

Compressor™

Analog to IP Video Encoder

DW-EN4K16



Default Login Information

Username: **admin**

Password: **admin**

※ The picture might differ according to the specification and model.

※ Contents of this user manual are protected under copyrights and computer program laws.

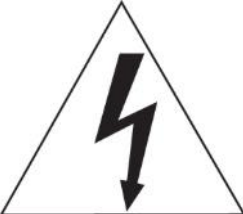

Rev: 07/20

Before operating the system, please read this User Manual and retain it for future reference.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL</p>		

EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FCC COMPLIANCE STATEMENT

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.

FCC INFORMATION: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radiofrequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE COMPLIANCE STATEMENT

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install following the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
16. *Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.*
17. ITE is to be connected only to PoE networks without routing to the outside plant.



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1. Overview

1.1 Package Contents

The device package contents consist of the following:

 **Note** Please check all components involved.

Table 1-1 Package contents

No	Name	No	Name
1	Encoder	3	Quick setup and download guides
2	DC power adapter and power cord		

1.2 Encoder Description

Each part is listed in the below:

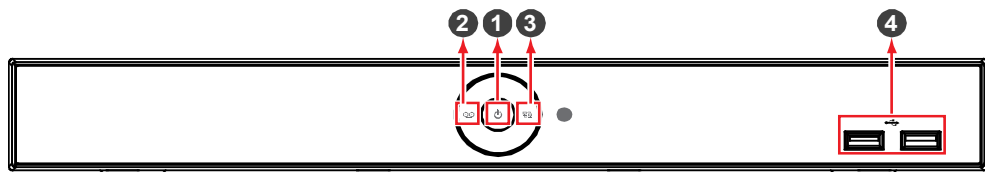





Figure 1-1 Name and connection of each front section

Table 1-2 Name and function of each front section

No.	Name	Function
1		Pointing out device power on/off
2		Not used. The Compressor DOES NOT record the camera's video locally.
3		With a network viewer, this icon indicates the encoder is being accessed over the network.
4	USB port	The USB port is connected for USB mouse or firmware upgrade, and data back-up.

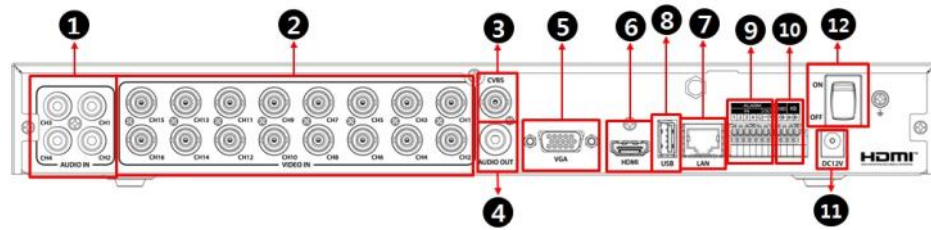


Figure 1-2 Name and connection of each rear section

Table 1-3 Name and function of each rear section

No.	Name	Function
1	Audio in	Camera audio input port
2	Video in	Camera video input port
3	CVBS	CVBS output port
4	Audio out	Audio output port
5	VGA	VGA output port
6	True HD output	HDMI output port
7	LAN	Network connector
8	USB	USB port for USB mouse, firmware upgrade and data back-up
9	Alarm in/out	Alarm connector
10	RS485	RS-485 communication connector
11	DC12V	Connector with power supply
12	Power switch	Power on/off

2. Installation

When installing the encoder, connect the external devices to the ports in the back of the encoder according to the diagram below.

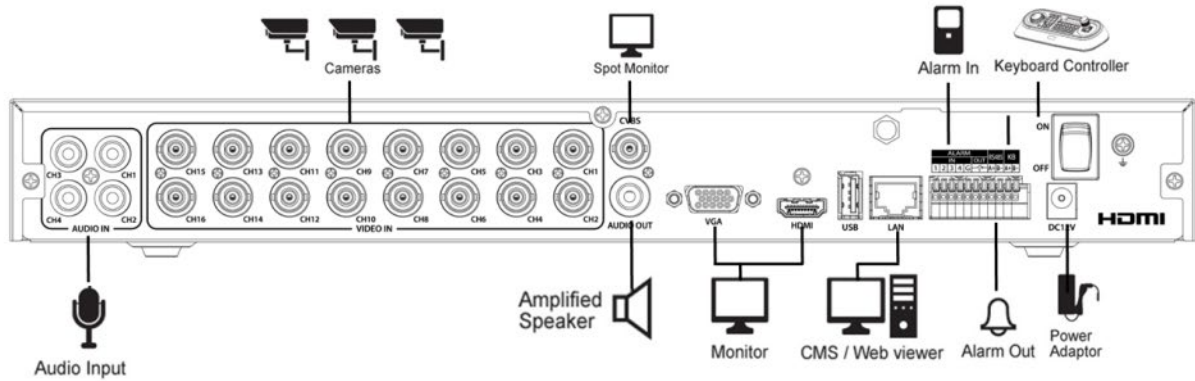


Figure 2-1 Connection map

Before connecting any devices to the encoder, make sure the following is applied:

- 1 Place the unit on a stable, flat surface.
- 2 Leave enough room around the encoder to run all necessary cables properly.



Warning

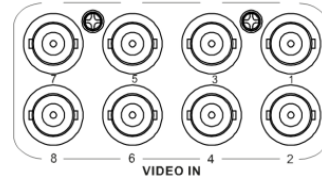
DO NOT install the device too close to the wall. Protrusive connects rear the unit may be forcedly curved or pressed, which may cause fires, electric shocks, or injury.

2.1 Connecting to Exterior Devices

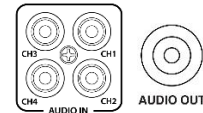
Make sure the encoder's power switch is off and the power cable is not connected.

Warning Make sure to withdraw the mains plug before installing the device.

- 1 Connect the cameras to the input ports. The unit will automatically detect the camera as it's connected to the port.

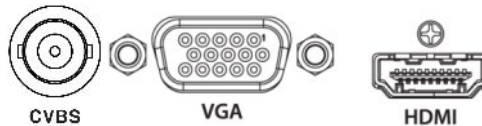


- 2 Connect a microphone to the audio input port and a speaker to the audio output port.

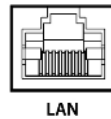


Note Make sure audio recording regulations in your area permit audio recording.

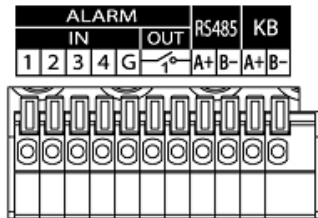
- 3 Connect a monitor for local live view and setup to the VGA, true HD, or CVBS ports.



- 4 Connect a network cable to the network port.



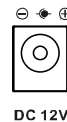
- 5 Connect an alarm and RS485 devices.



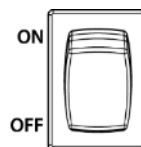
- 6 Connect the USB port in front or rear section of the unit with a mouse or other USB devices.



- 7 Supply the main power after completion. There is no power button. Once the encoder is connected to a proper power supply, the encoder will be powered automatically.



- 8 Turn on the switch after completion.



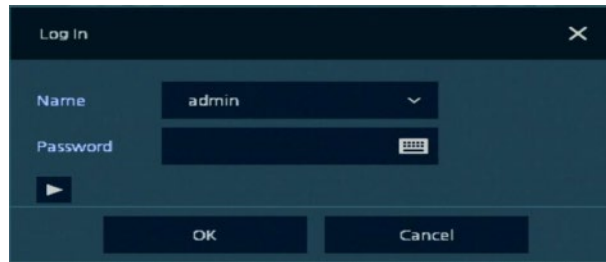
The encoder will boot up. If you are accessing the encoder for the first time, use the setup wizard to complete all the encoder's basic settings.

2.2 System Startup

Once the system powers up, the system will be available for configuration after a buzzer sound. Below will appear on the local display:



On the **login** screen, enter the **User ID** and **password** and press **OK**.



The default user ID and password are admin/admin.

Note Click  to see the MAC address.

If you do not know your password, contact DW Technical Support.


Attention

Please change the password after login due to security.

2.3 Quick Setup

When the system first boots up, you will be prompted to use the installation wizard. The wizard includes setup for the following settings:

- 1 Account
- 2 System
- 3 Network
- 4 Time/date

2.3.1 Account

Use this screen to change the default admin password.

- 1 Click the keyboard icon to set **ID** and **Password**.

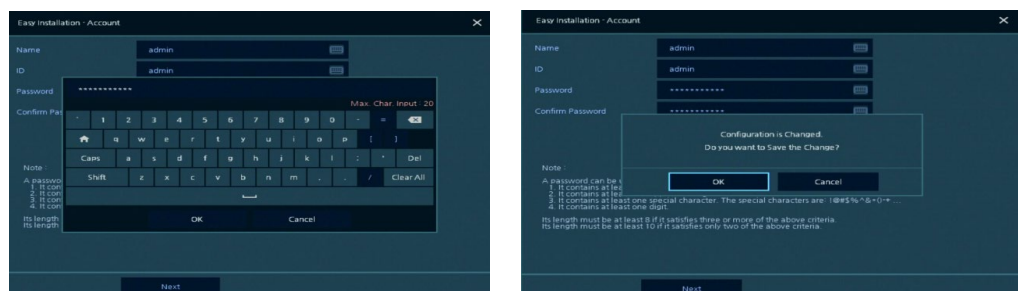


- 2 Refer to the password notes on the bottom of the window for password rules. If the rules are not followed, a password error message will appear.

A password can be used if it satisfies two or more in the following criteria:

- Contains at least one lowercase English character.
- Contains at least one uppercase English character.
- Contains at least one special character. The special characters are: !@#\$%^&*()~+ ...
- Contains at least one digit.
- At least 10 characters long if it satisfies only two of the above criteria.
- At least 8 characters long if it satisfies three or more of the above criteria

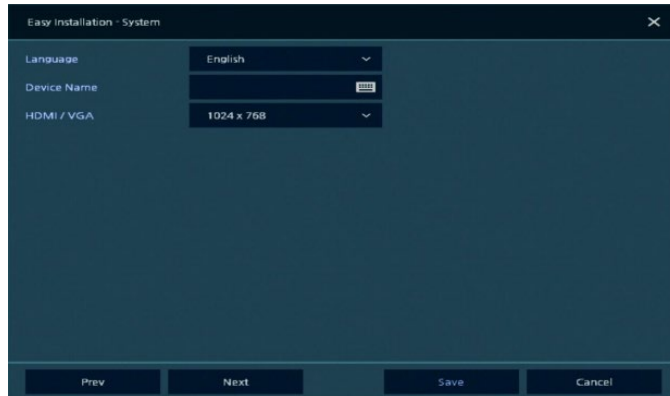
- 3 Using the virtual keyboard, set the **ID** and **Password**, and press **OK**.



