User's Guide (Ver. 1.0)

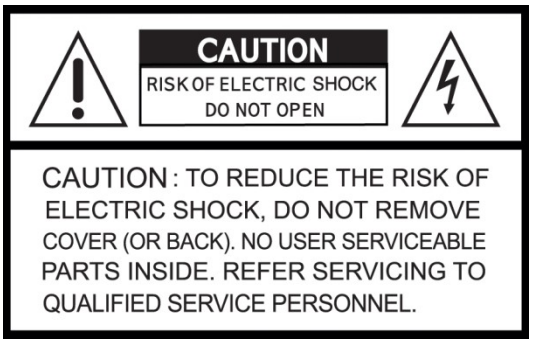
Models: D8HU/D16HU

8/16 Channel Higher MP HD-TVI & IP Full Hybrid DVR

About This User's Guide

Before operating the unit, please read this user's guide thoroughly and retain it for future reference.

Cautions



Explanation of Graphical Symbols

This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

This symbol indicates the presence of “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock, property damage, personal injury, or death.

WARNING

To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

CAUTION

Changes or modifications not approved by the manufacture will void the warranty of the product.
Using an incompatible battery may increase the risk of fire or explosion.
Replace only with the same or equivalent type battery recommended by the manufacture.
Discard used batteries according to manufacturer’s instructions.

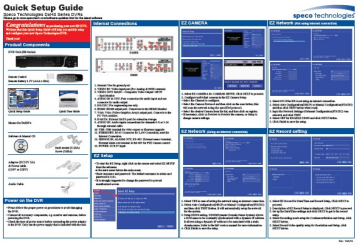
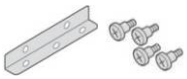
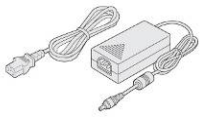
These precautions MUST be followed for safety reasons

Warning

- Do not use if the unit emits smoke.
- Do not disassemble the unit.
- Do not place any heavy or sharp objects on the unit.
- Do not place on uneven surface.
- Do not expose to shock or vibration.
- Do not move the unit when the unit is powered on.
- Do not block, and allow dust to accumulate in the air vents.
- Do not restrict airflow of the unit; doing so can damage the unit.
- Only qualified and experienced personnel should perform installation and servicing.
- Turn off the power of the HU when connecting Cameras, Audio or Sensor Cables.
- The manufacturer is not responsible for any damage caused by improper use of the product or failure to follow instructions for the product.
- The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the HU for examination or attempting to repair the unit.

Product Components

Please make sure the following components are included as specified below.

DVR Unit Desktop: D8HU / D16HU	
Remote Control	
Battery 1.5V (AAA x2)	
Quick Setup Guide	
Quick User Guide	
USB Mouse	
Software & Manual CD	
Rack mount (x 2) & Screw (x 6)	
Adaptor (DC12V 5A or DC12V 6.67A) & AC Power cable (110V or 220V)	
Audio Cable (for D16HU)	

Specifications

MODEL NAME				D8HU	D16HU
Operational Mode (HD-TVI, Analog, IP)				Flexible for all channels	
Video	Input	HD-TVI		Up to 8	Up to 16
		Analog		Up to 8	Up to 16
		IP Camera Highest Resolution		Max. 3840x2160 (8MP)	Max. 3840x2160 (8MP)
	Output	Main Monitor		VGA(Max. 1920x1080) and HDMI (Max. 3840x2160)	
		Sub Monitor		CVBS or SPOT	
		HD-TVI, Analog Loop Output		8	16
Audio	Input	Local Input		8	16
		Remote Input from IP Camera		8	16
	Output	Local Output (RCA)		1	1
	Audio Codec			G.711	
I/O	Sensor In	Local Input (Terminal Block)		8	16
		Remote Input from IP Camera		8	16
	Alarm Output			2	4
Serial	RS-232C			None	
	RS-485			1	
Recording	Compression			H.264	
	Local Resolution & Frame Rate		3840x2160	80fps	112fps(Ch1~8), 160fps@QHD (Ch9~16)
			2560x1440	160fps	400fps
			1920x1080	240fps	480fps
			1920x540	240fps	480fps
			1280x720	240fps	480fps
			640x360	240fps	480fps
			960H	240fps	480fps
	IP Resolution & Frame Rate		3840x2160	240fps	480fps
	Recording Quality Grade			5 Levels	
	Recording Mode			Continuous / Motion / Sensor / Schedule / Manual/Continuous + Sensor/ Continuous + Motion	
	Pre Recording			Max. 20 Minutes	
	Post Recording			Max. 60 Seconds	
Playback	Search			EZ Search, Smart, Date/Time, Event, Archive, Log	
	Multi-Decoding			1, 4, 8	1, 4, 9, 16

	Playback Speed		x0.25, x0.5, x2, x4, x8, x16, x32, x64	
Backup	Media		USB drive, External HDD, Network	
	File Format		BMP, AVI, Proprietary Format	
	Huge Backup		Yes (Max. 24 hours)	
Storage	HDD	Capacity of 1 HDD	8TB	
		Internal HDDs	4	
		e-SATA	1	
	USB	Front	2	
		Rear	1	
User I/F	Input Method		Front Buttons, IR, Mouse, Keyboard Controller	
Network	Private (IP Camera, Auto Connection)		10/100/1000 Base-TX	
	LAN (IP Camera or Remote Access)		10/100/1000 Base-TX	
	Dynamic DNS		Yes (Free Speco DDNS)	
	Dual Encoding for Network		Yes	
Features	Digital Zoom		Yes	
	DLS (Day Light Saving)		Yes	
	NTP (Network Time Protocol)		Yes	
	S.M.A.R.T		Yes	
	EZNetwork / EZRecord / EZSearch / EZCopy / EZCamera		Yes	
	Internal Beep		Yes	
	e-mail Notification		Yes	
	Cloud Archiving		Yes	
	Twitter Mass Alert		Yes	
	HTTPS		Yes	
Network Access	Mobile Viewer		Speco Player (Live, Search, PTZ, 2-Way Audio)	
	PC Web Viewer		Windows (IE, Chrome, Firefox, Safari)	
	PC Client		SecureGuard CMS and SpecoTech Multi-Client Viewer	
	Remote Setup and Upgrade		Yes	
	Streaming	Analog Channel	640x360@30fps/channel, 320x180@30fps/channel	
		IP Channel	Relay of the IP Camera's Sub-stream	
Power	Power Supply Voltage		12V 5A	12V 6.67A
Temperature	Operation		41° F ~ 104° F (5°C ~ 40°C)	
	Storage		14° F ~ 122° F (-10°C ~ 50°C)	
Humidity	Operation		20% ~ 80% (Non-condensing)	
Weight	Unit Weight (Gross weight)		Approximately 12 lbs.	
Dimension	Unit Dimension (W x H x D)		15"(W) x 2.83"(H) x 13.4"(D)	

Please note that specifications and unit exterior designs are subject to change without notification.

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1. Main Features

- Easy Record, Copy and Setup
- Easy Search by Thumbnail Preview
- Easy Network
- Easy IP Camera Setup
- Recording Rate: D16HU: 400fps @ QHD, D8HU: 160fps @ QHD
- Digital Deterrent, audio message output upon event
- H.264 High Profile compression saves HDD space
- Simultaneous live view/playback while continuing to record/network transfer or backup
- Remote monitoring/recording/playback/configuration and control via internet
- Audio Recording: D16HU:16 Channels, D8HU:8 Channels
- Switch between low and high quality stream during simultaneous Continuous + Motion or Continuous + Sensor recording modes for storage optimization

NOTE: Under federal law, The Fourth Amendment to the U.S. Constitution, Title III of the Omnibus Crime Control and Safe Streets Act of 1968, as amended by the Electronic Communications Privacy Act of 1986 (18 U.S.C. § 2510, *et seq.*), and the Foreign Intelligence Surveillance Act of 1978 (50 U.S.C. 1801, *et seq.*) permit government agents, acting with the consent of a party to a communication, to engage in warrantless interceptions of telephone communications, as well as oral and electronic communications.

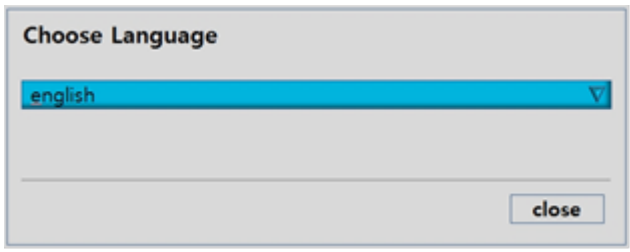
- Automatic camera detection (Plug & Play)
- Covert camera operation provides enhanced security and administrator control
- Dynamically programmable recording priority, motion detection, alarms and scheduling
- Simple and Easy Graphic User Interface
- Simple Schedule Recording
- HDMI Output
- VGA Output
- LOOP Out
- Password to secure installation authorization
- Network software supports 10/100/1000Base-T
- USB 2.0 port for video clip exporting and easy firmware upgrade via USB Flash Drive
- Exclusive File Format Backup and Player
- Variety of Ways Network Access via SecureGuard® CMS, SpecoTech Multi-Client Software , Web-Viewer, and Mobile Viewer
- S.M.A.R.T. **(S**elf-**M**onitoring, **A**nalysis, and **R**eporting **T**echnology for HDD)

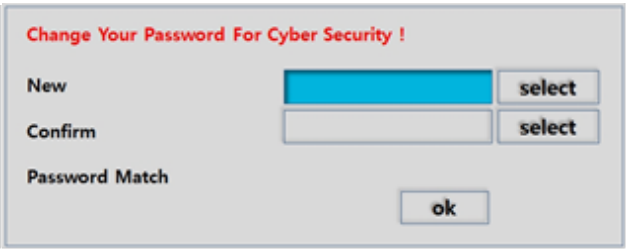
2. Initial Boot-up Process

2-1. Initial Boot up and Basic Time Setup

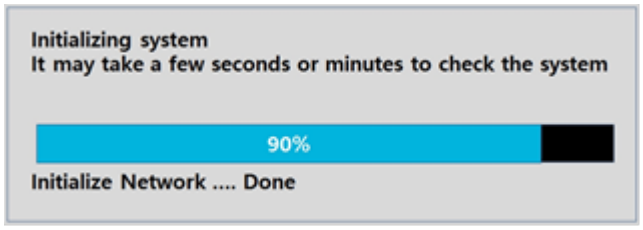
1. During the first boot up, the following logo will be displayed.

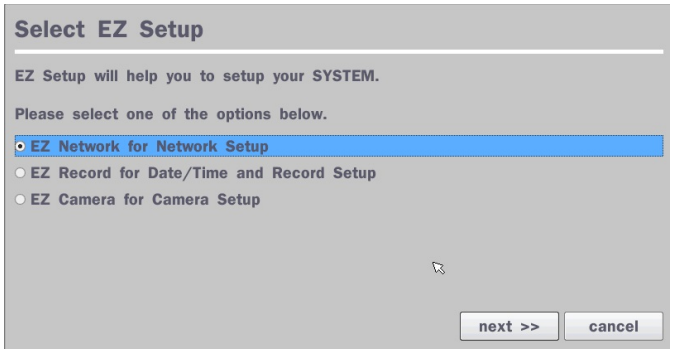
2. After the logo, select the language and set date and time as specified below.





1) User has to set a password before using.
   Can not use '1111' when the initial boot up password set.
   But user can set '1111' as a password through [Setup > User Management > Password Setup]
2) DVR will not proceed when user put the password '1111'.



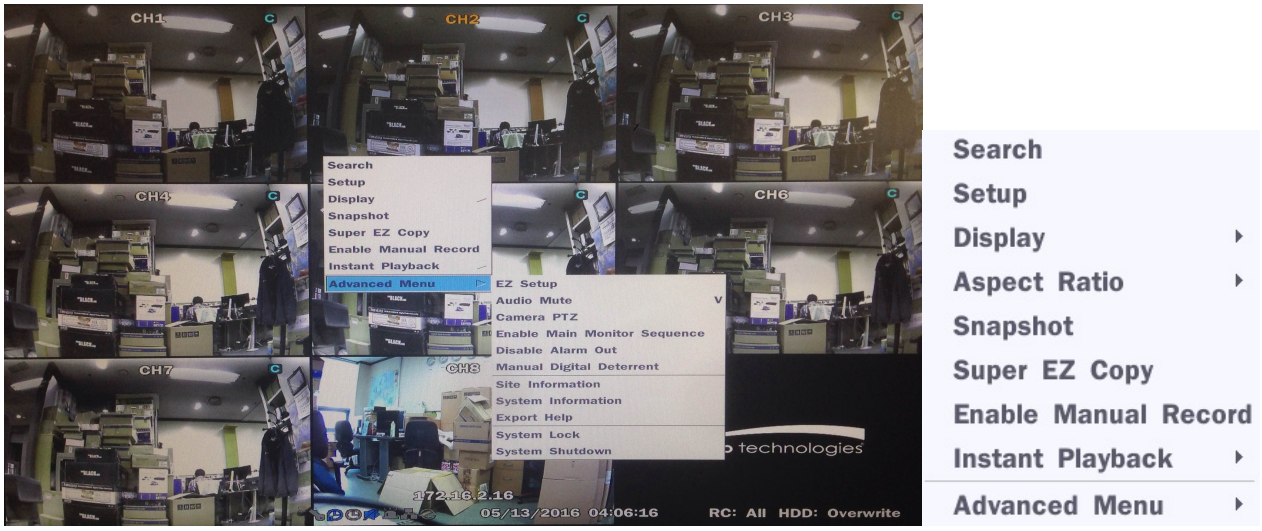


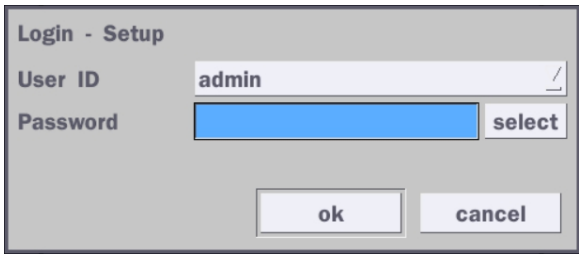
(EZ Setup Page Reference / **Page: 15 ~ 17**)

2-2. Setting up Daylight Savings Time

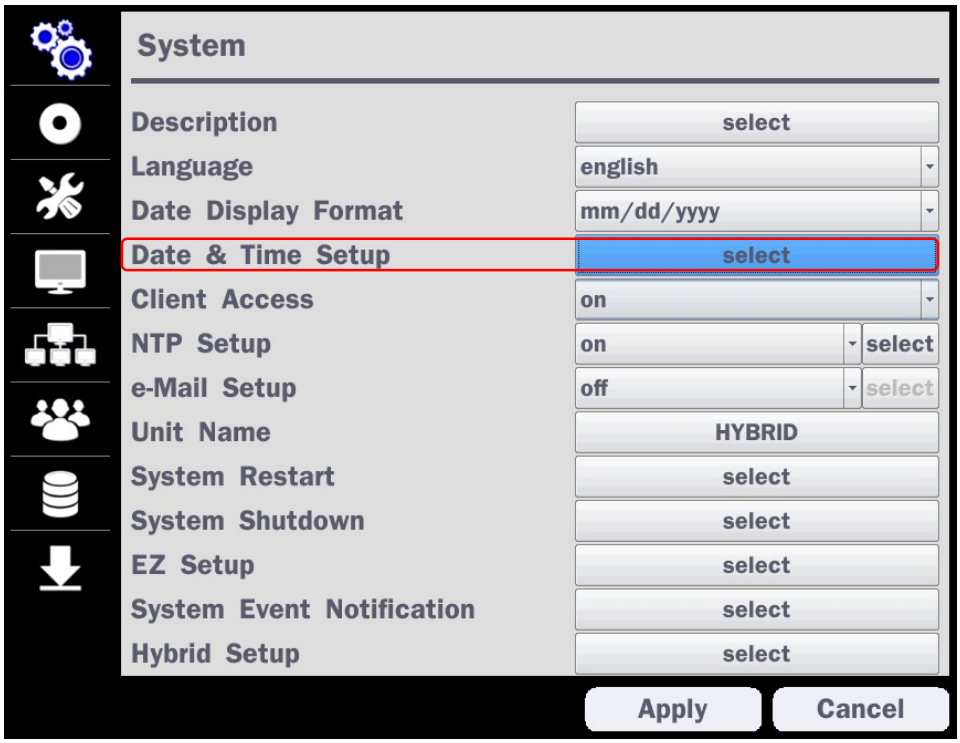
To enable Daylight Saving feature/NTP synchronization, take the following steps.

1. Enter the Setup mode. The default Username is “admin” and enter a password set on the initial boot-up process.

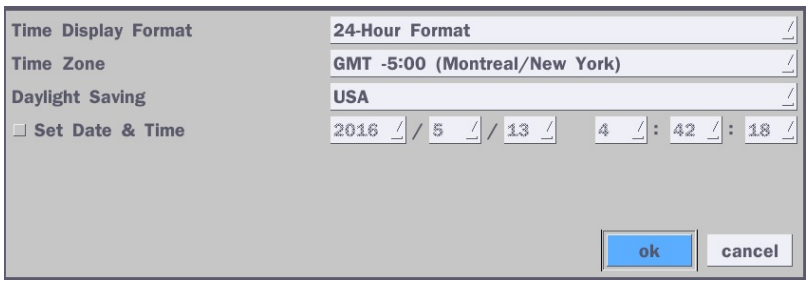




2. Go to SETUP > SYSTEM > DATE & TIME SETUP

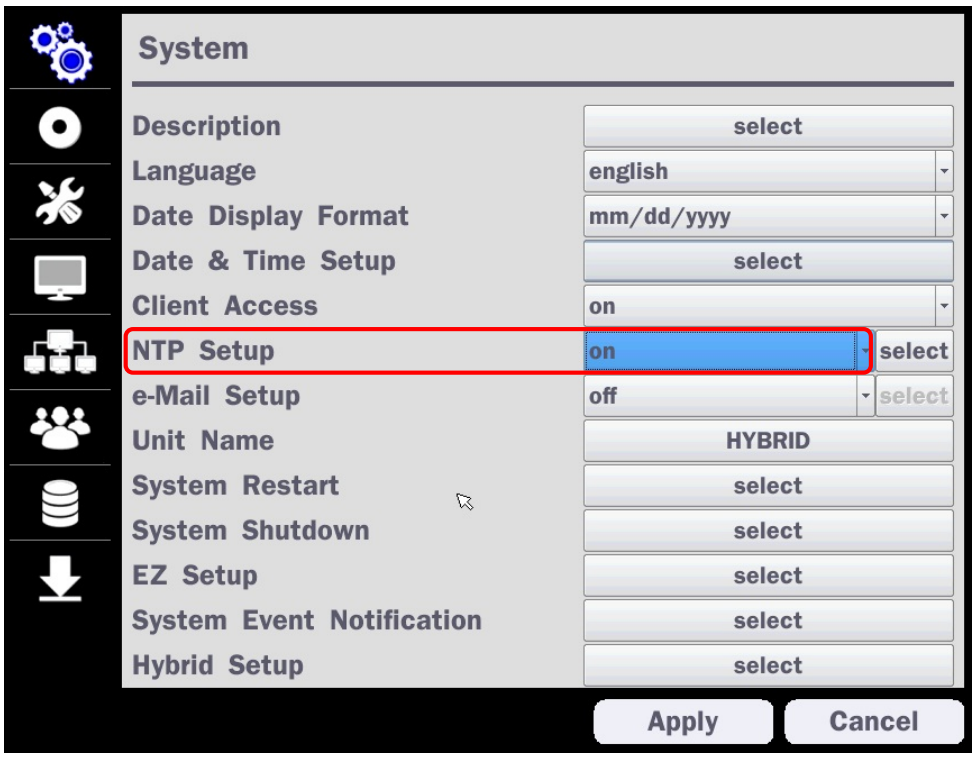


3. Select ON from the DAYLIGHT SAVING dropdown menu.



2-3. Setting NTP (Network Time Protocol)

1. SETUP > SYSTEM > NTP SETUP > ON



2. Select the proper TIME ZONE time.

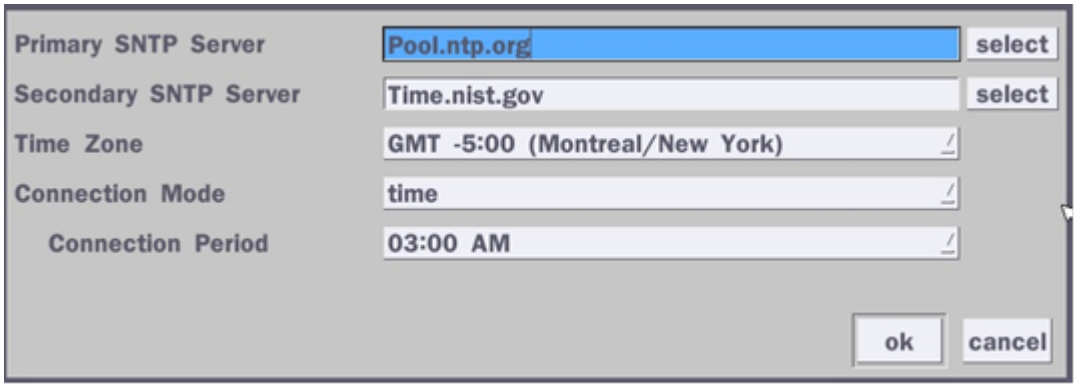


Table2.3.1. GMT Time Zone

	State	Standard Time	Daylight-Saving Time
AL	Alabama	GMT-6	GMT-5
AK	Alaska	GMT-9	GMT-8
AK	Alaska (Aleutian Islands)	GMT-10	NA
AZ	Arizona	GMT-7	NA
AZ	Arizona (Navajo)	GMT-7	GMT-6
AR	Arkansas	GMT-6	GMT-5
CA	California	GMT-8	GMT-7
CO	Colorado	GMT-7	GMT-6
CT	Connecticut	GMT-5	GMT-4
DC	District of Columbia	GMT-5	GMT-4
DE	Delaware	GMT-5	GMT-4
FL	Florida	GMT-5	GMT-4
FL	Florida (W)	GMT-6	GMT-5
GA	Georgia	GMT-5	GMT-4
HI	Hawaii	GMT-10	NA
ID	Idaho (N)	GMT-8	GMT-7
ID	Idaho (S)	GMT-7	GMT-6
IL	Illinois	GMT-6	GMT-5
IN	Indiana	GMT-5	GMT-4
IN	Indiana (SW / NW)	GMT-6	GMT-5
IA	Iowa	GMT-6	GMT-5
KS	Kansas	GMT-6	GMT-5
KS	Kansas (W)	GMT-7	GMT-6
KY	Kentucky (E)	GMT-5	GMT-4
KY	Kentucky (W)	GMT-6	GMT-5
LA	Louisiana	GMT-6	GMT-5
ME	Maine	GMT-5	GMT-4
MD	Maryland	GMT-5	GMT-4
MA	Massachusetts	GMT-5	GMT-4
MI	Michigan	GMT-5	GMT-4
MI	Michigan (W)	GMT-6	GMT-5
MN	Minnesota	GMT-6	GMT-5
MS	Mississippi	GMT-6	GMT-5
MO	Missouri	GMT-6	GMT-5
MT	Montana	GMT-7	GMT-6
NE	Nebraska	GMT-6	GMT-5
NE	Nebraska (W)	GMT-7	GMT-6
NV	Nevada	GMT-8	GMT-7

NH	New Hampshire	GMT-5	GMT-4
NJ	New Jersey	GMT-5	GMT-4
NM	New Mexico	GMT-7	GMT-6
NY	New York	GMT-5	GMT-4
NC	North Carolina	GMT-5	GMT-4
ND	North Dakota	GMT-6	GMT-5
ND	North Dakota (W)	GMT-7	GMT-6
OH	Ohio	GMT-5	GMT-4
OK	Oklahoma	GMT-6	GMT-5
OR	Oregon	GMT-8	GMT-7
OR	Oregon (E)	GMT-7	GMT-6
PA	Pennsylvania	GMT-5	GMT-4
RI	Rhode Island	GMT-5	GMT-4
SC	South Carolina	GMT-5	GMT-4
SD	South Dakota (E)	GMT-6	GMT-5
SD	South Dakota (W)	GMT-7	GMT-6
TN	Tennessee (E)	GMT-5	GMT-4
TN	Tennessee (W)	GMT-6	GMT-5
TX	Texas	GMT-6	GMT-5
TX	Texas (W)	GMT-7	GMT-6
UT	Utah	GMT-7	GMT-6
VT	Vermont	GMT-5	GMT-4
VA	Virginia	GMT-5	GMT-4
WA	Washington	GMT-8	GMT-7
WV	West Virginia	GMT-5	GMT-4
WI	Wisconsin	GMT-6	GMT-5
WY	Wyoming	GMT-7	GMT-6

NOTE: If you want the unit to automatically synchronize the local time, the Time Zone must be properly set according to your local time zone.

2-4. EZ Setup

Quick installation Menu for HU and IP Camera Easy installation(Right-Click on the Main Screen)

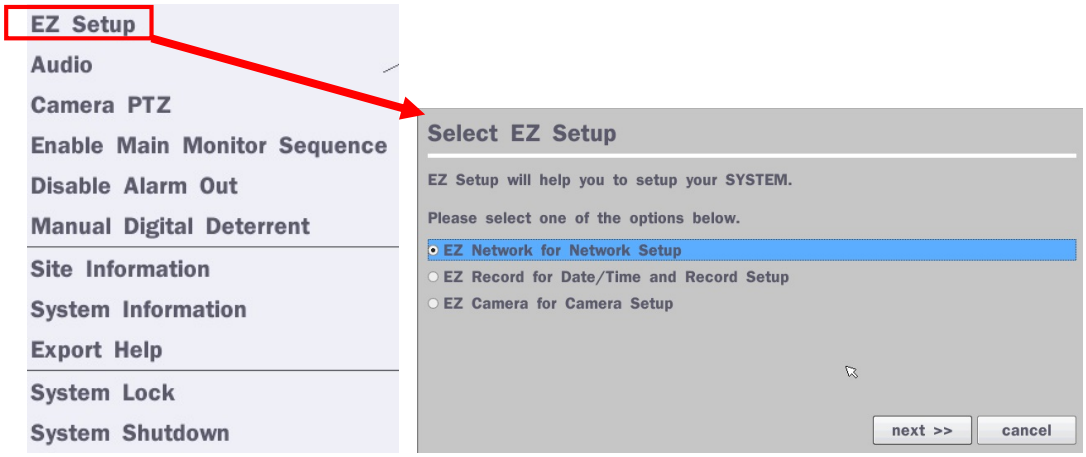
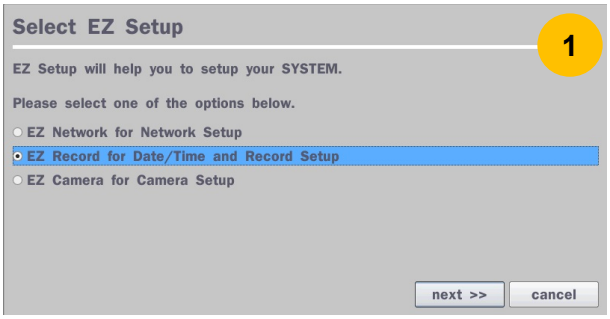
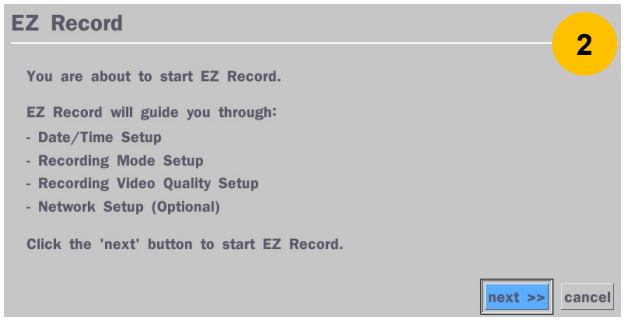
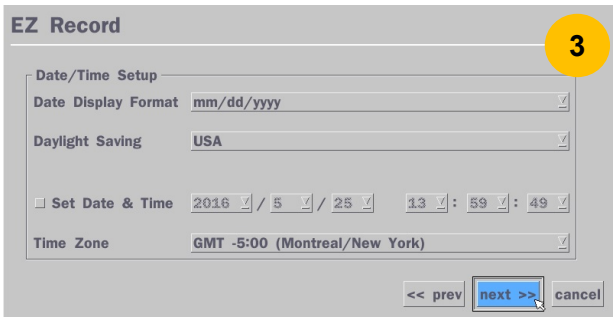


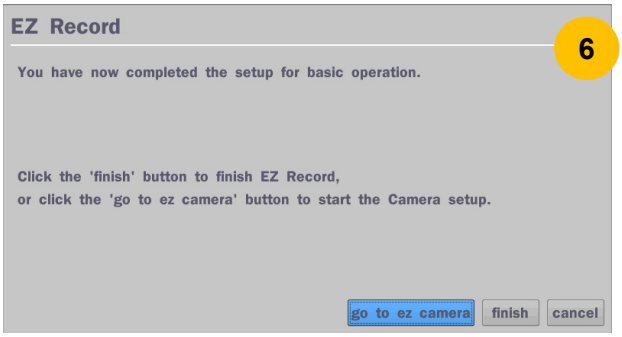
Figure 2.4. EZ Setup Screen

2.4.1. Setup EZ Record, Date & Time, and IP Camera configurations.









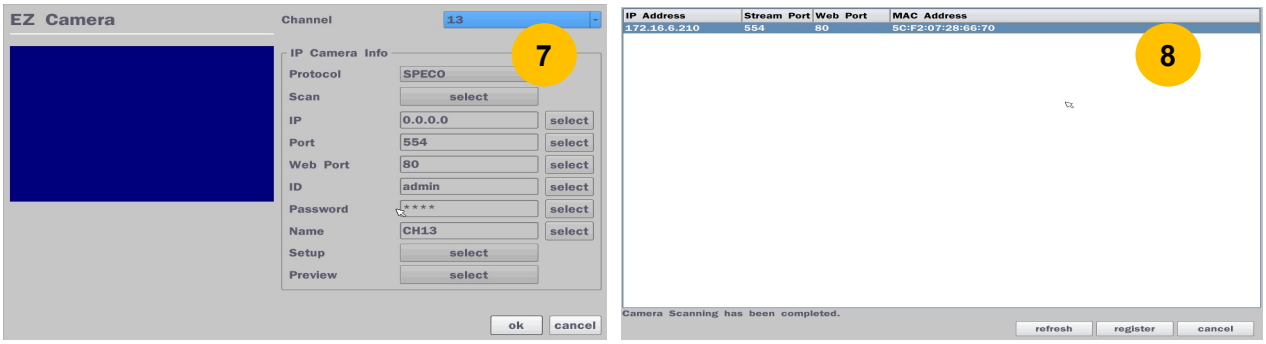


Figure 2.4.1. EZ Record Setup Procedure

① Select EZ Record for Date/Time and Recording Setup, and click “next” to proceed.

② When the description of EZ Record Setup is displayed, click “next” to proceed.

③ Set up the Date/Time settings and click “next” to get to the recording setup.

④ Select the recording mode and click “next” to get to the record video quality setup.

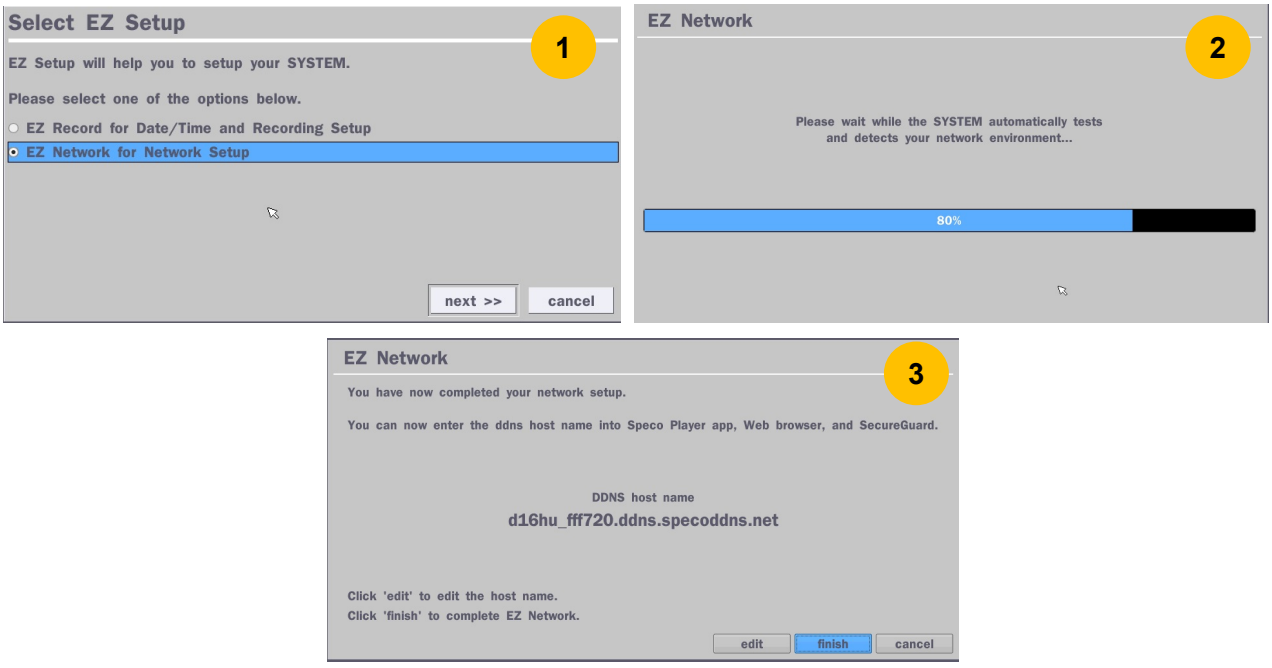
⑤ After setup the Record Video Quality, click “next” to to proceed.

⑥ To close the setup page click “finish” or “go to ez camera” to set up IP Camera.

⑦ Configure individual cameras in the EZ Camera Setup.

- Select the Channel to configure.
- Select the Camera Protocol, and then click “select” on Scan menu. (This will scan the network for any IP cameras using the specified protocol.)
- Select the desired IP camera from the list, and then click on “register”.
- If necessary, click on “Preview” to preview the camera, or Setup to change camera settings.

2.4.2. EZ Network (Using an internet connection)



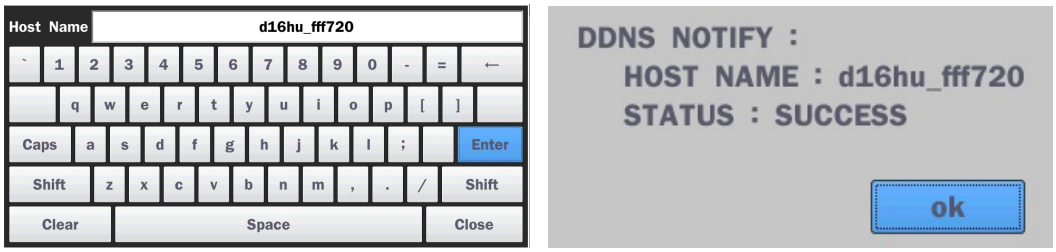


Figure 2.4.2. EZ Network Setup Procedure

① DVR automatically checking the network and configuration by scanning in few seconds.

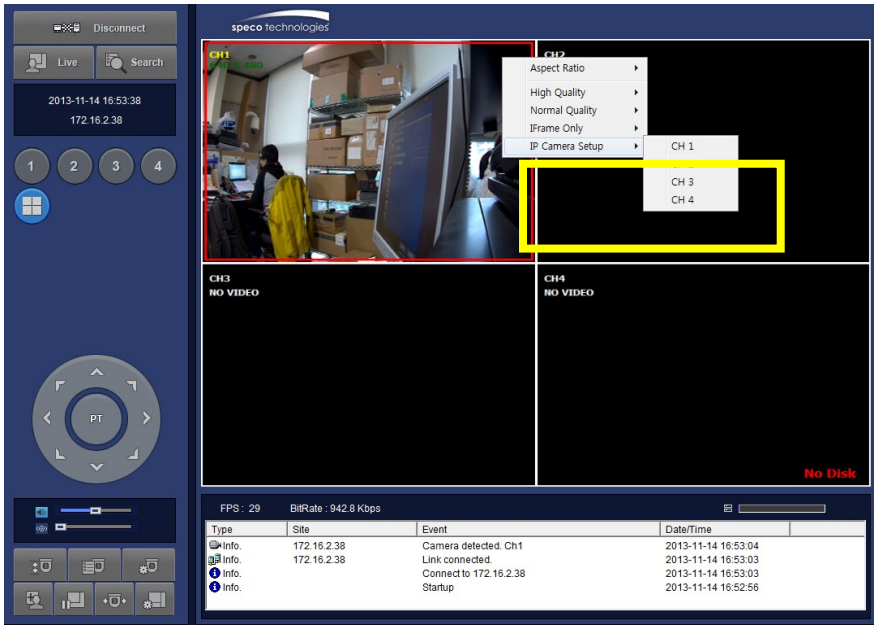
② DVR will show the DDNS host name when configuration is finished automatically.

③ If you need to edit the host name please select ‘edit’ button.

④ Everything is OK, then select ‘finish’. Host name and status pop-up screen will be showed.

2-5. IP Camera SETUP (through SpecoTech Web Viewer)

HU Series allows remote access to the IP Cameras through "IP Camera Setup" menu in SpecoTech Web Viewer.



① Click the mouse right button

② Select “IP Camera Setup”.

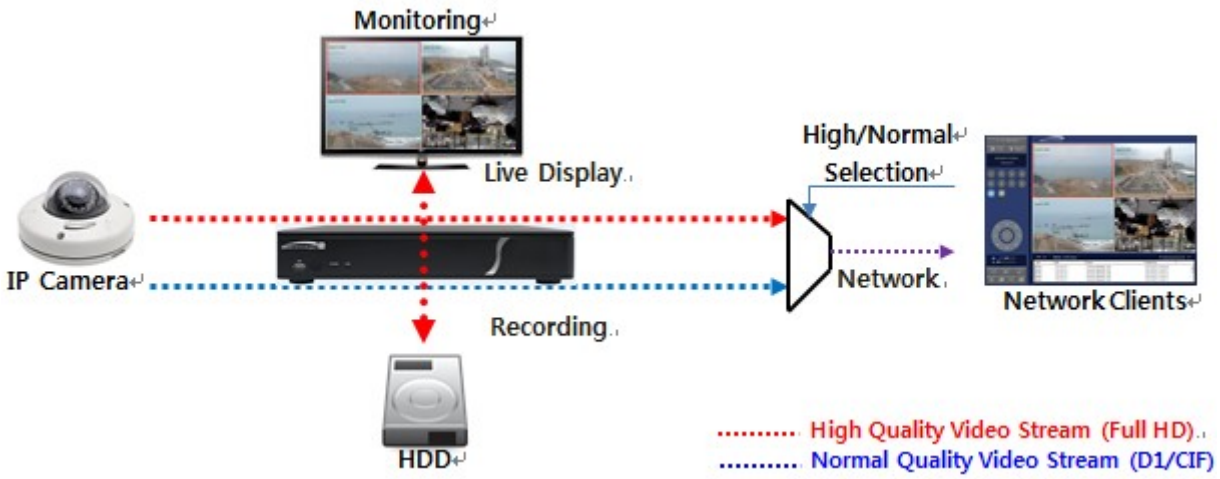
③ Select Channel Number.

④ It launches the camera’s web setup page.

In order for the web pages to launch from the “IP Camera Setup” menu when accessed from the WAN, Ports 59011 to 59254 on the router must be port forwarded to the HU. The local address of the HU can be found in the system information.

2-6. Dual Streaming

- High Quality (Main Profile) Video Stream is used for both Recording and Live Display.
- High Quality (Main Profile) Video Stream can be viewed through the network, when selected.
- Normal (Secondary) Quality Video Stream is used by default when viewing through the network.



3. Front and Rear Panels

3-1. Front Panel

Figure 3.1.1. DVR Front panels

Table 3.1.1. Front LED and Ports of Desktop Models (D16HU/D8HU)

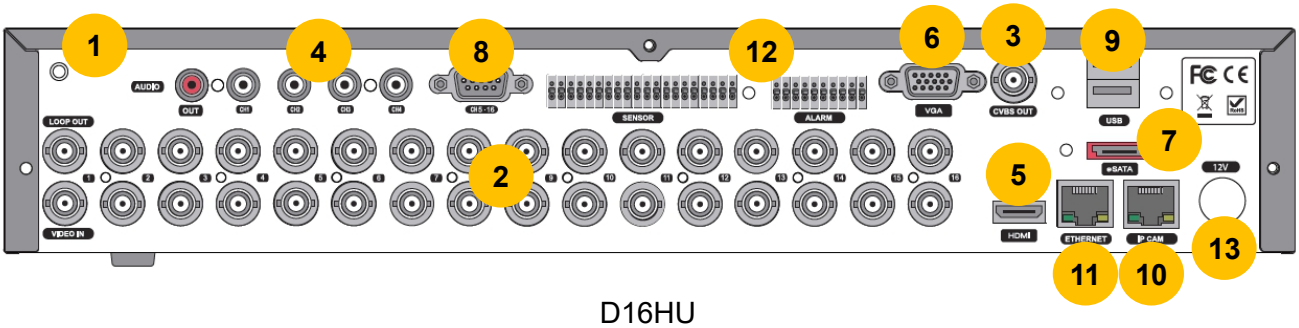
Name	Description
POWER	LED light is on when power is applied to the system.
HDD	LED light is on when the system is recording video data.
USB Port	This USB port for archiving footage into a USB device. (USB 2.0 connector)

Table 3.1.2. Front Buttons (D16HU/D8HU)

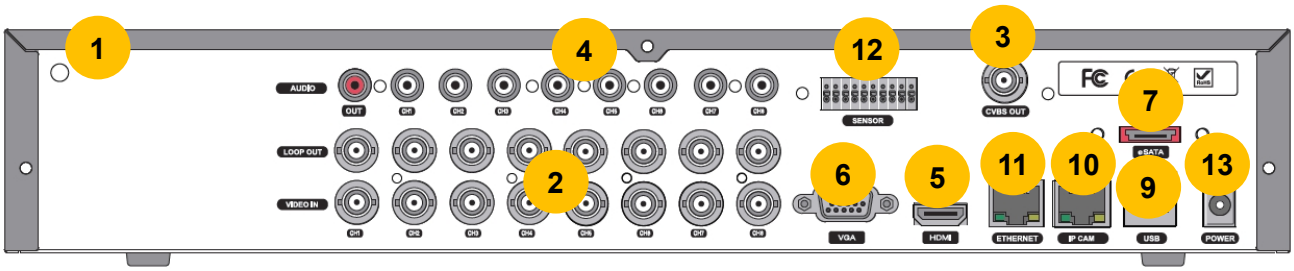
Name	Description
Buttons 1~16	Select a channel from CH1 to CH16
	Buttons from 9 to 16 is used as function keys on PTZ control mode To escape out of PTZ mode, press the ESC button.
MENU	Goes into the Setup window
COPY	Takes a Screenshot on Live View and Goes into Backup during Playback
ALARM	Activates the external alarm device
SEQ	Enables the sequence mode on Live
ESC	Exit the current mode or cancels current operation
PLAYBACK	Goes into search mode
PTZ	Activates the Pan, Tilt and Zoom menu
MODE	Toggles between the available display modes (1x1, 2x2, 3x3, 4x4)
POWER	Will initiate system shut down
	LIVE mode – Moves Up SEARCH mode – Skips 1min ahead on playback and 1 frame ahead on pause
	LIVE mode – Moves Right SEARCH mode - Control the play speed (Fast Forward)
	LIVE mode – Moves Down SEARCH mode - Skips 1min back on playback and 1 frame back on pause
	LIVE mode – Moves Left SEARCH mode- Select the play speed (Rewind)
	LIVE mode – Select (Center) SEARCH mode - Play & Pause

3-2. Rear Panel Connectors

- Do not power this system on before all the connections are attached.
- Make sure all the connections are properly secured. Faulty connection may result in the system being damaged.



