Digital Video Recorder
User Manual

Version 2.0.11
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Contents

Welcome

Thank you for purchasing an Amcrest DVR!

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

Here you can find information about the DVR's features and functions, as well as information to aid in troubleshooting.

Many of the setup and installation sections below have corresponding videos on YouTube

To access the setup videos, please go to http://amcrest.com/videos

For access support articles, please go to http://amcrest.com/support

NOTE: This user manual is applicable to all 4, 8, 16 channel Amcerst DVRs, Including S3, S4, and S5 models.

Important Security Warning

To keep your Amcrest camera secure and prevent unauthorized access, please make sure to follow the steps below:

- Always make sure that your camera has the latest firmware as listed on https://amcrest.com/firmwaredownloads
- Never use the default password for your camera. Always ensure that your password is at least 8-10 characters long and contains a combination of lowercase characters, uppercase characters as well as numbers.

For access to the quick start guide and other support information, go to http://amcrest.com/support

To contact Amcrest support, please do one of the following:

Visit http://amcrest.com/contacts and use the email form
Call Amcrest Support using one of the following numbers:
Toll Free: (888) 212-7538
International Callers (Outside of US): +1-713-893-8956
USA: 888-212-7538
Canada: 437-888-0177
UK: 203-769-2757
Email Amcrest Customer Support support@amcrest.com

Important Safeguards and Warnings

1. **Electrical Safety**

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

2. **Transportation Security**

Heavy stress, violent vibrations, and excess moisture should not occur during transportation, storage, and installation of the device.

3. **Installation**
Handle the device with care. Keep the device right side up.
Do not apply power to the DVR before completing installation.
Do not place objects on top of the DVR.

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

5. **Environment**
The DVR should be installed and kept in a cool, dry place away from direct sunlight, flammable materials, explosive substances, etc.
This product should be transported, stored, and used only in the specified environments as stated above.

6. **Accessories**
Be sure to use only the accessories recommended by manufacturer.
Before installation, please open the package and check to ensure that all the components are present.
Contact the retailer that you purchased from, or Amcrest directly if anything is broken or missing in the package.

NOTE: This user manual is applicable to all 4, 8 and 16 channel Amcerst DVRs, Including S3, S4 and S5 models.

Features and Specification

Overview

Amcrest DVRs are an excellent digital surveillance too designed to increase the security of your everyday life. Our DVR use a Linux based OS to maintain reliable operation. It's easy to use and can be set up in a relatively small amount of time. It has various functions such as recording, playback, and monitoring functionality and it synchronizes audio and video by default.

Our DVR adopt a high-quality design to achieve high levels of reliability and security and can be configured to work locally, as well as on a network. With the use of its built-in tools and OS, this device can also help monitor and track network usage.

By using industry standard cables and tribrid functionality, our DVRs can be used with a variety of different cameras (Analog, HDCVI, or IP) and can work with most standard security system cable setups. This product can be used in a variety of locations such as banks, residential neighborhoods or homes, factories, warehouses, transportation (trucking), and more.

Features

The Amcrest DVRs has the following features:

Real-time Monitoring
Our DVRs provide an analog output port, VGA port, and an HDMI port. You can use a variety of monitors to display the DVR's interface, and the DVR can support VGA and HDMI output at the same time.

Storage Functionality
The DVR can record multiple video and audio streams to the built-in hard drive to allow for playback of any recorded media.

Compression Format
By utilizing advanced compression, the DVR can support multiple channels of audio and video, decoding audio and video from each channel to maintain video and audio synchronization.

Backup Function
The DVR supports backup of recorded media and settings via the USB port or an internal HDD.

Advanced Playback Function
Our DVRs support independent real-time recording for each channel and can support search, fast forwarded playback, recorded searches, and downloading of videos and screenshots. The DVR can also playback in slow motion, backwards, and frame by frame as needed. When recording, the DVR shows a date/time overlay to ensure accurate viewing of events when they occurred. Lastly, the DVR can support video enlargement of certain zones within a stream.

Network Operation
Our DVRs have built-in tools to allow for remote network real-time monitoring, remote recording of searches, and remote PTZ control.

Advanced Network Protocol Support
The DVR is UPnP compatible, and includes functionality for use with PPPoE, and DDNS protocols to allow remote and local connection with a large variety of network hardware.

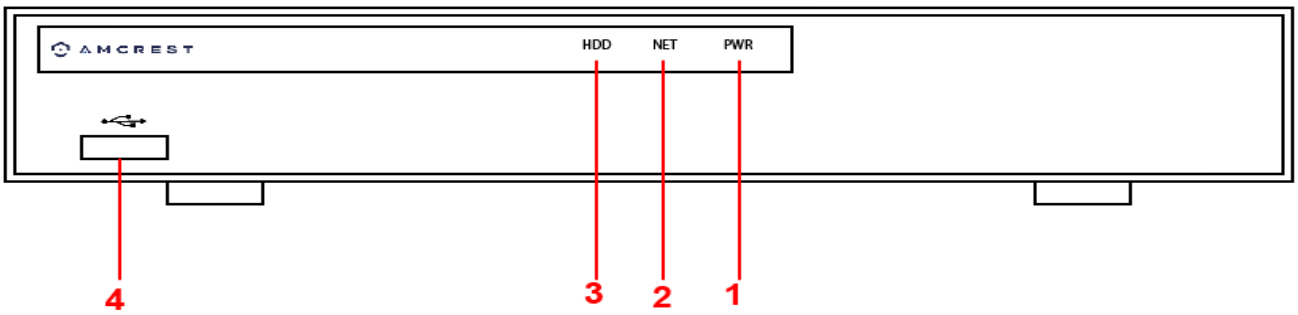
Note: There may be slight differences in functionality due to the existence of different product series.

Overview and Controls

This section provides information about the physical design and controls for your DVR. Please refer to the diagrams below to become acquainted with the DVR and its physical features. Each category is based on specific model DVRs, please locate the model number associated with your DVR from the list for more details.

Front Panel

Models
AMDVTENL16/AMDVTENL8/AMDVTENL4/AMDV10818/AMDV10814/AMDV72116/AMDV7218/S5 Models.

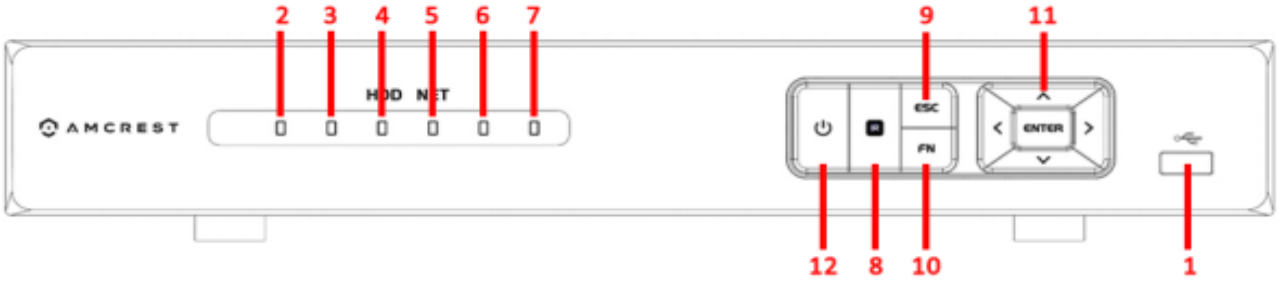


Please refer to the following chart for information on the front panel buttons:

SN	Icon	Name	Function
1	PWR	Power indicator	When DVR is on, this light remains on.
2	NET	Network abnormality indicator light	When a network error occurs or there is no network connection, this light turns red.
3	HDD	HDD abnormal indicator light	When an HDD error occurs, or the HDD capacity is below the specified threshold value, this light turns red.
4		USB 2.0 port	USB 2.0 port: connect a mouse, USB storage device, etc.

Models

AMDV4M4/AMDV4M8/AMDV4M16/AMDV7204/AMDV7208/AMDV72016/AMDV10804/AMDV10808/AMDV10801
6

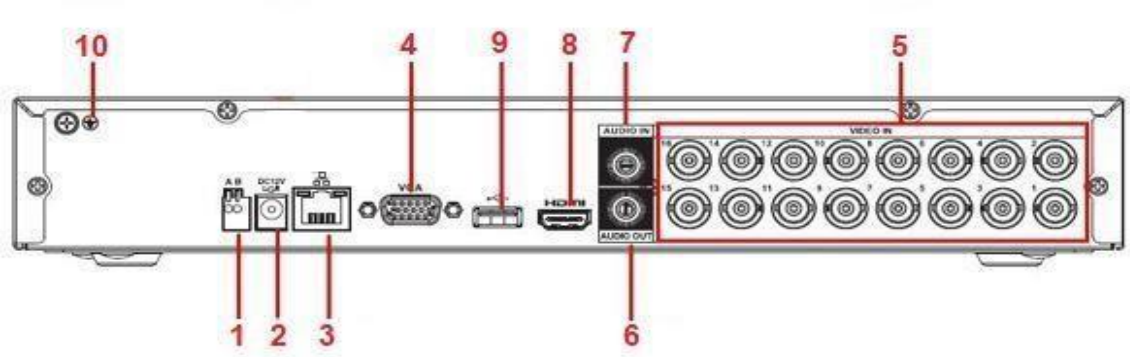


Please refer to the following chart for information on the front panel buttons

#	Icon	Name	Function(s)
1		USB 2.0 port	USB 2.0 port: connect a mouse, USB storage device, etc.
2	ALARM	Alarm status indicator light	When an alarm event occurs, this LED becomes blue to alert you.
3	REC	Recording status indicator light	When the DVR is recording footage to the hard drive, this LED will become blue to alert you.
4	HDD	HDD status indicator light	When an HDD error occurs, or the HDD capacity is below the specified threshold, this LED becomes blue to alert you.
5	NET	Network status indicator light	When a network error occurs or there is no network connection, this LED becomes blue to alert you.

6	ACT	ENTER	Confirms the current operation.
7	POWER	Power status indicator light	When the DVR is powered on, this LED will remain blue.
8		Power button	Press and hold the power button for 3 seconds to boot up or shut down the DVR.
9	▲ / ▼	Up/Down	Activates current controls, modifies settings, and allows navigating up and down through options.
			Increases/Decreases numerals.
			Assists in functions such as PTZ menu.
10	< / >	Left/Right	Shifts current activated controls.
			When in playback, use these buttons to control the playback bar.
11	ENTER	Enter	Confirms the current operation.
			Goes to the default button.
			Goes to the menu.
12	ESC	Escape	Go to the previous menu or cancel the current operation.
			When in playback, push ESC to restore real-time monitoring.
13	Fn	Assist	In one-window monitoring, push this button to display additional functions such as PTZ control and image color.
			Backspace function: in numeric/text control, press Fn for 1.5 seconds to delete the character before the cursor.
			In motion detection setup, use the Fn button and directional keys to adjust the settings.
			In text mode, push Fn to switch between numeric and English characters (small/capitalized), etc.
			Activates other special functions.

Rear Panel



Note: This is for example purposes only, the diagram represents a 16 Channel system, however, is applicable to all units provided in the description.

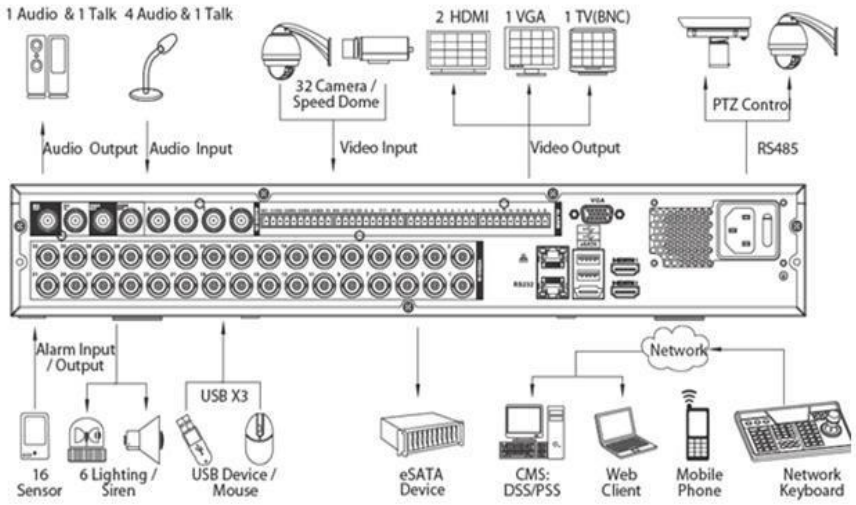
Please refer to the following chart for detailed information on the rear panel ports:

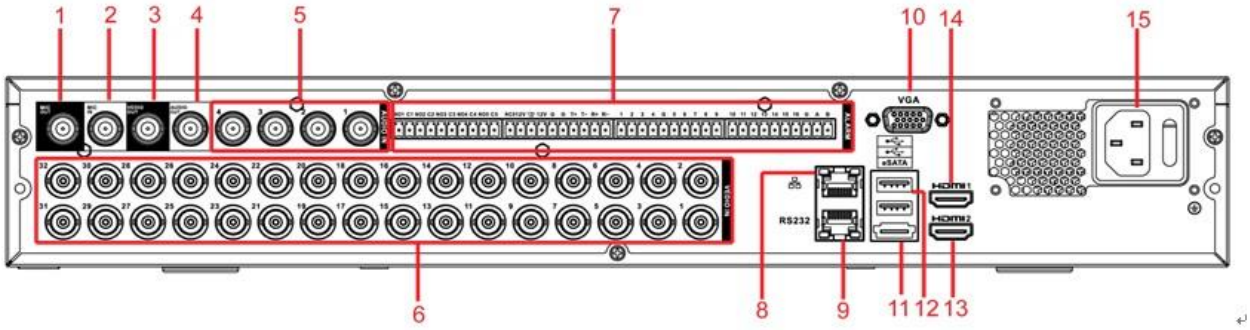
SN	Icon	Name	Note
1	A B	RS485（RS-485）communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ. RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
2	DC 12V	Power Input port	Input 12V DC.
3		Network port	100M Ethernet port
4	VGA	VGA video output port	VGA video output port. Output analog video signal. Can connect to the monitor to view analog video output.
5	VIDEO IN	Video input port	Connect to analog camera, video input signal.
6	Audio OUT	Audio output port	Connect to video output device such as sound box.
7	Audio IN	Audio input port	Connect to audio input device such as microphone.
8	HDMI	High definition media interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device.

9		USB 2.0 port	Connect to USB storage device, mouse, burning DVD-ROM etc.
10		GND	Ground end.

General 720p/1080p 32-Channel System

The 32-channel system rear panel is as shown below:



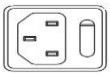


Please refer to the following table for detailed information:

SN	Icon	Name	Function
1	MIC IN	Bidirectional talk input port	Input bidirectional talk analog signal from microphone, pick up.
2	MIC OUT	Bidirectional talk output port	Output bidirectional talk analog signal to sound box, etc. Bidirectional talk output. Audio output of single window monitor mode. Audio output of single window playback mode.

3	VIDEO OUT	Video output port	Connect to output devices such as TV.
4	AUDIO OUT	Audio output port	Connect to sound box etc. to output audio signal.
5	AUDIO IN	Audio input port	Connect to microphone etc. to input audio signal.
6	VIDEO IN	Video input port	Connect to analog camera to input video signal.
7	1～16	Alarm input port 1～16	There are four groups. The first group is from port 1 to port 4, the second group is from port 5 to port 8, the third group is from port9 to port 12, the fourth group is from port13 to port 16. They are to receive the signal from the external alarm source. There are two types; (normal open)/NC (normal close). When your alarm input device is using external power, please make sure the device and the NVR have the same ground.

SN	Icon	Name	Function
	NO1～NO5	Alarm output port 1～5	5 groups of alarm output ports. (Group 1： port NO1～C1,Group 2:port NO2～C2,Group 3:port NO3～C3. 4:port NO4～C4. 5:port NO5～C5.).Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. NO:Normal open alarm output port. NC:Normal close alarm output port. C:Alarm output public end.
	C1～C5		
	NC5		
	A	RS485 communication port	RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ.

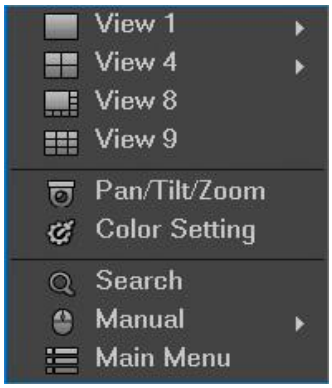
	B		RS485_B.It is the cable B. You can connect to the control devices such as speed dome PTZ.
	T+、T-、R+、R-	Four-cable full-duplex 485 port.	T+, T-: Send out cable. R+, R-: Input cable.
	CTRL 12V	Control power output	Turn off power output when the alarm is cancelled.
8		Network port	1000M Ethernet port
9	RS-232	RS232 debug port	It is for general COM debug to configure IP address or transfer transparent COM data.
10	VGA	VGA video output port	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
11	eSATA	eSATA port	External SATA port. It can connect to the device of the SATA port.
12		USB2.0 port	Connect to mouse, USB storage media, USB-burner and etc.
13	HDMI2	High definition media interface 2	HD video matrix output. Support zero-channel
SN	**Icon**	**Name**	**Function**
			encoding matrix output. Support tour.
14	HDMI1	High definition media interface 1	High definition audio and video signal output port. It transmits the same video signal as the VGA/TV. Support mouse operation.
15		Power socket and power switch	Power input port/power on/off button.

Mouse Control

The following table details the different uses for a computer mouse regarding the DVR's controls.

<table>
<tr><td rowspan="5">Left click mouse</td><td>System pops up password input dialogue box if you have not logged in. In real-time monitor mode, you can go to the main menu.</td></tr>
<tr><td>When you have selected one menu item, left click mouse to view menu content.</td></tr>
<tr><td>Implement the control operation.</td></tr>
<tr><td>Modify checkbox or motion detection status.</td></tr>
<tr><td>Click combo box to pop up drop down list</td></tr>
<tr><td rowspan="3"></td><td>In the input box, you can select input methods. Left click the corresponding button on the panel and you can input numeral/English character (small/capitalized). Here, ← stands for backspace button. __ stands for the space button.

In English input mode: _ stands for input a backspace icon and ← stands for deleting the previous character.

 
</td></tr>
<tr><td rowspan="2">Double left click mouse</td><td>Implement special control operation such as double click one item in the file list to playback the video.</td></tr>
<tr><td>In multiple-window mode, double left click one channel to view in full-window.
Double left click current video again to go back to previous multiple-window mode.</td></tr>
<tr><td rowspan="2">Right click mouse</td><td>In real-time monitor mode, pops up shortcut menu: one-window, four-window, ninewindow and sixteen-window, Pan/Tilt/Zoom, color setting, search, record, alarm input, alarm output, main menu.
Among which Pan/Tilt/Zoom and color setting applies for current selected channel. If you are in multiple-window mode, system automatically switches to the corresponding channel.
 
</td></tr>
<tr><td>Exit current menu without saving the modification.</td></tr>
<tr><td></td><td>In numeral input box: Increase or decrease numeral value.</td></tr>
</table>

Press middle button	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

Connection and Installation

Check Hardware

When you receive the system, unpack it, and check all sides of the DVR to see if there is any damage to the unit. The protective materials used for the packaging of the DVR can protect most accidental damage during transportation, but to ensure that your equipment is operating as expected, it is recommended to inspect the product before proceeding further.

On the DVR unit, please verify that the label on the bottom of the DVR is not damaged. The serial number of the unit is often needed to provide support or for other useful information.

Please check that all required items for your DVR are present and accounted for in the package. To check what is included with your purchase, go to https://amcrest.com/security-camera-systems/security-dvrs.html and find the product you purchased. Once you have found your product, scroll down and click on the "What's Included" tab. If any item is missing, please contact us as soon as possible so we can send any missing components if necessary.

Hard Drive Installation

A hard drive allows you to configure and use the recording functionality of this DVR, including playing back previously recorded footage.
Note: This section *only* applies to HDCVI DVRs purchased without a hard drive already pre-installed. Most 'kits' or 'bundles' will come with a pre-installed hard drive.

The DVR has connections for only 1 hard drive inside the case and the hard drive must be no bigger than 6TB (Terabytes).
To install your hard drive, the following is needed:

- A medium sized (regular) Phillips-head screwdriver - *not included*
- A hard drive - *not included (unless you purchased a 'kit' that **does** have one included)*
- Four hard drive fastening screws - *included*

Note: **Before installing the hard drive, make sure the DVR is powered off with the power cable disconnected.**

1. Loosen the screws of the upper cover and side panel.

2. Attach four screws in the HDD (Turn just three times).

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

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

5. Attach the HDD firmly.

6. Connect the HDD cable and power cable.

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

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

Connection Port Information

Note: This section may not be applicable to ALL model DVRs.

Power Supply Connection

Please check to make sure the input voltage is correct, and the power button is in the off position when connecting the power supply.

We recommend you use an Uninterruptible Power Supply (UPS) to guarantee steady operation of the DVR, as well as to elongate the life span of the DVR and other peripheral equipment such as attached cameras and other accessories.

Video Input/Output Connections

The video input interface is BNC.

The input video format includes: PAL/NTSC BNC (1.0VBP- P, B75Ω)

The video signal should comply with your national standards.

The input video signal should have high SNR, low distortion; low interference, natural color and suitable brightness. To guarantee the stability and reliability of the camera signal, the camera should be installed in a cool, dry place away from direct sunlight, flammable materials, explosive substances, etc.

The camera and the DVR should have the same grounding to ensure the normal operation of the camera.
Guarantee stability and reliability of the transmission line

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

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

You should keep the video signal away from the strong electromagnetic interference, especially power lines.

Keep connection lugs closely contacted.

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

Video Output Connection Information

Video output includes a BNC (PAL/NTSC1.0VP-P， 75Ω） output, a VGA output, and a HDMI output. The system supports BNC, VGA and HDMI output at the same time.

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

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

Using a TV as video output device is not a reliable substitution method. When using a TV as a video output device, it is advised to turn off the TV from time to time to ensure its longevity. The use of a low-quality TV may result in the damage of the device.

Audio Input/Output Connections
The DVR audio input ports uses a BNC type connection.
Due to high impedance of audio input, please use an active sound microphone to get the best audio quality.

Audio transmission is similar to video transmission. Try to avoid interference, look out for dry joints, loose contacts, and keep the audio devices and cables away from power lines.

Audio Output Connection Information

The audio output signal parameter is usually over 200mv 1KΩ (BNC or RCA).

It can directly connect to a low impedance earphone, active speaker, or amplifier-drive audio output device.

If the speaker and the microphone cannot be separated spatially, it may create a feedback loop. In this case you can adopt the following measures:

- Use a better directional microphone.
- Reduce the volume of the speaker.
- Using more sound-absorbing materials in the surrounding area can reduce voice echo and improve the acoustic environment.

Adjust the layout of the audio output cables to reduce the occurrence of a feedback loop.

Alarm Input/Output Connections

Please read the following before connecting any alarm devices. Please note, this information is only applicable to DVRs that provide an alarm connection on the device.

a. Please make sure the alarm input mode is grounded.
b. A grounding signal is needed for alarm input.
c. Alarm input uses a low-level voltage signal.
d. Alarm input mode can be either NO (Normal Open) or NC (Normal Close).
e. When you are connecting two DVRs, or one DVR and one other device, please use a relay to separate them. The alarm output port should not be connected to a high-power load directly (The power load should be less than 1 amp) to avoid high current which may result in relay damage.

Connecting a PTZ Decoder

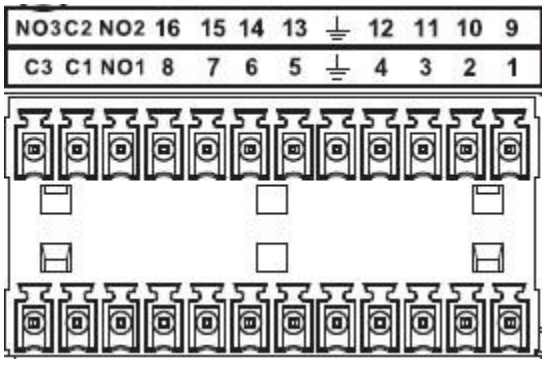
a. Ensure that the decoder has the same grounding with the DVR, otherwise you may not be able to control the PTZ. Shielded twisted wire is recommended and the shielded layer is used to connect to the ground.
b. Avoid high voltage. Ensure proper wiring and take some thunder protection measures.
c. For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

Alarm Input/Output Details

Important!

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

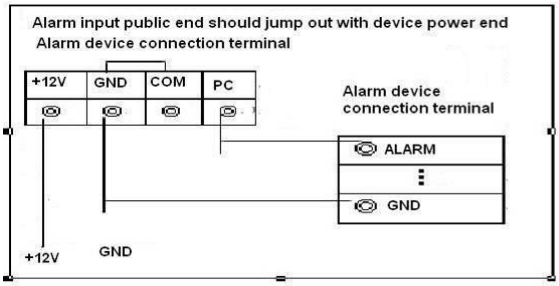
The following interface is based on the 8-channel advanced 1080P (V2) mini 1U Series.



1，2，3，4，5，6，7，8，9，10，11，12，13，14，15，16	ALARM 1 to ALARM 16. The alarms become active in low voltage.
NO1 C1，NO2 C2，NO3 C3，	Three normal open groups (on/off signal)
⏚	Earth cable.

Alarm Input Ports

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



Alarm Output Ports

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

T+ T-: output wire
R+ R-: input wire

Relay Specification

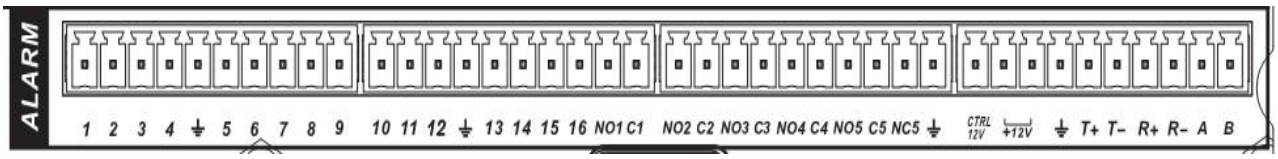
Model:	**JRC-27F**	
Material	Silver	
Rating (Resistance Load)	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	Between contacts with same polarity	1000VAC 1 minute

	Between contacts with different polarity	1000VAC 1 minute
	Between contacts and winding	1000VAC 1 minute
Surge voltage	Between contacts with same polarity	1500V (10×160us)
Length of open time	3ms maximum	
Length of close time	3ms maximum	
Longevity	Mechanical	50×106 times (3Hz)
	Electrical	200×103 times (0.5Hz)
Temperature	-40°C~+70°C	

RS485 Port

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

Below is a diagram of the 32-channel alarm I/O ports:



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

To connect PTZ devices to the DVR:

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

USB Port

DVR Assembly Guide

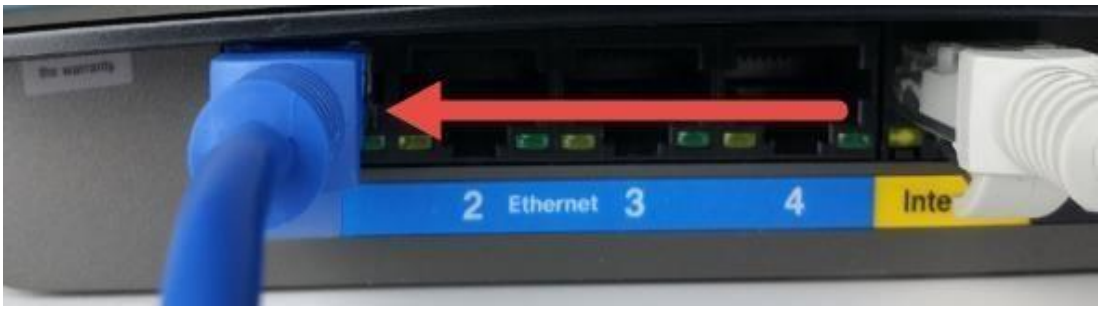
The following instructions will show you how to set up the cables for the DVR, cameras, as well as a monitor or TV screen.

To set up the DVR's cable connections, there are 6 major steps:

1. Connect a monitor or TV screen to your DVR. For purposes of this guide, we will use a VGA connection. Take a VGA cable, and connect one end to the VGA port on your monitor/screen and the other end to the VGA port on the back panel of your DVR.

2. Connect the included USB mouse to the front of the DVR.

3. Connect an Ethernet cable to your router.



Then, connect the other end of the Ethernet cable to the DVR.

4. Secure the coaxial extension cable to the camera's video cable port. Then, connect a power adapter to the camera's power adapter port and plug the power adapter into a wall socket or power source.

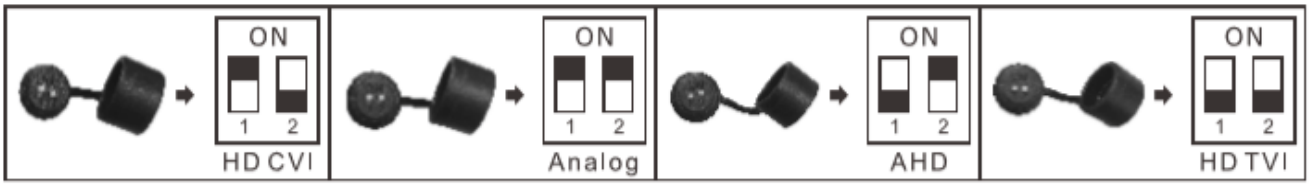
5. Secure the coaxial cable port from the camera to any of the video (coaxial) ports on the back of the DVR.

6. Connect the power adapter into the back of the DVR, and then plug in the DVR power adapter into an electrical socket to turn on the unit.

Using an Amcrest 4-in-1 Camera

Quadbrid or 4-in-1 technology, allows for a flexible means of providing HD-CVI, HD-TVI, AHD, and Analog formatted video to your DVR. The signal is transmitted uncompressed, which eliminates latency and allows for real-time, highly reliable video security without loss or delay. The cameras connect point-to-point directly to the DVR (BNC) which provides a highly secure, closed network, as well as a painless and non-complex plug-and-play setup process. The toggle switch for your 4-in-1 camera is represented in the image below:

Most Amcrest DVRs will require you to set the camera to **HD-CVI or Analog (960H)** settings and may not be compatible with HD-TVI or AHD. Ensure your 4-in-1 camera's toggle switch is set to the proper setting as indicated in the diagram below.



Note: If the proper mode configuration is not set, **you will not be able to view your camera on your DVR**. Please make sure you have the proper settings on your camera before you begin setting up or installing.

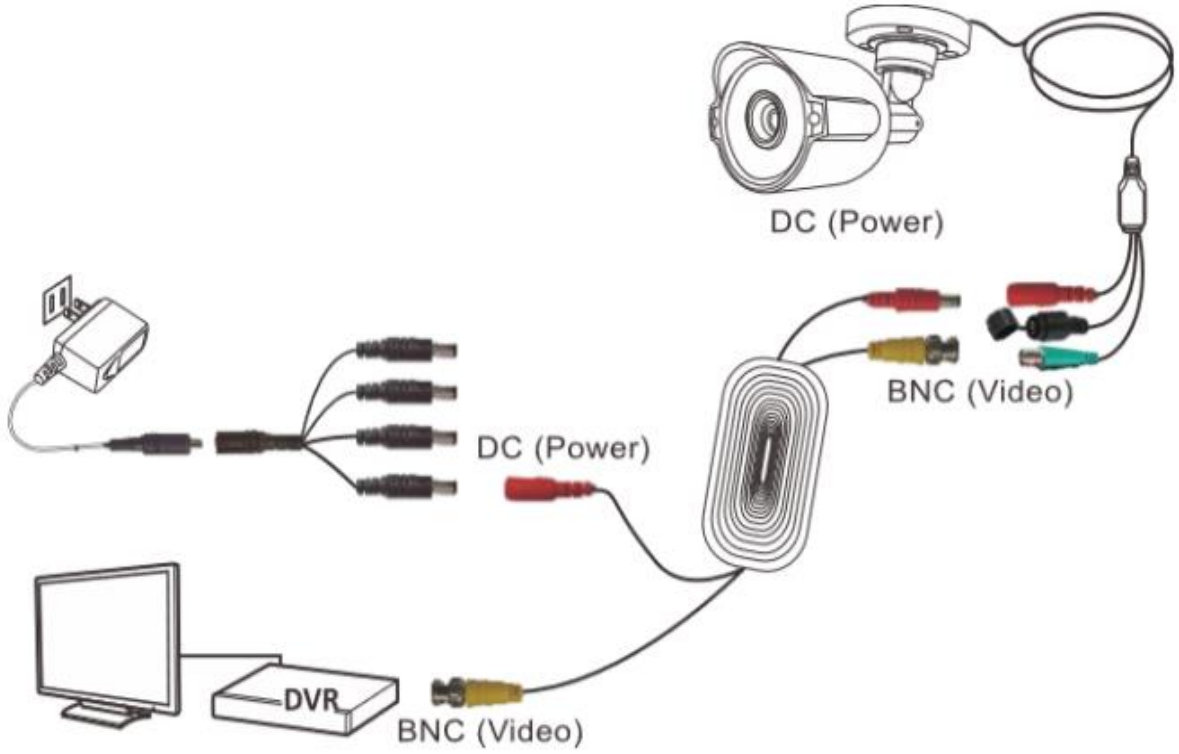
To install your Amcrest 4-in-1 camera, please follow the steps provided below:

Note: Make sure you have the proper mode configuration on your camera before running or connecting any cables.

Step 1: Connect a BNC (coaxial) cable to the video out connection of your camera.

Step 2: Connect the male end of the DC power connector of the BNC (coaxial) cable to the female end of the power connector of the camera.
Step 3: Connect the BNC (coaxial) cable to a video out channel on the back of your DVR.
Step 4: Connect the male end of the DC power connector of the power adapter to the female end of the power connector of the BNC (coaxial) cable. Plug in the power adapter to apply power to the camera.

For more information on the installation process described, refer to the image below for more details.



- PLEASE READ BELOW-

Note: Your DVR may not work properly if the following is not accounted for.

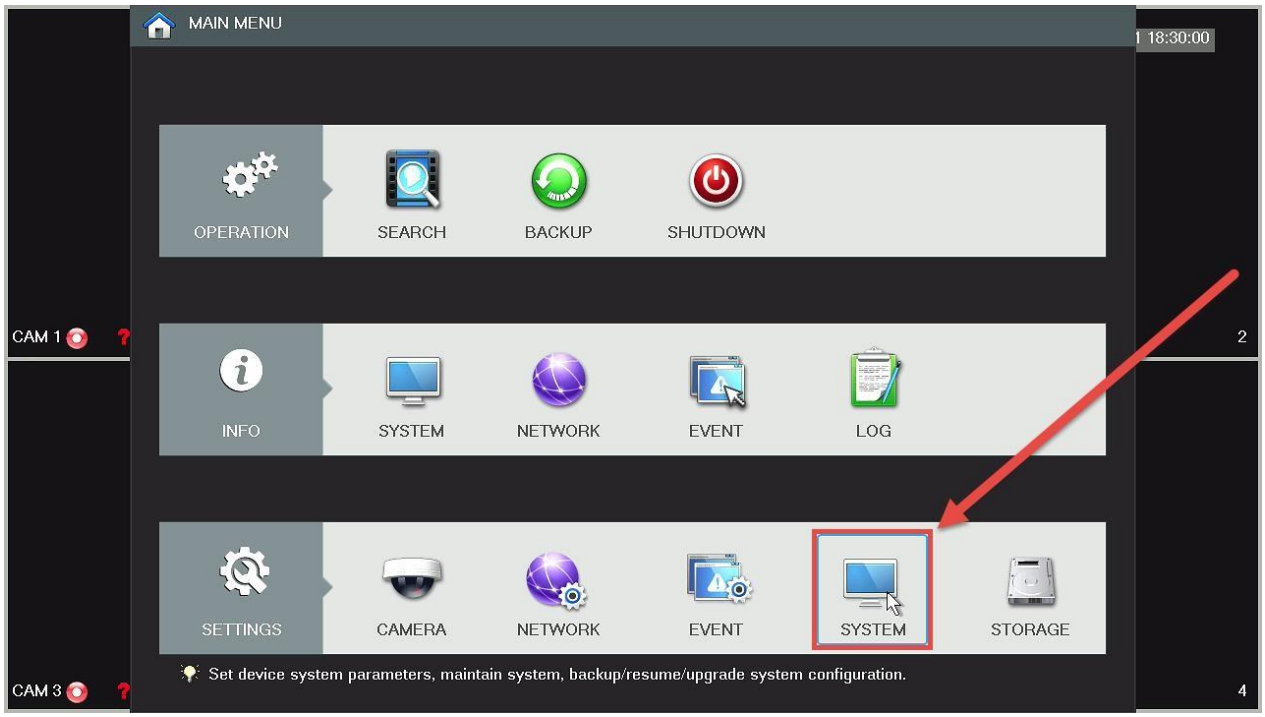
Every DVR comes preset to a video output resolution of **1280x1024**. What this means is that any time an HDMI cable is plugged into an HDTV, it may result with a blank screen even if the DVR is operational. If this occurs, please follow the steps provided below to change the resolution.
Procedure using a VGA cable:

1. Connect your DVR to a computer monitor or TV screen with a VGA cable (the HDMI cable should not be connected during this process).

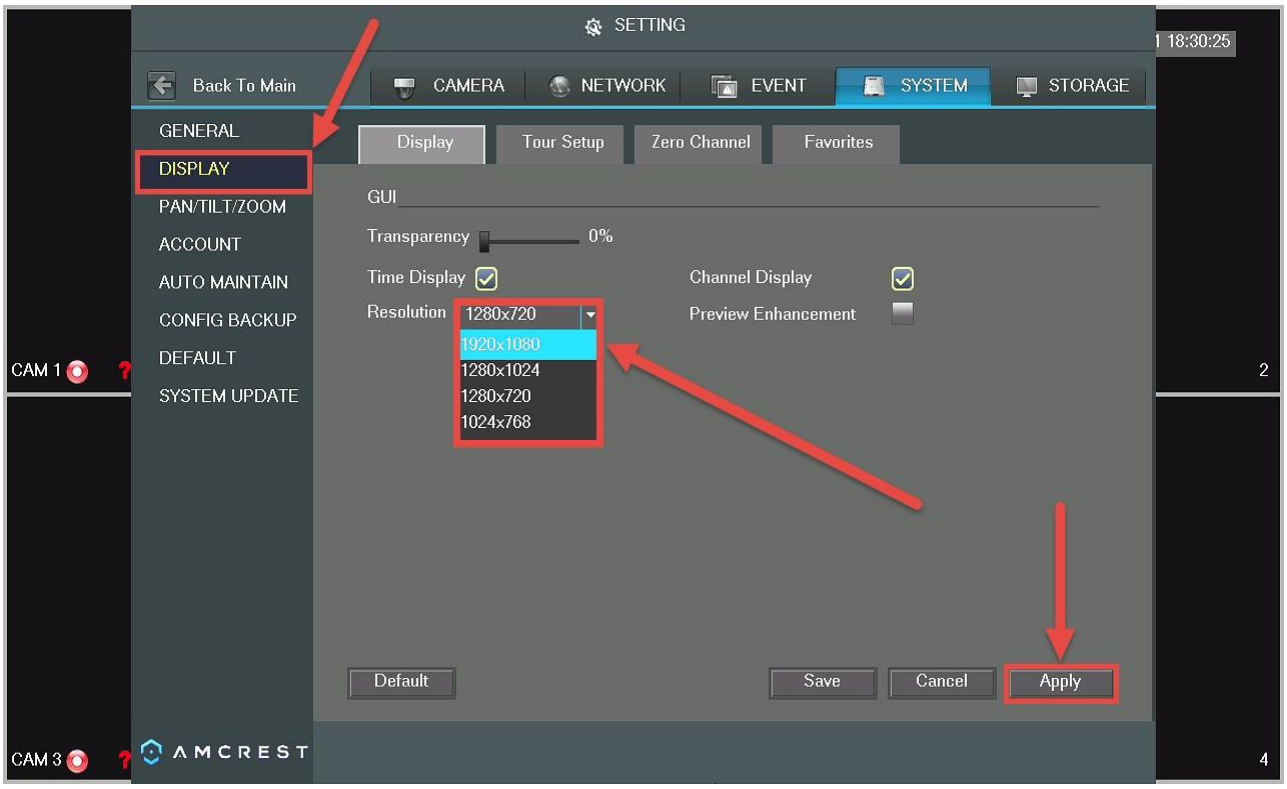
2. Boot up your DVR. On the monitor or TV, please make sure the “input” is set to VGA.

3. When the interface loads, you will see the login screen appear. Enter your credentials. (To find your login credentials, please refer to part 3 of this guide: **Console Setup** > **Logging in**.)

4. On your DVR, open the Main Menu by left-clicking once on the live feed screen and, under the Settings row, click on the System icon.



5. Then, on the new window, click Display from the list on the left column of options. Change your resolution from **1280x1024** to **1920x1080** and click **Apply** down below. Your DVR will reset to effect the change.



6. Disconnect the VGA cable and connect your DVR to an HD monitor or TV using an HDMI cable. Don't forget to change the input to HDMI on a TV. Your interface will now appear, and you can use your DVR freely.

Overview of Navigation and Controls

Startup and Shutdown

Startup

Before initial startup, please make sure:

- The rated input voltage matches the output voltage at your location. Please make sure the power wire connection is secure before pressing the power on-off button.
- Always use a stable current. If necessary, an Uninterruptable Power Supply (UPS) is a good way to ensure power stability.

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

- Plug the power adapter into a wall outlet.
- Connect the power cable to the DVR
- Click the power switch on the DVR's rear panel to supply power to the device.
- Wait a few seconds, and then push the power button on the front of the device to fully power it on.

Shutdown

Note:

- When you see the corresponding dialogue box "System is shutting down…" Do not click the power on-off button directly.
- Do not unplug the power cable or click the power on-off button to shut down the device directly when device is running (especially when it is recording.)

There are three ways for you to log out.

a. Main menu (**RECOMMENDED**)
   From Main Menu->Shutdown, select shutdown.
   Click the OK button and you can see device shuts down.
b. From power on-off button on the front panel.
   Press the power on-off button on the DVR front panel for more than 3 seconds to shut down the device.
c. From power on-off button on the rear panel.

Auto Resume Feature

The HDCVI has an auto resume feature that allows the system to automatically backup video and resume previous working status after power failure.

Button Battery Replacement

The DVR has a button battery that's used to ensure accurate system time. The battery is a CR2032 watch battery, and it is recommended that the batter is replaced once a year.

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

Display Settings Screen

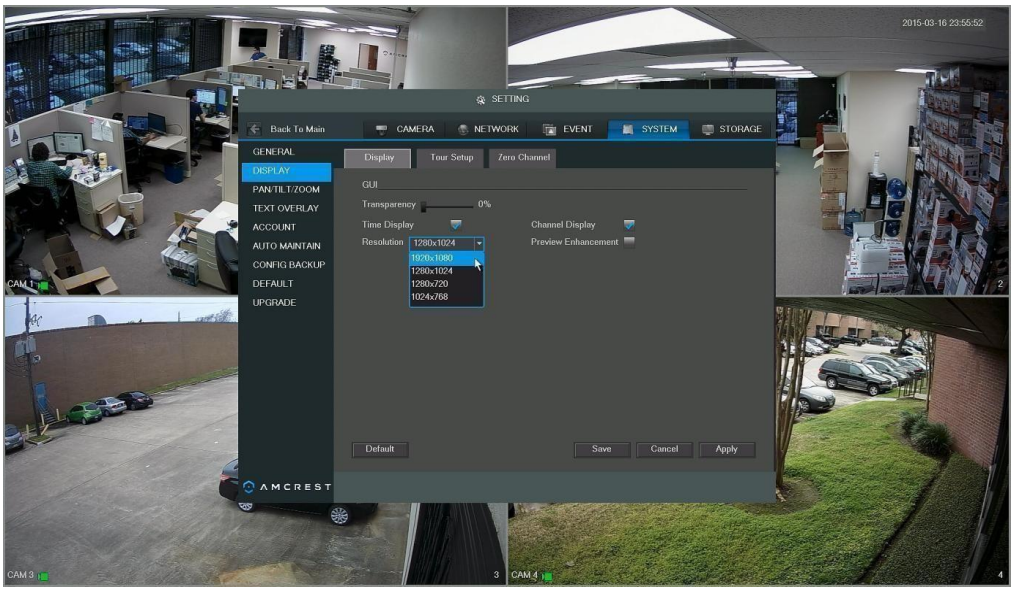
Every DVR comes preset to a video output resolution of **1280x1024**. What this means is that any time an HDMI cable is plugged into an HDTV, it may result with a blank screen even if the DVR is operational.

If this occurs, please follow the steps below.

Procedure using a VGA cable:

1. Connect your DVR to a computer monitor or TV screen with a VGA cable (the HDMI cable should not be connected during this process).
2. Boot up your DVR. When the interface loads, you will see the login screen appear. On the monitor or TV, please make sure the 'input' is set to VGA.
3. On your DVR, open the Main Menu by left-clicking once on the live feed screen and, under the Settings row, click on the System icon. Then, on the new window, click Display from the list on the left column of options. Change your resolution from **1280x1024** to **1920x1080** and click Apply down below. Your DVR will reset to effect the change.
4. Disconnect the VGA cable and connect your DVR to an HD monitor or TV using an HDMI cable. Don't forget to change the input to HDMI on a TV. Your interface will now appear, and you can use your DVR freely.

Display Settings Screen

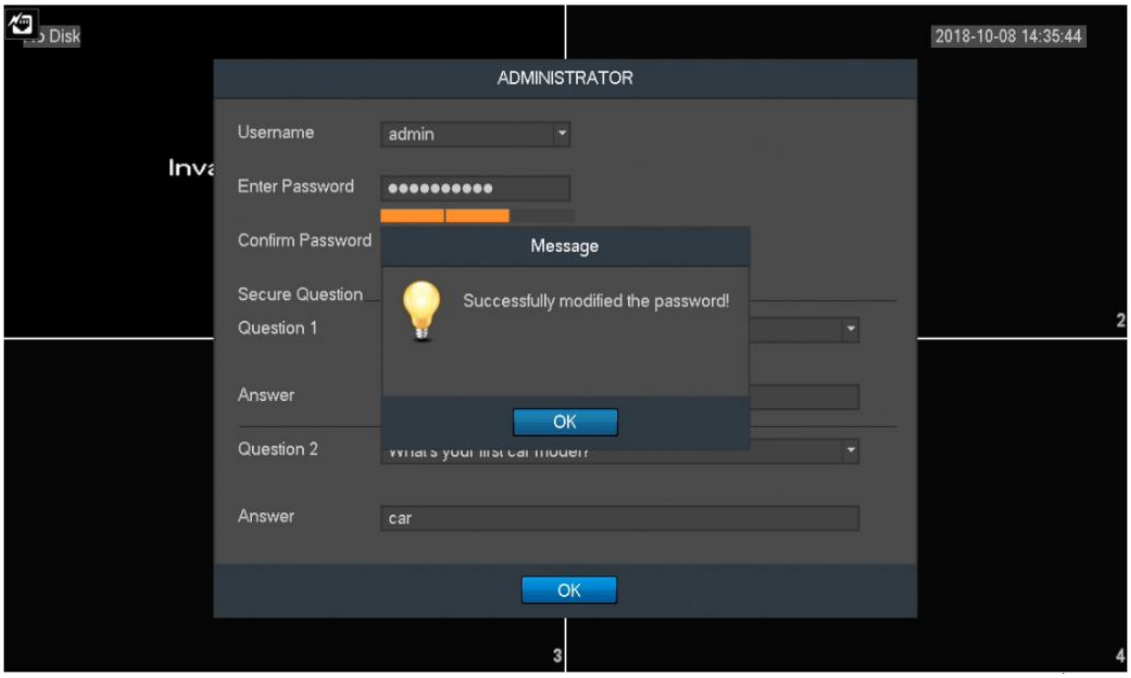


Initial DVR Setup

The first screen you will be taken to during setup will be the Administrator page. In this page, you will set your DVR username and password as well as set up security questions. These security questions will help assist during password reset procedures or as a means of gaining access to a forgotten password.

Note: A strong password for the device should be between 8 to 32 characters long with a combination of letters and numbers. Please avoid using special characters during password setup.

After you have entered a valid password, use the drop-down menu in question one and two to select a security question. Enter the answer for your question into the **Answer** field. When you are done, click **OK** to continue. The information will then be modified and saved to your device, click on **OK** to continue.



After the administrator page has been modified, you will then be taken to the startup wizard which will guide you through a step by step process of setting up your DVR.

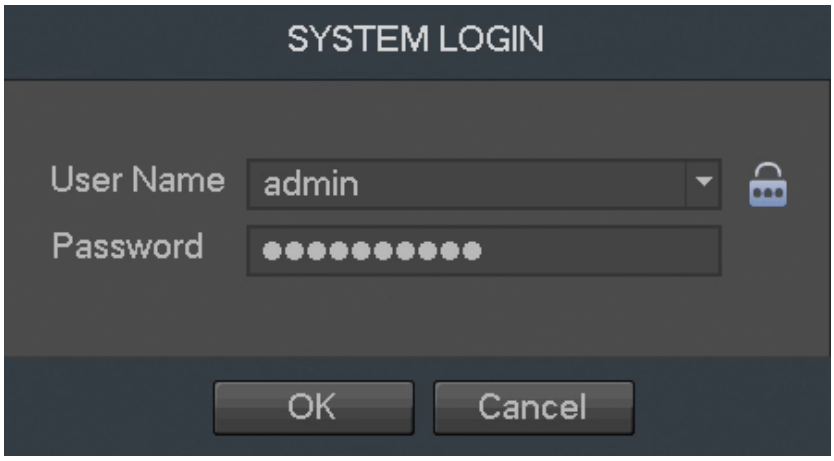
Startup Wizard

The first page of the Startup Wizard will appear:

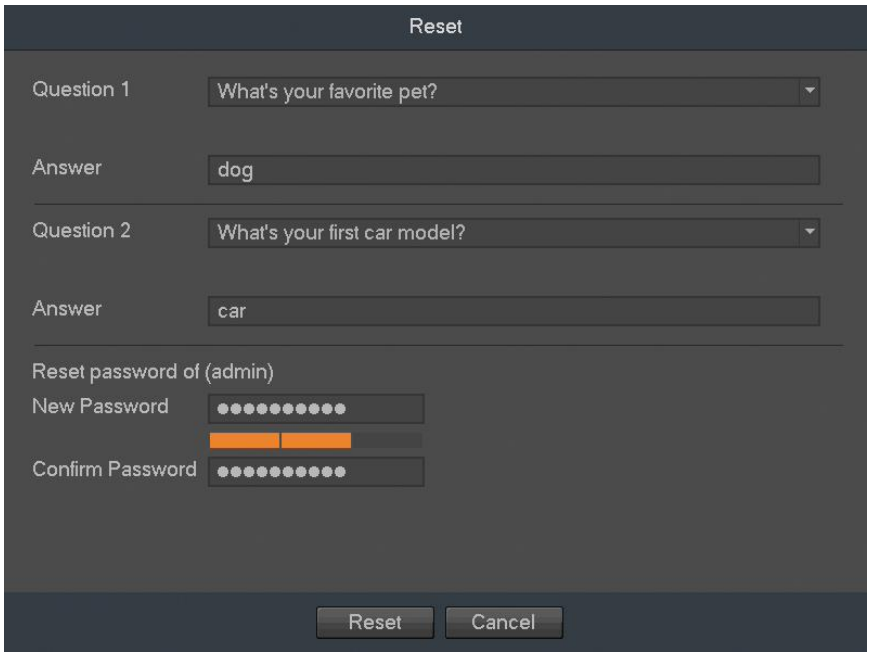
If you do not want to use the Startup Wizard, or you have already gone through it and do not want it to keep appearing, unmark the checkbox next to **Startup** and click **Cancel**. To proceed with the startup wizard, click **Next**. **Note**: Every page from the Startup Wizard that follows can be accessed and modified at any time through the Main Menu.

System Login

Log into your DVR with the credentials set up on the administrator page. Type in the username and password you have initially set for the DVR and press **OK** to continue.



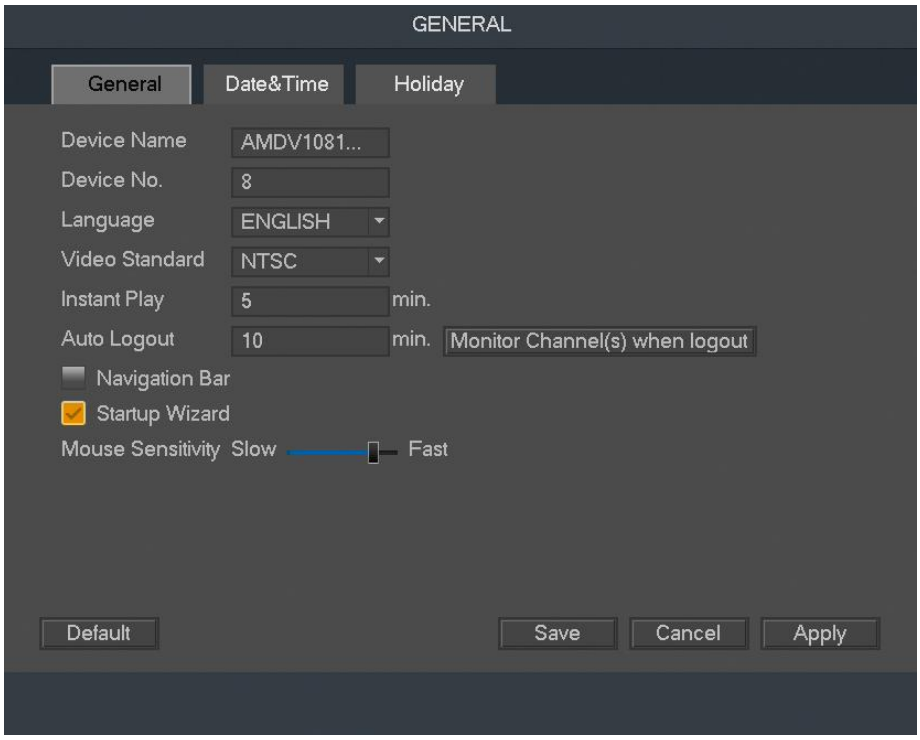
If you have forgotten your password or would like to reset your existing password. Click on the Forgot Password icon ( ) and answer the security questions that you assigned in the administrator menu.



Next, enter the new password that you would like to set in the **New Password** field and confirm the password. Lastly, click on the **Reset** button to reset the password. Once your password has been successfully reset, click on **OK** to continue.

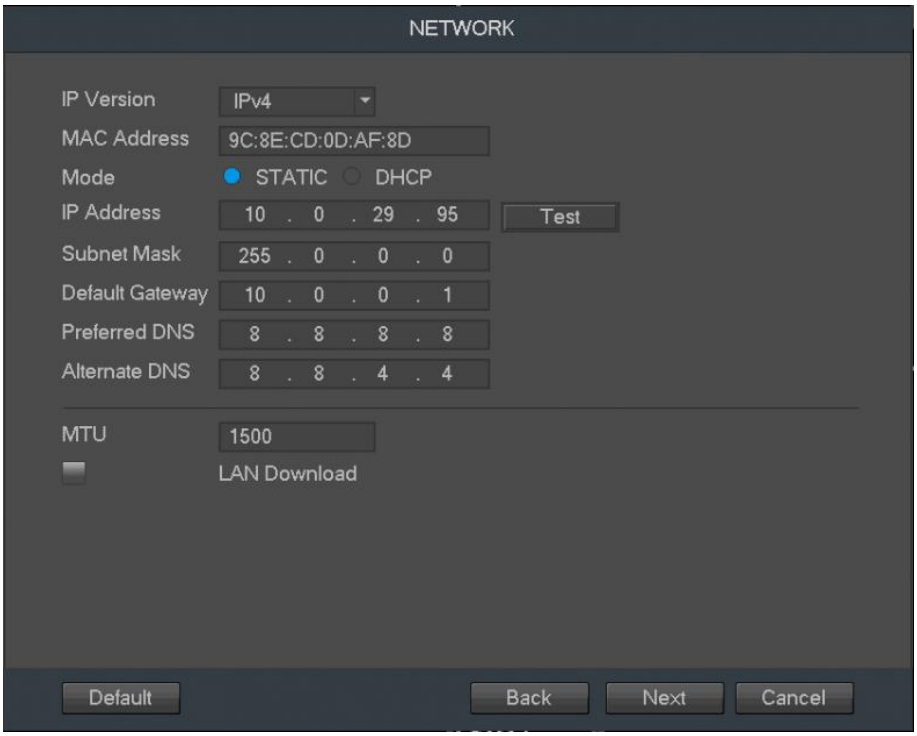
General

The first screen that comes up is the **GENERAL** settings screen. Make sure to click the tabs at the top for Date & Time, as well as Holiday to configure those settings as well. Once you are satisfied with the settings on this screen, click the **Next** button at the bottom of the screen.



Network

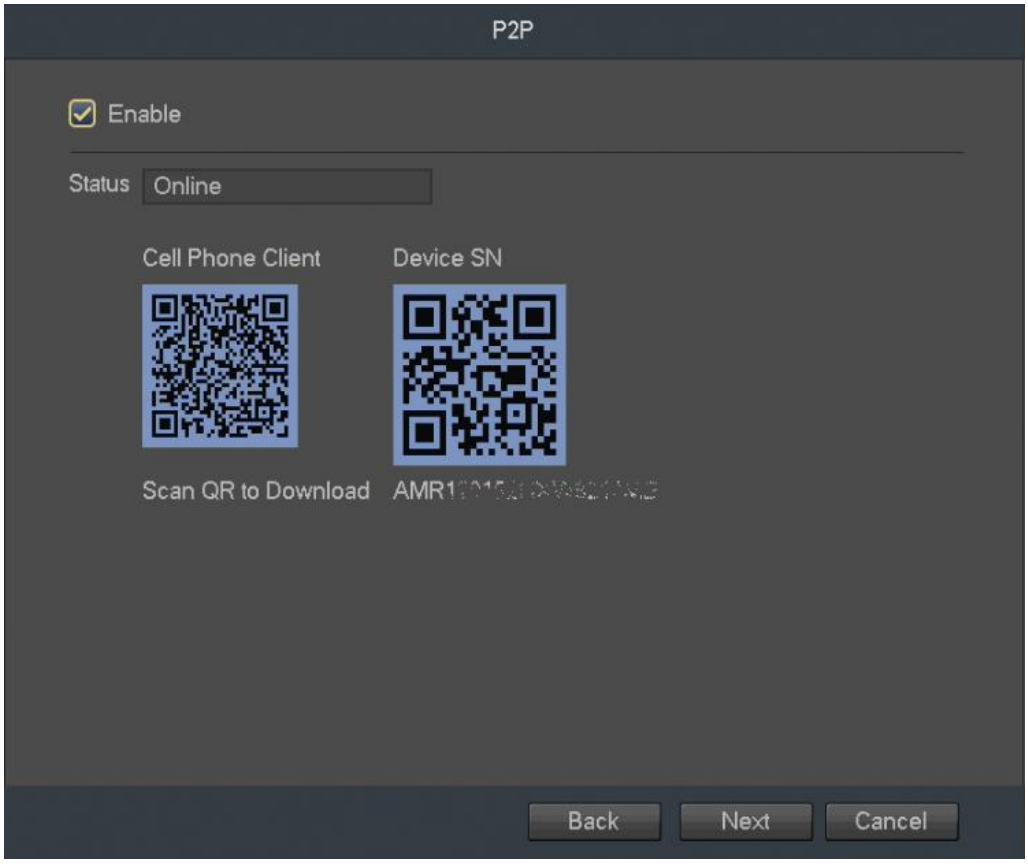
The next screen that comes up is the **NETWORK** settings screen. *Unless you have a specific reason to change these settings, it's best to leave them as they are.* Please note, the IP address for the DVR will be used to access your DVR's web user interface on a laptop or PC. As good practice it is important to set your IP address to static before proceeding. For more information on how to access your DVR's web user interface on a laptop or PC, visit, amcrest.com/DVRwebsetup.



Once you are satisfied with the settings on this screen, click the **Next** button at the bottom of the screen.

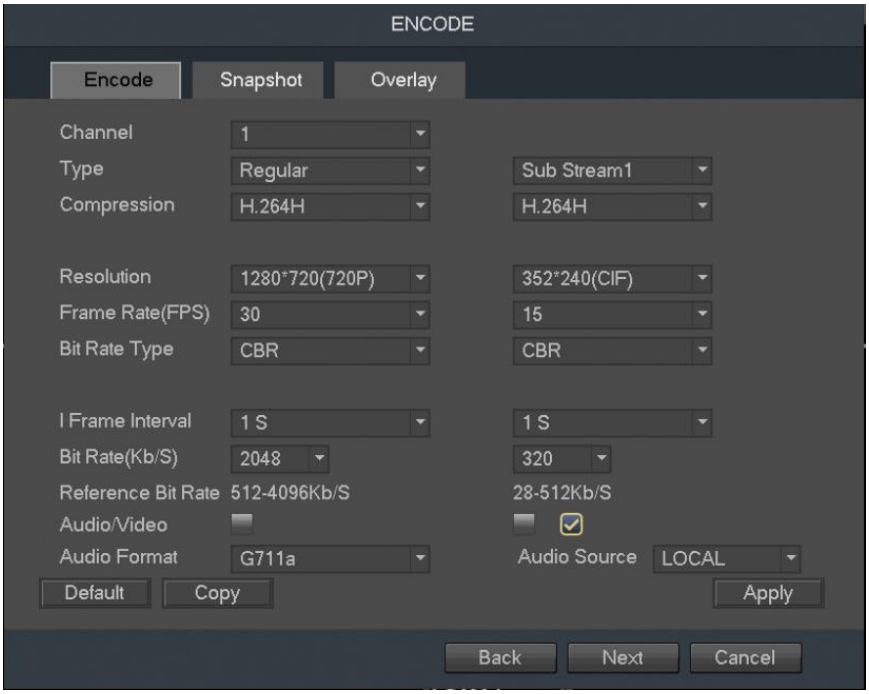
P2P

The next screen that appears is the P2P screen. This screen allows you to connect your DVR to your mobile device via the Amcrest View Pro app. To download the app, use your mobile devices camera and scan the **Cell Phone Client** QR code. For more information on how to add your DVR to the Amcrest View Pro app, visit amcrest.com/appsetupDVR

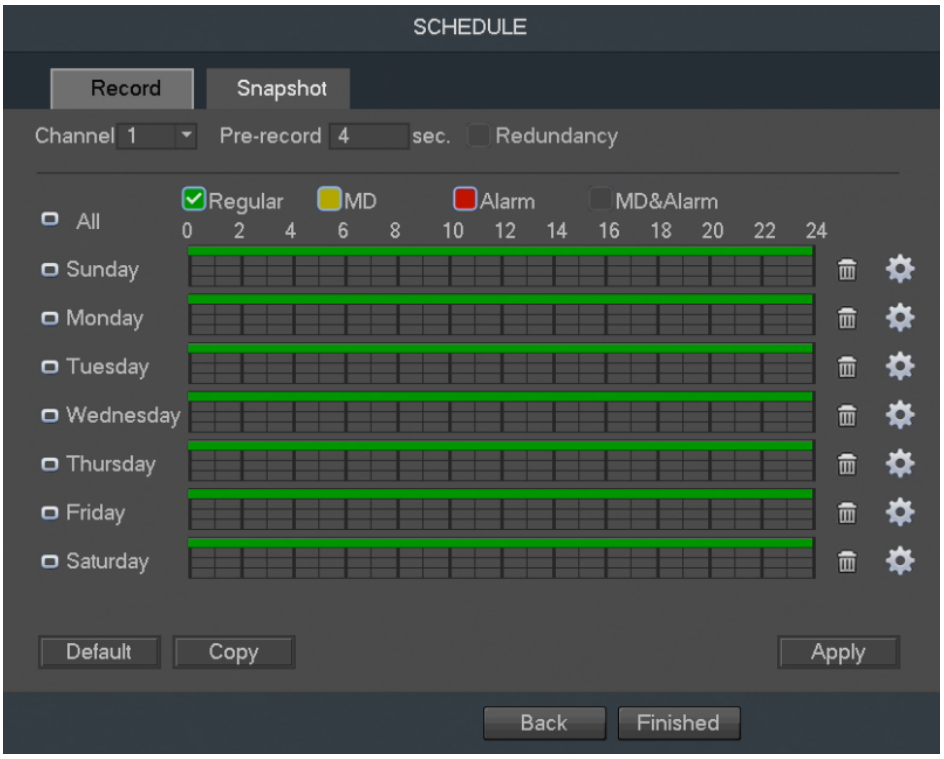


Encode

The next screen that appears is the **ENCODE** settings screen. This is where you can adjust the video quality settings for your DVR/cameras, including the compression and frame rate. Make sure to check the **Snapshot** and **Overlay** tabs to see those settings too.



The next screen you see is the Schedule settings screen. Make sure to click the tabs at the top for Record and Snapshot to configure those settings as well. Your DVR is configured, by default, to record everything on all channels 24/7 (this will only actually happen provided you have a hard drive installed). You can also use this screen to set up motion detection and alarm schedules.



Once you are satisfied with the settings on this screen, click the **Finished** button at the bottom of the screen.

Before following this guide to the next step, that covers the main menu, you will need to left-click once or right-click and select “Main Menu‟ from the right-click menu.

Main Menu Overview

The screenshot below is the main menu screen for the Amcrest DVR console interface:

Below are short descriptions for each of the menu items on the main menu:

OPERATION -> **SEARCH**: Search and playback recorded video that is stored on the hard drive.
OPERATION -> **BACKUP**: Backup recorded files onto a USB drive.
OPERATION -> **SHUTDOWN**: Logout, shutdown, or restart the system.

INFO -> **SYSTEM**: View information about the recordings, hard drive statistics, or version information. **INFO** -> **NETWORK**: View information about the network or test the network status **INFO** -> **EVENT**: Display information about events that triggered recording. **INFO** -> **LOG**: Display system logs of critical events.

SETTINGS -> **CAMERA**: Review or edit settings for each camera, including video settings (e.g. quality, bit rate, color, etc.).
SETTINGS -> **NETWORK**: Review or edit network settings for the DVR (e.g. email, DDNS, UPnP, etc.) **SETTINGS** -> **EVENT**: Review or edit settings that trigger recording events (e.g. motion detection, alarm, etc.).
SETTINGS -> **SYSTEM**: Review or edit system parameters or configuration, including account settings (e.g. usernames, etc.).

SETTINGS -> **STORAGE**: Review or edit storage parameters and settings.

S5 Model DVR Initialization

Newer Amcrest model DVRs with end notations "S5" will provide a different setup method than its previous counterparts. To verify if your DVR has this specific end notation, inspect the serial number tag on the bottom of the device.

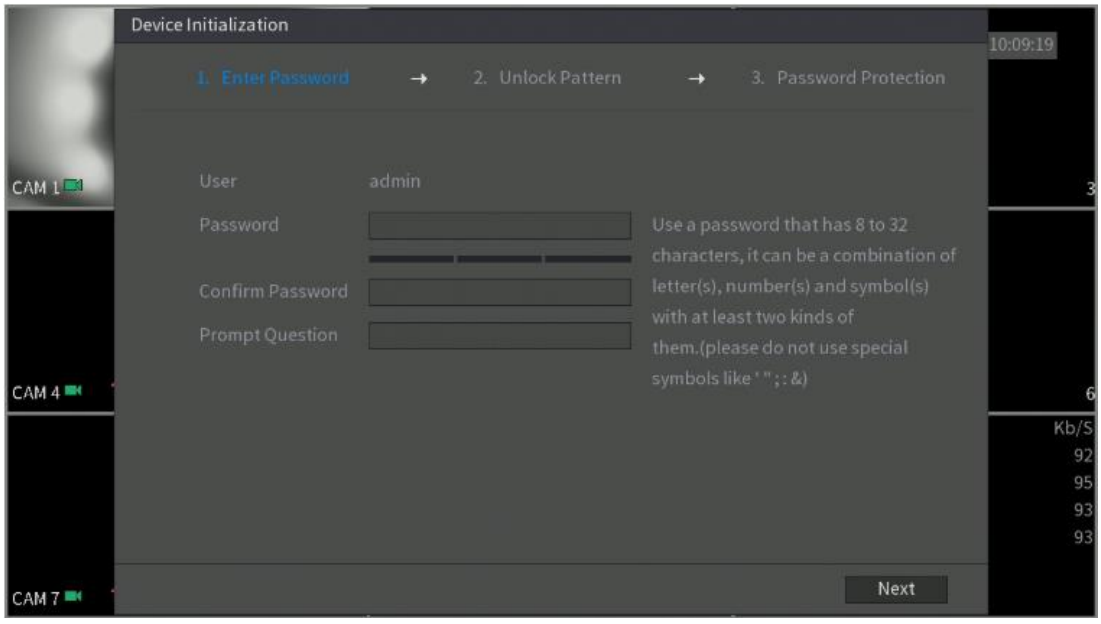
For example, if the model number for the device has a AMDVXXXXX-S3 or above end notation the below initialization procedures pertain to that device. For more information on the initialization process of these model DVRs, refer to the instruction set provided below.

To begin, hook your device up to your network with an Ethernet cable and apply power to the device. Ensure you have a monitor on the device as well (VGA or HDMI) and allow the DVR to boot.

Once the DVR has successfully finished booting you will be immediately taken to a **Device Initialization** screen. The device initialization screen allows you to enable basic setup features more efficiently to the DVR. These are basic features related to the device, such as password setups or customized recovery setting.

Enter Password

The first screen you will see in the Device Initialization screen is the **Enter Password** page. This page allows you to set a password for your device and is represented in the image below.



To login to the system for the first time, you will need to assign a password for the user (admin) account. Please enter a password for the account into the password field and rewrite it into the confirm password field. You can

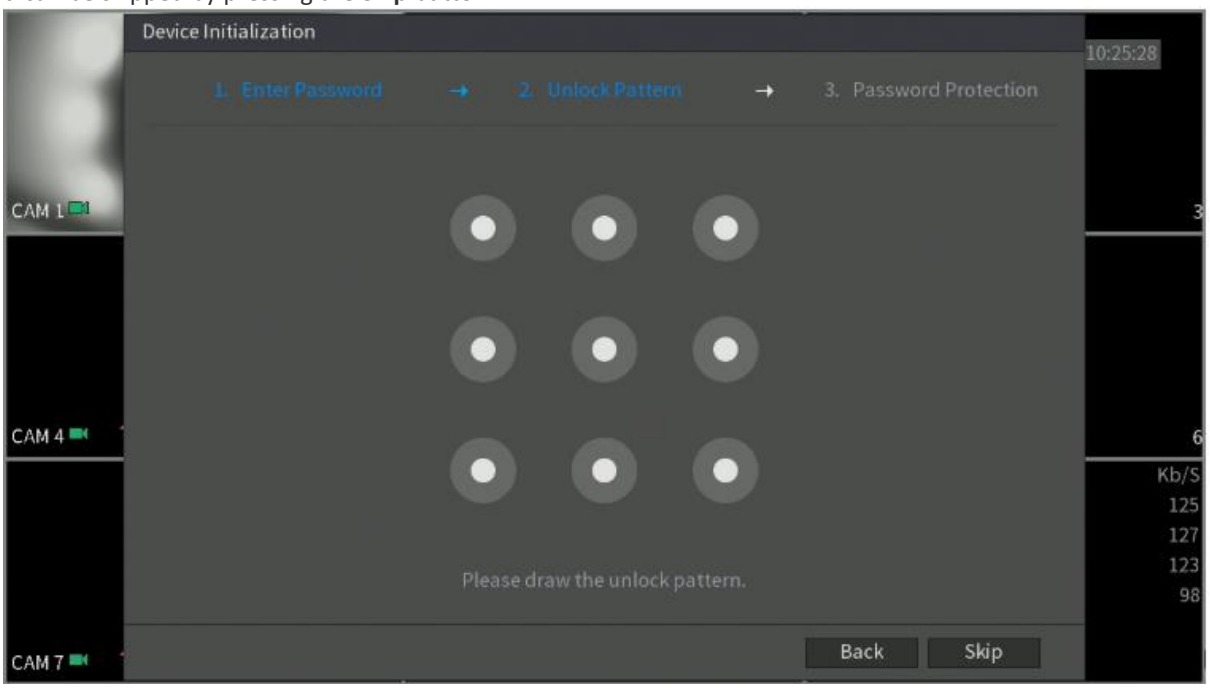
also add in a prompt question that will be applicable for password recovery. The prompt question field is optional but is recommended to help you remember what the password you set was if you have forgotten.

Note:

- Use a password that has 8 to 32 characters, it can be a combination of letter(s), number(s), and symbol(s) with at least two kinds of them. Do **not** use special symbols such as, (‘ “ ; : &).
- These settings configured can be changed at any time by accessing the settings menu of the DVR when finished.
- If the password for the administrator account is misplaced, forgotten, or a user is locked out, please visit https://amcrest.com/password to request a new password.

Unlock Pattern

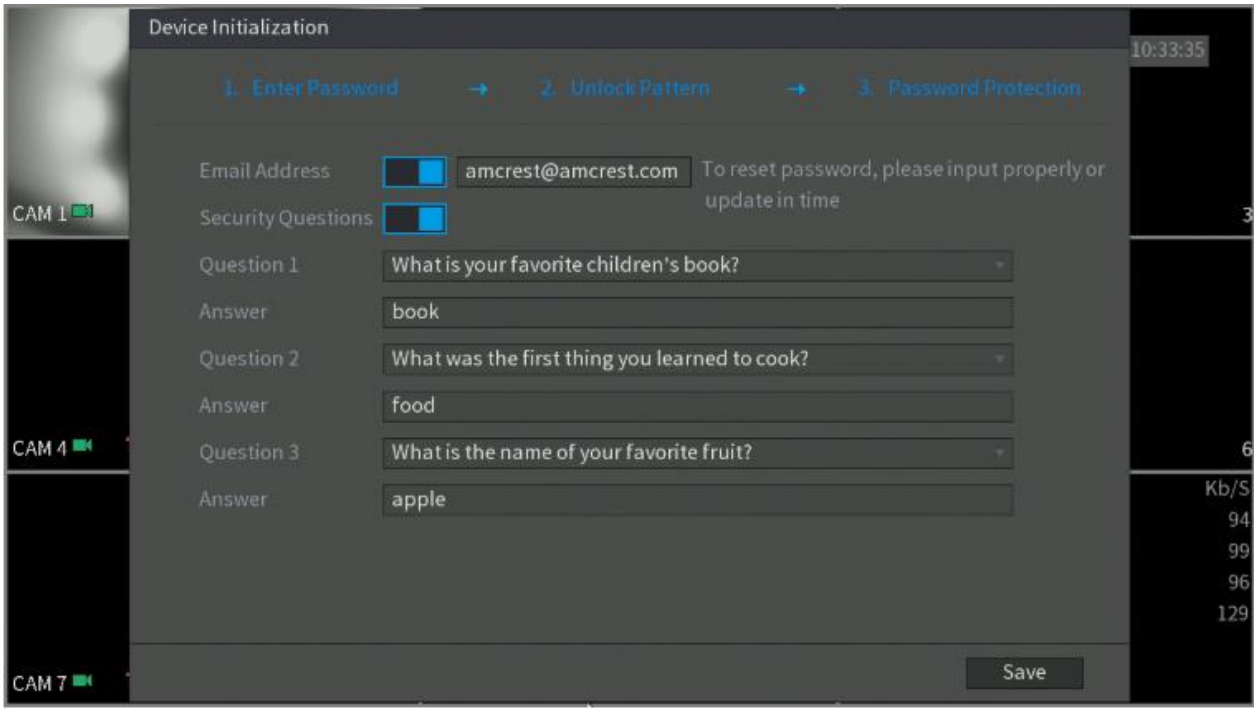
The next screen that will be configured will be the unlock pattern screen. In this screen you can configure the unlock pattern for your device. This setting is set to ensure the security and integrity of your device but is optional and can be skipped by pressing the **Skip** button.



To set the unlock pattern, use the provided mouse to draw a continual pattern that you would like to use. Once you have drawn the desired pattern on the screen the system will ask you to confirm the unlock pattern you have set. To confirm the setup, use the mouse to draw the same pattern again. When complete you will be automatically directed to the password protection screen.

Password Protection

This screen is another means of password retrieval. If you would like to reset your password via email (recommended), toggle the email address toggle switch to the on position or check the checkbox for this option if applicable. Enter a valid email address in the **Email Address** field to retain the email address in the system.



Next, you will need to enable security questions. These security questions will be set up to better assist with the password recovery process. To enable security questions, toggle the toggle switch to the on position or check the checkbox for this option if applicable in the **Security Questions** field. Select a question from the drop-down menu for **Question 1, Question 2,** and **Question 3** and enter the answers to those questions in the **Answer** fields.
Once this section is complete, click on the Save button to save your information to the device. You will then be able to proceed with the Setup Wizard.

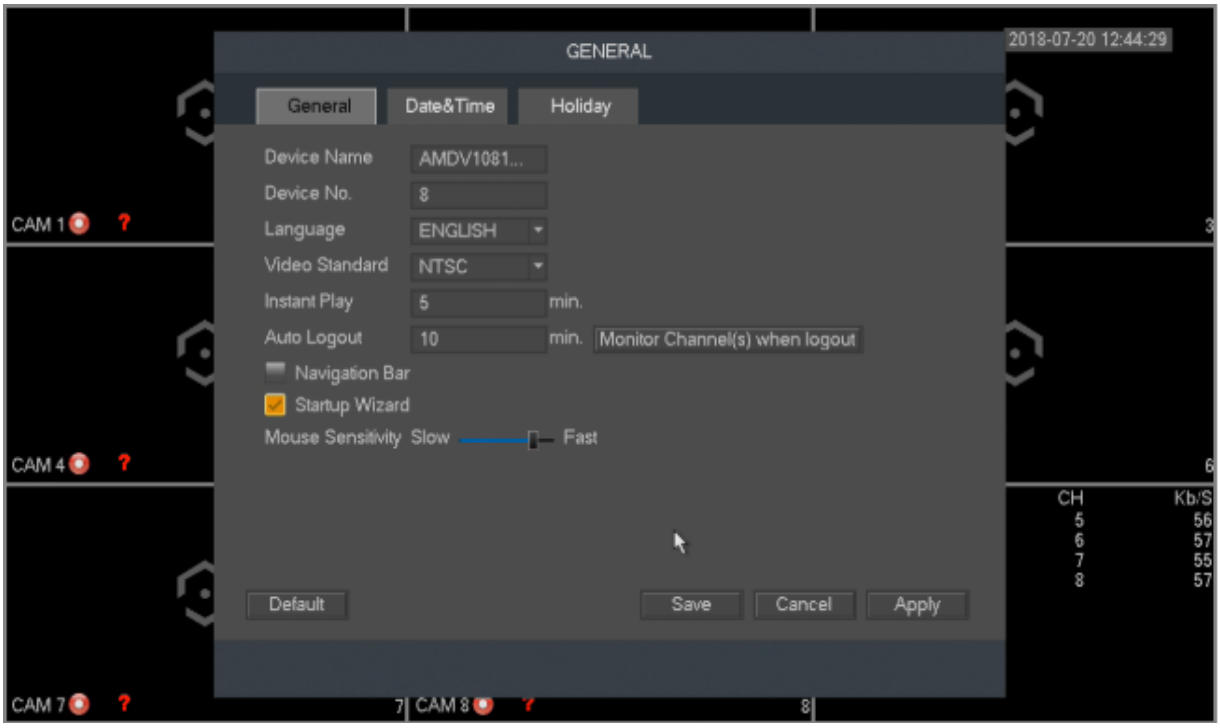
Setup Wizard for S5 Model DVRs

After device initialization has been completed your device will display a startup wizard screen. This is optional but is highly recommended because it will help to better assist you complete the setup process.
This is feature is highly recommended to use to efficiently set your device for the first time. However, the feature is optional. To cancel startup wizard, press **Cancel**. If you wish to proceed with the startup wizard, click **Next**.

Note: To have the wizard appear during initial startup of your device, click on the checkbox option next to **Startup**.

General

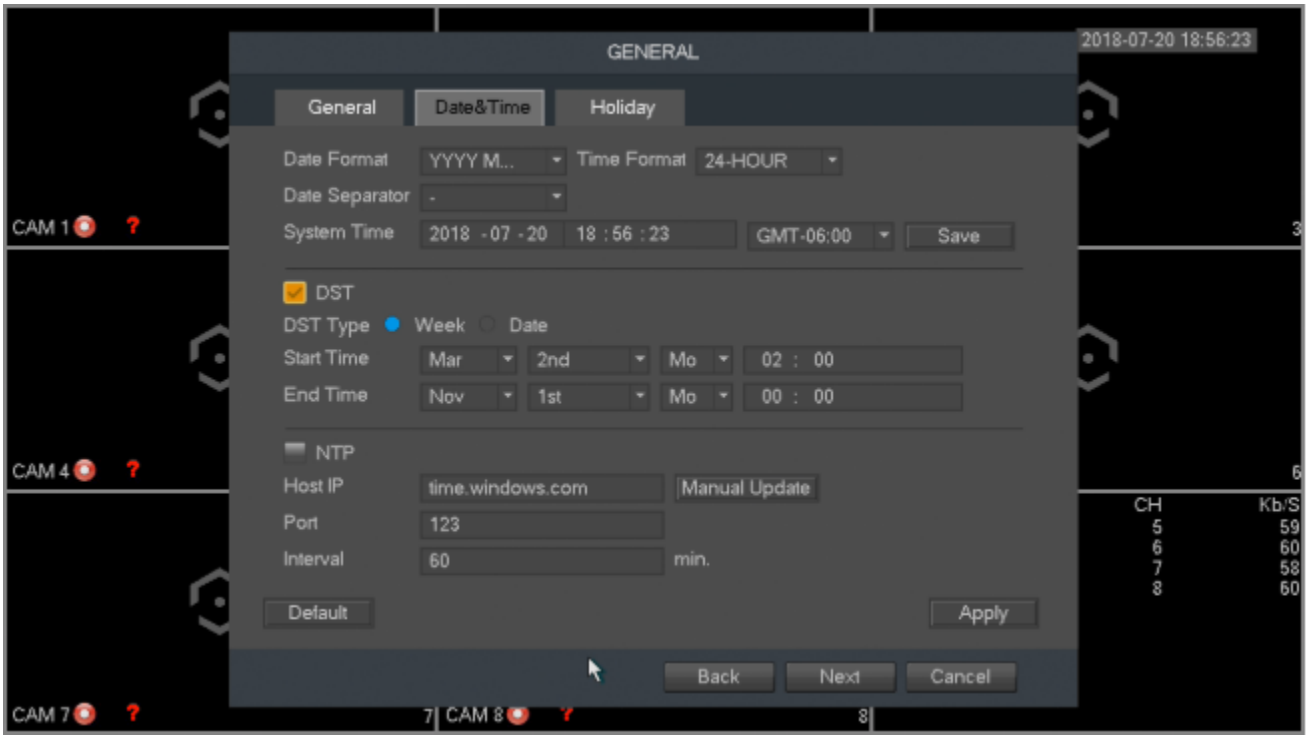
The first screen that appears in the startup wizard will be the **General** menu. This menu allows you to set the name for your device as well as provides several general options associated with your device. Once set, click **Apply** and then the **Next** button to continue.



