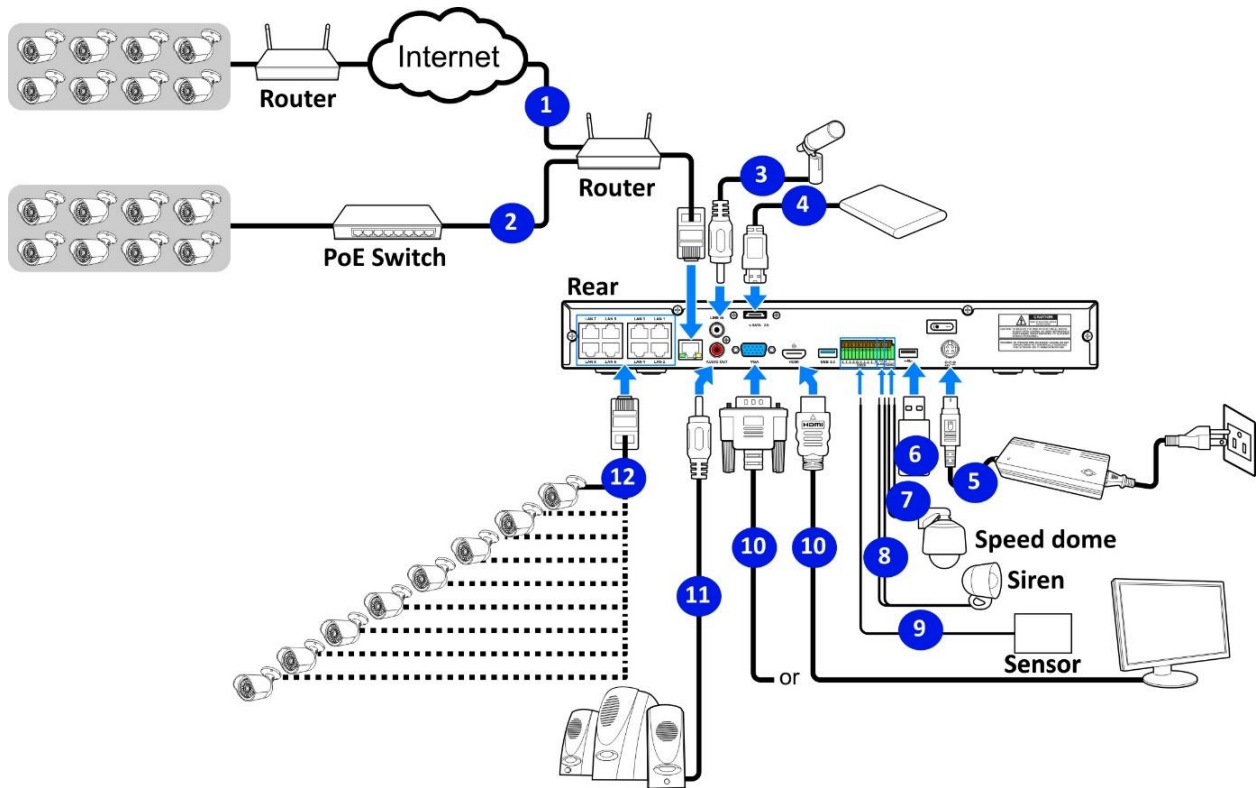
1. Power off the NVR, remove screws on both sides and rear panel. Remove the top panel.
2. Connect the data and power cables to the HDD. Place it on the bottom panel inside the NVR. Carefully flip the case and secure the HDD to the inside bottom panel with the screws. The diagrams below are for reference only. Your actual device may vary slightly.



3. Reassemble the top panel to the NVR and secure with the screws removed in the earlier steps.



## 2.2 Connection Diagram

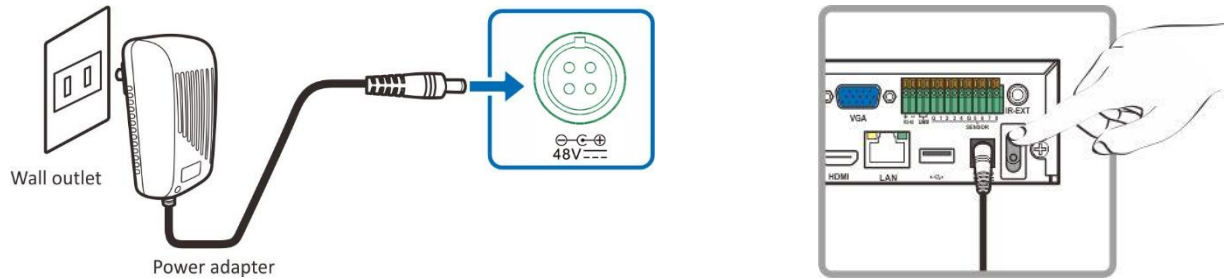


**The diagram above is for illustration purposes only. Your model may vary.**



## 2.3 Power Supply Connection

**Caution: Use the power supply supplied or specified by the manufacturer only. Contact your local dealer if any problem with the power supply is found.**



You may need to press the power switch to turn on the NVR if there is a power switch on the rear panel.

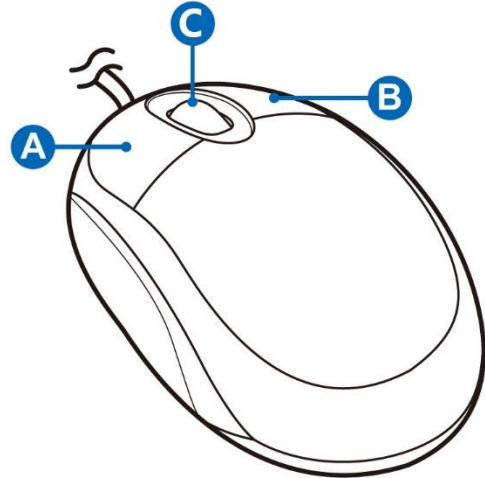
**The above pictures are for illustration purposes only. Your model may vary.**

# Chapter 3 Common Operations

## 3.1 Using the supplied mouse

### A - LEFT BUTTON

- Click to select menu options.
- During live viewing in split-screen view, double-click on a channel/image to view it full-screen. Double-click on a channel/image to return to split-screen viewing.
- Click upon a channel on the Live Viewing screen to open Camera Quick Toolbar.
- Click and hold to drag sliders and scales in menu mode.



### B – RIGHT BUTTON

- Click once to open the Taskbar on the Live Viewing screen. View Taskbar on [4.2.2 Taskbar](#).
- In the menu, click to go back / close menu.

### C – SCROLL WHEEL

- In the menu, scroll to move up / down through the menu content.
- While hovering over the volume control wheel, scroll to turn system volume up / down.

## 3.2 Using the Virtual Keyboard

1. Click to switch to upper case and special characters.
2. Move the cursor left.
3. Move the cursor right.
4. Click to execute/finish.
5. Click to delete a character.



## 3.3 Password

Proper configuration of all passwords and other security settings are the responsibility of the installer and/or end-user.

### 3.3.1 Password Generation

The first time the NVR is powered on, the system will require setting a password immediately in order to protect your privacy. Please be sure to record the username and password and save them in a secure place.

**Language:** Choose an available OSD language.

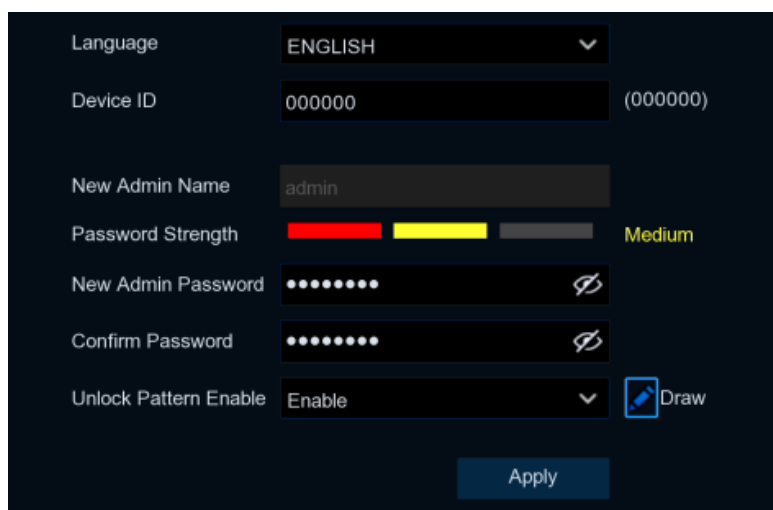
**Device ID:** Input the device ID in the parentheses. Default ID is 000000. View more about Device ID on [5.7.1. General](#).

**New Admin Password:** Set the password. The password must be a combination of 8 to 16 characters, which is combined with at least 2 kinds of different characters from uppercase letters, lowercase letters, digit numbers and special characters.

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

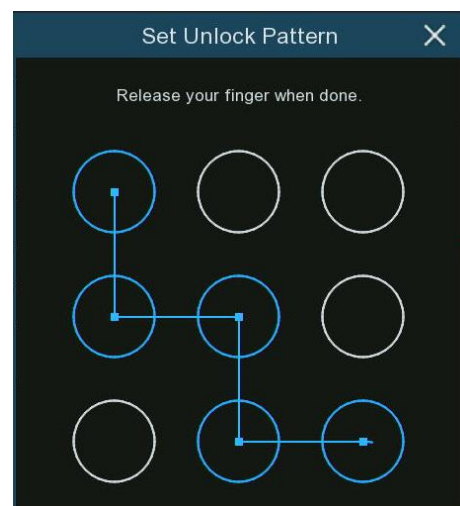
**Unlock Pattern:** Select **Enable** to draw the pattern lock.

Click **Apply** to confirm your settings.



The screenshot shows a configuration menu with the following fields and options:

- Language: ENGLISH (dropdown)
- Device ID: 000000 (000000)
- New Admin Name: admin
- Password Strength: Medium (indicated by a yellow bar)
- New Admin Password: [masked]
- Confirm Password: [masked]
- Unlock Pattern Enable: Enable (dropdown) with a "Draw" icon
- Apply button



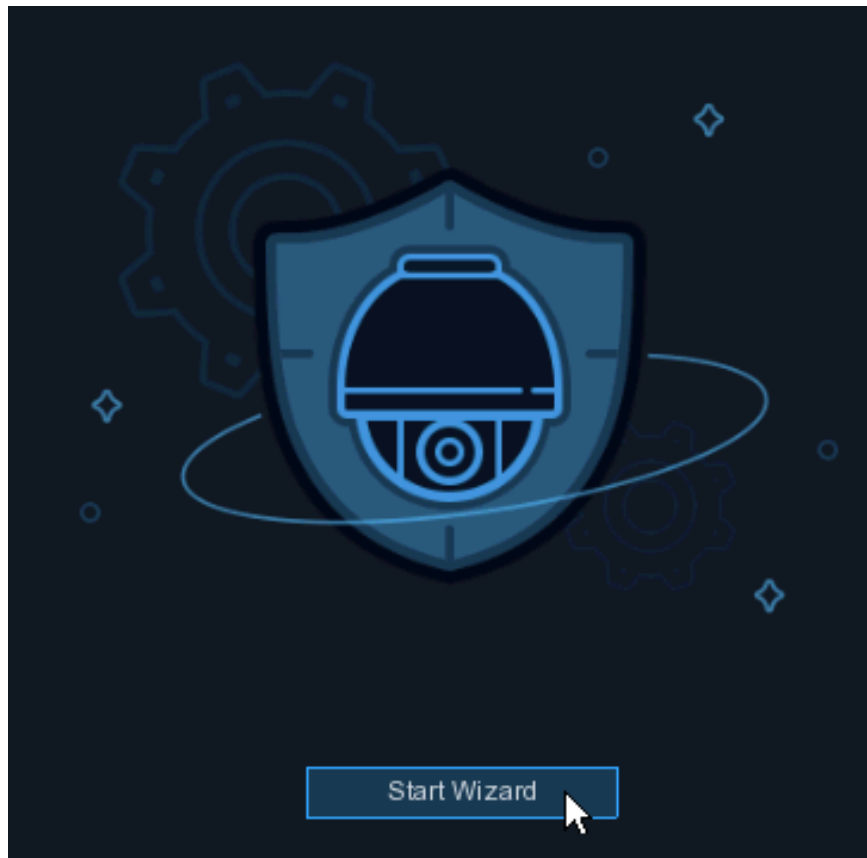


# Chapter 4 Initial NVR Start Up

The first time the NVR is run, it is recommended to follow the Startup Wizard. Which will help to configure the system and get the NVR up and working quickly.

Log into the system and click the **Start Wizard** to move to the next step.

Log into the system and click Start Wizard. Follow the on-screen prompts to complete Start Wizard.



### 4.1.1 Network Configuration

If the NVR is connected to a router that allows DHCP, check the **DHCP** box. The router will automatically assign all the network parameters for the NVR. If the network is manually configured, use the below parameters:

**IP Address:** The IP address identifies the NVR in the network. It consists of four segments 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 an IP address is like a street where you live, then the subnet mask is like a neighborhood.

The subnet address also consists of four segments of numbers, separated by periods. For example, "255.255.000.000".

**Gateway:** This address 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".

**IPv6 Address:** Input the IPv6 address you got from your ISP.

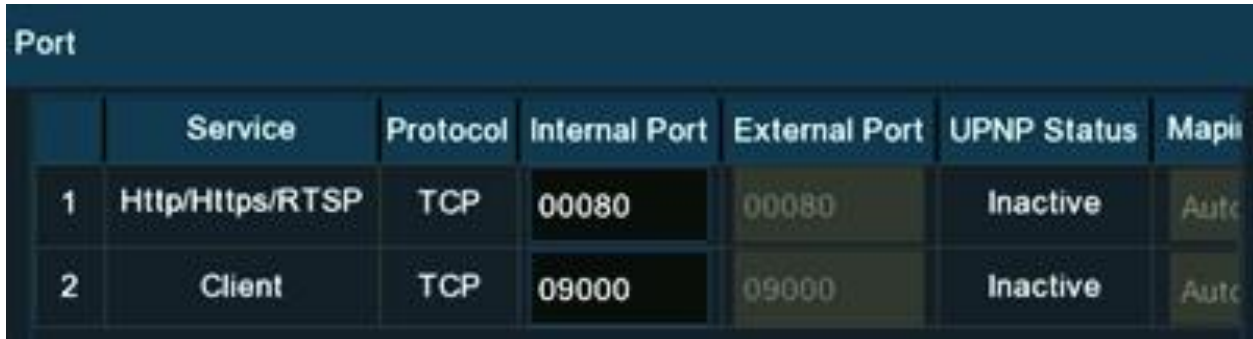
**DNS1/DNS2:** DNS1 is the primary DNS server and DNS2 is a backup DNS server. Usually, it should be enough just to enter the DNS1 server address.

The screenshot shows a 'Network' configuration window with a 'Local Connection' section. The 'DHCP' checkbox is checked. The 'IP Address' is 192.168.001.100, 'Subnet Mask' is 255.255.255.000, and 'Gateway' is 192.168.001.001. The 'IPv6 Address' is 2000:0:0:0:0:0:0:1 with a scope of 064, and the 'IPv6 Gateway' is 2000:0:0:0:0:0:0:1. Below this is a 'DNS' section with 'DNS1' at 192.168.001.001 and 'DNS2' at 008.008.008.008. A 'Port' section is partially visible at the bottom.

Network	
Local Connection	
DHCP	<input checked="" type="checkbox"/>
IP Address	192.168.001.100
Subnet Mask	255.255.255.000
Gateway	192.168.001.001
IPv6 Address	2000:0:0:0:0:0:0:1 / 064
IPv6 Gateway	2000:0:0:0:0:0:0:1
DNS	
DNS1	192.168.001.001
DNS2	008.008.008.008
Port	

### 4.1.1.1 Port

**http/https/rtsp:** This is the port that is used to log in remotely to the NVR (e.g., using the Web Interface), or the NVR will be allowed to send real-time streaming to other devices (e.g., using a streaming Media player.). ONVIF uses the same port. If the default port 80 is already taken by another application, please change it.



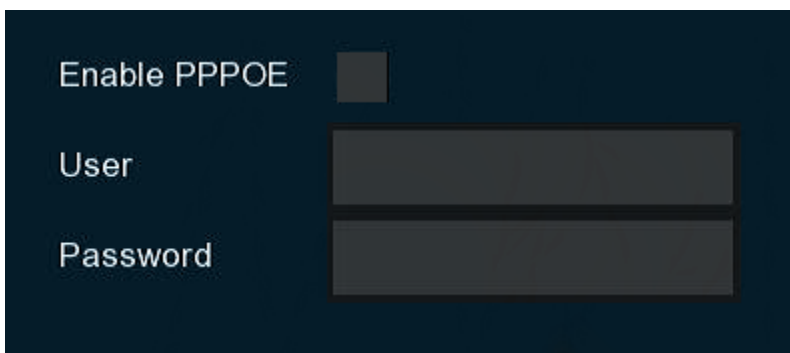
	Service	Protocol	Internal Port	External Port	UPNP Status	Mapli
1	Http/Https/RTSP	TCP	00080	00080	Inactive	Auto
2	Client	TCP	09000	09000	Inactive	Auto

**Client:** This is the port that the NVR will use to send information for remote viewing (e.g., using the mobile app). If the default port 9000 is already taken by other applications, then change it.

**UPNP:** To log in remotely to the NVR using the Web Interface via a different network, you need to setup port forwarding in your router. Enable UPnP, if your router supports UPnP. In this case, you do not need to manually configure port forwarding on your router. If your router does not support UPnP, make sure the port forwarding is configured manually in your router.

**PPPoE:** This is a protocol that allows the NVR to connect to the network directly via a DSL modem.

Check the **Enable PPPoE** box, and then enter the Username & Password of the PPPoE which is provided by your ISP.



Enable PPPOE


User

Password

## 4.1.2 Date & Time

Configure the Date, Time, Date Format, Time Format, Time Zone, NTP and DST.

### Date/Time

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

**Time:** Edit the system time.

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

**Time Format:** Choose time format.

**Time Zone:** Choose your time zone.

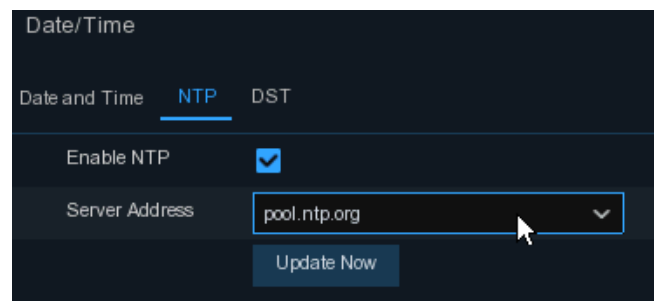


The screenshot shows the 'Date/Time' configuration page with the 'Date and Time' tab selected. The settings are as follows:

Field	Value
Date	04/15/2021
Time	11:28:21
Date Format	MM/DD/YYYY
Time Format	24Hour
Time Zone	GMT+08:00

### NTP

NTP stands for Network Time Protocol. This allows you to synchronize the date and time automatically over the Internet. The NVR needs to be connected to the Internet. Check the "NTP" box and select the NTP server.



The screenshot shows the 'Date/Time' configuration page with the 'NTP' tab selected. The settings are as follows:

Field	Value
Enable NTP	<input checked="" type="checkbox"/>
Server Address	pool.ntp.org

There is an 'Update Now' button at the bottom.

### DST

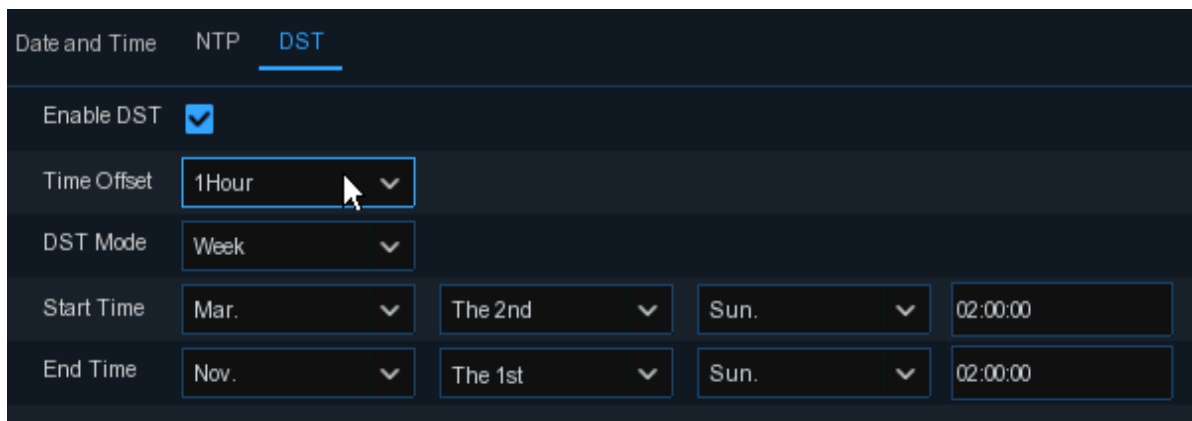
DST stands for Daylight Savings Time.

**Enable DST:** Enable if Daylight Saving Time (DST) is observed in your region.

**Time Offset:** Select the amount of time to offset for DST.

**DST 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 daylight savings.



The screenshot shows the 'Date and Time' configuration page with the 'DST' tab selected. The settings are as follows:

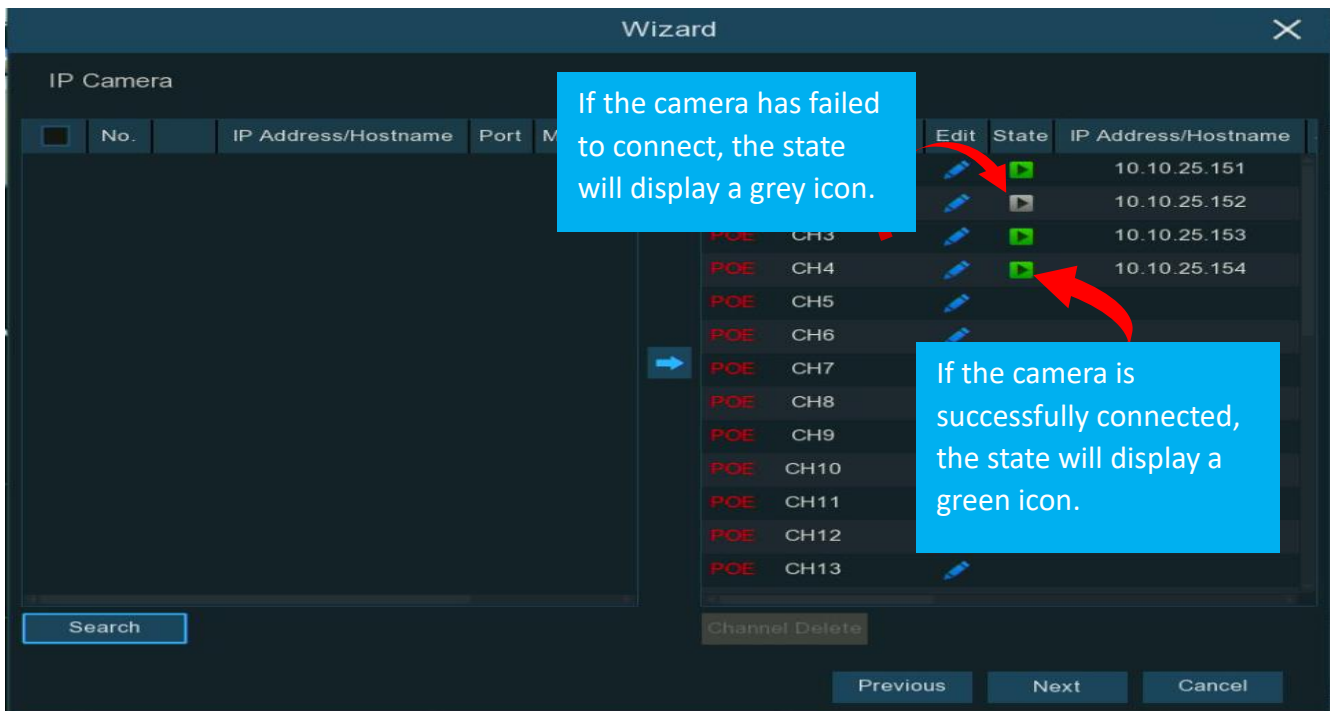
Field	Value
Enable DST	<input checked="" type="checkbox"/>
Time Offset	1Hour
DST Mode	Week
Start Time	Mar. The 2nd Sun. 02:00:00
End Time	Nov. The 1st Sun. 02:00:00

### 4.1.3 IP Camera

Add IP cameras to the NVR in this section.

#### 4.1.3.1 Connect IP Camera to NVR PoE Ports

IP cameras will connect automatically if the IP cameras are connected to the PoE ports on the rear panel. The online cameras will be displayed on the right side of the window.

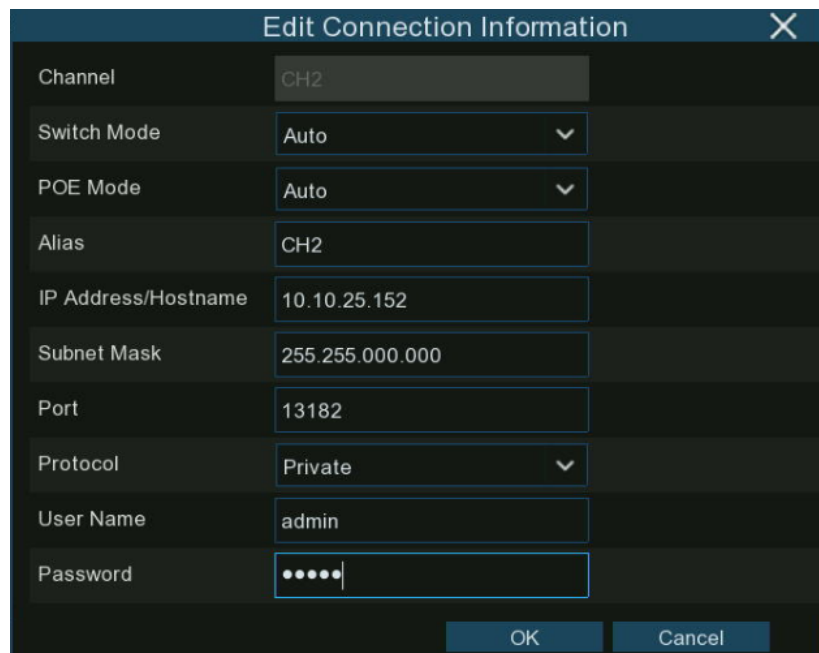


Click on the grey icon, a message will pop-up to display the failure reason.

If it shows "Username or password error!"



Click the edit icon 


Input the correct username and password of the camera.



### 4.1.3.2 Add IP Camera to PoE NVR from LAN

To add an IP camera to the PoE NVR from the local network, make sure the NVR is connected to the LAN (local area network), and the IP camera being added is configured to the same network segment as the NVR.

1. Click the edit icon  in the channel the camera is being added to.
  - Click the drop-down arrow next to Switch Mode to select **Manual**.
  - Click **OK** to save.
2. Click **Search**.
  - All available cameras in the LAN will be displayed.
  - Select the camera to add.
    - Click the arrow icon 

Or click  in the channel list.



Field	Value
Channel	CH5
Switch Mode	Manual
POE Mode	Auto
Alias	
IP Address/Hostname	
Subnet Mask	
Port	1
Protocol	Private
User Name	
Password	

3. Click **Search**.
  - All available cameras in the LAN will be displayed.
  - Click on the camera you want to add.
  - Input the username and password of the camera.
  - Click **Add** to complete.



No.	IP Address/Hostname	Port	Manufacturer	Active state	Device Type	MAC Address
1	192.168.5.111	9000		None	IP CAMERA	00-23-63-81-4E-11

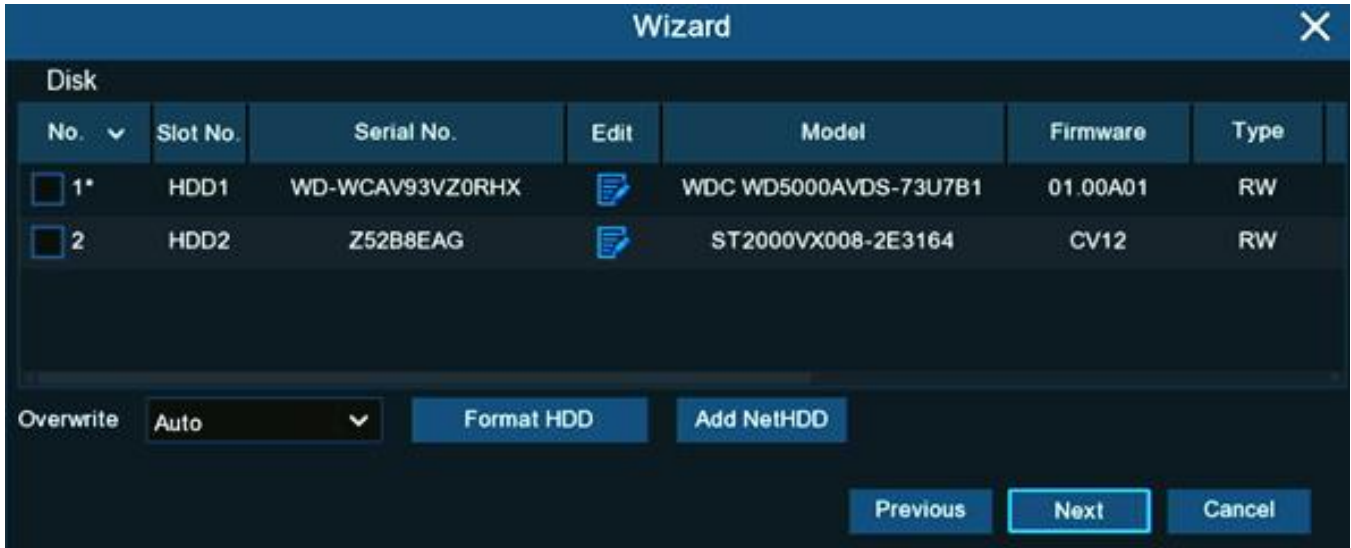
IP Address/Hostname	192.168.5.111
Alias	CH5
Port	9000
Protocol	Private
User Name	admin
Password	•••••

### 4.1.3.4 Add IP Camera to Non-PoE NVR

For Non-PoE NVR, the IP cameras need to be added manually from LAN and/or Internet manually. Please refer to [4.1.3.2. Add IP Camera to PoE NVR from LAN](#).

### 4.1.4 Disk

HDD must be formatted when it is installed in the NVR for the first time.



Select the HDD.

Click **Format HDD** to format the HDD.

**Overwrite:** Use this option to overwrite the oldest video files as the hard drive becomes full. For example, if you choose the option '7 days' then only the last 7 day's recordings are saved on the HDD. To prevent overwriting any old recordings, select **OFF**. If you have selected **OFF**, please check the HDD status regularly to make sure the HDD is not full.

**Add NAS HDD:** Add a NAS drive.

## 4.1.5 Resolution


Choose an output resolution compatible with your monitor. The NVR supports auto-adjustment of the output resolution to the best resolution for your monitor when the system is starting up.

If you connect to a 4K HDMI monitor, choose max. 4K (3840x2160) resolution.

If you connect a VGA monitor, do not select any resolution higher than 1080P(1920x1080).

## 4.1.6 Mobile

The NVR has a P2P ID. The P2P ID is used to connect the NVR to a mobile app for remote viewing. You can scan the QR code with your mobile app to add the P2P ID of the NVR to view the NVR remotely.



The screenshot displays the mobile settings interface for an NVR. It is organized into several sections:

- Mobile**: The main header for this section.
- P2P ID**: A section containing the P2P ID 'TR111A' and a QR code for mobile app scanning.
- Local Connection**: A section showing network details:
  - IP Address: 172.16.3.90
  - Subnet Mask: 255.255.255.0
- Port**: A section showing connection ports:
  - Http/Https/RTSP: 13181
  - Client: 9000



## 4.1.7 Summary

You can review the system summary information and finish the wizard.

Check "**Don't show the Wizard after start.**" if you do not want to display the Start Wizard every time the system starts. Click **Finish** to save & exit.









Summary	
<b>System</b>	
Resolution	1080P(1920x1080)
Date/Time	05/12/2022 09:00:04, GMT+08:00
NTP	OFF
<b>Network</b>	
DHCP	OFF
IP Address	172.16.3.90
Subnet Mask	255.255.255.0
Gateway	172.16.3.1
DNS1	192.168.5.1
DNS2	8.8.8.8
PPPoE	OFF
<input type="checkbox"/> Don't show the Wizard after start.	
<b>Previous</b> <b>Finish</b>	




## 4.2 Live View Screen Overview

The screenshot displays a multi-camera live view interface. The main area shows four camera channels (CH1, CH2, CH3, CH4) displaying a shopping mall interior. The interface includes several key components:

- Channel Number:** Located in the top left corner of the main view.
- Status Icon:** A red circle with a white exclamation mark and a person icon, indicating a system status.
- Camera Quick Toolbar:** A horizontal bar with icons for camera control (pan, tilt, zoom, etc.).
- Start Menu:** A vertical sidebar menu with options: admin, Search, Setup, Lock Screen, and Shutdown.
- Alarm Notification Panel:** A panel displaying a "Channel Abnormal Message" with the text "No Camera".
- HDD Error Icon:** A red square icon with a white exclamation mark, indicating a hard drive error.
- Task Bar:** A bottom bar with various system icons and the text "Task Bar".
- Status Bar:** A bottom bar with the text "Status Bar" and the current date and time: "05/12/2022 09:37:11".

## 4.2.1 Definitions of On-screen Icons & Messages















Status Icons		HDD Error Icons	
Icon	Meaning	Icon	Meaning
	The camera is currently recording.		HDD is uninstalled or in error.
	A motion alarm has been triggered.		HDD is unformatted.
	An intelligent or AI alarm has been triggered.		HDD is full.
	The external I/O alarm device has been triggered.		HDD is read-only.
<b>PIR</b>	The PIR alarm has been triggered.		

Channel Abnormal Message	
Message	Meaning
No Camera	No camera is added to this channel. You can click the add icon  to add a new camera.
Failed to connect to camera, please check the network connection!	The added camera is off-line or lost connection. Please check the cameras working status or network connection. You can click the edit icon  to check the camera status.
Username or password error!	Incorrect username or password of the camera. Click the edit icon  to modify.
Resource Not Enough	Not enough system resources to decode the camera images, please try to change the cameras to sub-stream mode. If there are 2 or more cameras are using MJPEG decoding, only 1 camera can be encoded at a time.
Not enough bandwidth for this camera!	The camera cannot get online because the total bitrate of all connected cameras exceeds the NVR's bandwidth limitation.

## 4.2.2 Camera Quick Toolbar

From the live view screen, click the left button of your mouse on a connected camera to display the Camera Quick Toolbar.



	Meaning
	Click to manually record the channel immediately. If manual recording is in progress, the icon will be red. Click one more time to stop manual recording.
	Click to save a snapshot of the current camera image. Manual Capture must be enabled to use this feature. For details on enabling Manual Capture, see <a href="#">5.2.3.1 Capture</a> .
	Click to play the last 5 minutes recorded of this channel.
	Click to enter PTZ control panel; Click to control zoom and focus of motorized varifocal cameras.
	Click to zoom-in the channel. Scroll the wheel button of your mouse to zoom in and zoom out the image.
	Click to adjust the image color of the channel.
	To switch the live view video stream between HD & SD. HD is mainstream quality, SD is substream quality.
	Click this button to enter fisheye mode. To use this feature, you must connect a camera that supports fisheye operations.
	Click to start two-way voice communication. Requires supporting camera.
	If your camera has white light LEDs, click this button to turn on or turn off the LEDs.
	If your camera has a built-in speaker, click this button to turn on or turn off the alarm/siren sound.
	If your camera has warning light LEDs, click this button to turn on or turn off the LEDs.
	Tag button. It supports fast search by adding a tag in live view. See more on <a href="#">7.5 Tag Search</a> .
	AI statistics. Hover the mouse over the icon to view AI statistics when the AI function is activated in your NVR.

## 4.2.3 Taskbar

In the Taskbar, enter the system menu, start playback, and change the live view display.















Icon	Meaning
	Click to bring up the Start Menu.
	Click to display 4/9/12/16 channels in live view screen.
	Click to display 20/25/36 channels in live view screen.
	Click to choose more display layouts in live view screen.
	Click to start viewing channels in a sequence. You're able to set the sequence display mode on <a href="#">5.8.1.4 Output Configuration</a> .
	Quick playback. You can choose to play the recording for all channels from the beginning of the day, or you can choose the play the latest 5 seconds, 10 seconds, 30 seconds, 1 minute or 5 minutes by clicking the triangular button ▲.
	Click to adjust audio output volume.
	Click to switch the live view image resolution for all channels between mainstream and substream.
	Click to switch the image scale for all channels between original and stretched view.
	Click to switch between real-time, balanced, or smooth view. It affects the live view video quality by changing the bitrate and frame rate.
	Click this button to restore the camera view to the original channel positions.

## 4.2.4 Status Bar






In the Status Bar, check the network connection status, turn on/off white light LEDs and alarm sounds, start, and stop manual recording, check the system information, disable mouse, and set the system time.



Icon	Meaning
	<ul style="list-style-type: none"> <li>: Network is disconnected.</li> <li>: Network is connected but offline.</li> <li>: Network is successfully connected.</li> </ul>
	<ul style="list-style-type: none"> <li> The device is in an armed state.</li> <li> The device is in disarmed state.</li> </ul>
	<p>To turn on or turn off all the white light LEDs and alarm/siren sound for available cameras.</p>
	<p>To start manual recording and manual relay alarm output.</p>
	<p>To view system information, channel information, record info and network state.</p>
	<p>The device is connected through USB-WIFI and is recognized successfully. It can access the Internet through WiFi. For more information, see Section 5.5.1.4. For supported models only.</p>
	<p>Click this button to switch the mouse between the primary screen and the secondary screen. To use this feature, your device must support this function.</p>

## 4.2.5 Start Menu

From the Start menu: switch user, search & playback, enter system setup menu, lock & unlock the screen, shut down, reboot & logout of the system.


 admin	To switch user. <a href="#">Chapter 5.7.2. Multi-user.</a>
 Search	Search & Playback. <a href="#">Chapter 7. Search, Playback &amp; Backup.</a>
 Setup	NVR System Setup. <a href="#">Chapter 5. System Setup</a>
 Lock Screen	Lock & unlock screen.
 Shutdown	Shutdown, reboot & logout the system.

### Unlock and Lock Screen

The screen will be locked automatically to protect unauthorized OSD operation while the NVR is not in menu operations if a Menu Timeout has been set up in [5.7.1.1 System General Setting](#).

To lock the screen operation manually. Go to the Start Menu.

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. Password is required to unlock the system.

**Shutdown:** Click **Shutdown** from Start Menu.

The options will be to shut down, reboot or log out of the NVR.

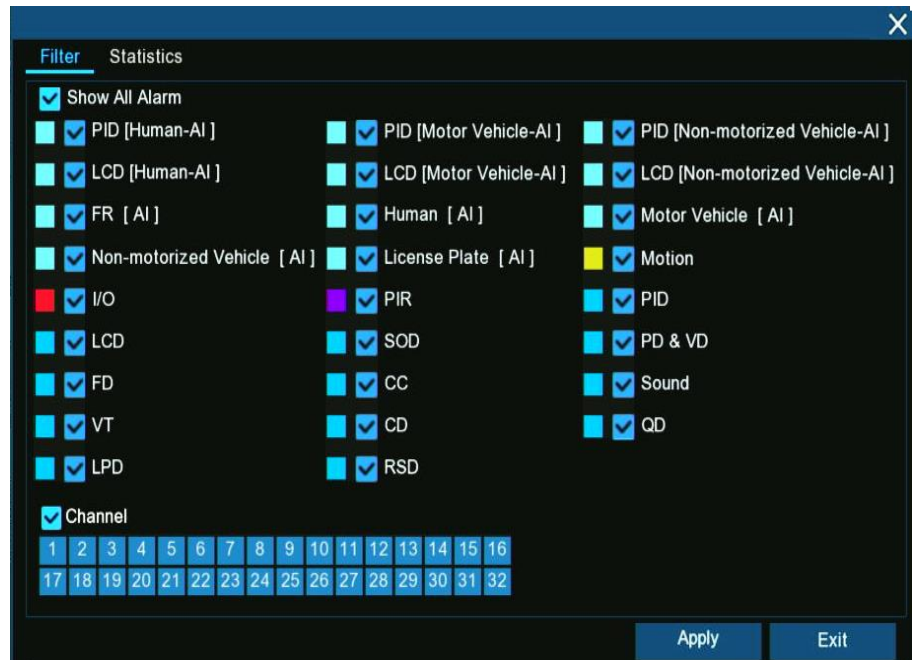
Click **OK**. System password will be required.

## 4.2.7 Alarm Notification Panel

The Alarm Notification Panel displays thumbnails of alarm events that have occurred. Events are color-coded according to the event type. Use the mouse scroll wheel to scroll up and down. Click the play button next to or over the thumbnail to play the event.



1. Click to always display the notification panel.
2. Click to hide the notification panel.
3. Click to reveal AI statistics information.
4. Click to reveal the Filter and Statistics functions (shown below).



Use the Filter function to customize which alerts and which cameras will appear in the notification panel and customize the time duration and channels to display in AI statistics.

# Chapter 5. System Setup

Configure the NVR settings for Channel, Record, Alarm, Network, Device, System, AI, AI Scenario.

<p><b>Channel</b></p> <p>Channel   Live Image Control   PTZ Video Cover   Motion PIR   ROI</p> 	<p><b>Record</b></p> <p>Encode   Record Capture</p> 	<p><b>Alarm</b></p> <p>Motion   PIR   I/O Combination Alarm PTZ Linkage   Exception Alarm Schedule Voice Prompts Deterrence   Siren Disarming</p> 	<p><b>AI</b></p> <p>Setup   Recognition Alarm   Statistics</p> 
<p><b>Network</b></p> <p>General   DDNS   Email IP FILTER Voice Assistant Platform Access</p> 	<p><b>Storage</b></p> <p>Disk   Cloud   FTP</p> 	<p><b>System</b></p> <p>General   Multi-User Maintenance IP Camera Maintain Information</p> 	<p><b>AI Scenario</b></p> <p>Cross Counting Face Attendance Object Classification</p> 



## 5.1.1 Channel

Add and delete IP cameras in this menu. If the NVR comes with built-in PoE ports, it is possible to check the PoE power consumption here.

### 5.1.1.1 IP Channels

To add or delete IP cameras here. If the NVR comes with PoE ports, go to [5.1.1.1.1 PoE NVR Connection](#). If the NVR comes without PoE port, go to [5.1.1.1.2. Connect External Cameras from LAN or Internet](#).

The screenshot displays the 'Channel' configuration page in a web interface. The top navigation bar includes icons for Channel, Record, Alarm, AI, AI Scenario, Network, Storage, and System. The main content area features a table with the following columns: No., Edit, IP Address/Domain, Port, Channel Count, Manufacturer, Active state, Device Type, MAC Address, and Software Version. Below the table are buttons for Search, Add, and Add All. The table lists six channels (CH1-CH6) with POE status, Switch Mode, and POE Mode. At the bottom, there are buttons for Auto Assign IP to Camera(s), Channel Delete, Default Password, and Show Password. A status bar at the bottom right shows Total Band Width: 256Mbps, Used Band Width: 0bps.

No.	Edit	IP Address/Domain	Port	Channel Count	Manufacturer	Active state	Device Type	MAC Address	Software Version
POE	CH1	Auto	Auto						
POE	CH2	Auto	Auto						
POE	CH3	Auto	Auto						
POE	CH4	Auto	Auto						
POE	CH5	Auto	Auto						
POE	CH6	Auto	Auto						

### 5.1.1.1.1 PoE NVR Connection

For the built-in PoE NVR, connect the IP cameras via the internal PoE ports and/or external LAN(WAN) port. PoE not only supplies power over ethernet, but it also supports plug & play connection for IP cameras.

<input type="checkbox"/>	Channel	Switch Mode ▾	POE Mode ▾	Edit	State	IP Address/Hostname	Subnet M
<b>POE</b>	CH1	Auto	Auto			10.10.25.151	255.255.
<b>POE</b>	CH2	Auto	Auto			10.10.25.152	255.255.
<b>POE</b>	CH3	Auto	Auto			10.10.25.153	255.255.
<b>POE</b>	CH4	Auto	Auto			10.10.25.154	255.255.
<b>POE</b>	CH5	Auto	Auto				
<b>POE</b>	CH10	Auto	Auto				

Auto Assign IP to Camera(s) Channel Delete Default Password  Show Password

**Switch Mode: Auto** mode supports Plug & Play connection via PoE port.

- To add camera(s) manually, click the edit icon , change the mode to **Manual**.
- Or click the drop-down arrow to change all channels to Auto or Manual mode.

**PoE Mode:** with **Auto** mode, the maximum bandwidth is 100Mbps.

- With **ePoE** mode, the maximum bandwidth is 10Mbps and PoE transmission distance will be extended up to 200 meters with RJ45 cable at CAT 5E or higher standard.

- If you have a connection problem with **Auto** mode when the IP camera is powered by PoE via an RJ45 cable longer than 100 meters, then change to ePOE mode for a more stable connection.

#### Edit Connection Information ✕


Channel	CH1
Switch Mode	Auto ▾
POE Mode	Auto ▾
Alias	CH1
IP Address/Hostname	10.10.25.151
Subnet Mask	255.255.000.000
Port	80
Protocol	Private ▾
User Name	admin
Password	.....

OK Cancel


**Edit:** Edit the Switch mode, PoE mode, network parameters, username, and password for the camera.

**State:** Show the connection status of the camera.

→ Click on the icon, a message will display the failure reason. If the failure reason is "Username or password error"

→ Click the edit icon  and enter the correct username and password.

If the failure reason is "Failed to connect to camera, please check the network connection", the network parameters might be incorrect or incompatible with Onvif protocol.

→ Click the edit icon  to correct network parameters.

**Auto Assign IP to Camera(s):** If the camera being added manually is not in the same network segment, it might not add the camera. Use this function to change the IP address of the camera(s).

### Default Password

Configure the default username and password of the cameras based on protocol type: [Private](#), [Onvif](#) and [RTSP](#).

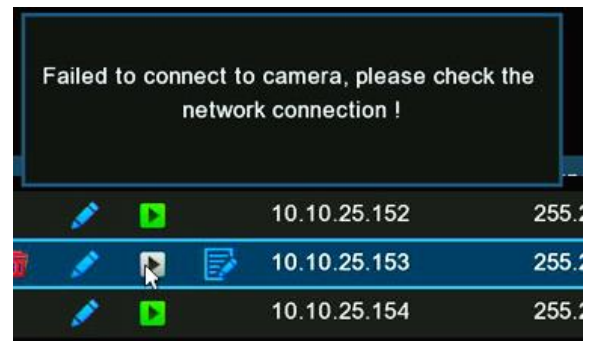
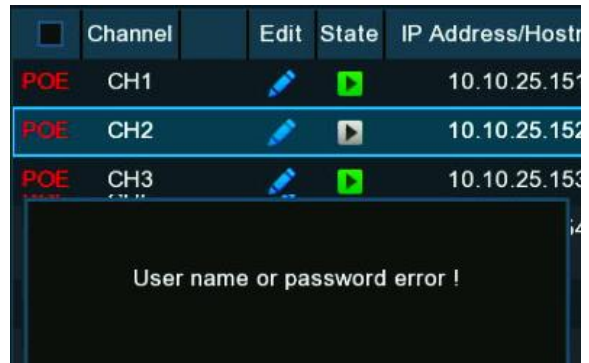
The default password is "admin".

1. **Default Password:** If the password

for the cameras is something other than "admin" use this function.

Please note, if the username and password of the camera is different from the default values, you may need to input the username and password each time after the NVR restarts.

**Show Password:** Click to show the password of a connected IP camera on the channel list.



### 5.1.1.1.1 Steps to Connect Plug & Play PoE Cameras



1. Keep the default settings.
2. Change the default username and password to match the camera's password if camera password is not "admin".
3. Make sure the IP camera is set to DHCP. If your camera is set to static IP address which is different from the IP address segment of the built-in poe ports, your IP camera will not connect. Check more in [5.5.1.1 Network → General](#).
4. Connect your IP camera into the PoE port on the rear panel.
5. The camera will be online and displayed on the camera list after reboot.

### 5.1.1.1.2 Connect External Cameras from LAN or Internet

To connect to an IP camera from LAN or internet, please make sure the NVR is properly connected to the LAN/network.