D16HU

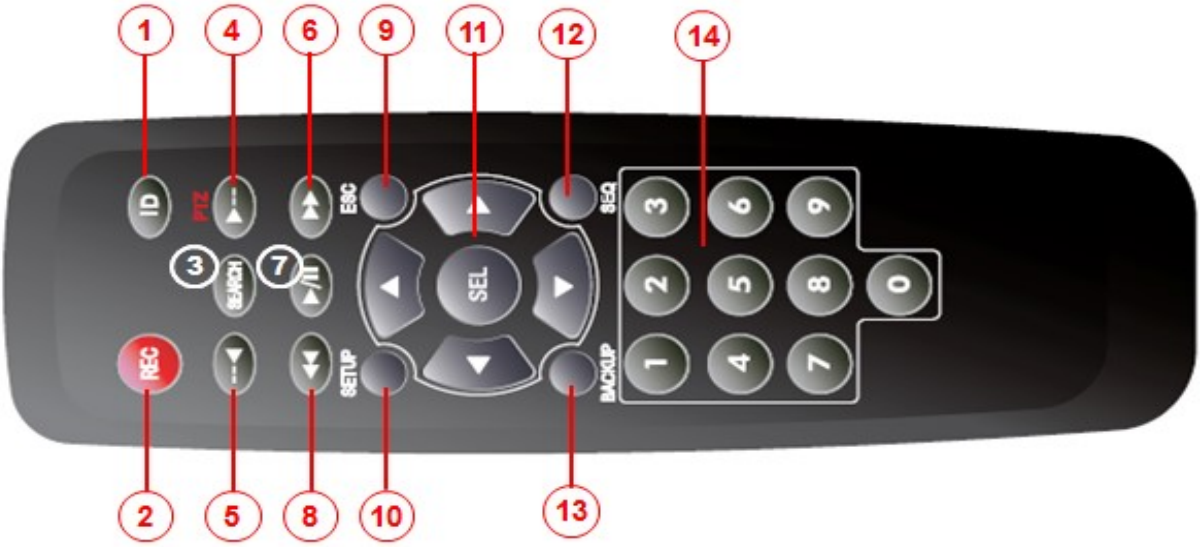


D8HU

Figure 3.2.1. Connectors

① Ground: Use for ground port.
② VIDEO IN: Video input port.(For HD TVI & Analog 960H cameras)
③ VIDEO OUT: MAIN – Composite Video Output / SPOT – Spot Monitor
④ AUDIO IN & OUT: Connectors for audio input and one connector for audio output.
⑤ HDMI: HDMI output port. Connector to the HDMI Monitor
⑥ VGA: VGA (Video Graphics Array) output port. Connects to the PC VGA monitor.
⑦ E-SATA: External SATA port for extension storage.
⑧ AUDIO IN: Audio inputs connections for channels 5~16 through external cable (only D16HU)
⑨ USB: USB terminal for video export or firmware upgrade
⑩ IP CAM: Network Second Terminal. No Internet access.
⑪ ETHERNET: RJ-45 Connector for LAN Connection, used for Internet Connection
⑫ SENSOR IN, ALARM OUT, RS-485: External sensor terminal, External alarm out terminal & RS-485 for PTZ Camera control
⑬ POWER: DC12V input

3-3. Remote Control



Typical Remote Control

① ID: To set the remote control ID.

② REC: To start and stop manual recording

③ SEARCH: To go to SEARCH menu.

④ F/ADV:

- During playback – To move the playback position 60 seconds forward .
- During Pause – To move the playback position moves 1 frame forward

⑤ F/REW:

- During playback – To move the playback position 60 seconds back.
- During Pause – To move the playback postion 1 frame back.

⑥ FF: To fast forward the recording.

⑦ PLAY/PAUSE: To play or to pause the recording in playback mode

⑧ REW: To rewind the recording.

⑨ ESC:

- During setup – To retun to the preivous menu screen.
- During Playback – To exit playback mode
- System lock – To lock a system when pressing ESC button for 5 seconds.
- System unlock – To unlock a system when pressing ESC button for 5 seconds.

⑩ SETUP: To open the SETUP menu.

⑪ Direction buttons: To move menu items or select a channel.

⑫ SEQ: To start auto sequencing the screen in full screen mode. (Toggle)

⑬ BACKUP: To start a backup operations in live or playback mode

⑭ 0~9: To select channel (1,2,3,..) or to enter a DVR ID number or use as number key.

4. Setting up the DVR

The following sections detail the initial setup of the DVR.

Menu screen will close if user response is not received in 5 minutes.

4-0. Setup – Main Live Screen

To enter the setup menu, right click on the mouse and select setup from the submenu or press the setup button on the remote control.

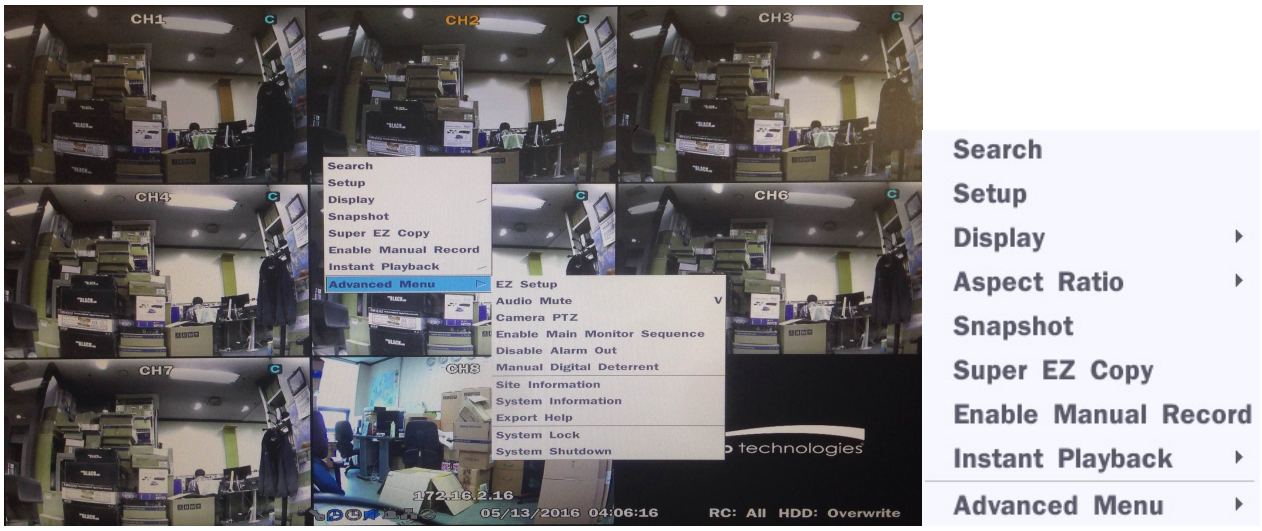


Figure 4.1 Live Screen and Quick Operation Window

When the DVR prompts the Login window, the default User ID is “admin” and enter the password set on the initial boot-up procedure by a virtual keyboard, or a remote control. It is highly recommended to assign a new password to protect the system. New password can be set up in the Security setup menu.

4-1. Setup – IP CAMERA

Press the SETUP button and enter the password. The setup menu is displayed as picture below. Select IP Camera icon and press SEL button to enter the setup menu item.

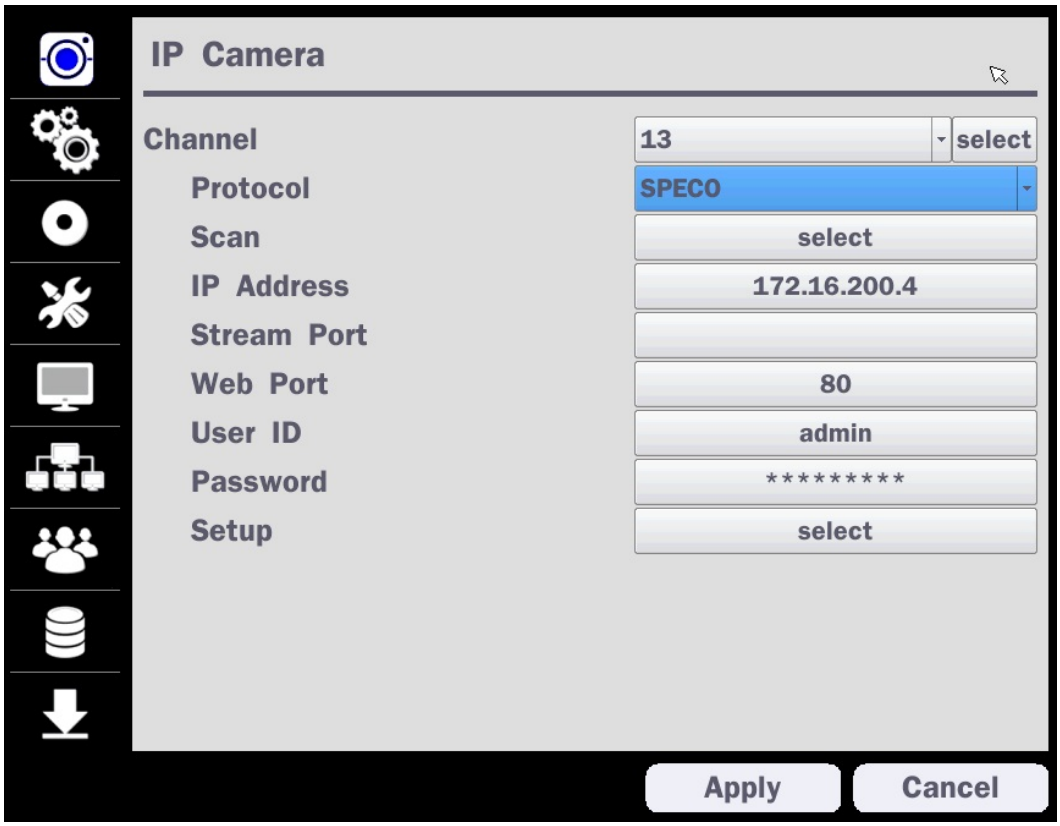
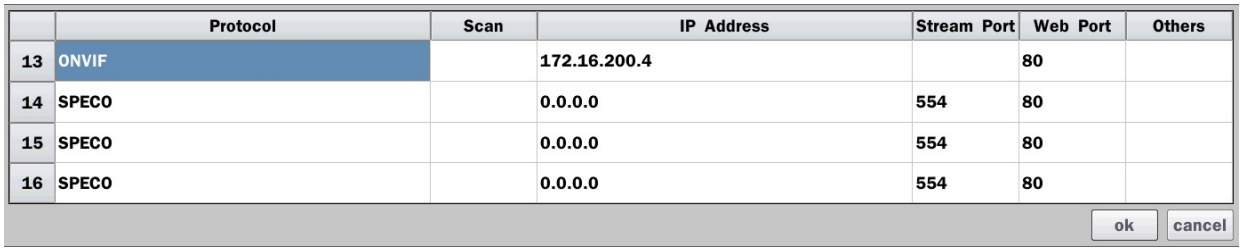


Figure 4.1.1 IP Camera mode setup screen

Table 4.1.1. Menu items in IP Camera mode setup

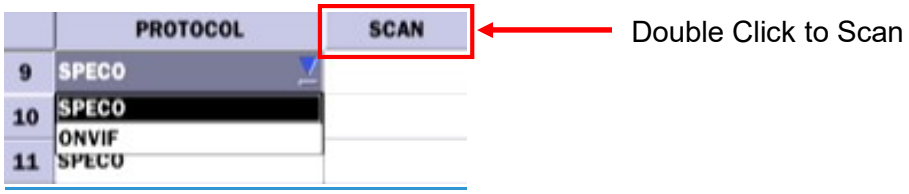
Item	Description
CHANNEL	To manually connect each camera, click on the “select” to get this window:



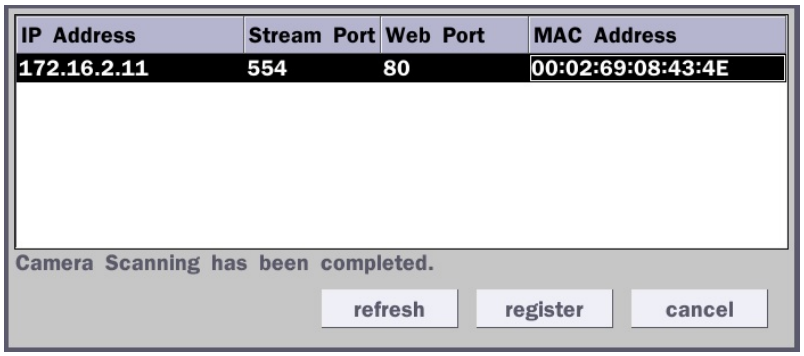
	Protocol	Scan	IP Address	Stream Port	Web Port	Others
13	ONVIF		172.16.200.4		80	
14	SPECO		0.0.0.0	554	80	
15	SPECO		0.0.0.0	554	80	
16	SPECO		0.0.0.0	554	80	

ok cancel

Under the column labeled Type, Select IP Camera Manufacturer.



Scan: Double click the empty box to search IP camera on the local network.



IP Address: Enter the address of IP camera to connect, or select from scanned list.

Stream Port: Enter the port number of IP camera to connect

Web Port: Enter the web port number of IP camera to connect

Others: Change the IP camera setting. Double click the empty box and then Log-In box will be pop-up. (Enter ID and PASSWORD of IP Camera)

Protocol	Select the protocol for the IP Camera
Scan	Automatic IP Camera search on the local network.
IP Address	Set up IP camera address.
Stream Port	Set up the RTSP port of the IP Camera (default: 554)
Web Port	Set up the web port of IP Camera (default: 80)
User ID	Enter ID of IP Camera
Password	Enter the Password of IP Camera
Setup	Set up Video, Network and System of IP Camera

4-1-1. Scan Menu

Scan for IP Camera on network using SPECO/ONVIF/HIKVISION protocols.

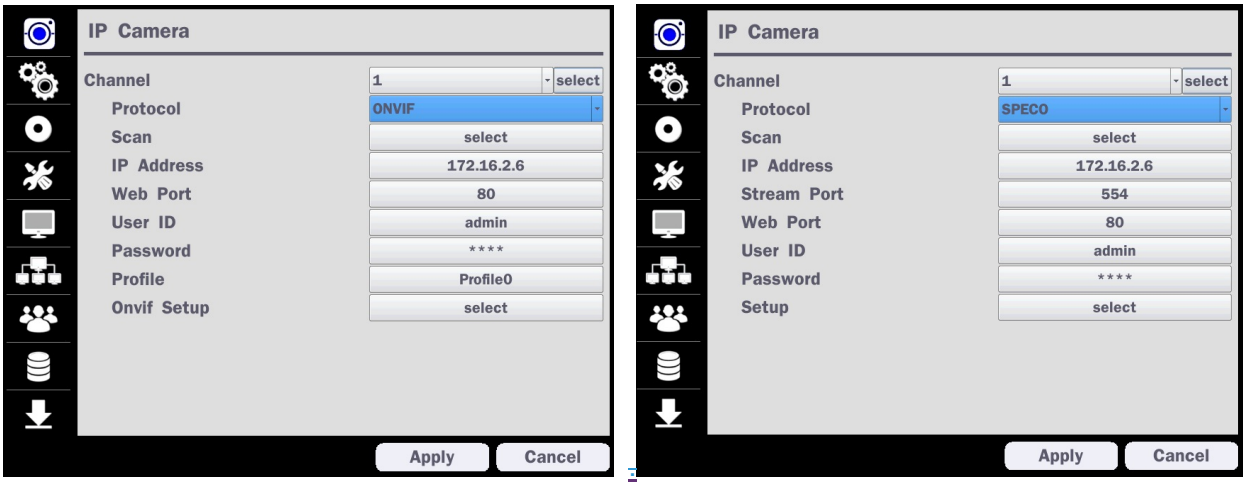


Figure 4.1.2 IP Camera Setup Screen

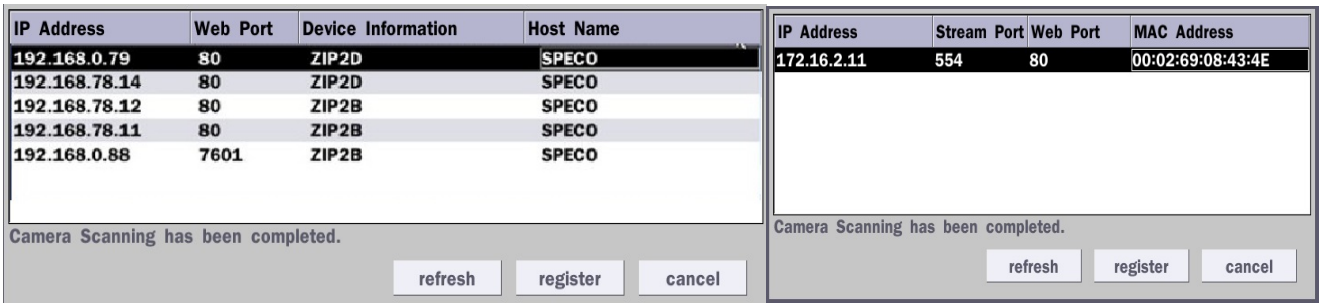


Figure 4.1.3 Left Image using ONVIF Protocol Scan, Right Image using SPECO Protocol Scan

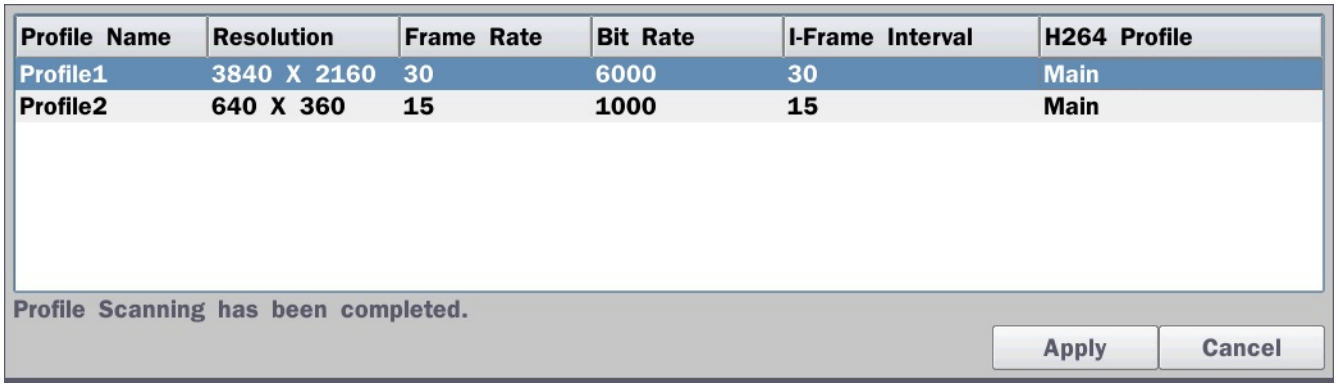


Figure 4.1.4 ONVIF Protocol Profile SCAN Image

① Select the protocol used by the IP Camera and then click the scan button.

② Select the IP Camera from the list and then click the register button.

③ After registering, the basic information is displayed.

④ IP cameras using ONVIF protocol require ID, Password and Profile to be correctly entered for proper operation.

⑤ SPECO protocols only require ID and Password to be correctly entered for proper operation. IP cameras using ONVIF protocol can have their Video, Network and System settings accessed and updated using the ONVIF setup menu.

(ONVIF Setup Menu may not be accessible depending on the ONVIF version used by the IP camera.)

4-1-2. ONVIF Setup Menu

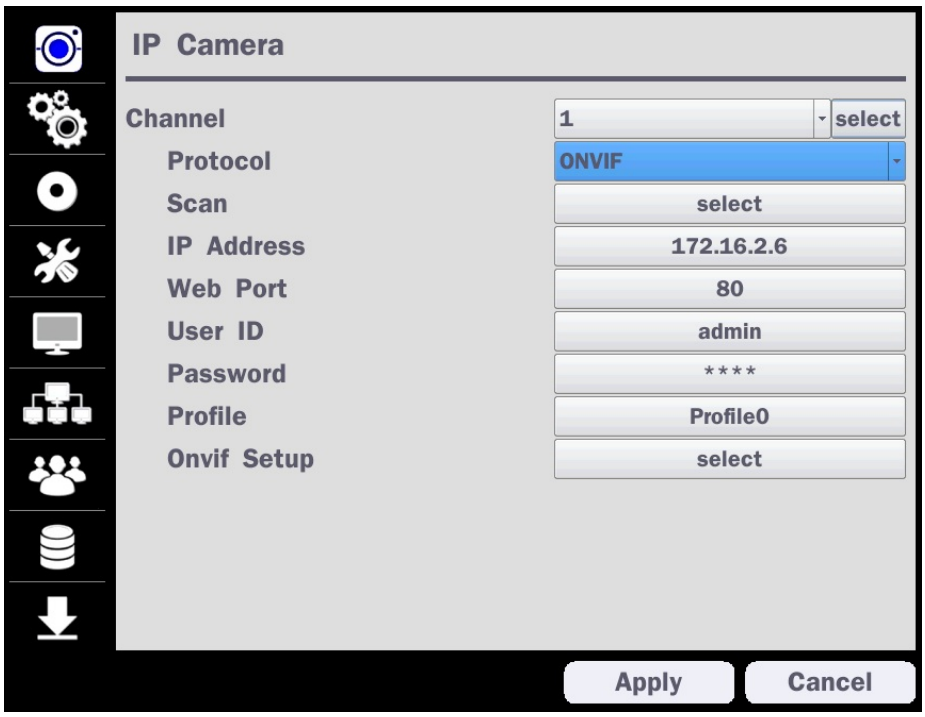


Figure 4.1.2 IP Camera Setup Screen (ONVIF)

The NS Series can search for IP Cameras that are conformant to ONVIF (Open Network Video Interface Forum).

In order to search for ONVIF Cameras, the field associated with VENDOR has to be set to ONVIF.

Click on the Box associated with Scan to scan the networks for ONVIF Conformance cameras.

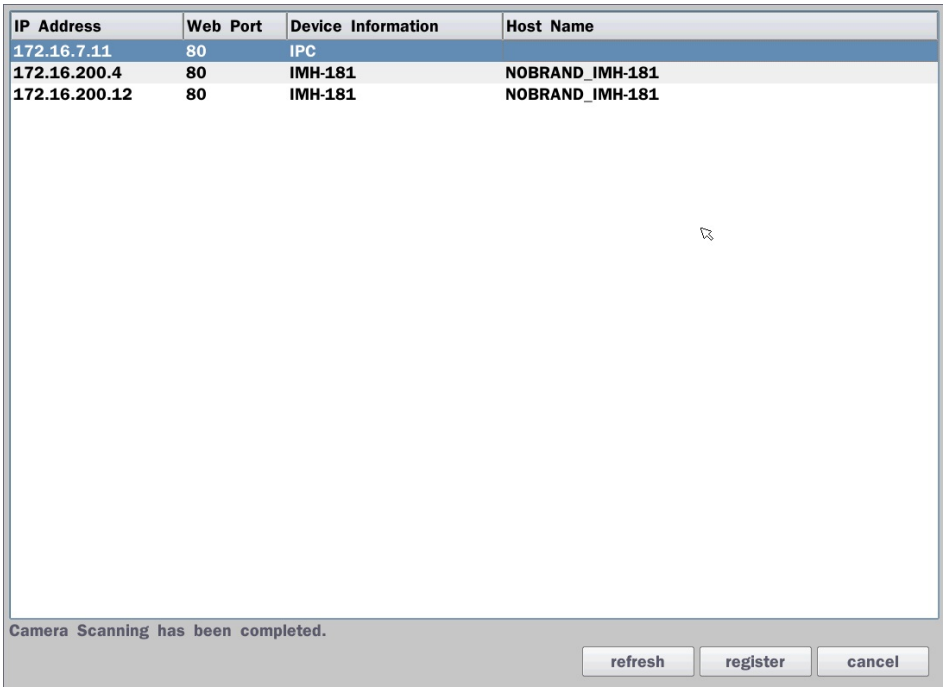


Figure 4.1.4 ONVIF Camera Scan Window

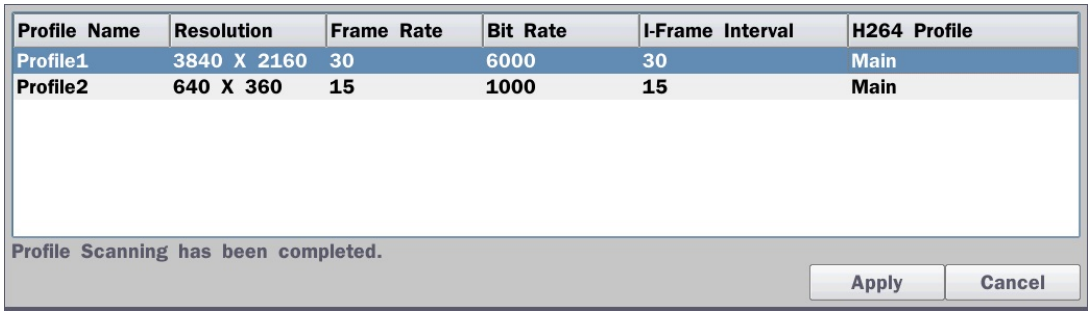


Figure 4.1.5 ONVIF Profile Scan Window

① Select ONVIF for Vendor and click the SCAN button.

② Select the camera on the list and then click the register button.

③ Then, PROFILE and ONVIF setting button will be displayed on the menu.
Click PROFILE button and then the detail information of ONVIF will be searched and listed.
(If there is not one listed, the ONVIF protocol of IP CAM is not compatible with Hybrid DVR and therefore not supported.)

④ Double click the listed profile to apply.

⑤ Enter ID and PASSWORD of IP CAM. Registration is .completed.

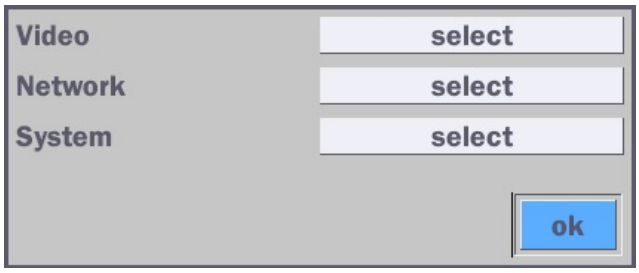
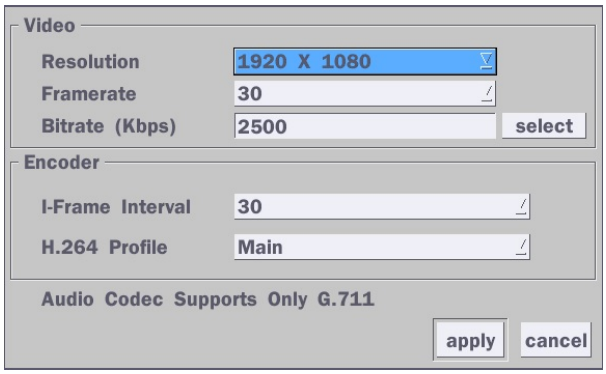
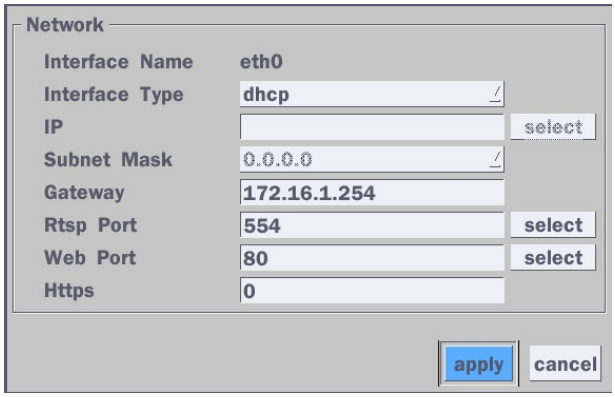


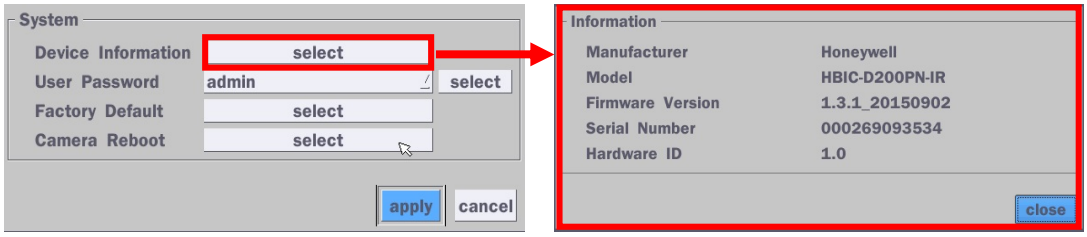
Figure 4.1.6 ONVIF Setup Window

Under ONVIF Setup, the following can be viewed and changed: VIDEO, NETWORK, SYSTEM settings.

Menu Item	Description
VIDEO	Video, Encoder to view and change to audio settings. 
NETWORK	View and change Network settings.



SYSTEM	System information and change your password, factory reset and the camera is rebooting.



4-2. Setup – SYSTEM

In the SETUP menu, select the SYSTEM tab. Then, the SYSTEM menu is displayed as pictured below. Navigate through the menu items using the mouse or the remote control and change the value of the menu.

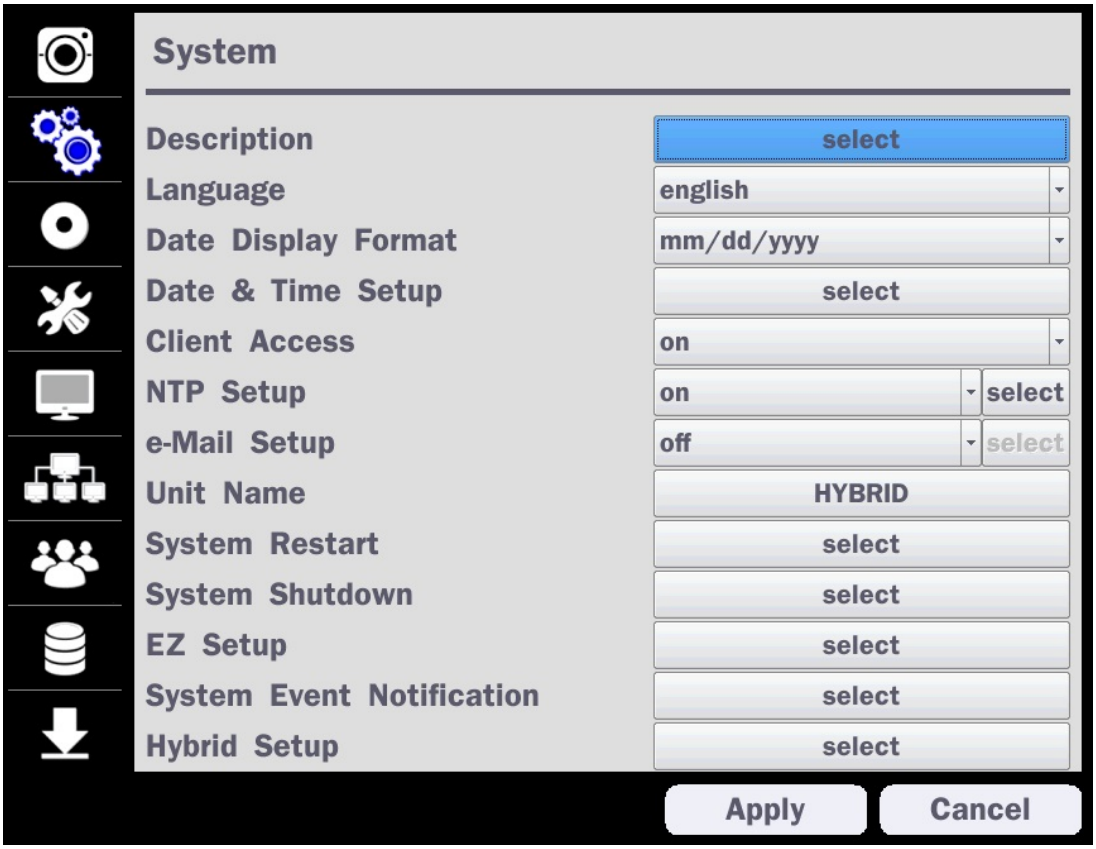
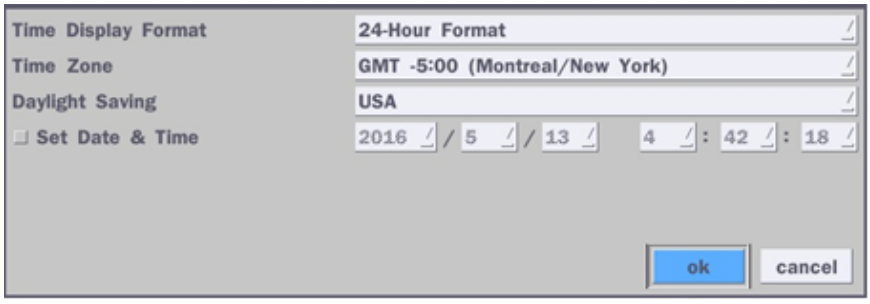


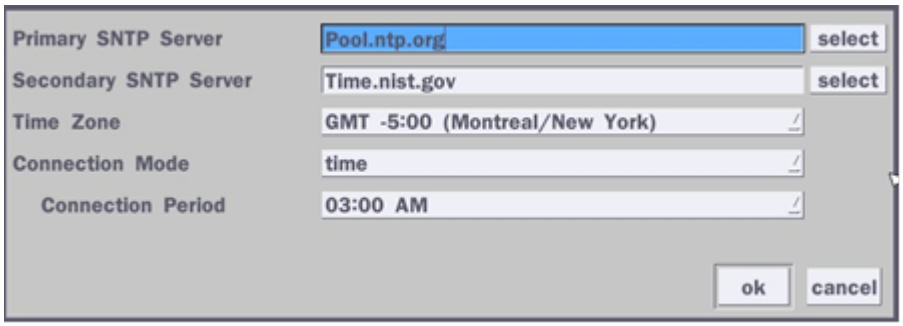
Figure 4.2.1. SYSTEM Setup Screen

Table 4.2.1. Menu Items in SYSTEM Setup Screen

Item	Description
DESCRIPTION	Press the button to view the system information. (Software Version, Storage Size, IP Address, MAC Address and DDNS Status)
LANGUAGE	Select the display language using the mouse or the remote control. Once a language is selected, the display language will change.
DATE DISPLAY FORMAT	Select the date display format using the mouse or the remote control. Options are: MM/DD/YYYY, YYYY/MM/DD, DD/MM/YYYY, YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY
DATE&TIME SETUP	Select the display date and time using the mouse or the remote control and press OK button to set the present date and time.  Select DAYLIGHT SAVING using the mouse or the remote control and select the appropriate daylight saving time zone. The available options are: **OFF**: Daylight saving is turned off. **USA**: Applies the USA daylight saving time. **EU**: Applies the EU daylight saving time. - Select the GMT AREA using the mouse or the remote control. - Set the time difference with the standard time using the mouse or the button. **OTHERS**: If the time zone is neither USA nor EU, set the date and time of the daylight saving period. - Select BEGIN or END using the remote and press the SEL button. **Caution** - Do not set the start time to 23:00 for DLS. - DLS cannot be applied if the date of BEGIN and END is the same.
CLIENT ACCESS	Enable/Disable remote access through the network.
NTP	NTP (Network Time Protocol) which synchronizes the time of the computer systems

SETUP

over variable-latency data networks.



PRIMARY SNTP SERVER: Input the address of the primary NTP time-server.

SECONDARY SNTP SERVER: Input the address of the secondary NTP time-server.

TIME ZONE: NTP synchronizes with GMT (Greenwich Mean Time) regardless of geography, user must set their own time difference.

CONNECTON MODE: Select the NTP time-server connection mode from TIME, INTERVAL, and ONCE.

CONNECTION PERIOD

- **TIME** – Refresh the time at the designated time (e.g. 1AM)
- **INTERVAL** – Every 1 hour ~ 24 hours
- **ONCE** – Synchronizes time only once. NTP will not synchronize unless the Connection Mode is changed.

Sends E-MAIL Notification when the NTP server time is faster than the system time with bellow message.

“NTP server time is faster than the system time.

In this case, NTP server time is ignored to protect the user data.

User must set the time manually.

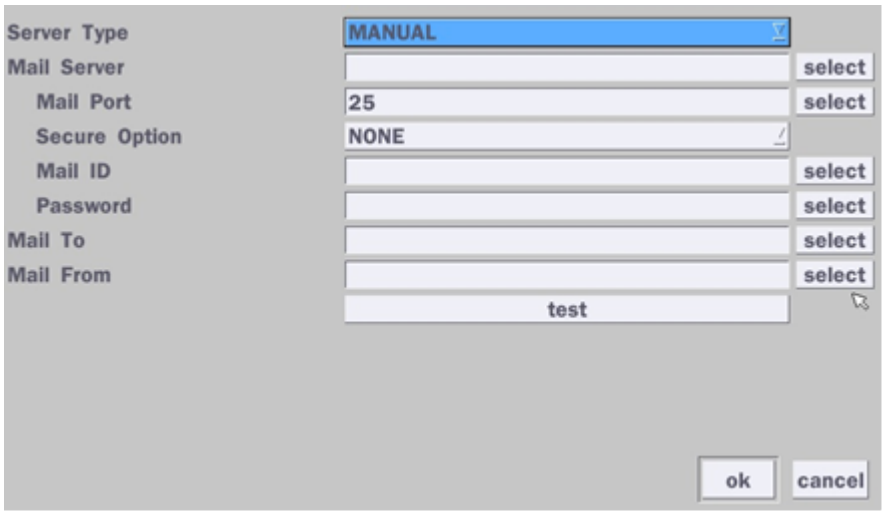
SYSTEM TIME: Mon Oct 10 13:46:49 2011

SERVER TIME: Mon Oct 10 13:33:12 2011

DVR ID: DVR

IP ADDRESS: 172.16.2.46

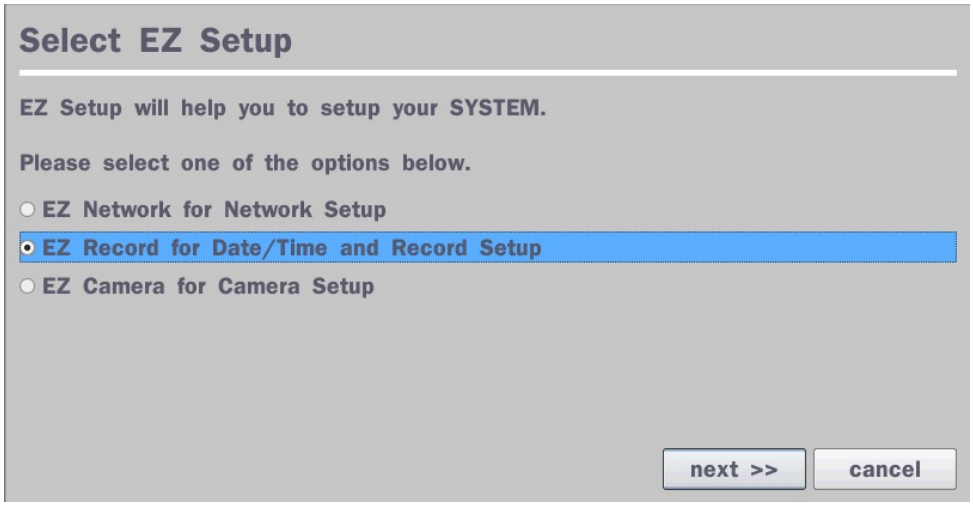
SEND EMAIL



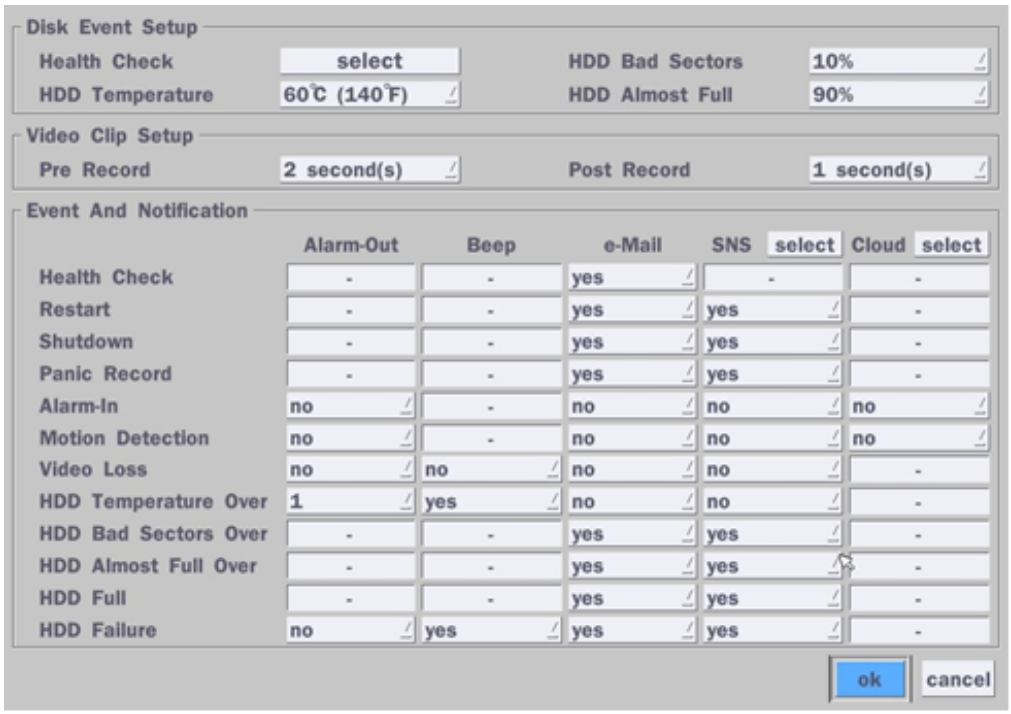
SERVER TYPE: Select GMAIL, HOTMAIL, AOL, YAHOO or MANUAL)

MAIL SERVER: Enter the appropriate mail server information.

	MAIL PORT: Assign Mail Port number. **SECURE OPTION:** Select the secure mail server connection method. **(SSL or TLS)** **ID:** Enter the appropriate mail server ID. **PASSWORD:** Enter the appropriate mail server PASSWORD **MAIL TO:** Enter the appropriate email address to enable sending e-mail reports using a virtual keyboard. **MAIL FROM:** To set the email address sent to the destination host. **TEST** : E-mail settings sent a test mail to the registered account
UNIT NAME	Name the HYBRID (e.g. Factory, Library, Store, Location etc) This is to used to identify the name of each DVR under the same network.
SYSTEM RESTART	Restart the system
SYSTEM SHUTDOWN	Shut down the system
EZ SETUP	Helps user to easily setup NETWORK, RECORDING and IP CAMERA



SYSTEM EVENT NOTIFICATION	



HEALTH CHECK – OFF, ON

(Allows the user to set MAIL STATUS periodically) : DAILY or WEELY or MONTHLY

VIDEO CLIP SETUP: Setup the duration of video clip for PRE RECORD and POST RECORD.

EVENT AND NOTIFICATION – OFF, ON

(Allows the user to set EVENT NOFICIATION ON or OFF)

HEALTH CHECK / RESTART / SHUTDOWN / PANIC RECORD

- Enable Email Notification in the event a problem occurs with the VS.

ALARM-IN – Enable Email Notification when the camera detects sensor.

MOTION DETECTION – Enable Email Notification when the camera detects motion.

VIDEO LOSS – Enable Email, Beep and Alarm output Notification when the camera signal is lost.

HDD TEMPERATURE – Enable Email, Beep and Alarm output Notification when the HDD temperature.

HDD BAD SECTORS – Enable Email Notification when the HDD has bad Sectors.

HDD ALMOST FULL – Enable Email Notification when the HDD is almost full

HDD FULL – Enable Email Notification when the HDD is full

HDD FAILURE – Enable Email, Beep and Alarm output Notification when the HDD fails.

How to use 'Cloud'

- **Notice : User have to have a 'Google Drive' Account**
- **Save video clip on the Google Drive and playback though Mobile device.**

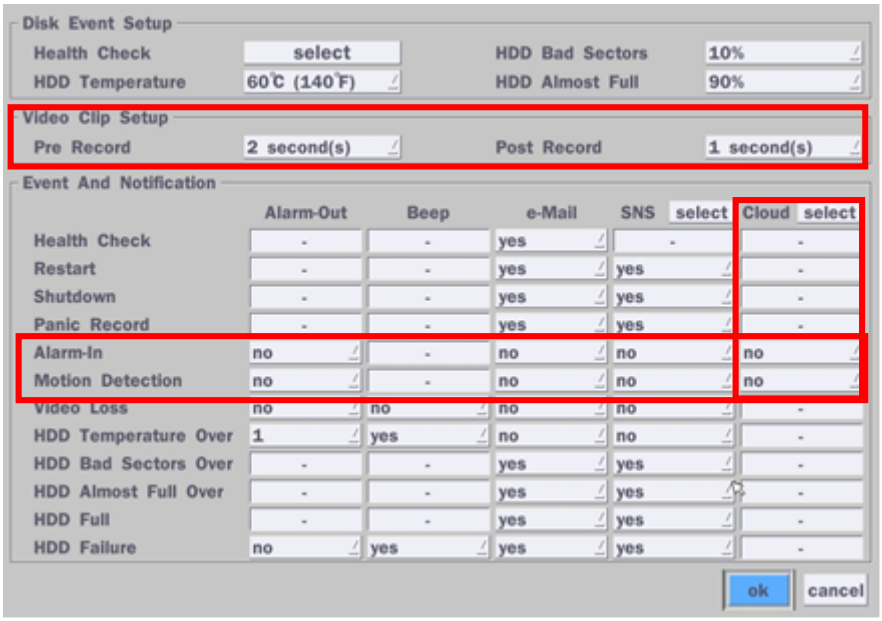
1) How to set (Setup – System – System Event Notification – **Cloud**)

1-1) Click icon

1-2) Enter Google Drive Account

1-3) Video clip will be save at Google Drive when 'Alarm-In' and 'Motion' triggered.