Device Name	Displays the model number of your DVR
Device No.	Number of analog channels supported.
Language	Which language your DVR is operating under.
Video Standard	Displays the video standard (NTSC, PAL)
Instant Play	Set to play back the previous five minutes to sixty minutes of playback video.
Auto Logout	Sets the time limit of idle time for the DVR before the
Navigation Bar	Check if you want to enable Navigation bar on the live view screen.
Startup Wizard	Check if you want the startup wizard to appear upon startup.
Mouse Sensitivity	Sets the sensitivity of your mouse controls.

Date & Time

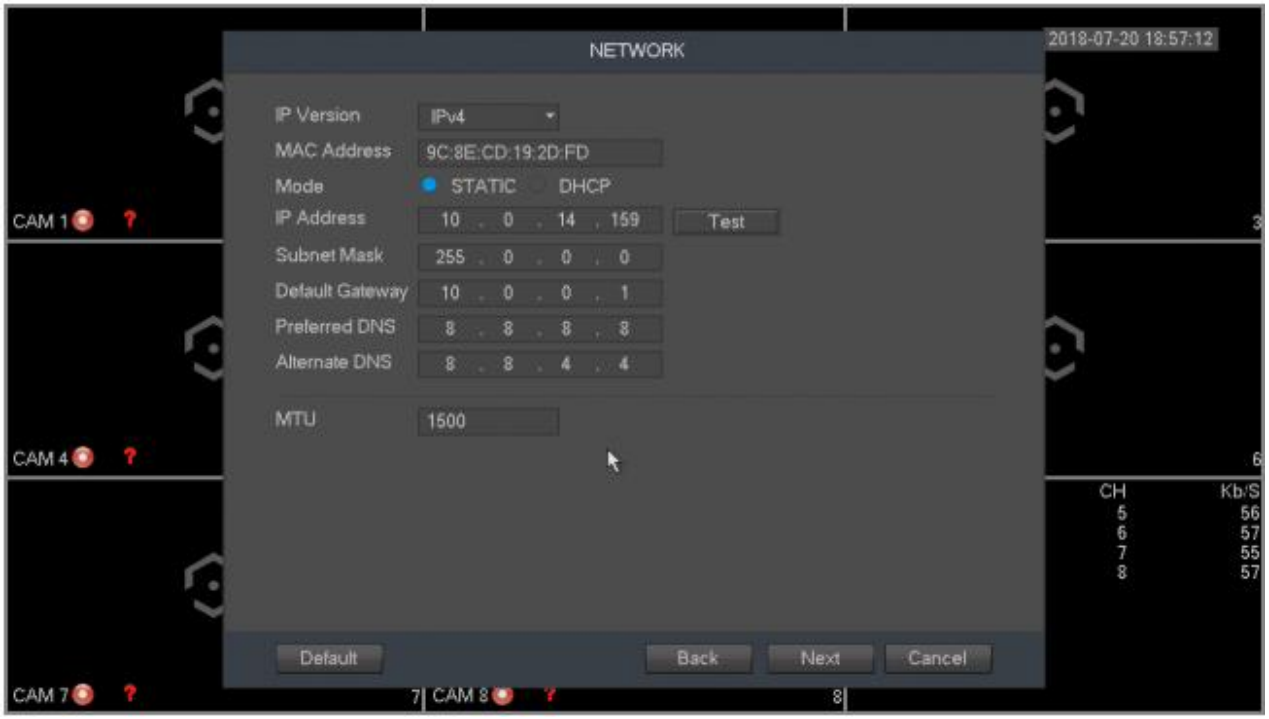
The next screen that appears will be the Date & Time settings screen. This is where you can set the date and time for your specific location. If you wish to utilize daylight savings time, check the **DST** check box. Once you have selected the proper date and time for your device, click **Apply** and then the **Next** button to continue.



Note: Make sure to toggle the NTP toggle switch to the off position to avoid syncing your device to the NTP server.

Network

The next screen that will appear is the Network settings screen. In this screen you can configure the network settings for your DVR. If you want to set your device up to have a static IP (recommended), select the STATIC radio button next to DHCP.



Note: To test the connectivity of the device to your network, click on the Test button. The device will return a network status. To return to the previous menu, click the Back button.

P2P

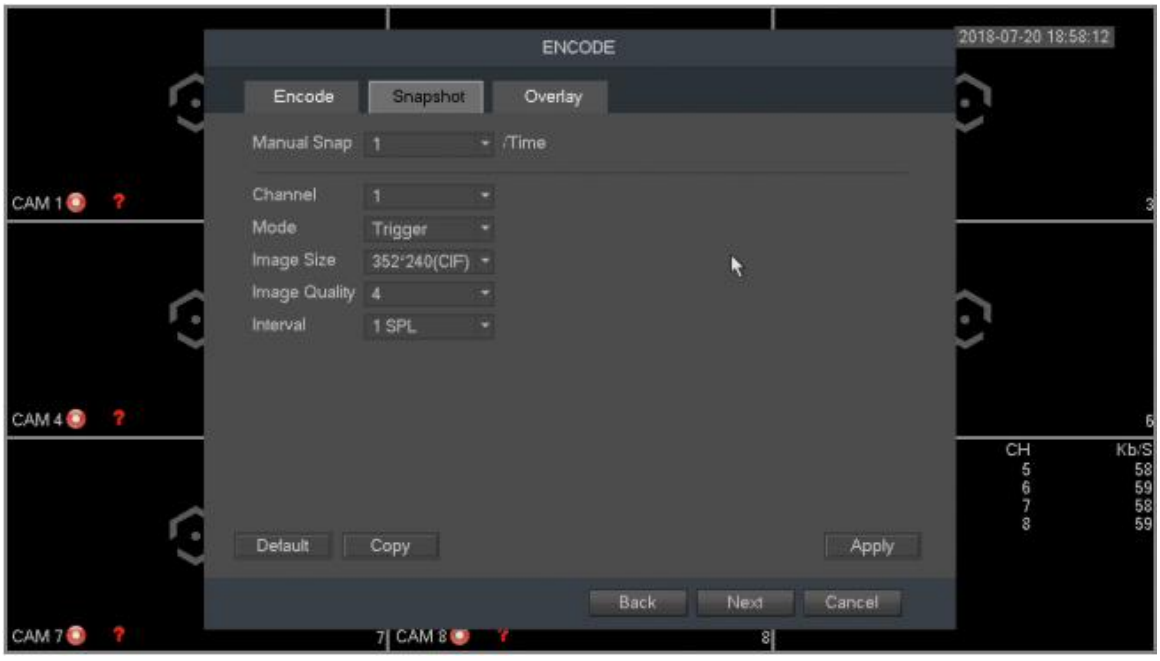
The next screen that appears is the P2P settings screen. This will be enabled by default. It is highly recommended to keep this enabled if you want to use you're the Amcrest View Pro mobile app or AmcrestView.com to view your cameras remotely. After enabling the P2P toggle switch, click the Next button to continue.

Encode

The next screen that appears is the ENCODE settings screen. This is where you can adjust the video quality settings for your DVR/cameras, including the compression and frame rate. When you have finished configuring your encode settings, click **Apply** and then the **Next** button to continue.

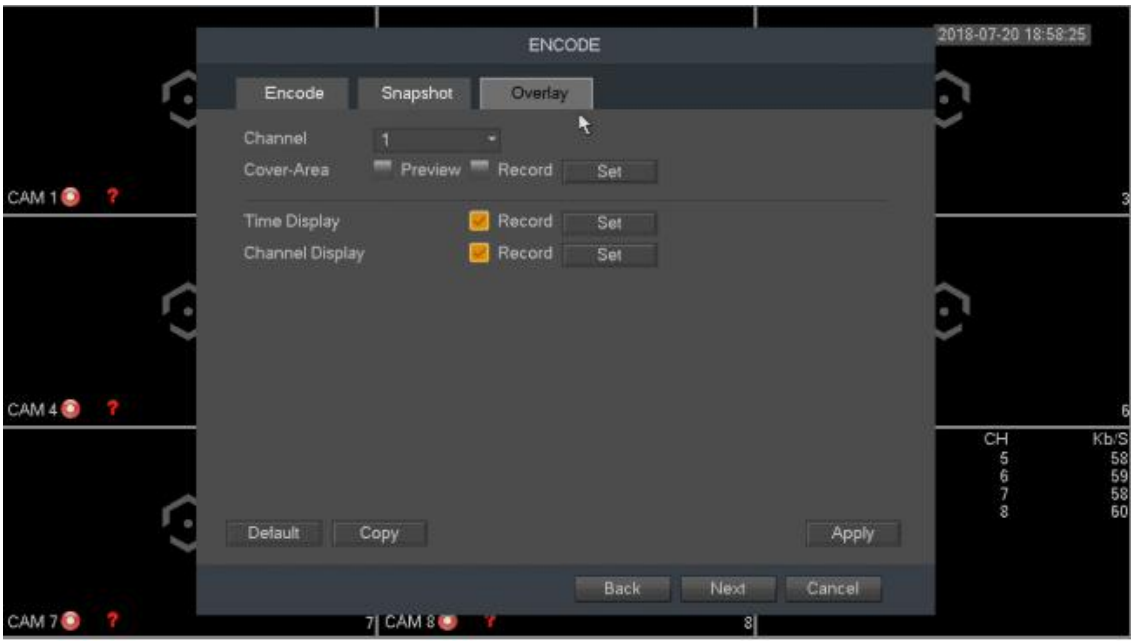
Snapshot

The next screen that will appear will be the Snapshot settings screen. This is where you can adjust the settings for your snapshots. This includes, the image size, quality, as well as interval in which the snapshot is retained. Once set, click **Apply** and then the **Next** button to continue.



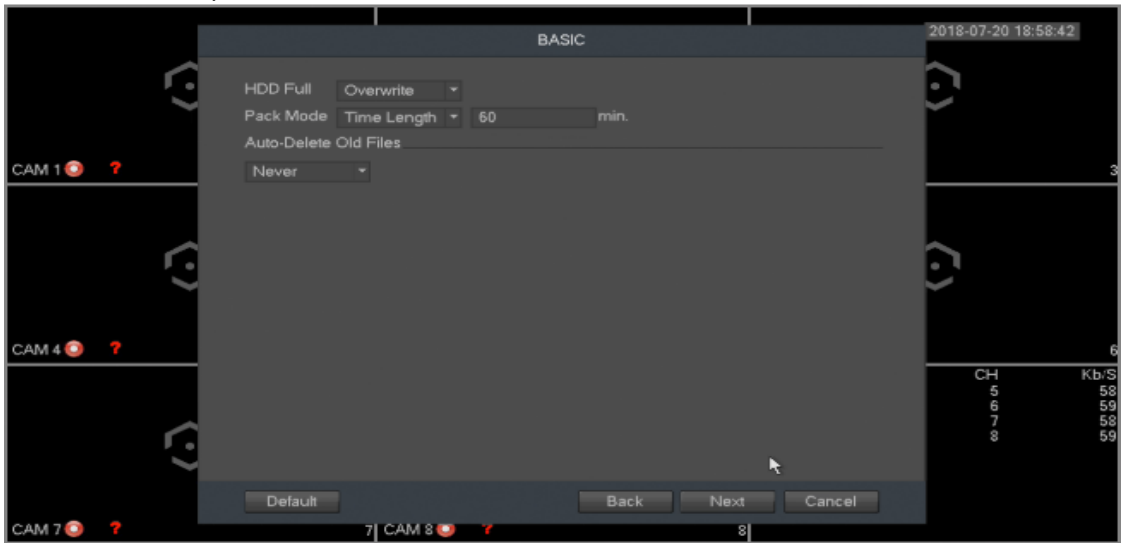
Overlay

The next screen that will appear will be the Overlay settings screen. This is where you can change overlay settings for each channel. This includes, channel numbers, time displays, and channel titles. Once set, click **Apply** and then the **Next** button to continue.



Basic

This option allows you to configure the settings for an installed hard drive. For example, you can set settings for when the hard drive is full, you can set the file length and time of a recorded video, or setup auto-delete to auto delete old files from the system.

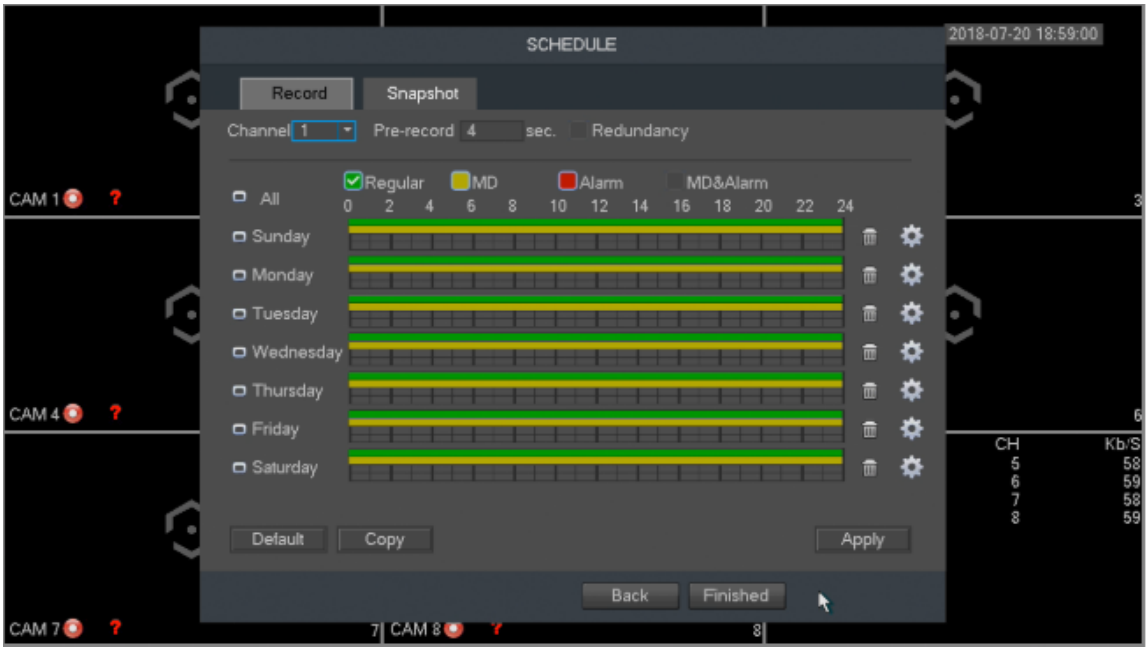


For more information on the settings listed in this menu, refer to the table below.

HDD Full	Configure the settings for the situation when all the read/write HDDs are full.
Pack Mode	Configure the time length and file length for each recorded video.
Auto-Delete Old Files	Configure whether to delete the old files and if yes, in the **Auto-Delete Old Files** list, select **Customized** to configure the time length for how long you want to keep the old files.

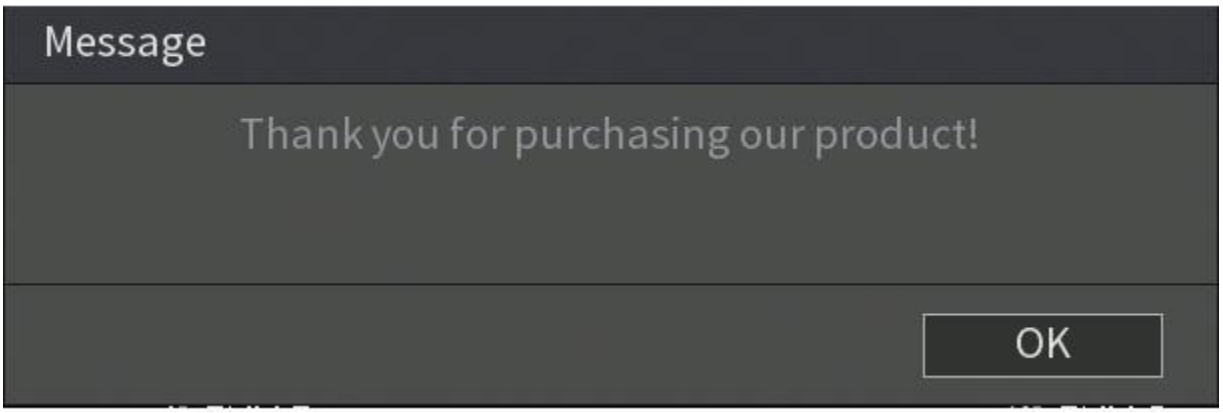
Schedule

The next screen you see is the Schedule screen. Your DVR is configured, by default, to record everything on all channels 24/7 (this will only actually happen provided you have a hard drive installed). You can also use this screen to set up motion detection and alarm schedules.



Once you are satisfied with the settings on this screen, click the **Apply** button.
Next, you will be able to configure your snapshot settings for your scheduled recordings. You can also use this screen to set up motion detection and alarm schedules for snapshot events. Once you have scheduled your events, click on the **Finished** button to continue.

Once the setup process is finished and you have clicked the “Finished” button, you should see the below dialog box:



Click **OK** to continue and the next screen you will reach will be the home video wall screen for your system.

Live View

When you log in, the system will be in live view mode. You can see the system date, time, channel name and window number. If you want to change the system date and time, you can refer to the general settings (Main Menu->Setting->System->General). If you want to modify the channel name, please refer to the display settings (Main Menu->Camera->CAM name).

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

Tips:

- Preview drag: If you want to change the position of channel 1 and channel 2 when you are viewing, you can click and hold the left mouse button on the channel 1 window and then drag it to the channel 2 window, then release the left mouse button. This will switch channel 1 with channel 2's position.
- Use the middle mouse button to control how the windows are split: You can use the middle mouse button to switch the window split amount.

Preview Control:

The preview control function has the following features.

Supports preview playback.
In the preview desktop, the system can playback the previous 5-60 minutes of recorded video of the current channel. Please go to the Main Menu->General to set real-time playback time.
Supports drag and play function. You can use your mouse to select any playback start time.
Supports playback, pause, and exit functions.
Right now, the system does not support slow playback or backwards playback functionality.
Supports digital zoom function.
Supports real-time backup function.
You can follow the contents listed below for operating instructions.

Preview Control Interface

Move your mouse near the center at the top of the video of the current channel. You will notice that the system pops up the preview control interface as shown below.

If your mouse stays in this area for more than 6 seconds without any action, the control bar will auto-hide.

1. Mute

   Click to mute. Click again to enable audio when in preview mode.
   Please note that this function only works when viewing one window/channel.

2. Digital zoom

This is used to zoom into a specified zone of the current channel.

Click the  button, and the button will then show as  .

There are two ways for you to zoom in.

- Click and drag the mouse to select a zone. You can see the interface shown below.
- Push the middle mouse button at the center of the zone you want to zoom into and move the mouse. You can see the interface as shown below.

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

3. Manual record function

This is used to back up the current channel's video to the USB device. The DVR cannot backup multiple channels of video at the same time.

Click the  button begin recording. Clicking it again causes the system to stop recording. You can find recorded files on the flash drive.

4. Real-time playback

This button is used to playback the previous 5-60 minutes recorded from the current channel.

Please go to the Main menu->Setting->->System->General screen to set real-time playback.

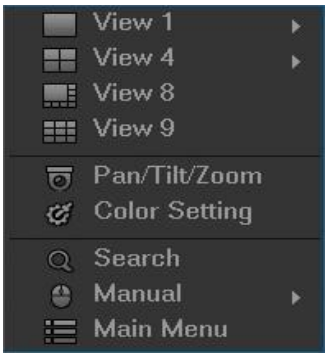
The system may pop up a dialog box if there are no recordings on the current channel.

5. Manual Snapshot

Click  to take 1-5 snapshots at a time. The snapshot file is saved on the USB device or HDD. You can go to the Search interface to view these snapshots.

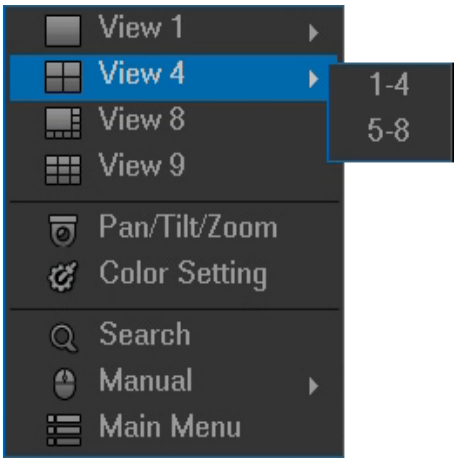
Right-Click Menu

By right-clicking the mouse on the screen, the following menu opens:



Video Viewing Options

The DVR supports many different video viewing options of the live streamed channels. The desired view can be selected from the dropdown list as shown below:



Pan/Tilt/Zoom (PTZ) Control

The PTZ control setup is shown below:

Note: The name of the command will be grayed out if the function is not supported.
Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light, wiper, rotation, etc.

The speed field controls PTZ movement speed. The value ranges from 1 to 8. 8 is the fastest and 1 is the slowest.

To adjust values for Zoom, Focus, and Iris, click the buttons on either side of the function to adjust them. The following chart will provide guidance on how to use the buttons to adjust the PTZ functionality.

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

The PTZ control panel also supports the rotation of the camera in 8 different directions. If the buttons on the front panel of the DVR are used, then only four of the directions will be accessible (up/down/left/right).

In the middle of the eight directional arrows, there is a button to activate the 3D Intelligent Positioning function. To use the 3D Intelligent Positioning function, your PTZ enabled device should support this function, and a compatible USB mouse should be plugged into the DVR.

By clicking the 

button and activating the 3D Intelligent Positioning, the system will go to single screen mode. Once activated, section size can be adjusted using the mouse. The zone selected supports 4x to 16x speeds and can use PTZ automatically to move the camera field. The smaller the designated zone, the higher the movement speed within the zone.

Additional functions within the PTZ control panel can be opened by clicking the 

button. See the chart below to see which additional functions are available.

Icon	Function	Icon	Function
	Preset		Flip
	Tour		Reset
	Pattern		Settings
	Scan		Aux on-off button
	Rotate		Go to menu

Note: The name of the command will be grayed out if the function is not supported. See below for detailed information on each PTZ function.

To configure the functions above, click the Settings button.

Preset
This function allows for the creation and editing of preset camera configurations.

To create and manage preset camera configurations, follow the steps below:

- Configure the camera positioning as needed.
- Click the Set button and then input the preset number.
- Click the Set button to save the current preset.
- Click Del Preset to delete the current preset.

Tour

The tour function allows for the use of multiple presets stringed together.

To create and manage tours, follow the steps below:

- Ensure you have more than 1 preset configured already.
- Input the tour value, and the preset value.
- Click the Add Preset button to add another preset.
- Continue adding presets as needed.
- Click Del Preset to remove a preset from the tour. Click Del Tour to delete the entire tour.

Pattern

The pattern function allows for a custom tour to be created on the fly using the PTZ controls.

To create a pattern, click Begin, then use the PTZ controls to move the camera around. Once finished, click End to end and save the pattern. During the use of pattern mode, zoom/focus/iris cannot be modified.

Border

The border function allows for constraining the area of movement for the cameras during any PTZ function.

To set up borders, move the camera using the PTZ controls to the left limit, then click Left to designate that position as the left limit. Then move the camera to the right limit, and then click Right to designate that position as the right limit.

Rotate

The rotate button enables camera rotation.

Flip

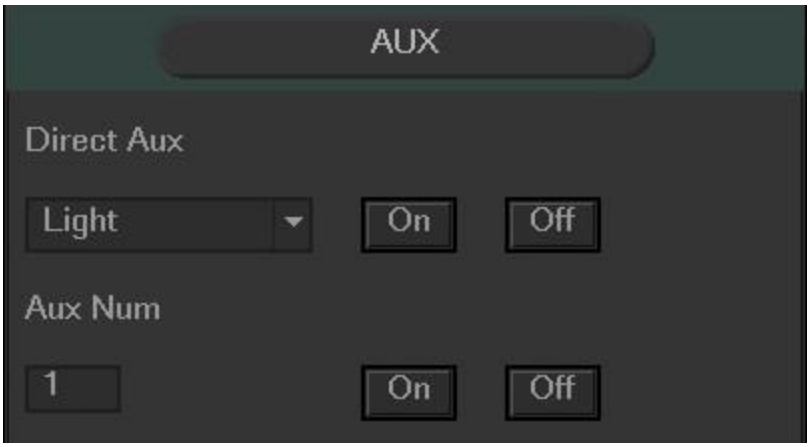
The flip button flips the present camera configuration on a vertical axis.

Reset

The reset button restores the camera to its original configuration settings.

Aux On/Off

The camera may have an auxiliary function, and this feature enables its use. The aux number corresponds to the device's slot on the PTZ decoder.



Color Settings

Using this screen, the color settings can be configured for the camera display.

The following chart shows which settings can be configured by Color Settings:

Item	Note
Period	There are two periods in one day. You can set different sharpness, brightness, and contrast setup for different periods.
Effective Time	Check the box here to enable this function and then set the period time.
Sharpness	The value here is used to adjust the sharpness of the video. The value ranges from 0 to 100. The larger the value is, the clearer the edges are and vice versa. Note: The higher the value, the higher likelihood of picture noise occurring. The default value is 50 and the recommended value ranges from 40 to 60.
Brightness	This is used to adjust monitor window brightness. The value ranges from 0 to 100. The default value is 50. The larger the number, the brighter the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
Contrast	This is used to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number, the higher the contrast is. You can use this function when the whole video brightness is OK but the contrast is not correct. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over expose the picture. The recommended value ranges from 40 to 60.
Saturation	This is used to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be clear if the value is too low. The recommended value ranges from 40 to 60.
Gain	The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the lower the noise, but brightness is also affected and may be too low in dark environments. This setting can enhance the video brightness if the value is high, and it may cause the picture noise level to rise to high levels.
Color Mode	It includes several modes such as standard, color, bright, and gentle. Select a color mode, the sharpness, brightness, contrast, etc. and it will automatically switch to the corresponding setup.

Navigation Bar

To enable Navigation Bar functionality, go to Main Menu -> Settings -> System -> General and check the “Enable Navigation Bar” box.

The Navigation Bar looks like the picture below:

Main Menu

Click the  button to go to the main menu interface.

Video Viewing Options

These buttons allow the user to select a viewing mode for live viewing.

Favorites

Click the  button and the system displays the favorites drop down menu. Once the desired layout of cameras is achieved, click this button and select “Add to Favorites”. A window will appear for you to name the favorite. To remove a favorite, select “Trim Collection”.

Color Settings

Click the  button and the system goes to the color interface.

Search

Click the  button and the system goes to the search interface.

Alarm Status

Click the  button and the system goes to the alarm status interface. It is used to view device status and channel status.

USB Manager

Click the  button and the system goes to the USB Manager interface. It is used to view USB information, backup, and update.

HDD Manager

Click the  button and the system goes to the HDD manager interface. It is used to view and manage HDD information.

Network

Click the  button and the system goes to the network interface. It is used to set the network IP address, default gateway etc.

PTZ

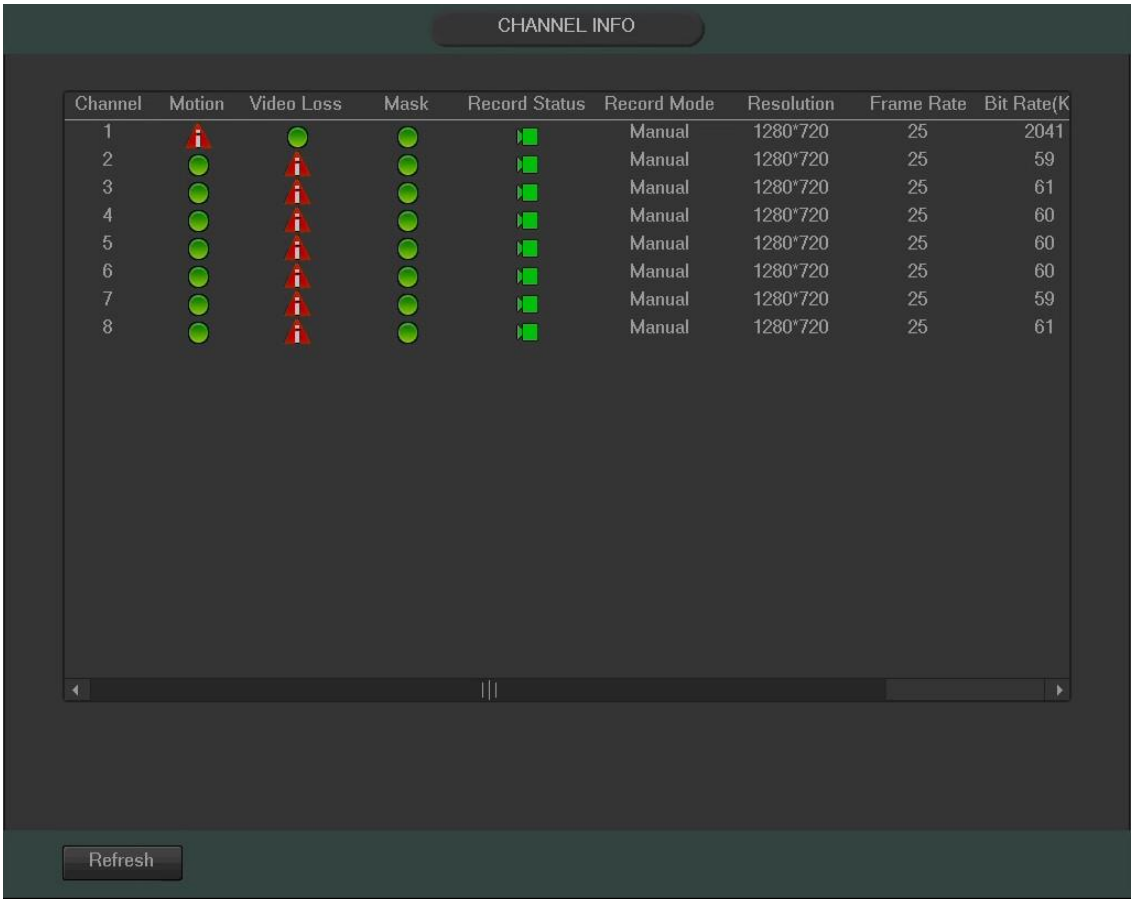
Click the  button and the system goes to the PTZ control interface

Tour

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

Channel Info

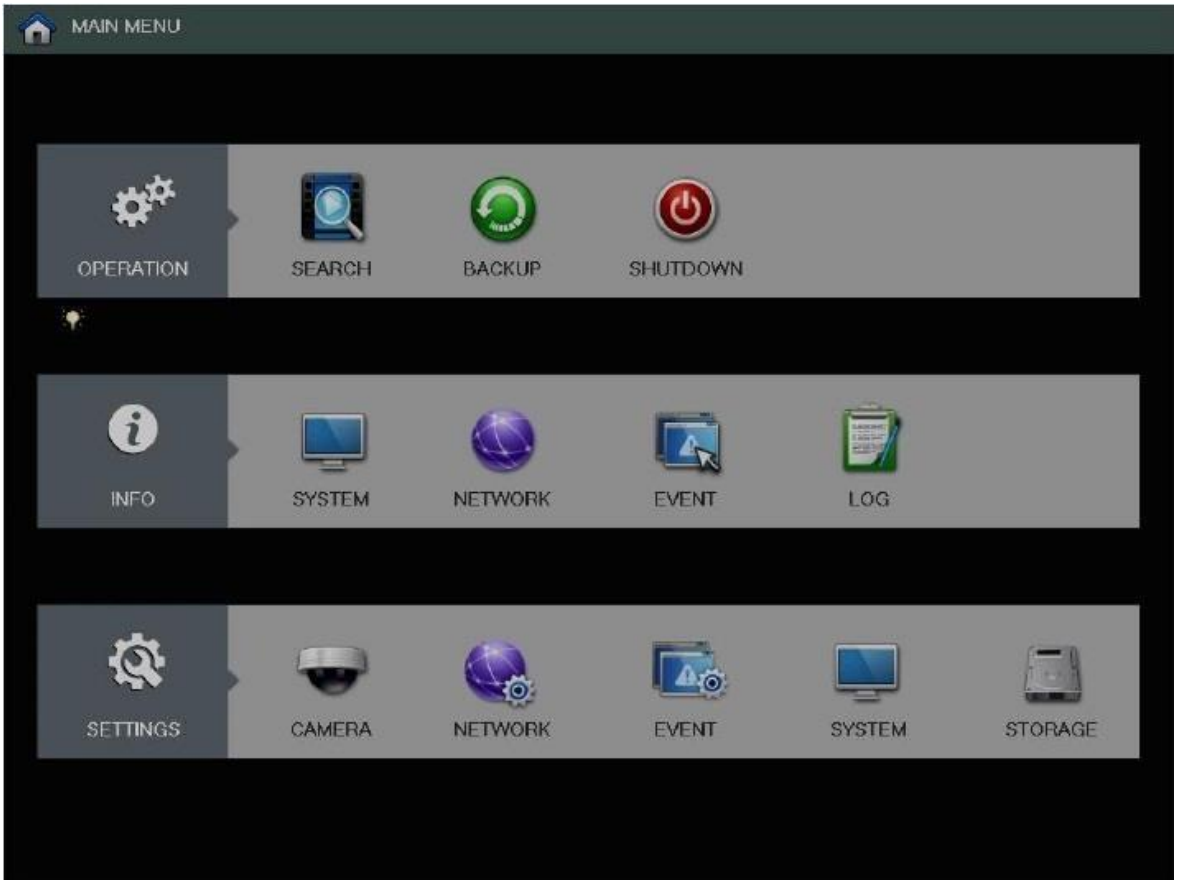
Click the  button and the system goes to the channel information interface. It is used to view information about the corresponding channel. See the image below to view the Channel Information screen:



Device Auto Popup

When you insert the USB device, the system will auto detect it and pop up the following dialogue box. It allows you to conveniently backup files, logs, configurations or update the system. See the image below for the USB Device Popup screen

Main Menu



The Main Menu Interface is shown below:

Below are short descriptions for each of the menu items on the main menu:

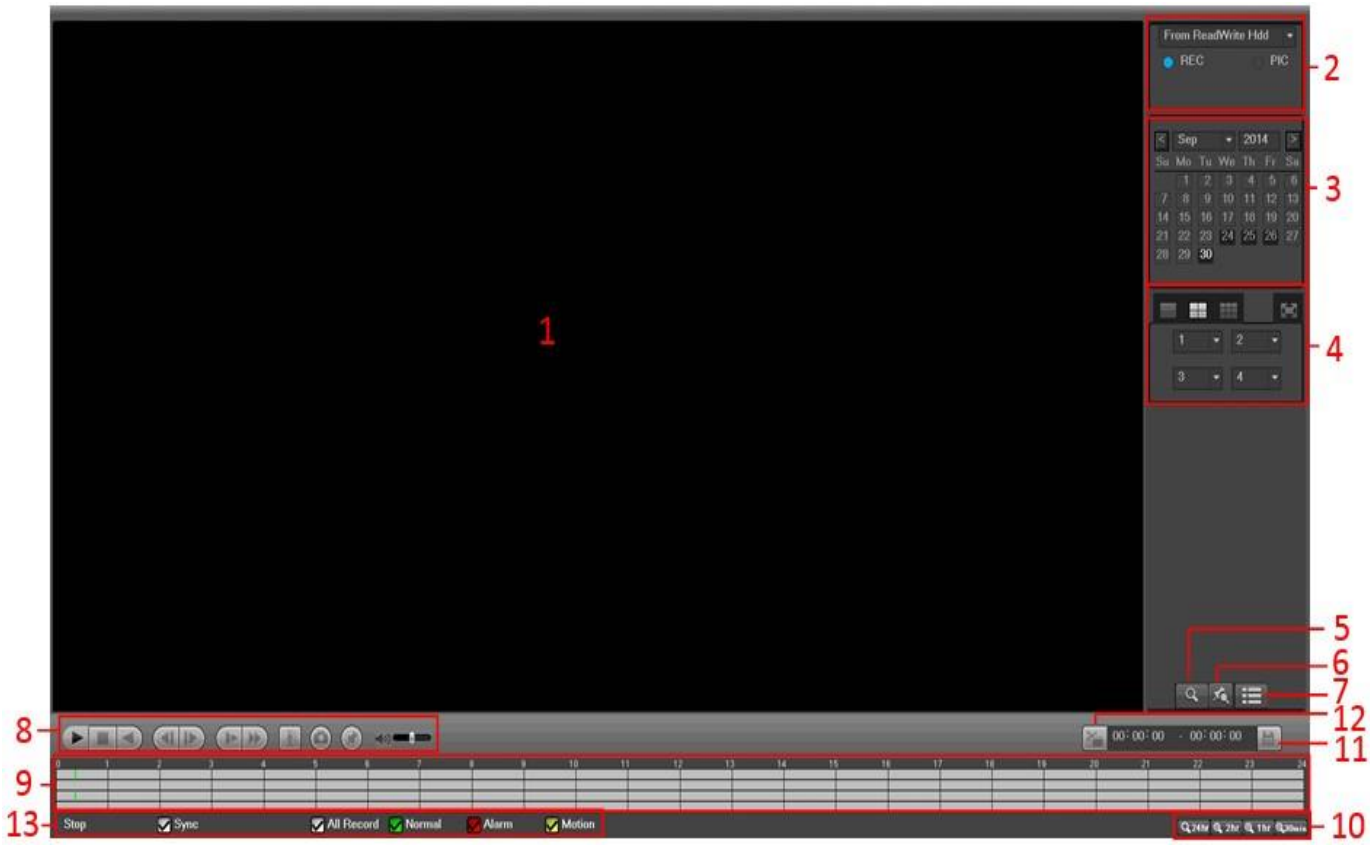
Operation -> Search: Search and playback recorded video.
Operation - > Backup: Backup recorded files onto a CD or USB drive.
Operation - > Shutdown: Logout, shutdown, or restart the system.

Info -> System: View information about the recordings, hard drive statistics, or version information. Info - > Network: View information about the network or test the network status Info -> Event: Display information about events that triggered recording. Info -> Log: Display system logs of critical events.

Settings -> Camera: Review or edit settings for each camera.
Settings -> Network: Review or edit network settings for the DVR.
Settings -> Event: Review or edit settings that trigger recording events.
Settings -> System: Review or edit system parameters or configuration. Settings -> Storage: Review or edit storage parameters and settings.

Main Menu: Operation

Search
To access this screen, click the Search button in the Operation row of the Main Menu. The Search screen interface is shown below:



Please refer to the following table for more information:

SN	Name	Function
1	Display window	Here is where the searched picture or file will be displayed. Supports 1/4/8-window playback.
2	Search type	Here you can select to search the picture or the recorded file. You can select to play from the read-write HDD, from a peripheral device, or from a redundancy HDD. Before you select to play from the peripheral device, please connect the corresponding peripheral device. You can view all recorded files in the root directory of the peripheral device. Click the Browse button; you can select the file you want to play. **Important:** **Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures on the redundancy HDD.**
3	Calendar	The blue highlighted date means there is picture or file. Otherwise, there is no picture or file. In any playback mode, click the date you want to see, and you can see the corresponding recorded file tracers in the time bar.
4	Playback mode and channel selection pane.	Playback mode：1/4/9 In 1-window playback mode: you can select 1-16 channels. In 4-window playback mode: you can select 4 channels according to your requirement. In 9-window playback mode: you can switch between 1-8 and 9-16 channels. The time bar will change once you modify the playback mode or the channel option.
5	Card number search	The card number search interface is shown as below. Here you can view card number/field setup bar. You can implement an advanced search. 
6	Mark file list button	Click this button to go to mark file list interface. You can view all marked information in the current channel by time. Please refer to chapter 4.8.1.3 for detailed information on how to mark video for playback.

7	Advanced Search	Click this button and you can view the picture/recorded file list of the current day. The file list is used to display the first channel of the recorded file. The system can display a maximum of 128 files at one time. Use the ◀|and |▶ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback. You can input the period in the following interface to begin a precise search. File type：R—regular record； A—external alarm record； M—Motion detect record.  Lock file: Click the file you want to lock and click the button to  lock. The file you locked will not be overwritten. Search Locked Files: Click the button  to view the locked file. Please note: Any file that is currently writing or overwriting cannot be locked until it is no longer being accessed.	
8	Playback control pane	►/ II	Play/Pause There are three ways for you to begin playback. The play button Double click the valid period of the time bar. Double click the item in the file list. In slow play mode, click it to switch between play/pause.
		■	Stop
		◀	Backward Play In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ►/ II to restore normal play.
		|◀/ ▶|	In the playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. In normal play mode, when you pause the video, you can click ◀| and |▶ to begin frame by frame playback.

			In frame by frame playback mode, click ►/ II to restore normal playback.
		►	Slow play In playback mode, click it to use various slow play modes such as slow play 1, slow play 2, and etc.
		⏩	Fast forward In playback mode, click to play various fast play modes such as fast play 1, fast play 2, etc.
			Smart search

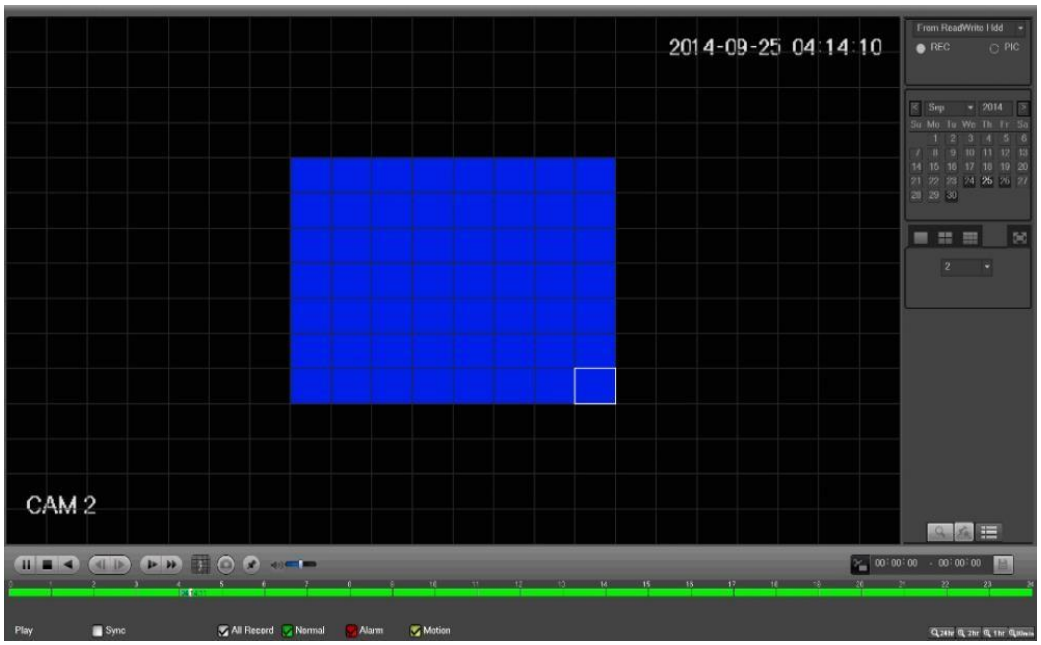
			The volume of the playback
			Click the snapshot button in the full-screen mode. The system will take a snapshot. The System supports a custom snapshot save path. Please connect a peripheral device first, click snap button on the full-screen mode, you can select or create path. Click the Start button, the snapshot picture will be saved to the specified path.
			Mark button. Allows for the marking of a file for later ease of access. You can refer to chapter 4.8.1.3 for detailed information.
9	Time bar	This is used to display the record type and its period in the current search criteria. In 4-window playback mode, there are four corresponding time bars. In other playback modes, there is only one-time bar. Use the mouse to click one point of the color zone in the time bar and the system will begin playback. The time bar begins with 00:00 when you are setting the configuration. The time bar zooms in on the period of the current playback time when you are playing the file. The green color stands for regular record files. The red color stands for external alarm record files. The yellow stands for motion detect record files.	
10	Time bar zooming	The option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the recording. The time bar begins at 0 o'clock when you are setting the configuration. The time bar zooms in on the period of the current playback time when you are playing the file.	
11	Backup	Select the file(s) you want to backup from the file list. You can mark from the list then click the backup button. Now you can see the backup menu. System supports a customized path setup. After selecting or creating new folder, click the Start button to begin the backup operation. The recorded file(s) will be saved in the specified folder. Check the file again and you can cancel current selection. System supports maximum of 32 files from one channel displayed. After you click on the recorded file, click the Backup button and you can save it. For one device, if there is a backup in process, you cannot start a new backup operation.	
12	Clip	This is used to edit the file and specify which parts of a file to save. Please play the file you want to edit and then click this button when you want to edit. You can see the corresponding slide bars in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time. After the clip end time is set, you can click the Clip button again to edit the second period. You can see the slide bar restore its previous position.	
		Click the Backup button after clip to save current content in a new file. You can clip one channel or multiple-channels. The multiple-channel clip operation is like the one-channel operation. Please note: **System supports maximum of 1024 file backups at the same time.** **You cannot operate the clip operation if there are any files that have been checked in the file list.**	

13	Record type	In any play mode, the time bar will change once you modify the search type.
Other Functions		
14	Smart search	When system is playing, you can select a zone in the window to begin smart search. Click the motion detect button to begin play. Once the motion detect file play has started, clicking the button again will terminate current motion detect file play. There is no motion detection zone by default. If you select to play another file in the file list, the system switches to motion detection playback for the other file. During the motion detect play process, you cannot implement operations such as change time bar or frame by frame playback.
15	Other channel synchronization switch to play when playback	When playing the file, click the number button. The system will switch to the same time period of the corresponding channel to play.
16	Digital zoom	When the system is in full-screen playback mode, left click the mouse on the screen. Drag your mouse to select a section and then left click the mouse to activate digital zoom. You can right click the mouse to exit.
17	Manually switch channel when playback	During the file playback process, you can switch to another channel via the dropdown list or scrolling the mouse. This function is null if there is no recorded file or system is in the smart search mode.

Smart Search

The Smart Search feature enables searching for motion within the recorded file for a specific channel. This feature is useful, as it allows users to search a channel's recorded files for motion without having to change the recording type to a motion detection recording.

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



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

Important:

- **The system does not support motion detection zone setup while in full-screen mode.**
- **During the multiple-channel playback, the system stops playback for the rest of the channels if one-channel smart search is used.**

Precise Playback by Time

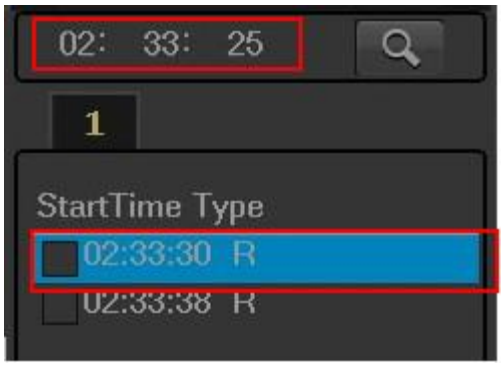
This feature allows for searching through recordings by time stamp.

Select recordings from one day, click advanced search, and go to the file list interface. The user can input the time at the top right corner to search recordings by time. See image on the left side of the images below.

For example, inputting the time 11:00.00 and then clicking the Search button 

allows for viewing all of the recorded files after 11:00.00 (The recordings include current times). Double click a file name to playback. **Note**

- After searching files, system implements accurate playback for the first time Play is clicked.
- System does not support precise playback for screenshots.
- System supports synchronized playback and non-synchronized playback. The synchronized playback supports all channels and non-synchronized playback only supports precise playback of the currently selected channel.

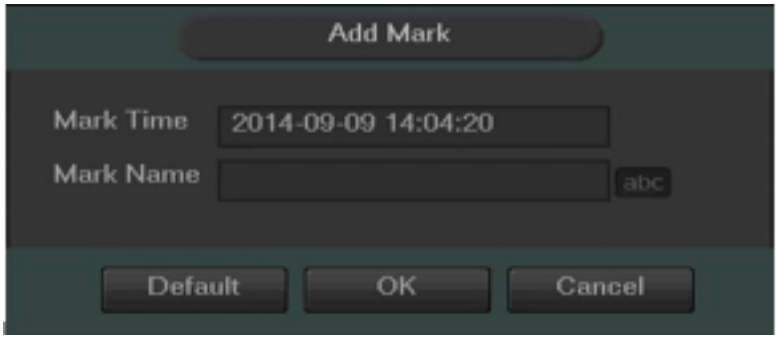


Marked Playback

When playing back a recorded file, you can mark the record when there is important information. After playback, you can use time or the mark button to search a corresponding record and then play it. This feature allows for easy playback of key events within a recording.

- **Add Mark**

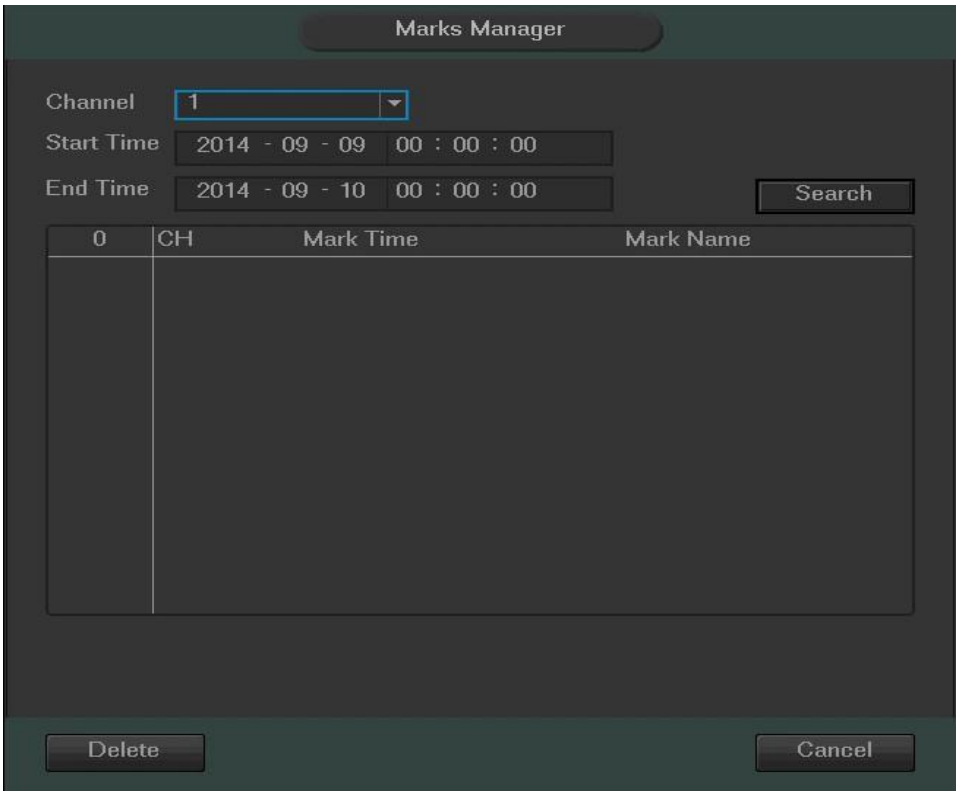
When a file is being played and the Mark button () is clicked the following interface will appear:



To continue marking the played file, enter a name for the marked location and click **OK**. Also, ensure the mark time is correct before proceeding.

- **Playback Mark**

While in 1-window playback mode, click mark file list button  to go to the marked file list interface. Double click one-mark file and you can begin playback from the marked time.



- **Marks Manager**

  Click the mark manager button  on the Search interface; you will go to the Marks Manager interface. The system can manage all the recorded mark information of the current channel by default. You can view all marked information in the current channel by time.

- **Modify**

  Double click one marked information item. The system pops up a dialogue box that allows for editing of the marked information. The marked information's name can be changed from this dialog box.

- **Delete**

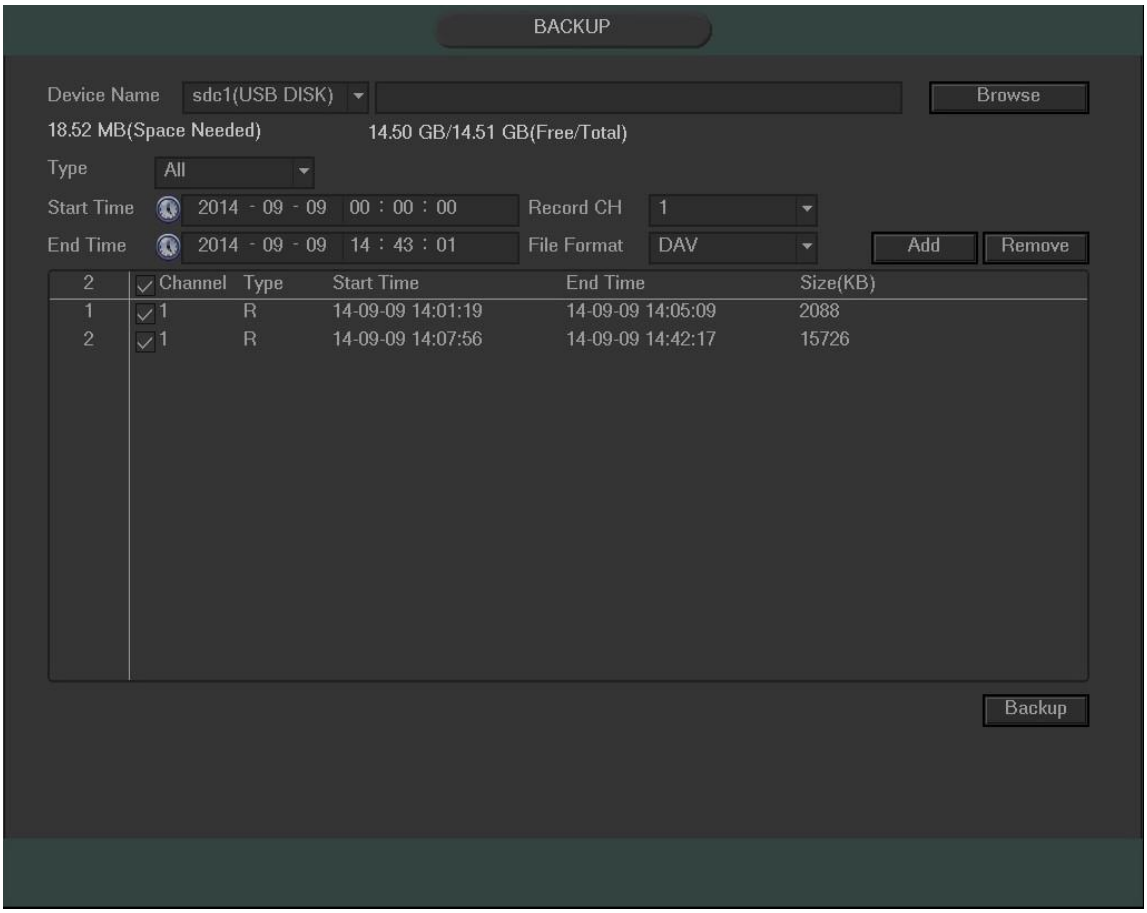
  By selecting the marked item and clicking the delete button, the marked item can be removed.

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

Backup

The DVR supports backup of recorded files to, USB devices, eSATA devices, and through network download. In this section, USB and eSATA backup will be discussed.

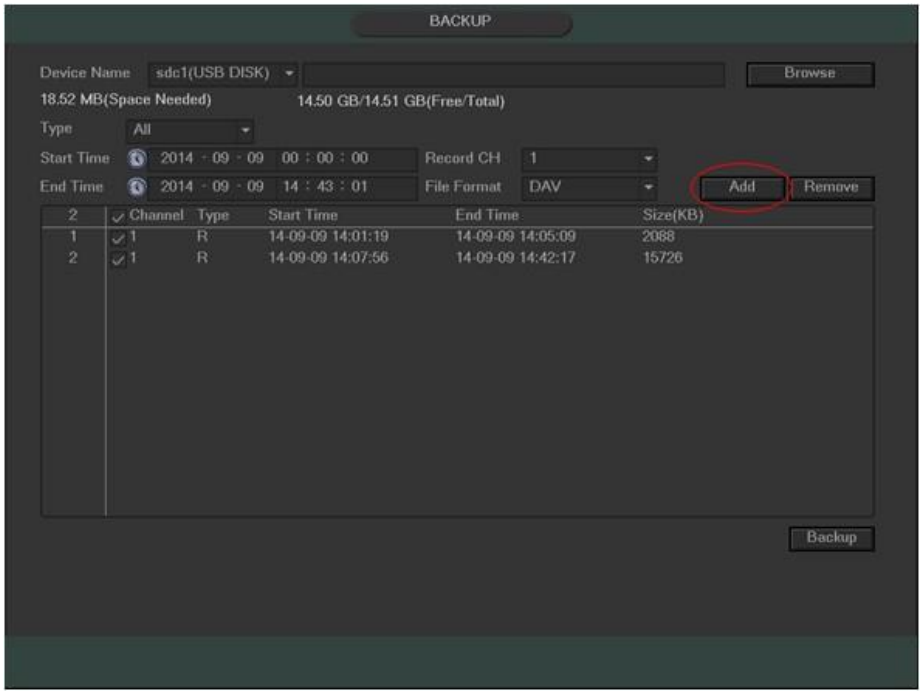
Clicking the backup button from the Main Menu opens the Backup screen. On this screen, all available backup devices are shown with their name, total space, and free space.



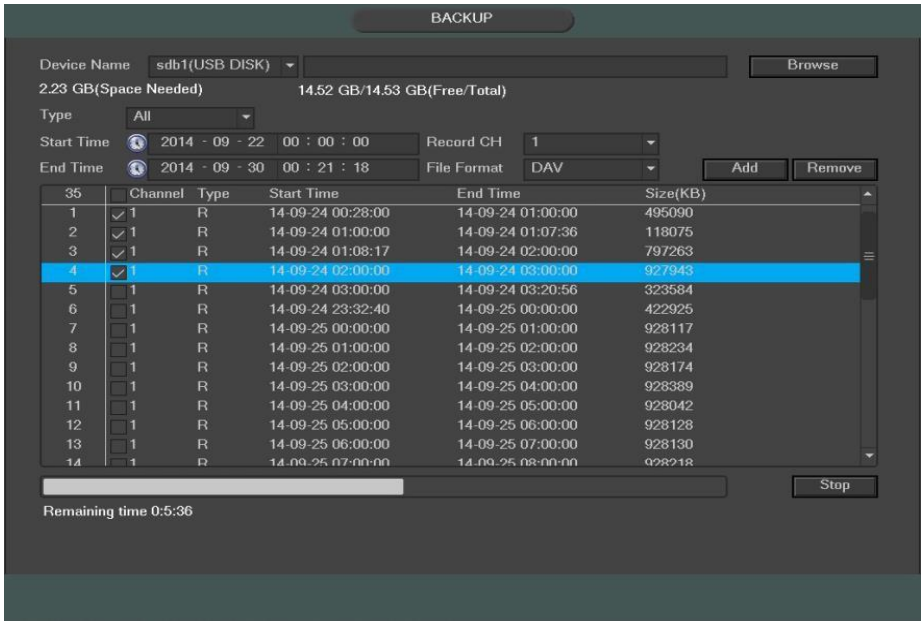
To backup recorded files, select the backup device, the channel, file start time, the end time, then click the add button so the system can begin a search for the selected files. Once the files are found, they are listed and can be selected for backup.

The system automatically calculates the capacity needed and the capacity remaining on each backup device.

Select the desired backup file format by clicking the dropdown box next to the file format field, and then select the files for backup by clicking the checkboxes next to each line item. Once the items have been selected, click the Add button to add them to the backup queue.



To start the backup, click the backup button on the bottom right of the screen. Once the backup button is clicked, the backup will begin, and the backup button turns into a stop button that allows for the cancellation of the backup. The remaining time and progress bar will show on the bottom of the screen.



When the system completes the backup, a dialogue box appears informing the user about a successful backup.

Note:

- There are two file format options: DAV/ASF
- The file name format is usually: Channel number+Record type+Time.
- In the file name, the YDM format is Y+M+D+H+M+S. File extension name is .dav or .asf

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

Tip:

- During the backup process, the user can click ESC to exit the current interface to use the DVR for other functions. The system will not terminate the backup process.

Shutdown

From the Main Menu, clicking the Shutdown button will result in the appearance of a box with three options:

The Shutdown option turns off the DVR.
The Logout option logs off the current user and shows the login screen, so another user may login. The Reboot option reboots the DVR.

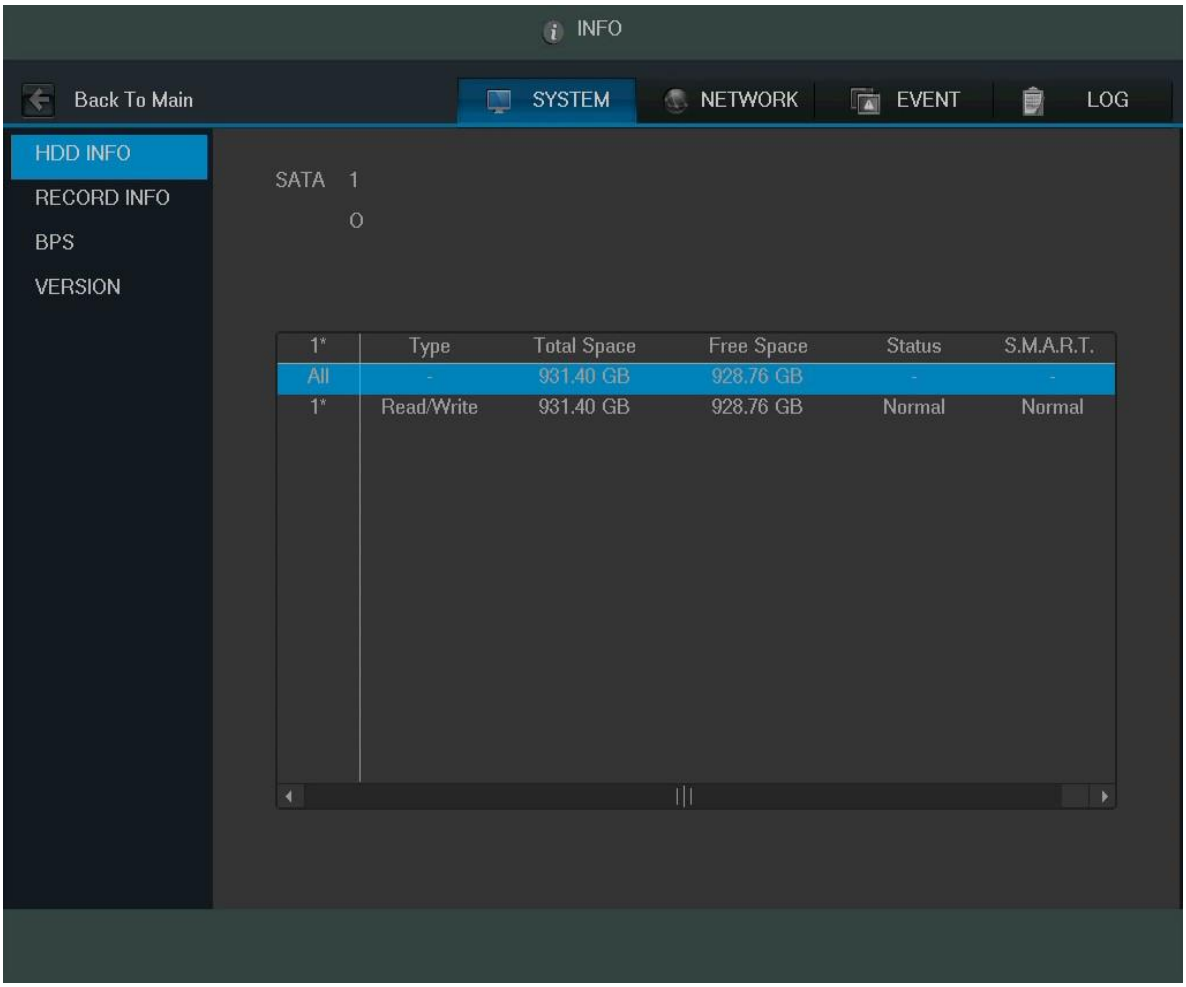
Note: If the proper authorized user is not logged in, they will be prompted to enter the administrator password to shut down the DVR.

Main Menu: Information

System Information

From this screen, system information can be viewed. There are a total of 4 screens that each display different aspects of the system.

HDD Information

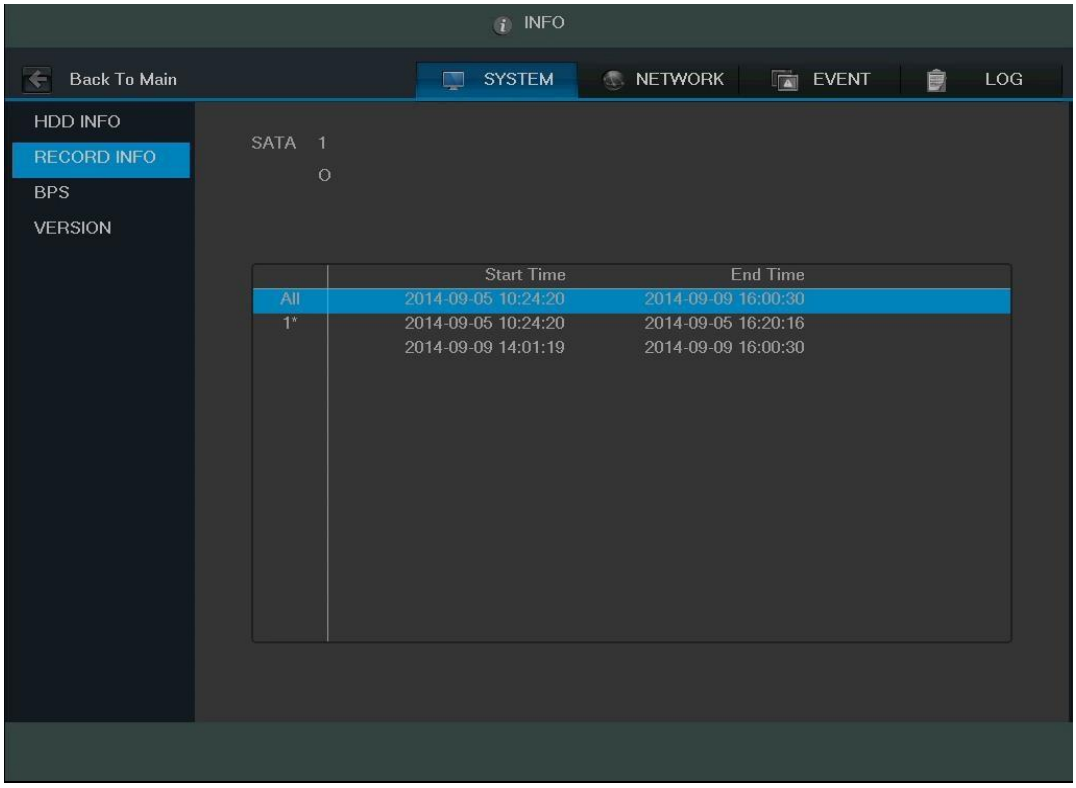


- SATA: This shows how many hard drives the system can support. ○ 1 here means the system supports a maximum of 1 HDD.
-
- The symbol on the next row shows the status of the connected hard drive.
  - 0 means that the current HDD is functioning normally.
  - X means there is an error with the hard drive connection, or that there is no connected hard drive.
  - ? means that the hard drive is damaged and should be replaced.
- Type: This field shows the read/write properties of the connected hard drive.
- Total space: This field shows the total capacity of the connected hard drive.
- Free space: This field shows the remaining free space on the connected hard drive.
- Status: This field shows whether the connected hard drive is working properly or not.
- SMART: This field displays SMART status for the connected hard drive.
- To access SMART information for the connected hard drive, double click the hard drive line item.

The image below shows the SMART information for the hard drive selected.

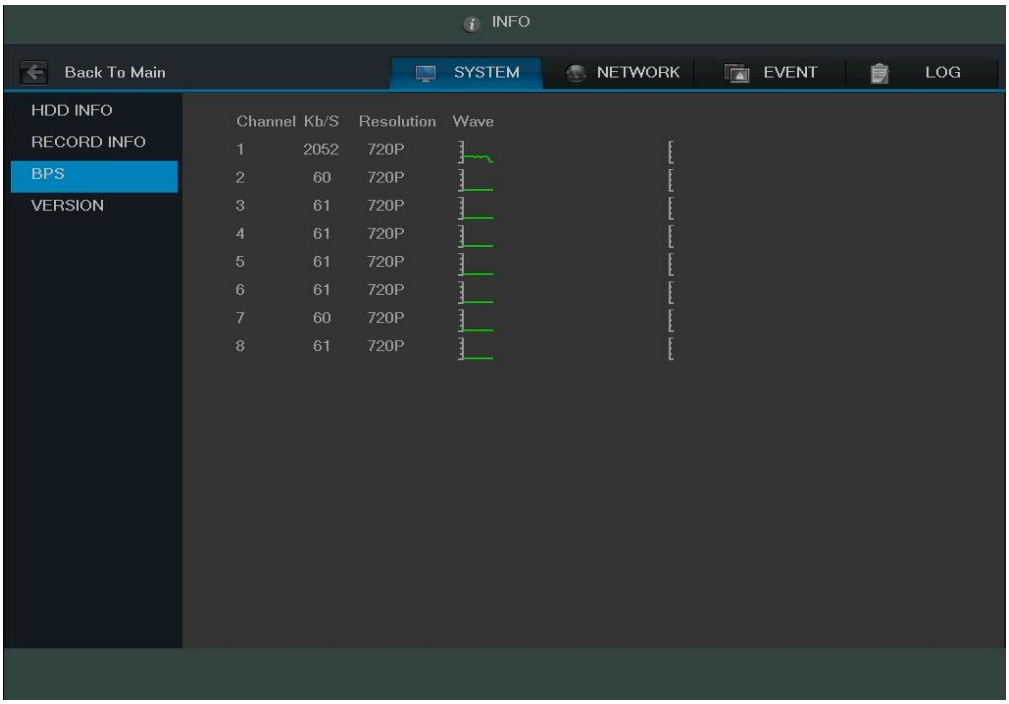
Record Info

This screen is used to view information on recorded video, specifically recording start time and end time for all media based on each hard drive.



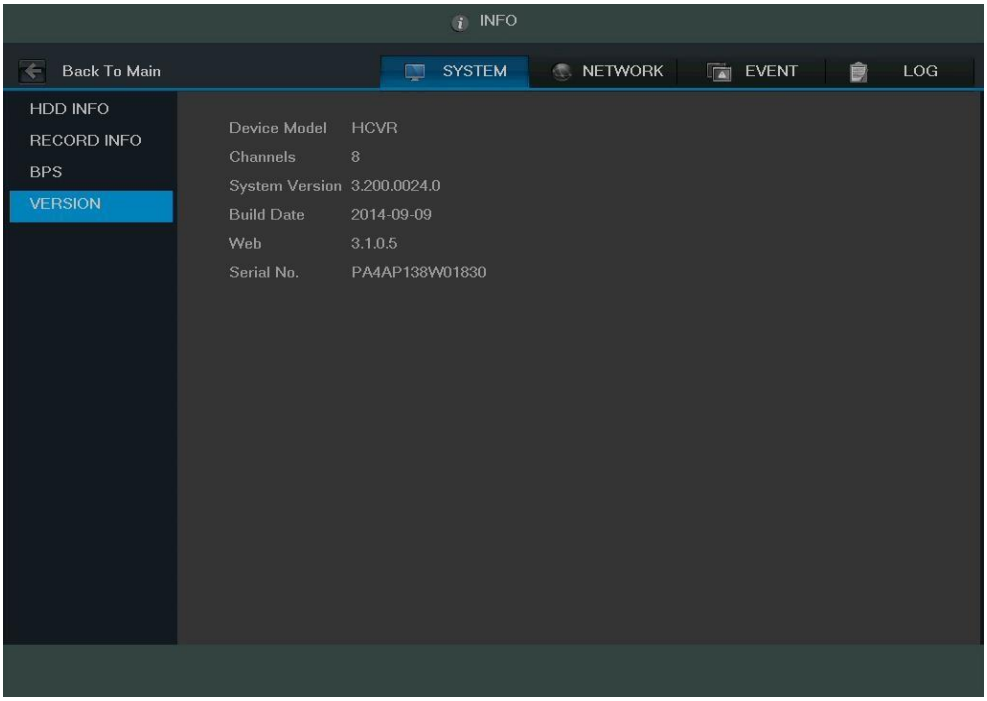
BPS

On this screen, current video data stream information can be viewed, as well as resolution used for each camera. All data is measured in Kilobytes per Second (KB/s).



Version

This screen shows version information for the DVR. Here information such as device model, channels, system version, build date, web interface version, and serial number can be found.

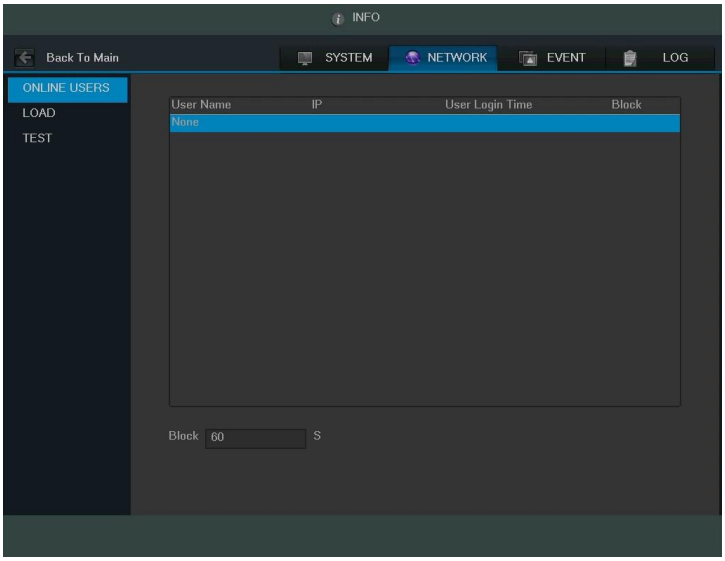


Network

This screen is used to display network information. It consists of 3 screens, Online Users, Load, and Test.

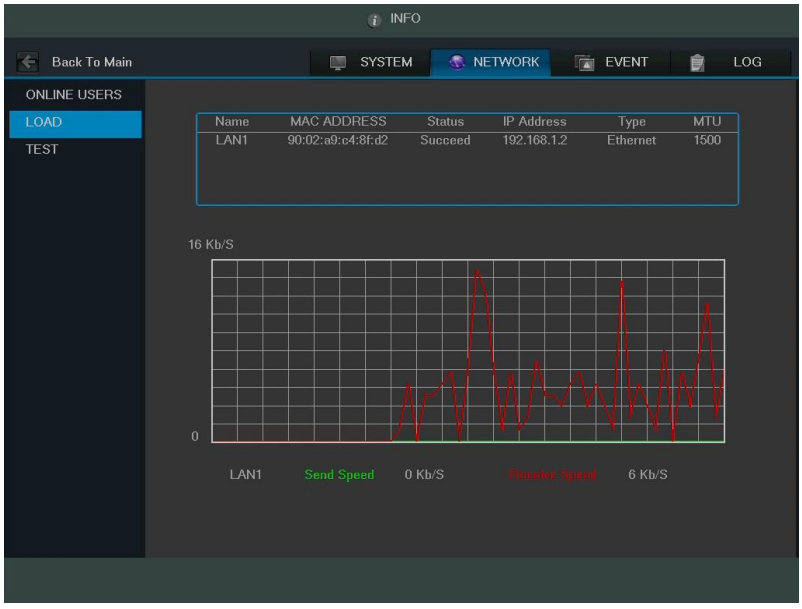
Online Users

This screen is used to monitor and manage users who are online. With the proper system access level, users can be disconnected or blocked. The system refreshes this list automatically every five seconds.



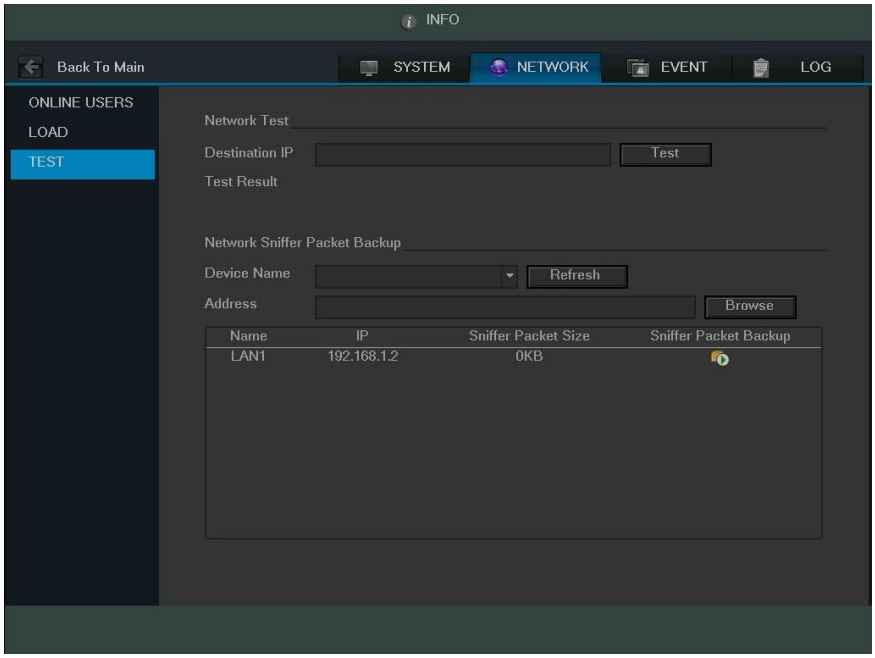
Load

This screen shows the amount of bandwidth consumed on the network by the DVR. The connection status is shown as offline if the DVR is disconnected from the internet. The bottom panel is a graph that shows the fluctuation in the send and receive speed.



Test

This screen is used to test the network connection for the DVR. It can send data to a specific IP to see if it can transmit data to it.



Below is an explanation of each of the fields:

- Destination IP: Input a valid IPV4 address or domain name to test connection with.
- Test: This button is clicked to test the connection with the destination IP address. The test results can display average delay and packet loss rate, and network status can be viewed.
- OK means that the connection works, bad means the connection is spotty, and no connection means that no connection was made.
- Network Sniffer Backup: To use the network sniffer feature, insert a USB2.0 network sniffer device and click the Refresh button. You can view the device on the following column. You can use the dropdown list to select the peripheral device. Click the Browse button to select the path.

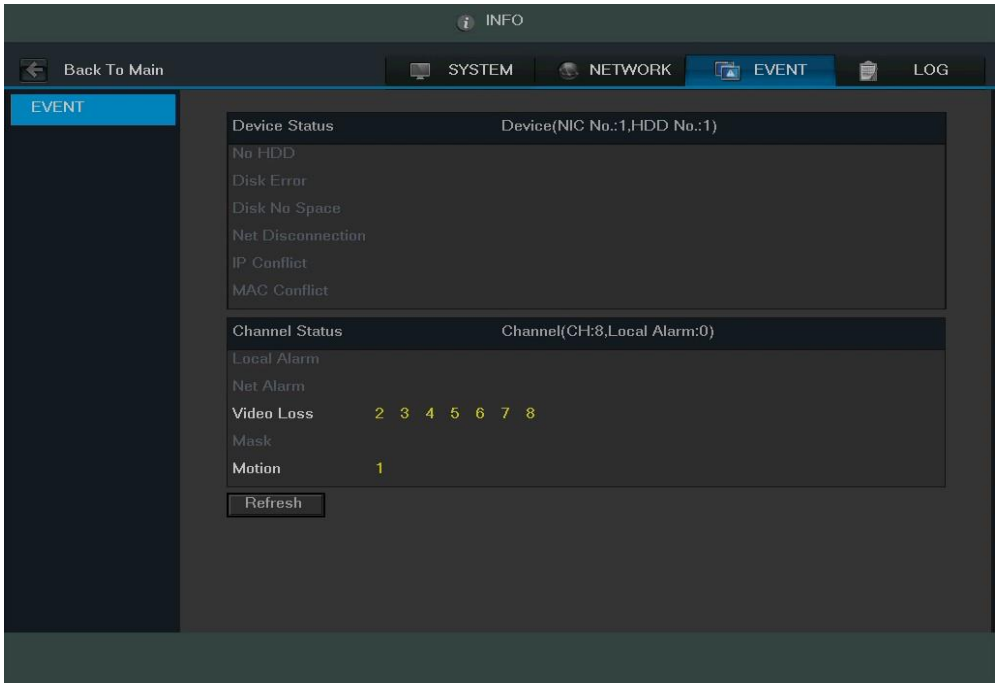
You can view all connected network adapter names (including Ethernet, PPPoE, and WIFI). You can click the  button on the right panel to begin the Sniffer. Click the grey stop button to stop. Please note the system cannot sniff several network adapters at the same time.

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

Tip: During the network sniffer process, the user can click ESC to exit the current interface to use the DVR for other functions. The system will not terminate the backup process.

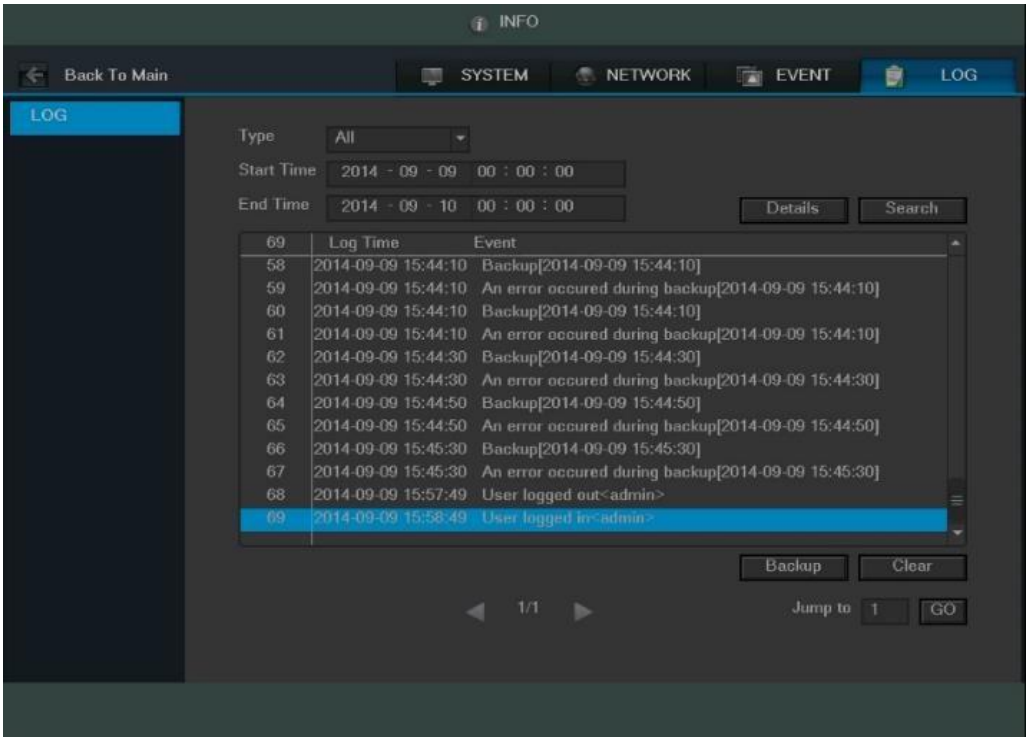
Event

This screen is used to display device and channel status.