- 4 Press the '**Save**' button to save all changes and press '**Next**' to move to the next screen.

2.3.2 System

Set each item in **the System** setting screen.



- Language: Select system language.
- Device Name: Enter the device name.
- True-HD/VGA: The set resolution of a monitor connected to the device.

Note ▪ When using more than one encoder, set a unique ID for each encoder.

Press the **'Save'** button to save all changes and press **'Next'** to move to the next screen.

2.3.3 Network

1 Set each item in **the Network** setting screen.

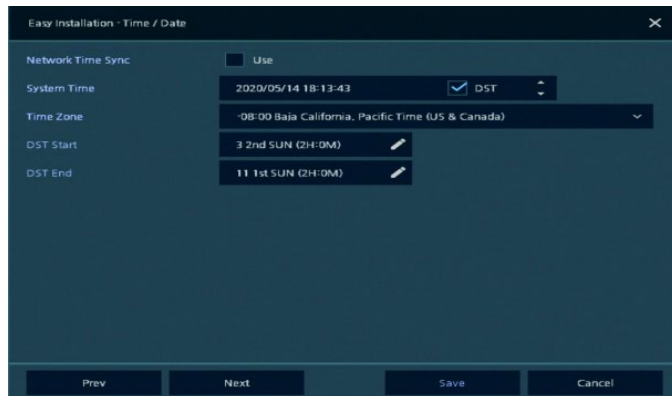


- WAN Port: Select whether to use static IP or dynamic IP.
- Enter the applicable information for the IP Address, Subnet Mask, Gateway, DNS, and Port. Contact your Network Administrator for more information.

Press the **'Save'** button to save all changes and press **'Next'** to move to the next screen.

2.3.4 Time/Date

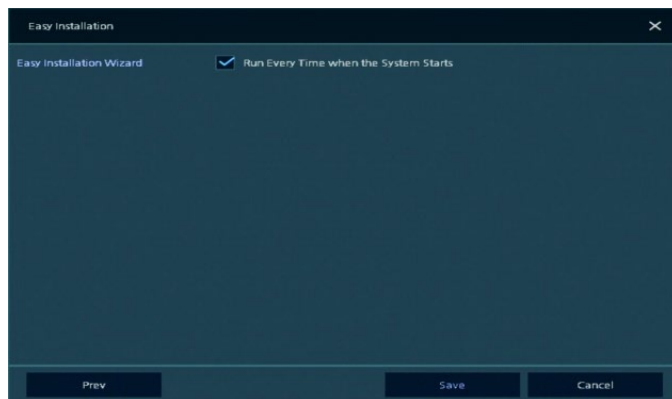
1 Set each item in the **Time/Date** setting screen.



- Network Time Sync: Select to synchronize the encoder with a time server.
- System Time: When the encoder is not set to synchronize with a time server, enter manually the date and time for the encoder.
- Time Zone: Select the time zone for the encoder.
- DST Start/End: For Daylight saving time, set the start and end period.

Press the '**Save**' button to save all changes and press '**Next**' to move to the next screen.

2.3.5 Easy Installation Wizard



- 1 Select to run Easy Installation whenever the system starts.
- 2 Press the '**Save**' button to save all changes.

3. Live Screen Configuration

The image below displays the encoder’s main GUI.

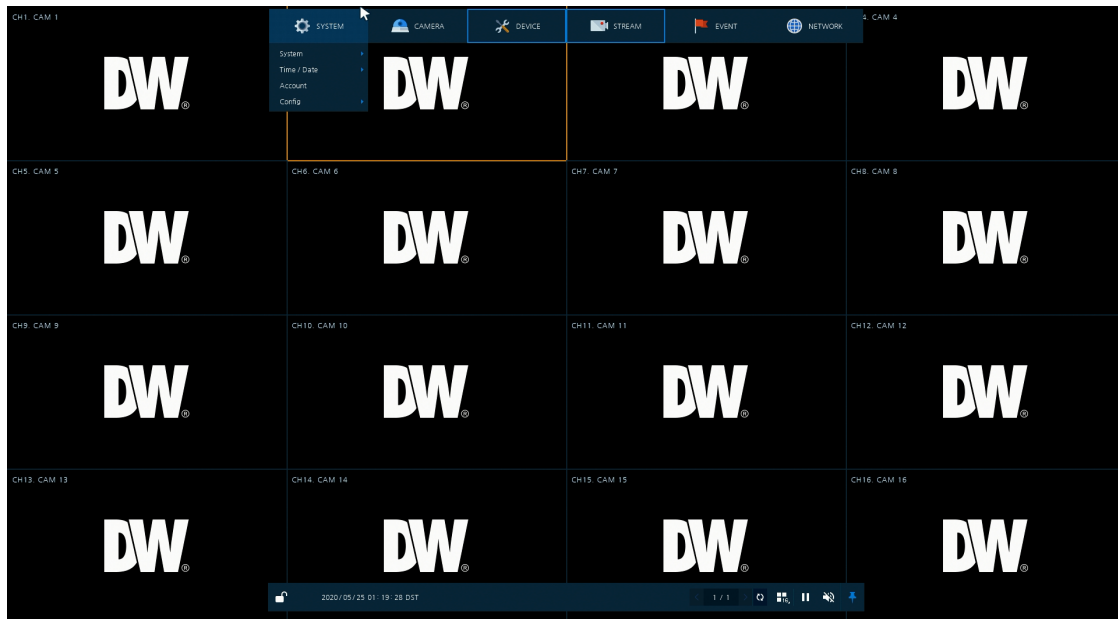


Figure 3-1 UI Screen Configuration

Table 3-1 Items and Description of UI Screen Configuration

No.	Item	Description
1	Setup menu	The Setup menu is located on the top of the screen. See “4 Setup ” for more information.
2	Live screen	Show live video from the connected cameras.
3	Launcher menu	The launcher menu is located at the bottom of the screen. See “3.2 Live Launcher ” for more information.
4	Quick menu	Right-click anywhere on the screen to display the Quick menu. See “3.3 Quick” for more information.

3.1 Icons in Live Screen

The table below includes all icons and text that are available on the live view screen and their meaning.

Note

In a multi-channel view, the channel selected will be highlighted with a blue frame. When the mouse cursor hovers over a channel, it will be highlighted in yellow.

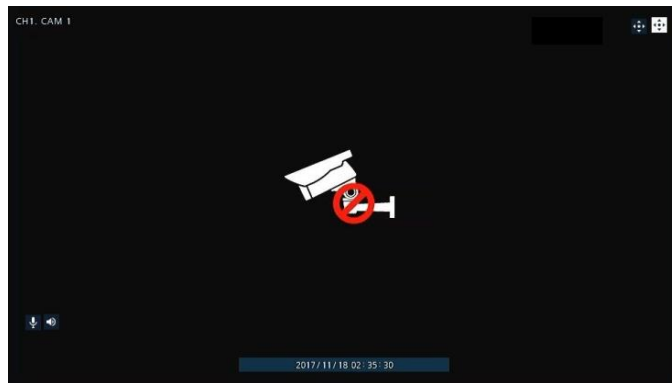


Figure 3-2 Live screen icon

Table 3-2 Live screen icon and its description

No.	Icon	Description
1	CH1 CAM1	Channel number and camera title.
2		A camera with PTZ function.
3		PTZ control functions active.
4		Video loss.
5		Turn the mic on/off.
6		Turn the speaker on/off.
7	2017/11/18 02:35:30	Display current time and date.

3.2 Live Launcher Menu



Figure 3-3 Launcher menu

Table 3-3 Launcher menu Item and Description

No.	Item	Description
1		Log in/out and logged ID.
2	Date and Time	Display current time and date.
3		Moving between partition screens.
4		Displaying live screen in a loop (toggle).
5		Selecting the split mode (single screen, 4-, 9-, and 16- partition).
6		Stop or play a selected live view (toggle).
7		Enable or disable the audio on a chosen channel (toggle).
8		Pin the setup menu to the top of the screen (toggle).

3.3 Quick Menu

The Quick Menu is available by right-clicking anywhere on the screen.



Figure 3-4 Quick menu

Table 3-4 Quick menu Item and Description

No.	Item	Description
1	Screen mode	Select the split mode (Full, 2X2, 3X3, and 4x4).
2	Zoom in	Digitally enlarge a selected live screen (Zoom out, 2 times, 4 times, and 8 times).
3	Freeze	Freeze the video in the selected channel (toggle on/off).
4	Speaker output/mute	Turn on/off a speaker.
5	PTZ control	Control the PTZ function on supporting cameras.
6	Stop alarm	Stop monitoring alarm output and events.
7	Spot monitor	Set the output mode of a spot monitor (Auto, Full, and 4x4).
8	Setup	Open the setup menu pop-up. See “4. Setup ” for more information.
9	Camera registration	Open a pop-up menu for IP camera registration. This menu will be shown when it is selected ‘Analog+IP cam’ mode on the Easy Installation-System setup.
10	Status	Open a pop-up display device event and stream status.
11	Log in/out	Log in/out.
12	Shutdown	Shut down the encoder.

3.3.1 PTZ Control

Note

To see the PTZ Control menu, the channel must be set with the camera's communications protocol in the **DEVICE > PTZ** setup menu.