1-4) Set Video clip duration



2) How to playback

2-1) Playback through PC

: Log in Google Drive and select a file and playback

2-2) Playback through Mobile device

: Use 'SpecoPlayer'

Notice – Support iOS from '1.5.8_150316', Android from '3.2.2.7_150316'

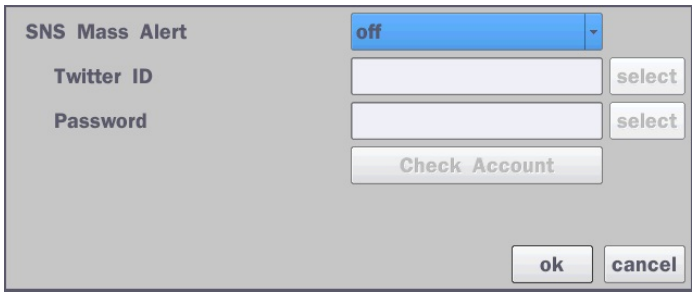
How to use 'SNS'

- **Notice : User have to make an Twitter account for DVR in order to follow the Twitter followers.**
- **DVR send event message to Twitter followers when EVENT Triggered.**

1) How to set (Setup – System – System Event Notification – **SNS**)

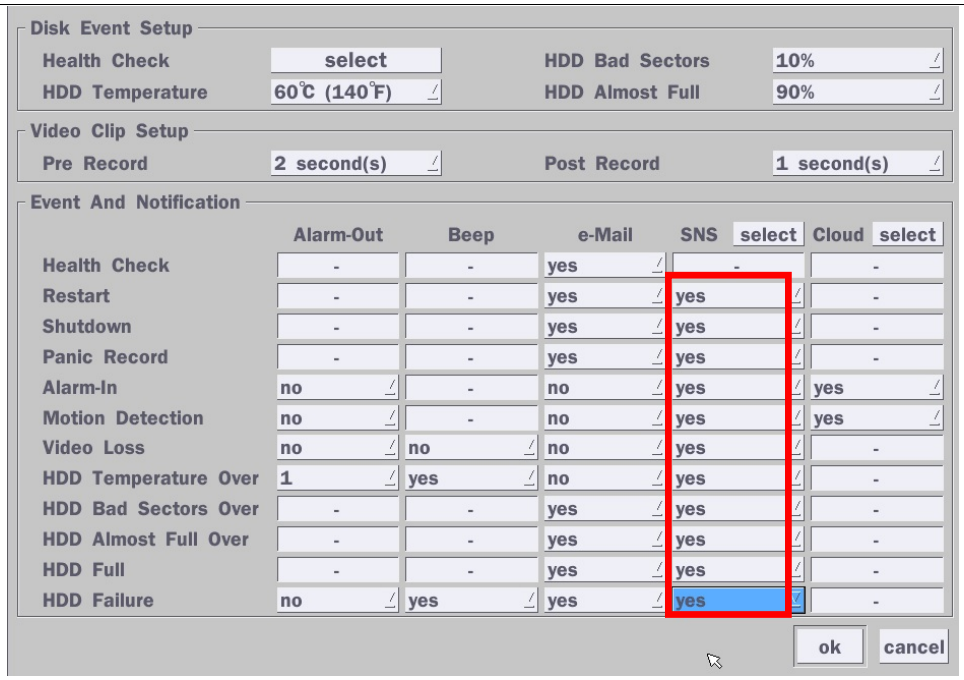
1-1) Click icon

1-2) Enter the Twitter Account



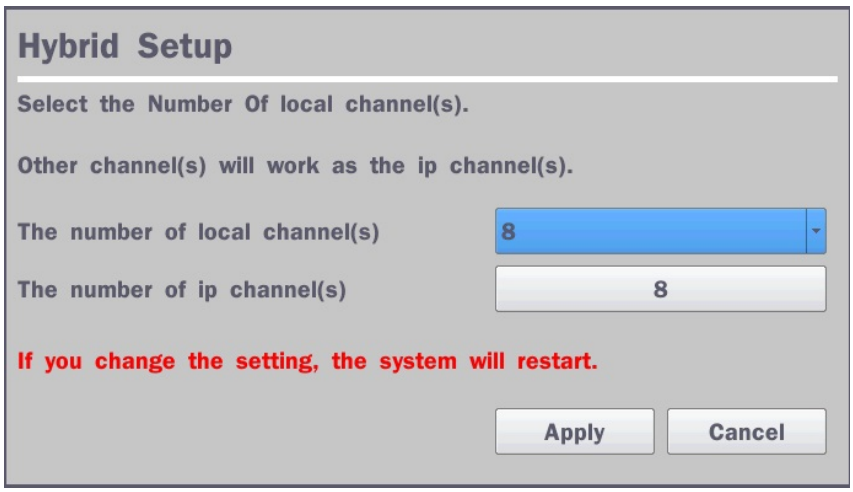
1-3) Select the items that user want to receive the status message.

Select 'YES'



1) Message receiving (Following)
2) Message receiving (Following)
   2-1) Follow the DVR twitter account
   2-2) Followers can see received messages

HYBRID SETUP



Each channel can be configured to be HD-TVI & Analogue or IP Camera. However, Local channels take priority to ip cameras when it comes to channel order.

4-3. Setup – RECORD Mode

In the SETUP menu, select the RECORD tab. Then, the RECORD menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control.

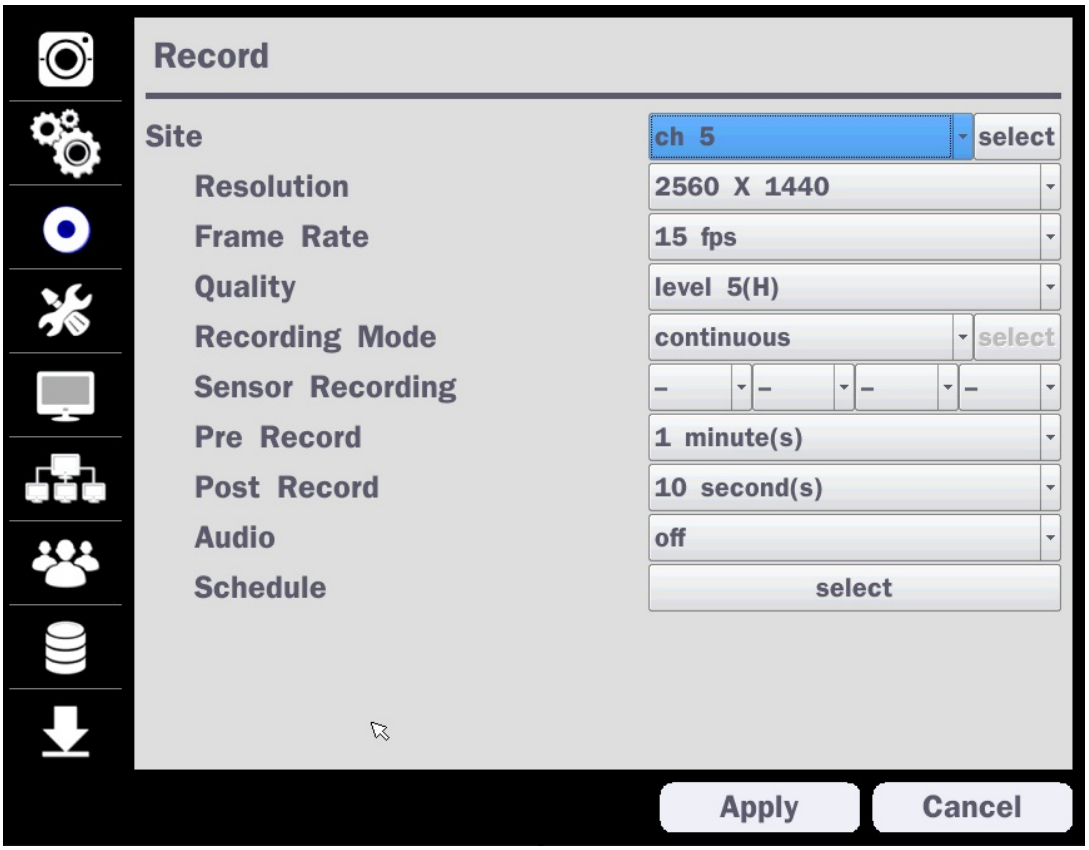
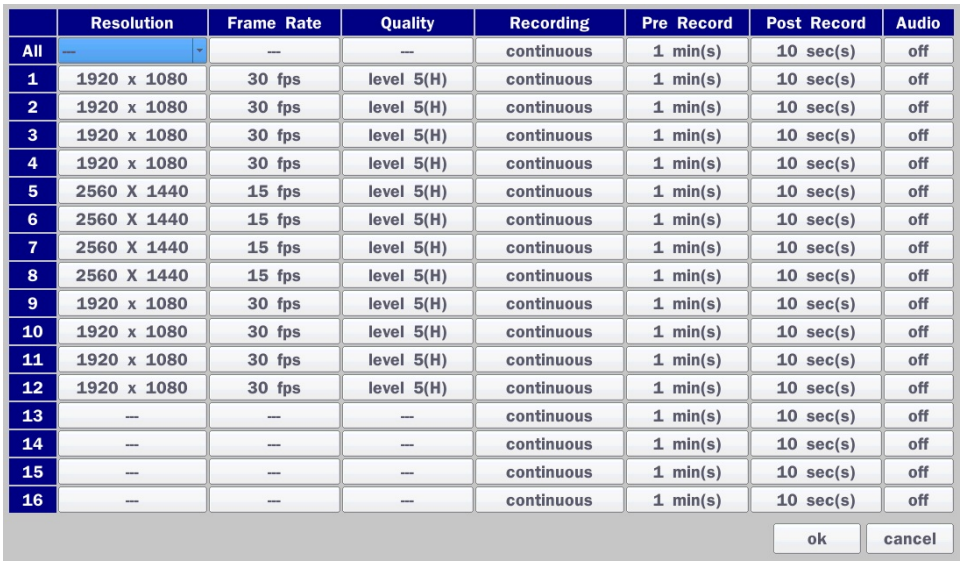


Figure 4.3.1. RECORD Setup Screen

Table 4.3.1. Menu Items in RECORD Setup Screen

Menu Item	Description
SITE	Select a channel for applying the following settings using the mouse or the remote control. To change the values of all channels, take the following steps. Select the button to change the values of all channels.



	Resolution	Frame Rate	Quality	Recording	Pre Record	Post Record	Audio
All	---	---	---	continuous	1 min(s)	10 sec(s)	off
1	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
2	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
3	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
4	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
5	2560 X 1440	15 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
6	2560 X 1440	15 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
7	2560 X 1440	15 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
8	2560 X 1440	15 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
9	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
10	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
11	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
12	1920 x 1080	30 fps	level 5(H)	continuous	1 min(s)	10 sec(s)	off
13	---	---	---	continuous	1 min(s)	10 sec(s)	off
14	---	---	---	continuous	1 min(s)	10 sec(s)	off
15	---	---	---	continuous	1 min(s)	10 sec(s)	off
16	---	---	---	continuous	1 min(s)	10 sec(s)	off

ok cancel

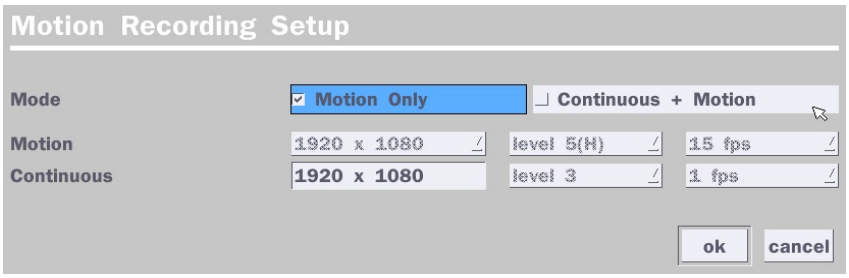
RESOLUTION	Select HD TVI or 960H for analog cameras using the mouse or the remote control.
FRAME RATE	Set the frame rate for the specified channel. The sum of the frame rate values from each channel cannot exceed the maximum frame rates for a specific recording resolution.
QUALITY	Select the recording quality for the selected channel. Options are: Level 1 (Low), Level 2, Level 3, Level 4, and Level 5 (High)
RECORDING MODE	Assign the recording mode for the selected channel. Options are: Continuous, Motion, Sensor, Schedule, Disable and Smart Recording (c + m : continuous & motion, c + s : continuous & sensor). When Motion Recording is selected, Continuous + Motion recording option can be used. 
SENSOR RECORDING	Select the sensor setting for the selected channel.
PRE RECORD	Enable/disable pre-event recording. Pre-event recording is limited to 20 minutes.
POST EVENT RECORD	Set the post event recording time duration for the specified channel. (10~60 seconds)
AUDIO	Enable/disable audio recording for the specified channel.
SCHEDULE	To setup a recording schedule, select SCHEDULE in the RECORD menu. Navigate through the menu items or change the settings using the mouse or the remote control. Select CHANNEL > select NONE, CONTINUOUS, MOTION or SENSOR > Highlight area. To copy a schedule to a different channel, select the channel from the COPY SCHEDULE menu.

Figure 4.3.2. Schedule Recording Setup Screen

- **NONE**: Disable recording during selected timeframe (Highlighted in White)
- **CONTINUOUS**: CONTINUOUS recording (Highlighted in Green)
- **MOTION**: MOTION recording (Highlighted in Yellow)
- **SENSOR**: SENSOR recording (Highlighted in Red)
- **CLEAR**: Clears the schedule

4-4. Setup – DEVICE Mode

In the SETUP menu, select the DEVICE tab. Then, the device menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control.

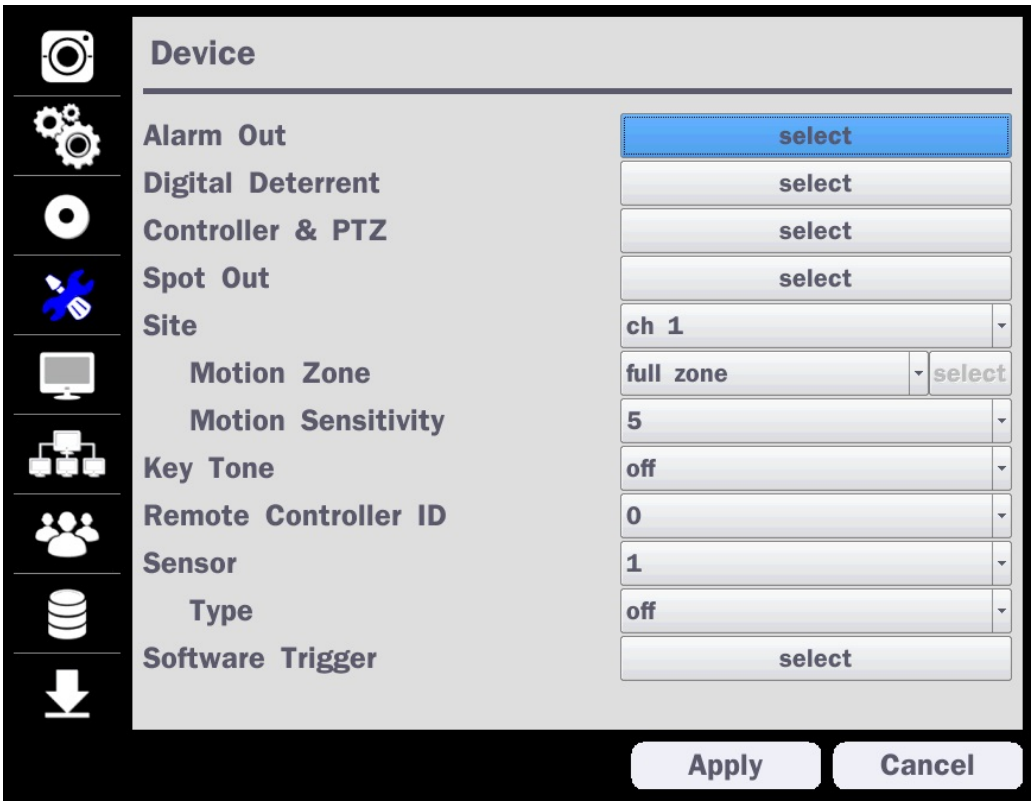
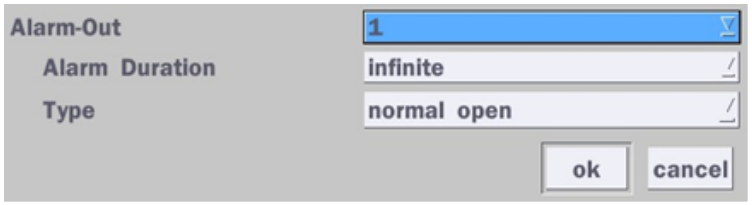
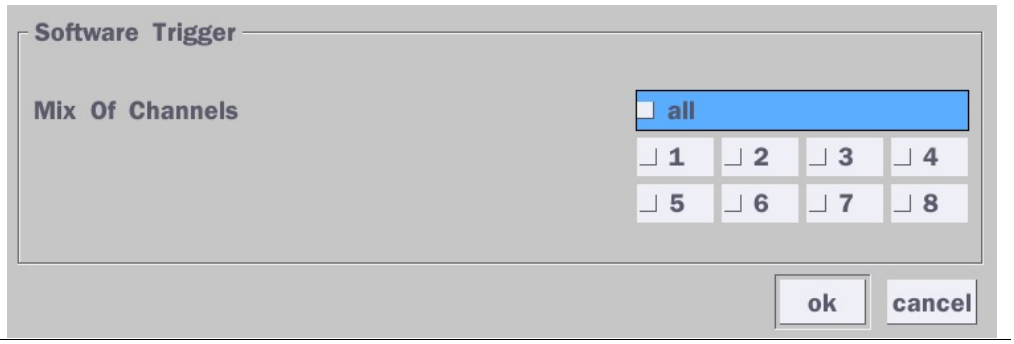


Figure 4.4. DEVICE Setup Screen

Table 4.4. Menu Items in DEVICE Setup Screen

Item	Description
ALARM OUT / BEEP DURATION	Only one Alarm-out is available. Set alarm dwell time from 5 to 60 seconds or infinite. 
DIGITAL DETERRENT	Setup schedule and audio recordings for Digital Deterrent.
CONTROLLER & PTZ	Set the PTZ baud rate, protocol, and ID.
SPOT-OUT	Display the channels triggered by an event (Refer to 4.4.3)

SITE	Select specified channel for motion zone setup.
MOTION ZONE	Select either Full Zone or Partial Zone for motion detection.
MOTION SENSITIVITY	Set the motion sensitivity for the selected channel. Control the motion sensitivity from 1 to 9. (9 – Highest sensitivity, 1 – Lowest sensitivity)
KEY TONE	Enable/disable key tone from front panel usage.
REMOTE CONTROL ID	Set the remote control ID. 1. Select ID. 2. Input the remote control ID number. 3. An icon will indicate on the Live Screen if the remote control ID is synchronized. The options are from 0 to 99
SENSOR	Select the type of each sensor. Option is Off, Normal Open or Normal Close.
SOFTWARE TRIGGER	Remote trigger channels. User can set the channels that want to make a sensor recording through remotely with Software record mode. 

4-4-1. Digital Deterrent

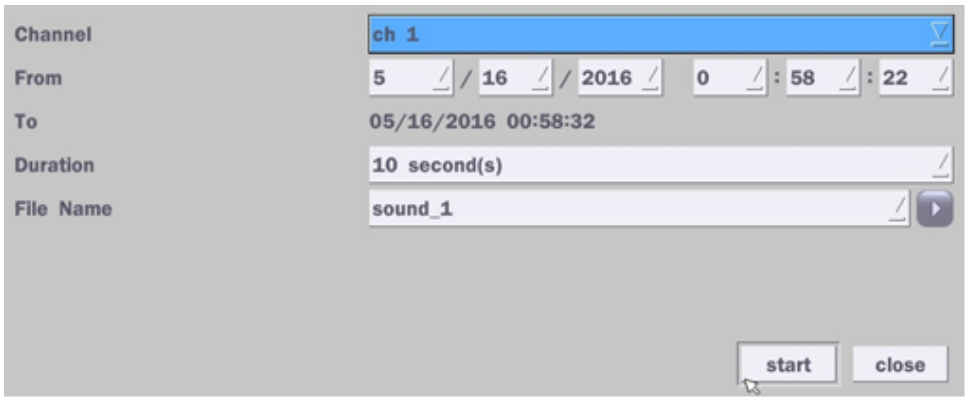
Trigger audio message via motion detection or sensor.

Figure 4.4.1. Digital Deterrent setup screen

Table 4.4.1. Item for Digital Deterrent Setup Screen

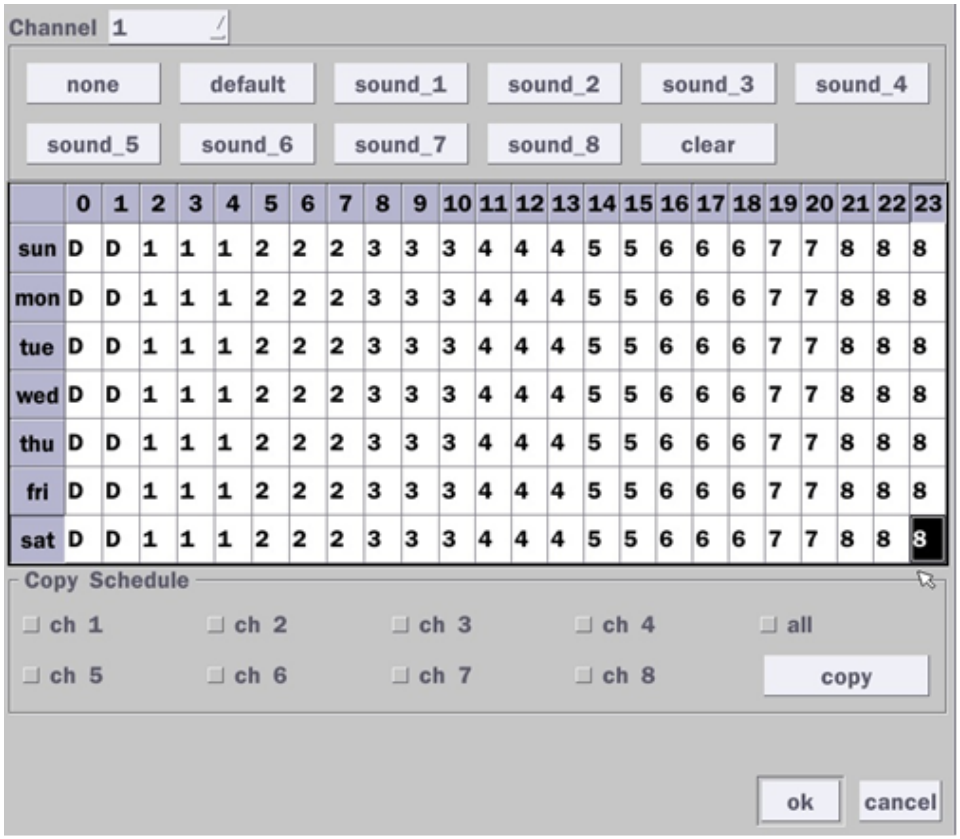
Item	Description
IMPORT FROM USB	Import up to 8 sound files from USB.
EXPORT TO USB	Export the sound file to USB
RECORD	Select a channel and set up the date and the duration. Select START to export audio to Digital Deterrent.

Select the play button to hear message after export.



SCHEDULE

Schedule the sound file considering the expected situation.



4-4-2. Keyboard Controller & PTZ Setup

To control the PTZ functions of the camera, connect the PTZ controller to the RS-485 port on the back of the chassis with CAT5 (or equivalent) cable.

① Connect the RS-485 cables of PTZ camera to the RS-485 port on the rear panel.

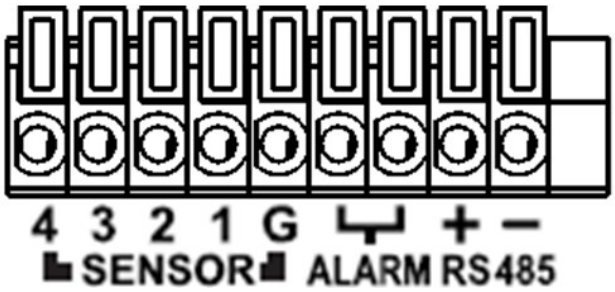


Figure 4.4.2.1. Device Mode Setup Screen

② Open the PTZ sub menu by selecting the submenu button.

Figure 4.4.2.2. PTZ Control Setup Screen

Note: Connect PTZ cameras that support RS-485 directly to the RS-485 port. If the camera is controlled through an RS-232C interface, use an RS-232C to RS-485 to RS-232C signal converter.

Use the PTZ setup screen to select the following options for the camera PTZ controller:

- **CHANNEL**: Channel connected to a PTZ device
- **CAMERA**: Protocol Type
- **SPEED:** 19200, 14400, 9600, 4800, 2400 (Baud rate)
- **ID:** 0-63

Controller (Keyboard Controller): If a PTZ controller is used, select a controller protocol from Controller menu. Set SPEED (Baud Rate) and ID number.

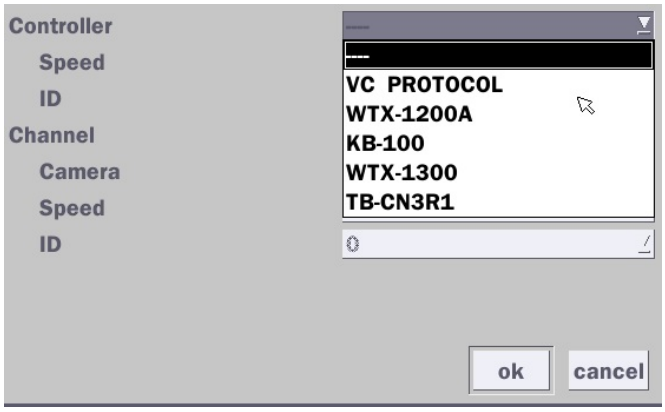


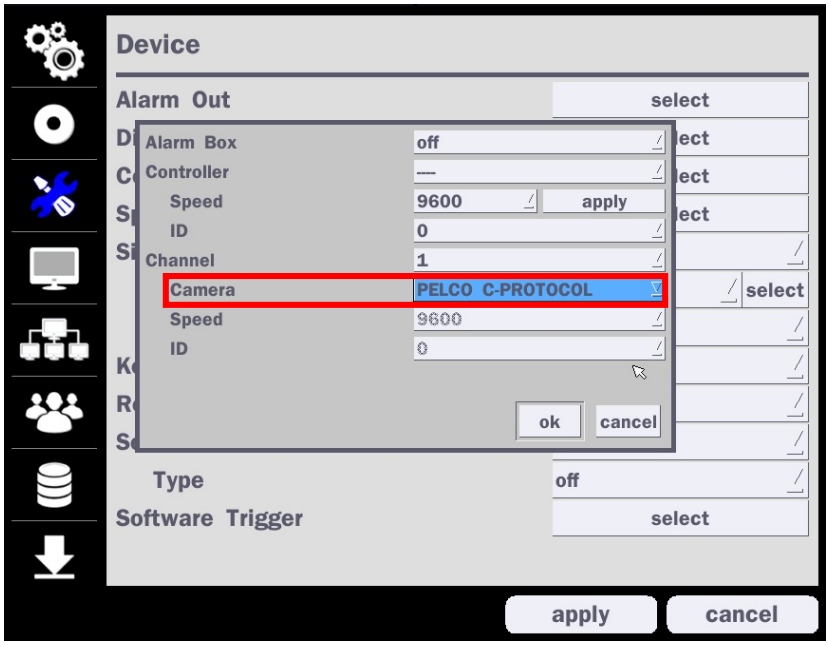
Figure 4.4.2.3 Controller Selection Screen

❖Notice: DxxHU series can use UTC feature.

: UTC(Up The Coax) allows for control of the camera OSD menu via the coax cable.

User does not need extra connection via RS-485 to control the camera OSD menu

- **How to set (Setup > Device > PTZ & Controller > PELCO C-PROTOCOL)**



4-4-3. Spot Out

Figure 4.4.3. SPOT-OUT Setup Screen

Table 4.4.3. Menu Item in SPOT-OUT Setup Screen

Item	Description
SPOT ON EVENT	Enable/disable channel change if an event occurs on a channel.
SPOT EVENT DWELL TIME	Set the dwell time for the display of the event activated channel. (3-10sec)
SEQUENCE	Enable/disable sequential display of spot channel in full screen. If select ON, the selected channel will be displayed on the monitor periodically.
SEQUENCE DWELL TIME	Set the dwell time for the spot channel display. (3-10sec)
SPOT CHANNEL	Select a channel for spot monitoring using the mouse or the remote control and press OK button.

4-4-4. Motion Zone Setup

Select MOTION ZONE using the mouse or the remote control and select either PARTIAL ZONE or FULL ZONE using the mouse control. The default value is FULL ZONE.

If FULL ZONE is selected, the motion zone grid screen is not displayed. Only set the level of sensitivity for MOTION SENSITIVITY.

FULL ZONE: The motion sensor is active on the whole screen.

PARTIAL ZONE: The motion sensor is active in the set detection frame.

Select the motion detection position using the mouse or the remote control. Then left click on the mouse or left click and drag the mouse pointer to select or deselect the area. Highlighted area indicates the partial motion detection zone. Press the ESC button or right click on the mouse to return to the previous menu.

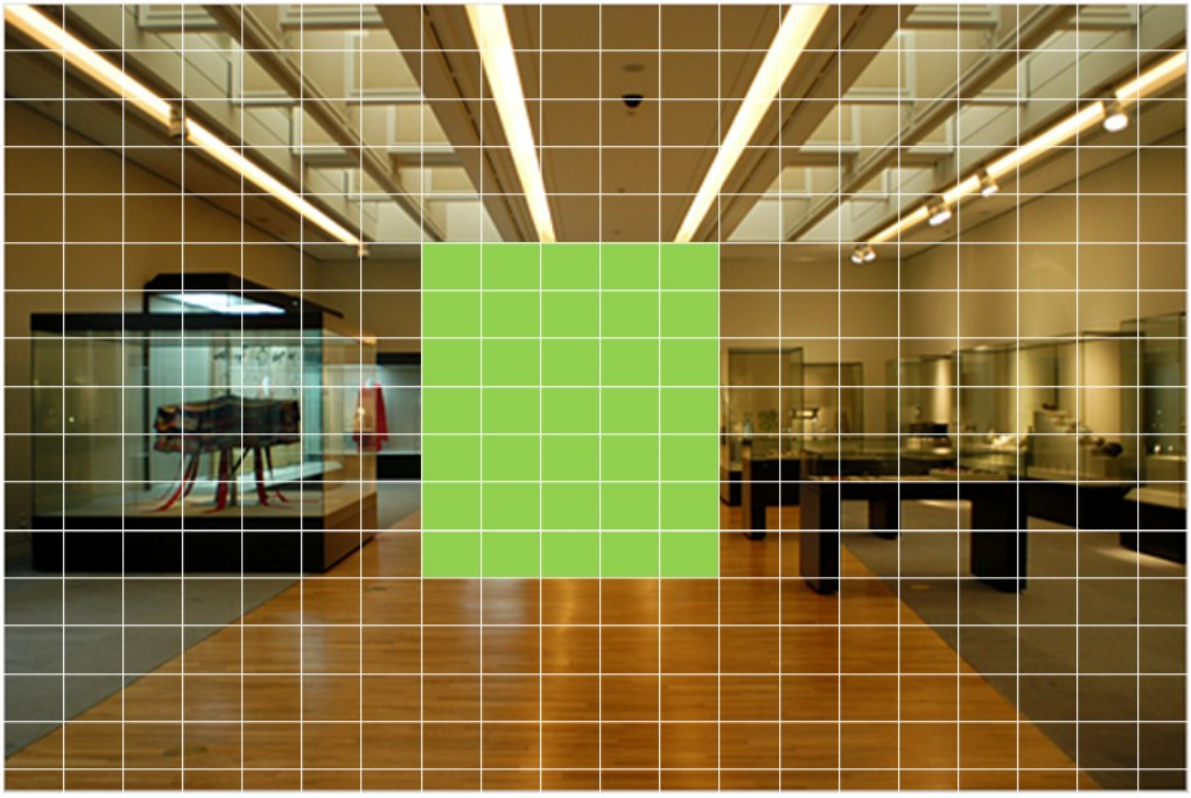


Figure 4.4.4. Motion Zone Grid Screen

4-5. Setup – DISPLAY Mode

In the SETUP menu, select the DISPLAY tab. Then, the DISPLAY menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control. To return to the previous setup menu screen, press the Cancel button.

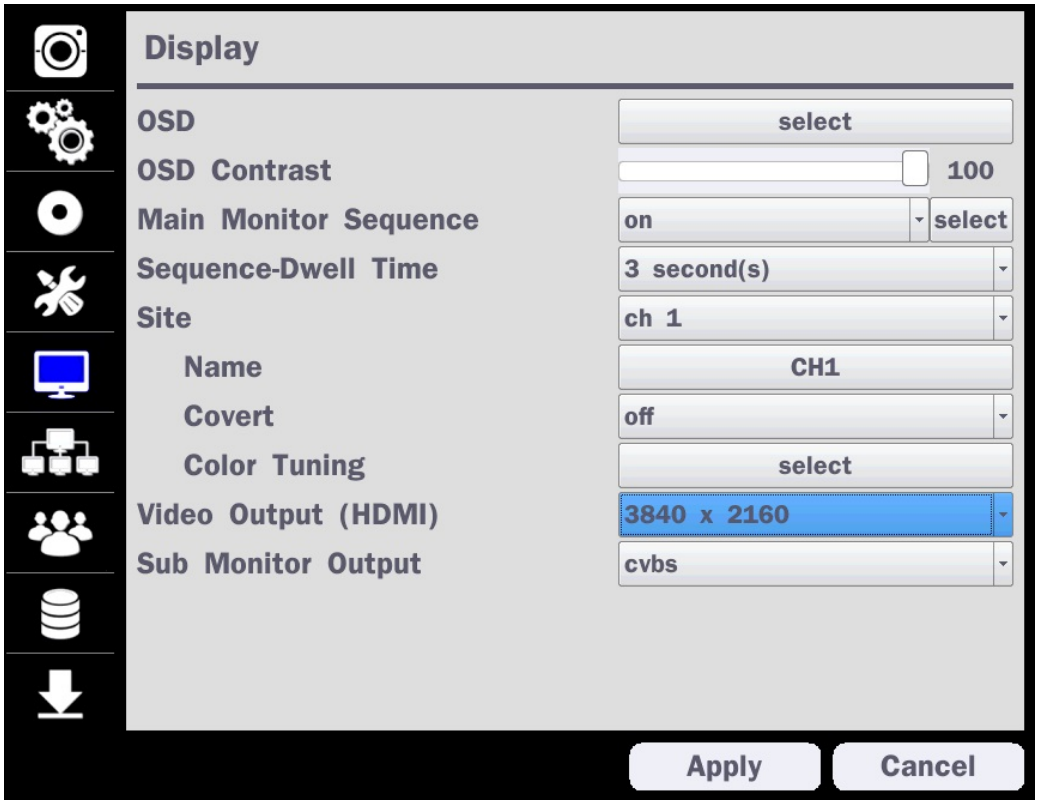
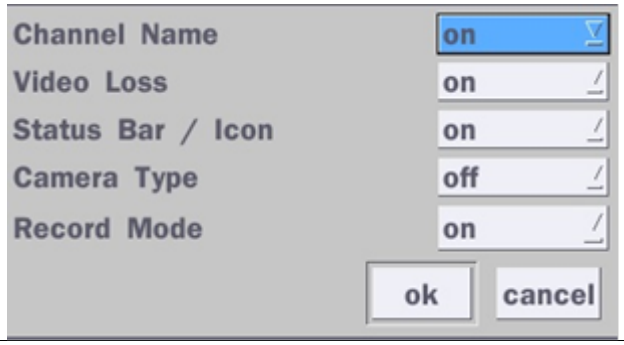
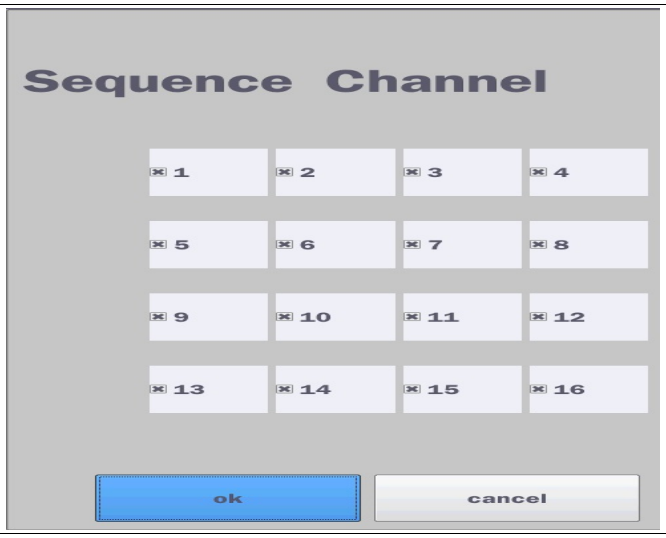
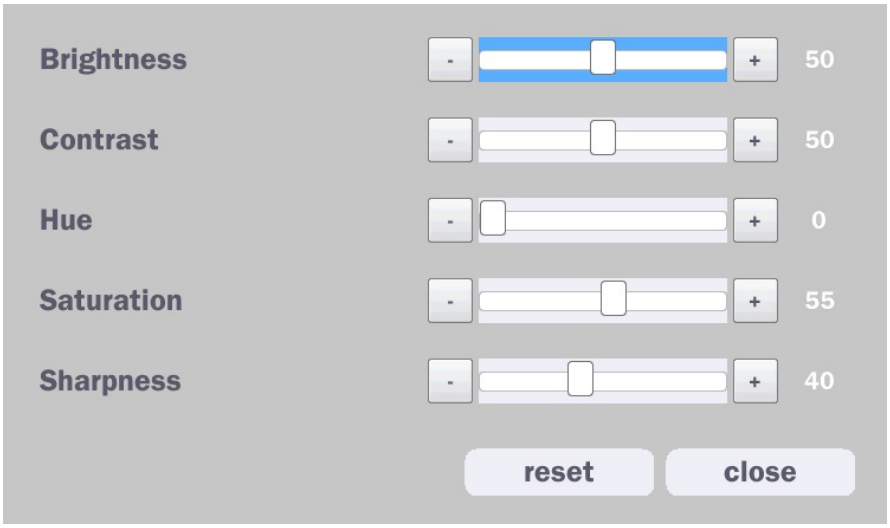


Figure 4.5. DISPLAY Setup Screen

Table 4.5. Menu Items in DISPLAY Setup Screen

Item	Description
OSD	Enable/disable on-screen-display. 
OSD CONTRAST	Set the transparency level of the On Screen Display (OSD) (50~100)
MAIN MONITOR SEQUENCE	Enable/disable sequential display of video in full screen mode.



SEQUENCE DWELL TIME	Set the dwell time of each, single channel display in sequential display mode (3~60seconds)
SITE	Select a channel to apply the name and covert settings change using the mouse or the remote control. Select a channel to apply the following settings using the mouse.
NAME	Set the channel name. Press the right square button and set the channel name and select OK using the mouse. The name can be made up to 36 characters.
COVERT	Enable/disable display of the specified video channel in live display.
COLOR TUNING	 **Brightness**: Change the brightness value. (0~100) **Contrast**: Change the contrast value(0~100) **Hue**: Change the hue value(0~100) **Saturation**: Change the saturation value(0~100) **Sharpness**: Change the sharpness value(0~100)
VIDEO OUTPUT (HDMI)	Select video output resolution, Support 3840x2160, 2560x1440, 1600x1200, 1280x1024, 1920 X 1080, 1280 X 720
SUB MONITOR OUTPUT	Select Sub Monitor Video out. CVBS or SPOT

4-6. Setup – NETWORK Mode

Select the NETWORK tab. Then, the network menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control.

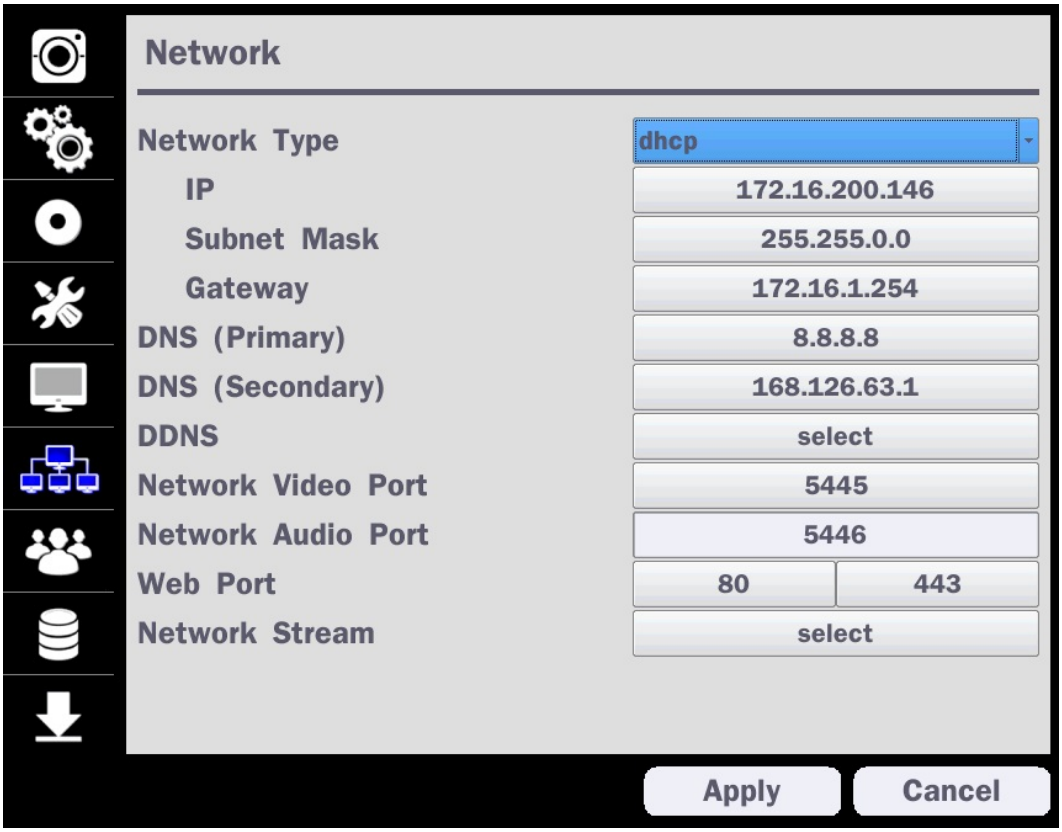


Figure 4.6. NETWORK Setup Screen

Table 4.6. Menu Items in NETWORK Setup Screen

Item	Description
NETWORK TYPE	**DHCP:** DVR will automatically retrieve an IP address. **STATIC:** Network information must be manually configured.
IP	Enter IP address that is assigned for the DVR
SUBNET MASK	Enter Subnet Mask that is assigned for the DVR
GATEWAY	Enter Gateway that is assigned for the DVR.
DNS (PRIMARY)	Enter Primary DNS address that is assigned for the DVR
DNS (SECONDARY)	Enter Secondary DNS address assigned for the DVR
DDNS	Dynamic Domain Name System (DDNS) allows a DNS name to be constantly synchronized with a dynamic IP address. In other words, it allows using a dynamic IP address to be associated with a static domain name so others can connect to it by the static name. Enable/disable using domain name address through DDNS server.
NETWORK VIDEO PORT	Enter the port number. (Default 5445)
NETWORK AUDIO PORT	Display the network audio port (NETWORK PORT + 1).

WEB PORT/ HTTPS PORT	Enter the port number for connection using web. (Default web port : 80, Default https port : 443)
NETWORK STREAM	Sets the camera display settings for network streaming.

4-6-1. Network Types

4-6-1-1. DHCP

An IP address is automatically assigned by the DHCP server, which automatically assigns the IP address and other parameters to new devices.

4-6-1-2. STATIC

IP address, Subnet Mask, Gateway, and DNS are manually assigned by the user.

- IP ADDRESS: The fixed IP address of the DVR unit.
- SUBNET MASK: The subnet mask for the LAN.
- GATEWAY: The IP address of the Gateway.
- DNS (PRIMARY) The primary address of Domain Name Server
- DNS (SECINDARY): The secondary address of Domain Name Server

NOTE

Unless DNS is properly set, the DDNS and the e-mail features will not work.

4-6-2. DDNS

DDNS (Dynamic Domain Name System) allows a DNS name to be constantly synchronized with a dynamic IP address. It allows using a dynamic IP address to be associated with a static domain name.

Once the setting is completed, the DDNS address will be:

http://**hostname**.ddns.specoddns.net

For example, if you enter the host name as “D16HU”, then the address will be:

http://D16HU.ddns.specoddns.net

Select NETWORK>DDNS. The menu displays as below.

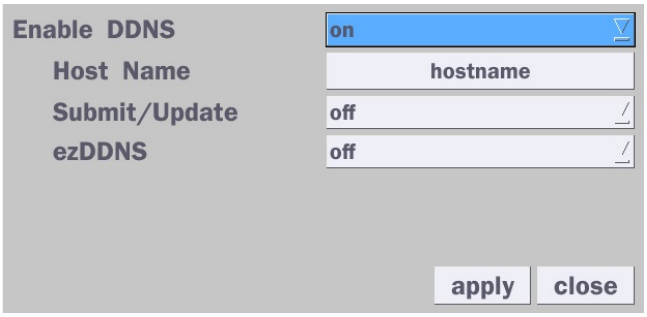


Figure 4.6.3. NETWORK Setup Screen – DDNS

Table 4.6.2. DDNS

Item	Description
ENABLE DDNS	Turn DDNS on/off
HOST NAME	This item allows the user to setup a domain name manually, using virtual keyboard displays as shown.
SUBMIT/UPDATE	When manual host name input is done, move the cursor to this item and select ON to submit the settings.
ezDDNS	Enable/disable ezDDNS to register the host name automatically.

4-6-3. Network Port and Web Port

Connecting DVR/DVRs through a common IP sharing device, each DVR must be assigned a unique TCP port number for access from outside the LAN. This port number is displayed on NETWORK>NETWORK PORT Setup MENU.