Log

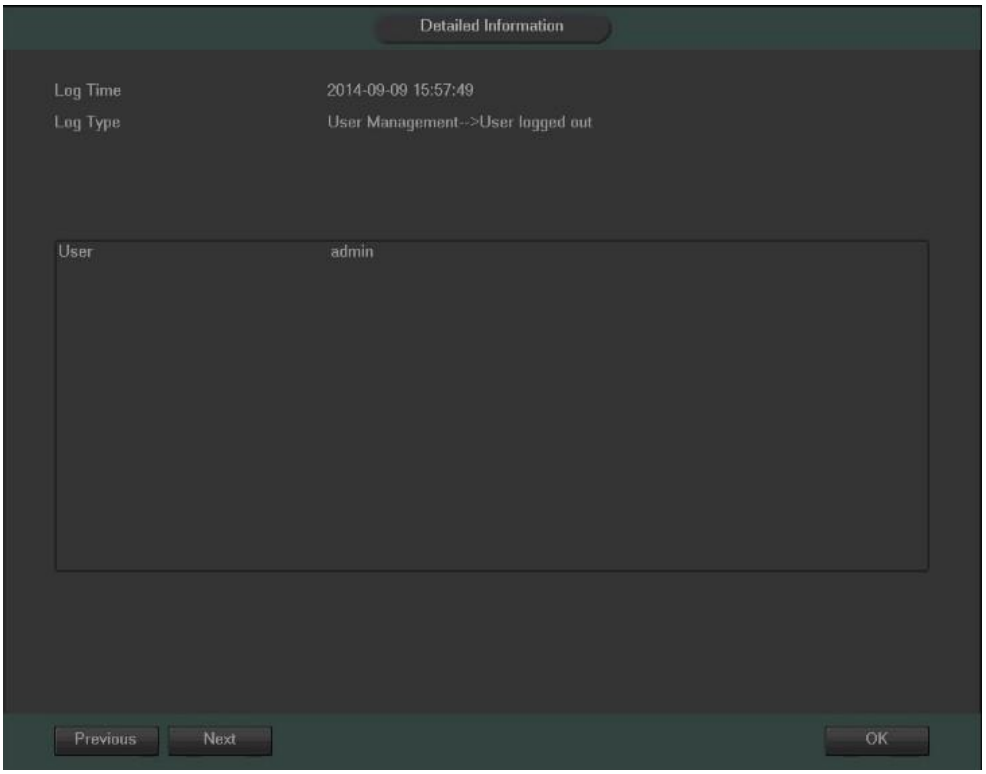
On this screen, you can view the system log file.



The system lists the following information:

System Operation
Configuration Operation
Data Management
Alarm Events
Record Operation
Account Manager
Log Clear
File Operation
Reboot Type

Note:
The system can only show a maximum of 100 logs on one page.
The system can save a maximum of 1024 log files.
Using the fields at the top of the page, the user can search for log items, and view details for each one. Start Time and End Time allow the user to narrow the range in which a log item resides, and the Type dropdown box allows for filtering on what type of event the user is looking for. Once the parameters are set, click Search to show log items that match the criteria. Clicking on a line item then clicking the Details button (or double clicking the line item) shows the detail screen:



The backup button allows a user to backup log files. Once the backup button is clicked, the system will prompt the user to select a folder to save the log data to.

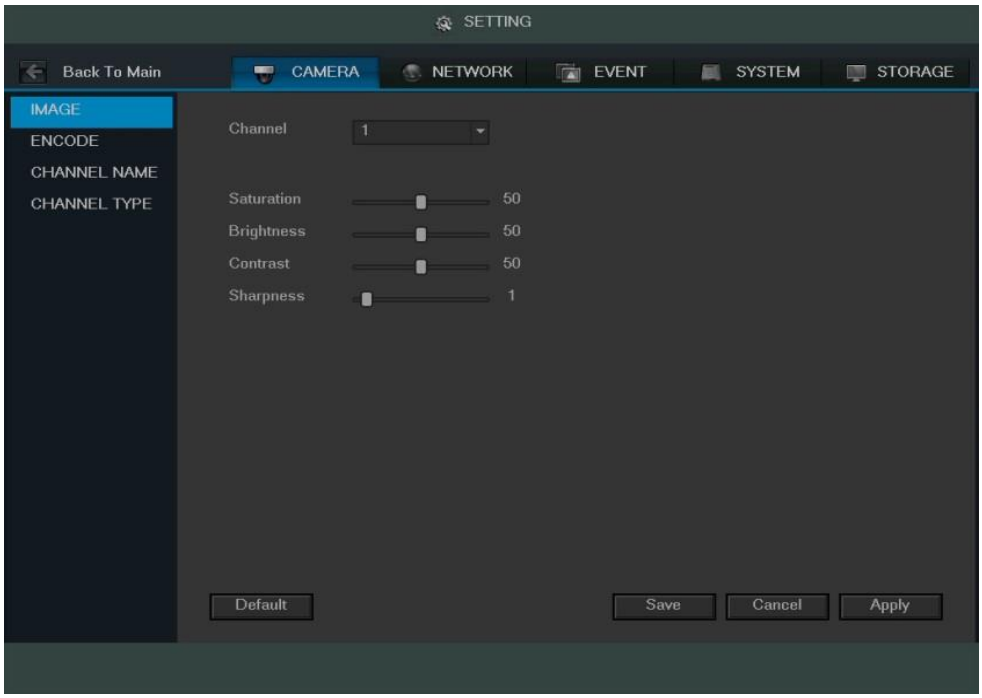
Main Menu: Settings

This set of menu items allows the user to change settings for a variety of functions.

Image

Image Settings

This screen allows the user to adjust the image settings for each channel. See below for a screenshot of the image settings screen:



Below is an explanation for each of the fields on the Image Settings screen:

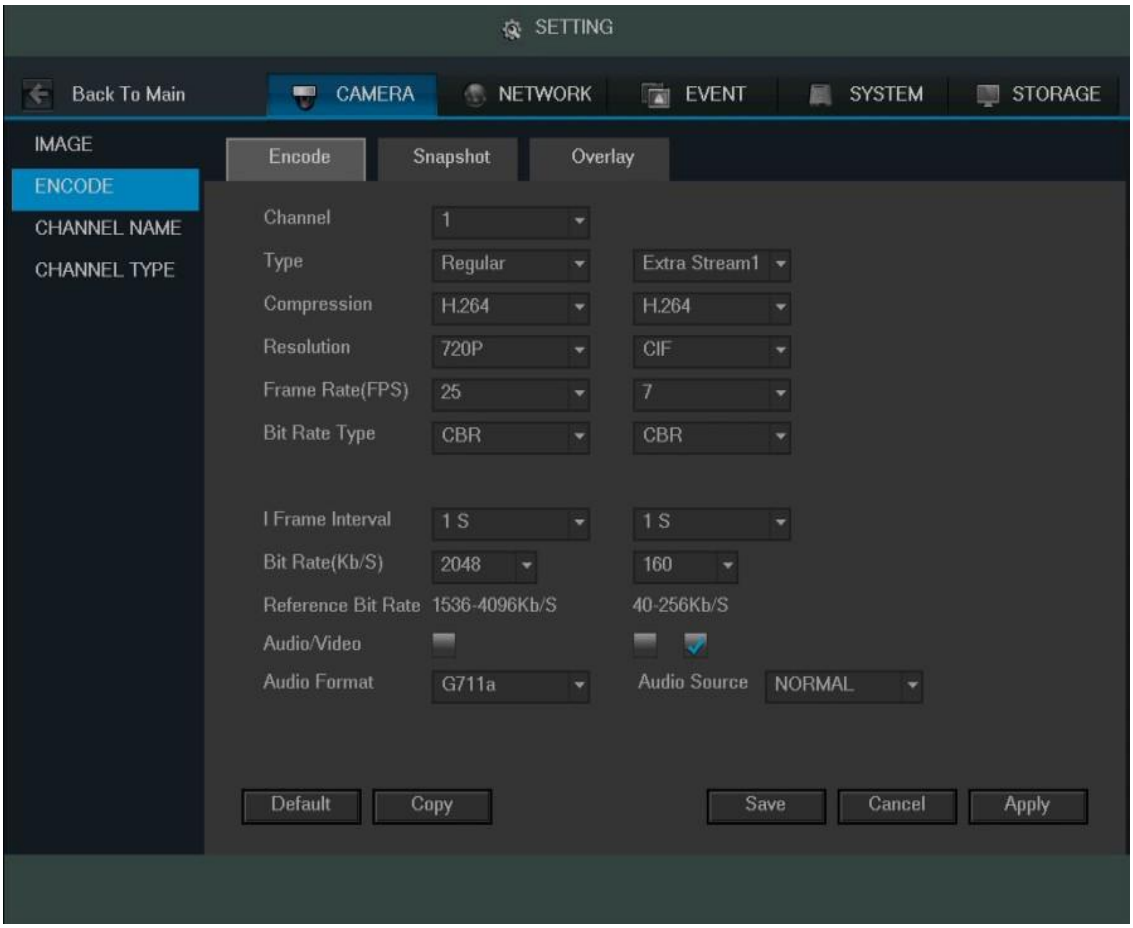
- Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
- Period: This dropdown box allows the user to select a period of time for which to modify the image settings. The user can configure up to 2 periods to encompass the entire 24 hours in the day. Click the checkbox to enable the period image settings changes.
- Saturation: This slider is used to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be clear if the value is too low. The recommended value ranges from 40 to 60.
- Brightness: This slider is used to adjust monitor window brightness. The value ranges from 0 to 100. The default value is 50. The larger the number, the brighter the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- Contrast: This slider is used to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video brightness is OK but the contrast is not correct. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over expose. The recommended value ranges from 40 to 60.

- Sharpness: This slider is used to adjust the sharpness of the video. The value ranges from 0 to 100. The larger the value is, the clearer the edges are and vice versa. Note: The higher the value, the higher likelihood of picture noise occurring. The default value is 50 and the recommended value ranges from 40 to 60.

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

Encode

This tab is used to set the video encoding settings for each channel. See below for a screenshot of the tab:



Below is an explanation of the fields on the Encode settings screen:

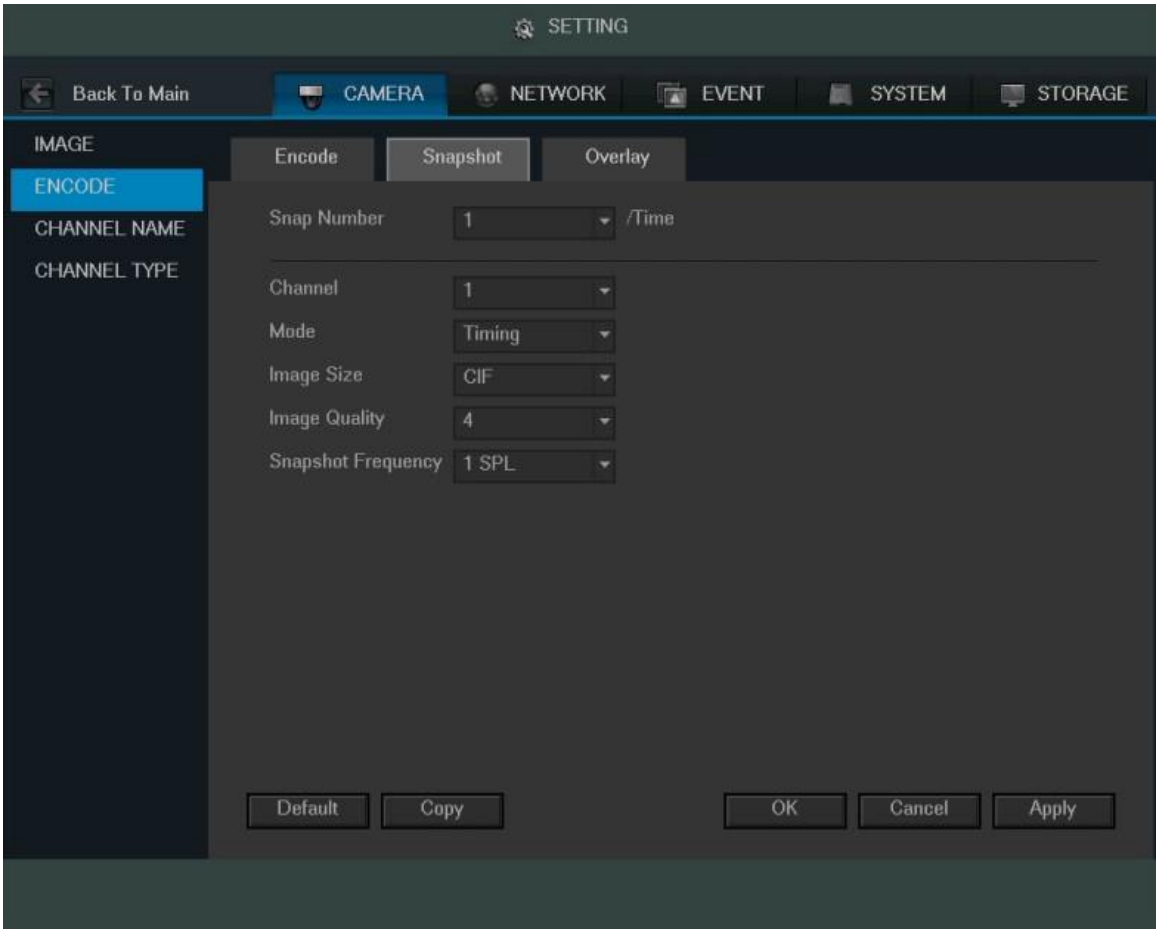
- Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
- Type: This dropdown box allows the user to select one of 3 channel types: regular, motion detect, and alarm. Various encode parameters can be for different record types.
- Compression: This dropdown box allows the user to select a compression protocol. The system supports H.264 and MJPEG video compression protocols.
- Resolution: This dropdown box allows the user to set the resolution. The system supports various resolutions and they can be selected from this dropdown list.

- Frame Rate: This dropdown box allows the user to select a frame rate. Frame rate settings range from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- Bit Rate Type: This dropdown box allows the user to select a bit rate type. The system supports two-bit rate types: CBR and VBR. In VBR mode, video quality can be set.
- Video/Audio: This checkbox allows the user to enable or disable Video/Audio. Audio formal can be selected as well.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click the Copy button near the bottom right hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

Snapshot

This tab allows for the selection of snapshot settings. See below for a screenshot of the Snapshot tab:



Below is a list of snapshot settings that can be modified on this screen:

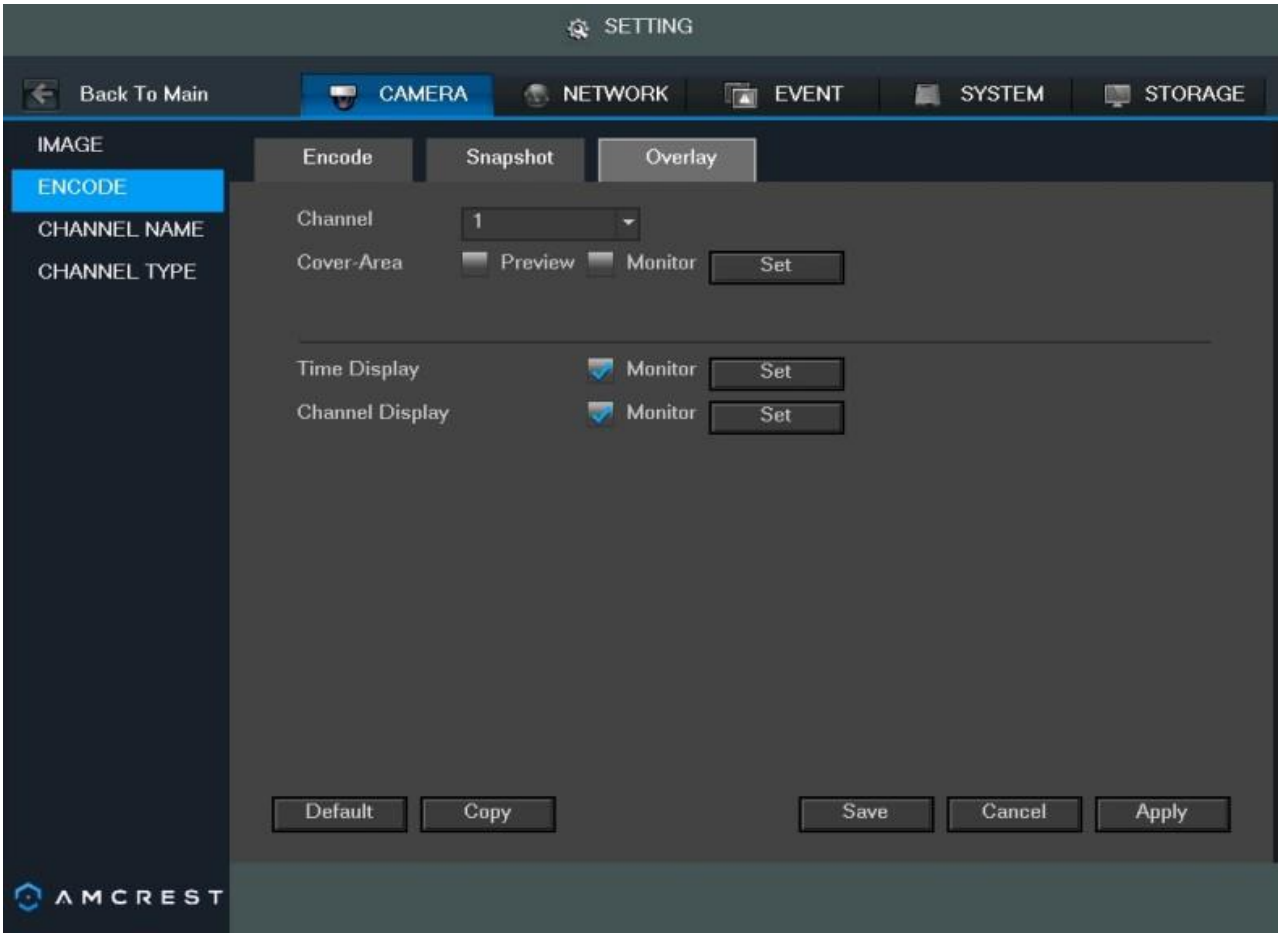
- Snapshot Mode: This dropdown box allows the user to select a snapshot mode. There are two snapshot modes: regular and trigger.
  - Regular: Based on timing and happens at a set interval.
  - Trigger: Based on motion detection or alarm activation.
- Image Size: This dropdown box allows the user to select an image size.

- There are 4 settings: D1, HD1, 2CIF, and CIF.
- Image Quality: This dropdown box allows the user to select image quality. Quality is adjusted on a scale of 110.
- Snapshot Frequency: This dropdown allows the user to select the snapshot interval. The value ranges from 1 to 7 seconds. The maximum setting for a customized interval is 3600s/picture.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click the Copy button near the bottom right hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

Overlay

The overlay tab allows the user to change overlay settings for each channel.
Below is a screenshot of the overlay tab:



Below is an explanation of fields that can be modified on the overlay settings screen:

- Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
- Cover Area: This button allows the user to set the cover area. Drag the mouse to set the proper section size. The system supports a maximum of 4 zones in one channel.
- Preview/Monitor: There are two types of cover areas
- Preview means the privacy mask zone cannot be viewed by user when system is in preview status.

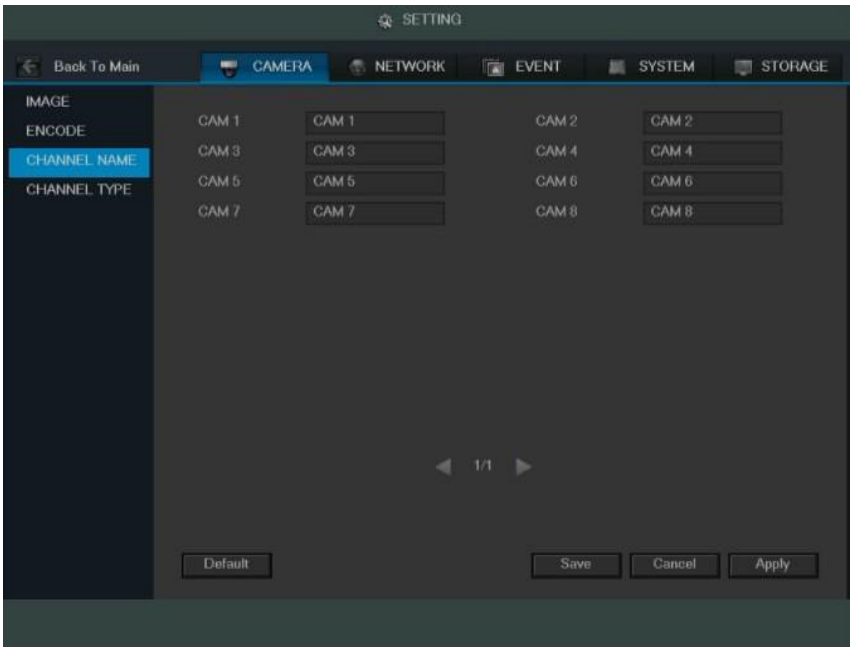
- Monitor means the privacy mask zone cannot be viewed by the user when system is in monitor status.

- Time Display: This button allows the user to select whether the system displays time on playback video. Clicking the set button and allows the user to drag the timestamp to the desired position on the screen.
- Channel Display: This button allows the user to select whether the system displays channel number on playback video. Clicking the set button allows the user to drag the title to the corresponding position on the screen.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click the Copy button near the bottom right hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

Channel Name

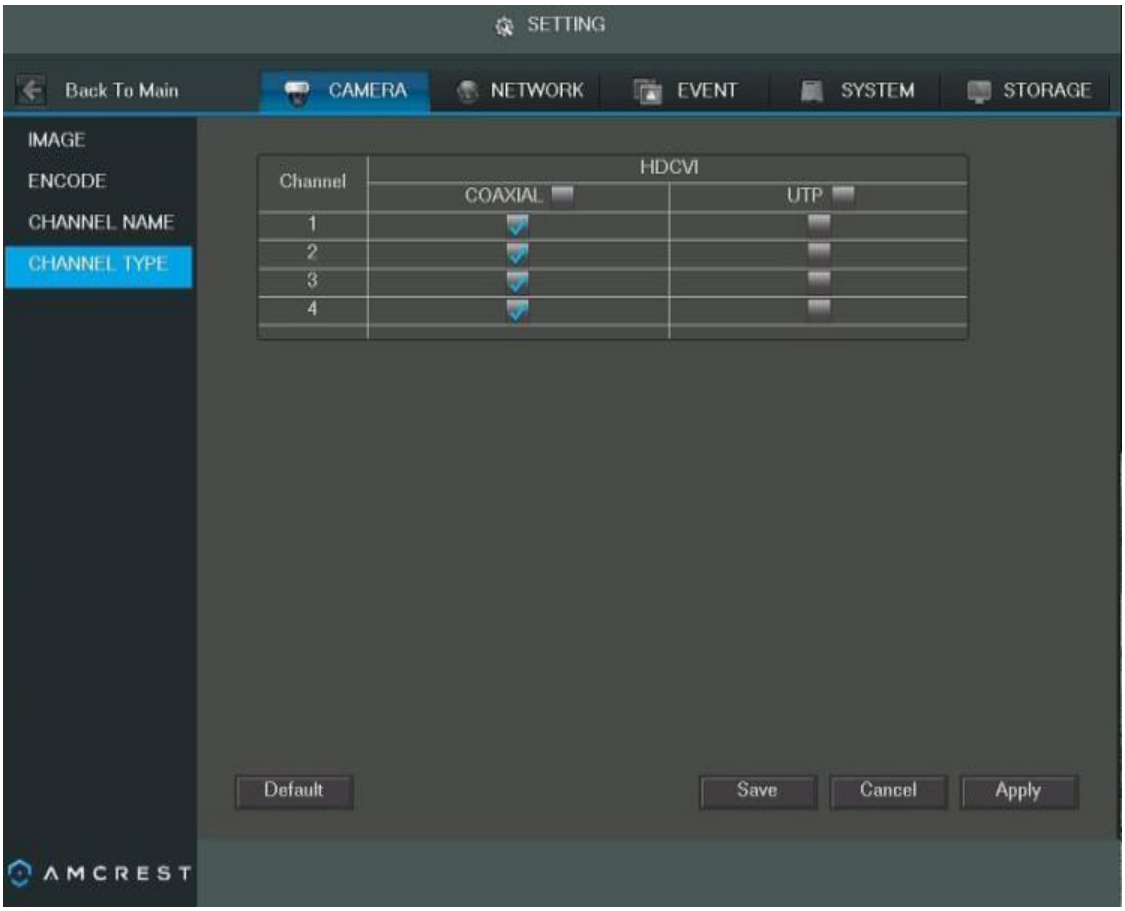
This screen is used to modify the channel names. Each field supports a maximum of 31 characters.



To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

Channel Type

This screen is used to set the channel type. The supported channel types are coaxial, UTP, and IP.



To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

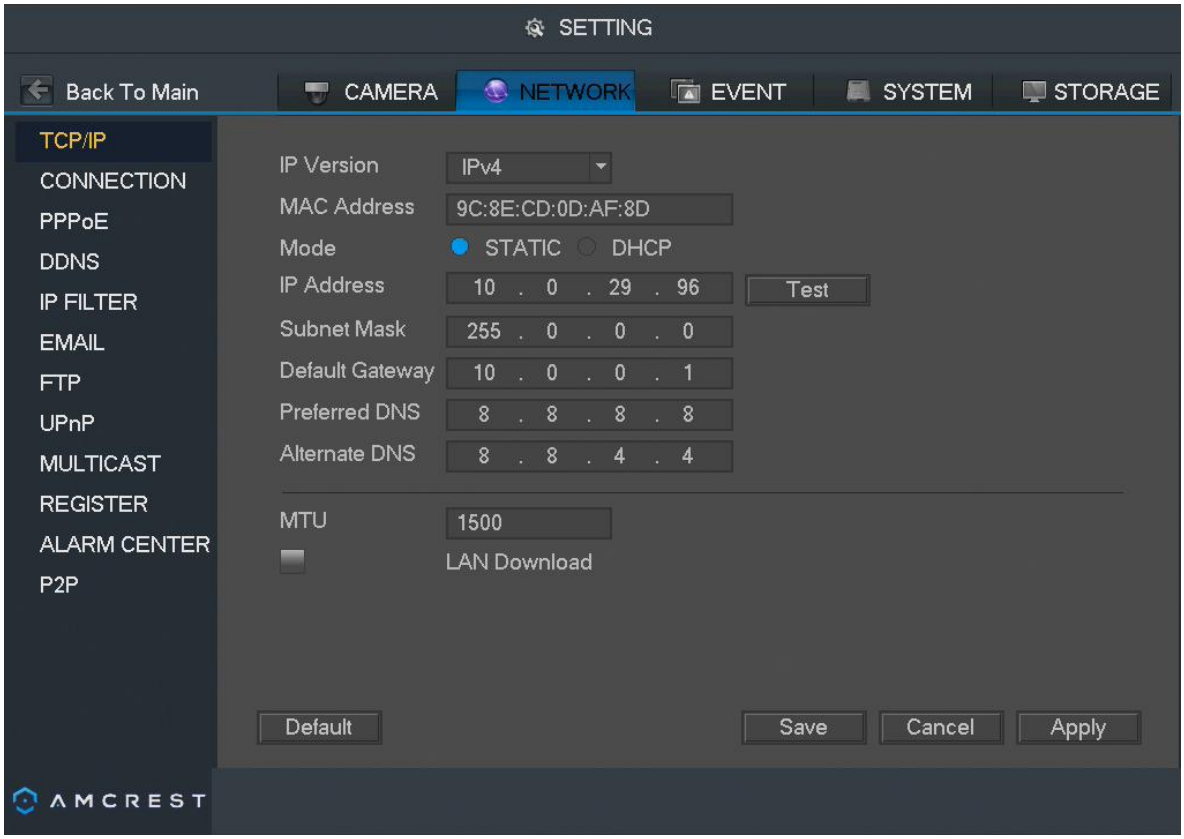
Network

This menu controls all network related functions for the DVR and governs how the DVR interacts with the network it is connected to.

TCP/IP

TCP/IP stands for Transmission Control Protocol/Internet Protocol and it is the language/protocol that allows communication between internet connected devices, whether on a local network, or a on the Internet at large. This screen allows for TCP/IP settings to be modified for the DVR to establish connection to the network.

Below is a screenshot of the TCP/IP settings screen:



Below is an explanation of the fields on the TCP/IP settings screen:

- IP Version: This dropdown allows the user to select the IP version. The two options are IPV4 and IPV6.
- MAC address: This field shows the DVR's MAC address, which is unique to this device. This number is read-only and is used to access a local area network (LAN).
- Static vs DHCP: This check box allows the user to choose between a static IP address, and a dynamic IP address. DHCP stands for Dynamic Host Configuration Protocol, and this enables the DVR to automatically obtain an IP address from another network device such as a server or more commonly, a router. When the DHCP function is enabled, the user cannot modify the IP address, Subnet Mask, or Gateway, as these values are obtained from the DHCP function. To view the current IP address, DHCP needs to be disabled. Note: When PPPoE is enabled, modification of IP Address, Subnet Mask, and Gateway becomes prohibited.
- IP Address: This field allows the user to enter a custom IP address.
- Subnet Mask: This field allows the user to enter a custom subnet mask. The default subnet mask is 255.255.255.0. This number is used to determine which subnetwork the IP address belongs to.
- Default Gateway: This field allows the user to enter the default gateway for the network. The default gateway should be on the same IP subnet as the DVR's IP. That is to say, the specified length of the subnet prefix should have the same string. For example, if the IP address is 192.168.0.25, the default gateway should start with 192.168.0.X. The default gateway is usually the IP address of the router.
- MTU: MTU stands for Maximum Transmission Unit. This field allows the user to set the MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default value is 1500 bytes. Please note MTU modification may result in network adapter reboot and the network turning off. That is to say, MTU modification can affect the current network service. The system may pop up a dialog box to confirm setup when the MTU value is changed. Click the OK button to confirm current value and reboot or can click the Cancel button to terminate the current modification. Before the modification, you can check the MTU of the gateway; the MTU of the DVR should be the

same or lower than the MTU of the gateway. This way, packets can be reduced, and the network transmission efficiency be enhanced. The following MTU values are for reference only.

- 1500: Ethernet information packet maximum value and it is also the default value. It is the typical setup when there is no PPPoE or VPN. It is the default setup of some routers, switches, and network adapters.

  1492: Recommend value for PPPoE
  1468: Recommend value for DHCP.
  Preferred DNS server: This field allows the user to enter the DNS server IP address.

- Alternate DNS server: This field allows the user to enter the Alternate DNS server IP address.
- LAN download: This checkbox allows the user to enable the user to process the downloaded data first. The download speed is 1.5X or 2.0X compared to the normal streaming speed.

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

Connection

This screen allows users to configure port connections. It is important that the system is rebooted if any changes are made to the settings on this screen. Also, ensure that port values do not conflict. Below is a screenshot of the connection screen:

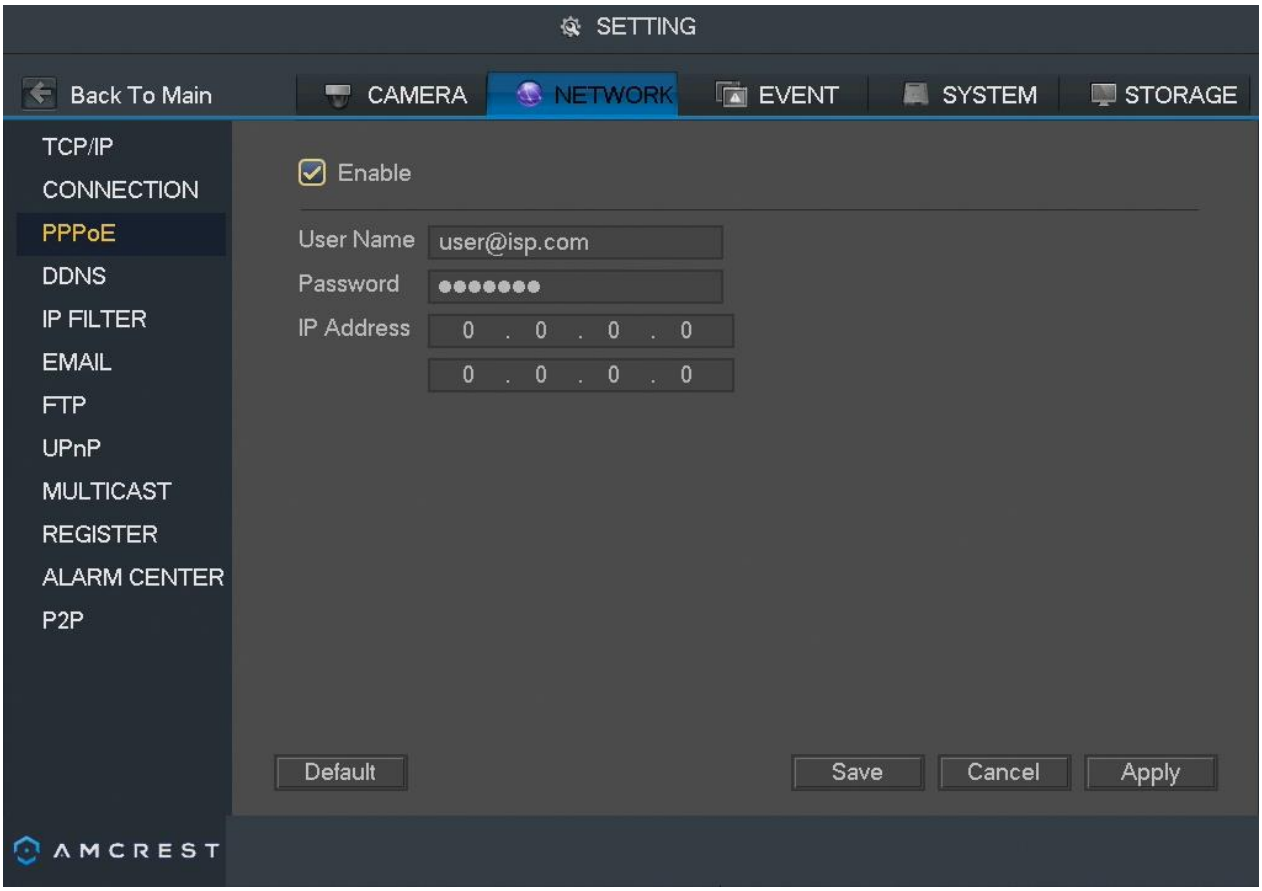
Below is an explanation of the fields on the Connection settings screen:

- Maximum Connection: This field represents the maximum number of users that can be connected to the DVR at the same time. The maximum number of users the DVR can support at one time is 128.
- TCP Port: This field designates the Transmission Control Protocol (TCP) port number. The default value is 37777.
- UDP Port: This field designates the User Datagram Protocol (UDP) port number. The default value is 37778.
- HTTP Port: This field designates the Hypertext Transfer Protocol (HTTP) port number. The default value is 80.
- HTTPS Port: This field designates the Hypertext Transfer Protocol Secure (HTTPS) port number. The default value is 443.
- RTSP Port: This field designates the Real Time Streaming Protocol (RTSP) port number. The default value is 554.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click the Copy button near the bottom right hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

PPPoE

PPPoE stands for Point-to-Point Protocol over Ethernet. This screen allows users to configure PPPoE connections. Below is a screenshot of the PPPoE screen:



To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click the Copy button near the bottom right hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner.

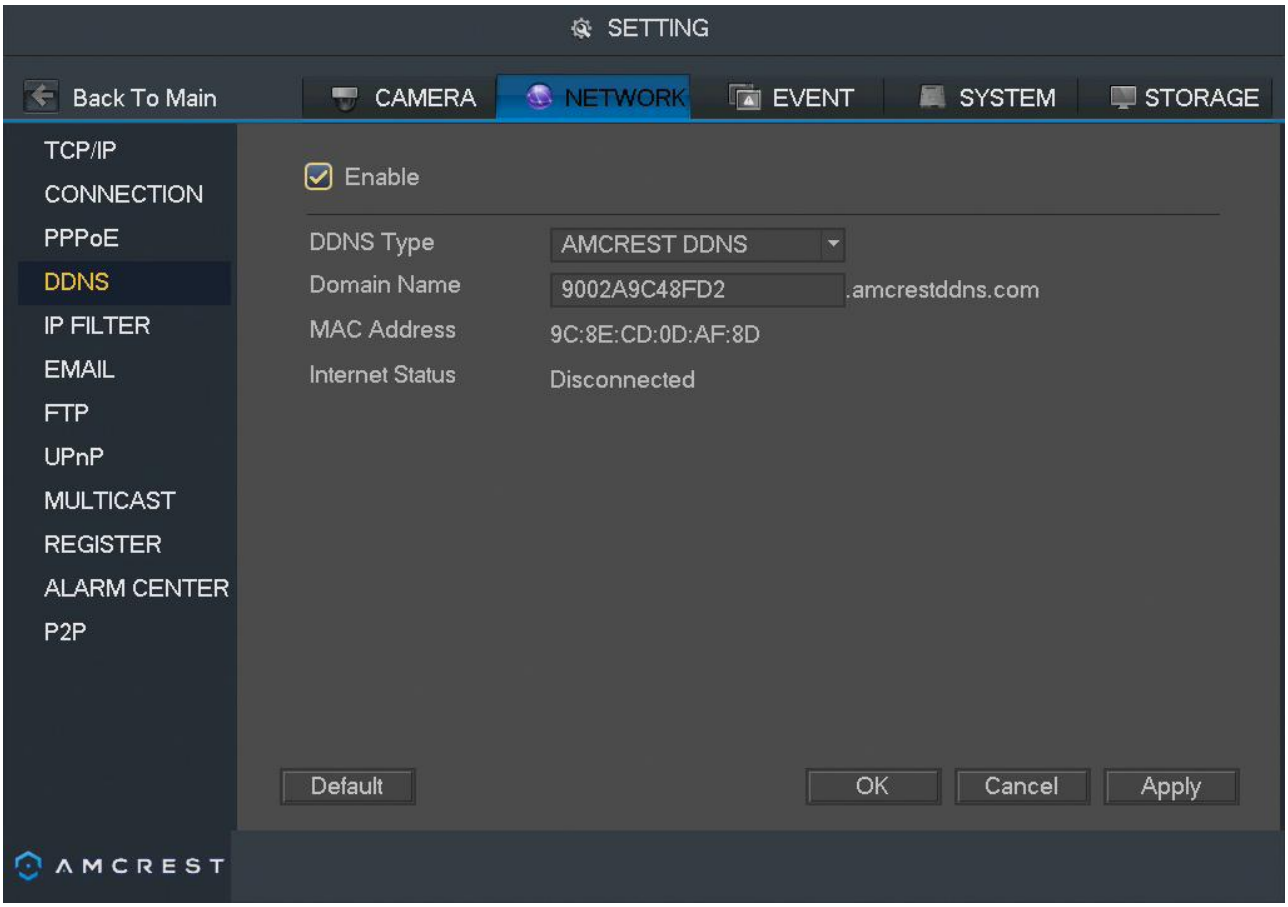
To apply the settings, click the Apply button near the bottom right hand corner. After completing the setup please click the save button to go back to the previous menu.

DDNS

DDNS stands for Dynamic Domain Name Server. This technology is used to automatically update name servers in real time to help the DVR maintain a persistent address despite changes in location or configuration. What this means is that even when the DVR is restarted, moved, or reconfigured, it can keep the same IP address, thus allowing remote users uninterrupted access to the DVR, rather than having to request a new IP address to use for remote access anytime a change is made.

To use this feature, users will need to setup an account with a DDNS service. The DVR supports a variety of DDNS services such as AmcrestDDNS, NO-IP DDNS, CN99 DDNS, Dyndns DDNS, and private DDNS services. Based on which service is selected, different options may show on this screen. For purposes of this guide, AmcrestDDNS will be used. To use AmcrestDDNS, go to http://www.AmcrestDDNS.com and register for an account. If the account is inactive for a year, AmcrestDDNS may take back the domain name, but an email will be sent beforehand as a warning.

Below is a screenshot of the DDNS settings screen, configured to AmcrestDDNS:



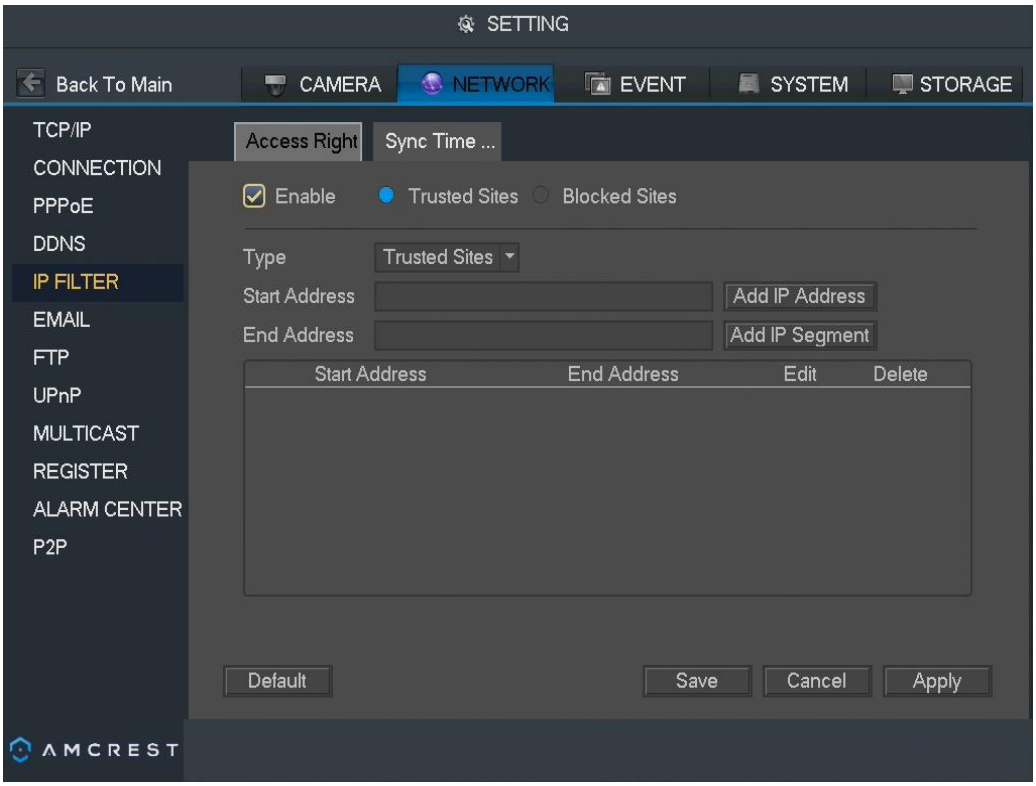
Below is an explanation of the fields that can be configured on DDNS settings screen when set to AmcrestDDNS type.
Fields with a '*' next to them appear when AmcrestDDNS is selected:

- Enable: This checkbox allows the user to enable DDNS on the DVR.
- DDNS Type: This dropdown box allows the user to select which DDNS service is being used on the DVR.
- *Server IP: This field allows the user to enter the IP address for the server used by the specific DDNS service. For AmcrestDDNS, the default address is www.AmcrestDDNS.com
- *Domain Mode: This radio button allows the user to choose a custom domain names, or the default one generated by the AmcrestDDNS system.
- *Domain Name: This field allows the user to enter the domain name from the AmcrestDDNS service.
- *Email Address: This field allows the user to enter the email address associated with the AmcrestDDNS account.

To revert to default settings, click the Default button near the bottom left hand corner. To test the current settings, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

IP Filter

This screen allows for the filtering of IP addresses, either blocking them, or granting them access to the DVR. This feature helps make the DVR more secure by limiting remote access only to approved users. Below is a screenshot of the IP Filter screen:



Below is an explanation of fields on the IP Filter settings screen:

- Enable: This checkbox allows the user to enable the IP Filter feature. Many of the other fields below cannot be edited if this checkbox is not checked.
- Type: This dropdown box allows the user to select an IP address type. There are two types of IP addresses that can be used by this feature. Only one of them can be activated at a time.
  - Trusted Sites: This setting allows the user to enter trusted IP addresses. All other addresses will be blocked.

- Blocked Sites: This setting allows all IP addresses, but blocks the ones that are specified.
- Start Address/End Address: This field allows the user to enter IP addresses, and depending on which button is clicked, it can either add a single IP address, or a section of IP addresses to the IP Filter list.
- The DVR can support a maximum of 64 IP addresses on this list.
- Newly added IP addresses are enabled by default but can be disabled or added to the block list. If the system is in trusted sites mode, select the IP address, and delete it to remove it from the list. If the system is in blocked sites mode, add the IP address to the blocked sites list to prevent that IP from getting access.
  The IP address column supports both IPV4 and IPV6 IP address formats. For IPV6 addresses, the system can optimize them to make the addresses more readable.
- aa:0000: 00: 00aa: 00aa: 00aa: 00aa: 00aa can be optimized to aa:: aa: aa: aa: aa: aa: aa
  IP addresses automatically have spaces before or after the address removed as they are entered.
  For adding a single IP, enter it in the Start Address field. For entering in a section of IP addresses, enter in IP addresses in both fields, ensuring that the larger number IP address is in the End Address field.

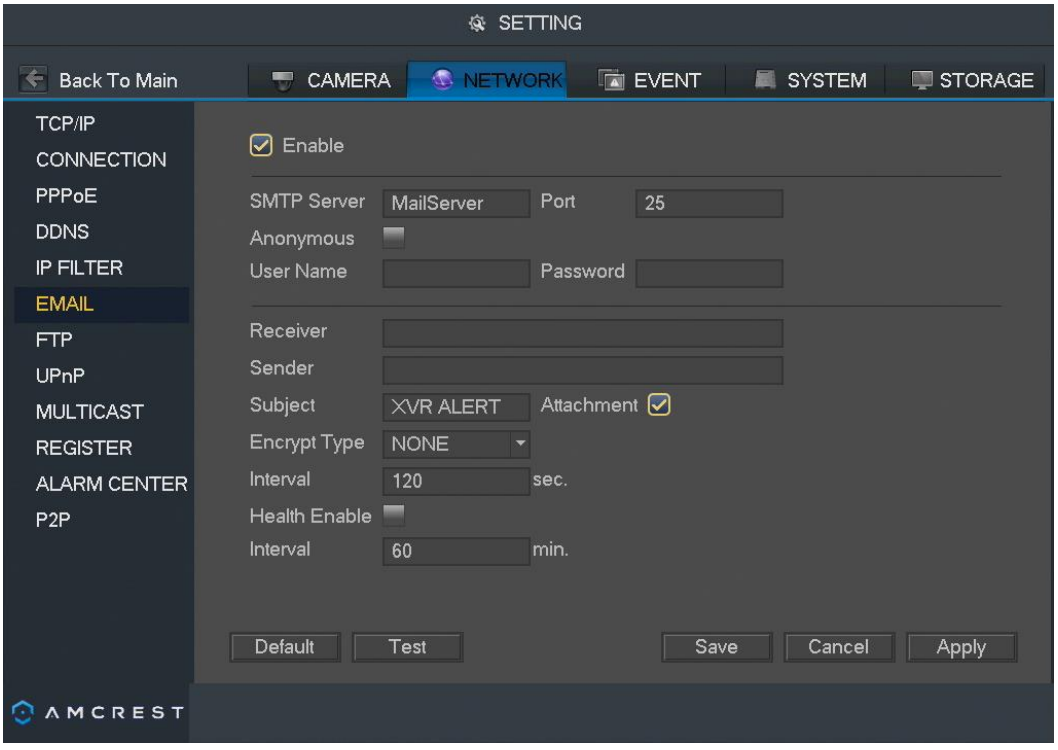
  Note: The system also supports the adding of MAC addresses.

- Delete: This button allows a user to remove a specific IP address from the IP Filter list. Edit: This button allows a user to edit start or end addresses.

To revert to default settings, click the Default button near the bottom left hand corner. To test the current settings, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Email

This screen allows for the configuring of email settings to permit the DVR to send emails when the connected cameras or alarms are triggered. Below is a screenshot of the email settings screen:



Below is an explanation of the fields on the Email settings screen:

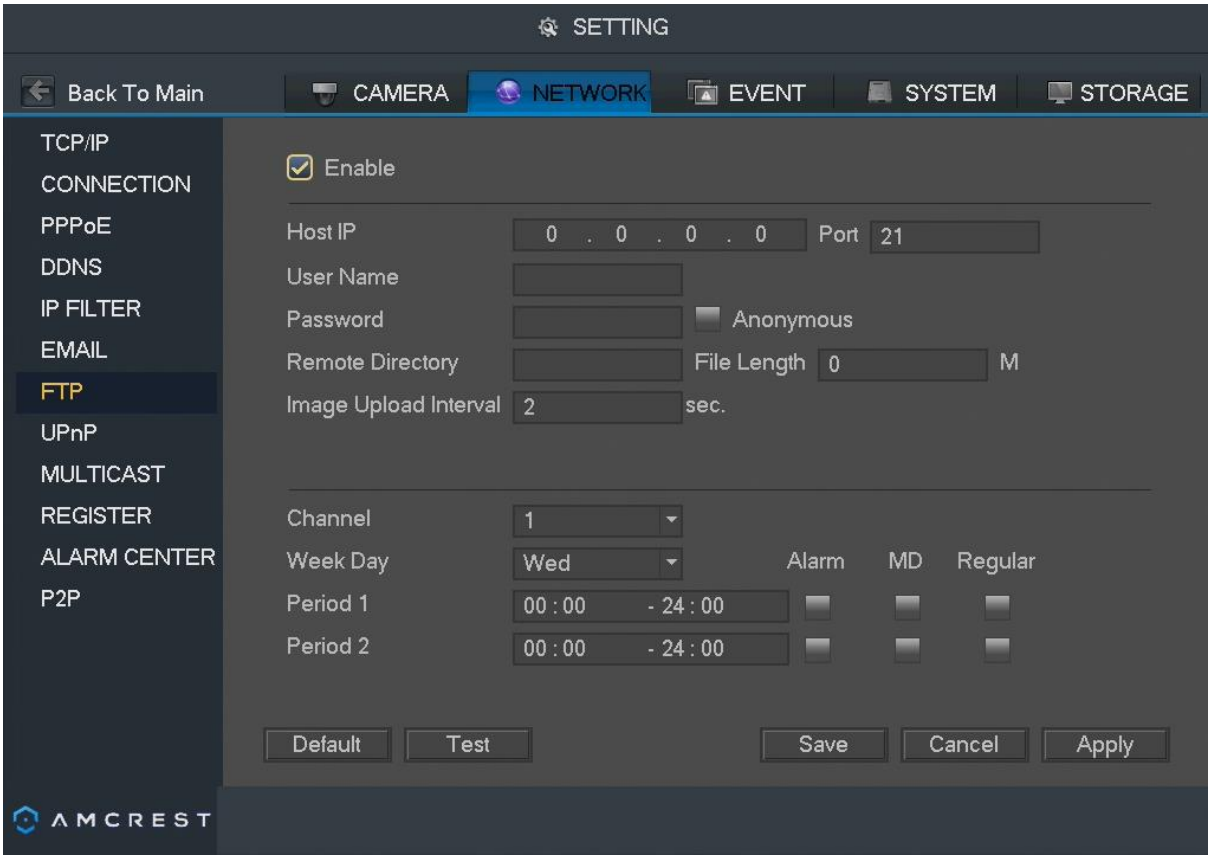
- Enable: This checkbox allows the user to enable the email feature.
- SMTP Server: SMTP stands for Simple Mail Transfer Protocol. This field allows the user to enter the SMTP server used by the email service.
- Port: This field allows the user to enter the port that corresponds to the selected SMTP server.
- User Name: This field allows the user to enter the username used to login to the selected SMTP server.
- Password: This field allows the user to enter the password associated with the SMTP username.
- Sender: This field allows the user to enter the sender email address. This email address will be the one that sends out all emails pertaining to the alerts and alarm emails sent by the DVR.
- Receiver: This field allows the user to enter the receiver email address. These email addresses are the ones that will receive any emails pertaining to alert and alarm emails sent by the DVR. Up to 3 email addresses can be entered in this field.
- Subject: This field allows the user to define the subject line of the email that is sent to the receivers.
- Attachment: This checkbox allows the user to enable the attachment of screenshots with emails.
- Encrypt Type: This dropdown box allows the user to select an encryption type. There are two types of email encryption that are available
- SSL: Secure Socket Layer
- TLS: Transport Layer Security
  Event Interval: This field allows the user to define, in seconds, how many events can be triggered concurrently.
- Health Enable: This checkbox allows the user to enable the function that causes the system to send out a test email to ensure if the connection is OK or not.
- Interval: This field allows the user to define, in minutes, how often emails can be sent by the system. This helps to curb heavy load on the email server when multiple events are occurring.

To revert to default settings, click the Default button near the bottom left hand corner. To test the current settings, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

FTP

FTP stands for File Transfer Protocol. This protocol allows for remote uploading of files to a server. This feature requires the use of an FTP tool on a computer to enable the use of FTP features on the DVR.

Once an FTP tool has been acquired, installed, and configured to allow read, write, append, and delete access, then the DVR can be configured to use FTP. Below is a screenshot of the FTP menu screen:



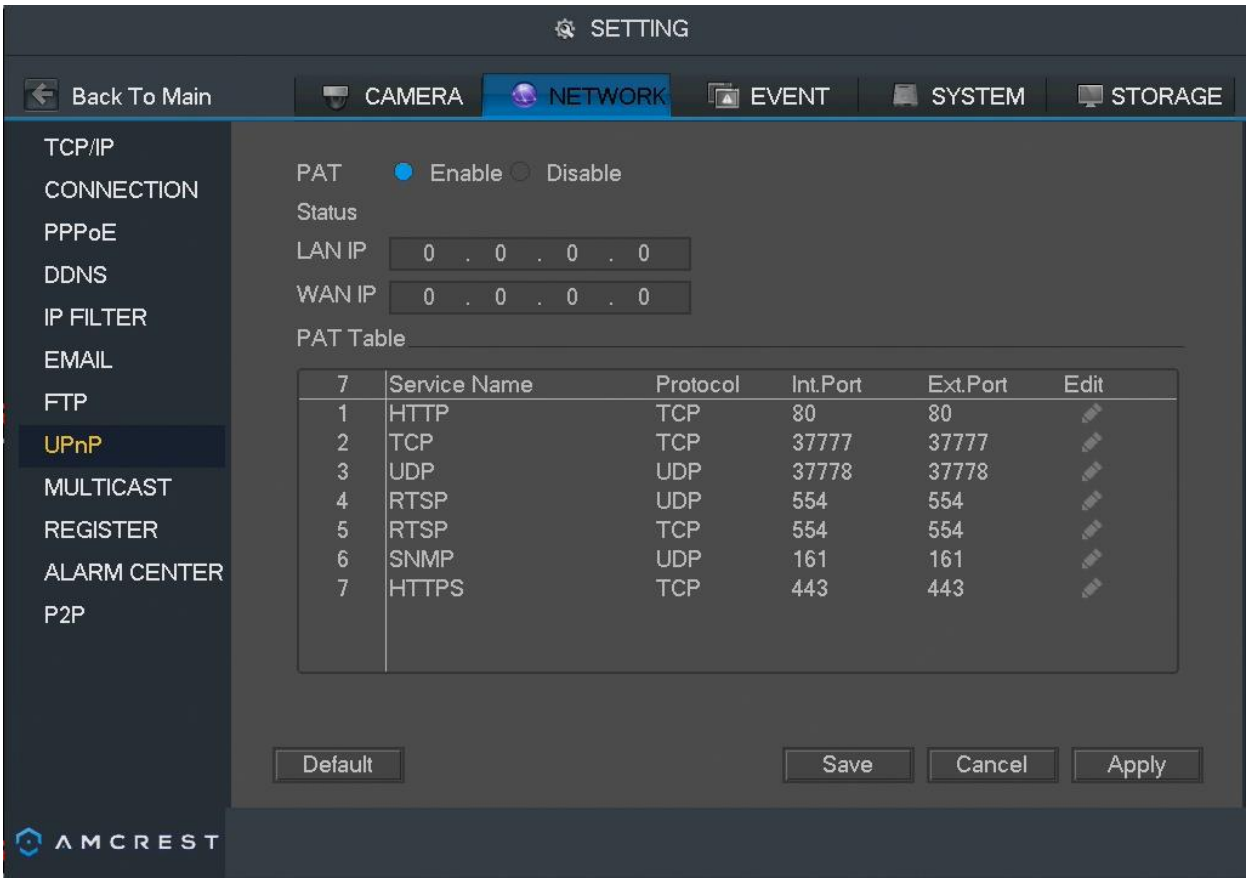
Below is an explanation of the fields on the FTP settings screen:

- Enable: This checkbox allows the user to enable the FTP feature for the DVR.
- Server IP: This field allows the user to enter the FTP server IP address and port.
- User Name: This field allows the user to enter the FTP username.
- Password: This field allows the user to enter the FTP server password. The checkbox next to this field enables anonymous access to the FTP.
- Remote Directory: This field allows the user to designate which folder the DVR will upload files to.
- File Length: This field allows the user to dictate how large upload files can be.
- Image Upload Interval: This field allows the user to define, in seconds, how often images can be uploaded to the FTP server.
- Channel: This field allows the user to pick a channel to set FTP settings for.
- Weekday: This field allows the user to pick a day of the week to set FTP settings for.
  Time Period 1: This field allows the user to specify a time period and what types of files to upload (Alarm, Motion, Regular).
- Time Period 2: This field allows the user to specify a time period and what types of files to upload (Alarm, Motion, Regular).

To revert to default settings, click the Default button near the bottom left hand corner. To test the current settings, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

UPnP

UPnP stands for Universal Plug and Play, and it is a protocol used to easily connect devices to the internet. In the case of this DVR, it allows the DVR to connect to the router in an easy manner to quickly allow for remote connection. Below is a screenshot of the UPnP settings screen:



Below is an explanation of the fields in the UPnP settings screen:

- PAT: PAT stands for Port Address Translation, and it is something that the UPnP protocol handles. This checkbox allows the user to enable UPnP on the device.
- UPnP Status: This field shows the UPnP status and has two options:
  - Unknown: This means that UPnP is offline.
  - Successful: This means that UPnP is working.
- Router LAN IP: This field allows the user to enter the IP address of the router that the DVR is trying to connect to.
- WAN IP: This field is where the DVR Wide Area Network (WAN) IP is populated. This IP address is what is used to remotely access the DVR through web access.

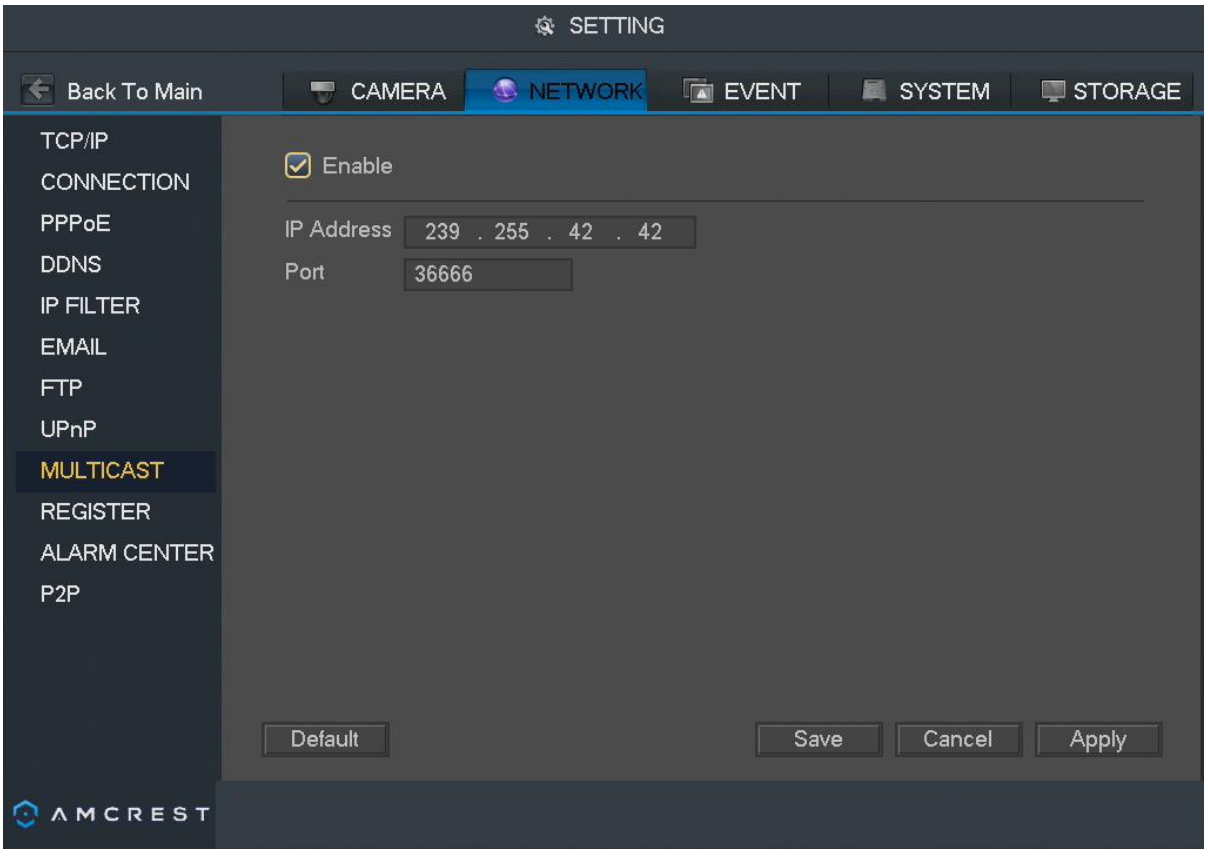
  PAT Table: This table is used to show how the ports for each protocol listed below have been remapped by the UPnP protocol.
  - The first column shows the order of the services.
  - The second column shows the name of the services. To edit this, double click on the service line item.
  - The third column shows the name of the protocol used by that service. To edit this, double click on the service line item.
  - The fourth column shows the Internal Port used by that service. To edit this, double click on the service line item.
  - The fifth column shows the External Port used by that service. To edit this, double click on the service line item.

To revert to default settings, click the Default button near the bottom left hand corner. To add a service to the list, click Add Service near the bottom left hand corner. To delete a service, click Delete near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

To view a video on how to remotely access your DVR using UPnP, go to http://amcrest.com/videos and view the video titled "How to Gain Remote Access to Your HDCVI DVR with Universal Plug and Play".

Multicast

Multicast is a feature that enables the DVR to broadcast its live view to multiple computers on the same network. Below is a screenshot of the multicast screen:



Below is an explanation of the fields in the Multicast settings screen:

- Enable: This checkbox allows the user to enable the Multicast feature for the DVR.
- IP Address: This field allows the user to enter the multicast IP address.
- Port: This field allows the user to enter the port number for the multicast IP address.

For more information on how to configure multicast, see the information below.

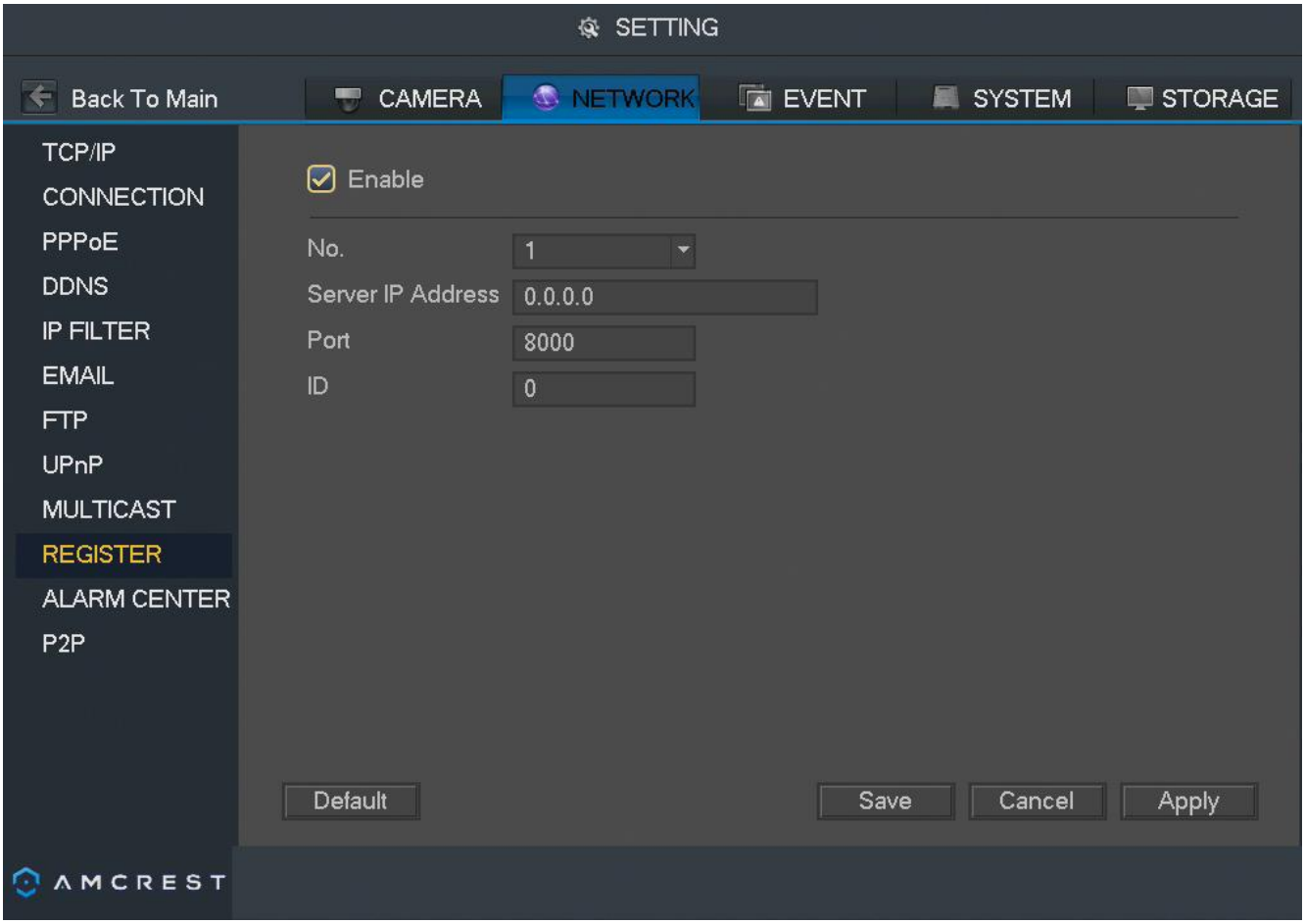
Multicast IP Address Range (IPV4): 224.0.0.0 through 239.255.255.255

Well-known IPv6 multicast addresses	
Address	**Description**
ff02::1	All nodes on the local network segment
ff02::2	All routers on the local network segment
ff02::5	OSPFv3 All SPF routers
ff02::6	OSPFv3 All DR routers
ff02::8	IS-IS for IPv6 routers
ff02::9	RIP routers
ff02::a	EIGRP routers
ff02::d	PIM routers
ff02::16	MLDv2 reports (defined in RFC 3810)
ff02::1:2	All DHCP servers and relay agents on the local network segment (defined in RFC 3315)
ff02::1:3	All LLMNR hosts on the local network segment (defined in RFC 4795)
ff05::1:3	All DHCP servers on the local network site (defined in RFC 3315)
ff0x::c	Simple Service Discovery Protocol
ff0x::fb	Multicast DNS
ff0x::101	Network Time Protocol
ff0x::108	Network Information Service
ff0x::181	Precision Time Protocol (PTP) version 2 messages (Sync, Announce, etc.) except peer delay measurement
ff02::6b	Precision Time Protocol (PTP) version 2 peer delay measurement messages
ff0x::114	Used for experiments

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Register

The register feature allows the DVR to register itself with a specified proxy, so that the DVR can be remotely accessed via a proxy. A proxy is a computer server that acts as an intermediary between client computers that are seeking resources from a server. Below is a screenshot of the Register settings screen:



Below is an explanation of the fields on the Register settings screen:

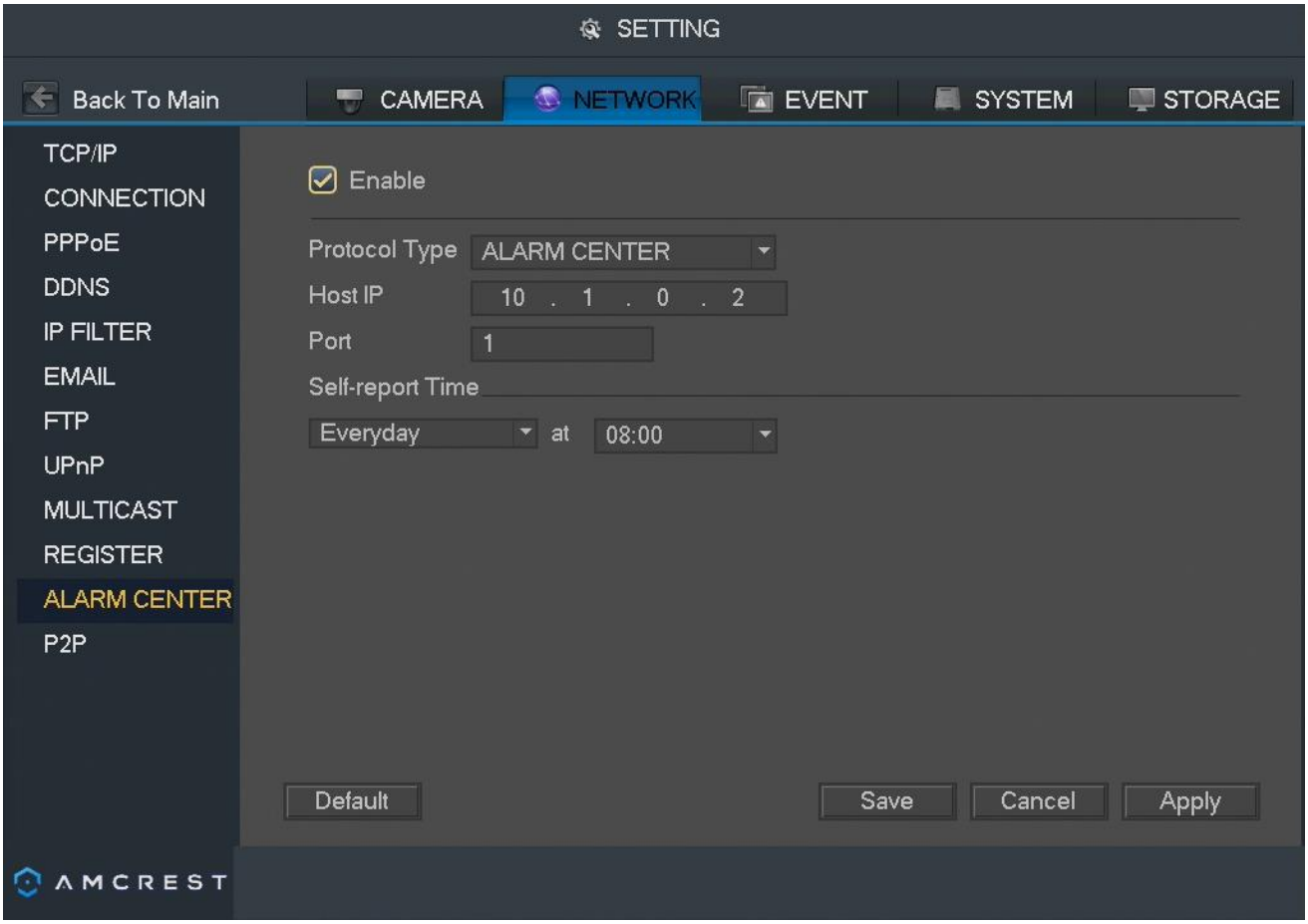
- Enable: This checkbox allows the user to enable the Register feature for the DVR.
- No: This dropdown box allows the user to select the proxy number. Currently the DVR can only configure one proxy.
- Server IP Address: This field allows the user to enter the proxy server IP address.
- Port: This field allows the user to enter the proxy port number.
- ID: This field allows the user to enter the proxy ID number.

Note: Do not enter a network default port for this port number. It may result in a port conflict.

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Alarm Center

The alarm center feature is used to allow users to connect the DVR to their alarm server, so the server can receive a notice when certain events happen. One common use for the alarm center is to send daily reports on the status of the DVR's connection to the network. Below is a screenshot of the Alarm Center settings screen:



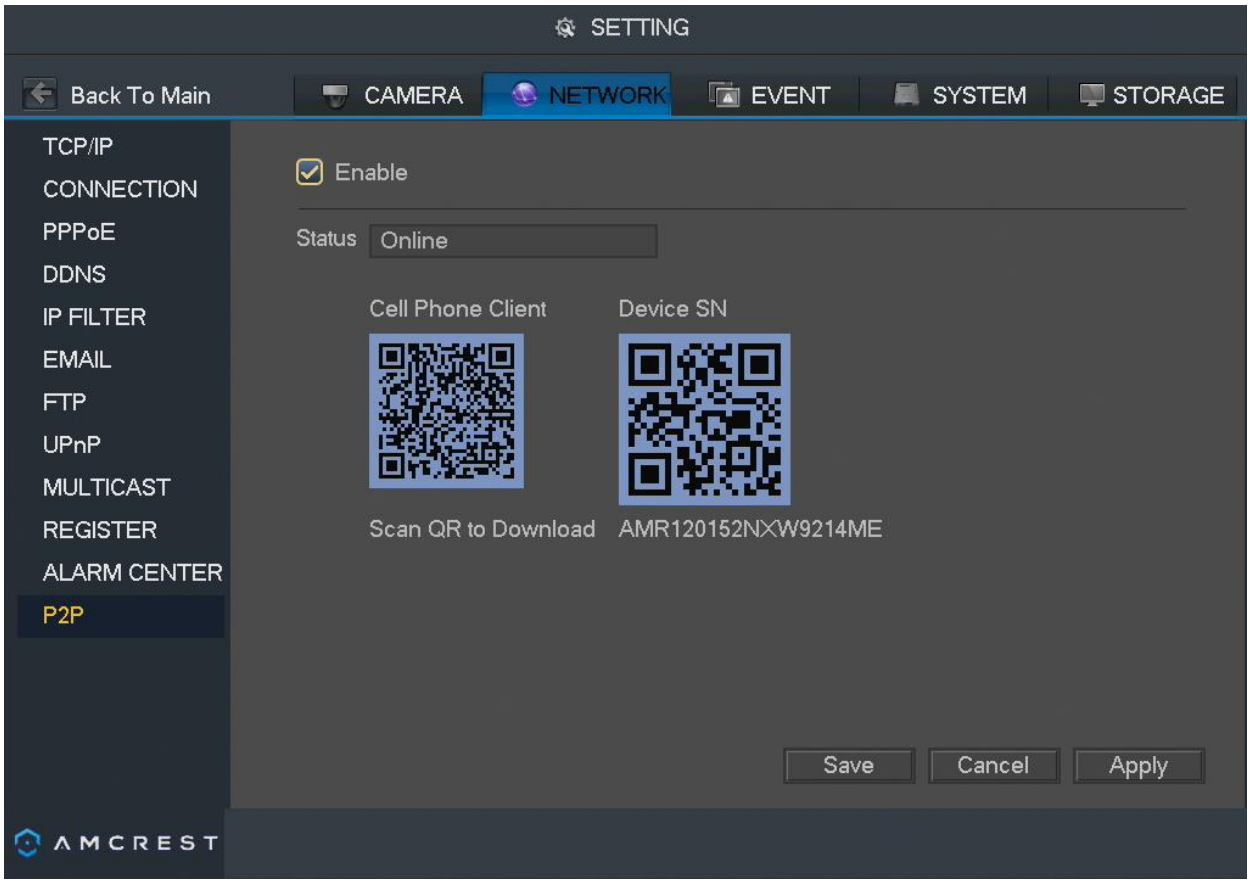
Below is an explanation of the fields on the Alarm Center settings screen:

- Enable: This checkbox allows the user to enable the Alarm Center feature for the DVR.
- Protocol Type: This field allows the user to select which protocol type they want to use for the alarm. Currently, only the private protocol type is available.
- Server IP: This field allows the user to enter the IP address of the alarm server.
- Port: This field allows the user to enter the port number of the alarm server.
- Self-Report Time: This field allows the user to enter a time of the day when they want to receive a report about the DVR's connection to the network each day.

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

P2P

The P2P settings screen is where users can use a QR code to connect their smartphone or tablet to the DVR. The HDCVI uses an app called Amcrest View, and it is available on both iOS and Android. Below is a screenshot of the P2P settings screen:



Below is an explanation of the fields on the P2P settings screen:

- Enable: This checkbox allows the user to enable the P2P feature for the DVR.
- Status: This field shows the status of the P2P connection. Once connected using the app, this field should display the word Online.
- Cell Phone Client: This is the unique QR code is used as a quick reference point for downloading the Amcrest View Pro app onto your mobile device.
- Device SN: This is the unique QR Code associated with your DVR's serial number. Use this as a quick reference point when setting up your DVR on the Amcrest View Pro app.

To confirm settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Event

Video Detect

Main Menu -> Settings -> Event -> Video Detect opens the Detection interface. Here there are 3 options, each representing a detection type: Motion Detection, Video Loss, and Tampering.

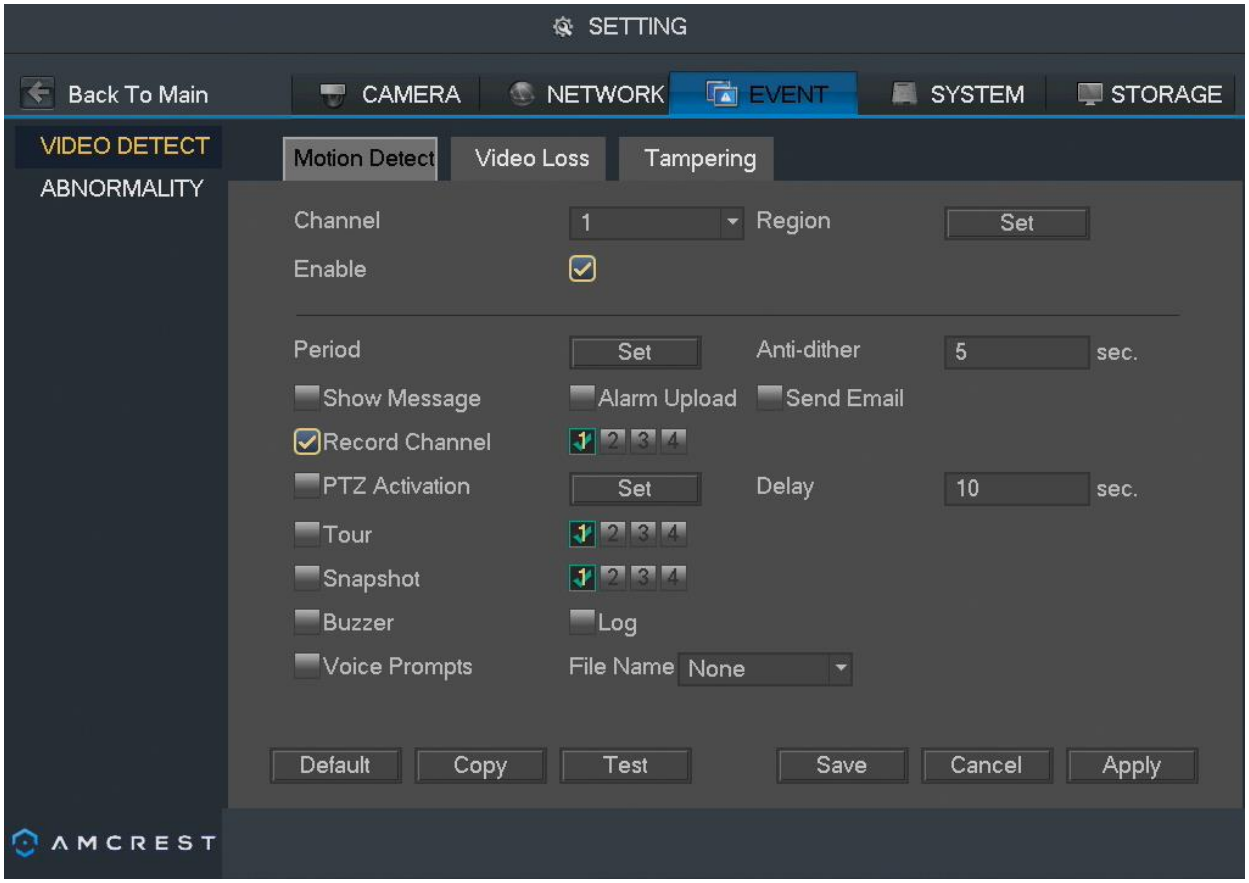
Tips:

- The motion detection icon will be present if the motion detection alarm has been triggered on the current channel.

To set the motion detection region, click and drag the mouse over the region desired. Once the region has been set, click the OK button to save the current region setup, and right click on the mouse to exit the motion detection interface.