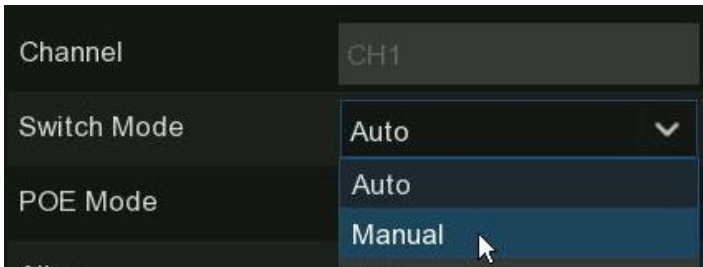
If the NVR comes with built in PoE ports, change the PoE Switch Mode to manual.


To set all channels to manual:

- Click the drop-down arrow next to Switch Mode, select "**Manual**".








To add a camera to an individual channel manually:



- Click edit  in the channel list.
- Click the drop-down arrow next to Switch Mode to select "**Manual**".
- Click **OK** to save.

#### 5.1.1.1.2.1. Add Individual Camera in the LAN

1. Change the PoE mode to Manual.
2. Click **Search**, all available cameras in the LAN will be displayed.
3. Or click the Add icon  in the

Channel	Switch Mode	POE Mode		Edit	State
CH1	Manual	Auto			
CH2	Manual	Auto			

- channel list to add a camera to an individual channel.
4. Click on the camera to connect to, enter the camera information, input the username and password of the camera, and click **Add**.

**Alias:** Enter the camera title to display in the live view screen.

**Port:** Camera communication port.

**Protocol:** Select the connection protocol.

**Bind channel:** Choose which channel to add the camera.

IP Channels POE Power

<input type="checkbox"/>	No.	Edit	IP Address/Hostname ^	Port	Manufacturer	Active state	Device Ty
<input type="checkbox"/>	1		10.10.25.151	80		Activated	IPCAME
<input type="checkbox"/>	2		192.168.5.111	9000		None	IP CAME

Search Add Add All

Add IP Camera

No.	IP Address/Domain	Port	Manufacturer	Active state	Device Type
1	192.168.10.157	9000		None	GW8536MIC
2					
3					

IP Address/Domain: 192.168.10.157

Alias: CH1

Port: 9000

Protocol: Private

User Name: admin

Password: .....

Camera Mode: Auto

Search Default Password Add Cancel

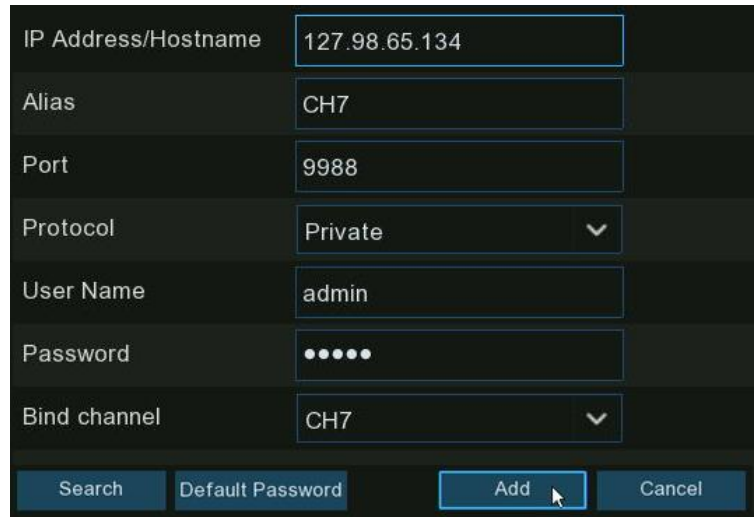
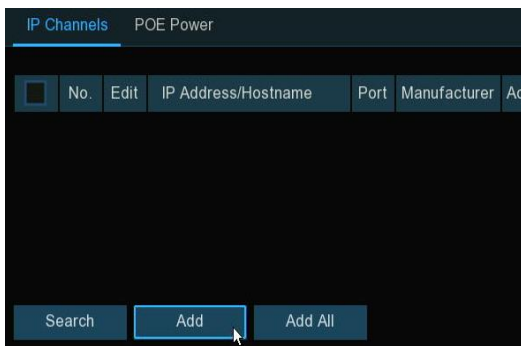
The added camera will be displayed in the channel list.

### 5.1.1.1.2.4 Add Cameras from Internet

If the NVR is connected to the internet, it is possible to add cameras from the local network using the camera's IP address.

1. Click **Add** on the search page.
2. Input the IP address or domain name, port, protocol, username & password of the IP camera.

→ Click **Add** to add the camera.

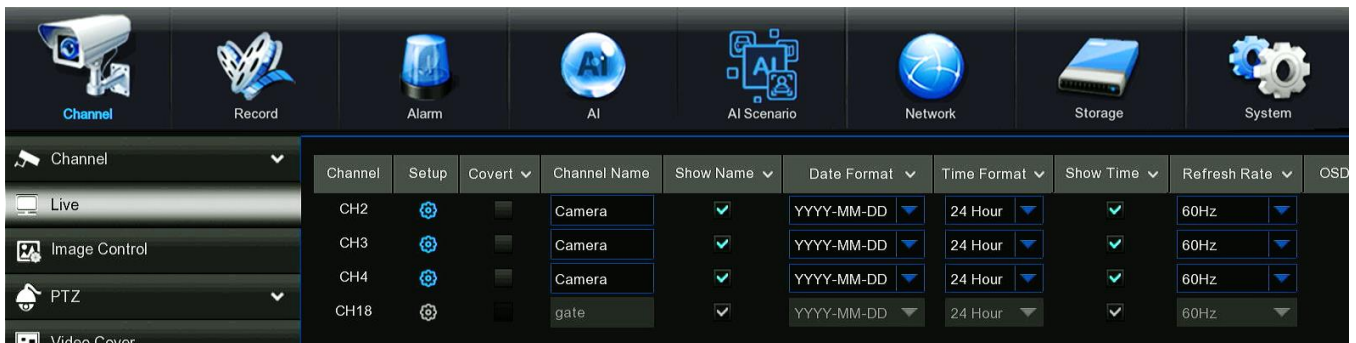


### 5.1.1.1.2 Non PoE NVR Connection

Please refer to: [5.1.1.1.2 Connect External Cameras from LAN or Internet](#)

## 5.1.2 Live

To configure camera parameters, including channel name, color, date & time format, and refresh rate.



**Convert:** Hide the camera images in live view. If covert is enabled, only live view will be hidden. Recording will not be affected. Enable this if your NVR and TV are in a public area (shop, warehouse, etc.), and you do not want others to see an image from the camera.

**Channel Name:** Give a name to the camera.

**Show Name:** Leave this enabled to display the camera name in Live View mode, otherwise disable it. It affects both live view & video recorded.

**Date Format:** Choose a date format.

**Time Format:** Choose a time format.

**Show Time:** Leave this enabled, a timestamp will be embedded on all video recordings. Un-check to disable it. This affects both live view & video recorded.

**OSD Self-adaptive:** When enabled the NVR will automatically change the font color of OSD in accordance with the screen background to ensure clear display.

**Refresh Rate:** Set according to the frequency of alternating current in your region.

**Setup:** Click  icon for more settings.

**Channel:** Select a channel to edit

**Channel Name:** Give a name to the camera.

**Date Format:** Choose a date format.

**Time Format:** Choose a time format.

**Refresh Rate:** Choose the correct refresh rate.

**Show Name:** Show or hide camera name.

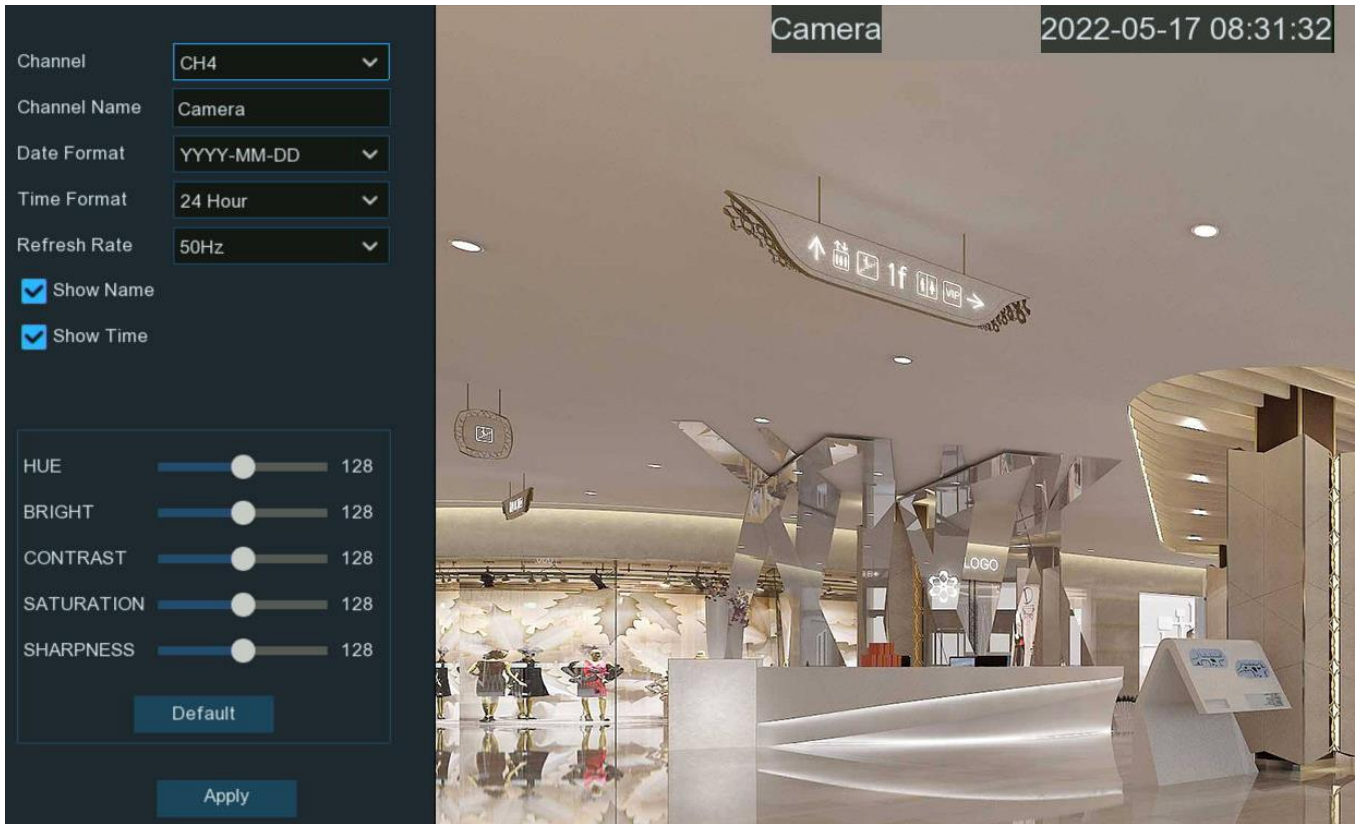
**Show Time:** Show or hide date and time.

**HUE:** Adjust the hue value which changes the color mix of the image.

**BRIGHT:** Adjust the brightness which changes how light the image appears to be

**CONTRAST:** Adjust the difference in luminance that makes an object distinguishable.





**SATURATION:** Adjust the values to alter how color is displayed in the image.

**SHARPNESS:** Used to adjust the image sharpness.

- ➔ Click **Apply** to save settings.
- ➔ Click **Default** to load default settings.
- ➔ Right click the mouse to exit.

### 5.1.3.1 Full Color Camera Settings

If there is a full color night vision camera connected to the NVR, an **Image Setting** option is displayed under the **Image Control** settings page.

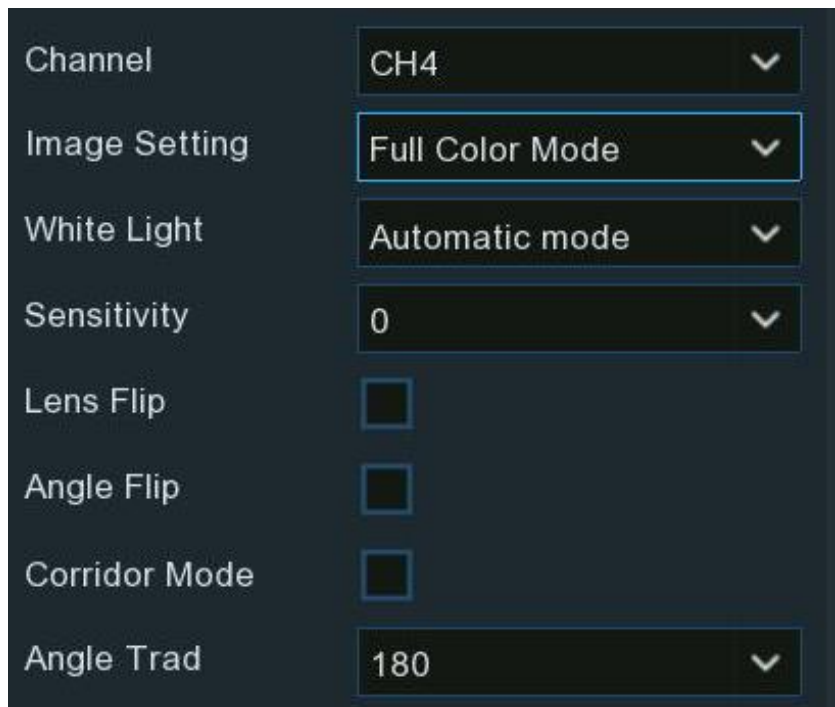
A full color camera includes not only IR LEDs, but also white light LEDs. It is possible to set the operating mode of the lights:

**Day/Night Mode:** The camera will be working as a normal IR LED camera.

**Full Color Mode:** The camera will be working as a full color camera. It is possible to configure the brightness of white lights:

→ **Auto:** The brightness of the lights will be controlled by the system automatically according to the brightness of images.

→ **Manual:** The brightness of the lights is set manually. It is possible to set a fixed value in the **Light Brightness** bar. The higher the number, the brighter the lights are. Lights will be turned off if the value is set to 0.

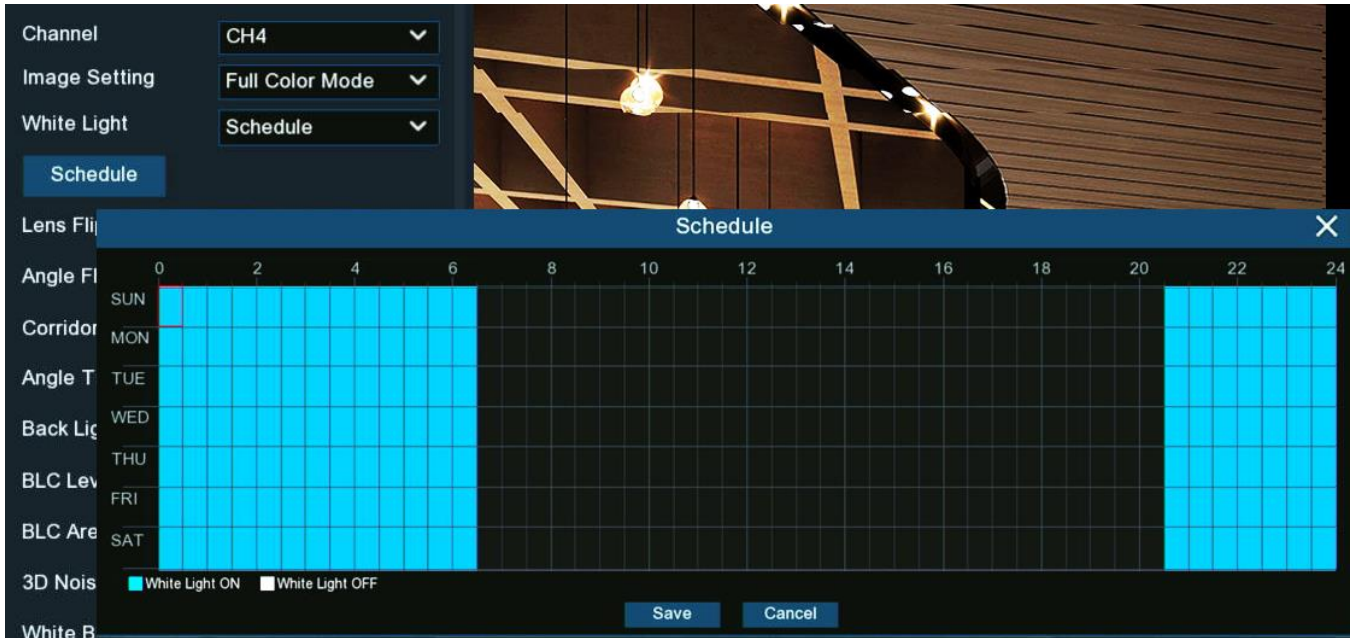


**Schedule:** Using the mouse, click on a particular square to change or click and drag the mouse over the squares to select the desired timeframe.

The blocks highlighted in blue are the time periods the lights will be on. The black squares indicate when the lights will not be on.

**OFF:** Turn off the white lights.

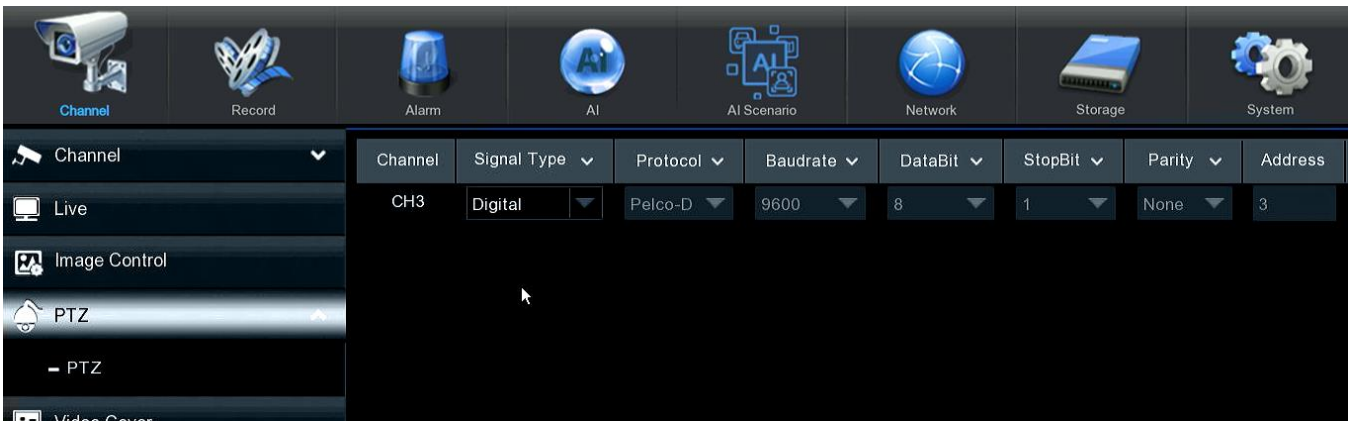
**Sensitivity:** The higher the number is, the more sensitive the system will be to trigger the white lights.



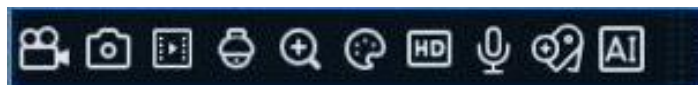
→ **Schedule:** The lights will be on according to the schedule that is set up. The camera will work in full color mode during the timeframe, highlighted in blue. The camera works in Day&Night mode during the timeframes not highlighted in blue.

## 5.1.4 PTZ

This menu configures the PTZ (Pan/Tilt/Zoom) settings for the PTZ speed dome cameras.




**Channel:** Channel name




**Signal Type:** If the PTZ camera is connected to the RS485 port, then choose "**Analog**", otherwise choose "**Digital**".

### 5.1.4.1 MFZ & PTZ Control

In live view, left click the mouse on a connected camera to display the Camera Quick Toolbar. Click the PTZ  icon to open the PTZ control panel.

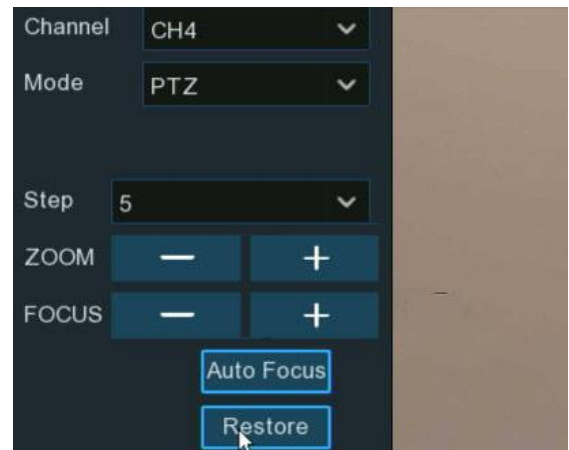
#### 5.1.4.1.1 Controlling a MFZ Camera

Adjust the optical lens to zoom in or zoom out if a MFZ (Motorized Focus & Zoom) camera is connected. In live view, left click the mouse on the MFZ camera to display the Camera Quick Toolbar. Click the PTZ  icon to open the MFZ control panel to operate the motorized adjustment of the MFZ lens:

**Zoom:** Control the zoom in and zoom out:

→ —: Single click the button, the lens will perform a single adjustment to zoom out the image and then auto focus. Click and hold on the button to perform continuous adjustment until releasing the mouse.

→ +: Single click the button, the lens will perform a single adjustment to zoom in the image and then auto focus. Click and hold on the button to perform continuous adjustment until releasing the mouse.



**Focus:** Manually fine tune the focus:

→ —: A single click on the button, the lens will perform a single adjustment to focus out the image. Click and hold on the button to perform continuous adjustment until releasing the mouse.


→ +: A single click on the button, the lens will perform a single adjustment to focus in the image. Click and hold on the button to perform continuous adjustment until releasing the mouse.

**Auto Focus:** Auto focus on the objects.


**Restore:** Restore the camera to default status.

### 5.1.4.1.2 Controlling Your PTZ Camera

In live view, left click the mouse on the PTZ camera to bring up the Camera Quick Toolbar.


Click the PTZ button  to open the PTZ control panel.


**Mode:** Select the mode PTZ, Preset, Line Scan, Watch Mode, Tour, or Pattern Scan.


**Directional Buttons:** Click and hold the directional buttons to move the camera in the direction selected. Click the middle button  to continually rotate the camera towards the left (click any directional button to stop). To change the rotation speed, stop the rotation first, and start again after changing the speed.


**Speed:** Adjust the speed control to alter how fast or slow the camera will move when operating the pan or tilt functions. Move the slider to decrease or increase the speed.

**Lens Control Buttons:** Control the optical zoom, focus length and iris of the lens.


→  Single click on the button, the lens will perform a single adjustment to zoom out the image and then auto focus. Click and hold on the button to perform continuous adjustment until you release the mouse button.

→  Single click on the button, the lens will perform a single adjustment to zoom in on the image and then auto focus. Click and hold on the button to perform continuous adjustment until you release the mouse button.

→  Click and hold the button to decrease the focal length.

→  Click and hold the button to increase the focal length.


→  Click to reduce the iris value, image will get darker.




→  Click to increase the iris value, image will get brighter.

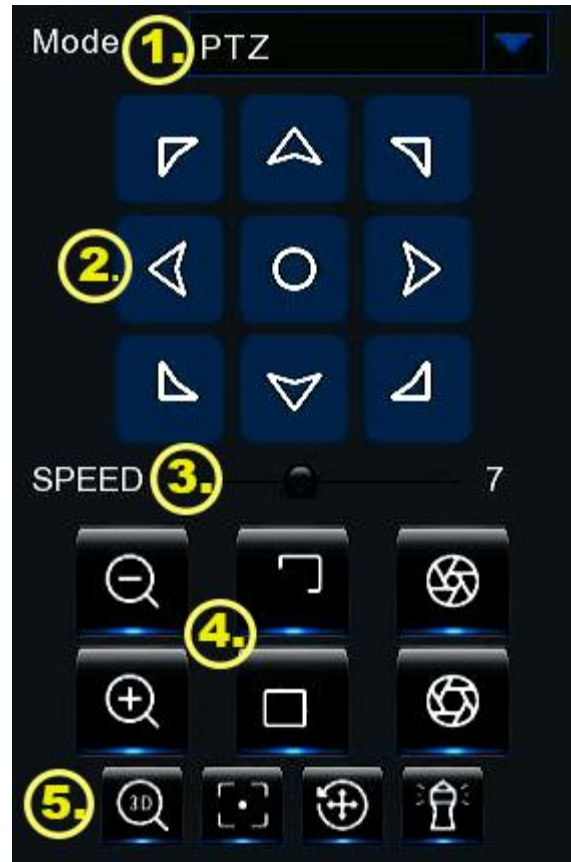


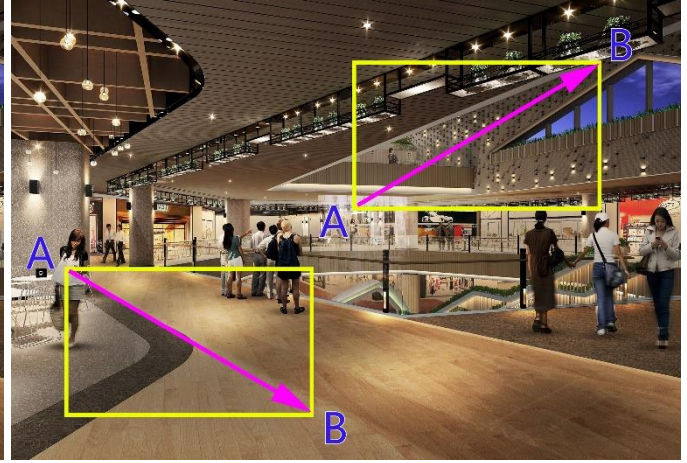
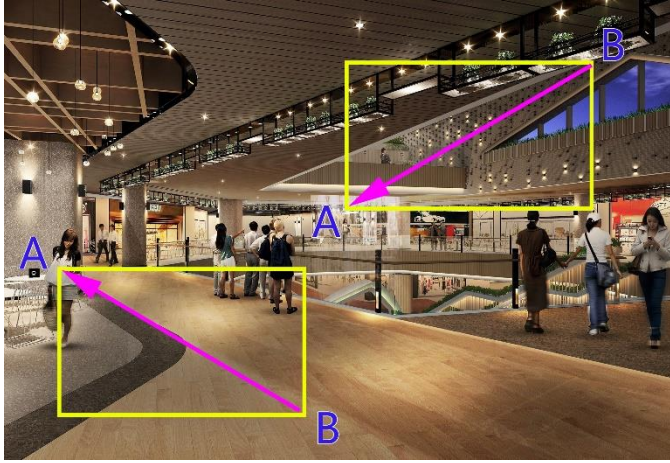
### 5.1.4.1.2.1 Controlling PTZ

1. Select PTZ mode.
2. Click the directional buttons to move the camera.
3. To adjust the speed to pan or tilt.
4. To control the optical zoom, focus and iris of the lens.
5. Using functional buttons:

-  3D PTZ control. Click to control the pan/tilt/zoom directly on the live view screen.
- Click on any point in the image, and then the image will be centered on the clicked point.
- Drag: You can zoom in or zoom out the image by dragging your mouse on the image:
- Click on the image and hold the mouse to drag a rectangle from point A to point B, the camera will zoom in to make the objects closer.
- Click on the image and hold the mouse to drag a rectangle from point B to point A, the camera will zoom out to make the objects farther.

-  Auto focus.
-  Load default values. All the parameters set. will be lost and the default values will be restored.
-  Start or stop 'Watch Mode'. See more on [5.1.4.1.2.3 Watch Mode](#).





## 5.1.5 Privacy Zone

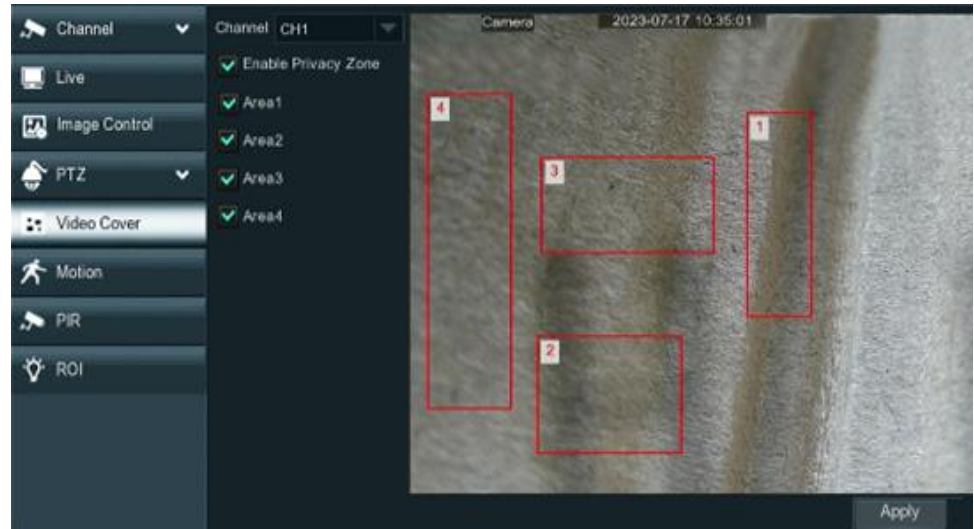
This function can obscure all or part of the image for privacy (create up to 4 privacy masks per camera). Areas obscured by a mask will not be shown in live view or recorded video.

**Channel:** Select a camera to edit.

### Enable Privacy Zone:

Enable/disable this function.

**Area 1 - 4:** Select the area number to enable. Up to 4 privacy masks can be enabled per camera. The masks will appear in the Live View windows.

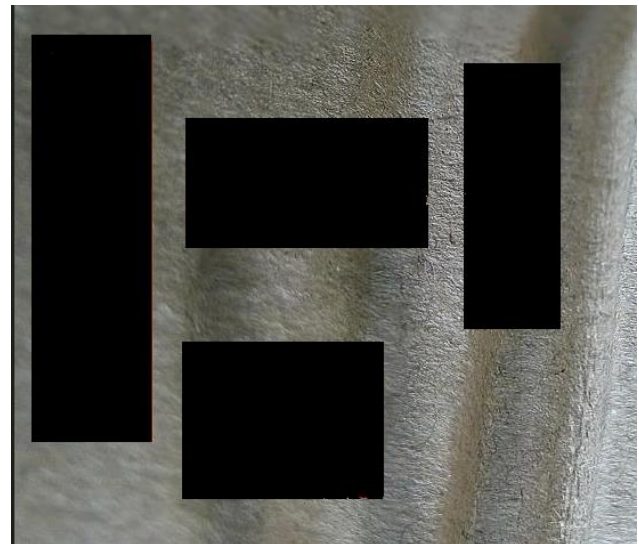


Depending on the number of masks enabled, each mask will be numbered.

- To reposition the mask, click and hold inside the mask then move the mask to the desired location.
- To resize the mask, click and hold the bottom right corner of the mask then resize to the desired size.
- It is possible to reposition and resize each mask to overlap each other.
- Click "**Apply**" to save the settings.

Areas obscured by a mask will not be shown in live view or recorded video.

- To remove a mask, un-check the box next to the relevant area.
- Click "**Apply**" to save.





## 5.1.6 Motion Detection

Configure motion parameters. When motion has been detected by one or more cameras, the NVR will send an alert. It does this by sending an email alert with an attached image from the camera to use as a reference (if this option is enabled)

Channel	Setup	Switch	Sensitivity	SMD by Recorder
CH1		<input checked="" type="checkbox"/>	3	Motion
CH2		<input checked="" type="checkbox"/>	3	Motion
CH3		<input checked="" type="checkbox"/>	3	Motion
CH18		<input checked="" type="checkbox"/>	8	Motion

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

**Sensitivity:** Change the sensitivity level. The higher the number, the more sensitive the camera will be when detecting motion.

**SMD by Recorder:** Used for cameras that do not support intelligent motion detection.

**SMD by Camera:** Used for the IP cameras that support intelligent motion detection.

There are four detection types available: **Motion**, **Human**, **Vehicle**, and **Vehicle&Human**.

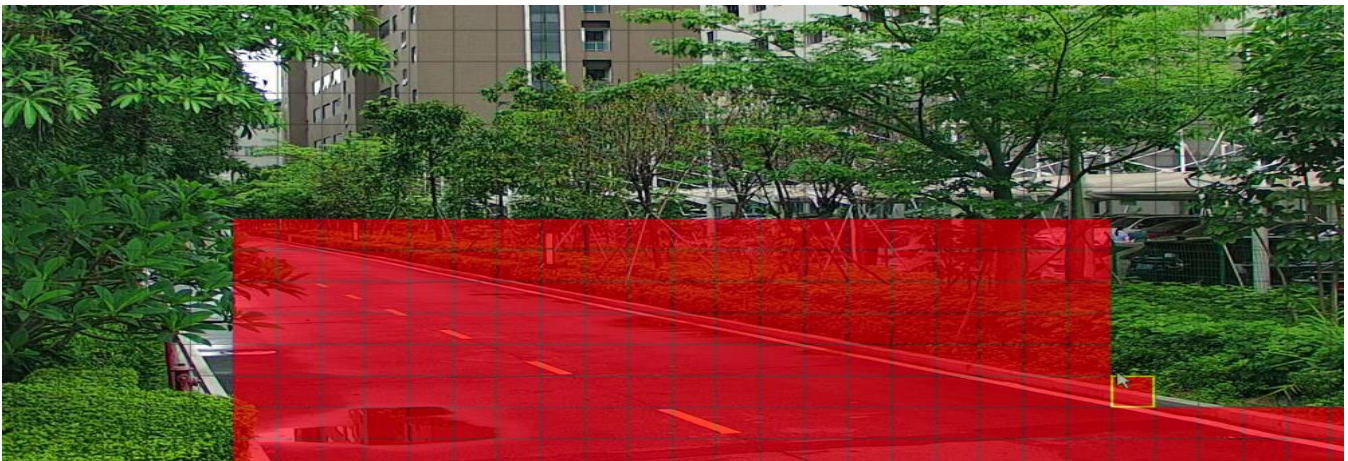
- **Motion:** The camera will detect all motion events, including movements of human beings, vehicles, animals, trees, etc.

If the camera or NVR supports smart motion detection (SMD), these are the advanced motion trigger options to choose from:

- **Human:** The camera only alerts when a human being is detected.
- **Vehicle:** The camera only alerts when vehicles are detected.
- **Vehicle & Human:** The camera only alerts when human beings and/or vehicles are detected.

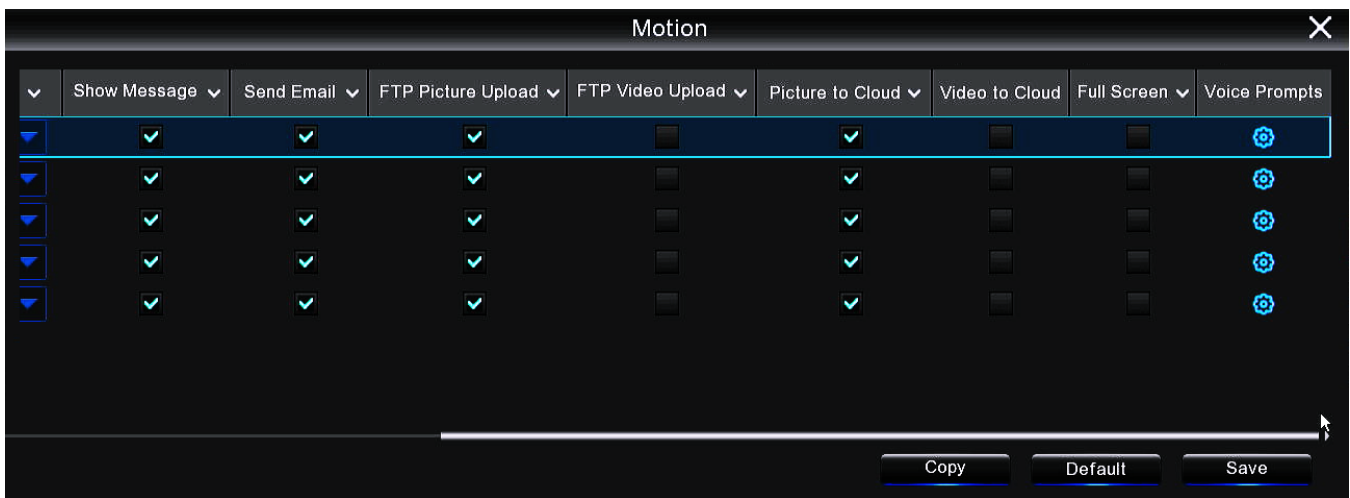
**Motion Detection Area Setup:** Click  icon to open the setup page.

1. The entire image is marked for motion detection (red blocks) by default.
  - Click "**Clear All**" to clear the entire default detection area.
2. To create a new detection area: Press and hold the left mouse button to select a cell or square, then click and drag to select the area that motion will be detected. Release the mouse to finish.
3. Multiple areas can be created. Any cell or square can be enabled to detect motion. The same action also applies when deleting an area.
4. Movement outside of the motion detection areas won't be detected therefore will not trigger recording or event notifications.
5. Adjust the sensitivity if needed, right-click the mouse to exit.
6. Click "**Apply**" to save the settings.



### 5.1.6.1 Motion Alarm Settings



Click the **Alarm** button to change options for alarm notifications and more.



**Buzzer:** When motion is detected, it is possible to enable the NVR's buzzer to sound for a predetermined length of time. Click the drop-down menu to select a time.


**Latch Time:** To configure the external alarm time when motion detection is triggered.

**Record:** This option allows selecting additional cameras to start recording when motion is detected by the camera.

- Click the drop-down arrow  to select which cameras to record or not.
- Click  icon, check the "Record Channel" box to enable recording.
- Check the 'All' box or check the box in front of the channel number to select which cameras you want to trigger to record.



**Post Recording:** This option instructs the NVR to record for a set length of time after a motion event has occurred. For most environments, the default setting is adequate.

**Show Message:** When motion is detected, the alarm icon  will appear on screen.

**Send Email:** An email alert will be sent when an alarm event is detected. Un-check the box to disable this.

**FTP Picture Upload:** Check the box to save snapshots to your ftp server when a motion event has occurred.

**FTP Video Upload:** Check the box to save videos to an ftp server when motion is triggered.

**Picture to Cloud:** Check the box to save snapshots to the cloud via Dropbox or Google Drive when motion detection is triggered.

**Video to Cloud:** Check the box to save videos to the cloud via Dropbox or Google Drive when motion detection is triggered.

**Full Screen:** Check the box to view the camera full screen in Live View when motion detection is triggered.

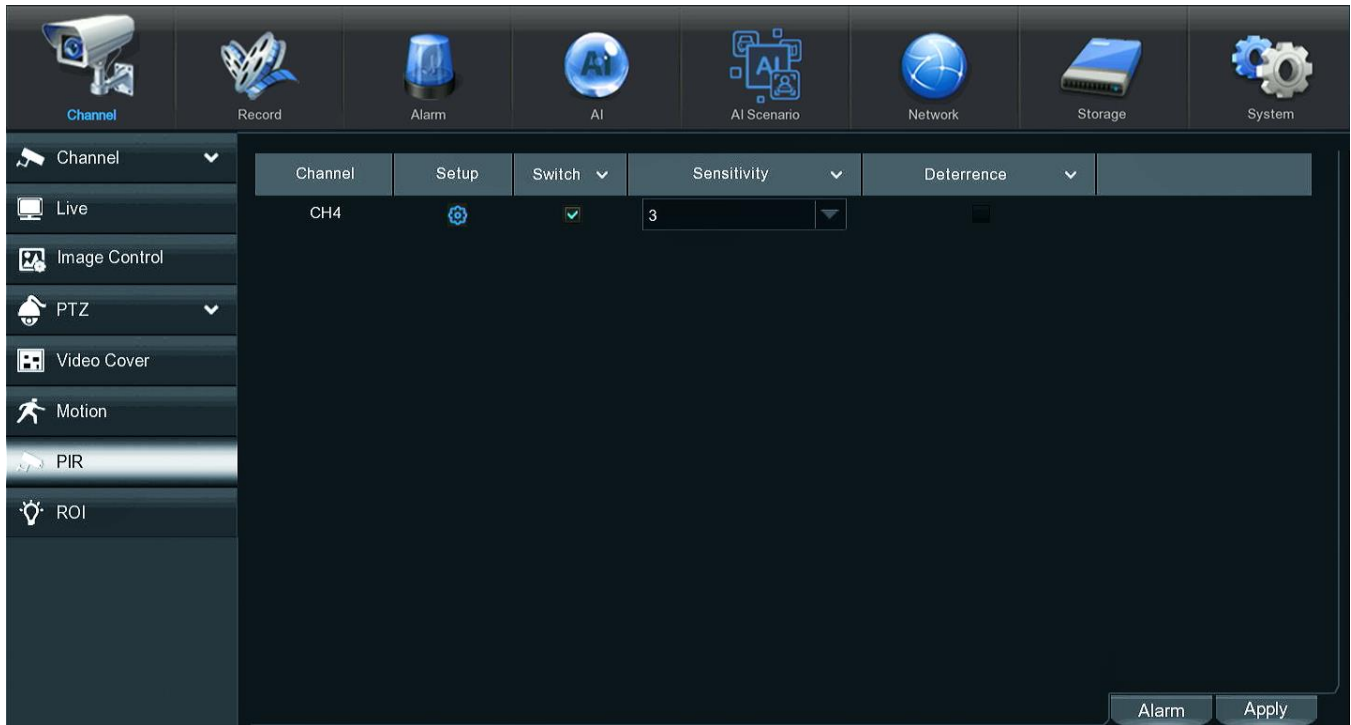
**Default:** Click "Default" to revert to default settings.

**Copy:** Use the "Copy" option to apply these settings to the other connected cameras.

**Save:** Click "Save" to save settings.

## 5.1.7 PIR

Configure PIR (passive infrared motion detector) parameters. When a PIR alarm has been detected by one or more cameras, the NVR can send an email alert with an attached image from the camera to use as a reference (if this option is enabled).



**Switch:** Enable or disable PIR detection. (Only for cameras that support PIR)

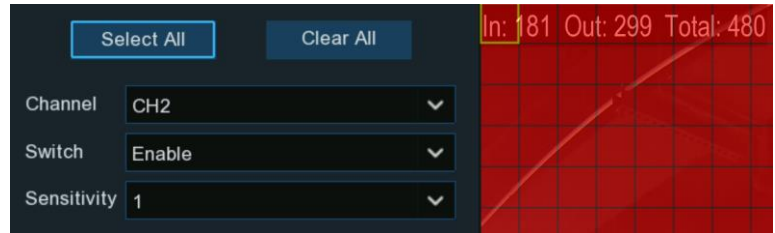
**Sensitivity:** Set the sensitivity level. The higher the number, the more sensitive your camera will be when detecting PIR.

**Deterrence:** Check the box to light up the built-in white lights of the camera when a PIR event is detected.

**PIR Detection Area Setup:** Click  icon into the setup page.

The entire image is selected for PIR detection (red blocks) by default.

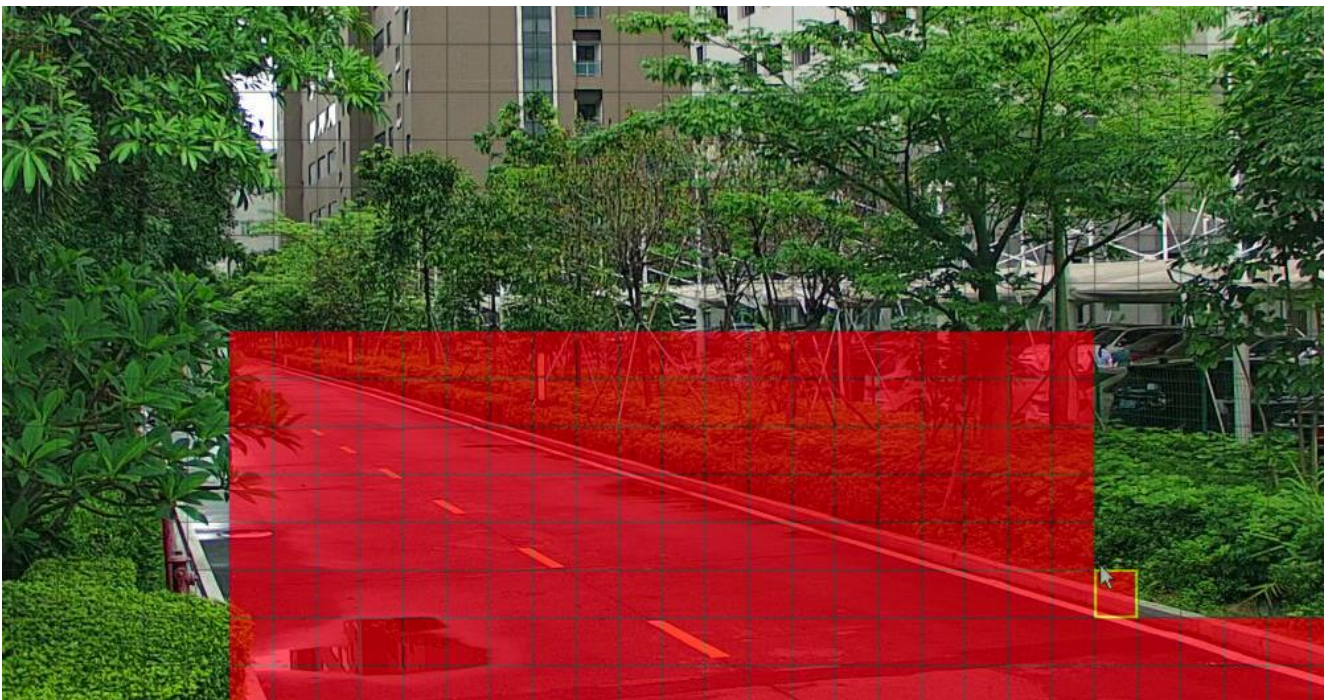
→ Click "**Clear All**" to clear the entire detection area.



To create a new detection area: Press and hold the left mouse button to select a cell or square, then click and drag to select the area where PIR will be detected.

Multiple areas can be created. Any cell or square can be enabled to detect PIR. The same action also applies when deleting an area.

Movement outside of the selected areas will not be detected therefore will not trigger recording or event notifications.

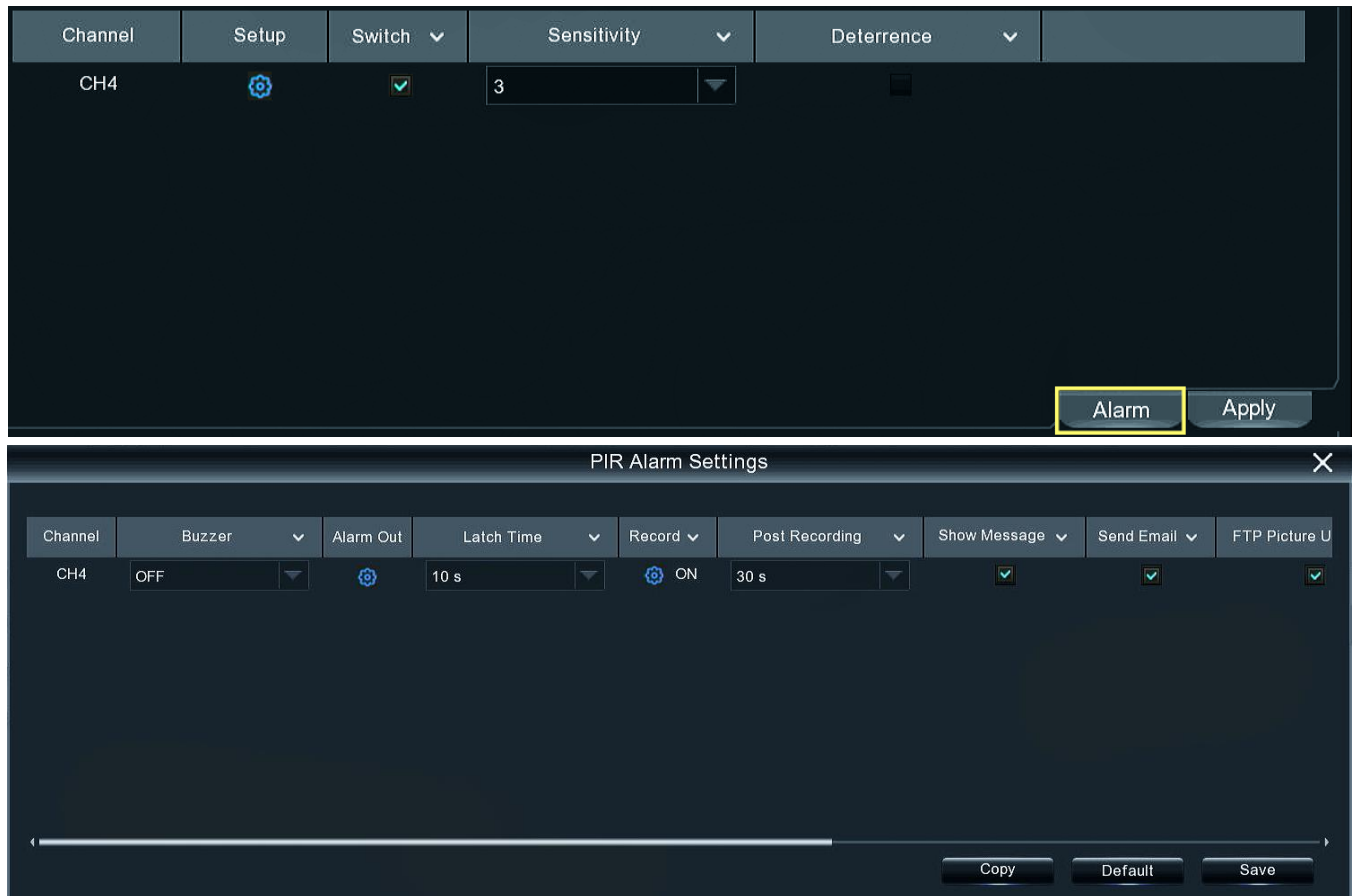


→ Adjust the sensitivity if needed. Right-click the mouse to exit.