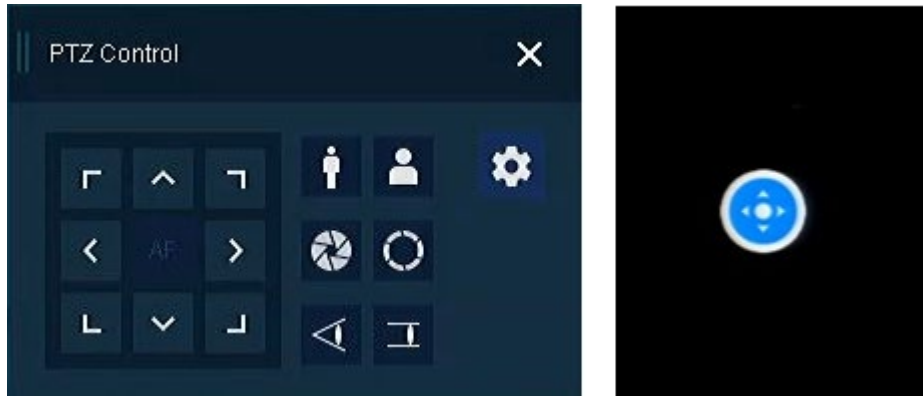


Figure 3-5 Quick menu > PTZ Control

Table 3-5 Quick menus> PTZ Control Item and Description

No.	Item	Description
1		Move the camera using the arrow buttons.
2		Move images using the PTZ ball.
3	AF	Adjust the camera's focus automatically.
4	Zoom Out	Control the zoom function on the PTZ camera.
5	Zoom In	
6	IRIS OFF	Adjust the iris on the camera.
7	IRIS On	
8	Focus Far	Adjust the focus on the camera.
9	Focus Near	
10		Open the camera's setup menu.

In the PTZ Control screen, right-click anywhere on the screen to see the following options.

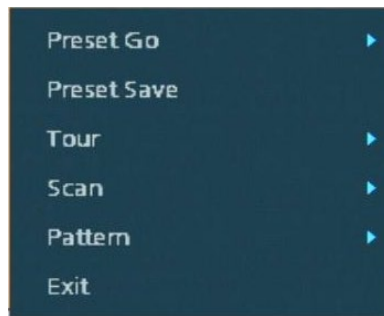


Figure 3-6 PTZ Control Quick menu

Table 3-6 PTZ Control Item and Description in Quick menu

No.	Item	Description
1	Preset, Tour, Scan, Pattern	Run a PTZ function (these must be set on the camera beforehand).
2	Exit	Exit the PTZ menu and return to the live screen view.

3.3.2 Status > Event

See real-time event information for the encoder in the **Event** table.

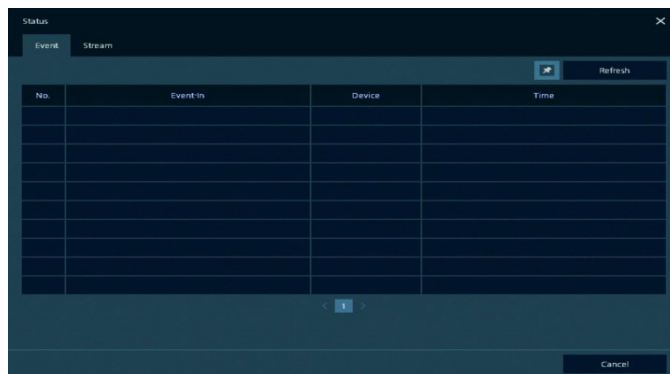


Figure 3-7 Status > Event in Quick menu

Table 3-7 Status > Event Item and Description in Quick menu

No.	Item	Description
1		Lock the event table to the view (toggle).
2	Refresh	Delete the event list.
3	Event list	Display the event list.
4	Cancel	Close the screen.

3.3.3 Status > Stream

See the stream status in the **Stream** table in **Status** screen.



Figure 3-8 Status > Stream in Quick menu

Table 3-8 Status > Stream Item and Description in Quick menu

No.	Item	Description
1	Input Type	Display the input video type.
2	Main Stream	Display mainstream status.
3	Second Stream	Display the second stream status.

4. Setup Menu



Figure 4-1 Setup menu

Table 4-1 Setup menu tree

Main menu	Sub-menu	
SYSTEM	System	System
		F/W Upgrade
	Time/Date	Time/Date
		Holiday
	Account	User
	Configuration	Export/Import
Factory Default		
CAMERA	Basic	Basic
		Audio In/Out
	Advanced	Scan Mode
		Advanced
DEVICE	Display	Display
		Spot
		OSD
		Sequence
	PTZ	PTZ
Serial Device	Serial Device	
	Serial Device	
STREAM	STREAM	Main Stream
		Sub Stream
		Codec Type
EVENT	System	System
	Alarm In	Setup
		Schedule
	Motion	Setup
		Schedule
	Video Loss	Setup
Notification	Periodic	
	Schedule	
NETWORK	Basic	WAN Port

Main menu	Sub-menu	
	DDNS	DDNS
	E-Mail	E-Mail
	RTP Multicast	RTP Multicast

4.1 General Buttons in the Setup Menu

This section depicts General buttons in the Setup menu.

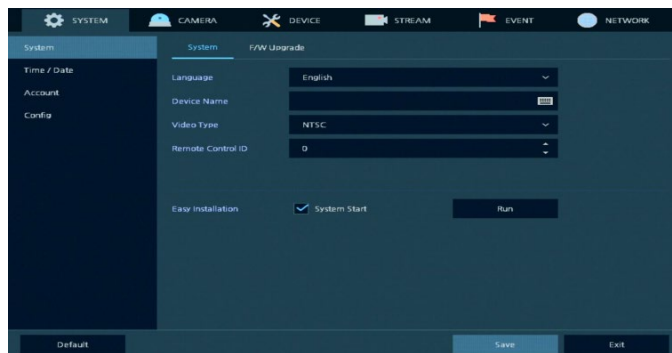


Figure 4-2 General buttons in the Setup menu

Table 4-1 Item and Description of General buttons in the Setup menu

No.	Item	Description
1	Default	Reverse settings back to default values.
2	Save	Save changes.
3	Cancel/Exit	Cancel/Exit the set value.
4	Restore	Cancel changes and reverse them to the default settings.
5	Apply	Apply all changes.

4.2 SYSTEM

4.2.1 System

System > System

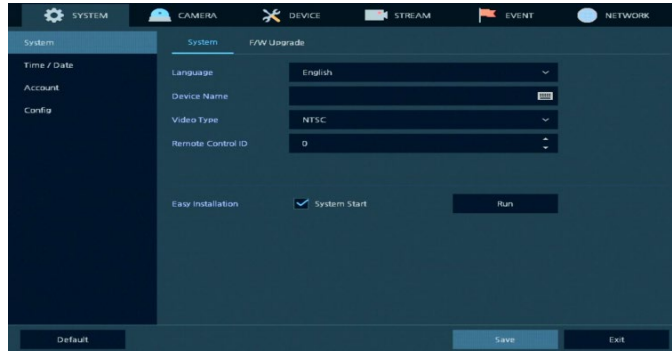


Figure 4-3 SYSTEM > System > System

Table 4-2 SYSTEM > System > System Item and Description

No.	Name	Function
1	Language	Set the system language.
2	Device Name	Enter the device name (English only).
3	Video Type	Set the image-standard types (NTSC, PAL).
4	Keyboard ID	Set the keyboard ID (1-255).
5	System Start	Set the Easy Installation to start every time the system boots up.
6	Run	Run the Easy Installation.

System > F/W Upgrade

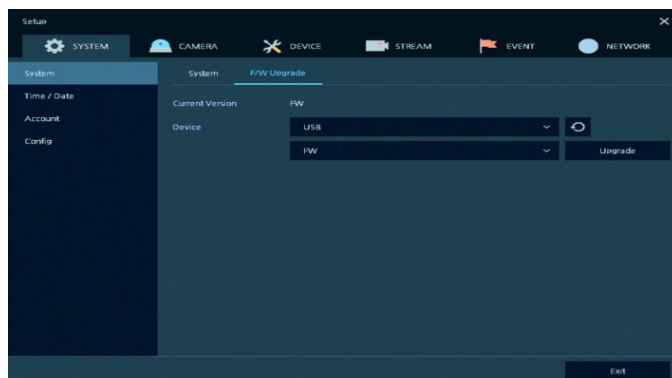


Figure 4-4 SYSTEM > System > F/W Upgrade

Table 4-3 SYSTEM > System > F/W Upgrade Item and Description

No.	Name	Function
1	Current Version	Display the current firmware version.
2	Device	Connect a USB drive with a new firmware file to upgrade the system.

4.2.2 Time/Date

Time/Date > Time/Date

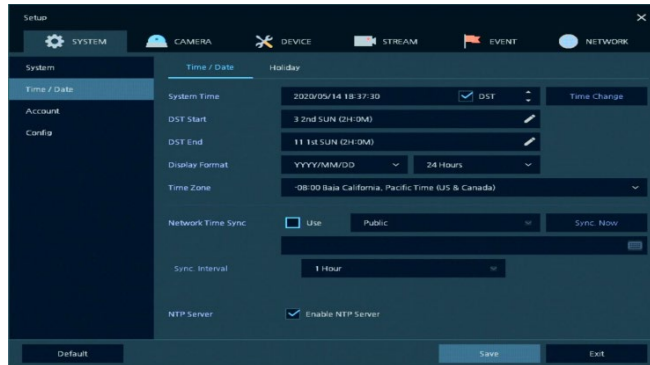


Figure 4-5 SYSTEM > Time/Date > Time/Date

Table 4-4 SYSTEM > Time/Date > Time/Date Item and Description

No.	Name	Function
1	System Time	Set the date and time.
2	DST Start	Set the start date for DST.
3	DST End	Set the end date for DST
4	Display Format	Select the display format.
5	Time Zone	Select the time zone.
6	Network Time Sync	When using a time server, check the box and enter the server's IP address. Set how often the encoder will sync with the time server.
7	NTP Server	Select whether to use the NTP server.

Time/Date > Holiday

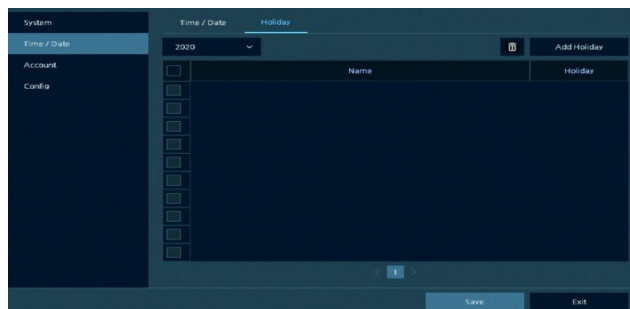



Figure 4-6 SYSTEM > Time/Date > Holiday

Table 4-5 SYSTEM > Time/Date > Holiday Item and Description

No.	Name	Function
1	Year	Select the year to set holidays.
2		Delete selected holidays.
3	Add Holiday	Add holidays.
4	List	Display holidays as a list.

To add a holiday, press the **Add Holiday** button and enter the information in the popup window below.



