

**INSTRUCTION MANUAL** (X-Plus Series \_Ver. 1.0\_131114)

# **H.264 Video Compression**

**960H Digital Video Recorder**

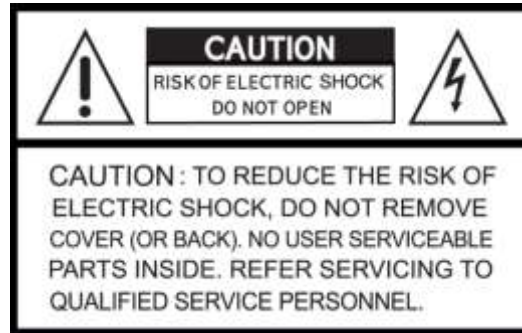
## **User Guide**

### **About this user guide**

Before installing and using this unit, please read this user guide carefully.

Be sure to keep it handy for later reference.

# Safety Precautions



## 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 uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

### **WARNING**

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

### **CAUTION**

Changes or modifications not expressly approved by the manufacturer may void the user's authority to operate this equipment.

### **CAUTION**

It is danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Discard used batteries according to the manufacturer's instructions.

## **These precautions must be followed for safety reasons.**



### **Warning**

- Do not use if the unit emits smoke, strange sounds are heard, or odor is emitted.
- Make sure the power cable is not damaged.
- Make sure there is no dust accumulation on the power plug or the outlet.
- Disassembly prohibited
- Do not place any foreign objects inside the unit.
- Do not place a container holding water or other liquids above the unit when it is connected to power.
- Do not allow the unit to get wet.
- Do not use during thunder/thunder storms.
- Do not place in an unstable position.
- Do not expose to shock or vibration.
- Do not use this unit in areas where it is exposed to the possibility of explosion.



### **Caution**

- Do not pull on the power cable when removing the power plug from the outlet.
- Do not touch the power plug with wet hands.
- Do not sit on.
- Make sure the cables are connected properly.
- Do not place heavy objects on connected units.
- Never move this unit while the power is turned on.
- Remove the power plug from the outlet when the unit is going to remain unused for long periods of time.
- Do not block the cooling fans or air ducts.
- Do not expose to extreme temperatures or humidity changes.

## **Warning**

Installation and servicing should be performed only by qualified and experienced personnel.

Turn off the power of the DVR 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 DVR for examination or attempting to fix the unit. The manufacturer may not be held liable for any issues with the unit if the warranty seal is removed.

## Product Components

The package contains the main unit and its components as specified below. When you purchase the unit, please check to ensure the components specified below are included.

DVR Set (4CH)	
DVR Set (8 & 16CH)	
DVD-RW (option for 8 & 16CH DVR))	
Client Software CD	
Remote Control	
Battery 1.5V (AAA x 2EA)	
Quick Guide	
HDD/DVD-RW data & power cable	
HDD/DVD-RW mounting bracket & Screw	
HDD/DVD-RW fixing screw	
Adaptor (DC12V 3A or 5A ) & Power Cable	
Mouse	

Items	4CH DVR	8/16CH DVR
HDD/DVD-RW data & power cable	1EA	2EA
HDD/DVD-RW mounting bracket	1 Set (2EA)	2Set (4EA)
HDD/DVD-RW Mounting bracket screw	4EA	8EA
HDD/DVD-RW fixing screw	4EA	8EA

## Mounting the HDD or DVDRW (for only 8&16CH model)



1. Before installing bracket and screws onto HDD



2. After installing bracket and screws onto HDD.



3. Installation HDD and Bracket onto base case (Inside)



4. Installation HDD and Bracket onto base case (Outside)

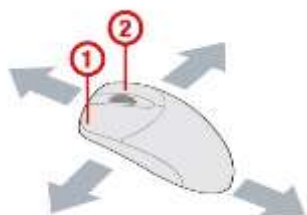


5. After connecting power cable and data cable with HDD



6. Whole picture after installation HDD and DVD-RW (for only 8&16CH)

## Basic function of the MOUSE



① : Left button: SELECT function

② : Wheel: MOVEMENT function on a drop-down menu

## Compatible HDD Models

Company	Model	Size	SATA Type	RPM	BUFFER
Seagate	ST2000VM003	2 TB	SATA 3	5900 RPM	64 MB
	ST2000VM002	2 TB	SATA 2	5900 RPM	64 MB
	ST2000DL003(barracuda green)	2 TB	SATA 3	5900 RPM	64 MB
	ST32000641AS(Barracuda XT)	2 TB	SATA 3	7200 RPM	64 MB
	ST1000DM003	1 TB	SATA 3	7200 RPM	64 MB
	ST31000524AS(barracuda 7200.12)	1 TB	SATA 3	7200 RPM	32 MB
	ST31000322CS(pipeline)	1 TB	SATA 2	5900 RPM	8 MB
	ST31000526SV(Surveillance)	1 TB	SATA 3	7200 RPM	32 MB
	ST31000524AS(Barracuda)	1 TB	SATA 3	7200 RPM	32 MB
	ST31000340SV(Surveillance)	1 TB	SATA 2	7200 RPM	32 MB
	ST31000528AS(Barracuda)	1 TB	SATA 2	7200 RPM	32 MB
	ST500DM002(barracuda)	500 GB	SATA 3	7200 RPM	16 MB
	ST3500312CS(pipeline)	500 GB	SATA 2	5900 RPM	8 MB
	ST3500411SV(Surveillance)	500 GB	SATA 3	7200 RPM	16 MB
	ST3500413AS(Barracuda)	500 GB	SATA 3	7200 RPM	16 MB
	ST3500830SCE	500 GB	SATA 2	7200 RPM	8 MB
	ST3500418AS(Barracuda)	500 GB	SATA 2	7200 RPM	16 MB
	ST3500410AS(Barracuda)	500 GB	SATA 2	7200 RPM	16 MB
HITACHI	HDS723020BLA642	2 TB	SATA 3	7200 RPM	64 MB
	HDS722020ALA330	2 TB	SATA 2	7200 RPM	32 MB
	HDS721010DLE630	1 TB	SATA 3	7200 RPM	32 MB
	HDS721010KLA330	1 TB	SATA 2	7200 RPM	32 MB
	HDT721010SLA360	1 TB	SATA 2	7200 RPM	16 MB
	HDS721010CLA332	1 TB	SATA 2	7200 RPM	32 MB
	HDS721050CLA362	500 GB	SATA 2	7200 RPM	16 MB
	HDP725050GLA360	500 GB	SATA 2	7200 RPM	16 MB

Western Digital	WD20EURS-63SPKY0	2 TB	SATA 2	5400 RPM	64 MB
	WD5000AAKX-00ERMAO	500 GB	SATA 3	7200 RPM	16 MB
	WD5000AVCS-632DY1	500 GB	SATA 2	5400 RPM	32 MB
	WD10EZEX-00RKKA0	1 TB	SATA 3	7200 RPM	64 MB
	WD20EARS	2 TB	SATA 2	5900 RPM	64 MB
	WD20EARX(00PASB0)	2 TB	SATA 3	5900 RPM	65 MB
	WD20EADS	2 TB	SATA 2	5400 RPM	32 MB
	WD20EURS	2 TB	SATA 2		64 MB
	WD10EURX(63FH1Y0)	1 TB	SATA 3	5400 RPM	64 MB
	WD10EZRX(00A8LB0)	1 TB	SATA 3	5400 RPM	64 MB
	WD10EARS(00Y5B1 Caviar Green)	1 TB	SATA 3	5400 RPM	64 MB
	WD10EVDS(63U8B1)	1 TB	SATA 3	7200 RPM	32 MB
	WD10EALX(229BA1)	1 TB	SATA 3	7200 RPM	32 MB
	WD10EALX(009BA0)	1 TB	SATA 3	7200 RPM	32 MB
	WD10EVVS	1 TB	SATA 2	5400 RPM	8 MB
	WD10EACS	1 TB	SATA 2		16 MB
	WD10EUCX	1 TB	SATA 3		16 MB
	WD10EURS(630AB1)	1 TB	SATA 2	5900 RPM	64 MB
	WD5000AAKX(221CA1 Caviar Blue)	500 GB	SATA 2	7200 RPM	16 MB
	WD5000AAKX(001CA0)	500 GB	SATA 3	7200 RPM	16 MB
	WD5000AVCS	500 GB	SATA 2		16 MB
	WD5000AACS	500 GB	SATA 2	5400 RPM	16 MB
TOSHIBA	HDS723020BLE640	2 TB	SATA 3	7200 RPM	64 MB

## NOTICE

The brands and models of all HDD should be the same. If the brands and models of each HDD are different with others, the DVR may not recognize HDD.

# Specifications

MODEL			SP-DRH04	SP-DRH08	SP-DRH16
Video	Input	Number of Channels	4CH (650/700TVL)	8CH (650/700TVL)	16CH (650/700TVL)
		Signal Format	NTSC/PAL		
	Output	Main Monitor	VGA and HDMI (1920x1080)		
		Sub Monitor	CVBS or SPOT	CVBS and SPOT	
Audio	Input & Output		4 Line Input & 1 Line Output		
	Audio Codec		G.711		
Alarm	Sensor Input		4		
	Alarm Output		1		
Serial	RS-232C		None		Yes
	RS-485		Yes		
Recording	Compression		H.264		
	Resolution & Frame Rate	960H(960x576)	100fps	200fps	400fps
		4CIF(704x576)	100fps	200fps	400fps
		CIF(352x288)	100fps	200fps	400fps
	Recording Quality Grade		5 Levels		
	Recording Mode		Continuous / Motion / Sensor / Schedule / Manual		
	Pre Recording		Max. 20 Minutes		
	Post Recording		Max. 60 Seconds		
Playback	Search		Date/Time, Event, Archive, Log		
	Multi-Decoding		1, 4	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, DVD-R (for only 8&16CH DVR)		
	Format		BMP, AVI, Proprietary Format		
	Huge Backup		Yes (Max. 24 hours)		
Storage	HDD	Capacity of 1 HDD	Up to 2TB	Up to 3TB	
		Internal HDDs	1	2 (1 with DVD-R)	
		e-SATA	None		Yes
	USB	Front	1		
		Rear	1		
User I/F	Input Method		Front Button, IR, Mouse, Keyboard Controller		
Network	Interface		10/100 Base-T		10/100/1000 Base-T
	Dynamic DNS		Yes (Free 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	
	Internal Beep	Yes	
	Multi-Language	Yes	
	e-mail Notification	Yes	
Network Access	3G/4G Mobile	iPhone / iPad / Android Phone & Tab	
	Web Viewer	Windows (IE, Chrome, Firefox, Safari)	
	PC Client	Single / Multi Client	
	Remote Setup and Upgrade	Yes	
Power	Power Supply Voltage	DC 12V 3A	DC 12V 5A
Temperature	Operation Temperature	5°C - 40°C, During storage: -10°C - +50°C	
Weight	Unit Weight (Gross weight)	1.5 Kg(3 Kg)	4.1 Kg(6.2 Kg)
Dimension	Unit Dimension (W x D x H)	340 x 262 x 63mm	380 x 340 x 72mm

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

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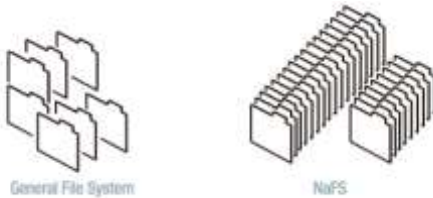
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# 1. Main Features

## ■ H.264 Video compression



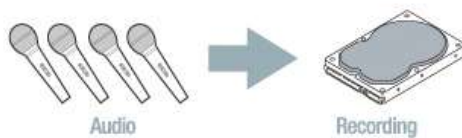
## ■ Reliable file system



## ■ Spot output (Live and Event Pop-up)

## ■ HDMI Video output

## ■ 4Channel audio recording



## ■ Individual channel operation

## ■ Motion detection

## ■ Automatic video input and video loss detection

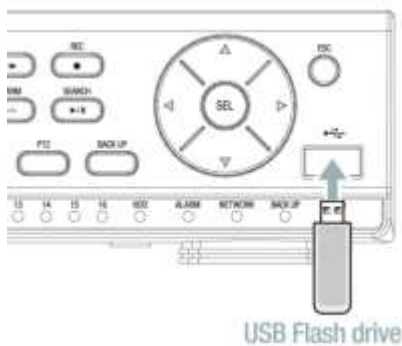
## ■ Covert camera operation provides enhanced security

## ■ Built-in PTZF camera control

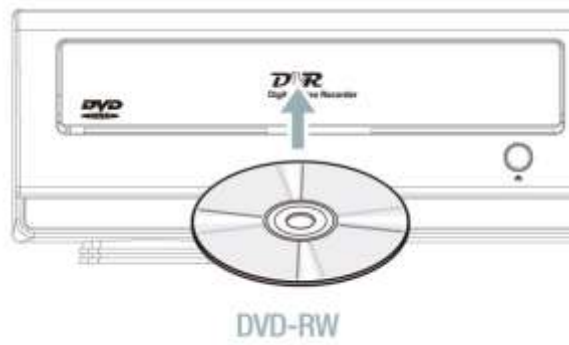
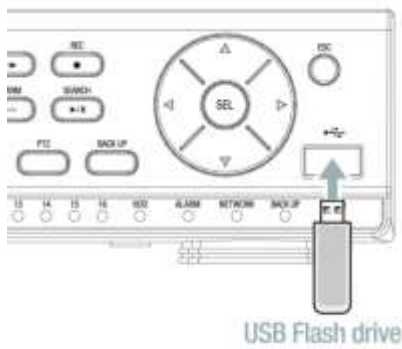
## ■ Easy and simple user interface

## ■ Easy scheduler

## ■ Easy software upgrade



- Instant and convenient backup via USB flash drive, network or DVD-RW (for 8&16CH model)



- Exclusive file format backup
- AVI backup
- Various ways of network access via Network client software, Web-viewer, CMS, UMS(Multi-site monitoring software) and Mobile Viewer

## 2. Name, Function and Connection

### 2-1. Front Panel

The following information will help you to operate the front panel controls.

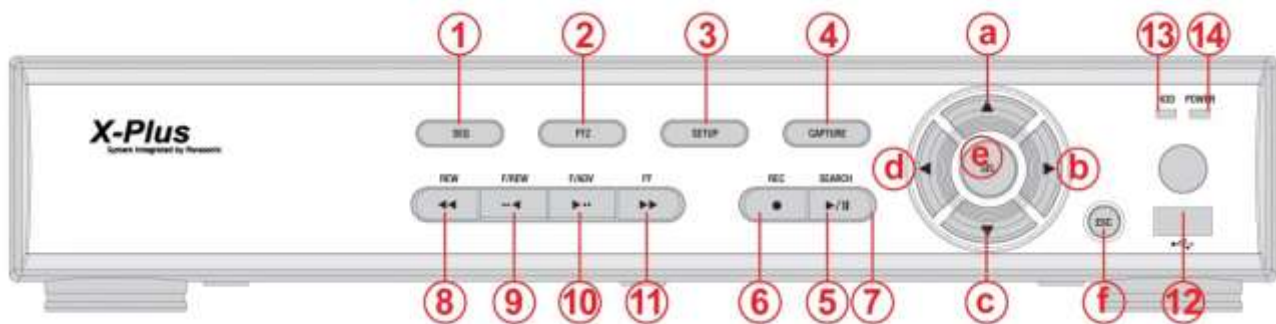


Figure 2.1.1. Front panel (SP-DRH04)

- ① **SEQ:** To start auto sequencing of the screen in full screen mode. (Toggle)
- ② **PTZ:** To control PTZ operation
- ③ **SETUP:** To launch SETUP menu.
- ④ **CAPTURE:** To start operations of capture a still image in live mode or backup a video data in playback mode
- ⑤ **SEARCH:** To go to the search menu.
- ⑥ **REC:** To start and stop manual recording.
- ⑦ **PLAY/PAUSE:** To play or to pause the footage in playback mode.
- ⑧ **REW:** To rewind the footage at 1x, 2x, 4x, and more speed during playback.
- ⑨ **F/REW : During playback -** To move the playback position 60 seconds backward.  
**During pause -** To move the playback position 1 frame backward.
- ⑩ **F/ADV: During playback -** To move the playback position 60 seconds forward.  
**During pause -** To move the playback position moves 1 frame forward.
- ⑪ **FF:** To fast forward the footage at 1x, 2x, 4x and more speeds during playback.

- ⑫ **USB PORT:** To connect USB Thumb drive to backup data.
- ⑬ **HDD:** The indicator blinks during recording and playback.
- ⑭ **POWER:** The indicator blinks when the AC adaptor is connected.

#### Direction, Selection & Escape buttons

- a Press to move up the menu in Setup mode
- b Press to move right or to change the values in Setup mode
- c Press to move down the menu in Setup mode
- d Press to move left or to change the values in Setup mode
- e To select full screen or quad screen view in live/playback. Or to select desired menu item and to store the setup value.
- f To return to previous menu screen or to exit from playback.