Click "**Apply**" to save the settings.

### 5.1.7.1 PIR Alarm Settings

Click the **Alarm** button to change options for alarm notifications, alerts and more.



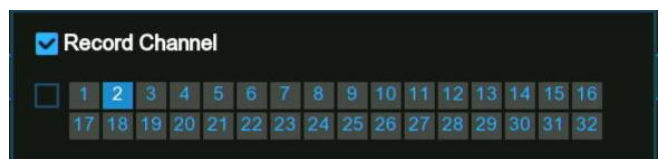
**Buzzer:** When a PIR alarm is detected, it is possible to enable the NVR's buzzer to sound for a predetermined length of time.

- Click the drop-down menu to select a time.
- **Latch Time:** Configure the external alarm time when PIR is triggered.

**Record:** Allows selecting additional cameras to start recording when PIR is detected.

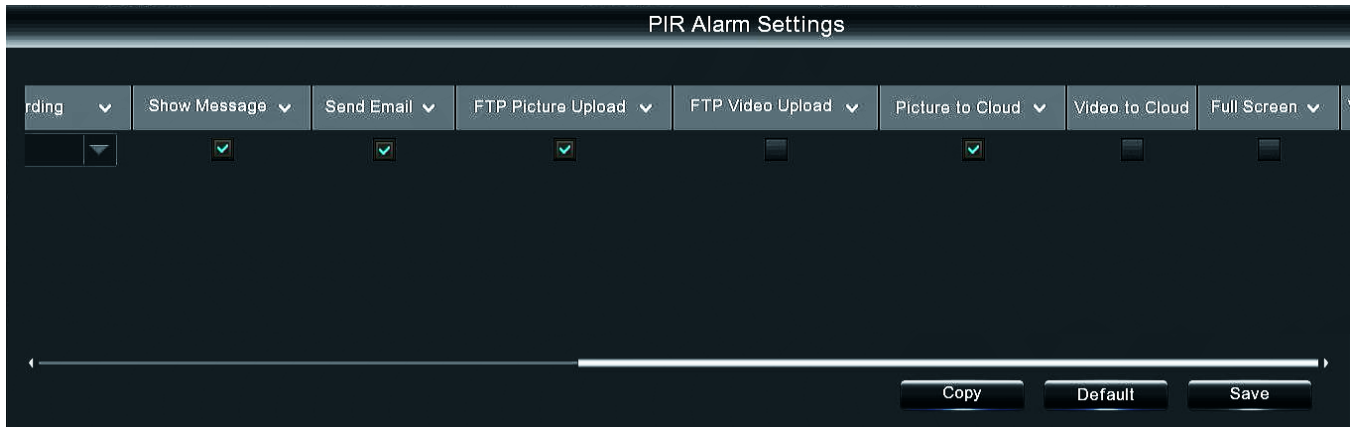
- **Click** the drop-down arrow to select which cameras to record or not.
- **Click** icon, check the "Record Channel" box to enable recording.
- Check the 'All' box or the box in front of the channel number to select cameras.

**Post Recording:** This option instructs the NVR to record for a set length of time after a PIR event has occurred.



**Show Message:** When motion is detected, the alarm icon 🚨 will appear on screen.

**Send Email:** An email alert will be sent when an alarm event is detected. Un-check the box to disable this.



(Slide to the right to view more options)

**FTP Picture Upload:** Check the box to save snapshots to an FTP server when PIR is triggered.

**FTP Video Upload:** Check the box to save videos to an FTP server when PIR detection is triggered.

**Picture to Cloud:** Check the box to save snapshots to the cloud via Dropbox or Google Drive when PIR detection is triggered.

**Video to Cloud:** Check the box to save videos to the cloud via Dropbox or Google Drive when PIR detection is triggered.

**Full Screen:** Check the box to view the camera full screen in Live View when PIR detection is triggered.

**Default:** Click "Default" to revert to default settings.

**Copy:** Use the "Copy" option to apply all settings to the other connected cameras.

**Save:** Click "Save" to save settings.



## 5.2 Record

The Record and Capture menus are accessible from the Main Menu. Access and change the recording frame rate, resolution and recording schedule for each camera connected.

### 5.2.1 Encoding Settings

Configure the recording video and network transmission picture quality. Generally, Mainstream defines the recording video quality which will be saved in the HDD. Substream defines the video quality being viewed via remote access.

#### 5.2.1.1 Video Encoding

Configure the encode parameters of mainstream, substream and mobile stream.

Configure	Channel	Stream Type	Resolution	FPS	Video Encode Type	Bitrate Control	Bitrate Mode	Bitrate	Audio
- Mainstream	CH1	Normal	2592 x 1944	20	H.265	CBR	Predefined	4096	✓
- Substream	CH2	Normal	3840 x 2160	20	H.265	CBR	Predefined	5120	✓
	CH3	Normal	3840 x 2160	20	H.265	CBR	Predefined	5120	✓
- Mobilestream	CH4	Normal	3840 x 2160	20	H.265	CBR	Predefined	6144	✓
- Audio	CH18	Normal	1920 x 1080	15	H.265	CBR	Predefined	4096	✓

Total Band Width: 56Mbps, Used Band Width: 31Mbps

Apply

**Resolution:** This parameter defines how large the recorded images will be. The higher the number, the greater the detail available. By default, the recording resolution of the camera is auto selected by the NVR.

**FPS:** This parameter defines the number of frames per second the NVR will record. By default, the recording frame rate of the camera is auto selected by your NVR.

**Video Encode Type:** It will list the codecs which are supported by the connected camera. The H.265 codec will compress the information more efficiently and provide the best video quality for a given bandwidth between each camera and the NVR. The other codec is H.264 which will affect the reliability of the connection between each camera and the NVR due to the higher

bandwidth used in H264. H265 has a higher compression rate than H264. H265 is recommended over H264 as it uses about half the bandwidth and uses about half the storage space.

**Bitrate Control:** Select the bitrate level. For a simple scene, such as a gray wall constant bitrate is suitable (**CBR**). For more complex scenes, such as a busy street variable bitrate is suitable (**VBR**).

**Video Quality:** Available for VBR only, select the recording quality that will define the variable bitrate used, from lowest to highest.

**Bitrate Mode:** Set the bitrate, manually. Choose **User-defined** mode.

→ To select a predefined bitrate, choose **Predefined** mode.

**Bitrate:** This parameter corresponds to the data transfer speed that the NVR will use to record video. Recordings that are encoded at higher bitrates will be of better quality. For cameras that monitor medium to high traffic areas, increase the bitrate to add more detail to the camera's image. Just be aware this will increase the bandwidth required. Increase the bitrate in small increments until you are satisfied with the image quality.

**Audio:** If the camera has a built-in microphone or external audio input device, it is possible to record the audio streaming together with the video streaming. Check the box to disable or enable. Make sure Audio streaming has been enabled in [5.2.1.2. Audio Encoding](#) to record the audio streaming.



(Slide to the right to view more options)

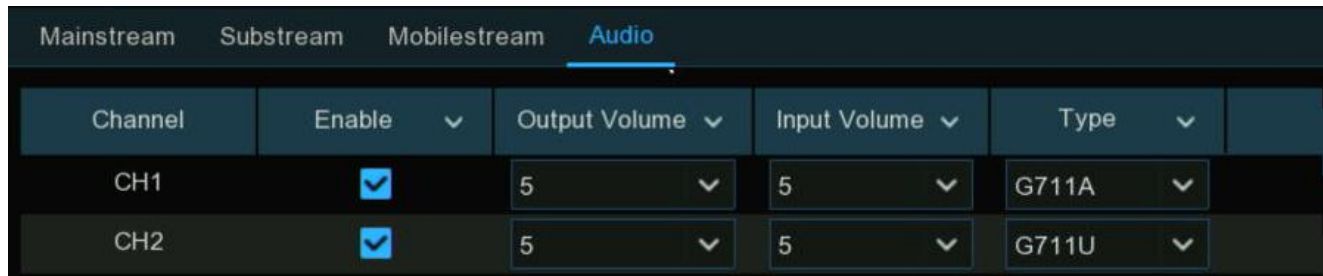
**I Frame Interval:** This configures the number of partial frames that occur between full frames (I-Frames) in the video stream. For example, in a scene where a door opens and a person walks through, only the movements of the door and the person are stored. The stationary background that occurs in the previous partial frames are not encoded.

**ETR:** If the camera supports ETR function, it is possible to set independent video streaming for normal and alarm triggered recording.

For example, decrease the frame rate and bitrate to reduce the recording file size in normal recording, and increase the frame rate and bitrate to have clearer and more fluent camera images when an event occurs. **ERT** is available for mainstream only.

### 5.2.1.2 Audio Encoding

If the camera has a built-in microphone or supports an external audio input device, it is possible to enable the audio stream, define the input/output volume, and select the audio encode type.



Channel	Enable	Output Volume	Input Volume	Type
CH1	<input checked="" type="checkbox"/>	5	5	G711A
CH2	<input checked="" type="checkbox"/>	5	5	G711U

**Enable:** Turn on or turn off the audio streaming.

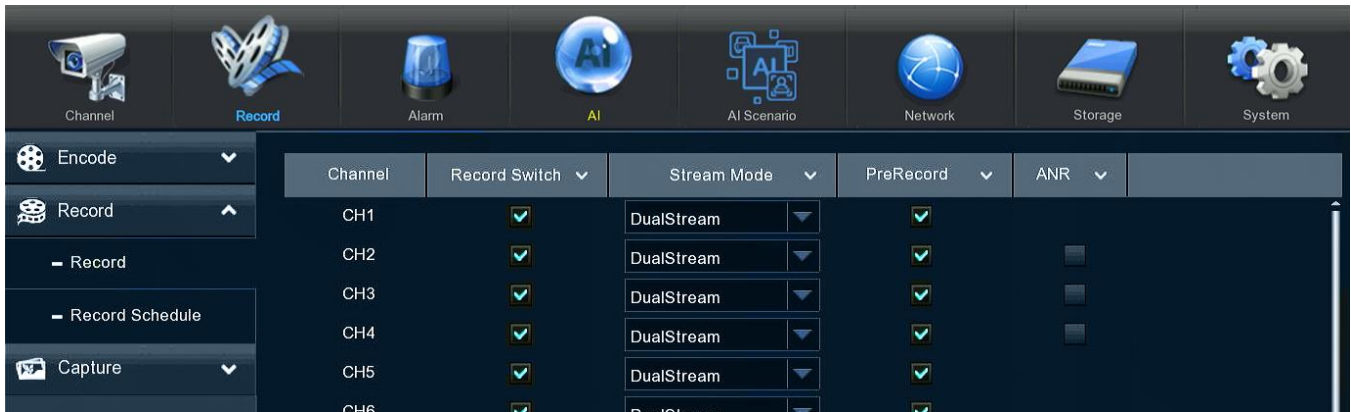
**Output Volume:** Choose the audio output volume.

**Input Volume:** Choose the audio input volume.

**Type:** Choose the audio encoding codec.

## 5.2.2 Record

Configure the recording parameters for each channel.



### 5.2.2.1 Recording Configuration

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

**Stream Mode:** By default, the NVR will record both Mainstream and Substream video (known as **Dual stream**).

- **Mainstream** (high quality) is used for video playback when using your NVR console directly.
- **Substream** (reduced quality) is used for remote playback on your mobile device. If remote playback is not required, select Mainstream recording only to save storage space.

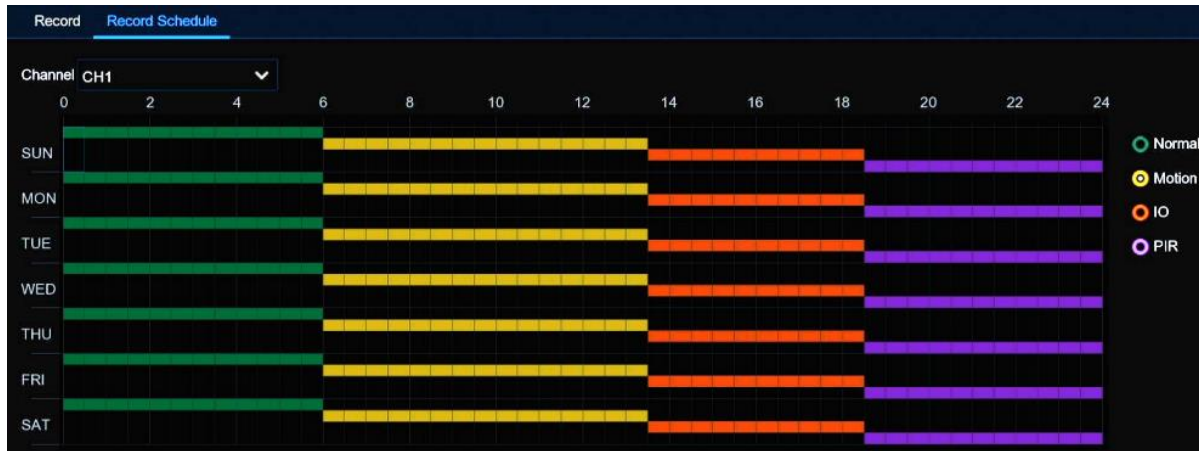
**Prerecord:** Allows the NVR to record for several seconds before an event occurs. It is recommended to leave this enabled.

**ANR:** Videos are stored in the NVR when network connection is normal between the NVR and cameras. With ANR (Automatic Network Replenishment) function, the camera would start continuous recording and store videos in an SD card when the connection between NVR and camera is lost. Once the network is restored, the video recordings will be sent to the NVR's storage. It is recommended to enable ANR if your camera supports this function.

## 5.2.2.2 Recording Schedule

Specify when the NVR records video and define the recording mode for each channel. The recording schedule allows setting daily and hour by hour schedules for normal (continuous) recording, motion recording, I/O alarm recording & PIR recording (supporting cameras only)

By default, the NVR is set to continuous recording 24hr/7days a week. Each camera can have a different schedule if needed. The schedule is color coded to represent the event type.



1. Choose the **Channel** to set.
2. Click on the mode option button to choose one of the recording modes:
  - ➔ **Normal:** The NVR will constantly record for time period set. The time slot will be marked green for normal recording.
  - ➔ **Motion:** The NVR will only record when motion is detected. The time slot will be marked yellow for motion detection recording.
  - ➔ **IO:** The NVR will only record when external sensor is triggered. The time slot will be marked red for sensor triggered recording.
  - ➔ **PIR:** The NVR will only record when PIR detection occurs. Time slot will be marked purple for PIR detection recording.
3. Drag the cursor to select the hours to schedule the recording for the desired time period.
4. The set recording schedule is valid only for one channel.
  - ➔ To use the same recording schedule for other channels, use the **Copy** option.
5. If a time slot is black, there will be no recording during that time period.
6. Click **Apply** to save the settings.

## 5.2.3 Capture Images

Enable and set a schedule for the NVR to take a snapshot each time an event occurs.

*Note: The maximum resolution of a captured image is 1920x1080.*

### 5.2.3.1 Capture Configuration



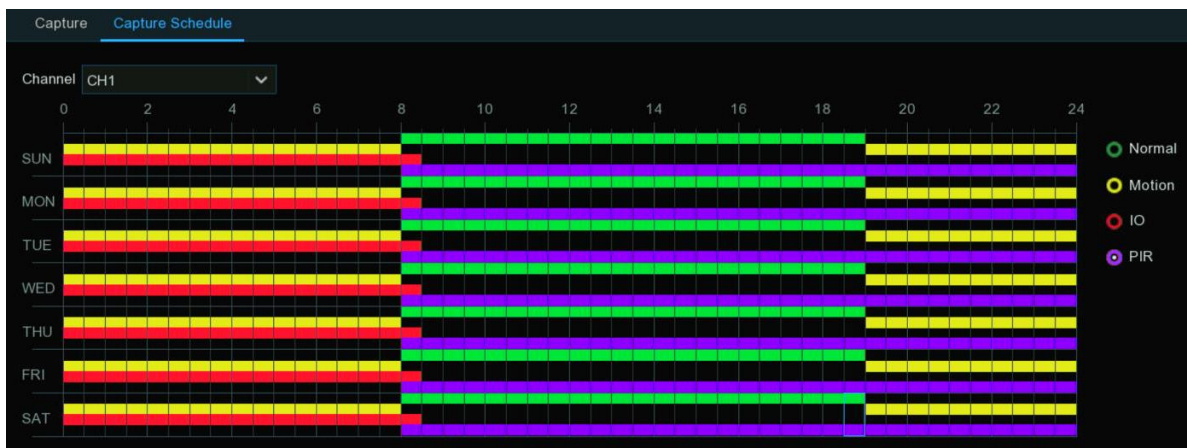
**Auto Capture:** When enabled, the NVR will take a snapshot each time an event occurs.

**Normal Interval:** The length of time that must elapse before a snapshot is taken. For example, when setting a "Normal" capture schedule, a snapshot is taken every 5 seconds using the default selection. This setting can be changed.

**Alarm Interval:** When setting an alarm (Motion, IO or PIR) capture schedule, a snapshot is taken each time an alarm is triggered, according to the interval selected.

### 5.2.3.2 Capture Schedule

Create a capture schedule so the NVR can take snapshots when an event has occurred or to take snapshots using a time interval (every 5 seconds, for example).



1. Choose a **Channel** to set.
2. Click on the mode button to choose one of the capture modes:
  - ➔ **Normal:** A snapshot is taken according to the normal interval setting selected (every 5 seconds, for example). Time slot will be marked green for normal capture.
  - ➔ **Motion:** A snapshot is taken during a motion alarm. The schedule will be marked yellow for motion detection capture.
  - ➔ **IO:** The NVR will only record when external sensor is triggered. The schedule will be marked red for IO recording.
  - ➔ **PIR:** The NVR will only record when PIR detection occurs. The schedule will be marked purple for PIR recording.
3. Click and drag the cursor to select the hours for the snapshot/capture schedule.
4. The set capture schedule is valid only for one channel. To set the same schedule to other channels, use the **Copy** option.
5. If a time slot is black, there will be no snapshots/capture during that time.
6. Click **Apply** to save the settings.

## 5.3 Alarm Settings

Configure the alarm actions when events occur.




Motion	Channel	Buzzer	Alarm Out	Latch Time	Record	Post Recording	Show Message	Send Email	FTP Picture Upload
PIR	CH1	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I/O	CH2	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Combination Alarm	CH3	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	CH4	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>






### 5.3.1 Motion Alarm

**Buzzer:** When motion is detected, it is possible to enable the NVR's buzzer to sound for a predetermined length of time. Click the drop-down menu to select a time.

**Latch Time:** Configure the external alarm time when motion is triggered.

**Record:** Allows selecting additional cameras to start recording when motion is triggered.

- **Click** the drop-down arrow  to select which cameras to record or not.
- **Click**  icon, check the "Record Channel" box to enable recording.
- Check the 'All' box or check the box in front of the channel number to select which cameras you want to trigger to record.
- **Post Recording:** This option instructs the NVR to record for a set length of time after a motion event has occurred. For most instances, the default setting is adequate.
- **Show Message:** When motion is detected, the alarm icon  will appear on screen.
- **Send Email:** An email alert will be sent when an alarm event is detected. Un-check the box to disable this. (Setting up email in the Network settings is required.)

▼	Show Message ▼	Send Email ▼	FTP Picture Upload ▼	FTP Video Upload ▼	Picture to Cloud ▼	Video to Cloud	Full Screen ▼	Voice Prompts
▶	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▶	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▶	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▶	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▶	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

(Slide to the right to view more options)

- **FTP Picture Upload:** Enable to save snapshots to an FTP server for motion events.
- **FTP Video Upload:** Enable to save videos to an FTP server for motion events.
- **Picture to Cloud:** Enable to save snapshots to the cloud via Dropbox or Google Drive for motion events.
- **Video to Cloud:** Enable to save videos to the cloud via Dropbox or Google Drive. for motion events.
- **Full Screen:** Enable to view the camera full screen in Live View for motion events.
- **Motion:** Configure the motion detection. See more on [5.1.6. Motion Detection](#).
- **Default:** Click "Default" to revert to default settings.
- **Copy:** Use the "Copy" option to apply all settings to the other connected cameras.
- **Apply:** Click "Apply" to save settings.




## 5.3.2 PIR Alarm

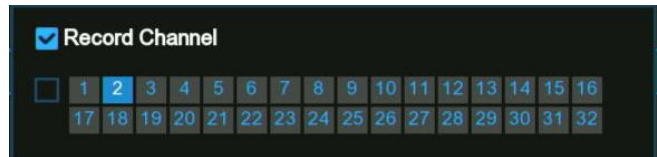


**Buzzer:** When PIR is detected, it is possible to enable the NVR's buzzer to sound for a predetermined length of time. Click the drop-down menu to select a time.

**Latch Time:** Configure the external alarm time when PIR detection is triggered.

**Record:** This option allows selecting additional cameras to start recording when PIR is detected by the camera

→ Click the drop-down arrow  to select which cameras to record or not.




→ Click  icon, check the "Record Channel" box to enable recording.

→ Check the 'All' box or check the box in front of the channel number to select which cameras you want to trigger to record.

→ **Post Recording:** This option instructs the NVR to record for a set length of time after a PIR event has occurred. For most instances, the default setting is adequate.

Show Message	Send Email	FTP Picture Upload	FTP Video Upload	Picture to Cloud	Video to Cloud	Full Screen	Voice Prompts
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

(Slide to the right to view more options)


- **Show Message:** When motion is detected, the alarm icon  will appear on screen.
- **Send Email:** An email alert will be sent when an alarm event is detected. Un-check the box to disable this. (Setting up email in the Network settings is required.)
- **FTP Picture Upload:** Enable to save snapshots to an FTP server for PIR events.
- **FTP Video Upload:** Enable to save videos to an FTP server for PIR events.
- **Picture to Cloud:** Enable to save snapshots to the cloud via Dropbox or Google Drive for PIR events.
- **Video to Cloud:** Enable to save videos to the cloud via Dropbox or Google Drive. for PIR events.
- **Full Screen:** Enable to view the camera full screen in Live View for PIR events.
- **PIR Detection:** Configure the PIR detection. See more on [5.1.7. PIR](#).
- **Default:** Click "Default" to revert to default settings.
- **Copy:** Use the "Copy" option to apply all settings to the other connected cameras.
- **Apply:** Click "Apply" to save settings.

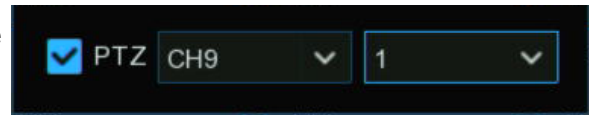
### 5.3.5 PTZ Linkage

If there are one or more PTZ cameras connected to the NVR, it is possible to set the actions of PTZ cameras when motion event, I/O sensor alarm and/or PIR alarm occurs, to move your PTZ cameras field of view to a selected preset position.


PTZ Linkage						
Channel	Switch	Alarm	PTZ1	PTZ2	PTZ3	PTZ4
CH1	<input type="checkbox"/>		OFF	OFF	OFF	OFF
CH2	<input type="checkbox"/>		<input checked="" type="checkbox"/> All	<input checked="" type="checkbox"/> PIR	<input checked="" type="checkbox"/> I/O	OFF
CH3	<input type="checkbox"/>		<input checked="" type="checkbox"/> Motion	<input checked="" type="checkbox"/> CC	<input checked="" type="checkbox"/> Sound Detection	OFF
CH4	<input type="checkbox"/>		<input checked="" type="checkbox"/> SOD	<input checked="" type="checkbox"/> AD	<input checked="" type="checkbox"/> FD	OFF
CH5	<input type="checkbox"/>		<input checked="" type="checkbox"/> Video Tampering	<input checked="" type="checkbox"/> QD	<input checked="" type="checkbox"/> LPD	OFF
CH6	<input type="checkbox"/>		<input checked="" type="checkbox"/> CD	<input checked="" type="checkbox"/> LPR	<input checked="" type="checkbox"/> FR	OFF
CH7	<input type="checkbox"/>		<input checked="" type="checkbox"/> RSD	<input checked="" type="checkbox"/> LCD[AI]	<input checked="" type="checkbox"/> PD & VD[AI]	OFF
CH8	<input type="checkbox"/>		OFF	OFF	OFF	OFF

**Switch:** Check the box to enable the PTZ linkage function.

**Alarm:** Click  to choose the alarm source to enable the PTZ linkage function when the selected alarm occurs.

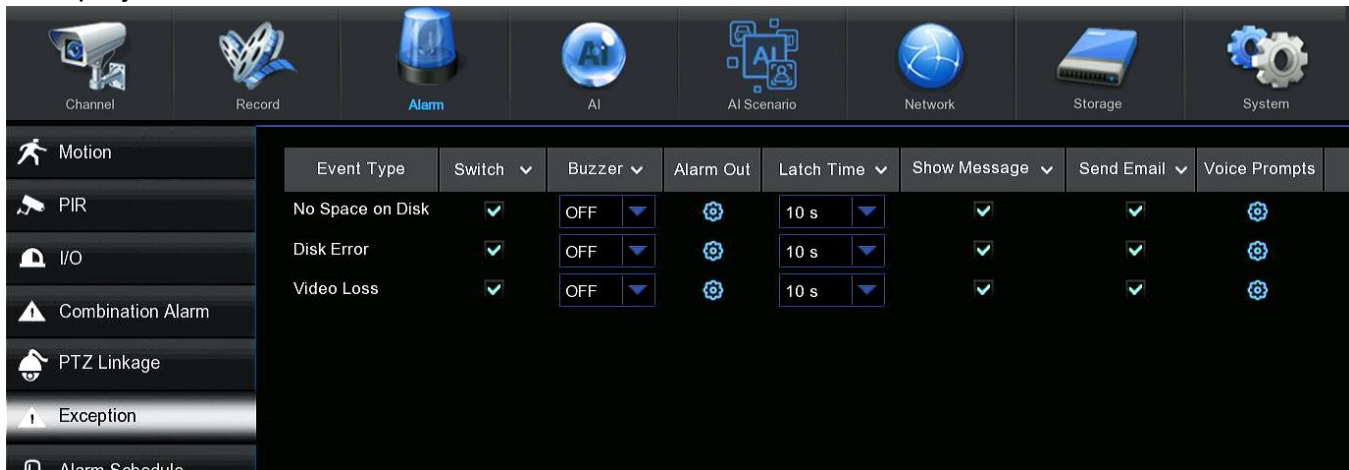


**PTZ:** For each channel, there are a maximum of 4 PTZ preset positions available.

- Click  on PTZ 1~4, select the check point to enable.
- Select the channel of connected PTZ camera and choose a preset point.

### 5.3.6 Exception Alarm

Set up system alerts for abnormal events in the NVR.



**Event Type:** There are three event types that your NVR will detect as an exception:

- **No Space on Disk:** No space left on the hard drive.
- **Disk Error:** Hard drive error.
- **Video Loss:** One or more channels have lost connection.

**Buzzer:** When one of these alarms is detected, it is possible to enable the NVR's buzzer to sound for a predetermined length of time. Click the drop-down menu to select a time.

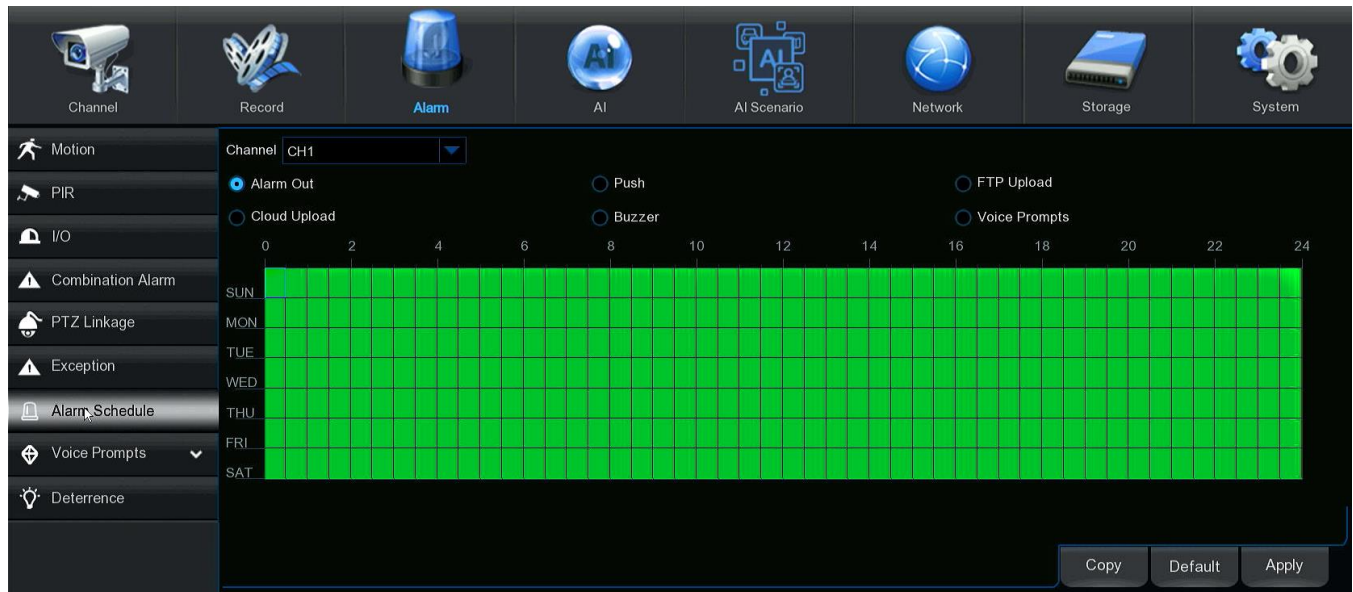
**Latch Time:** Configure the external alarm time when the detection is triggered.

**Show Message:** Select to display a message on the screen when a No Space on Disk, Disk Error, or Video Loss event happens.

**Send Email:** Enable the NVR to send an email alert when an exception is triggered.

## 5.3.7 Alarm Schedule

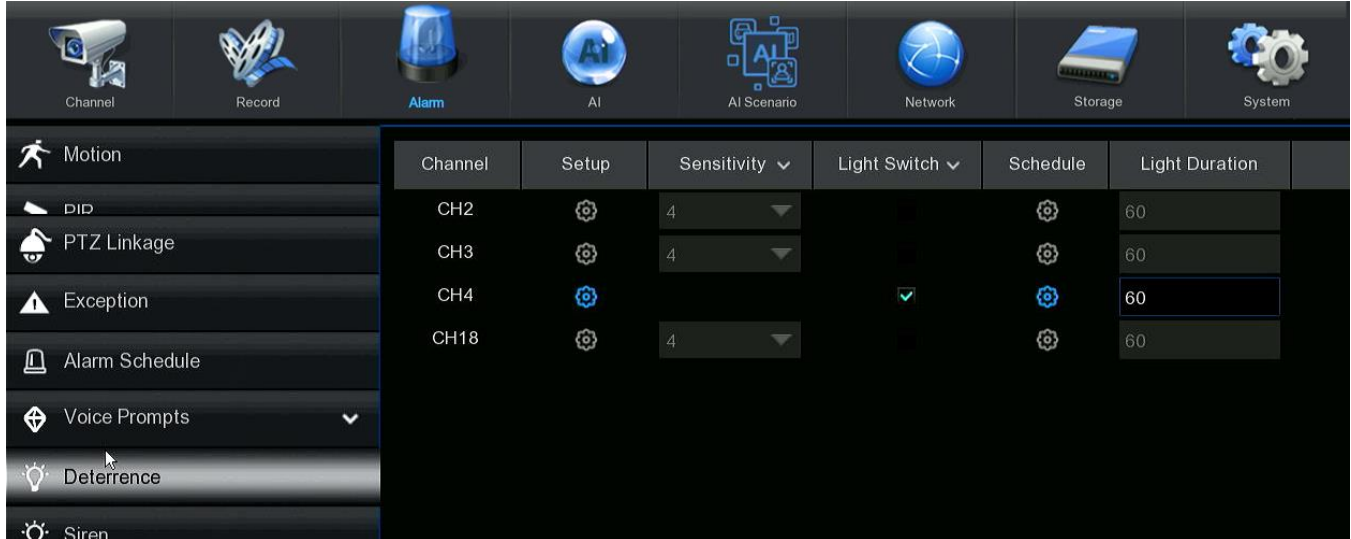
Set the schedule individually for Alarm out, Push Notification, FTP Upload, Cloud Upload, Buzzer and Voice Prompts.



1. **Channel:** Select the channel to set the schedule.
2. Click on the radio button of the type of event to set a schedule for.
3. Click and drag the cursor to select the time frame. The green portions of the schedule will be active for alarm notifications.
4. The schedule is valid only for the selected channel.
- ➔ To use the same schedule for other channels, use the **Copy** function.
5. Click **Save** to save the settings.

## 5.3.9 Deterrence

Configure the action of built-in white lights ("spotlights") and speaker of deterrence cameras when an alarm event is triggered. Cameras that support these features are required.



**Setup:** Click button to open the configuration page.

- **Light:** Click the drop-down menu to enable the camera's white light.
- **Light Brightness:** Adjust the flood light value. (Not all cameras support this setting) The greater the value, the brighter the light will be.
- **Duration:** Change the length of time the white light will remain lit when an alarm is triggered.
- **Color Image:** If enabled, the night vision images will be in color. If disabled, the night version images will remain black & white.
- **Deterrence Mode:** Click the drop-down menu to select a solid light (**Warning Light**) or a flashing light (**Strobe Light**). When picking **Strobe Light**, you can select a low, medium or high **Strobe Frequency** setting.
  - **Warning Light:** Click the drop-down menu to enable the camera's warning light.
  - **Warning Light Duration:** Change the length of time the warning light will remain lit when an alarm is triggered.

**Schedule:** Click to configure the deterrence schedule:

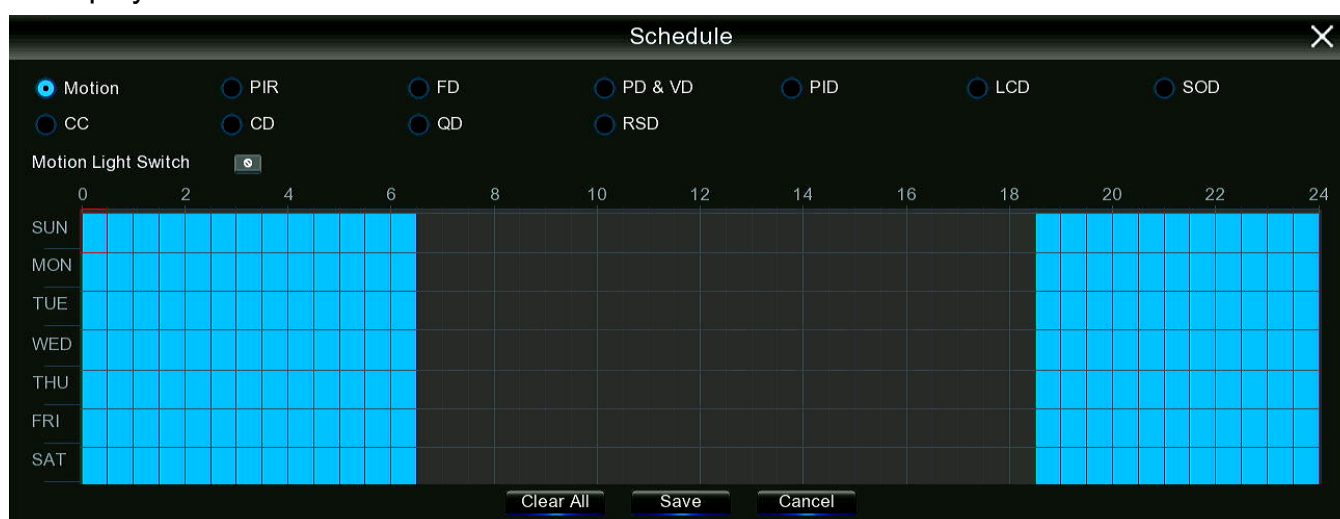
→ By default, the white lights will not trigger between 04:30 p.m. and 06:30 a.m., however that can be changed.

→ Each square represents 30 minutes. Using the mouse, click on a particular square to change or click and drag the mouse over the squares related to the time period to schedule. Squares in blue are active for deterrence.

→ Click "**Save**" to save changes made.

→ Right-click the mouse to exit.

When the camera is connected to the NVR with web port, the schedule interface might be displayed as shown below:



All supported alarm types are listed.

It is possible to configure the schedule for each individual alarm type.

→ Check the box of the alarm type to set.

→ Set the schedule accordingly.

→ Click "**Save**" to save changes made.

→ Right-click the mouse to exit.

### 5.3.10 Siren

Set the siren-related parameters of cameras directly connected to the NVR that have a built-in speaker.

**Channel:** Select the built in PoE port channel.

**Enable:** Enable/disable the siren function.

**Siren Type:** Select the siren audio file. By default, two audio files are provided. Up to three customized audio files (PCM format or WAV format) can be imported.

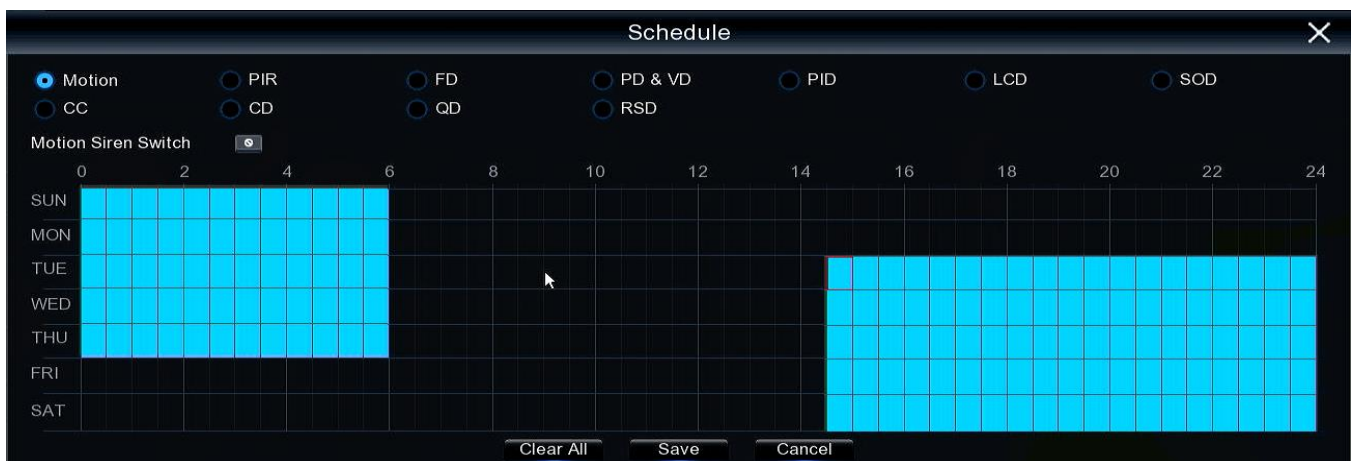
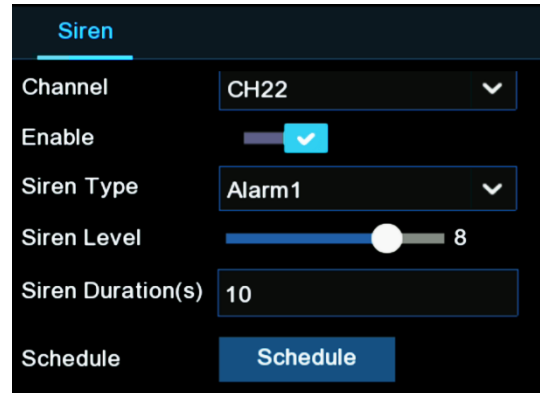
The audio sample rate of the imported file cannot exceed 8000 Hz, file size cannot exceed 256 KB. After selecting a customized audio file to be imported, a **Delete** button appears on the right of the file, click **Delete** to delete the audio file. (Only for cameras that support these functions)

**File Name:** If 'User-defined' for **Siren Type** is selected, enter the file name, and click the **Import** button on the right to import the customized audio file from a USB flash drive.

**Siren Level:** Set the siren volume level, which ranges from 1 to 10. The higher the level is, the louder the volume is.

**Siren Duration(s):** Set the siren duration. You can adjust the siren sounding time between 5 to 180 seconds.

**Schedule:** If the IP camera is connected to the NVR via the HTTP port, click **Schedule** to open the setting page.



If a channel is selected in the schedule, it indicates that the channel can trigger siren alarms during the corresponding period.

Set the siren linkage alarm and effective time of a function by selecting the corresponding function sub-tab and switch.

**Clear All:** Click to clear the selected status on all sub-tabs.

### 5.3.11 Disarming

After the one-click disarming function is enabled, it is possible to cancel the response of the device to various alarms. On this page set the relevant parameters including the disarming switch, channel, type, and schedule.

**Note:** The Exception system alarms are not controlled by one-click disarming.





**Disarming:** Enable/disable the one-click disarming function.

**Disarm Alarm Linkage Action:** Set the alarm linkage types to be disarmed.

**All:** Select to clear all the types.

**Buzzer:** Enable/disable the buzzer. When the one-click disarming function is enabled, select this option to disable the buzzer.

**Alarm Out:** Enable/disable external alarm output. When the one-click disarming function is enabled, select this option to disable the external alarm device when an alarm is triggered.

**Show Message:** Enable/disable the display messages function. When the one-click disarming function is enabled, select this option to not display the alarm messages when motion is detected on the preview page.

**Send Email:** Enable/disable email notifications. When the one-click disarming function is enabled, select this option to disable email notifications when an alarm is triggered.

**Full Screen:** Enable/disable the display in full screen function. When the one-click disarming function is enabled, select this option to stop the channel from displaying full-screen when the channel triggers an alarm.

**Channel:** Select the channels to be disarmed.

**Schedule:** Click **Setup** to open the schedule settings page.

If a channel is selected in the schedule, it indicates that the channel has disarming enabled within the corresponding period.



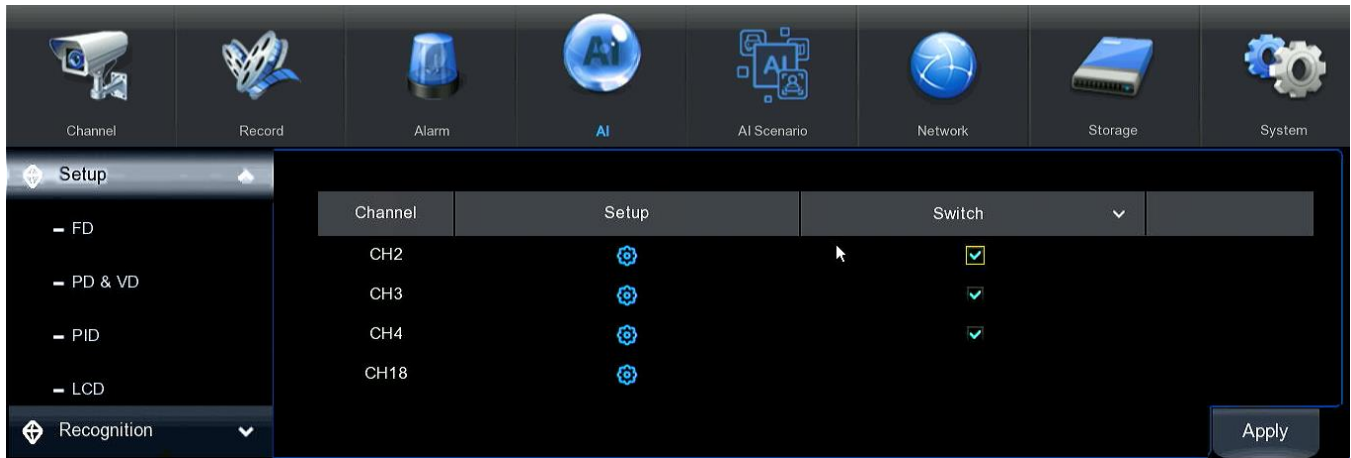
## 5.4 AI

Artificial Intelligence (AI) is a set of advanced functions to detect a variety of alarm events based on face detection, human detection, and vehicle detection. This section will be available if the NVR has AI capabilities and AI supporting cameras are used.

**Note:** The detection functions, including Face Detection, Human & Vehicle Detection, Perimeter Intrusion Detection, Line Crossing Detection, Cross Counting, Crowd Density Detection, Queue Length Detection and License Plate Detection, may be mutually exclusive due to system limitations. When the Switch checkbox is grey, another AI feature is already enabled in the camera. Most often multiple AI functions cannot be enabled in the same camera at the same time.

### 5.4.1.1. FD (Face Detection)

When human faces are detected, the NVR will activate recording, and it will also send an alert.



**Channel:** Choose the channel you want to set.

**Snap Mode:** Set how snapshots containing a recognized face will be captured. This can affect the number of facial recognition notifications that you will receive:

- **Real time Mode:** The camera tracks and captures the face of someone entering and leaving the facial detection area. There will be two notifications in the Alarm Notification Panel - one when the face is first detected and again as the face leaves the facial detection area.
- **Optimal Mode:** A single, 'best' snapshot of the face is captured.
- **Interval Mode:** Specify the number of snapshots to take and the time interval between snapshots.

**Snap Num:** The number of snapshots to take.

**Snap Frequency:** The time interval between snapshots.



**Apply Mode:** There are three options available:

- ➔ **Frontal View:** The facial recognition is optimized to scan for faces approaching the camera straight-on.
- ➔ **Multi Angle:** The facial recognition engine is optimized to scan faces approaching the camera from different angles.
- ➔ **Customize:** The facial recognition engine is optimized to scan for faces approaching the camera from customized angles.

**Roll Range:** Set the range of face rotation.

**Pitch Range:** Set the range of the face pitch.

**Yaw Range:** Set the range of face horizontal flipping.

**Picture Quality:** Set the picture quality.

**Frontal View Default:** Load default values for front view.

**Multi Angle Default:** Load default values for multi angle view.

**Min Pixel:** The minimum face size in pixels. The smaller the number of pixels, the more faces the camera can recognize. If the camera is recognizing too many unwanted distant faces, try increasing the minimum pixel value to train the camera to look for larger faces that are typically at a closer distance.

**Max Pixel:** The maximum face size in pixels. For the camera to detect faces within proximity to each other, try increasing the maximum pixel value, otherwise leave the default value.

**Face Enhance:** Face enhancement makes it easier to recognize moving faces, but it may lower the whole picture quality.