Motion Detect

The motion detection settings screen is where motion detection can be setup for each individual channel. Based on the active motion detection region, the DVR can generate a motion detection alarm when a moving signal is detected in a specified area. Below is a screenshot of the motion detection settings screen:

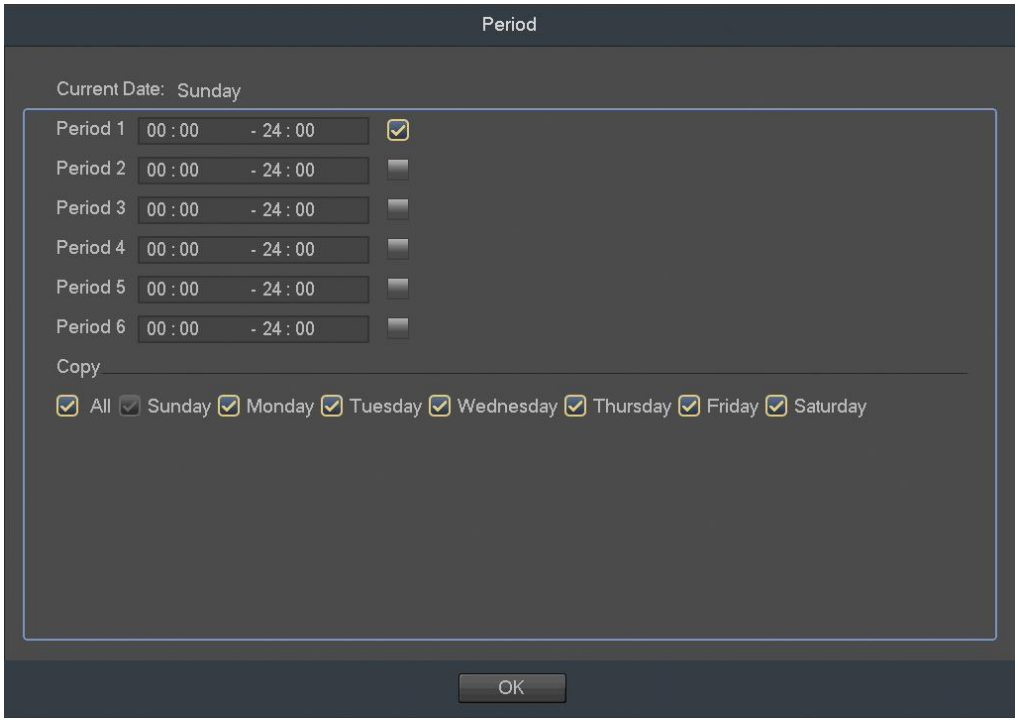


Below is a description of the fields on the Motion Detection settings page:

- **Channel:** The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
- **Enable:** This checkbox allows the user to enable the motion detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.
- **Period:** This setup button takes the user to the motion detection period settings screen. Below is a screenshot of the motion detection period settings screen.

- Click and drag on the yellow bars to specify time zones for motion detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press save to save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click **Default** to use the default settings.

- To specify time zones in greater detail for each day, click the Setup button to the left of the time bar, and the Time Period setup screen will appear. The screenshot below shows the Time Period settings screen:

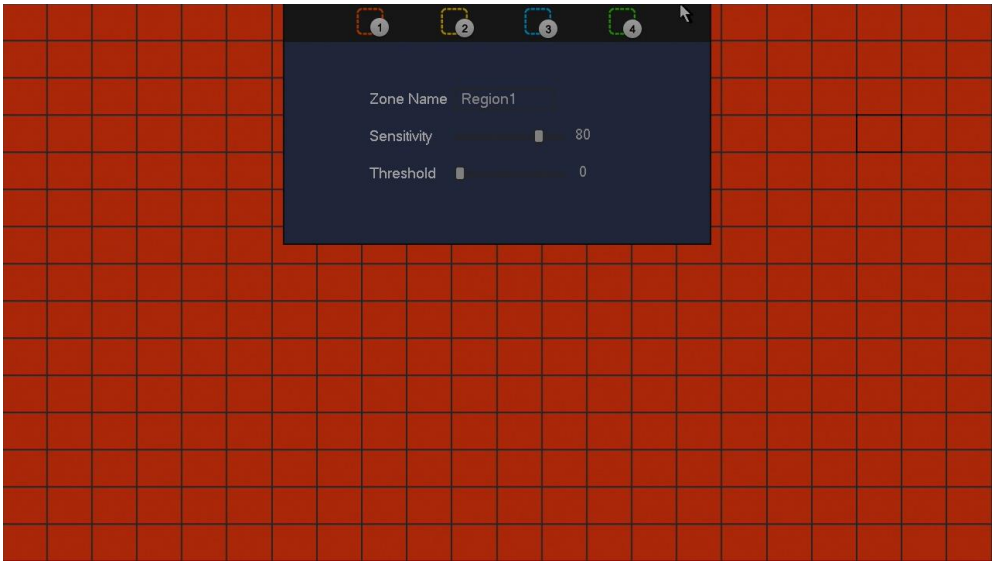


- The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you'd like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

- **Anti-Dither:** This field allows the user to set the anti-dither time. The values in this field can range from 5 to 600 seconds. This time value controls how long the alarm signal lasts. Based on motion detection, a buzzer can go off, a tour can begin, PTZ can be activated, a snapshot can be taken, or a channel can begin recording.

  For example, if the anti-dither time is set to 10 seconds, each alarm may last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel functions will begin another 10 seconds while the screen prompt, alarm upload, email will not be activated again. After 10 seconds, if system detects another alarm signal, it can generate a new alarm since the anti-dither time has expired.

- **Region:** The setup button takes the user to the motion detection region setup screen for that specific channel. On the next page is a screenshot of the motion detection region screen.



When the setup button is clicked, the current channel's interface comes into a full screen view. The user can then set up to 4 regions, each with their own region name, sensitivity (1-100), and threshold (1-100). Each region has a specific color, and the region selector tool is displayed when the mouse is moved to the top of the screen.

- Sensitivity is the amount of change required to increase the motion detected by a percentage. The lower the sensitivity, the more movement is required to trigger an alarm.
- Threshold is the level that the motion detection needs to reach to trigger an alarm. The lower the threshold, the more likely that motion will trigger an alarm.

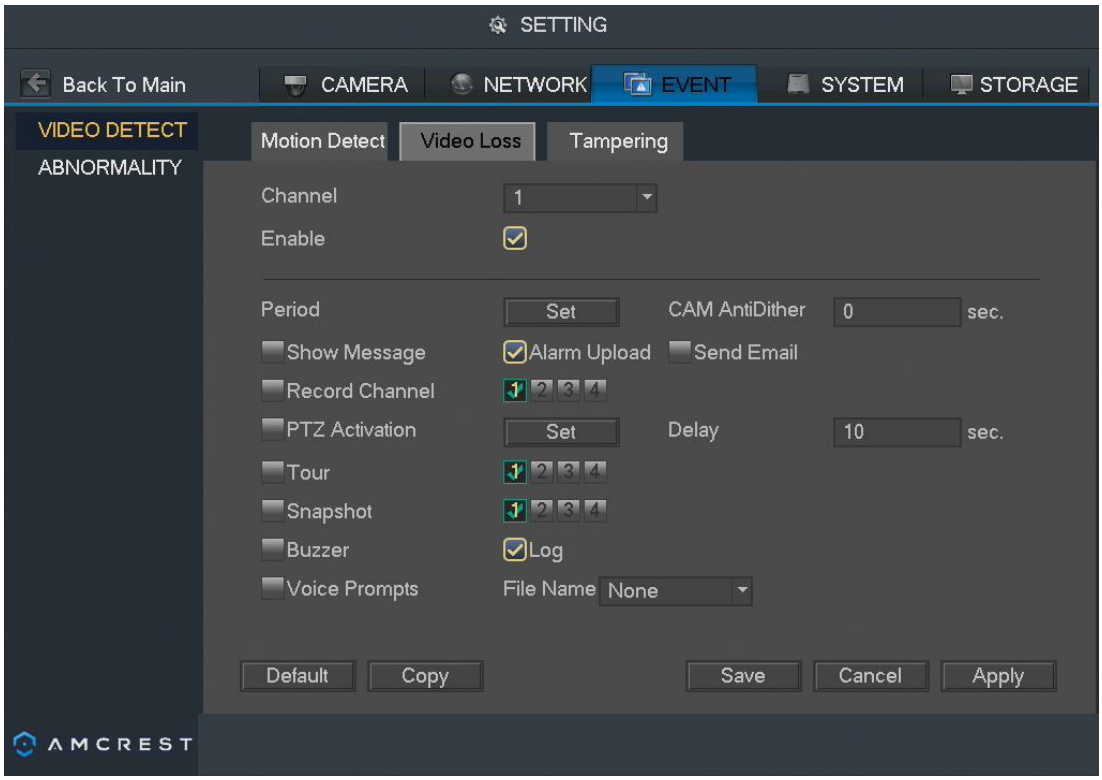
- To designate a zone, click and drag the mouse over the area desired. When a colored box is displayed over the live feed, that area is now enabled for motion detection. Clicking the FN button will switch the mode between armed and disarmed, so that clicking and dragging the mouse can either designate a motion detection zone or remove any motion detection zone markers.
- After the motion detection zone is set, click the enter button to exit the motion detection screen. Remember to click the save button on the motion detection settings screen, otherwise the motion detection zones will not go into effect. Clicking the escape button to leave the motion detection zone and will not save the zone setup.

- **Record Channel:** This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab, it is the This field specifies in seconds how long the delay between alarm activation and recording should be.
- **PTZ Activation:** Allows the user to active PTZ functionality to applicable PTZ devices.
- **Delay:** Allows the user to set a delay in between motion event activation.
- **Tour:** Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.
- **Snapshot: A**llows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Voice Prompts:** Allows the user to customize voice prompts for motion detected events.
- **Show Message:** This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.
- **Buzzer:** Allows the user to trigger a buzzer once a motion event is detected.
- **Log:** Allows the user to log all motion detected events that are triggered in the device.
- **Alarm Upload:** This checkbox allows the user to enable the system to upload alarm information when a motion detection alarm is triggered.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To test a channel's motion detection, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Video Loss

The video loss settings screen is where the DVR can be setup to notify the user any time there is video loss on any of the channels. Below is a screenshot of the video loss settings screen:

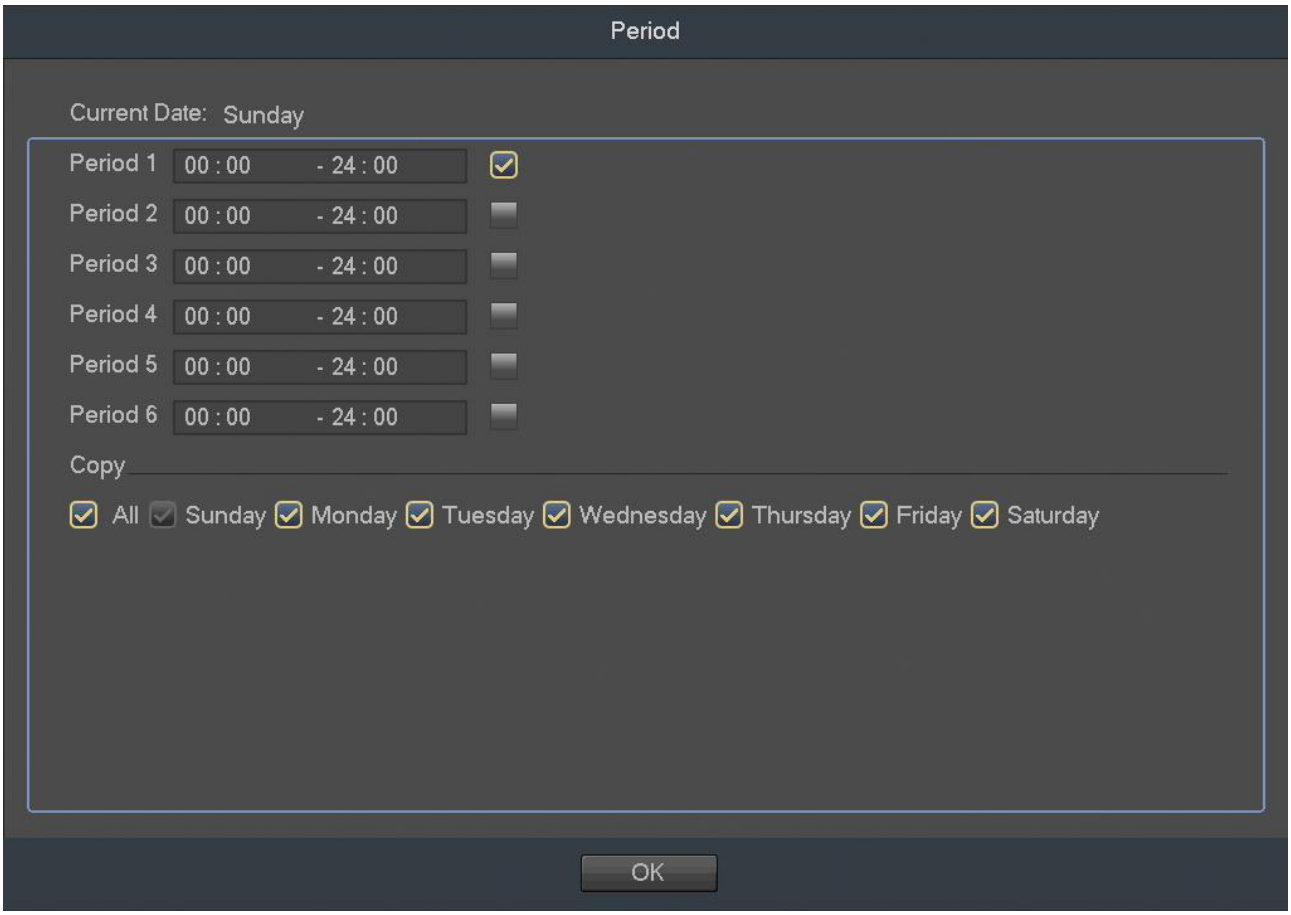


Below is a description of the fields on the Video Loss settings page:

- **Channel:** The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
- **Enable:** This checkbox allows the user to enable the motion detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.
- **Period:** This setup button takes the user to the motion detection period settings screen. Below is a screenshot of the motion detection period settings screen.

- Click and drag on the green bars to specify time zones for motion detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press save to save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click Default to use the default settings.

- To specify time zones in greater detail for each day, click the Setup button to the left of the time bar, and the Time Period setup screen will appear. The screenshot below shows the Time Period settings screen:



The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you'd like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

- **CAM Anti-Dither:** This field allows the user to set the anti-dither time. The values in this field can range from 5 to 600 seconds. This time value controls how long the alarm signal lasts. Based on motion detection, a buzzer can go off, a tour can begin, PTZ can be activated, a snapshot can be taken, or a channel can begin recording.

  For example, if the anti-dither time is set to 10 seconds, each alarm may last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel functions will begin another 10 seconds while the screen prompt, alarm upload, email will not be activated again. After 10 seconds, if system detects another alarm signal, it can generate a new alarm since the anti-dither time has expired.

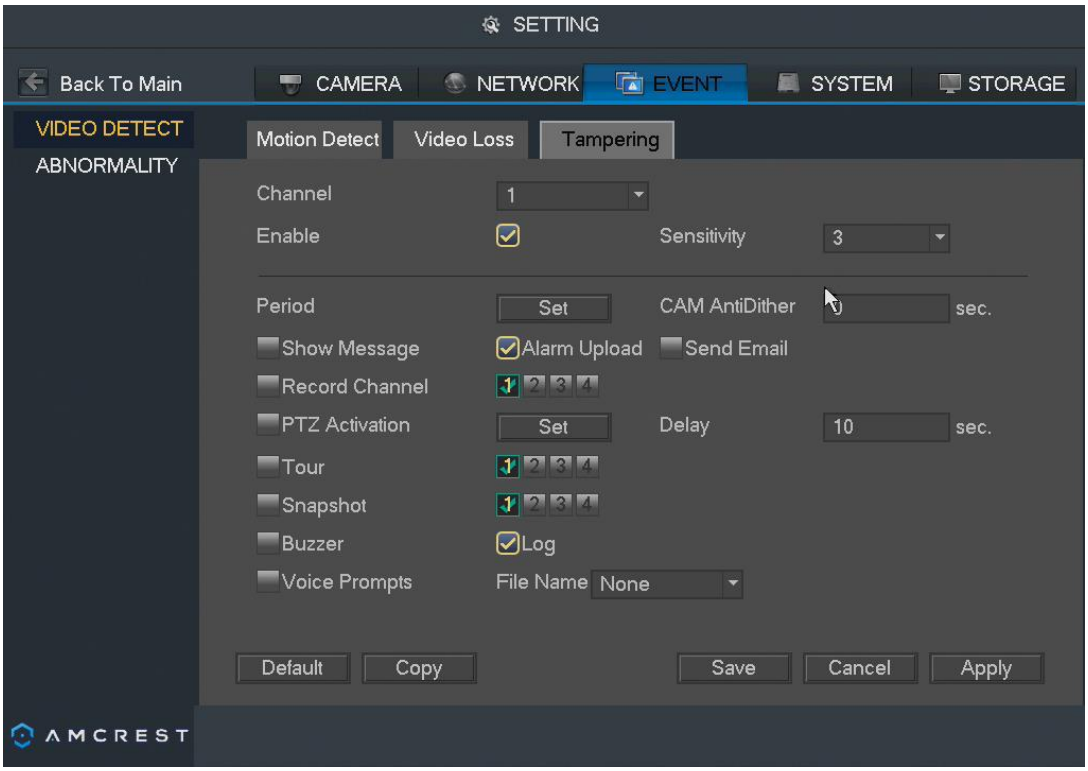
- **Record Channel:** This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab, it is the This field specifies in seconds how long the delay between alarm activation and recording should be.
- **PTZ Activation:** Allows the user to active PTZ functionality to applicable PTZ devices.
- **Tour:** Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.
- **Snapshot: A**llows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Voice Prompts:** Allows the user to customize voice prompts for motion detected events.

- **Show Message:** This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.
- **Buzzer:** Allows the user to trigger a buzzer once a motion event is detected.
- **Log:** Allows the user to log all motion detected events that are triggered in the device.
- **Alarm Upload:** This checkbox allows the user to enable the system to upload alarm information when a motion detection alarm is triggered.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To test a channel's motion detection, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Tampering

The tampering settings screen is where the DVR can be setup to notify the user any time a camera is tampered with or if the output video is only displaying in one color. Below is a screenshot of the video tampering settings screen:

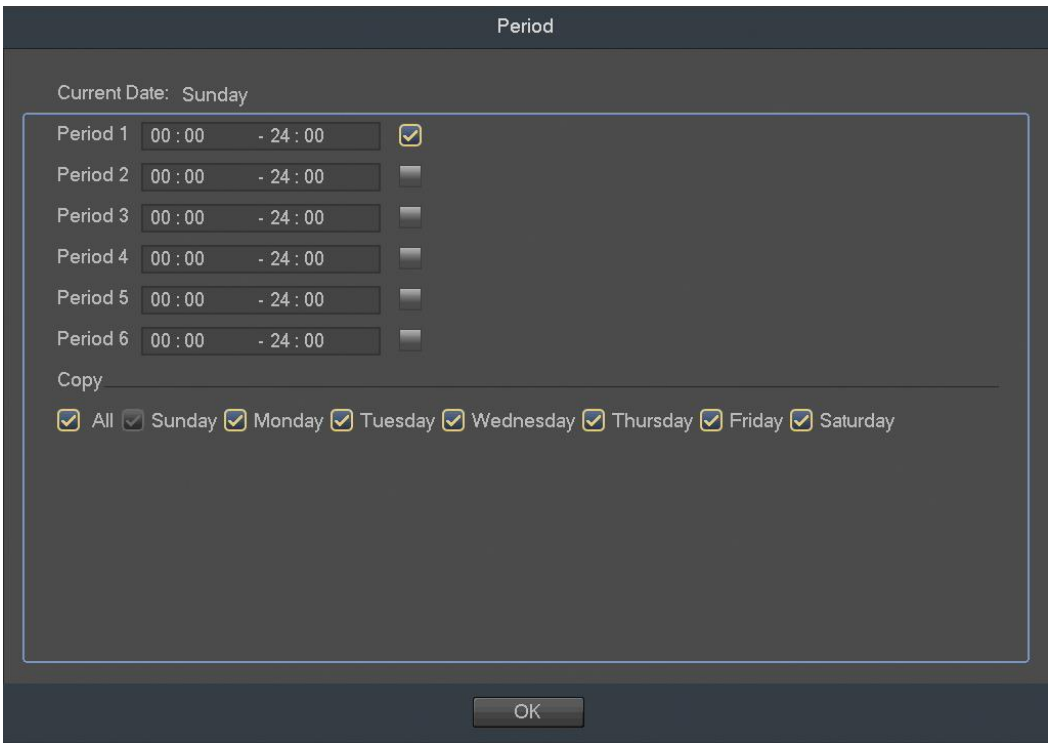


Below is a description of the fields on the Tampering settings page:

- **Channel:** The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
- **Enable:** This checkbox allows the user to enable the motion detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.
- **Period:** This setup button takes the user to the motion detection period settings screen. Below is a screenshot of the motion detection period settings screen.

- Click and drag on the green bars to specify time zones for motion detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press save to save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click Default to use the default settings.

- To specify time zones in greater detail for each day, click the Setup button to the left of the time bar, and the Time Period setup screen will appear. The screenshot below shows the Time Period settings screen:



- The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you'd like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

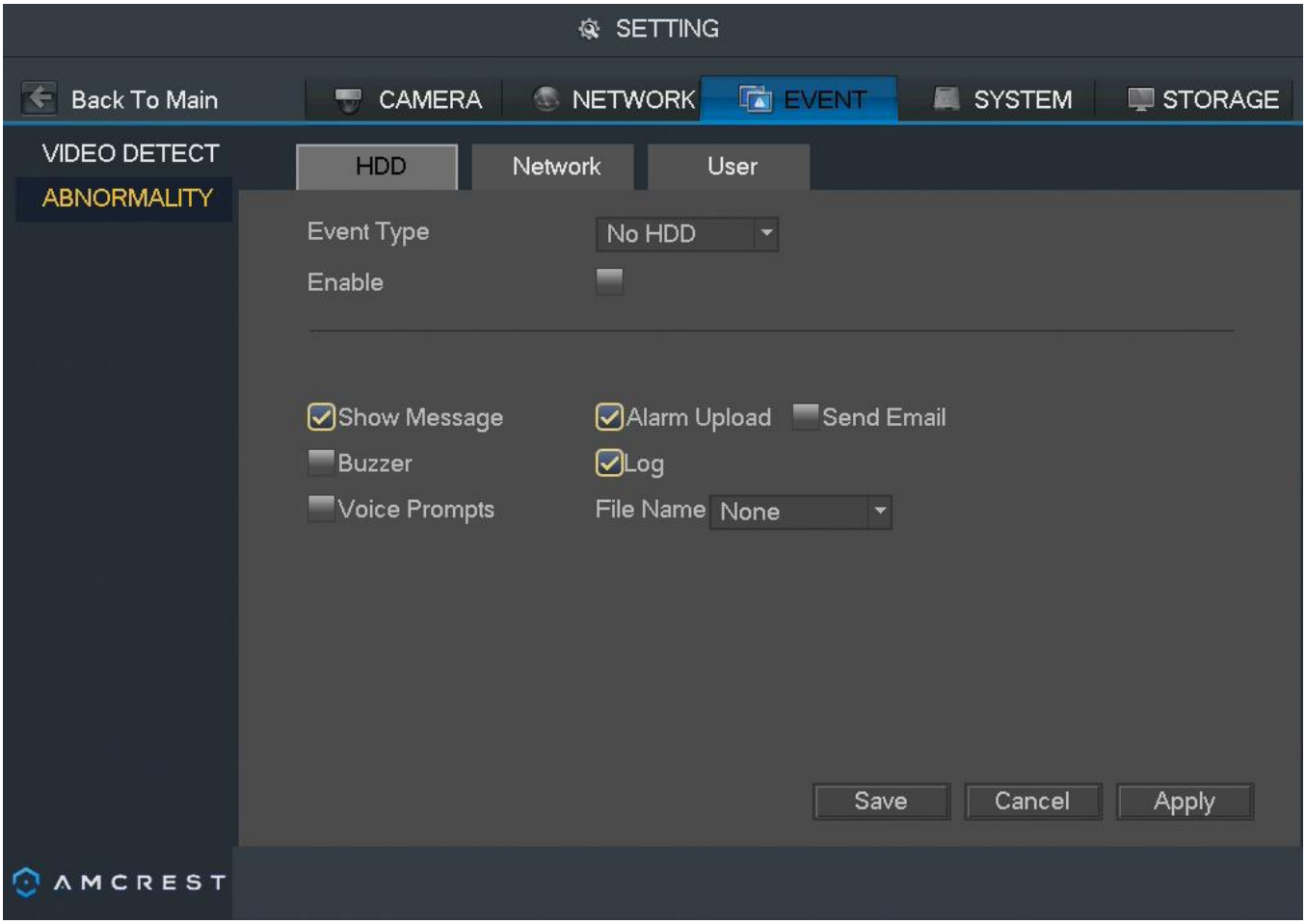
- **CAM Anti-Dither:** This field allows the user to set the anti-dither time. The values in this field can range from 5 to 600 seconds. This time value controls how long the alarm signal lasts. Based on motion detection, a buzzer can go off, a tour can begin, PTZ can be activated, a snapshot can be taken, or a channel can begin recording.
  - For example, if the anti-dither time is set to 10 seconds, each alarm may last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel functions will begin another 10 seconds while the screen prompt, alarm upload, email will not be activated again. After 10 seconds, if system detects another alarm signal, it can generate a new alarm since the anti-dither time has expired.
- **Record Channel:** This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab, it is the This field specifies in seconds how long the delay between alarm activation and recording should be.
- **Sensitivity –** Allows the user to set a preset sensitivity setting for motion detected events.
- **PTZ Activation:** Allows the user to active PTZ functionality to applicable PTZ devices.
- **Tour:** Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.
- **Snapshot: A**llows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Voice Prompts:** Allows the user to customize voice prompts for motion detected events.
- **Show Message:** This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.
- **Buzzer:** Allows the user to trigger a buzzer once a motion event is detected.
- **Log:** Allows the user to log all motion detected events that are triggered in the device.
- **Alarm Upload:** This checkbox allows the user to enable the system to upload alarm information when a motion detection alarm is triggered.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To test a channel's motion detection, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Abnormality

This screen is used to specify system action in the case of either hard drive abnormality, or network abnormality.
HDD.

This screen allows the user to specify actions that occur when there is an abnormality with the DVR's hard disk drive (HDD). Below is a screenshot of the HDD Abnormality settings screen:



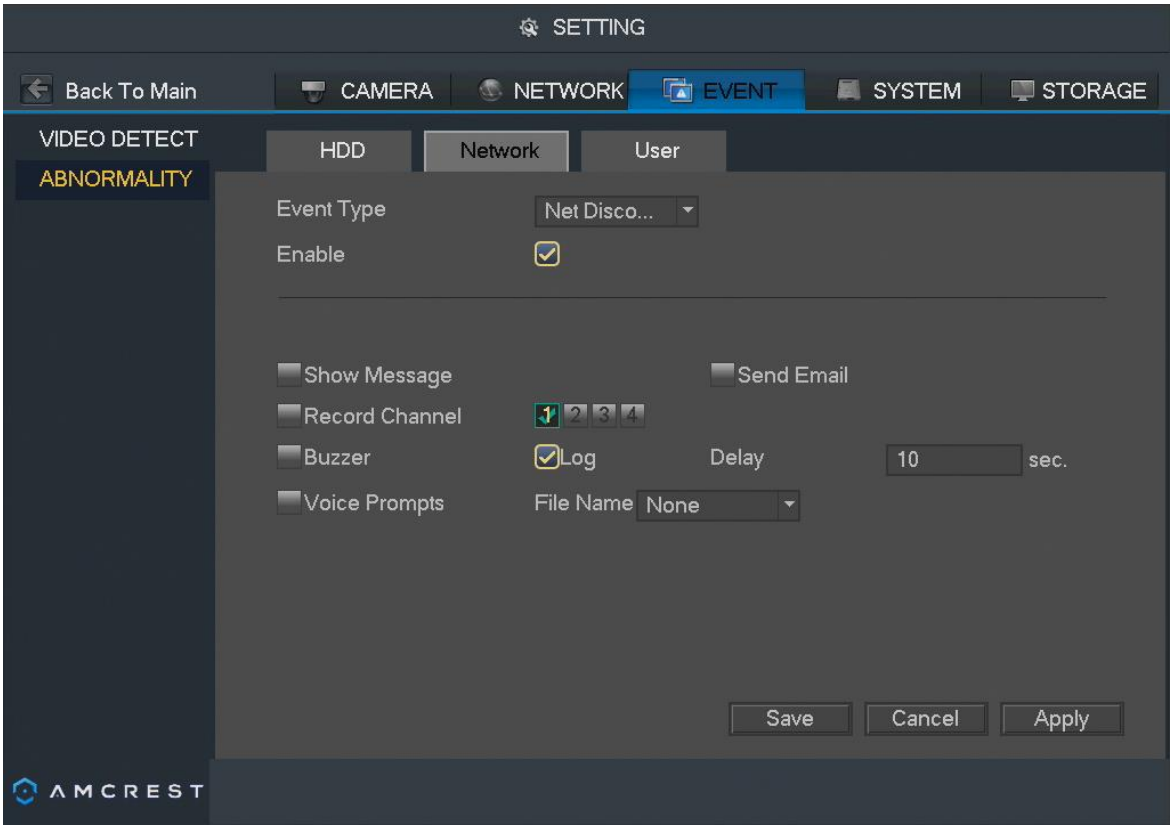
Below is an explanation of the fields on the HDD Abnormality settings screen:

- Event Type: This field allows the user to specify which HDD abnormality event type they would like to configure settings for.
- No Disk: No hard drive is detected.
- Disk Error: The hard drive has an error.
- Disk No Space: The hard drive is about to or has run out of space.
- Less Than: This field allows the user to specify at what percentage of free disk space this condition should be triggered.
- Enable: This checkbox allows the user to enable the features below for the specified event type.
- Show Message: This checkbox allows the user to enable the system to show an on-screen message when an HDD abnormality occurs.
- Alarm Upload: This checkbox allows the user to enable the system to upload alarm information when an HDD abnormality occurs.
- Send Email: This checkbox allows the user to enable the system to send an email when an HDD abnormality occurs.
- Buzzer: This checkbox allows the user to enable the system to activate a buzzer when an HDD abnormality occurs.

To save settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Network

This screen allows the user to specify actions that occur when there is an abnormality with the DVR's network connection. Below is a screenshot of the Network Abnormality settings screen:



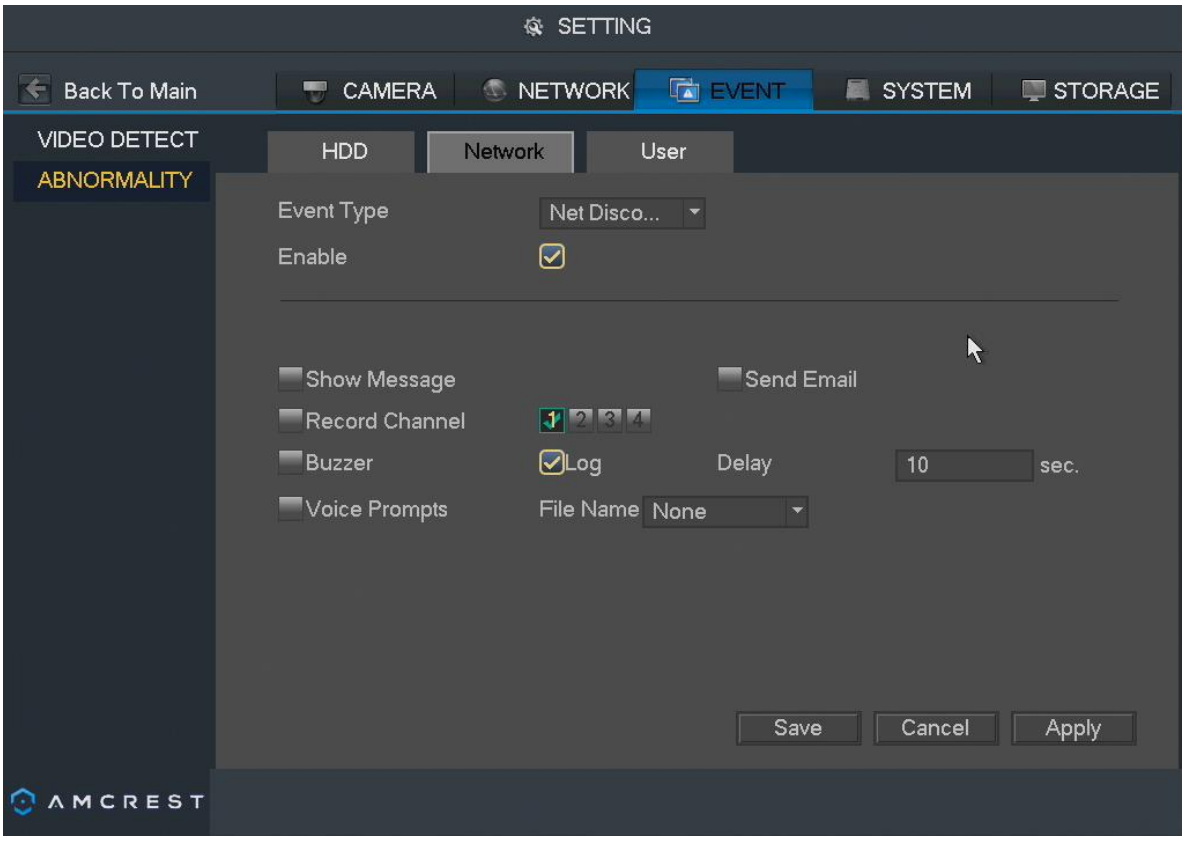
Below is an explanation of the fields on the Network Abnormality settings screen:

- Event Type: This field allows the user to specify which Network abnormality event type they would like to configure settings for.
  - Net Disconnected: The network connection has been disconnected.
  - IP Conflict: There is a device on the network with the same IP address.
  - MAC Conflict: There is a device on the network with the same MAC address.
- Enable: This checkbox allows the user to enable the features below for the specified event type.
- Show Message: This checkbox allows the user to enable the system to show an on-screen message when a network abnormality occurs.
- Send Email: This checkbox allows the user to enable the system to send an email when a network abnormality occurs.
- Record Channel: This checkbox allows the user to enable the system to start recording video when a network abnormality occurs. Multiple cameras can be specified to start recording based on this function.
- Buzzer: This checkbox allows the user to enable the system to activate a buzzer when a network abnormality occurs.
- Delay: This field specifies in seconds how long the delay between alarm activation and buzzer activation should be.

To save settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

User

This screen allows the user to specific actions that occur when there is an abnormality with the user account connection. Below is a screenshot of the User Abnormality settings screen:



Below is an explanation of the fields on the Network Abnormality settings screen:

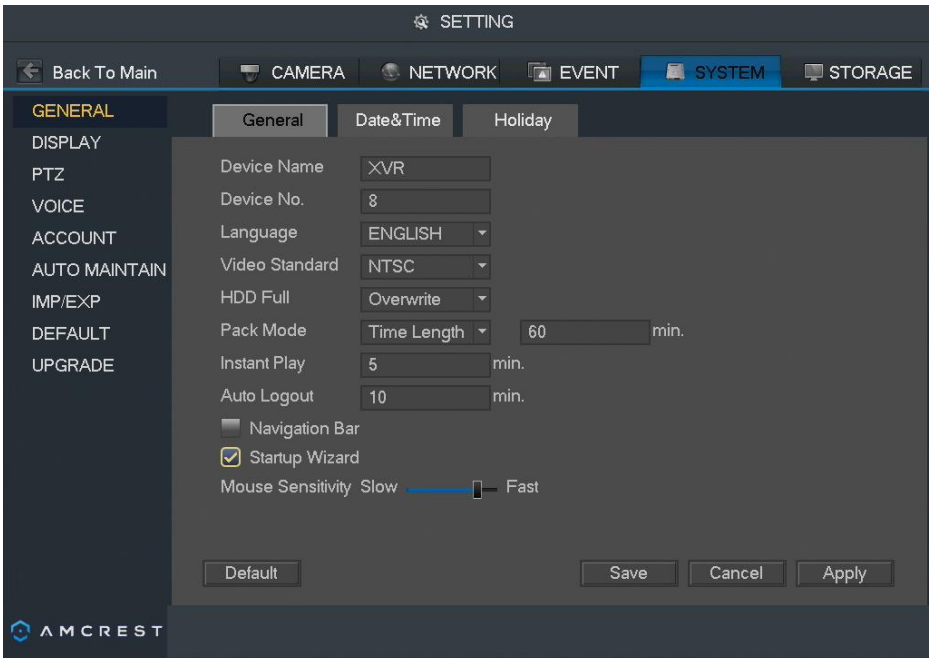
- Event Type: This field allows the user to specify which Network abnormality event type they would like to configure settings for.
  - Net Disconnected: The network connection has been disconnected.
  - IP Conflict: There is a device on the network with the same IP address.
  - MAC Conflict: There is a device on the network with the same MAC address.
- Enable: This checkbox allows the user to enable the features below for the specified event type.
- Show Message: This checkbox allows the user to enable the system to show an on-screen message when a network abnormality occurs.
- Send Email: This checkbox allows the user to enable the system to send an email when a network abnormality occurs.
- Record Channel: This checkbox allows the user to enable the system to start recording video when a network abnormality occurs. Multiple cameras can be specified to start recording based on this function.
- Buzzer: This checkbox allows the user to enable the system to activate a buzzer when a network abnormality occurs.
- Delay: This field specifies in seconds how long the delay between alarm activation and buzzer activation should be.

To save settings, click the Save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

System

General

This screen displays general settings for the DVR. Below is a screenshot of the general settings screen:



Below is an explanation of the fields on the General settings screen:

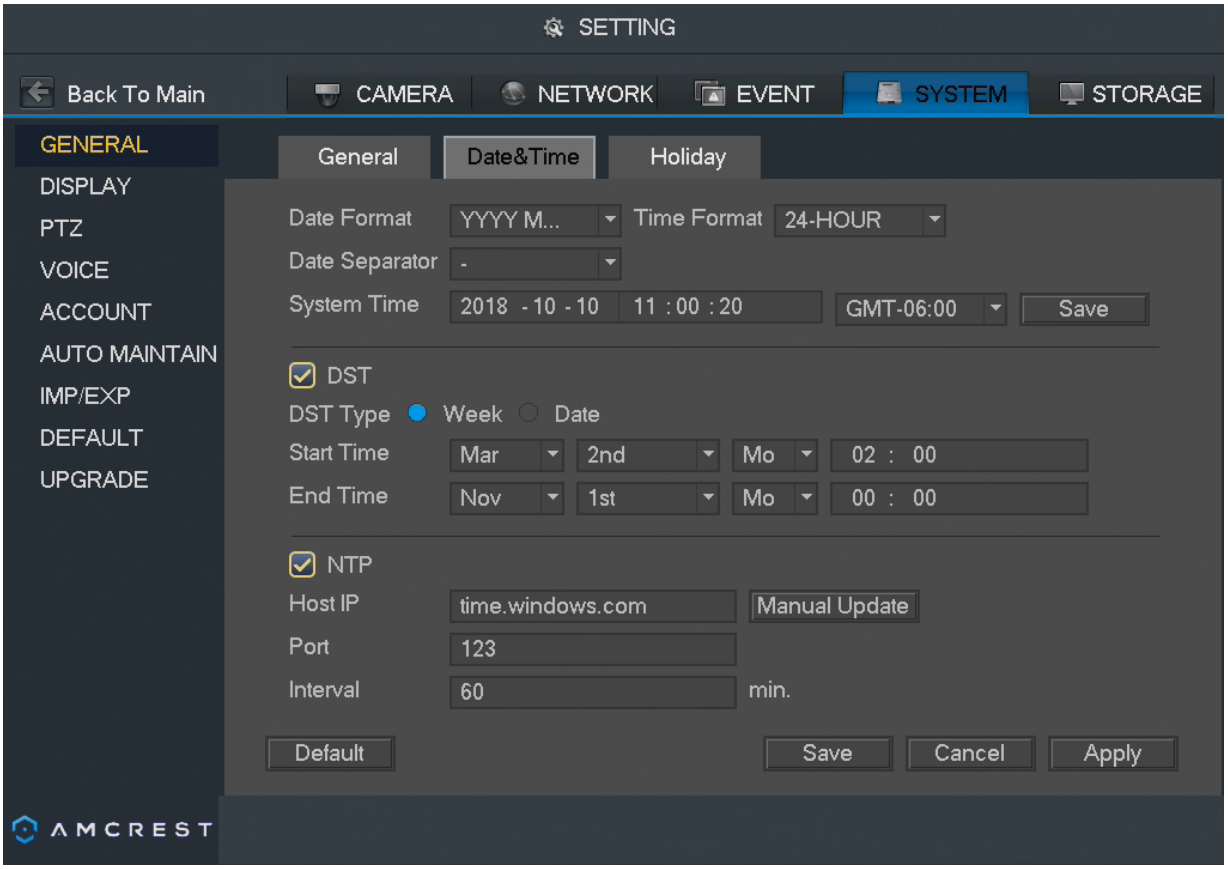
- Device Name: This field allows the user to customize the name of the HDCVI.
- Device No: This field allows the user to customize the device's number.
- Language: This dropdown box allows the user to select a language for the DVR. Options include English, Simplified Chinese, Traditional Chinese, Italian, Japanese, French, and Spanish.
- Video Standard: This dropdown box allows the user to select a video standard. The options are between PAL and NTSC.
- HDD Full: This dropdown box allows the user to specify what to do when the HDD is full. There are two options:
  - Overwrite: This option lets the DVR overwrite the oldest recorded video on the DVR.
  - Stop Record: This option causes the DVR to stop recording once the HDD is full.
- Pack Duration: This field allows the user to define the recording duration. The default value is 60 minutes.
- Instant Play: This field allows the user to set the playback time frame that is viewed in the preview interface. This value can range from 5 to 60 minutes.
- Auto Logout: This field allows the user to define in minutes how long the system can stay idle before a user is logged out. The value can range from 0 to 60 minutes.
- Navigation Bar: This checkbox allows the user to enable the navigation bar that shows on the main screen.
- Startup Wizard: This checkbox allows the user to enable the startup wizard the next time the system is restarted.

Mouse Sensitivity: This sliding scale allows the user to increase the movement and double click speed of the mouse.

To rest to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Date and Time

This screen displays date and time settings for the DVR. Below is a screenshot of the Date & Time settings screen:



Below is an explanation of the fields on the Date & Time settings screen:

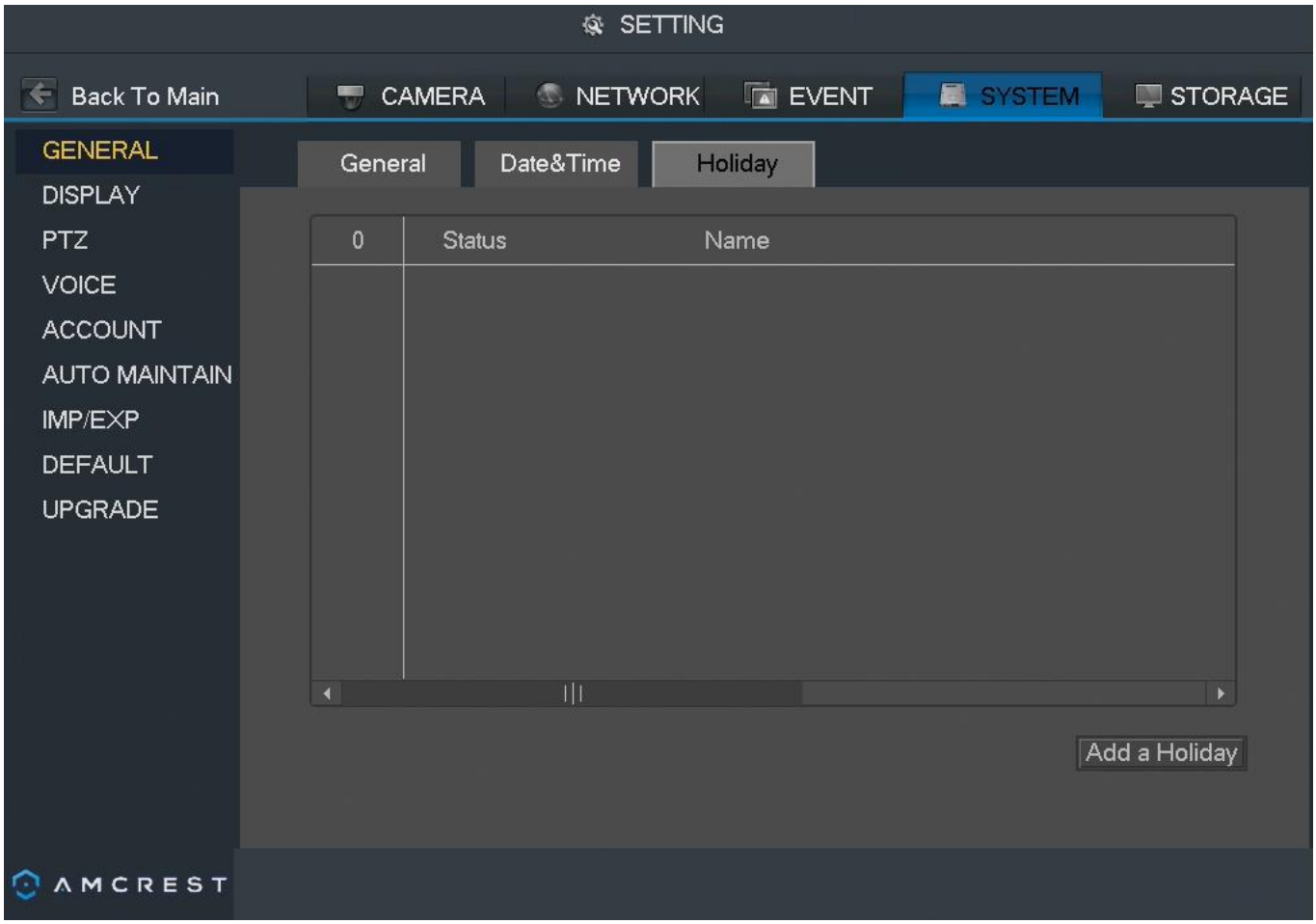
- Date Format: This dropdown box allows the user to specify a date and time format for the DVR to use. There are 3 options.
  - YYYY MM DD: Year, Month, Day.
  - MM DD YYYY: Month, Day, Year.
  - DD MM YYYY: Day, Month, Year.
- Time Format: This dropdown box allows the user to specify a time format for the DVR to use. There are two options.
  - 24 Hour
  - 12 Hour
- Date Separator: This dropdown box allows the user to specify a date separator. There are 3 options:
  - – Dash
  - / Forward Slash
  - _ Underscore
- System Time: This field allows the user to set the system time and time zone. Click Save to save the system time as it is shown in the display.
- Time Zone: This dropdown box allows the user to specify a time zone for the DVR to use.
  DST: This checkbox allows the user to activate DST for the system.
- DST Type: This field allows the user to pick whether DST starts on a specific day of the week, or on a specified.
- Start Time: This field allows the user to enter a start date and time for DST to begin.
- End Time: This field allows the user to enter an end date and time for DST to end on.

- NTP: NTP stands for Network Time Protocol. This checkbox allows the user to enable the use of an NST server to synchronize the date and time settings on the DVR.
- Server IP: This field allows the user to set the NTP server IP address. Clicking the Manual Update button pulls a time update from the server.
- Port: This field allows the user to set the NTP server port number.
- Interval: This field allows the user to set the NTP synchronization interval. This number determines how often the DVR queries the NTP server to get accurate date and time information. This value can be between 0 and 60 minutes.

To revert to default settings, click the Default button near the bottom left hand corner. To save settings, click the save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Holiday

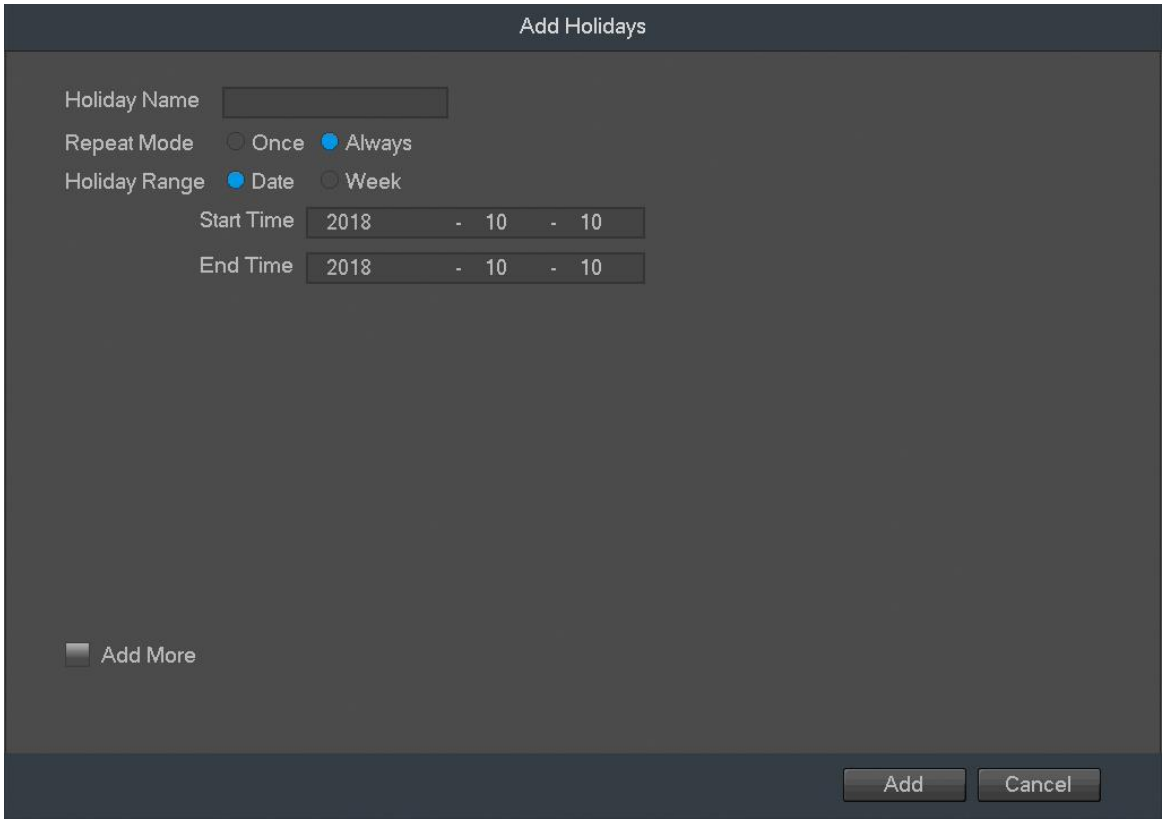
This screen displays the holiday settings for the DVR. Below is a screenshot of the Holiday settings screen:



Below is an explanation of the fields on the Holiday settings screen:

- 1: This number indicates how many holidays are in the system. Each line item has a number to signify its place in the list.
- Status: This dropdown box indicates the status of the holiday. There are two options:

- Open: The holiday is active, and the DVR will stop recording for that holiday period.
- Stop: The holiday is inactive, and the DVR will continue normal operation for that holiday period.
  Name: This column is where the name of the holiday is displayed.
- Date: This column shows the date that the holiday occurs on.
- Period: This column shows the range in which the holiday occurs.
- Edit: This column has a button that allows for the editing of the holiday.
- Delete: This column has a button that allows for the deletion of the holiday.
- Add New Holidays: This button allows the user to add a holiday. Below is screenshot of the Add New Holidays screen.

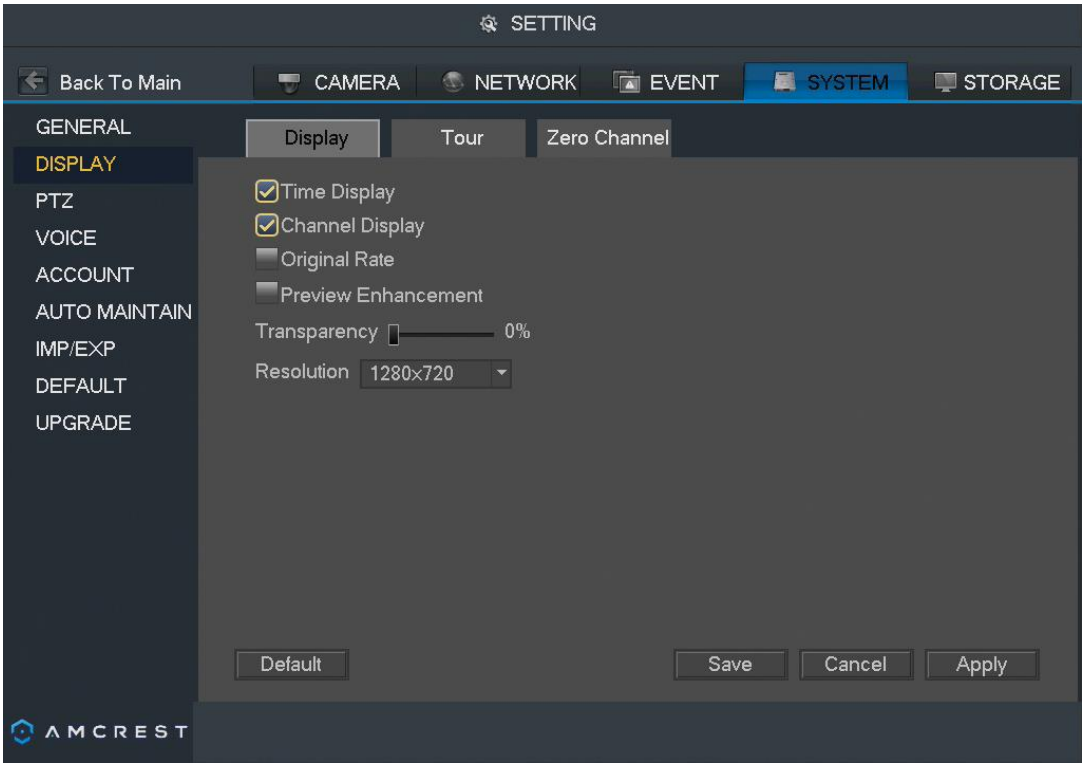


Note:

- Holidays take precedence over the scheduled setup.
- Holidays do not roll over based on their inherent date. Meaning, if a holiday is set for October 30th, then the system will treat every October 30th as a holiday.

Display

This screen is used to set display settings for the DVR. Below is a screenshot of the display settings screen:



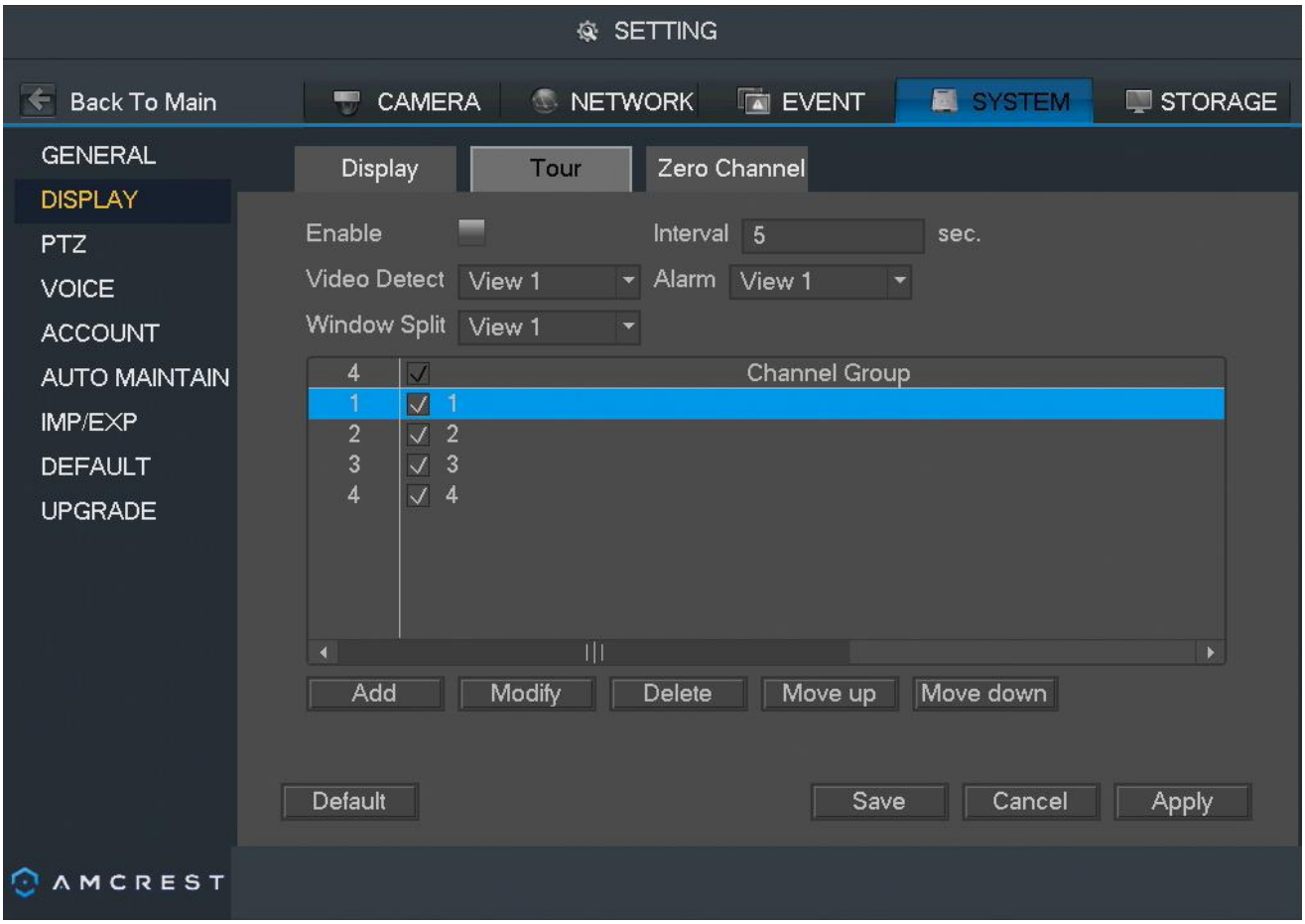
Below is an explanation of the fields on the Display settings screen:

- Time Display: This checkbox allows the user to choose whether the time stamp shows in the playback video.
- Channel Display: This checkbox allows the user to choose whether the channel number is displayed in the playback video.
- Original Rate: This checkbox allows the user to choose the original rate of the display being monitored by the device.
- Preview Enhancement: This checkbox allows the user to optimize the margin of the playback video.
- Transparency: This slider allows the user to change the transparency of the menu screens on the DVR. The range goes from 0% to 100%.
- Resolution: This dropdown box allows the user to change the resolution of the DVR. There are 4 options:
  - 1920×1080
  - 1280×1024 (default)
  - 1280×720
  - 1024×768

To revert to default settings, click the Default button near the bottom left hand corner. To save settings, click the save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Tour

This screen is used to activate tour functionality for the live preview. Below is a screenshot of the Tour Setup screen:



Below is an explanation of the fields on the Tour Setup settings screen:

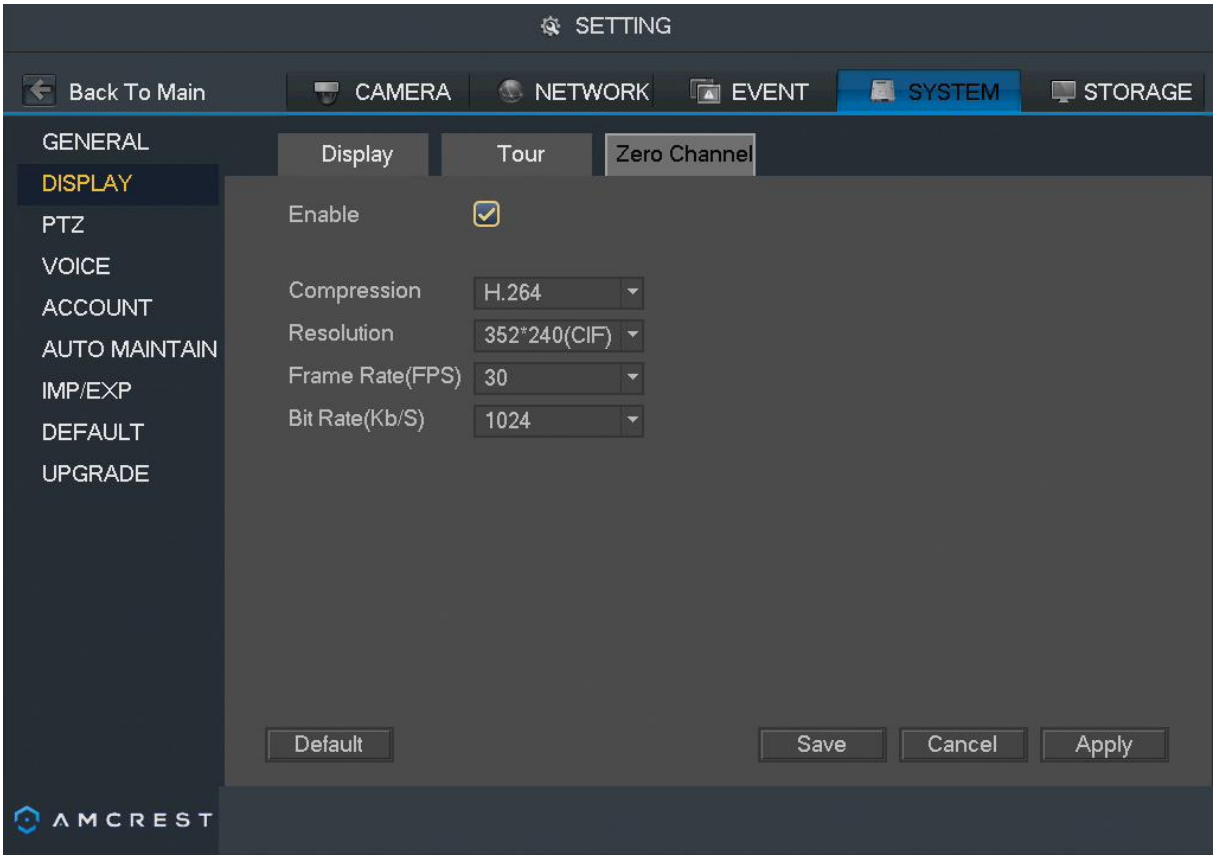
- Enable: This checkbox allows the user to enable the tour functionality.

  Note: An alternate way to enable or disable tour is by clicking  or  on the navigation bar.
- Interval: This field allows the user to set an interval in seconds for how quickly the tour cycles through channels. This value ranges from 5 to 120 seconds.
- Video Detect: This dropdown box allows the user to select whether they want to see 1 or 4 cameras at a time in the tour.
- Alarm: This is a list that allows the user to select channels and add alarms as a part of the tour.
- Window Split: This list allows the users to select channels add as a part of the tour. The number in the corner indicates how many channels are available.
  - Add: This button allows the user to add a channel from the tour.
  - Modify: This button allows the user to modify or edit a channel from the tour.
  - Delete: This button allows the user to remove a channel from the tour.
  - Move Up: This button allows the user to move a camera up in the tour queue.
  - Move Down: This button allows the user to move a camera down in the tour queue.

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Zero Channel

This screen is used to configure zero channel encoding functionality. This feature allows for the preview of several channels in one channel's window. Note: This feature only works on the Web Access view. Below is a screenshot of the Zero-Channel Encoding settings screen:



Below is an explanation of the fields on the Zero-Channel Encoding settings screen:

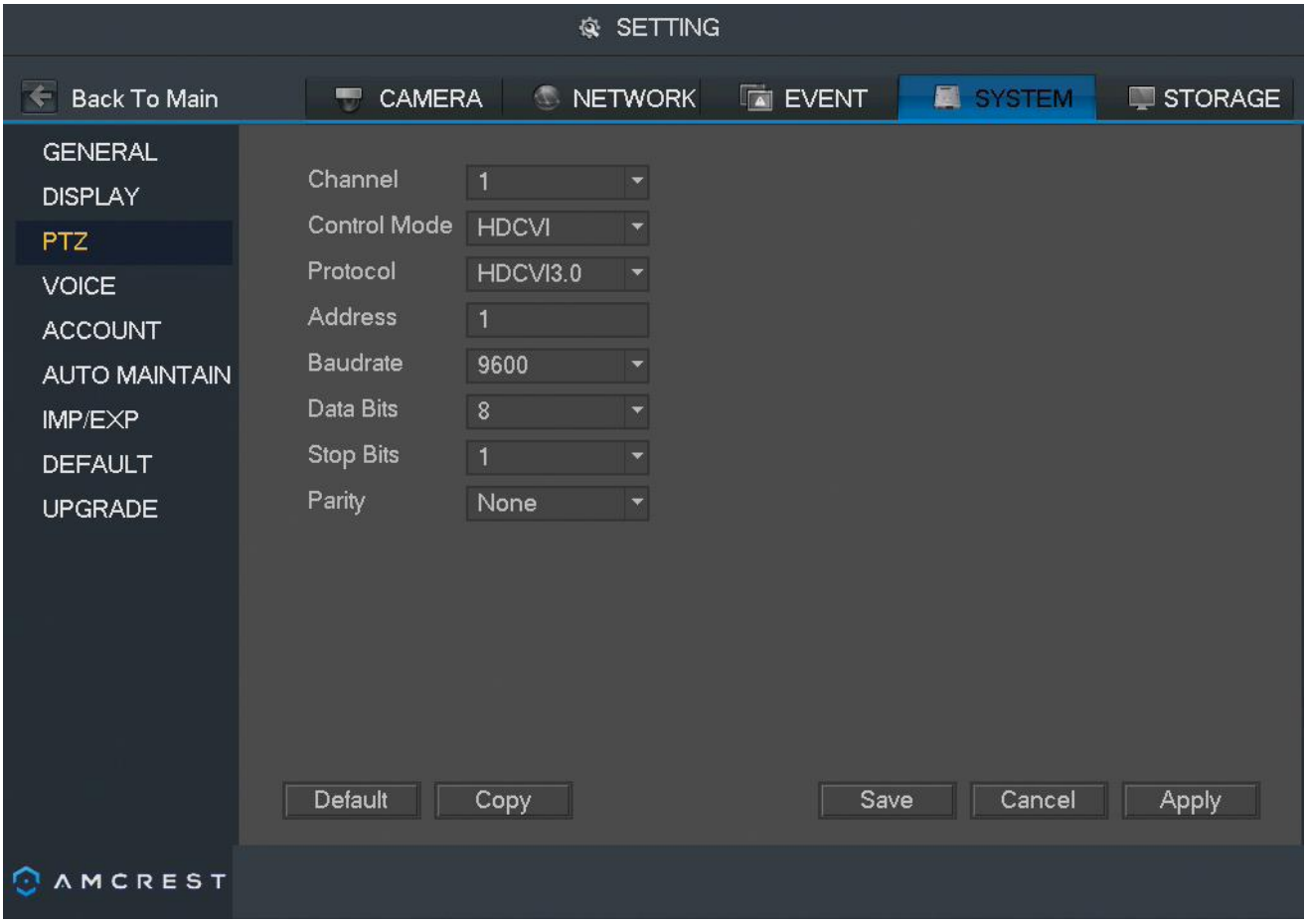
- Enable: This checkbox allows the user to enable the zero-channel encoding functionality.
- Compression: This dropdown box allows the user to select the compression settings used by the system for zero-channel encoding. The default is H.264.
- Resolution: This dropdown box allows the user to select the resolution used by the system for zero-channel encoding. There are 2 options for resolution (in pixels):
- CIF: 352 x 240
- D1 720 x 480
- Frame Rate: This dropdown box allows the user to select the frame rate used by the system for zero-channel encoding. The range is between 1 and 30 frames per second.
- Bit Rate: This dropdown box allows the user to select the bit rate used by the system for zero-channel encoding. There are 7 options, and all are measures in kilobytes per second (Kb/S):

  ○ 896 ○ 1024 ○ 1280 ○ 1536 ○ 1792 ○ 2048 ○ 4016
- Overlay: This checkbox allows the user to enable a timestamp on the zero-channel encoded video.
- Set: This button allows the user to set a time stamp position on the video.

To revert to default settings, click the Default button near the bottom left hand corner. To save settings, click the save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

PTZ

This screen is used to configure Pan/Tilt/Zoom (PTZ) functionality. Below is a screenshot of the PTZ settings screen:



Below is an explanation of the fields on the PTZ settings screen:

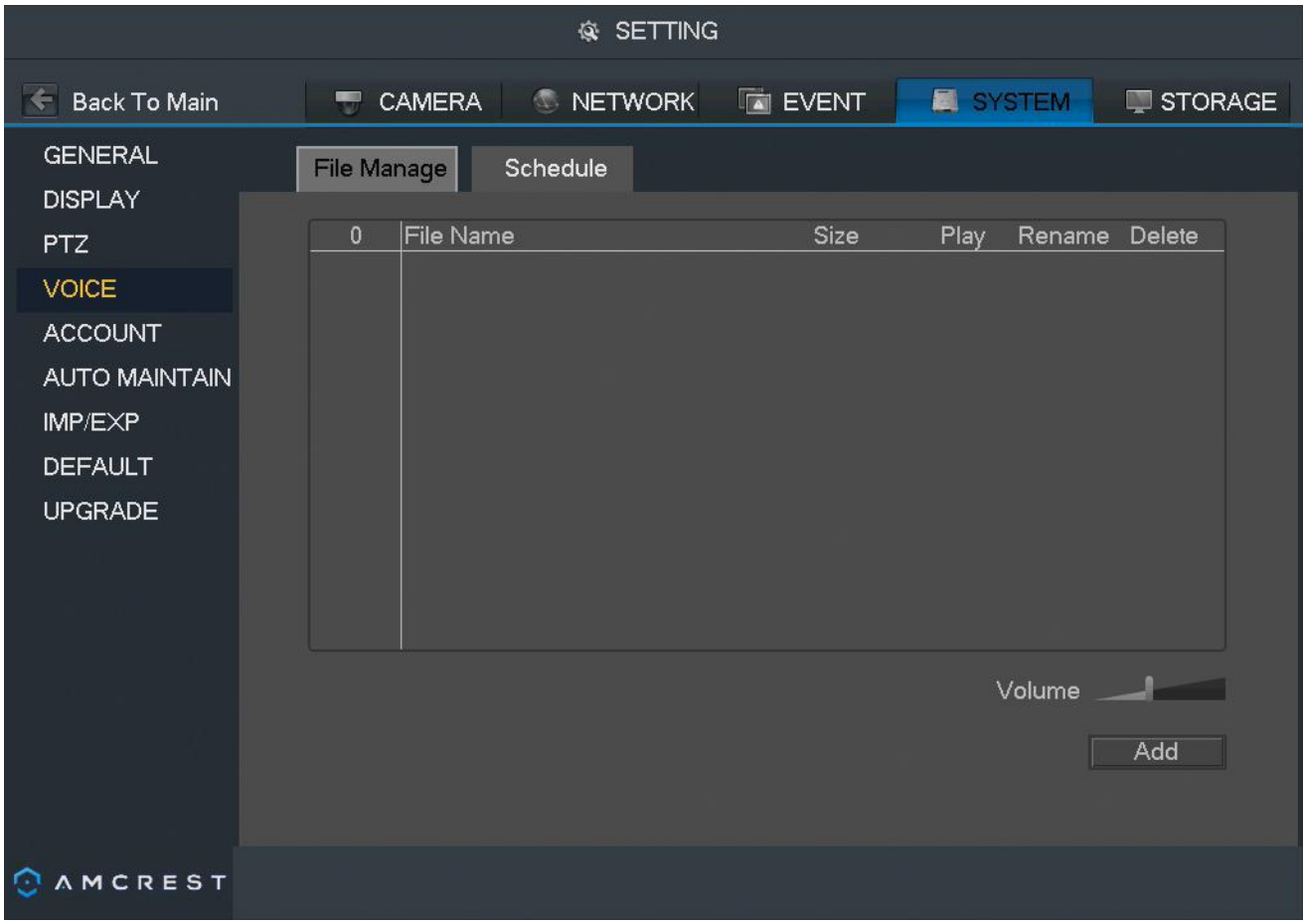
- Channel: This dropdown box allows the user to pick which channel they would like to change PTZ settings for.
- Control Mode: This dropdown box allows the user to pick which control move they would like to use for the specified channel. The two options are Serial and HDCVI.
- Protocol: This dropdown box allows the user to pick a protocol for the specified channel. Default is HDCVI.
- Address: This dropdown box allows the user to pick the corresponding PTZ address for the channel.
- Baud Rate: This dropdown box allows the user to pick a baud rate for the PTZ channel. The options are 1200, 2400, 4800, 9600, 19200, 38400, 57600, or 115200.
- Data Bits: This dropdown box allows the user to pick the amount of data bits for the PTZ transmission. The options are 5, 6, 7, or 8.
- Stop Bits: This dropdown box allows the user to pick the amount of stop bits for the PTZ transmission. The options are 1, 1.5, or 2.
- Parity: This dropdown box allows the user to pick the parity for the PTZ transmission. The options are none, odd or even.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To save settings, click the save button near the bottom right

hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Voice

This screen is used to set and manage voice file settings for scheduled alerts. To use this function, you will need to use a USB device with preset voice files on them. The interface will import the files into the **File Manage** tab. Below is a screenshot of the file manage tab:

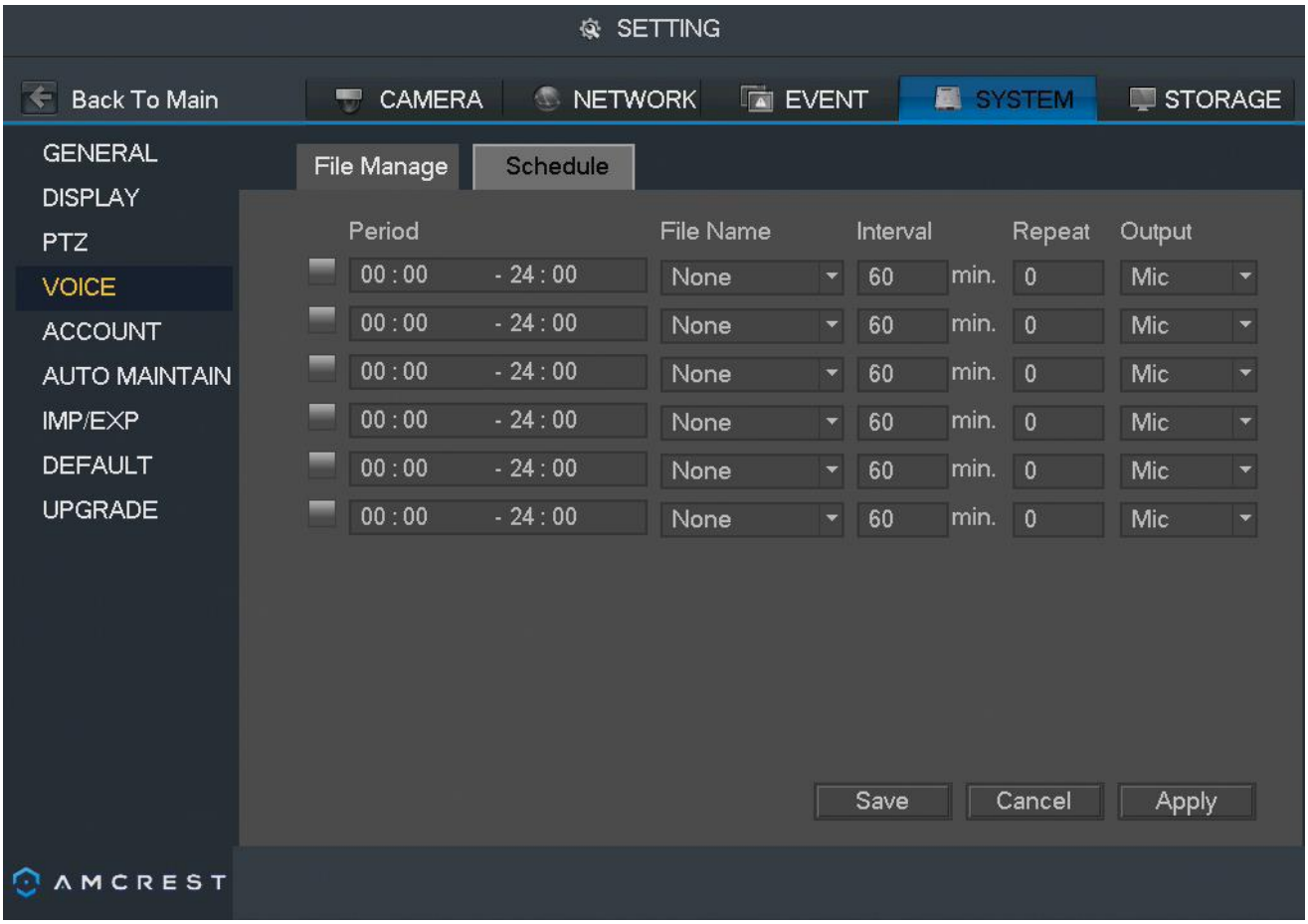


Below is an explanation of the fields on the File Manage screen:

File Name: Indicates the name of the file you will be importing into the system.
Size: Indicates the size of that file.
Play: Allows the user to playback and hear the file they are importing.
Rename: Allows the user to rename the file if necessary.
Delete: Allows the user to delete the file from the USB storage device.
Add: Allows the user to add or import the voice file into the system.

Schedule

This tab allows the user to schedule a voice file towards a specific period on the device. Below is a screenshot of the schedule tab:



Below is an explanation of each field in this menu:

Period: Allows the user to set a time period for the schedule voice event.
File Name: Allows the user to choose which voice file will be used during the event.
Interval: Allows the user to determine a specific interval of time (in minutes) the event will occur.
Repeat: Allows the user to set a specific number of repeats for the indicated voice alarm.
Output: Allows the user to set the audio output of the voice event. This will be default to **Mic**.

To save settings, click the save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Account

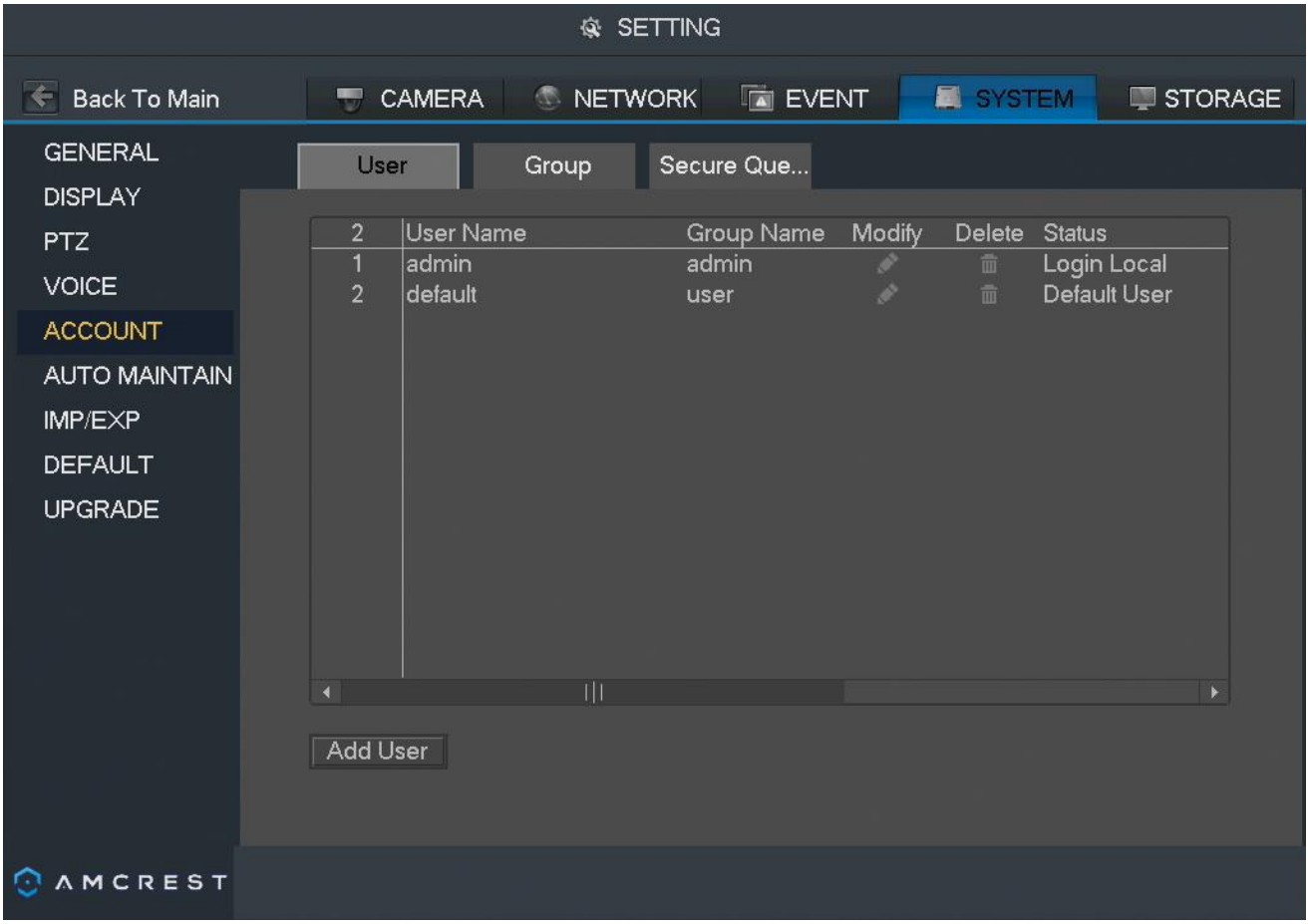
This menu is used to manage user accounts, user account passwords, and user groups. Below are a few considerations to keep in mind when editing this information:

- The DVR comes with 2 usernames by default:
- Username: admin Password: admin
- Username: default Password: default
- It is highly recommended to change the passwords for the admin and default accounts.

- Each user name and user group name can only contain letters, numbers, underline marks, dashes, or dots. No empty spaces are allowed.
- The maximum number of users is 64, and the maximum number of users that can be in one group is 20.
- There are two levels for user management: administrator and user. Administrator has more rights than a normal user and can modify key DVR settings.
- Each user can belong to only one group, and user rights cannot exceed group rights.