NOTE:

If you access the DVR only within the same LAN, the TCP port number does not need to be changed.

Network access beyond a router

To access DVR beyond a router (firewall), you must open the proper TCP ports for live/playback streaming, for commands, for remote backup, and for audio streaming. If these ports are not opened properly, you can't access the DVR beyond a router.

- **For live/playback streaming, for commands, for remote backup**: Open the port number on NETWORK>NETWORK PORT menu. The default port number is 5445.
- **For bi-directional audio:** Open the port number on NETWORK AUDIO PORT. The default port number is [NETWORK PORT number + 1].
- **For web-viewer downloading and remote firmware upgrading**: Open the port number on NETWORK>WEB PORT menu. The default port number is 80.

4-6-4. Network Stream

User can set the RESOLUTION, FRAME RATE, and the QUALITY for the network stream.

- D16HU: Up to 30fps @ 640x360 per channel.
- D8HU: Up to 30fps @ 640x360 per channel.

<Note> Individual Channels can be set with different RESOLUTION, FRAME RATE, and QUALITY.

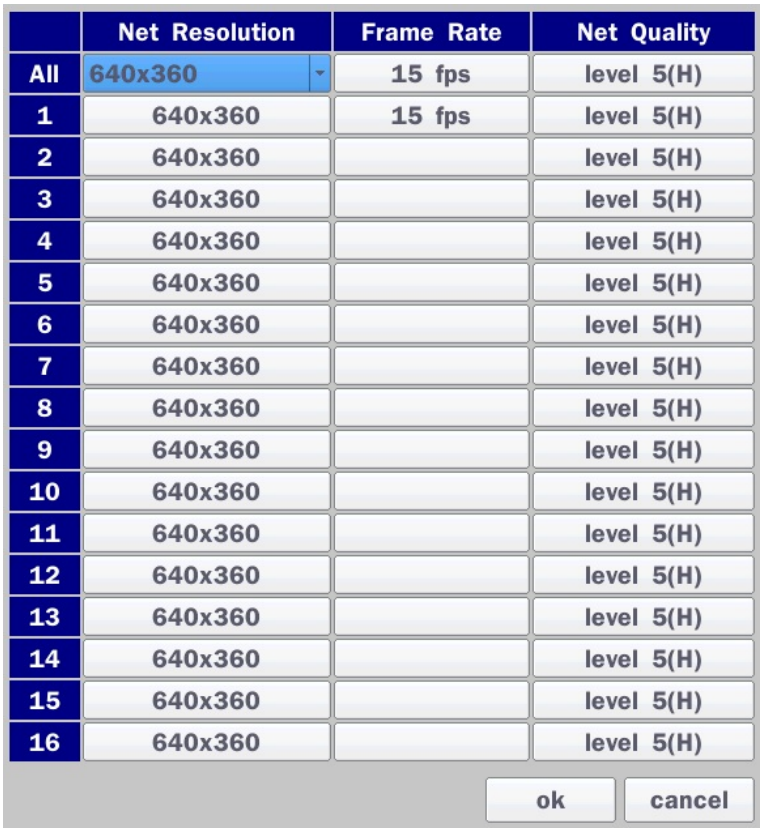


Figure 4.6.4. NETWORK Setup Screen – Network Stream

4-7. Setup – USER MANAGEMENT Mode

In the SETUP menu, select the USER MANAGEMENT tab. Then, the USER MANAGEMENT menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control.

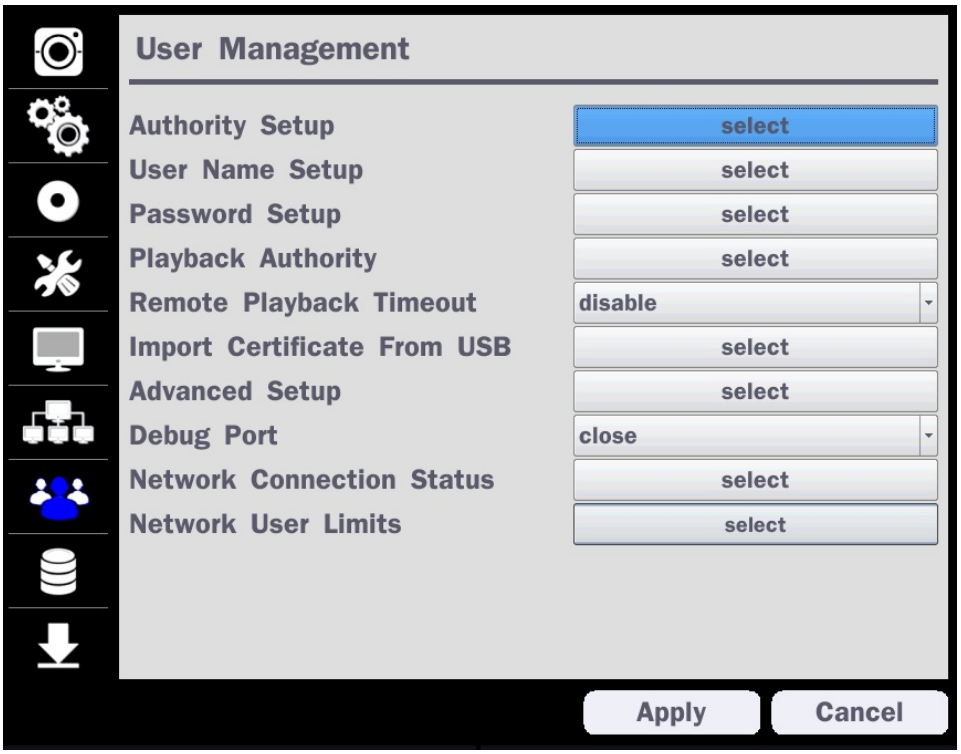
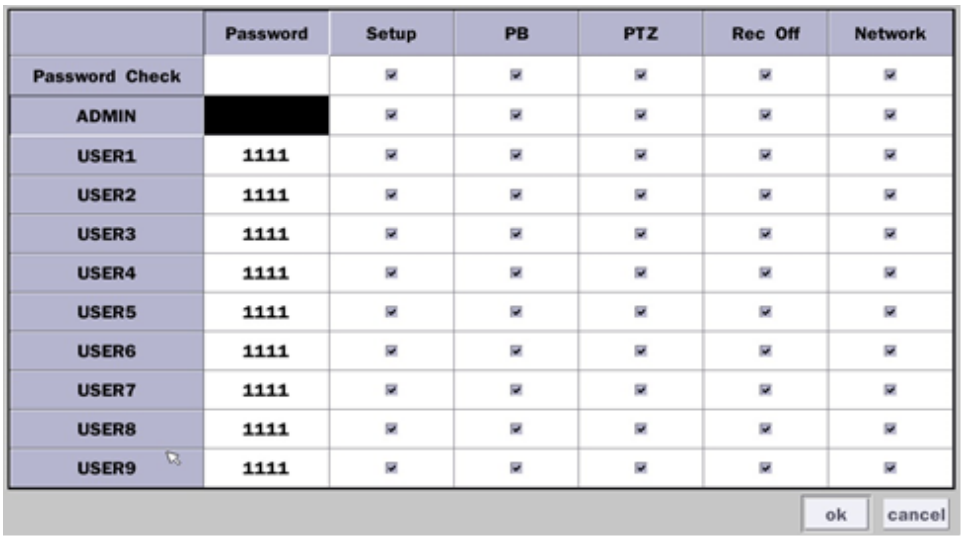
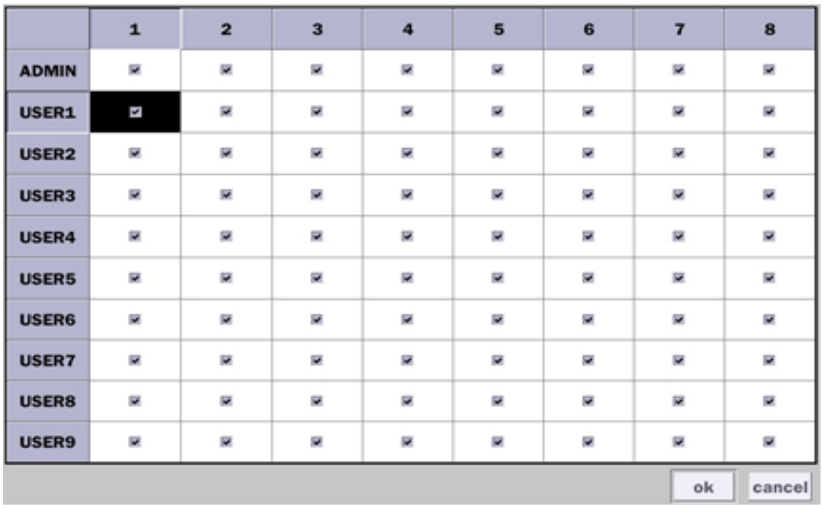
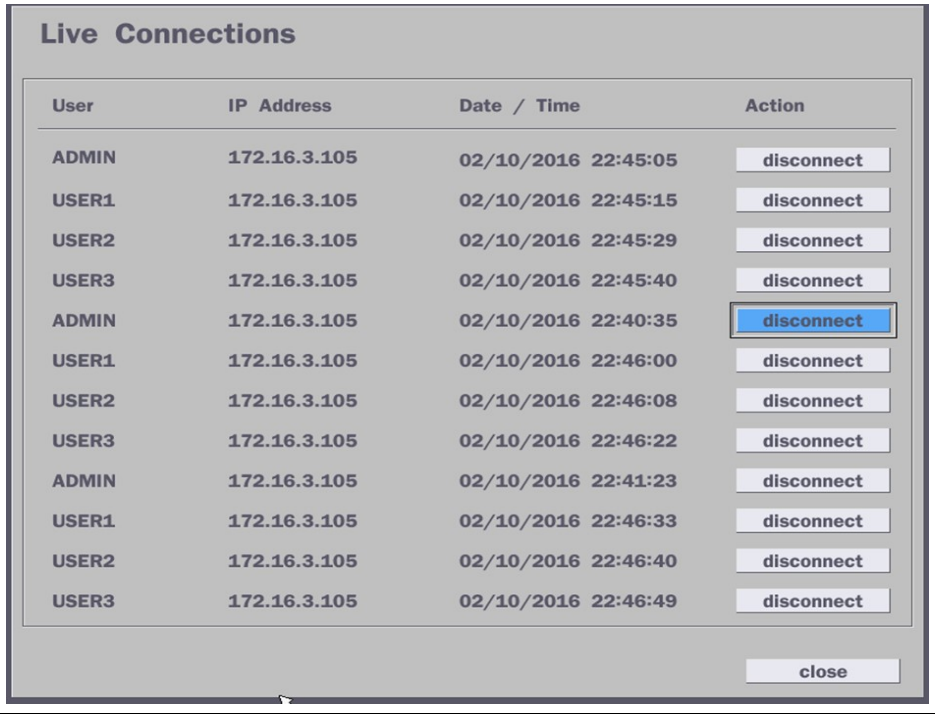
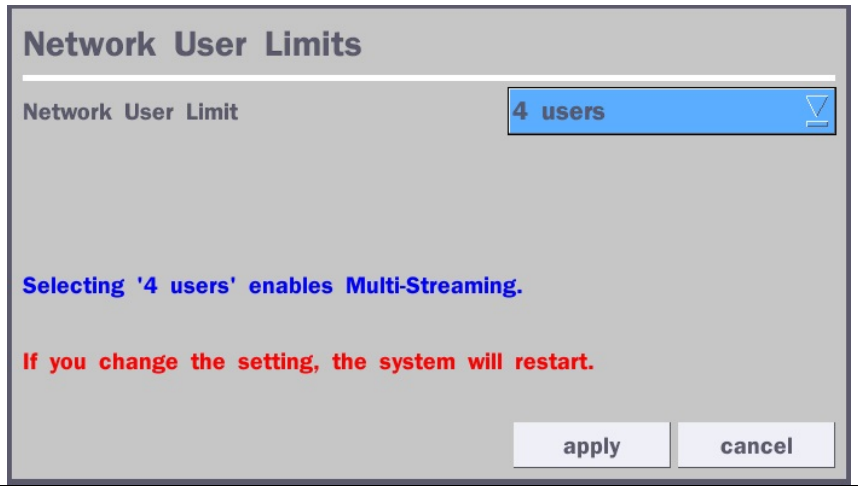


Figure 4.7. USER MANAGEMENT Setup Screen

Table 4.7. Menu Items in USER MANAGEMENT Setup Screen

Item	Description
AUTHORITY SETUP	Only the Admin will have access to the menu. **PASSWORD CHECK:** Select the Checkbox to enable the functions or leave the Checkbox blank to disable the functions. • **SETUP: Enable/Disable of access to Setup** • **PB: Enable/Disable of access to Playback** • **PTZ: Enable/Disable of access to PTZ Control** • **REC OFF: Enable/Disable of manual Record** • **NETWORK: Enable/Disable of access to Network** Selected Checkbox: The DVR will ask for a password when the given function is selected for all users. Blank Checkbox: The DVR will not ask for a password when the given function is selected for all users.  **ADMIN, USER1, USER2, USER3, USER4, USER5, USER6, USER7, USER8, USER9:** Selected Checkbox: The user can access the function. Blank Checkbox: The user cannot access the function.
USER NAME SETUP	Change the name of USER1, USER2, USER3, USER4, USER5, USER6, USER7, USER8, and USER9. Click “select” and change the user name on the virtual keyboard.
PASSWORD SETUP	Options are ADMIN, USER1, USER2 USER3, USER4, USER5, USER6, USER7, USER8 and USER9. Select USER PASSWORD using the mouse or the remote control and press SEL button. Select user type and enter the current password. And, enter a new password, enter the same password again to confirm and select OK. Then the message

	"PASSWORD CHANGED" is displayed. **It is highly recommended to assign a new password to protect the system.**
AUTHORITY OF PLAYBACK	Set authority level of playback on each user. **Checked box**: authorized to playback. **Blank check box**: no authority. 
REMOTE PLAYBACK TIMEOUT	Disconnect the remote playback after the specific time (Disable, 5min, 10min, 15 min, 30min, 60min.
IMPORT CERTIFICATATE FROM USB	Upload https certificate through USB
ADVANCED SETUP	Send IP address and ports information to the control center
DEBUG PORT	Open or Close the ports for remote checking
Network Connection Status	Shows the current network connection status (User, IP Address, Date/Time). And do disconnect the user's network connection to click 'disconnect' button. 

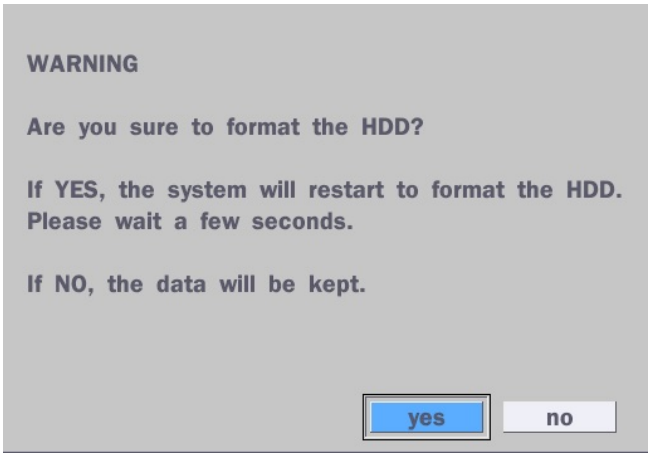
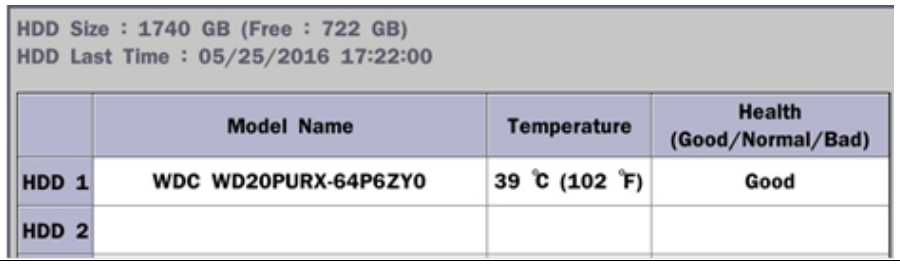
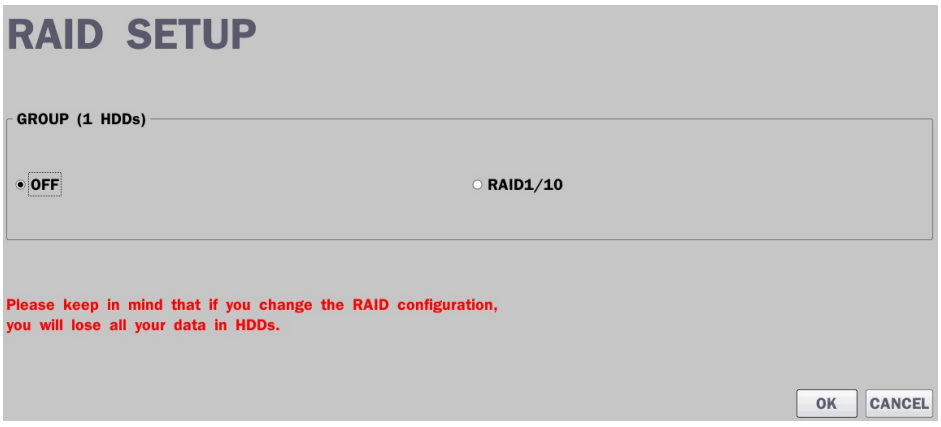
Network User Limits	User can select network access user number (4 users of 12 users). DVR system will be restarted if user change this network user number. 

4-8. Setup – STORAGE Mode

In the SETUP menu, select the STORAGE tab. Then, the STORAGE menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control.

Figure 4.8. STORAGE Setup Screen

Table 4.8. Menu Items in STORAGE Setup Screen

Item	Description
OVERWRITE	When enabled, the DVR will continue recording and overwrite the oldest existing recorded data once the hard drive is full. When disabled, recording will stop once the hard drive is full.
DISK FORMAT	You will have an option of YES or NO for formatting the Hard Drive. After formatting HDD, the DVR will reboot. **Caution: It is recommended to archive any data that you may need in the future before formatting the hard drive.** 
DISK INFO	Hard drive information. Displays the following information; 
RECORDING LIMIT	Enable/disable recording limit.
RECORDING LIMIT DAYS	Set the recording limit days. (1- 90 days). If the RECORDING LIMIT DAYS are set to 1, the data will be overwritten after 24 hours.
RAID SETUP	Select RAID Off or RAID1/10 If the RAID configuration is changed, the data on HDD will be lost. 

4-9. Setup - CONFIG Mode

In the SETUP menu, select the CONFIG tab. Then, the configuration menu is displayed as pictured below. Navigate through the menu items or change the settings using the mouse or the remote control.

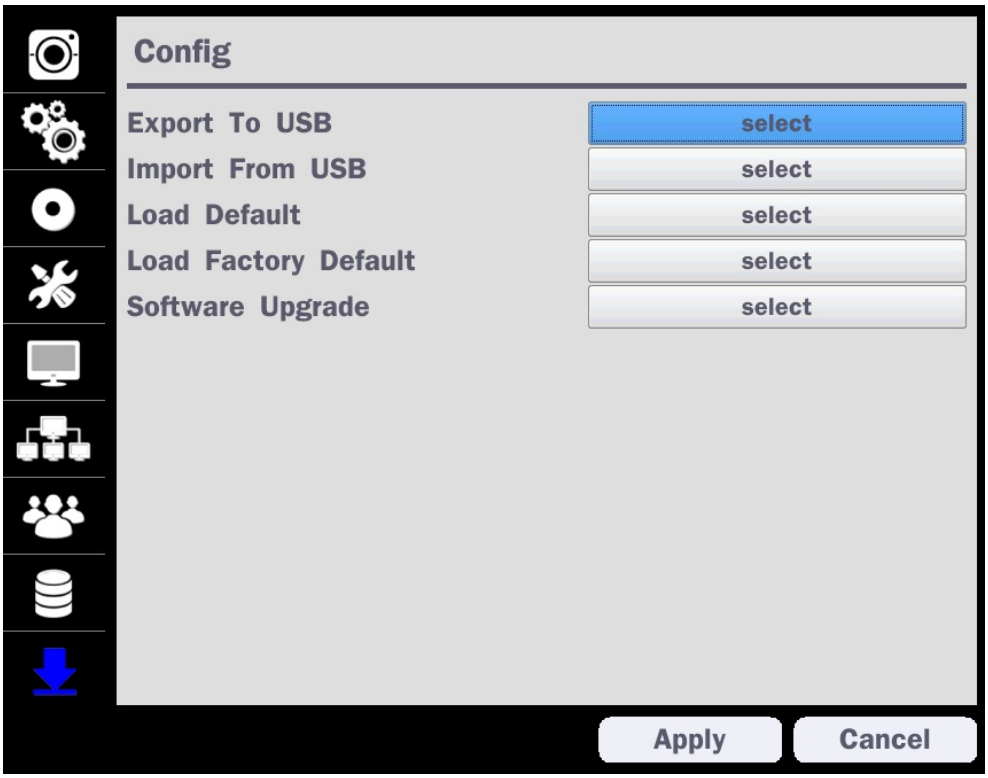


Figure 4.9.1. CONFIGURATION Setup Screen

Table 4.9.1. CONFIGURATION Setup

Item	Description
EXPORT TO USB	User can save the current configuration (Setting values) of the DVR to the USB flash drive. Plug in the USB flash on the front panel and press the button to start the saving process.
IMPORT FROM USB	User can upload the configuration of the DVR to another DVR using the USB. Flash drive. Plug in the USB flash drive on the front panel and press the button to start the loading process.
LOAD DEFAULT	Press the button to reset the system to the default settings. The following settings such as **Language, DVR ID, Security User Authentication, Security User P/W, Date format, DLS settings, Network settings, HDD overwrite, Limit recording, HDD serial number, and HDD ERROR time** will not be included.
LOADFACTORY DEFAULT	Press the button to reset the system to the factory default settings.
SOFTWARE UPGRADE	Upgrade softeware to the latest version. After connecting USB flash drive to USB port on the DVR, click SEARCH. It will automatically find the upgrade file.

4-9-1. Firmware Upgrade

1. Create a new folder named “upgrade” in the USB flash drive root directory.
2. Create sub-folder for each model under “upgrade” folder and copy each firmware.
    - For D16HUModels:
        - Folder name – “d16hu
        - File name – “main_D16HUspeco_*.*.*_201****”.bin
    - For D8HU Models:
        - Folder name – “d8hu
        - File name – “main_D8HUspeco_*.*.*_201****”.bin
3. Plug in the USB flash drive on the rear panel.
4. Navigate to CONFIG menu of SETUP.
5. Select SOFTWARE UPGRADE.
6. Follow the procedure from Figure 4.9.2 to Figure 4.9.4.

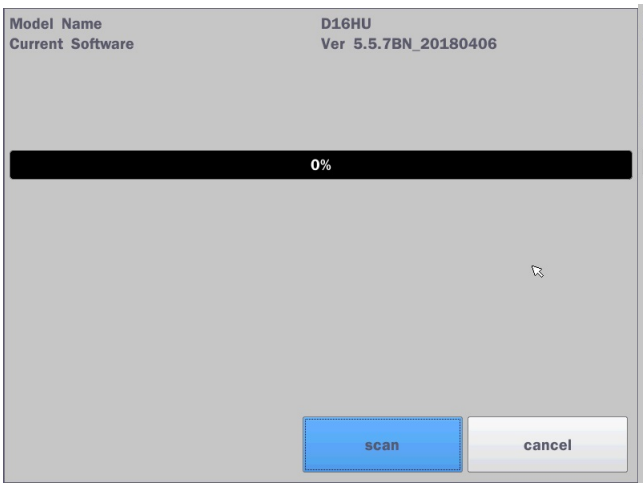


Figure 4.9.2

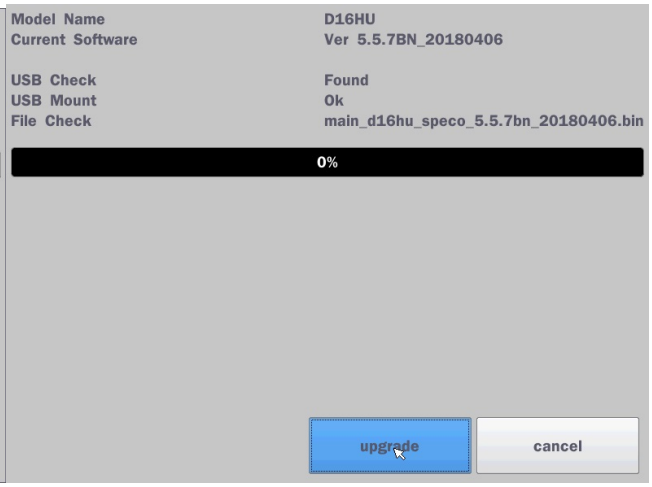


Figure 4.9.3

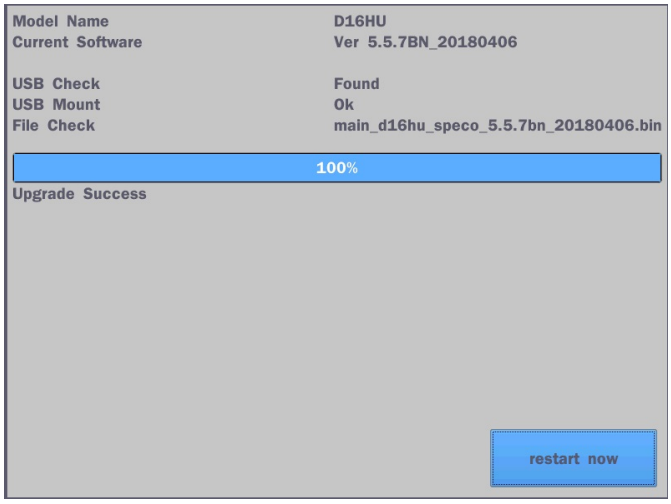


Figure 4.9.4

NOTICE

If selecting REBOOT NOW when the USB flash drive is plugged, the WARNING message will pop up. Remove the USB flash drive and select OK.

5. Live, Search and Playback

5-1. Live View

In the Live screen, video inputs from the cameras are displayed as they are configured in the Display Setup screen. When the mouse is right clicked, and the quick operation window will be displayed as below.

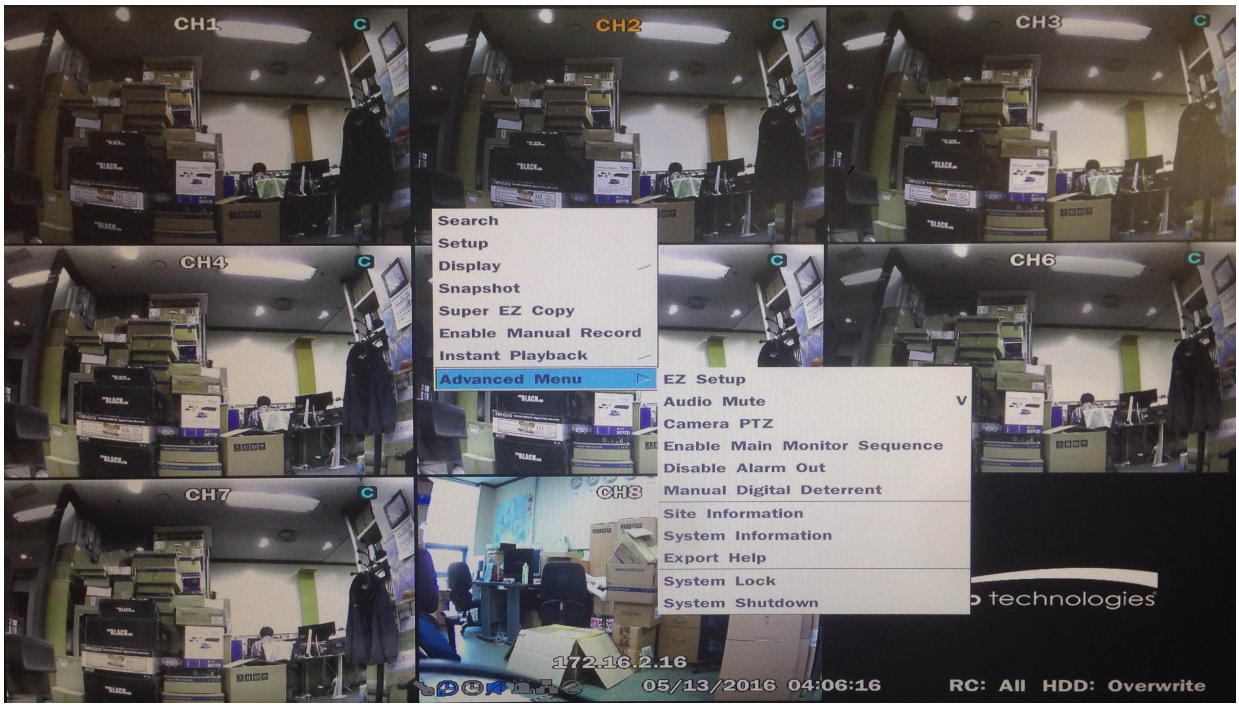


Figure 5.1.1. Live Screen and Quick Operation Window

On the bottom of the screen, various On-Screen Display (OSD) symbols, which indicate the status of the DVR, are described in Table 5.1.1.

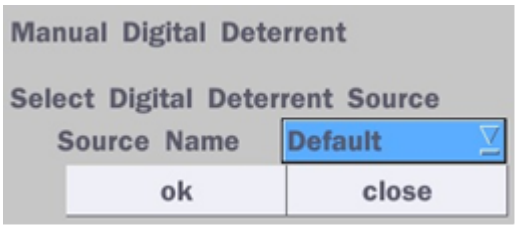
Table 5.1.1. Status Indicator Icons in Live Viewing Screen

Icon	Description
	Indicates the DVR is locked. Note) to unlock, right click on the live view screen and select on Unlock.
	Audio mute. Audio channel output can be selected from the quick operation menu
	Indicates that alarm is set.
	Indicates that alarm output is activated.
	Event indicator. When there is an event (motion recording, video loss, HDD fail, S.M.A.R.T), this icon will be highlighted.
	Indicates that a network client is connected to the DVR.

	Indicates that sequencing mode is enabled.
2009/04/14 17:23:40	Displays the current date and time.
RC: ALL	Remote control ID display. If a remote ID is not set, the message “ALL” is displayed.
	When Overwrite is not enabled, this displays the percent of the hard disk usage from 0-99%. When Overwrite is enabled, the Bar will indicate with Overwrite
	Continuous recording in progress.
	Manual recording in progress. To set the Manual recording mode, press the Record button on the front panel.
	Motion alarm recording in progress.
	Sensor recording in progress.

Table 5.1.2. Menu Items in Quick Operation Window

Icon	Description
Search	Select this option to enter the Search menu.
Setup	Select this option to enter the Setup menu.
Display	Display layout. Select between different multi-view display formats. D8HU: 1x1, 2x2, 3x3; D16HU: 1x1, 2x2, 3x3, 4x4
Aspect Ratio	Select ‘Auto Stretch’ or ‘Pass Through’
Snapshot	Click this option to create a snapshot of selected channel image. (BMP Still Image)
Super EZ Copy	Direct Backup of the selected channel to USB flash drive without going through the search mode.
Enable Manual Record	Manual Record button. Click this button to enable manual recording. Also known as Panic Record.
Advanced Menu	
EZ Setup	Select this option to start EZ Setup Wizard
Audio	Select this option to set an audio channel to output; (Channel 1 through 4, Audio Mute).
Camera PTZ	Select this option and the PTZ user interface will appear.
Enabel Main Monitor Sequence	Select this option to enable/disable sequence function.
Disable Alarm Out	Click this button to enable/disable Alarm outputs
Manual	Window where users can manually trigger the digital deterrent audio

Digital Deterrent	“Right now it just says “use”. 
Site Information	Press the button to view the record setting of a selected channel.
System Information	Press the button to view the system information.
Export Help	Displays window with instructions for exporting video.
System Lock	Locks the DVR from user access.
System Shutdowm	Click this button to shutdown system.

5-1-1. PTZ Control

Table 5.1.3. Menu Items in PTZ Control Window

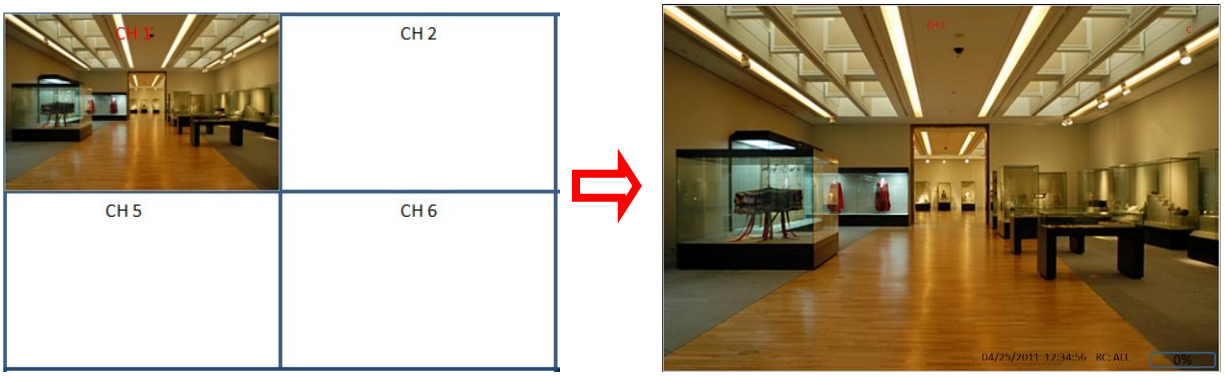
Image	Item	Description
	INITIALIZE	Initialize the PTZ settings of the selected camera
	PAN/TILT	Select PAN/TILT using the ▲▼◀ and ▶button, then press SEL. Adjust the tilt (UP/DOWN)/pan (LEFT/RIGHT) position using the ▲▼◀and ▶ buttons.
	ZOOM/FOCUS	Select ZOM/FOCUS using the▲▼◀ and ▶ buttons, then press SEL. Adjust the zoom (UP/DOWN)/ focus (LEFT/RIGHT)position using the ▲▼◀ and ▶ buttons.
	OSD	Select OSD to enter the menu. Control keys are Right, Left, UP, Down, Select, Far (REW KEY), and Near (FF KEY). Press the ESC button to return to the previous menu. Press the PTZ button to close the OSD menu.

	AUTOSCAN	Press the right key(▶) to start auto scan. Press the left key (◀) to stop auto scan.
	PRESET	Select PRESET, then press the left key(◀). A number input window will appear. Set the number (3digits) using the number key, then press the SEL to confirm the preset number for the current position. Press the right key (▶) and enter the number (3digits) to go to the preset position.
	TOUR	Select TOU and press the right (▶) key. A number input window will open. Select a number (1digit) using a number key, then press SEL to start the tour. Press the left (◀) key to stop the tour. Preset the number of the tour group in the OSD menu.
	NUMBER	For the TOUR and PRESET menu.
		Press ESC to return to the main menu

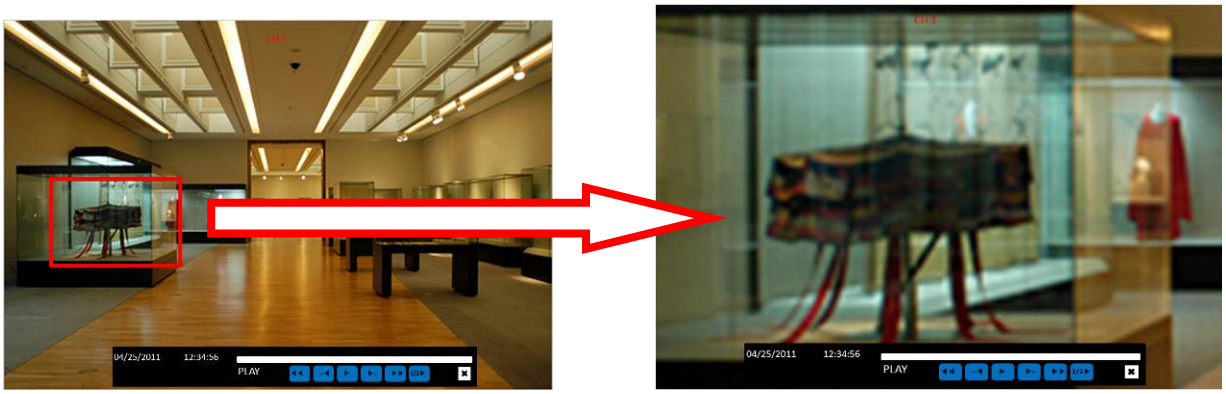
5-2. Digital Zoom in Live and Playback Screen

HU series supports Digital Zoom feature during live and playback mode.

1. Double click the target channel.



2. Click the left button of the mouse and drag to make rectangular shape.



5-3. Search Screen

To enter the search screen menu, select Search menu on the screen using the mouse or press Search icon on live screen.

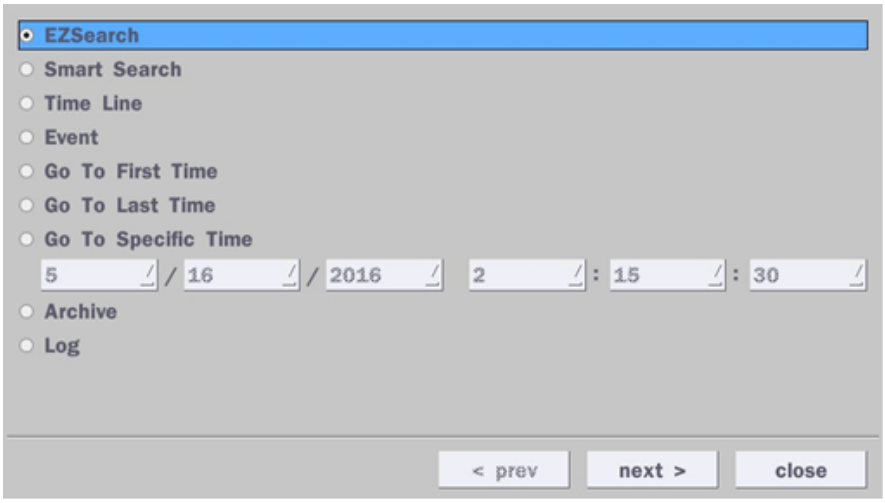


Figure 5.3.1. Search Screen

There are 7 options in the Search Menu, they are: EZSearch, Smart Search, Time Line (Calendar), Event, Go To First Time, Go To Last Time, Go To Specific Time, Archive list, and Log list on the screen.

5-3-1. EZSearch

The EZSearch window is used to find stored video with ease using the thumb nail playback screen.

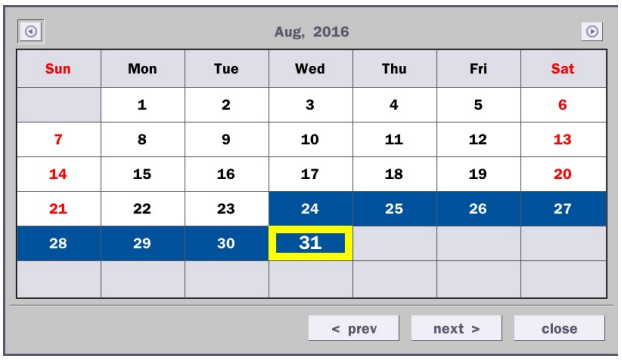


Figure 5.3.2. Calendar Screen

Figure 5.3.3. Channel Selection Screen

Step1. 24 Hourly Thumbnail Screen

Step2. Every 2 minutes and 30 seconds

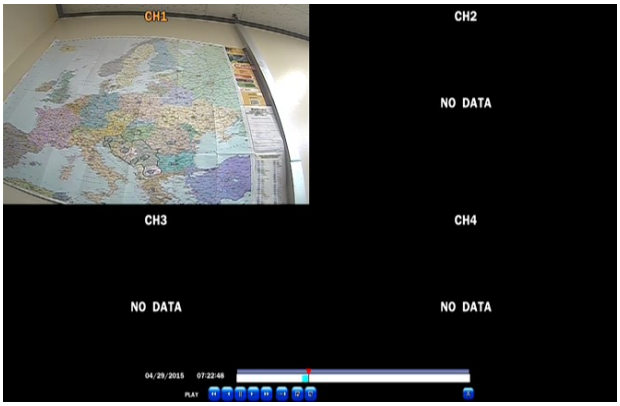


Figure 5.3.4. Second Thumbnail Screen

When the EZSearch menu is selected, a calendar is displayed that highlights dates with recorded data.

1. Select a specific date on the calendar.
2. Select a channel from Channel Selection Screen.
   Then the Thumbnail Search screen displays 24 thumbnails, one for each hour of the day.
3. Second step shows every 2 minutes and 30 seconds screen.
4. Playback the selected image.

5-3-2. Smart Search

Smart Search is search the selected area quickly. User can search need to know area.

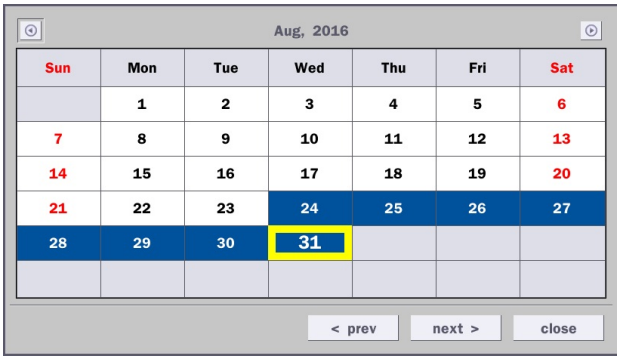
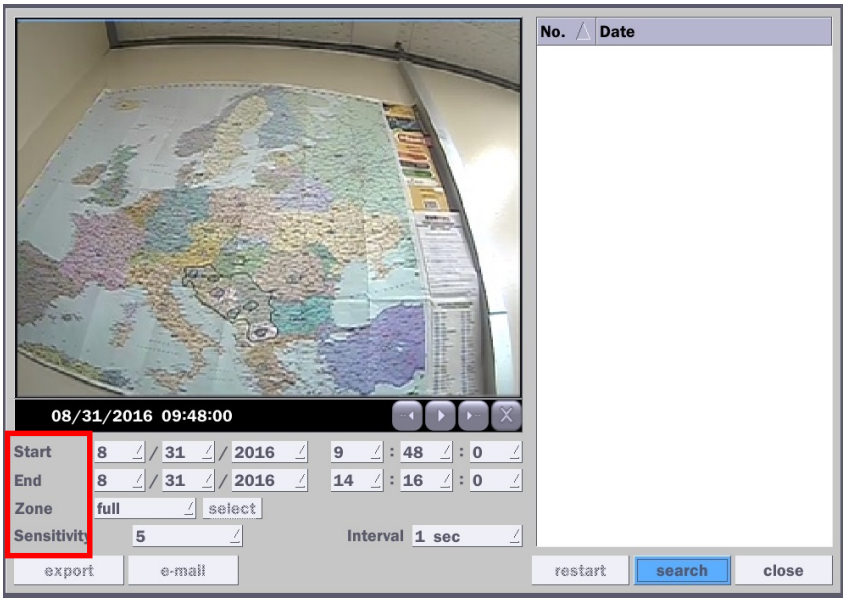
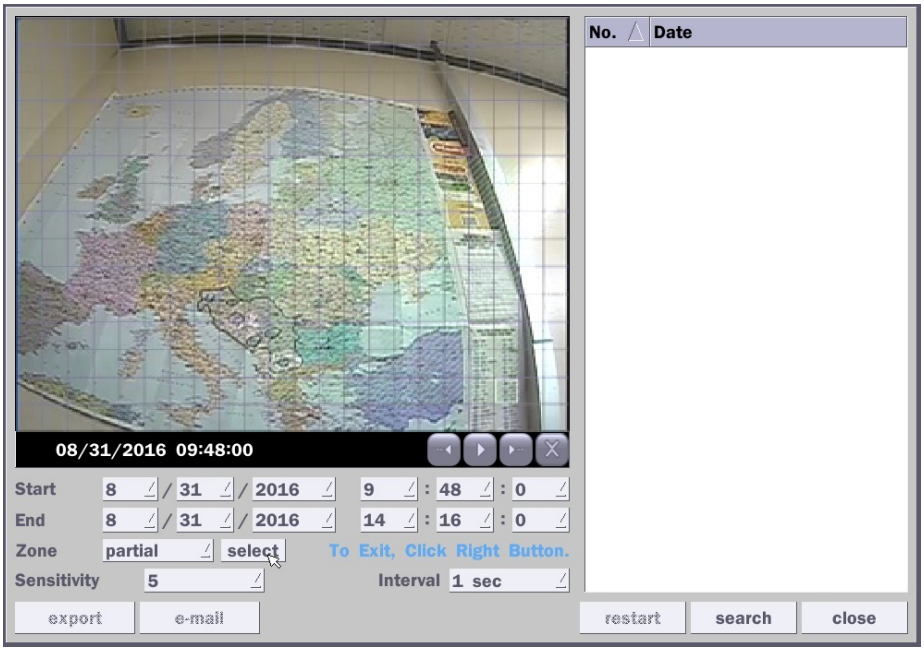


Figure 5.3.4. Calendar Screen

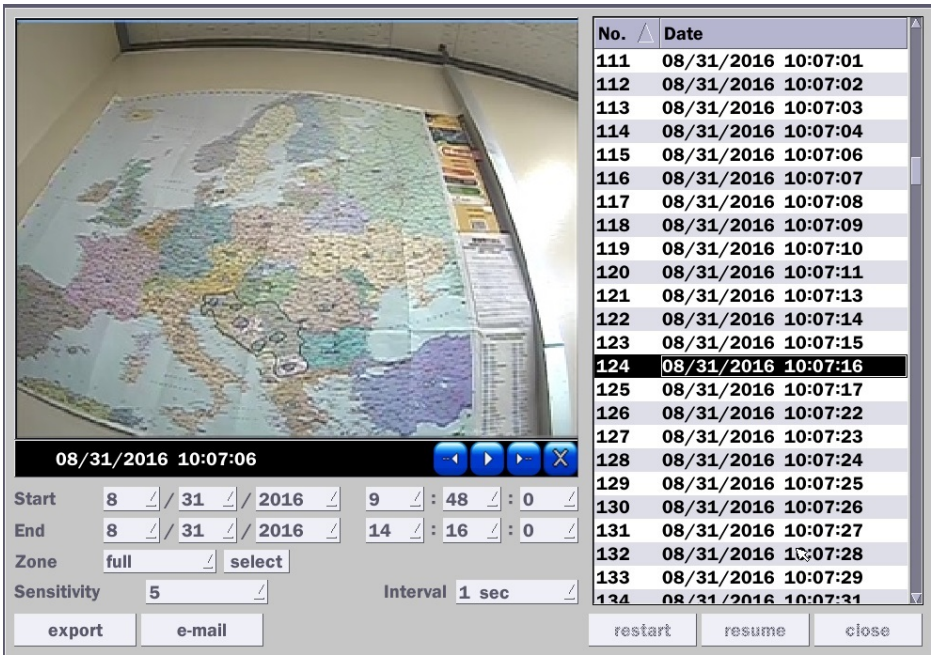
Figure 5.3.5. Channel Selection Screen



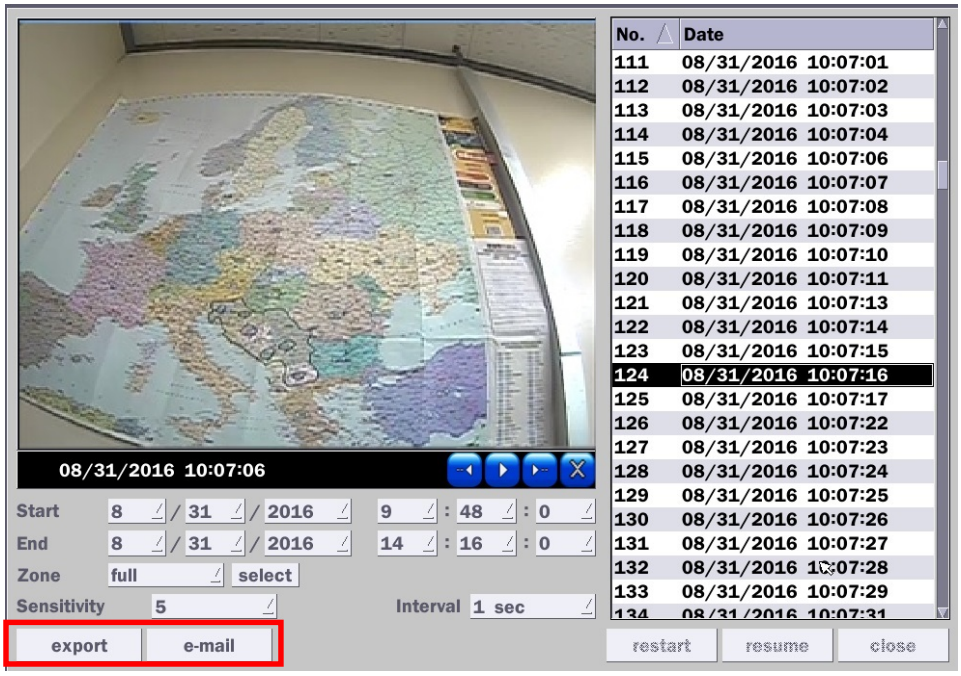
1) Select the start time and End time that user want to search
2) Set Zone as ‘Partial’ or ‘Full’
3) Partial zone can select the area that user want.