**Face Attribute:** Enable this function to detect gender, age, mask, glasses, and facial expression.

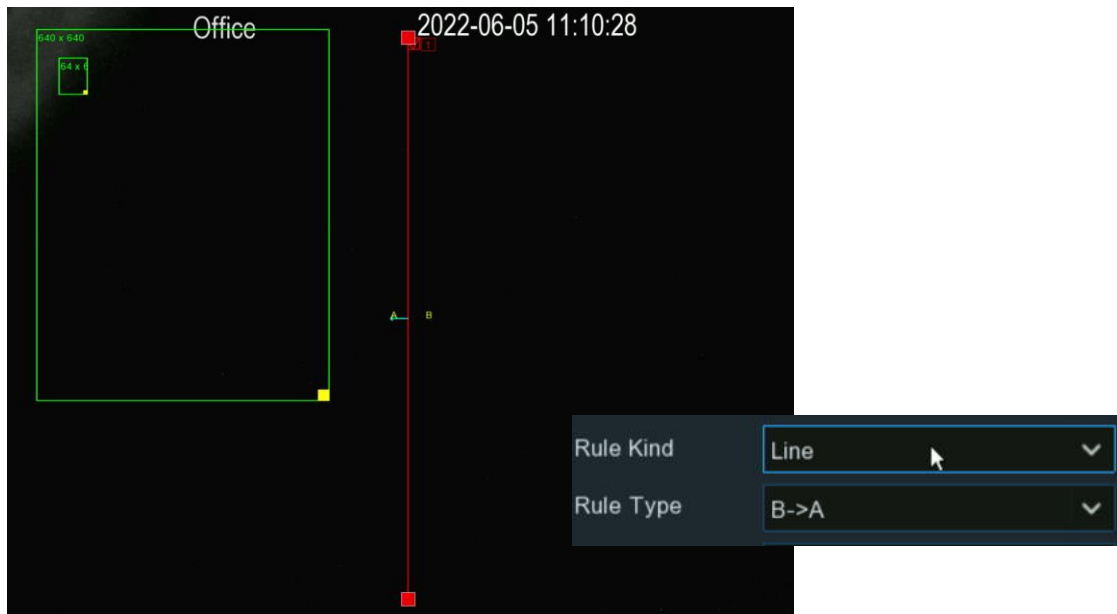
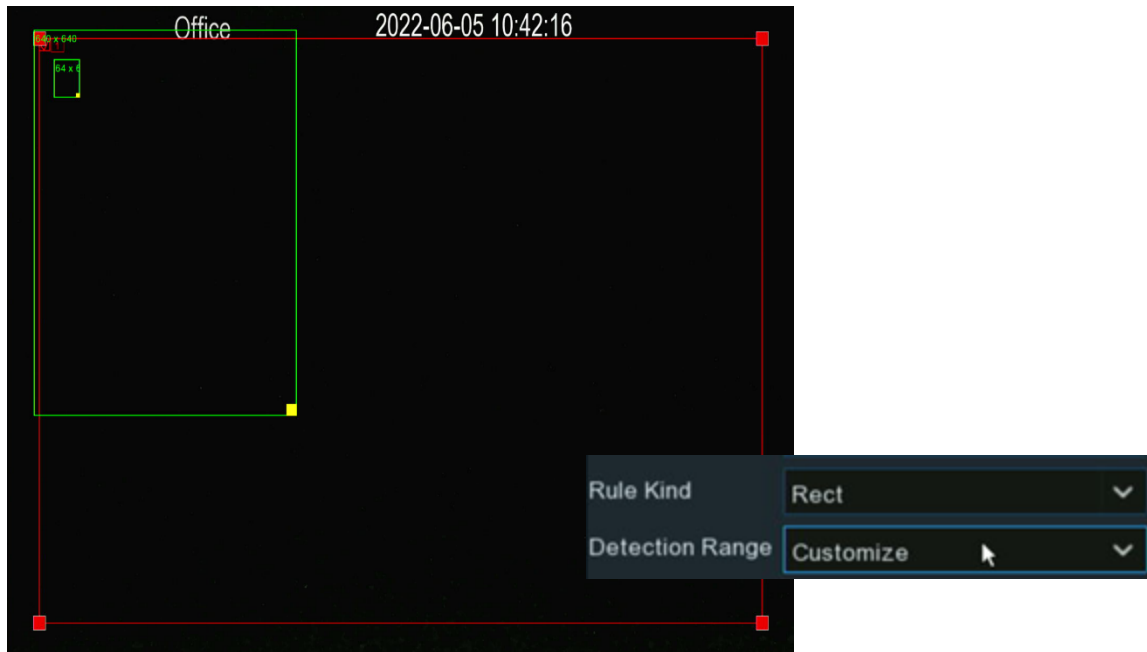
**Detection Mode:** In Static Mode, all objects in the camera's field of view will be analyzed. In Motion Mode, only moving objects will be analyzed.

**Rule Kind:** **Rect** (rectangular) and **Line** (linear).

→ **Rect** mode: If "**Full Screen**" is chosen, the entire view of the camera is enabled for face detection or choose "**Customize**" to adjust the size of rectangular to focus the detection in a certain area.

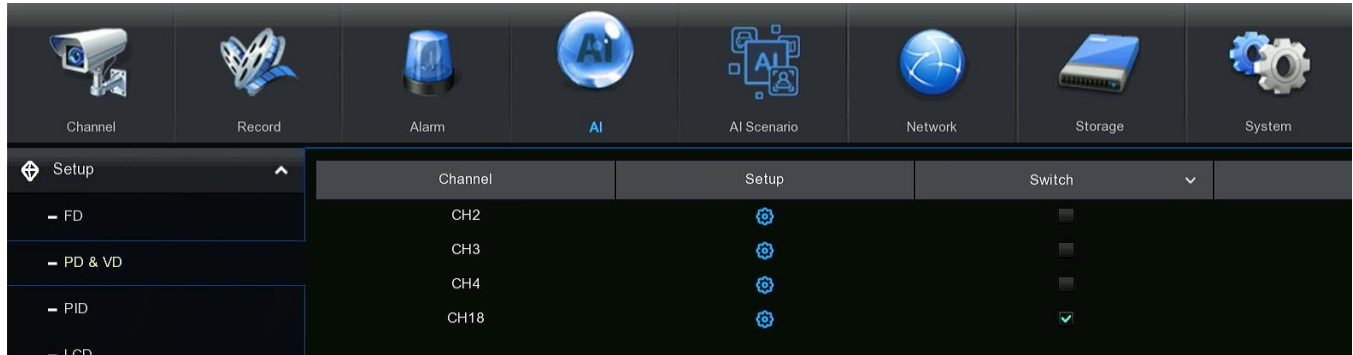
If **Line** mode is chosen, adjust the position, length of the line, and choose the detection direction from  $B \rightarrow A$  or  $A \rightarrow B$ .

**Dynamic Marking:** If Disable is selected, the green tracking frame that surrounds a detected face will not be visible during Live View mode and playback.



### 5.4.1.2 PD & VD (Human & Vehicle Detection)

When human beings and/or vehicles are detected, the NVR will activate recording, and it will also send an alert.



**Switch:** Check the box to enable human & vehicle detection.

**Setup:** Click setup to open the settings page.

**Channel:** Choose the channel to set.

**Snap Mode:** Set how snapshots containing a recognized object will be captured. This can affect the number of notifications that you will receive:

- ➔ **Default:** A single, 'best' snapshot of the detected human/vehicle is captured.
- ➔ **Real-time Mode:** The camera tracks and captures the people/vehicles entering and leaving the detection area. There will be two notifications in the Alarm Notification Panel - one when the human/vehicle is first detected and again as the human/vehicle leaves the detection area. This is useful to continuously monitor the people/vehicles in an area and get alerts in real-time.
- ➔ **Interval Mode:** Specify the number of snapshots to take and the time interval between snapshots.
  1. **Snap Num:** The number of snapshots to take.
  2. **Snap Frequency:** The time interval between snapshots.

**Min Pixel:** The minimum object size in pixels. The smaller the number of pixels, the more objects the camera can recognize. If the camera is recognizing too many unwanted distant objects, try increasing the minimum pixel value to have the camera look for larger objects that are typically at a closer distance.

**Max Pixel:** The maximum object size in pixels. If you would like the camera to detect objects within proximity to each other, try increasing the maximum pixel value, otherwise leave the default value.



**Sensitivity:** Adjust the sensitivity level of the detection area. The higher the number, the more sensitive it will be when detecting objects.

**Detection Type:** Choose one or more of the detection types.

**Detection Mode:** In Static Mode, all objects in the camera's field of view will be analyzed. In Motion Mode, only moving objects will be analyzed.

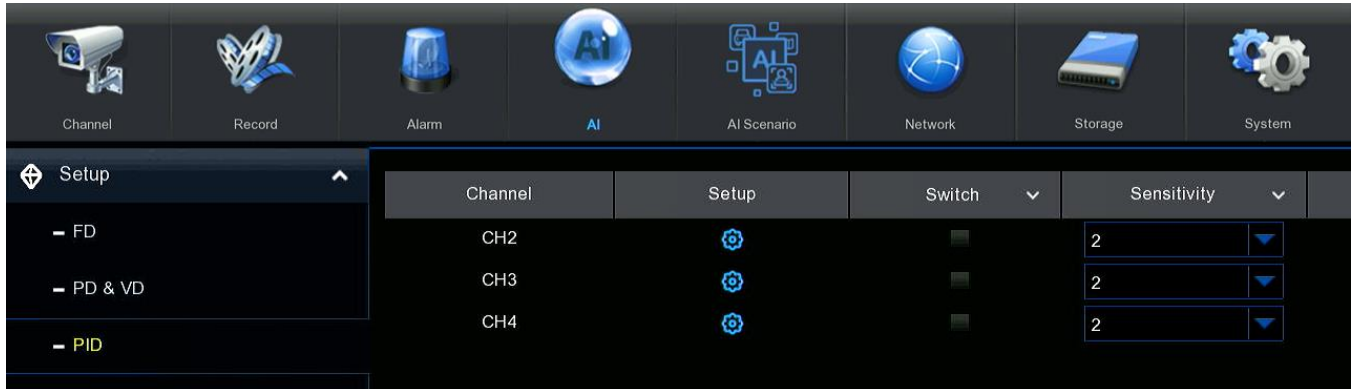
**Detection Area:** Choose "**Full Screen**", to have the entire view of the camera enabled for human and/or vehicle detection. Or choose "**Customize**" to adjust the size of rectangular to focus the detection in a certain area.

**Dynamic Marking :** If Disable is selected, the green tracking frame that surrounds a detected object will not be visible during Live View mode and playback.

**PTZ Auto Tracking:** If a PTZ camera (the camera must support this function) is connected, this function might be available. Enable to activate the PTZ auto tracking function. View more on [5.1.4.1.2.1 Controlling PTZ](#).

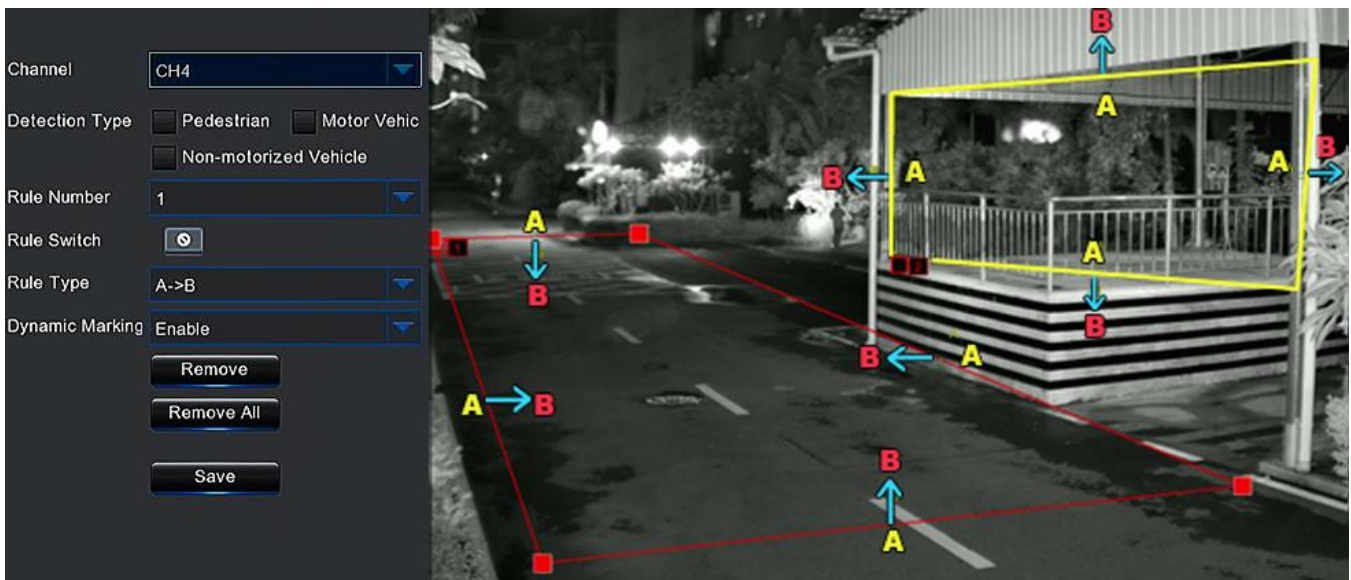
### 5.4.1.3 PID (Perimeter Intrusion Detection)

Perimeter Intrusion Detection detects people, vehicles or other objects which enter and loiter in a defined virtual region. The NVR will record and send notifications when a PID alarm is triggered.



**Switch:** Enable/disable the Perimeter Intrusion Detection.

**Sensitivity:** Adjust the sensitivity level of the PID detection. The higher the number, the more sensitive the PID detection will be.

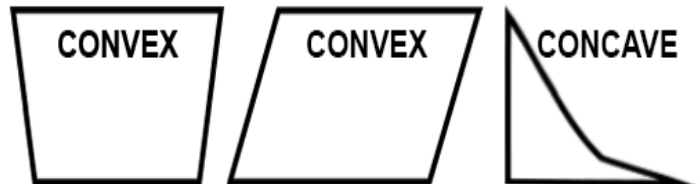




**Setup:** Click  to open the settings page.

1. **Channel:** Select the channel.
2. **Detection Type:** Select the detection targeted object/s.
3. **Rule Number:** Select the number of PID areas. Maximum of 4 areas.
4. **Rule Switch:** Enable/disable PID
5. **Rule Type:** Select one of the following:
  - ➔ A→B: Only detects activity crossing from side A to side B.
  - ➔ B→A: Only detects activity crossing from side B to side A.
  - ➔ A↔B: Will detect activity from either side B to side A or side A to side B.

6. Use the mouse to click 4 points in the camera image to draw a virtual region. The shape of the region must be a convex polygon. Concave polygons will not save.



7. Click **Save** to save your settings.
8. To modify the position or shape of the region, click the red box in the region; the borders of the region will change to red. Long press the left mouse button to move the position of the region, or drag the corners to resize the region.
9. To remove a region from the camera image, click the red box in the region and click **Remove**. **Remove All** will delete all regions.
10. **Dynamic Marking:** Enable/disable the green tracking frame that surrounds a detected object to be visible/invisible during live view and playback.

### 5.4.1.4 LCD (Line Crossing Detection)

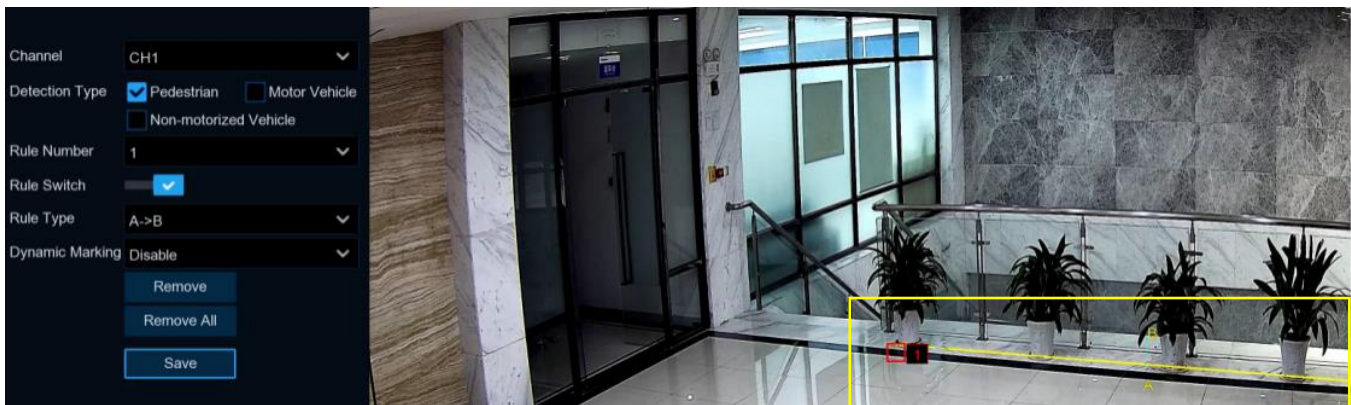
Line Crossing Detection detects people, vehicles or other objects that cross a defined virtual line. The NVR will record and send notifications when an LCD alarm is triggered.



**Switch:** Enable/disable Line Crossing Detection.

**Sensitivity:** Adjust the sensitivity level. The higher the number, the more sensitive the detection will be.

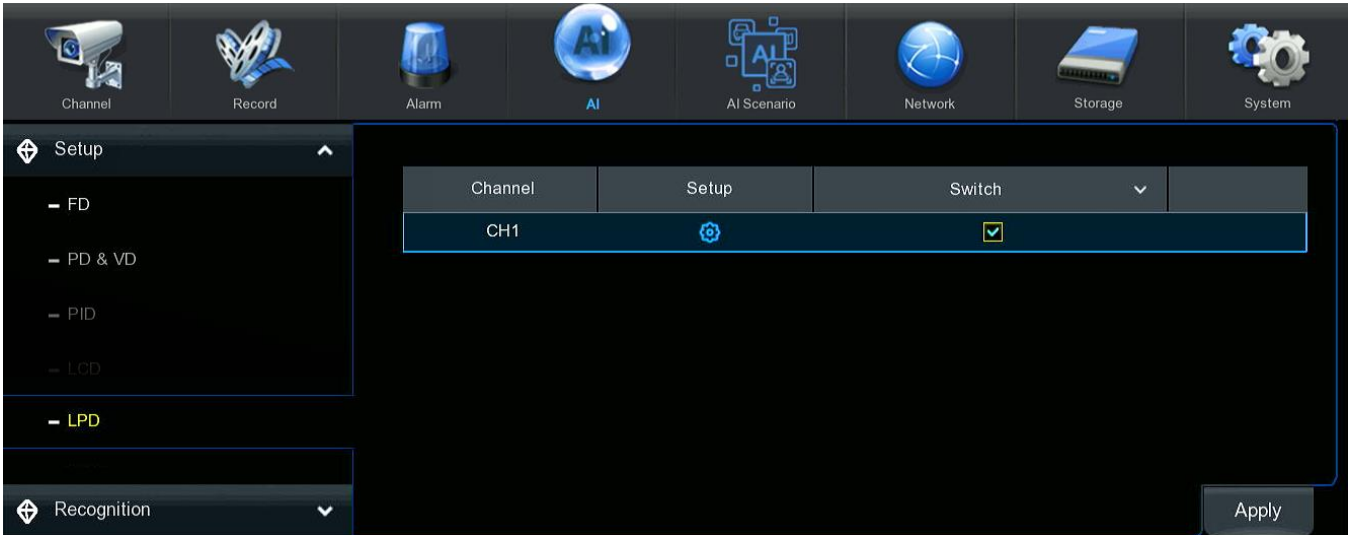
**Setup:** Click to open the settings page.



1. **Channel:** Select the channel.
2. **Detection Type:** Select one or more of the detection types.
3. **Rule Number:** Select which line rule to set or change. (Maximum of 4 lines in the same image)
4. **Rule Switch:** Enable/disable LCD.
5. **Rule Type:** Select the rule type for each line.
  - ➔  $A \rightarrow B$ : Will only detect the activities crossing from side A to side B of the line.
  - ➔  $B \rightarrow A$ : Will only detect the activities crossing from side B to side A of the line.
  - ➔  $A \leftrightarrow B$ : Will detect the activities crossing either side B to side A or side A to side B.
6. **Use** the mouse to click 2 points in the camera image to draw a virtual line.
7. Click **Save** to save the settings.
8. To modify the position or length of the line, click the red box on the line; the color of the line will change to red. Long press the left button of the mouse to move the line, or drag the end points to modify the length or position of the line.
9. To remove a line from the camera image, click the red box in the line, click **Remove**. Click **Remove All**: to delete all lines.
10. **Dynamic Marking:** Enable/disable the green tracking frame that surrounds a detected object to be visible/invisible during live view and playback.

### 5.4.1.9 LPD (License Plate Detection)

License Plate Detection, also called "Automatic License/Number Plate Recognition (ANPR)", helps to detect, and record license plate numbers.



1. **Channel:** Select a channel.
2. **Snap Mode:** Select how snapshots containing a readable license plate will be captured. This can affect the number of license plate detection notifications received.
  - ➔ **Default Mode:** a single, 'best' snapshot of the license plate is captured.
  - ➔ **Real-time Mode:** the camera tracks and captures the license plate of vehicles entering and leaving the detection area. Two notifications will be in the Alarm Notification Panel - one when the license plate is first detected and again as the vehicle leaves the detection area. This is useful to continuously monitor the vehicle's presence in an area and get alerts in real-time.
  - ➔ **Interval Mode:** Specify the number of snapshots to take and the time interval between snapshots.
    - **Snap Num:** The number of snapshots to take.
    - **Snap Frequency:** The time interval between snapshots.
3. **Min Pixel/ Max Pixel:** Set the minimum and maximum number of pixels for the license plate size.
4. **Sensitivity:** Adjust the sensitivity level. The higher the number, the more sensitive the detection will be.
5. **Detection Type:** Select the license plate type:
  - ➔ European license plate: used in European countries.
  - ➔ American license plate: used in United States.
6. **Detection Mode:** Select a detection mode.
  - ➔ **Static Mode:** All license plates in the camera's field of view will be analyzed.
  - ➔ **Motion Mode:** Only license plates of moving vehicles will be analyzed.
7. **Detection Range:** Select one.
  - ➔ **Full Screen:** The entire view of the camera is enabled as the detection area.
  - ➔ **Customize:** Adjust the size of the detection region.
8. **Dynamic Marking:** Enable/disable the green tracking frame that surrounds a detected object to be visible/invisible during live view and playback.
9. **LPD Enhance:** Enable/disable license plate detection enhancement.

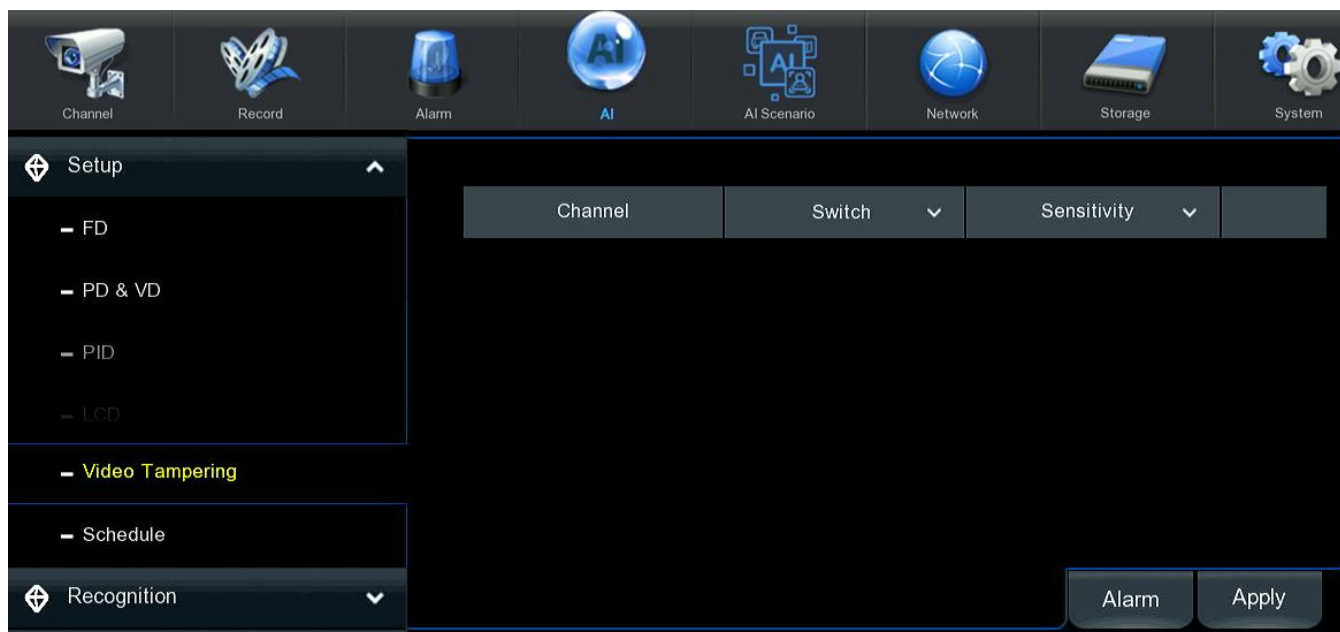
- ➔ **Day Level:** Set the daytime level which applies to daytime scenarios. The larger the level value is, the brighter the image is. The lower the level value is, the darker the image is. The level value range is 0–255.
- ➔ **Night Level:** Set the nighttime level, which applies to nighttime scenarios. The larger the level value is, the brighter the image is. The lower the level value is, the darker the image is. The level value range is 0–255.

**Note:** When the LPD function is enabled, the image brightness of the camera can be adjusted based on the configured level value. Meanwhile, the device automatically adjusts its daytime level or nighttime level based on whether the camera is enabled with IR mode. The two application scenarios are independent of each other.

To use LPD enhancement, you need to set **Exposure Compensation** to **Disable** and set **Shutter** to **Auto** on the image control page. After LPD enhancement is enabled, **Time Exposure** cannot be modified.

### 5.4.1.13 Video Tampering

Video Tampering detects the absence of camera images.

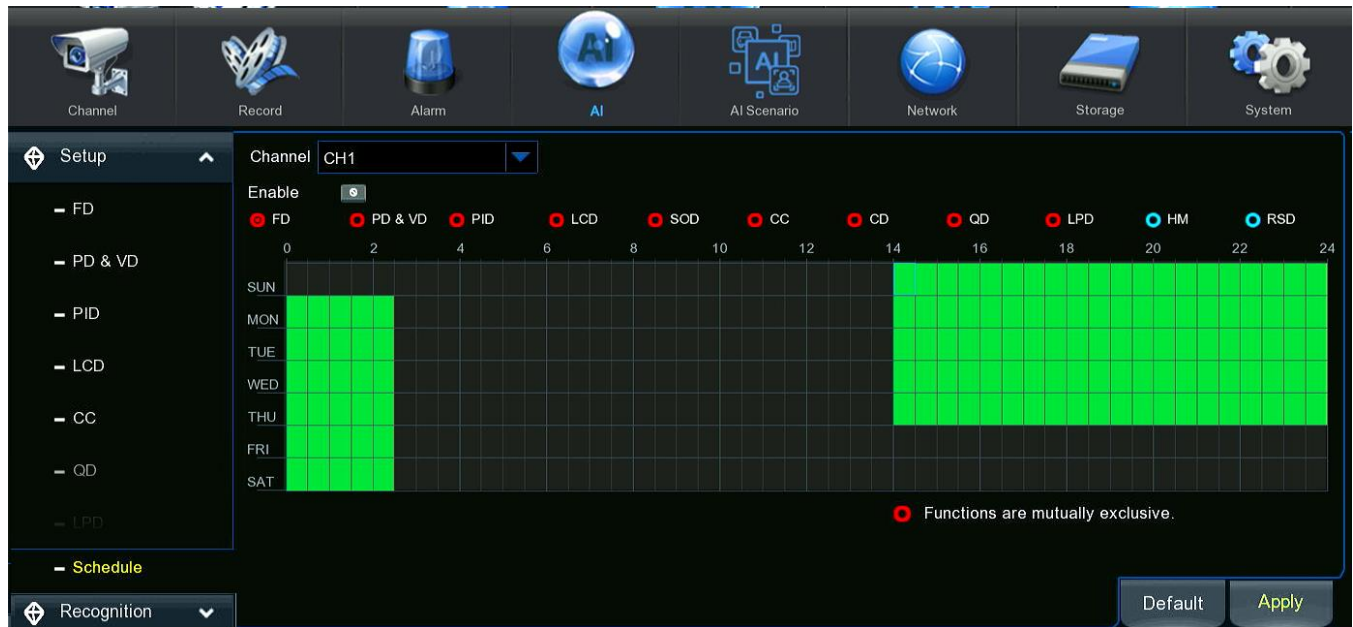


**Switch:** Enable/disable the function.

**Sensitivity:** The sensitivity level is from 1 to 6, with a default value of 3. The most sensitive being 6.

## 5.4.1.14 Schedule

Configure the recording schedule for AI detection functions.



1. **Channel:** Select a channel.
2. **Enable:** Check to activate the AI recording schedule.
3. Click on the AI mode button to choose a detection function. The detection functions with a red button are mutually exclusive, one and only one of them can be activated at the same time.
4. Each square represents 30 minutes. Using the mouse, click on a particular square to select or click and drag the mouse over the squares corresponding to your desired period. Squares in green are active.
5. Blocks in grey are unavailable and cannot be selected. Blocks in black are available to select.
6. Click **Apply** to save.

## 5.4.2 AI Recognition

The system supports Facial Recognition and License Plate Recognition. Configure the recognition settings and manage the database in the following sections.

## 5.4.2.1 Model Configuration

Select the Face Recognition AI algorithm model.

Device/Channel	Face Recognition Model	FD Model	Enable Face Recognition
Local	V0.6.0.0.2-release	-----	<input checked="" type="checkbox"/>
CH1	V0.4.0.0.2-release	V0.4.1.6.1-release	<input type="checkbox"/>
CH1B	V0.3.0.0.1-release		<input type="checkbox"/>

The face AI algorithm has two parts: Detection and Recognition.

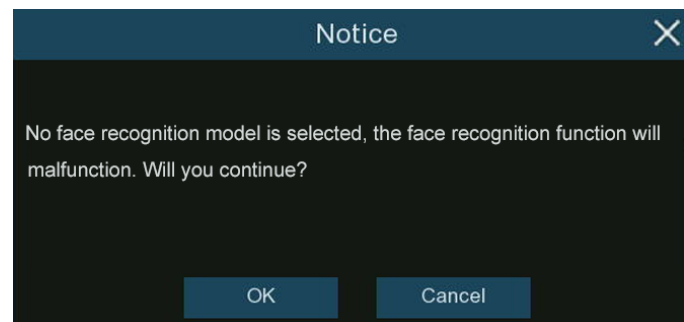
- **Detection** is used to detect and capture face images. Generally, **Detection** is a property or function of IP cameras.
- **Recognition** is used to extract, analyze, and compare facial features. **Recognition** capabilities are properties or functions of the NVR, although some IP cameras also have these functions.

For face detection and recognition functions, the system will select a face recognition model automatically when the first-time face AI functions are set up.

To manually choose the face recognition model, deselect the "**Auto select recognition model**" box and select a face recognition model.

### Rules & Guidelines for manual selection:

1. At least one face recognition algorithm model must be enabled.
2. Only one recognition model can be enabled at a time.





- When enabling cameras with both facial detection and facial recognition functions, they all must have the same recognition model version. They must all have the same detection model version.
- Selecting the newest version (with bigger digital sequence) is preferred due to its algorithm optimization and database update.
- Dual function models with the same version are allowed & recommended to be enabled. This will help to decrease the analysis loading on a single NVR or camera and accelerate the recognition.

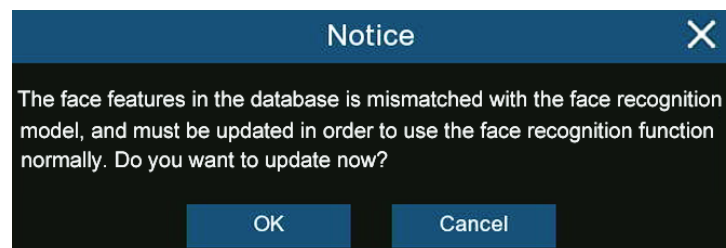
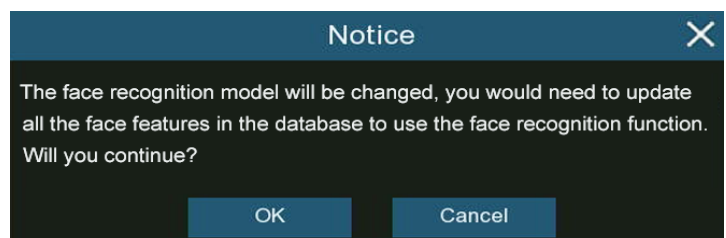
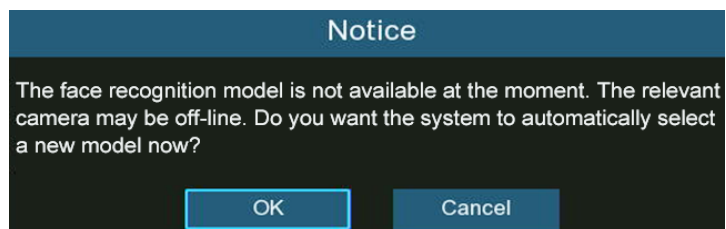
Device/Channel	Face Recognition Model	Face Detection Model	Enable Face Recognition
Local	V0.6.0.0.2-release	-----	<input type="checkbox"/>
CH1	<u>V0.4.0.0.2-release</u>	<u>V0.4.1.6.1-release</u>	<input checked="" type="checkbox"/>
CH2	V0.2.0.5.1-beta	V0.2.1.2.1-release	<input type="checkbox"/>
CH3	V0.3.0.0.1-release	V0.3.1.2.1-release	<input type="checkbox"/>
CH6	<u>V0.4.0.0.2-release</u>	<u>V0.4.1.6.1-release</u>	<input checked="" type="checkbox"/>
CH7	<u>V0.4.0.0.2-release</u>	<u>V0.4.1.6.1-release</u>	<input checked="" type="checkbox"/>
CH8	-----	V0.4.1.6.1-release	<input type="checkbox"/>
CH9	-----	V0.2.1.2.1-release	<input type="checkbox"/>
CH12	<u>V0.4.0.0.2-release</u>	<u>V0.4.1.6.1-release</u>	<input checked="" type="checkbox"/>

Multiple Models with the same version are allowed to be enabled

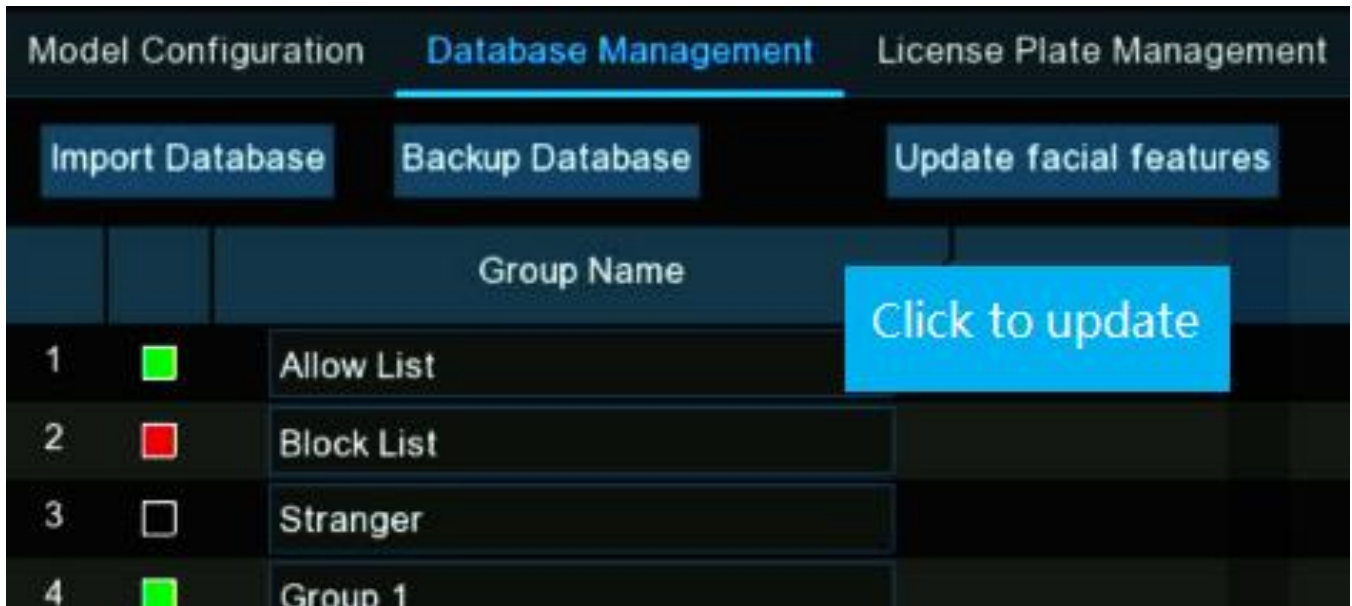
If one or more selected cameras (not all) are off-line, the recognition functions will automatically be assigned to the rest of selected camera(s).

- When the recognition model is enabled on a single camera and the camera is off-line, the face recognition will stop working. The system will send an alert/notification as shown below.

- Click "OK" to let the system automatically select a new model.
- Click "Cancel", to configure manually.



7. To change the model to a different version, the system will send a notice, click "OK" to continue.
8. If the recognition model has been changed to a different version, the system will send a notice.
9. Click "OK" to continue.
10. Selecting "Cancel" will require going to "Database Management".
11. Click "Update facial features" to update the database.




#### 5.4.2.2 Face Recognition Database Management


Create and manage face profiles (database) to classify different people into different groups. Configure the system actions for each group.



There are 3 default groups:

- **Allow List:** Used to define a list of people that are regarded as acceptable or trustworthy, such as family members, colleagues, frequent customers, etc.
- **Block List:** Mostly used to define a list of people that are regarded as unacceptable or untrustworthy and are not wanted or allowed to be in a designated area.
- **Stranger:** Any persons not already assigned to the Allow or Block list will be identified as a stranger.

Click add  to create a customized group.

Click delete  to delete a customized group.

**Backup Database:** Create a backup of the database and export it to a USB flash drive. The exported database can be imported to the same or another NVR.

**Import Database:** Import a database that was previously exported to a flash drive. (Please note, this will overwrite the existing settings and face profiles.)

**Enable:** Enable a group or groups. For these features to work effectively it is highly recommended to create face profiles (add face images) for each person being added to a group.

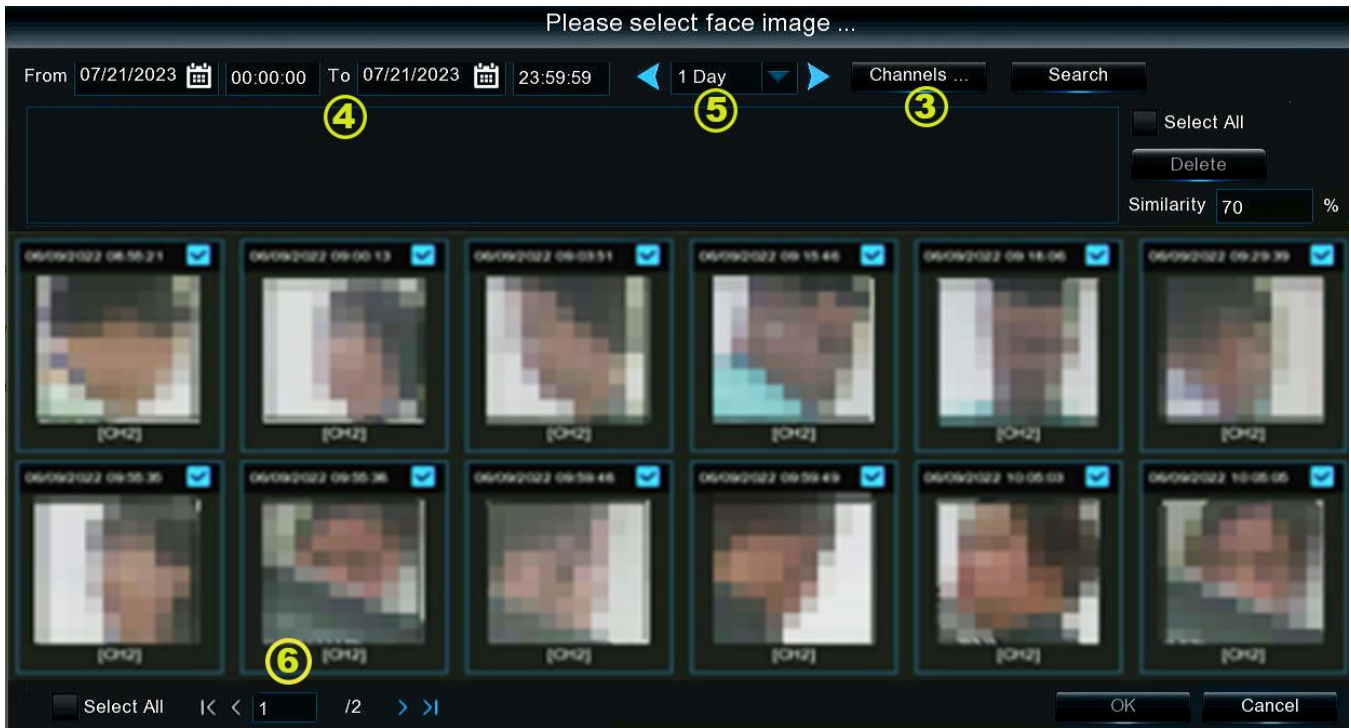
### 5.4.2.2.1 Create Face Profiles from Local Storage Device

This section will show how to create face profiles from face images that have been captured and stored on the NVR.



1. Click "**Edit**" of a group to create face profiles for that group.\
2. From the Group window, click "**Import**", select "**Local Storage Device**".
3. **Channels:** Click to specify the cameras to search. All channels are set to search by default.

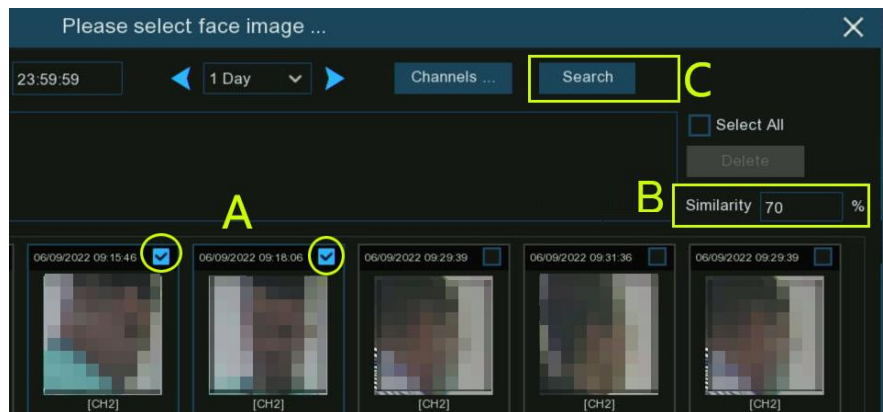




4. Use the calendar to specify the date range.
5. Use the arrow buttons to quickly display face images from before the selected start dates or after the selected dates. Click the drop-down arrow to select how many days before or after the initial search dates to review.
6. **Search:** Execute a search based on the parameters selected.
7. The search results will be displayed in the face list automatically. Use the arrow buttons to display the previous page or next page of results.

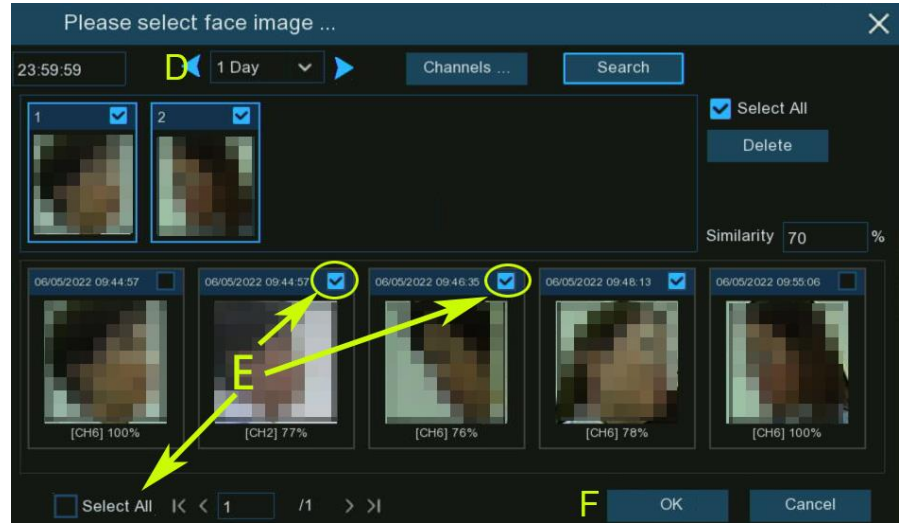
Narrow the search result by using **Similarity:**

- **A.** Select a face image(s) from the search results.
- **B. Similarity:** Select a value. This is the face similarity threshold (%). The higher the number, the more precise the result will be.

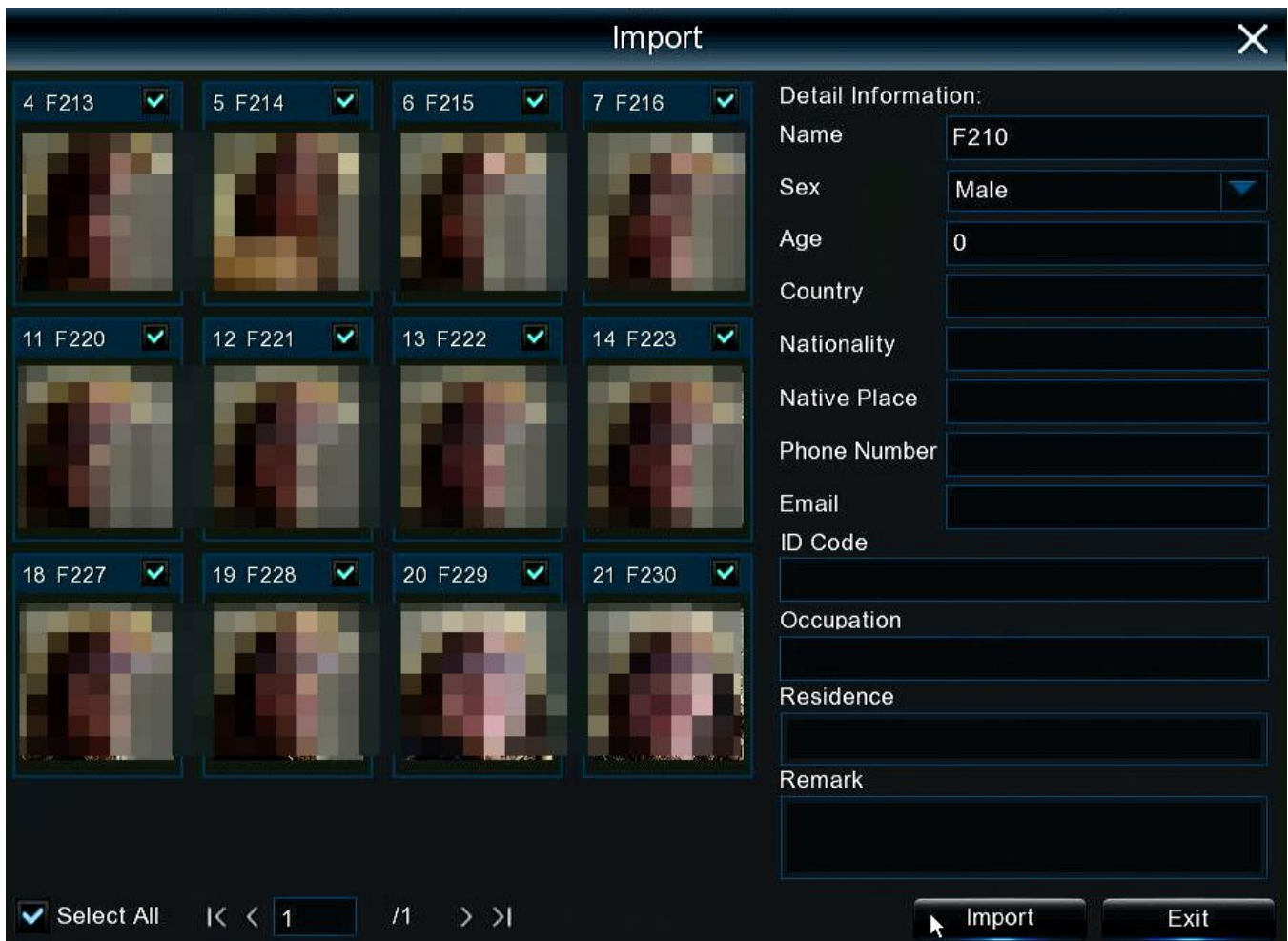


→ **C. Search:** The system will search for faces with an equal or greater similarity than the specified value.

→ **D.** To search from other days: Click the drop-down arrow to select how many days before or after the




selected date range the system should search. Use the arrow buttons to view the days before or after the initial search dates.