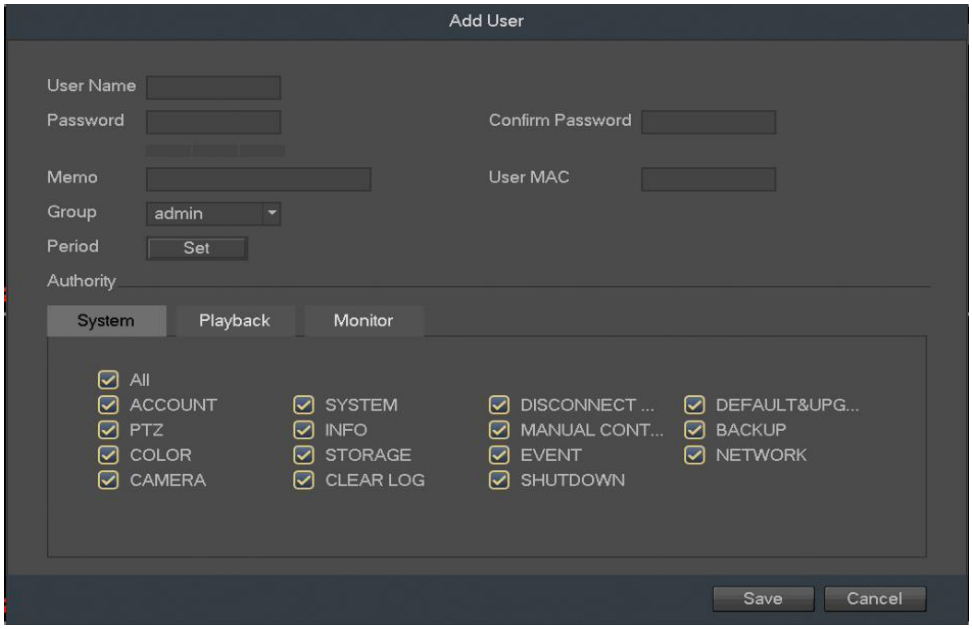
User

This screen is used to configure User Account settings. Below is a screenshot of the User Account settings screen:



Below is an explanation of the fields on the User Account settings screen:

- Number: This number indicates how many users are in the system. Each line item has a number to signify its place in the list.
- User Name: This column indicates an account's username.
- Group Name: This column shows which group the username belongs to.
- Modify: This column has a button that allows for the account's properties to be edited.
- Delete: This column has a button that allows for the account's properties to be deleted.
- Status: This column shows what the status of a certain account is.
- MAC Address: This column shows the account's MAC address.
- Add User: This button allows the user to add another user account. Below is a screenshot of the Add User screen.

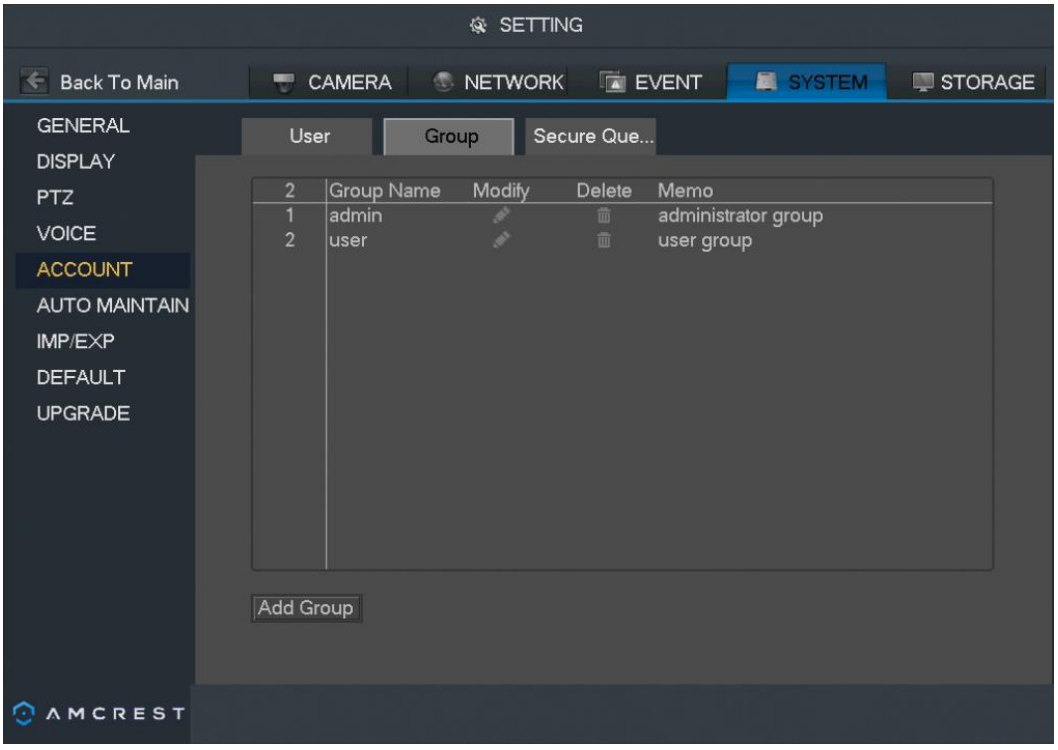


Note:

- It is recommended to give the general user fewer rights than an administrative one.
- When a new user is created, a MAC address can be entered for the user. This can limit the user's ability to logon from another device. If left blank, the user can logon from any MAC address.
- There is a total of 98 rights that can be assigned to a user.

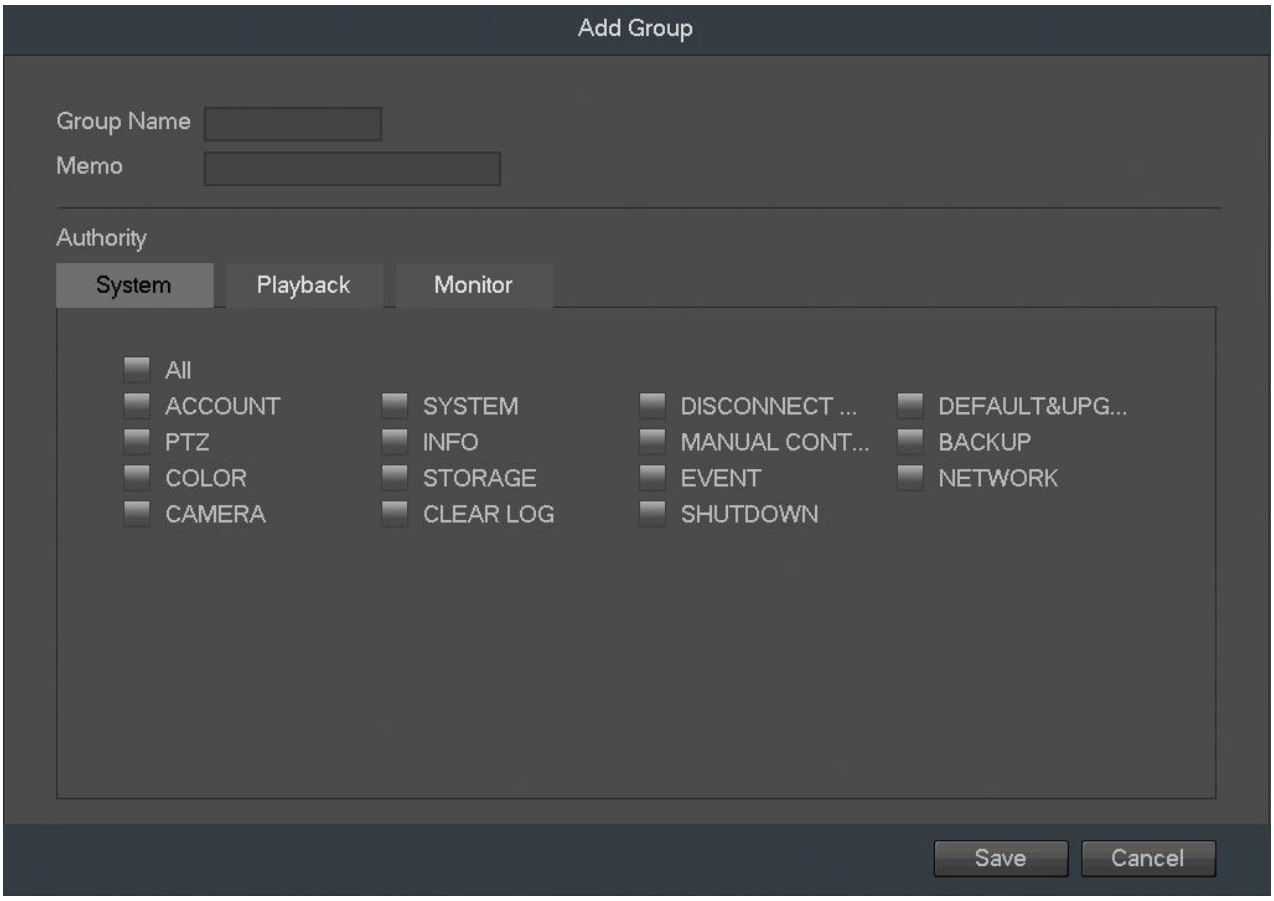
Group

This screen is used to configure Group Account settings. Below is a screenshot of the Group Account settings screen:



Below is an explanation of the fields on the User Group settings screen:

- Number: This number indicates how many groups are in the system. Each line item has a number to signify its place in the list.
- Group Name: This column indicates an account's username.
- Modify: This column has a button that allows for the account's properties to be edited.
- Delete: This column has a button that allows for the account's properties to be deleted.
- Memo: This column indicates any notes about the user group.
- Add Group: This button allows the user to add another user group. On the next page is a screenshot of the Add Group screen.

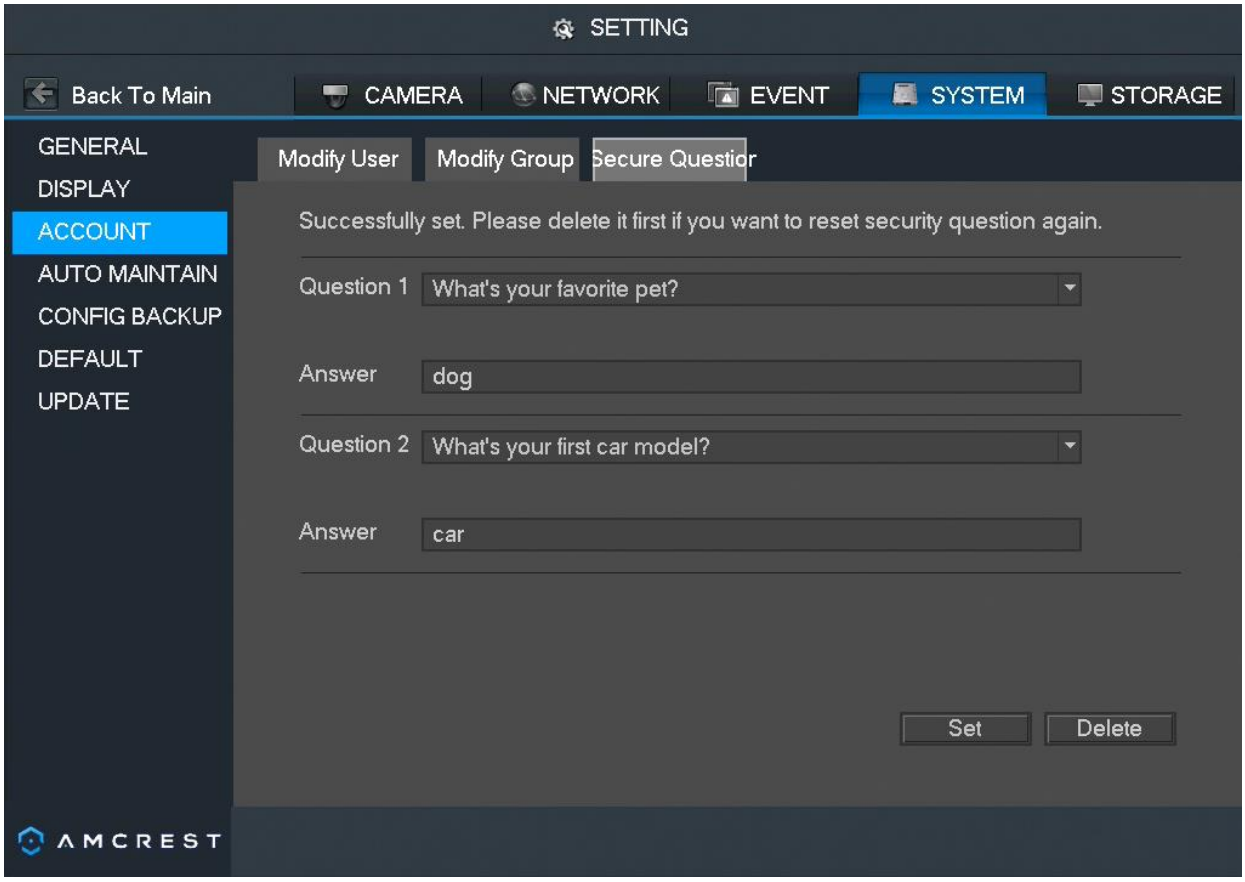


Note:

- It is recommended to give the general user fewer rights than an administrative one.
- There is a total of 98 rights that can be assigned to a user.

Security Questions

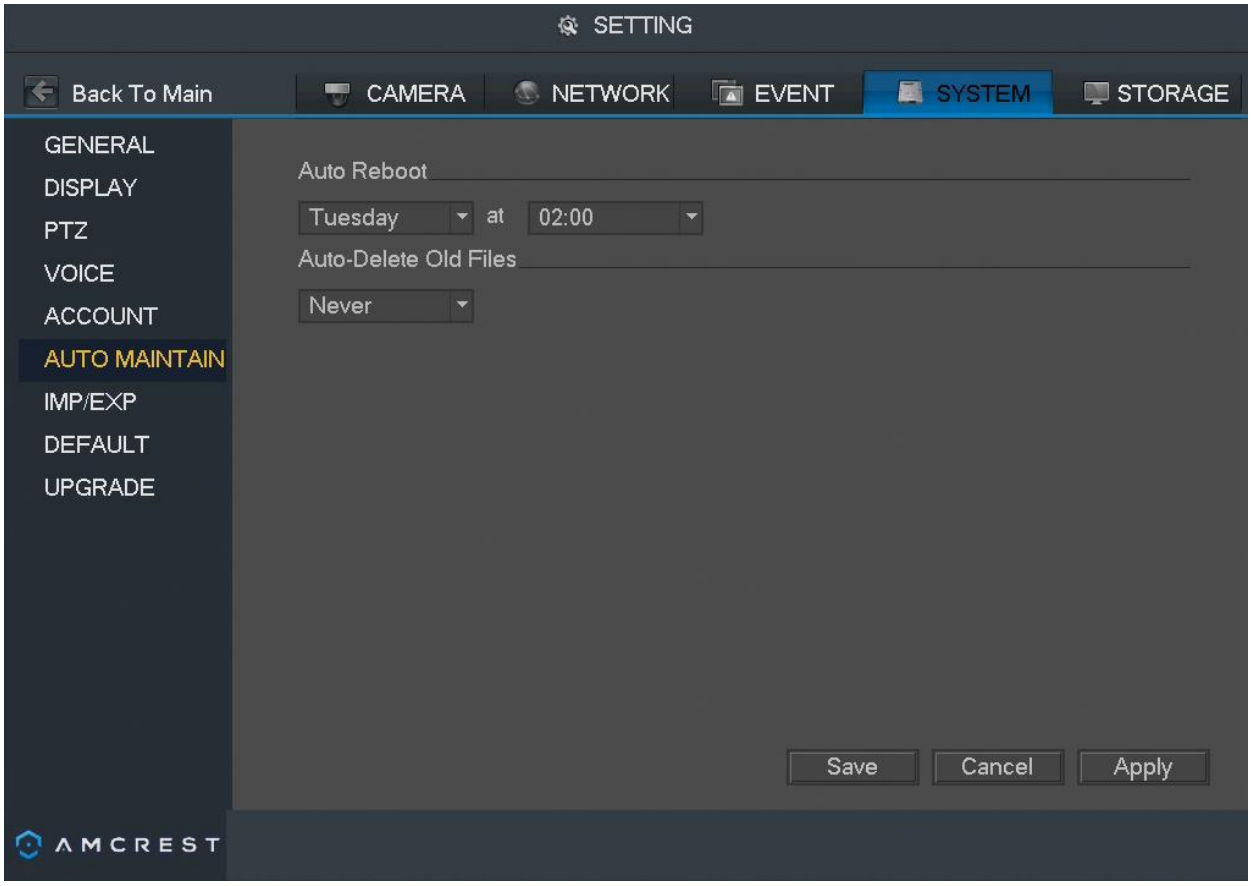
This screen is used to configure or modify security questions for password resets. Below is a screenshot of this menu:



To update or modify a security questions from the dropdown menu choose a security question from the **Question 1** field. Then in the **Answer** field, place the answer to that question. Do the same for questions two. When you have finished creating your security questions, click on the **Set** button to set and apply the settings to your NVR. To delete a question, click on **Delete.**

Auto Maintain

This screen is used to configure Auto Maintenance settings for the DVR. Below is a screenshot of the Auto Maintain settings screen:



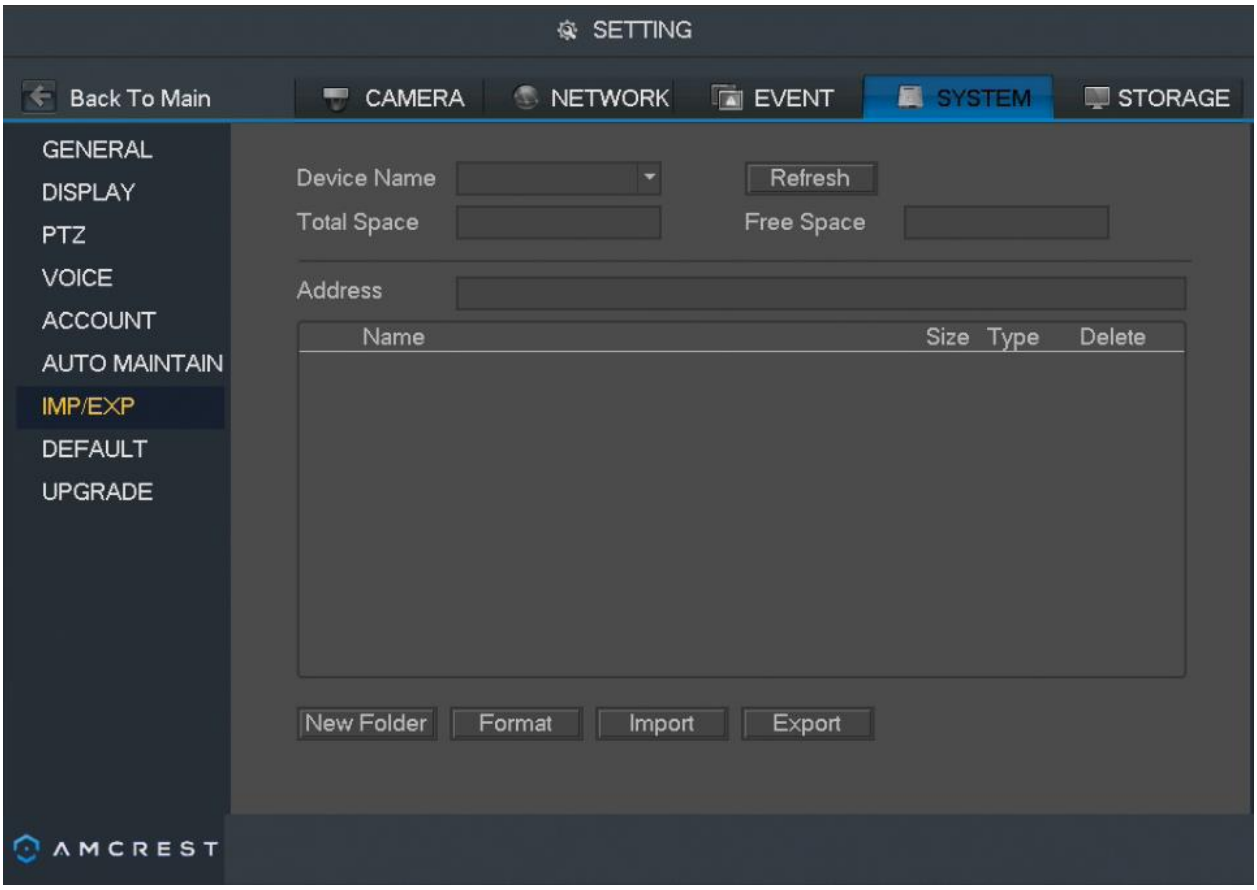
Below is an explanation of the fields on the Auto Maintain settings screen:

- Auto Reboot: This dropdown field allows the user to set a day of the week and time to automatically reboot the system to keep the system healthy.
- Auto Delete Old Files: This dropdown field allows the user to delete old files. The two settings are Never and Customized. When customized is selected, several days can be specified. Any files that exist past that many days in the past are deleted to create space on the DVR's hard drive.

To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

IMP/EXP

This screen is used to manage importing and exporting of system configurations. This feature can be used to clone the settings from one DVR to another. Below is a screenshot of the IMP/EXP settings screen:

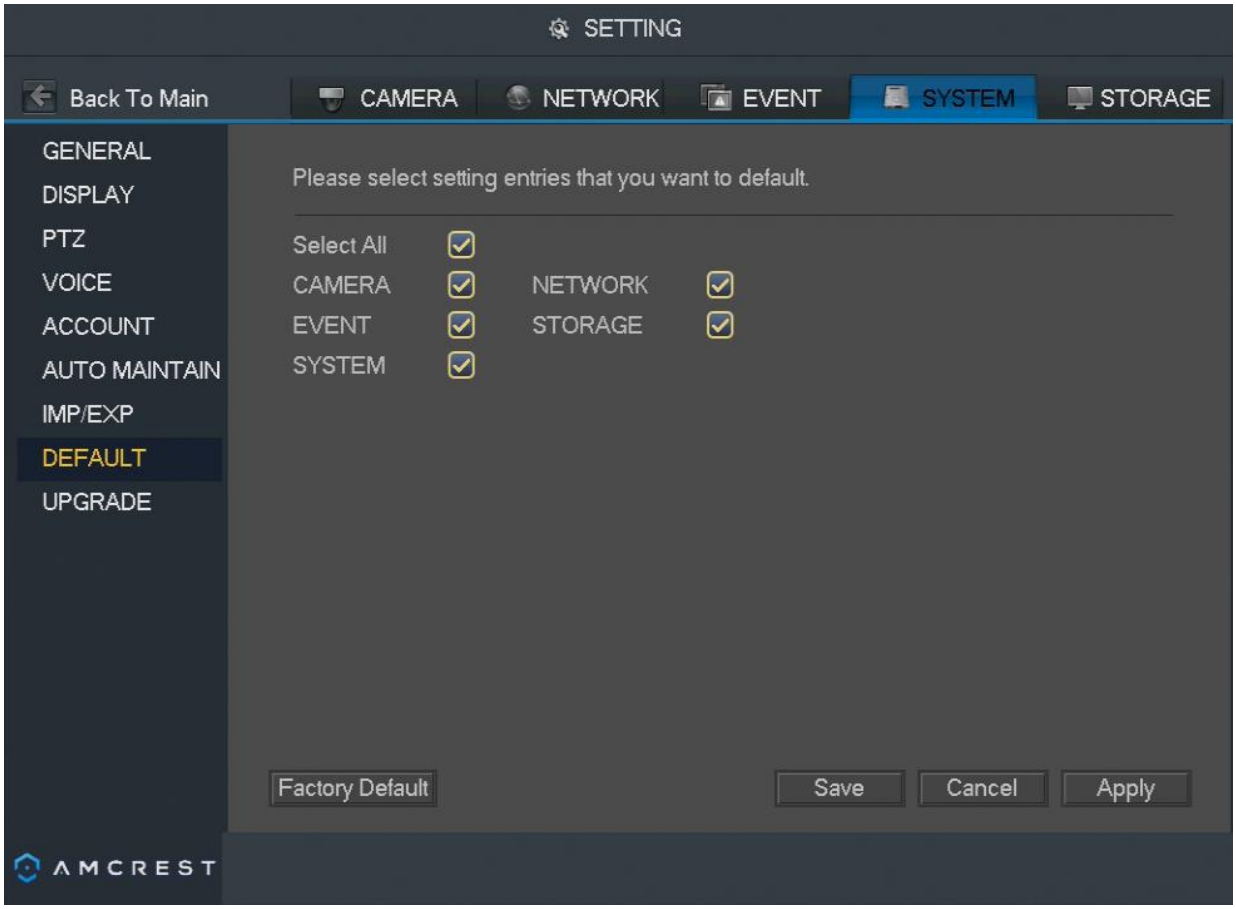


Below is an explanation of the fields on the Config Backup settings screen:

- Device Name: This dropdown field allows the user to select a device to pull configuration data from.
- Refresh: This button refreshes the list of devices connected to the DVR.
- Total Space: This field displays the total storage capacity on the selected device.
- Free Space: This field displays the remaining storage capacity on the selected device.
- New Folder: This button allows the user to create a new folder on the selected device.
- Format: This button allows the user to format the selected device.
- Import: This button allows the user to import configuration data to the DVR.
- Export: This button allows the user to export current configuration data to another device.

Default

This screen is used to revert the DVR back to its default settings. This feature can be used to restore the DVR to its factory setup conditions. Below is a screenshot of the Default settings screen:



There are 5 different settings areas that can be reset to default settings: Camera settings, Event settings, Network settings, System settings, and Storage settings. All of these settings can be reset by the use of the All checkbox. The following settings are also reset with a factory reset:

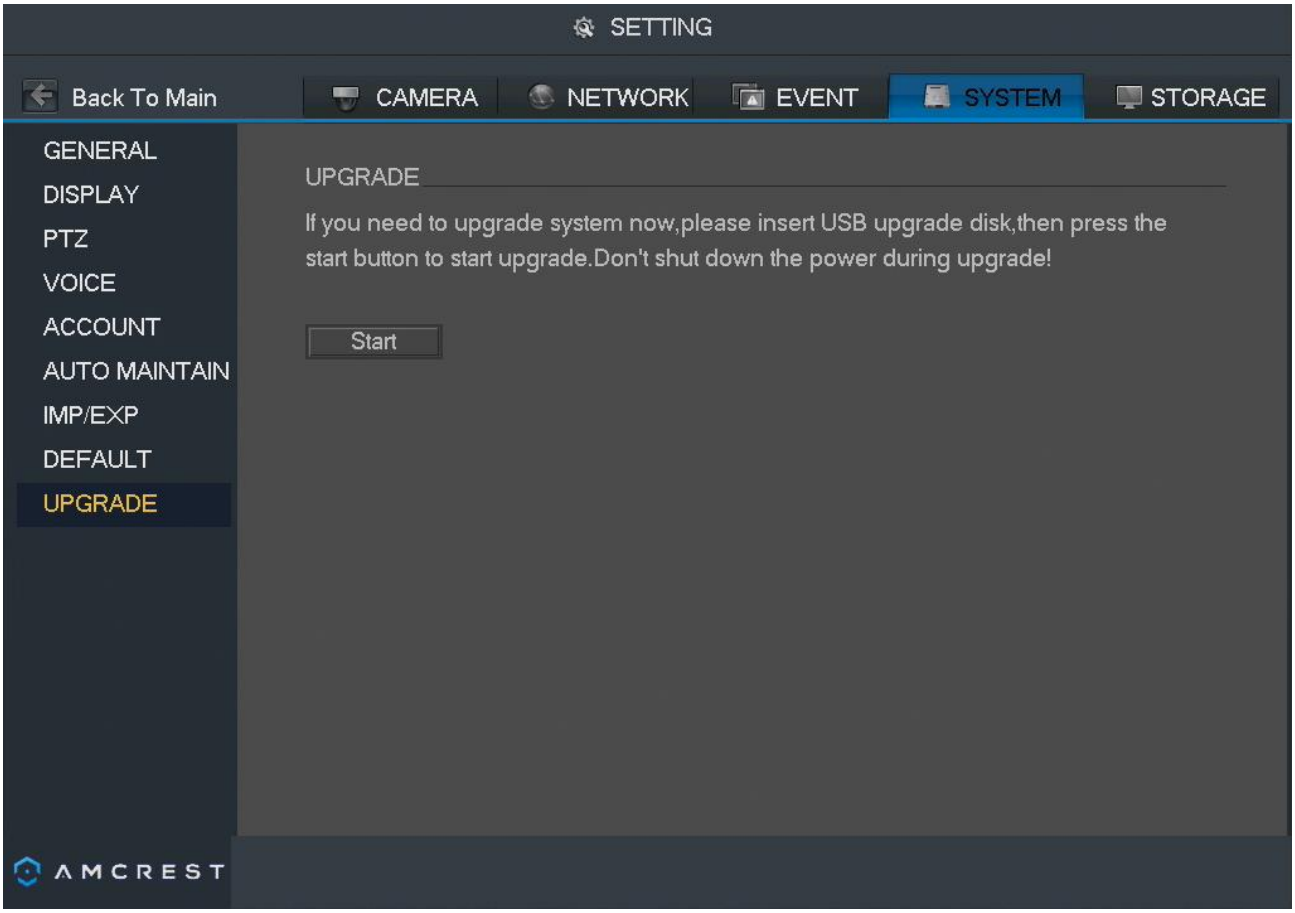
- System Menu Color
- Language
- Time Display Mode
- Video Format
- IP Address
- User Accounts

To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Upgrade

This screen is used to update the DVR's firmware to the latest version. To conduct a system update, it is required to put an update file onto a USB storage device and plug it into the DVR. Ensure the update file is named update.bin.

Below is a screenshot of the Update screen:



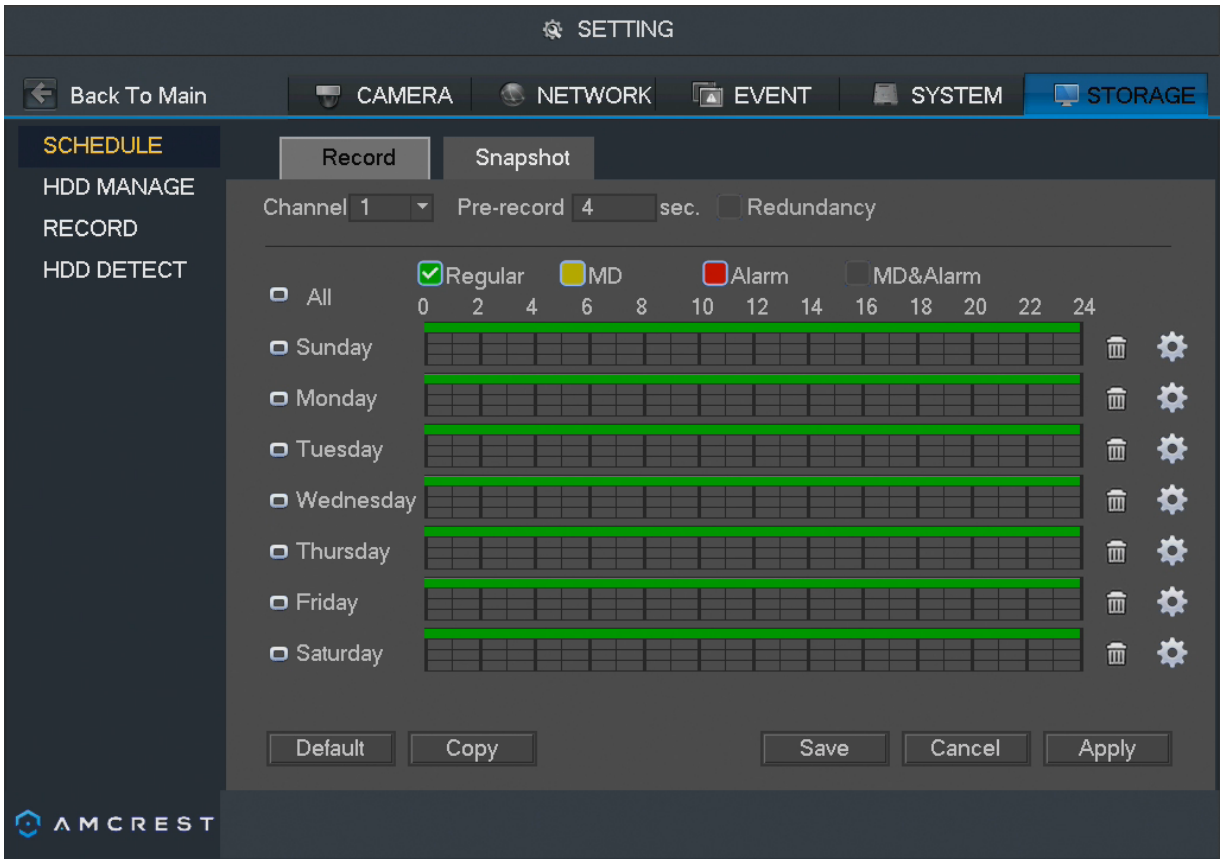
Once the USB device with the firmware update is plugged in, navigate to this screen and click the Start button to begin the firmware update process.

Storage

This menu allows the user to update, modify, and manage device storage settings within the DVR. For more details on this menu please refer to the sections below.

Schedule

This screen is used to specify the recording schedule for both recorded video and snapshots.

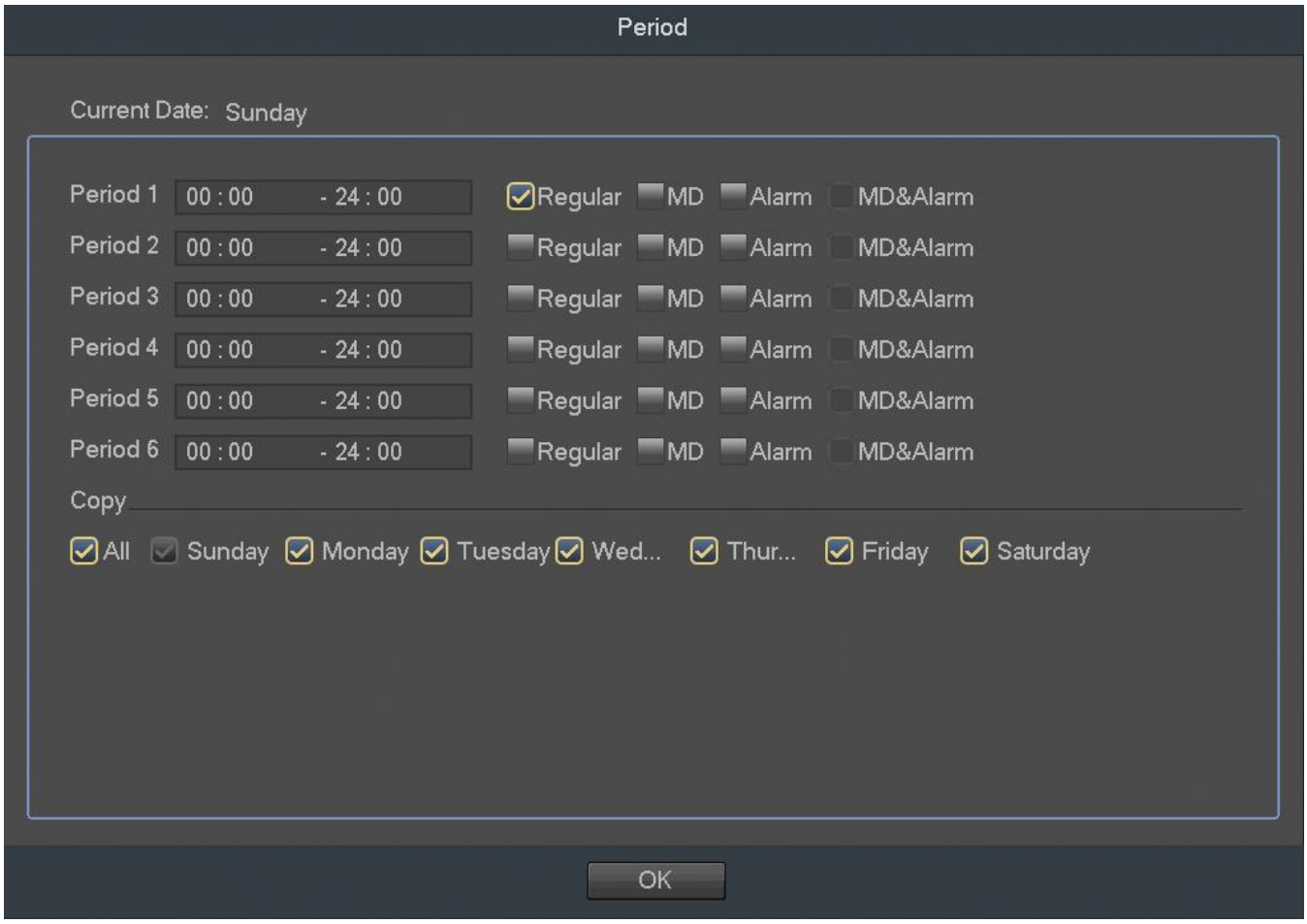


Below is an explanation of the fields on the Record settings screen:

- **Channel:** This dropdown box allows the user to pick which channel they would like to change video recording settings for.
- **Prerecord:** This field allows the user to capture extra video that occurs before an event. Up to 30 seconds of video prior to a recording event can be captured to provide context to a recording.
- **Redundancy:** This checkbox allows the user to enable the redundancy backup feature. This feature allows the DVR to record video to two hard drives concurrently to ensure that in the case of a hard drive failure, the recorded data may be backed up to another hard drive.
  - Note: This function only works if the HDD has two hard drives installed.
  - Note: One hard drive must be designated as redundant from the HDD Manager menu.

- Record Types: There are 4 types of recordings:
  - **Regular:** Regular recording means that the DVR captures all footage for the specified time period. Regular recording is represented by green.
  - **MD:** Motion Detection recording means that the DVR captures only footage when the motion detection alarm is activated. MD recording is represented by yellow.
  - **Alarm:** Alarm recording means that the DVR captures only footage when an alarm is activated. Alarm recording is represented by the color red.
  - **MD & Alarm**: This type of recording is a combination of motion detection and alarm footage, and records when either a motion detection alarm or general alarm is activated. MD & Alarm recording is represented by the color white.

To set a recording schedule for your device, click on the **set** option located on the right of the day you wish to set the schedule. The system allows for the configuration of up to 6 different time periods.

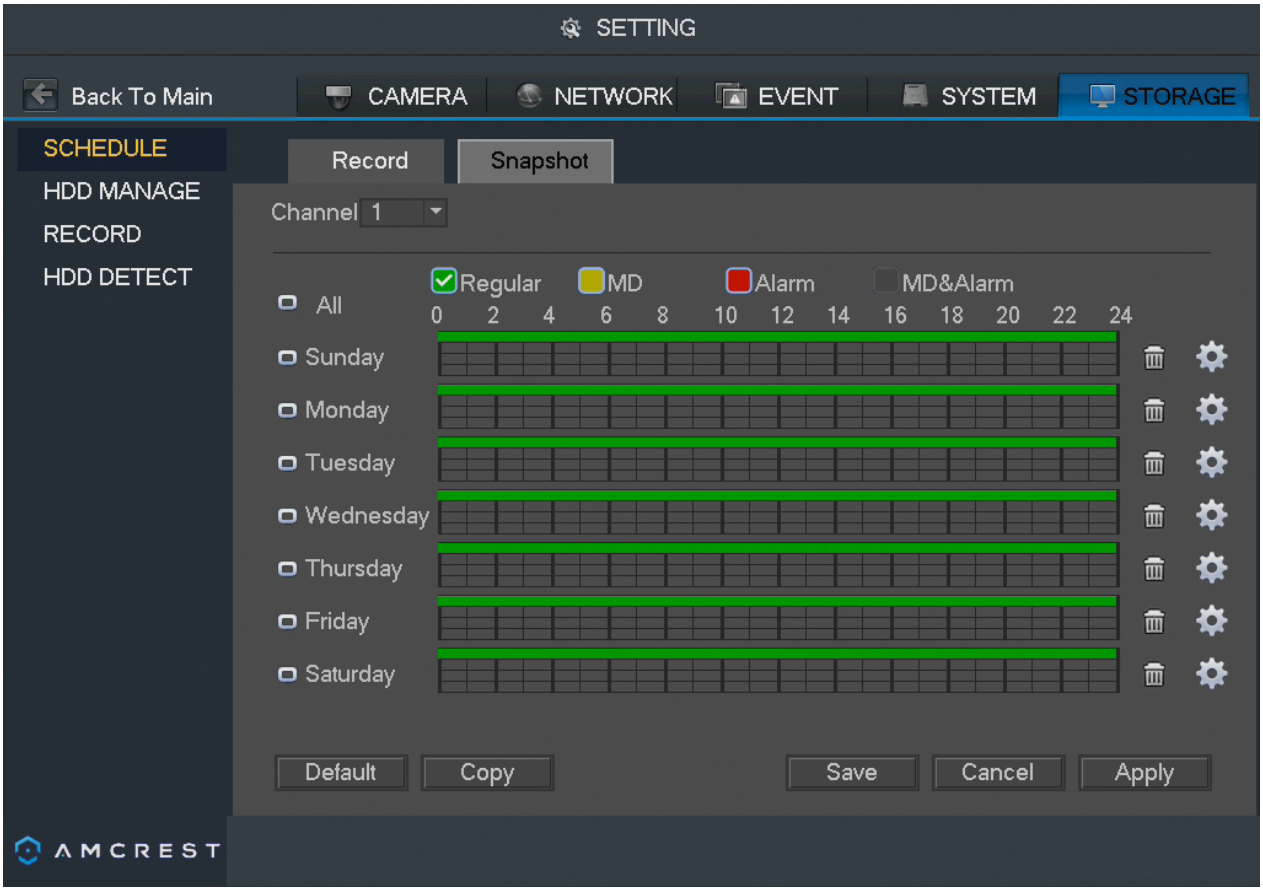


Click the text next to each period to edit the time you wish to set for that specific period. Next, choose which record type you would like to set for each period. You will also need to select the days you wish to apply these settings. To select all days, select the all options to apply the settings to all days of the week.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Snapshot

This tab is where snapshot recording settings are configured. Below is a screenshot of the Snapshot settings screen:



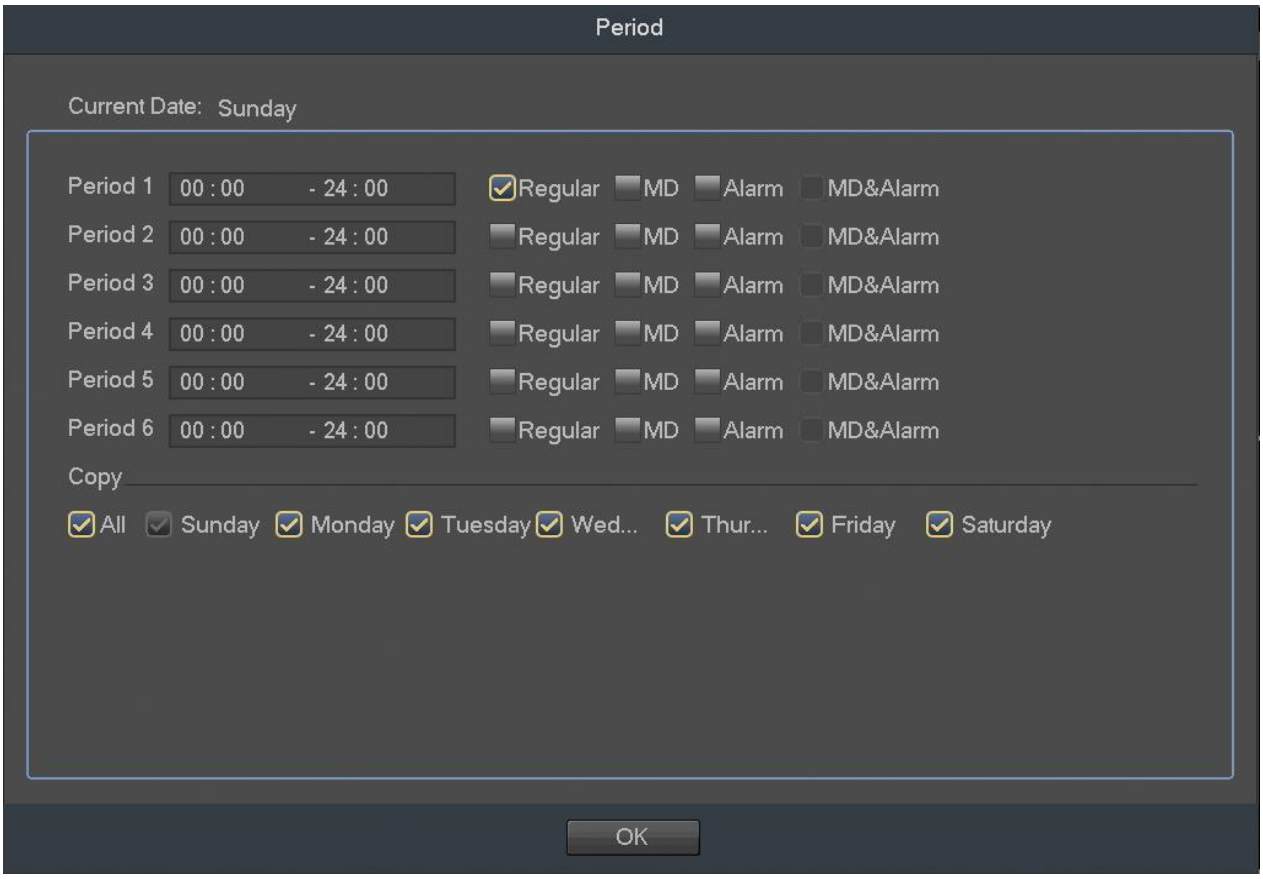
Note: Prior to setting up a schedule for snapshots in this menu, it is highly recommended to do the following 3 steps.

1. Go to Main Menu -> Settings -> Storage -> Record and enable snapshot for any channels that may be using this feature.
2. Go to Main Menu -> Settings -> Camera -> Encode -> Snapshot Interface and configured the settings on this page.
3. Go to Main Menu -> Settings -> Event -> Detect and enable snapshot for any specified channels for motion detection, video loss, and video masking.

Below is an explanation of the fields on the Snapshot settings screen:

- **Channel:** This dropdown box allows the user to pick which channel they would like to change video recording settings for.
- Record Types: There are 4 types of recordings:
  - **Regular:** Regular recording means that the DVR captures all footage for the specified time period. Regular recording is represented by green.
  - **MD:** Motion Detection recording means that the DVR captures only footage when the motion detection alarm is activated. MD recording is represented by yellow.
  - **Alarm:** Alarm recording means that the DVR captures only footage when an alarm is activated. Alarm recording is represented by the color red.
  - **MD & Alarm**: This type of recording is a combination of motion detection and alarm footage, and records when either a motion detection alarm or general alarm is activated. MD & Alarm recording is represented by the color white.

To set a recording schedule for your device, click on the **set** option located on the right of the day you wish to set the schedule. The system allows for the configuration of up to 6 different time periods.



Click the text next to each period to edit the time you wish to set for that specific period. Next, choose which record type you would like to set for each period. You will also need to select the days you wish to apply these settings. To select all days, select the all options to apply the settings to all days of the week.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

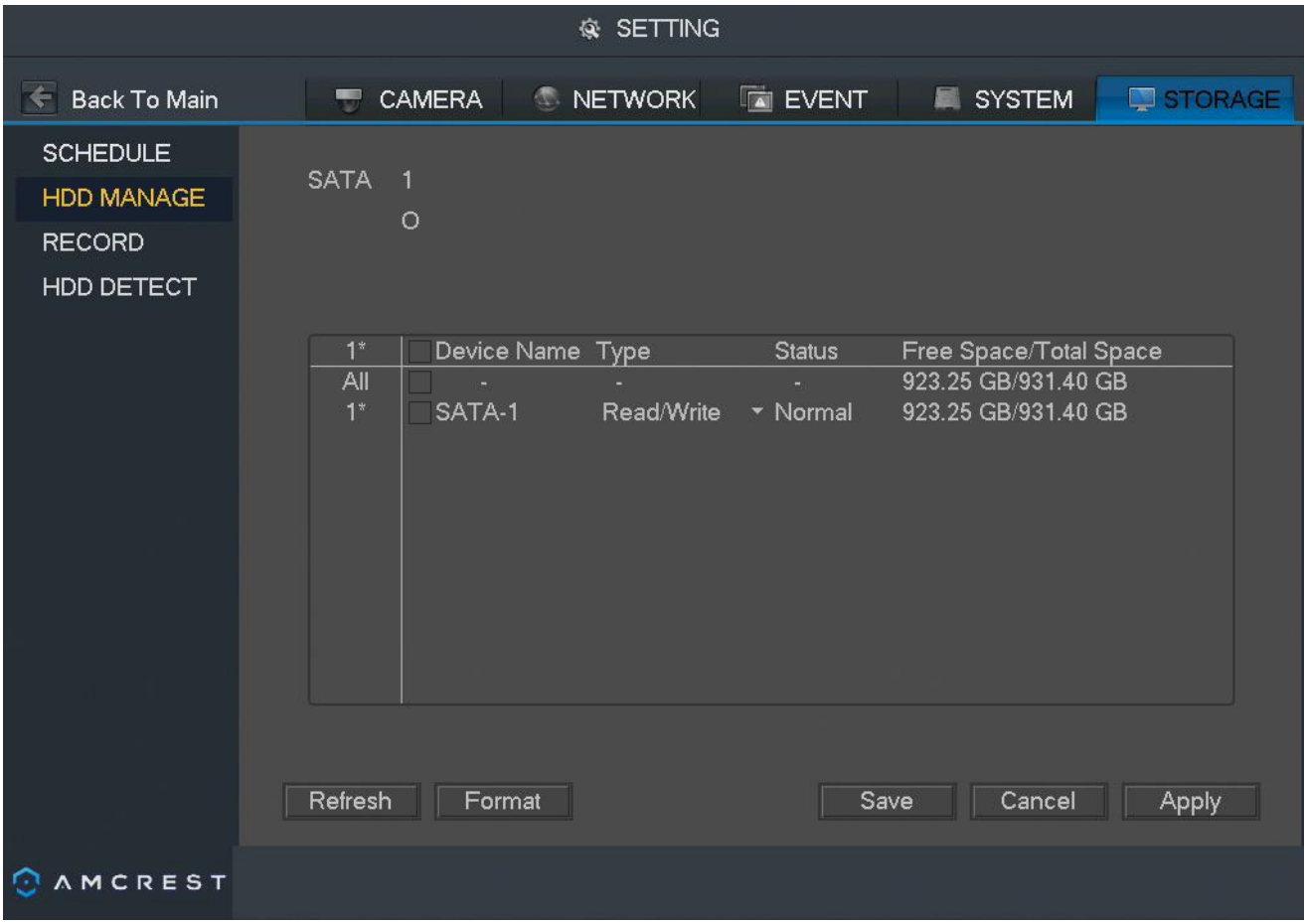
Note: Alarm activated snapshots have higher recording priority than scheduled snapshots. If there is an overlap, alarm activated snapshots will take precedence.

Note: To enable FTP upload of snapshots, connection to an FTP server must be configured. See section 4.10.2.7 for more information.
To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

HDD Manage

This screen is meant to help the user monitor the DVR's hard drives. Using this screen, the user can see the current HDD type, status, and capacity. The user can also use this screen to format hard drives and change hard drive properties.

Below is a screenshot of the HDD Manage settings screen:



Below is an explanation of the fields on the HDD Manage settings screen:

- SATA: This shows how many hard drives the system can support.
- 1 here means the system supports a maximum of 1 HDD.

The symbol on the next row shows the status of the connected hard drive.

- 0 means that the current HDD is functioning normally.
- X means there is an error with the hard drive connection, or that there is no connected hard drive.
- ? means that the hard drive is damaged and should be replaced.

- Hard Drive List:
- This shows what hard drives are currently connected to the DVR and displays information about them.
  - Device Name: This column shows the names of the connected hard disk drives (HDD).

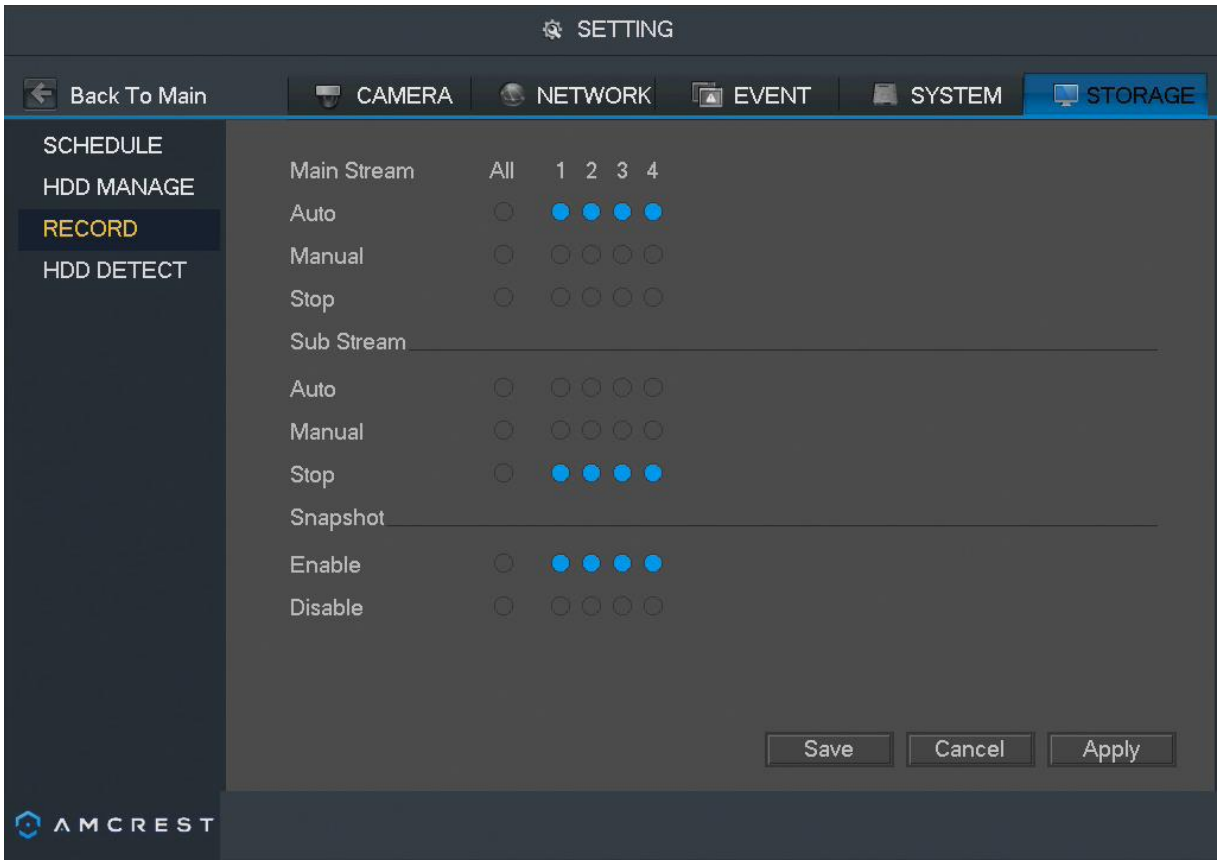
- Type: This column shows the type of access the DVR has to the hard drive. To change a hard drive's type, click the downward arrow next to the HDD's type and select the desired type. There are 3 possible settings:

- Read-Only: This allows the DVR to read the data, but not modify it in anyway.
- Write-Only: This allows the DVR to write data to the HDD, but not read any data from it.
- Read/Write: This allows the DVR to both read and write data on the HDD.
- Status: This column shows the status of the connected hard drive. There are 3 statuses:
- Normal: This means the hard drive is operating normally.
- Error: This means the DVR is experiencing an error when attempting to access the hard drive.
- Disconnected: This means that the HDD has disconnected from the DVR.
- Free Space/Total Space: This field shows the free space on the hard drive compared to its total capacity.

To refresh the hard drive list, click Refresh near the bottom left hand corner. To format a hard drive, select a hard drive to format from the list, and then click Format near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Record

This screen allows the user to specify which channels can record and take snapshots. The settings on this screen supersede all others when it comes to allowing channels the ability to record information. Below is a screenshot of the Record screen:



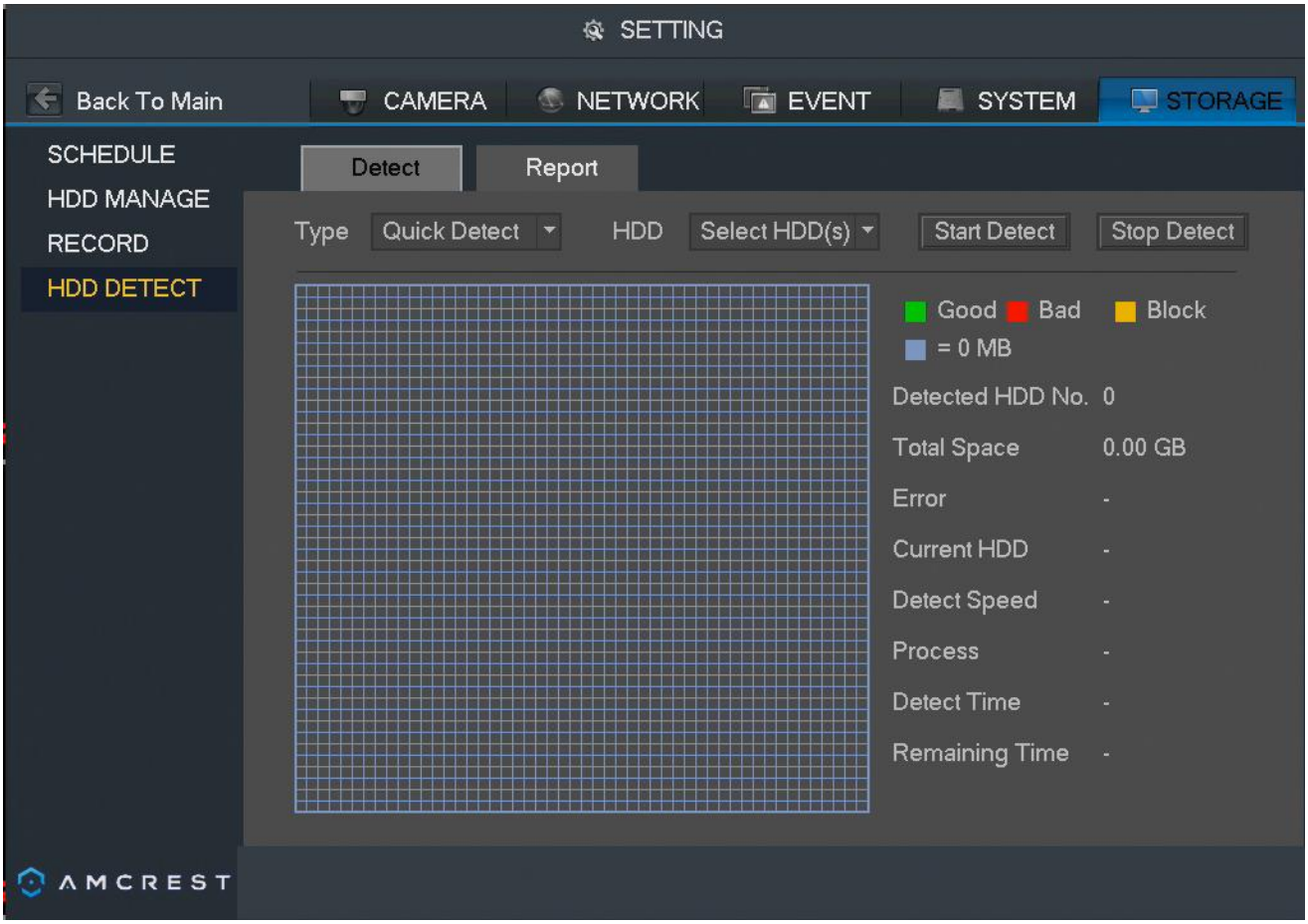
Below is an explanation of all the fields on the Record settings page:

- Main Stream: The main stream is the stream through which the channels transmit data by default. There are 3 settings that can be used for the main stream.
  - Schedule: Channels will record as they have been scheduled, and not in any other capacity.
  - Manual: Channels will support all recording type. This includes scheduled recording.
  - Stop: Channels will not record in any capacity. This includes scheduled and manual recording.
- Extra Stream: Otherwise known as the sub stream, this stream allows for additional data to be transmitted. There are 3 settings that can be used for the main stream.
  - Schedule: Channels will record as they have been scheduled, and not in any other capacity.
  - Manual: Channels will support all recording type. This includes scheduled recording.
  - Stop: Channels will not record in any capacity. This includes scheduled and manual recording.
- Snapshot: This set of options can either enable or disable the snapshot functionality for specific channels.

To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

HDD Detect

This screen allows the user to run an error detection report on the DVR's hard drives. Below is a screenshot of the HDD Detect settings menu:

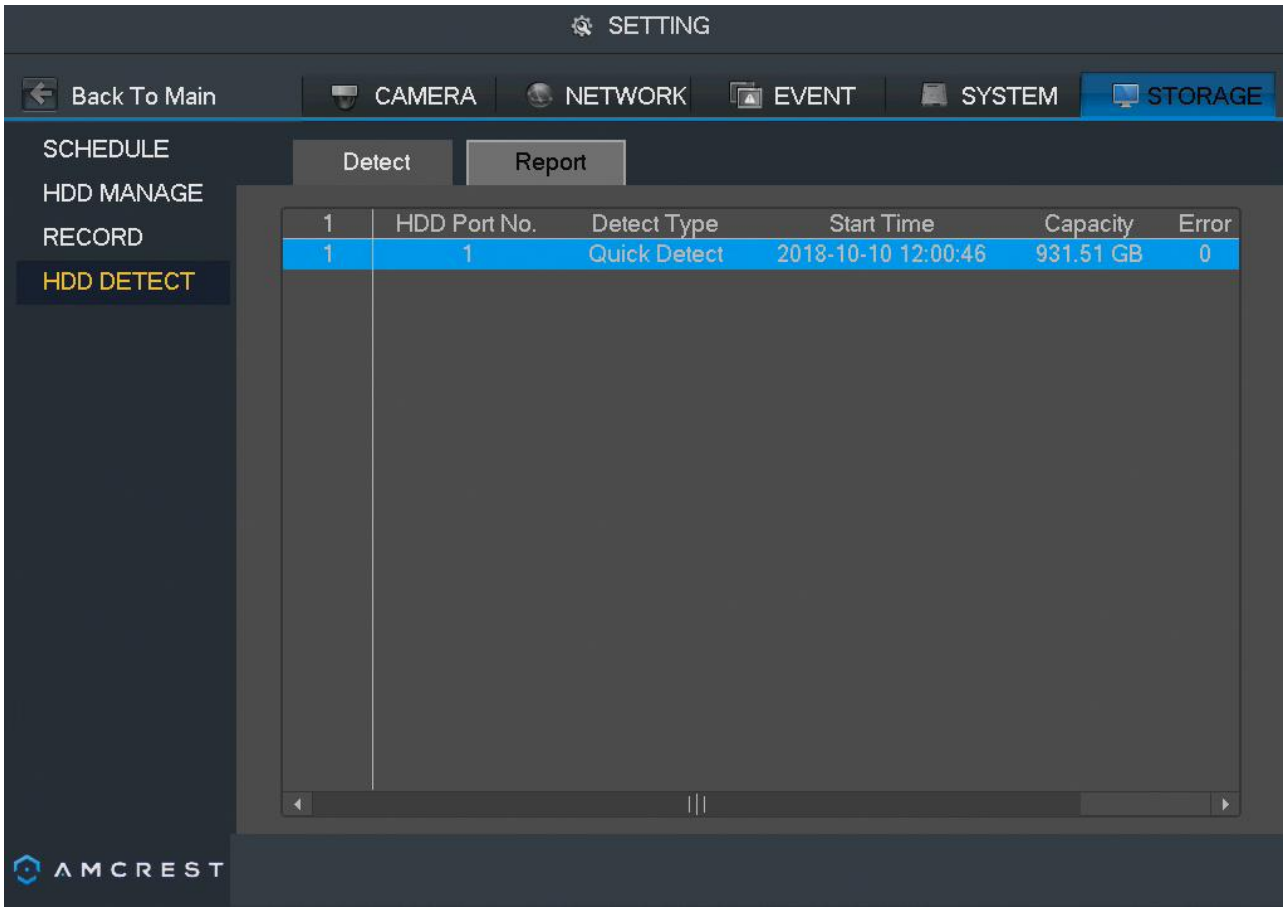


Below is an explanation of the fields on the HDD Detect settings page:

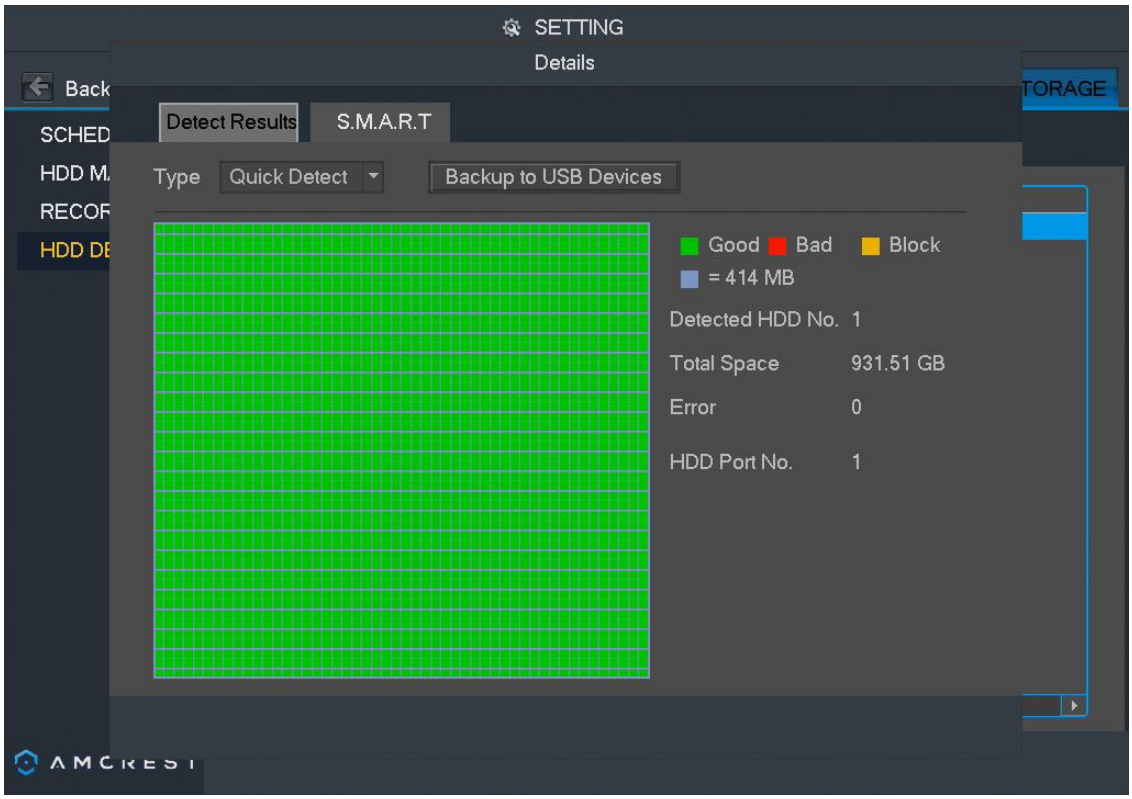
- Type: This dropdown box allows the user to select which type of HDD detection report to run. There are two options:
  - Quick Detect: Quick detect runs a quick hard drive error detection report.
  - Full Detect: Full detect runs a more detailed hard drive error report and may take more time.
- HDD: This dropdown box allows the user to select which HDD to run the HDD detection report on. Multiple hard drives can be selected.
- Start Detect: This button started the HDD detection report.
- Stop Detect: This button stops the HDD detection report.

Report

Once the report is done, the results show in the **Report** tab. Below is a screenshot of the detect report tab:



To view detailed results of the report, double click the line item, or click the magnifying glass in the view column of the report. The detailed view looks like the screenshot below:



The Results tab shows a visual representation of the hard drive scan results. The S.M.A.R.T. tab shows S.M.A.R.T. report results.

Web Operation

One of the main features of your Amcrest DVR is the ability to access the DVR and all its features through the web. Whether you want to view the live feed from remote location, or you want the ability to display the live feed on multiple computers on your local network, the device can accommodate all those needs.

To enable web client operation, ensure the following items are completed:

- The DVR is connected to the Network via an Ethernet cable.
- The DVR and the PC are on the same network OR the DVR has been configured for remote access.

Local Web Access

NPAPI plugins have been recently depreciated by most mainstream web browsers such as recent versions Google Chrome (Plugin), Edge, and Firefox. Currently, our team is pursuing a solution to this, however, as a primary means of accessing the web user interface for your Amcrest device in a web browser, **we recommend using Internet Explorer**. Other browsers will also be functional such as a previously released version of Mozilla Firefox, such as Firefox 49.0.2, or Safari 11.

As an alternative, other secondary browsers will also be functional for the web user interface such as, SeaMonkey, and Pale Moon web browsers. SeaMonkey is compatible with Windows and Mac and is free to use, Pale Moon is only compatible with Windows and Linux systems. Conversely, both browsers will require the use of a plugin like other web browsers.

Note: Pale Moon users, please use the 32-bit version of the browser as the 64-bit version may be incompatible with our plugins.

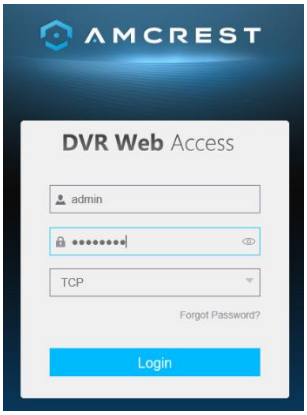
Internet Explorer is currently the most preferred method of accessing your device on your computer from a web browser. To access the web UI via Internet Explorer please refer to the information provided below.

Locate the IP address for your device using the Amcrest IP Config Tool. The Amcrest IP Config Tool can be downloaded at the following web page: amcerest.com/downloads

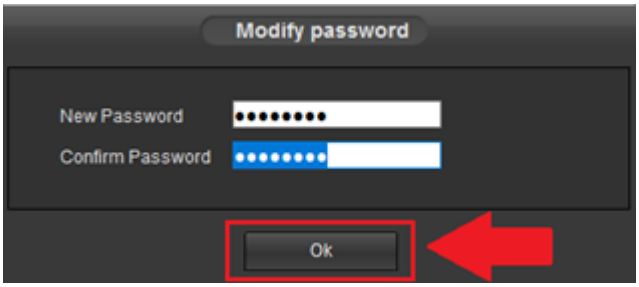
In the All Downloads menu, click on IP Config Software to begin the free download. Once the download has completed installing, locate the IP address associated with the device you would like to view in the browser.

Enter this IP address into the Internet Explorer browser and press enter to load the web user interface.

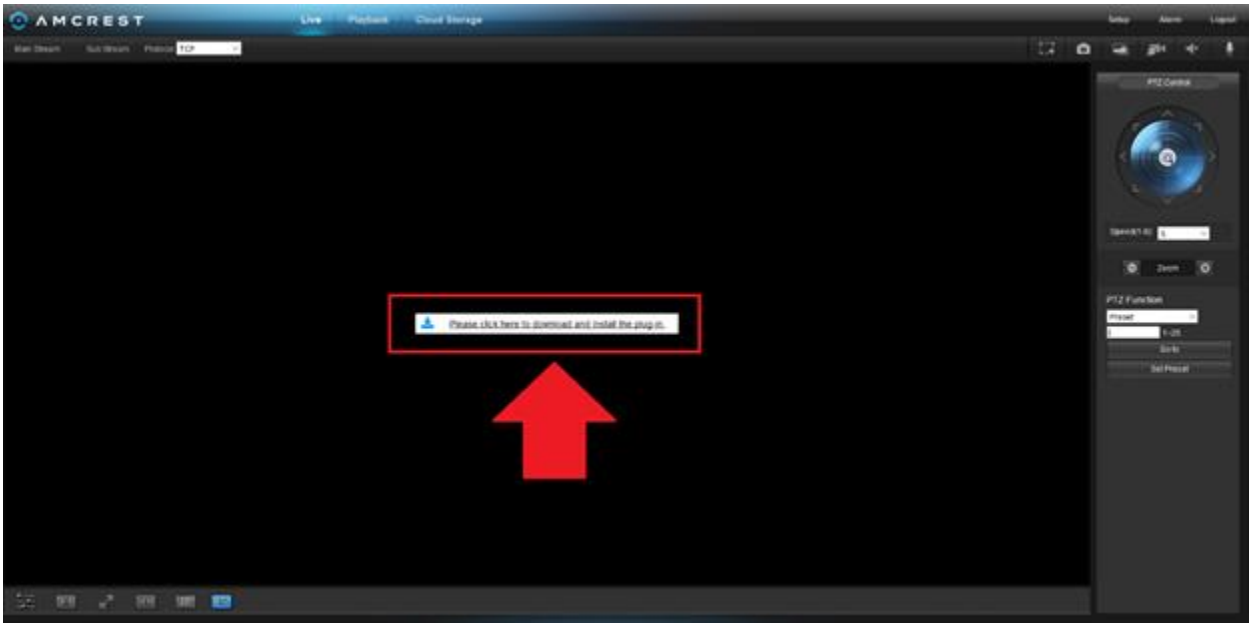
In the web user interface, enter the login credentials for your device. If this is the first time accessing the device, the username and password will both be **admin.** Click on **Login**.



If this is the first-time logging into your device, you will be prompted to modify the password for your device. To modify the password, enter the new password you would like to use in the **New Password** field and confirm. The password used should be between 8 and 32 characters long with a combination of letters and numbers. Click **Ok** when done to log into the web user interface.



To view your device on the browser you will need to download the plugin. To download the plugin, click on the **Please click here to download and install the plugin** prompt in the middle of the screen.



Click **Run** to download the plugin.

The browser will then show the live feed of your connected device in the web user interface.

If the process above is not working, please contact Amcrest Support via one of the following options:

Visit http://amcrest.com/contacts and use the email form
Call Amcrest Support using one of the following numbers Toll Free: (888) 212-7538
International Callers (Outside of US): +1-713-893-8956
USA: 713-893-8956
Canada: 437-888-0177
UK: 203-769-2757
Email Amcrest Customer Support support@amcrest.com

Remote Web Access

There are two main methods for setting up remote access: UPnP/DDNS, and Port Forwarding.
UPnP/DDNS Remote Access Setup
Using Universal Plug and Play (UPnP) and Dynamic Domain Name Server (DDNS) functionality is the easiest way to setup stable remote access. For this method, your router should support the uPnP networking protocol and the protocol should be enabled. Please refer to your router manufacturer's documentation to learn how to enable uPnP on your router.

To view a video on how to setup the HDCVI for UPnP/DDNS remote access go to http://amcrest.com/videos and view the video titled "How to Gain Remote Access to Your HDCVI DVR with Universal Plug and Play".

Below is a step-by-step walkthrough that details how to setup the HDCVI for Remote Web Access using UPnP and DDNS:

1. Login to your DVR, open the main menu then go to Settings -> Network.
2. Using the left-hand menu, go to the Connection menu, and write down the HTTP port. It is recommended to ensure the port number is at least 5 digits long to prevent any port conflicts. If need be, change the port to a 5-digit number that is less than 65535, note the number down, and click save before proceeding to the next step.
3. The system will prompt you to reset the DVR. Click OK and wait for the DVR to restart.
4. Login to your DVR, open the main menu then go to Settings -> Network.
5. Click the Connections menu item on the left-hand menu and ensure that the HTTP port has changed.
6. Click the DDNS menu item on the left-hand menu, click the enable checkbox, and then click the Apply button on the bottom right.
7. Write down the entire Domain Name field, including the white text that says .AmcrestDDNS.com 8. Click the UPnP menu item on the left-hand menu and click the enable radio button at the top.
9. While in the UPnP menu, double click the HTTP port, and change both the internal and external HTTP ports to match the number that was used in step 2.
10. Uncheck the last 4 checkboxes in the PAT table on the UPnP menu.
11. Click apply and ensure the UPnP status field says "Searching."

12. Exit this menu to go back to the main menu, then re-enter the UPnP menu, and ensure the UPnP status says "Success".
13. Open a web browser and enter in the DDNS domain name address from step 3, enter in a colon, then type the port number from step 4 on to the end.

a. For example, if the DDNS domain name is http://abc123456789.AmcrestDDNS.com and your HTTP Port is 33333, the URL would be http://abc123456789.AmcrestDDNS.com:33333

14. The browser may prompt you to install a plugin. Click install to download the plugin, and then click on the plugin installation file to install the plugin.
15. If the browser prompts you to allow the plugin to work on the computer, hit Allow to ensure the plugin can run successfully.
16. Enter in login details into the username and password fields.
17. Click the WAN option, and then click Login.
18. Once the main interface opens, click the plug icons next to each camera on the list on the left-hand side, and activate the main stream for each of them to enable the live feed.

If the process above is not working, please contact Amcrest Support via one of the following options:

- Visit http://amcrest.com/contacts and use the email form
- Call Amcrest Support using one of the following numbers Toll Free: (888) 212-7538
  International Callers (Outside of US): +1-713-893-8956
  USA: 713-893-8956
  Canada: 437-888-0177
  UK: 203-769-2757
- Email Amcrest Customer Support support@amcrest.com

Port Forwarding Remote Access Setup

Port Forwarding is an alternative method to setting up remote access for the DVR. This method should only be used if the UPnP/DDNS Remote Access method did not work.

To view a video on how to setup the HDCVI for Port Forwarding remote access go to http://amcrest.com/videos and view the video titled
"How to Gain Remote Access to Your HDCVI DVR with Port Forwarding".
Below is a step-by-step walkthrough that details how to setup the HDCVI for Remote Web Access using UPnP:

1. Login to your DVR, open the main menu then go to Settings -> Network.
2. Open the TCP/IP settings screen.
3. By default, the DVR has the mode set to Static. Click the radio button next to DHCP to change this to DHCP. The IP Address, Subnet Mask, Default Gateway, Preferred DNS, and Alternate DNS should all change to 0s.
4. Click Save to save these settings. This should now open the main menu.
5. From the main menu, go to Settings -> Network.
6. On the TCP/IP settings screen, the IP Address, Subnet Mask, Default Gateway, Preferred DNS, and Alternate DNS should all be populated.
7. Click the radio button next to Static, to change the mode to Static.
8. Write down the IP Address that is currently in the IP address field.
9. Click the Save button.
10. Using the left-hand menu, go to the Connection menu, and write down the TCP, UDP, and HTTP port number. It is recommended to ensure that these port numbers are at least 5 digits long to prevent any port conflicts. If need be, change each of these port numbers to a 5-digit number that is less than 65535, note the numbers down, and click save before proceeding to the next step.
11. Go to http://www.canyouseeme.org/ and check to ensure each of the port numbers specified in step 10 are open.

12. Write down the manufacturer name, brand, and model name for the router that the DVR is connected to, and then proceed to portforward.com on your web browser.
13. Open the port forwarding guide section on the left-hand side menu.
14. Find the router brand name in the list and click it.
15. Find the router model number and click it.
16. Click the Default Guide link near the middle of the page.
17. This guide will help you take the step necessary to port forward on the router. Follow these steps, and then return to the DVR.
18. Login to your DVR, open the main menu then go to Settings -> Network.
19. Click the DDNS menu item on the left-hand menu, click the enable checkbox, and then click the Apply button on the bottom right.
20. Write down the entire Domain Name field, including the white text that says.AmcrestDDNS.com
21. Open a web browser and enter in the DDNS domain name address from step 20, enter in a colon, then type the HTTP port number from step 10 on to the end.

a. For example, if the DDNS domain name is http://abc123456789.AmcrestDDNS.com and your HTTP Port is 33333, the URL would be http://abc123456789.AmcrestDDNS.com:33333

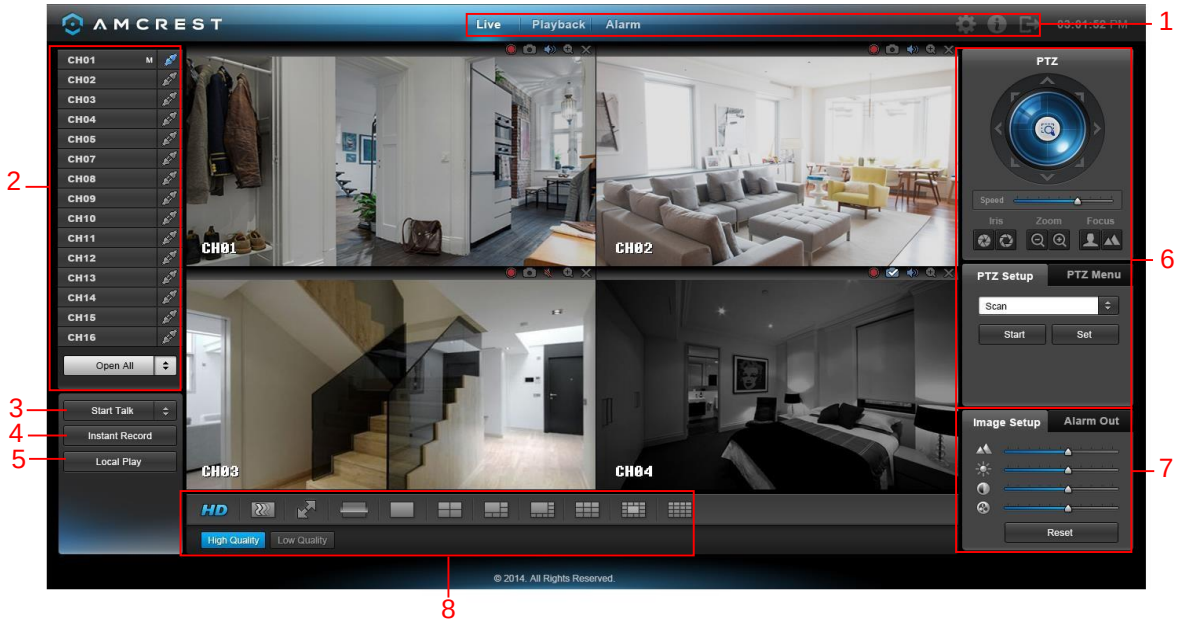
22. The browser may prompt you to install a plugin. Click install to download the plugin, and then click on the plugin installation file to install the plugin.
23. If the browser prompts you to allow the plugin to work on the computer, hit Allow to ensure the plugin can run successfully.
24. Enter in login details into the username and password fields.
25. Click the WAN option, and then click Login.
26. Once the main interface opens, click the plug icons next to each camera on the list on the left-hand side, and activate the main stream for each of them to enable the live feed.