4) Click “select” button after selection as ‘Partial’ then user can drag the area.
5) Click **right mouse button** when the area selection was finished.
6) Select ‘search’ then show the detected motion lists at the right blank.



7) Click the list that user want to playback.



8) ‘export’ and ‘e-mail’ icon will be activate for backup or mail notice

5-3-3. Time Line Search

The Calendar Search window is used to find the stored video by using the time line bar.

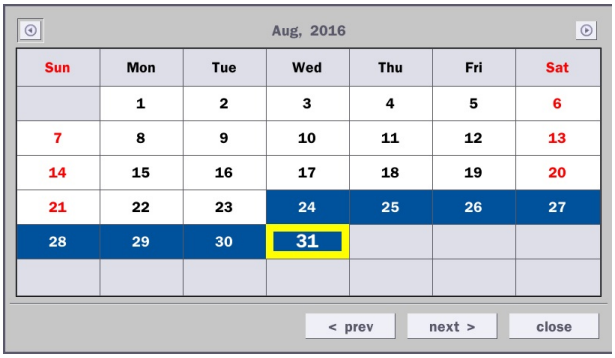


Figure 5.3.7. Calendar Screen

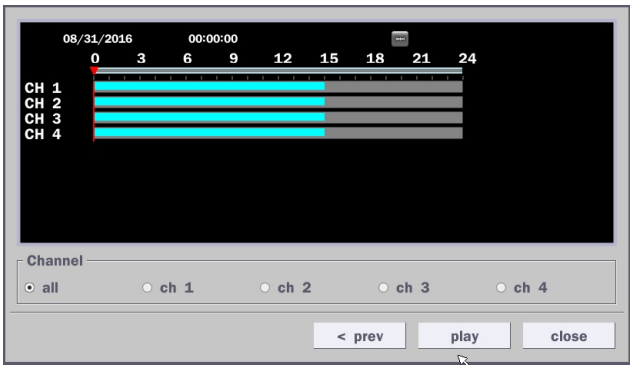


Figure 5.3.8. Time-Line Search Screen

When the Timeline menu is selected, the user can see a calendar, which displays recorded dates with highlights. Select a specific date and time. Click and drag the red time indicator bar to the desired hour. User can select a specific minutes using a button in the above red box. Press the “play” button after selecting the specific time. Press the “prev” to return to the Search window.

5-3-4. Event Search

The Event Search window is used to find stored video.

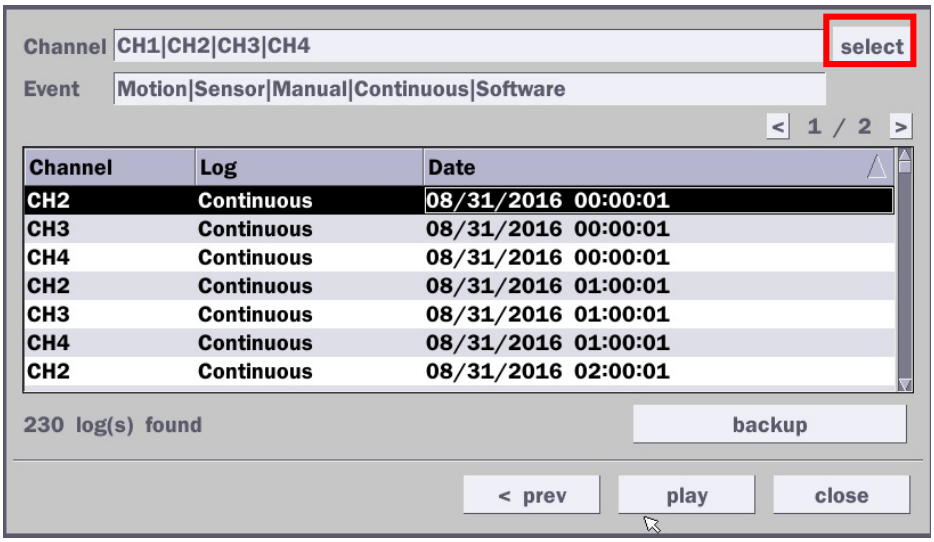


Figure 5.3.9. Event Search Screen

When the Event menu is selected, a calendar is displayed that highlights dates with recorded event data. Select a specific date and the event log will be displayed. After selecting the event, Press the “play” button to playback the recorded data or press the “backup” button to export the data. User can find a data of the specific channel and event using a button in the above red box as following Figure 5.3.9. Press the “prev” to return to the Search window.

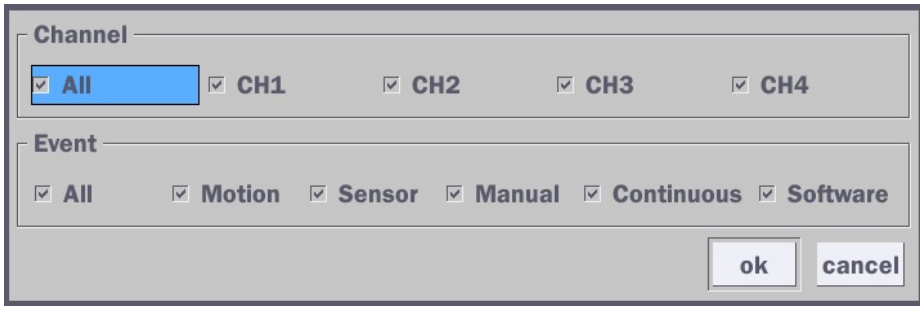


Figure 5.3.10. Event Search Screen

5-3-5. Go To First Time

You can access the oldest recorded data on the DVR hard drive by selecting Go To First Time on the Search window. Press the “prev” to return to the Search window.

5-3-6. Go To Last Time

You can access the latest recorded data on the DVR hard drive by selecting Go To Last Time on the Search window. Press the “prev” to return to the Search window.

5-3-7. Go To Specific Time

User can search for video data from a specific instance by setting the date and time in the GO TO SPECIFIC TIME menu. Use the mouse or the remote control to change the date and time value and press the PLAY button after setting. If there is no video data in the set date and time, No Data Exist message displays.

5-3-8. Archive List

The ARCHIVE Search window is used to find previously stored video or images.

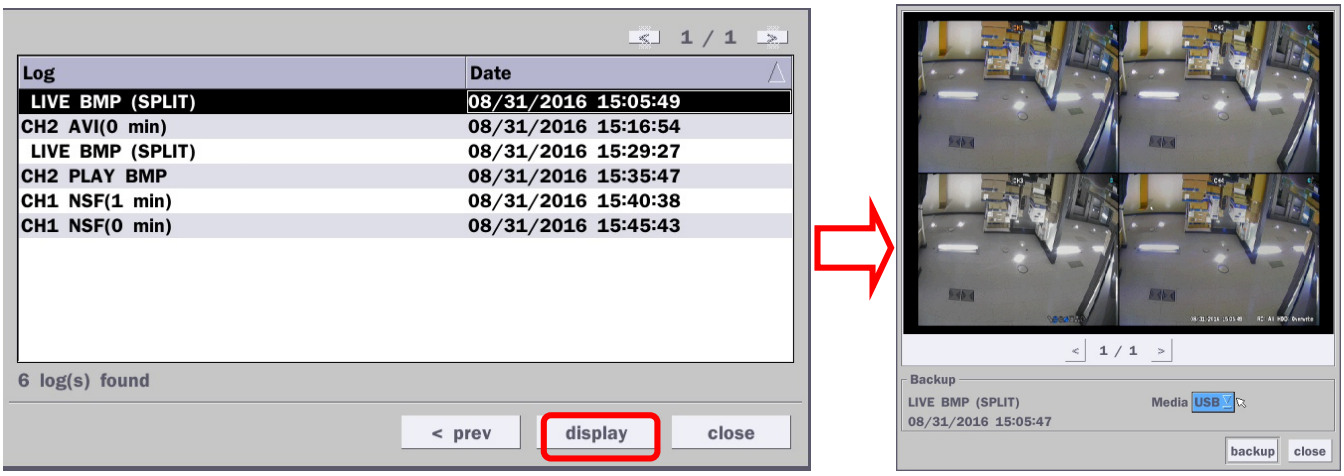


Figure 5.3.11. Archive Search Screen

When the Archive menu is selected, the user can see a calendar, which has archive data. Select a specific date and then the archived data will be displayed. Press the Display button to view the still image or the first frame of the selected video, then the user can export the selected data.

5-3-9. Log List

You can access the LOG list search screen by selecting LOG on the SEARCH window.

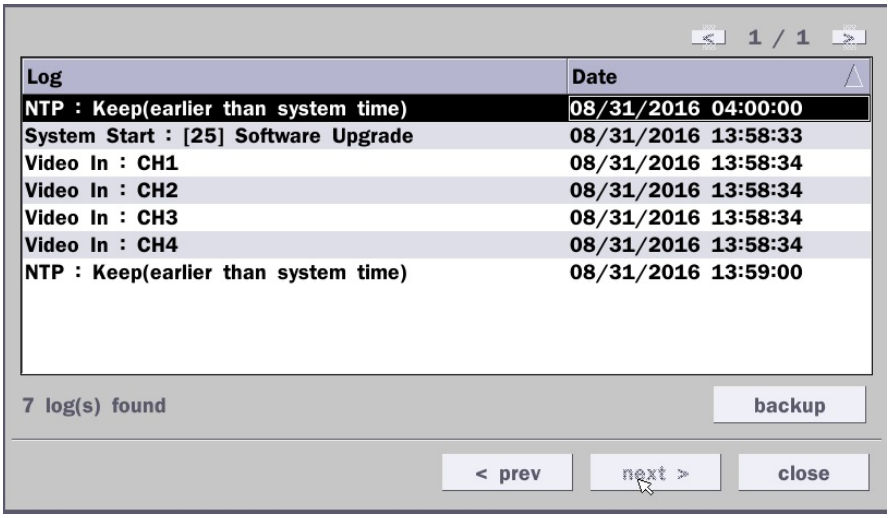


Figure 5.3.12. Log List Screen

When the Log menu is selected, the user can see a calendar, which has a log data. Select a specific date and press NEXT button, and then the log data will be displayed. Press the SAVE button to save the data and then the data is saved as a text file format.

5-4. Play Mode

During playback of a recorded event, the mode changes from SEARCH to PLAY. While in PLAY mode, you may return to the SEARCH screen by pressing the X button on the status bar.

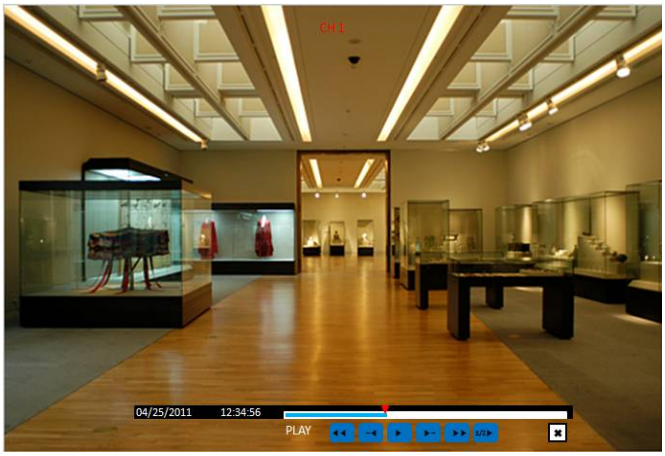


Figure 5.4.1. Play Mode Screen

The following status bar hides automatically and appears again if a mouse pointer is positioned to the bottom of the screen.

Table 5.4.1. Button Functions in PLAY Mode

Button	Description
	• 1x, 2x, 4x, 8x,16x for D8HU • 1x, 2x, 4x, 8x for D16HU Single Channel backward playback speed 1x, 2x, 4x, 8x, 16x, 32x, 64x

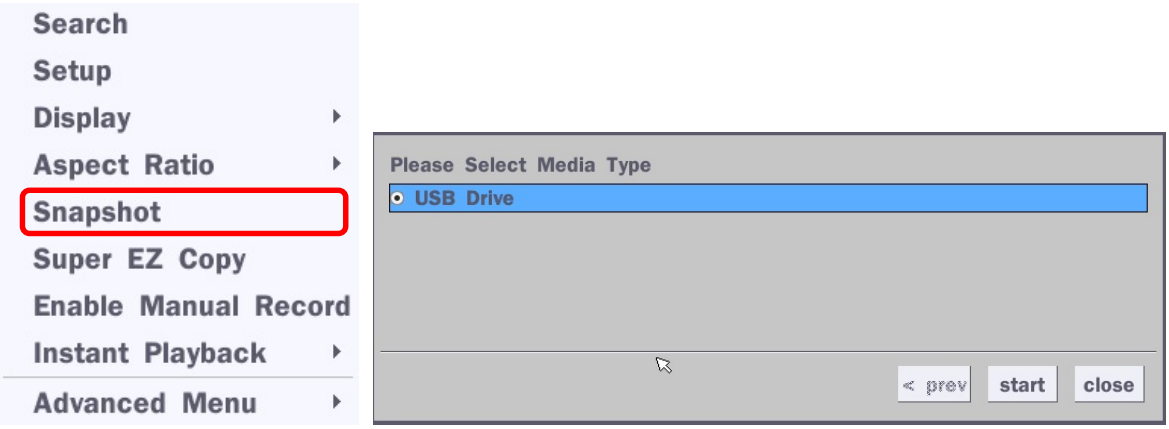
	Jump/Step backward. The playback position moves 60 seconds backward.
	Press to play or pause recorded video.
	Jump/Step forward. Playback position moves 60 seconds forward.
	• 2x, 4x, 8x,16x for D8HU • 2x, 4x, 8x for D16HU Single Channel forward playback speed 1x, 2x, 4x, 8x, 16x, 32x, 64x
	Slow Mode play. Forward playback speed x1/4, x1/2
	Press to back up the video. User can select archive file formats (Still image, NSF, AVI and EXE).
	EZCopy button. User can copy video data as NSF, AVI and EXE format.
	Return to the previous menu screen, search window, or exit from the Menu.

6. Export and Back Up

6-1. Still Image Backup onto USB Flash Drive

Still images can be captured and archived onto a USB flash drive or an USB external hard drive in live mode or while playing back recorded video.

1. Select a specific channel, which wants to back up on live screen.
2. When you press “Snapshot” button on Quick operation window, the media selection window screen will display.



3. Once you press “start” button, the system will capture a still image and archive onto a USB flash drive.

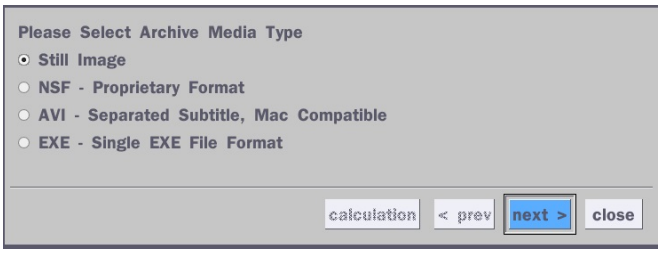
NOTICE

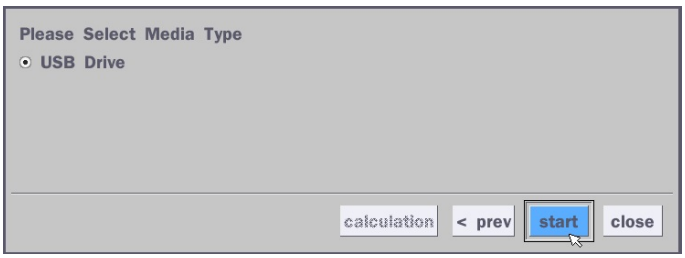
USB Flash Drive must be in FAT32 file format.

6-2. Video Backup onto USB Flash Drive during playback

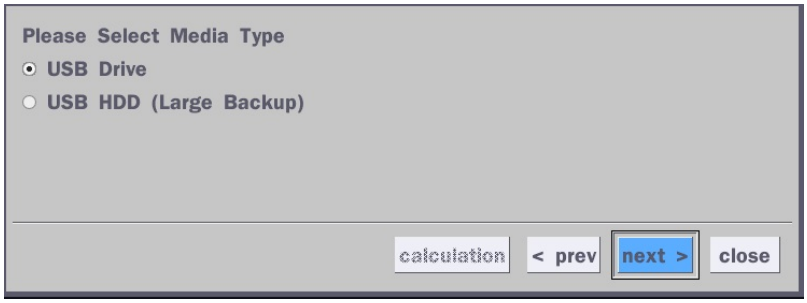
Video can be captured and archived onto the USB flash drive or a hard drive while playing back the recorded video. In playback mode, press the **"Export"** button to launch the backup function.

1. When you press **"Export"** button on the selected channel or all channels, the DVR will ask whether to archive a Still Image, NSF, AVI or EXE and select the proper media type.

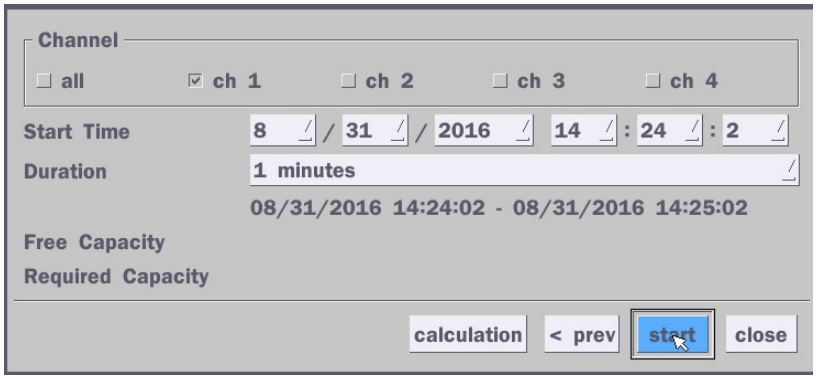




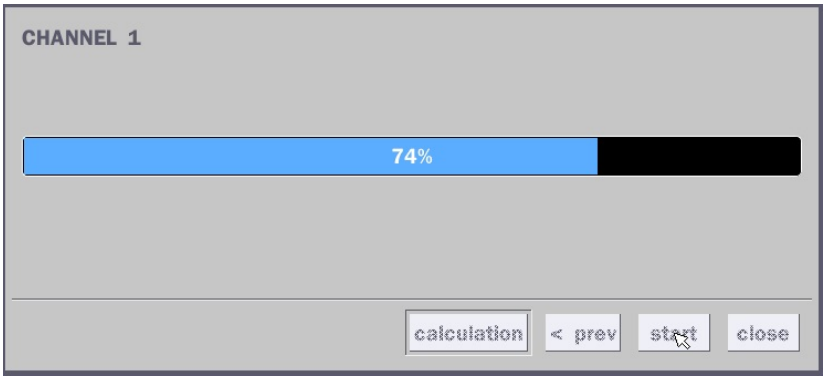
2. Select USB Drive (Flash Drive) to back up less than an hour.
   Select USB HDD (Large Backup) to back up from 1 hour to 24 hours. (Only for NSF type)



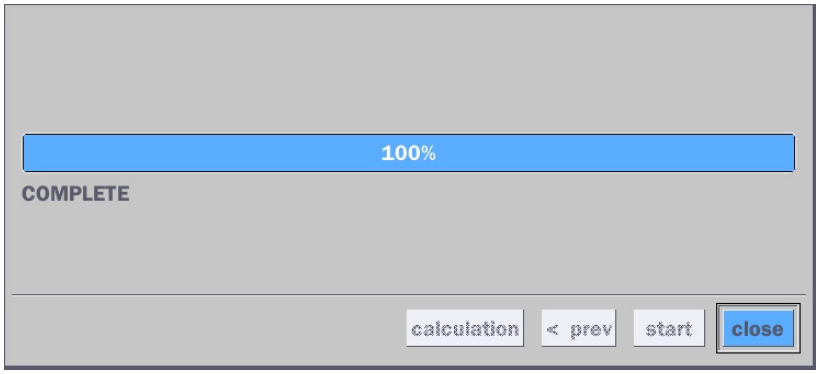
3. Once you select the channel and duration, the system will start to archive the data to the USB drive.



4. The following image shows the progress of archiving the data.



5. The following shows the image to complete the backup. Select lose to return to the previous screen.

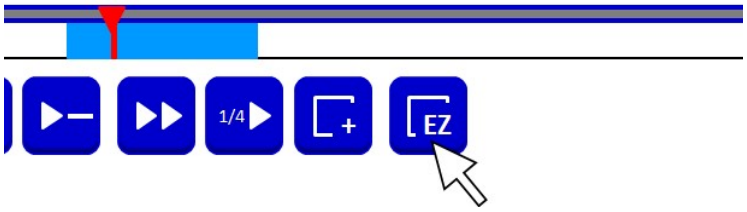


6-3. EZCopy: Video Backup onto USB Flash Drive during playback

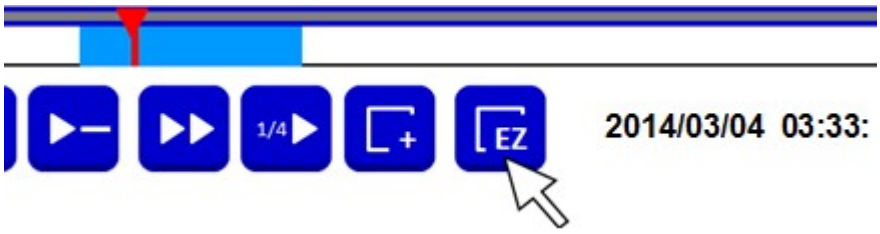
Using EZCopy feature, Video can be easily archived onto the USB flash drive or a hard drive.

In playback mode, press the EZ **"EZCopy"** button to launch the backup function.

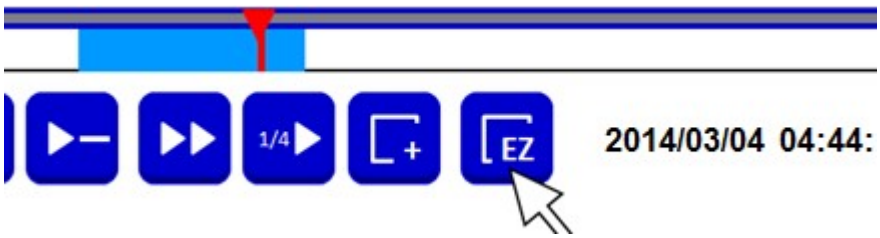
1. Press "EZCopy" button on the selected channel or all channels.



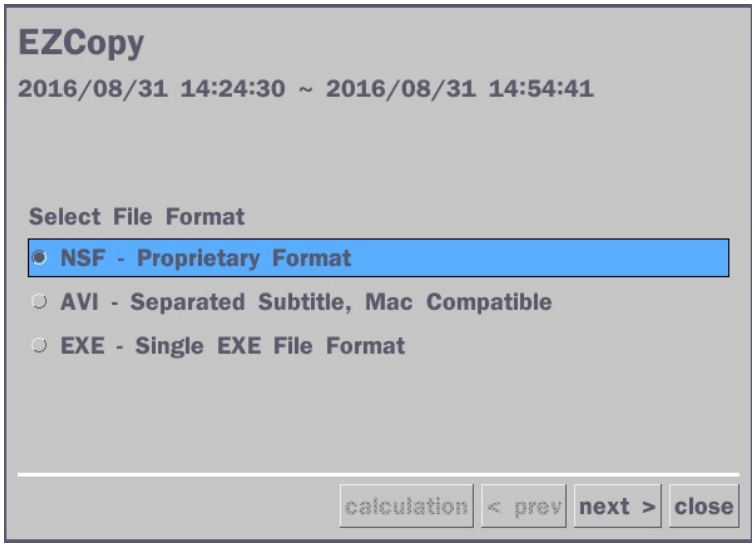
2. Then, EZCopy START time will display.



3. Move time bar cursor to the time of end of backup and press EZCopy button. Then, EZCopy STOP time will display.



4. EZCopy window will display. The DVR will ask whether to archive a NSF, AVI or EXE.



5. After backup format is selected, also select media type and channel(s) to archive the data to the media.

6-4. Transferring Still Images or Video from the ARCHIVE List

The stored data in the hard drive can be found in the ARCHIVE list in the SEARCH window.

User can back up still images or video into the storage device from the ARCHIVE list.

1. Select the date to begin searching and navigate through the days using the mouse or the remote control.
2. Once you have selected the date, press the NEXT button to open the list of stored data.
3. Use the mouse or the remote control to scroll through the archive list.
4. Select a list of stored events in the archive list.
5. Once the desired event has been selected, press the DISPLAY button to view the still image or the first frame of the selected video.
6. Press the BACKUP button to launch the archiving function in playback mode.
7. Press the CLOSE button to return to the SEARCH window.

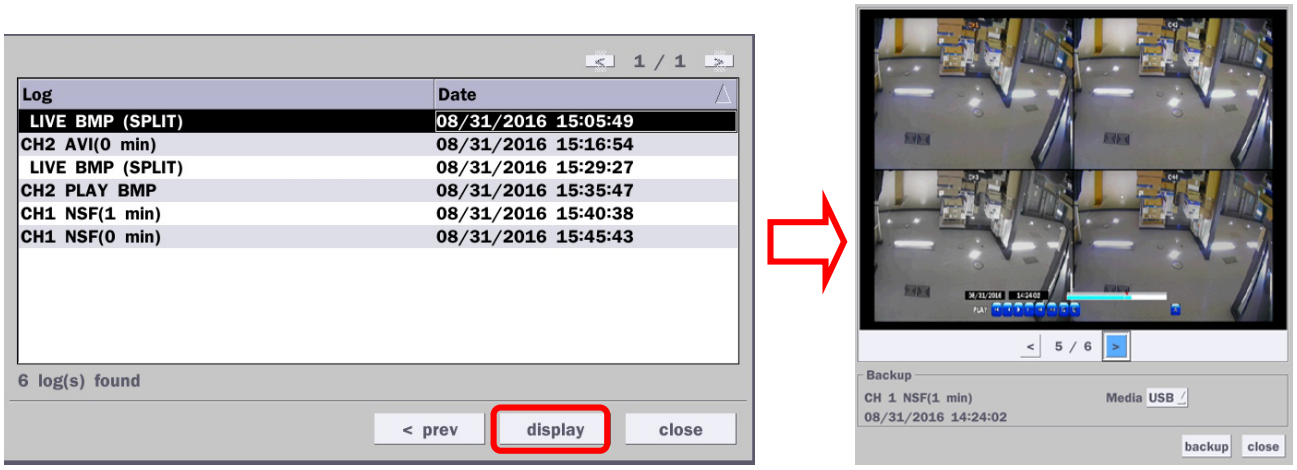


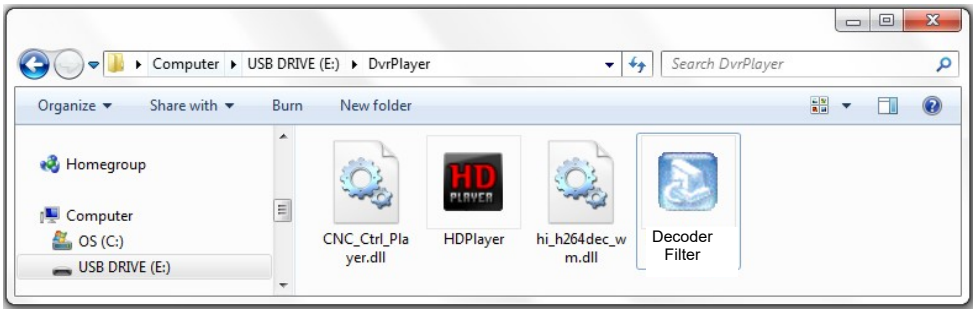
Figure 6.3.1. Archive Search Screen

6-5. Playback of Backup Video

6-5-1. AVI Format

AVI format: AVI format video can be played back by Window Media Player™ or other media player that is compatible with AVI format video.

1. Please install the Decoder Filter that the DVR copies “DvrPlayer” folder on USB flash drive with the video. Decoder Filter is exported to the “/DvrPlayer” folder of the USB drive.



2. Otherwise, the video and time stamp over video can’t be properly played back and won’t be displayed on Window Media Player™.

Timestamp On AVI. The subtitle is embedded to the video clip file.

The subtitle is embedded to the AVI file. To display a subtitle, user should install a special filter called “Decoder Filter”.

6-5-2. NSF Format

NSF format: NSF format video can be played back using the HDPlayer HDplayer that the DVR copies to “DvrPlayer” folder on USB flash drive with video. Use the mouse scroll to use digital zoom in and out feature.

7. Network Access Using the Multi-Sites Network Viewer

7-1. Overview

The SpecoTech Multi Client is a multiple site monitoring client software with; video, audio, and alarm signals from the DVRs over the network. The SpecoTech Multi Client does not limit the number of DVR units to register.

The program displays up to 16 DVRs and supports dual monitors.

On the program, user may control PTZ cameras on the DVRs. By attaching a microphone and speaker system to devices on site, the user may make bi-directional audio communication over the network.

7-2. PC Requirements

Minimum PC Requirements

CPU	Intel Core i3
	1.8Ghz
Memory	2GB DDR2
VGA	512MB
Resolution	1280x720
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100Base T
Others	Direct X 9.0c or Higher

Recommended PC Requirements

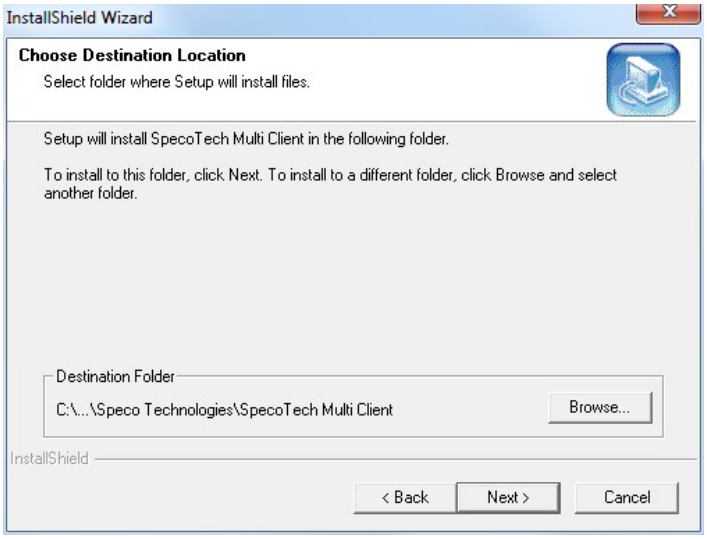
CPU	Intel Core i5
	2Ghz or higher.
Memory	4GB DDR3 or higher.
VGA	512MB or higher.
Resolution	1920x1080
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100/1000Base T
Others	Direct X 10 or higher.

Before installing the program, check the PC specifications. The DVR remote software may not perform correctly if the PC does not meet the minimum requirements.

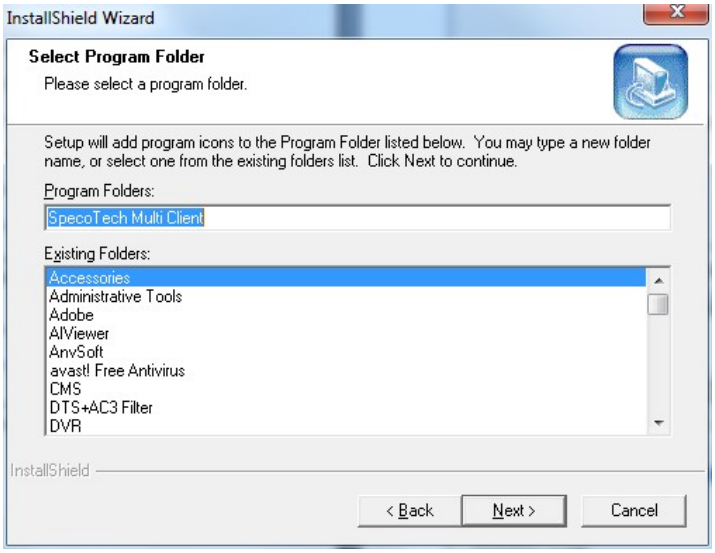
7-3. Installation of the Program

1. Insert the provided CD in the CD drive and double-click “SpecoTech Multi Client (XXXX)**.exe**”

2. Select a destination folder and click “Next”.



3. Select the program folder and click “Next”.

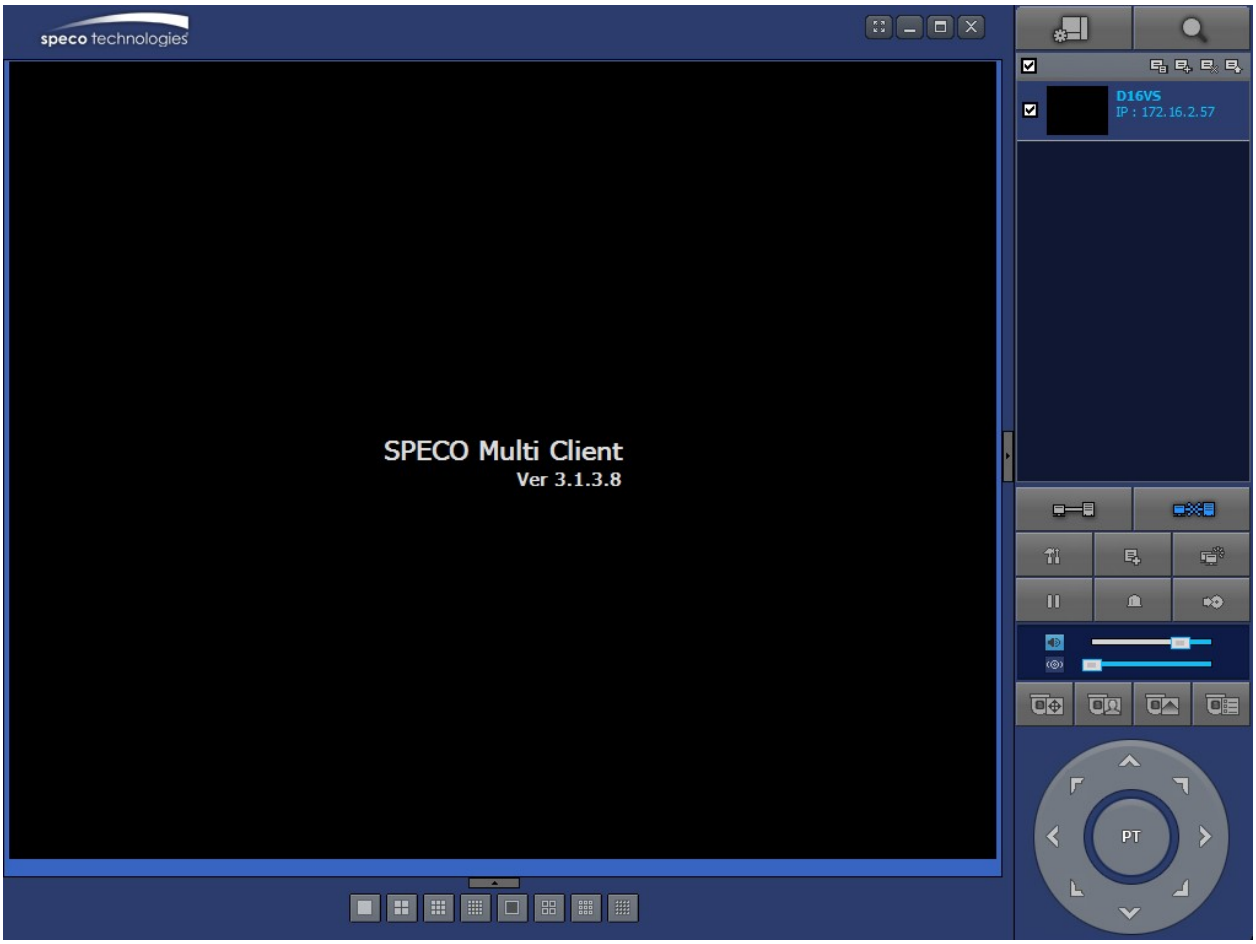


4. The installation status screen is displayed.
5. After the installation is completed, **“SpecoTech Multi Client”** icon displays on the desktop screen.

7-4. Live Window

When installation is completed, double click the **"SpecoTech Multi Client"** icon on your desktop to start the program.

7-4-1. Main User Interface



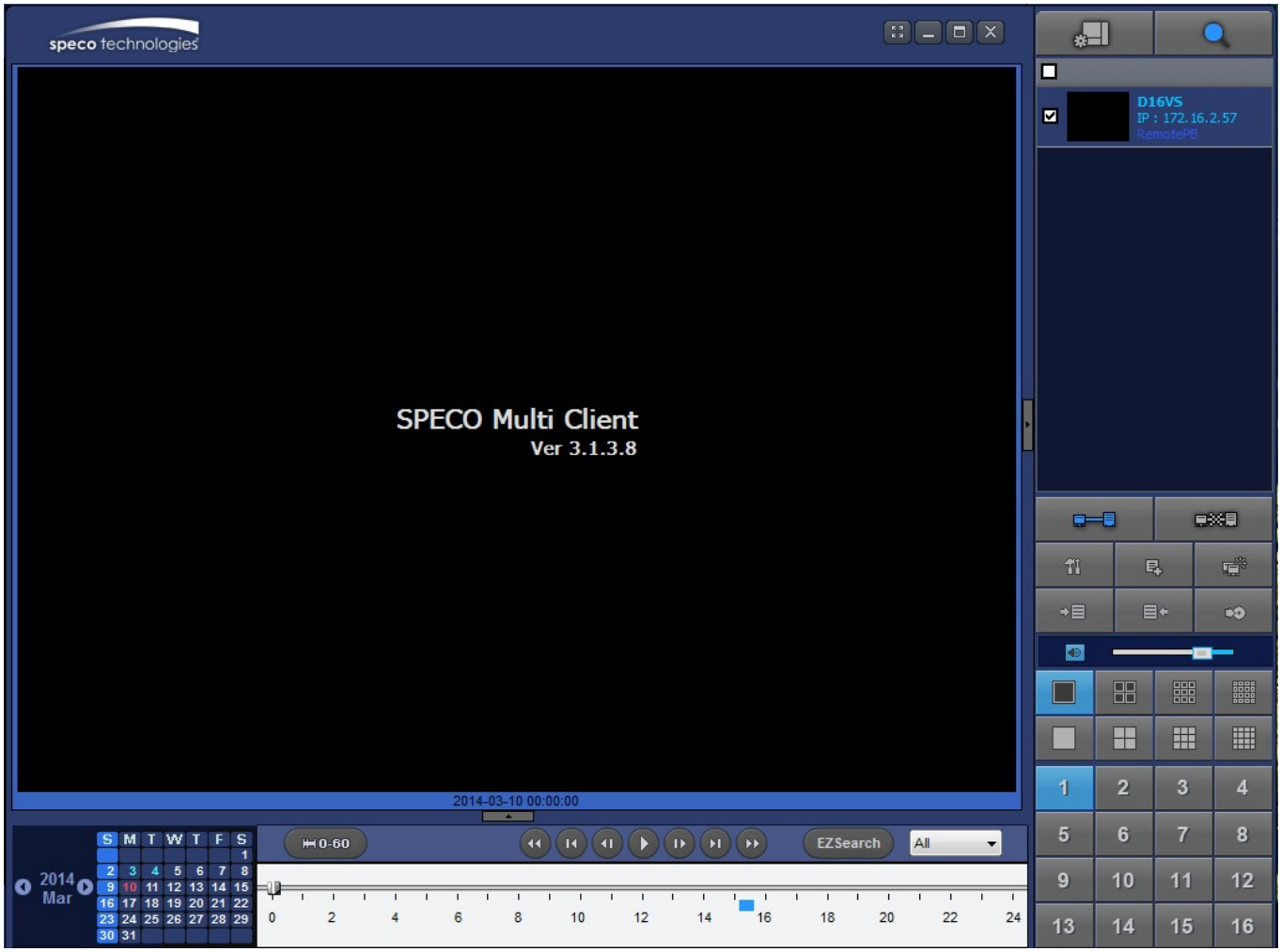
7-4-2. Control Buttons

Button	Description
LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote DVR.
SITE MANAGEMENT	THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of the connected sites. SITE ADDITION: Click this icon to open 'Site Addition' window. SITE DELETE: Click this icon to delete site from the index window, after disconnect a site. NET FINDER: Select the site from the index window and click this icon to modify the information of specific site.
CONNECT	Click this icon to connect the selected site/sites.
DISCONNECT	Click this icon to disconnect the selected site/sites.
SETUP	Click this icon to setup configuration of SpecoTech Multi Client.
CAPTURE	Click this icon to capture a still image.
EVENT LIST	Opens list of events logged by the SpecoTech Multi Client.
PAUSE	Click this icon to play/pause live video.
ALARM ON	Click this icon to turn on/off alarm outputs.
RECORD ON	Enable or disable recording of live video to local disk, which has set in setup menu.
AUDIO	Use the volume control bar to set the audio level.
MIC	Use the microphone volume control bar to set the micro phone level.
PRESET/TOUR/SCAN/MENU	User can control PRESET/TOUR/SCAN/MENU
CHANNEL SPLIT	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
DVR SITE SPLIT	To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.

7-5. Search and Playback Window

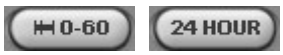
7-5-1. Main User Interface

You can access to search window by clicking the search icon (Local Playback / Remote Playback) on the upper right of the Live Window.