Figure 4-7 SYSTEM > Time/Date > Holiday > Add Holiday

Table 4-6 SYSTEM > Time/Date > Holiday > Add Holiday Item and Description

No.	Name	Function
1	Name	Enter the holiday name.
2	Date	Display the chosen date.
3	Type	Select holiday types. e.g.,) Selecting Relative and 1, first , and Sun , which designates annual January of the 1 st Sunday as a holiday.
4	Calendar	Select the holiday to add.

4.2.3 Account > User

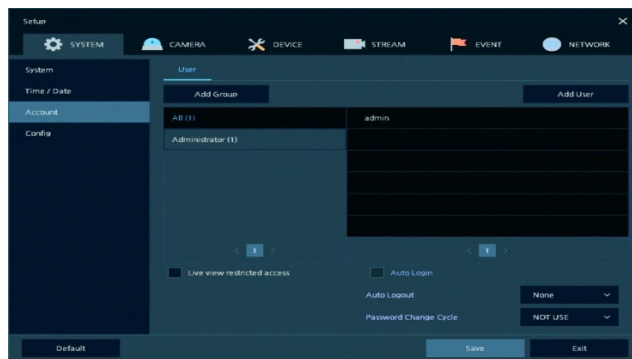


Figure 4-8 SYSTEM > Account > User

Table 4-7 SYSTEM > Account > User Item and Description

No.	Name	Function
1	Add Group	Add a users' group.
2	Add User	Add a user.
3	Group List	Display a list of all user groups.
4	User List	Display a list of all users.
5	Live view restricted access	If logging out, do not display live video.
6	Auto Login	Click/clear the automatic login checkbox.
7	Auto Logout	Select automatic logout time (Null, 1-30 min).
8	Password Change Cycle	If enabled, users will be prompted to change their passwords periodically.

To add a user group, press the **Add Group** button and fill out the information below:

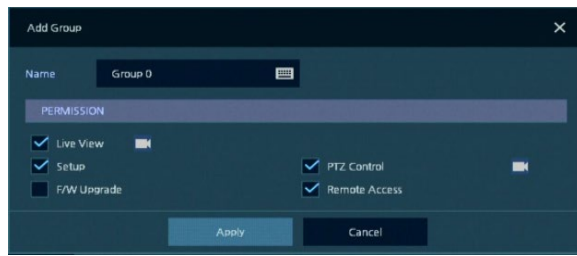



Figure 4-9 SYSTEM > Account > User > Add Group

Table 4-8 SYSTEM > Account > User > Add Group Item and Description

No.	Name	Function
1	Name	Enter the group name.
2	PERMISSION	Select items to permit access.
3		Select channels to permit access.

To add a user, press the **Add User** button, and enter fill out the information below:

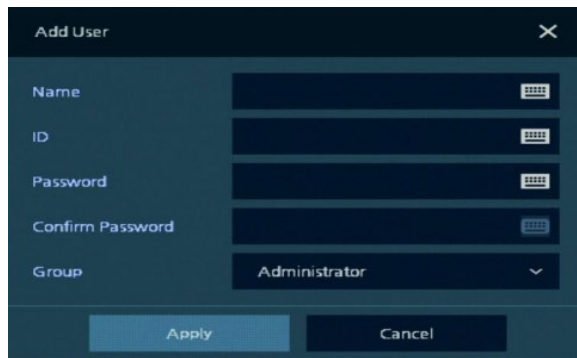


Figure 4-10 SYSTEM > Account > User > Add User

Table 4-9 SYSTEM > Account > User > Add User Item and Description

No.	Name	Function
1	Name	Enter the username.
2	ID	Enter the user ID.
3	Password	Enter the password.
4	Confirm Password	Confirm the password.
5	Group	Select the group to which belongs.

4.2.4 Configuration (Config)

Config > Export/Import

Use this menu to import settings from other encoders, or export the current encoder's setting to share with other devices.

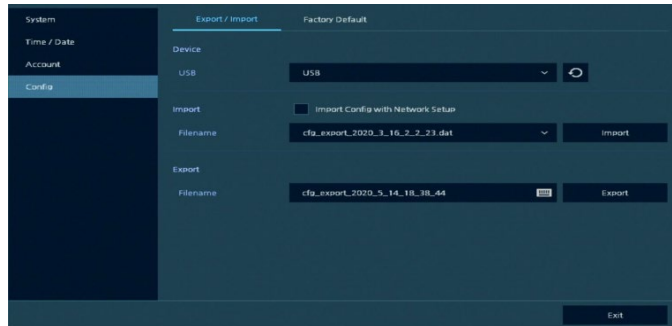


Figure 4-11 SYSTEM > Config > Export/Import

Table 4-10 SYSTEM > Config > Export/Import Item and Description

No.	Name	Function
1	Device	Select a USB drive connected to the encoder from the search results.
2	Import	Apply settings from another encoder. <ul style="list-style-type: none"> ▪ Import Config with network setup: The network information will also be updated. ▪ Import button: Start applying the settings saved in the USB drive.
3	Export	Save the current encoder's information on the USB drive. <ul style="list-style-type: none"> ▪ Export Config with network setup: Save the information including the network setting. Export button: Save the set information on the USB.

Config > Factory Default

Restore the encoder's default settings.

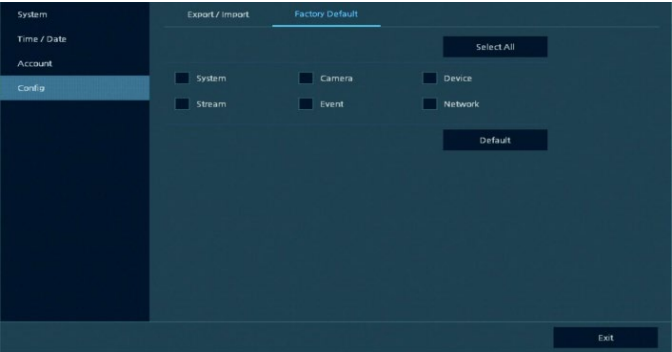


Figure 4-12 SYSTEM > Config > Factory Default

Table 4-11 SYSTEM > Config > Factory Default Item and Description

No.	Name	Function
1	Select All /Unselect All	Select/deselect all items to default.
2	Default Item	Select/deselect related items to default.
3	Default button	Default the system to the basics.

4.3 CAMERA

4.3.1 Basic

Basic > Basic

Set the basic settings for each camera connected to the encoder.

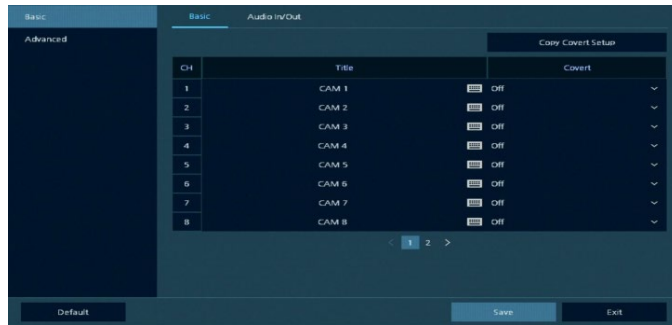


Figure 4-13 CAMERA > Basic > Basic

Table 4-12 CAMERA > Basic > Basic Item and Description

No.	Name	Function
1	CH	Associated display channel.
2	Title	Enter the camera's name.
3	Covert	Select whether to show a channel in the live screen, only the status message, or show no display (OFF, Video Only, Video/State All).
4	Copy Covert Setup	Apply the covert settings to other channels.

Press **Copy Covert Setup** button, then **Copy Covert Setup** screen displays.

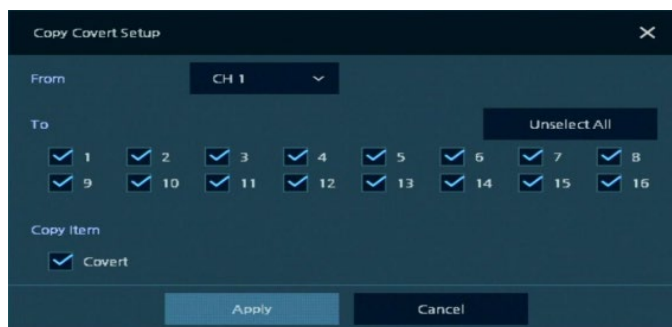


Figure 4-14 CAMERA > Basic > Basic > Copy Covert Setup

Table 4-13 CAMERA > Basic > Basic > Copy Covert Setup Item and Description

No.	Name	Function
1	From	Select a channel with a covert setting.
2	To	Select a channel to apply the settings to.
3	Select All /Unselect All	Select/deselect all channels.

Basic > Audio In/Out

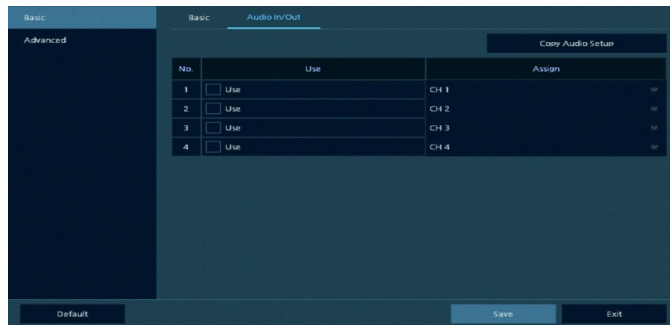


Figure 4-15 CAMERA >Basic > Audio In

Table 4-14 CAMERA > Basic > Audio In Item and Description

No.	Name	Function
1	No	Display channels with audio input.
2	Use	Select/deselect audio.
3	Assign	Select channels to assign the audio output.

4.3.2 Advanced

Advanced > Scan Mode

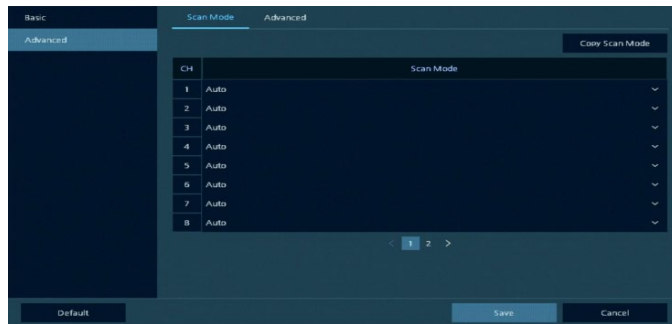


Figure 4-16 CAMERA > Advanced > Scan Mode

Table 4-15 CAMERA > Advanced > Scan Mode Item and Description

No.	Name	Function
1	CH	Display channels.
2	Scan Mode	Automatically detects the camera input type or fixes the input video format to the selected type (Auto, AHD, TVI).
3	Copy Scan Mode	Copies the currently set scan mode settings to other channels.