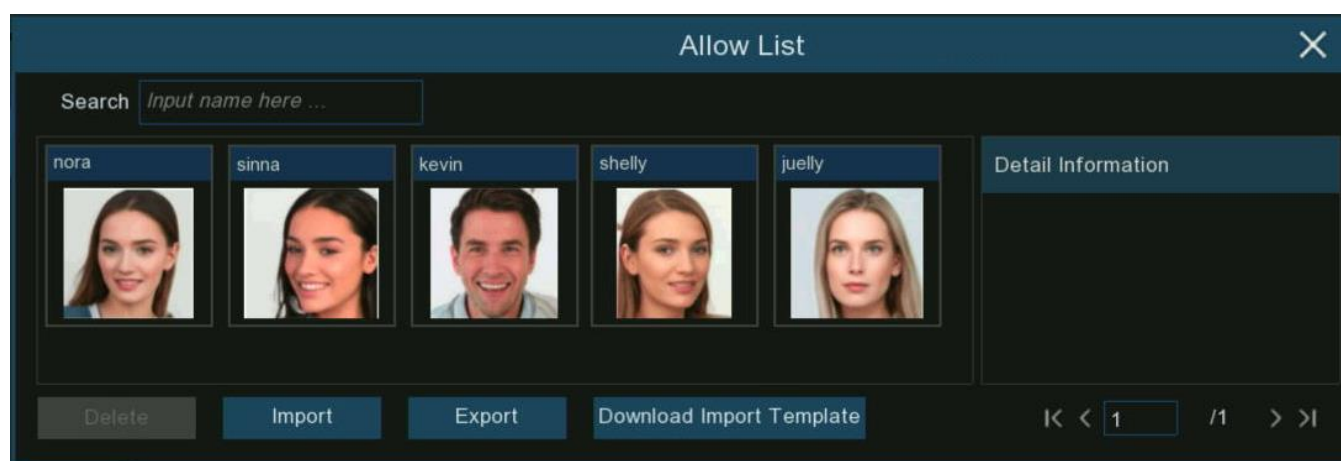


- E. Select individual face images, or "Select All" to select all face images in the current page of search results.
  - F. Click "OK". The system will open the profile edit page.
8. Click on a face image. Enter their identification details, such as the person's name and age. If a name is not manually assigned to the profile, each face image is given a face ID as its name by default.
  9. Click "Import". The face profile is now created and assigned to the group.

#### 5.4.2.2.4 Edit Face Profiles

To edit or delete a face profile:

1. Click **Edit**  for the group to edit.
2. Import and export images:
  - **Import**: Import face images. View [5.4.2.2.1. Create Face Profiles](#).
  - **Export**: Export face image(s) to external USB flash drive.
    - Select an image, click **Export** to export an individual image.
    - Click and hold the left mouse button, then drag the cursor to select multiple images. Click **Export** to export the selected images.
    - Click **Export** directly to export all face images in this group.



3. Left click the mouse on the image to select the image. Right click the mouse to display a pop-up menu.

4. Select an option:

→ **Edit:** Click to edit the face profile.

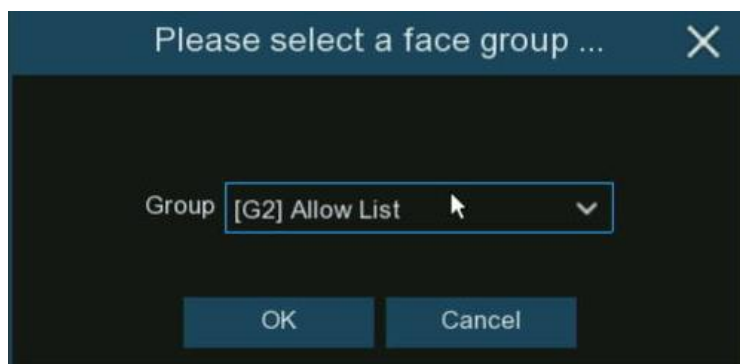
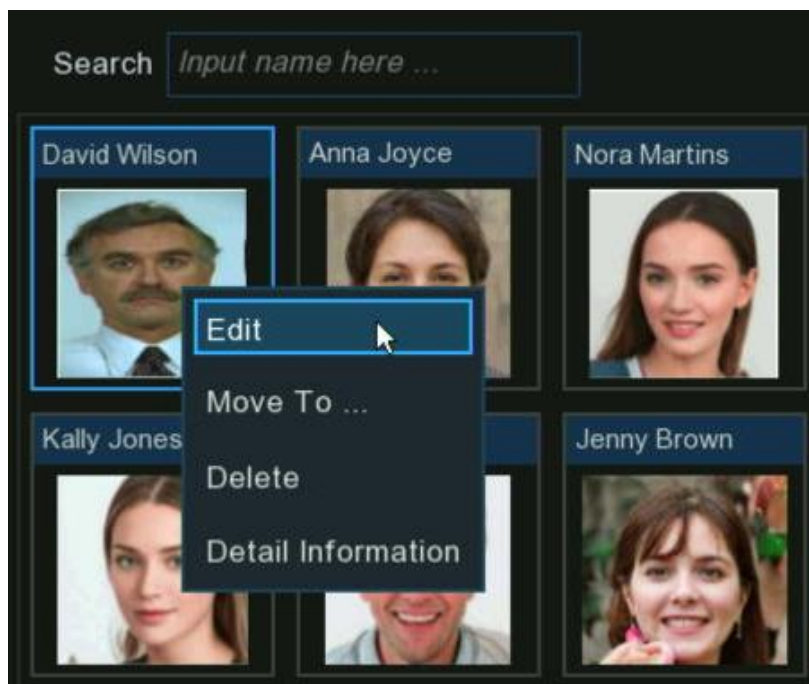
→ **Move To:** Click to move the face to another group.

**Group:** Select a group.

→ Click **OK**.

→ **Delete:** Delete the selected face profile.

→ **Detail Information:** Click to view the details of the selected face profile.





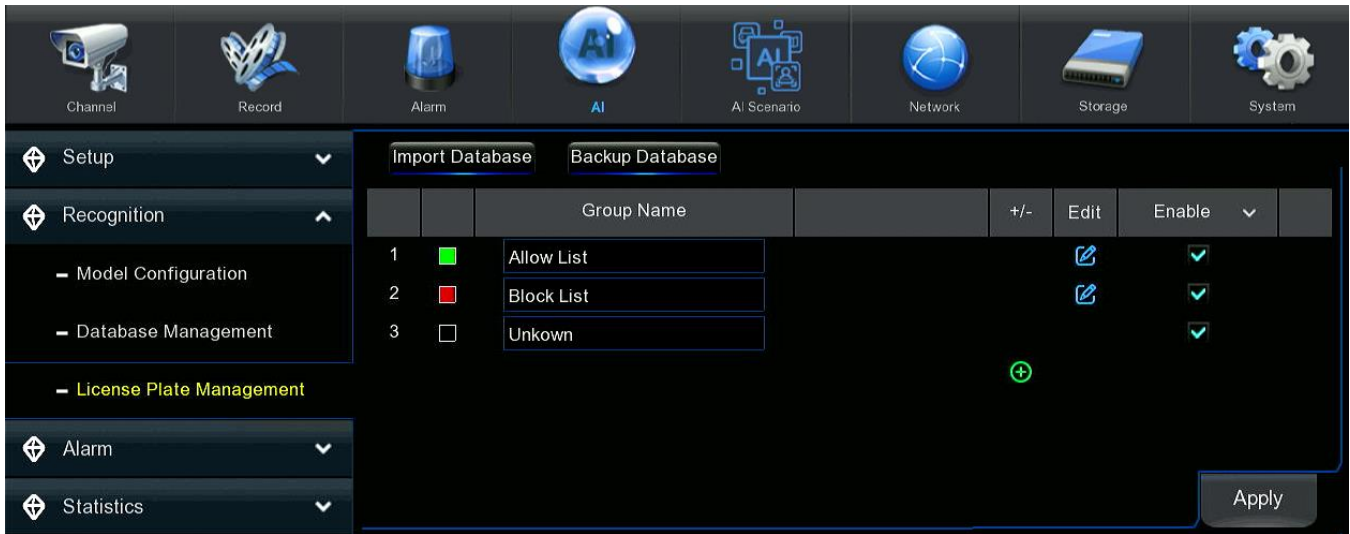
### 5.4.2.3 License Plate Management


Create and manage vehicle license plate profiles (database). Classify different vehicles into different groups to quickly identify vehicles as well as filter and receive notifications accordingly.

Detail Information			
Group	Block List		
Name	David Wilson	Gender	Male
Age	30	Country	UK
Nationality	English	Native Place	England
ID Code	123456799		
Occupation	Scientist		
Phone Number	07-123 456 799	Email	test@xxxxxx.com
Residence	No. xx, Downing Street, London		
Remark	Test 88		
Additional Face Image			
		Modify	Exit

There are 3 default groups:

- **Allow List:** Used to define a list of vehicles that are regarded as acceptable or trustworthy. in a designated area.
- **Block List:** Used to define a list of vehicles that are regarded as unwanted or not allowed in a designated area.
- **Unknown:** All unspecified vehicles will be identified as unknown vehicles.



Click add  to create or click delete  to delete a customized group.

**Backup Database:** Create a backup of your database and export it to a USB flash drive. The exported database can be imported to the same or another NVR.

**Import Database:** Import a database that was previously exported to a flash drive.

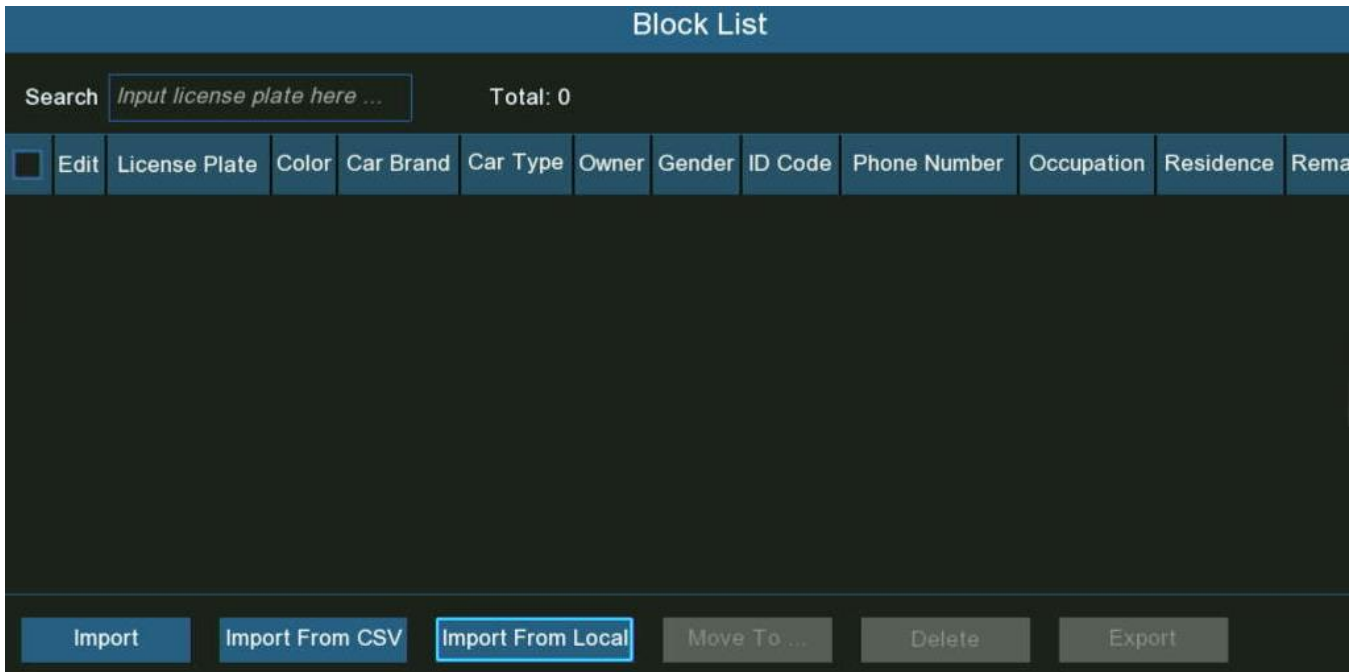
**Enable:** Enable/disable a group or groups. For these features to work effectively it is highly recommended to create profiles to be added to a group.


**Note: The maximum number of license plate profiles that can be created and stored in each group is 5,000.**

#### 5.4.2.3.1 Create License Profiles from Local Storage Device

Create vehicle profiles from license plate images that have been captured and stored on the NVR.

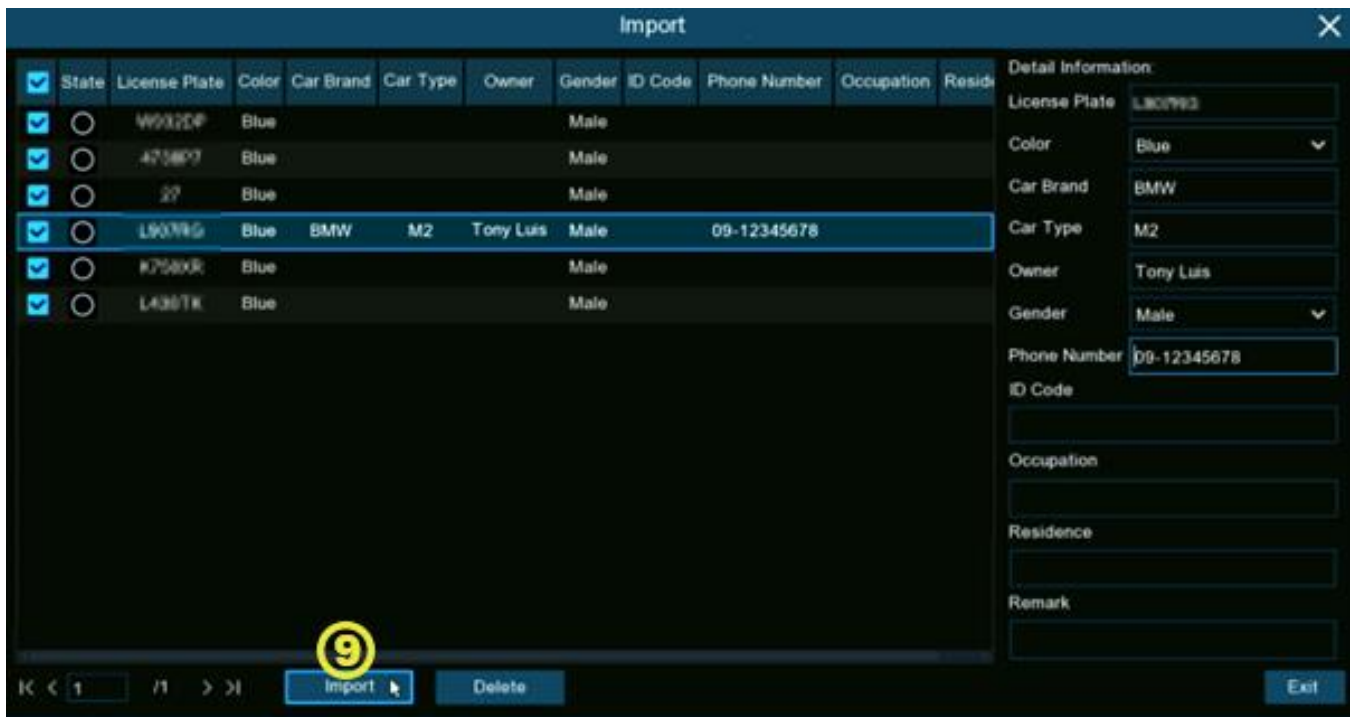




1. Click "Edit"  of the group to create license plate profiles for.
2. Click "Import from Local".
3. **Channels:** Specify the cameras to search. All channels search by default.
4. Use the calendar to specify the date range.




5. **Search:** Execute a search based on the parameters selected.
6. Use the arrow buttons to quickly display license plate images from before the selected start dates or after the selected dates.
  - Click the drop-down arrow to select how many days before and after the initial selected dates to search.
7. The search results will be displayed in the plate list automatically.
  - Use the arrow buttons to display the previous page or next page of results.
8. Check the box on the top right corner of the image to select the license plate images that to import, click **OK**.
9. **Import:** Click on one of the license plates displayed (detailed information will be listed to the right) to edit the information, including license number, color, make & model of the vehicle, and the owner information.
  - Click **Import** after editing, to save and add the selected license plates.





### 5.4.2.3.2 Create License Plate Profiles Manually

To create License Plate Profiles manually.

1. Click "Edit"  of the group to create license plate profiles for.



2. Click **Import**.
3.  Edit the license plate profile, including plate number, color, make/model, type of vehicle, and the owner's information.
4. **Alarm Channel:** Click  to configure.  
→ The system will alert when the license plate is detected and captured by the selected cameras.
5. Click **Import** after inputting the pertinent details.
6. Click **Exit** to finish.



### 5.4.2.3.4 Edit License Profiles

To edit or delete License Plate profiles.

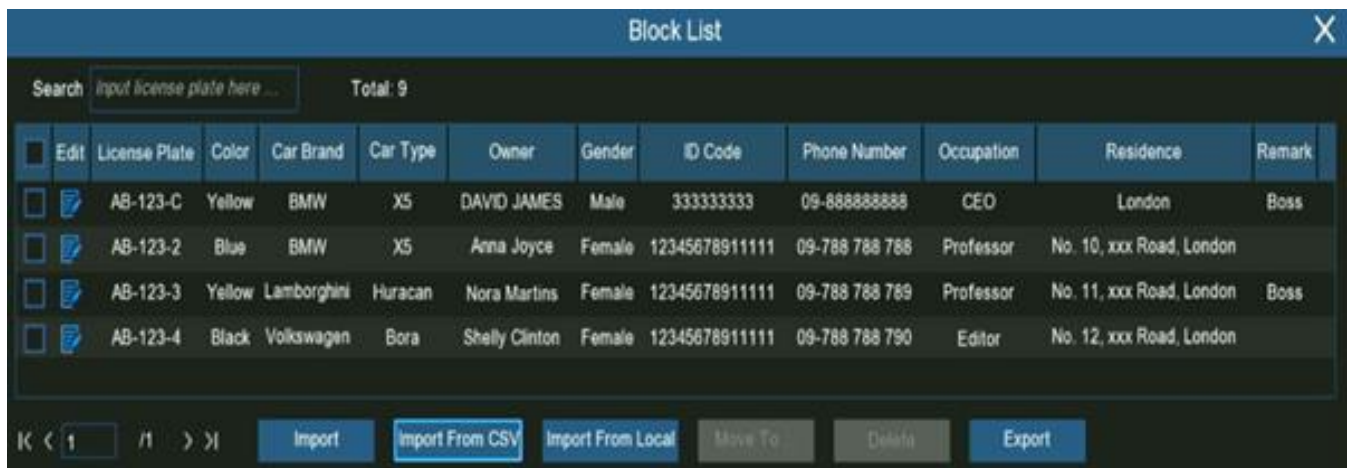
1. Click **Edit**  for the group to edit the vehicle license plate profiles in that group.



The screenshot shows the 'License Plate Management' interface. At the top, there are tabs for 'Model Configuration', 'Database Management', and 'License Plate Management'. Below the tabs are buttons for 'Import Database' and 'Backup Database'. The main area contains a table with the following data:

		Group Name	+/-	Edit	Enable
1	<input checked="" type="checkbox"/>	Allow List			<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>	Block List			<input checked="" type="checkbox"/>
3	<input type="checkbox"/>	Unkown			<input checked="" type="checkbox"/>

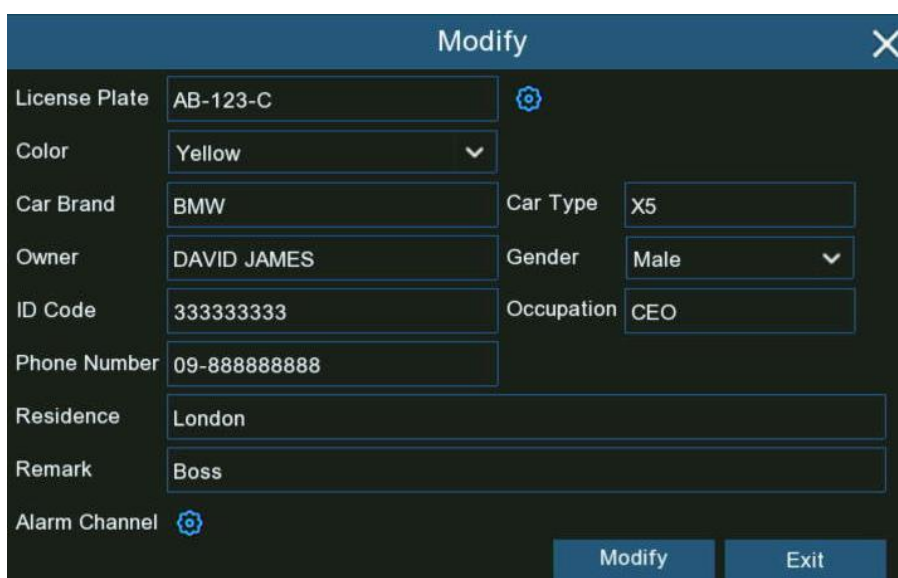
2. Click **Edit**  to modify the license plate profile detail.




The screenshot shows the 'Block List' dialog box. It has a search bar with the text 'input license plate here ...' and a 'Total: 9' indicator. Below the search bar is a table with the following data:

Edit	License Plate	Color	Car Brand	Car Type	Owner	Gender	ID Code	Phone Number	Occupation	Residence	Remark
<input type="checkbox"/>	AB-123-C	Yellow	BMW	X5	DAVID JAMES	Male	333333333	09-88888888	CEO	London	Boss
<input type="checkbox"/>	AB-123-2	Blue	BMW	X5	Anna Joyce	Female	12345678911111	09-788 788 788	Professor	No. 10, xxx Road, London	
<input type="checkbox"/>	AB-123-3	Yellow	Lamborghini	Huracan	Nora Martins	Female	12345678911111	09-788 788 789	Professor	No. 11, xxx Road, London	Boss
<input type="checkbox"/>	AB-123-4	Black	Volkswagen	Bora	Shelly Clinton	Female	12345678911111	09-788 788 790	Editor	No. 12, xxx Road, London	

At the bottom of the dialog box, there are buttons for 'Import', 'Import From CSV', 'Import From Local', 'Move To', 'Delete', and 'Export'.



The screenshot shows the 'Modify' dialog box. It contains the following fields:

- License Plate: AB-123-C
- Color: Yellow
- Car Brand: BMW
- Car Type: X5
- Owner: DAVID JAMES
- Gender: Male
- ID Code: 333333333
- Occupation: CEO
- Phone Number: 09-88888888
- Residence: London
- Remark: Boss
- Alarm Channel: 

At the bottom of the dialog box, there are buttons for 'Modify' and 'Exit'.

3. Modify the information.

4. Click **Modify** to save the changes.

## 5.4.3 AI Alarm Settings

Configure the alarm actions when an event occurs.

### 5.4.3.1 FR (Face Recognition) Alarm Settings

Configure alarm actions for different groups when faces are detected.


		Group Name	Enable Alarm	Policy	Similarity	Alarm	Alarm Schedule	Alarm Channel
1	<input checked="" type="checkbox"/>	Allow List	<input checked="" type="checkbox"/>	Allow	≥ 70 %			
2	<input checked="" type="checkbox"/>	Block List	<input checked="" type="checkbox"/>	Deny	≥ 70 %			
3	<input type="checkbox"/>	Stranger	<input checked="" type="checkbox"/>	Stranger	< 70 %			
4	<input checked="" type="checkbox"/>	Group 1	<input checked="" type="checkbox"/>	Allow	≥ 70 %			
5	<input checked="" type="checkbox"/>	Group 2	<input checked="" type="checkbox"/>	Allow	≥ 70 %			
6	<input checked="" type="checkbox"/>	Group 3	<input checked="" type="checkbox"/>	Allow	≥ 70 %			

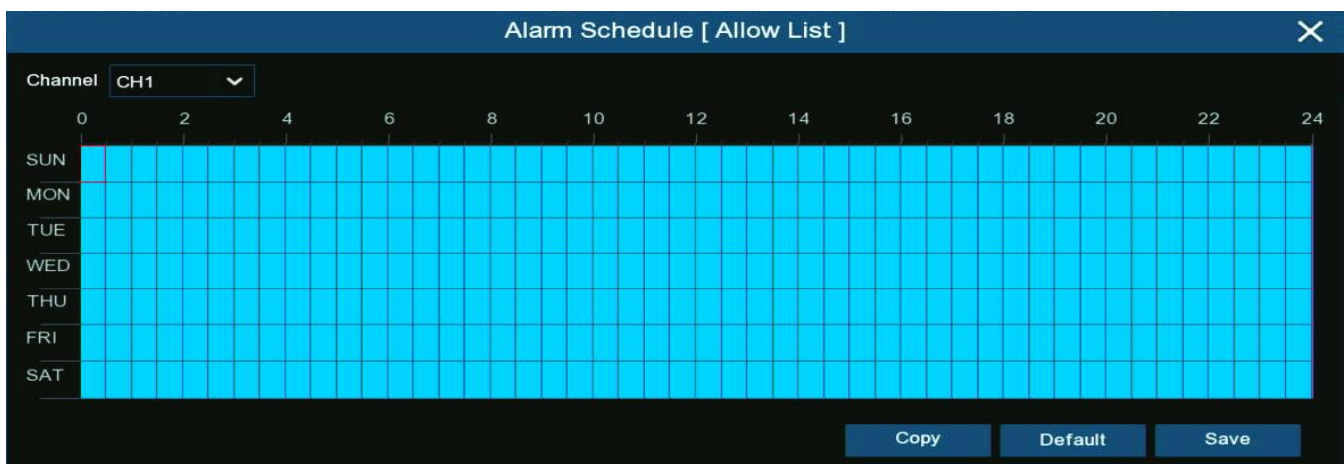
- Enable Alarm:** Select the group(s) to enable alarm functions. If the checkbox isn't enabled, no actions specified for the group such as alarm notifications will be carried out by the NVR. It is strongly recommended that the "**Stranger**" group stays enabled. This allows the NVR to save the images of every single face detected, (including those that do not match any existing face profiles) to the database. These captured face images can be used later to create or improve face profiles in the Allow List & Block List groups.
- Policy:** If a customized group has been created, set the policy of the customized group to either **Allow** or **Deny**. The three preset face groups: Allow, Block, and Stranger list policy cannot be changed.
- Similarity:** Set how closely, in percentage terms, the detected face must match a face profile in the group to be considered a recognized match. The default threshold is 70%. A higher percentage of similarity will result in fewer false recognition results.
- Alarm:** Click to specify the group actions to be taken by the NVR when a face recognition event has occurred.
  - ➔ **Buzzer:** Enable/disable the NVR's buzzer sounding for a predetermined length of time when a face is detected. Click the drop-down menu to select a time.
  - ➔ **Latch Time:** Configure the external alarm time when detection is triggered.

Alarm [ Allow List ]										
Channel	Buzzer	Alarm Out	Latch Time	Face Capture	Save Background	Show Thumbnail	Send Email	FTP Picture Upload	Pito Cloud	Voice Prompts
CH1	Disable		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH2	Disable		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH3	Disable		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH4	Disable		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH5	Disable		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

- **Face Capture:** Enable/disable: a snapshot of the recognized face is saved to the face database in the NVR. Leave this option enabled so more facial images can be added to profiles later to improve the accuracy of face recognition.
  - **Save Background:** Enable/disable: a snapshot of the background will be saved together with the face image. It is recommended to leave this option enabled.
  - **Show Thumbnail:** Enable/disable: to display a snapshot of the recognized face via the Alarm Notification Panel in Live View mode. Disabling this option will stop facial recognition events from appearing in the Alarm Notification Panel.
  - **Send Email:** Enable/disable: to send an email to be sent when an alarm event is detected.
  - **FTP Picture Upload:** Enable/disable: to send snapshots to an FTP server when detection is triggered.
  - **Picture to Cloud:** Enable/disable: to send snapshots to the cloud via Dropbox or Google Drive when detection is triggered.
  - **Default:** Revert to default settings.
  - **Copy:** Apply all settings to the other connected cameras.
  - **Save:** Save settings.
5. **Alarm Schedule:** Click to configure the schedule of when alarm actions specified for the group will be active.
- **Channel:** Select the channel.
  - Click the mouse on a square, drag the cursor to select the hours of the day/night the alarm schedule will be active.



- The blue blocks are the hours that will be active for alarm actions. The schedule is valid only for the selected channel.
- Use the **Copy** option to set the same schedule for other cameras.
- 6. **Save:** Save the settings.
- 7. **Alarm Channel:** Click  to configure when the NVR will alert for faces detected and captured by the selected cameras.
  - Use the **Copy** option to use the same settings on other channels.
  - **Save:** Save the settings



The image shows a software interface titled "Alarm Schedule [ Allow List ]". At the top left, there is a "Channel" dropdown menu set to "CH1". Below this is a grid with days of the week (SUN, MON, TUE, WED, THU, FRI, SAT) on the vertical axis and hours (0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24) on the horizontal axis. The grid cells are currently empty, indicating no active schedule is set. At the bottom right, there are three buttons: "Copy", "Default", and "Save".

### 5.4.3.3 LPR (License Plate Recognition) Alarm Settings

Configure alarm actions for different groups when license plates are detected.

	Group Name	Enable Alarm	Policy	Fault-tolerant	Alarm	Alarm Schedule	Alarm Channel
1	Allow List	<input checked="" type="checkbox"/>	Allow	≤ 1 character(s)			
2	Block List	<input checked="" type="checkbox"/>	Deny	≤ 1 character(s)			
3	Unknown	<input checked="" type="checkbox"/>	Unknown	> 1 character(s)			
4	Group 1	<input checked="" type="checkbox"/>	Allow	≤ 1 character(s)			
5	Group 2	<input checked="" type="checkbox"/>	Allow	≤ 1 character(s)			
6	Group 3	<input checked="" type="checkbox"/>	Allow	≤ 1 character(s)			


- Enable Alarm:** Enable/disable alarm functions for a group. If disabled, no actions, such as alarm notifications will be carried out by the NVR. It is recommended the "Unknown" group stays enabled so the NVR will save the images of every license plate detected (even if they don't match existing license plate profiles). They can be used later to create or improve license profiles in the Allow & Block List groups.
- Policy:** Set the policy of created groups to **Allow** or **Deny**. The preset groups: Allow, Block, and Unknown lists, can't be changed.

Recognized License Number	Number in License Profile	Fault Tolerance	Recognition Result
AB123C	AB-123-C	≤2 characters	True
AB123C	AB-123-C	≤0 or 1 character	False
A8I23C	AB123C	≤2 characters	True
A8I23C	AB123C	≤0 or 1 character	False
B594SB	B734KB	≤3 characters	True
B594SB	B734KB	≤2 character	False
AB132C	AB123C	≤2 characters	True
AB123C	AB123C	≤0 or 1 character	False

Samples for true of false result

3. **Fault Tolerance:** Variances in image resolution, light strength, camera angle, moving speed of the vehicle etc., can result in character(s) in the license plate number not being recognized. Set the Fault Tolerance for how many characters of the detected license plate can be different from the license plate number saved in the group and still be considered a recognized match. If the number of characters that are different between the detected license plate number and a license plate profile in the group is no more than the set value, the detected license will be considered a recognized match.



**Note:** Only English letters and numbers will be recognized by the system. Special characters, like underline , virgule /, hyphen -, will not be recognized. Set the Fault Tolerance accordingly, if special characters are in a license plate number of any license plate profiles created.

4. **Alarm:** Click setup  to specify the group actions to be taken by your NVR when a LPR event has occurred.

Alarm [ Allow List ]										
Channel	Buzzer	Alarm Out	Latch Time	License Plate Caputre	Save Background	Show Thumbnail	Send Email	FTP Picture Upload	Picture to Cloud	Voice Prompts
CH1	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH2	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH3	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH4	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH5	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH6	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH7	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CH18	10 s		10 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

→ **Buzzer:** Enable/disable the NVR's buzzer sounding for a predetermined length of time when an event is triggered.

5. Click the drop-down menu to select a time.
  - **Latch Time:** Configure the external alarm time when the detection is triggered.
  - **License Plate Capture:** Enable/disable: a snapshot of the recognized plate is saved to the database in the NVR. Leave this option enabled so more images can be added to profiles later to improve the accuracy of plate recognition.
  - **Save Background:** Enable/disable: a snapshot of the background will be saved together with the plate image. It is recommended to leave this option enabled.

- **Show Thumbnail:** Enable/disable: to display a snapshot of the recognized plate via the Alarm Notification Panel in Live View mode. Disabling this option will stop plate recognition events from appearing in the Alarm Notification Panel.
  - **Send Email:** Enable/disable sending an email alert when alarm event is detected.
  - **FTP Picture Upload:** Enable/disable: to send snapshots to an FTP server when detection is triggered.
  - **Picture to Cloud:** Enable/disable: to send snapshots to the cloud via Dropbox or Google Drive when detection is triggered.
  - **Default:** Revert to default settings.
  - **Copy:** Apply all settings to the other connected cameras.
  - **Save:** Save settings.
6. **Alarm Schedule:** Click  to configure the schedule of when alarm actions specified for the group will be active.
- **Channel:** Select the channel.
  - Click the mouse on a square, drag the cursor to select the hours of the day/night the alarm schedule will be active.
  - The blue blocks are the hours that will be active for alarm actions. The schedule is valid only for the selected channel.
  - Use the **Copy** option to set the same schedule for other cameras.
  - **Save:** Save the settings.
7. **Alarm Channel:** Click  to configure when the NVR will alert for plates detected and captured by the selected cameras.
- Use the **Copy** option to use the same settings on other channels.
  - **Save:** Save the settings.

### 5.4.3.4 PD & VD (Human & Vehicle Detection) Alarm Settings

Configure alarm actions when human beings and/or vehicles are detected.

Setup	FD	FR	AD	LPR	PD & VD	PID	LCD	CC	CD	QD	LPD	RSD	SOD	Sound Detection	Video Tampering
Recognition	Channel	Buzzer	Alarm Out	Latch Time	Record	Post Recording	Show Message	Send Email	FTP Picture Upload						
Alarm	CH1	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	CH2	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Statistics	CH3	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	CH5	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	CH6	OFF		10 s	ON	30 s	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						

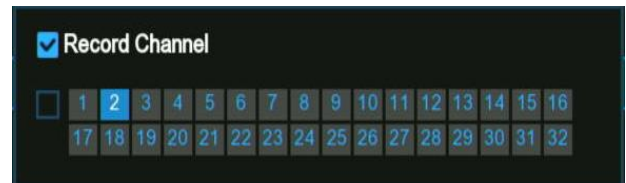
**Buzzer:** Enable/disable the NVR's buzzer sounding for a predetermined length of time when an event is triggered.

→ Click the drop-down menu to select a time.

**Latch Time:** Configure the external alarm time when the detection is triggered.

**Record: Record:** Click . Select "Record Channel" to enable recording.

→ **Optional:** Select the channel number(s) to have those cameras also record when an event is triggered in the initial camera being set.



**Post Recording:** Set the length of time after an event occurs the camera will continue to record. The default setting is recommended.

**Show Message:** Enable/disable the alarm icon appearing on screen when an event is triggered.

**Send Email:** Enable/disable an email alert being sent when an alarm event is triggered.

**FTP Picture Upload:** Enable/disable: to send snapshots to an FTP server when detection is triggered.

**FTP Video Upload:** Enable/disable: send videos to an FTP server when detection is triggered.

**Picture to Cloud:** Enable/disable: to send snapshots to the cloud via Dropbox or Google Drive when detection is triggered.

**Video to Cloud:** Enable/disable: to send videos to the cloud via Dropbox or Google Drive when detection is triggered.

**Full Screen:** Enable/disable the camera displaying full screen in Live View mode when an event is triggered.

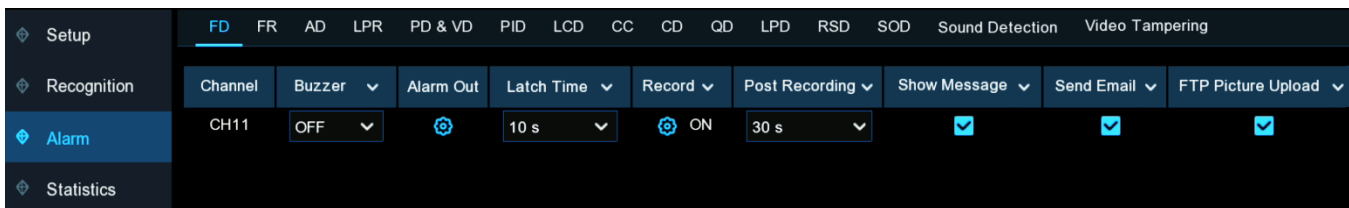
- **Default:** Revert to default settings.
- **Copy:** Apply all settings to the other connected cameras.
- **Save:** Save settings.

### 5.4.3.5 FD/PID/LCD/CC/CD/QD/LPD/RSD/SOD/Sound Detection/Video

#### Tampering Alarm Settings

The setting method to configure alarm actions is the same for FD (Face Detection), PID (Perimeter Intrusion Detection), LCD (Line Crossing Detection), CC (Cross Counting), CD (Crowd Detection), QD (Queue Length Detection), LPD (License Plate Detection), RSD (Rare Sound Detection), SOD (Stationary Object Detection), Sound Detection and Video Tampering.

**Note:** License Plate Detection differs from License Plate Recognition. LPD "detection" takes action if license plates are detected whether the license plates match a created profile or not. LPR "recognition" triggers alarm actions for plates recognized as a match to a created profile.



The screenshot shows a configuration menu for 'Alarm' settings. The 'Alarm' option is selected in the left sidebar. The main area displays settings for channel 'CH11'. The settings include: Buzzer (OFF), Alarm Out (gear icon), Latch Time (10 s), Record (gear icon), Post Recording (ON), Show Message (checked), Send Email (checked), and FTP Picture Upload (checked). The top navigation bar includes tabs for various detection types: FD, FR, AD, LPR, PD & VD, PID, LCD, CC, CD, QD, LPD, RSD, SOD, Sound Detection, and Video Tampering.

Setup	FD	FR	AD	LPR	PD & VD	PID	LCD	CC	CD	QD	LPD	RSD	SOD	Sound Detection	Video Tampering
Recognition	Channel	Buzzer	Alarm Out	Latch Time	Record	Post Recording	Show Message	Send Email	FTP Picture Upload						
Alarm	CH11	OFF		10 s		ON	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Statistics															

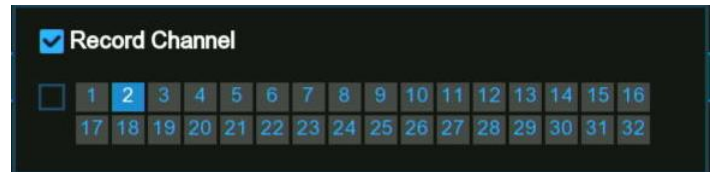
**Buzzer:** Enable/disable the NVR's buzzer sounding for a predetermined length of time when an event is triggered.

- Click the drop-down menu to select a time.

**Latch Time:** Configure the external alarm time when the detection is triggered.

**Record: Record:** Click . Select "Record Channel" to enable recording.

→ **Optional:** Select the channel number(s) to have those cameras also record when an event is triggered in the initial camera being set.



**Post Recording:** Set the length of time after an event occurs the camera will continue to record. The default setting is recommended.

**Show Message:** Enable/disable the alarm icon appearing on screen when an event is triggered.

**Send Email:** Enable/disable an email alert to be sent when an alarm event is triggered.

**FTP Picture Upload:** Enable/disable: to send snapshots to an FTP server when detection is triggered.

**FTP Video Upload:** Enable/disable: to send videos to an FTP server when detection is triggered.

**Picture to Cloud:** Enable/disable: to send snapshots to the cloud via Dropbox or Google Drive when detection is triggered.

**Video to Cloud:** Enable/disable: to send videos to the cloud via Dropbox or Google Drive when detection is triggered.

**Full Screen:** Enable/disable the camera displaying full screen in Live View mode when an event is triggered.

→ **Default:** Revert to default settings.

→ **Copy:** Apply all settings to the other connected cameras.

→ **Save:** Save settings.

## 5.5 Network

Configure network parameters.

### 5.5.1.1 General

If the NVR is connected to a router that uses DHCP (Dynamic Host Configuration Protocol), check the box to enable **DHCP**. The router will automatically assign all the network parameters for the NVR. Disable DHCP to manually configure the network. (Recommended for advanced users only.)



**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:** This allows the flow of network traffic between hosts to be segregated based on network configuration. A typical address might be "255.255.255.0" or something similar.

**Gateway:** This allows the NVR to connect to the internet and is typically the same IP address as your modem or router. The format of the **Gateway** address is the same as the **IP Address**. For example, "192.168.001.001".



**DNS1/DNS2:** Input the DNS settings for your internet service provider. DNS1 is the primary DNS server and DNS2 is a backup DNS server. Usually, it should be enough just to enter the DNS1 server address.

**IPv6 Address:** Input the IPv6 IP address if the network service supports IPv6. It consists of eight groups of characters between 0 to FFFF, separated by periods. For example, "ABCD:EF01:2345:6789:ABCD:EF01:2345:6789".

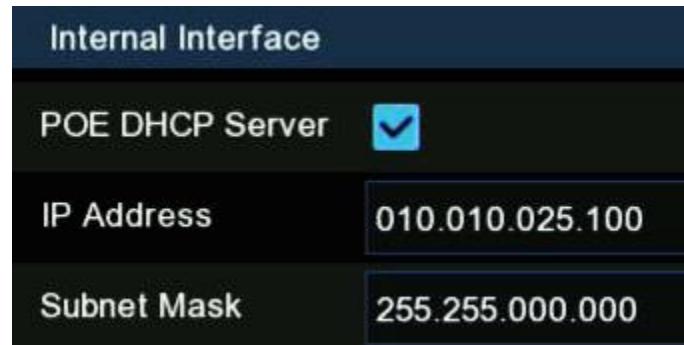
**Web Compatibility Mode:** If logging in to the NVR webpage with https protocol fails, enable the compatibility mode and try again. Otherwise, keep it disabled.

1. If the NVR comes with built in PoE ports, you will see the **Internal Interface** as shown:

→ **PoE DHCP Server:** Enable/disable DHCP service. It will automatically assign an IP address to each IP camera connected to the PoE ports.

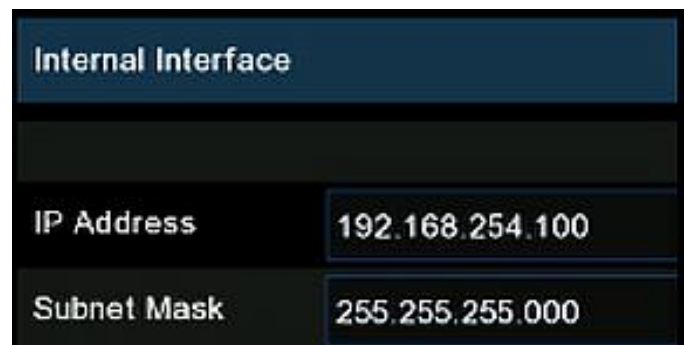
→ **IP address:** Set the IP address for the internal PoE router. Leave this at the default setting.

→ **Subnet Mask:** Leave this at the default setting.



2. If the device is non-POE and supports dual WAN/LAN ports, you can see the following internal GUI:

3. After manually setting the IP address and subnet mask of the LAN port, you can add cameras of different network segments to the same device through the LAN port.



### 5.5.1.2 PPPoE Settings

This is a protocol that allows the NVR to connect to the network more directly via DSL modem.

**Enable PPPOE:** Enable/disable PPPOE.

**User & Password:** Enter the username and password provided by your ISP.

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



### 5.5.1.3 SNMP

SNMP (Simple Network Management Protocol) is an Internet Standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior.



### 5.5.1.5 Port Configuration

**http/https/rtsp:** Used to log into the NVR's webpage or 3<sup>rd</sup> party streaming player using the rtsp protocol.

- ➔ If the default port number (80) is used by other devices in the network, it may need to be changed.

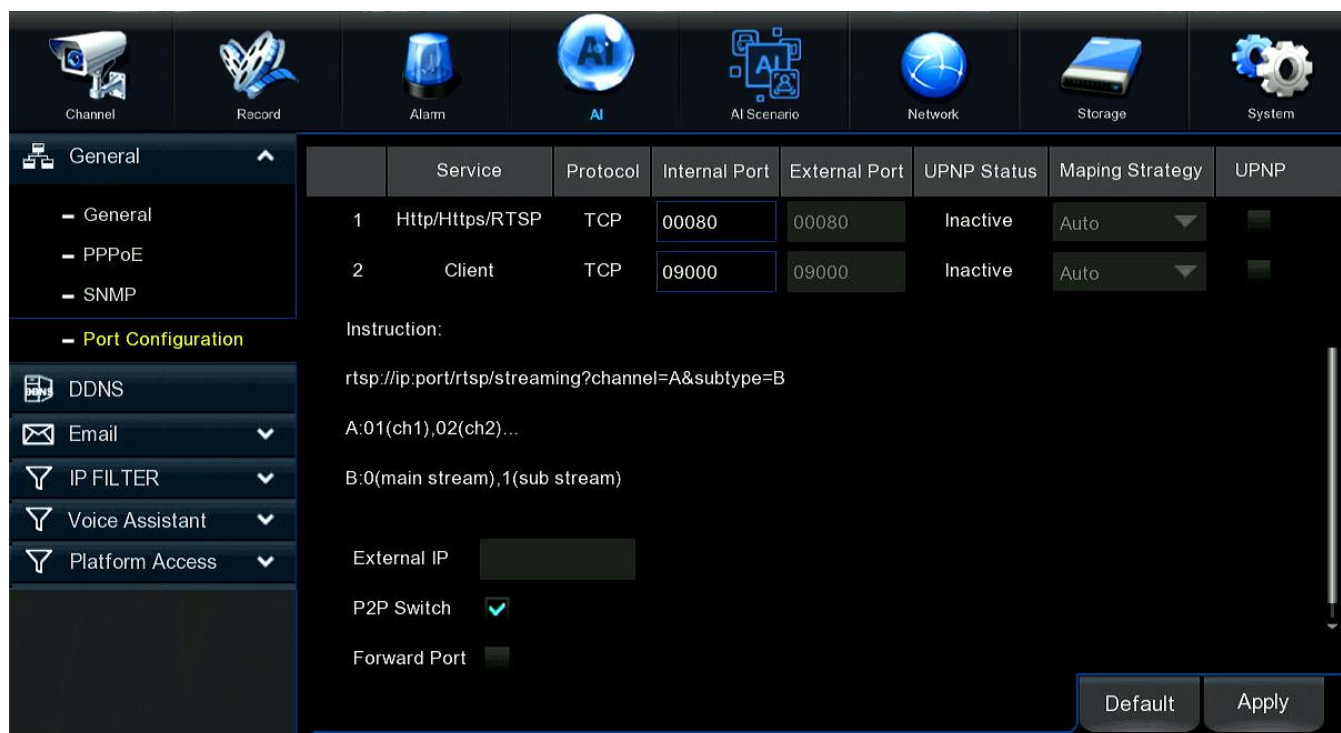
**Client Port:** The internal port that the NVR will use to send information through.

- ➔ If there is another NVR-like device on the same network, it may need to be changed.

**Internal Port:** Used to access the NVR from the same LAN.

**External Port:** Used to access the NVR from a different LAN or network.

→ Manually setting up port forwarding in the router of network the NVR is connected to may be required to access your NVR via internet (for users with advanced network experience). Using **UPNP** is highly recommended. **UPNP** is a network protocol designed to allow network-connected devices to automatically obtain and forward the ports from the router.



**UPNP:** Enable/disable **UPNP**.

**Mapping Strategy:** Select **Auto** so the external port will be automatically obtained and forwarded from the router.

→ To change the external port manually, choose **Manual** and modify the port accordingly.

**P2P Switch:** Enable/disable the P2P function.

## 5.5.2 DDNS

Configure DDNS settings. The DDNS provides a static address to simplify remote connection to the NVR. To use the DDNS, first create an account with a DDNS service provider.



**DDNS:** Check to enable DDNS.

**Server:** Select the preferred DDNS server (DDNS\_3322, DYNDNS, NO\_IP, CHANGEIP, DNSEXIT).

**Domain:** Enter the domain name you created on the web page of the DDNS service provider. This will be the address to type in the URL box when connecting remotely to the NVR via PC. For example: "nvr.no-ip.org".


**User/Password:** Enter the user's name and password you obtained when creating an account on the web page of the DDNS service provider.

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", check for network connectivity, double check the DDNS information has been entered correctly and that the DDNS subscription is active.

## 5.5.3 Email Settings

Configure the email settings. Complete these settings to receive the system notifications via email when an alarm is triggered, HDD becomes full, HDD error status, or Video Loss occurs. Email is also important when a password reset is needed.

### 5.5.3.1 Email Configuration



The screenshot shows the 'Email' configuration page in a security system's web interface. The top navigation bar includes icons for Channel, Record, Alarm, AI, AI Scenario, Network, Storage, and System. The left sidebar has a tree view with 'Email' selected, showing sub-items for 'Email Configuration' and 'Email Schedule'. The main content area is titled 'Email' and contains the following fields:

Email	<input checked="" type="checkbox"/>
Encryption	Auto
SMTP Port	00465
SMTP Server	smtp.gmail.com
User Name	xxxxxxx@gmail.com
Password	.....
Sender	NVR
Receiver 1	xxxxxxx@yahoo.com
Receiver 2	xxxxx@gmail.com
Receiver 3	
Interval	3 Min

At the bottom of the form are three buttons: 'Test', 'Default', and 'Apply'.

**Email:** Enable/disable the email settings.

**Encryption:** Enable if your email server requires the SSL or TLS verification.

→ If you are not sure, set to **Auto**.