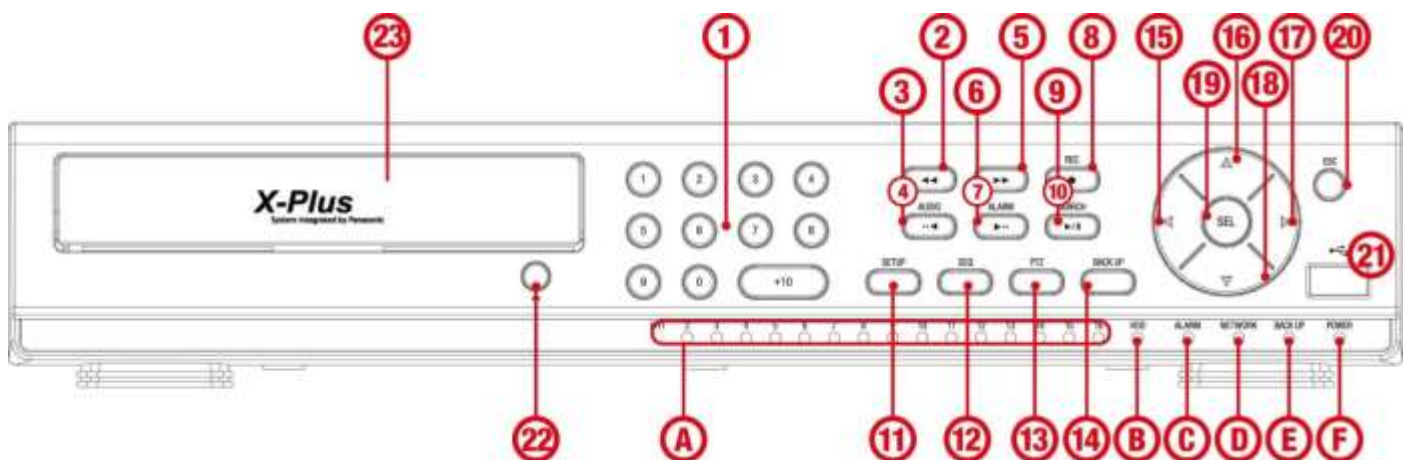


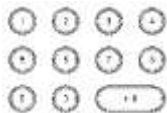















Figure 2.1.2. Front panel (SP-DRH08 & DRH16)

Table2.1.1. Indication lamps

NO.	Name	Description
A	<b>CH1~16</b>	Indicating that the channel is being recorded.
B	<b>HDD</b>	Indicating that the system is accessing the hard disk.
C	<b>ALARM</b>	Indicating that when sensor(s) is/are triggered or motion is detected.
D	<b>NETWORK</b>	Indicating that when Network client connects through the network.
E	<b>BACKUP</b>	Indicating that USB or DVD-RW storage device is stored images or video.
F	<b>POWER</b>	Indicating that the system is switched on.

Table 2.1.2. Front panel buttons

NO	Name	Description
----	------	-------------

1		Channel keys. For channel 10, press the 0 key. For channel 11, press the +10 and 1 key. For channel 16, press the +10 and 6 key.
2		Press to rewind the footage in playback mode.
3		Press to select audio mode such as SINGLE and MUTE. MUTE- All of 4 channels. SINGLE- Highlighted channel only.
4		Jump/Step backward. In playback mode, the playback position moves 60 seconds backward.
5		Press to fast forward the footage in playback mode.
6		Press to enable/disable ALARM operation.
7		Jump/Step forward. In playback mode, the playback position moves 60 seconds forward.
8		Press to start or stop manual recording.
9		Press to go to SEARCH menu in live display mode.
10		Press to play/pause the footage in playback mode.
11		Press to enter SETUP menu.
12		Enable/disable the automatic sequence of display of channels in full screen, quad, 9-split display mode.
13		Press to control Pan/Tilt/Zoom operations.
14		Press to capture video in jpeg format in live or playback mode.
15	◀(LEFT)	Press to move left or to change the values in Setup mode.
16	▲(UP)	Press to move up the menu in Setup mode.
17	▶(RIGHT)	Press to move right or to change the values in Setup mode.
18	▼(DOWN)	Press to move down the menu in Setup mode.
19		Press to select desired menu item or to store the setup value.
20		Press for temporary storage of the changed value or to return to the previous menu screen.
21	<b>USB Port</b>	To archive still-image or video into a USB memory or upgrade firmware with USB memory stick, connect a USB memory to the USB



terminal.

22	<b>OPEN /CLOSE</b>	To open and close the insert tray, press the button.
23	<b>DVD drive</b>	To save video, insert a DVD-R media

## 2-2. Rear Panel

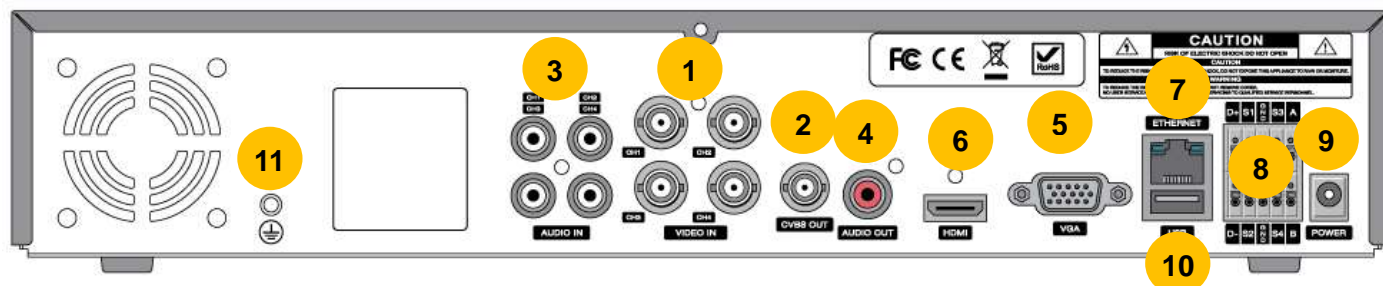


Figure 2.1.3. Rear panel (SP-DRH04)

NO	Connection	Purpose
1	<b>VIDEO IN</b>	4 connectors for video input. (NTSC/PAL)
2	<b>CVBS</b>	Video output terminal or Spot out terminal
3	<b>AUDIO IN</b>	4 connectors for audio input.
4	<b>AUDIO OUT</b>	1 connector for audio output.
5	<b>VGA OUT</b>	Connector for VGA monitor.
6	<b>HDMI OUT</b>	HDMI out terminal.
7	<b>ETHERNET</b>	RJ-45 connector for LAN connection.
8	<b>SENSOR IN</b>	4 connectors for sensor device connection.
	<b>ALARM OUT</b>	1 connector for alarm device connection.
	<b>RS-485</b>	Provides simple On/Off switching by using relay. 0.5A/125V, 1A/30V RS-485 control terminal
9	<b>POWER SOCKET</b>	Connect DC12V 3A Adaptor
10	<b>USB Port</b>	To archive still-image or video into a USB memory or upgrade firmware with USB memory stick, connect a USB memory to the USB terminal.
11	<b>GROUND</b>	Use for ground port

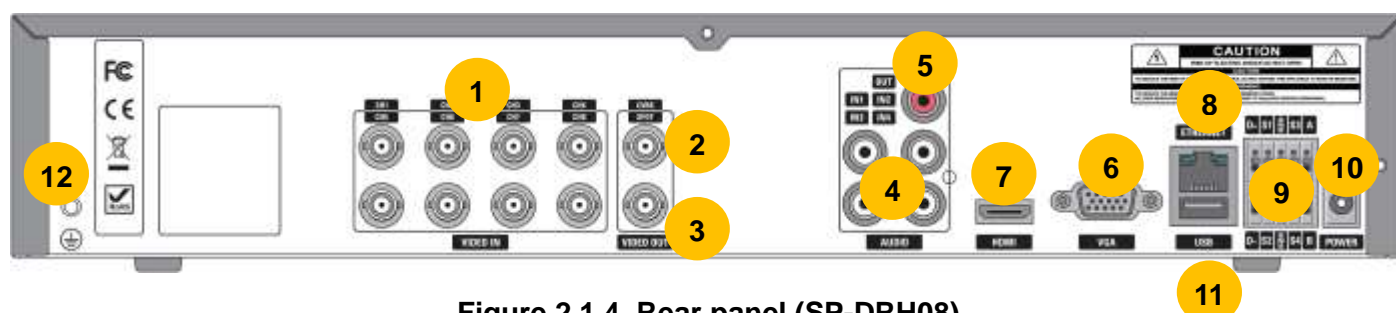


Figure 2.1.4. Rear panel (SP-DRH08)

NO	Connection	Purpose
1	<b>VIDEO IN</b>	8 connectors for video input. (NTSC/PAL)
2	<b>CVBS</b>	Video output terminal
3	<b>SPOT</b>	Spot out terminal
4	<b>AUDIO IN</b>	4 connectors for audio input.
5	<b>AUDIO OUT</b>	1 connector for audio output.
6	<b>VGA OUT</b>	Connector for VGA monitor.
7	<b>HDMI OUT</b>	HDMI out terminal.
8	<b>ETHERNET</b>	RJ-45 connector for LAN connection.
9	<b>SENSOR IN</b>	4 connectors for sensor device connection.
	<b>ALARM OUT</b>	1 connector for alarm device connection.
	<b>RS-485</b>	Provides simple On/Off switching by using relay. 0.5A/125V, 1A/30V RS-485 control terminal
10	<b>POWER SOCKET</b>	Connect DC12V 5A Adaptor
11	<b>USB Port</b>	To archive still-image or video into a USB memory or upgrade firmware with USB memory stick, connect a USB memory to the USB terminal.
12	<b>GROUND</b>	Use for ground port

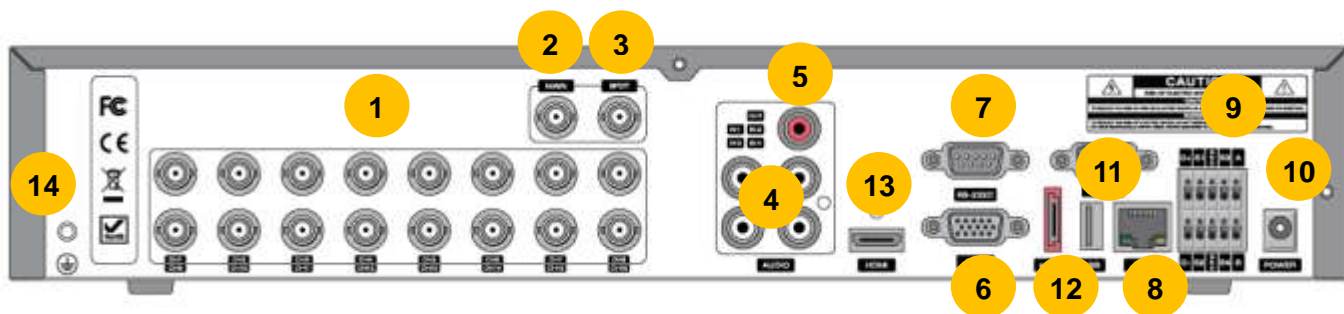


Figure 2.1.5. Rear panel (SP-DRH16)

NO	Connection	Purpose
1	<b>VIDEO IN</b>	16 connectors for video input. (NTSC/PAL)
2	<b>CVBS</b>	Video output terminal
3	<b>SPOT</b>	Spot out terminal
4	<b>AUDIO IN</b>	4 connectors for audio input.
5	<b>AUDIO OUT</b>	1 connector for audio output.
6	<b>VGA OUT</b>	Connector for VGA monitor.
7	<b>RS-232</b>	For engineering use only.
8	<b>ETHERNET</b>	RJ-45 connector for LAN connection.

9	<b>SENSOR IN</b>	4 connectors for sensor device connection.
	<b>ALARM OUT</b>	1 connector for alarm device connection. Provides simple On/Off switching by using relay. 0.5A/125V, 1A/30V
	<b>RS-485</b>	RS-485 control terminal
10	<b>POWER SOCKET</b>	Connect DC12V 5A Adaptor
11	<b>USB Port</b>	To archive still-image or video into a USB memory or upgrade firmware with USB memory stick, connect a USB memory to the USB terminal.
12	<b>e-SATA Port</b>	1 connector for External SATA
13	<b>HDMI OUT</b>	HDMI out terminal.
14	<b>GROUND</b>	Use for ground port

### 2-3. 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 return to the previous 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 NVR ID number or use as number key.

### 3. Setting up the DVR

The following sections detail the initial setup of a DVR.

#### 3-1. Setup – Main Screen

When booting a system at first, the following messages display. After initializing, select a language and set the time.



To enter the setup menu, select a right button of the mouse or press the SETUP button on the remote control.



Table 3.1.1. Setup menu tree

Then password input screen will be displayed. User can select a password by pressing a small square box next to a password input box. The factory default password is **1111**. It is highly recommended to assign a new password to protect the system. User can assign a new password in SECURITY setup menu.

**CONTROL BAR AUTO HIDE:** Set to hide automatically or display continuously a control bar on the bottom side in a Live mode.

**CHANNEL INFORMATION:** Display a channel number, channel name, resolution, frame rate, quality and recording type of each channel.

**SYSTEM INFORMATION:** Display a software version, storage size, network type, IP address, MAC address, DDNS status, DVR ID and remote controller ID of the system.

**SYSTEM LOCK:** To lock the system, user input a password. To unlock the system, please press ESC button for 5 seconds on a front panel or a remote control. You can also unlock the system when pressing LOCK icon on the screen using a mouse control. Then, the system will ask a password.

#### ■ DISPLAY

- OSD
- OSD CONTRAST
- SEQUENCE
- SEQUENCE DWELL TIME
- CHANNEL
  - NAME
  - COVERT
  - BRIGHTNESS
  - CONTRAST
  - HUE
  - SATURATION
- VIDEO OUTPUT (VGA)

#### ■ RECORD

- CHANNEL
  - RESOLUTION
  - FRAME RATE
  - QUALITY
  - RECORDING
  - SENSOR RECORDING
  - PRE RECORD
  - POST EVENT RECORD
  - AUDIO
  - SCHEDULE

#### ■ DEVICE

- ALARM OUT
  - ALARM OUT
  - ALARM DURATION

- CONTROLLER & PTZ
  - CONTROLLER
    - SPEED
    - ID
  - CHANNEL
    - CAMERA
    - SPEED
    - ID
- CHANNEL
  - MOTION ZONE
  - MOTION SENSITIVITY
  - PRIVACY ZONE
- KEY TONE
- REMOTE CONTROLLER ID
- SENSOR
  - TYPE
- VIDEO INPUT TRIMMING

#### ■ STORAGE

- OVERWRITE
- DISK FORMAT
- DISK INFO
- RECORDING LIMIT
  - RECORDING LIMIT DAYS

#### ■ SYSTEM

- DVR-ID
- DESCRIPTION
- LANGUAGE
- DATE FORMAT
- SET DATE & TIME
  - TIME ZONE
  - DAYLIGHT SAVING
  - SET DATE & TIME
- CLIENT ACCESS
- NTP
- SEND EMAIL
- SYSTEM EVENT NOTIFICATION

#### ■ SECURITY

- USER AUTHENTICATION
- USER NAME
- USER PASSOWRD
- PLAYBACK AUTHORITY

- NETWORK LIVE AUTHORITY

## ■ NETWORK

- PORT
- NETWORK AUDIO PORT
- WEB PORT
- NETWORK TYPE (DHCP, STATIC)
  - IP
  - SUBNET MASK
  - GATEWAY
  - DNS(PRIMARY)
  - DNS(SECONDARY)
- DDNS
  - OFF
  - DDNS SERVER 1
  - DDNS SERVER 2
  - DDNS SERVER 3
- NETWORK STREAM
  - RESOLUTION
  - FRAME RATE
  - QUALITY
- USE MOBILE

## ■ CONFIG

- SAVE SETUP TO A USB
- LOAD SETUP FROM A USB
- LOAD DEFAULT
- LOAD FACTORY DEFAULT
- SOFTWARE UPGRADE

## ■ QUICK SETUP

- USE QUICK SETUP
  - INPUT DESIRED DAYS
- CUSTOMER SETTINGS
  - RESOLUTION
  - FRAME RATE
  - QUALITY
  - RECORDING
  - DAYS TO RECORD

3-2. Setup – Display Mode

Press the SETUP button and select DISPLAY. Then, the DISPLAY menu displays as picture below. Navigate through the menu items using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and change the value of the menu item.



Figure 3.2.1. Display mode setup screen

Table 3.2.1. Menu items in DISPLAY mode setup

Item	Description
OSD	Enable/disable on-screen-display. <div><div>CHANNEL NAMEON</div><div>VIDEO LOSSON</div><div>STATUS BAR / ICONON</div><div>OKCANCEL</div></div>
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD).(50~100)
SEQUENCE	Enable/disable sequential display of video in full screen mode. <div><div>SEQUENCE CHANNEL</div><div><div><div><input checked="" type="checkbox"/>1</div><div><input checked="" type="checkbox"/>2</div><div><input checked="" type="checkbox"/>3</div><div><input checked="" type="checkbox"/>4</div></div><div><div><input checked="" type="checkbox"/>5</div><div><input checked="" type="checkbox"/>6</div><div><input checked="" type="checkbox"/>7</div><div><input checked="" type="checkbox"/>8</div></div><div><div><input checked="" type="checkbox"/>9</div><div><input checked="" type="checkbox"/>10</div><div><input checked="" type="checkbox"/>11</div><div><input checked="" type="checkbox"/>12</div></div><div><div><input checked="" type="checkbox"/>13</div><div><input checked="" type="checkbox"/>14</div><div><input checked="" type="checkbox"/>15</div><div><input checked="" type="checkbox"/>16</div></div></div><div>OKCANCEL</div></div>



control button (◀ ▲ ▶ ▼) on the remote control. Press the right square button to change the setting value of all channels at once. Press SEL button to change the setting value of all channels at once. Press a right button of the mouse control just one time if you want to select an item and please do a double-click if you want to change the value. Once you select an item, and then press OK to set value for all channels.