Advanced > Advanced

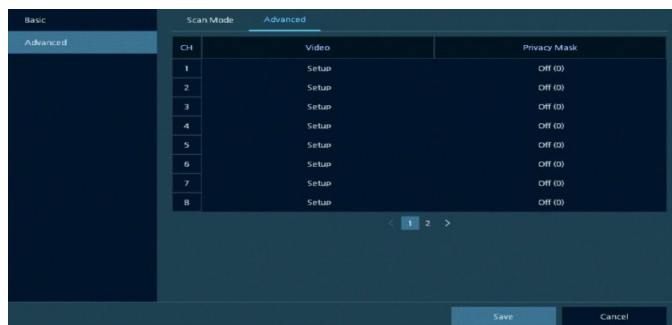


Figure 4-17 CAMERA > Advanced > Advanced

Table 4-16 CAMERA > Advanced > Advanced Item and Description

No.	Name	Function
1	CH	Display channels.
2	Video	Set brightness, contrast, and color of the camera.
3	Privacy Mask	The Privacy Mask function allows users to set up to four (4) privacy masks to each individual channel..

To set a privacy mask:

- 1 Press the **New Mask** button. **Mask Zone** is automatically set as **Mask1**.

Drag the area you want on the screen with a mouse. Click the Edit Icon (✎) in the right corner, to see additional setting options.

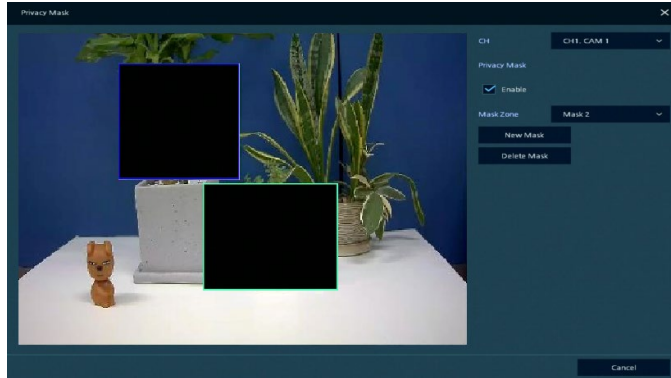


Figure 4-18 CAMERA > Advanced > Privacy Mask

Table 4-17 CAMERA > Advanced > Privacy Mask Item and Description

No.	Name	Function
1	CH	Select the channel to set the privacy mask.
2	Privacy Mask	Select/deselect to use the privacy mask.
3	New Mask	Create a new privacy mask.
4	Delete Mask	Delete the selected privacy mask.

- To adjust the privacy mask: Select Mask No. in **Mask Zone** and drag the area you want on the screen with a mouse.
- To delete the privacy mask: Select Mask No. in **Mask Zone** and click **Delete Mask**.

- 2 Press the **Apply** button to save all changes.

4.4 DEVICE

4.4.1 Display

Display > Display

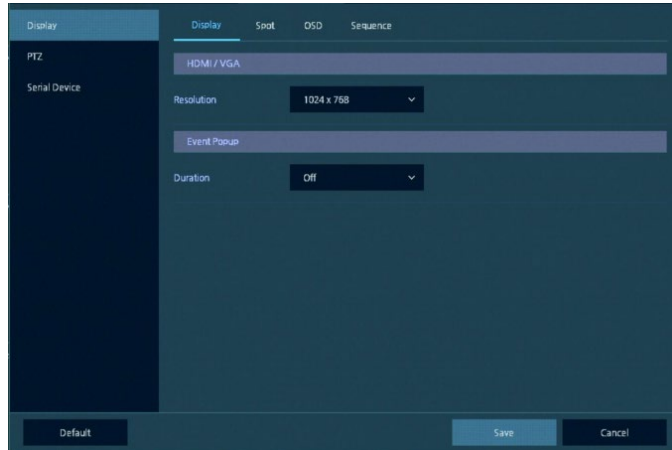


Figure 4-19 DEVICE > Display > Display

Table 4-18 DEVICE > Display > Display Item and Description

No.	Name	Function
1	True HD/VGA	Select the local display resolution (1024x768, 1280x720, 1920x1080, 3840x2160).
2	Event Popup	Set the duration of the event popup window.
3	Monitor Relay Switch	Send an alarm out when the screen layout changes.

Display > Spot

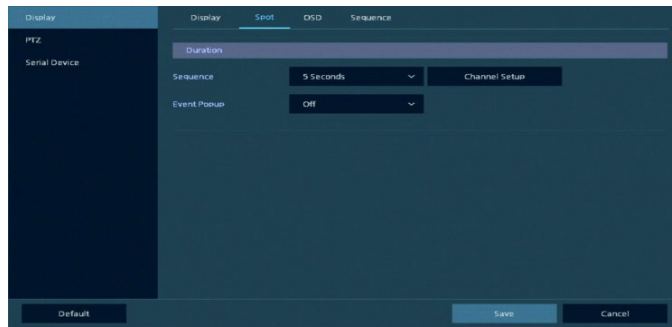


Figure 4-20 DEVICE > Display > Spot

Table 4-19 DEVICE > Display > Spot Item and Description

No.	Name	Function
1	Sequence	Set the channels and dwell time (5, 10, 20, 30sec).
2	Event Popup	Sets the hold time for the full-screen view when an event occurs (Off, 5, 10, 20, 30sec, Continuous). If multiple channels have events at the same time, the event channel is shown as a split-screen.

Display > OSD

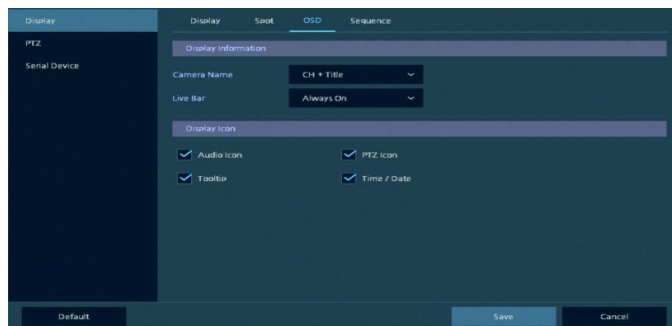


Figure 4-21 DEVICE > Display > OSD

Table 4-20 DEVICE > Display > OSD Item and Description

No.	Name	Function
1	Camera Name	Set the camera name display settings on the live screen (Off, CH+Title, CH).
2	Live Bar	Set the way to display the live bar (Always On, Auto Hide).
3	Display Icon	Select/deselect icons to display on the live screen.

Display > Sequence

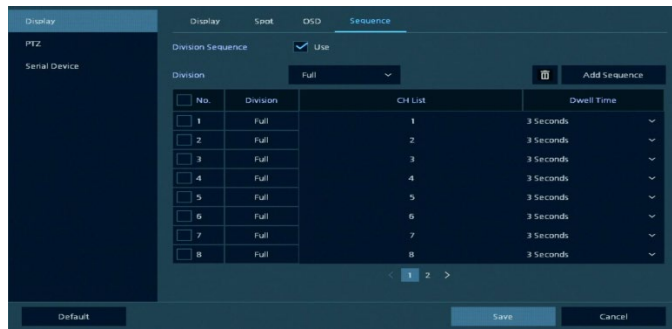




Figure 4-22 DEVICE > Display > Sequence

Table 4-21 DEVICE > Display > Sequence Item and Description

No.	Name	Function
1	Quad Sequence	Set the view to sequence between quad view modes.
2	Division	Set the screen partition mode to Full or Quad.
3	Sequence List	Display the sequence list based on the division selected.
4	Add Sequence	Add items to the play sequence.
5	NO	Automatically show screens in the numbered order.
6	Division	Select the display options from full, 2X2 (Quad).
7	CH LIST	Adjust the order of display for all the channels. For example, if CH3 is set as No. 1 on the channel list, CH3 will be shown first.
8	Dwell Time	Set the remaining time to automatic (3 sec~30 sec).
9	Default	Revert settings back to their default values.
10		Revise the list.
11		Delete the list.

Clicking **Add Sequence** displays **Add Sequence** screen.

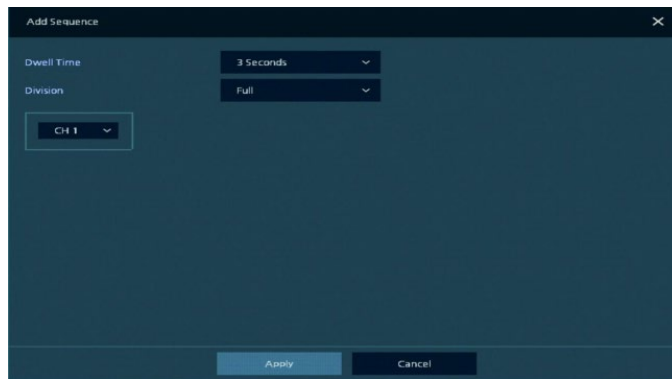


Figure 4-23 DEVICE > Display > Sequence > Add Sequence

Table 4-22 DEVICE > Display > Sequence > Add Sequence Item and Description

No.	Name	Function
1	Dwell Time	Set the play duration for each view (3 sec, 5 sec, 10 sec, 15 sec, and 30 sec).
2	Division	Set the partition screen (Full, Quad).
3	Channel Selection	Select the channels to play.

4.4.2 PTZ > PTZ

Use the PTZ menu page to adjust the settings on a PTZ-enabled camera.

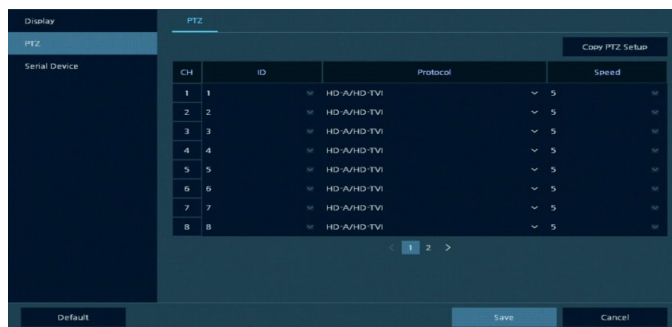


Figure 4-24 DEVICE > PTZ > PTZ

Table 4-23 DEVICE > PTZ > PTZ Item and Description

No.	Name	Function
1	Copy PTZ Setup	Apply settings to all or selected channels.
2	CH	Display channels.
3	ID	Select camera ID connected to relevant channels (1-255).
4	Protocol	The select protocol of the camera connected to relevant channels.
5	Speed	Select the pan-tilt of the camera connected to relevant channels (1-5).