If the process above is not working, please contact Amcrest Support via one of the following options:

- Visit http://amcrest.com/contacts and use the email form
- Call Amcrest Support using one of the following numbers Toll Free: (888) 212-7538
  International Callers (Outside of US): +1-713-893-8956
  USA: 713-893-8956
  Canada: 437-888-0177
  UK: 203-769-2757
- Email Amcrest Customer Support support@amcrest.com

Web Access Interface

LAN Live View Interface



The interface on the LAN Live View consists of 8 major sections:

1. Menu Bar: There are 6 menu items on the menu bar.

a. Live: This button takes the user to the Live View interface (pictured above)

b. Playback: This button takes the user to the Playback interface. See section 5.3.3.

c. Alarm: This button takes the user to the Alarm interface. See section 5.3.4.

d. Settings: This button takes the user to the Settings interface. See section 5.4.

e. Info: This button takes the user to the Information interface. See section 5.5.

f. Logout: This button logs the user out of the system. See section 5.6.

2. Channel List: On this side bar, there is a list of all the channels available, as well as an Open All button. The Open All button enables/disables real-time channel monitoring for all of the channels.

a. To switch between the main stream and the sub stream, click the channel name and select which stream to use. For more information on main stream vs sub stream, see section 4.10.5.3.

3. Start Talk Button: This button allows the user to broadcast audio via their audio-enabled camera or audio output device. Note: If the audio input port from the device to the client-end is using the first channel audio input port, during the bidirectional talk process, the system will not encode the audio data from the 1-channel. There are 4 bidirectional talk protocols available in the system:

a. Default

b. G711a

c. G711u

d. PCM

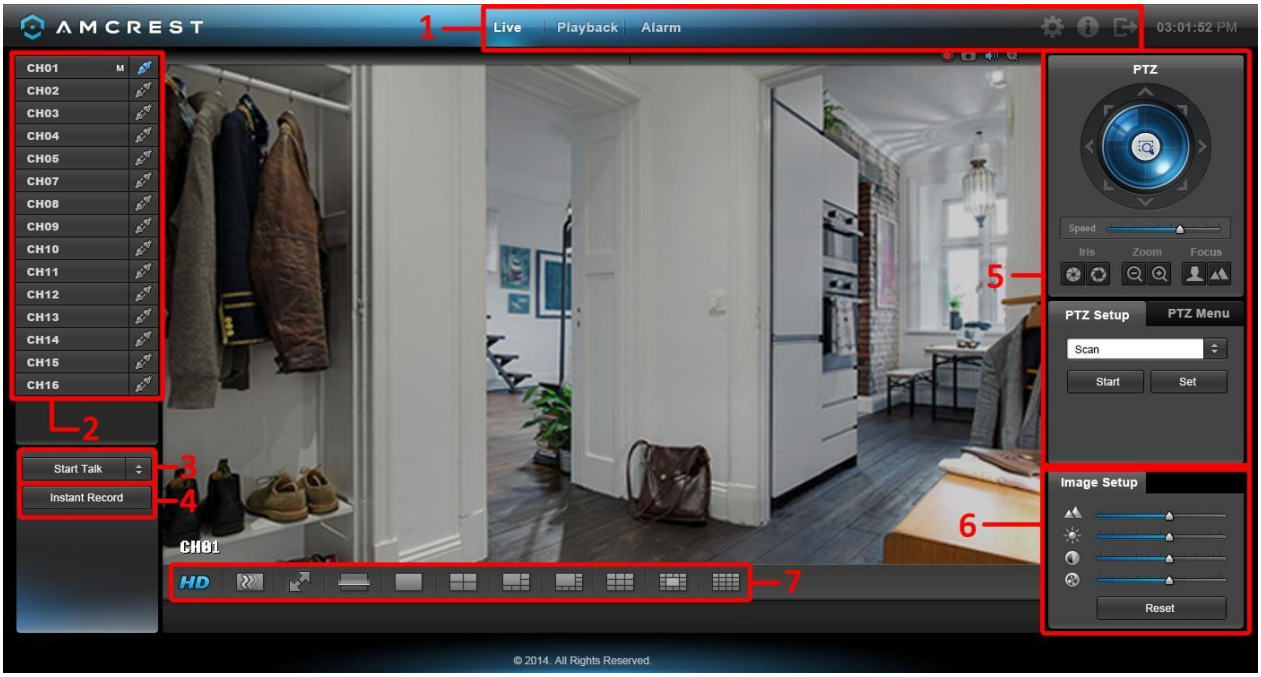
4. Instant Record Button: This button allows the user to begin manual recording. Click the button again to restore the system to the previous recording mode.

5. Local Play Button: This button allows the user to playback saved files from their PC. Saved files have a .dav extension. Click the local play button to open a file browser to select a playback file.

6. PTZ Operation Panel: This set of controls allows the user to remotely control PTZ enabled cameras. Please refer to section 4.4.2 for more information on how to use the PTZ controls.

7. Image Setup and Alarm Output: These controls allow the user to modify the live-feed image settings, as well as alarm output notifications.
8. Live Feed View Settings: This set of controls allows the user to change their view in the live view screen. From left to right, the buttons do the following: Set video quality, set video fluency, enter full screen mode, scan, enter 1-window mode, enter 4-window mode, enter 6-window mode, enter 8-window mode, enter 9-window mode, enter 13-window mode, and enter 16-window mode.

WAN Live View Interface



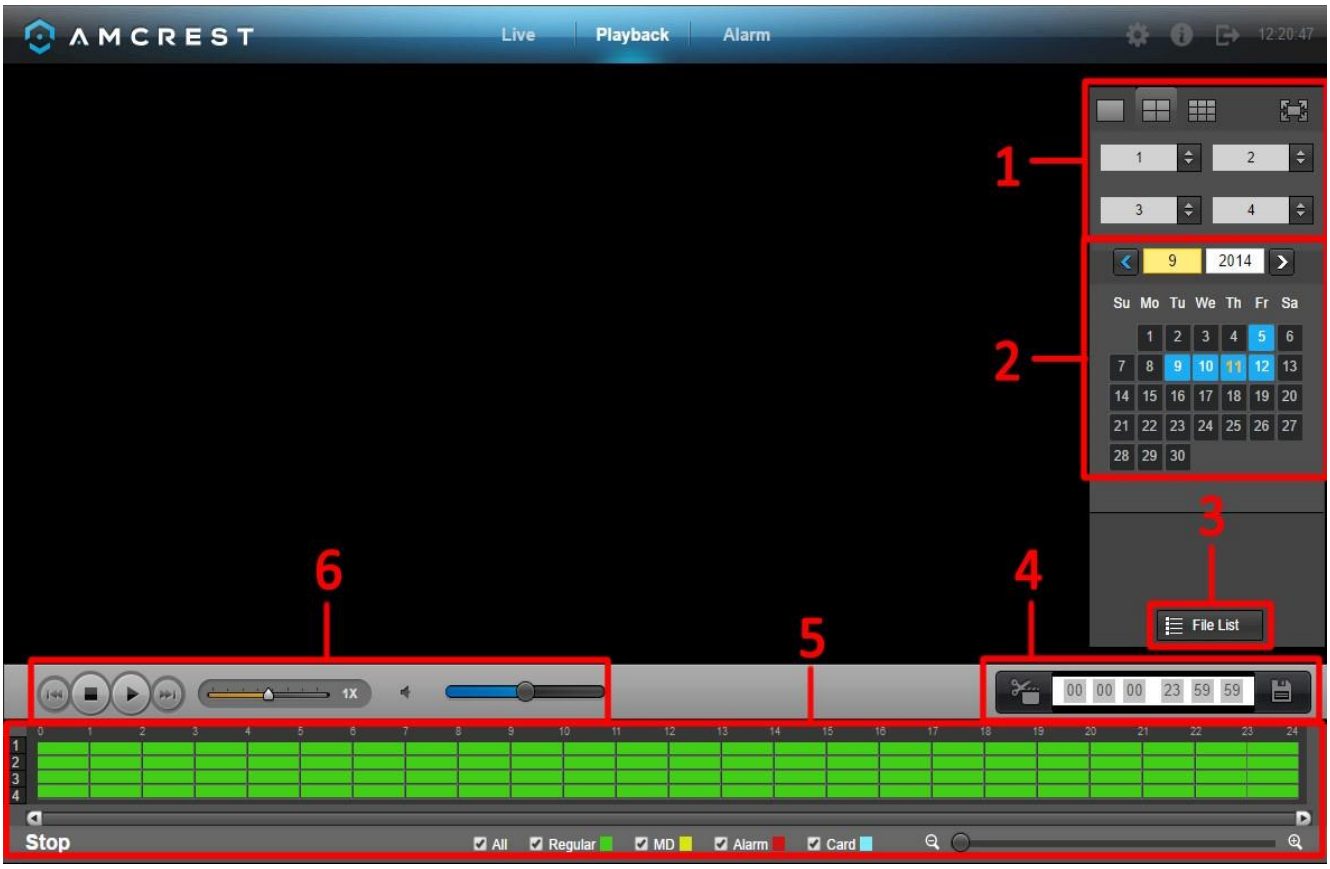
There are minor differences between the LAN and WAN Live View Interfaces.
The interface on the WAN Live View consists of 7 major sections:

1. Menu Bar: There are 6 menu items on the menu bar.
a. Live: This button takes the user to the Live View interface (pictured above)
b. Playback: This button takes the user to the Playback interface. See section 5.3.3.
c. Alarm: This button takes the user to the Alarm interface. See section 5.3.4.
d. Settings: This button takes the user to the Settings interface. See section 5.4.
e. Info: This button takes the user to the Information interface. See section 5.5.
f. Logout: This button logs the user out of the system. See section 5.6.
2. Channel List: On this side bar, there is a list of all the channels available, as well as an Open All button. The Open All button enables/disables real-time channel monitoring for all of the channels.
a. To switch between the main stream and the sub stream, click the channel name and select which stream to use. For more information on main stream vs sub stream, see section 4.10.5.3.
3. Start Talk Button: This button allows the user to broadcast audio via their audio-enabled camera or audio output device. Note: If the audio input port from the device to the client-end is using the first channel audio input port, during the bidirectional talk process, the system will not encode the audio data from the 1-channel. There are 4 bidirectional talk protocols available in the system:
a. Default
b. G711a
c. G711u

d. PCM

4. Instant Record Button: This button allows the user to begin manual recording. Click the button again to restore the system to the previous recording mode.
5. PTZ Operation Panel: This set of controls allows the user to remotely control PTZ enabled cameras. Please refer to section 4.4.2 for more information on how to use the PTZ controls.
6. Image Setup: These controls allow the user to modify the live-feed image settings.
7. Live Feed View Settings: This set of controls allows the user to change their view in the live view screen. From left to right, the buttons do the following: Set video quality, set video fluency, enter full screen mode, scan, enter 1-window mode, enter 4-window mode, enter 6-window mode, enter 8-window mode, enter 9-window mode, enter 13-window mode, and enter 16-window mode.

Playback Interface

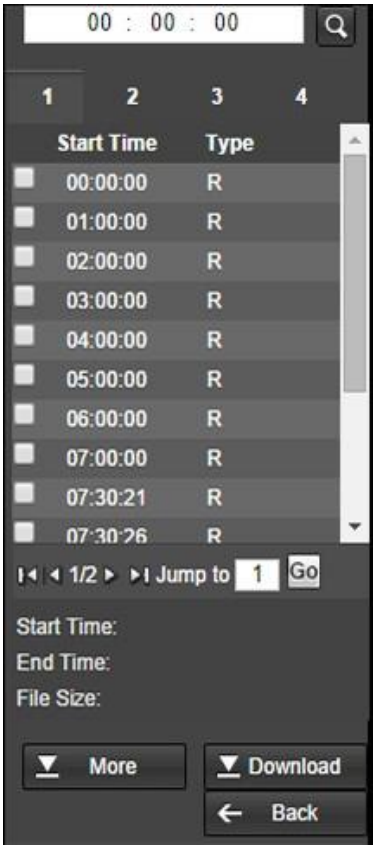


This is the interface for the DVR web access playback menu. There are 6 main sections:

1. View Selection: This panel allows the user to view the different channel layouts.
2. Calendar: This panel allows the user to pick a date that they would like to playback video from.
3. File List: This button opens a file list of all recorded video for a specific date range. From here, the user can download these videos to their PC.
4. Trim Panel: This panel allows the user to trim playback video for download. By specifying time stamps, the user can trim down.
5. Recorded Video Panel: This panel allows the user to specify what type of video they would like to playback and it also allows the user to select where to start playback from.

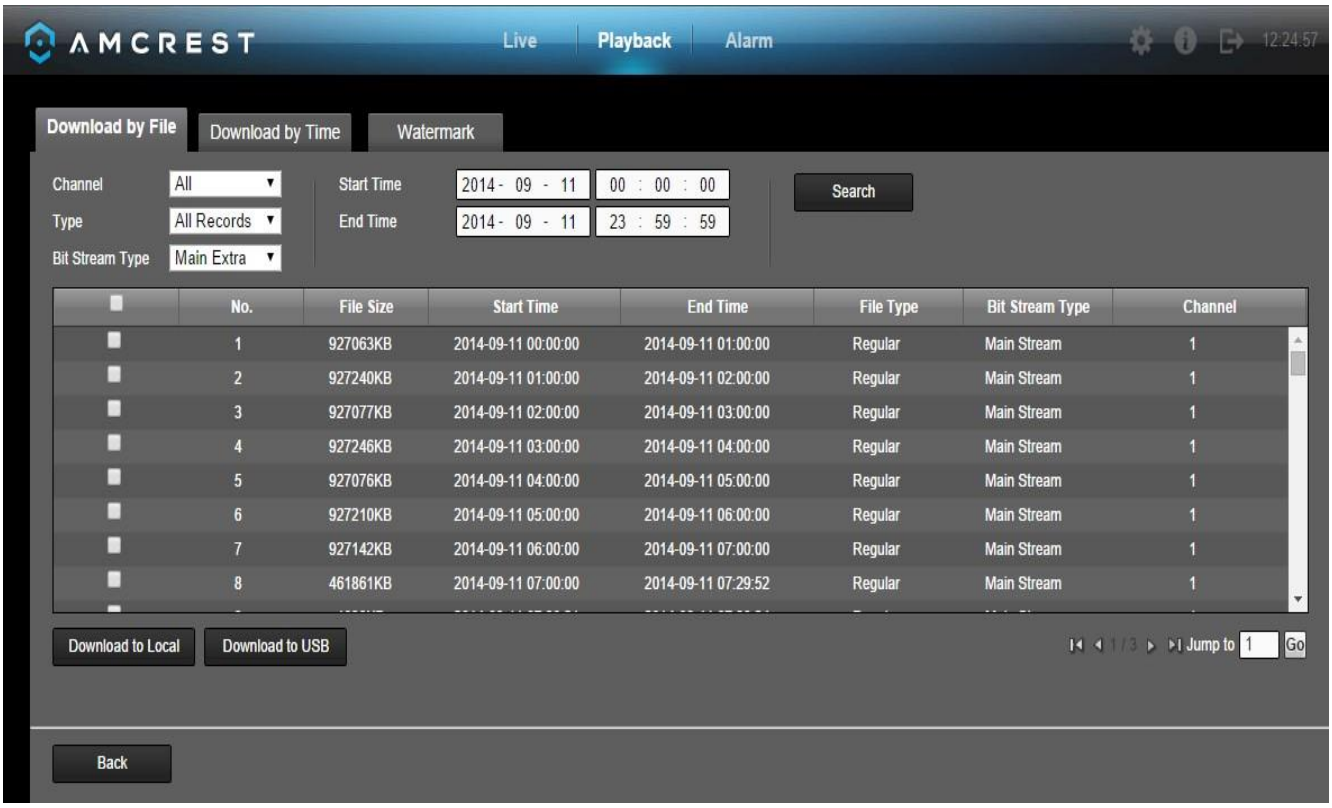
6. Playback Bar: This panel allows the user to control playback. It also allows the user to control playback speed, and playback volume.

Clicking the File List opens the following screen on the sidebar:

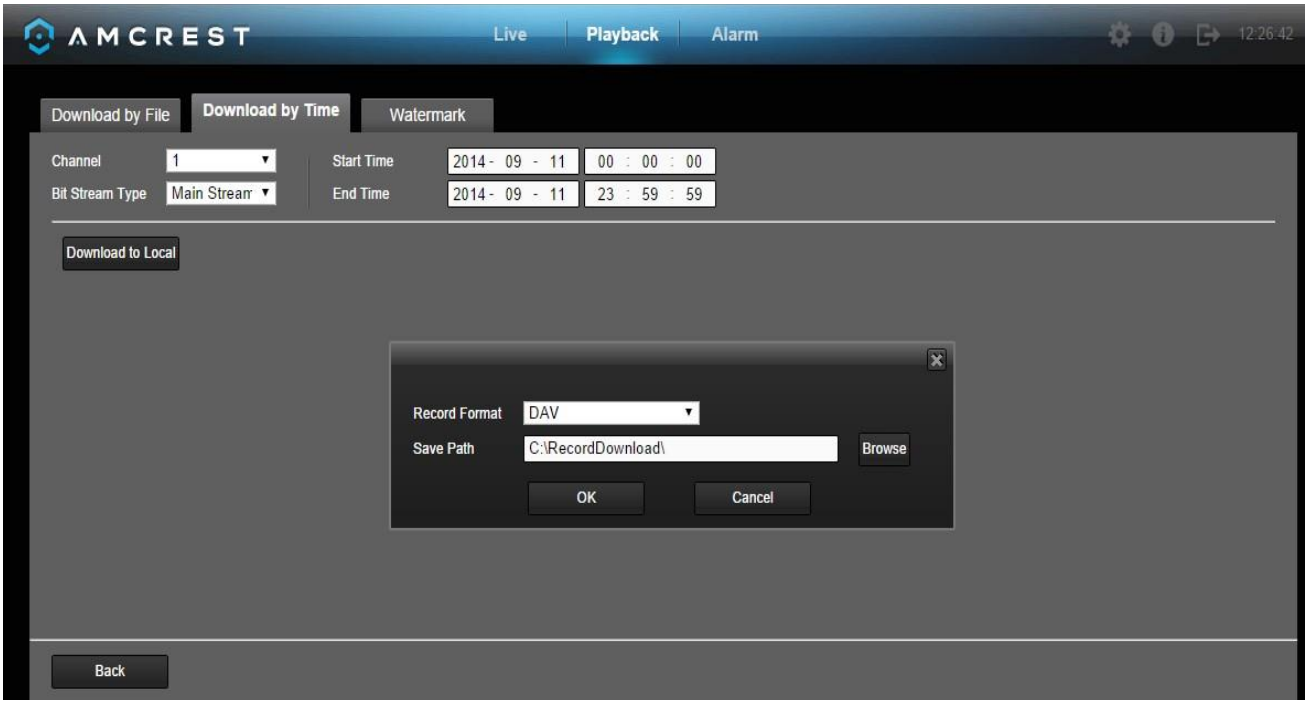


This allows the user to select files for download. Select the files by clicking the checkbox next to each file, and then click download to download the files to the PC. Clicking more, opens the advanced download screen where the user can download individual files, download by time frame, or add a watermark to a video. Below are screenshots of the advanced download screen:

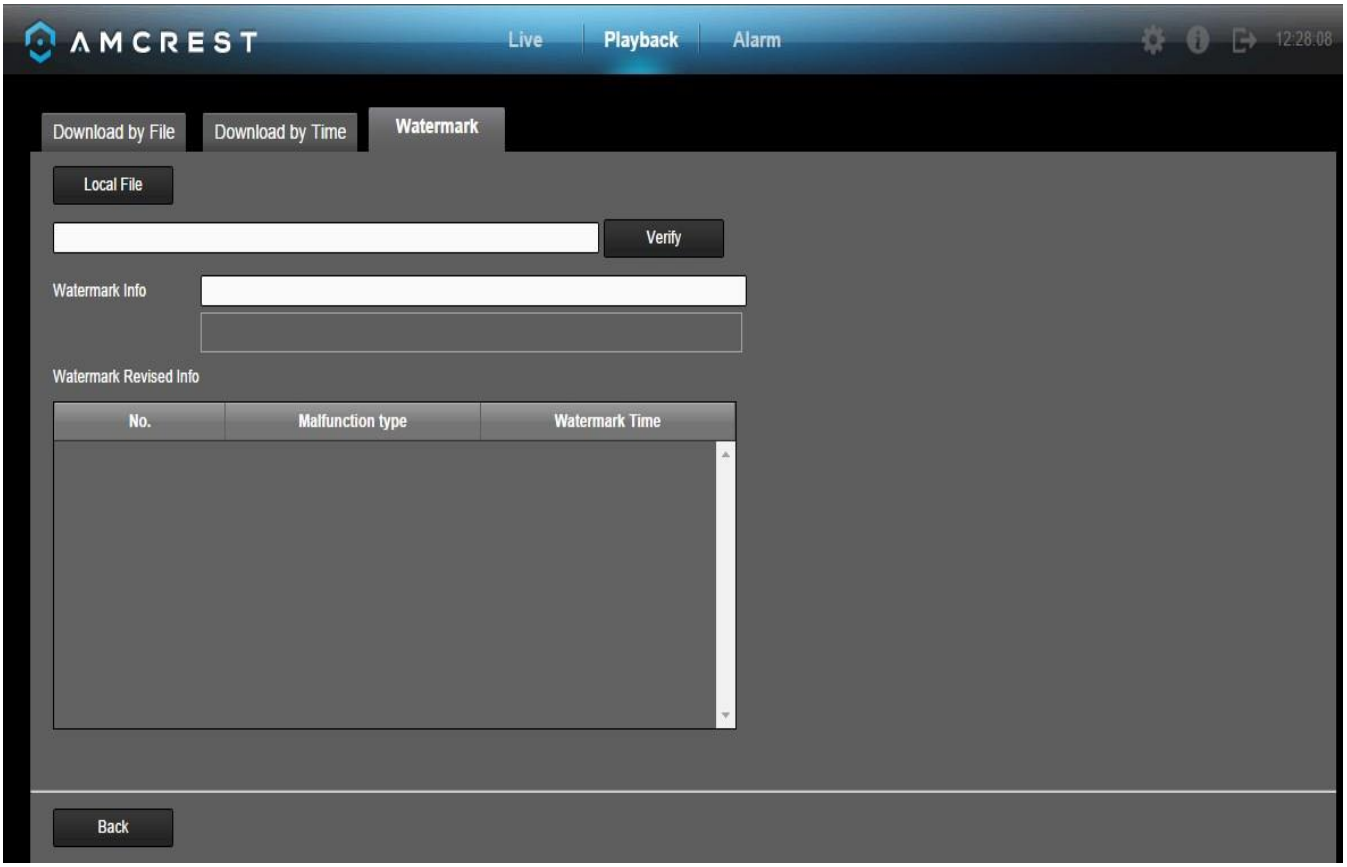
This is the Download by File screen. The top part of the screen allows the user to search through the files. The buttons on the bottom allow the user to download files to the PC or download to USB.



This is the Download by Time screen. The top part of the screen allows the user to select a channel and a time frame from which to download any recorded video. The Download to Local button opens a dialog box asks the user to where to save the downloaded file.



This is the Watermark screen. This screen allows users to add a watermark to downloaded video, and to verify watermarked videos.



Alarm Interface

This is the interface for the DVR's Alarm management menu. There are 4 main sections. See the table below for more information:

Number	Section	Parameter	Function
1	Alarm Type	Video loss	The system triggers the alarm when video loss occurs.
		Motion detection	The system triggers the alarm when motion detection occurs.
		Tampering	The system triggers the alarm when camera is maliciously masked.
		Disk full	The system triggers the alarm when the disk is full.
		Disk error	The system triggers the alarm when a disk error occurs.
		External alarm	An alarm input device triggers the alarm.
2	Operation	Prompt	The system automatically pops up an alarm icon on the Alarm button in the main interface when there is an alarm.
3	Alarm Sound	Play alarm sound	The system sends out an alarm sound when an alarm occurs. A custom sound can be used.
		Sound path	Here you can specify the alarm sound file.
4	Alarm Indicator	All	All triggered alarms are displayed here.

Web Access Settings Menu

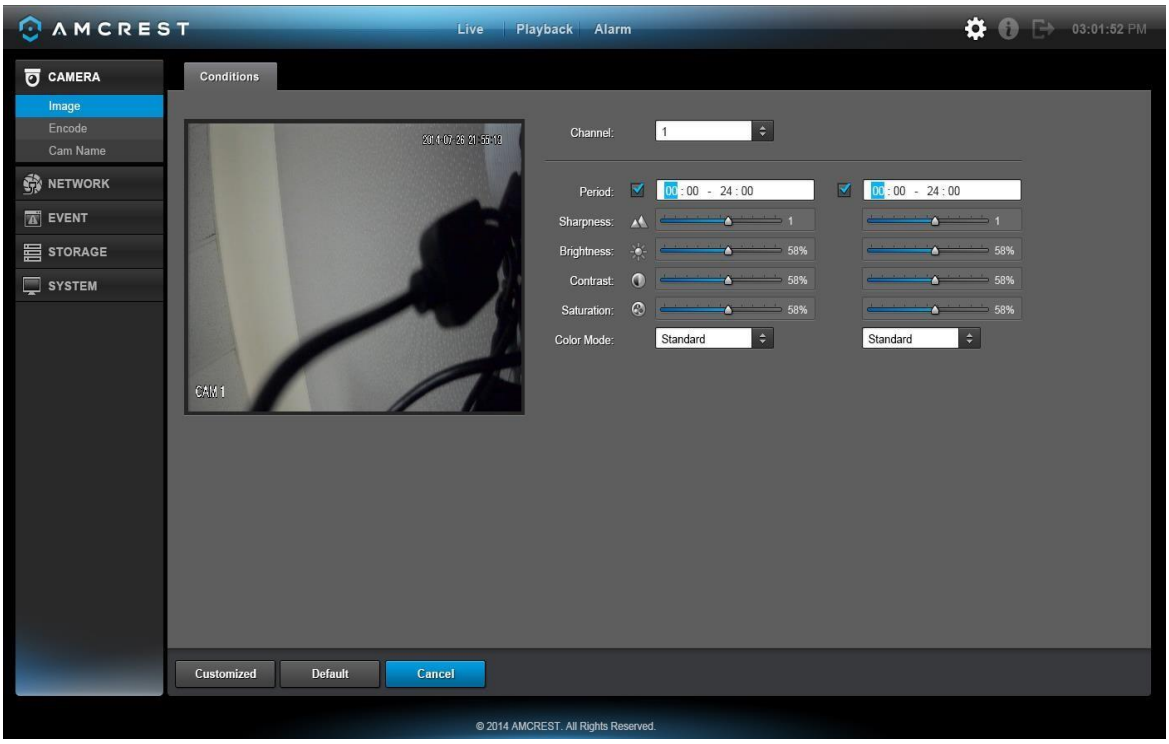
The web access settings menu has slight differences with the DVR's menu. In this section, the web access settings menu will be explained in depth just like the DVR settings menu had been explained in the sections above.

To access the web access settings menu, click the gear icon near the top right-hand corner of the web access interface.

Camera

Image Settings

This screen is allowing the user to adjust the image settings for each channel. See below for a screenshot of the image settings screen:



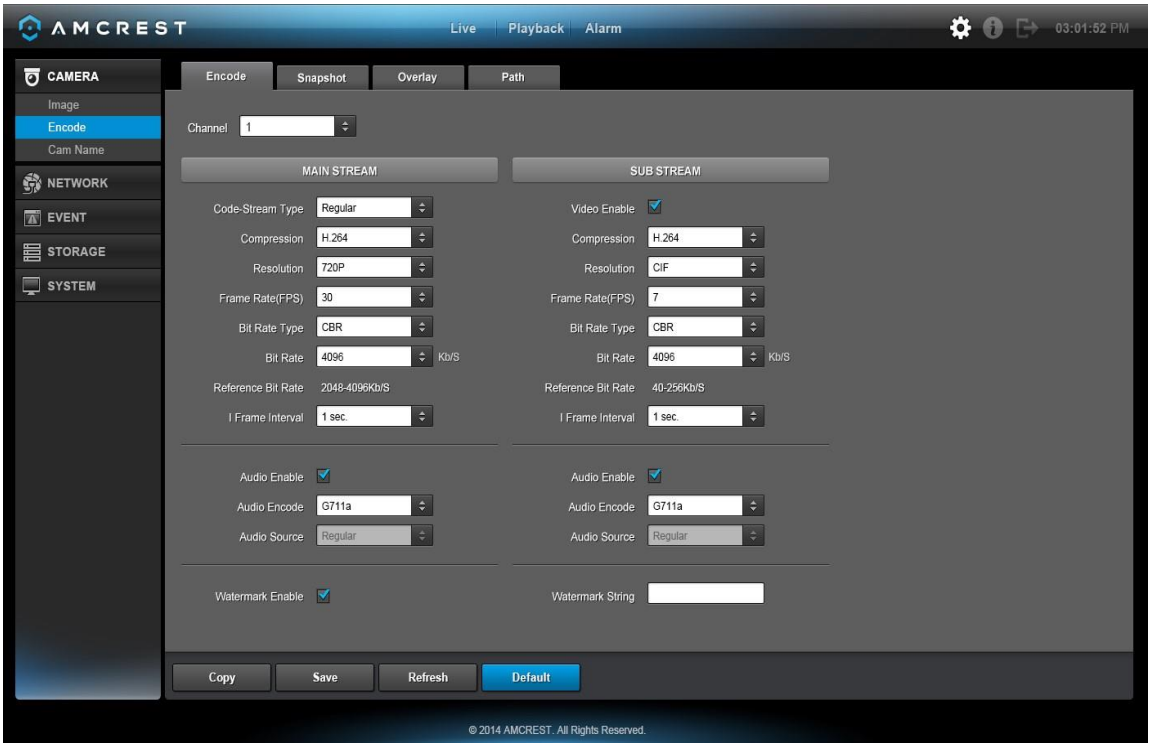
Below is an explanation for each of the fields on the Image Settings screen:

- Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
- Period: This dropdown box allows the user to select a period of time for which to modify the image settings. The user can configure up to 2 periods to encompass the entire 24 hours in the day. Click the checkbox to enable the period image settings changes.
- Saturation: This slider is used to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be clear if the value is too low. The recommended value ranges from 40 to 60.
- Brightness: This slider is used to adjust monitor window brightness. The value ranges from 0 to 100. The default value is 50. The larger the number, the brighter the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- Contrast: This slider is used to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video brightness is OK but the contrast is not correct. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over expose. The recommended value ranges from 40 to 60.
- Sharpness: This slider is used to adjust the sharpness of the video. The value ranges from 0 to 100. The larger the value is, the clearer the edges are and vice versa. Note: The higher the value, the higher likelihood of picture noise occurring. The default value is 50 and the recommended value ranges from 40 to 60.

To customize the picture, click Customize near the bottom left hand corner. To revert to default settings, click the Default button near the bottom left hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner.

Encode

This tab is used to set the video encoding settings for each channel. See below for a screenshot of the tab:



Below is an explanation of the fields on the Encode settings screen:

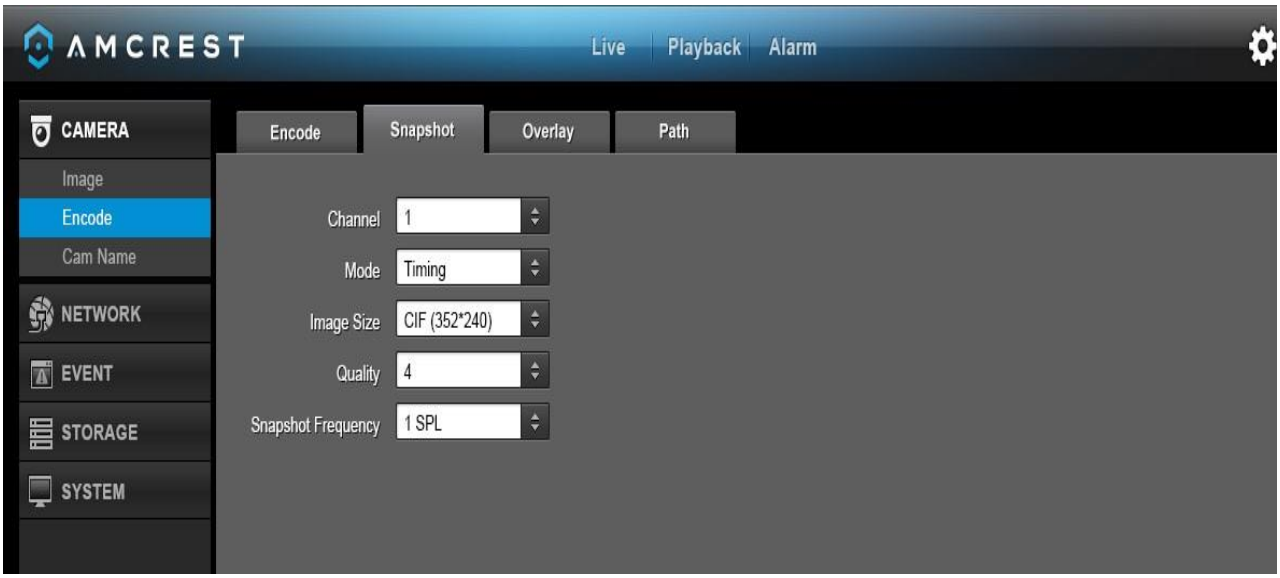
Parameter	Function
Channel	This dropdown box allows the user to select a channel from the dropdown list to modify.
Video Enable	This checkbox allows the user to enable the extra video stream. This is checked by default for the main stream.
Code Stream Type	This dropdown box allows the user to select different encode frame rates for different recorded events. This includes the main stream, motion stream, and alarm stream.
	The system supports active control frame function (ACF). It allows the user to record in different frame rates. For example, a high frame rate can be used to record important events, and a low frame rate can be used to record scheduled events. The DVR also allows for the option to set different frame rates for motion detection recordings and alarm recordings.
Compression	This dropdown box allows the user to select a compression protocol. The system supports H.264 and MJPEG video compression protocols.

Resolution	This dropdown box allows the user to set the resolution. The system supports various resolutions and they can be selected from this dropdown list.
Frame Rate	This dropdown box allows the user to select a frame rate. Frame rate settings range from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
Bit Rate	This dropdown box allows the user to select a bit rate type. The system supports two bit rate types: CBR and VBR. In VBR mode, video quality can be set.
Reference Bit Rate	This is the recommended bit rate value according to the resolution and frame rate selected.
I Frame	This field allows the user to set the P frame amount between two I frames. The value ranges from 1 to 150 seconds. Default value is 50. Recommended value is frame rate *2.
Audio Source	This dropdown box allows the user to select an audio source. The system supports two audio sources: Normal or HDCVI. In normal mode, the audio signal comes from the audio input. In HDCVI mode, the audio signal comes from the camera coaxial cable.
Watermark Enable	This function allows the user to verify if the video has been tampered with. Watermark bit stream, watermark mode, and a watermark string can be selected. The default string is DigitalCCTV. The maximum length is 85 characters. This string can only include numbers, characters, and underscores.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Snapshot

This tab allows for the selection of snapshot settings. See below for a screenshot of the Snapshot tab:



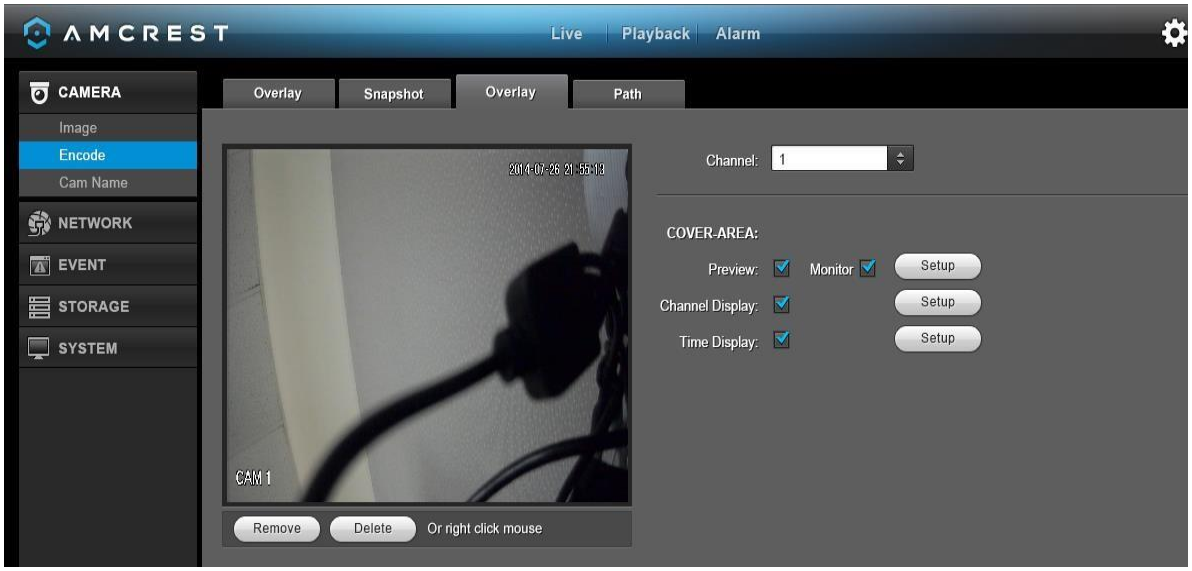
Below is a list of snapshot settings that can be modified on this screen:

Parameter	Function
Snapshot Mode	This dropdown box allows the user to select a snapshot mode. There are two snapshot modes: regular and trigger. Regular snapshots are taken as scheduled. Trigger snapshots occur when a motion detection alarm, a tampering alarm, or a local activation alarm is triggered.
Image Size	This dropdown box allows the user to select an image size. There are 4 settings: D1, HD1, 2CIF, and CIF.
Image Quality	This dropdown box allows the user to select image quality. Quality is adjusted on a scale of 1-10.
Snapshot Frequency	This is to set snapshot frequency. The value ranges from 1 to 7 seconds. The maximum setting for a customized interval is 3600s/picture.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Overlay

The overlay tab allows the user to change overlay settings for each channel. Below is a screenshot of the overlay tab:



Below is an explanation of fields that can be modified on the overlay settings screen:

Parameter	Function
Channel	This dropdown box allows the user to select a channel from the dropdown list to modify.
Cover-Area	This button allows the user to set the cover area. Drag the mouse to set the proper section size. The system supports a maximum of 4 zones in one channel.

Preview/Monitor	There are two types of cover areas Preview means the privacy mask zone cannot be viewed by user when system is in preview status. Monitor means the privacy mask zone cannot be viewed by the user when system is in monitor status.
Time Display	This button allows the user to select whether or not the system displays time on playback video. Clicking the set button and allows the user to drag the timestamp to the desired position on the screen.
Channel Title	This button allows the user to select whether the system displays channel number on playback video. Clicking the set button allows the user to drag the title to the corresponding position on the screen.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Path

The path tab allows the user to specify a path to record snapshots and manual recordings to on the PC. Below is a screenshot of the path tab:

To confirm settings, click the Save button. To revert to default settings, click the Default button.

Cam Name

Here you can set channel name. Below is a screenshot of the channel name settings screen:

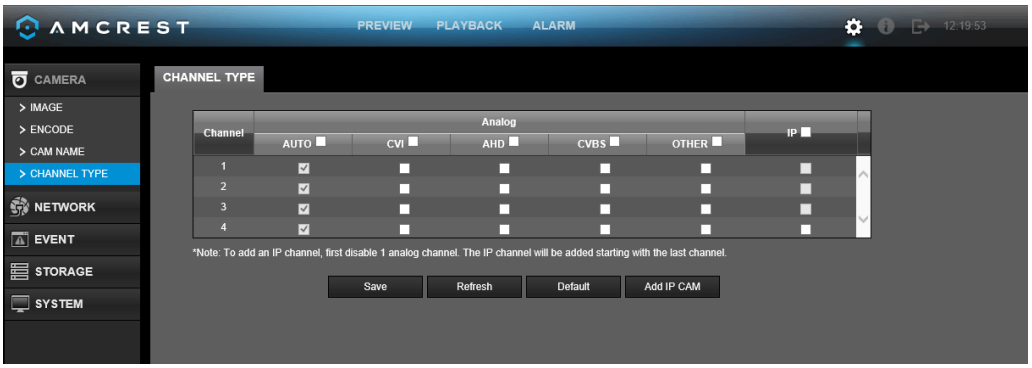
To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button. To confirm settings, click the Save button.

Channel Type

The channel type menu allows users to select which channel type will be added into the system. This can include the following types of protocols:

- Auto: Allows the user to automatically configure which protocol will be used.
- CVI: Allows the user to add a CVI or HDCVI camera to the DVR. for the device.
- AHD: Allows the user to add an AHD camera to the DVR.
- CVBS: Allows the user to add a CVBS (Analog) camera to the DVR.
- Other: Allows the user to add other compatible cameras into the DVR.
- IP: Allows the user to add IP cameras into the DVR. The number of cameras that can be added into the DVR will be specific to the amount of channels it can hold.

Below is a screenshot of the channel type screen:



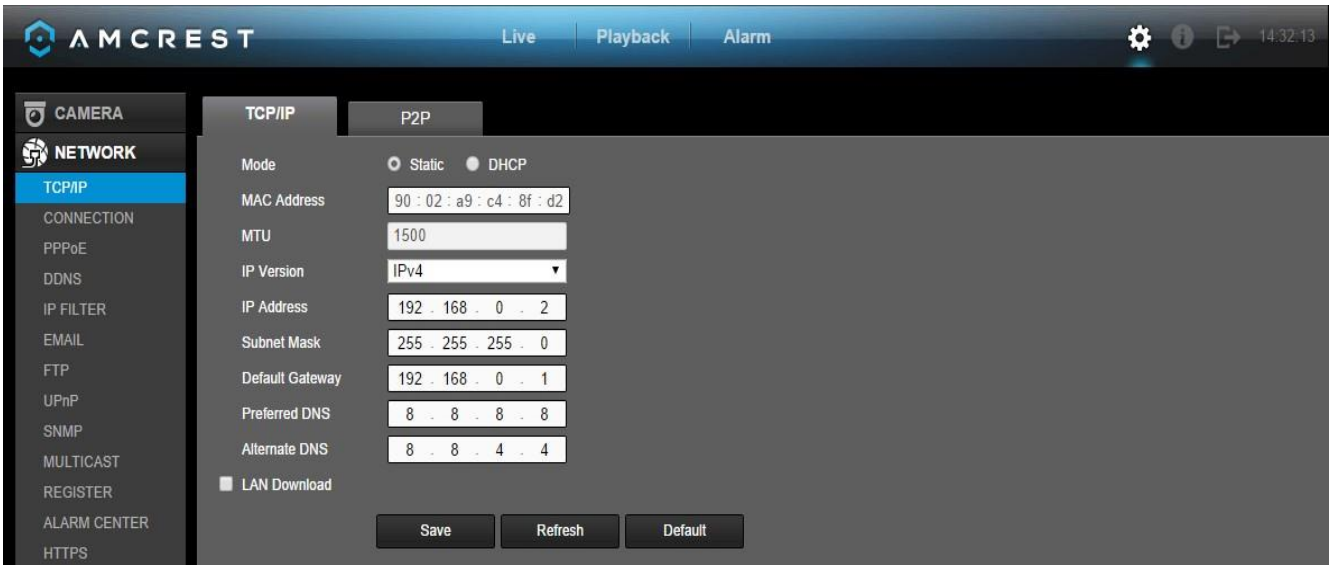
Note: To add an IP channel, you will need to disable 1 analog channel. The IP channel will be added starting with the last channel.
To add an IP camera, check the channels listed in the **IP** field and click on the **Add IP CAM** button. The system will need to reboot to activate the new setup parameters. Click **Yes** to reboot the DVR, allow the device to reboot and initialize, then add the IP camera accordingly.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button. To confirm settings, click the Save button.

Network

TCP/IP

TCP/IP stands for Transmission Control Protocol/Internet Protocol and it is the language/protocol that allows communication between internet connected devices, whether on a local network, or a on the Internet at large. This screen allows for TCP/IP settings to be modified for the DVR to establish connection to the network. Below is a screenshot of the TCP/IP settings screen:



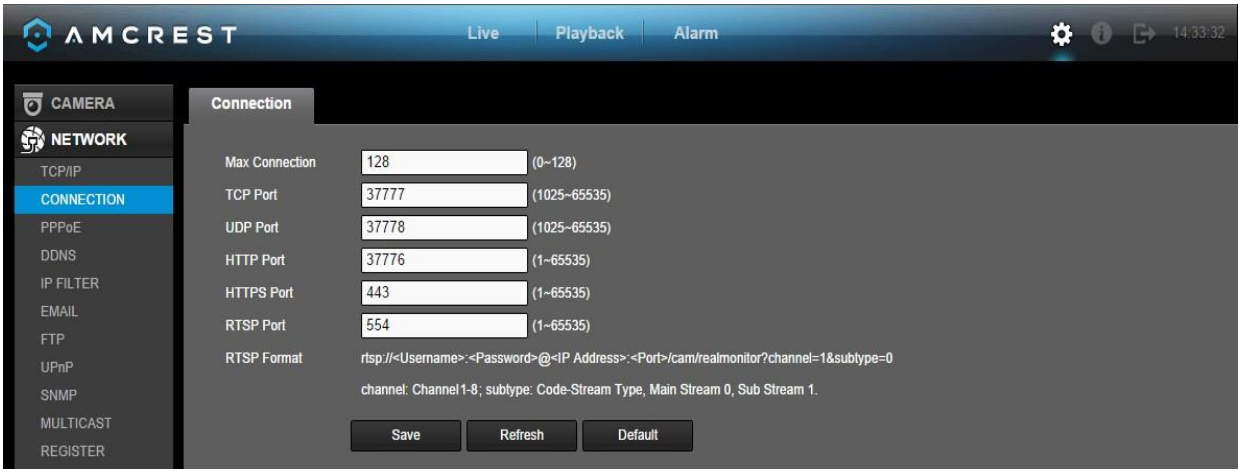
Below is an explanation of the fields on the TCP/IP settings screen:

Parameter	Function
Mode	Static vs DHCP: This check box allows the user to choose between a static IP address, and a dynamic IP address. DHCP stands for Dynamic Host Configuration Protocol, and this enables the DVR to automatically obtain an IP address from another network device such as a server or more commonly, a router. When the DHCP function is enabled, the user cannot modify the IP address, Subnet Mask, or Gateway, as these values are obtained from the DHCP function. To view the current IP address, DHCP needs to be disabled. Note: When PPPoE is enabled, modification of IP Address, Subnet Mask, and Gateway becomes prohibited.
MAC Address	This field shows the DVR's MAC address, which is unique to this device. This number is read-only and is used to access a local area network (LAN).
IP Version	This dropdown allows the user to select the IP version. The two options are IPV4 and IPV6.
IP Address	This field allows the user to enter a custom IP address.
Preferred DNS	This field allows the user to enter the DNS server IP address.
Alternate DNS	This field allows the user to enter the Alternate DNS server IP address.
For the IP address of IPv6 version, default gateway, preferred DNS, and alternate DNS, the input value should be 128-digits. It should not be left blank.	
LAN Download	This checkbox allows the user to enable the user to process the downloaded data first. The download speed is 1.5X or 2.0X compared to the normal streaming speed.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button. To confirm settings, click the Save button.

Connection

This screen allows users to configure port connections. It is important that the system is rebooted if any changes are made to the settings on this screen. Also, ensure that port values do not conflict. Below is a screenshot of the connection screen:



Below is an explanation of the fields on the Connection settings screen:

Parameter	Function
Maximum Connection	This field represents the maximum amount of users that can be connected to the DVR at the same time. The maximum number of users the DVR can support at one time is 128.
TCP Port	This field designates the Transmission Control Protocol (TCP) port number. The default value is 37777.
UDP Port	This field designates the User Datagram Protocol (UDP) port number. The default value is 37778.
HTTP Port	This field designates the Hypertext Transfer Protocol (HTTP) port number. The default value is 80.
HTTPS	This field designates the Hypertext Transfer Protocol Secure (HTTPS) port number. The default value is 443.
RTSP Port	This field designates the Real Time Streaming Protocol (RTSP) port number. The default value is 554.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

PPPoE

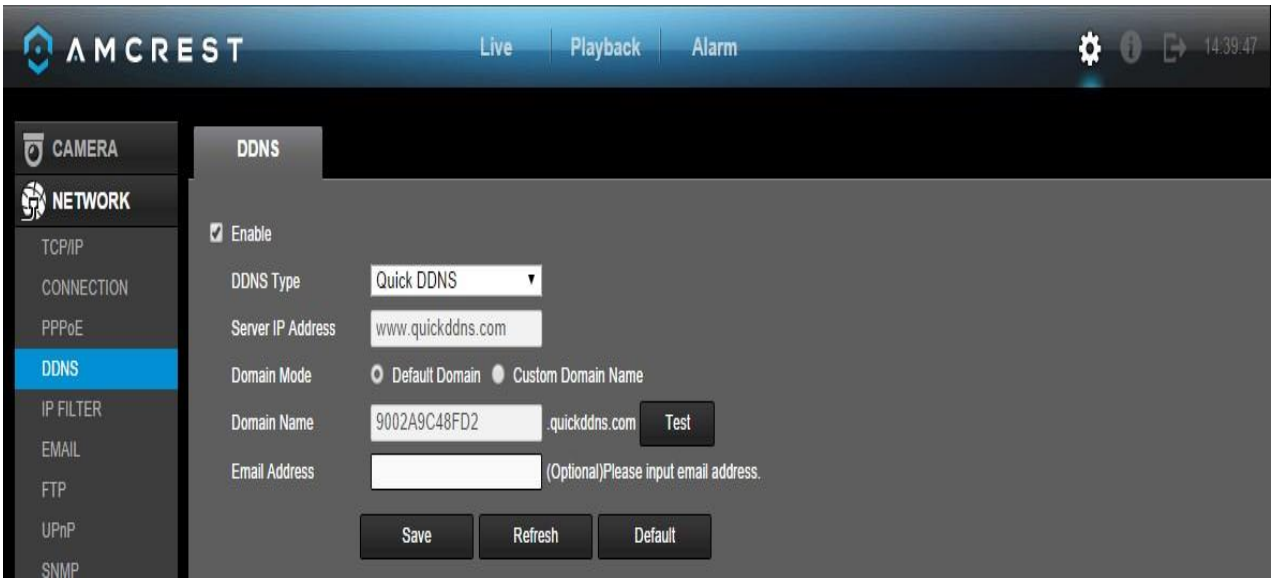
PPPoE stands for Point-to-Point Protocol over Ethernet. This screen allows users to configure PPPoE connections. Below is a screenshot of the PPPoE screen:

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

DDNS

DDNS stands for Dynamic Domain Name Server. This technology is used to automatically update name servers in real time to help the DVR maintain a persistent address despite changes in location or configuration. What this means is that even when the DVR is restarted, moved, or reconfigured, it can keep the same IP address, thus allowing remote users uninterrupted access to the DVR, rather than having to request a new IP address to use for remote access anytime a change is made.

To use this feature, users will need to setup an account with a DDNS service. The DVR supports a variety of DDNS services such as AmcrestDDNS, NO-IP DDNS, CN99 DDNS, Dyndns DDNS, and private DDNS services. Based on which service is selected, different options may show on this screen. For purposes of this guide, AmcrestDDNS will be used. To use AmcrestDDNS, go to http://www.AmcrestDDNS.com and register for an account. If the account is inactive for a year, AmcrestDDNS may take back the domain name, but an email will be sent beforehand as a warning. Below is a screenshot of the DDNS settings screen, configured to AmcrestDDNS:



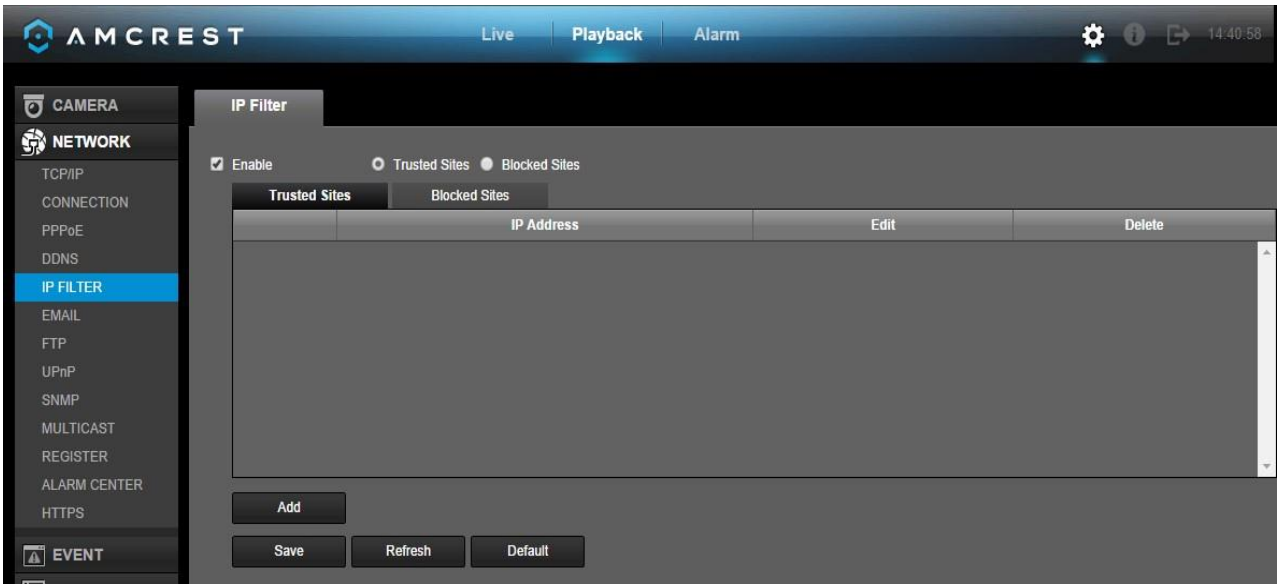
Below is an explanation of the fields that can be configured on DDNS settings screen when set to AmcrestDDNS type:

Parameter	Function
DDNS Type	This dropdown box is used to select which DDNS service is being used on the DVR.
Server IP Address	This field allows the user to enter the IP address for the server used by the specific DDNS service.
Domain Name	This field is where the domain name from the AmcrestDDNS service is entered.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

IP Filter

This screen allows for the filtering of IP addresses, either blocking them, or granting them access to the DVR. This feature helps make the DVR more secure by limiting remote access only to approved users. Below is a screenshot of the IP Filter screen:



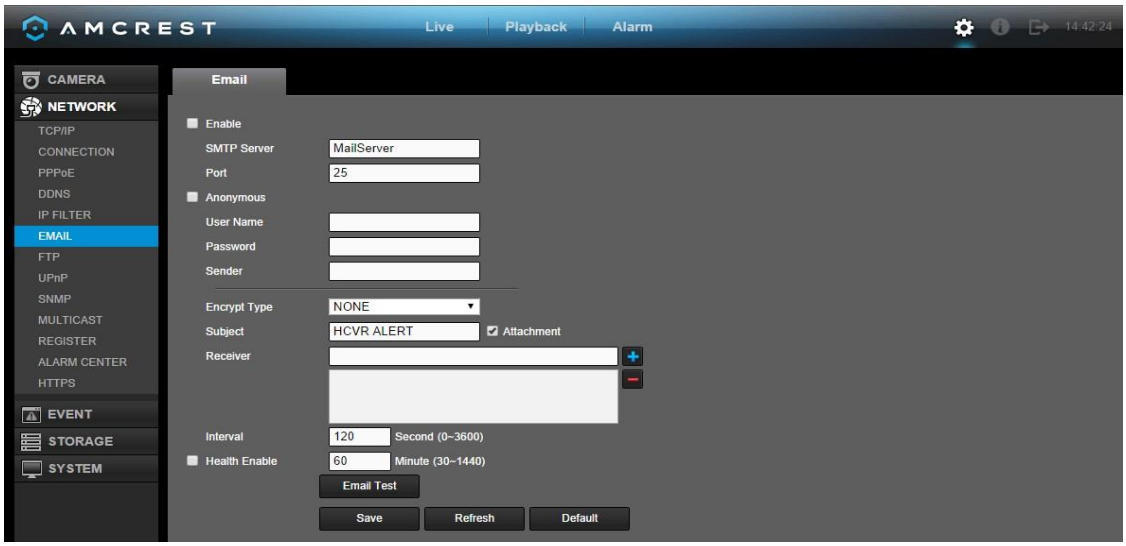
Below is an explanation of fields on the IP Filter settings screen:

- Enable: This checkbox allows the user to enable the IP Filter feature. Many of the other fields below cannot be edited if this checkbox is not checked.
- Type: This radio button allows the user to select an IP address type. There are two types of IP addresses that can be used by this feature. Only one of them can be activated at a time.
  Trusted Sites: This setting allows the user to enter trusted IP addresses. All other addresses will be blocked.
  Blocked Sites: This setting allows all IP addresses, but blocks the ones that are specified.
- Delete: This button allows a user to remove a specific IP address from the IP Filter list.
- Edit: This button allows a user to edit start or end addresses.

To add another line item, click the Add button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Email

This screen allows for the configuring of email settings to permit the DVR to send emails when the connected cameras or alarms are triggered. Below is a screenshot of the email settings screen:



Below is an explanation of the fields on the Email settings screen:

Parameter	Function
Enable	This checkbox allows the user to enable the email feature.
SMTP Server	SMTP stands for Simple Mail Transfer Protocol. This field allows the user to enter the SMTP server used by the email service.
Port	This field allows the user to enter the port that corresponds to the selected SMTP server.
Anonymity	This checkbox allows the user to anonymously login to the server.
User Name	This field allows the user to enter the username used to login to the selected SMTP server.
Password	This field allows the user to enter the password associated with the SMTP username.
Sender	This field allows the user to enter the sender email address. This email address will be the one that sends out all emails pertaining to the alerts and alarm emails sent by the DVR.
Encryption Type	This dropdown box allows the user to select an encryption type. There are two types of email encryption that are available. SSL: Secure Socket Layer TLS: Transport Layer Security
Subject	This field allows the user to define the subject line of the email that is sent to the receivers.
Attachment	This checkbox allows the user to enable the attachment of screenshots with emails.

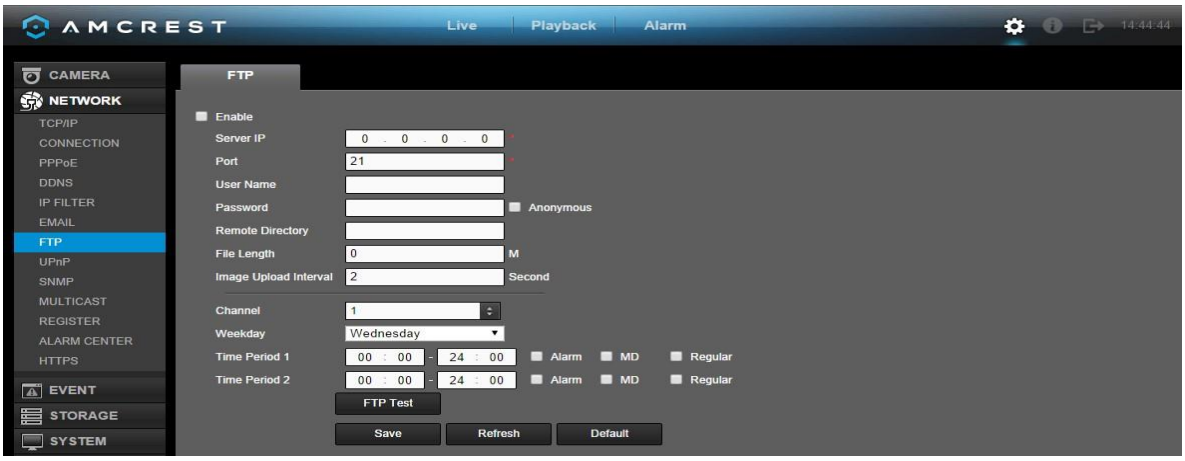
Parameter	Function
Receiver	This field allows the user to enter the receiver email address. These email addresses are the ones that will receive any emails pertaining to alert and alarm emails sent by the DVR. Up to 3 email addresses can be entered in this field.
Interval	This field allows the user to define, in seconds, how many events can be triggered concurrently.
Health Enable	This checkbox allows the user to enable the function that causes the system to send out a test email to ensure if the connection is OK or not.
Email Test	This button causes the system to automatically send out an email once to test the connection is OK or not. Prior to the email test, please save the email setup information.

To email a test email, click the Test Email button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

FTP

FTP stands for File Transfer Protocol. This protocol allows for remote uploading of files to a server. This feature requires the use of an FTP tool on a computer in order to enable the use of FTP features on the DVR.

Once an FTP tool has been acquired, installed, and configured to allow read, write, append, and delete access, then the DVR can be configured to use FTP. Below is a screenshot of the FTP menu screen:



Below is an explanation of the fields on the FTP settings screen:

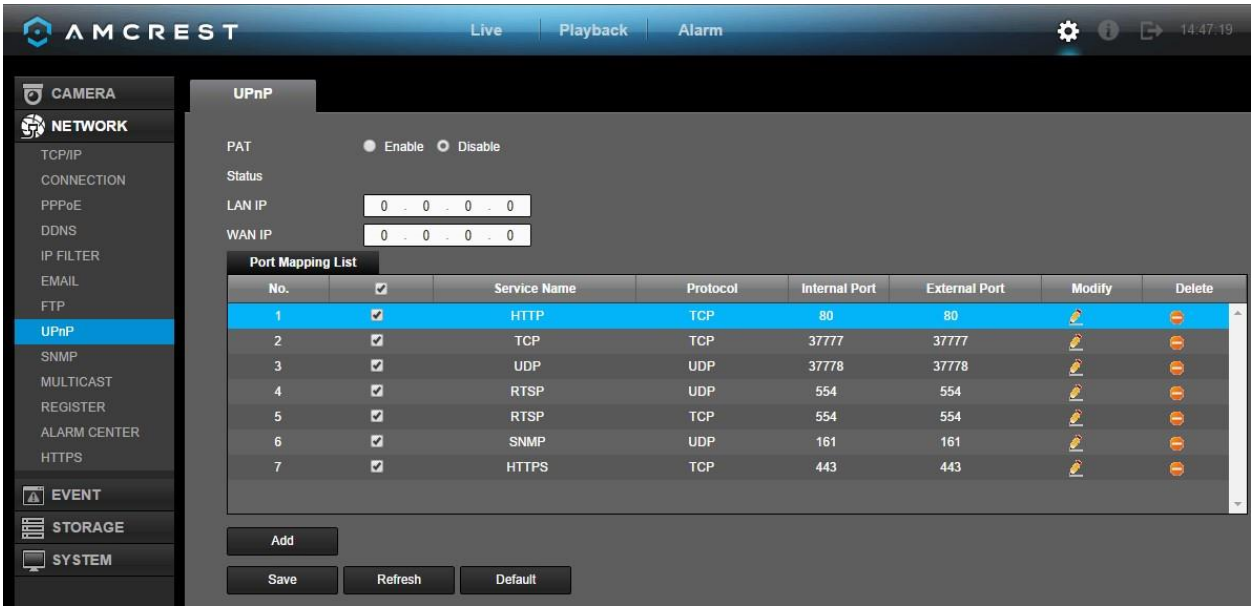
- Enable: This checkbox allows the user to enable the FTP feature for the DVR.
- Server IP: This field allows the user to enter the FTP server IP address and port.
- User Name: This field allows the user to enter the FTP username.
- Password: This field allows the user to enter the FTP server password. The checkbox next to this field enables anonymous access to the FTP.
- Remote Directory: This field allows the user to designate which folder the DVR will upload files to.
- File Length: This field allows the user to dictate how large upload files can be.

- Image Upload Interval: This field allows the user to define, in seconds, how often images can be uploaded to the FTP server.
- Channel: This field allows the user to pick a channel to set FTP settings for.
- Weekday: This field allows the user to pick a day of the week to set FTP settings for.
- Time Period 1: This field allows the user to specify a time period and what types of files to upload (Alarm, Motion, and Regular).
- Time Period 2: This field allows the user to specify a time period and what types of files to upload (Alarm, Motion, and Regular).

To test the FTP, click the Test FTP button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

UPnP

UPnP stands for Universal Plug and Play, and it is a protocol used to easily connect devices to the internet. In the case of this DVR, it allows the DVR to connect to the router in an easy manner to quickly allow for remote connection. Below is a screenshot of the UPnP settings screen:



Below is an explanation of the fields in the UPnP settings screen:

- PAT: PAT stands for Port Address Translation, and it is something that the UPnP protocol handles. This checkbox allows the user to enable UPnP on the device.
- UPnP Status: This field shows the UPnP status and has two options:
  - Unknown: This means that UPnP is offline.
  - Successful: This means that UPnP is working.
- Router LAN IP: This field allows the user to enter the IP address of the router that the DVR is trying to connect to.
- WAN IP: This field is where the DVR Wide Area Network (WAN) IP is populated. This IP address is what is used to remotely access the DVR through web access.
- PAT Table: This table is used to show how the ports for each protocol listed below have been remapped by the UPnP protocol.
  - The first column shows the order of the services.
  - The second column shows the name of the services. To edit this, double click on the service line item.

- The third column shows the name of the protocol used by that service. To edit this, double click on the service line item.
- The fourth column shows the Internal Port used by that service. To edit this, double click on the service line item.
- The fifth column shows the External Port used by that service. To edit this, double click on the service line item.

To view a video on how to remotely access your DVR using UPnP, go to http://amcrest.com/videos and view the video titled "How to Gain Remote Access to Your HDCVI DVR with Universal Plug and Play".

To view more information on how to set up the HDCVI DVR for remote access using UPnP, see section 5.2.1.

To add another line item, click the Add button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Multicast

Multicast is a feature that enables the DVR to broadcast its live view to multiple computers on the same network. Below is a screenshot of the multicast screen:

Below is an explanation of the fields in the Multicast settings screen:

- Enable: This checkbox allows the user to enable the Multicast feature for the DVR.
- IP Address: This field allows the user to enter the multicast IP address.
- Port: This field allows the user to enter the port number for the multicast IP address.

For more information on how to configure multicast, see the information below.

Multicast IP Address Range (IPV4): 224.0.0.0 through 239.255.255.255

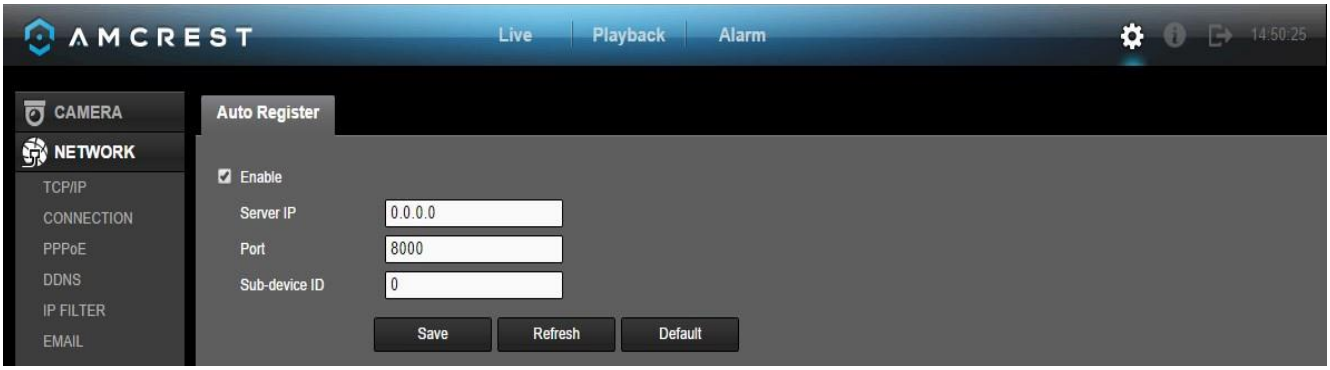
Well-known IPv6 multicast addresses	
Address	**Description**
ff02::1	All nodes on the local network segment
ff02::2	All routers on the local network segment
ff02::5	OSPFv3 All SPF routers
ff02::6	OSPFv3 All DR routers
ff02::8	IS-IS for IPv6 routers
ff02::9	RIP routers
ff02::a	EIGRP routers
ff02::d	PIM routers
ff02::16	MLDv2 reports (defined in RFC 3810)

ff02::1:2	All DHCP servers and relay agents on the local network segment (defined in RFC 3315)
ff02::1:3	All LLMNR hosts on the local network segment (defined in RFC 4795)
ff05::1:3	All DHCP servers on the local network site (defined in RFC 3315)
ff0x::c	Simple Service Discovery Protocol
ff0x::fb	Multicast DNS
ff0x::101	Network Time Protocol
ff0x::108	Network Information Service
ff0x::181	Precision Time Protocol (PTP) version 2 messages (Sync, Announce, etc.) except peer delay measurement
ff02::6b	Precision Time Protocol (PTP) version 2 peer delay measurement messages
ff0x::114	Used for experiments

To revert to default settings, click the Default button near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Register

The register feature allows the DVR to register itself with a specified proxy, so that the DVR can be remotely accessed via a proxy. A proxy is a computer server that acts as an intermediary between client computers that are seeking resources from a server. Below is a screenshot of the Register settings screen:



Below is an explanation of the fields on the Register settings screen:

- Enable: This checkbox allows the user to enable the Register feature for the DVR.
- No: This dropdown box allows the user to select the proxy number. Currently the DVR can only configure one proxy.
- Server IP Address: This field allows the user to enter the proxy server IP address.
- Port: This field allows the user to enter the proxy port number.

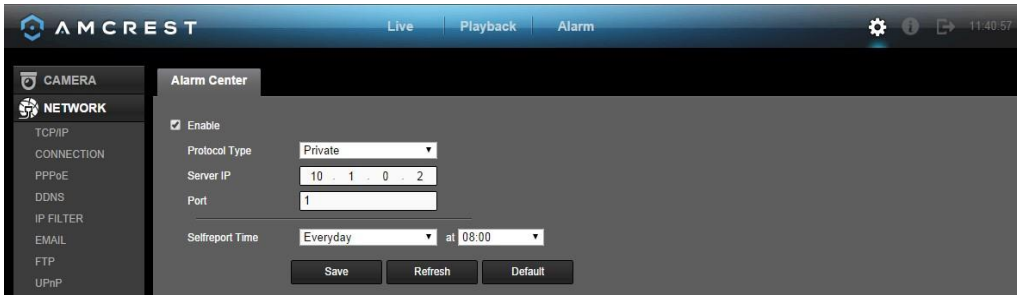
Note: Do not enter a network default port for this port number. It may result in a port conflict.

- ID: This field allows the user to enter the proxy ID number.

To confirm settings, click the Save button near the bottom right hand corner. To refresh the page, click the Refresh button. To revert to default settings, click the Default button near the bottom left hand corner.

Alarm Center

The alarm center feature is used to allow users to connect the DVR to their alarm server, so the server can receive a notice when certain events happen. One common use for the alarm center is to send daily reports on the status of the DVR's connection to the network.
Below is a screenshot of the Alarm Center settings screen:



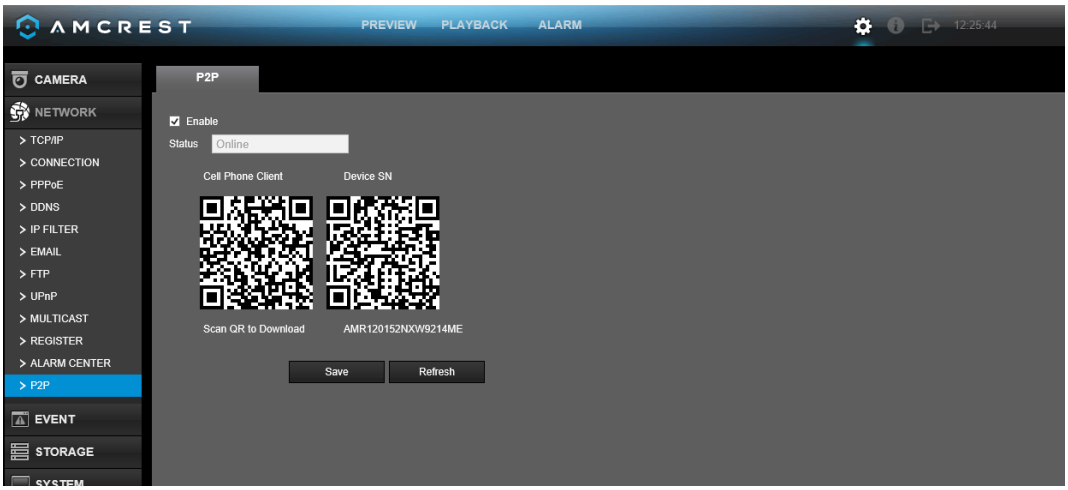
Below is an explanation of the fields on the Alarm Center settings screen:

- Enable: This checkbox allows the user to enable the Alarm Center feature for the DVR.
- Protocol Type: This field allows the user to select which protocol type they want to use for the alarm. Currently, only the private protocol type is available.
- Server IP: This field allows the user to enter the IP address of the alarm server.
- Port: This field allows the user to enter the port number of the alarm server.
- Self-Report Time: This field allows the user to enter a time of the day when they want to receive a report about the DVR's connection to the network each day.

To confirm settings, click the Save button near the bottom right hand corner. To refresh the page, click the Refresh button. To revert to default settings, click the Default button near the bottom left hand corner.

P2P

The P2P settings screen is where users can use a QR code to connect their smartphone or tablet to the DVR. The HDCVI uses an app called Amcrest View, and it is available on both iOS and Android. Below is a screenshot of the P2P settings screen:



Below is an explanation of the fields on the P2P settings screen:

- Enable: This checkbox allows the user to enable the P2P feature for the DVR.
- Connect Status: This field shows the status of the P2P connection. Once connected using the app, this field should display the word Online
- SN: This is an alternate string of characters used to denote the QR code in case the QR code scanner isn't working.
- QR Code: This is the unique QR code used to help the app user connect to the DVR
- **Note**: The physical design of the QR code may change based on the network settings used. All QR code connections should be made with the image that displays on this screen, and not through any static saved images.
- To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button. To confirm settings, click the Save button.

To confirm settings, click the Save button. To refresh the page, click the Refresh button.

Event

Video Detect

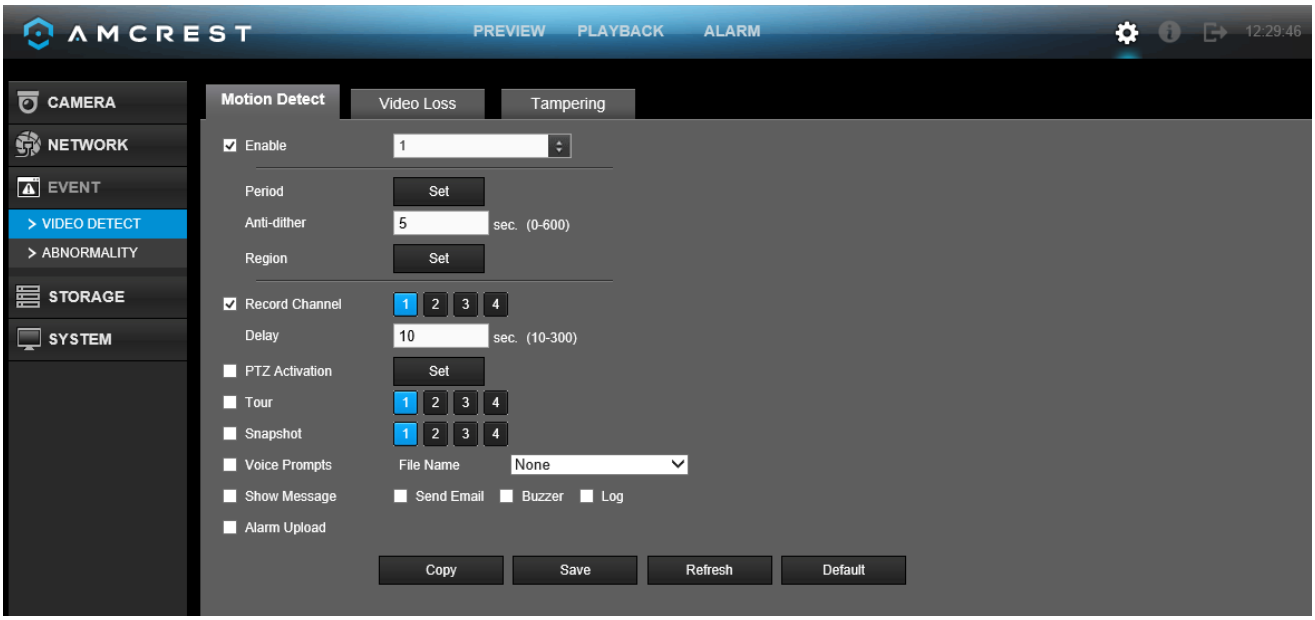
Main Menu -> Settings -> Event -> Detect opens the Detection interface. Here there are 3 options, each representing a detection type: Motion Detection, Video Loss, and Tampering.

Tips:

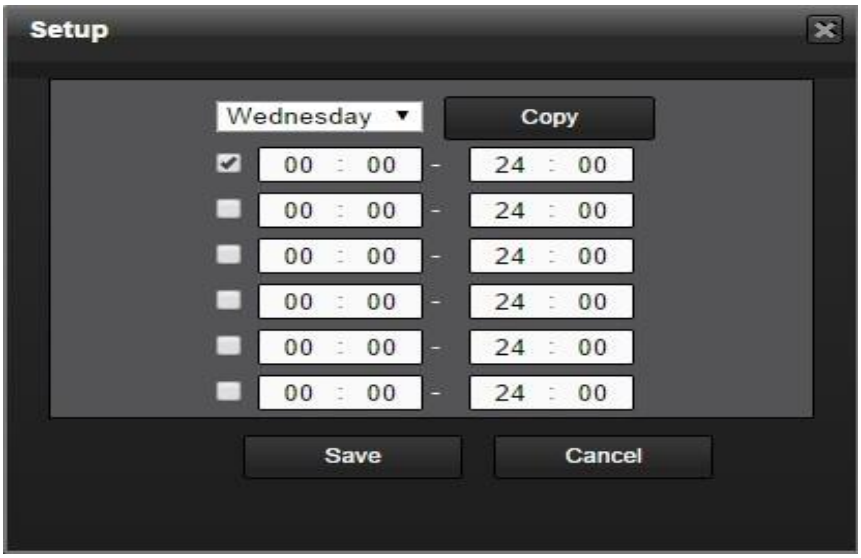
- The video loss and tampering screens have no detection regions or sensitivity setup.
- The motion detection icon will be present if the motion detection alarm has been triggered on the current channel.
- To set the motion detection region, click and drag the mouse over the region desired. Once the region has been set, click the OK button to save the current region setup, and right click on the mouse to exit the motion detection interface.

Motion Detect

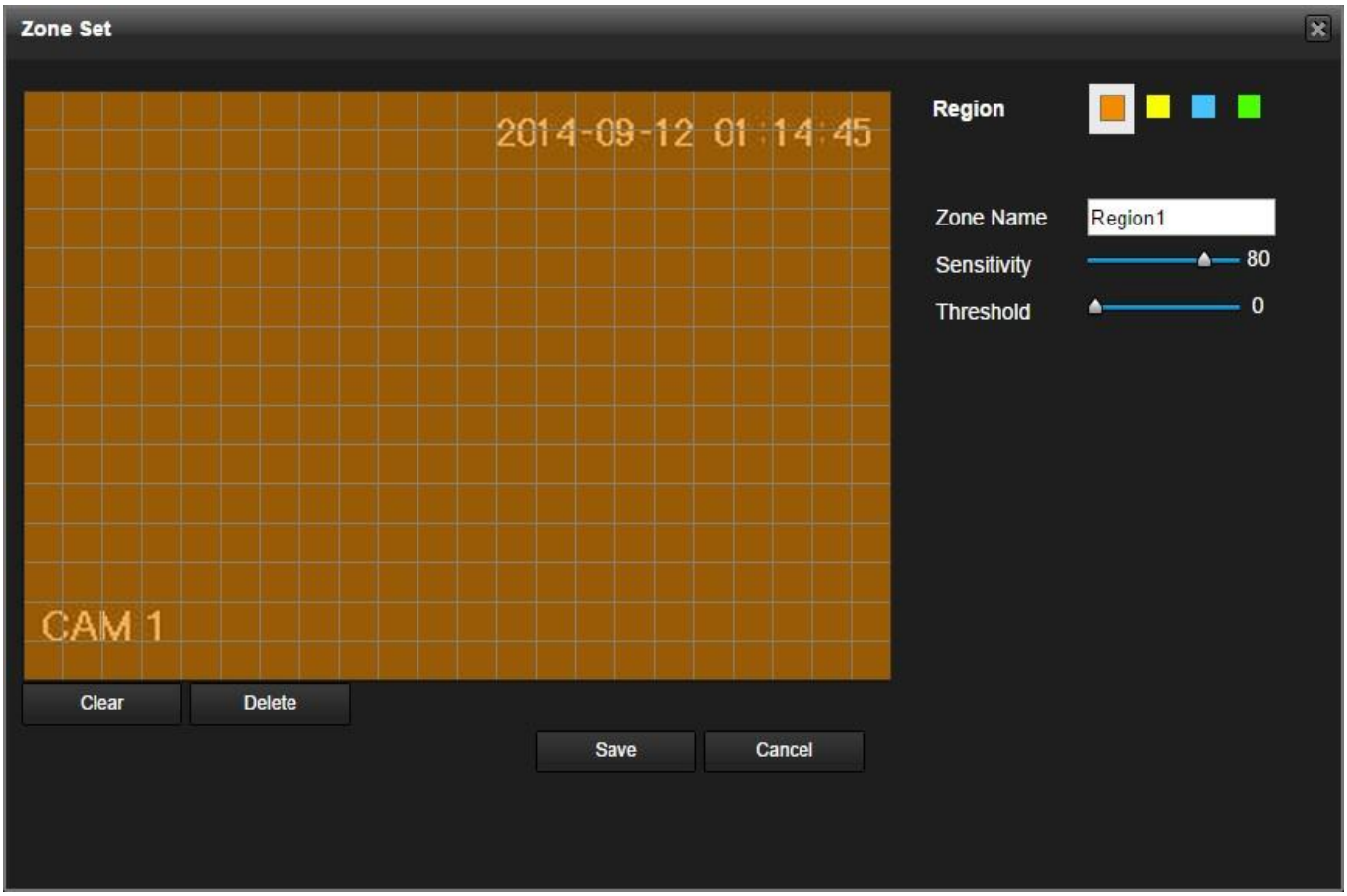
The motion detection settings screen is where motion detection can be setup for each individual channel. Based on the active motion detection region, the DVR can generate a motion detection alarm when a moving signal is detected in a specified area. Below is a screenshot of the motion detection settings screen:



Below is a screenshot of the period setup screen:



Below is a screenshot of the region setup screen:



Below is a screenshot of the PTZ Activation screen:

Below is a description of the fields on the Motion Detection settings page:

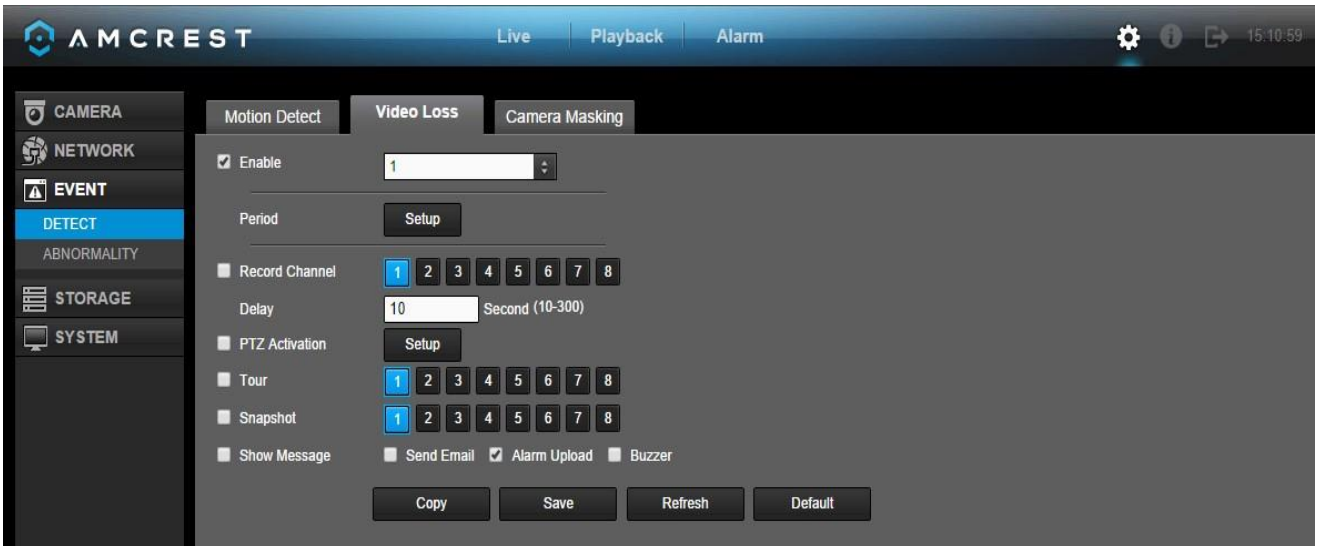
Parameter	Function
Enable	This checkbox allows the user to enable the motion detection function for a specific channel.
Period	This setup button takes the user to the motion detection period settings screen.
Anti-dither	This field allows the user to set the anti-dither time. The values in this field can range from 5 to 600 seconds. This time value controls how long the alarm signal lasts. Based on motion detection, a buzzer can go off, a tour can begin, PTZ can be activated, a snapshot can be taken, or a channel can begin recording. For example, if the anti-dither time is set to 10 seconds, each alarm may last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel functions will begin another 10 seconds while the screen prompt, alarm upload, email will not be activated again. After 10 seconds, if system detects another alarm signal, it can generate a new alarm since the anti-dither time has expired.