(COVERT, BRIGHTNESS, CONTRAST, HUE, SATURATION)

	COVERT	BRIGHTNESS	CONTRAST	HUE	SATURATION
ALL	OFF	50	50	50	55
1	OFF	50	50	50	55
2	OFF	50	50	50	55
3	OFF	50	50	50	55
4	OFF	50	50	50	55
5	OFF	50	50	50	55
6	OFF	50	50	50	55
7	OFF	50	50	50	55
8	OFF	50	50	50	55
9	OFF	50	50	50	55
10	OFF	50	50	50	55
11	OFF	50	50	50	55
12	OFF	50	50	50	55
13	OFF	50	50	50	55
14	OFF	50	50	50	55
15	OFF	50	50	50	55
16	OFF	50	50	50	55

<b>NAME</b>	Set the channel name. Press the right square button and set the channel name and select OK using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. The name can be made by 10 characters at most.
<b>COVERT</b>	Enable/disable display of the specified video channel in live display mode.
<b>BRIGHTNESS</b>	Change the brightness value of the specified channel. (0~100)
<b>CONTRAST</b>	Change the contrast value of the specified channel. (0~100)
<b>HUE</b>	Change the hue value of the specified channel. (0~100)
<b>SATURATION</b>	Change the saturation value of the specified channel. (0~100)
<b>VIDEO OUTPUT (HDMI&amp;VGA)</b>	Set the proper HDMI or VGA resolution among the following various resolutions; 1024x768(4:3), 1280x720(16:9), 1280x1024(4:3), 1920x1080(16:9) The default value is 1024x768 output. Please check your monitor resolution list and set the proper video output resolution of DVR. It supports same resolution onto VGA and HDMI simultaneously.
<b>VIDEO OUTPUT (CVBS &amp; SPOT)</b>	8CH & 16CH DVR have a CVBS output port and a SPOT output port separately. But 4CH DVR has only 1 BNC output port, and it supports the different video output function according to the main monitor resolution. (1024x768 & 1280x102 4mode: CVBS OUTPUT ON, 1280x720 & 1920x1080 mode: SPOT OUTPUT ON)

3-3. Setup – Recording Mode

Press the SETUP button and select RECORD icon. Then, the RECORD menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and change the value of the menu item.



Figure 3.3.1. Recording mode setup screen

Table 3.3.1. Menu items in Recording mode setup

Menu item	Description
CHANNEL	Select a channel for applying the following settings using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control. Press the right square button to change the setting value of all channels at once. Once you select an item, then press OK to set value for all channels. (RESOLUTION, FRAME RATE, QUALITY, RECORDING, PRE RECORD, POST EVENT RECORD and AUDIO)
RESOLUTION	Select one type among CIF, D1 and 960H using the mouse or the control button(◀ ▶ ▲ ▼) on 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.
<b>QUALITY</b>	Select the recording quality for the specified channel. Options are: LEVEL 1 (Low), 2, 3, 4 and 5 (High)
<b>RECORDING</b>	Assign the recording mode for each channel. Options are: Continuous, By Motion, By Sensor, By Schedule or Disable.
<b>SENSOR RECORDING</b>	Enable setting up to 4 sensors for the specified channel using the mouse or the control button (◀ ▲ ▶ ▼) of the remote control.
<b>PRE RECORD</b>	Enable/disable pre-event recording. Options are: OFF, 15 seconds, 30 seconds, 1 minute, 3 minutes and 20 minutes.
<b>POST EVENT RECORD</b>	Set the post event recording time duration for the specified channel. (10~60 seconds)
<b>AUDIO</b>	Enable/disable audio recording for the specified channel. ● Fixed-available on only from channel 1 to channel 4.
<b>SCHEDULE</b>	Set the recording schedule. Press SEL to go to schedule setup screen.

### 3-3-1. Recording Schedules

To setup a recording schedule, select **SCHEDULE** in the **RECORD** menu. Navigate through the menu items using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control.

**[Channel]:** Select the specific channel.

**[Setup]:** Set up using the left button of the mouse to section under the specific day and time. It can set the all section under the specific day or time at a time when pressing the specific day or time. It is also possible to set up recording modes of various type using a Continue(green color), Motion(yellow color) and Sensor button(red color). It can set easy using a drag-and-drop function of a mouse control.

**[COPY Schedule]:** Set the channel 1 schedule and select the square button of CH2 in **COPY SCHEDULE** section using the mouse. And, press the **COPY** button. Then the CH1 schedule is copied to CH2. To remove the setting value, press the **CLEAR** button.



Figure 3.3.2. Schedule recording setup screen

### 3-4. Setup – Device Mode

Press the SETUP button and enter the password. Select DEVICE icon and press SEL button to enter the setup menu item. Then, the device menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control and change the value of the menu item.



Figure 3.4.1. Device mode setup screen

Table 3.4.1. Menu items in Device Setup screen

Item	Description
<b>ALARM OUT</b>	Select alarm-out channel and set up the alarm duration (5 SECONDS ~ INFINITE)
<b>CONTROLLER &amp; PTZ</b>	Set the controller and PTZ camera speed, number, type and ID.

<b>CHANNEL</b>	Select specified channel for motion zone setup.
<b>MOTION ZONE</b>	Select either Full Zone or Partial Zone for motion sensing.
<b>MOTION SENSITIVITY</b>	Set the motion sensitivity for the specified channel. Control the motion sensitivity from 1(L) to 9(H).
<b>PRIVACY ZONE</b>	Select the privacy zone through mouse drag (Left-up to right down). To escape from this setting page, select Quite after press the right button on the mouse.
<b>KEY TONE</b>	Enable/disable key tone.
<b>REMOTE CONTROL ID</b>	Select an ID of remote control. 1. Select ID. 2. Press the same number as ID set in DVR on a remote control 3. Then icon will be displayed on Live screen of DVR that respond to the remote control. The options are from 0 to 99
<b>SENSOR</b>	Select sensor Number from 1 to 4
<b>TYPE</b>	Set the type of sensor for the specified channel. Options are: OFF, N/O (normal open), and N/C (normal closed).
<b>VIDEO INPUT TRIMMING</b>	ON (Display 960x 576), OFF (Display 944 x 576). Select this menu after checking the right inputting camera resolution

### 3-4-1. ALARM-OUT

Figure 3.4.2. ALARM-OUT setup screen

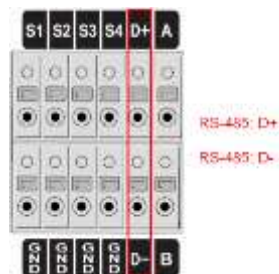
Table 3.4.2. Menu item in ALARM-OUT Setup screen

Item	Description
<b>ALARM OUT</b>	Available Number is just one (1).
<b>ALARM DURATION</b>	Set the alarm dwell time from 5 seconds to infinite.

### 3-4-2 Controller & PTZ Setup

To control the PTZ functions of the camera, connect a controller to the RS-485 port.

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



- ② Press the Controller & PTZ menu button. Then PTZ menu screen is displayed.

**Figure 3.4.4. Controller & PTZ Setup Screen**

**Note:** For speed dome cameras that support RS-485, connect them directly to the RS-485 port. If the camera is controlled with RS-232C, use an RS-485 to RS-232C signal converter.

On the PTZ control setup screen, you can select or set the protocol type of the camera that is the same as the one installed on the site. If the camera has a specific camera ID, select the camera ID using the mouse or the control button (◀ ▲ ▶ ▼) of the remote control.

The following options are available on the PTZ setup screen.

**CONTROLLER** (controller type)

**CHANNEL** (channel number that the PTZ is connected to)

**CAMERA** (camera protocol type)

**SPEED** (19200, 14400, 9600, 4800, and 2400)

**ID** (0-63)

### 3-4-4. Motion Zone Setup

Select MOTION ZONE using the mouse or the control button (◀ ▲ ▶ ▼) on 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 setting 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 sensor detection position using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. Then the color of the position which is selected will be changed. And the press the right button of the mouse or SEL button of the remote control. Press OK button of the SETUP menu to save the setting value.



To escape from the motion zone setting mode, user has to click the right mouse button after finishing its setup.



Figure 3.4.5. Motion Zone selection screen

### 3-5. Setup – Storage Mode

Press the SETUP button and select STORAGE icon. Then, the STORAGE menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and change the value of the menu item.

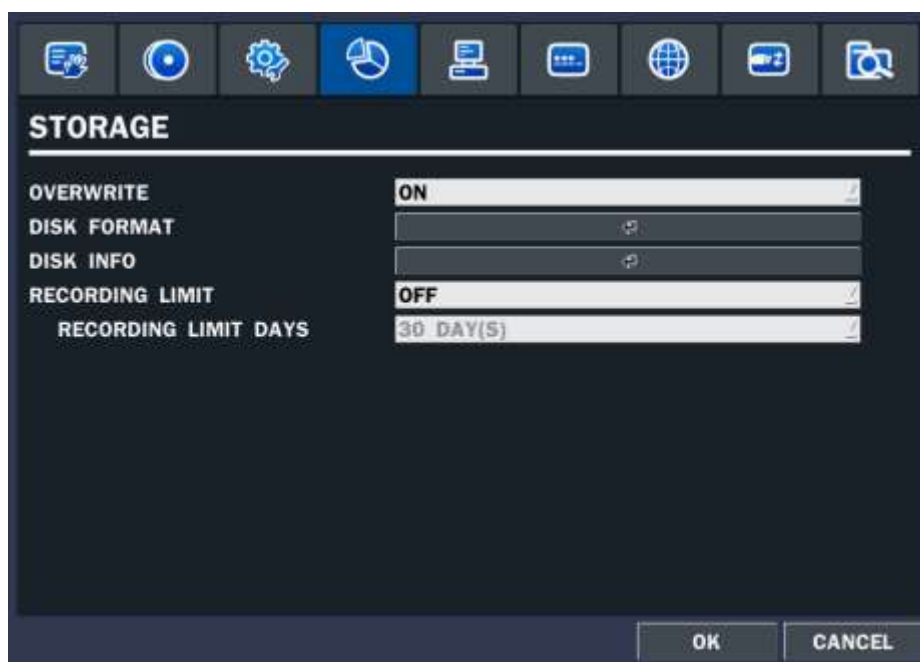


Figure 3.5.1. STORAGE setup screen

Table 3.5.1. Menu items in STORAGE Setup screen

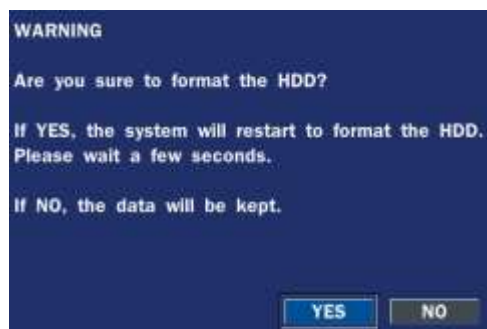
Item	Description
<b>OVERWRITE</b>	When enabled, the DVR will continue recording and overwrite the oldest existing recorded data once the hard drive is full. When disabled, recording will stop once the hard drive is full.

## DISK FORMAT

You will have an option YES or NO for the hard drive format.

### Caution:

We recommend that you archive any data that you may need in the future before you format the hard drive.



## DISK INFO

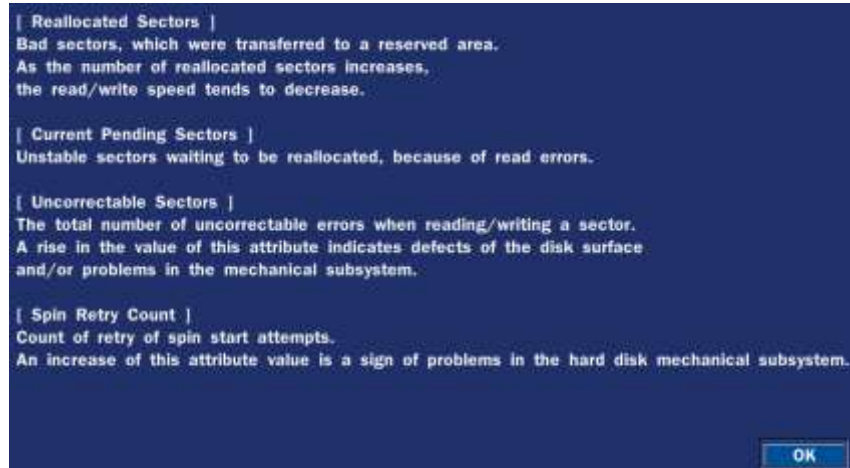
Hard disk drive information

DETAIL

HELP

HDD SIZE : 217 GB (FREE : 38 GB)				
HDD START TIME : 2013/08/12 07:00:00				
HDD LAST TIME : 2013/08/28 14:35:00				
	MODEL NAME	TEMPERATURE	POWER ON TIME	HEALTH (GOOD/NORMAL/BAD)
HDD 1				
HDD 2	Hitachi HDS721025CLA382	40 C (104 F)	230 days 0 hour	GOOD
HDD 3				
HDD 4				
				OK
				DETAIL

	Reallocated Sectors	Current Pending Sectors	Uncorrectable Sectors	Spin Retry Sectors
HDD 1				
HDD 2	0	0	0	0
HDD 3				
HDD 4				
				OK
				HELP



## RECORDING LIMIT

Enable/disable recording limit.



**RECORDING LIMIT DAYS** Set the recording limit days.(1- 90 days)

When setting to 1 day, the data will remove by the hour.

### 3-6. Setup – System Mode

Press the SETUP button and select SYSTEM icon. Then, the SYSTEM menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and change the value of the menu item.

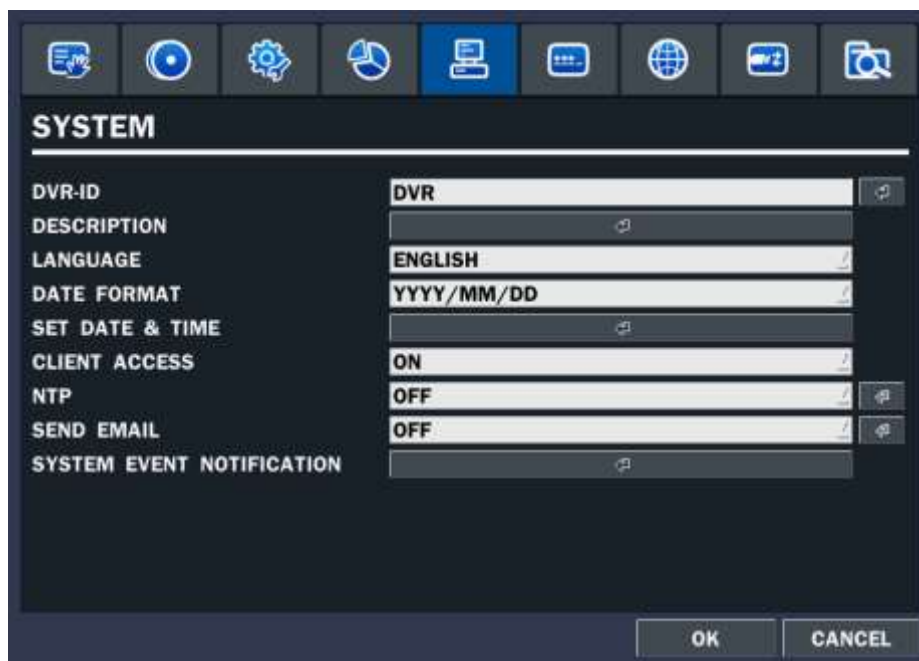

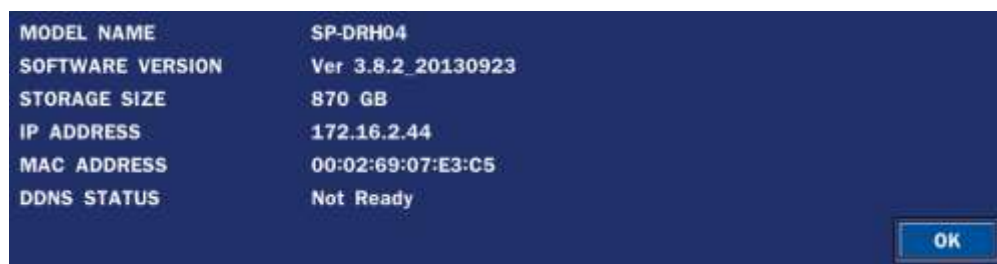


Figure 3.6.1. SYSTEM Setup Screen

Table 3.6.1. Menu items in SYSTEM Setup screen

Item	Description
DVR ID	Set DVR ID using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control. Press OK button on SYSTEM menu to apply the set DVR ID. <div data-bbox="426 1440 1230 1816"></div>
DESCRIPTION	Press the button to view the system information. (Model Name, Software version, Storage size, IP address, MAC address)

and DDNS status.)



## LANGUAGE

Select the display language using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control. Once a language is selected, the display language changes.

(English, Korean, Japanese, SP Chinese, TR Chinese, Czech, Finnish, French, Greek, Italian, Dutch, Norse, Russian, Spanish, Turkish, Polish, Danish, Croatian, German, Portuguese, Farsi and so on)

## DATE FORMAT

Select the date display format using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control. Options are:

(YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY)

## SET DATE&TIME

Select the display date and time using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and press OK button to set the present date and time.