Note ■ For more information about camera ID, protocol information, and details, see Instruction of relevant PTZ Function camera.

4.4.3 Serial Device > Serial Device

Use this menu to adjust the settings for external devices connected to the encoder via the USB port and RS485 connector.

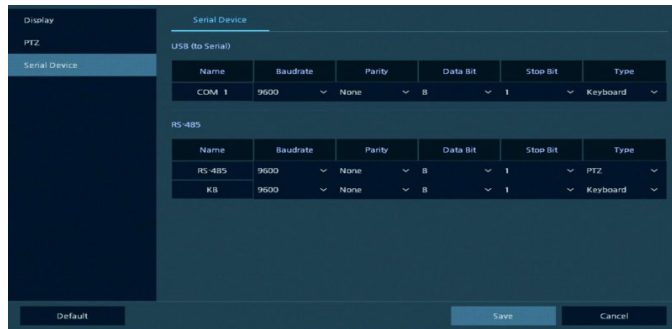


Figure 4-25 DEVICE > Serial Device > Serial Device

Table 4-24 DEVICE > Serial Device > Serial Device Item and Description

No.	Name	Function
1	USB (to Serial)	Set the communication transmission value of the USB device.
2	RS-485	Set communication transmission value of RS-485 connector.

4.5 STREAM

4.5.1 Stream

Stream > Main Stream

Set the resolution, framerate, and image quality of the Main Stream.

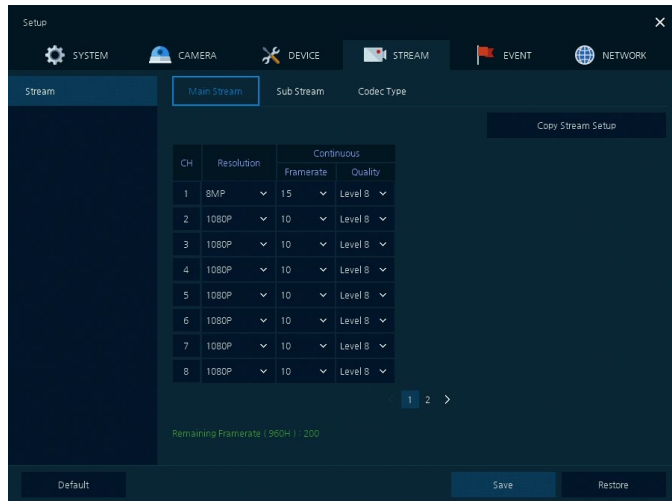


Figure 4-26 Stream > Stream > Main Stream

Table 4-25 Stream > Stream > Main Stream Item and Description

No.	Name	Function
1	CH	Display channels.
2	Resolution	Set the resolution of video clips (4K, 5MP, 4MP, 2.1MP/1080P, 720P and 960H).
3	Frame rate	Select the FPS (1-30). The total number of fps for the encoder cannot exceed 240 fps @ 4MP.
4	Quality	Quality setting ranges from 1 (low) to 8 (high).
5	Remaining Frame rate (960H)	16CH maximum framerate limit is 480fps (total) @ 2.1MP/1080p. This setting displays the remaining framerate available (should be greater than or equal to 0 frames).
6	Copy Stream Setup	Copy stream settings to other channels.

Stream > Sub Stream

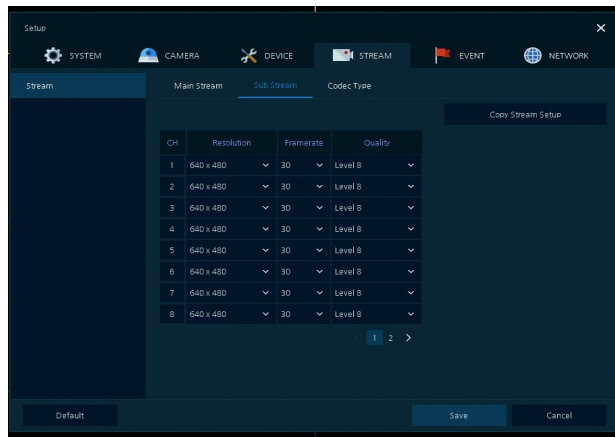


Figure 4-27 Stream > Stream > Sub Stream

Table 4-26 Stream > Stream > Sub Stream Item and Description

No.	Name	Function
1	CH	Display channels.
2	Resolution	Show camera second stream setup status.
3	Framerate	Select the FPS (1-30). The total number of fps for the encoder cannot exceed 240 fps @ 4MP.
4	Quality	Quality setting ranges from 1 (low) to 8 (high).
5	Copy Stream Setup	Copy stream settings to other channels.

Stream > Codec Type

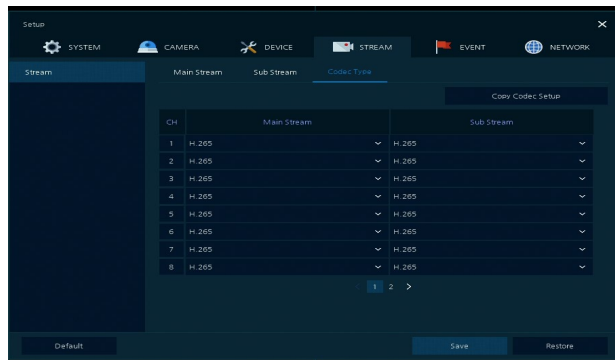


Figure 4-28 Stream > Stream > Codec Type

Table 4-27 Stream > Stream > Codec Type Item and Description

No.	Name	Function
1	CH	Display channels.
2	Main Stream	Show camera mainstream codec type.
3	Sub Stream	Show camera sub-stream codec type.
4	Copy Codec Setup	Copy codec settings to other channels.

4.6 EVENT

4.6.1 System

System > System

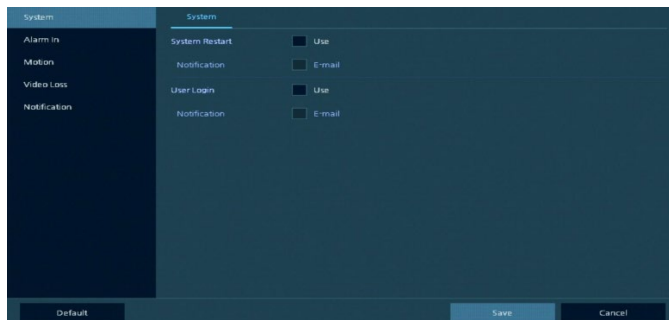


Figure 4-29 Event > System > System

Table 4-28 Event > System > System Item and Description

No.	Name	Function
1	System Restart	Select/deselect to list system restart as an event.
2	Notification	Select/deselect whether to list notifications as an event.
3	User Login	Select/deselect whether to list user-login as an event.

4.6.2 Alarm In

Alarm In > Setup

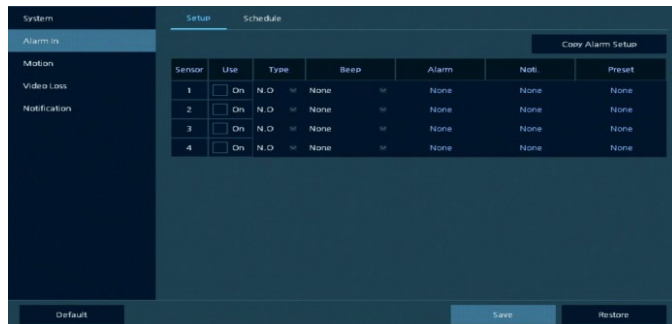


Figure 4-30 Event > Alarm In > Setup

Table 4-29 Event > Alarm In > Setup Item and Description

No.	Name	Function
1	Sensor	Display sensor numbers.
2	Use	Select/deselect whether to use the alarm in the sensor.
3	Type	Select sensor types (N.O, N.C).
4	Beep	Select the buzzer duration (null, 5 sec, 10 sec, 20 sec, 30 sec, 1 min, 10 min, 30 min, and 1 hour).
5	Alarm	Set an alarm output.
6	Noti.	Set an email notification.
7	Preset	Activate a PTZ camera's preset.
8	Copy Alarm Setup	Copy alarm settings to other channels.

To edit an alarm, press the edit icon (✎) next to the **Alarm, Group Rec, Noti., Preset**.

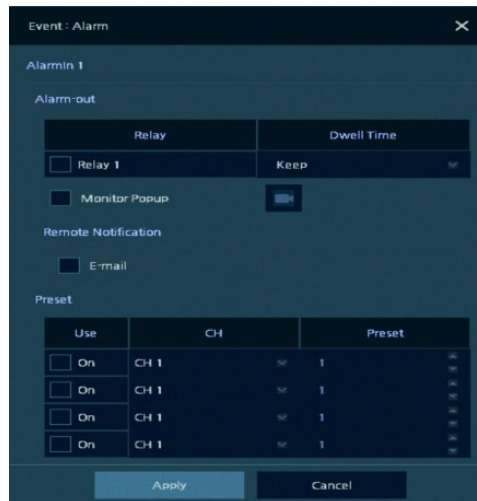



Figure 4-31 Event > Alarm In > Setup > Event : Alarm

Table 4-30 Event > Alarm In > Setup > Event : Alarm Item and Description

No.	Name	Function
1	Alarm-out	Set the alarm. <ul style="list-style-type: none"> ▪ Relay: Select/clear the Relay output checkbox. ▪ Dwell Time: Select alarm duration (Keep, 5 sec, 10 sec, 20 sec, 30 sec, 1 min, 10 min, 30 min, and 1 hour)
2	Monitor Popup	Enable/disable the Monitor Popup when an alarm occurs.
3		The popup camera channel selection screen opens.
3	Remote Notification	Select/deselect to send push notifications when the alarm occurs.
4	Preset	Activate a PTZ camera's preset when an alarm occurs. <ul style="list-style-type: none"> ▪ Use: Select/deselect whether to use preset. ▪ CH: Select channels. ▪ Preset: Set preset value.