Region	The setup button takes the user to the motion detection region setup screen for that specific channel. When the setup button is clicked, the current channel's interface comes into a full screen view. The user can then set up to 4 regions, each with their own region name, sensitivity (1-100), and threshold (1-100). Each region has a specific color, and the region selector tool is displayed when the mouse is moved to the top of the screen. Sensitivity is the amount of change required to increase the motion detected by a percentage. The lower the sensitivity, the more movement is required to trigger an alarm. Threshold is the level that the motion detection needs to reach in order to trigger an alarm. The lower the threshold, the more likely that motion will trigger an alarm. To designate a zone, click and drag the mouse over the area desired. When a colored box is displayed over the live feed, that area is now enabled for motion detection. Clicking the FN button will switch the mode between armed and disarmed, so that clicking and dragging the mouse can either designate a motion detection zone or remove any motion detection zone markers. After the motion detection zone is set, click the enter button to exit the motion detection screen. Remember to click the save button on the motion detection settings screen, otherwise the motion detection zones will not go into effect. Clicking the escape button to leave the motion detection zone and will not save the zone setup.
Record Channel	This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered.
Record Delay	This field specifies in seconds how long the delay between alarm activation and PTZ activation should be.
PTZ Activation	This checkbox allows the user to enable the system to activate PTZ movement when a motion detection alarm is triggered. To setup the PTZ activation settings, click the setup button next to PTZ activation. the PTZ Activation screen, each camera can be setup to perform a preset PTZ action based upon motion detection.
Tour	This checkbox allows the user to enable the system to cause a PTZ tour to occur when a motion detection alarm is triggered. Multiple cameras can be specified to perform a tour.
Snapshot	This checkbox allows the user to enable the system to take a snapshot when a motion detection alarm is triggered. Multiple cameras can be specified to perform a tour.
Alarm out	This checkbox allows the user to enable the system to upload alarm information when a motion detection alarm is triggered.
Buzzer	This checkbox allows the user to enable the system to activate a buzzer when a motion detection alarm is triggered.
Show message	This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.

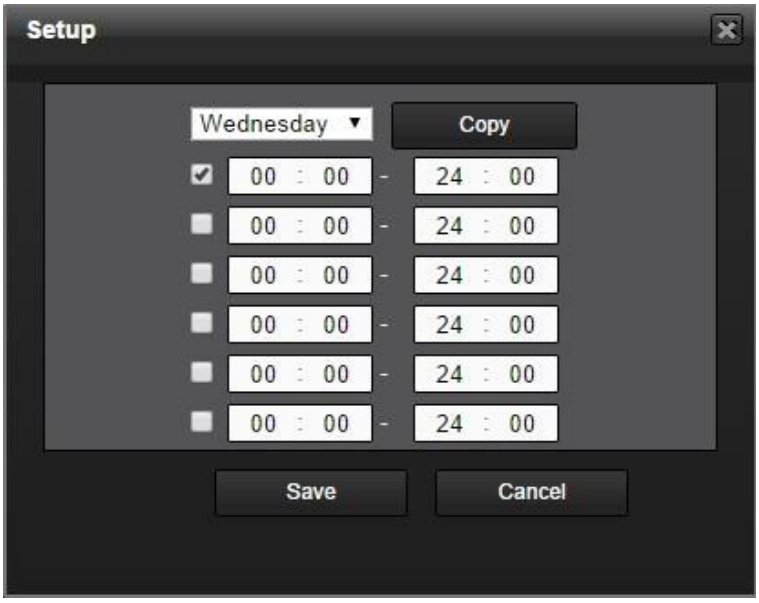
To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Video Loss

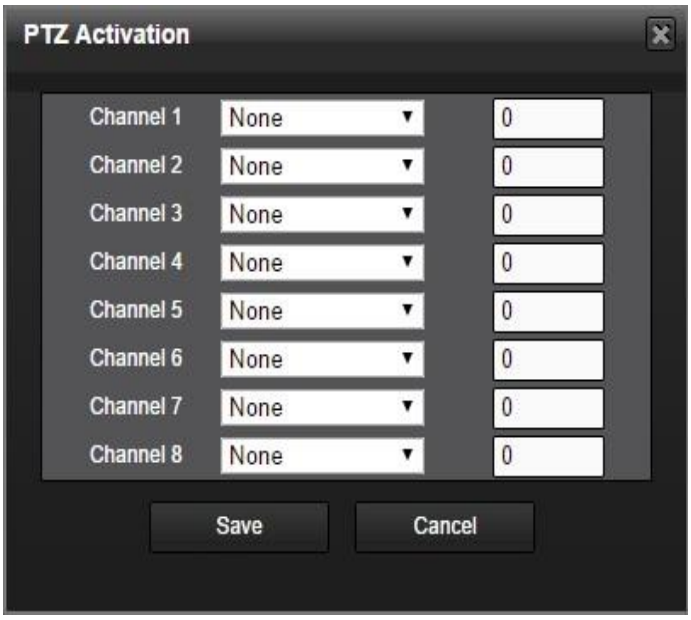
The video loss settings screen is where the DVR can be setup to notify the user any time there is video loss on any of the channels. Below is a screenshot of the video loss settings screen:



Below is a screenshot of the period setup screen:



Below is a screenshot of the PTZ Activation screen:



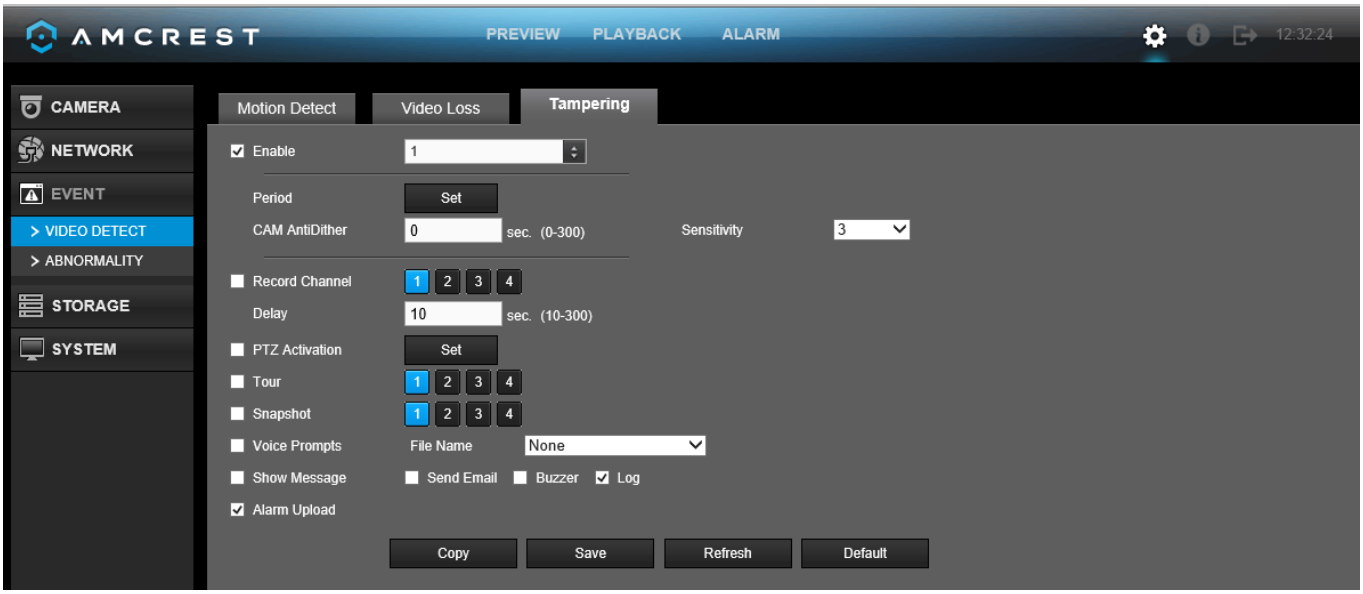
Below is a description of the fields on the Video Loss settings page:

Parameter	Function
Enable	This checkbox allows the user to enable the video loss function for a specific channel.
Period	This setup button takes the user to the video loss period settings screen.
Record Channel	This checkbox allows the user to enable the system to record video for that channel when a video loss alarm is triggered.
Record Delay	This field specifies in seconds how long the delay between alarm activation and PTZ activation should be.
PTZ Activation	This checkbox allows the user to enable the system to activate PTZ movement when a video loss alarm is triggered. To setup the PTZ activation settings, click the setup button next to PTZ activation. the PTZ Activation screen, each camera can be setup to perform a preset PTZ action based upon video loss.
Tour	This checkbox allows the user to enable the system to cause a PTZ tour to occur when a video loss alarm is triggered. Multiple cameras can be specified to perform a tour.
Snapshot	This checkbox allows the user to enable the system to take a snapshot when a video loss alarm is triggered. Multiple cameras can be specified to perform a tour.
Alarm out	This checkbox allows the user to enable the system to upload alarm information when a video loss alarm is triggered.
Buzzer	This checkbox allows the user to enable the system to activate a buzzer when a video loss alarm is triggered.
Show message	This checkbox allows the user to enable the system to show an on-screen message when a video loss alarm is triggered.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Tampering

The tampering settings screen is where the DVR can be setup to notify the user any time a camera is tampered with or if the output video is only displaying in one color. Below is a screenshot of the video tampering settings screen:



Below is a description of the fields on the Tampering settings page:

- **Channel:** The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
- **Enable:** This checkbox allows the user to enable the motion detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.
- **Period:** This setup button takes the user to the motion detection period settings screen. Below is a screenshot of the motion detection period settings screen.

- Click and drag on the green bars to specify time zones for motion detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press save to save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click Default to use the default settings.

- To specify time zones in greater detail for each day, click the Setup button to the left of the time bar, and the Time Period setup screen will appear. The screenshot below shows the Time Period settings screen:

- The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you'd like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

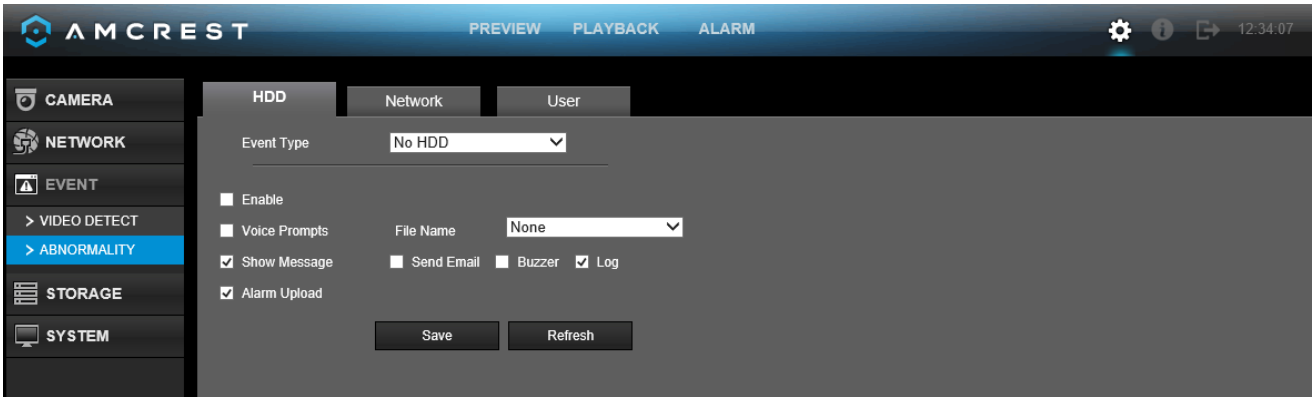
- **CAM Anti-Dither:** This field allows the user to set the anti-dither time. The values in this field can range from 5 to 600 seconds. This time value controls how long the alarm signal lasts. Based on motion detection, a buzzer can go off, a tour can begin, PTZ can be activated, a snapshot can be taken, or a channel can begin recording.
  - For example, if the anti-dither time is set to 10 seconds, each alarm may last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel functions will begin another 10 seconds while the screen prompt, alarm upload, email will not be activated again. After 10 seconds, if system detects another alarm signal, it can generate a new alarm since the anti-dither time has expired.
- **Record Channel:** This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab, it is the This field specifies in seconds how long the delay between alarm activation and recording should be.

- **Sensitivity –** Allows the user to set a preset sensitivity setting for motion detected events.
- **PTZ Activation:** Allows the user to active PTZ functionality to applicable PTZ devices.
- **Tour:** Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.
- **Snapshot: A**llows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Voice Prompts:** Allows the user to customize voice prompts for motion detected events.
- **Show Message:** This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.
- **Buzzer:** Allows the user to trigger a buzzer once a motion event is detected.
- **Log:** Allows the user to log all motion detected events that are triggered in the device.
- **Alarm Upload:** This checkbox allows the user to enable the system to upload alarm information when a motion detection alarm is triggered.

To revert to default settings, click the Default button near the bottom left hand corner. To copy settings to another channel, click Copy near the bottom left hand corner. To test a channel's motion detection, click Test near the bottom left hand corner. To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Abnormality

This screen is used to specify system action in the case of either hard drive abnormality, or network abnormality.



HDD

This screen allows the user to specify actions that occur when there is an abnormality with the DVR's hard disk drive (HDD). Below is a screenshot of the HDD settings screen:

Parameter	Function
Error Type	Error Type: This field allows the user to specify which HDD abnormality event type they would like to configure settings for. No Disk: No hard drive is detected. Disk Error: The hard drive has an error. Disk No Space: The hard drive is about to or has run out of space. ○ Less Than: This field allows the user to specify at what percentage of free disk space this condition should be triggered.

Enable	This checkbox allows the user to enable the features below for the specified event type.
Show message	This checkbox allows the user to enable the system to show an on-screen message when an HDD error occurs.
Send Email	This checkbox allows the user to enable the system to send an email when an HDD error occurs.
Buzzer	This checkbox allows the user to enable the system to activate a buzzer when an HDD error occurs.

To confirm settings, click the Save button. To refresh the page, click the Refresh button.

Network

This screen allows the user to specify actions that occur when there is an abnormality with the DVR's hard disk drive (HDD). Below is a screenshot of the HDD Abnormality settings screen:

Below is an explanation of the fields on the Network Abnormality settings screen:

Parameter	Function
Error Type	Event Type: This field allows the user to specify which Network abnormality event type they would like to configure settings for. Net Disconnected: The network connection has been disconnected. IP Conflict: There is a device on the network with the same IP address. MAC Conflict: There is a device on the network with the same MAC address.
Enable	This checkbox allows the user to enable the features below for the specified event type.
Show message	This checkbox allows the user to enable the system to show an on-screen message when a network error occurs.
Send Email	This checkbox allows the user to enable the system to send an email when a network error occurs.
Buzzer	This checkbox allows the user to enable the system to activate a buzzer when a network error occurs.
Delay	This field specifies in seconds how long the delay between alarm activation and buzzer activation should be.

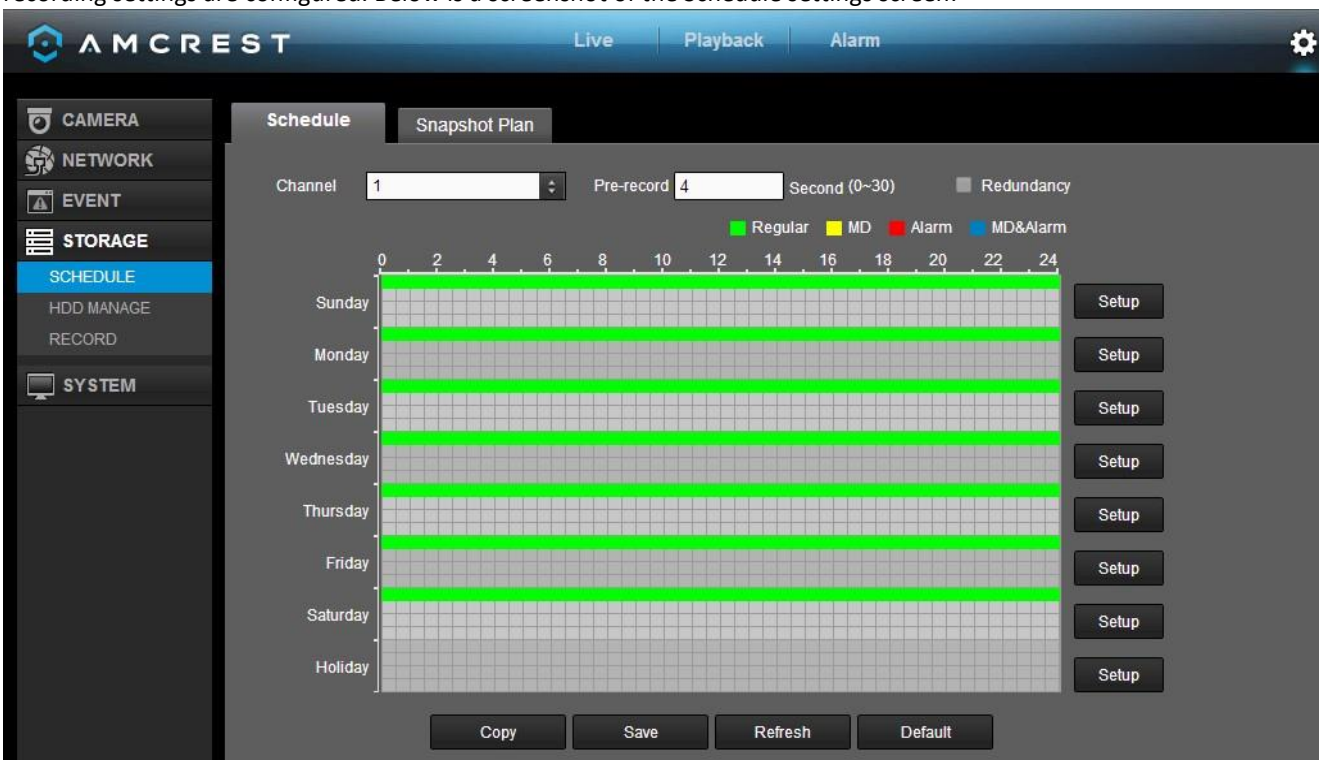
To confirm settings, click the Save button. To refresh the page, click the Refresh button.

Storage

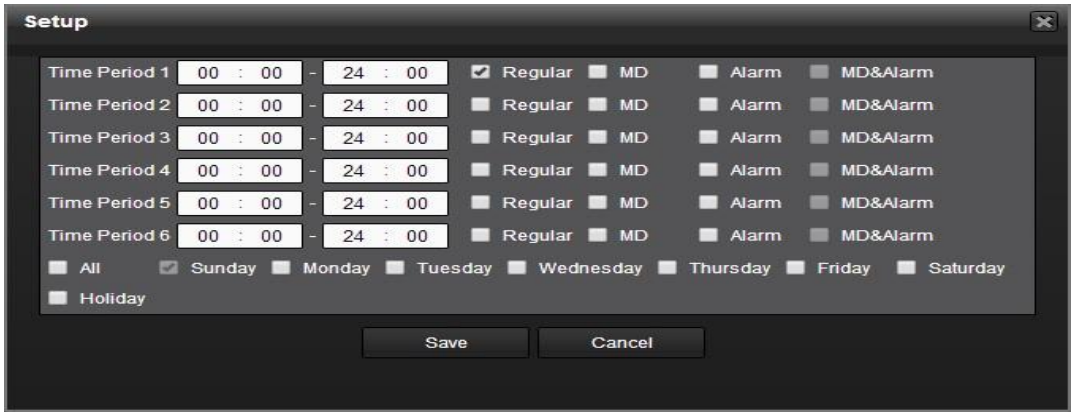
This set of menu items deal with storage of data on the DVR.

Schedule

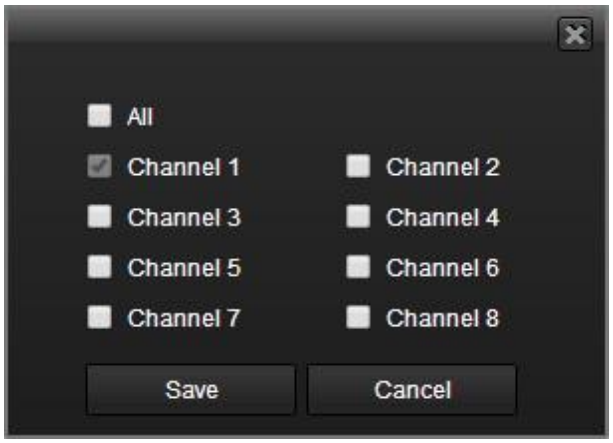
This screen is used to specify the recording schedule for both recorded video and snapshots. This tab is where video recording settings are configured. Below is a screenshot of the Schedule settings screen:



Below is a screenshot of the time period setup screen:



Below is a screenshot of the copy screen:



Below is an explanation of the fields on the Schedule settings screen:

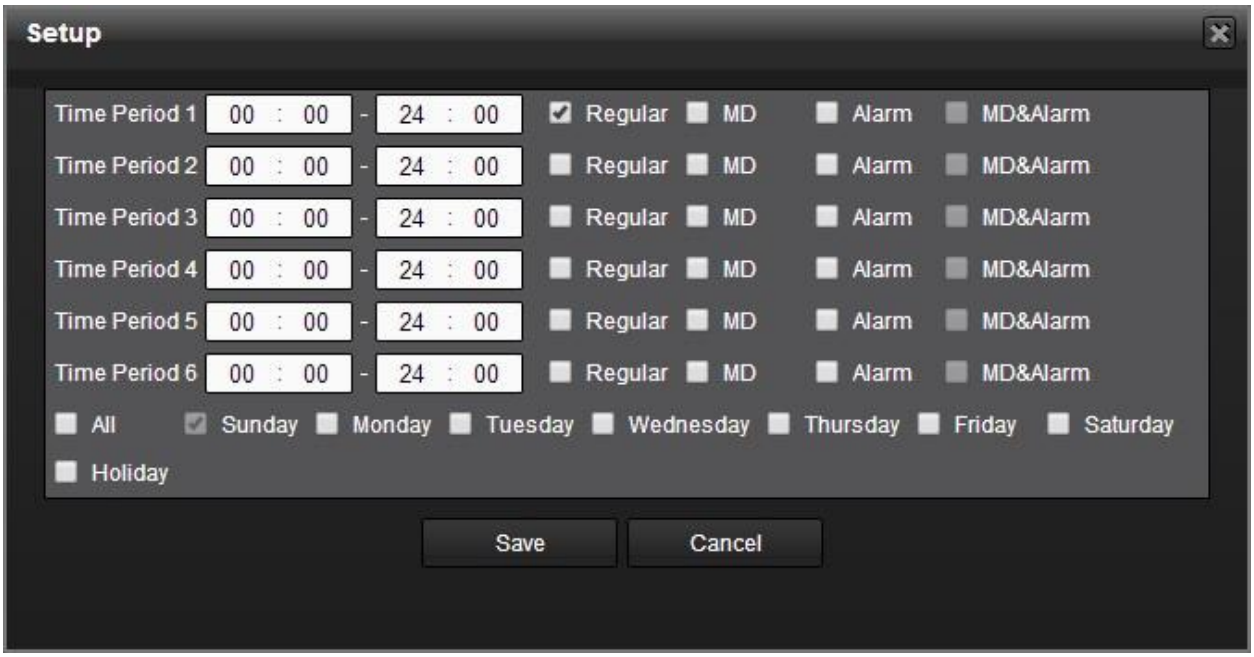
Parameter	Function
Channel	This dropdown box allows the user to pick which channel they would like to change video recording settings for.
Pre-record	This field allows the user to capture extra video that occurs before an event. Up to 30 seconds of video prior to a recording event can be captured in order to provide context to a recording.
Redundancy	This checkbox allows the user to enable the redundancy backup feature. This feature allows the DVR to record video to two hard drives concurrently in order to ensure that in the case of a hard drive failure, the recorded data may be backed up to another hard drive. Note: This function only works if the HDD has two hard drives installed. Note: One hard drive has to be designated as redundant from the HDD Manager menu. See section 4.10.5.2 for more details.
Holiday	This dropdown box allows the user to enable the holiday function. Holiday settings are configured in the System settings section. See section 4.10.4.1.3 for more information on holiday settings.
Setup	In order to specify time zones in greater detail for each day, click the setup button to the left of the time bar, and the Time Period setup screen will appear. The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you'd like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

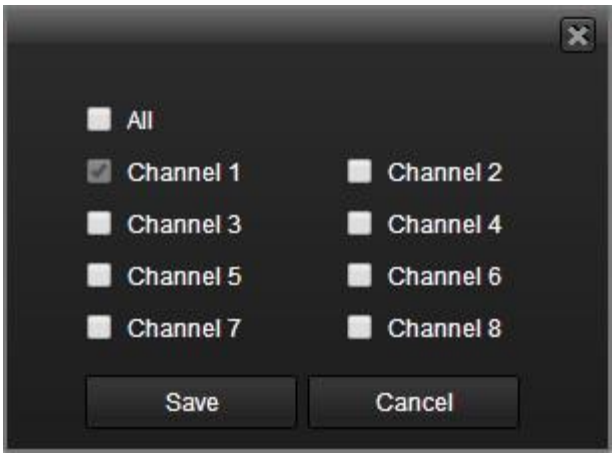
Snapshot

This tab is where snapshot recording settings are configured. Below is a screenshot of the Snapshot settings screen:

Below is a screenshot of the time period setup screen:



Below is a screenshot of the copy screen:



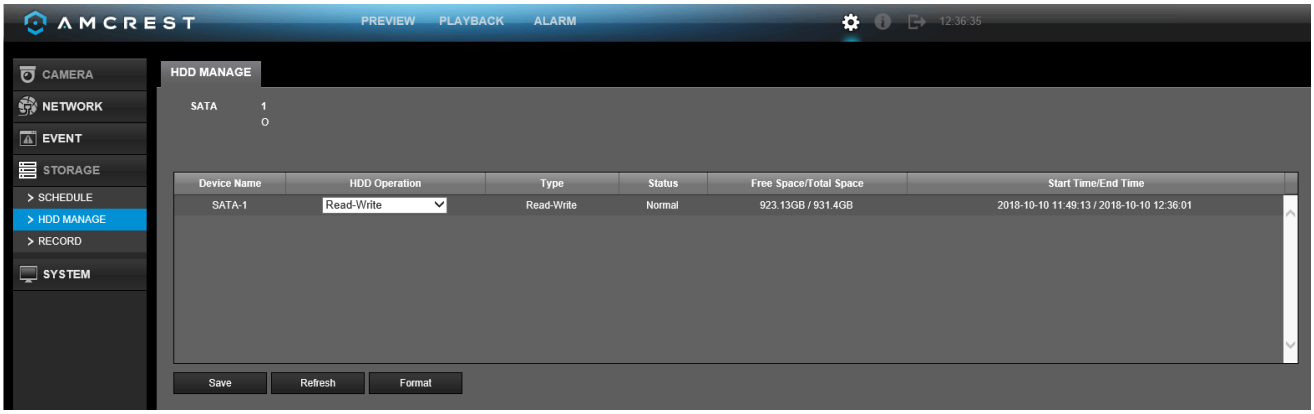
Below is an explanation of the fields on the Snapshot settings screen:

Parameter	Function
Channel	This dropdown box allows the user to pick which channel they would like to change snapshot recording settings for.
Holiday	This dropdown box allows the user to enable the holiday function. Holiday settings are configured in the System settings section. See section 4.10.4.1.3 for more information on holiday settings.
Setup	In order to specify time zones in greater detail for each day, click the setup button to the left of the time bar, and the Time Period setup screen will appear. The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you'd like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

HDD Manage

This screen is meant to help the user monitor the DVR's hard drives. Using this screen, the user can see the current HDD type, status, and capacity. The user can also use this screen to format hard drives and change hard drive properties. Below is a screenshot of the HDD Manage settings screen:



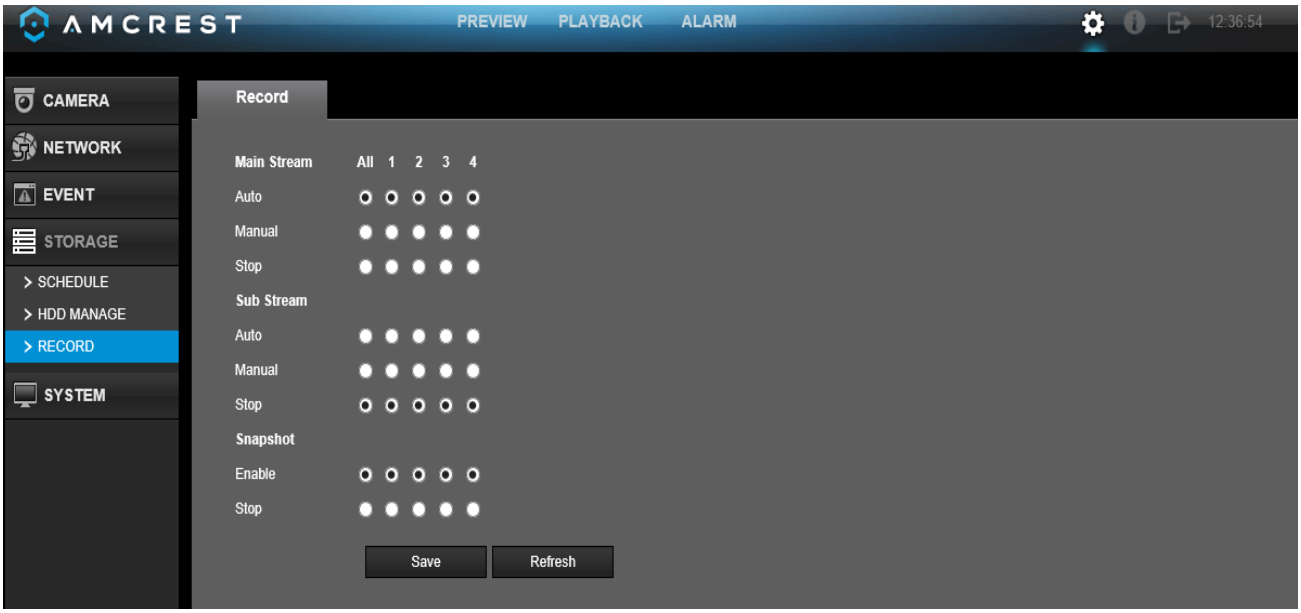
Below is an explanation of the fields on the HDD Manage settings screen:

- SATA: This shows how many hard drives the system can support. ○ 1 here means the system supports a maximum of 1 HDD.
  - The symbol on the next row shows the status of the connected hard drive.
    - 0 means that the current HDD is functioning normally.
    - X means there is an error with the hard drive connection, or that there is no connected hard drive.
    - ? means that the hard drive is damaged and should be replaced.
- Hard Drive List:
- This shows what hard drives are currently connected to the DVR and displays information about them.
  - Device Name: This column shows the names of the connected hard disk drives (HDD).
  - Type: This column shows the type of access the DVR has to the hard drive. To change a hard drive's type, click the downward arrow next to the HDD's type and select the desired type. There are 3 possible settings:
    - Read-Only: This allows the DVR to read the data, but not modify it in anyway.
    - Write-Only: This allows the DVR to write data to the HDD, but not read any data from it.
    - Read/Write: This allows the DVR to both read and write data on the HDD.
    - Status: This column shows the status of the connected hard drive. There are 3 statuses:
    - Normal: This means the hard drive is operating normally.
    - Error: This means the DVR is experiencing an error when attempting to access the hard drive.
    - Disconnected: This means that the HDD has disconnected from the DVR.
    - Free Space/Total Space: This field shows the free space on the hard drive compared to its total capacity.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To format a hard drive, click the Format button.

Record

This screen allows the user to specify which channels can record and take snapshots. The settings on this screen supersede all others when it comes to allowing channels the ability to record information. Below is a screenshot of the Record screen:



Below is an explanation of all the fields on the Record settings page:

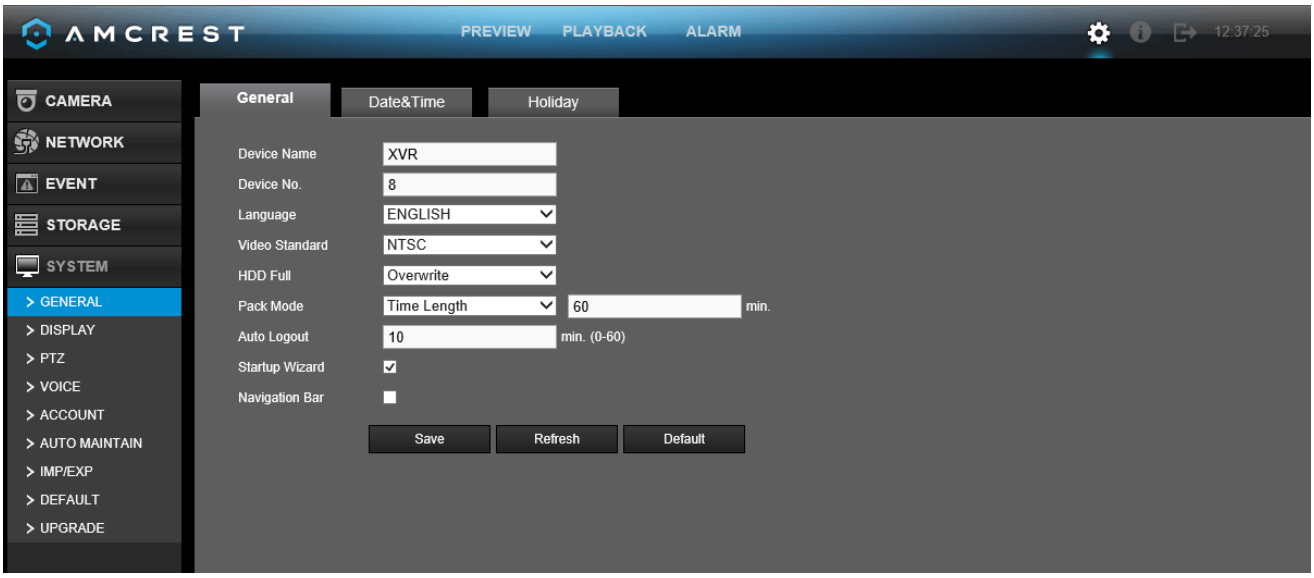
- Main Stream: The main stream is the stream through which the channels transmit data by default. There are 3 settings that can be used for the main stream.
  - Schedule: Channels will record as they have been scheduled, and not in any other capacity.
  - Manual: Channels will support all recording type. This includes scheduled recording.
  - Stop: Channels will not record in any capacity. This includes scheduled and manual recording.
- Extra Stream: Otherwise known as the sub stream, this stream allows for additional data to be transmitted. There are 3 settings that can be used for the main stream.
  - Schedule: Channels will record as they have been scheduled, and not in any other capacity.
  - Manual: Channels will support all recording type. This includes scheduled recording.
  - Stop: Channels will not record in any capacity. This includes scheduled and manual recording.
- Snapshot: This set of options can either enable or disable the snapshot functionality for specific channels.

To confirm settings, click the Save button. To refresh the page, click the Refresh button.

System

General

This screen displays general settings for the DVR. Below is a screenshot of the general settings screen:

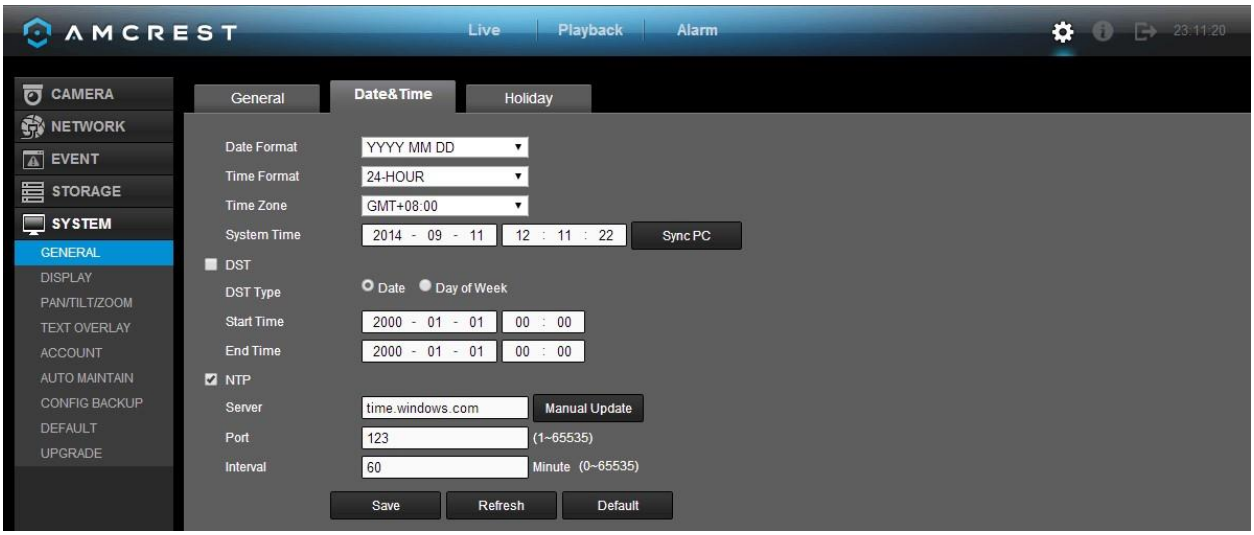


Parameter	Function
Device ID	This field allows the user to customize the name of the HDCVI.
Device No.	This field allows the user to customize the device's number.
Language	This dropdown box allows the user to select a language for the DVR. Options include English, Simplified Chinese, Traditional Chinese, Italian, Japanese, French, and Spanish. **Please note the device needs to reboot to activate the modification.**
Video Standard	This dropdown box allows the user to select a video standard. The options are between PAL and NTSC.
HDD Full	This dropdown box allows the user to specify what to do when the HDD is full. There are two options: Overwrite: This option lets the DVR overwrite the oldest recorded video on the DVR. Stop Record: This option causes the DVR to stop recording once the HDD is full.
Pack Duration	This field allows the user to define the recording duration. The default value is 60 minutes
Auto Logout	This field allows the user to define in minutes how long the system can stay idle before a user is logged out. The value can range from 0 to 60 minutes.
Startup Wizard	This checkbox allows the user to enable the startup wizard the next time the system is restarted.
Navigation Bar	This checkbox allows the user to enable the navigation bar that shows on the main screen.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Date & Time

This screen displays date and time settings for the DVR. Below is a screenshot of the Date & Time settings screen:



Below is an explanation of the fields on the Date & Time settings screen:

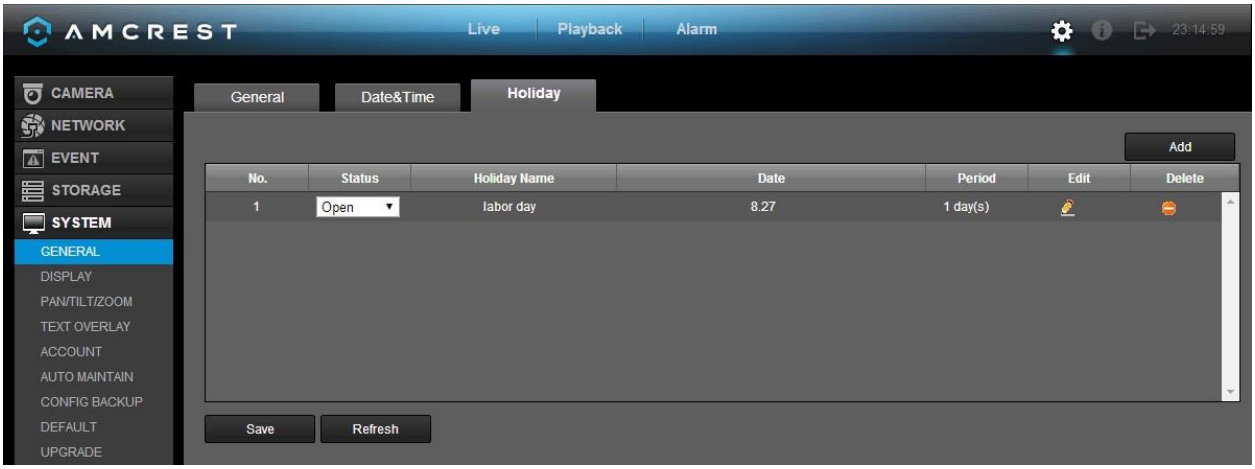
Parameter	Function
Date Format	This dropdown box allows the user to specify a date and time format for the DVR to use. There are 3 options. • YYYY MM DD: Year, Month, Day. □ MM DD YYYY: Month, Day, Year. • DD MM YYYY: Day, Month, Year.
Time Format	Time Format: This dropdown box allows the user to specify a time format for the DVR to use. There are two options. 24 Hour 12 Hour
Time Zone	This dropdown box allows the user to specify a time zone for the DVR to use.
System Time	This field allows the user to set the system time and time zone. Click Save to save the system time as it is shown in the display.
Sync PC	Click this button to save the DVR system time as your PC's current time.
DST	This checkbox allows the user to enable DST on the DVR. This fields below it allow the user to set DST settings such as DST type, start time, and end time.
NTP	NTP stands for Network Time Protocol. This checkbox allows the user to enable the use of an NST server to synchronize the date and time settings on the DVR.
NTP Server IP	This field allows the user to set the NTP server IP address. Clicking the Manual Update button pulls a time update from the server.
NTP Port Number	This field allows the user to set the NTP server port number.

Interval	This field allows the user to set the NTP synchronization interval. This number determines how often the DVR queries the NTP server to get accurate date and time information. This value can be between 0 and 60 minutes.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Holiday

This screen displays the holiday settings for the DVR. Below is a screenshot of the Holiday settings screen:



Below is an explanation of the fields on the Holiday settings screen:

- 1: This number indicates how many holidays are in the system. Each line item has a number to signify its place in the list.
- Status: This dropdown box indicates the status of the holiday. There are two options:
    - Open: The holiday is active, and the DVR will stop recording for that holiday period.
        - Stop: The holiday is inactive, and the DVR will continue normal operation for that holiday period.
- Name: This column is where the name of the holiday is displayed.
- Date: This column shows the date that the holiday occurs on.
- Period: This column shows the range in which the holiday occurs.
- Edit: This column has a button that allows for the editing of the holiday.
- Delete: This column has a button that allows for the deletion of the holiday.
- Add New Holidays: This button allows the user to add a holiday.

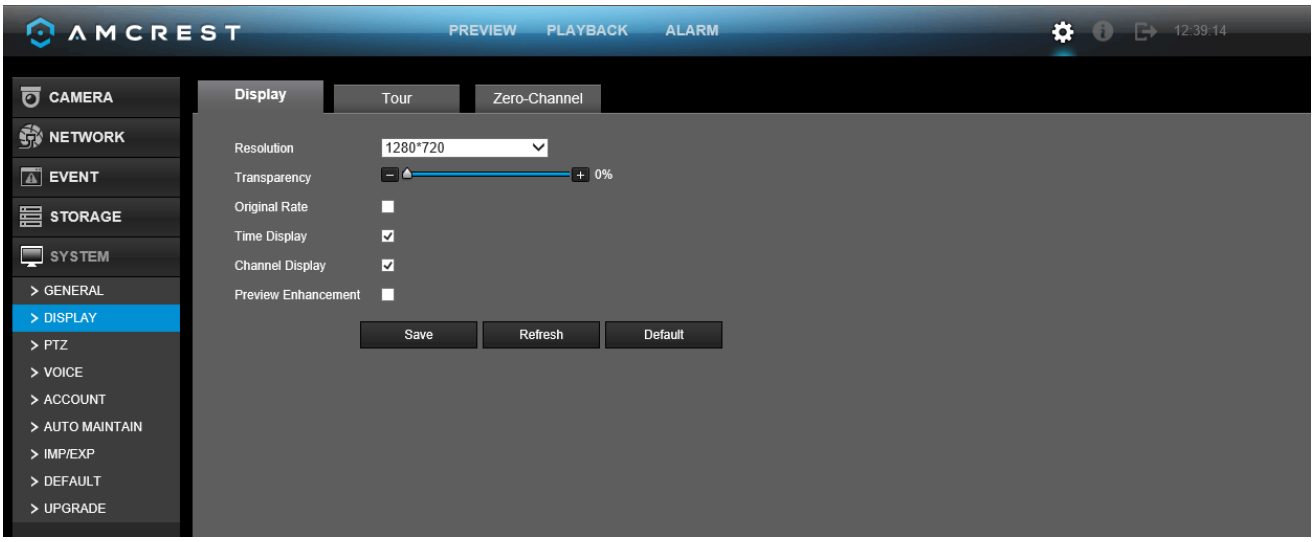
Note:

- Holidays take precedence over the scheduled setup.
- Holidays do not roll over based on their inherent date. Meaning, if a holiday is set for October 30th, then the system will treat every October 30th as a holiday.

To confirm settings, click the Save button. To refresh the page, click the Refresh button.

Display

This screen allows the user to adjust display settings, tour settings, and zero-channel encoding settings for the DVR.



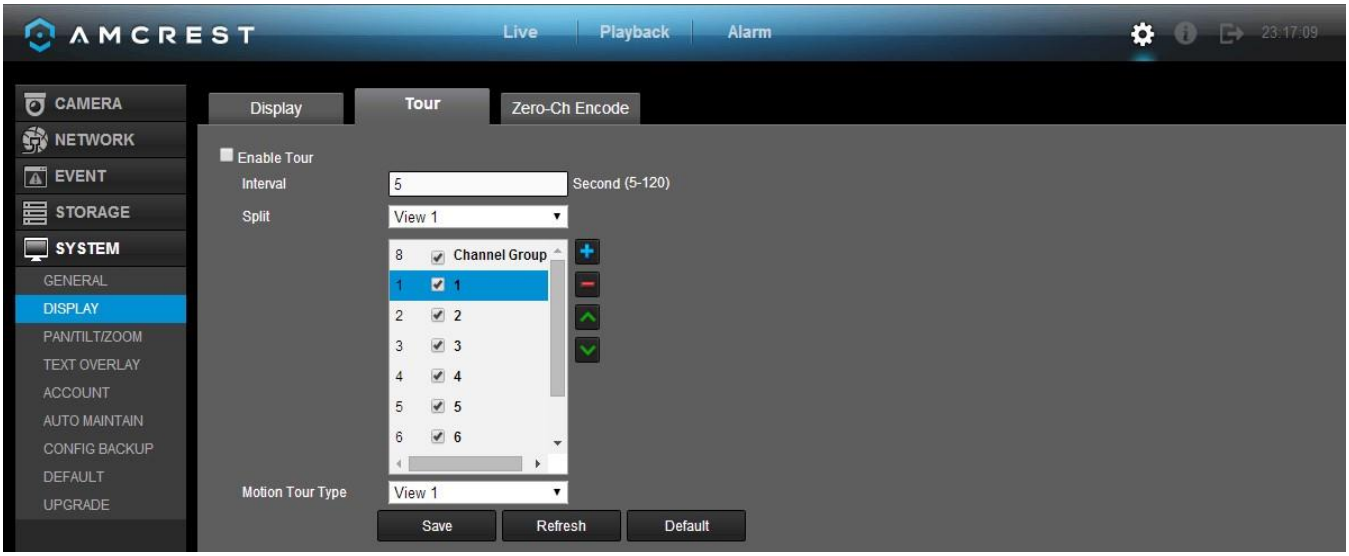
Below is an explanation of the fields on the Display settings screen:

Parameter	Function
Resolution	This dropdown box allows the user to change the resolution of the DVR. There are 4 options: 1920×1080 1280×1024 (default) 1280×720 1024×768
Transparency	This slider allows the user to change the transparency of the menu screens on the DVR. The range goes from 0% to 100%.
Original Rate	This check box allows the user to set the original bit rate for their DVR to their output device.
Time Display/ Channel Display	These checkboxes allow the user to choose whether the time stamp and channel number are shown in the playback video.
Preview Enhancement	This checkbox allows the user to optimize the margin of the playback video.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Tour

This screen is used to activate tour functionality for the live preview. Below is a screenshot of the Tour Setup screen:



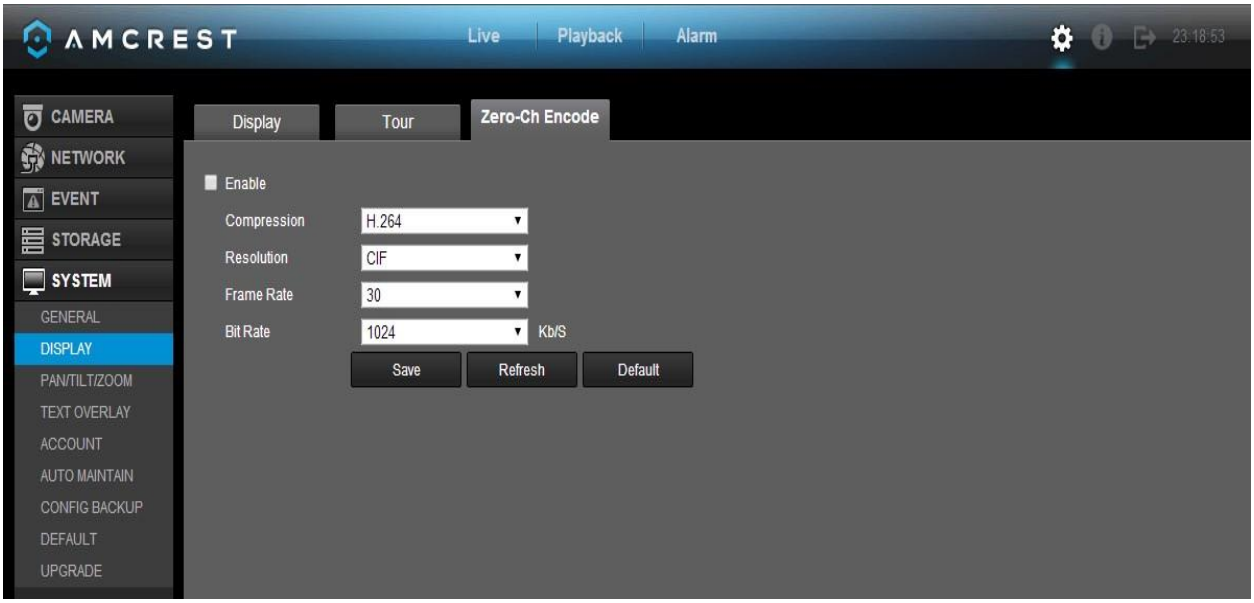
Below is an explanation of the fields on the Tour Setup settings screen:

Parameter	Function
Enable Tour	This checkbox allows the user to enable the tour functionality.
Interval	This field allows the user to set an interval in seconds for how quickly the tour cycles through channels. This value ranges from 5 to 120 seconds.
Split	This list allows the users to select channels add as a part of the tour. The number in the corner indicates how many channels are available. Add: This button allows the user to add a channel to the tour. Delete: This button allows the user to remove a channel from the tour. Move Up: This button allows the user to move a camera up in the tour queue. Move Down: This button allows the user to move a camera down in the tour queue.
Motion Tour Type	This dropdown box allows the user to select whether they want to see 1 or 4 cameras at a time in the tour.

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Zero Channel

This screen is used to configure zero channel encoding functionality. This feature allows for the preview of several channels in one channel's window. Note: This feature only works on the Web Access view. Below is a screenshot of the Zero-Channel Encoding settings screen:



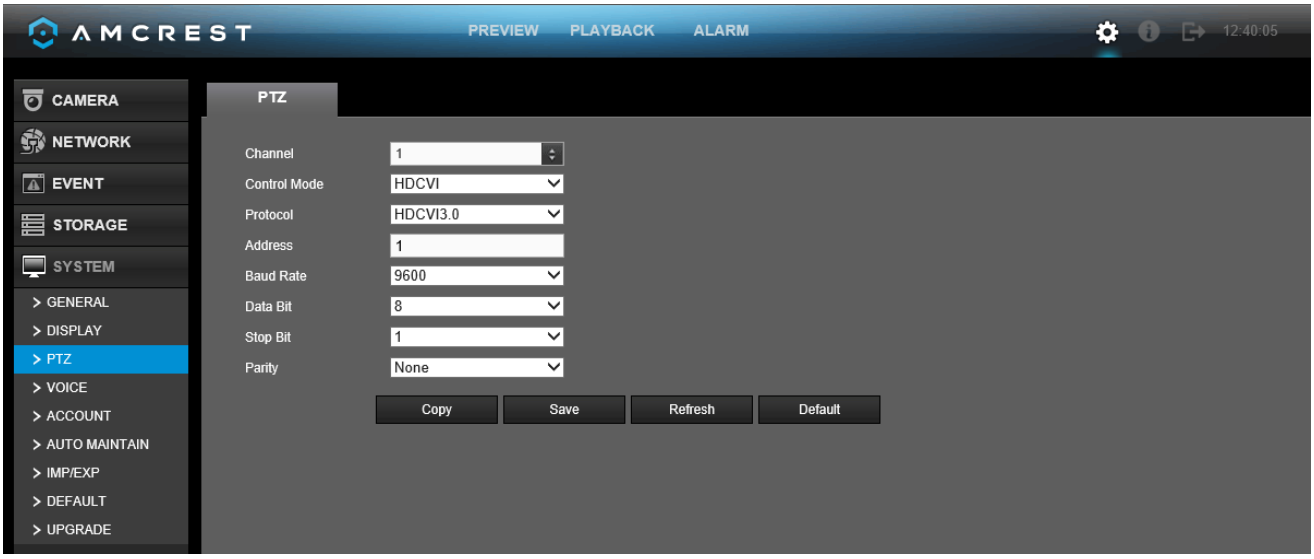
Below is an explanation of the fields on the Zero-Channel Encoding settings screen:

Parameter	Function
Enable	This checkbox allows the user to enable the zero-channel encoding functionality.
Compression	This dropdown box allows the user to select the compression settings used by the system for zero-channel encoding. The default is H.264.
Resolution	This dropdown box allows the user to select the resolution used by the system for zero-channel encoding. There are 2 options for resolution (in pixels): CIF: 352 x 240 D1 720 x 480
Frame Rate	This dropdown box allows the user to select the frame rate used by the system for zero-channel encoding. The range is between 1 and 30 frames per second.
Bit Rate	This dropdown box allows the user to select the bit rate used by the system for zero-channel encoding. There are 7 options, and all are measures in kilobytes per second (Kb/S): 896, 1024, 1280, 1536, 1792, 2048, 4016

To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

PTZ

This screen is used to configure Pan/Tilt/Zoom (PTZ) functionality. Below is a screenshot of the PTZ settings screen:



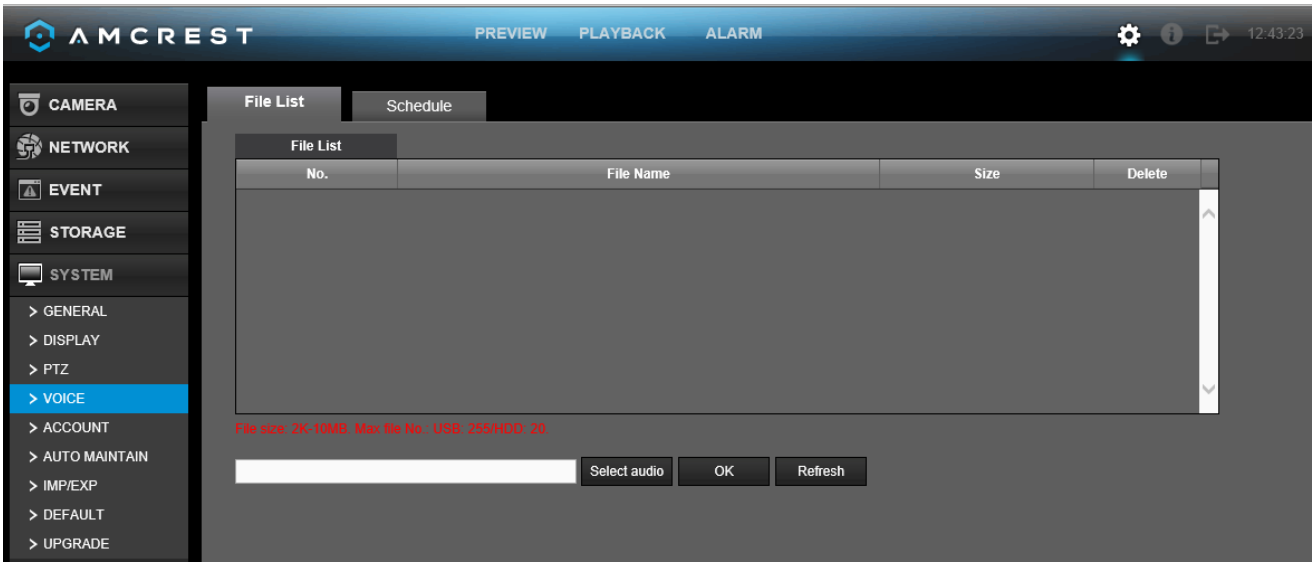
Below is an explanation of the fields on the PTZ settings screen:

Parameter	Function
Channel	This dropdown box allows the user to pick which channel they would like to change PTZ settings for.
Control Mode	This dropdown box allows the user to pick which control move they would like to use for the specified channel. The two options are Serial and HDCVI.
Protocol	This dropdown box allows the user to pick a protocol for the specified channel. Default is HDCVI.
Address	This dropdown box allows the user to pick the corresponding PTZ address for the channel.
Baud Rate	This dropdown box allows the user to pick a baud rate for the PTZ channel. The options are 1200, 2400, 4800, 9600, 19200, 38400, 57600, or 115200.
Data Bit	This dropdown box allows the user to pick the amount of data bits for the PTZ transmission. The options are 5, 6, 7, or 8.
Stop bit	This dropdown box allows the user to pick the amount of stop bits for the PTZ transmission. The options are 1, 1.5, or 2.
Parity	This dropdown box allows the user to pick the parity for the PTZ transmission. The options are none, odd or even.

To copy settings to another channel, click the Copy button. To confirm settings, click the Save button. To refresh the page, click the Refresh button. To revert to default settings, click the Default button.

Voice

This screen is used to set and manage voice file settings for scheduled alerts. To use this function, you will need to use a USB device with preset voice files on them. The interface will import the files into the **File List** tab. Below is a screenshot of the file list tab:



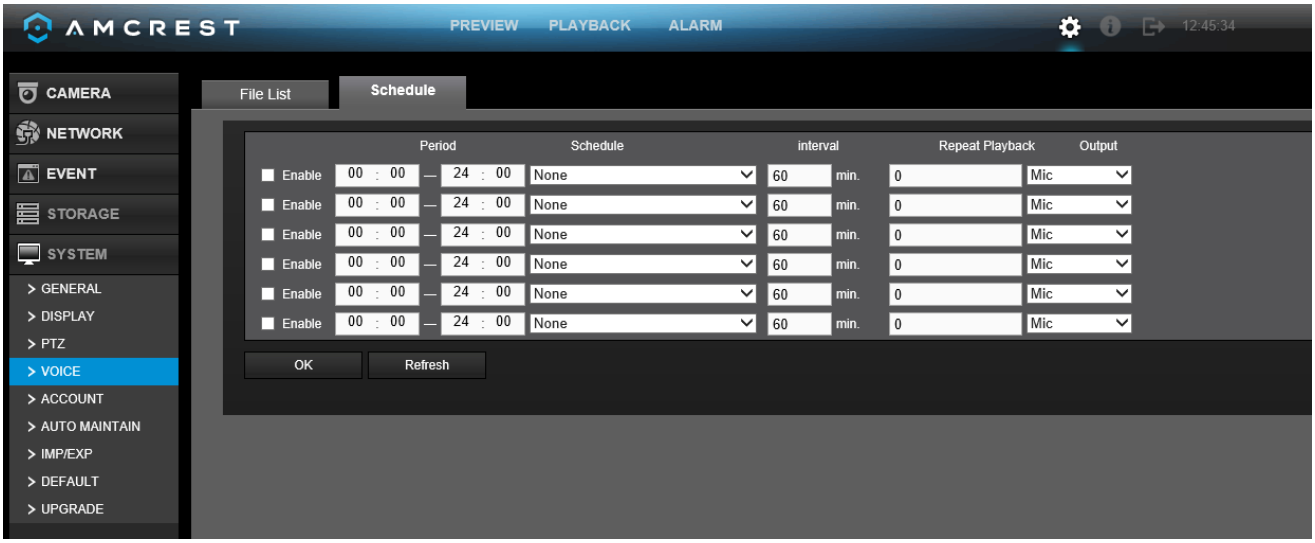
Below is an explanation of the fields on the File List screen:

No.: The number, in sequential order, of the file in the file list.
File Name: Indicates the name of the file you will be importing into the system.
Size: Indicates the size of that file.
Delete: Allows the user to delete the file from the USB storage device.
Select Audio: Allows the user to add or import the voice file into the system.

Note: The voice menu may only be available on certain models, such as S5, and may not be applicable to all devices.

Schedule

This tab allows the user to schedule a voice file towards a specific period on the device. Below is a screenshot of the schedule tab:



Below is an explanation of each field in this menu:

Period: Allows the user to set a time period for the schedule voice event.
File Name: Allows the user to choose which voice file will be used during the event.
Interval: Allows the user to determine a specific interval of time (in minutes) the event will occur.
Repeat: Allows the user to set a specific number of repeats for the indicated voice alarm.
Output: Allows the user to set the audio output of the voice event. This will be default to **Mic**.

To save settings, click the save button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

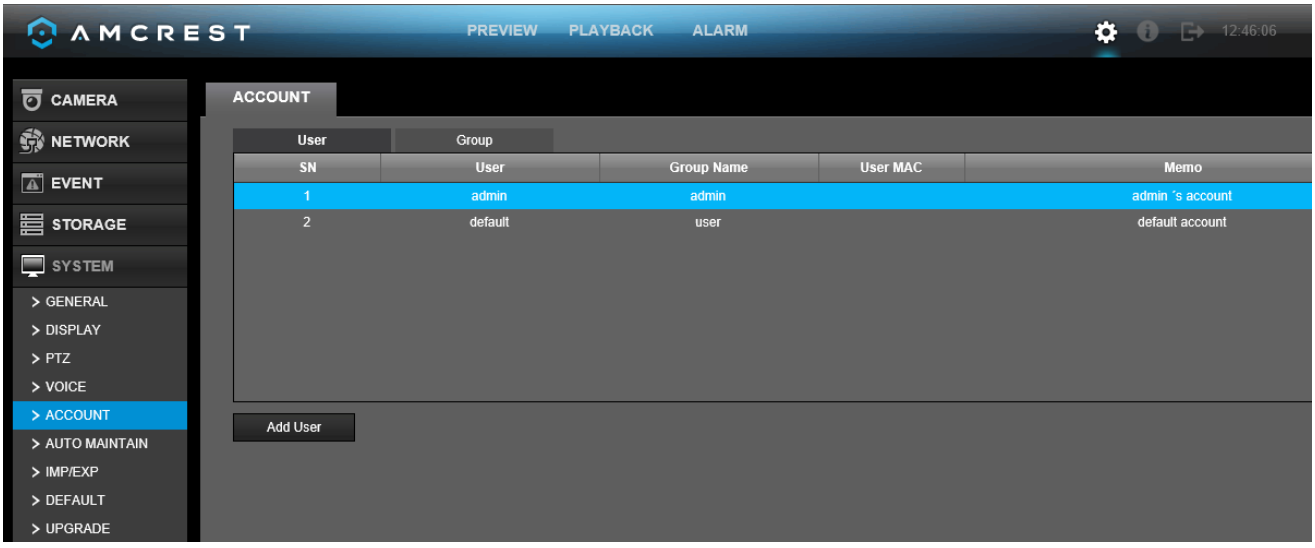
Account

This menu is used to manage user accounts, user account passwords, and user groups. Below are a few considerations to keep in mind when editing this information:

- The DVR comes with 2 usernames by default:
- Username: admin Password: admin
- Username: default Password: default
- It is highly recommended to change the passwords for the admin and default accounts.
- Each user name and user group name can only contain letters, numbers, underline marks, dashes, or dots. No empty spaces are allowed.
- The maximum number of users is 64, and the maximum number of users that can be in one group is 20.
- There are two levels for user management: administrator and user. Administrator has more rights than a normal user and can modify key DVR settings.
- Each user can belong to only one group, and user rights cannot exceed group rights.

User

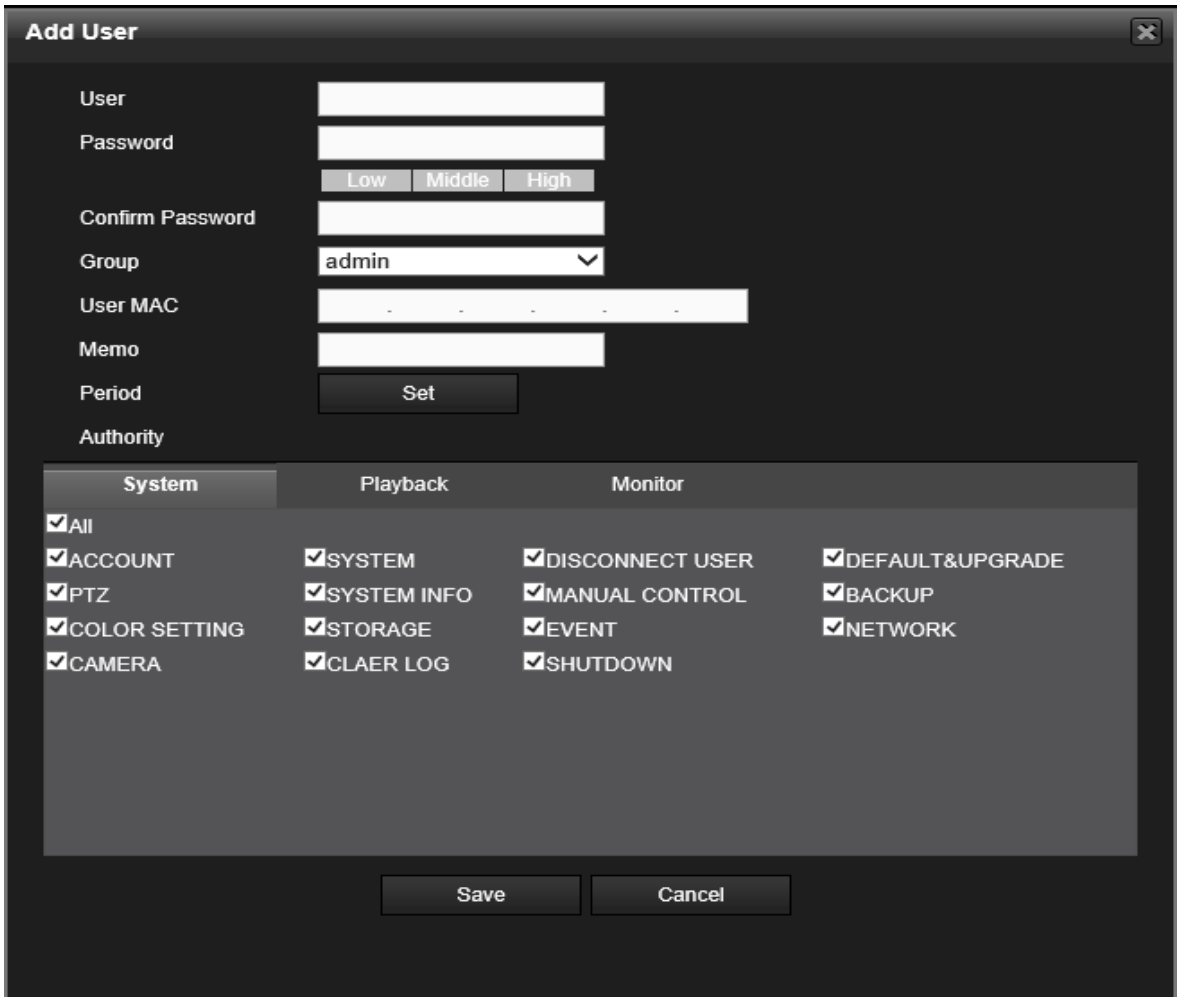
This screen is used to configure User Account settings. Below is a screenshot of the User Account settings screen:



Below is an explanation of the fields on the User Account settings screen:

- Number: This number indicates how many users are in the system. Each line item has a number to signify its place in the list.
- User Name: This column indicates an account's username.

- Group Name: This column shows which group the username belongs to.
- Modify: This column has a button that allows for the account's properties to be edited.
- Delete: This column has a button that allows for the account's properties to be deleted.
- Status: This column shows what the status of a certain account is.
- MAC Address: This column shows the account's MAC address.
- Add User: This button allows the user to add another user account. Below is a screenshot of the Add User screen.

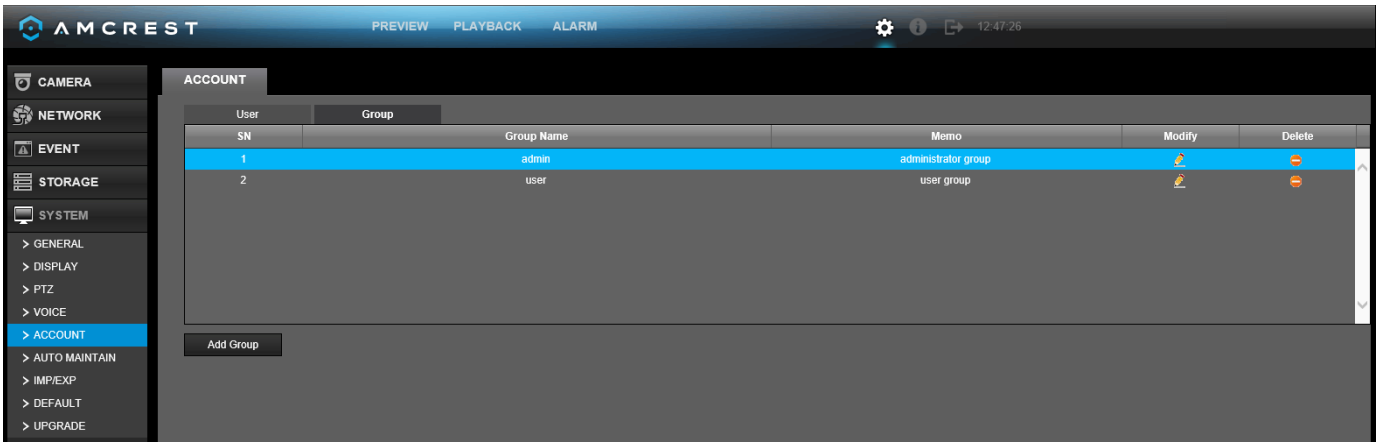


Note:

- It is recommended to give the general user fewer rights than an administrative one.
- When a new user is created, a MAC address can be entered for the user. This can limit the user's ability to logon from another device. If left blank, the user can logon from any MAC address.
- There is a total of 98 rights that can be assigned to a user.

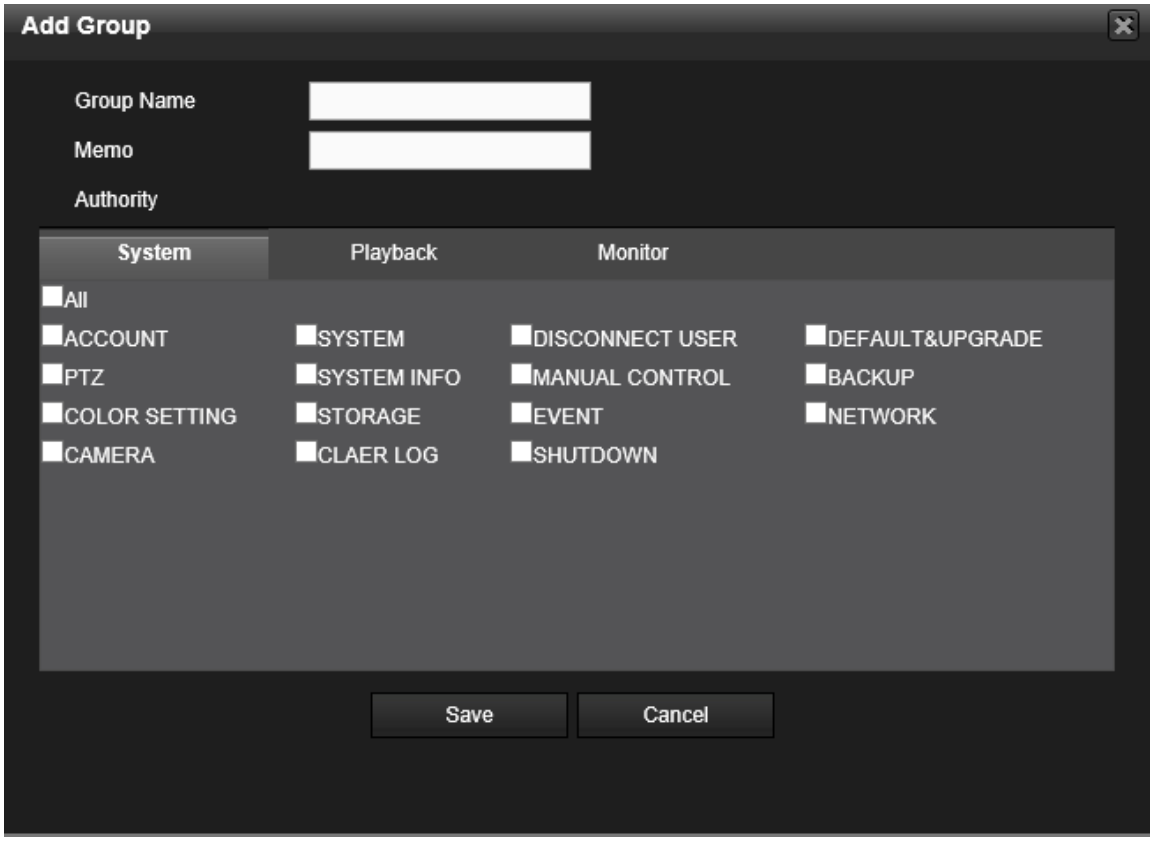
Group

This screen is used to configure Group Account settings. Below is a screenshot of the Group Account settings screen:



Below is an explanation of the fields on the User Group settings screen:

- Number: This number indicates how many groups are in the system. Each line item has a number to signify its place in the list.
- Group Name: This column indicates an account's username.
- Modify: This column has a button that allows for the account's properties to be edited.
- Delete: This column has a button that allows for the account's properties to be deleted.
- Memo: This column indicates any notes about the user group.
- Add Group: This button allows the user to add another user group. On the next page is a screenshot of the Add Group screen.

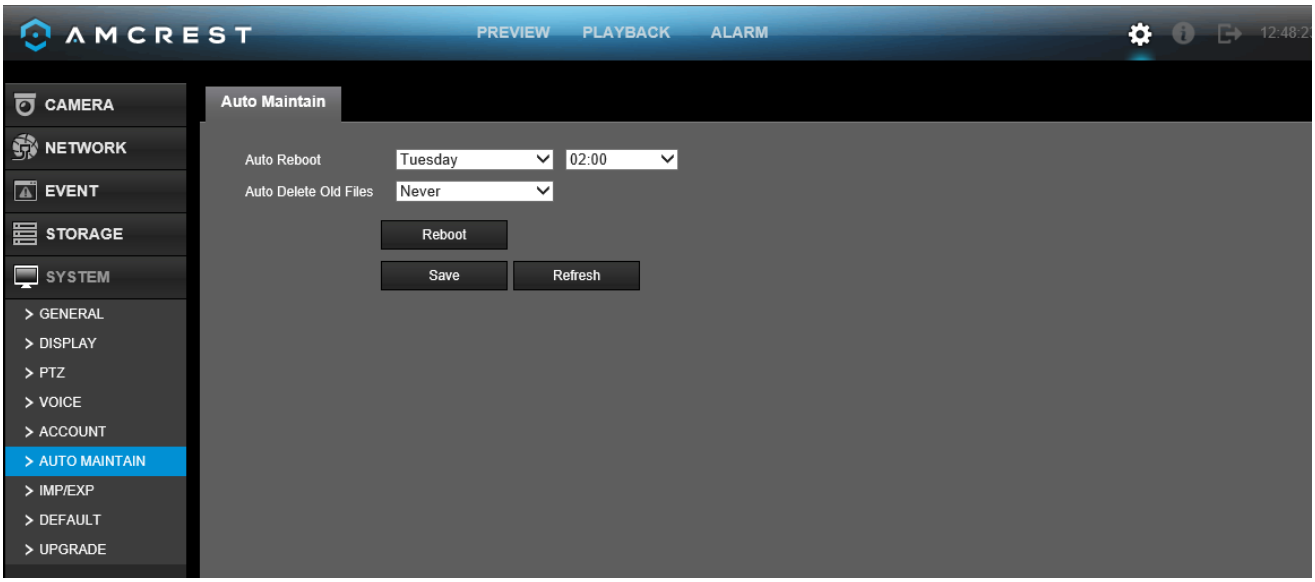


Note:

- It is recommended to give the general user fewer rights than an administrative one.
- There is a total of 98 rights that can be assigned to a user.

Auto Maintain

This screen is used to configure Auto Maintenance settings for the DVR. Below is a screenshot of the Auto Maintain settings screen:



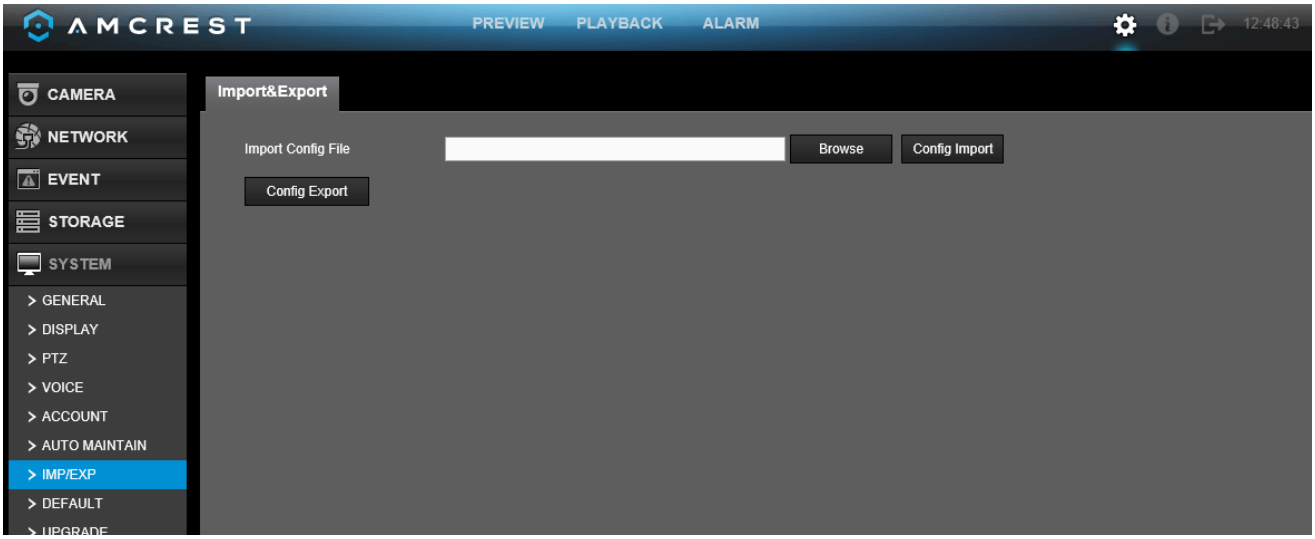
Below is an explanation of the fields on the Auto Maintain settings screen:

- Auto Reboot: This dropdown field allows the user to set a day of the week and time to automatically reboot the system to keep the system healthy.
- Auto Delete Old Files: This dropdown field allows the user to delete old files. The two settings are Never and Customized. When customized is selected, several days can be specified. Any files that exist past that many days in the past are deleted to create space on the DVR's hard drive.