**SMTP Port:** Enter the SMTP port of your email server.

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

**Username:** Enter your email address.

**Password:** Enter the email account password.

**Receiver 1~3:** Input the email address(es) to send email alerts to.

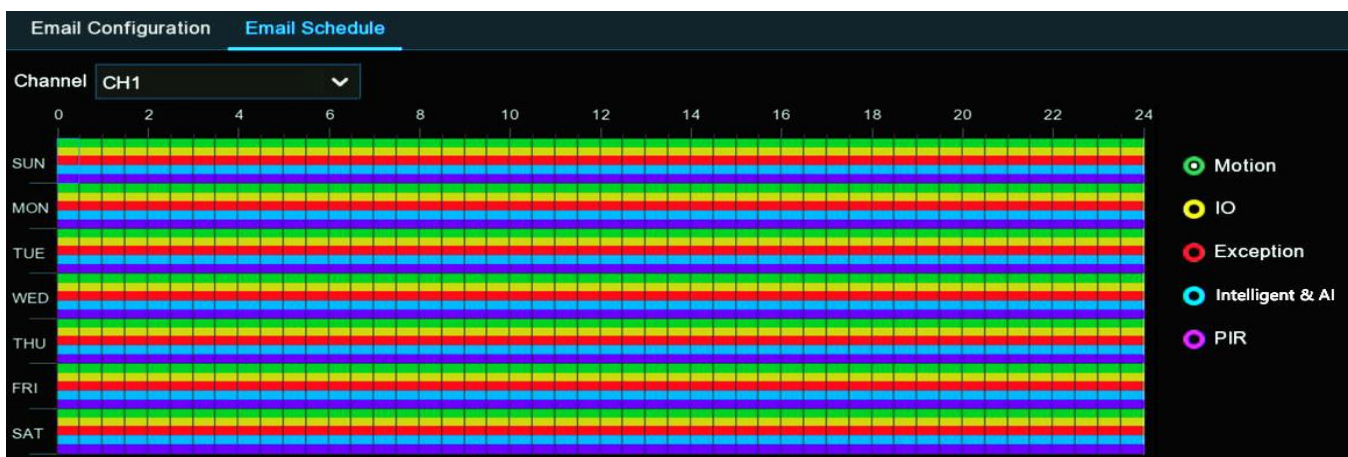
**Interval:** Set the length of time between email notifications being sent.

**Test Email:** Click to test if the email settings are set properly. The system sends an automated email message to your inbox. If you received the test email, the settings are set correctly.

### 5.5.3.2 Email Schedule

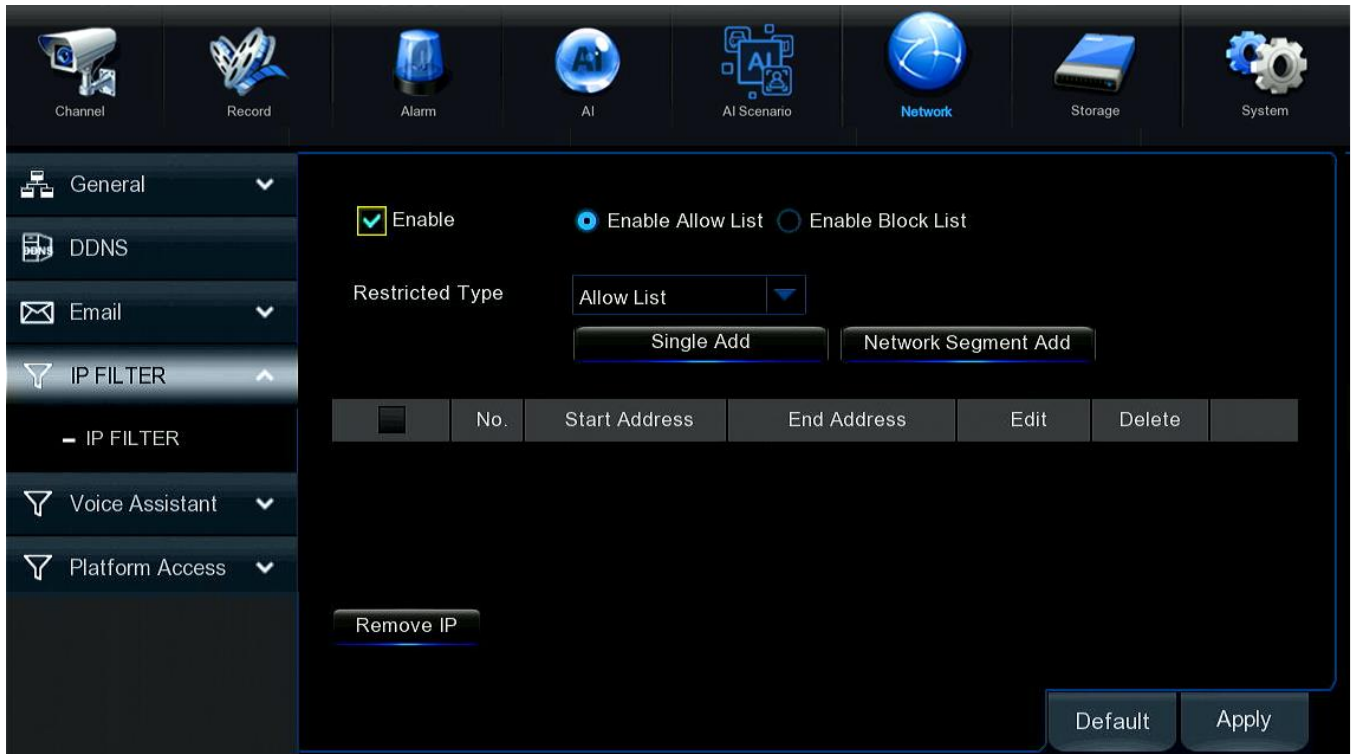
If email alerts are enabled on the NVR, alerts would be emailed 24 hours a day by default. The schedule can be changed for when the NVR will send those alerts. For example, to only receive alerts during the day but not in the evening, an alternative schedule can be created for each camera.

1. **Channel:** Select a channel.
2. Click on button of the alarm type to send email alerts for:
  - ➔ **Motion:** Email alerts for motion detection events
  - ➔ **IO:** Email alerts for I/O triggered events
  - ➔ **Exception:** Email alerts for exception events, which include no space left on the hard drive, a hard drive error or video loss.
  - ➔ **Intelligent & AI:** Email alerts for Intelligent or AI detection events.
  - ➔ **PIR:** Email alerts for PIR events.
3. Using the mouse, click on a square and drag the mouse over the squares to select the hours of the day email alerts will be active.
4. Repeat step 2 & 3 to set the schedule for other alarm types.
5. The set schedule is only valid for the selected channel. To use the same schedule for other channels, use the **Copy** option.
6. **Apply:** Save the settings



## 5.5.4 IP FILTER

IP Filtering is a great way to limit access to the network devices for specific groups of IP addresses. For example, if a malicious user is attacking the network, add a filter to prevent access to the devices from a single IP address or a block of IP addresses.



**Allow List:** It includes a range of IP addresses that specifies what IP addresses are allowed to access the NVR to prevent unauthorized IP addresses from logging into the NVR.

1. **Enable:** to activate the IP filter function.
2. Select "**Enable Allow List**".
3. **Restricted Type:** Select **Allow List**.
4. **Single IP Address:** to input a single IP address.  
➔ Click **IP Address Range** to allow a block of IP addresses: input the start IP address and end IP address.
5. Click **Save**. Only IP addresses from the Allow List can access the NVR after saving the settings.



**Block List:** Define what IP addresses are forbidden to access the NVR to prevent unauthorized IP addresses logging into the NVR.

1. **Enable:** Activate the IP filter function.
2. Select "**Enable Block List**".
3. **Restricted Type:** Select **Block List**.
4. **Single IP Address:** Input a single IP address.  
→ Click **IP Address Range** to restrict a block of IP addresses: input the start IP address and end IP address.
5. Click **Save**. IP addresses on the Block List are forbidden from accessing the NVR.

## 5.6 Storage

Configure the storage devices, including the internal hard drive storage, external NAS storage and cloud storage.

### 5.6.1 HDD

This allows formatting the NVR's hard drive (if a new hard drive has been installed inside the NVR, it needs to be formatted before it will record video).



#### Format HDD:

1. Check the box(es) to select the hard drive(s).
2. Click **Format HDD**. Select one of three options:
  - ➔ Format the entire hard disk: All data will be erased: including events, log files and analytic information will be erased.
  - ➔ Only format the record partition: All record data will be erased: Only data such as videos, snapshots and log files will be erased. All analytic information will be kept.
  - ➔ Only format the general partition: All AI related data may be erased: Only analytic information will be erased. Videos, snapshots, and log files will be kept on the hard drive.
3. Click **OK**. The NVR password is required to execute this function.
4. Input the NVR password.


5. Click **Authenticate**. A message will appear noting the data that will be erased. Click "**OK**" to continue.


**Overwrite:** Set the NVR to overwrite the oldest video files as the hard drive becomes full.

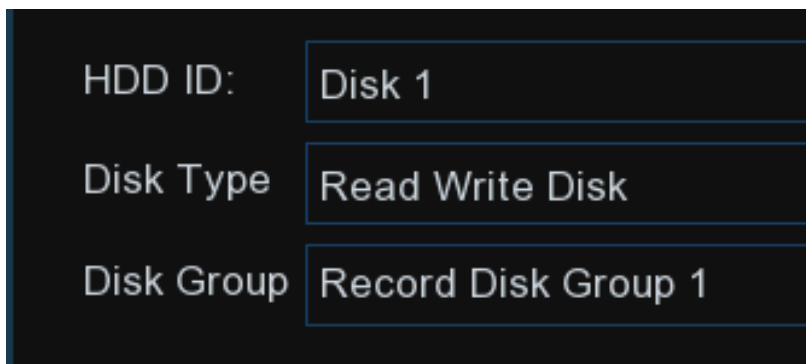
**Auto** is the recommended setting to use.

To prevent overwriting any old recordings, select **OFF**. If **OFF** is selected, check the HDD status regularly to ensure the HDD is not full. Recording stops when the HDD is full. It is highly recommended to select **Auto** as this prevents your NVR from running out of storage space.

**Record on ESATA:** This menu will only be displayed if the NVR comes with an e-SATA port on the rear panel and an e-SATA HDD has been connected to the NVR. Not all models support this function. It will allow recording the video to an external e-SATA HDD to enhance your HDD capacity. If the e-SATA recording function is enabled, the e-SATA backup function will be disabled.

If the NVR supports installing multiple hard drives, and more than 1 hard drive is installed in the NVR, the edit  option will be available.

→ Click  to edit the HDD as below.



**Disk Type:** Set the hard disk to: Read Write, Read Only, or Redundant.

→ **Read Write:** is the normal status for an HDD to save recordings or search recordings to play. If all the installed hard drives are set to Read Write, the NVR will save recordings to the hard drives sequentially.


- **Read Only:** New recordings will not be saved onto a hard drive set as **Read Only**. However, searching and playing recordings already saved to the hard drive can be done. To prevent important video data from being overwritten during cyclic recording, the hard drive can be set as **Read Only**.
- **Redundant:** A hard drive can be set to save the same recordings as another hard drive in the NVR that has been set to Read Write. When a redundant disk is set, the redundant drive will save the recordings in parallel with the Read Write drive. This provides a backup copy of the recorded video should the other hard drive fail.

**Disk Group:** It is possible to set the disks into different disk groups for recording. See more on [5.6.1.1 Disk Group](#).

1. The Redundant disk only supports saving mainstream recordings.
2. If the disk type has been changed, the hard disks might be unmounted and offline for a short time. Give the system a few moments to get disk(s) mounted again.

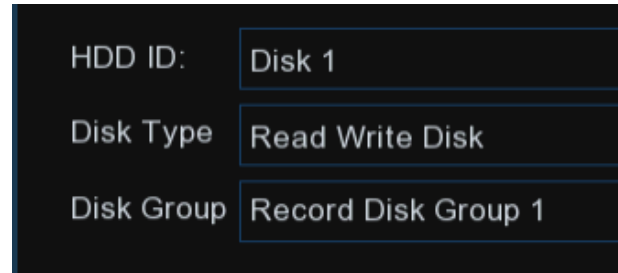
### 5.6.1.1 Disk Group

If the NVR supports installing multiple hard disks and more than one hard disk is installed in the NVR, the Disk Group menu will be available. The Disk Group function can assign the cameras to be recorded to different disk groups to reduce the load on a single hard disk and extend the life of the hard disk.

Click edit  on the hard disk to configure.

- Set the **Disk Type**.
- Set the **Disk Group**.

Go to the **Disk Group** tab.



- **Disk Type:** Select the disk group type. If all the hard disks are set as Read Write, only **Record Disk Group** is available here. If one or more hard disks are set as Redundant, the **Redundant Disk Group** option will also be available.
- **Disk Group:** Select a disk group.



- **Record Channel:** Select which camera(s) will be recorded and saved into the hard disk(s) in the selected group. Maximum 16 cameras can be recorded in a group.
- **Click Apply** to save the settings.

## 5.6.3 FTP Settings

Configure the FTP settings for uploading captured snapshots or videos to an FTP server.

The screenshot displays the FTP configuration page. The top navigation bar includes icons for Channel, Record, Alarm, AI, AI Scenario, Network, Storage, and System. The Storage section is selected, showing a sidebar with 'Disk', 'Cloud', and 'FTP' options. The main area contains the following settings:

- FTP Enable:**
- Server IP:** 172.20.50.2 (with a 'Test FTP' button)
- Port:** 00021
- User Name:** admin
- Password:** [Masked]
- Picture Quality:** Higher
- Video Stream Type:** Substream
- Max Package Interval:** 30 Min
- Directory Name:** N5532NPN
- Upload Normal Video:** OFF
- Upload Alarm Video:** Motion, PIR Alarm Settings, I/O

Buttons for 'Default' and 'Apply' are located at the bottom right of the configuration area.

**FTP Enable:** Enable/disable the FTP function.

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

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

**Username/ Password:** Enter the username and password of the FTP server.

**Picture Resolution:** Set the snapshot resolution to upload. Maximum resolution is 1920x1080.

**Picture Quality:** Select the image quality of snapshots to upload.

**Video Stream Type:** Select stream type to upload:

→ Mainstream or Substream.

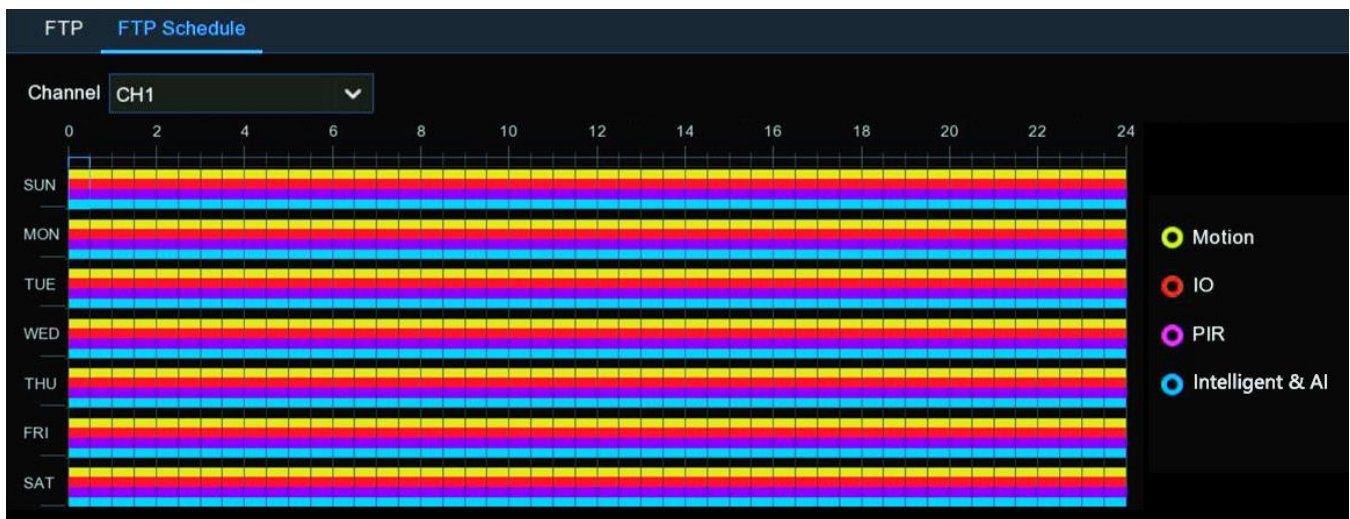
**Max. Package Interval:** Set the maximum time length of each uploaded video.

**Directory Name:** Enter the directory name in the FTP server to save the uploaded pictures and videos to that directory.

Click **Test FTP:** The system sends an automated file to the FTP server. FTP is properly configured if a "Write to file succeeded!" message is received.

### 5.6.3.1 FTP Schedule

If FTP upload is enabled on the NVR, images/video would be uploaded 24 hours a day by default. The schedule can be changed for when the NVR will upload images/videos. For example, to only upload images/video during the day but not in the evening, an alternative schedule can be created for each camera.



1. **Channel:** Select a channel.
2. Click on the radio button of the alarm type to send email alerts for:
  - ➔ **Motion:** Email alerts for motion detection events
  - ➔ **IO:** Email alerts for I/O triggered events
  - ➔ **Intelligent & AI:** Email alerts for Intelligent or AI detection events
  - ➔ **PIR:** Email alerts for PIR events
3. Using the mouse, click on a square and drag the mouse over the squares to select the hours of the day FTP upload will be active.
4. Repeat step 2 & 3 to set the schedule for other alarm types.
5. The set schedule is only valid for the selected channel. To use the same schedule for other channels, use the **Copy** option.
6. **Apply:** to save the settings.

## 5.7 System Configuration

Change general system settings, such as date, time, and region. Edit passwords, permissions, system maintenance tasks and more.

### 5.7.1.1 General



**Device Name:** Rename the NVR (if needed). The name can include both letters and digital numbers.

**Device ID:** Input an ID for the NVR. Composed of numbers only (6 digits, ex: 000000 or 111111). The device ID will identify the NVR. For example: 2 NVRs are installed in the same area; operating the NVR with a remote controller, both NVRs may receive the signal from controller causing both NVRs to act at the same time. To control only the NVR with ID 111111, input the Device ID 111111 at the login page with the remote control. Only the NVR with ID 111111 responds for further operations during the current login session.

**Language:** Select a language the system menus will display in. Multiple languages are available.

**Video Format:** Select the correct video standard for your region.



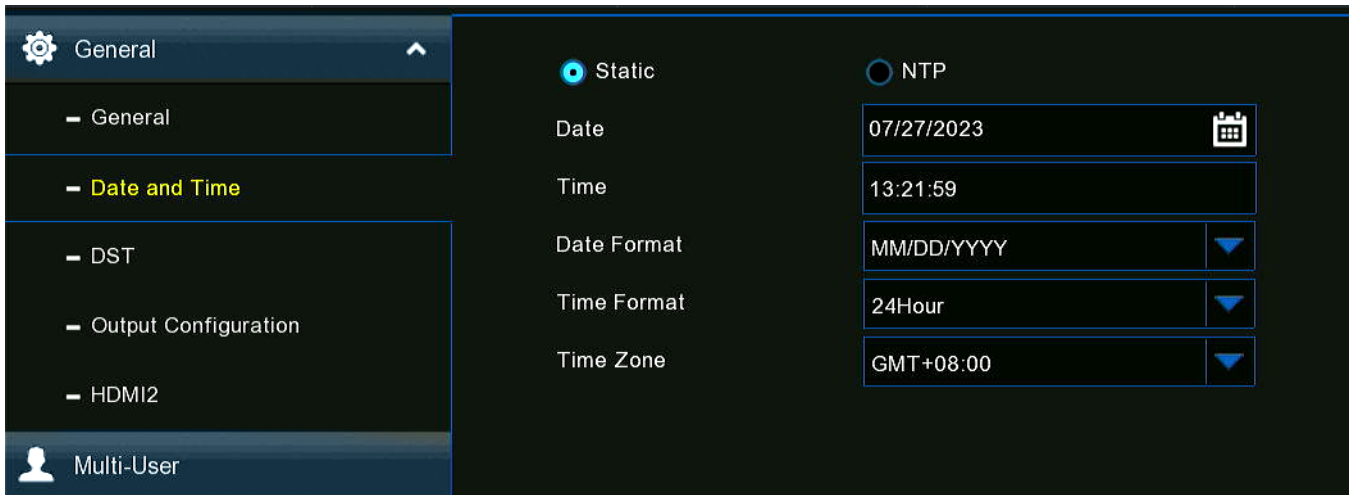
**Menu Timeouts:** Click the drop-down menu to select the time the NVR will exit the Main Menu if idle. Disable by selecting "OFF" (password protection will be temporarily disabled).

**Web Session Timeouts:** Enter the time (in minutes) when idle in the settings pages of the web interface, the NVR will require logging in again to resume web access. Set from 5 minutes to 1,440 minutes.

**Preview Session Timeouts:** Enable/disable **Preview Session Timeouts**. If enabled, web access will time out when idle on the web interface live view page.

**Show Wizard:** Enable/disable the Startup Wizard displaying each time the NVR is powered on or the NVR reboots.

### 5.7.1.2 Date and Time



**Date:** Set the date.

➔ Click the calendar icon to change the date.

**Time:** Set the time.

➔ Click the dialogue box to change the time.






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

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

**Time Zone:** Select a time zone relevant to your region or city.

## NTP Settings

The NTP (Network Time Protocol) function allows the NVR to automatically sync its clock with a time server. This ensures that the date and time are accurate and ensures correct time stamping when events occur.

<input type="radio"/> Static	<input checked="" type="radio"/> NTP
Date	2023-02-28 
Time	15:20:02
Date Format	YYYY-MM-DD 
Time Format	24Hour 
Time Zone	GMT+08:00 
Server Address	pool.ntp.org 
<a href="#">Update Now</a>	

Click **NTP** to enable.

**Server Address:** Select an NTP server.

Click "**Update Now**" to instantly sync the date & time. When NTP function is enabled, the system time will update at 00:07:50 each day or every time the system is starting up.

Click "**Apply**" to save the settings.

### 5.7.1.3 DST

DST (Daylight Saving Time) allows selecting the amount of time Daylight Saving has increased by in your time zone or region.

**Enable DST:** Enable/disable DST, if **DST** applies to your time zone or region.

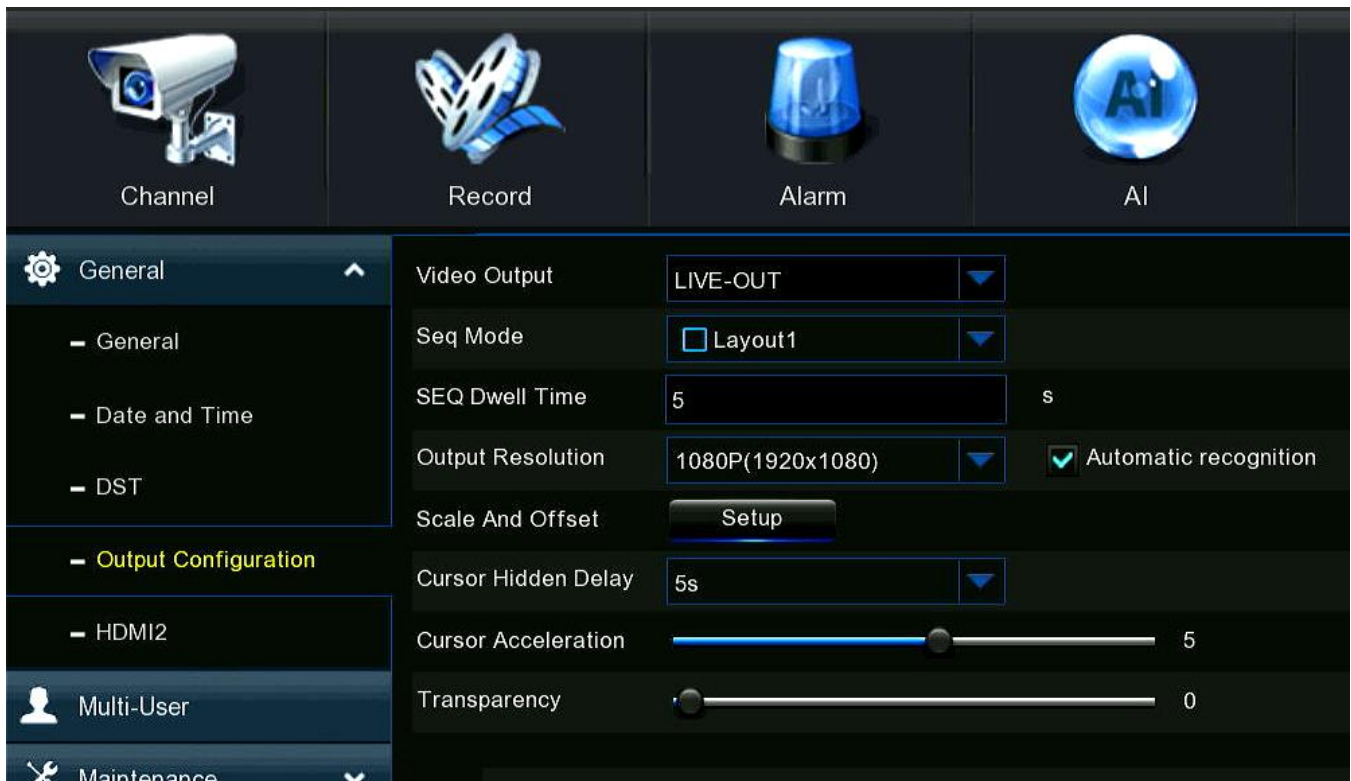
**Time Offset:** Select the amount of time that **DST** has increased in your time zone. The difference in minutes between Coordinated Universal Time (UTC) and the local time.

**DST Mode:** Select how Daylight Saving starts and ends:

- **Week:** Select the month, a particular day, and time when Daylight Saving starts and ends. For example: 2 a.m. on the first Sunday of a particular month.
- **Date:** Select the start date, end date, and time when Daylight Saving starts and ends.

### 5.7.1.4 Output Configuration

Configure video output parameters.



The screenshot displays a software interface for configuring video output parameters. At the top, there are four main menu items: Channel (with a camera icon), Record (with a film strip icon), Alarm (with a blue light icon), and AI (with a blue sphere icon). Below these is a settings menu with a gear icon and the word 'General'. The 'General' menu is expanded, showing sub-items: General, Date and Time, DST, Output Configuration (highlighted in yellow), HDMI2, Multi-User, and Maintenance. The 'Output Configuration' section is active, showing the following settings:

- Video Output: LIVE-OUT (dropdown menu)
- Seq Mode:  Layout1 (dropdown menu)
- SEQ Dwell Time: 5 s (input field)
- Output Resolution: 1080P(1920x1080) (dropdown menu) with a checked 'Automatic recognition' checkbox.
- Scale And Offset: Setup (button)
- Cursor Hidden Delay: 5s (dropdown menu)
- Cursor Acceleration: A slider bar set to 5.
- Transparency: A slider bar set to 0.

**Video Output:** Leave the default setting.

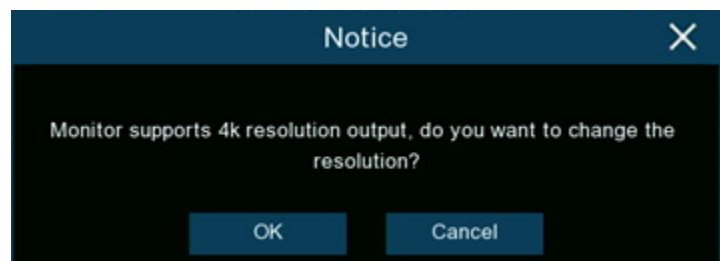
**SEQ Mode:** Select how many channels to display at a time when your NVR is in sequence mode.

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

**VGA/HDMI Resolution:** Set the VGA/HDMI output resolution.

**Auto Recognition:** Enable/disable. If enabled, the system will automatically set the resolution compatible with the monitor connected, when the NVR boots up.

→ The system will suggest changing the resolution if it detects a higher resolution available each time the system starts up.



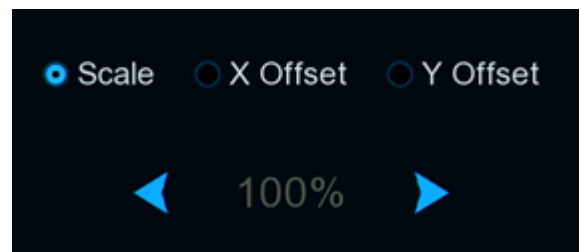
**Scale and Offset:** Set the image scale and offset.

Click **Setup** to change the settings:

→ **Scale:** Adjust the size of the display window.

→ **X Offset:** Move the display window towards left or right.

→ **Y Offset:** Move the display window up or down.



Click or long press the ◀ or ▶ button or using scroll wheel of your mouse to adjust accordingly.

**Cursor Hidden Delay:** Select the time before the NVR will hide the mouse cursor when idle. Select "OFF" to disable.

**Cursor Acceleration:** Adjust the speed of the mouse cursor speed.

**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.

### 5.7.1.5 HDMI 2

Set the output display parameters of the secondary screen (Not all models support this feature).



**Enable:** Enable/disable the secondary screen display.

**View Setup:** Select **Static** or **Dynamic**.

➔ If **Dynamic** is selected, images are previewed on the secondary screen in a sequential manner.

**SEQ Mode:** Select the number of video channels to be displayed when the NVR is in HD 2 SEQ mode.

**SEQ Dwell Time:** Set the SEQ dwell time on the secondary screen, based on Seconds.

**Output Resolution:** Select the display resolution of the secondary screen (maximum resolution is 1920x1080)

**Spot Poll setting:** Select the channels for sequential display on the secondary screen when in dynamic mode.

## 5.7.2 Users

Configure usernames, passwords, and user permissions.

The system supports the following account types:

**ADMIN:** The system administrator has full control of the system and can change the password of both administrator and users and enable/disable password protection.

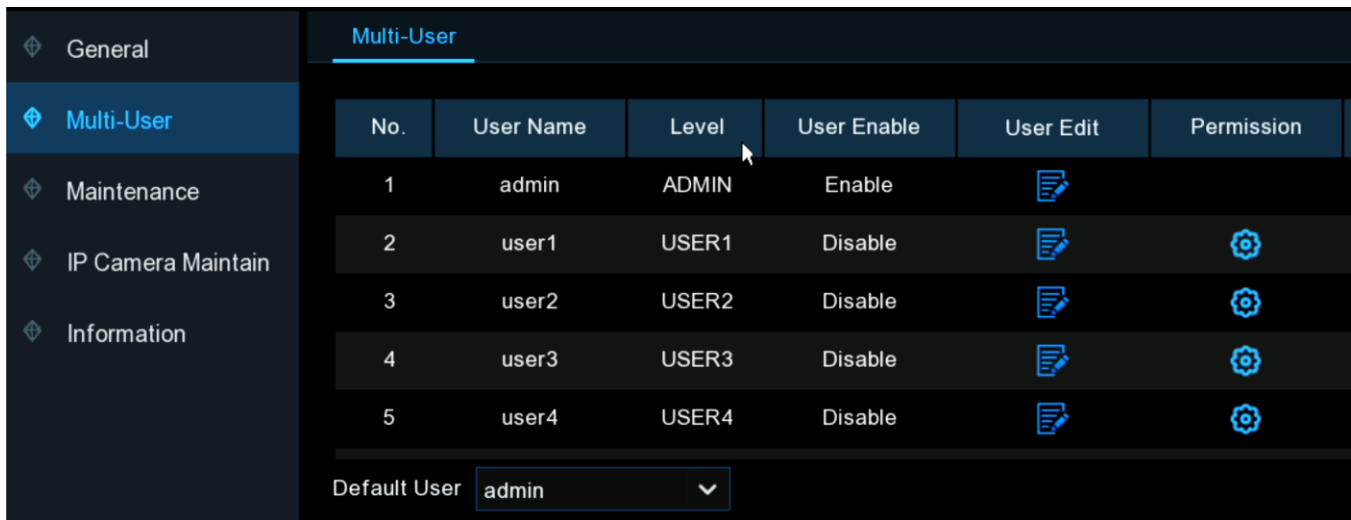
→ **USER:** Normal users only have access to live viewing, search, playback, and other functions.










→ Multiple user accounts with varying levels of access to the system can be set up.

**Default User:** Designate which user will be the default user (the default username will auto populate in the login window when the system starts up). Admin is the default user account. If multiple user accounts have been created, click the drop-down menu to turn this off.


### 5.7.2.1 Edit Users

Edit user passwords, enable, or disable a user, set permissions, and set Limitation of Remote Access.



No.	User Name	Level	User Enable	User Edit	Permission
1	admin	ADMIN	Enable		
2	user1	USER1	Disable		
3	user2	USER2	Disable		
4	user3	USER3	Disable		
5	user4	USER4	Disable		

Default User:

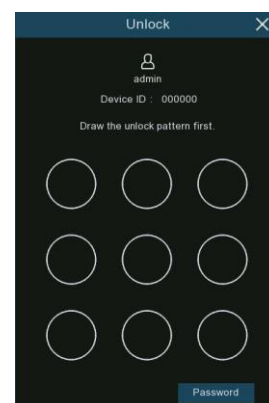
1. Click Edit  of the user to configure.

2. For the Admin:

→ To change password, the password must be a combination of 8 to 16 characters, which are combined with at least 2 kinds of different characters from uppercase letters, lowercase letters, numbers, and special characters.

→ Enter the new password again to confirm.

- Click **Save** to save the new password. You will be required to input your old password to authenticate.
- **Unlock Pattern**: Enable/disable **Unlock Pattern**. If enabled, draw a pattern, and save. This allows drawing unlock pattern to gain access to the NVR, the username and password will not be required.
- **Limitation of Remote Access**: Limit the number of remote logins with this user account at the same time. Remote logins include but are not limited to web interface, CMS/VMS, mobile apps, 3<sup>rd</sup> party platforms.



3. For a normal user:

- **User enable**: Enable /disable the user.

**Username**: Input a username

**Password**: Input a password.

**Confirm**: Input the password again to confirm.

- **Limitation of Remote Access**: Limit the number of remote logins with this user account at the same time. Remote logins include but are not limited to web interface, CMS/VMS, mobile app, 3<sup>rd</sup> party platform.

### 5.7.2.2 Edit User Permissions

The administrator account is the only account that has full control of all system functions. Enable or disable access to certain menus and functions for other user accounts.

Multi-User					
No.	User Name	Level	User Enable	User Edit	Permission
1	admin	ADMIN	Enable		
2	user1	USER1	Disable		
3	user2	USER2	Disable		
4	user3	USER3	Disable		

1. Click of the user to configure.
2. Check the box of any system menus or functions to give the user access to the selected options.

3. Click **All** to select all menus and functions.
4. Click **Clear** to deselect all menus and functions.
5. Click **Save** to save the modifications.

### User Permission ✕

User Name:

<input type="checkbox"/> Log Search	<input type="checkbox"/> Parameter	<input type="checkbox"/> Auto Reboot	<input type="checkbox"/> Manual Record
<input type="checkbox"/> Disk	<input checked="" type="checkbox"/> Remote Login	<input type="checkbox"/> SEQ Control	<input type="checkbox"/> Manual Capture
<input type="checkbox"/> Audio	<input type="checkbox"/> Database Management	<input type="checkbox"/> License Plate Management	<input type="checkbox"/> Subuser Password Change

**Backup**

IP Camera

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

**Live**

IP Camera

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

**Playback**

IP Camera

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

**PTZ**

IP Camera

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32




## 5.7.3 Maintenance

Search & view the system log, load default settings, upgrade the system, export & import system parameters, manage system auto reboot, and more.



The screenshot shows the Maintenance section of an NVR interface. The left sidebar contains navigation options: General, Multi-User, Maintenance (expanded), IP Camera Maintain, and Information. The Maintenance menu includes Log, Load Default, Reset Settings, Upgrade, Parameter Management, Auto Reboot, and Developer Mode. The main area displays search filters for Start Date (07/27/2023), End Date (07/27/2023), Start Time (00:00:00), End Time (23:59:59), and Log Type (All). A Search button is present. Below the filters is a table of log entries with columns: Channel, Type, TIME, CON., Access Source, RECORD, and Playback. The table shows several entries for Motion Start, Face Detection, and Motion End events. A Backup button is located at the bottom right of the interface.

Channel	Type	TIME	CON.	Access Source	RECORD	Playback
CH1	Alarm	07/27/2023 09:06:39	Motion Start		Yes	
CH1	Alarm	07/27/2023 09:07:07	Motion End		Yes	
CH1	Alarm	07/27/2023 09:38:00	Motion Start		Yes	
CH3	Alarm	07/27/2023 09:38:01	Motion Start		Yes	
CH1	Face Detection	[07/27/2023] 09:38:22 - 09:38:24	Stranger		Yes	
CH1	Alarm	07/27/2023 09:38:25	FD Start		Yes	
CH3	Alarm	07/27/2023 09:38:29	Motion End		Yes	
CH1	Face Detection	[07/27/2023] 09:39:08 - 09:39:09	Stranger		Yes	

1. **Start Date & End Date:** Click the calendar icon to select the month, year, and date to search.
2. **Start Time & End Time:** Click the dialogue box to enter a specific start and end time.
3. **Log Type:** Leave the default setting or click the drop-down menu to select a specific action to search for.
4. **Search:** Click to display a list of log files that match the search criteria.  
→ **Double-click** a file to display more information.
5. **Playback:** Click  to play the video segment of the event.
6. Click the arrow controls to go to the next page/previous page of the search list.
7. Insert a USB flash drive into the NVR.  
→ Click **Backup** to save the log files that match your search criteria to the USB flash drive.

### 5.7.3.2 Load Default

Reset the NVR settings to its out-of-the-box factory settings. Choose to reset all settings at once, or just settings for specific menus. Restoring the default settings will not delete recordings or snapshots saved to the hard drive.



**Select All:** To reset all settings back to the default settings.

Or select a specific topic or multiple topics to restore.

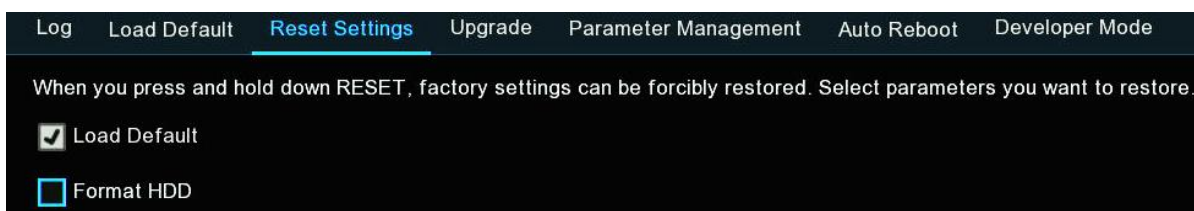
Click **Apply** to load default settings to the selected topics.

### 5.7.3.3 Reset Settings

If the NVR comes with a pinhole reset on the rear panel, this menu will be available.

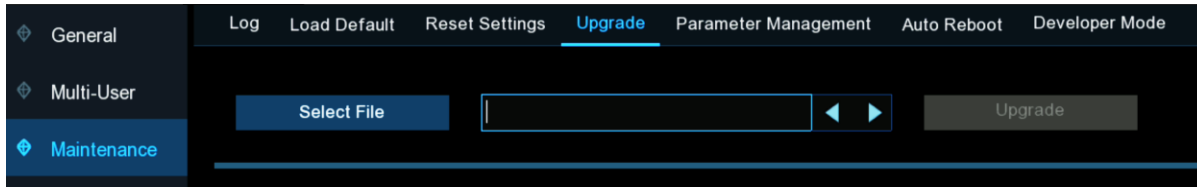
By default: Using a small pin (such as a paperclip) inserted in the reset pin hole, pressing the reset button, and holding for 10 seconds (until the NVR beeps) will restore default settings.

Select **Format HDD** to format HDD if needed.



### 5.7.3.4 System Upgrade

To upgrade the firmware by USB flash drive or online.



#### 5.7.3.4.1 Upgrade by USB Flash Drive

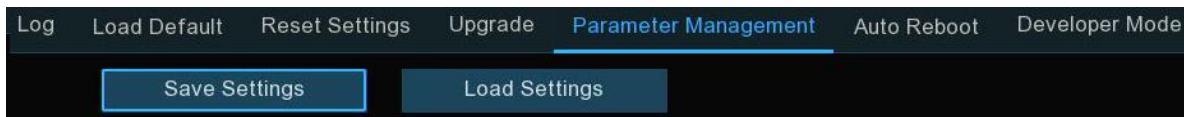
1. Copy the firmware file to a USB drive and insert the USB flash drive into the NVR's USB port.
2. Click **Select File** to choose the firmware file in the USB flash drive, then Click **OK**.
3. Click **Upgrade** to start firmware upgrade. The upgrade will last around 5-10 minutes, please do **NOT** power off the NVR or remove the USB from NVR during firmware upgrade.
4. The NVR will reboot after the upgrade is finished.

### 5.7.3.5 Parameter Management

Export the system settings to a USB flash drive or import a system settings file from USB flash drive to the NVR. Insert a USB flash drive into one of the NVR's USB ports prior to using these functions.

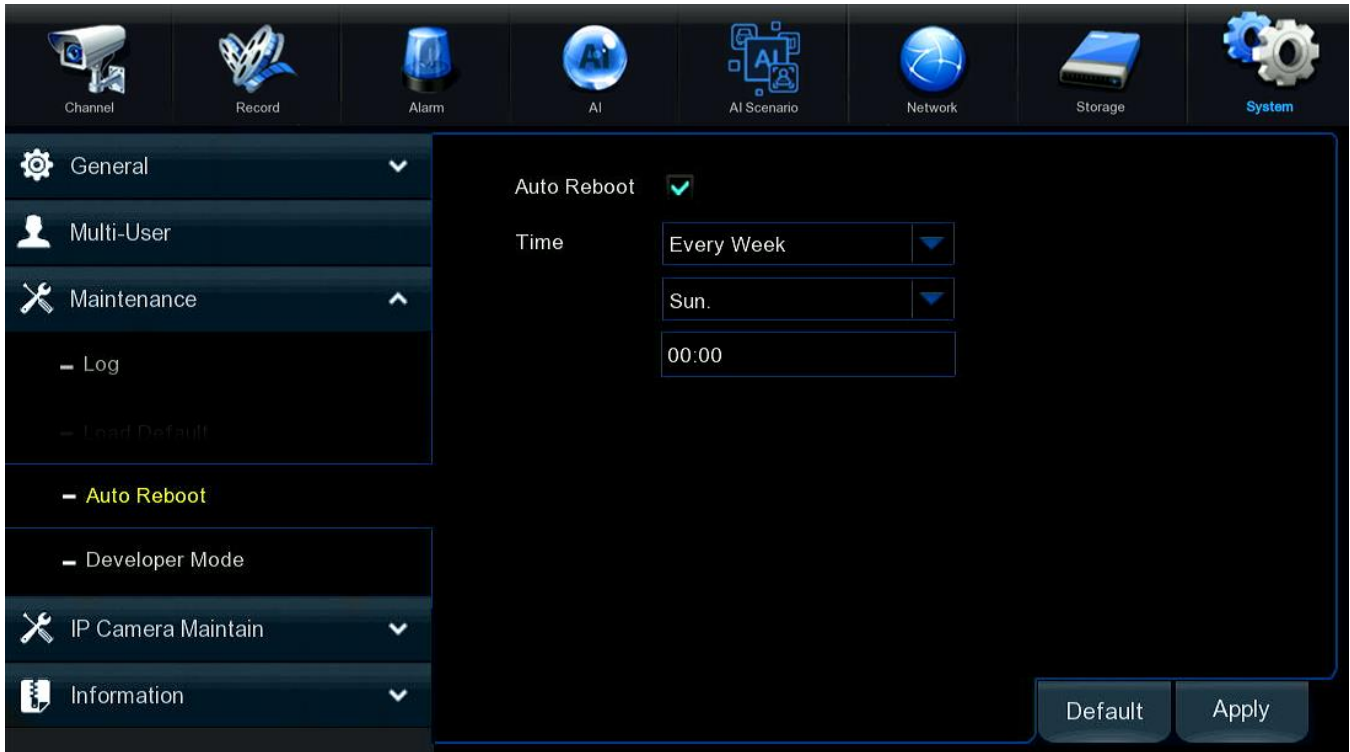
**Save Settings:** Click this button to export a configuration file containing all the settings that you have customized.

**Load Settings:** Click this button to import a configuration file containing all the settings that you have customized.



### 5.7.3.6 Auto Reboot

Manage the systems auto reboot functions. Enable/disable the NVR automatically rebooting based on a set schedule. The recommendation is to leave this function enabled, as it maintains the operational integrity of the NVR.



**Auto Reboot:** Enable/disable **Auto Reboot**.

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

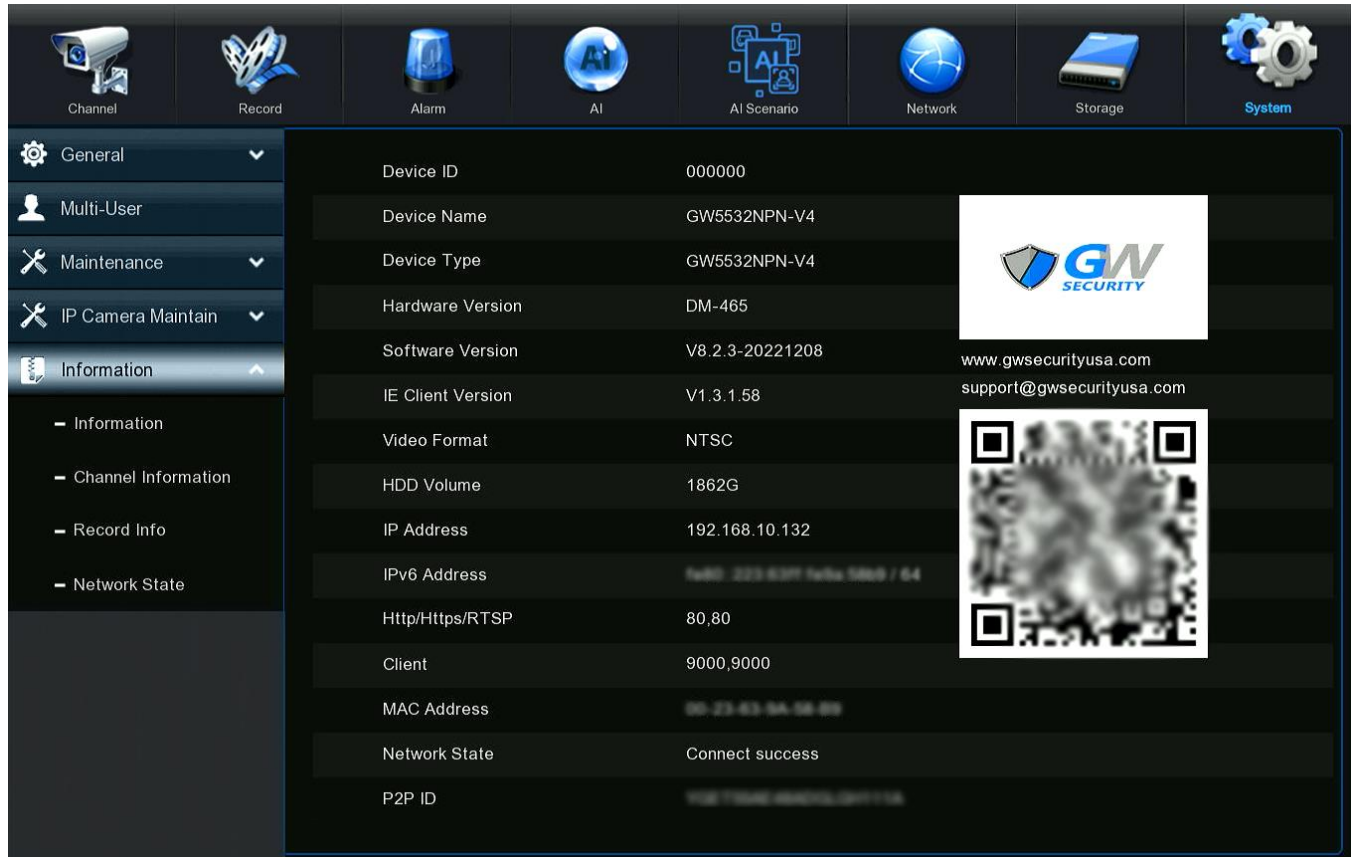
- ➔ Select the day of the week to reboot.
- ➔ Set the hour of the day to reboot.

## 5.7.5 System Information

View the system information, channel information, record information & network status.

### 5.7.5.1 System Information

Displays technical information about the NVR, such as hardware/software version, IP address, network ports, MAC address, etc.