## DAY LIGHT SAVING

Select DAYLIGHT SAVING using the mouse and the control button (◀ ▶ ▲ ▼) on the remote control and select the appropriate daylight saving time zone. If choosing EU or OTHERS, set the applicable conditions.

The options are: **OFF / USA / EU / OTHERS**

1. OFF: Daylight saving is not set.
2. USA: Applies the USA daylight saving time.
3. EU: Applies the EU daylight saving time.
  - Select the GMT AREA using the control button (◀ ▶ ▲ ▼).
  - Set the time difference with the standard time using the control button (◀ ▶ ▲ ▼).
4. OTHERS: If the time zone is neither USA nor E, set the start and end date of the daylight saving period.
  - Select BEGIN or END using the control button (◀ ▶ ▲ ▼) and press the SEL button.
  - Select the item using the control button (◀ ▶ ▲ ▼), select the

setting value using the control button (◀ ▲ ▶ ▼) and press the ESC button to return to SET DATE & TIME setup menu.

**CAUTION:**

- Do not set the start time to 23:00 for DLS.
- DLS can't be applied if the date of BEGIN and END is the same.

---

**CLIENT ACCESS** Enable/Disable remote access through network client software.

[Warning! User cannot access DVR through network if this menu is OFF.](#)

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**NTP** NTP is an abbreviation for Network Time Protocol, which is for synchronizing the clocks of computer systems 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:** Greenwich Mean Time(GMT) is a term originally referring to mean solar time at the Royal Observatory, Greenwich in London. Because NTP synchronizes with Greenwich Mean Time(GMT) regardless of geography, users must set their own time difference. (for example, KOREA GMT+09:00)

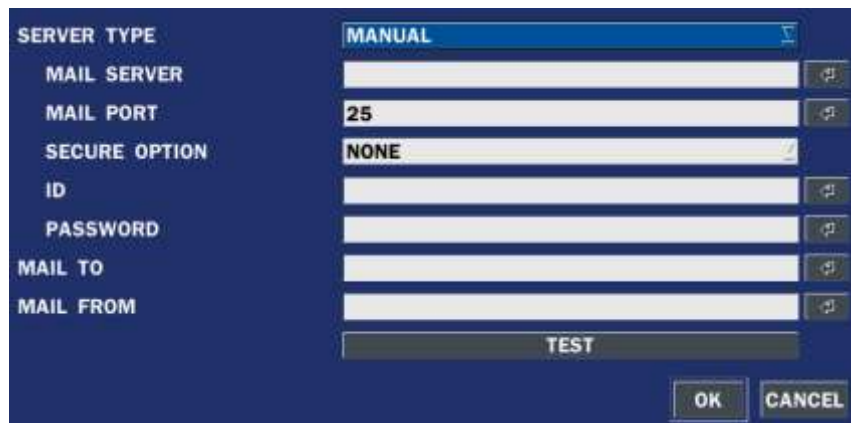
**CONNECTON MODE:** Select NTP time server connection mode.

- **INTERVAL:** Synchronize the clock by hours which are set on the connection period menu. (Every 1 ~ 24 hours)
- **TIME:** Synchronize the clock at the time daily which is set on the connection period menu. (01:00 AM ~ 12:00AM)

**CONNECTION PERIOD:** Every 1 ~24 Hours / 01:00AM ~ 12:00AM

---

**SEND EMAIL** Enable/disable the send e-mail function.(ON/OFF)



**SERVER TYPE** - Select Email account from Gmail, Hotmail, AOL, Yahoo, or manual configuration.

**MAIL SERVER**- Outgoing mail server address.

**MAIL PORT**- 1 ~ 99 (Allows the user to set E-MAIL PORT)

**SECURE OPTION**- NONE, SSL, TLS (Allows the user to select E-MAIL SECURE OPTION)

**ID** – Outgoing mail address/ID.

**PASSWORD** – Outgoing mail password.

**MAIL TO** – Recipient's email address.

**MAIL FROM** – Sender's name.

**TEST** – test the email sending after setup the SEND EMAIL menu

## SYSTEM EVENT NOTIFICATION

HEALTH CHECK	<input type="text" value="⏮"/>	HDD BAD SECTORS	10%	/
HDD TEMPERATURE	60C (140F)	HDD ALMOST FULL	90%	/
EVENT AND NOTIFICATION	ALARM-OUT	BEEP	E-MAIL	
HEALTH CHECK	-	-	YES	/
RESTART	-	-	YES	/
SHUTDOWN	-	-	YES	/
PANIC RECORD	-	-	YES	/
ALARM-IN	NO	-	NO	/
MOTION DETECTION	NO	-	NO	/
VIDEO LOSS	NO	NO	NO	/
HDD TEMPERATURE	1	YES	NO	/
HDD BAD SECTORS	-	-	YES	/
HDD ALMOST FULL	-	-	YES	/
HDD FULL	-	-	YES	/
HDD FAILURE	NO	NO	YES	/
			OK	CANCEL

**HEALTH CHECK** – Select time of Daily, Weekly and Monthly

PERIOD	DAILY	
FIRST	SUN	0 H
OK CANCEL		

**HDD BAD SECTORS** – Select a bad sector percentage (0~50%)

**HDD TEMPERATURE** – Select a HDD temperature (40C/140F ~ 80C/176F)

**HDD ALMOST FULL** – Select a full HDD status (75% ~ 95%)

## EVENT AND NOTIFICATION

**HEALTH CHECK-** Select Yes or No. Yes is sending an email or not

**RESTART-** Select Yes or No. Yes is sending an email or not

**SHUTDOWN-** Select Yes or No. Yes is sending an email or not

**PANIC RECORD-** Select Yes or No. Yes is sending an email or not

**ALARM-IN-** Select Alarm –out or not and sending an email or not

**MOTION DETECTION-** Select Alarm –out or not and sending an email.

**VIDEO LOSS-** Select Alarm-out, Beep and Sending an email

**HDD TEMPERATURE-** Select Alarm-out, Beep and Sending an email

**HDD BAD SECTORS-** Select Yes or No. Yes is sending an email or not

**HDD ALMOST FULL-** Select Yes or No. Yes is sending an email or not

**HDD FULL-** Select Yes or No. Yes is sending an email or not

**HDD FAILURE-** Select Alarm-out, Beep and Sending an email

### 3-7. Setup – SECURITY Mode

Press the SETUP button and select SECURITY icon. Then, the SECURITY menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and change the value of the menu item.



Figure 3.7.1. SICURITY setup screen

Table 3.7.1. Menu Items in PASSWRORD Setup Screen

Item	Description
USER AUTHENTICATION	<a href="#">ADMIN only can access to the menu.</a> <b>PASSWORD CHECK:</b> Select either V or blank for the functions such as <b>Setup, Playback(PB), PTZ, Record OFF(R/OFF), and Network</b> V check: Ask for a password when the given function is selected for all users.

Blank: Does not ask for a password when the given function is selected for all users.

The default value is that there is the password check.

	PASSWORD	SETUP	PB	PTZ	REC OFF	NETWORK
PASSWORD CHECK		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADMIN	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER1	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER2	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER3	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**ADMIN, NETOWRK, USER1, USER2, USER3:**

V check: It means the user can access to the function.

Blank: It means the user cannot access to the function.

## USER NAME

Allows to change the user name, but ADMIN cannot be changed.

## USER PASSWORD

Options are ADMIN, USER1, USER2 and USER3.

Select USER PASSWORD using the mouse or the control button (◀ ▲ ▶ ▼) on 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.

The factory default password is 1111.

## PLAYBACK

Enable/disable a covert function in playback mode by channel.

## AUTHORITY

V: No Covert.

Blank: Covert

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ADMIN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## NETWORK LIVE

Allows specific users to view selected channels or block the view of selected channels.

## AUTHORITY





When user set this function, they can see a user login window. Then, user can select one of user types (ADMIN, USER1, USER2, USER3) using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. Then password input screen will be displayed. User can select a password using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. The factory default password is 1111. [It is highly recommended to assign a new password to protect the system.](#) User can assign a new password in the SECURITY setup menu.

### 3-8. Setup – Network Mode

Press the SETUP button and select NETWORK icon. Then, the network menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control and change the value of the menu item.



Figure 3.8.1. NETWORK setup screen

Table 3.8.1. Menu items in Network Setup screen

Item	Description
<b>PORT</b>	DVR port. Default is 5445.
<b>NETWORK AUDIO PORT</b>	Set the port for sending audio data via network. Default is 5446 and it has to be the next number of the DVR port.
<b>WEB PORT</b>	Web server port. Default is 80.

<b>NETWORK TYPE</b>	Select a type of network connection.
<b>DHCP</b>	DVR automatically get IP varying from time to time from network and does not therefore need to be set.
<b>STATIC</b>	Assigned to an Internet service provider ( <a href="#">ISP</a> ) to be its permanent address on the Internet.
<b>DNS (PRIMARY)</b>	The address for the primary DNS server
<b>DNS (SECONDARY)</b>	The address for the secondary DNS server
<b>DDNS</b>	<p>Enable/disable using domain name address through DDNS server. "ON" mode, DDNS server name appears for domain registration.</p> <p><b>DDNS 1:</b> Select this type to use the default (BESTDDNS) server.</p> <p><b>DDNS 2:</b> Select this type when wants to use other general-purpose DDNS Server.</p> <p><b>DDNS INTERVAL:</b> Set the connection interval (5-60minutes)</p>
<b>NETWORK STREAM</b>	Set the value for network streaming. (Resoluiton, FPS, Quality)

### 3-8-1. Port, Network Audio Port and Web Port

When you connect one or more DVRs to a network through an IP sharing device, each device must have a unique TCP port number for access to each unit from outside the LAN. Also, the IP sharing device must be configured for port forwarding so when each port is accessed on the IP sharing device, it will forward to the appropriate DVR.

**Note:** This port number is listed next to the Port menu option in the Network Setup screen. If you plan to access the DVR units only from within the same LAN, the TCP port does not have to be changed.

#### Network access beyond a router

In order to access the DVR remotely beyond a router (firewall), the user must open TCP port for command level, live/storage channels. User need to open port number 5445 and 5446.

If the DVR supports remote setup and upgrade function over the network, user need to open additional port number 80.

#### Web viewer Network access beyond Router

In order to access beyond Router (Firewall), user must open 1 TCP port that is set on NETWORK > WEB PORT. If this port is not open properly, user cannot access DVR using direct Web viewer (Example: When NETWORK > WEB PORT is set as 80, 80 TCP port of IP address of DVR must be open.)

### 3-8-2. Network Types

#### 3-8-2-1. DHCP

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

When ADSL or other network being used adopts variable IP method, not fixed IP. This option is used as a way to automatically get IP address.



### 3-8-2-2. STATIC

1. For the use of fixed IP.

(See your network administrator if you do not have this information)

2. When DVR is installed in IP sharer that is connected with ADSL, a user can assign fixed IP to DVR from IP sharer itself using “DMZ” function out of such sharer.

Input IP set in DMZ on “IP” field and Gateway of ADSL modem on “Gateway” field. Similarly, for Subnet Mask, DNS address, input relevant values in IP sharer.

**Table 3.8.2. STATIC**

Item	Description
IP	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 address for the DNS server
DNS (SECONDARY)	The address for the DNS server

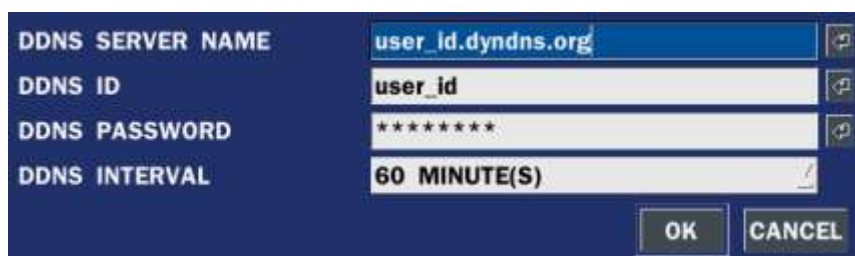
### 3-8-3. DDNS

User can use the function to connect to a network with a domain name. When it selects a Sever 1, user can select one type among three DDNS Servers which be supporting for free. (**bestddns.com** is default) The DDNS interval can be set from 5 to 60 minutes. To connect to a network with a domain name, user also has to register a MAC address and create a unique domain name to <http://www.bestddns.com>. Please refer to Appendix: How to connect network section for the detail of the registration.



**Figure 3.8.2. Network setup screen – DDNS Server 1**

If user wants to use other general-purpose DDNS Server, select a Sever 2. Then, user has to input the server name, ID and password using a virtual keyboard.



**Figure 3.8.3. Network setup screen – DDNS Server 2**

### 3-8-4. Network Stream

User can set the resolution, the frame rate and the quality for a network stream classified by channel. It is recommended that user should adjust each item to proper level to get the network service smoothly.

The maximum value for the network stream is CIF 15fps per channel but the recording resolution and frame

rate are sending when only one user connects to the one channel mode via network.

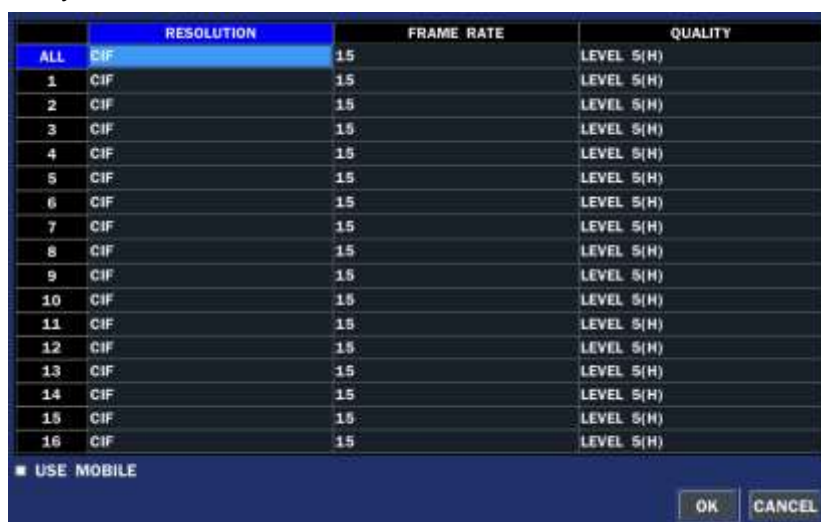


Figure 3.8.4. Network setup screen – Network Stream

### 3-9. Setup - CONFIG Mode

Press the SETUP button and select CONFIG icon. Then, the CONFIG menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control and change the value of the menu item.



Figure 3.9.1. CONFIG setup screen

Table 3.9.1. CONFIG setup

Item	Description
<b>SAVE SETUP TO A USB</b>	User can save the current configuration (Setting values) of DVR to the USB memory stick. Put the USB stick on the front panel and press the button to start the saving process.

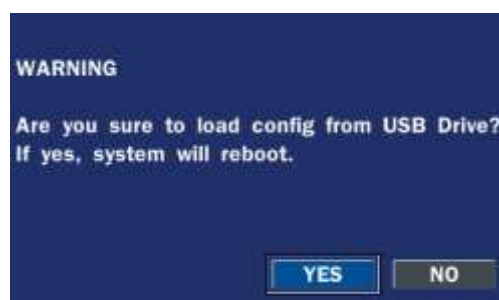
Are you sure to save config to a USB drive?

YES NO

---

**LOAD SETUP  
FROM A USB**

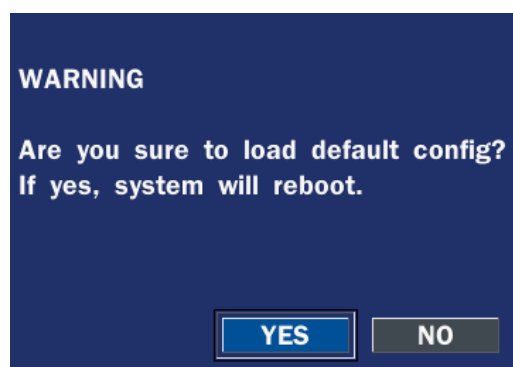
User can upload the configuration of DVR to another DVR using the USB Memory stick. Put the USB stick on the front panel and press the button to start the loading process.



---

**LOAD DEFAULT**

Press the button to reset the system to the default settings.

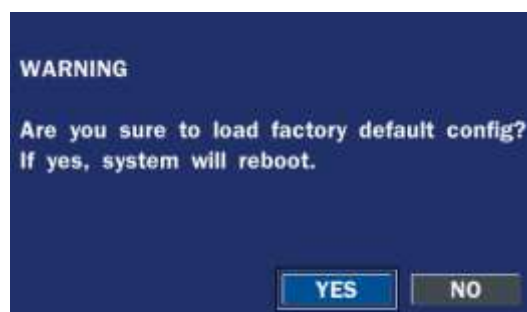


(The follow settings such as Language, DVR ID, Security User Authentication, Security User P/W, Date format, DLS settings, Network settings, HDD overwrite, Limit recording, HDD serial number and HDD error time will not be reset. This is different from "Load Factory Default.")

---

**LOAD FACTORY  
DEFAULT**

Press the button to reset the system to the factory default settings.



---

**SOFTWARE  
UPGRADE**

User can upgrade the latest firmware to this menu.  
Please refer to 7. Upgrading Firmware.





### 3-10. Quick Setup

Press the SETUP button and select QUICK SETUP icon. Then, the QUICK SETUP menu is displayed as picture below. Navigate through the menu items using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control and change the value of the menu item.

The QUICK SETUP has high priority than other setting values on RECORDING menu. The QUICK SETUP also cannot set to classified according to channel.