To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

IMP/EXP

This screen is used to manage importing and exporting of system configurations. This feature can be used to clone the settings from one DVR to another. Below is a screenshot of the IMP/EXP settings screen:

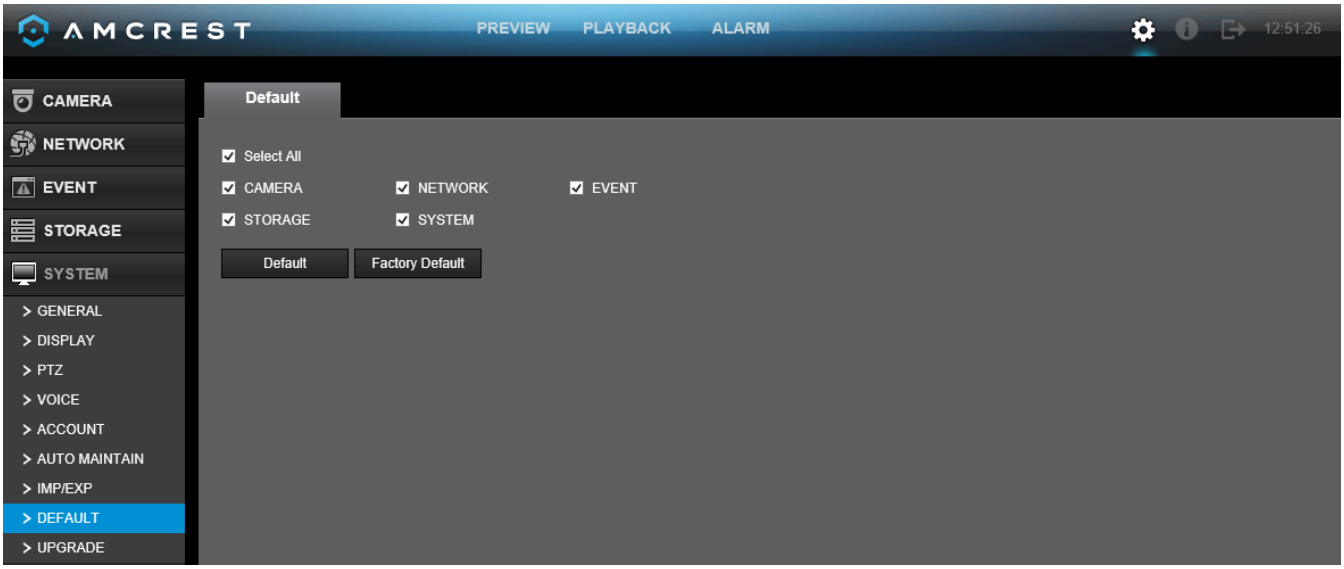


Below is an explanation of the fields on the Config Backup settings screen:

- Config Export: This button allows the user to export config files from the DVR to the local storage device.
- Browse: Allows users to search for the exported config file.
- Config Import: Allows the user to import the exported file from the local storage device.

Default

This screen is used to revert the DVR back to its default settings. This feature can be used to restore the DVR to its factory setup conditions. Below is a screenshot of the Default settings screen:



There are 5 different settings areas that can be reset to default settings: Camera settings, Event settings, Network settings, System settings, and Storage settings. All these settings can be reset using the **All** checkbox.

The following settings are also reset with a factory reset:

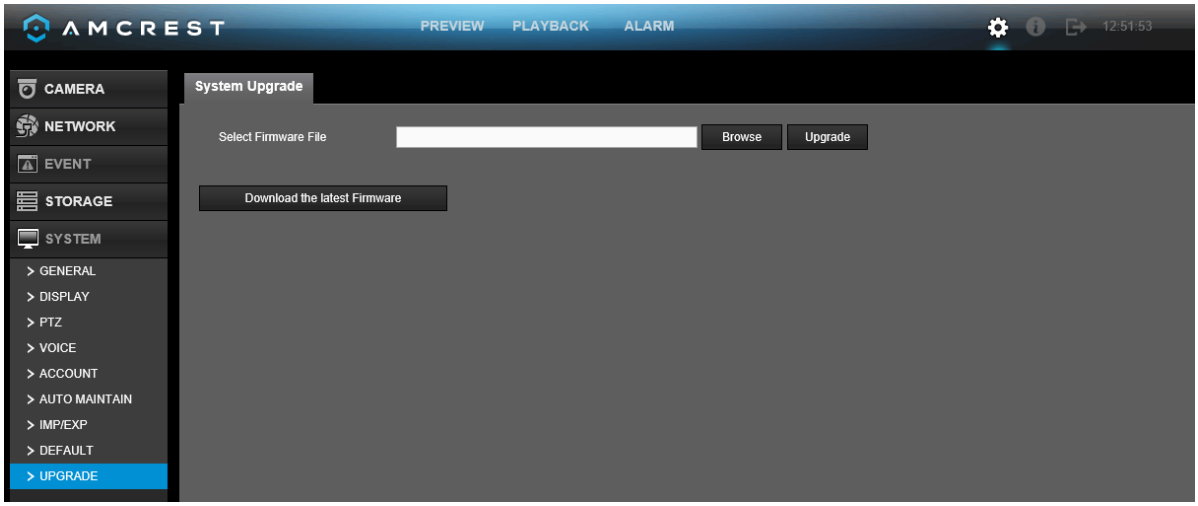
- System Menu Color
- Language
- Time Display Mode
- Video Format
- IP Address
- User Accounts

To confirm settings, click the OK button near the bottom right hand corner. To cancel any modifications, click the Cancel button near the bottom right hand corner. To apply the settings, click the Apply button near the bottom right hand corner.

Upgrade

This screen is used to update the DVR's firmware to the latest version. To conduct a system update, it is required to put an update file onto a USB storage device and plug it into the DVR. Ensure the update file is named update.bin. To access the current firmware file for your DVR visit https://amcrest.com/firmware-subscribe

Below is a screenshot of the Update screen:



Once the USB device with the firmware update is plugged in, navigate to this screen and click the Start button to begin the firmware update process.

Web Access Information Menu

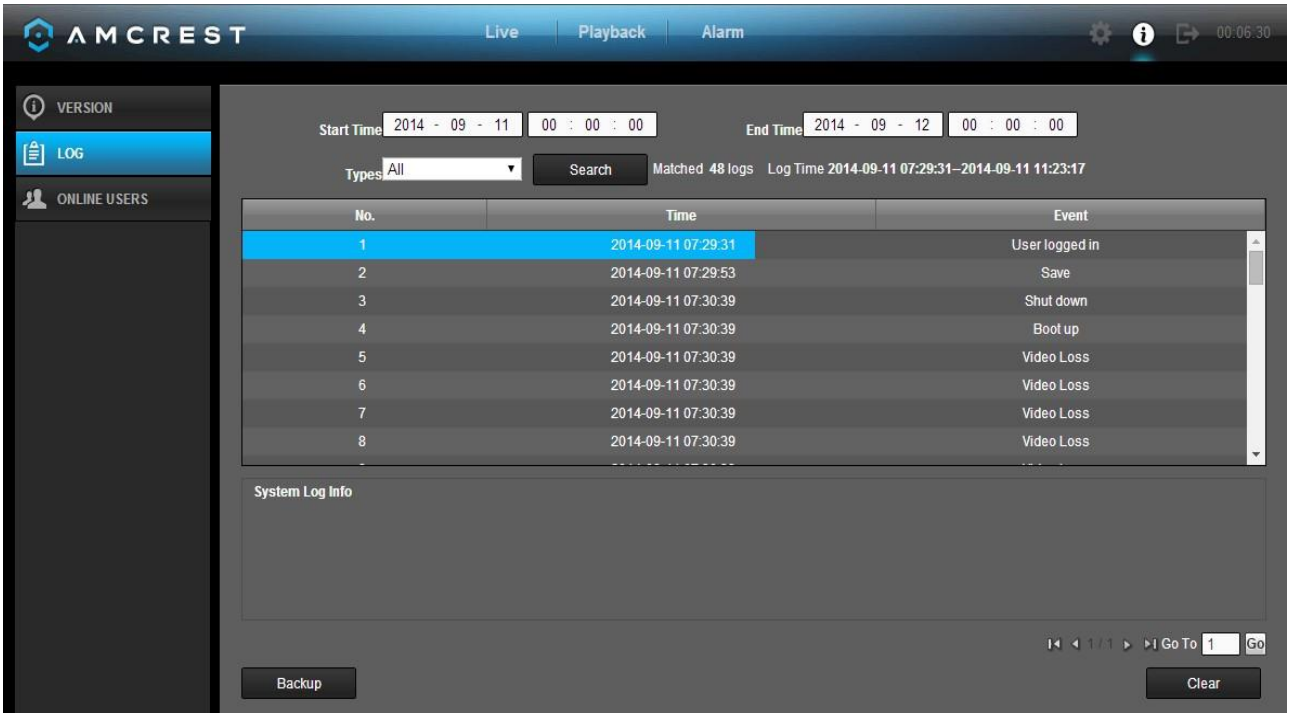
This menu can be accessed by clicking the  button near the top right corner of the web access interface.

Version

This screen is used to display record channel information, alarm input information, alarm output information, system serial number, and system version. Below is a screenshot of the version screen:

Log

This screen is used to keep a log of all activity on the DVR. Below is a screenshot of the Log screen:



The system lists the following information:

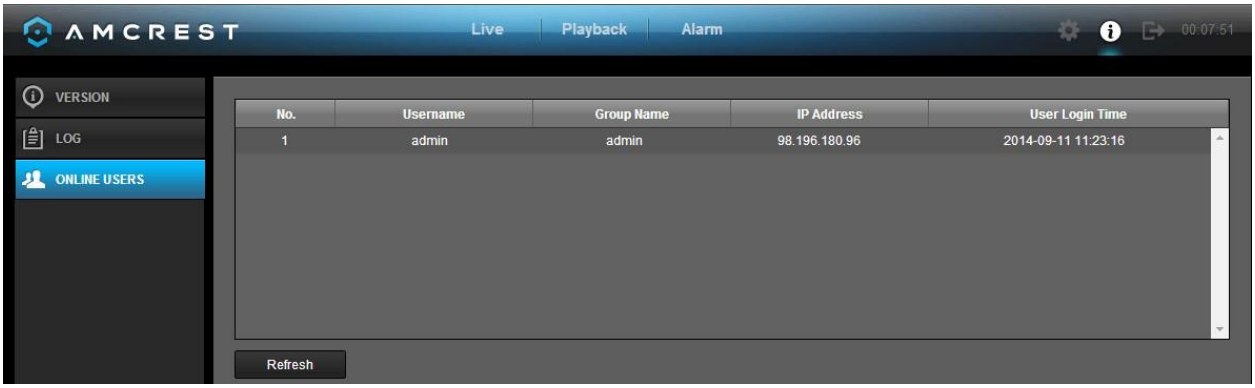
- System Operation
- Account Manager
- Configuration Operation
- Log Clear
- Data Management
- File Operation
- Alarm Events
- Reboot Type
- Record Operation

Below is an explanation of the fields on the log screen:

Parameter	Function
Type	This dropdown box allows the user to select which type of log they want to view. Log types include system operation, configuration operation, data operation, event operation, record operation, user management, and log clear.
Start time	This field allows the user to set the start time of the requested log.
End time	This field allows the user to set the end time of the requested log.
Search	You can select the log type from the drop-down list and then click search button to view the list. You can click the stop button to terminate the current search operation.
Detailed Information	Double click a line item to open a more detailed view of that log item.
Clear	This button deletes all log files that are currently displayed.
Backup	Click this button to backup log files to the PC.

Online Users

This screen shows a list of all the users that are currently online and accessing the DVR, either through the DVR itself, through local access, or through remote access. Below is a screenshot of the Online Users screen:



Log Out

The logged in user can logout by using the button near the top right-hand corner of the screen. Once logged out, the DVR Web Access will return to the login screen, where another user may login. Below is a screenshot of the login screen:

Amcrest View App Setup

The Amcrest View app grants instant access to all live camera streams from any location. This is the primary application most users prefer when using Amcrest systems. The app supports a multitude of features and includes both a plug-and-play setup as well as a manual network setup. For purposes of this guide, we will use Amcrest View Pro, which is free on both the App Store and Play Store.

Before accessing the DVR through the app using the easy plug-and-play method (P2P Setup), **confirm that P2P is enabled on the DVR**. This feature should be enabled by default.

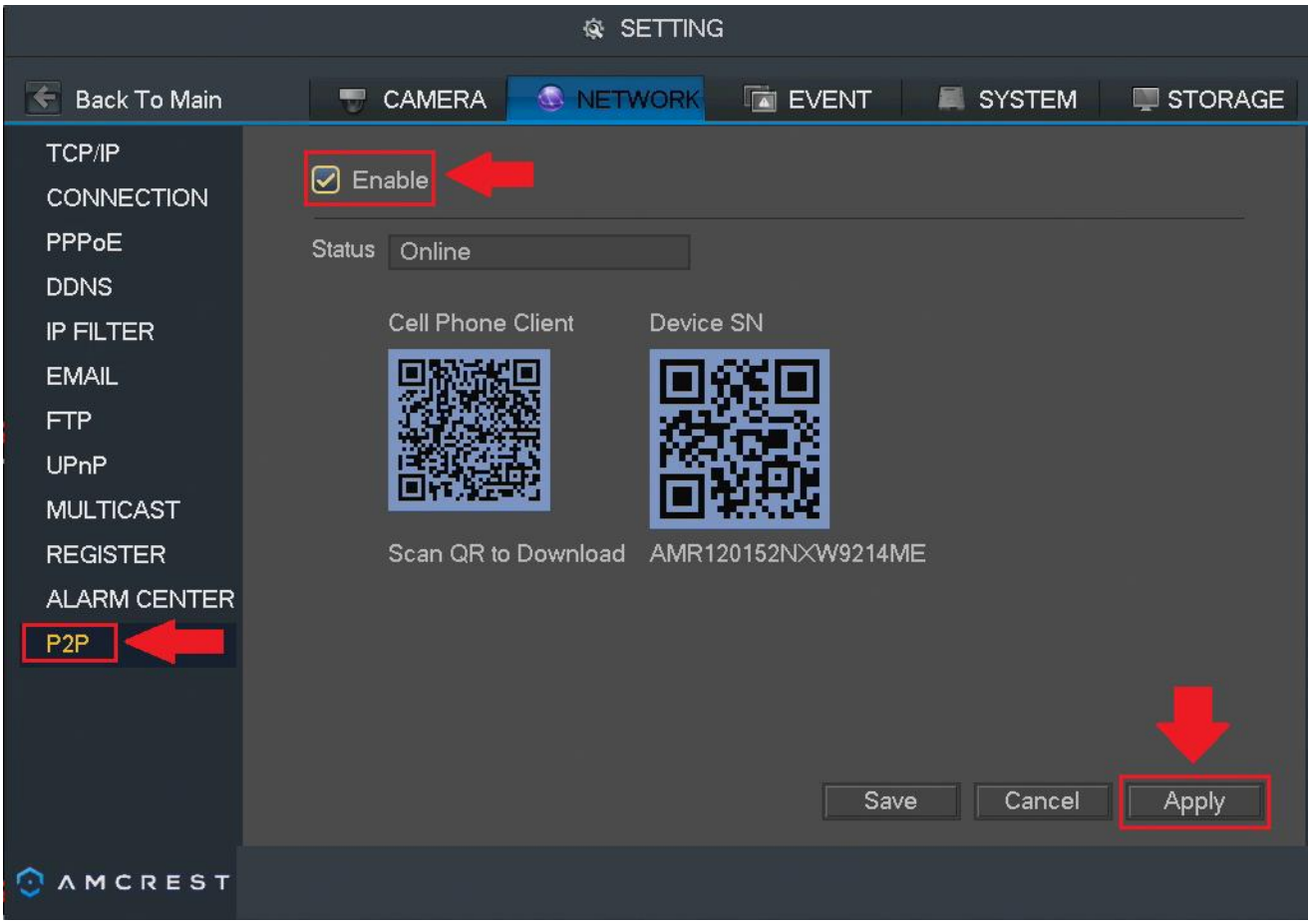
Enabling P2P on the DVR

1. Log into your DVR console's built-in interface using the DVR login credentials. Please refer to part 3 of this guide: **Console Setup** > **Logging in**.

2. Open the **MAIN MENU** by left-clicking the DVR's home preview screen. Then, click **NETWORK** in the bottom **SETTINGS** row:

3. Select **P2P** from the left navigation panel's list of options. Make sure the checkbox next to **Enable** is checked. If it is not, check it, then click **Apply** and **Save**.

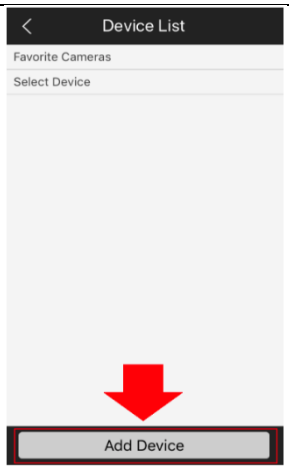
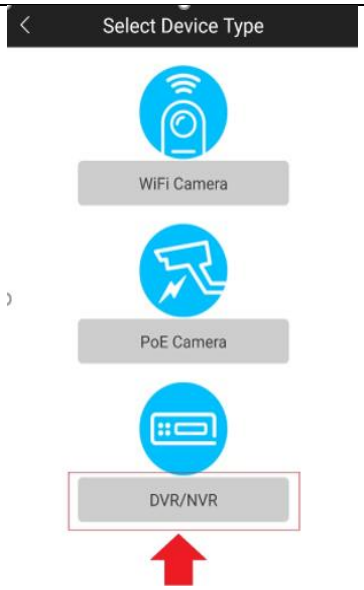
4. Exit out of the main menu, then come back to the **P2P** page and confirm that the **Status** is '**Online**'.

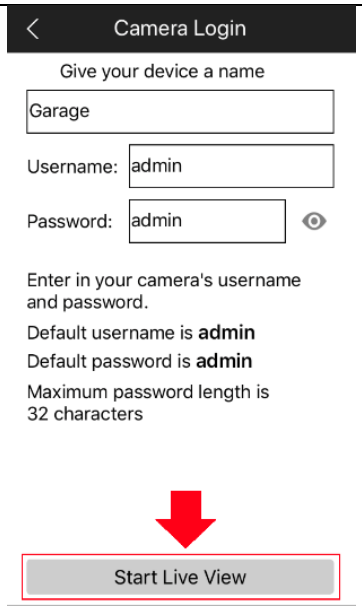


Amcrest View Pro Setup

The following steps will continue the app setup process for an Android phone and, though the iPhone version of the app has slightly different steps, most of this process is identical and easy.

1. Download and install the Amcrest View Pro app for the App Store or Google Play Store.

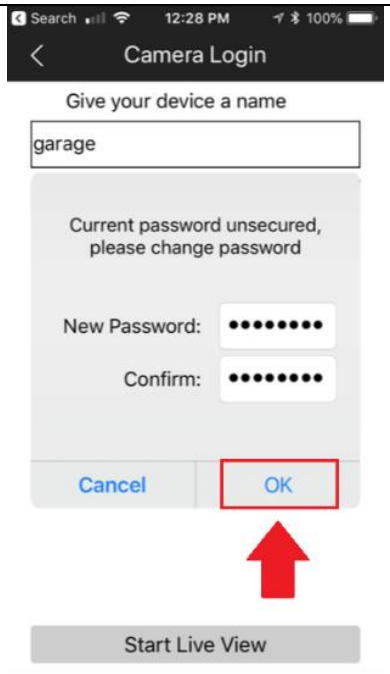
	
2. Open the app and tap on the (+) symbol in the middle of the screen to begin adding your DVR.	3. Tap on **Add Device.**
	
4. Tap on **DVR/NVR.**	5. Next, we will need to select a connection type. Since we will be setting up a basic P2P connection with the device, tap on **"P2P Connection" to continue**.



6. Scan the QR code for your device. This code can be found on or near the device's serial number tag. **If** the QR code does not scan or you are unable to access it, the application provides you a means of entering your serial number manually. Tap on **"Enter S/N Manually"** to enter the information.

7. Give the device a name and provide the username and password. The default username and will be **admin**. Tap **Start Live View** to continue.

Note: You can tap on the icon to verify the password.



8. The app will prompt you to change the password. Enter a password between 8 and 32 characters and confirm the password. Press **OK** to continue.

9. Your device is now set up and ready for use on the app.

For setup without establishing a P2P connection in the app you will need to use IP Doman/DDNS setup. For more details on this setup visit, amcrest/com/support

App setup not working? (troubleshooting steps)

1. **Re-enter login credentials**: Are you getting a (quote 'incorrect password' error) message? Try double checking your username and password. These will be the same credentials used to log into the DVR console's built-in interface.

2. **Confirm your phone is online**: Make sure that your phone is receiving a strong WiFi or cellular data signal. Confirm the Internet connection is working by loading a webpage or testing another internet enabled app.

3. **Confirm the DVR is online**: Make sure an Ethernet cable is connected from your router to the Internet port on the back panel of your DVR console. (For help with this, refer to part 2 of this guide: **Hardware Setup** > **Setting up the cable connectons**.)

4. **Confirm P2P is enabled**: In order to use the P2P Setup to gain plug-and-play instant access, P2P needs to be enabled on the DVR. It will be enabled by default. To confirm
   P2P is enabled, log into the main console built-in interface for your DVR and select Network from the Main Menu (in the Settings row). Then, click P2P from the left navigation panel (on the bottom). Make sure the checkbox is checked next to "Enabled". If it is not, check it, click Apply down below, then attempt the P2P App Setup again (tap Start Live Preview).

5. **Confirm the serial number**: if you entered the serial number manually, double check that it is correct and re-enter it. This does not apply if you used the QR code scan.

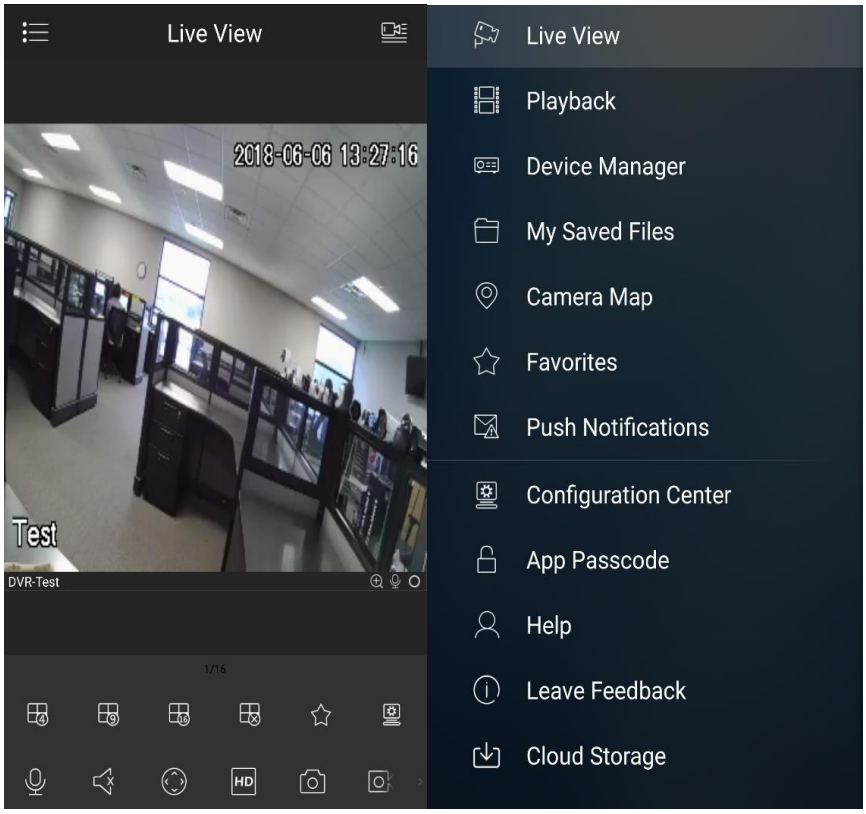
6. **Still not working?**
   If you have tried all the above troubleshooting steps, try rebooting your DVR. Then, restart your phone and try the P2P Setup on your app again. Contact support if you are still unable to gain access.

To view a video on how to setup the Amcrest DVR for remote access on a smartphone or tablet, go to http://amcrest.com/videos and view the video titled
"How to Setup Amcrest HDCVI DVR for Remote Access on Smartphone/Tablet".

Amcrest View Pro Interface Overview

Once the app is setup to work with your DVR, it should look like the image below on the left. Here, you will be able to access all crucial functions like taking snapshots, manual recordings, etc.

Clicking the Menu Icon on the top left-hand corner will open the menu for this app, and it should look like the image below on the right.



Live Preview is the default screen that the app opens on, but from the menu, **Playback**, and **Device Manager** can be opened, as well as other menu items for other features.

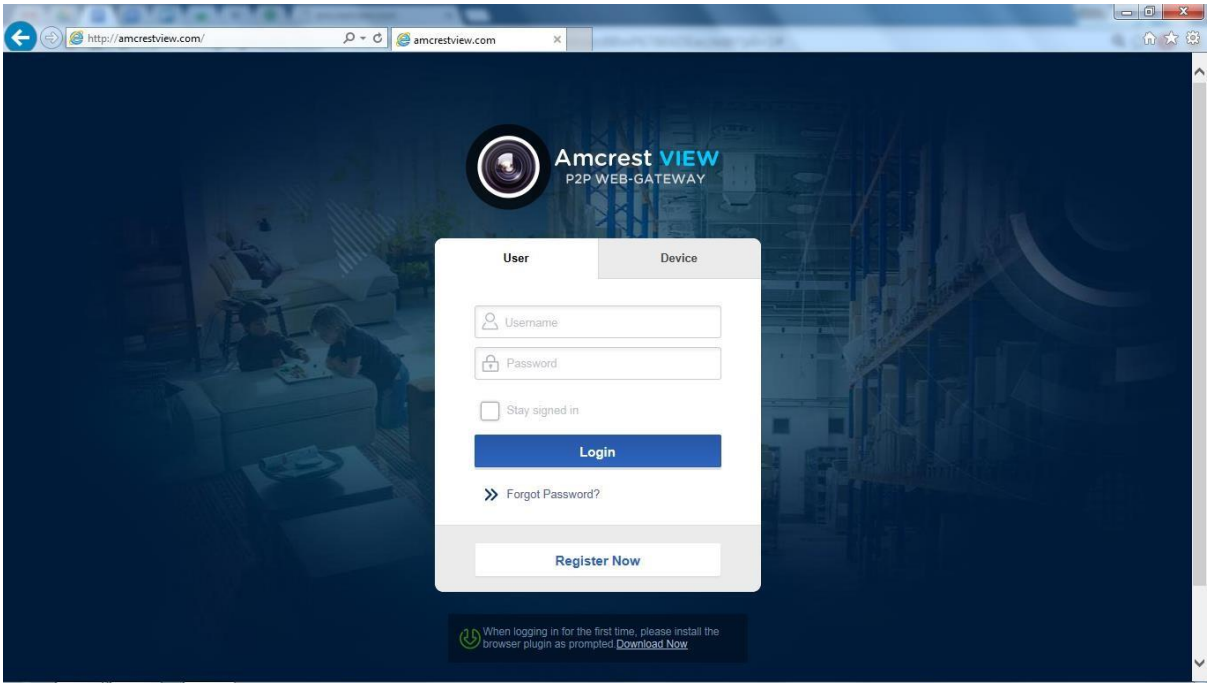
Note: For help identifying and understanding app features, either tap the icon to see a tooltip description, or open the main menu, then tap **Help** to learn more.

Amcrest View Web Portal Setup

You can access your DVR through a computer using the P2P web portal **AmcrestView.com** for quick plug-and-play access. It uses the same technology as the Amcrest View mobile app and is an easy, non-technical setup method. There are 2 methods of accessing your DVR using AmcrestView.com: the **user method** (registering an account for login), and the **device method** (instant direct access using the serial number).
Both methods require that the Amcrest **browser plugin** be installed for AmcrestView.com.

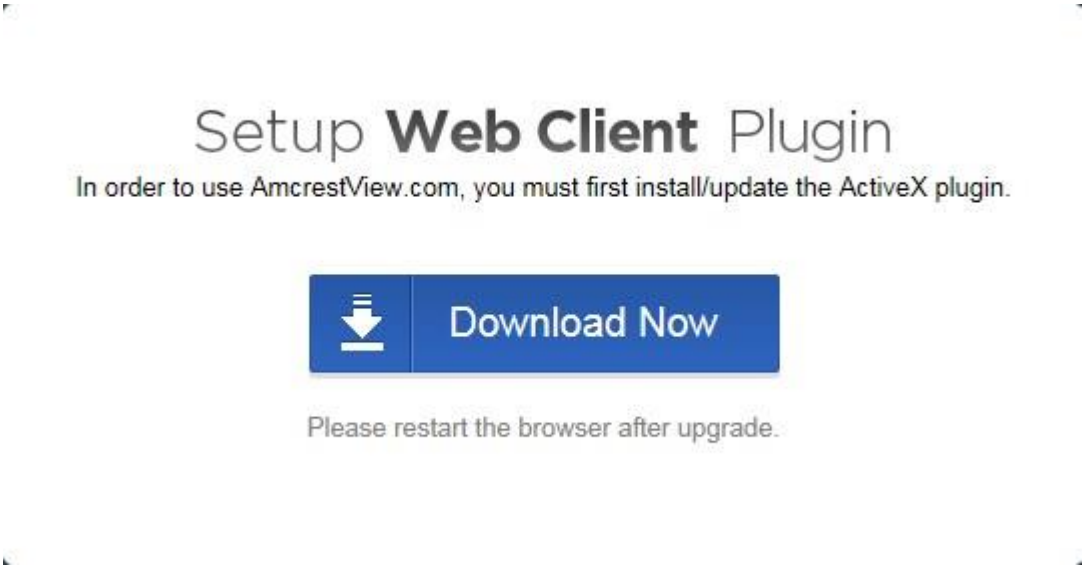
Installing the AmcrestView.com browser plugin

1. Open Internet Explorer, type ”www.amcrestview.com” into the search bar, and hit Enter. This will take you to the login screen:



2. Once you're on the login page, you will see a message about installing the plugin below the login box. Click **Download Now**:

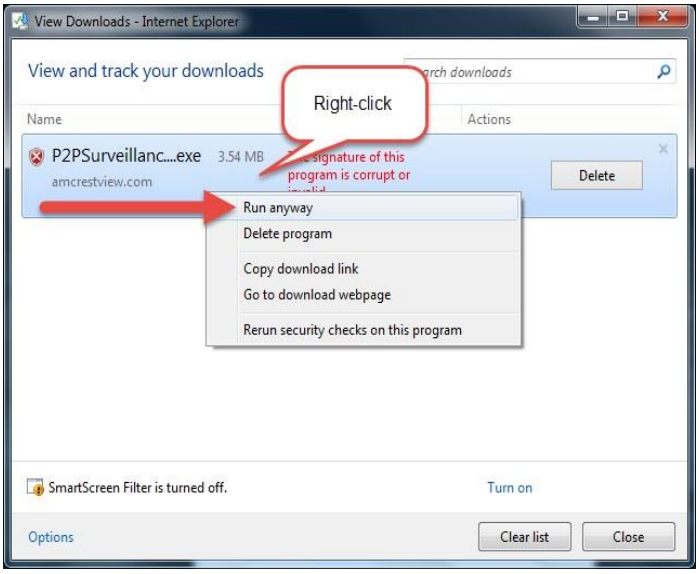
3. This will take you to another page where you will need to click the **Download Now** button:



4. You will be prompted by the browser to install the plugin. Click **Run**:

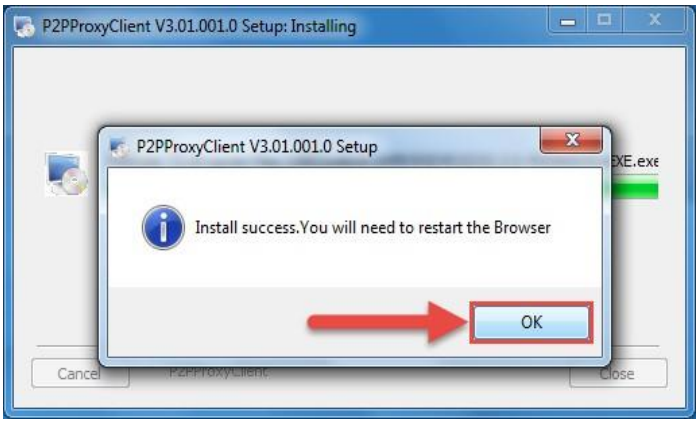
5. You may be prompted to verify this download. This software is not harmful to your computer and will not make any unwanted changes. To verify, start by clicking **View Downloads**:

6. In the View Downloads page, right click the plugin, then click **Run Anyway**.

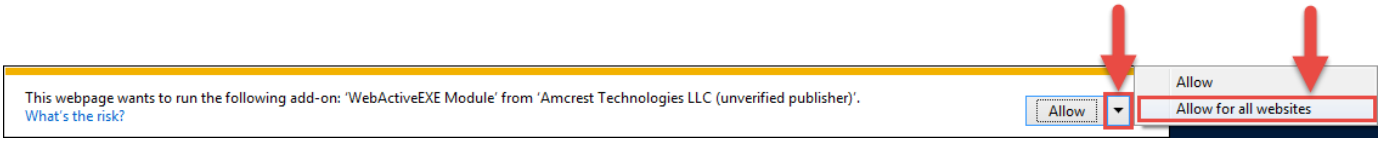


7. The plugin will close your browser sessions to install. Save any pages, then click **Yes**:

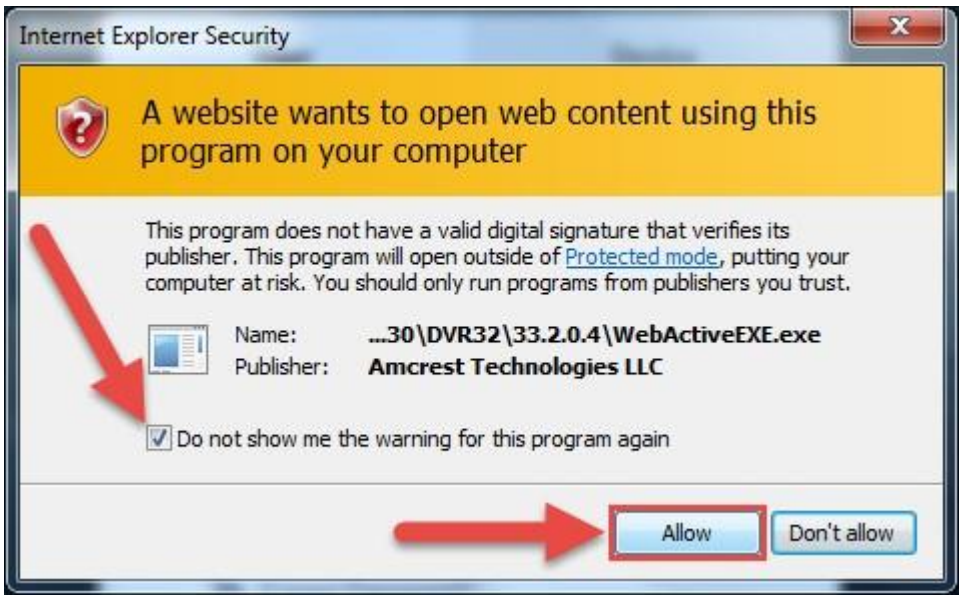
8. On the next prompt, it will say the install was successful and ask you to restart your browser. Click **OK**:



9. You will be taken back to the login page and see another notification from your browser asking you to allow this plugin on this web page. Click the small arrow next to **Allow**, then click **Allow for all websites**:



10. Another popup will appear asking you to allow this plugin. Mark the checkbox next to **Do not show me the warning for this program again**, then click **Allow**:

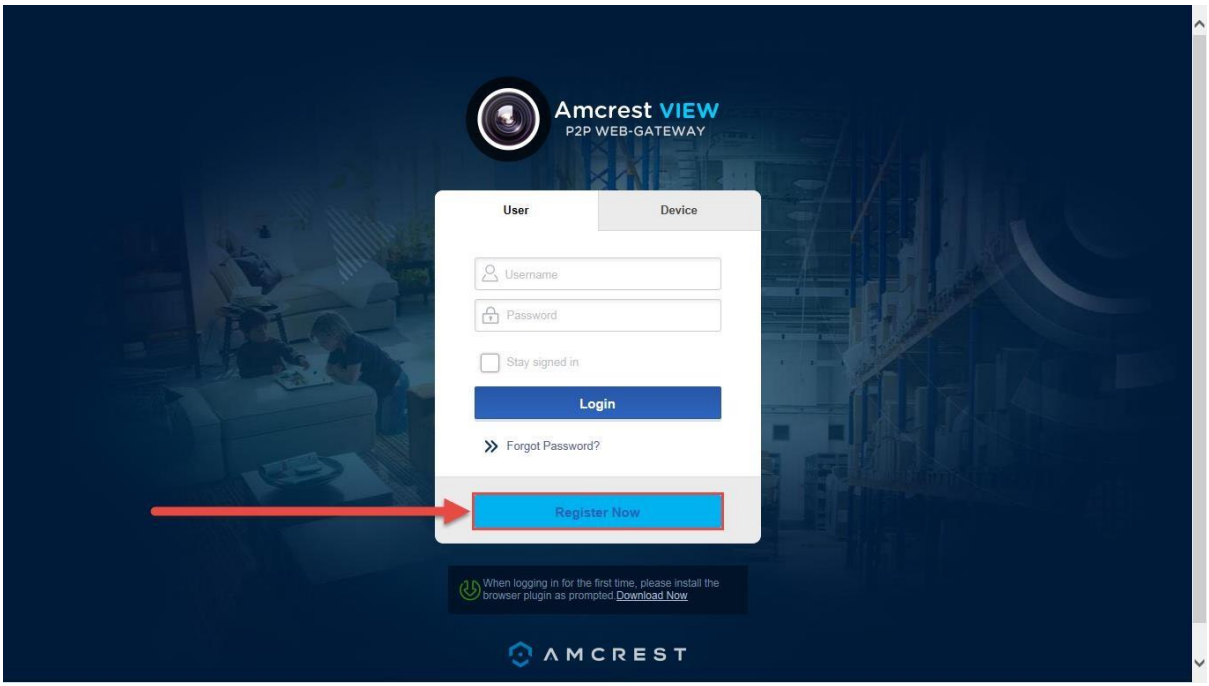


Now the plugin has been installed successfully and you can continue to register for an account for DVR access through AmcrestView.com

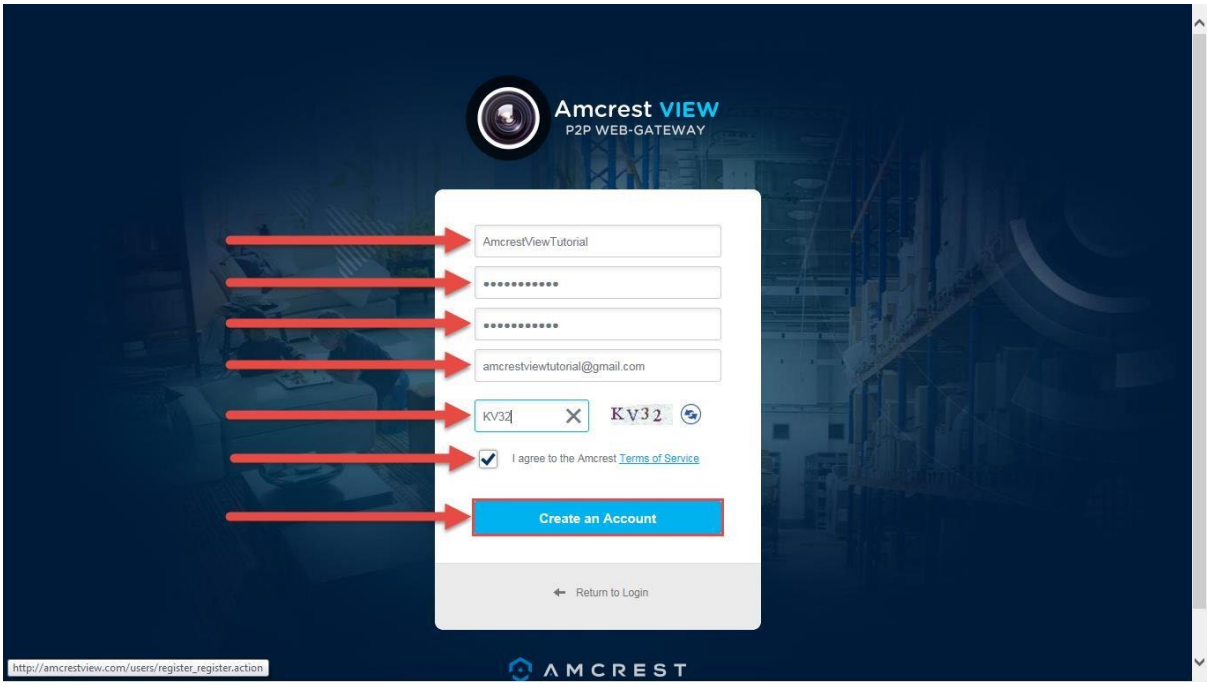
User Method

The **user method** requires that you first install the Amcrest browser plugin for AmcrestView.com. Then, you can register for an account to set up your DVR.

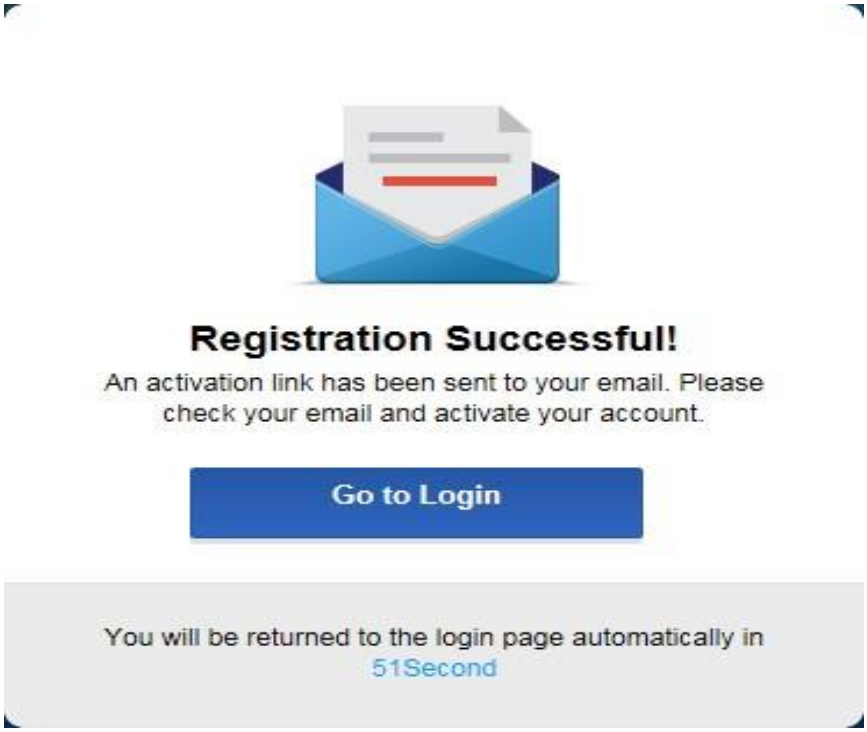
1. On the main login screen, www.amcrestview.com, click the **Register Now** button:



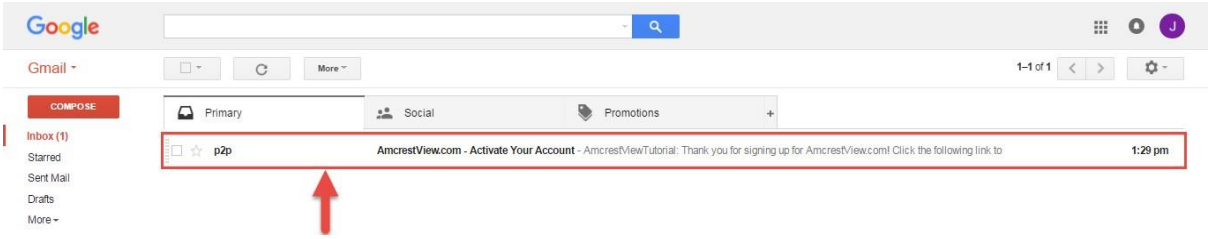
2. You will be taken to the registration form. Enter your **Username**, **Password**, then **Confirm Password**, type your **Email**, enter the **Verification Code**, make sure the box is checked confirming you've read the 'Amcrest Terms of Service', then click **Create an Account**:



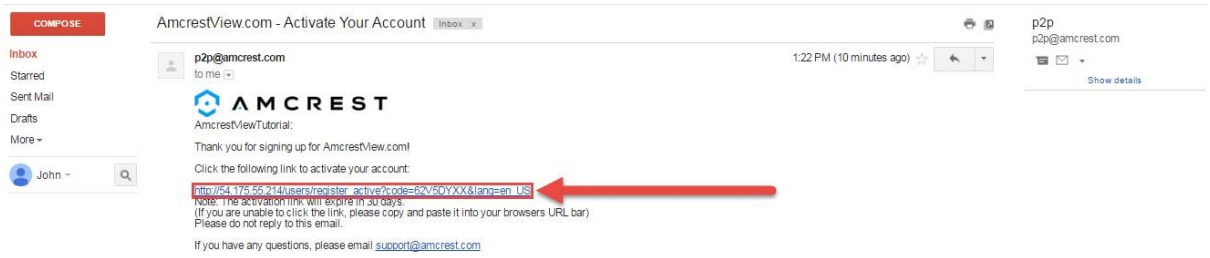
3. You will see the **Registration Successful** message and a confirmation email will be sent to you:



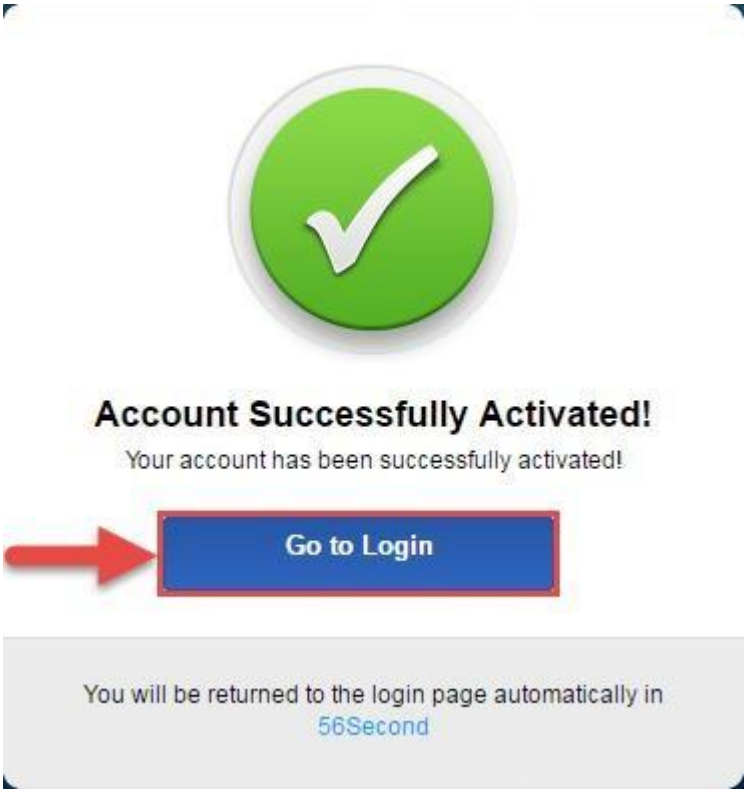
Check your email, and click the confirmation email from AmcrestView.com:



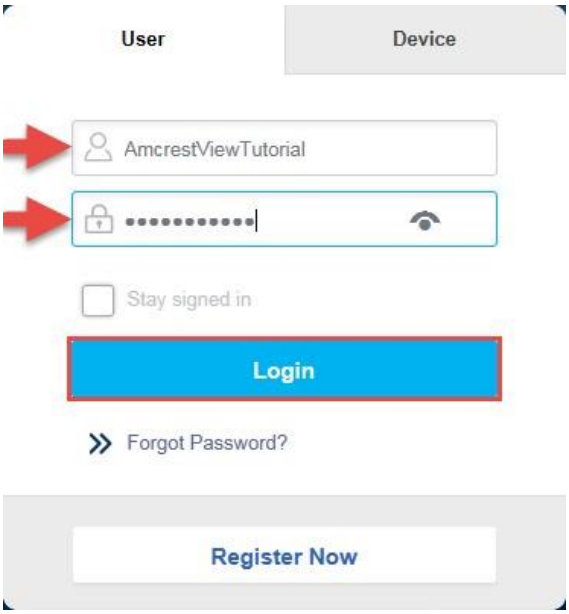
4. Once you've opened the email, click the confirmation link inside to complete your registration:



5. You will be taken back to AmcrestView.com and shown confirmation that your account has been activated. Click **Go to Login**:

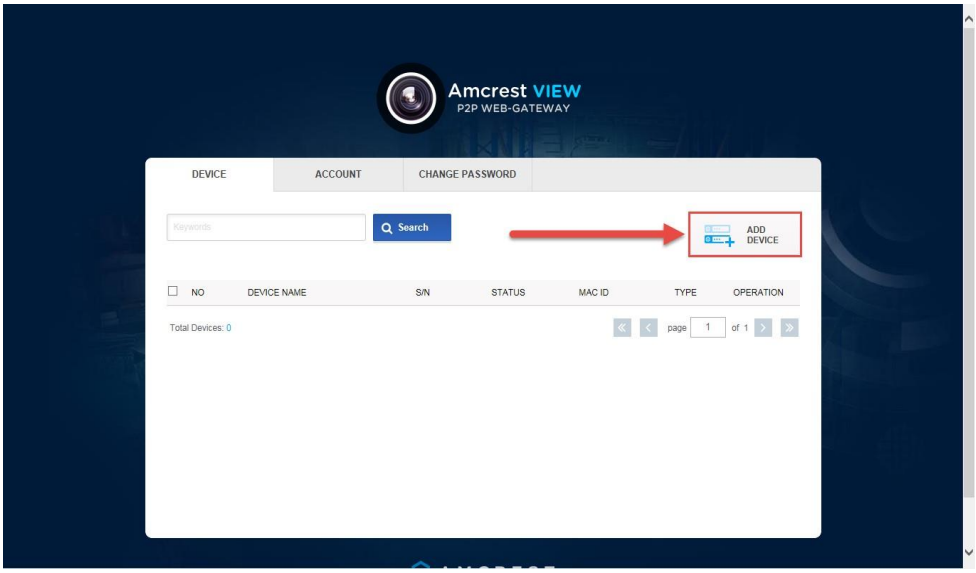


6. You will be taken back to the login screen. Enter your new AmcrestView.com username and password, then click **Login**:



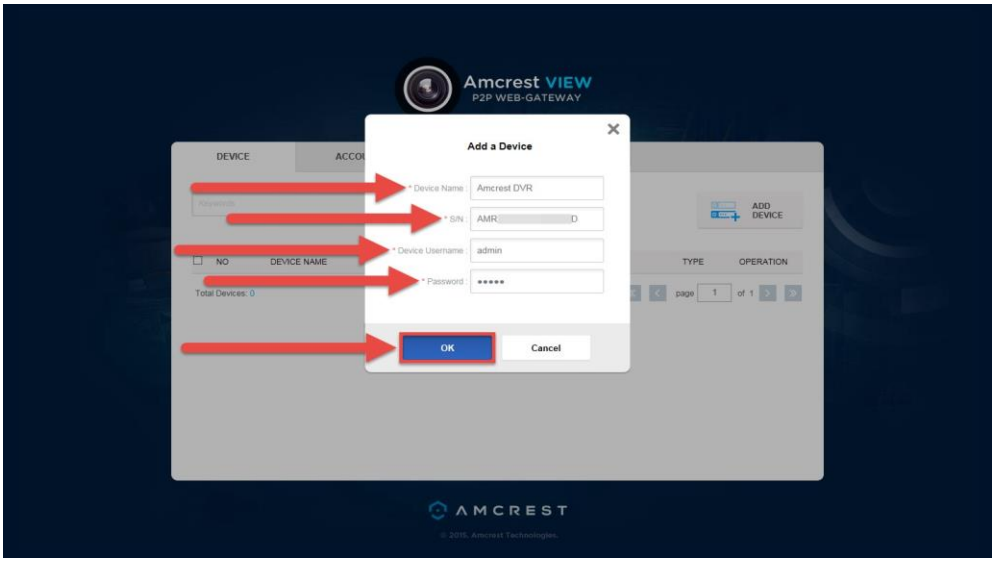
7. A popup will appear from your Windows Firewall. Click **Allow access**:

8. You will be taken to the main screen of your account. From here, click the **Add Device** button:

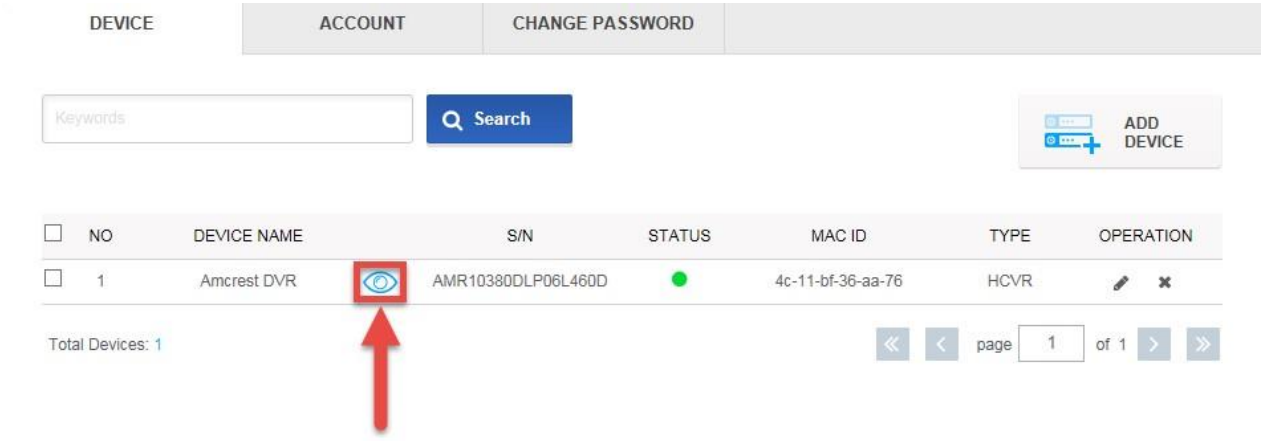


9. Now you can enter your DVR's information. Enter a **Device Name** (this can be anything). Then, fill in the **S/N** (serial number) this can be found on the sticker attached to the bottom of your DVR or through the web interface. Please refer to part 6 of this guide: **Amcrest View App Setup** > **Entering serial number manually (technical method - harder)**.

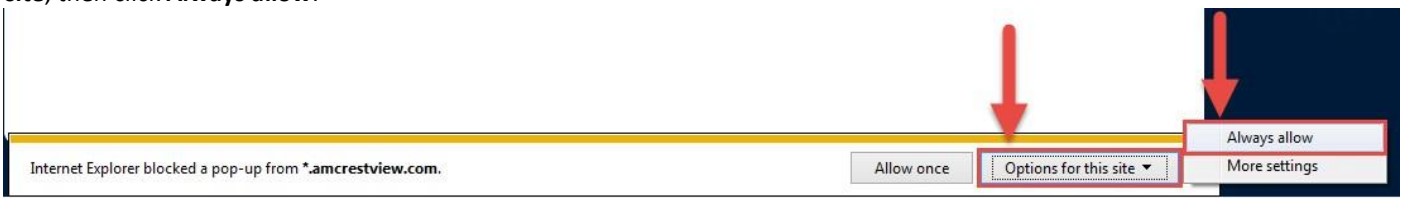
Enter your username and password for the DVR, not the username and password you just created for AmcrestView.com. To find your DVR login credentials, please refer to part 4 of this guide: **Console Setup (Login & Startup Wizard)** > **Logging in**. Finally, click **OK**:



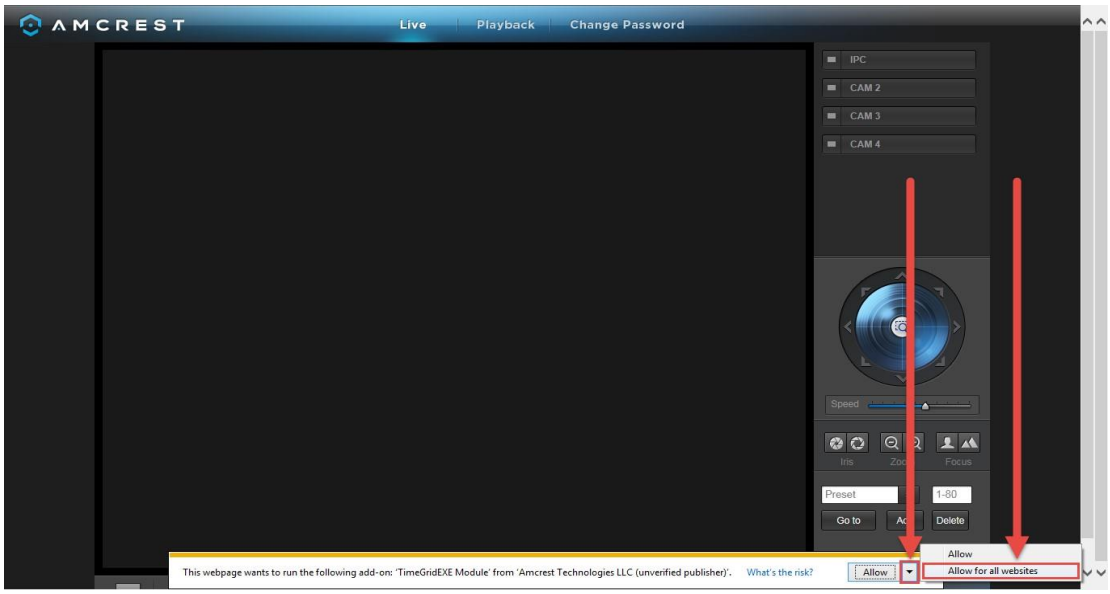
10. You will then see your DVR added to the device list on the main screen. Click the 'eye' icon to view the live feed:



11. Your browser will give you a notification asking you to allow popups from AmcrestView.com. Click **Options for this site**, then click **Always allow**:



12. You will be taken to the live view page and given a notification to allow the plugin to pull the video feed through here. Click the small arrow to the right of **Allow**, then click **Allow for all websites**:



13. A final popup will appear asking you to confirm that you allow this plugin on your browser. Mark the checkbox next to **Do not show me the warning for this program again**, then click **Allow**:

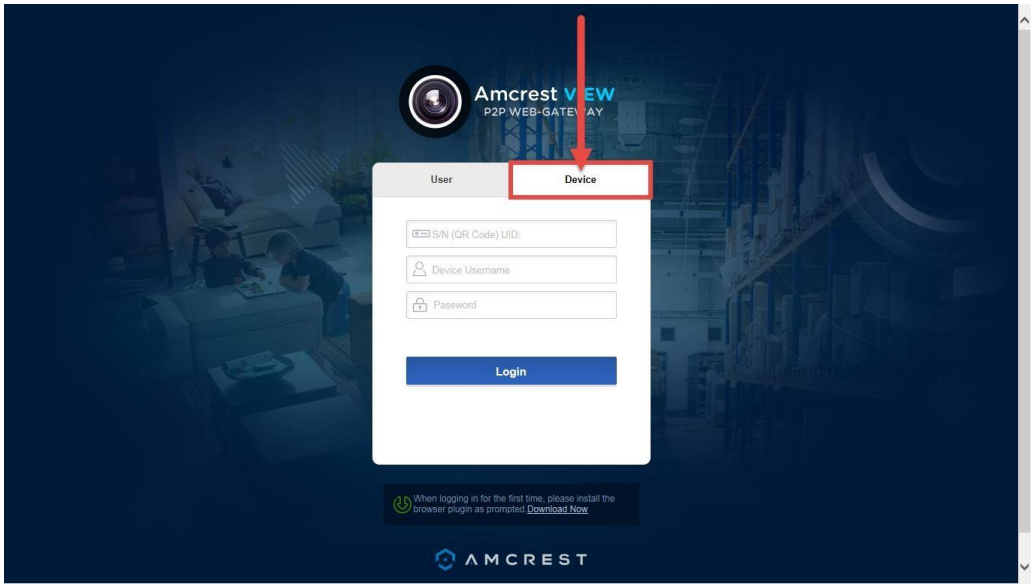
14. Now you can enable any of your added cameras to see their live feeds. In the top-right panel, there is a channel list. Click the small square icon to enable your feed for an added camera to see the video feed:

Click the “S” to change it to an “M” which stands for “Main Stream” and will give you a full HD quality video stream. To go back to “Sub Stream”, for lower quality video (that works better on slower internet connections), click the “M” and change it to an “S” again.

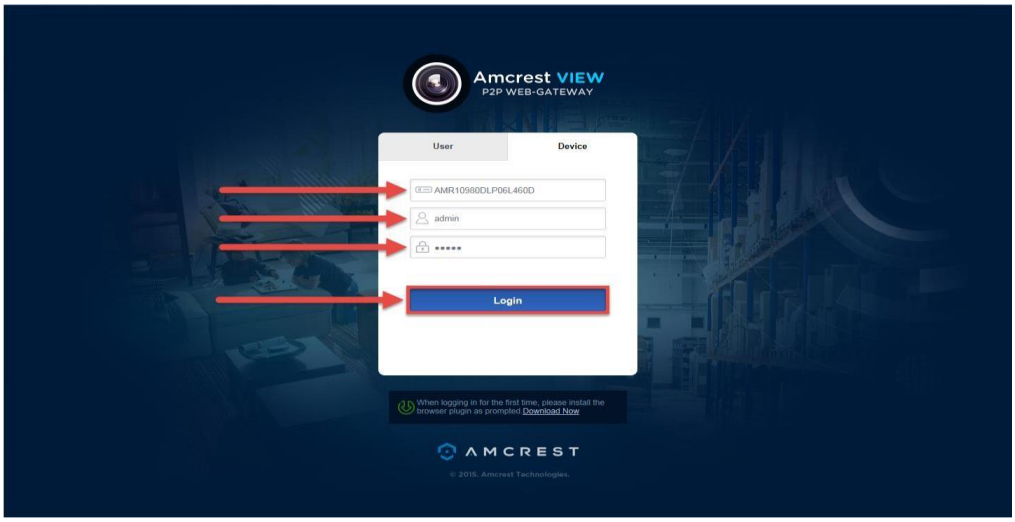
Device method

To login to your DVR quickly, without having to register, you can use the **device method**. This method still requires that you install a plugin, which is covered above, but can be done with only the DVR’s login credentials and the **serial number**.

1. On the main login screen for AmcrestView.com, click the **Device** tab:

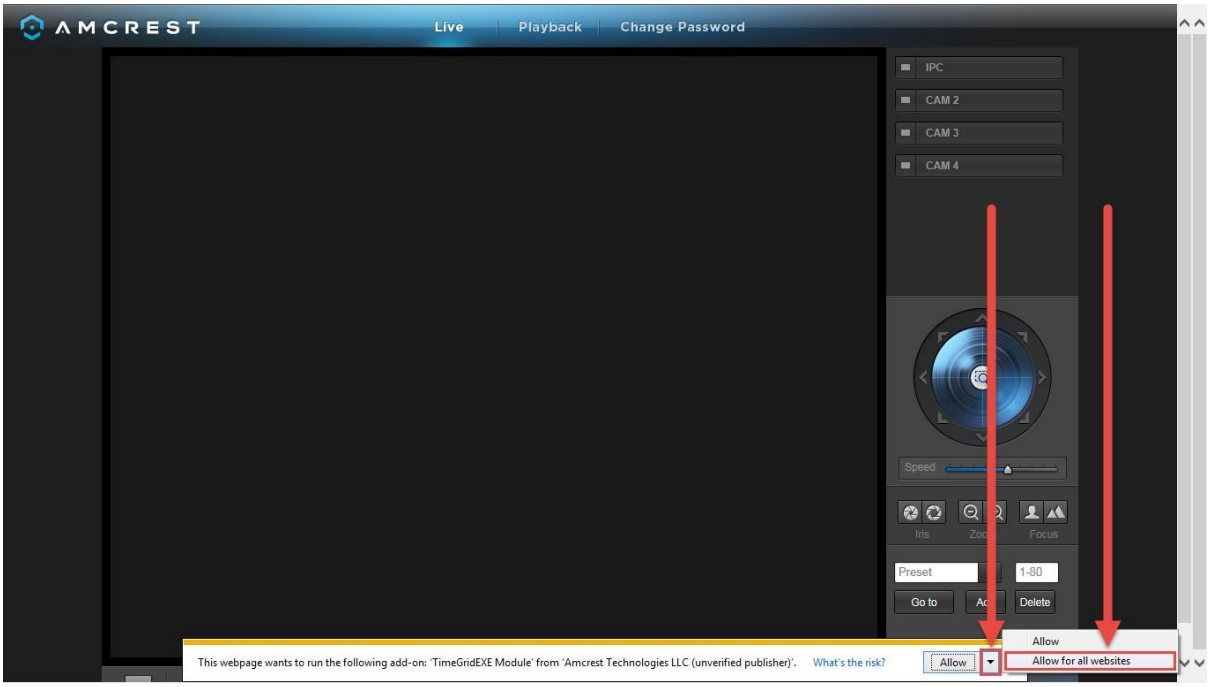


2. Enter your DVR's **S/N** (serial number) into the top field, enter your DVR's username and password, then click **Login**.



To find your DVR's login credentials, please refer to part 4 of this guide: **Console Setup (Login & Startup Wizard)** > **Logging in**.

3. This will take you straight to the live view screen. You will see a notification from your browser asking you to allow the plugin. Click the small arrow to the right of **Allow**, then click **Allow for all websites**:



4. You will see a popup asking you to confirm that you allow this plugin. Check the box next to **Do not show me the warning for the program again**, then click **Allow**:

5. Now you can enable any of your added cameras to see their live feeds. In the top-right panel, there is a channel list. Click the small square icon to enable your feed for an added camera to see the video feed:

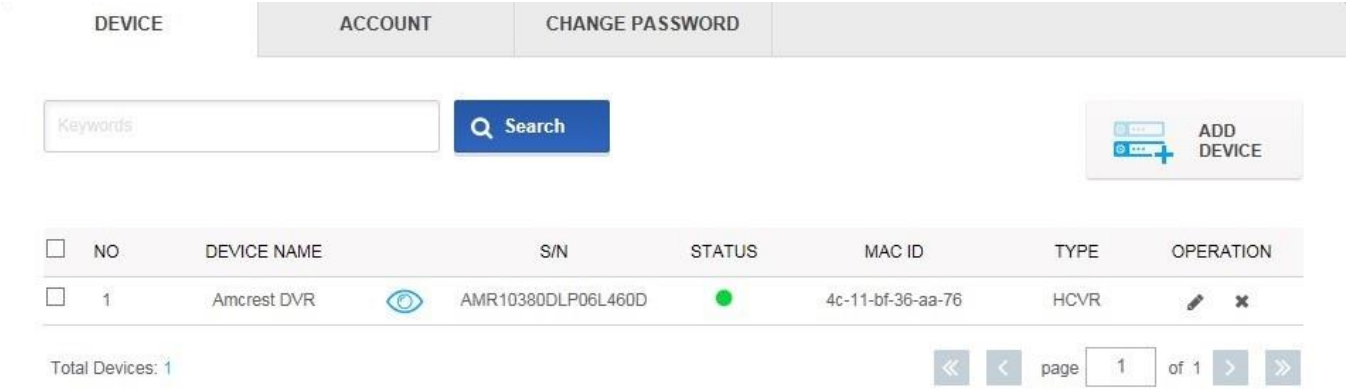
Click the “S” to change it to an “M” which stands for “Main Stream” and will give you a full HD quality video stream. To go back to “Sub Stream”, for lower quality video (that works better on slower internet connections), click the “M” and change it to an “S” again.

Amcrest View Web Interface Overview

There are two main sections inside of the Amcrest View web interface: the main **device list section** (for anyone logged in with a registered account) and the **live view section** (can be accessed by both registered users and those accessing their DVRs using the **device method** covered above.

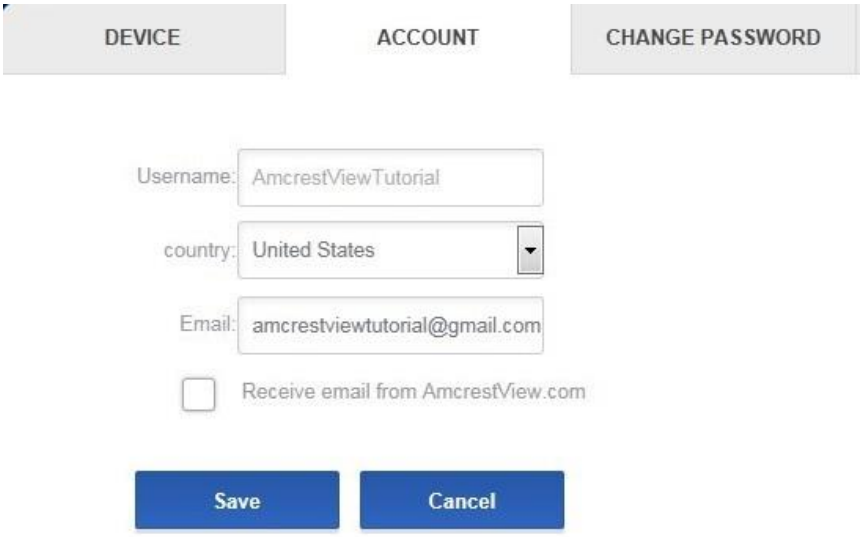
Device list section

The device list section has 3 main tabs. The first is the **DEVICE** tab:



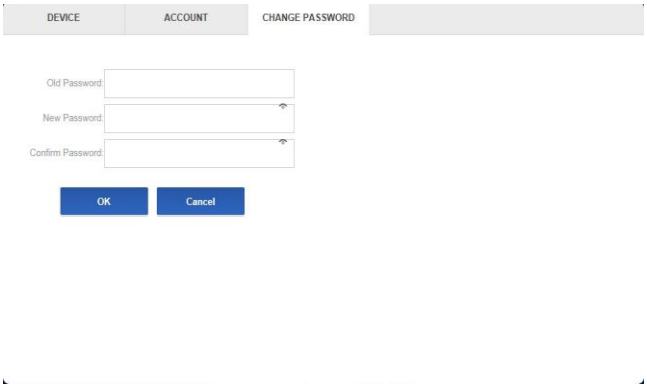
This page shows you a list of any added devices and is where you can click the 'eye' icon to view your DVR's live camera feeds. This is where you can **ADD DEVICE**, **Search**, edit, or delete your added devices.

The next tab is the **ACCOUNT** tab:



This is where you can see your **Username**, change your **Country**, see your **Email**, and enable email notifications from AmcrestView.com.

The last tab for the device list section is the **CHANGE PASSWORD** tab:



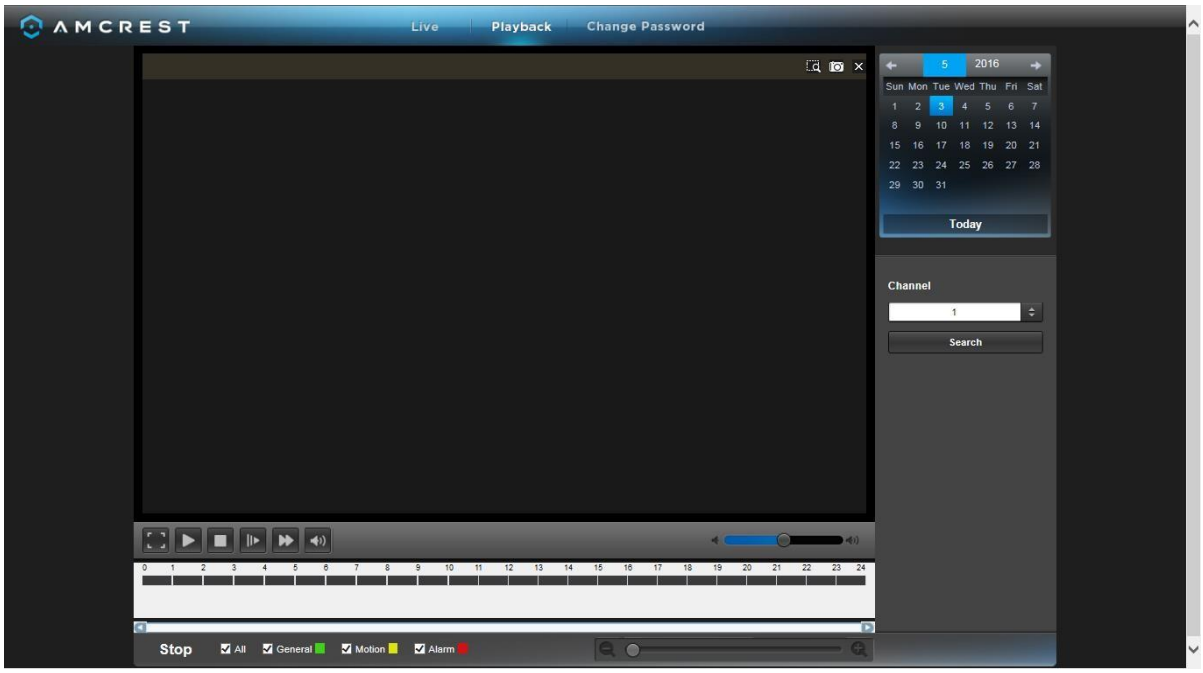
Here, you can change your password.

Live view section

The live view section is where you can see the live camera feeds and playback footage for any cameras added to your DVR. The first tab is the **Live**.

Here, you can enable the live feeds for any connected cameras, control PTZ, take snapshots, use 2-way audio, view them in full screen, and more.

The next tab is the **Playback** tab:



Here, on the right panel, there is a calendar for you to choose which day you'd like to see footage from, and you can choose a channel to select which camera you want to see footage from. The timeline on the bottom allows you to play, stop, forward, etc.

Note: Keep in mind that you can see the live feeds from your cameras whether a hard drive is installed in your DVR. However, you will need to have a hard drive installed and recordings properly configured to view the playback.

FAQs/Troubleshooting

1. The DVR does not boot up properly.

Below are a few possible reasons why this may be occurring:

- The power input is not correct voltage.
- The power cable connection is not secured correctly.
- The power button is damaged or malfunctioning.
- The firmware was upgraded incorrectly.
- There is an HDD malfunction, or something is wrong with the HDD cable.
- There is damage to the DVR's main motherboard.

2. DVR often automatically shuts down or stops running. Below are a few possible reasons why this may be occurring:

- The input voltage is too low or is not stable.
- There is an HDD malfunction, or something is wrong with the HDD cable.
- The power button is damaged or malfunctioning.
- Video output signal is not stable.
- The insides of the DVR have accumulated too much dust.
- The temperature is either too hot or too cold.
- The hardware is malfunctioning.

3. The system does not detect a hard drive.

Below are a few possible reasons why this may be occurring:

- The hard drive is broken.
- The hard drive cable is damaged.
- The hard drive cable connection is loose.
- The DVR's main motherboard SATA port is broken.

4. There is no video output on any of the channels.

Below are a few possible reasons why this may be occurring:

- The DVR firmware is incompatible with the attached cameras. Upgrade to the latest firmware.
- The image brightness is set to 0. Change the brightness using the image settings or restore the DVR to factory default settings.
- There is no video input signal, or the signal is too weak.
- A privacy mask or screensaver may be enabled.
- There might be a malfunction with the DVR hardware.

5. Real-time video color is distorted.

Below are a few possible reasons why this may be occurring:

- When using a BNC output, NTSC and PAL may be setup incorrectly. The real-time video may become black and white.
- The DVR is not compatible with the monitor.
- The video transmission cable is too long, or signal degradation is too great.
- The DVR's color or brightness settings are not correctly configured.

6. Local Recordings are not searchable.

Below are a few possible reasons why this may be occurring:

- The hard drive cable is damaged.
- The hard drive is broken.
- The DVR's firmware is incompatible with the recorded video.
- The recorded files have been overwritten.
- The recording function has been disabled.

7. Local playback video is distorted.

Below are a few possible reasons why this may be occurring:

- The video quality setting is too low.
- The DVR software has a read error. Restart the DVR to solve this problem.
- The hard drive cable is damaged.
- The hard drive is malfunctioning.
- The DVR's hardware is malfunctioning.

8. There is no audio during real-time monitoring.

Below are a few possible reasons why this may be occurring:

- The microphone being used is not sufficiently powered.
- The speakers being used are not sufficiently powered.
- The audio cable is damaged.
- The DVR hardware is malfunctioning.

9. There is no audio during recorded video playback.

Below are a few possible reasons why this may be occurring:

- Audio may not be enabled for that channel.
- The corresponding channel may not have any audio input.

10. The timestamp is not displaying the correct time.

Below are a few possible reasons why this may be occurring:

- The time and date settings may not be configured correctly.
- The battery inside the DVR may be loose, or the battery is running low.

11. PTZ control is not working.

Below are a few possible reasons why this may be occurring:

- There may be an error with the PTZ front panel buttons.
- The PTZ decoding settings aren't configured correctly.
- The PTZ connection may be loose or may not be installed correctly.
- An incorrect cable may be used to connect the PTZ enabled device to the DVR.
- The PTZ decoder and the DVR protocol are not compatible.
- The PTZ decoder and DVR address are not compatible.
- Multiple PTZ decoders are causing reverberation or impedance matching, causing PTZ signal interference. Use a 120 Ohm resister between the PTZ cables to reduce interference.
- The PTZ cable is too long or signal degradation is too great.

12. Motion detection does not work.

Below are a few possible reasons why this may be occurring:

- The motion detection time period may be incorrectly configured.
- Motion detection zone setup is not correctly configured.
- Motion detection sensitivity is too low.

13. Web Access isn't working.

Below are a few possible reasons why this may be occurring:

- Windows version is pre -Windows 2000 service pack 4. Use a more recent version of Windows.
- ActiveX controls have been disabled.
- The PC is not using DirectX 8.1 or higher. Upgrade to a more recent version of DirectX.
- The DVR is having network connection errors.
- Web access may be setup incorrectly.
- The username or password may be incorrect.
- The client end computer is not compatible with the DVR's firmware.

14. Web Access live view is only displaying a static picture. Both live playback and recorded playback aren't working.

Below are a few possible reasons why this may be occurring:

- The network speed is not enough to transfer video data via web access.
- The client PC may have limited resources.
- Multicast mode may be causing this issue.
- A privacy mask or screensaver may be enabled.
- The logged in user may not have enough rights to monitor real-time playback.
- The DVR's local video output quality is not enough.

15. Network connection is not stable.

Below are a few possible reasons why this may be occurring:

- The network is not stable.
- There may be an IP address conflict.
- There may be a MAC address conflict.
- The PC or DVR network card may be defective.

16. Keyboard is not working with the DVR.

Below are a few possible reasons why this may be occurring:

- The DVR serial port is not setup correctly.
- The keyboard may be drawing too much power.
- The keyboard cable too long.
- The keyboard is not compatible with the DVR's firmware.

17. The alarm signal cannot be disarmed.

Below are a few possible reasons why this may be occurring:

- An alarm may be setup incorrectly.
- An alarm output may have been manually opened.
- The DVR may have an input device error, or the connection is not correctly configured.
- There may be an error in the DVR's firmware.

18. Alarms are not working.

Below are a few possible reasons why this may be occurring:

- The alarm is not setup correctly.
- The alarm cable is not connected correctly.
- The alarm input signal is not correctly configured.
- There are two loops connected to one alarm device.

19. The camera is not recording enough video.

Below are a few possible reasons why this may be occurring:

- The hard drive's capacity is not enough.
- The hard drive is damaged.

20. Downloaded files cannot be played back.

Below are a few possible reasons why this may be occurring:

- The media player software on the PC may not be able to read the file format.
- The PC may not have DirectX 8.1 or higher.
- The PC may not have Windows XP or higher.

21. Forgot local menu operation password or network password

As a security measure, your device will lock your account after so many failed attempts. This is implemented to prevent unauthorized users from continually attempting to gain access to your system without consent.

If you experience a locked account issue, there are a few troubleshooting steps you can take to help resolve the problem.

1. **Power Cycle** - To power cycle the device, please remove the device from its power source and allow the device to shut down. This should take approximately **45 seconds** to complete. Once complete, plug the camera back in with its power supply and allow the device to boot back up. When the device is ready, try to connect to the device again.
2. **Wait to Unlock** - Initially, the device will be locked for a duration of 60 minutes. After the 60 minutes have passed, you will be given another round of password attempts to enter in the password correctly.
3. **Password Reset -** If the problem persists, it is highly advisable to fill out a password request form. This form can be found at https://amcrest.com/password. For more information on this issue. When completing the form, for security purposes, it will be required to provide a **proof of ownership** to help prevent unauthorized access to your device. A proof of ownership includes:

- A screenshot of the order history showing the purchase of the device.
- An image of the receipt or invoice for your purchase.

- A screenshot of the email confirmation with purchase information included.

Note: This information must be provided in common formats such as; PDF, JPG, or PNG format. Please make sure the file does not exceed **900KB**.

If the file is too large, it is advisable to either take a snip of the image, crop it, or resize it to fit these criteria. To expedite your request, please make sure the image is legible and visible enough for verification purposes.

If you have any questions or are having continued issues filling out the password reset form, please view the following instructional video at https://www.youtube.com/watch?v=20XKCXwwSlk

Maintenance Tips:

- Please use a brush to clean the motherboard, socket connectors, and the DVR chassis and keep it free of dust.
- The device should be soundly grounded in case there is an audio/video disturbance. Keep the device away from static electricity or induced electricity.
- Please unplug the power cable before you remove audio/video signal cables, RS232 cables, or RS485 cables.
- Always shut down the device properly. Please use the shutdown function in the menu or can press the power button on the front panel for at least three seconds to shut down the DVR. Incorrect shutdown may result in a hard drive malfunction.
- Keep the device is away from direct sunlight or other heat sources and keep the DVR well ventilated.

Appendix A: Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Sheet Metal(Case)	o	o	o	o	o	o
Plastic Parts （Panel）	o	o	o	o	o	o
Circuit Board	o	o	o	o	o	o
Fastener	o	o	o	o	o	o
Wire and Cable/Ac Adapter	o	o	o	o	o	o
Packing Material	o	o	o	o	o	o
Accessories	o	o	o	o	o	o

Note

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or

damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

FCC Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2. The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes, or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

3. (b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -- Consult the dealer or an experienced radio/TV technician for help.

4. RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

IC Warning Statement

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil ettoutes les personnes.

Note:

- To view setup videos for many of the steps outlined in this guide, go to http://amcrest.com/videos
- For more supplemental information or to view support articles on your product, go to http://amcrest.com/support
- This quick start guide is for reference only. Slight differences may be found in the user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective owners.
- If you have any questions or concerns, please contact us at support@amcrest.com, or call us at 888-212-7538.