Category	Value
Device ID	000000
Device Name	GW5532NPN-V4
Device Type	GW5532NPN-V4
Hardware Version	DM-465
Software Version	V8.2.3-20221208
IE Client Version	V1.3.1.58
Video Format	NTSC
HDD Volume	1862G
IP Address	192.168.10.132
IPv6 Address	fe80::223:6371:7a7a:58a9/64
Http/Https/RTSP	80,80
Client	9000,9000
MAC Address	98-23-63-94-58-88
Network State	Connect success
P2P ID	192.168.10.132:8080/192.168.10.132:8080

- The P2P ID & P2P QR code are displayed on the information page.
- After downloading the Mobile Application, scan this QR code to add the NVR to the Mobile App for remote viewing.

### 5.7.5.2 Channel Information

View channel information for each connected camera such as: mainstream and substream recording specifications, motion detection status & privacy zone.

Information	Channel Information		Record Info	Network State			
Channel	Alias	State	Mainstream	Substream	Mobilestream	Motion Detection	Privacy Zone
CH1	CH1	On-line	2592x1944, 30Fps, 4Mbps	1280x 720, 20Fps, 1024Kbps	640x 480, 10Fps, 512Kbps	Support	Support
CH2	CH2	On-line	1920x1080, 25Fps, 4Mbps	1280x 720, 20Fps, 1024Kbps	640x 480, 25Fps, 512Kbps	Support	Support
CH3	CH3	On-line	3840x2160, 15Fps, 4Mbps	1280x 720, 10Fps, 1.5Mbps	Nonsupport	Support	Support
CH4	CH4	On-line	2592x1944, 15Fps, 4Mbps	640x 480, 15Fps, 2Mbps	Nonsupport	Support	Support

### 5.7.5.3 Record Information

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

Information	Channel Information		Record Info	Network State			
Channel	Record State	Record Switch	Stream Type	Resolution	FPS	Bitrate	
CH1	ON	Enable	DualStream	2592x1944   1280x720	30Fps   20Fps	4Mbps   1024Kbps	
CH2	ON	Enable	DualStream	1920x1080   1280x720	25Fps   20Fps	4Mbps   1024Kbps	
CH3	ON	Enable	DualStream	3840x2160   1280x720	15Fps   10Fps	4Mbps   1.5Mbps	
CH4	ON	Enable	DualStream	2592x1944   640x480	15Fps   15Fps	4Mbps   2Mbps	

### 5.7.5.4 Network State

Displays the network settings used by the NVR.

Attribute	Value
WAN	
IP Address	192.168.5.110
Subnet Mask	255.255.255.0
Gateway	192.168.5.1
MAC Address	88:88:88:88:88:88
IPv6 Address	fe80::200:200:200:200:1
IPv6 Gateway	fe80::/64
DHCP	Disable
Internal Interface	
IP Address	10.10.25.100
Subnet Mask	255.255.0.0
DNS1	172.18.1.222
DNS2	8.8.8.8
PPPoE	Disable
Port	
Http/Https/RTSP	13180,13180,Inactive,Disable
Client	13181,13181,Inactive,Disable
Total Band Width:	256Mbps
Used Band Width:	58.488Mbps

**Total Bandwidth:** Total input bandwidth available for the NVR.

**Used Bandwidth:** Bandwidth being used by the NVR.

# Chapter 7 Search & Play in General

To bring up the Search/Playback functions, first you must bring up the toolbar. From the Live View, right click the mouse anywhere on the screen. A tool bar will display at the bottom of the screen.



Click  to open the Search/Playback functions.



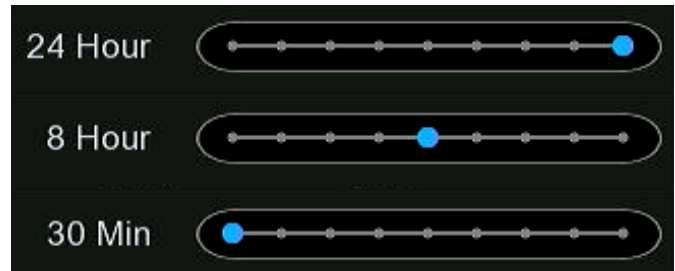
1. **Search Options:** Select one: General, Events, Sub-periods, Smart, Tag, External File, Picture, Slice & AI. Click the tab to search different event recordings.
2. **Search Date:** Click the calendar icon to select a date to search on.
  - A red underline on a date indicates there are recorded videos available for that date.
3. **Search Type:** Select the event type to search for.
  - Leave all event types checked to search for all.
  - Or select one or more specific event types to narrow the search.
4. **Stream Type:** Mainstream is the default setting.


















5. Channel **Selection**: Choose the channels you want to search & play.
6. **Playback Control Bar**: Used to control the video playback.
7. **Timeline**: Quickly go to any point in time to playback by double clicking on the desired point on the timeline.

→ Zoom in or zoom out the timeline by using the time frame options. Choose the time span that will be displayed on the timeline to make it easier to select the exact moment to playback.

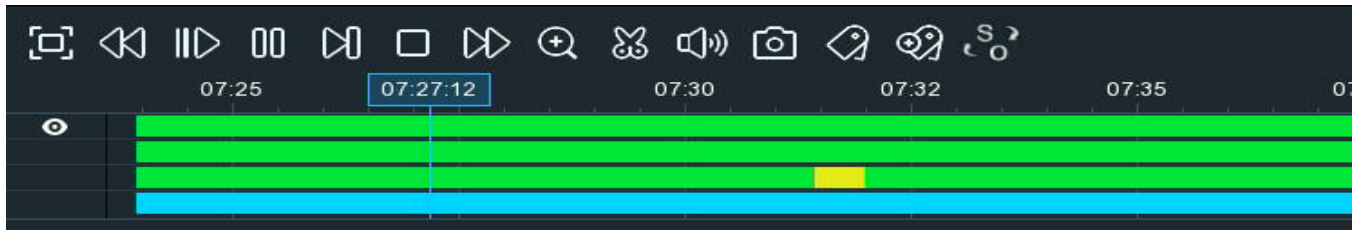
8. Indicates the video type displayed on the timeline.







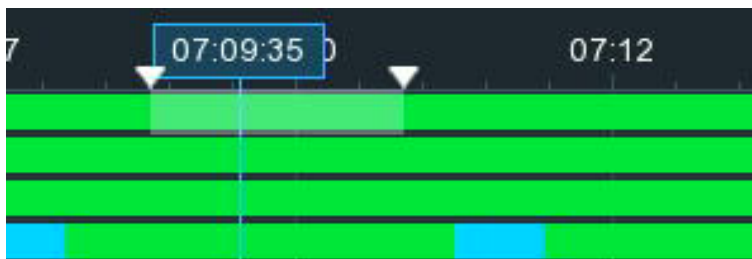


Button	Function
	Enlarge the video playback to full screen.
	Rewind button, subsequent presses of the button will change the rewind speed.
	Slow Play, subsequent presses of the button will change the play speed.
	Play in normal speed.
	Pause.
	Play frame by frame. Click once to play a frame of the video.
	Stop playing.
	Fast forward button, subsequent presses of the button will change the speed.
	Select a camera, click this button then use the scroll button on the mouse to zoom. Use the picture-in-picture screen to select a different area to view. Right-click to exit.
	This button allows saving a video clip by setting a start point and an end point which can then be copied to a USB flash drive. View more on <a href="#">7.1.1. Video Segment Backup</a> .
	Click to adjust audio output volume.
	Click to take a snapshot and save to your USB flash drive.
	Tag recording information such as a person or object within the video. Click on a camera to select, pause the video when a person/object is seen, click this button to create the tag. (Multiple tags can be created).
	Same as above, but you can name the tag.
	Click to switch the image scale for all playing cameras between original and stretch.

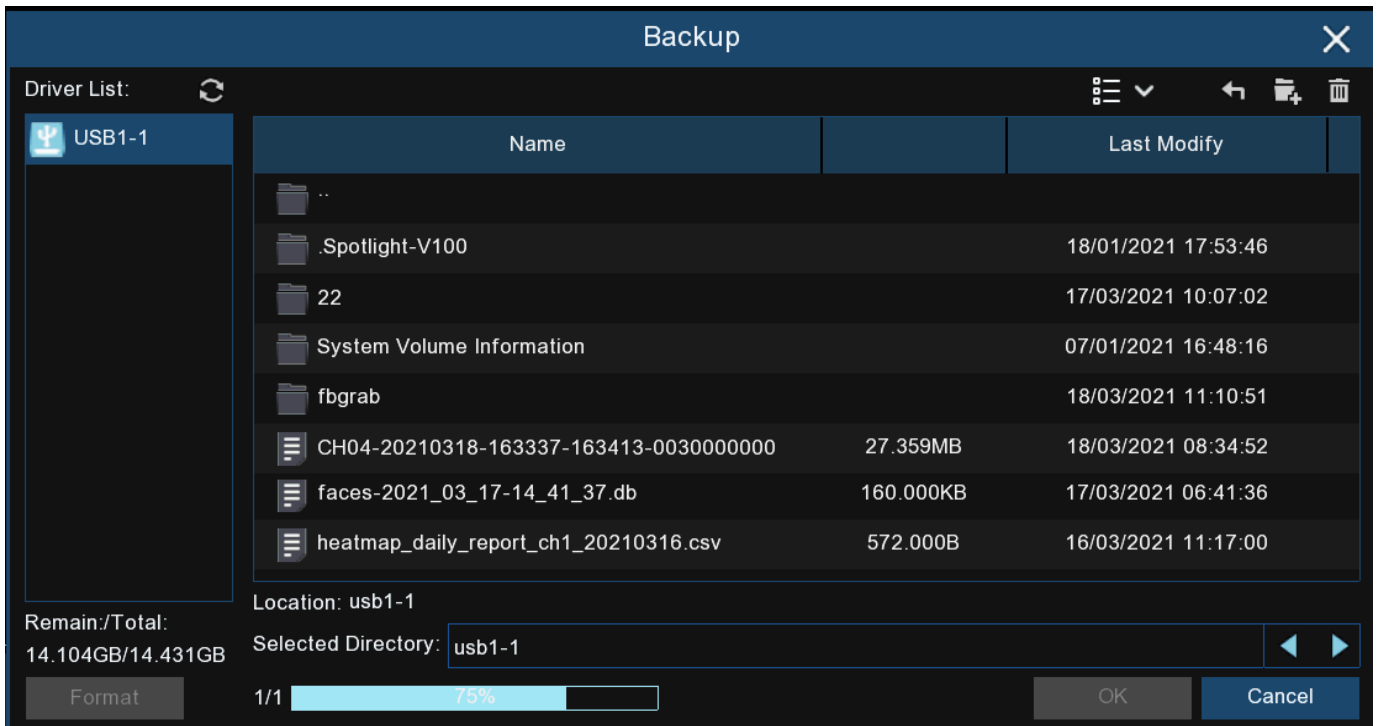
## 7.1.1 Video Segment Backup



1. Insert a USB flash drive into an available USB port on the NVR.
2. Search and start a video playback.
3. Move the mouse cursor, to the point in time on the timeline to cut a segment and click.
4. Click  There will be two white triangles on the timeline. Move them left or right on the section of the video that is to be clipped. To select multiple channels, click on the start time, hold and drag the mouse to select more channels, release the mouse at the position of the end time.
5. The  icon will change to .  
→ Click  to save the video segment.



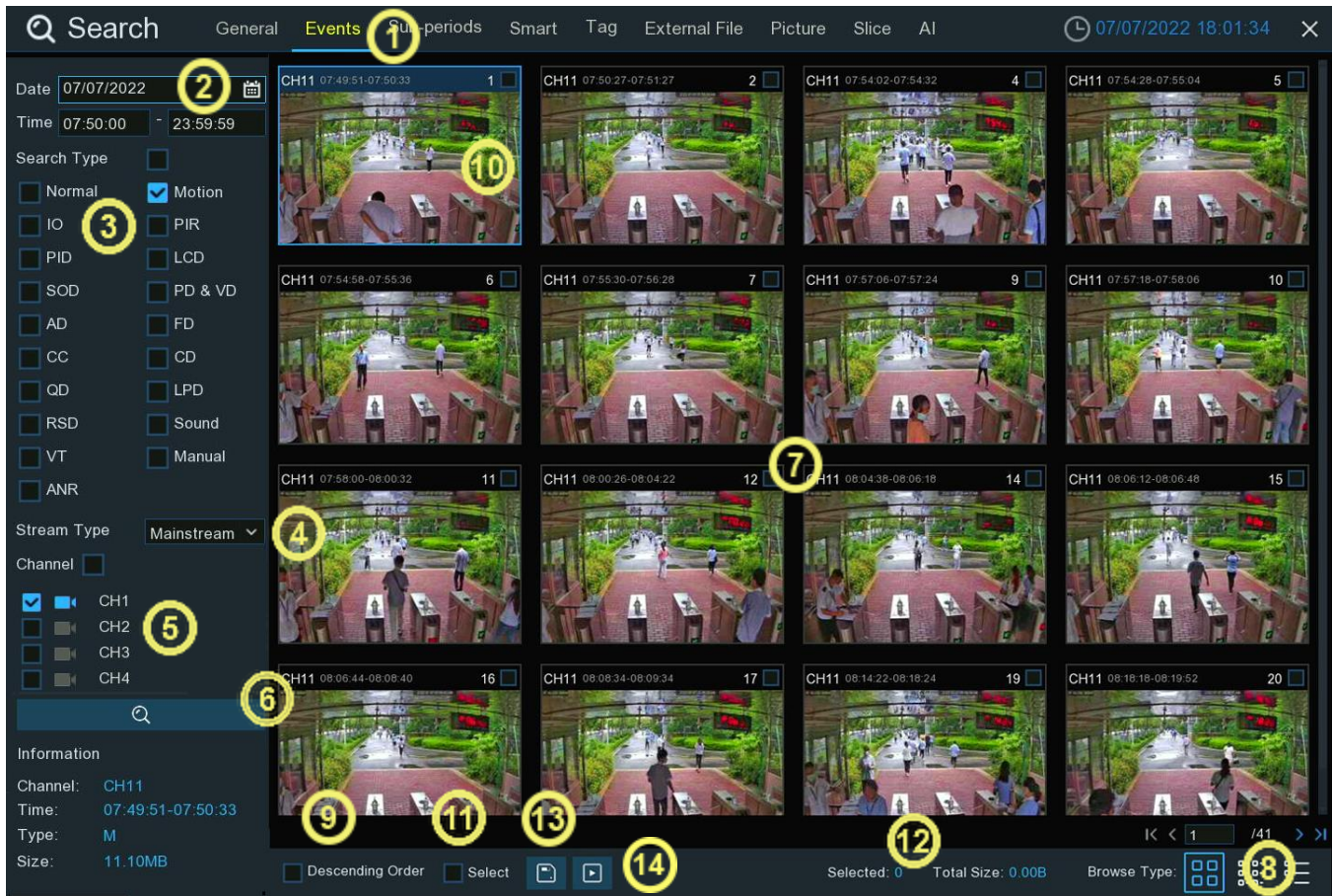
6. Select a file type for the backup files.
  - Click **Save** to save the video segment(s). (Make sure the USB flash drive has enough space to save the video file(s) being backed up.)
7. Choose the directory in the USB flash drive to save the video segment(s) in.
  - Click **OK**.
  - The progress bar at the bottom of the window shows the backup progress.







## 7.2 Search, Play and Back Up Event Recordings







Event search displays a list of video recordings with the channel, start/end time, and recording type, conveniently summarized. Great for quickly backing up events to a USB flash drive.

1. Click the **Events** tab.
2. Select the **Date** and **Time** to search:
  - **Date**: Click the calendar icon to select a date to search. A red underline on a date indicates recordings on those particular dates.
  - **Time**: Use the keypad to enter a specific start and end time.
3. **Search Type**: Select one or more event types. Leave all event types checked to search for all types.



4. **Stream Type:** Mainstream is the default setting.
  - Substream can be selected if dual-stream recording is enabled.
5. **Channel:** Select one or all cameras to search. The camera icon will be blue for cameras that match the search criteria.
6. Click **Search** to execute a search.
7. A thumbnail of each event that matches the search criteria will be displayed in the result window.
  - Use the arrow buttons to turn the page or use the keypad to navigate to a specific page.
8. **Browse Type:** Select how the events are displayed. Thumbnail, List or Detail.
  - In the detailed view mode, events can be locked to keep them from being overwritten in the hard drive.
  - Click  to lock or click  to unlock the events.
9. **Descending Order:** View the events in descending order.

10. Click on an event thumbnail, relative information will be displayed on the left bottom corner.
11. **Select:** Select all events in current page. Or check the box above an event thumbnail to select it.
12. The number of events and total size of selected event(s) will be displayed here.
13. Click  to save all selected events to the USB flash drive directly.
14. Or click  to enter the playback window. See more on [7.2.1. Event Playback Control](#).



<input checked="" type="checkbox"/>	11	CH11	SMN	07/07/2022	07:54:02	07:54:32	7.93MB		
<input checked="" type="checkbox"/>	12	CH11	MN	07/07/2022	07:54:28	07:55:04	9.52MB		
<input checked="" type="checkbox"/>	13	CH11	SMN	07/07/2022	07:54:58	07:55:36	10.00MB		

















## 7.2.1 Event Playback Control

The screenshot displays a video management software interface. At the top, there is a search bar and navigation tabs: General, Events (selected), Sub-periods, Smart, Tag, External File, Picture, Slice, and AI. Below the tabs is a table of event data:

Channel	Type	Start Time
1	CH1	N 00:00:01
2	CH1	N 00:26:12
3	CH1	N 00:53:55
4	CH1	N 01:21:37
5	CH1	N 01:49:20
6	CH1	N 02:17:03
7	CH1	N 02:44:48
8	CH1	N 03:12:31
9	CH1	N 03:40:16
10	CH1	N 04:07:59
11	CH1	N 04:35:44
12	CH1	N 05:03:27
13	CH1	N 05:31:09
14	CH1	N 05:58:54
15	CH1	N 06:26:37
16	CH1	N 06:54:22
17	CH1	N 07:22:05
18	CH1	N 07:49:50
19	CH1	N 08:17:34
20	CH1	N 08:45:17
21	CH1	N 09:13:02

Below the table are navigation controls: a keypad with 'K < 1 /5 >' and buttons for 'Selected: 30' and 'Total Size: 21.33GB'. There are also buttons for saving to USB and playing. The main video player shows a person walking on a wet street, with a green bounding box around them. The timestamp '07/07/2022 07:39:23' is visible in the bottom right of the video. Below the video is a playback control bar with various icons (rewind, play, stop, fast forward, etc.) and a timeline from 00:00:00 to 00:30:00. A legend at the bottom identifies event types: Normal (green), Motion (yellow), IO (red), PIR (purple), AI (blue), Alarm (orange), Manual (light green), and ANR (light orange).

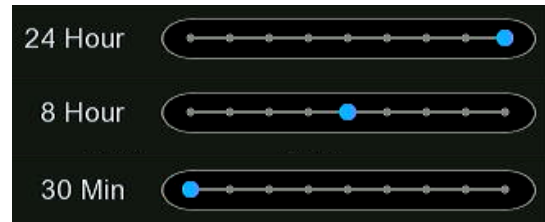
1. Select the events.
  - ➔ Use the arrow buttons to turn the page or use the keypad to navigate to a specific page.
  - ➔ Double-click on an event to play it directly.
2. Click  to save selected events to the USB flash drive.
  - ➔ Click  button to play selected events.
3. **Video Playback Controls:** to control the video playback.

Button	Function
	Return to event search page.
	Enlarge the video playback to full screen.
	Rewind button, subsequent presses of the button will change the rewind speed.
	Slow Play, subsequent presses of the button will change the play speed.
	Play in normal speed.
	Pause.
	Play frame by frame. Click once to play a frame of the video.
	Stop playing.
	Fast forward button, subsequent presses of the button will change the speed.
	Select a camera, click this button then use the scroll button on the mouse to zoom. Use the picture-in-picture screen to select a different area to view. Right-click to exit.
	This button allows saving a video clip by setting a start point and an end point which can then be copied to a USB flash drive. View more on <a href="#">7.1.1. Video Segment Backup</a> .
	Click to adjust audio output volume.
	Click to take a snapshot and save to the USB flash drive.
	Tagging allows recording information such as a person or object within the video. Click on a camera to select, pause the video when a person/object is seen, press this button to create the tag (multiple tags can be created).
	Same as above, but you can name the tag.
	Click to switch the image scale for all playing cameras between original and stretch.



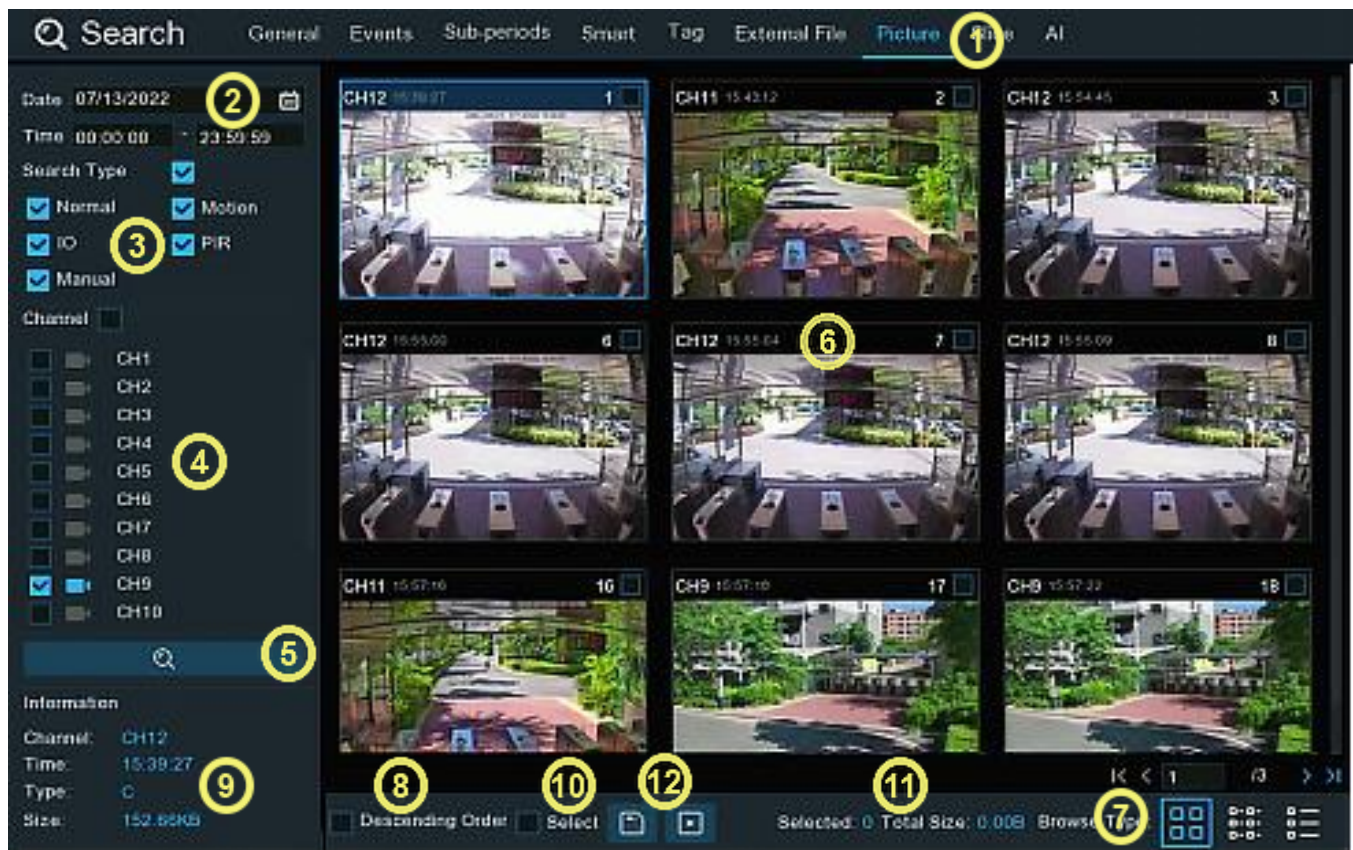
4. **Timeline:** Quickly go to any point in time to playback by double clicking on the desired point on the timeline.

→ Zoom in or zoom out the timeline by using the time frame options. Choose the time span that will be displayed on the timeline to make it easier to select the exact moment to playback.





## 7.7 Search & View Snapshots

View and save snapshots to a USB flash drive.



1. Click the **Picture** tab.
2. Select the **Date** and **Time** to search:
  - **Date:** Click the calendar icon to select a date to search. A red underline on a date indicates snapshots on those particular dates.
  - **Time:** Use the keypad to enter a specific start and end time.

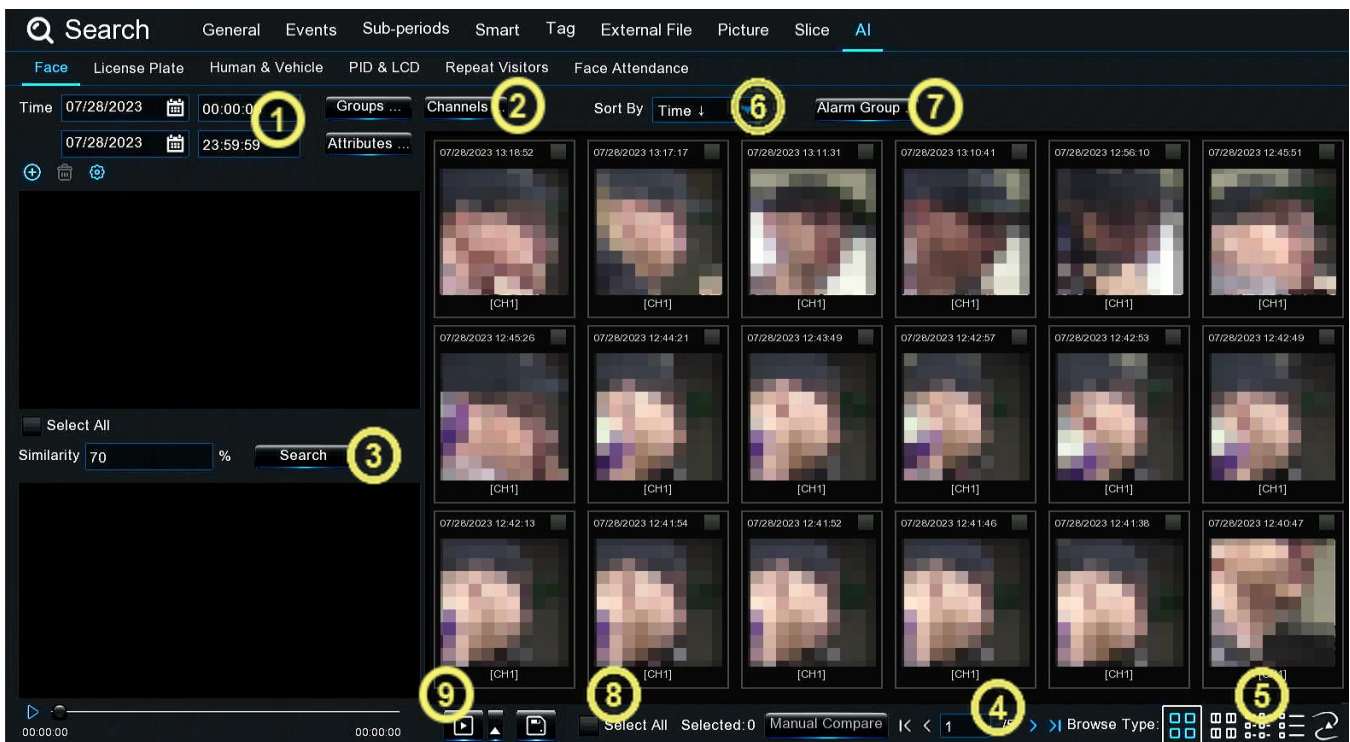
3. **Search Type:** Select one or more event types. Leave all event types checked to search for all types.
4. **Channel:** Select from one or more cameras to search on. Cameras with a blue camera icon match the search criteria. Only cameras with a blue camera icon can be selected.
5. **Search:** Click to execute a search.
6. A thumbnail of each snapshot that matches the search criteria will be displayed in the result window.
  - Use the arrow buttons to turn page or use the keypad to navigate to a specific page.
7. Change how the snapshots are displayed. Thumbnail, List or Detail.
8. **Descending order:** Check the box to view the results in descending order.
9. Click on a thumbnail, relative information will be displayed on the left bottom corner.
10. **Select:** To select all events on the current page. Or check the box above an event thumbnail to select it.
11. Selected file information will be displayed:
  - **Selected:** The total number of snapshots selected.
  - **Total Size:** The total file size of all the selected snapshot(s).
12. Click  to save all the selected snapshots to a USB flash drive directly.
  - Click  to enter the slideshow window.
  - See more on [7.7.1. Playing Slideshow](#)

## 7.9 AI Search




Search AI related events: face detection, license plates, human & vehicle detection, PID & LCD, repeat visitors and face attendance.

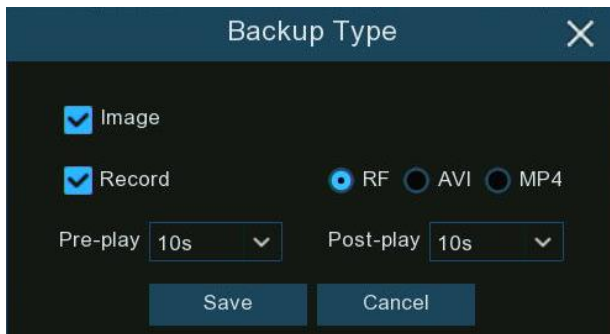
### 7.9.1 Face Detection Events

Click the **Face** tab to open Facial Recognition based search functions. For cameras that have face detection enabled, the face images captured by all supporting cameras for the current day will be displayed.



1. Select the **Date** and **Time** to search:
  - **Date**: Click the calendar icon to select a date to search. A red underline on a date indicates recordings on those particular dates.
  - **Time**: Use the keypad to enter a specific start and end time.
2. **Channels**: Select a specific channel(s) to search. The system searches all cameras by default.
3. Click **Search** to execute a search.
4. Use the arrow buttons to turn page or use the keypad to navigate to a specific page.


5. Change how the snapshots are displayed. Thumbnail, List or Detail.
6. **Sort By:** Change how the images display. In Ascending or Descending order.
7. **Alarm Groups:** Narrow the search by selecting specific alarm group(s).
8. **Select All:** To select all events in current page. Or check the box above an event thumbnail to select it.
9. Click  to save all selected face images to a USB flash drive.
  - To save video files as well as images, check "**Record**".
  - Select the video format.
  - Set the length of time to save before and after the events.
  - Click  to play the selected events,
  - Click  to add more time before and after the event and then play.
  - See more on [7.9.1.1. Playing Events](#)



## 7.9.1.1 Playing Events

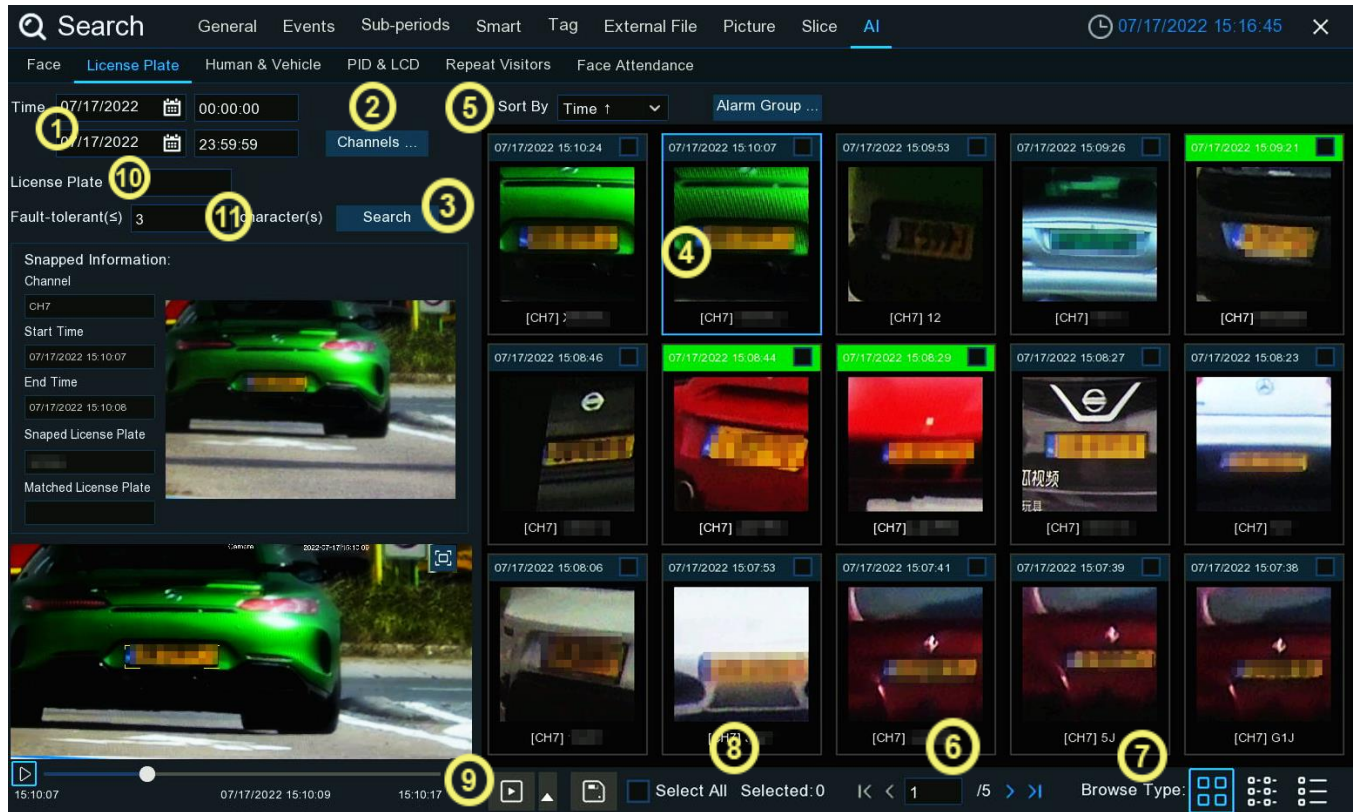
The screenshot displays a video management system interface. On the left, there is an event list table with columns for Channel, Start Time, and End Time. The table contains 20 rows of event data. A yellow circle labeled '1' highlights the first row of the table. Below the table, there are navigation arrows and a keypad. A yellow circle labeled '2' highlights a play button icon. The main area of the interface is a video playback window showing a security camera feed of a turnstile area. A yellow circle labeled '3' highlights the video playback controls at the bottom of the window, including a timeline and various control icons. A yellow circle labeled '4' highlights the timeline itself, which shows a time axis from 14:25:13 to 14:53:00. The video feed shows a person standing near a turnstile, and there are digital displays in the background showing times like 8:20:30 and 8:50:30.

Channel	Start Time	End Time
129	07/28/2023 15:08:49	07/28/2023 15:08:5
128	07/28/2023 15:07:20	07/28/2023 15:07:2
127	07/28/2023 15:00:56	07/28/2023 15:00:5
126	07/28/2023 14:25:01	07/28/2023 14:25:0
125	07/28/2023 14:24:58	07/28/2023 14:24:5
124	07/28/2023 14:24:55	07/28/2023 14:24:5
123	07/28/2023 14:02:26	07/28/2023 14:02:2
122	07/28/2023 14:02:23	07/28/2023 14:02:2
121	07/28/2023 14:02:19	07/28/2023 14:02:2
120	07/28/2023 14:00:09	07/28/2023 14:00:1
119	07/28/2023 13:59:47	07/28/2023 13:59:4
118	07/28/2023 13:58:03	07/28/2023 13:58:0
117	07/28/2023 13:54:23	07/28/2023 13:54:2
116	07/28/2023 13:54:11	07/28/2023 13:54:1
115	07/28/2023 13:54:07	07/28/2023 13:54:1
114	07/28/2023 13:52:17	07/28/2023 13:52:1
113	07/28/2023 13:51:59	07/28/2023 13:52:0
111	07/28/2023 13:48:36	07/28/2023 13:48:3




1. Event List. Use the arrow buttons to turn page or use the keypad to navigate to a specific page.
  - Double-click on an event to play it directly.
2. Add time before and after the event to review.
  - Click  to play.
3. **Video Playback Controls:** to control the video playback.
4. **Timeline:** Quick change the playback position by clicking on the timeline.
  - Zoom in or zoom out, the timeline by using the time frame options. Choose the time span that will be displayed on the timeline to make it easier to select the exact moment to playback.

## 7.9.2 Search License Plate

Click the **License Plate** tab to enter the license plate search section. If license plate detection is enabled in the camera(s), the license detection events captured on the current day will be displayed (cameras that support these functions are required).



1. Select the **Date** and **Time** to search:
  - ➔ **Date**: Click the calendar icon to select a date to search. A red underline on a date indicates recordings on those particular dates.
  - ➔ **Time**: Use the keypad to enter a specific start and end time.
2. **Channels**: Select specific channel(s) to search for. The system searches all channels by default.
3. Click **Search** to start a search.
4. The search result will be displayed on the right side of the screen.
5. **Sort By**: Select how to display the results: ascending or descending order.
6. Use the arrow buttons to the turn page or use the keypad to navigate to a specific page.
7. **Browse Type**: Select how events are displayed: Thumbnail, List or Detail.

8. **Select All:** To select all events on the current page. Or check the box above an event thumbnail to select it.
9. Click  to save all selected plate images to a USB flash drive.
  - To save video files as well as images, check "**Record**".
  - Select the video format.
  - Set the length of time to save before and after the events.
  - Click  to play the selected events,
  - Click  to add more time before and after the event and then play.
  - See more on [7.9.1.1. Playing Events](#)
10. License **Plate:** Input a license plate number.
11. **Fault Tolerance:** Set the fault tolerance.
  - Variances in image resolution, light strength, camera angle, moving speed of the vehicle etc., can result in character(s) in the license plate number not being recognized. Set the Fault Tolerance for how many characters of the detected license plate can be different from the license plate number saved in the group and still be considered a match. If the number of characters that are different between the detected license plate number and a license plate profile in the group is no more than the set value, the detected license will be considered a recognized match.

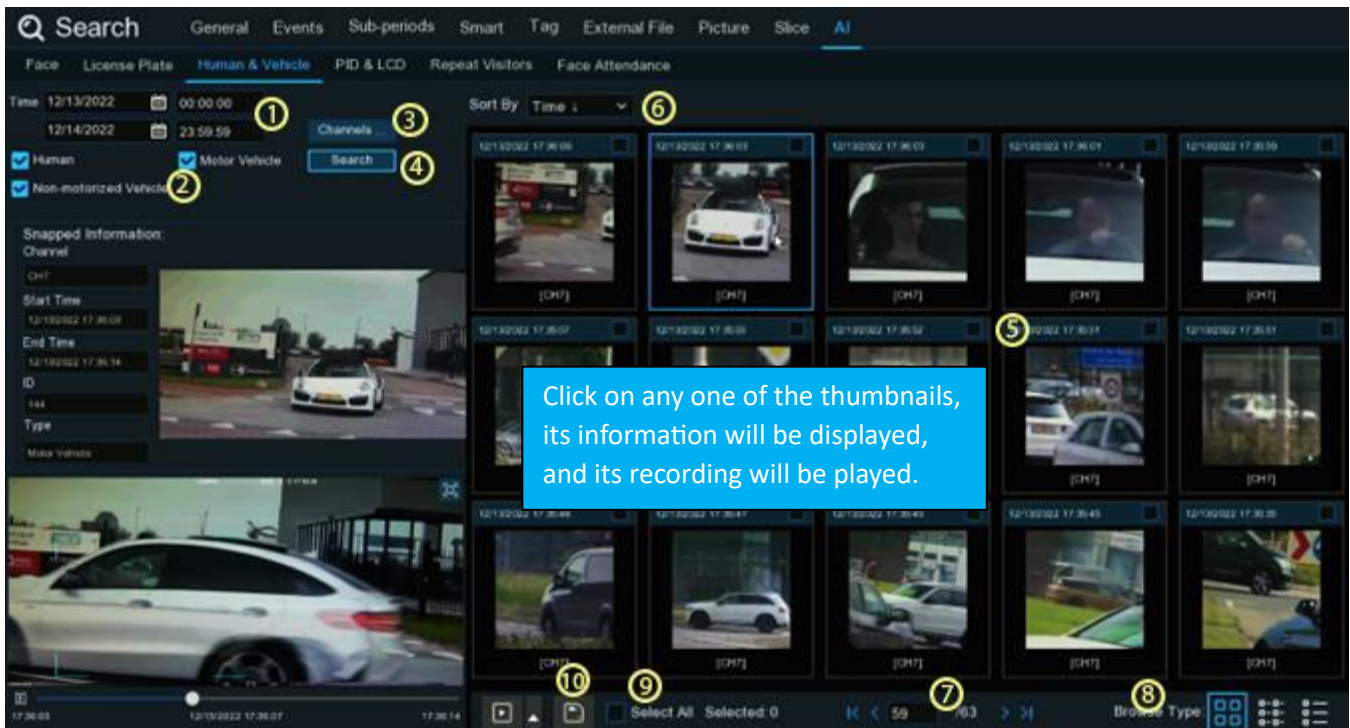
Recognized License Number	Input Number	Fault Tolerance	Recognition Result
AB123C	AB-123-C	≤2 characters	True
AB123C	AB-123-C	≤0 or 1 character	False
A8I23C	AB123C	≤2 characters	True
A8I23C	AB123C	≤0 or 1 character	False
B594SB	B734KB	≤3 characters	True
B594SB	B734KB	≤2 character	False
AB132C	AB123C	≤2 characters	True
AB123C	AB123C	≤1 or 1 character	True

Samples for true of false result

**Note:** Only English letters and numbers will be recognized by the system. Special characters, like underline , virgule /, hyphen -, will not be recognized. Set the Fault Tolerance; accordingly, if special characters have been used when inputting the license plate number when creating a license plate profile.




### 7.9.3 Human & Vehicle

Click the **Human & Vehicle** tab to open the Human & Vehicle search section. If Human & Vehicle detection has been enabled in the camera(s), the Human & Vehicle detection events captured on the current day will display.



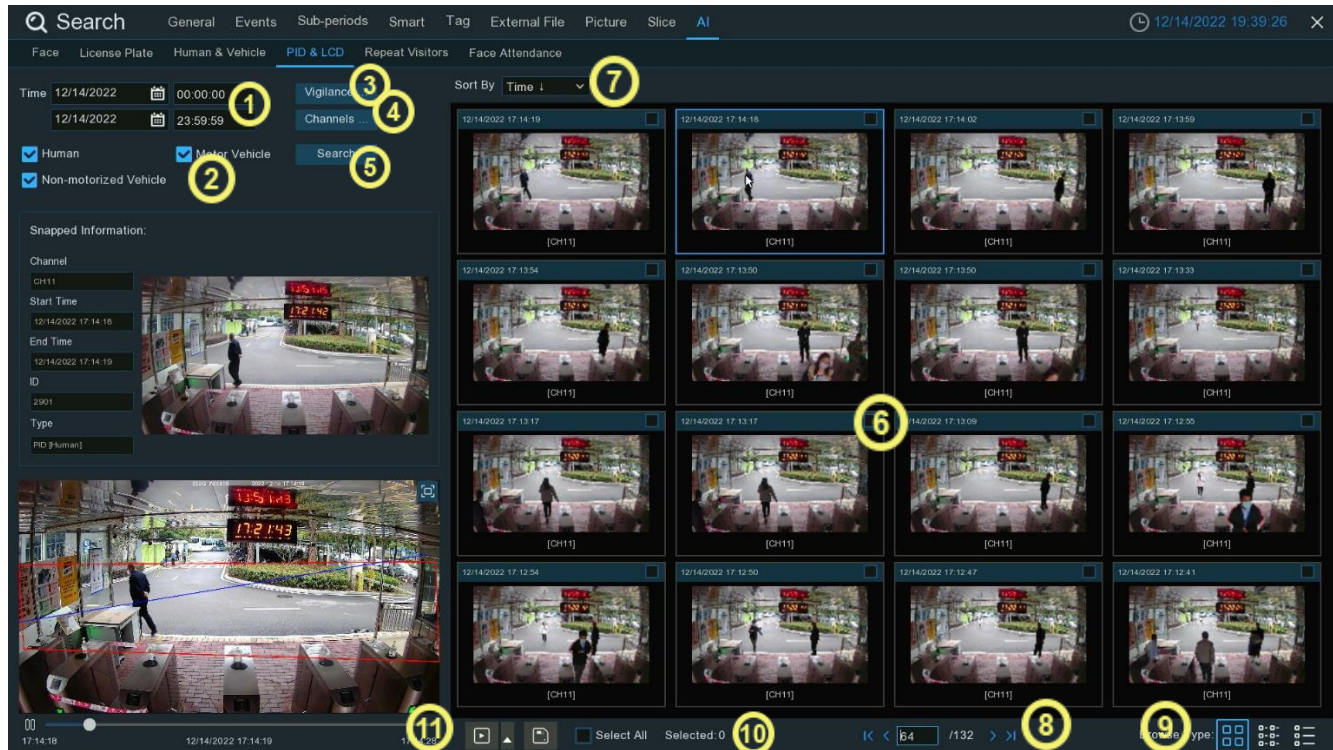
1. Select the **Date** and **Time** to search:
  - **Date:** Click the calendar icon to select a date to search. A red underline on a date indicates recordings on those particular dates.
  - **Time:** Use the keypad to enter a specific start and end time.
2. Select the target type(s) to search for: **Human, Motor Vehicle and Non-motorized Vehicle.**




3. **Channels:** Select the specific channel(s) to search for. The system searches all channels by default.
4. Click **Search** to execute a search.
5. The search result will be displayed on the right side of the screen.
6. **Sort By:** Select how to display the results: ascending or descending order.
7. Use the arrow buttons to turn page or use the keypad to navigate to a specific page.
8. **Browse Type:** Select how events are displayed: Thumbnail, List or Detail.
9. **Select All:** To select all events in current page. Or check the box above an event thumbnail to select it.
10. Click  to save all selected face images to a USB flash drive.
  - To save video files as well as images, check "**Record**".
  - Select the video format.
  - Set the length of time to save before and after the events.
  - Click  to play the selected events,
  - Click  to add more time before and after the event and then play.
11. See more on [7.9.1.1. Playing Events](#)

## 7.9.4 PID & LCD

Click the **PID & LCD** tab to open the PID (Perimeter Intrusion Detection) & LCD (Line Crossing Detection) event search section. If PID and/or LCD has been enabled in the camera(s), the detection events captured on current day will be displayed.




1. Select the **Date** and **Time** to search:
  - **Date**: Click the calendar icon to select a date to search. A red underline on a date indicates recordings on those particular dates.
  - **Time**: Use the keypad to enter a specific start and end time.
2. Select the target type(s) to search for: **Human, Motor Vehicle and Non-motorized Vehicle**.
3. **Vigilance**: Select PID and/or LCD.
4. **Channels**: Select the specific channel(s) to search for. The system searches all channels by default.
5. Click **Search** to execute a search.
6. The search result will be displayed on the right side of the screen.
7. **Sort By**: Select how to display the results: ascending or descending order.

8. Use the arrow buttons to turn the page or use the keypad to navigate to a specific page.
9. **Browse Type:** Select how events are displayed: Thumbnail, List or Detail.
10. **Select All:** To select all events in current page. Or check the box above an event thumbnail to select it.
11. Click  to save all selected images to a USB flash drive.

→ To save video files as well as images, check "Record".

→ Select the video format.

→ Set the length of time to save before and after the events.

→ Click  to play the selected events,

→ Click  to add more time before and after the event and then play.

→ See more on [7.9.1.1. Playing Events](#).



# Chapter 8 Remote Access Through the Web Client

Use the web interface on a PC to access the device remotely at any time. Before using the web interface, ensure the NVR network settings are properly configured and the NVR is connected to a network.

## 8.1 Basic System Environment Requirements

The minimum requirements for the hardware and PC operating system for running the web interface are as follows.