Alarm In > Schedule

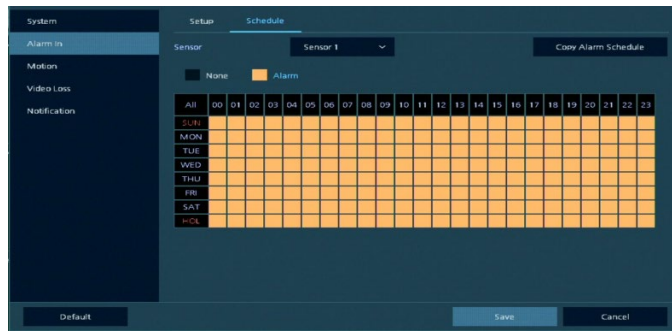


Figure 4-32 Event > Alarm In > Schedule

Table 4-31 Event > Alarm In > Schedule Item and Description

No.	Name	Function
1	Sensor	Select the sensor to set the schedule.
2	Schedule Type Selection	Select the types of schedules.
3	Schedule Table	Display the schedule users set.
4	Drag Field	Display the area dragged with a mouse.
5	Copy to Alarm Schedule Button	Copy the schedule to other sensors.

4.6.3 Motion

Motion > Setup

Set the motions across channels.

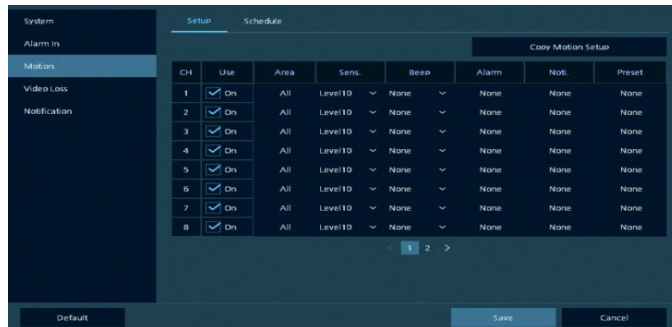


Figure 4-33 Event > Motion > Setup

Table 4-32 Event > Motion > Setup Item and Description

No.	Name	Function
1	CH	Display channels.
2	Use	Select/deselect to use motion in the channel.
3	Area	Display the motion area.
4	Sens.	Select the motion's sensitivity (Level 1-10).
5	Beep	Select the duration of the buzzer when motion is detected (null, 5 sec, 10 sec, 20 sec, 30 sec, 1 min, 10 min, 30 min, and 1 hour).
6	Alarm	Set an alarm output.
7	Noti.	Set an e-mail notification.
8	Preset	Activate a PTZ camera's preset.
9	Copy to Motion Setup	Copy the motion detection settings to other channels.

Note Placing your mouse on **Alarm**, **Noti.**, **Preset**, and clicking the editing icon (✎) will open the Event: Alarm screen. See section “4.6.2 Alarm In > Setup in Alarm In” for more information.

Motion > Schedule

Setup a schedule for when motion detection is enabled.

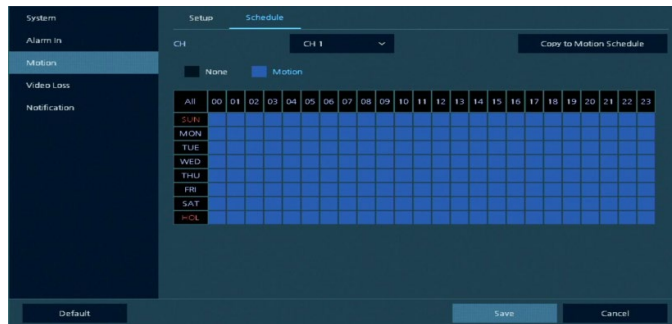


Figure 4-34 Event > Motion > Schedule

Table 4-33 Event > Motion > Schedule Item and Description

No.	Name	Function
1	CH	Select channels to set schedules.
2	Schedule Type Selection	Select the types of schedules.
3	Schedule Table	Display the schedule settings.
4	Drag Field	Click-and-drag using the mouse to select multiple hours and days across the table.
5	Copy to Motion Schedule	Copy the motion detection schedule to other channels.

4.6.4 Video Loss > Setup

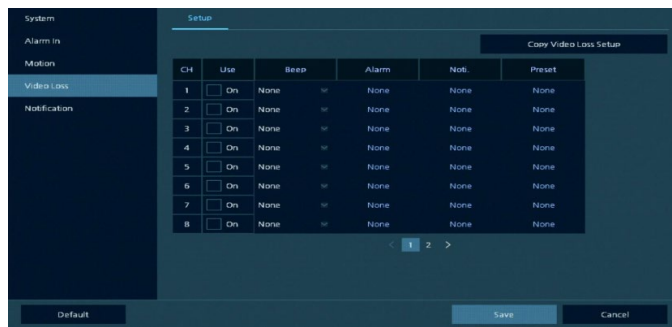


Figure 4-35 Event > Video Loss > Setup

Table 4-34 Event > Video Loss > Setup Item and Description

No.	Name	Function
1	CH	Display channels.
2	Use	Select/deselect Video Loss notification for each channel.
3	Beep	Select use duration for the buzzer (null, 5 sec, 10 sec, 20 sec, 30 sec, 1 min, 10 min, 30 min, and 1 hour).
4	Alarm	Set alarm output.
5	Noti.	Set email notices.
6	Preset	Activate a PTZ camera's preset.
7	Copy to Video Loss Setup	Copy the Video Loss settings to other channels.

Note

Placing your mouse on **Alarm**, **Noti.**, **Preset**, and clicking the editing icon (✎) in the right corner display **Event: Video Loss** screen. See section “4.6.2 Alarm In > Setup in Alarm In” for more information.

4.6.5 Notification

Notification > Periodic

The periodic notification includes information on the encoder’s status, events, and each channel.

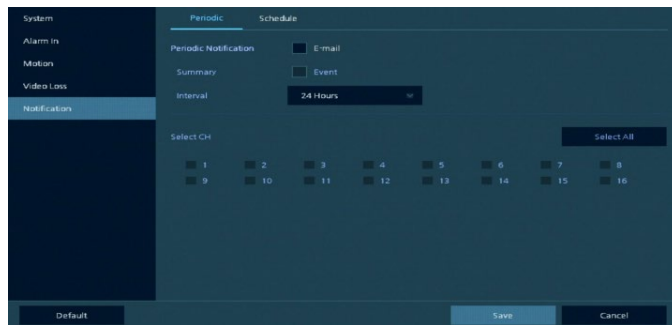


Figure 4-36 EVENT > Notification > Periodic

Table 4-35 EVENT > Notification > Periodic Item and Description

No.	Name	Function
1	Periodic Notification	Enable/disable to send the notifications to an e-mail.
2	Summary	Send event information with the periodic report.
3	Interval	Set how often to send the notification (5 min, 10 min, 30 min, and 1 hour, 2-hour, 6-hour, 8-hour, 12-hour, and 24-hour).
4	Select CH	Select channels users want.
5	Select All / Unselect All	Select/deselect all channels

Notification > Schedule

Schedule remote notification (alarm and motion).

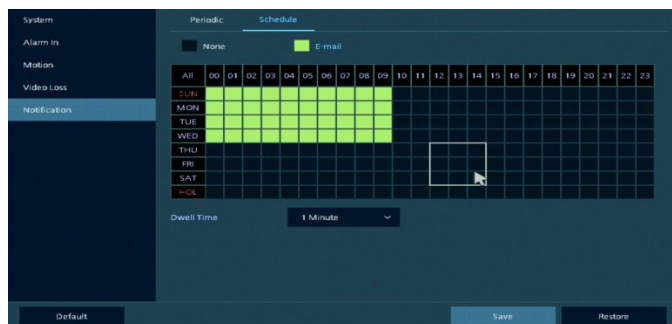


Figure 4-37 EVENT > Notification > Schedule

Table 4-36 EVENT > Notification > Schedule Item and Description

No.	Name	Function
1	Schedule Type	Select the types of schedules.
2	Schedule Table	Display the schedule.
3	Drag Field	Click-and-drag using the mouse to select multiple hours and days across the table.

4.7 NETWORK

4.7.1 Basic > WAN Port

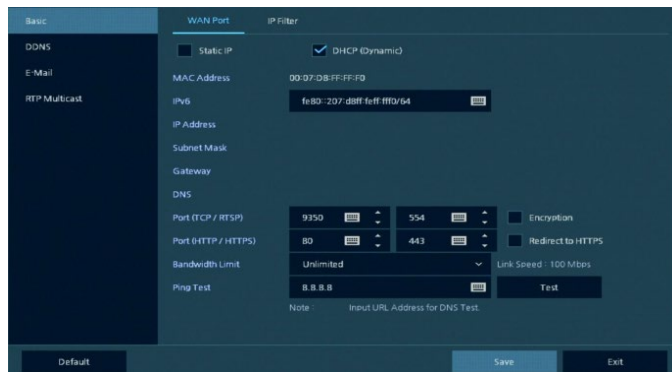


Figure 4-38 NETWORK > Basic > WAN Port

Table 4-37 NETWORK > Basic > WAN Port Item and Description

No.	Name	Function
1	Static IP	If you are using a static IP, enter the IP address, Subnet Mask, and Gateway information. Contact your Network Administrator for more information.
2	DHCP	Select to use DHCP (Dynamic). If selected, the encoder's network information will be set automatically based on the current network's settings.
3	MAC Address	Display the unit's MAC Address.
4	DNS	Enter the DNS manually or set to automatic.
5	Port (TCP)	Enter the TCP port (default 9350)
6	Port (Web)	Enter the Web port (default 80).
7	Bandwidth Limit	You can set a limit to the amount of bandwidth used by the encoder (no limits, 50Mbps, 10Mbps, 5Mbps, 2Mbps, 1Mbps, 500Kbps, 400Kbps, 300Kbps, 200Kbps, and 100Kbps).
8	Ping Test	To test your encoder's network settings, enter the unit's IP address in the Ping field.

4.7.2 Basic > IP Filter

Filter any IP addresses or ranges from accessing the encoder remotely.



Figure 4-39 NETWORK > Basic > IP Filter

Table 4-39 NETWORK > Basic > IP Filter Item and Description

No.	Name	Function
1	Mode	Select None to disable. Select Access to access the IP address range. Select Deny to restrict the IP address range.
2	Range Start	Enter the Start IP address to Access or to Deny.
3	Range End	Enter the End IP address to Access or to Deny.

4.7.3 DDNS

Set the DDNS site for remote users to access networking.