Figure 3.10.1. Quick Setup screen

Table 3.10.1. Quick Setup

Item	Description
<b>USE QUICK SETUP</b>	Tick in a box to use the Quick Setup. When user inputs period which they want to record, the system displays a recommended resolution, frame rate, quality and recording type after calculating the capacity of the mounted HDD. At that time, the priority is followed by the order of the items; resolution, frame rate, quality and recording type.
<b>CUSTOMER SETTINGS</b>	User can change the setting value such as resolution, frame rate, quality and recording type. By the setting value, the days to record will change.

3-11. Saving Setup

To preserve the setup values that you have changed, select YES.

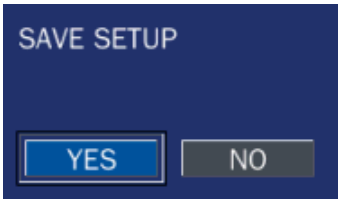


Figure 3.11.1. SAVE SETUP screen

4. Live, Search and Playback  
4-1. Live Viewing Screen



In the Live screen, video inputs from the cameras are displayed as they are configured in the Display Setup screen. Various on-screen display (OSD) symbols, which indicate the status of the DVR, are described in Table 4.1.1.










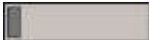











Figure 4.1.1. Live Viewing Screen

The following status bar hides automatically and appears again when putting a mouse pointer to the bar.

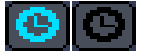
Table 4.1.1. Status Indicator Icons in Live Viewing Screen

Icon	Description
	Power Off button.
	Lock/Unlock Setup button.

	Setup button. Click this button to go to a setup menu.
	Click the AUDIO icon when you want to activate the audio using a mouse
	Search button. Click this button to go to a search menu.
	Backup button for capturing a still image in Live mode.
	PTZ button. A PTZ control window displays when clicking this button.
	Sequence button. Click this button to use a sequence function.
	Manual Record button. Click this button to record at once.
	Alarm-out function On/Off button. An alarm is stopped and an alarm setup lamp is right out when it clicks this button during the alarm is in progress.
	Click the split screen icon to change the current split screen mode using the mouse or SEL button.
2009/04/14 17:23:40	Displays the current date and time.
R:A	Remote control ID display. If a remote ID is not set, the message "A(all)" is displayed.
 15%	Displays the amount of recording on the hard disk from 0-99%.
	Indicates that HDD is recycled.
	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.
	Indicates that the lock is set. To
	Audio mute. To set audio mute, press the Audio button on the front panel.
	Single audio display. To set audio single for highlighted channel only, press the Audio button on the front panel.
	



Indicates that alarm is set. To set the alarm function, press the Alarm button on the front panel.



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 bright.



Indicates that a network client is connected to the DVR.



Indicates that sequencing mode is enabled.

## 4-2. SEARCH Screen

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



Figure 4.2.1. Search Screen

There are 7 ways of search menu such as Quick 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.

### 4-2-1. QUICK Search

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







1. When the Quick Search menu is selected, the user can see a calendar, which displays recorded dates with highlights. Select a specific date on a calendar.
2. Select a channel from Channel Selection Screen. Then, 24 Hourly Thumbnail Search screen displays.
3. Select the hourly thumbnail. Then, Minute Thumbnail Search screen displays.
4. Select the thumbnail of minutes that you want to playback.

#### 4-2-2. TIME-LINE Search

The TIME-LINE search window is used to find the stored video by using the time line bar.







When it clicks a Timeline menu, user can see a calendar which has recording data. Select a specific date and time. Use a drag-and-drop function of the mouse control. User can select a specific minutes using a button in the above red box. Press a PLAY button after setting a specific time. Press the PREV to return to the SEARCH window.

### 4-2-3. Event Search

The Event Search window is used to find stored video.



Figure 4.2.3. Event Search screen

When the Event menu is selected, the user can see a calendar, which has recorded data. Select a specific date and the event log will be displayed. Press the PLAY button to playback the data or the SAVE button to save the data after selecting the specific data. User can find a data of the specific channel and event using a button in the above red box as following Figure 5.3.10. Press the PREV to return to the SEARCH window.



Figure 4.2.4. Event Search screen

#### 4-2-4. Go To First Time

You can access from 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.

#### 4-2-5. Go To Last Time

You can access from the last minute recorded data on the DVR hard drive by selecting GO TO LAST TME on the SEARCH window. Press the PREV to return to the SEARCH window.

#### 4-2-6. 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 control button (◀ ▲ ▶ ▼) on the remote control to change the date and time value and press the PLAY button after setting. If there are not video data in the set date and time, the DVR will play the latest video data.

#### 4-2-7. Archive Search

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



**Figure 4.2.7. Archive Search Screen**

When it clicks an Archive menu, user can see a calendar which has recording data. Select a specific date and then user can see all data. When it presses a Display button, the still image or the first frame of the selected video is opened and user can save the data.

#### 4-2-8. Log Search

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



**Figure 4.2.5. Log Search Screen**

When it clicks a Log menu, user can see a calendar which has recording data. Select a specific date and press NEXT button. Then user can see all log data. Press SAVE button to save the data and then the data is saved to text file format.

### 4-3. 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 or the ESC button of a remote control.



**Figure 4.3.1. PLAY Mode Screen**

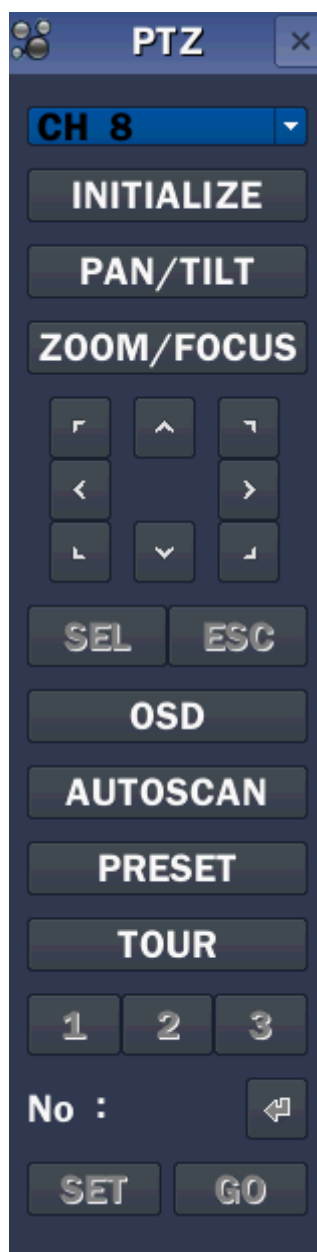
The following status bar hides automatically and appears again when putting a mouse pointer to the bar.

**Table 4.3.1. Button functions in PLAY Mode**


Button	Description
	Return to the previous menu screen, search window, or exit from the Menu
	Press to rewind the footage at x1, x2, x4 and more speed. Reverse playback speed is shown as -x1, -x2, -x4 and more speed at the bottom right of the screen.
	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.
	Press to fast forward the footage at 1x, 2x and 4x speeds. Playback speed is indicated as +1x, +2x and +4x for normal, twice and 4 times of the regular speed at the bottom right of the screen.
	Press to backup the video.

## 5. PTZ Control

To control the PTZ functions of the camera, select PTZ menu on the screen using the mouse. Select the item you wish to control the PTZ camera and control them using the mouse or the control button (◀ ▶ ▲ ▼) on the remote control. Please refer to the table 5.1. for the control.

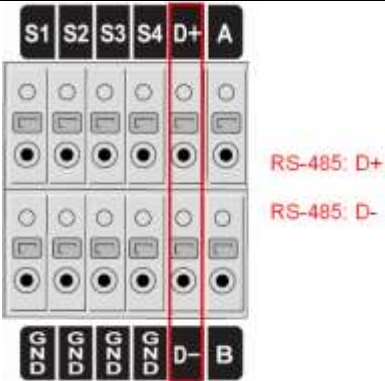


**Table 5.1. Button Functions in PTZ Control**

Item	Description
<b>INITIALIZE</b>	Initialize the PTZ settings of the selected camera.
<b>PAN / TILT</b>	<p>Select PAN/TILT using the mouse or the control button (◀ ▲ ▶ ▼) and press SEL button on the remote control.</p> <p>Adjust the tilt(UP/DOWN) / pan(LEFT/RIGHT) position using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control.</p>
<b>ZOOM / FOCUS</b>	<p>Select ZOOM/FOCUS using the mouse or the control button (◀ ▲ ▶ ▼) and press SEL button on the remote control.</p> <p>Adjust the zoom(Mouse Wheel Down or Up/Down button of the remote control)/focus(Mouse Wheel Up or Left/Right button of the remote control)position.</p>
<b>OSD</b>	Select the 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 main menu. Press the PTZ button to escape from the OSD menu.
<b>AUTOSCAN</b>	<p>Press the right key (▶) on the control button to start auto scan</p> <p>Press the left key (◀) on the control button to stop auto scan.</p>
<b>PRESET</b>	<p>Select the PRESET and press the left key (◀) on the control button. Then, number input window will appear. Set the number (3 digits) using the number key and press the SEL to set the preset number for the current position.</p> <p>Press the right key (▶) on the control button and set the number (3 digits) to go to the preset number.</p>
<b>TOUR</b>	<p>Select the TOUR and press the right key (▶) on the control button. Then, number input window will appear. Set the number (1 digit) using the number key and press SEL to make the group number work.</p> <p>Press the left key (◀) on the control button to stop tour. User can set the preset number in the tour group of the OSD menu.</p>
<b>NUMBER</b>	Available only on the TOUR and PRESET menu.
	Press the ESC button to return to the main menu.

- **Preset/ Tour/ OSD/ Autoscan function are available on the specific model AP8777 and PMA-200.** (Select it in the NAME of PTZ setup menu)

**Table 5.2. Description of RS-485 port**

	Data +
	Data -

## 6. Back up

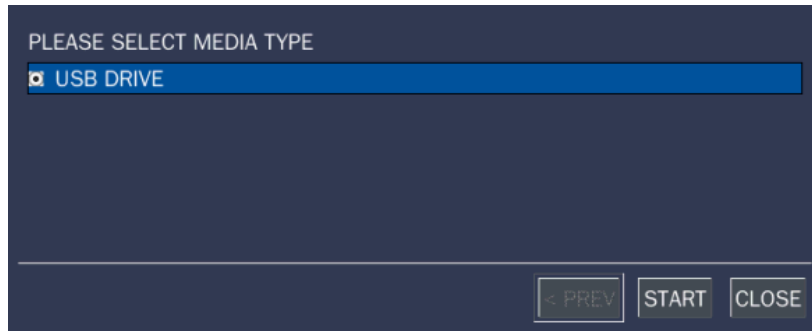
### 6-1. Still Image backup onto USB flash memory

Still images can be captured and archived onto the USB stick or hard drive in live mode or while playing back recorded video. In live mode, press the BACKUP button to launch the archive function or select BACK UP menu on the screen using the mouse.

1. Select a specific channel which wants to backup on live screen.



2. When you press BACKUP button, the archiving screen will display as Figure 6.1.1.
3. Once you press Backup button, the system will start to archive the data to the selected media.



**Figure 6.1.1. Still Image Archiving and Backup Screen**

**NOTICE** For a backup using a USB stick, a format of the USB stick has to be set to FAT32.

## 6-2. Video backup onto USB flash memory

Video can be captured and archived onto the USB stick or hard drive while playing back recorded video.

In playback mode, press the BACKUP button to launch the archiving function.

1. When you press BACKUP button, the DVR will ask whether to archive a Still Image or Video clip.
2. If the user selects VIDEO, the DVR will ask for the media. To use the Huge Backup, the external USB HDD has to be mounted.
3. After selecting the media, the DVR will ask for the channel and the setting of the archiving duration. If the huge Backup is selected, the duration is from 1 hour to 24 hours.
4. After selecting the channels and setting of the duration, the system will start to archive the data to the selected media.



**Figure 6.2.1. Video Archiving and Backup Screen**

## 6-3. Transferring still images or video from the ARCHIVE list

The stored data onto hard drive will be found in the ARCHIVE list in 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 control button (◀ ▲ ▶ ▼) on the remote control.

2. Once you have selected the date, press NEXT button to open the list of stored data.
3. Use the mouse or the control button (◀ ▲ ▶ ▼) on the remote control to scroll through the on-screen listings.
4. Select a list of stored events that happened previous to or after the current selection.
5. Once the desired event has been selected, press NEXT 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 CLOSE button to return to the SEARCH window.

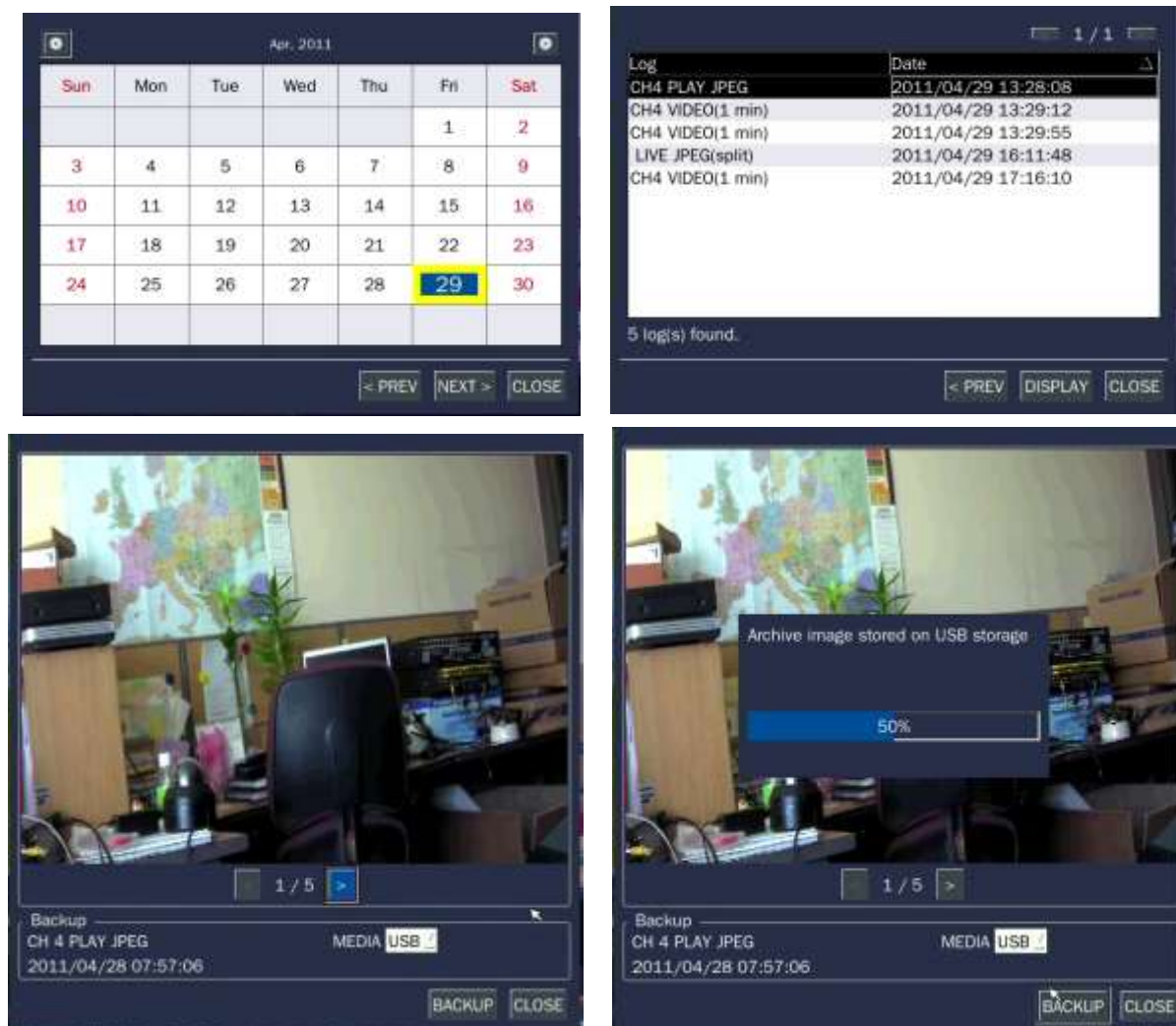


Figure 6.3.1. Archive Search Screen

#### 6-4. Playback of Backup Video

- **NSF format:** NSF format video can be played back by the player (the HD player) that the DVR copies on USB thumb drive with video.  
Two folders are copied on USB thumb drive
  - BACKUP DATA: NSF format video file and INDEX file for a title file of date and time
  - HD PLAYER: Exclusive video viewer.





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

## 7. Upgrading Firmware

In order to upgrade, the firmware upgrade file must first be downloaded and copied into the USB memory stick. Create a new folder in the USB memory stick and name it “upgrade”. Copy the firmware upgrade file “xxxxxx.bin” into the “upgrade” folder.

### NOTICE

**A format of the USB stick has to be set to FAT32.**

The folder on the USB memory stick must be named “**upgrade**”.

After the firmware upgrade file is copied into the USB memory stick, connect the USB memory stick to the USB port on the front or rear panel and do the followings:

#### 1. Go to Config menu of Setup.



2. You can see the following message when pressing the software upgrade menu after putting the USB memory stick on the system.



3. You can see the following message when pressing the scan button. Please check the current firmware version and the firmware version which you want to upgrade. The system will upgrade automatically when pressing the upgrade button. After upgrading, the system should be restarted. At that time, the USB memory stick has to be pulled out on the system.