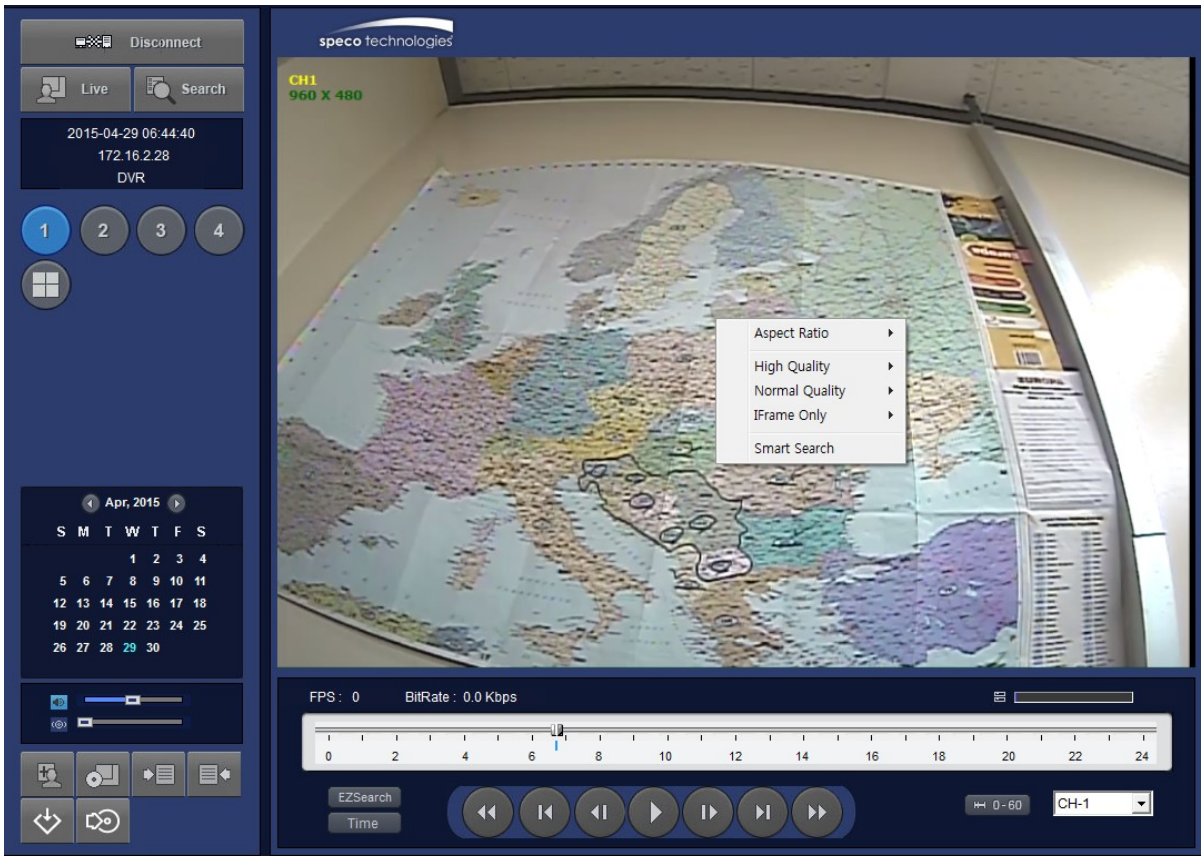
7-5-2. Main Control Panel

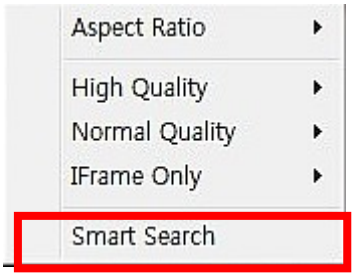
Button	Description
LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote DVR.
	Display the site information and the connection status.
CONNECT	Click this icon to connect the selected site/sites.
DISCONNECT	Click this icon to disconnect the selected site/sites.
SETUP	Click this icon to setup configuration of SpecoTech Multi Client.
CAPTURE	Click this icon to capture a still image.
EVENT LIST	Opens list of events logged by the SpecoTech Multi Client.
EZCopy Start	Click this icon to set the beginning time for backup of the recorded video in AVI format.
EZCopy End	Click this icon to set the ending time for backup of the recorded video in AVI format.
BACKUP	Click this icon to back up the recorded video in AVI format.
AUDIO	Use the volume control bar to set the audio level.
	To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.
	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
	To select the channel to playback.
	The calendar shows dates with recorded video in color.
	To display the recorded data of selected channel or all channels on a time line scale.

	To change a timeline scale from 24 hours to 60 minutes. The timeline shows recorded data in color on the bar. You can adjust the timeline scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.
	Playback buttons.
	EZSEARCH: Thumbnail search over the network. - Shows 24 thumbnail images, one for each hour from 00:00 to 23:00. - Each hour is further broken up 24 segments; each is 150sec. - Then select the tile to play * Click the “PREVIOUS” button to go the previous step.
	Digital Zoom Window in Live and Playback. (Only available in Single Channel Viewing)

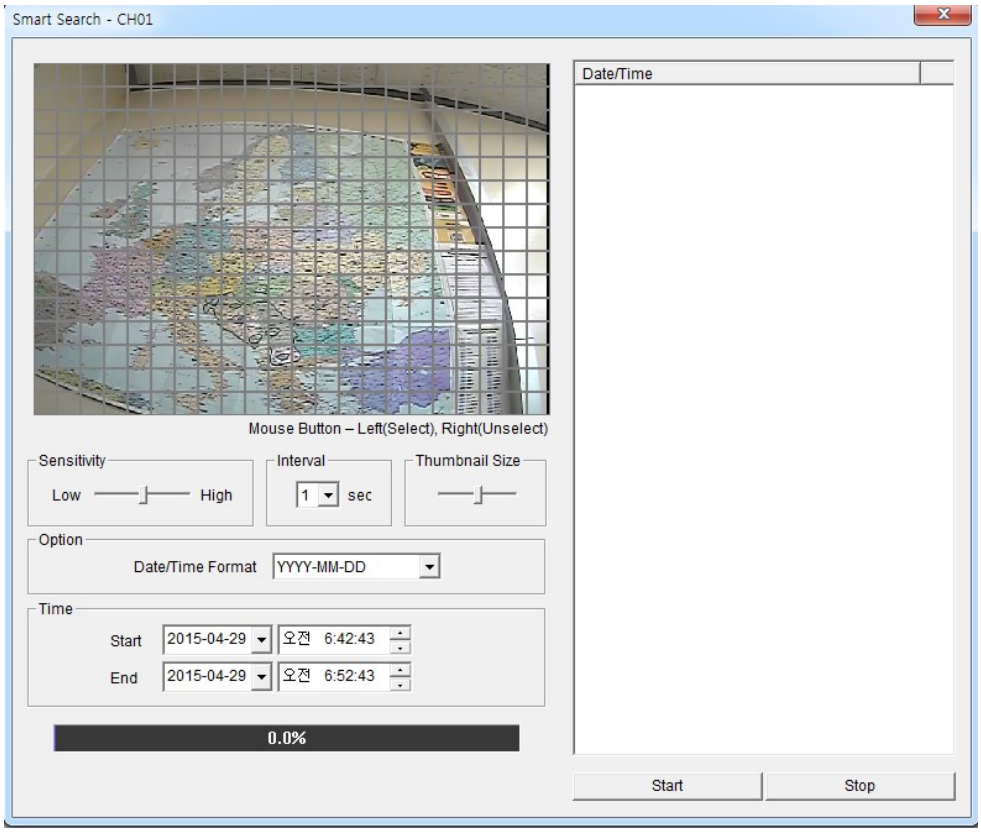
7-5-3. SMART SEARCH

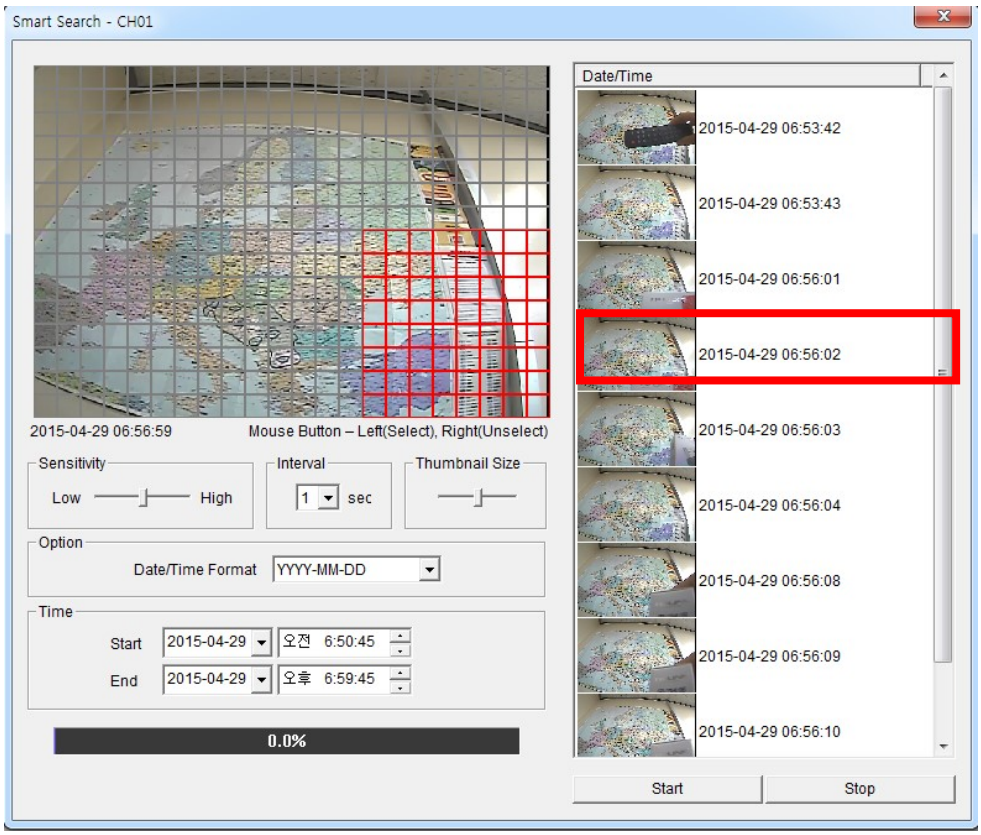
1) User can search with selected area
2) Click right mouse button when playback





3) 'Smart Search' will search in the selected area only.
4) 'Smart Search' checking the motion and event from the selected area.
5) User can set, Sensitivity, Internal, Thumbnail size, Date and Time





6) Select any of search Thumbnail then selected event will playing.

7-6. Setup of SpecoTech Multi Client

Click the setup icon to setup the configuration of SpecoTech Multi Client software. The SETUP window is displayed as below.

7-6-1. General

Security Option: Set a password for security options. Select security options and set a password. Then when you access any of selected functions, you need to enter the password. You can also set the save path for capturing and backup.

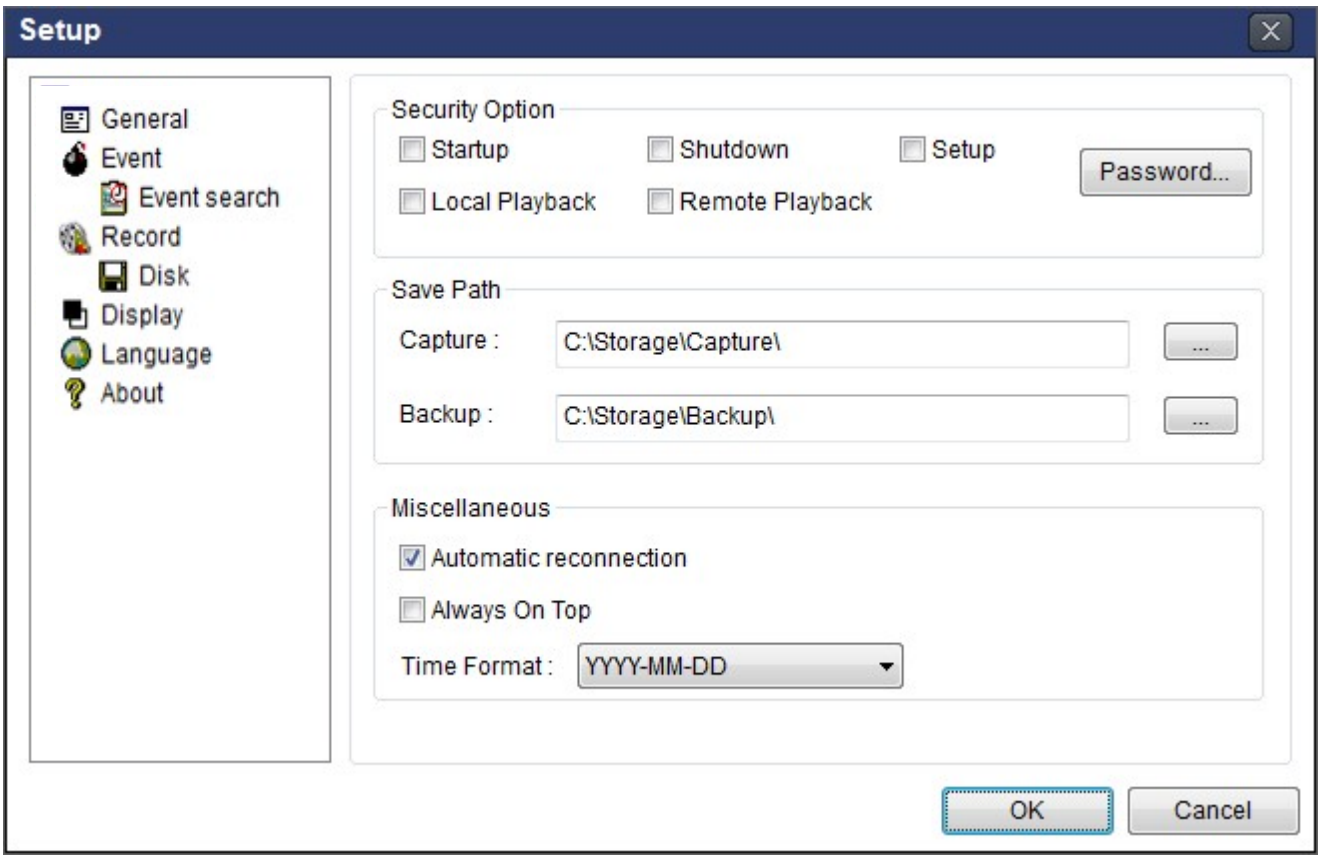
Save Path: Specify the location to save captured still image for Capture and Backup data.

Miscellaneous

Automatic Reconnection: If enabled, the software will automatically try to reconnect to the last successful IP address. But, when CLIENT ACCESS is OFF on the DVR, the software will not try to reconnect even if it is enabled.

Always On Top: If enabled, the software display will be continuously on the top of other windows.

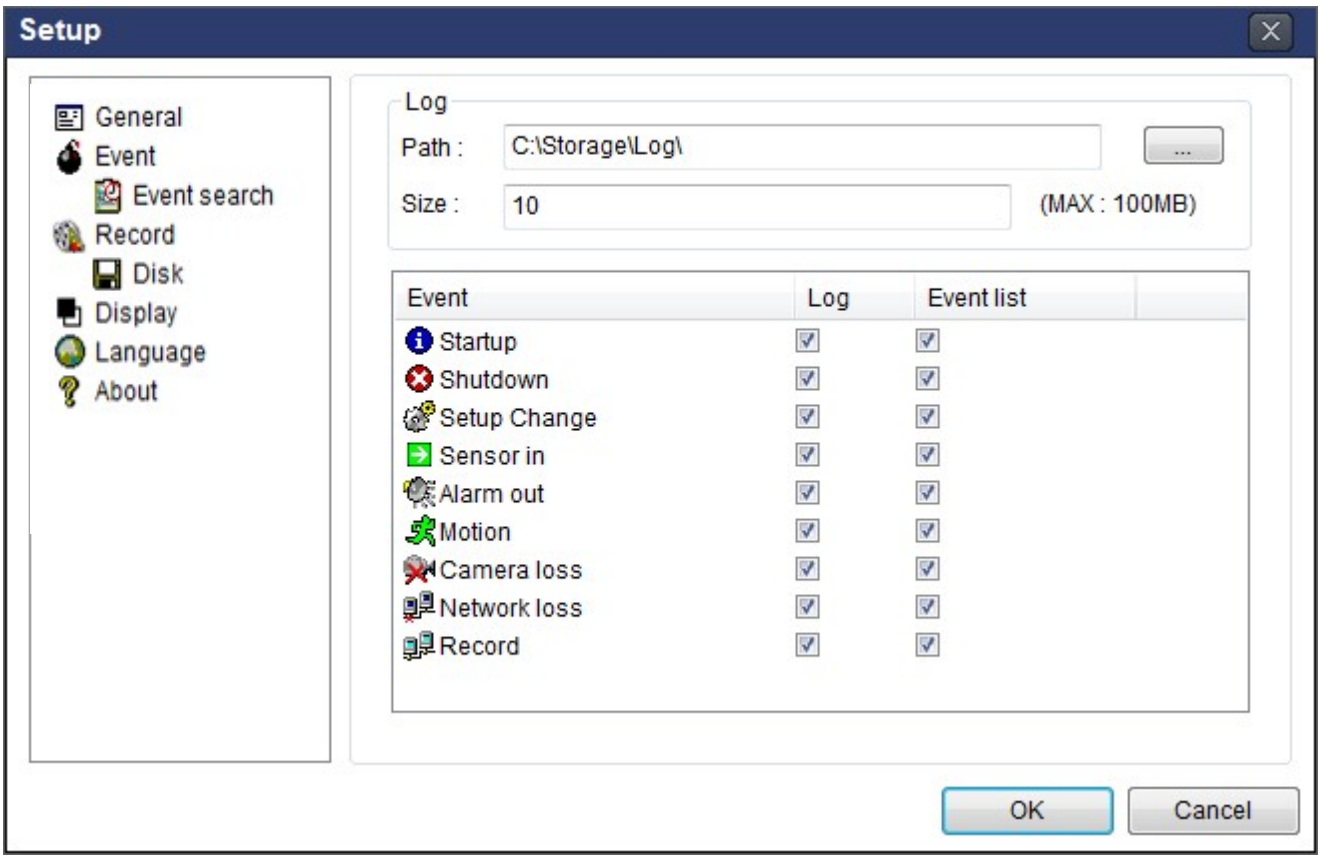
Time Format: Change the way the Client software displays the time.



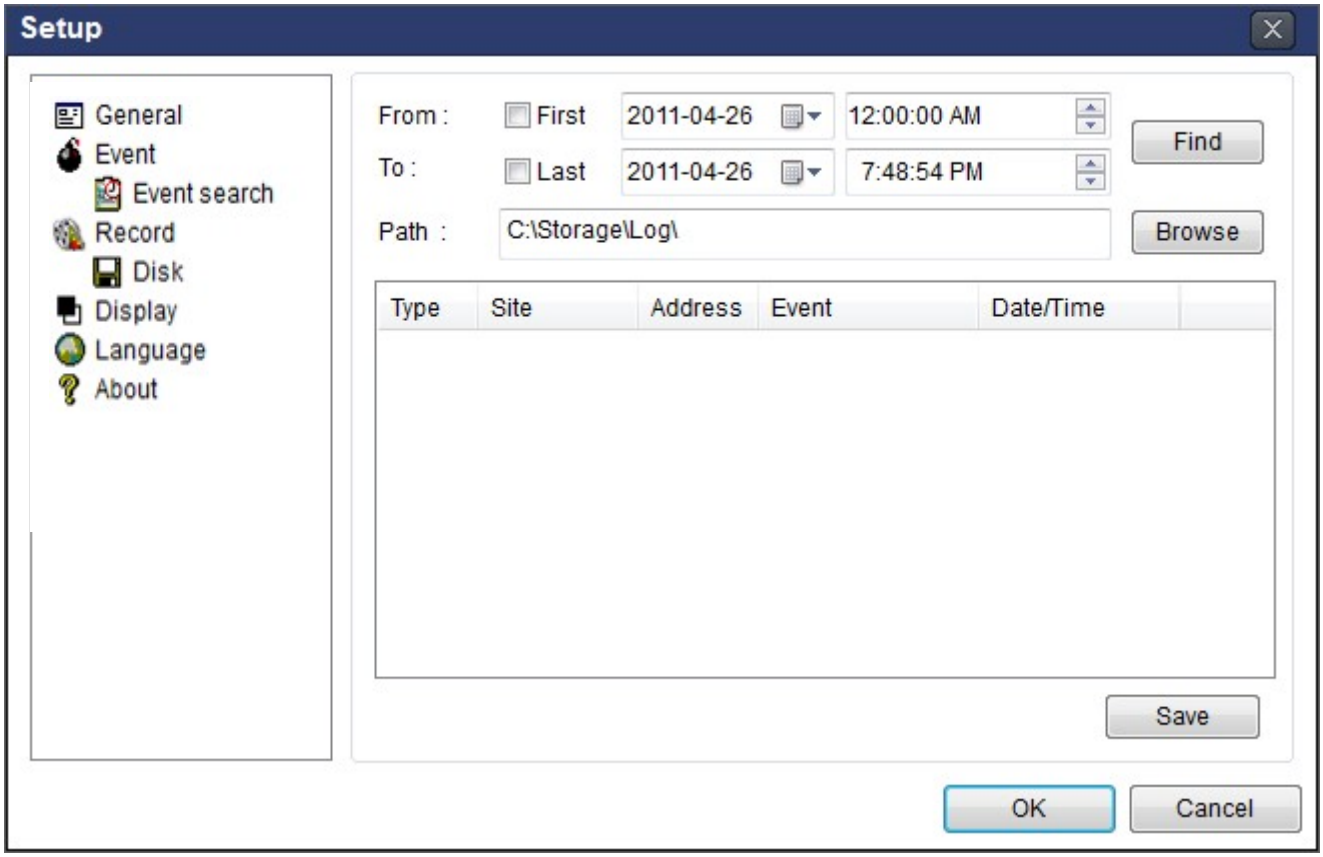
7-6-2. Event

Event log can be archived and searched.

Event Log: Specify the location to save event logs and select event to archive.

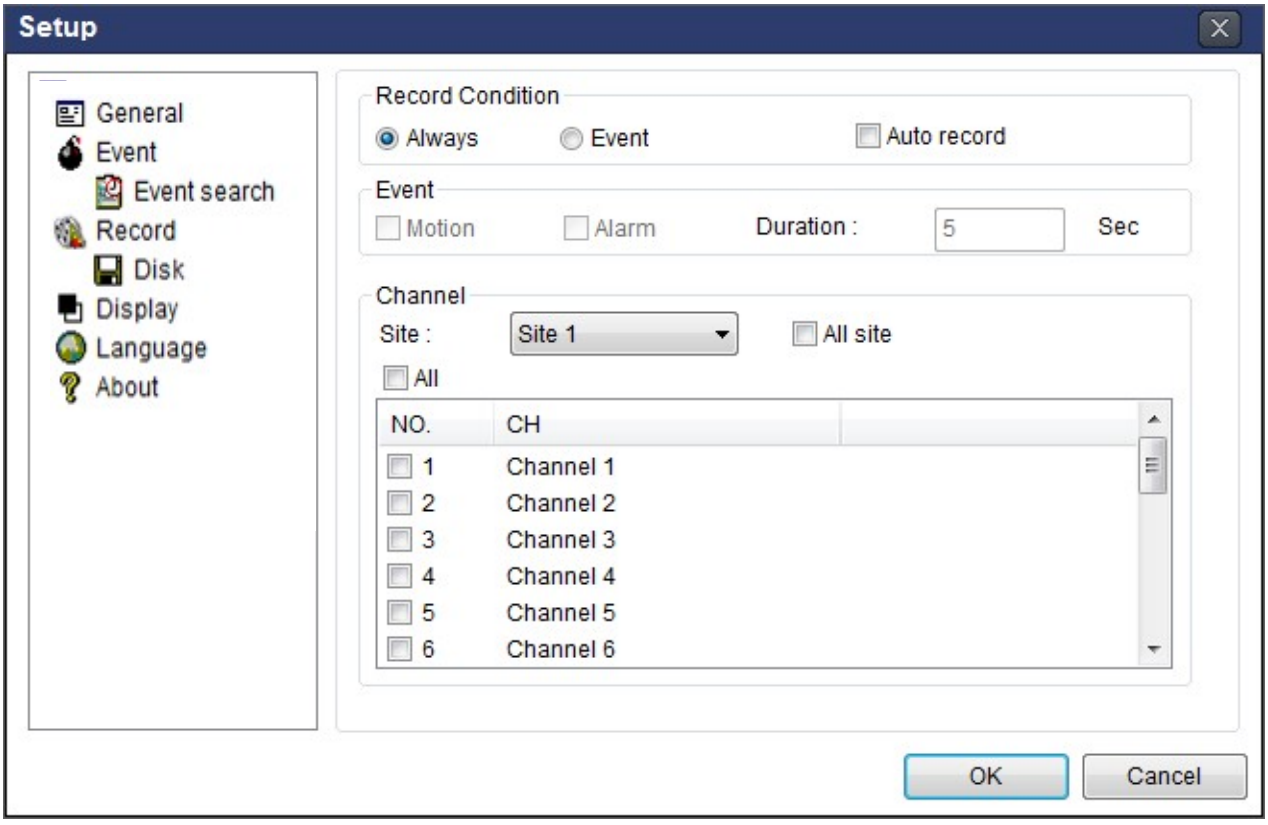


Event Search: Event log can be searched from the selected time.

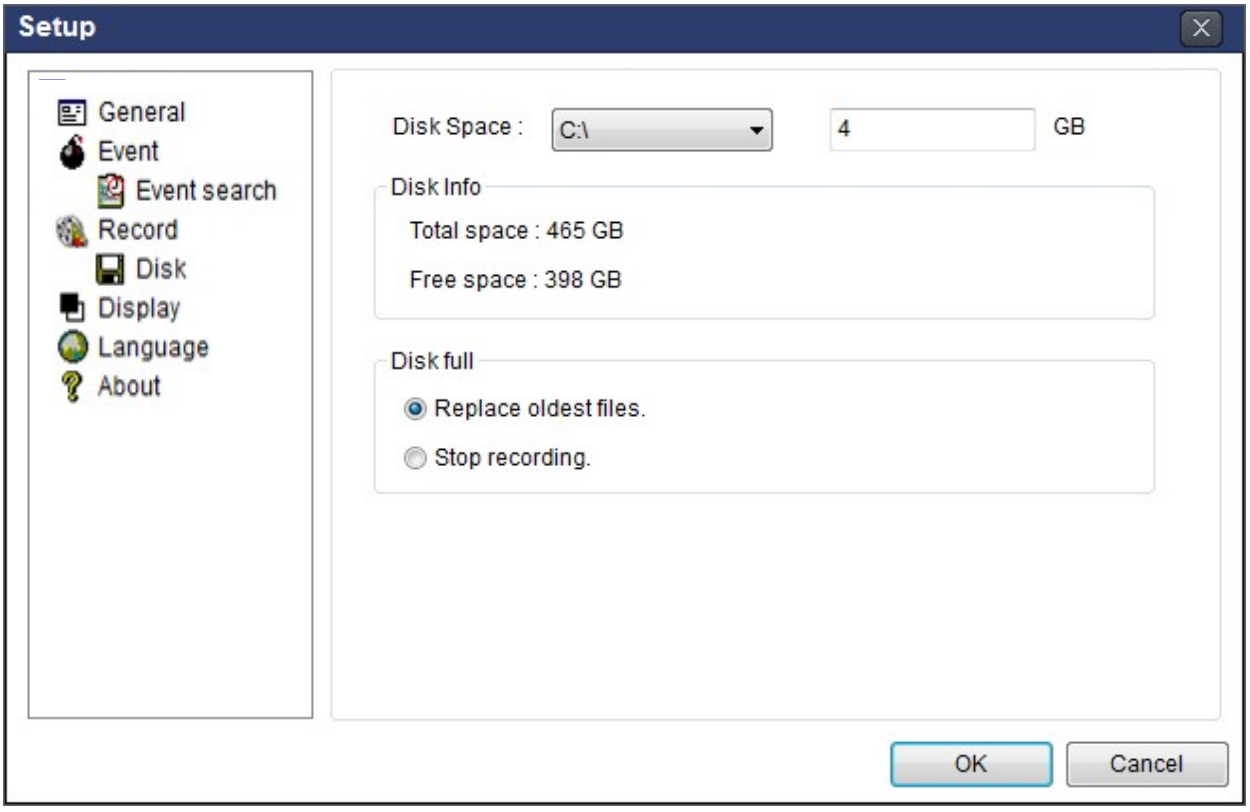


7-6-3. Record

Record Setup: You can set the recording conditions as the following; Always, Event, or Auto record. And you can also select target DVR/DVRs and channel/channels. When you set the recording condition to event, you can set event for motion or alarm with duration.

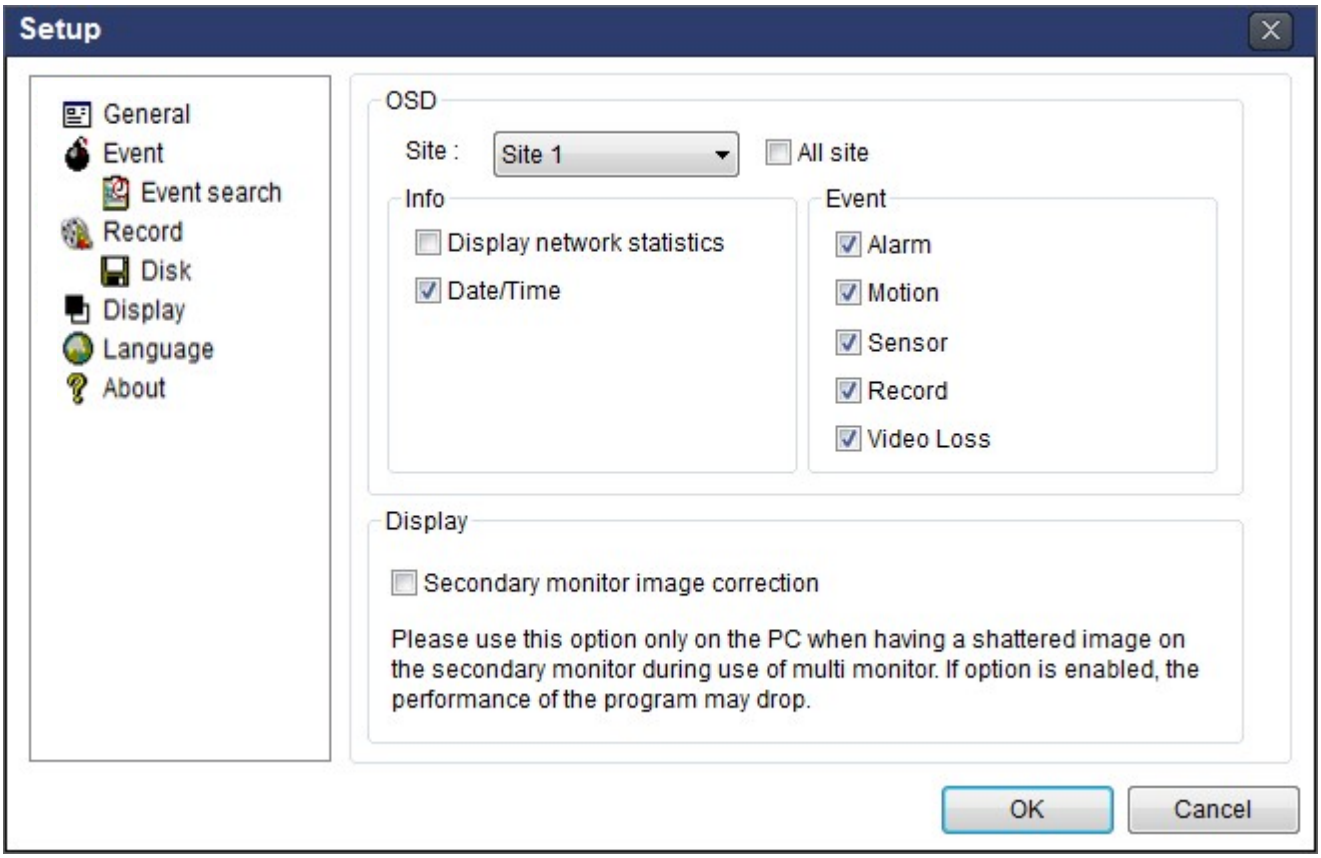


Record Local Storage Setup: You can select the local disk to record and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop recording when the maximum amount of disk space is full.



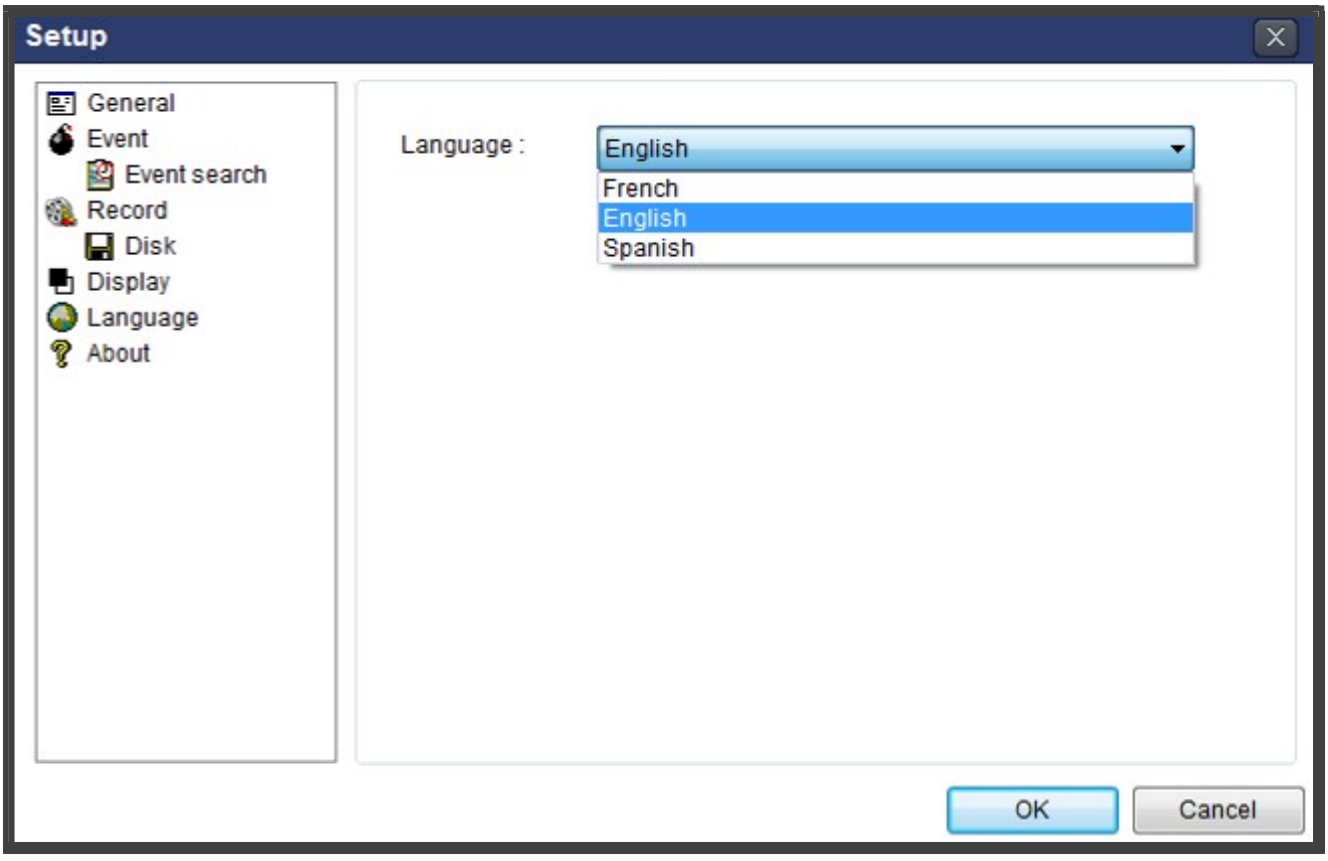
7-6-4. Display

You can select the OSD (On Screen Display) to be displayed.



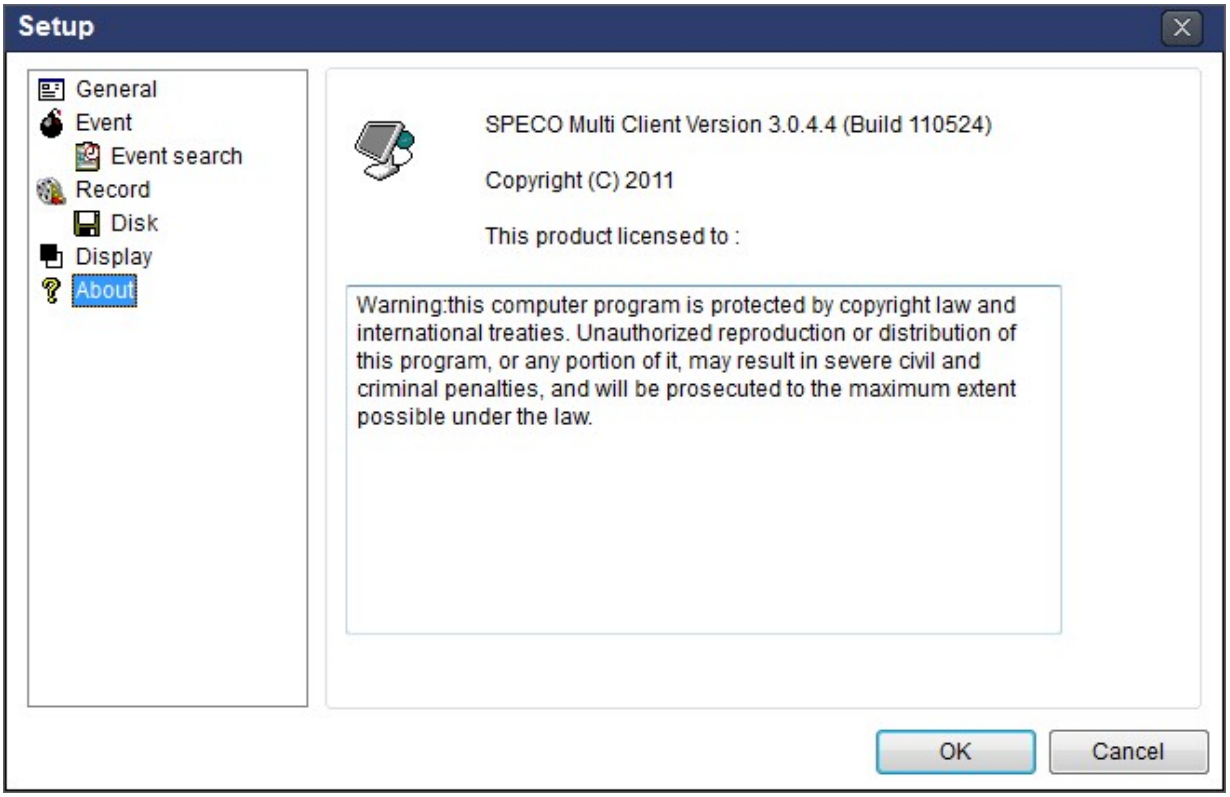
7-6-5. Language

English, French and Spanish is selectable.



7-6-6. About

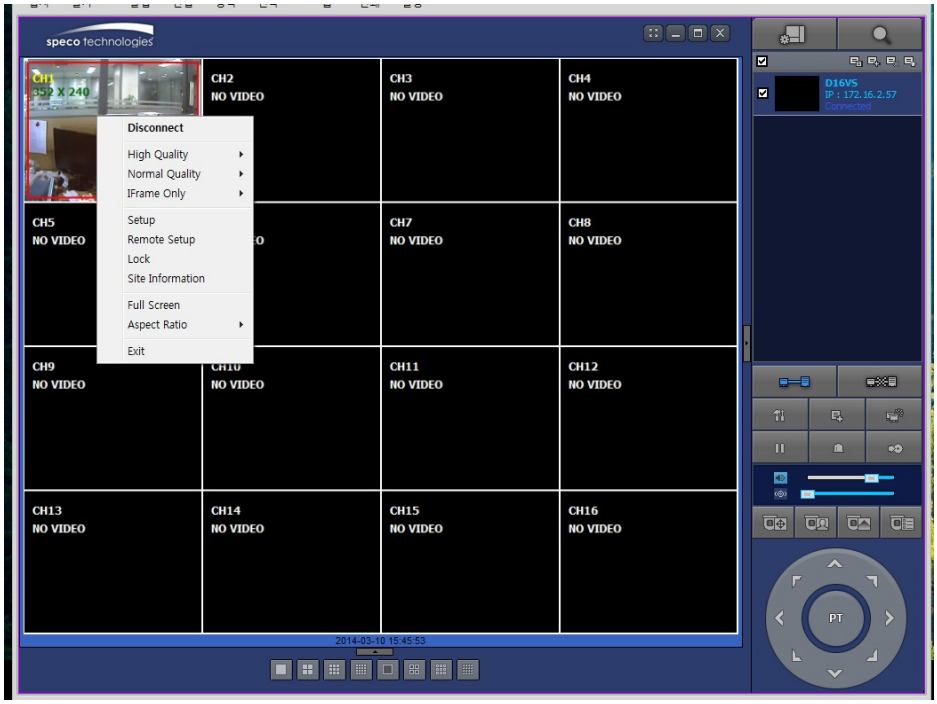
“About” provides network client version information.



7-7. Remote Setup

The menu settings for the DVR unit can be set over network.

Put the cursor of the mouse on the channel, which is connected to the site and right click on the mouse to open the submenu. Then the following window is displayed as below. Select the **REMOTE SETUP**.



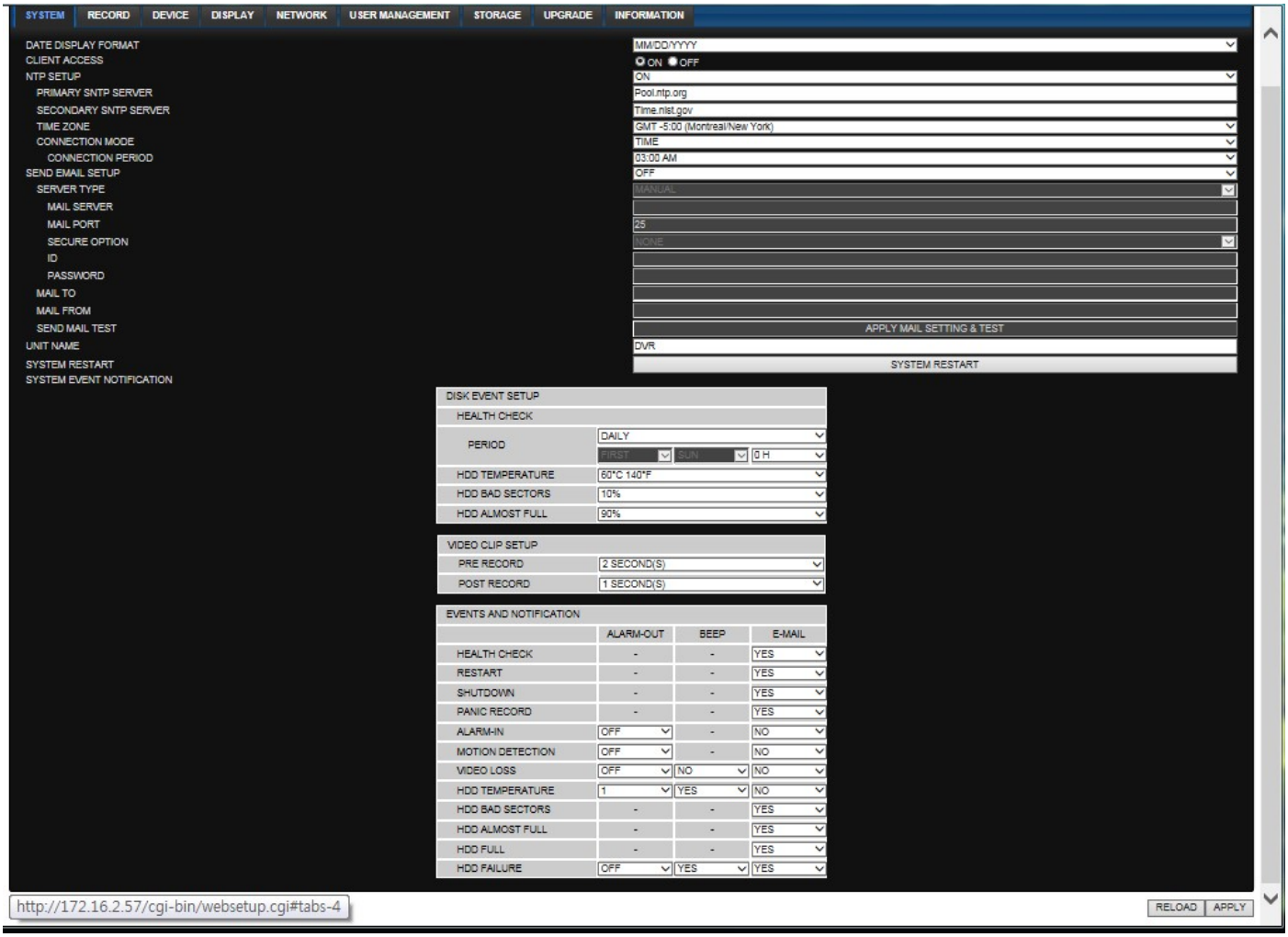
Then the setup window is displayed. The specified menu screen is displayed on the upper left of the screen. Enter the password of the DVR when prompted. (NOTE: The password is same with DVR setup password.) Setting is the same as with the DVR menu setting. Refer to the corresponding pages for details on the setting items.