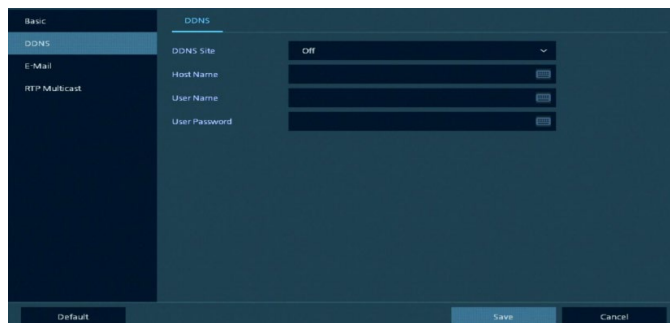


Figure 4-40 NETWORK > DDNS > DDNS

Table 4-38 NETWORK > DVRNS/DDNS > DDNS Item and Description

No.	Name	Function
1	DDNS Site	Select the DDNS site from the options in the drop-down.
2	Host Name	Enter hostname.
3	Username	Enter the username.
4	User Password	Enter the user password.

4.7.4 E-Mail

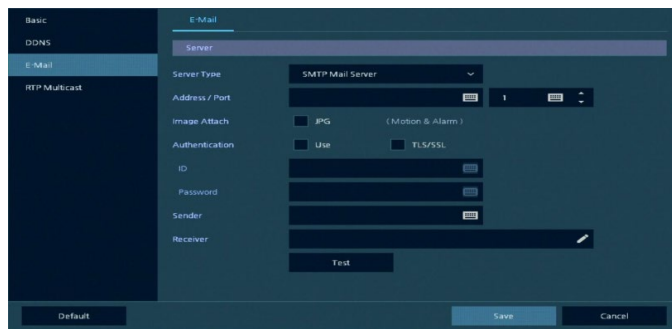


Figure 4-41 NETWORK > E-Mail > E-Mail

Table 4-39 NETWORK > E-Mail > E-Mail Item and Description

No.	Name	Function
1	Server Type	Select the SMTP server from the options in the drop-down menu.
2	Address/Port	Enter the server address and port number.
3	Image Attach	Select/deselect to attach the JPG image.
4	Authentication	Select/deselect using authentication and password.
5	ID	Enter the sending e-mail address associated with the encoder.
6	Password	Enter the e-mail password for the e-mail associated with the encoder.
7	Sender	Enter the sending e-mail address associated with the encoder.
8	Receiver	Enter the e-mail address that will be receiving the notifications.
9	Test	Verify the e-mail server is set normally.

4.7.5 RTP Multicast



Figure 4-44 NETWORK > RTP Multicast

Table 4-45 NETWORK > Notification Server > Add Message

No.	Name	Function
1	Multicast Destination IP	Enter the multicast destination IP.
2	RTP Port	Enter the RTP Port.
3	RTP TTL	Enter the RTP TTL.

5. Web Viewer

The encoder can be accessed and managed remotely from the unit's web viewer.

Table 5-1 System Requirement for Web viewer

Item	Recommended	Minimum
OS	Microsoft® Windows® 10 x86 (64bit) (Home Premium, Professional, Ultimate) Microsoft® Windows® 8 (Pro, Enterprise)	Microsoft® Windows® XP Home SP3
CPU	Intel Core™ i5-2550 3.30GHz or higher	Intel Core™ 2 Duo E7200 2.53GHz or higher
RAM	4GB or higher	2GB or higher
VGA	ATI Radeon™ HD 3650 or NVIDIA Ge-Force 8400GS or higher (1280x1024, 32bpp or Higher), multi-monitor	ATI Radeon™ HD 2400 or NVIDIA Ge-Force FX5500 or higher (1024x768, 24bpp or higher)
HDD	Over 6GB	Over 1GB
LAN	Gigabit Ethernet	10/100 Mbps Ethernet

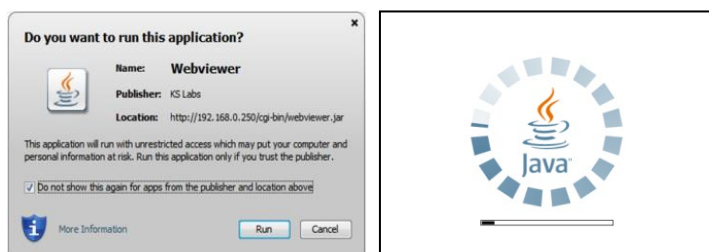
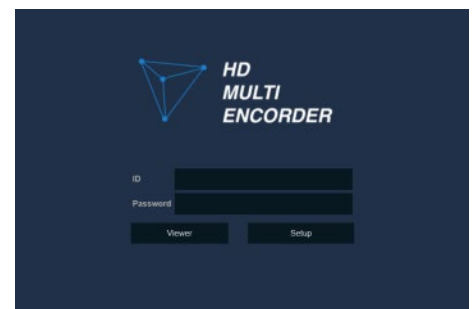
1 Enter the encoder's IP address and web port into your browser (ex. http://<IP Address>:<Web Port>)

2 Enter the encoder's username and password. Please note that based on the user's permissions, not all functions will be available on the web viewer.

- Viewer: View live footage from the encoder
- Setup: Enter the encoder's setup menu. If selected, the encoder's the local setup menu will be available.

3 If you are viewing video from the encoder for the first time, you will be prompted to download and install Java.

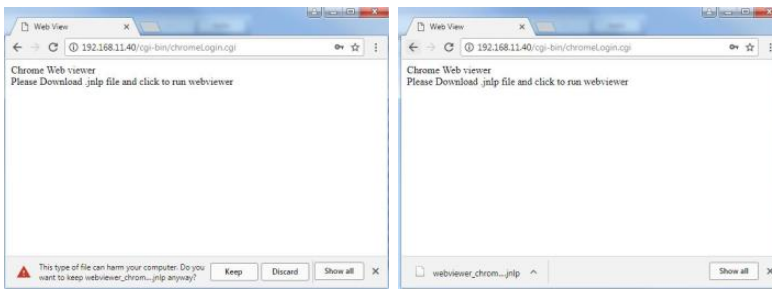
- If you are accessing the encoder using Internet Explorer:
 - a. Press the "Viewer" button.
 - b. When the Java installation wizard opens up, download and follow the instructions to install Java on your computer.



c. Once the installation is complete, you will be able to view live images from your encoder.

- If you are accessing the encoder using Google Chrome:
 - a. Press the "Viewer" button.

- b. The .jnlp file can be downloaded. Click the Keep button and launch the file once downloaded.



When the Java installation wizard opens up, download and follow the instructions to install Java on your computer.



- c. Once the installation is complete, you will be able to view live images from your encoder.

6. Products Specifications

VIDEO			
Video input	Signal type	HD over Coax® technology with HD-Analog, HD-TVI and CVBS analog signal up to 4K	
	CH#	16CH BNC input	
Video output	Outputs	True HD, VGA, Spot	
	Resolutions	True HD/VGA: 4K, 1920x1080, 1280x720, 1024x768 Spot: 1.0 Vp-p (75 ohm, Composite)	
Display mode (local)		True HD/VGA: 1/4/16 split, sequence Spot: 1/16 Split, sequence	
Display speed		Up to 480fps, 4K @ 240fps, 5MP @ 320fps	
Compression		H.265, H.264	
Framerate and resolution		Main Stream: 4K @ 112fps, 5MP @ 192fps, 4MP @ 240fps, 2.1MP/1080p @ 480fps Sub Stream: VGA @ 480fps	
PERFORMANCE			
Interface	Audio input and output	4 RCA input / 1 RCA output, 1 HD output	
	Alarm input	4 input (via terminal block)	
	Alarm output	1 output (via terminal block)	
	Serial (RS485, USB, UTC)		2x RS485, 3x USB, UTC
			PTZ control via Coax (HD-Analog / HD-TVI)
Features	Motion detection	Yes	
	Privacy masks	Yes	
	Alarm management	Locally and via DW Spectrum® IPVMS. NC/NO alarm management	
	Notifications	E-mail notifications	
	Security	HTTPS, SSL	
NETWORK			
Network connection		1 RJ45 10/100/1000 Base-T	
Streaming	Transmission speed live	4K @ 112fps, 5MP @ 192fps	

	Max. throughput	288Mbps
	Bandwidth	Support for bandwidth control
	Protocols	TCP/IP, UDP, IPv4/v6, HTTP, HTTPS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf
Access	Web viewer	Internet Explorer® 11 or higher
	software	DW Spectrum® IPVMS
GENERAL		
Operating temperature		32°F ~ 104°F (0°C ~ 40°C)
Operating humidity		Less than 90% (non-condensing)
Other certifications		FCC
Electrical	Power requirement	12V DC, 2A
	Power consumption	Max. 15.6W
Dimensions		14.76" x 1.76" x 12.52" (375 x 44.9 x 318.2 mm)
Weight		5.5 lbs (2.5 kg)

※ Specifications are subject to change without notice.

7. Warranty Information

Digital Watchdog (referred to as “the Warrantor”) warrants the Camera against defects in materials or workmanship as follows:

Labor: For the initial five (5) years from the date of the original purchase if the product is determined to be defective, the Warrantor will repair or replace the unit with the new or refurbished product at its option, at no charge.

Parts: Also, the Warrantor will supply replacement parts for the initial two (2) years.

To obtain warranty or out of warranty service, please contact technical support representative at:

1+ (866) 446-3595, Monday through Friday from 9:00 AM to 8:00 PM EST.

A purchase receipt or other proof of the date of the original purchase is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damages which occurs in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, setup adjustments, improper antenna, inadequate signal pickup, maladjustments of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.

8. Limits and Exclusions

There are no express warranties except as listed above. The Warrantor will not be liable for incidental or consequential damages (including without limitation, damage to recording media) resulting from the use of these products, or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for a particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights from vary from state to state.

If the problem is not handled to your satisfaction, then write to the following address:

Digital Watchdog, Inc.
ATTN: RMA Department
16220 Bloomfield Ave
Cerritos, CA 90703

Service calls that do not involve defective materials or workmanship as determined by the Warrantor, in its sole discretion, are not covered. The cost of such service calls is the responsibility of the purchaser.



Complete Surveillance Solutions

DW® East Coast office and warehouse: 5436 W Crenshaw St, Tampa, FL USA 33634
DW® West Coast office and warehouse: 16220 Bloomfield Ave, Cerritos, CA USA 90703

PH: 866-446-3595 | FAX: 813-888-9262

www.Digital-Watchdog.com

technicalsupport@dwcc.tv

Technical Support PH:

USA & Canada 1+ 866-446-3595

International 1+ 813-888-9555

French Canadian: + 1-904-999-1309

Technical Support hours: Monday-Friday 9 a.m. to 8 p.m. Eastern Time