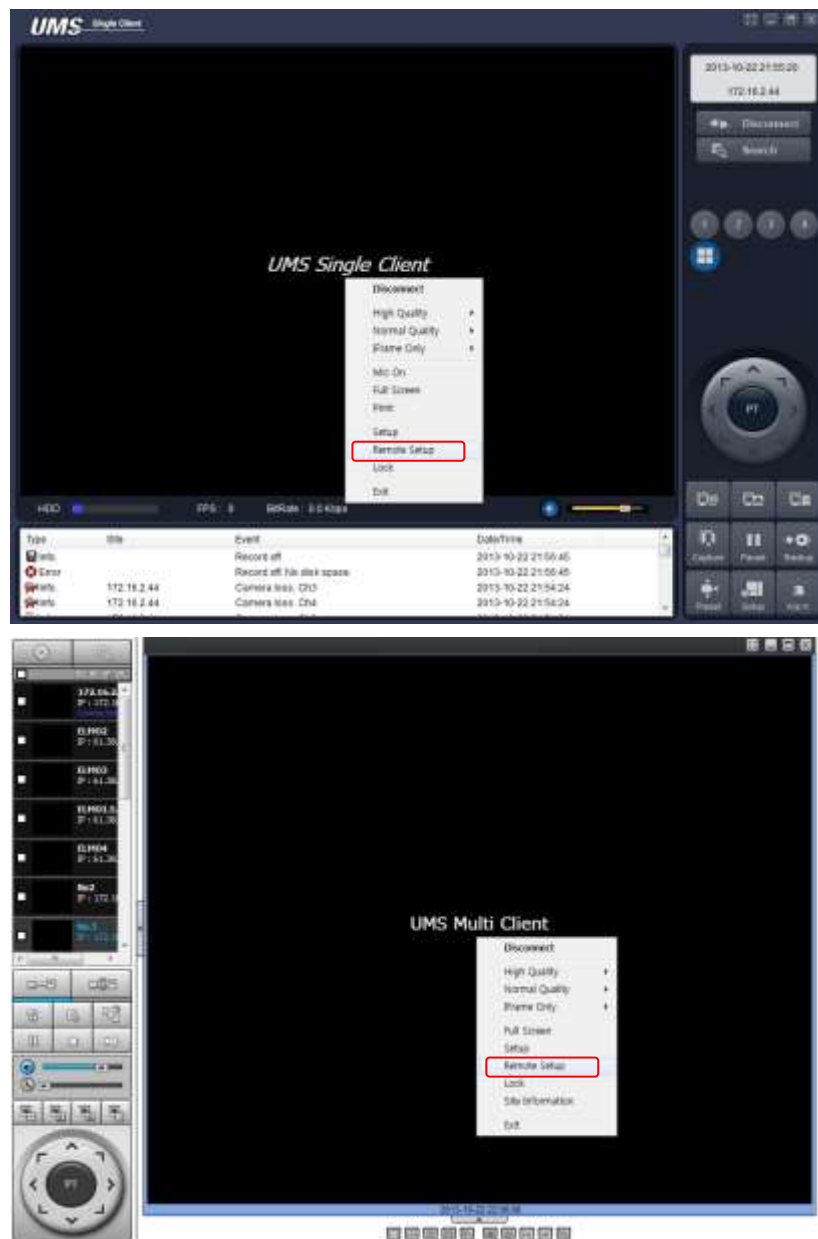
4. You could see the following warning message if you don't pull out the USB memory stick.



## Remote Firmware Upgrade

User can upgrade the firmware via Network as follows.

1. Go to the Remote Setup menu on the UMS Single, UMS Multi or Web Viewer.



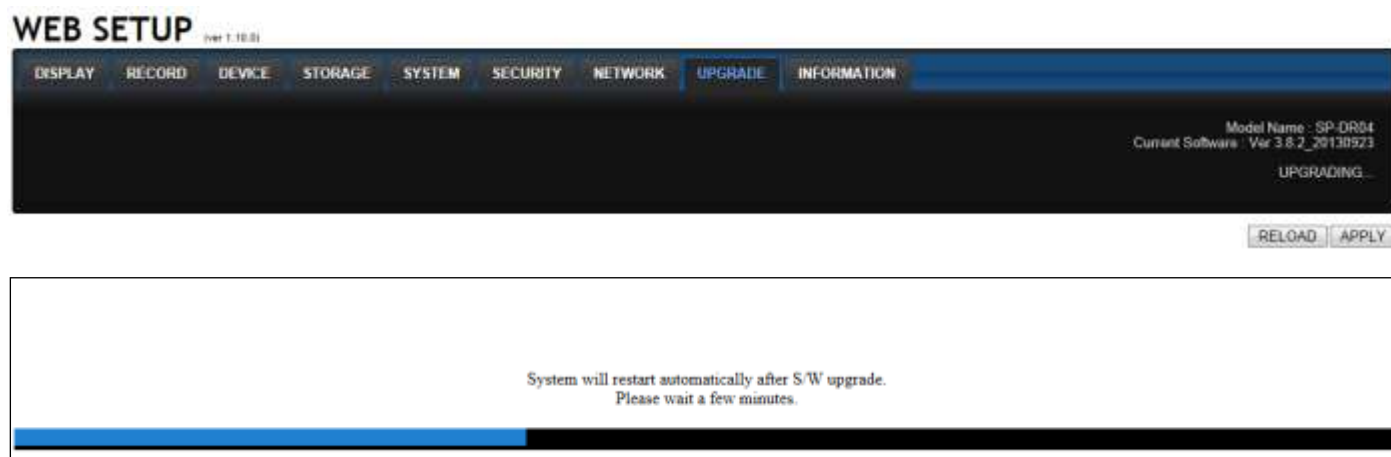
2. Press the password for admin. Just admin is possible to connect to the remote setup menu.



3. Go to the Remote Upgrade menu. Then, you can see the current F/W version as follows. To upgrade a new F/W, insert the F/W in your PC and press the UPGRADE button.



4. Then, you can see the following progress bar and it would be taken around 150 seconds to upgrade.



5. When finishing the upgrade, the network streaming would be connected again automatically and you can see the following screen. Please check the current F/W version if the upgrade is succeeded.



## 8. Network access using the Exclusive network viewer, UMS single

The DVR provides a live remote monitoring feature. Remote monitoring requires installation of the network viewer on your PC.

### NOTICE

In a high bandwidth network, a maximum of four users can access one DVR simultaneously.  
In a low bandwidth network it is recommended that only one user access the DVR at a time.

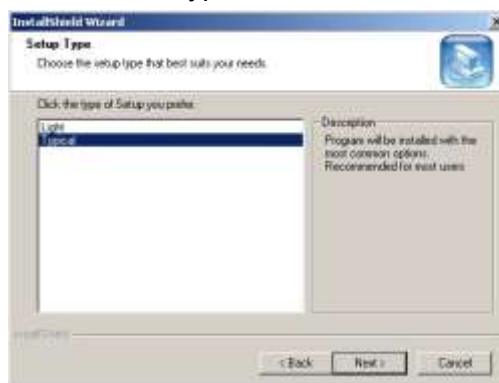
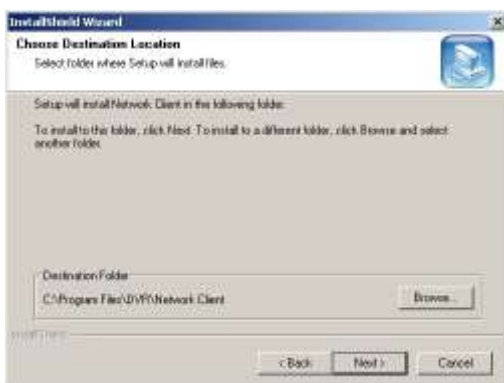
### 8-1. PC requirements

- CPU: Intel Pentium IV 1.4Ghz or higher
- Memory: 512MB (1GB or higher is recommended.)
- VGA memory: 16MB (64MB or higher is recommended.)
- Resolution: 1024x768
- O/S: Windows 2000, XP Professional, XP home
- Direct X: DirectX 8.1 or higher

### 8-2. Installing the network viewer

1. Insert the provided CD in the CD drive and double-click "UMSClient(XXXX).exe"

2. Select a destination folder and click "Next". 3. Select the type and click "Next".



4. Select the program folder and click "Next". 5. The setup status screen is displayed.





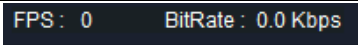

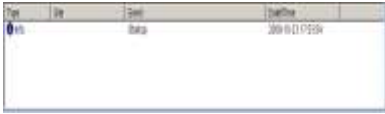


After the installation is completed, "UMS Client"  icon is displayed on the desktop.

### 8-3. Live monitoring mode and functions.

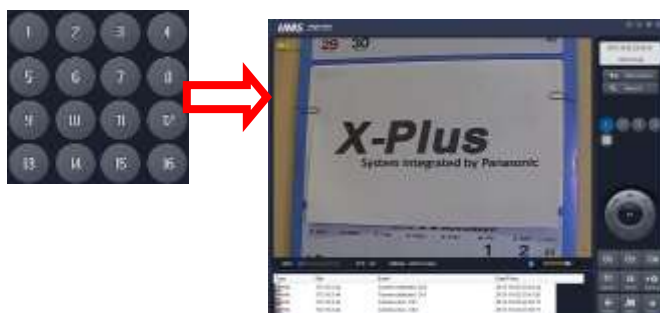


Button	Function	Description
	<b>DATE &amp; TIME</b>	Displays the current date and time.
	<b>CONNECT/DISCONNECT</b>	Connect/disconnect network connection.
	<b>SEARCH</b>	Switches the live mode to search mode.
	<b>DISPLAY MODE</b>	Select a channel and screen display mode.
	<b>PAN/TILT/ZOOM/ FOCUS</b>	Control the PAN/TILT/ZOOM/FOCUS features on the remote camera.
	<b>SCAN</b>	
	<b>TOUR</b>	
	<b>MENU</b>	
	<b>CAPTURE</b>	Capture a still image from live screen.
	<b>PLAY/PAUSE</b>	Play/pause live video.
	<b>BACKUP</b>	

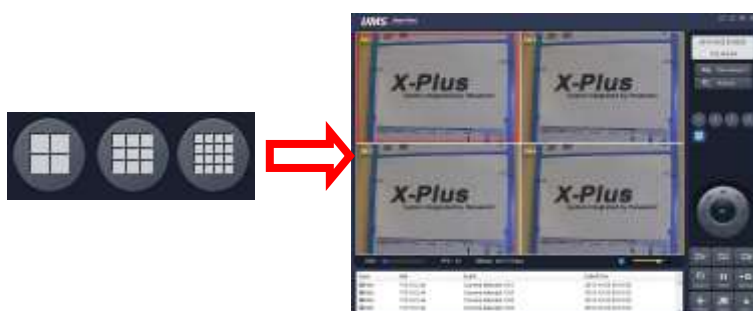
	<b>PRESET</b>	
	<b>SETUP</b>	Display the setup screen of the network viewer.
	<b>ALARM</b>	The ON/OFF button of the alarm output of the DVR. When an alarm of the DVR is output, this button becomes Red.
	<b>HDD USAGE</b>	DVR HDD storage Indicator.
	<b>NETWORK BANDWIDTH</b>	Shows the transferred frames and network bandwidth.
	<b>AUDIO</b>	Adjust the volume. The audio can be turned on or off by clicking the audio icon.
	<b>LOG WINDOW</b>	

### Operations of the display mode of the main screen

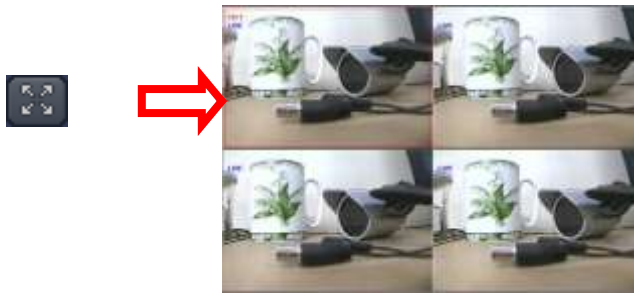
- Single channel display - Click the one of channel button or double-click the channel screen.



- QUAD/-screen display - Click the QUAD button to switch to quad-screen display



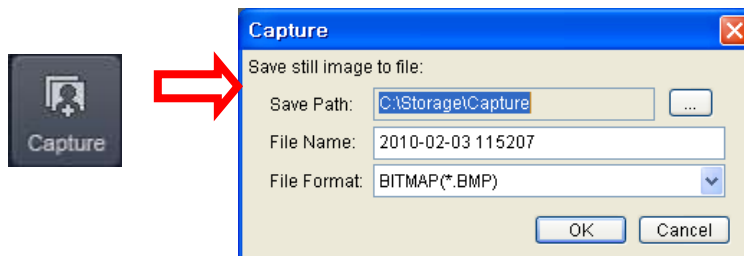
- Full screen display - Click the maximize button to display only screen and hidden the operation panel.



### Image capture of live screen

Still-image of live screen can be captured and saved as BMP or JPEG file.

1. Click the channel to be captured. Then the channel screen is surrounded with a red line.
2. Click the CAPTURE button. Then the IMAGE CAPTURE dialog is displayed.



3. Set the conditions and click OK button. Then still-image is saved.

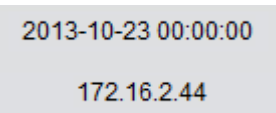

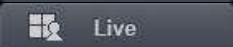






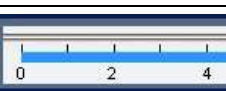

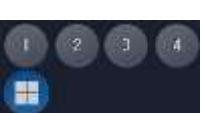

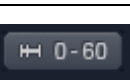

### 8-4. Bi directional audio

The UMS Client allows for bi directional audio between the client and a dvr unit. On the PC, to use bi directional audio, you will need a sound card of handling a microphone and speakers. On the dvr side, you will need to connect a microphone to the audio in connection, and a pair of amplified speakers to the audio out connection.

### 8-5. Remote search mode and functions



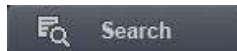


Button	Function	Description
	<b>DATE &amp; TIME</b>	Displays the recording time of the data selected on the time bar at the bottom of the main user interface.
	<b>DISCONNECT</b>	Disconnect network connection..
	<b>LIVE</b>	Switches the search mode to live mode.
	<b>CAPTURE</b>	Capture a still image from live screen.
	<b>MARK IN</b>	Set the start time for video backup.
	<b>MARK OUT</b>	Set the ending time for video backup.
	<b>SETUP</b>	
	<b>BACKUP</b>	Backup the selected recorded video as AVI format.
	<b>SEARCH CALENDAR</b>	The calendar shows dates with recorded video in a light blue and the selected date in dark blue.
	<b>TIMELINE BAR</b>	The timeline shows recorded data in dark blue on the bar.
	<b>PLAYBACK BUTTON</b>	The playback buttons.
	<b>DISPLAY MODE</b>	Select a channel and screen display mode.
	<b>GO BACK</b>	
	<b>0-60</b>	To change a time line scale from 24 hours to 60 minutes or vise versa. The timeline shows recorded data in color on the bar. You can adjust the time line scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.
	<b>ALL</b>	

## Searching and playing video in the remote DVR

Video recorded in the remote DVR or Video recorded on the PC can be searched and played back.

1. Connect the network to the remote DVR and press SEARCH button. Then the mode is changed from the live mode to the search mode.



- Searching the video recorded in the remote DVR: Connect the network to the DVR..
- Searching the video recorded in the PC: Do not connect the network to the DVR.

2. Select the date to search the video.



3. Drag the slid on the time scale and drop it between 0 to 24.



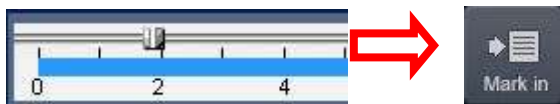
4. Press the PLAY button. Then the video recorded in the remote DVR is played back.



## Backup of video in the remote DVR

Video recorded in the remote DVR can be backed up on the PC HDD as AVI format.

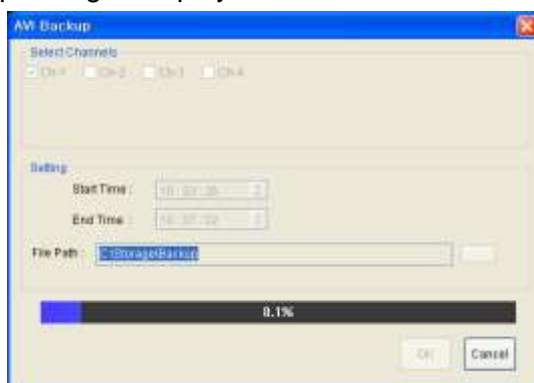
1. Connect the network to the remote DVR and play the video recorded in the remote DVR.
2. Drag the slid on the time scale and drop to the start time for video backup and press the MARK IN button.



3. Drag the slid on the time scale and drop to the end time for video backup and press the MARK OUT button. Then the marked time is displayed in dark green.