Item	Minimum Value	Recommended Value
CPU	Intel® Core™ i5 CPU	Intel® Core™ i5 CPU or higher
RAM	≥ 4 GB	≥ 8 GB
Hard disk drive	≥ 500 GB	≥ 1000 GB
Video memory	≥ 2 GB	≥ 4 GB
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	10/100/1000 M Ethernet adapter	
Internet Explorer (IE) web browser	Microsoft Internet Explorer (version: V11, V10)	
Firefox web browser	V52 or above	
Google Chrome web browser	V57 or above	
Apple Safari web browser	V12.1 or above	
Edge web browser	V79 or above (using the Chromium core)	

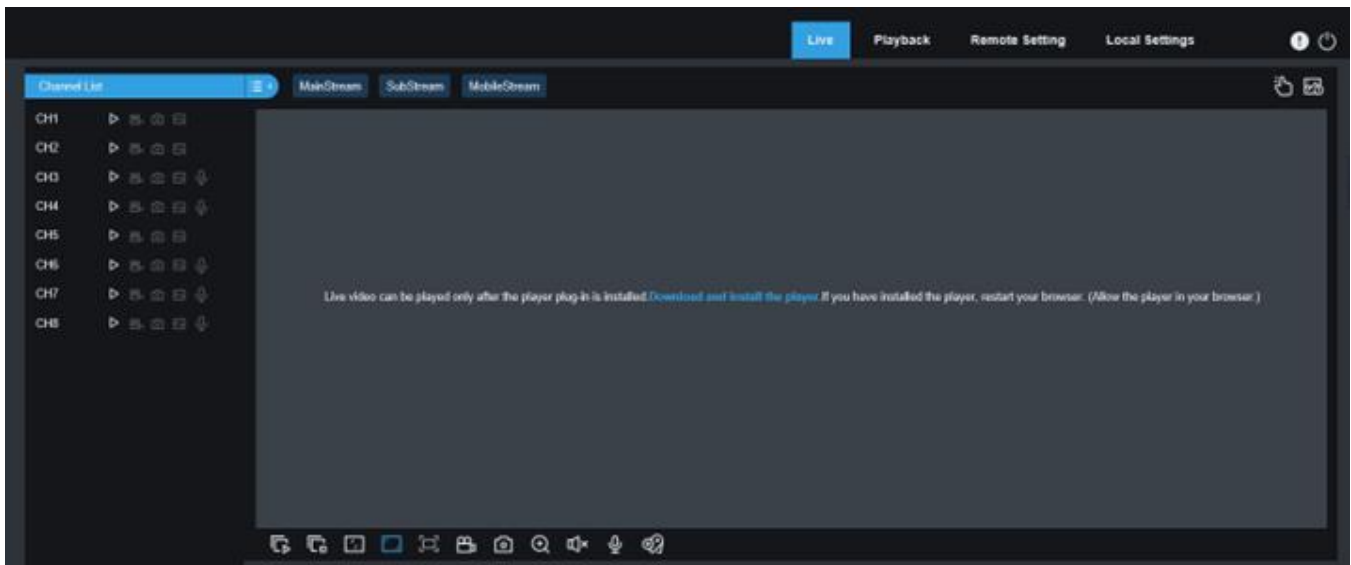
## 8.2 Web Plug-in Downloading and Installation

To access the Web client, perform the following steps:

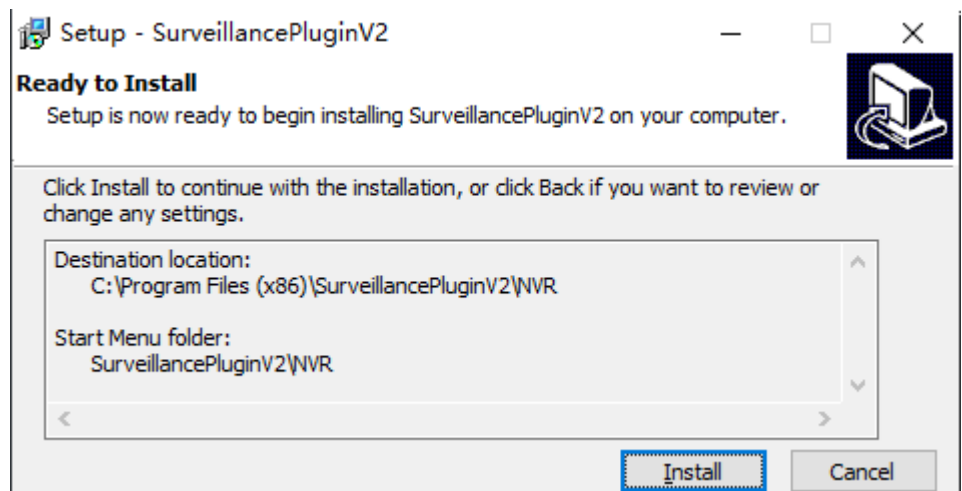
- ➔ Enter the IP address or "DDNS + port number" of the NVR into the URL/address bar to reach the login screen.
- ➔ Enter the correct NVR username and password to log in to the web interface.

When accessing the web interface through IE for the first time, the system requires installing a plug-in.

- ➔ Click **Download and install the player** to download the plug-in and install it on the computer.



After installing the plug-in, refresh the page, and click **Allow** in the pop-up dialog box at the bottom of the page. Then, images can be displayed properly.

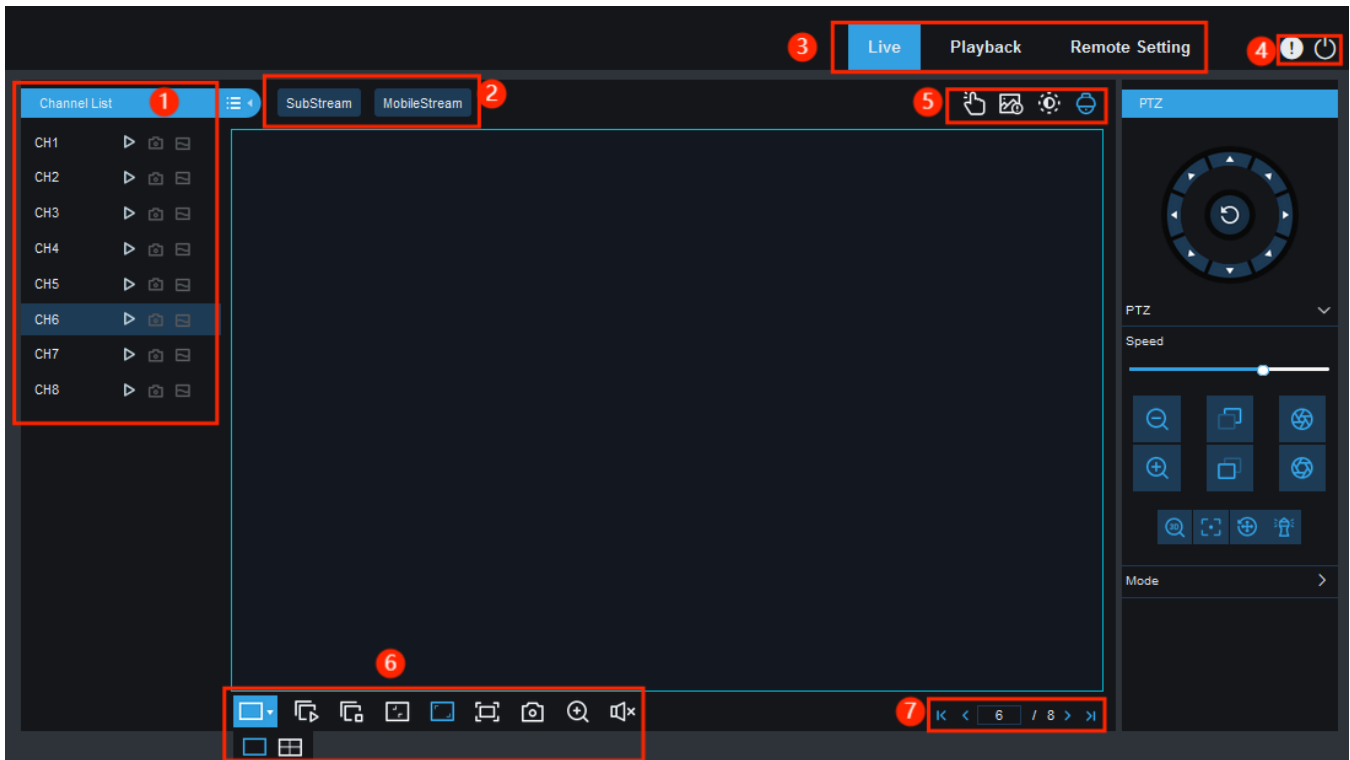


**Note:** Apple Safari, Google Chrome, Firefox, or Microsoft Edge web browsers, do not require downloading the plug-in and can directly log in to the device.

## 8.3 Web Client Management



### 8.3.1 Live View Page



After logging into the web interface, the live view page of the NVR is displayed. From here: enable or disable the live view, manually record video to the local computer, capture screen snapshots, PTZ control, and color adjustment.




#### 1. Channel list

Click  to display the channel list.

Click   to enable/disable live view/video streaming of the channel. When live view/video streaming is enabled, the icon is blue.

Click   to manually start recording the channels video. Click again to stop recording.

→ The manually recorded video is stored on the computer. During recording, the icon is blue.

Click : to manually capture and store the real time snapshot currently displaying, to the computer.

## 2. Stream switching

**Mainstream:** The web interface is automatically switched to Mainstream mode when a single channel is viewed full screen.

**Substream:** The web interface displays in substream mode when videos are viewed in multiple split-screens.


→ Select the appropriate stream mode for video viewing based on the actual network environment.


## 3. Main menu

→ **Live:** Displays the live video streams of the camera(s) in real time.

→ **Playback:** Remotely play the recorded videos stored in the NVR.

→ **Remote Setting:** Remotely access the system settings to set parameters of the NVR.

4. : Hover the mouse to display system user and web version information.

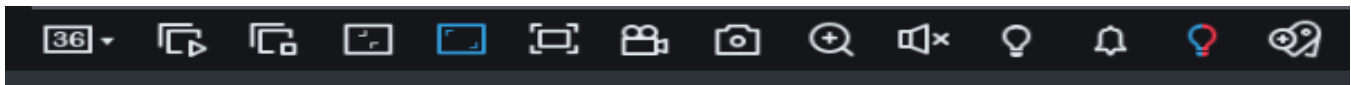
: Exit the web client.

















5. **Manual Alarm:** Manually enable or disable I/O alarms.

6. **Live View Control Buttons:**

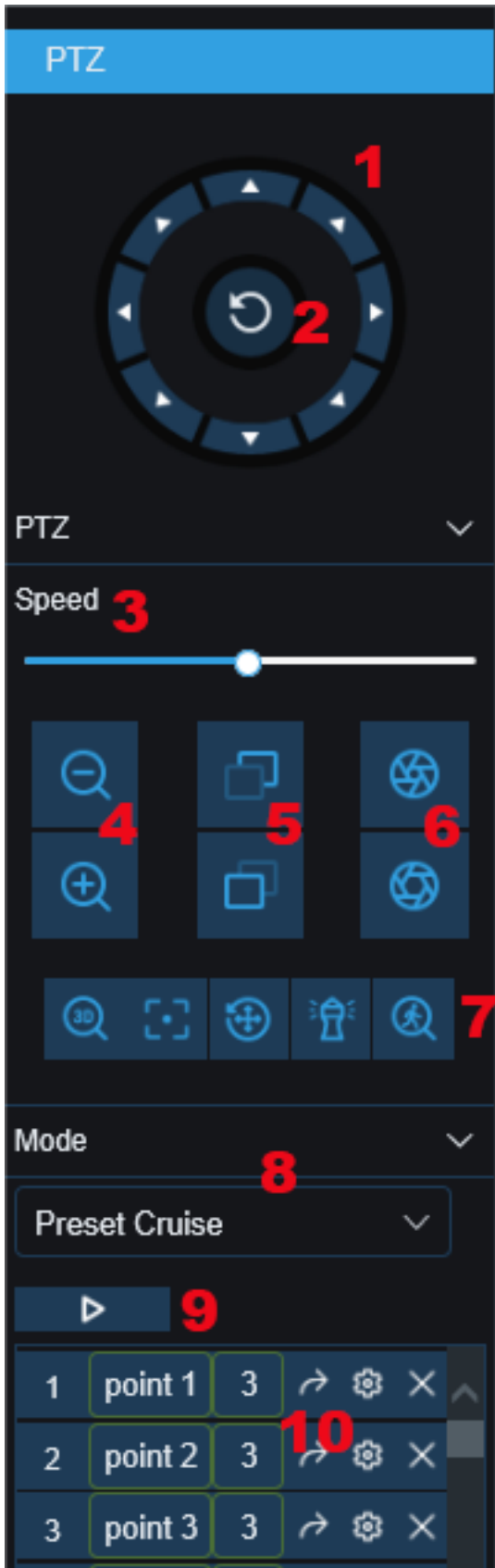
7. **Display Page:** Use the arrow controls to move to the next page/previous page.










	Switch display mode in the channel area.
	Open all channel previews.
	Close all channel previews.
	Original proportions: The live video is displayed in the original proportions.
	Stretch: The live video is stretched to fit the entire area of each channel on the screen.
	The web client is enlarged to full screen.
	Manual recording: Click to start manual recording of all displayed channels. Click again to stop recording. The manually recorded video is stored on the computer.
	Manual capture: Click to capture the images of all displayed channels and store them on the computer.
	Digital zoom: Click an active image, drag the mouse to get an area on the active image to zoom it in. Right-click the area to return to normal view.
	Volume control: Adjust the volume by adjusting the level value.
	Mute the audio.
	Intercom: Click to enable the intercom between the client and the device. Click again to disable the intercom. (Requires cameras that support 2 way audio operations)
	White light control. White light deterrence can be enabled manually (Requires cameras that support this function).
	Alarm bell control. Alarm bell can be enabled manually (Requires cameras that support this function).
	Warning light control. Warning light alarm can be enabled manually (Requires cameras that support this function).
	Click to add a custom tag event.





## PTZ Controls:

1. **Arrow keys:** Click the arrow keys to rotate the PTZ camera.
2. **Default Cruise**
3. **PTZ Speed:** Set the rotation speed of the camera.
4. **Zoom Control:** Click -/+ to zoom the image in or out.
5. **Iris:** Adjust the iris size.
6. **Focus:** Click to adjust the focus.
- 7 Other Controls:

	3D PTZ
	Automatic Focus
	Preset Point Reset
	Watch Mode
	Manual Tracking. For detailed information see: <a href="#">5.1.4.1</a>

8. **PTZ rotation mode:** There are six modes:

PTZ  
 PRESET  
 Line Scan  
 Watch Mode  
 Tour  
 Pattern

9. **Cruise Start/Stop**

10. **Preset Points:** Modify the names of preset points, add or delete preset points.

## 8.3.2 Playback Page

Search and play back the videos stored on the hard drives of the NVR. Download recordings to a PC.



### Searching Videos:

1. Click **Playback** to open the **Playback** page.
2. **Date:** Select the date to search. The days with video recording are underlined in red.
3. **Stream:** Select the video stream to be searched.
4. **Search type:** Select one or more recording types to search. Select **All** to search all recording types.
5. **Channel List:** Select the channels to search and play back. (Search maximum of four channels at the same time.)
6. Click **Search** to search recordings.
7. The search results are displayed on the timeline.
  - Click the timeline of a camera to select it to play a video clip,
  - Click ▶ to play the video.

### 8.3.2.1 Playback Control Icons



**Play a single video.**



**Pause a single video.**



**Stop playing the video of a single channel.**



**Play videos frame by frame:** Advance the playback by one frame. Only available when the synchronous playback option is not selected.



**Synchronous playback:** Click this icon to synchronously all the cameras at the same time and same point in time.



**Manual record:** Click this icon to select a channel being played.

- Click the record icon to record the current video to the computer.
- Click this icon again to stop recording.



Select a channel being played, click to take a **Snapshot**, and store it on the computer.



Click to open the **Download** page.

- Select the channel(s)
- Select the date and time to download.
- Search. The files matching your search criteria will be displayed.
- Select the files to be downloaded.
- Click the **Start Download** button to start downloading.

The download status is displayed.

- Click the **Stop Download** button to stop downloading.




**Rewind video:** Is available only when the synchronous playback option is not selected.





**Playback speed:** Click to select the playback speed.

	<input type="checkbox"/>	Start Time	End Time	Status	File Size
1	<input type="checkbox"/>	2021-02-20 00:00:00	2021-02-20 00:06:01	Not Downloaded	180.91M
2	<input type="checkbox"/>	2021-02-20 00:06:01	2021-02-20 00:14:28	Not Downloaded	253.81M
3	<input type="checkbox"/>	2021-02-20 00:14:28	2021-02-20 00:22:58	Not Downloaded	253.99M
4	<input type="checkbox"/>	2021-02-20 00:22:58	2021-02-20 00:31:24	Not Downloaded	253.73M
5	<input type="checkbox"/>	2021-02-20 00:31:24	2021-02-20 00:39:49	Not Downloaded	253.62M
6	<input type="checkbox"/>	2021-02-20 00:39:49	2021-02-20 00:48:19	Not Downloaded	253.86M
7	<input type="checkbox"/>	2021-02-20 00:48:19	2021-02-20 00:56:49	Not Downloaded	253.90M
8	<input type="checkbox"/>	2021-02-20 00:56:49	2021-02-20 01:05:18	Not Downloaded	253.83M
9	<input type="checkbox"/>	2021-02-20 01:05:18	2021-02-20 01:13:44	Not Downloaded	253.55M
10	<input type="checkbox"/>	2021-02-20 01:13:44	2021-02-20 01:22:10	Not Downloaded	253.46M
11	<input type="checkbox"/>	2021-02-20 01:22:10	2021-02-20 01:30:36	Not Downloaded	253.67M
12	<input type="checkbox"/>	2021-02-20 01:30:36	2021-02-20 01:39:06	Not Downloaded	253.98M
13	<input type="checkbox"/>	2021-02-20 01:39:06	2021-02-20 01:47:35	Not Downloaded	253.62M
14	<input type="checkbox"/>	2021-02-20 01:47:35	2021-02-20 01:56:01	Not Downloaded	253.58M


14 Row / Page 1 / 14Page


 **Play all channels:** Click this icon to play all channels of the selected search types. It is available only when the synchronous playback option is not selected.


 **Stop playing all channels:** Click to stop playing all channels. It is available only when the synchronous playback option is not selected.

 **Digital zoom:** Click a video being played. Click and drag the mouse to select an area on the image to zoom it in.

→ Right-click the area to return to normal view.

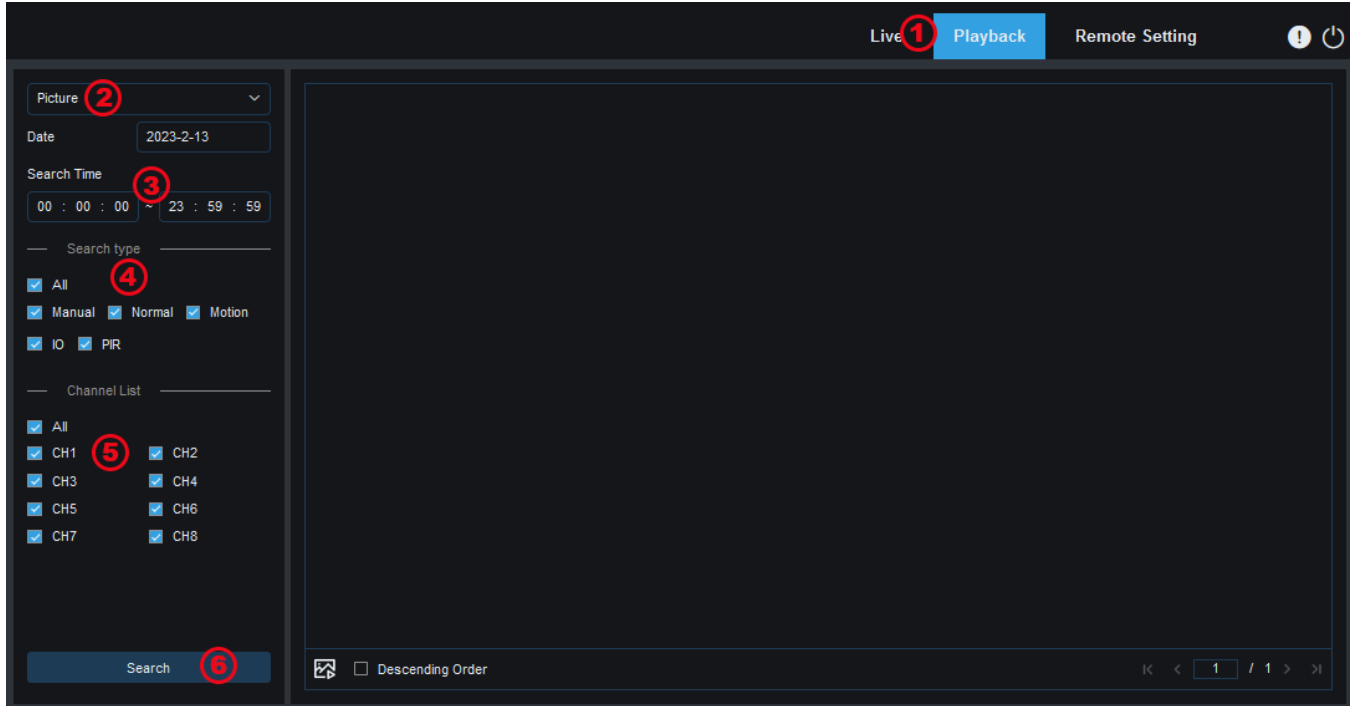
 **Original proportions:** The video is displayed in the original proportions.

 **Stretch:** The video being played is stretched to fit the entire area of each channel on the screen.

 The web interface is enlarged to full screen.

### 8.3.2.2 Image Playback

If the capture function is enabled for the device, search the captured images. A maximum of 5000 images can be searched at a time.

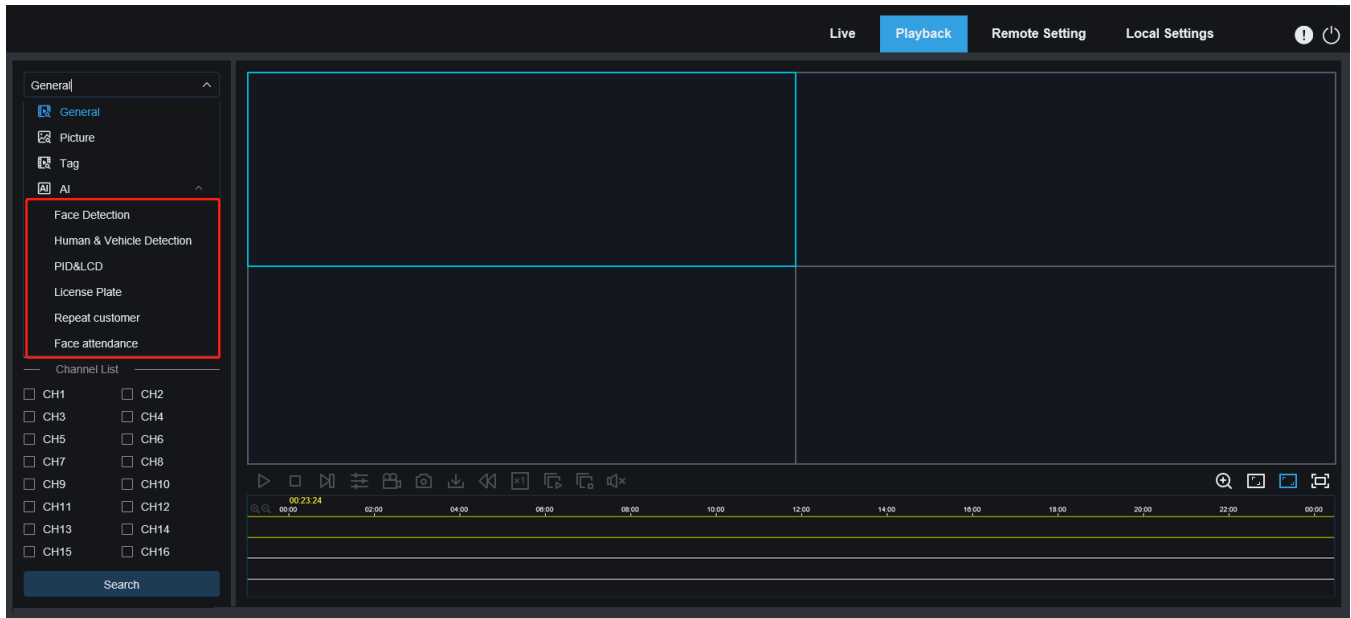


#### Searching images:

1. Click **Playback**.
2. Select **Picture**.
3. **Date & Time**: Select the day and time to search on the calendar. The dates with snapshots are underlined in red.
4. **Search Type**: Select one or more image types or select **All** to search all image types.
5. **Channel List**: Select the channels to search.
6. Click **Search**
7. The search results/images will be displayed.
  - Double-click an image, the video with a period of time before and after the image, will be played.

### 8.3.2.5 AI Playback

If the AI alarm function is enabled for the device, search AI alarm events, including face detection, license plate detection, pedestrian and vehicle detection, PID&LCD, repeat customers, and face attendance events.



## 8.3.3 Remote Setting

Set device parameters, including channel, video, alarm, AI, network, device, and system parameters.

The screenshot shows the 'Remote Setting' tab in a web interface. The left sidebar contains navigation menus for Channel, Record, Alarm, AI, Network, Device, and System. The main area displays a table of IP Channels with columns for Channel, CON., Edit, Status, IPC Modify, IP Address, Subnet Mask, Port, Manufacturer, Device Type, Protocol, MAC Address, and Software Version. Below the table are buttons for Delete, Quick Add, Auto Add IPC, Default Password, and Refresh.

Channel	CON.	Edit	Status	IPC Modify	IP Address	Subnet Mask	Port	Manufacturer	Device Type	Protocol	MAC Address	Software Version
CH1					172.20.64.23	255.255.255.000	80		SC335X	Private	00-23-63-69-46-48	V25.11.8.2.2_220218
CH2					172.20.64.22	255.255.255.000	9000		IP CAMERA	Private	00-23-63-96-B6-9D	V34.45.8.2.1_220223
CH3					172.20.64.25	255.255.255.000	9000		IP CAMERA	Private	00-23-63-23-DD-74	V10.35.7.1_210729
CH4					172.20.64.48	255.255.255.000	80		30KQ+307	Private	00-23-63-8B-A4-67	V31.35.8.2.2_220301
CH5					172.20.64.35	255.255.255.000	80	RS-CH340N4KR8-LTF-LFW36 PW-M	IP CAMERA	Private	00-23-63-97-17-49	V30.85.8.2.1_220303
CH6												
CH7												
CH8												
CH9												
CH10												
CH11					172.20.64.46	255.255.255.000	9000		IP CAMERA	Private	00-23-63-81-4F-45	V12.45.7.1_210729
CH12												
CH13												
CH14					172.20.64.45	255.255.255.000	9000		IP CAMERA	Private	00-23-63-56-74-95	V4.41.5.2_200301
CH15					172.20.64.42	255.255.255.000	443	HIKVISION	DS-2CD3125-I3	Onvif	10-12-FB-40-EB-93	V5.5.92 build 190227
CH16					172.20.64.47	255.255.255.000	9000		IP CAMERA	Private	00-23-63-7C-30-9C	V12.45.7.1_210902

## 8.3.4 Local Setting

Configure where the videos and snapshots saved through the web interface are downloaded and select the file type for the saved videos.

**Record Path:** Click to select the folder where the manually recorded videos are stored on the computer.

**Download Path:** Click to select the folder where the downloaded videos are stored on the computer.

**Snapshot Path:** Click to select the folder where the manually captured snapshots will be stored on the computer.

**File Type:** Select the file type for the manually recorded video files.

**Save:** Click to save the change

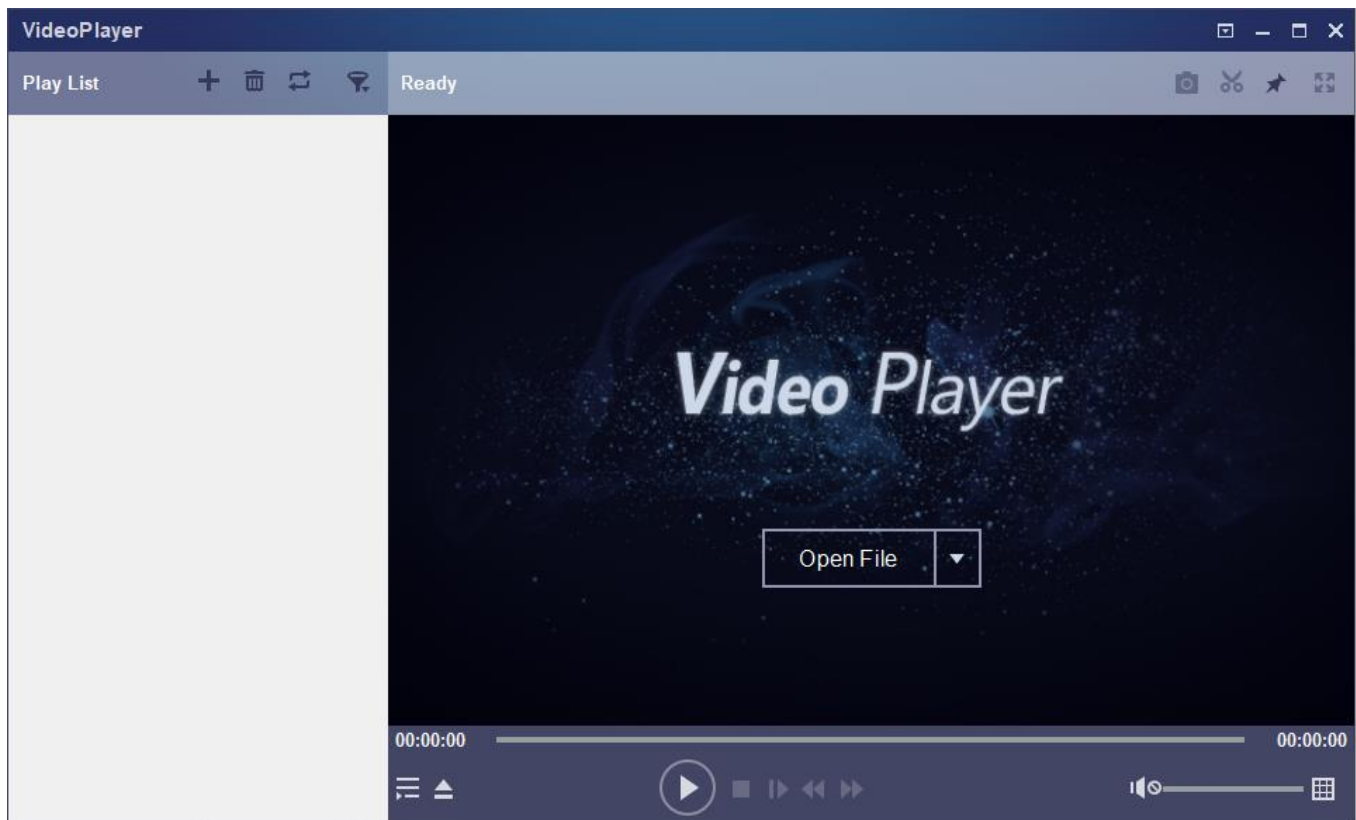
# Chapter 9 Backup Video Playing

How to use the **Video Player** software tool to play the video files downloaded/backed up from the NVR.

## Minimum Requirements for the Computer System

- CPU: Intel I3 or above
- Operating system: Windows XP/7/8/10/11, MacOS 10
- Memory: 2 GB
- Video memory: 1 GB

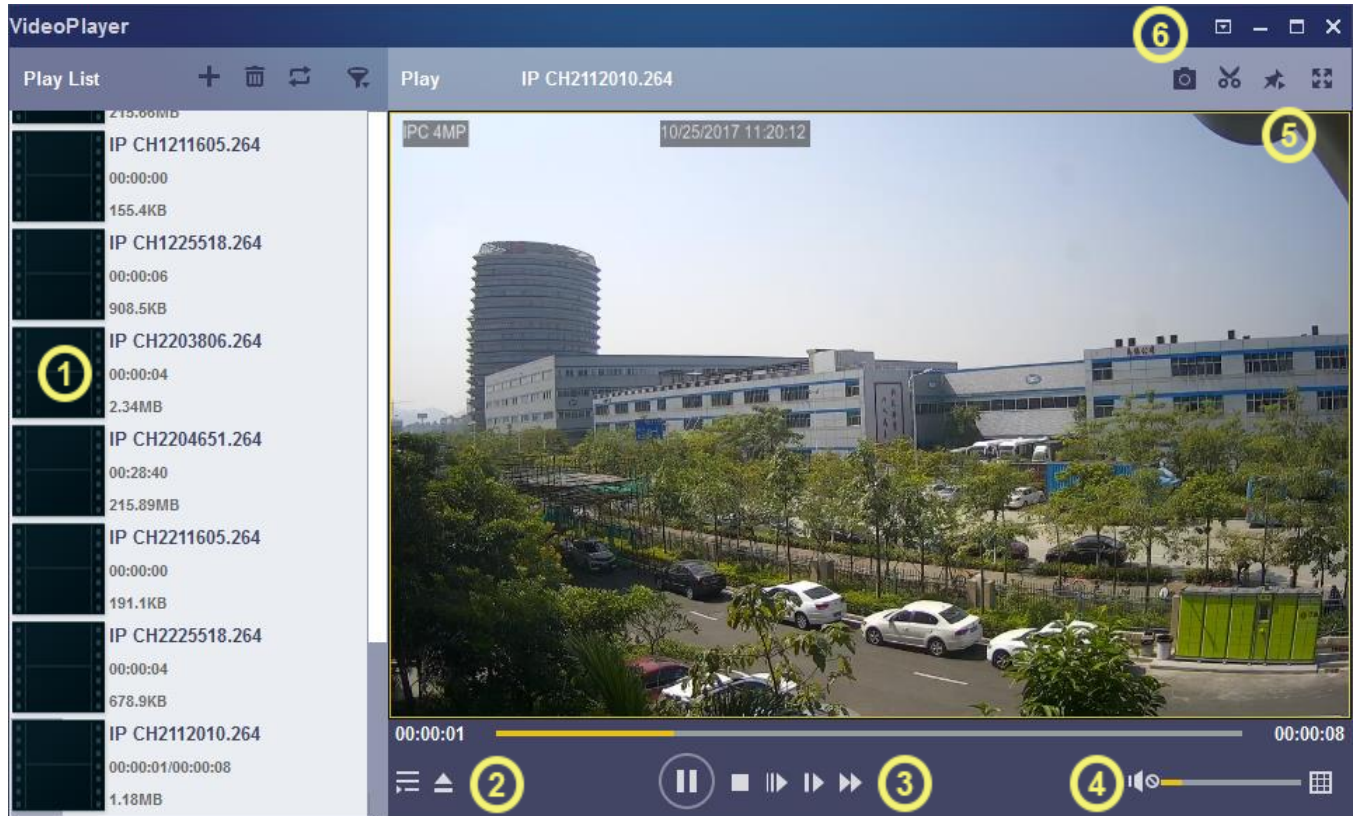
1. Install the video player software from the CD included with the NVR and run the program.



2. Copy the backup file to the computer.
3. Click **Open File** or click the "+" icon in the **Play List** pane to load one or multiple video files.
  - ➔ The supported video file formats include: .rf, .avi, and .mp4.
  - ➔ Click  to load a backed-up video file folder.




# Video Player Control




## 1. Play list:


 Add files.

 Delete files.


 Select play mode: Play a single file and then stop; play all listed files in sequence; play one file repeatedly; play all files repeatedly.


 Filter files by file name.

## 2. Hide/Show the play list.

 Open a file or load a file folder.

## 3. Play control:

 Play the video.

 Pause playing the video.

 Stop playing the video.

▶ Play the video frame by frame: One frame is played every time this icon is clicked.

◀ Play the video at a low speed: You can set the video to be played at 1/2, 1/4, 1/8, or 1/16 of the normal play speed.

▶ Fast forward: You can set the video to be played at 2×, 4×, 8×, or 16× of the normal play speed.

4. 🔊 Volume control.

🖥️ Multi-screen play. Multiple videos can be played at a time. After clicking this icon, you can drag the videos in the play list to the play page.

5. 📷 Snapshot.

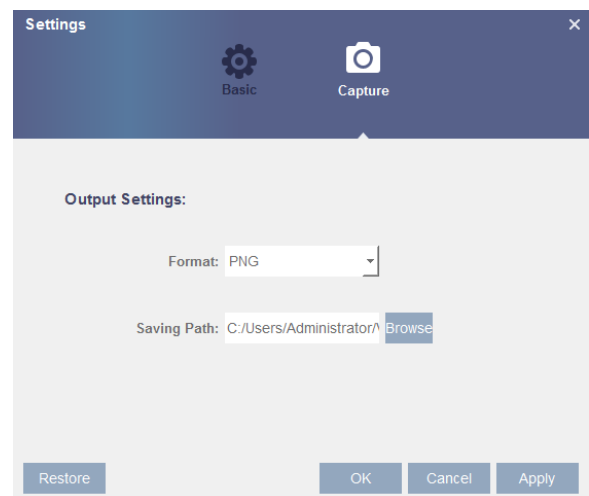
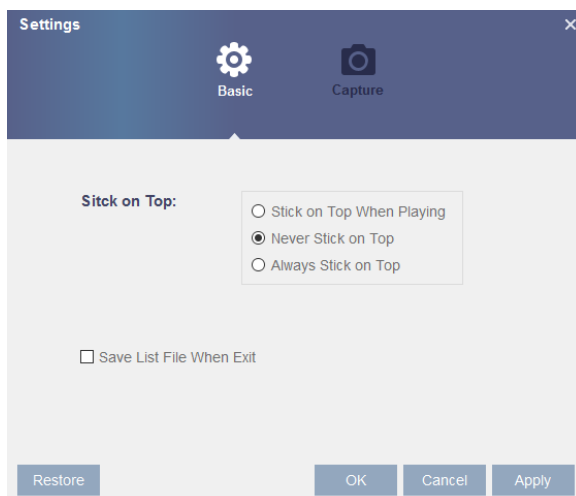
✂️ Click this icon to store a video clip on the computer. You can click it to start video clipping, and then click it again to stop video clipping.

📌 Keep the video player at the top.

🖥️ Enlarge the video page to full screen.

6. ⚙️ **Advanced setting menu:** Select language for the video player and configure the player functions.

**Basic Settings:** Set how to keep the player at the top.



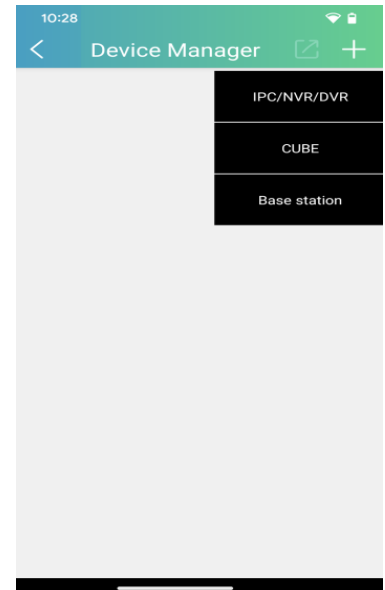
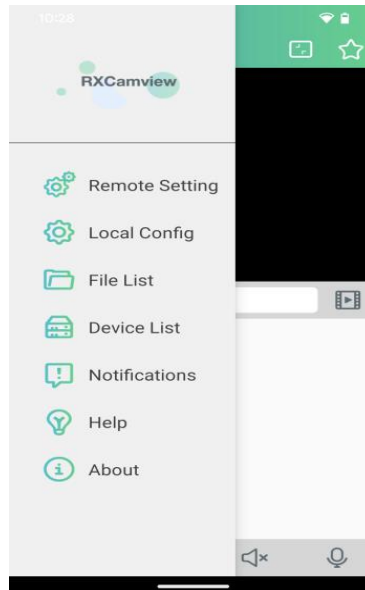
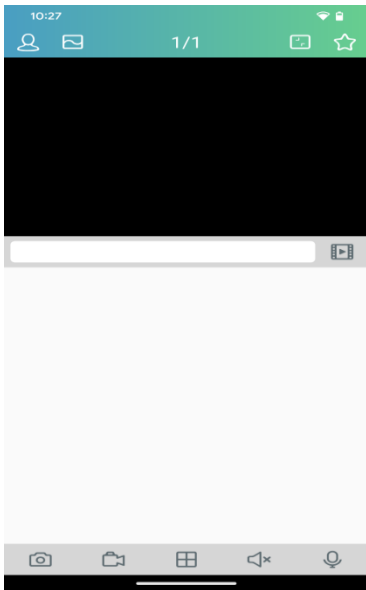
**Capture Settings:** Set the file format and path for saving snapshots.


# Chapter 10 Remote Access Through Mobile Devices

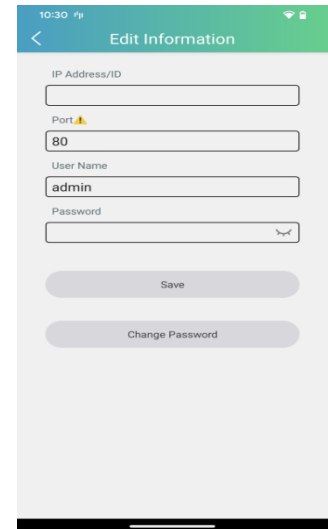
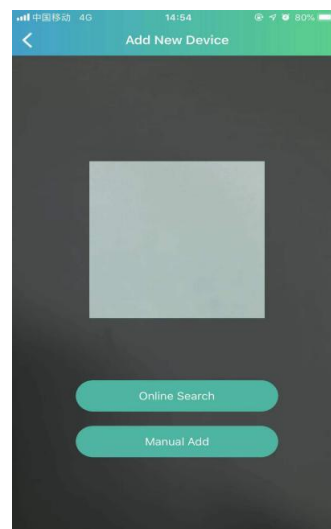
The NVR supports remote access through mobile devices with Android or iOS operating systems. For Android or iOS devices, download RXCamView mobile application from Google Store or Apple Store and then install the software.

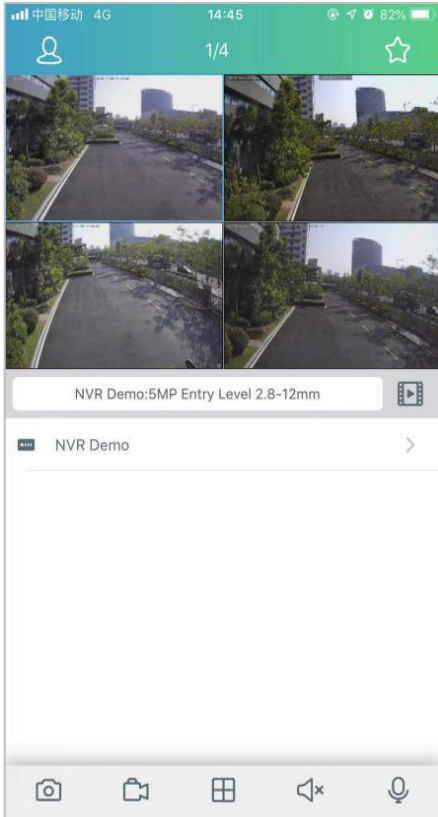
## 10.1 Mobile App

1. Open the app to display the live view screen.




2. Click the  icon to open the menu.
3. Click **Manual Add** and enter the device information to add a new device.
4. **Scan the QR code:** Scan the QR code to add a device.
5. **Online search:** Search and add a device in the same LAN as the device.
6. **Manual Add:**
7. **IP Address/ID:** Enter an IP address or a P2P ID.
8. **Port:** Enter the port number of the device.
9. **Username/Password:** Enter the username and password of the device.
10. Click **Save**. If the device is connected properly, the app will go to real time display status.








- 1-channel display.
- 4-channel display.
- 6-channel display.
- 8-channel display.
- 9-channel display.
- 16-channel display.

Note: The app can only display 16 channels on one screen. Swipe the screen to the left/right to switch between pages to view another 16 channels. A total of 80 channels can be displayed.


 **Capture:** Capture the images of the selected channel, and save them in the file list of the app. You can download the captured images in the file list to a mobile phone.

 **Video recording:** Record the images of the selected channel, and save it in the file list of the app. You can download the recorded videos in the file list to the mobile phone.

 **Audio:** Enable or disable the sound.

 **Intercom:** Intercom: two-way device intercom (NVR and Cameras must support 2-way audio to use this function)

 **PTZ control** (Only for cameras that have PTZ functions).

 **Shut down the channel:** This icon appears at the top of the screen when you press and hold the video image. You can drag the video to the icon to close the video preview.

# Chapter 11 Appendix

## 11.1 FAQ

1. Q: What should I do if I cannot detect the hard disk?

A: If no hard disk is detected, you need to verify the following:

- (1) The data cable and power cable of the hard disk are well connected.
- (2) The ports of the hard disk on the main board are in good condition.
- (3) The hard disk is supported as described in the specifications.

2. Q: What should I do if I forget the password after I change it?

A: When the administrator forgets the password, you can reset the password through the password retrieval function or restore the factory settings of the device through the physical reset button. It is recommended that you set a password that is both easy to remember and secure.

3. Q: After the NVR and cameras are connected, the NVR is plugged in and has power, but I do not see any images from the cameras, or the displayed images are not normal. Why?

A: Verify that the network cable connecting the camera is connected properly and is not damaged or worn and verify that the NTSC/PAL system configurations are the same both in the NVR and camera.

4. Q: What effect does heat, or high temperature environments have on the NVR itself during operation?

A: Because a certain amount of heat is generated during the device operation, you need to place the device in a safe and well-ventilated environment to prevent the device from being exposed to high temperatures, which may affect the stability and service life of the system.

5. Q: Why isn't the remote control of the NVR working? The monitoring screen is normal, and the panel buttons are working.

A: Align the remote control with the IR signal on the front panel of the NVR when trying to control the NVR with the remote. If the remote control still fails, check and/or replace the batteries. If the remote has good batteries, and still does not work, verify that the remote control is not damaged.

6. Q: Can I use the hard disk drive on my PC in the device?

A: It is recommended that you use a hard disk designed for video surveillance to ensure the stability of device operation.

7. Q: Can I play back videos while recording videos?

A: Yes. This device supports recording video and playback simultaneously.

8. Q: Can I delete some of the video recordings on the hard disk?

A: You cannot delete select recordings. If you really need to delete video recordings, the only way is to format the hard disk. Which will erase all the data on the hard disk.

9. Q: Why can't I log in to the device client?

A: Verify that the network connection configuration is correct, and the NVR is connected to the network with a working ethernet cable.

10. Q: Why can't I find any recorded video when trying to play back videos?

A: Verify the system date and time. If the NVR date and time are not set correctly, try searching for videos using the date displayed in the NVR.

B: Verify that the data cable of the hard disk is connected properly. If the problem persists after restarting, verify that the hard disk is not damaged.

11. Q: Why can't the NVR control the PTZ?

The problem may be due to the following:

- a) The PTZ camera is faulty.
- b) The settings, connection, or installation of the PTZ camera are incorrect.
- c) The PTZ settings of the NVR are not configured correctly.
- d) The PTZ encode protocol does not match the NVR protocol.
- e) The PTZ address does not match the device address.

12. Q: Why doesn't motion detection work?

A: Verify that the motion detection time and motion detection area settings have been set up correctly and verify that the sensitivity setting is not too low.

13. Q: Why do the alarms fail?

A: Verify that the alarm setting, alarm connections, and alarm input signals are correct.

14. Why does the buzzer keep sounding?

If the motion detection function is enabled, the buzzer may be enabled for motion events. If so, disable the buzzer for this setting.

In the alarm settings, Exceptions settings: the buzzer may be enabled for video loss events. If so, disable the buzzer for this setting.

If the buzzer keeps sounding after checking other alarm settings, check the hard drive status for errors in the Storage/Device settings.

15. Q: Why is the NVR still in recording even when I click the **Stop** icon or click **Stop Recording** in the shortcut menu?

If you click the **Stop** icon or click **Stop Recording**, only manual recording is stopped. To stop scheduled recording, you need to change the recording functions by removing/disabling the record schedule. To stop the NVR from automatically recording when it powers on, you need to change the recording mode to scheduled recording or manual recording, and then stop recording as described above. Or you can set the channel status to disabled.



## 11.2 Use and Maintenance

1. To turn off the NVR, first turn off the system on the software GUI, and then turn off the power supply. Do not turn off the power supply directly to avoid data loss or even damage to the hard disk.
2. Ensure that the NVR recorder is far away from places with high temperatures or heat sources.
3. Regularly remove the dust accumulated inside the device and keep good ventilation around the case of the NVR to facilitate heat dissipation.
4. Do not hot-plug the audio and video signal cables and interfaces such as RS-232 and RS-485; otherwise, such interfaces may be damaged.
5. Avoid the impact of other electric appliances on audio and video signals and prevent the NVR from being damaged by static electricity or induced voltage.  
If the NVR network cable is frequently plugged in and pulled out, the recommendation is to replace the cable regularly to avoid unstable input signals.
6. The device is a Class-A product. In the immediate environment, the product may cause radio interference. In such cases, practical measures should be taken to cope with the interference.

## 11.3 Included Accessories



Power adapter



USB Mouse

Warranty card

Warning: Using the wrong battery may increase the risk of explosion.

Used batteries should be handled in accordance with the instructions.



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