NOTICE

Web Setup is prohibited when DVR is in local Setup Menu.

7-7-1. System

Select **System** to set system and time settings.



- **DATE DISPLAY FORMAT:** Select the date display format.
- **CLIENT ACCCESS:** Enable/Disable remote access through network client software.
- **NTP SETUP:** Sets whether to synchronize the time using NTP server or not.
    - **Primary SNTP Server**: Input the NTP primary server address.
    - **Secondary SNTP Server**: Input the NTP secondary server address.
    - **Time Zone**: Select the time zone.
    - **Connection Mode**: Select the connection mode to NTP time server.
- **SEND E-Mail SETUP**: Sets whether to enable/disable e-mail sending function.
    - **SEVER TYPE:** Select GMAIL, HOTMAIL, AOL, YAHOO or MANUAL)
    - **MAIL SERVER:** Input the SMTP server name as well as the user ID and password.
    - **MAIL PORT:** Mail port setting.
    - **SEURE OPTION:** Select a secure mail server connection. **(SSL or TLS)**
    - **ID :** Email User ID
    - **PASSWORD :** Email User Password
    - **MAIL TO:** Input the appropriate email address to enable sending e-mail reports
    - **MAIL FROM (Return Mail Address)**: Set the source e-mail address to be notified to the destination.

- **SEND MAIL TEST**: Examine the function with registered information.

- **USER NAME**: Name the DVR
- **SYSTEM RESTART**
- **SYSTEM EVENT NOTIFICATION**

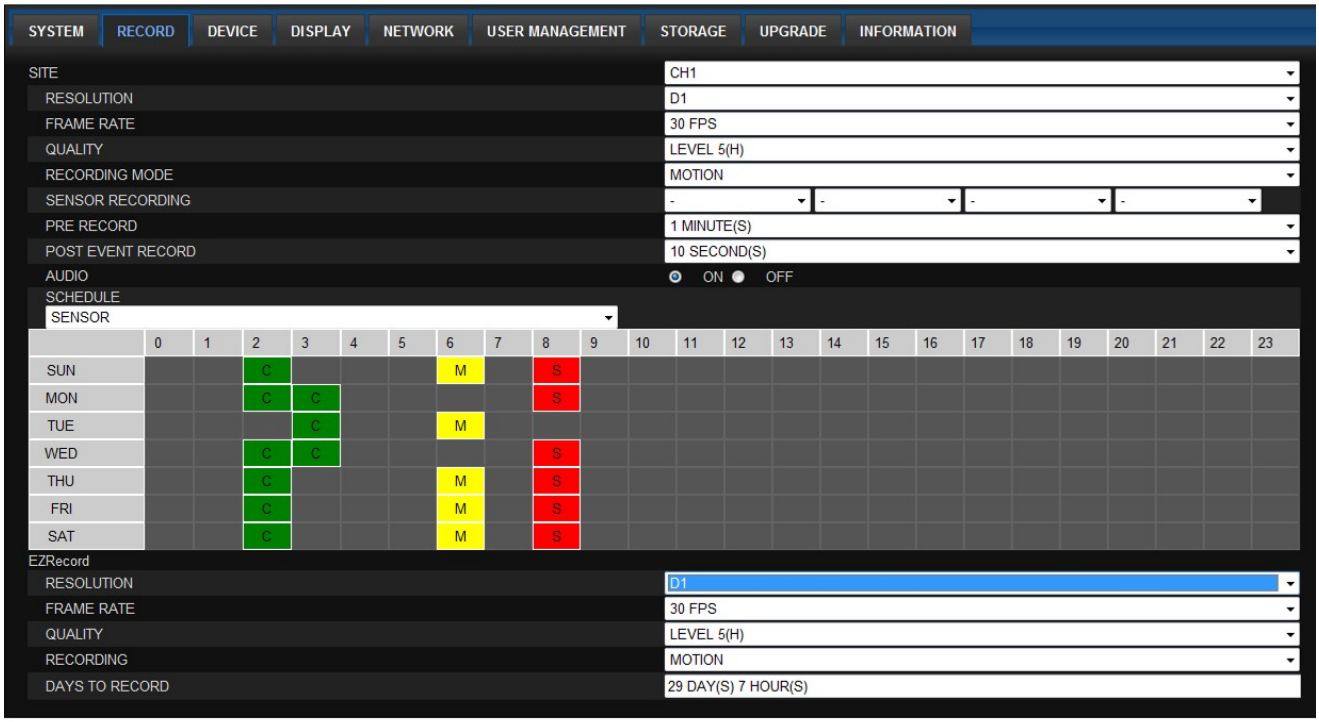
  Allows the user to set EVENT NOFICIATION ON or OFF
  - **HEALTH CHECK**

    (Allows the user to set MAIL STATUS periodically) : DAILY or WEELY or MONTHLY
  - HDD TEMPERATURE
  - HDD BAD SECTOR
  - HDD ALMOST FULL
  - **VIDEO CLIP SETUP: Setting the duration for pre and post recording.**
  - **EVENTS AND NOTIFICATION**
  - HEALTH CHECK / RESTART / SHUTDOWN / PANIC RECORD

    Enable Email Notification in the event a problem occurs with the HU.
  - ALARM-IN : Enable Email Notification when the camera detects sensor
  - MOTION DETECTION : Enable Email Notification when the camera detects motion
  - VIDEO LOSS: Enable Email, Beep and Alarm output Notification when the camera signal is lost.
  - HDD TEMPERATURE : Enable Email Beep and Alarm output Notification when the HDD reaches the maximum temperature
  - HDD BAD SECTOR: Enable Email Notification when the HDD has bad sectors.
  - HDD ALMOST FULL: Enable Email Notification when the HDD is almost full.
  - HDD FULL: Enable Email Notification when the HDD is full.
  - HDD FAILURE: Enable Email, Beep and Alarm output Notification when the HDD fails.

7-7-2. Record

Select **RECORD** tab to set the recording conditions.



These settings apply to the specified channel only.

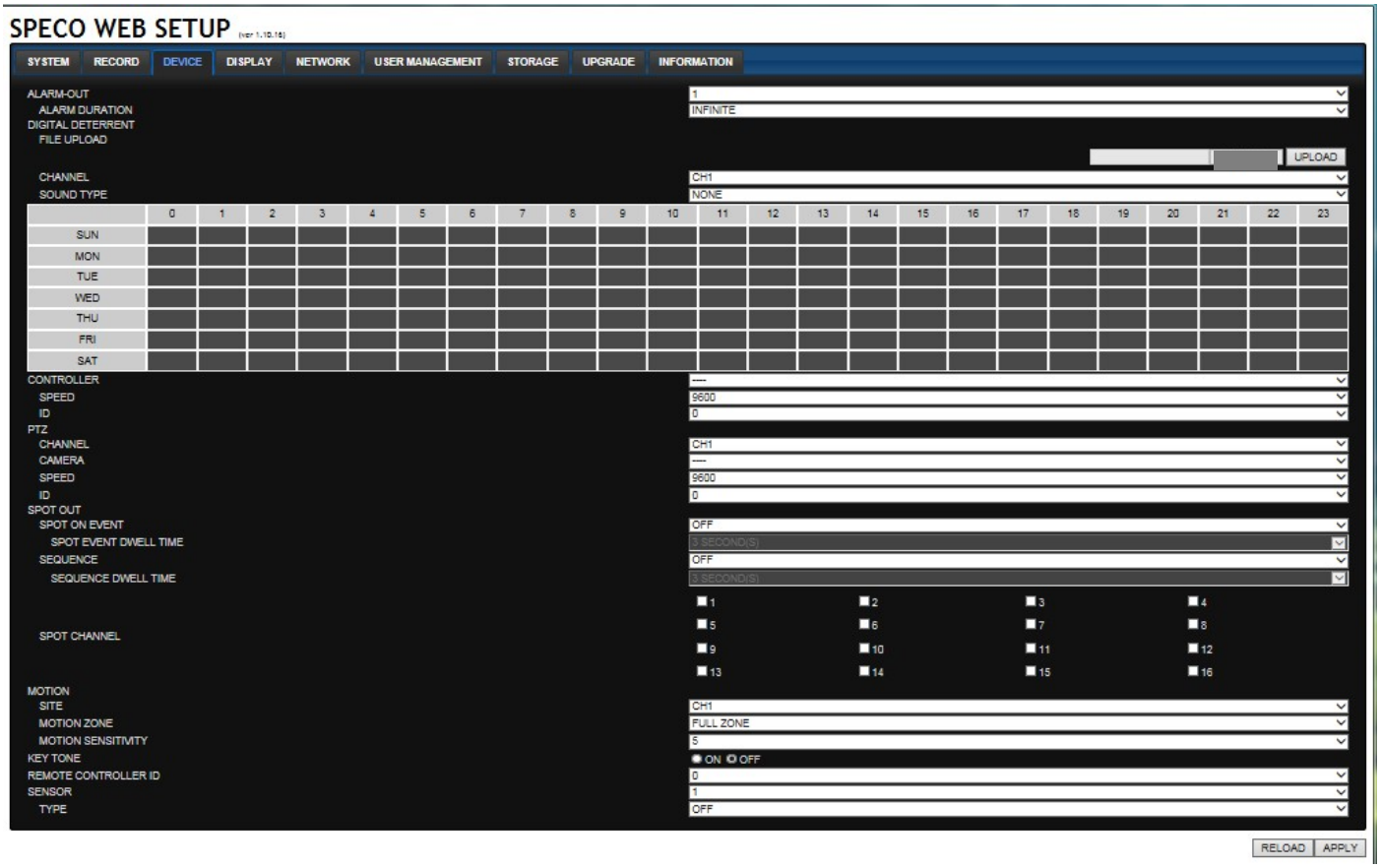
- Recording Setup
  - **RESOLUTION**: Sets the resolution for the recordings. The value applies to an individual channel.
  - **FRAME RATE**: Sets the recording rate.
  - **QUALITY**: Sets the image quality in 5 levels.
  - **RECORDING**: Sets the recording mode.
  - **RECORDING MODE:** CONTINUOUS, SCHEDULE, MOTION, SENSOR
  - **PRE RECORD**: Sets whether to perform or not prerecording.
  - **POST EVENT RECORD**: Sets the duration of the event recording.
  - **AUDIO**: Sets whether to perform or not audio recording.
  - **SECHDULE**: Sets the schedule recording.

These settings apply to all channels.

- **EZRECORD**
  - **RESOLUTION**: Sets the resolution for the recordings. The set value applies to an individual channel.
  - **FRAME RATE**: Sets the recording rate.
  - **QUALITY**: Sets the image quality in 5 levels.
  - **RECORDING MODE**: Sets the recording mode.
  - **RECORD DAYS**: By the setting value, the Recording Days will change accordingly.

7-7-3. Device

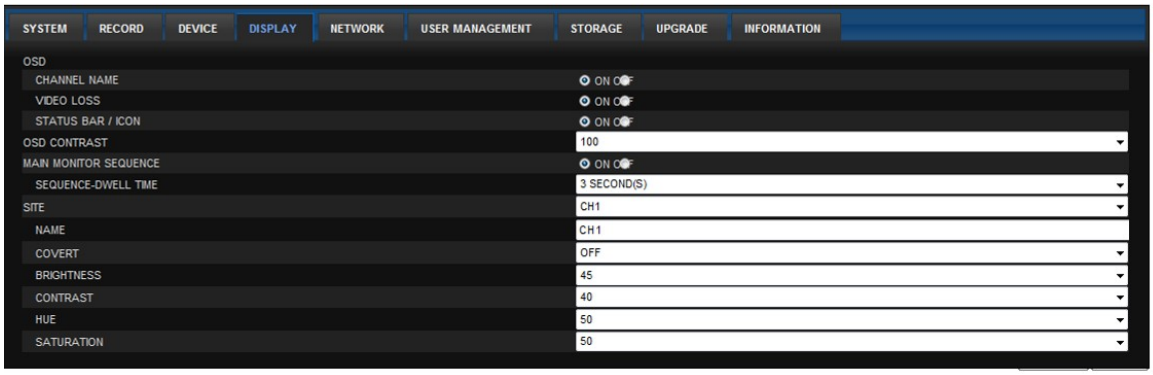
Select **Device** to set Spot Out, Enable/Disable CVBS Out, motion zone.



- **ALARM OUT:** Set the alarm out duration.
- **DIGITAL DETERRENT:** Set the schedule of digital deterrent function and upload the sound file to DVR.
- **CONTROLLER:** Set the controller baud rate and ID.
- **PTZ:** Set the PTZ baud rate, protocol, and ID.
- **SPOT:** Enable/Disable the SPOT OUT and SEQUENCE.
- **MOTION: Setup the motion detection area and the sensitivity.**
  - **SITE: Select the channel**
  - **MOTION ZONE:** FULL Zone or PARTIAL Zone
  - **MOTION SENSITIVITY:** 1~9 (High sensitivity level)
- **KEYTONE**: Sets On or Off of Key Tone.
- **REMOTE CONTROLLER ID**: Sets an ID number on the supplied remote control for its identification.
- **SENSOR:** Select the type of each sensor.

7-7-4. Display

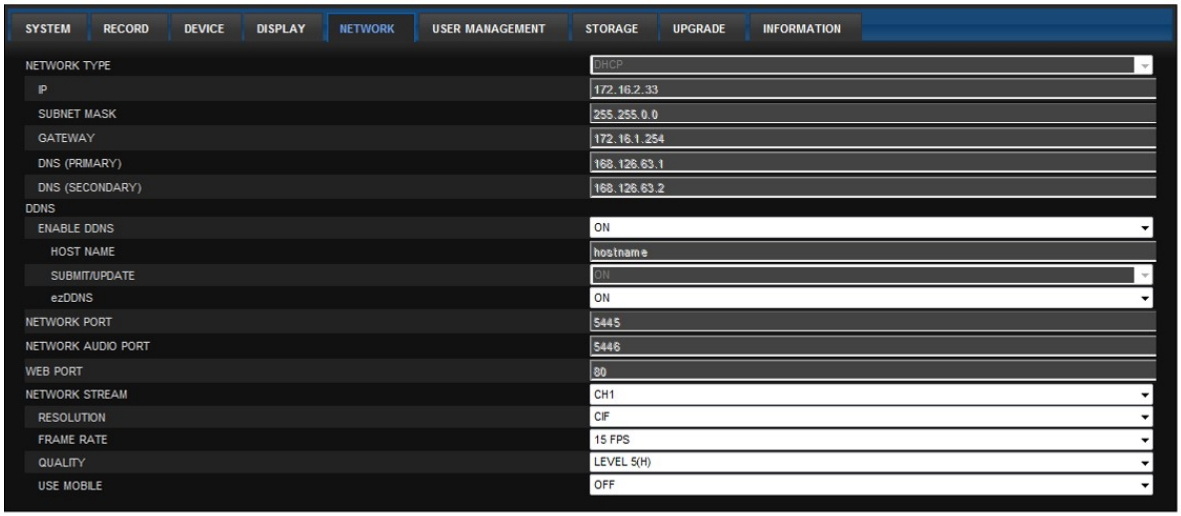
Select the **DISPLAY** tab to set the DISPLAY conditions.



These settings apply to all channels.

- **OSD**: Sets whether to display or not, the date and time as well as channel number on the screen.
- **OSD CONTRAST**: Adjust the character contrast on the screen.
- **MAIN MONITOR SEQUENCE**: Setting for automatically switching the displayed video.
  SEQUENCE DWELL TIME: Sets the interval for automatically switching the screens.
- **SITE**: Name, Covert, Brightness, Contrast, Hue, Saturation
  These settings apply to the specified channel only.

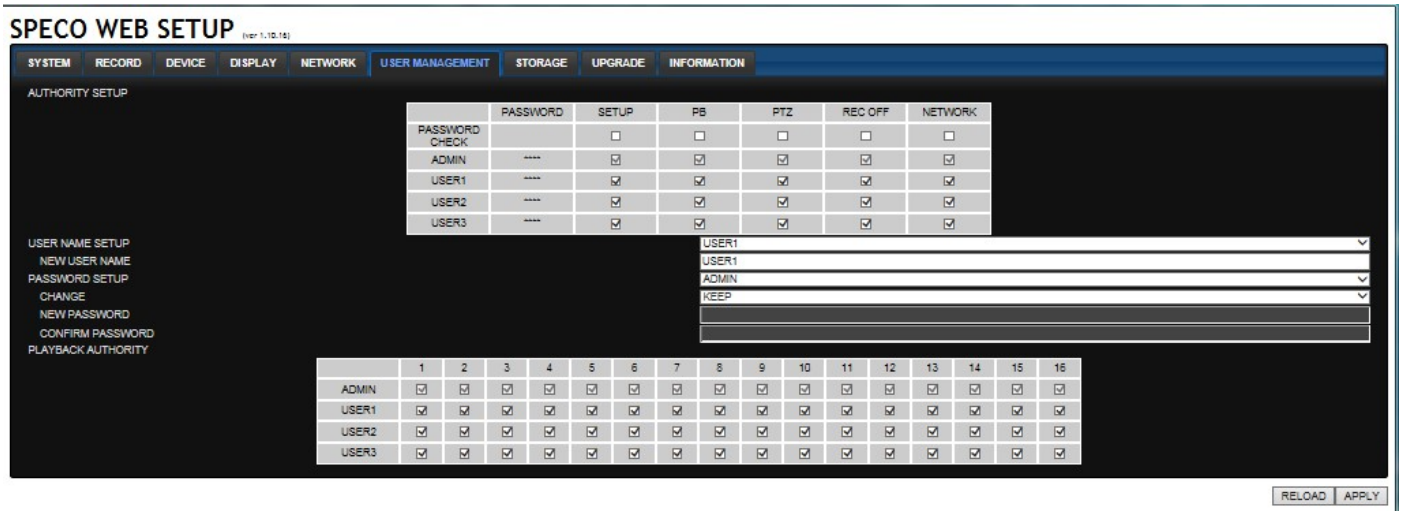
7-7-5. Network



- **NETWORK TYPE**
  - **STATIC**: The address setting mode is manual. Input IP, Gateway, Subnet Mask, and DNS IP.
  - **DHCP**: The address setting mode is automatic.
- **DDNS**: Set whether to use DDNS service or not.
  - **HOST NAME: A**llows the user to setup a domain name manually
  - **SUMBIT/UPDATE:** Select ON to submit the settings
  - **ezDDNS:** Enable/disable ezDDNS to register the host name automatically
- **NETWORK PORT:** When connecting multiple DVRs to the network, set a unique port number.
- **NETWORK AUDIO PORT:** Display the network audio port (NETWORK PORT + 1).
- **WEB PORT**: Set a web server port number.
- **NETWORK STREAM:** Set the Resolution, Frame Rate, and the Quality and enable/disable USE MOBILE.

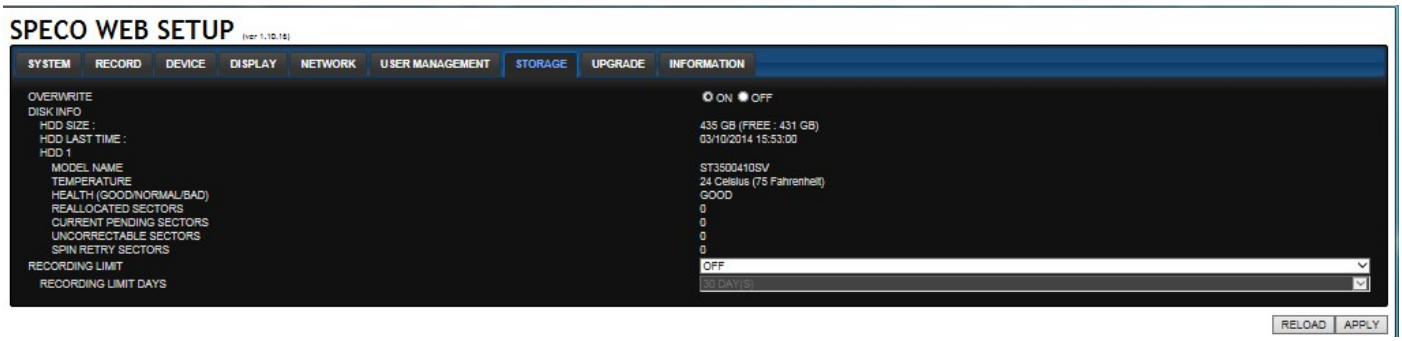
7-7-6. User Management

Select the **USER MANAGEMENT** tab to set the DISPLAY conditions.



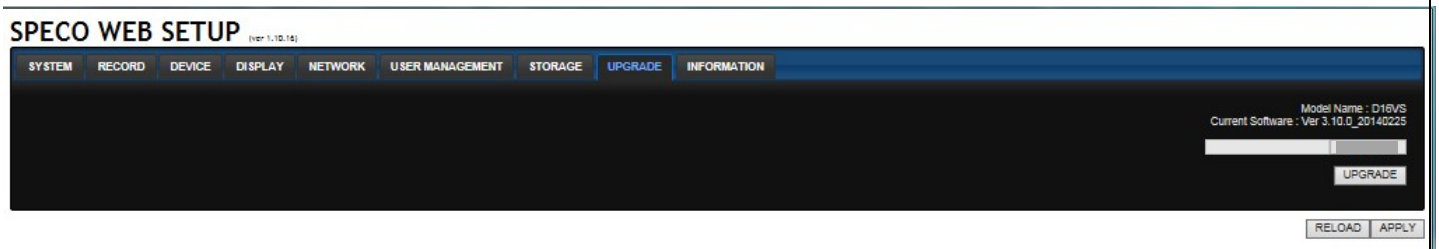
7-7-7. Storage

Select **Storage** to configure continued recording settings by overwriting the hard disk and the storage period for the recording data.



- **OVERWRITE**: Continues recording by writing over previous recordings when HDD is full.
- **DISK INFO**: Shows the information of HDD installed in DVR
- **RECORDING LIMIT**: Sets whether to limit or not, the recording data storage period.

7-7-8. Remote Upgrade



Shows the current Firmware version installed on DVR.

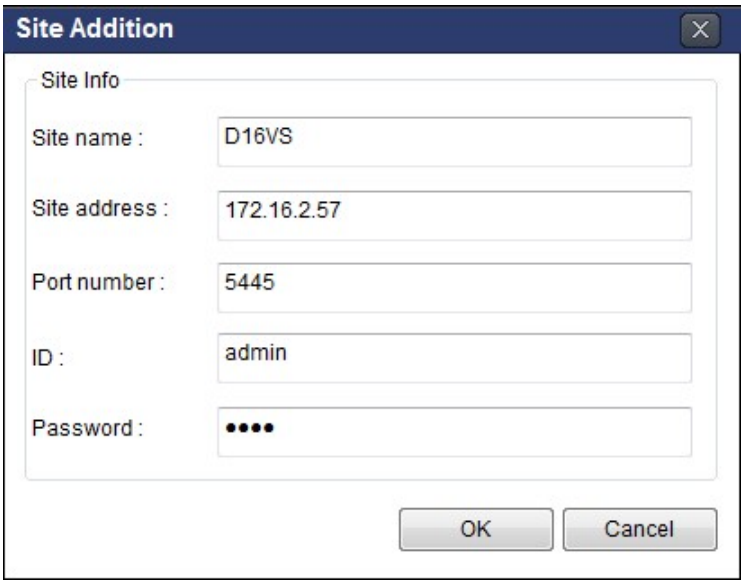
- **Browse:** Select BROWSE to locate the firmware file.
- **Upgrade:** Select UPGRADE to upgrade the firmware of the DVR.

7-8. Operation

7-8-1. Addition, Delete, and Modify of DVR Sites

7-8-1-1. Addition of Sites

1. Click SITE ADDITION button. And then the following window will be displayed as below.



- **Site Name:** Input a name that properly describes a site.
- **IP Address:** Input IP address (Public IP address of a router that DVR is connected.) or Domain name
- **Port Number: Default Port Number is "5445".**
- **ID:** Input ID of DVR. **Default ID is "admin".**
- **Password:** Input network password of DVR that is same with DVR setup password.

2. Click OK button. And then the registered site is added on the directory window.

7-8-1-2. Deleting a Site

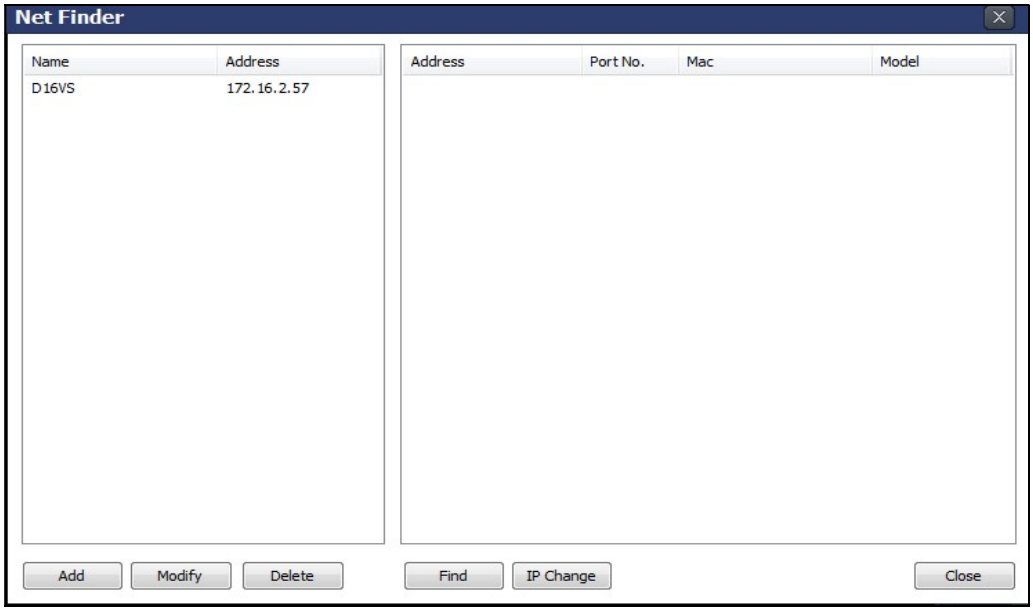
1. Select the site/sites to delete from the directory window.

2. Click SITE DELETE button. And then the selected site/sites is/are deleted.

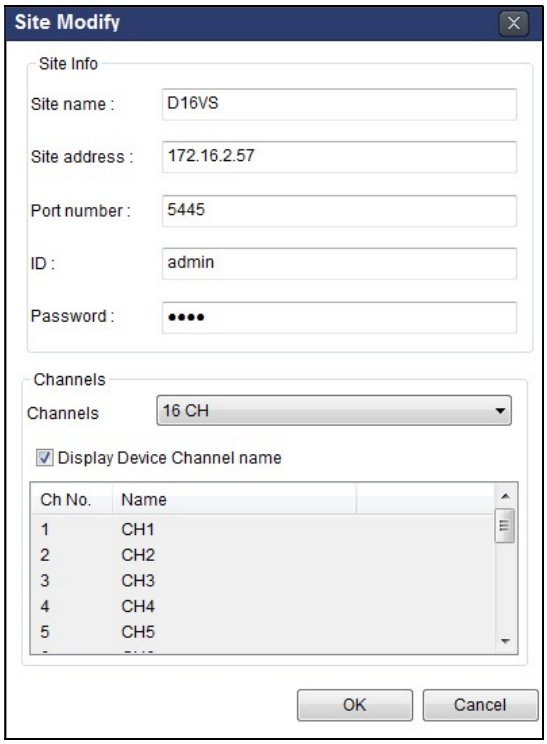
7-8-1-3. Modify of Sites

1. Select the site/sites to modify from the directory window.

2. Click NET FINDER button. And then the following window will be displayed as below.



3. Click MODIFY button. And then the modified information is displayed as below.

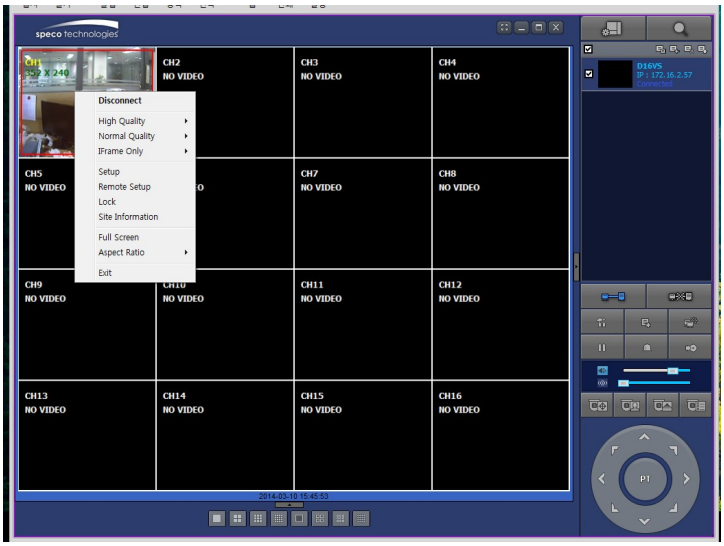


7-8-2. Connect and Disconnect

7-8-2-1. Connect

1. Select site/sites to connect from the directory window.

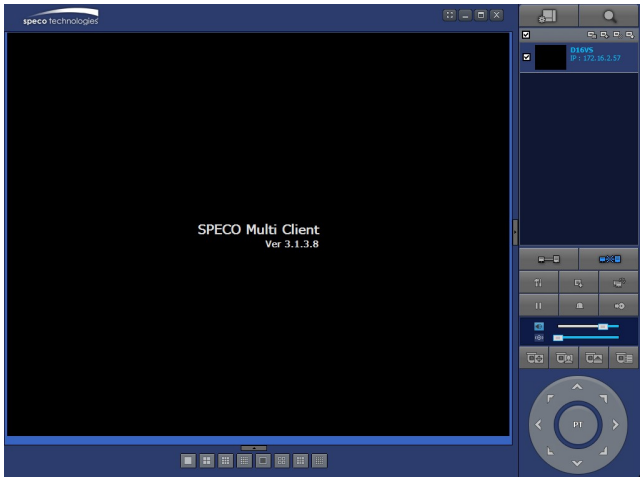
2. Click CONNECT button, and then site/sites displays/display as connected.



7-8-2-2. Disconnect

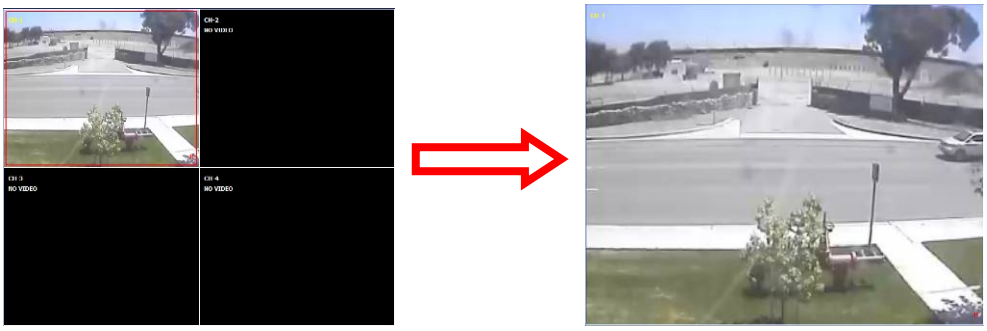
1. Select site/sites to disconnect from the directory window.

2. Click DISCONNECT button, and then selected site/sites disconnected.

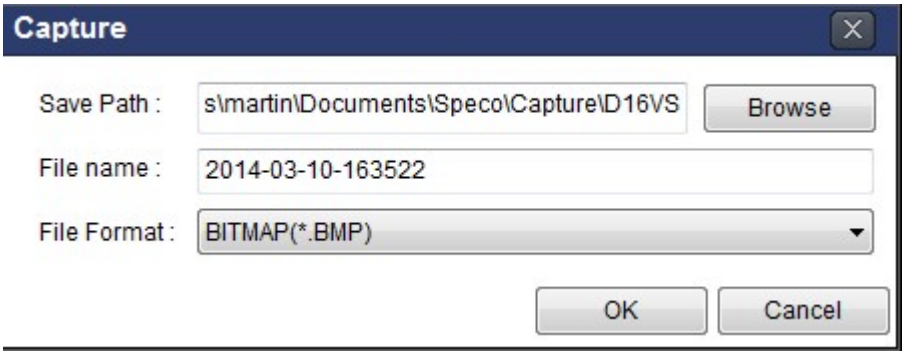


7-8-3. Still-image Capture During Live

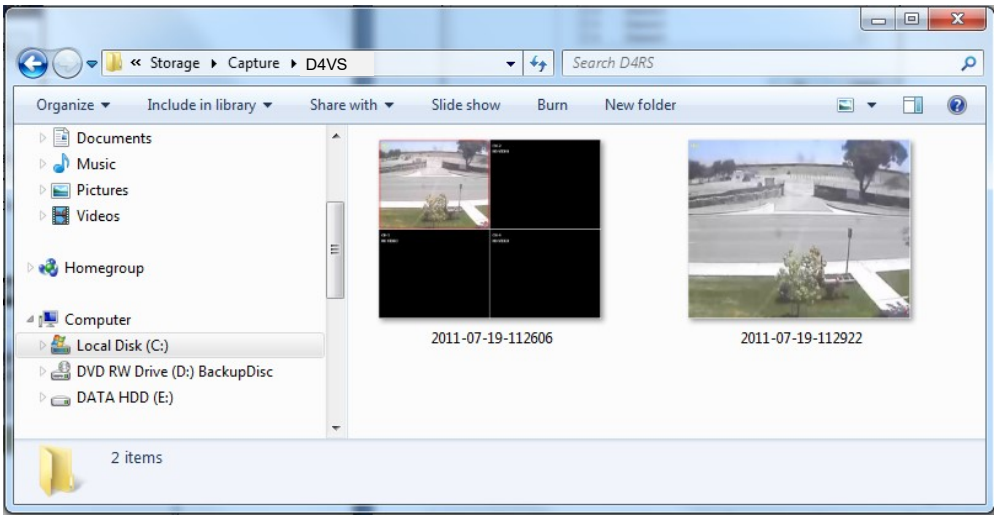
1. Double-click a channel to capture from the display screen. (Otherwise all channels will be captured.).



2. Click CAPTURE button. And then a Capture window will be displayed as below.



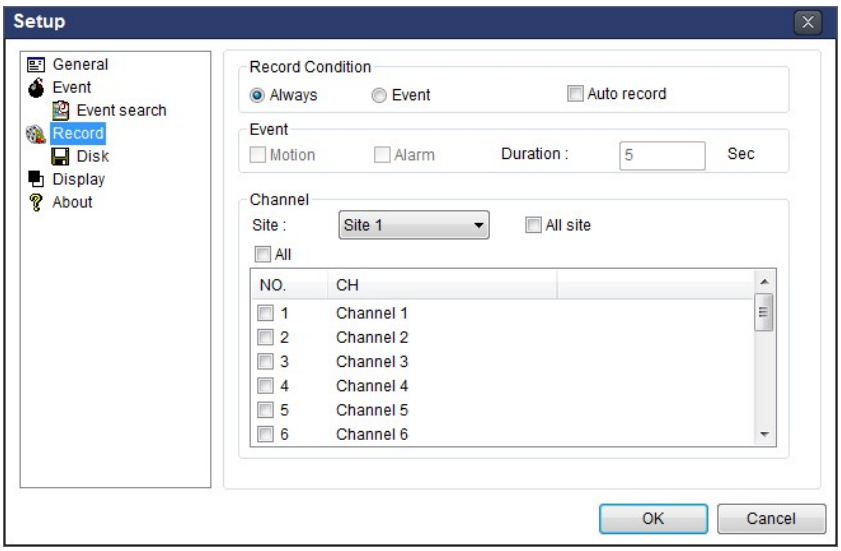
3. Set Save Path, File Name, and File Format. And then click OK button.
4. Still image is saved as set in Capture window.



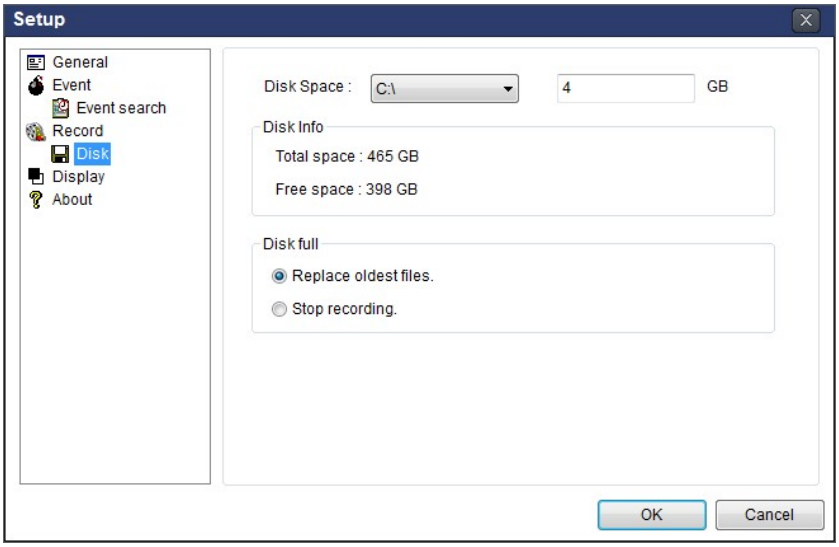
7-8-4. Recording Video on Local PC During Live

1. Click SETUP button. And then a setup window will be displayed as below.

2. Select Record and set the values.

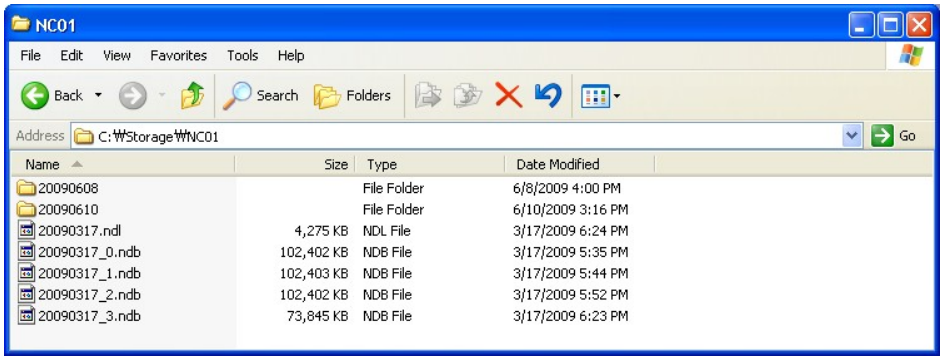


3. Select Disk and set the values.



4. Click RECORD ON button. And the color of button is changed.

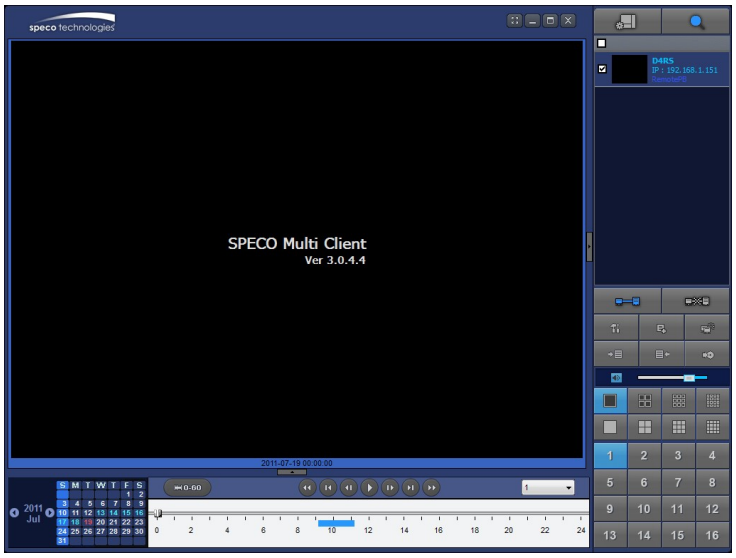
5. Live video data is recorded as set in Record and Disk setup. These video data can be searched and play-backed with Local Playback.



7-8-5. Local Playback and Remote Playback

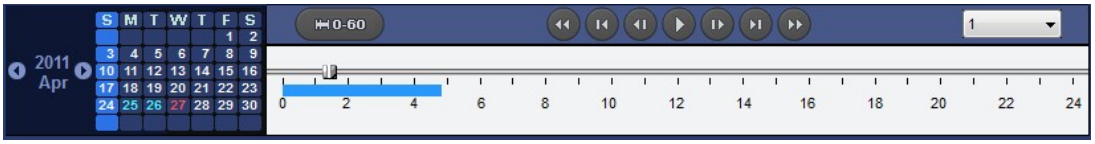
7-8-5-1. Playback of Recorded Video on a Local PC

1. Click LOCAL PLAYBACK. And then Playback Window will be displayed over the Live Window.

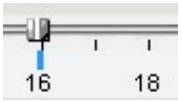


2. Select site/sites to connect from the directory window.

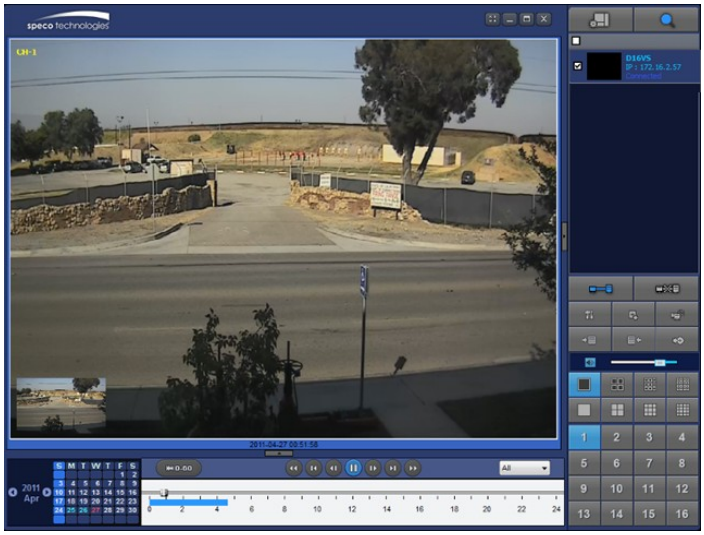
3. Click CONNECT button. And then Green bar displays on Search calendar and timeline scale window.



6. Move the marker on the timeline scale to where there is video data and press the PLAY button.



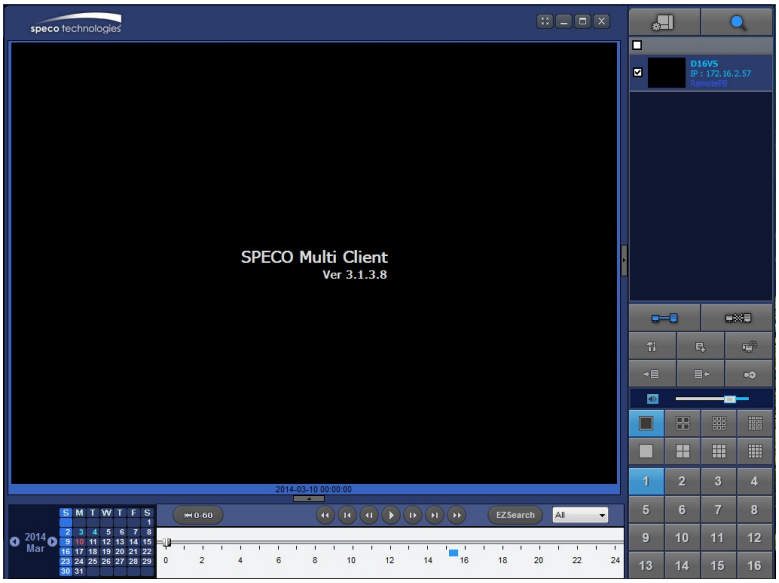
7. Video data that is recorded on local PC will be play-backed.



8. Use the mouse scroll to digitally zoom in and out from a single channel display.

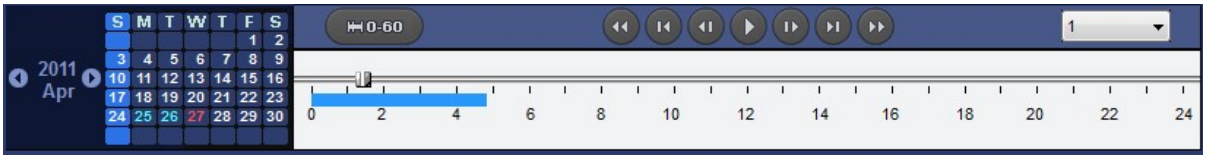
7-8-5-2. Playback of Recorded Video on Remote DVR

1. Click REMOTE PLAYBACK. And then Playback Window will be displayed.

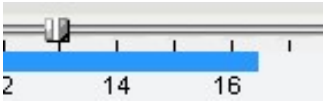


2. Select the site to connect from the directory window.

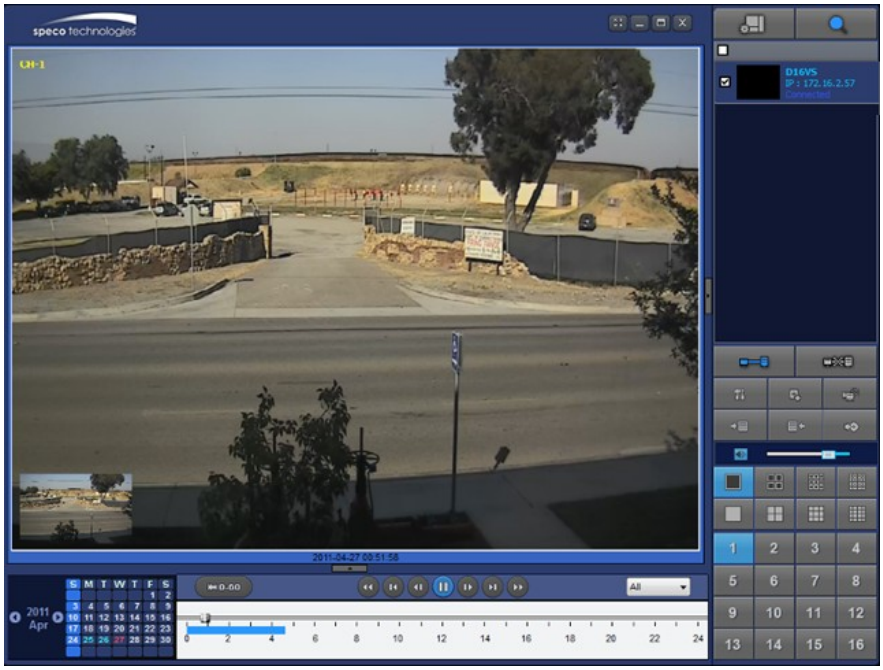
3. Click CONNECT. And then Green bar displays on Search calendar and timeline scale.