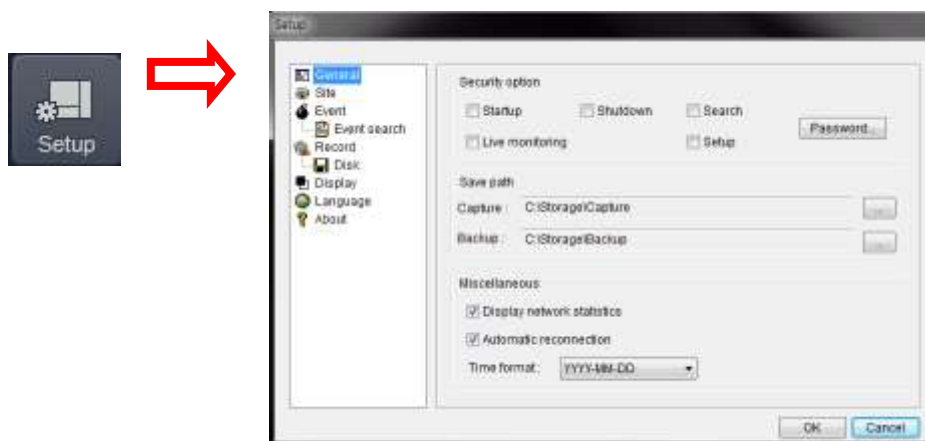
4. AVI Backup dialog is displayed. Click the OK button. Then the marked video is backed up.



- Start time / Stop time: Backup time can be changed.
- File path: Shows the folder that the backup file is recorded.
- Channel: Shows backup channel.

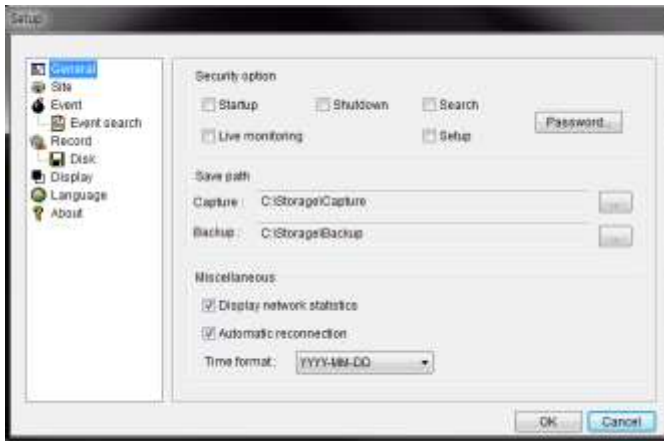
## 8-6. PC System configuration

Click the SETUP button. Then the Setup dialog is displayed.



### Setting General

Set the Security Option, Save Path, and Miscellaneous.



- **Security Option:** Set a password for security options. When you access any of the selected functions, you will need to enter the password.
- **Save Path:** Specify the location to record for backup and still image capture.
- **Automatic reconnection:** If a user selects this function, the client S/W will automatically try to connect to the previously connected IP address if the network connection is lost.
- **Display network statistics:** If a user selects this function, the client S/W will display network status, Bit rate and Frame rate.
- **Time Format:** Change the mode the Client software displays the time.

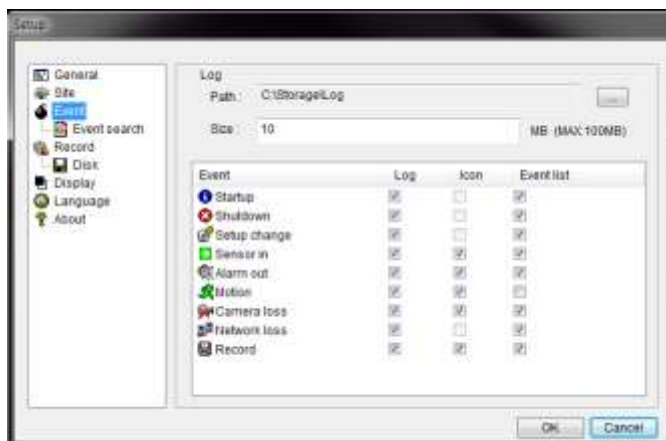
## Setting Site

The remote DVRs can be added, modified, and removed.



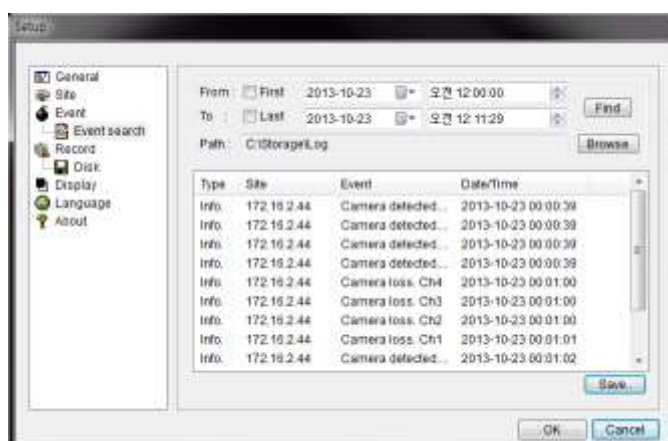
## Setting Event

Set the record path and the size of local disk space for the log files.



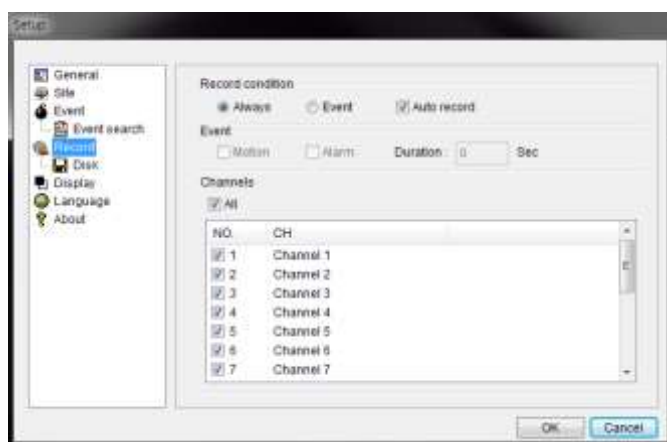
- LOG – Select to save event log into 'log file'.
- ICON – Select to display the event on live video.
- EVENT LIST – Select to show the event in the 'Event List' window of live mode.

Search and check the recorded log data.

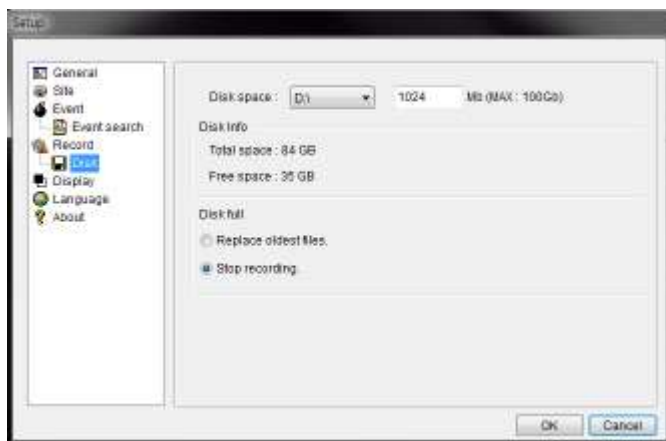


## Setting Record

Set the recording conditions and select channels to record.



Select the local disk to use and the amount of disk space you want to allow the program to use for recording.



## 9. Network access using the Exclusive network viewer, UMS multi

### 9-1. Overview

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

The program displays to up 256 live videos on one display and even playback videos window on the same or another display monitor.

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

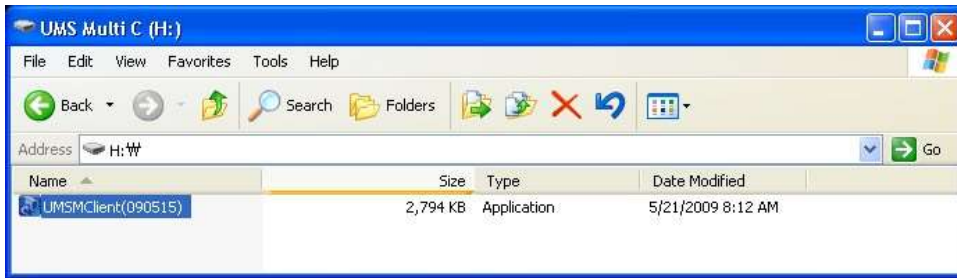
### 9-2. Minimum PC requirements

CPU	Intel PentiumIV
	2Ghz
Memory	512MB or Higher is recommended.
VGA	128MB or Higher is recommended.
Resolution	1024x768
Disk space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista (Some versions of Vista has problem in installation. Please contact your vendor for more information.)
Network	10/100Base T
Others	Direct X 8.1 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.

### 9-3. Installing the program

1. Insert the provided CD in the CD drive and double-click "UMSMultiClient (XXXX).exe"



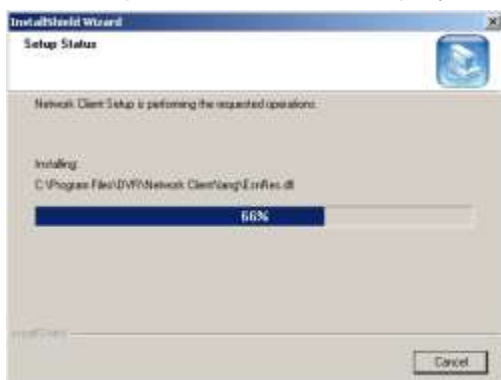
2. Select a destination folder and click “Next”.



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



4. The setup status screen is displayed.



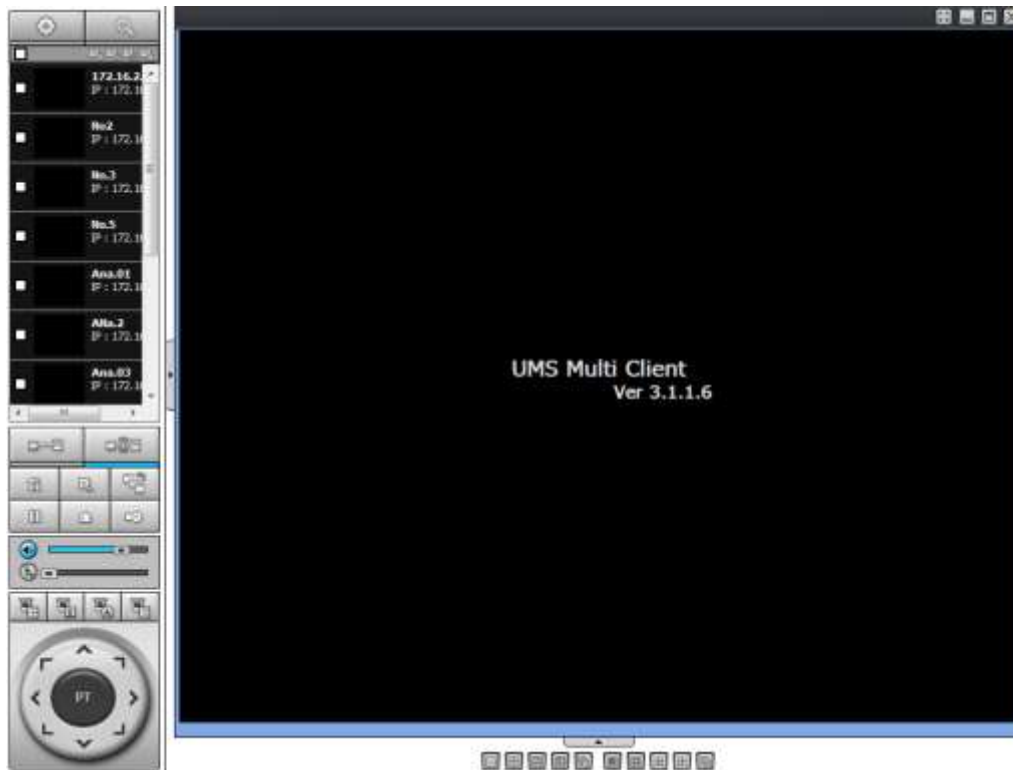
5. After the installation is completed, “**UMS Multi Client**” icon displays on the desktop screen.










#### 9-4. Live Window

When installation is completed, double click the “**UMS Multi Client**” icon on your desktop to start the program.


















##### 9-4-1. Main user interface



##### 9-4-2. Control buttons

Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in remote DVR.
 SITE MANAGEMENT	 THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of every connected site.  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.

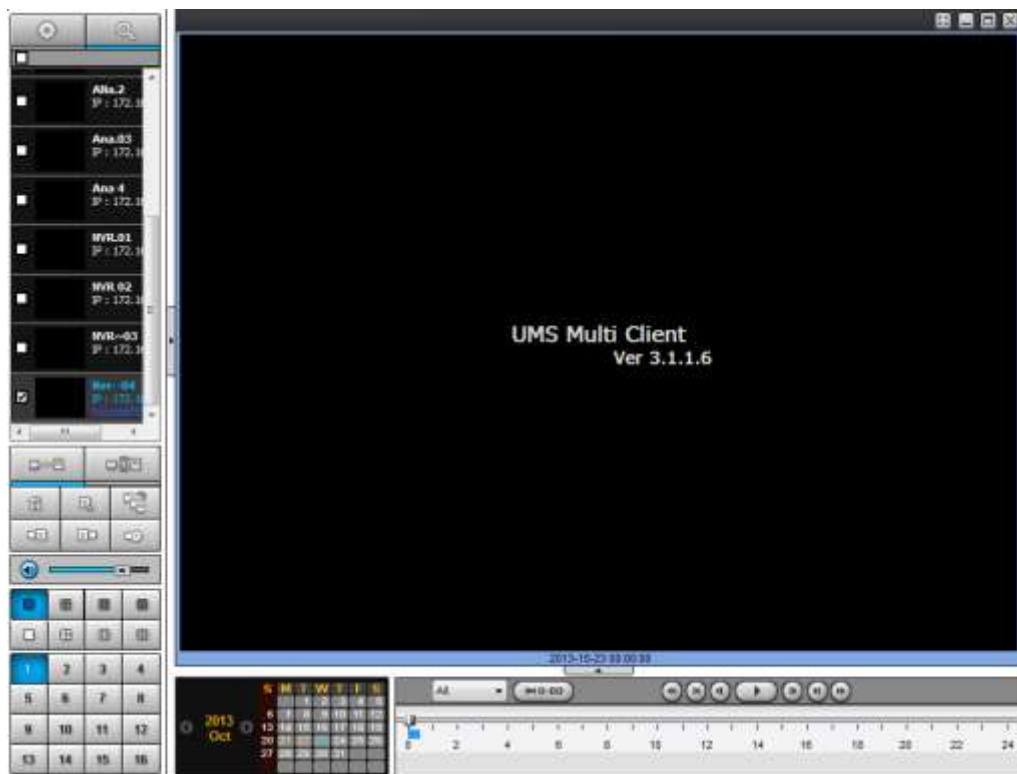


 CONNECT	Click this icon to connect the selected site/sites.
 DISCONNECT	Click this icon to disconnect the selected site/sites.
 SETUP	Click this icon to setup configuration of UMS MULTI CLIENT.
 CAPTURE	Click this icon to capture a still image
 EVENT LIST	
 PAUSE	Click this icon to play/pause live video.
 ALARM ON	
 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 micro phone volume control bar to set the micro phone level.
	<p>User can control PAN/TILT &amp; ZOON/FOCUS.</p> <div>  Camera Preset            Scan         </div> <div>  Tour            Menu         </div>
 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.







## 9-5. Search and Playback Window









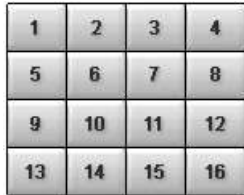






### 9-5-1. Main user interface

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




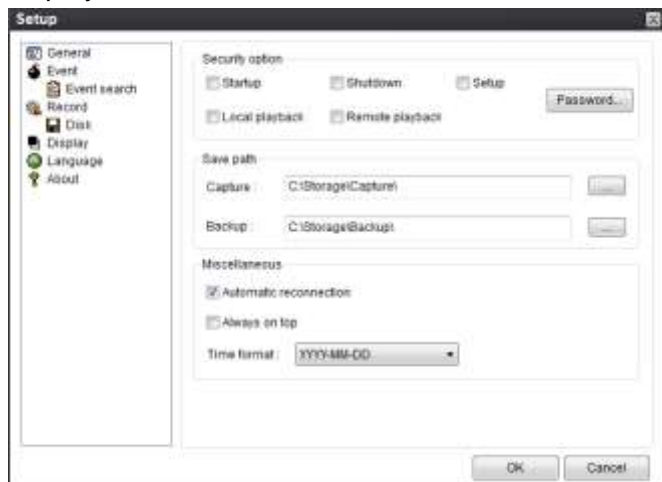
9-5-2. Main control panel

Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in remote DVR.
	Directory window shows site/sites that are pre-registered.
 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 UMS MULTI CLIENT.

 CAPTURE	Click this icon to capture a still image.
 EVENT LIST	
 MARK IN	Click this icon to set the beginning time for backup of the recorded video in AVI format.
 MARK OUT	Click this icon to set the ending time for backup of the recorded video in AVI format.
 BACKUP	Click this icon to backup the recorded video in AVI format.
 AUDIO	Use the volume control bar to set the audio level.
 DVR SITE SPLIT	To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.
 CHANNEL SPLIT	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.
	<p>To change a time line scale from 24 hours to 60 minutes or vise versa.</p>   <p>The timeline shows recorded data in color on the bar. You can adjust the time line scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.</p>
	Playback buttons.

## 9-6. Setup of UMS Multi Client

Click the setup icon  to setup the configuration of UMS Multi Client software. The Setup window displays.