4. Move the marker on the timeline scale to where there is video data and press the PLAY button.



5. Video data that is recorded on the remote DVR is play-backed.

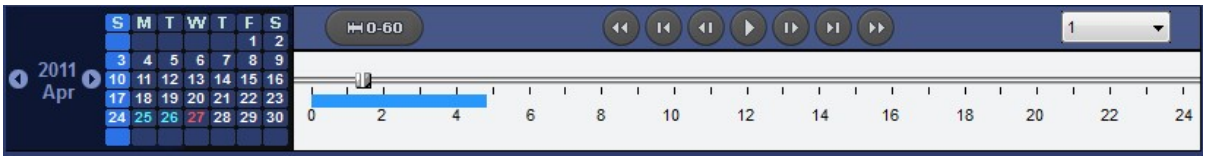


7-8-6. AVI Backup during Playback

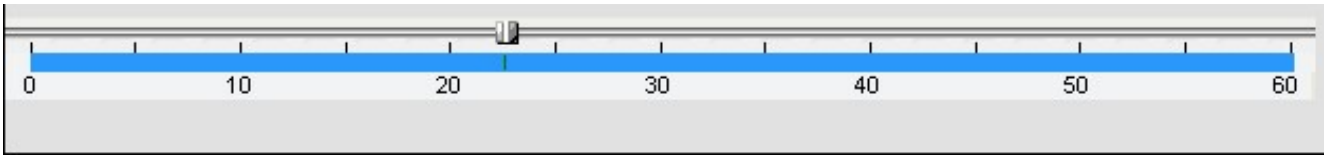
You can back up the recorded videos in AVI format during playback.

1. Double-click the target channel to backup.

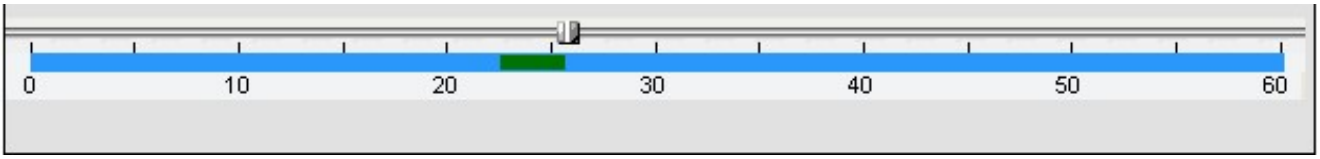
2. Select the beginning time by using the search calendar and timeline scale bar.



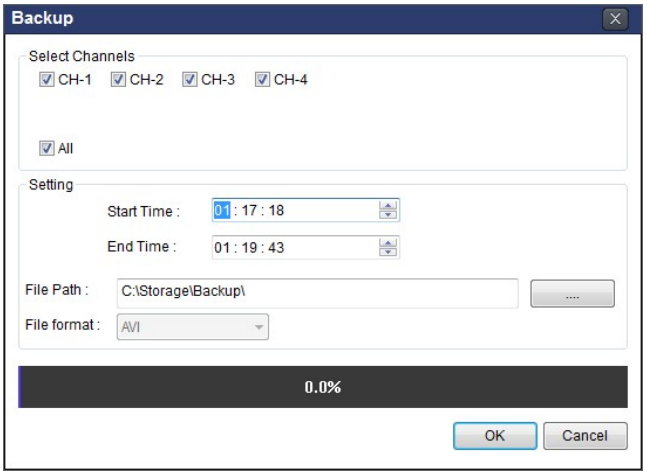
3. Click EZCOPY START button on the timeline scale to select the beginning point of the backup.



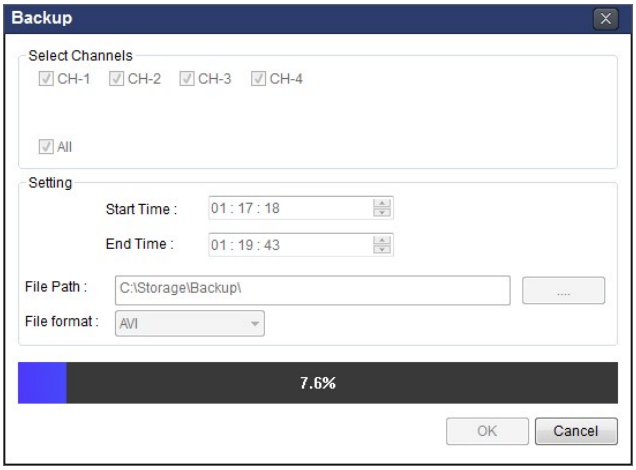
4. Click EZCOPY END button on the timeline scale to select the ending point of the backup. Then, the selected starting point and the ending point on the timeline scale bar will be marked in green.



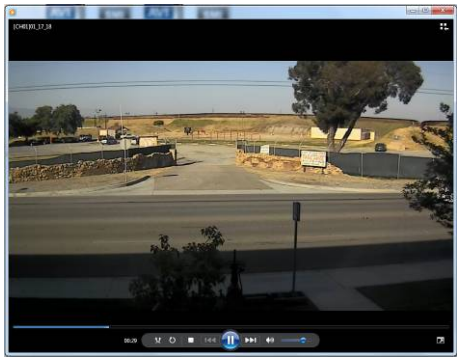
5. Click BACKUP. And then the BACKUP window will be displayed as below.



6. You can also set the beginning time and ending time on this window. After selecting a channel for backup, click the OK button. The backup will begin.



7. AVI video data is recorded as selected in AVI Backup window. AVI format video can be played back by using Window Media Player™ or other media player that is compatible with AVI format video.



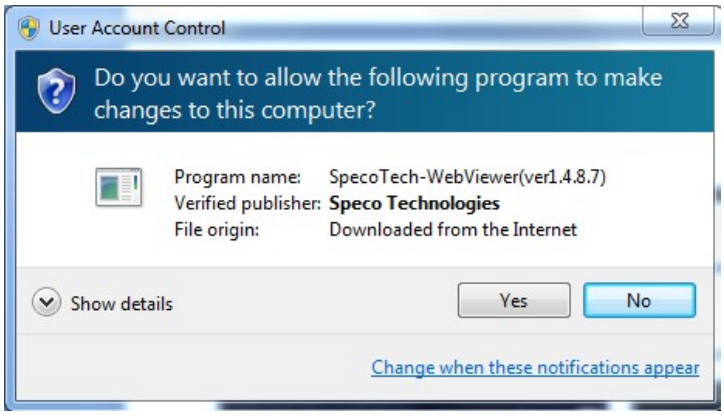
8. Network Access Using the Web-Browser Viewer

The DVR provides a live remote monitoring feature by web-browser viewer. (NOTE: Web-Brower is only available for Internet Explorer)

1. Check the IP address of the DVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS or
2. Input the IP address or Domain name address that you pre-registered.

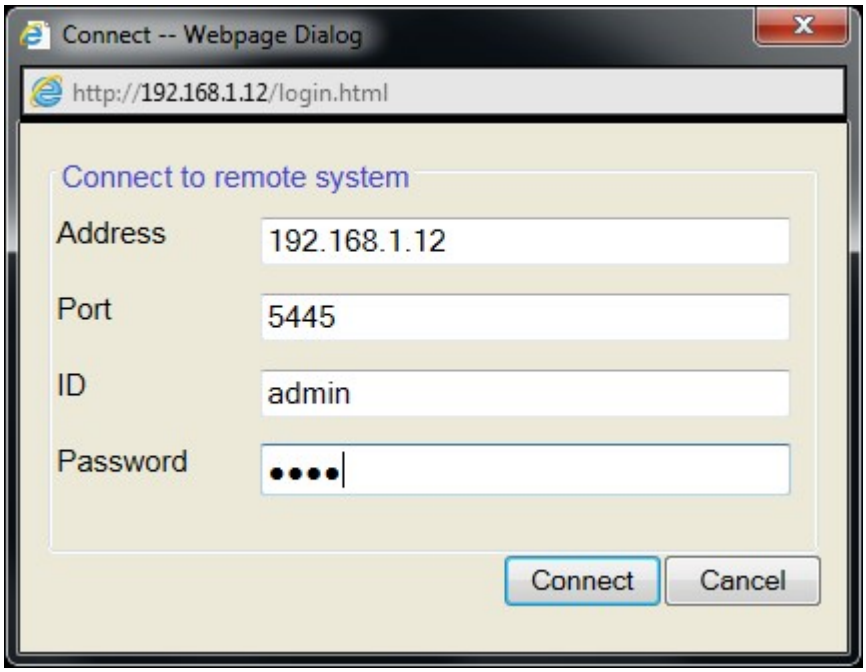
3. Click this bar. Then the dialog box is displayed.

4. Click “Install” to download and install the ActiveX control.



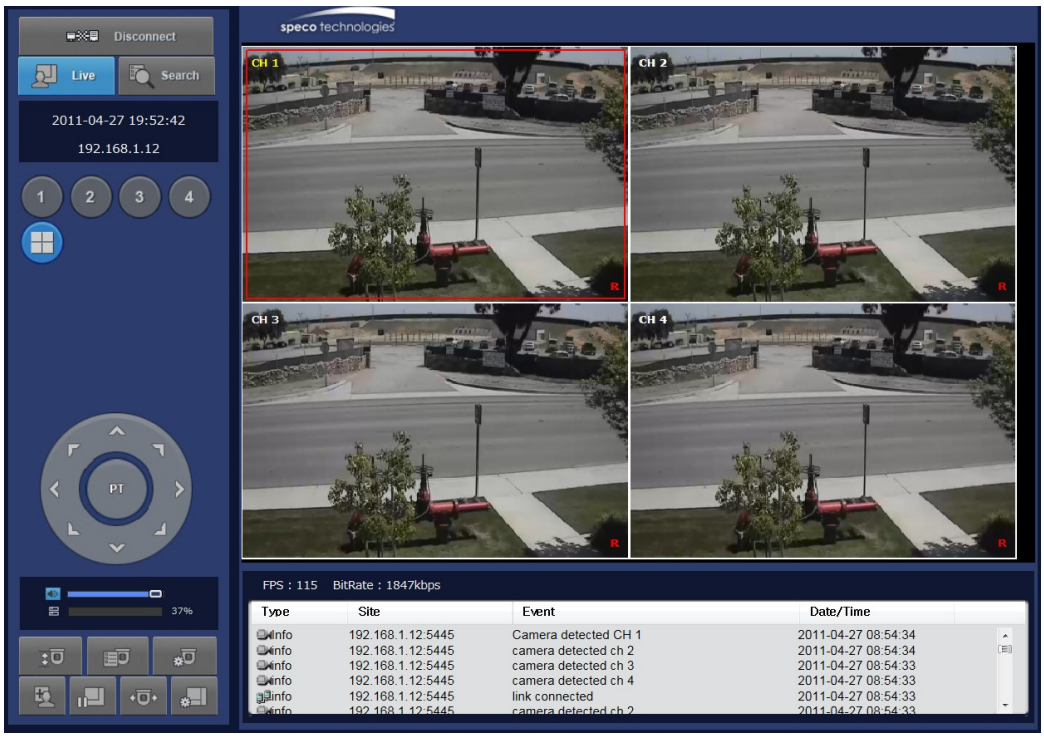
5. The Web Browser Viewer will be displayed as below after the ActiveX installation

6. Click the CONNECT button on the Left upper corner of web-viewer. Then “Connect” dialog is displayed.



- **Site Name:** Input a name that properly describes a site.
- **IP Address:** Input IP address (Public IP address of a router that DVR is connected.) or Domain name
- **Port Number: Default Port Number is “5445”.**
- **ID:** Input ID of DVR. **Default ID is “admin”.**

7. **Password:** Input network password of DVR that is same with DVR setup password.
8. Then the cameras connected to the DVR are displayed on the screen.
9. Use mouse scroll to digitally zoom in and out from a single channel display.



9. Network Access Using the Smart Phone Viewer

Notice

Data Usage applied without Wi-Fi connection. Please check with your Phone Carrier.

9-1. App Viewer for iPhone

1. Enter the Apple App Store.

2. Search “Speco Player” in the App Store.

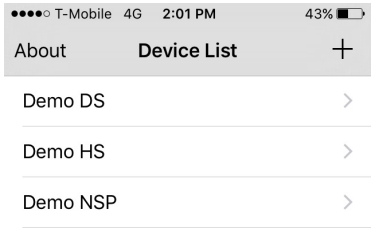
Notice

SPECO Player is for the **HU**, VX, VT, HT, HS, ZS, NS, DS, RS, WRS and HD series DVRs. SPECO VIEWER is not compatible with the T Series DVR’s (TH, TN or TL) or

9-1-1. Live

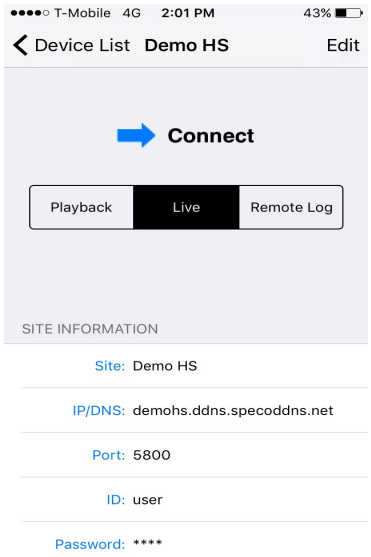
1. Open the installed “Speco Player” App and click button to add a remote device.

2. Enter the site name, IP or DDNS address, Network Port number (default 5445), ID(default admin) and Password that is same with DVR setup password. Then, click “Save” button.

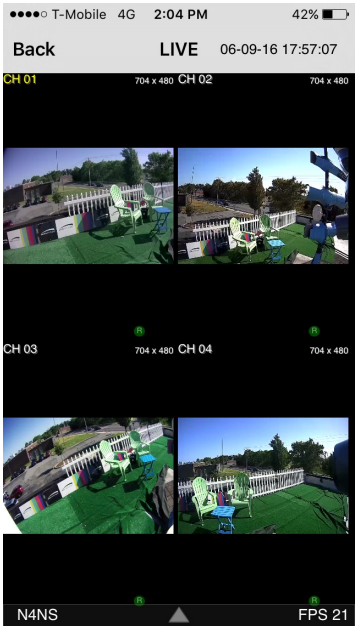


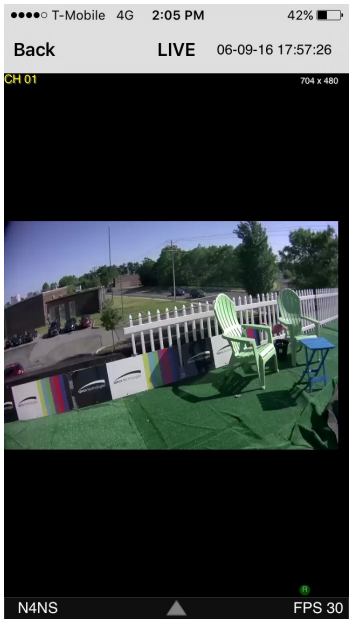
* Note: Network Port and Web Port must be forwarded before adding a new site.

3. Select a registered device and select “Live”. Then click “Connect” button.

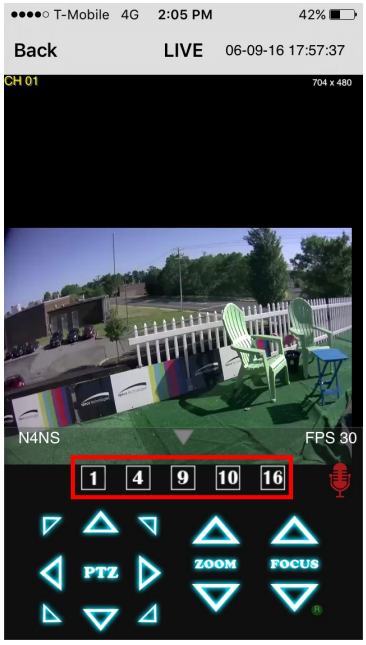


4. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4, 8, 10, 16 channels split display depending on the DVR.





5. To select the display mode(1, 4, 9, 10 or 16 split display), tap the arrow menus button



6. Drag and drop channels

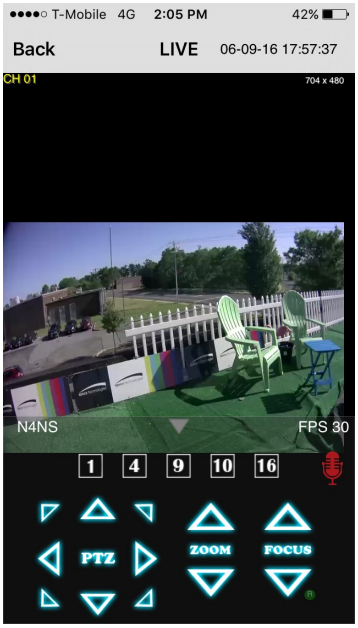
   Touch and drag one channel to the other channel to swap the channel location. To swap the channel, drag a channel to another channel.

7. Digital Zoom In-Out

   Double tap on the desired channel to view in 1channel mode. Then use the iPhone zoom feature using two fingers to pinch the screen to zoom in or out on the video image. User can also move the zoomed image around by touching the desired spot and dragging the zoom image.

9-1-2.PTZ Control

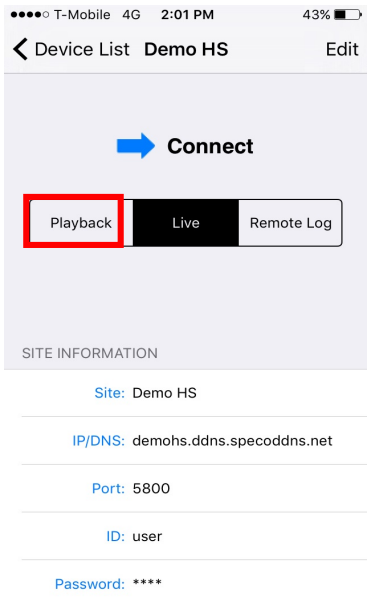
To control the PTZ functions of the camera, tap the menu button. Then PTZ menu icons will display. Using the PTZ icon on the screen, can control PTZF functions.

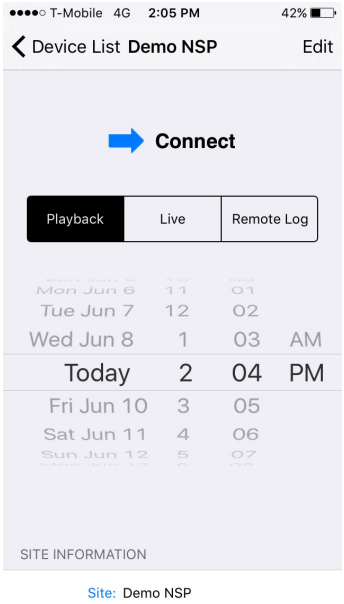


9-1-3. Playback

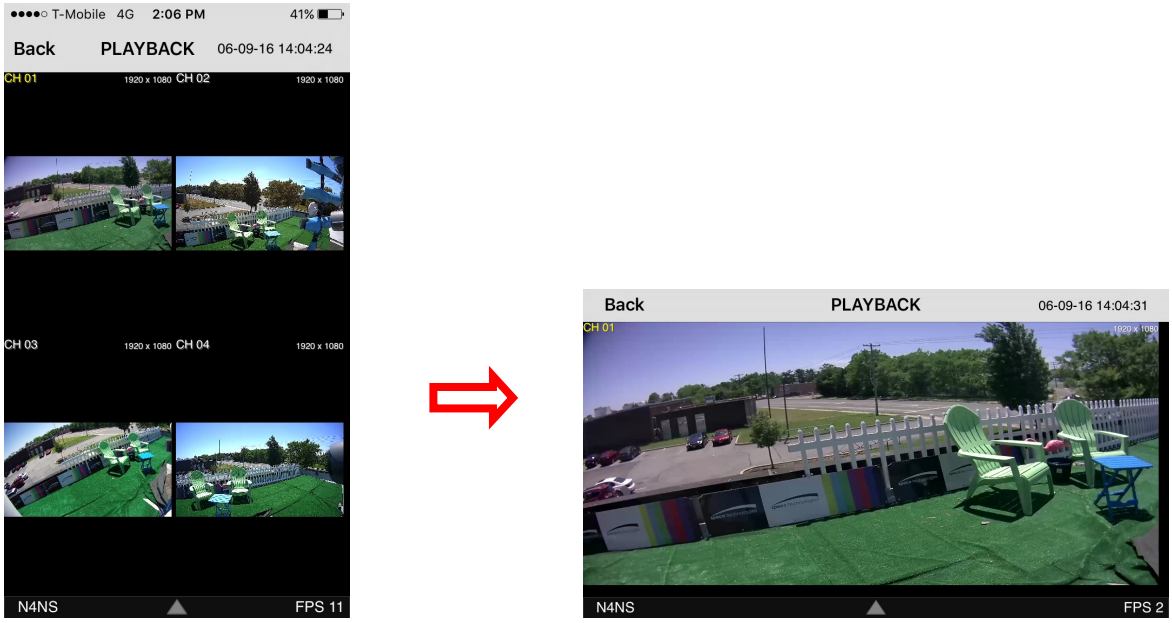
1. Select mode as 'Playback'

and click 'Connect' button. Then select Date & Time and click 'Connect' button.





2. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4, 8, 10, 16 channels split display depending on the DVR.



3. Tap the menu button. Then Playback menu icons will display.

9-2. App Viewer for Android Phone

1. Enter the Android Play Store.

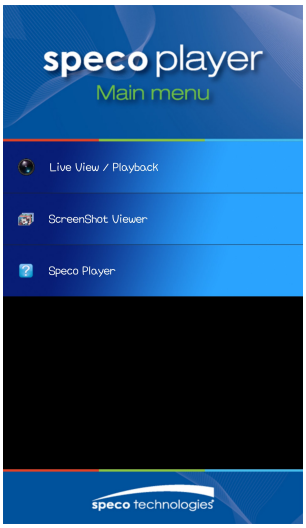
2. Search “Speco Player” in the Android Market and install the “Speco Player” app.

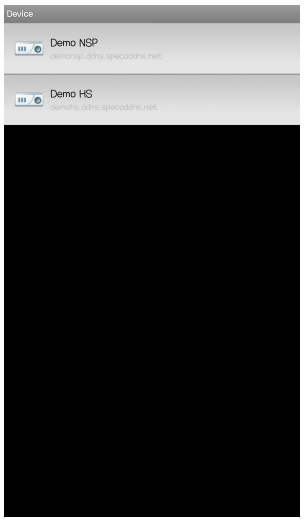
Notice

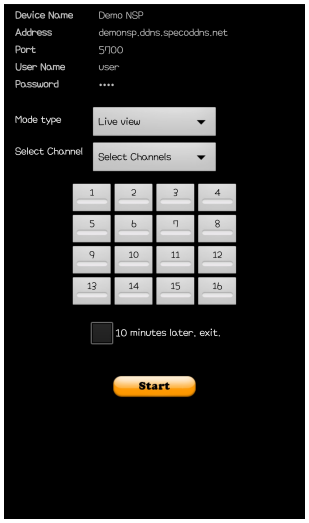
SPECO Player is for the **HU**, VX, VT, HT, NS, HS, DS, RS, WRS and HD series DVRs. SPECO VIEWER is not compatible with the T Series DVR’s (TH, TN or TL) or the PC

9-2-1. Live

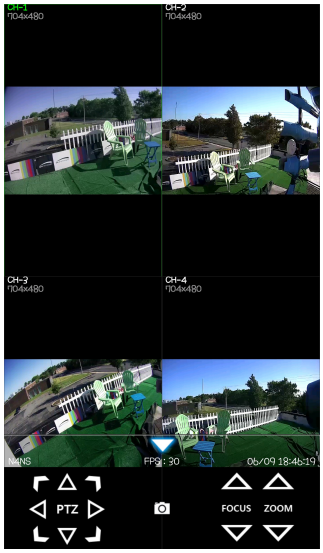
1. Open the installed “Speco Player” App and select the “Live view / Playback”. Then click the menu button of the phone to add a remote device.
2. Select the registered device and select ‘Live view’ and select up to 4 channels to monitor. Then click ‘Start’ button.





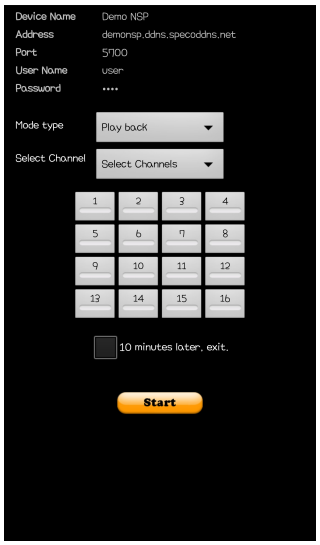


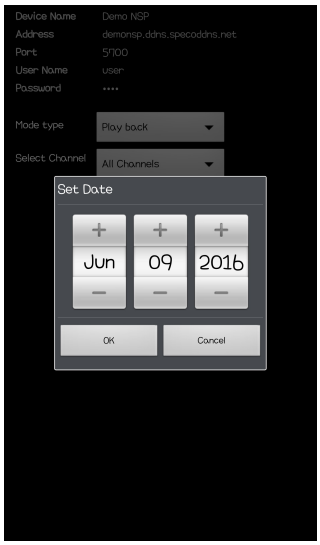
3. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4 channels split display.

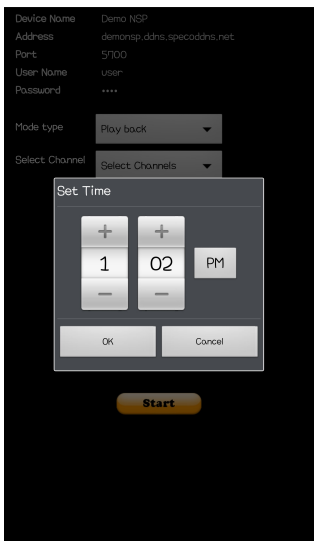


9-2-2. Playback

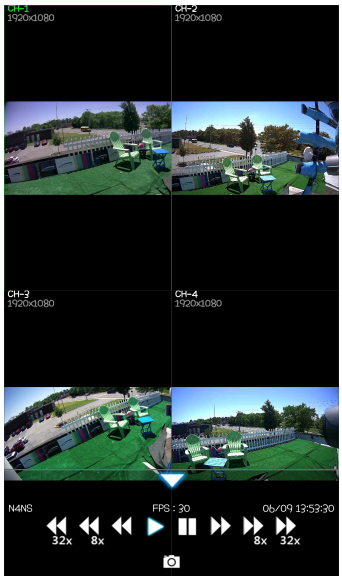
1. Select the registered device and select ‘Play back’ and select up to 4 channels to search. Then click ‘Start’ button. As soon as setting the date and time to search, the app will start the playback.





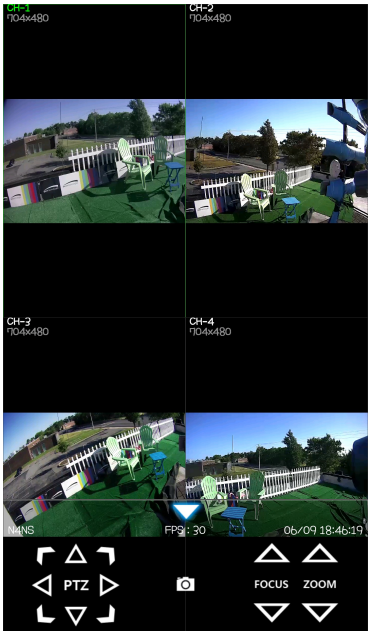


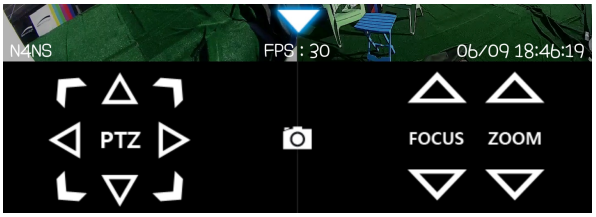
2. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4 channels split display.



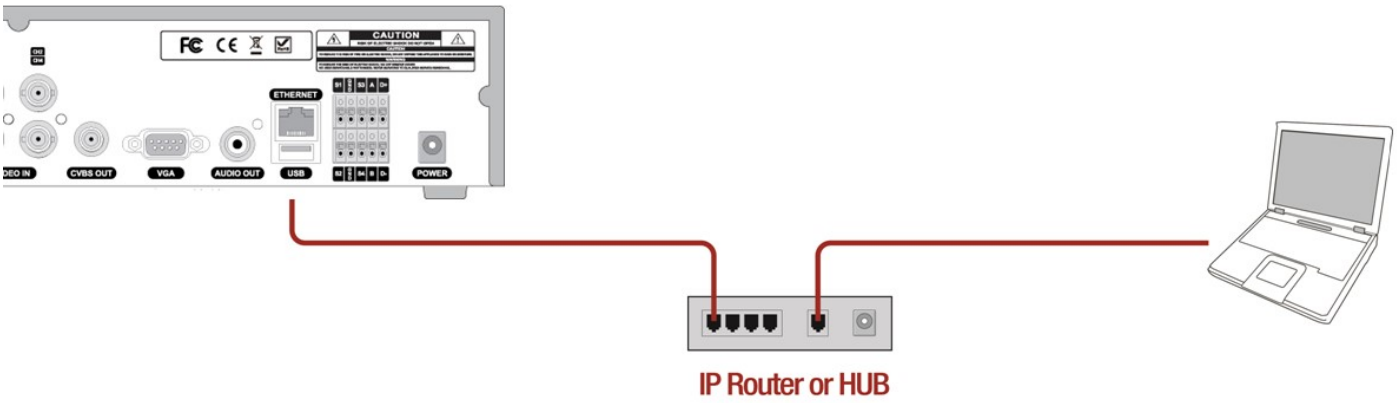
9-2-3.PTZ Control

To control the PTZ function of the camera, tap the channel screen, and then the channel name will be highlighted in Light Green. Using the PTZ menu icons on the screen, control PTZF.



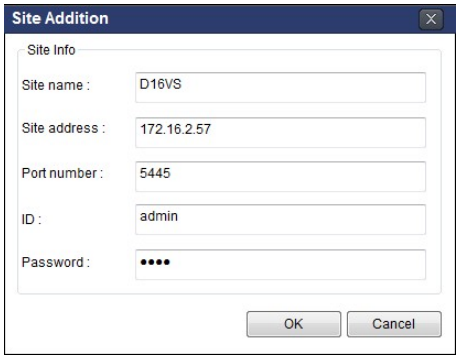


APPENDIX: Network Connection - LAN

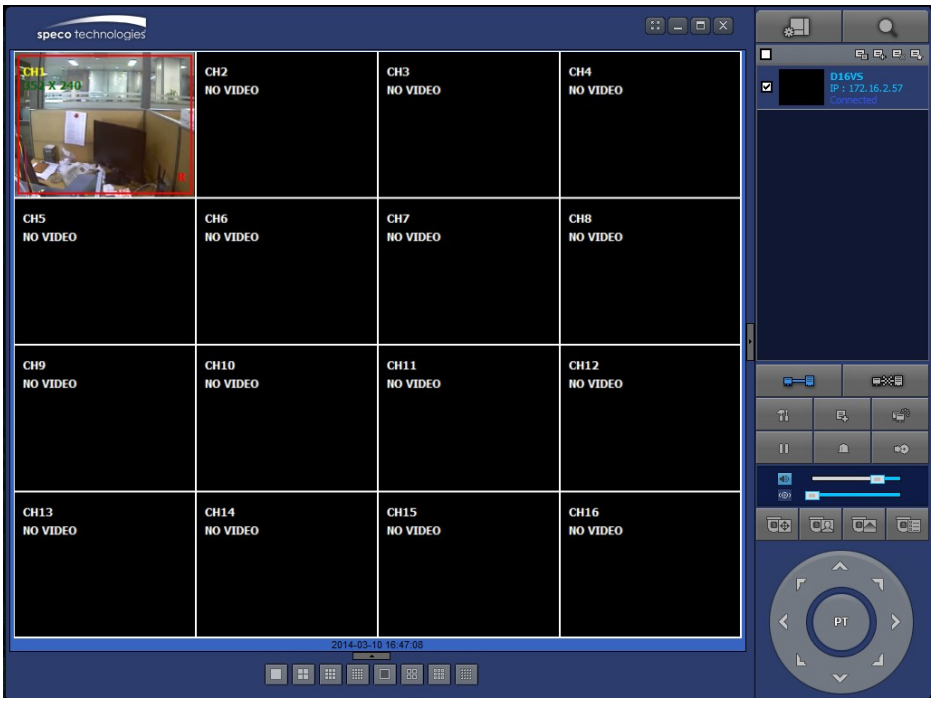


1. Install the network client software from the supplied CD.
2. Check the IP address from SETUP > SYSTEM > DESCRIPTION or SETUP>NETWORK of DVR.

3. Run the network client software.

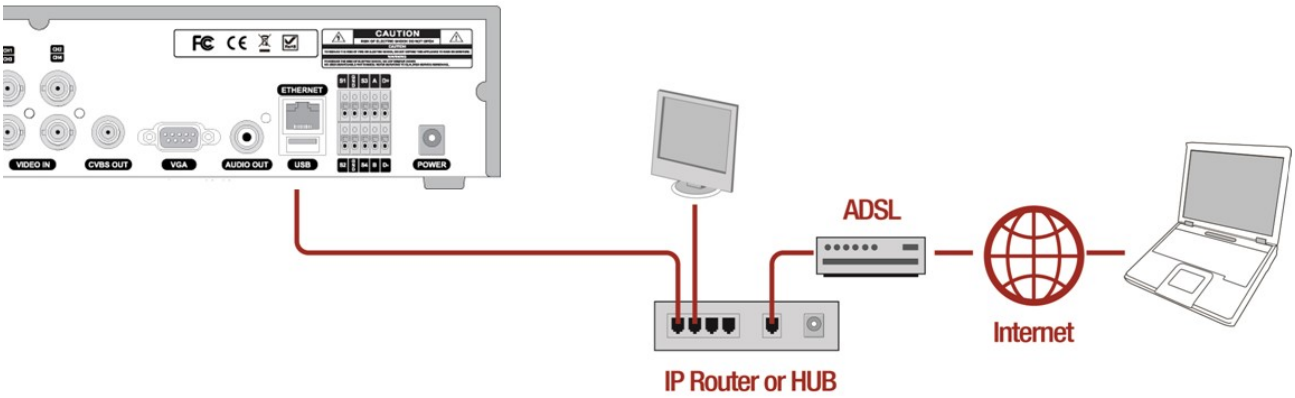


4. Input Site Name, Site Address (IP address), Port Number, and Password on the connect window.
   - **Site Name:** Input a name that properly describes a site.
   - **IP Address:** Input IP address
   - **Port Number: Default Port Number is "5445".**
   - **ID:** Input ID of DVR. **Default ID is "admin".**
   - **Password:** Input network password of DVR that is same with DVR setup password
5. Select a site by checking the box, and Press button to connect to the site.

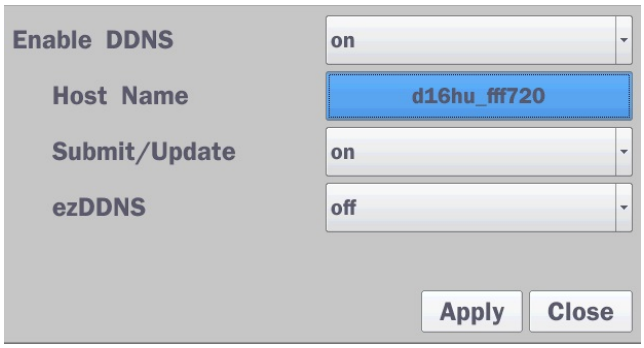

speco technologies
CH1
CH2
NO VIDEO
CH3
NO VIDEO
CH4
NO VIDEO
CH5
NO VIDEO
CH6
NO VIDEO
CH7
NO VIDEO
CH8
NO VIDEO
CH9
NO VIDEO
CH10
NO VIDEO
CH11
NO VIDEO
CH12
NO VIDEO
CH13
NO VIDEO
CH14
NO VIDEO
CH15
NO VIDEO
CH16
NO VIDEO
2014-03-10 16:47:08
D16V5
IP : 172.16.2.57
Connected
PT

APPENDIX: Network Connection – Internet and DDNS

Dynamic Domain Name System (DDNS) allows a domain name to be constantly synchronized with a dynamic IP address. A current dynamic IP address is being associated with a static domain name.



1. Go to SETUP>NETWORK>DDNS and set the DDNS SERVER to ON.



> If you set **ezDDNS** to ON, the host name is automatically generated and registered.

2. Go to SETUP>NETWORK>DDNS>HOST NAME. Manually enter a domain name using the virtual keyboard and click ENTER button.

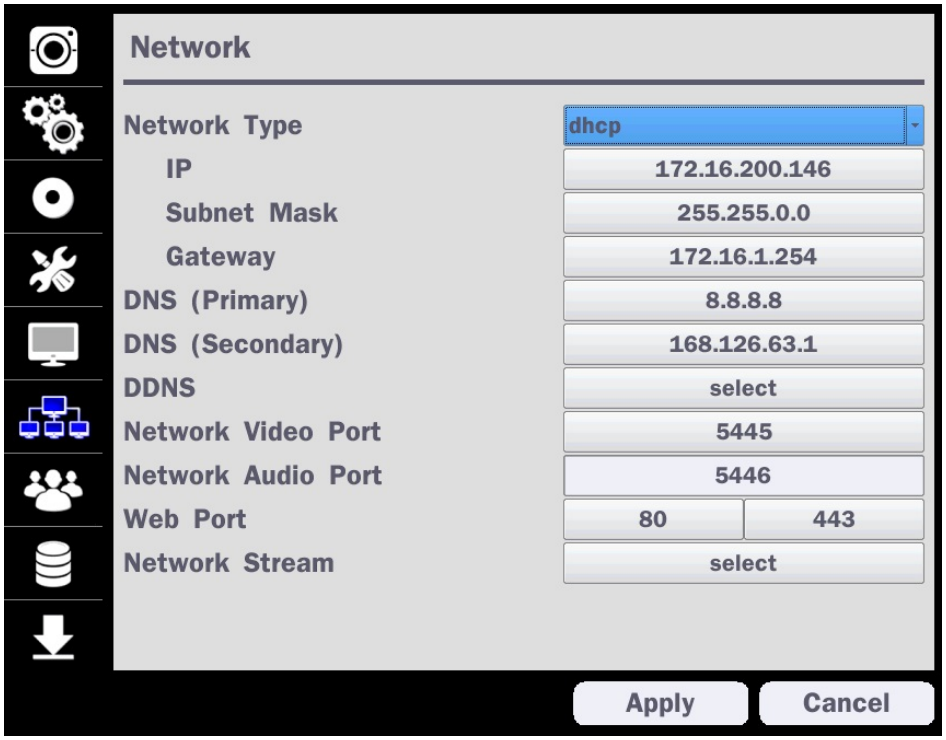
3. When a manual host name is completed, Go to SETUP>NETWORK>DDNS>SUBMIT/UPDATE and select ON to submit the settings on the SPECO DDNS.

> Once the setting is completed, the DDNS address will be:
> http://hostname.ddns.specoddns.net
> For example, if you enter the host name as “D16HU”, then the address will be:
> http://d16hu.ddns.specoddns.net

4. When DDNS setting is done, click the APPLY button. Otherwise DDNS setting will not be applied.
5. When you exit SETUP menu, DDNS NOTIFIY window will pop up.

6. DDNS registration status can be checked from SYSTEM INFORMATION or SETUP>SYSTEM>DESCRIPTION>DDNS STATUS

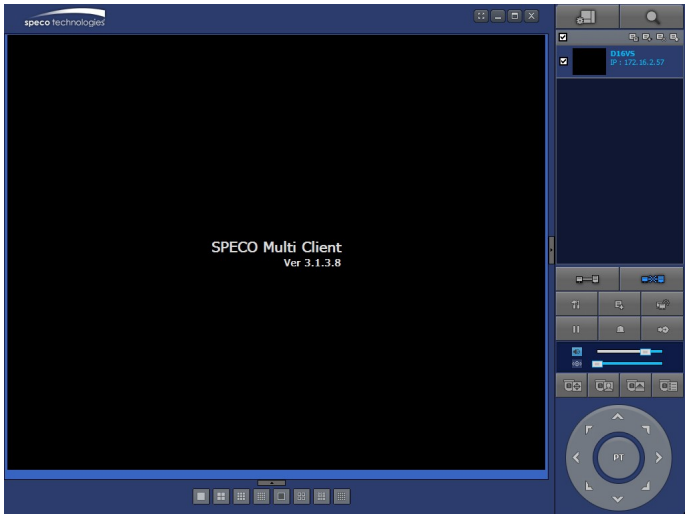
7. Check the NETWORK PORT (Default: 5445), WEB PORT (Default: 80), and the IP Address of the DVR from SETUP>NETWORK.

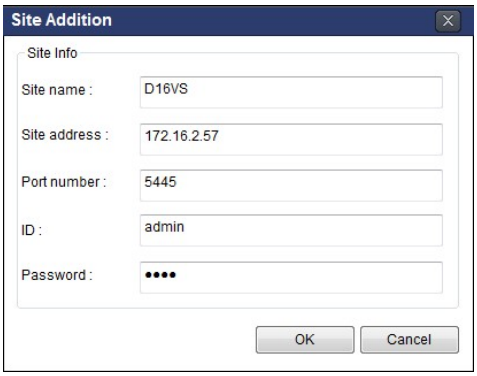


8. Port forward the NETWORK PORT (Default: 5445) and WEB PORT (Default: 80) of the private IP Address of the DVR on the network router.

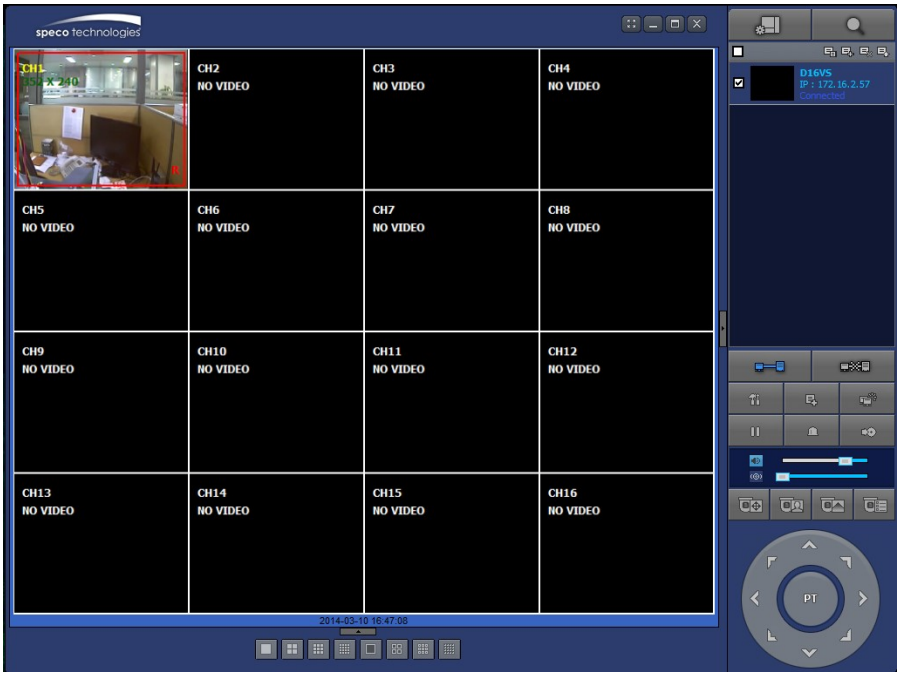
Please refer to the user manual and guide for the detailed steps for port forwarding for specific router model.

9. Run the network client software.





10. Input Site Name, Site Address (IP address), Port No., and Password on the connect window.

- **Site Name:** Input a name that properly describes a site.
- **IP Address:** Domain name or Public IP address of a router that DVR is connected.
- **Port Number: Default Port Number is "5445".**
- **ID:** Input ID of DVR. **Default ID is "admin".**
- **Password:** Input network password of DVR that is same with DVR setup password.

11. And select the OK button. Then, press button after checking the left check box.