### 9-6-1. General

#### 9-6-1-1. 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.

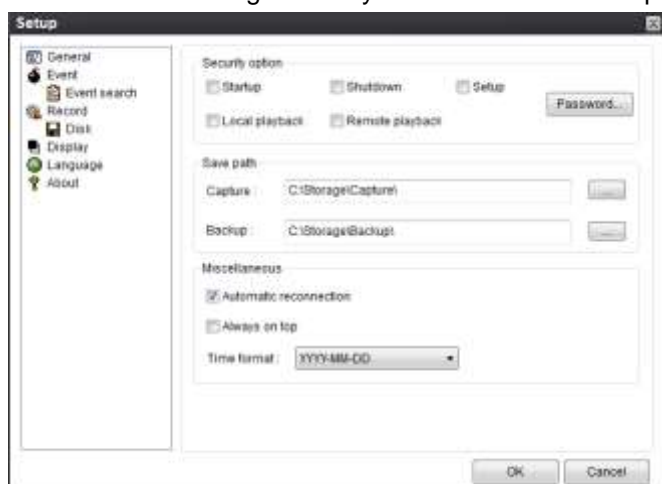
#### 9-6-1-2. Save Path: Specify the location to save captured still image for Capture and Backup data.

#### 9-6-1-3. Miscellaneous

**Automatic reconnection:** If a user selects this function, client S/W will automatically try to connect the finally connected IP address, after the network is disconnected.

**Always On Top:** If a user selects this function, client S/W will display continuously at the very front than other software on the PC.

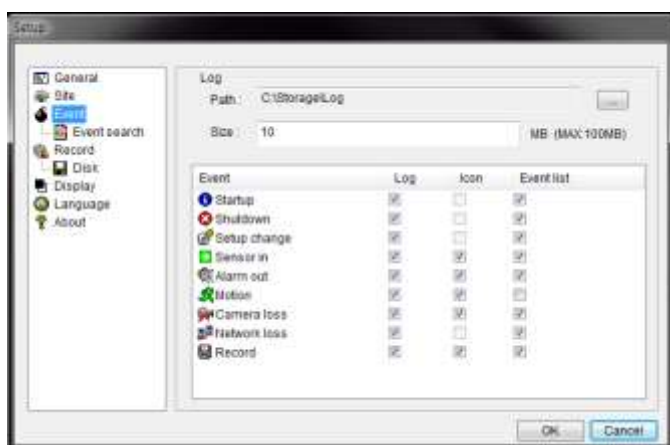
**Time Format:** Change the way the Client software displays the time.



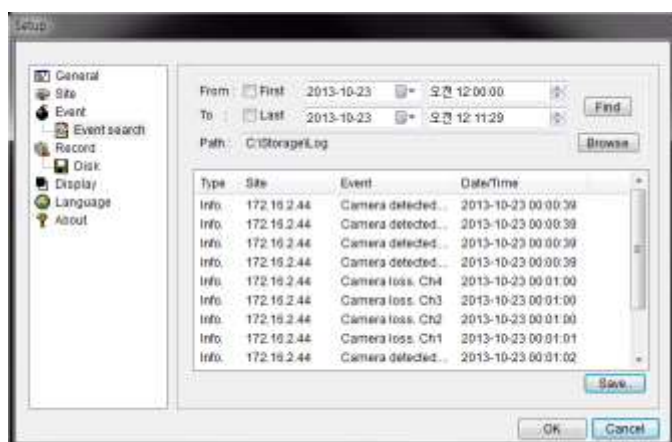
### 9-6-2. Event

Event log can be archived and searched.

### 9-6-2-1. Archiving Event Log: Specify the location to save event logs and select event to archive.



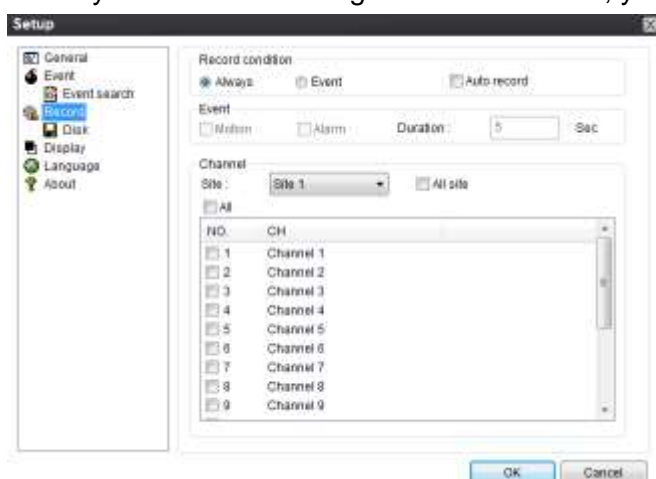
### 9-6-2-2. Archiving Event Log: Event log can be searched from selected time.



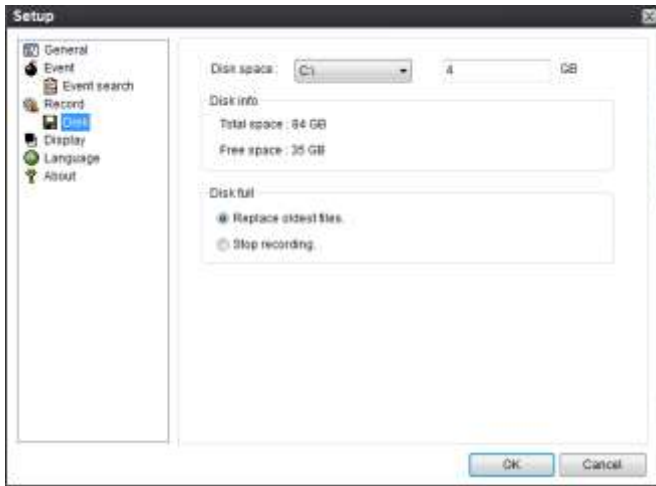
### 9-6-3. Record

**9-6-3-1. Record setup:** You can set the recording conditions for 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.

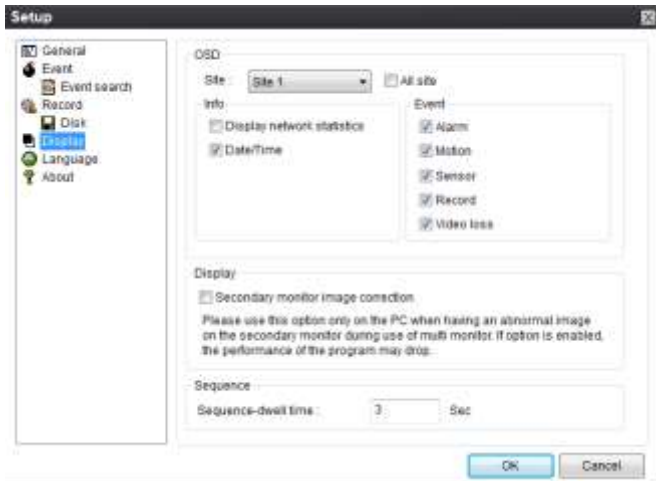


**9-6-3-2. Record local storage setup:** You can select the local disk to use and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop recording when the maximum amount of disk space is full.



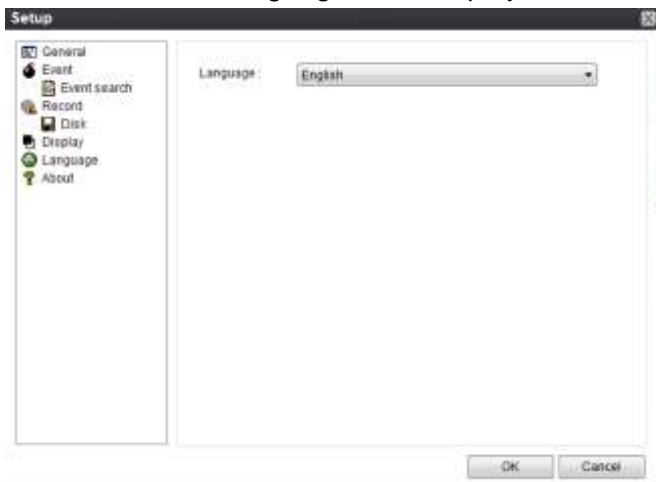
#### 9-6-4. OSD

You can select the OSD to be display



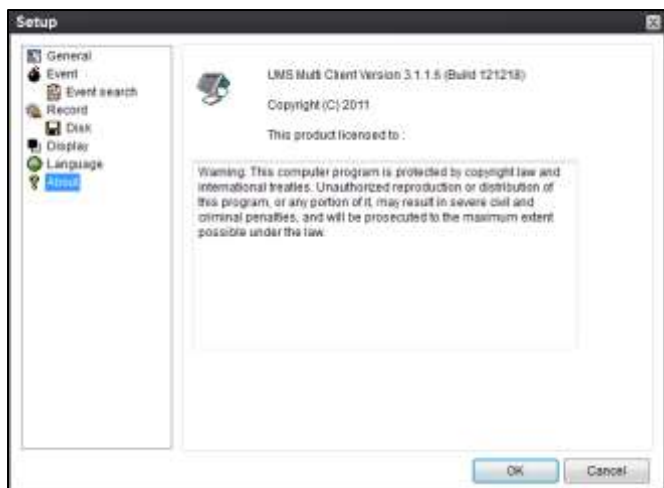
#### 9-6-5. Language

You can select a language to be display.



#### 9-6-6. About

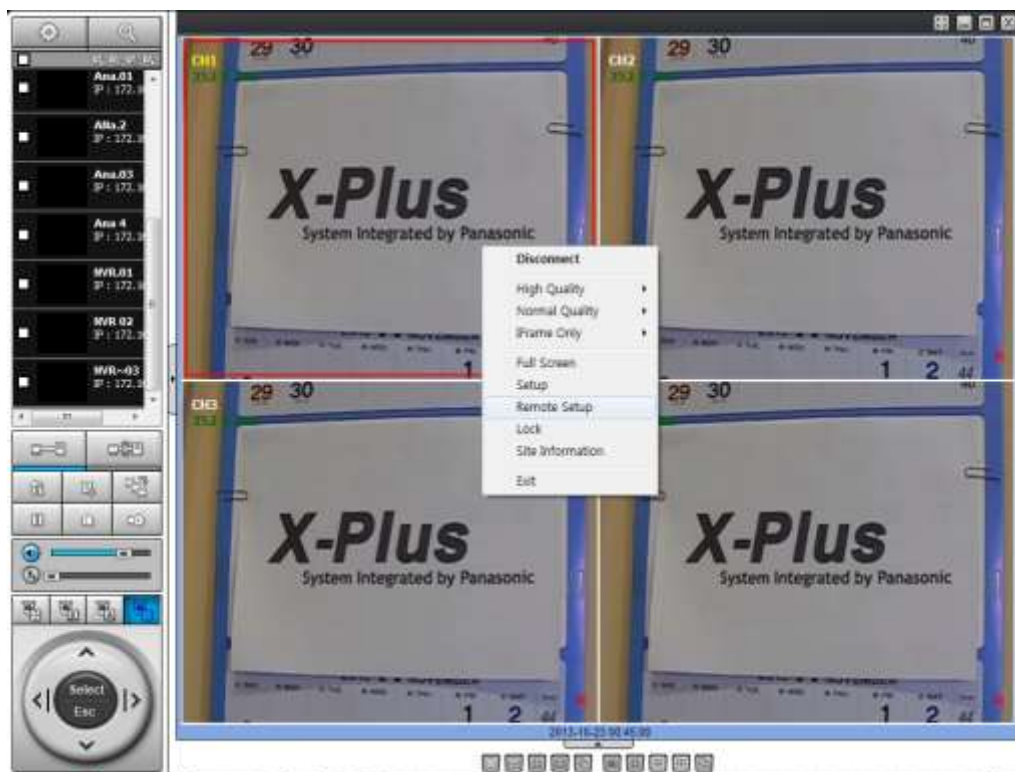
“About” provides network client version information.



## 9-7. Remote Setup

The menu settings for the DVR unit can be set from a PC, via network.

Put the cursor of the mouse on the channel which is connected to the site and press the right. Then the following window is displayed. Select the **Remote Setup**.



Then the setup window is displayed as follows to check the password for admin. Just admin is possible to connect to the remote setup menu. The specified menu screen is displayed on the upper side of the screen. Setting is basically the same as with the DVR menu setting.





## 9-7-1. Display

### WEB SETUP (ver 1.10.0)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE	INFORMATION
<b>OSD</b>								
CHANNEL NAME			<input checked="" type="radio"/> ON <input type="radio"/> OFF					
VIDEO LOSS			<input checked="" type="radio"/> ON <input type="radio"/> OFF					
STATUS BAR / ICON			<input checked="" type="radio"/> ON <input type="radio"/> OFF					
OSD CONTRAST			100					
SEQUENCE			<input checked="" type="radio"/> ON <input type="radio"/> OFF					
SEQUENCE-DWELL TIME			3 SECOND(S)					
CHANNEL			CH1					
NAME			CH1					
COVERT			OFF					
BRIGHTNESS			50					
CONTRAST			50					
HUE			50					
SATURATION			55					
<input type="button" value="RELOAD"/> <input type="button" value="APPLY"/>								

User can set the value on this remote setup page. After setting the value, please press the APPLY button. Then the value would be applied to the system without the system rebooting. RELOAD button is used when user want to bring the value in the system.

## 9-7-2. RECORD

WEB SETUP (ver 1.10.0)

DISPLAYRECORDDEVICESTORAGESYSTEMSECURITYNETWORKUPGRADEINFORMATION

CHANNEL

RESOLUTION

FRAME RATE

QUALITY

RECORDING

SENSOR RECORDING

PRE RECORD

POST EVENT RECORD

AUDIO

SCHEDULE

NONE

CH1

960H

30 FPS

LEVEL 5(H)

CONTINUOUS

-

1 MINUTE(S)

10 SECOND(S)

☒ ON ☐ OFF

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

SUN

MON

TUE

WED

THU

FRI

SAT

RELOAD

APPLY

9-7-3. DEVICE

WEB SETUP (ver 1.10.0)

DISPLAYRECORDDEVICESTORAGESYSTEMSECURITYNETWORKUPGRADEINFORMATION

ALARM-OUT

ALARM DURATION

CONTROLLER

SPEED

ID

PTZ

CHANNEL

CAMERA

SPEED

ID

SPOT OUT

SPOT ON EVENT

SPOT EVENT DWELL TIME

SEQUENCE

SEQUENCE DWELL TIME

SPOT CHANNEL

MOTION

CHANNEL

MOTION ZONE

MOTION SENSITIVITY

KEY TONE

REMOTE CONTROLLER ID

SENSOR

TYPE

1

5

—

9600

0

CH1

—

9600

0

OFF

3 SECOND(S)

OFF

3 SECOND(S)

☒ 1 ☐ 2 ☐ 3 ☐ 4

CH1

FULL ZONE

5

☒ ON ☐ OFF

0

1

OFF

RELOAD

APPLY

## 9-7-4. STORAGE

### WEB SETUP

(ver 1.10.0)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE	INFORMATION
OVERWRITE			<input checked="" type="radio"/> ON <input type="radio"/> OFF					
DISK INFO								
HDD SIZE :			870 GB (FREE : 769 GB)					
HDD START TIME :			2013/09/05 22:23:00					
HDD LAST TIME :			2013/10/23 00:44:00					
HDD 2								
MODEL NAME			Hitachi HDS721010CLA332					
TEMPERATURE			35 Celsius (95 Fahrenheit)					
HEALTH (GOOD/NORMAL/BAD)			NORMAL					
REALLOCATED SECTORS			6					
CURRENT PENDING SECTORS			0					
UNCORRECTABLE SECTORS			0					
SPIN RETRY SECTORS			0					
RECORDING LIMIT			OFF					
RECORDING LIMIT DAYS			30 DAY(S)					

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## 9-7-5. SYSTEM

### WEB SETUP

(ver 1.10.0)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE	INFORMATION
DVR-ID				DVR				
DATE FORMAT				YYYY/MM/DD				
CLIENT ACCESS				<input checked="" type="radio"/> ON <input type="radio"/> OFF				
NTP				OFF				
PRIMARY SNTP SERVER				kr.pool.ntp.org				
SECONDARY SNTP SERVER				time.kriss.re.kr				
TIME ZONE				GMT +9:00 (Seoul/Tokyo)				
CONNECTION MODE				TIME				
CONNECTION PERIOD				03:00 AM				
SEND EMAIL				OFF				
SERVER TYPE				MANUAL				
MAIL SERVER								
MAIL PORT				25				
SECURE OPTION				NONE				
ID								
PASSWORD								
MAIL TO								
MAIL FROM								
SEND MAIL TEST				APPLY MAIL SETTING & TEST				
SYSTEM EVENT NOTIFICATION								
HEALTH CHECK								
PERIOD				DAILY				
				FIRST				
				SUN				
				0 H				
HDD TEMPERATURE				60°C 140°				
HDD BAD SECTORS				10%				
HDD ALMOST FULL				90%				
EVENTS AND NOTIFICATION				ALARM-OUT				
				BEEP				
				E-MAIL				
HEALTH CHECK				-				
RESTART				-				
SHUTDOWN				-				
PANIC RECORD				-				
ALARM-IN				OFF				
MOTION DETECTION				OFF				
VIDEO LOSS				OFF				
HDD TEMPERATURE				1				
HDD BAD SECTORS				-				
HDD ALMOST FULL				-				
HDD FULL				-				
HDD FAILURE				OFF				

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## 9-7-6. SECURITY

### WEB SETUP

(ver 1.10.0)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE	INFORMATION
USER AUTHENTICATION								
	PASSWORD	SETUP	PB	PTZ	R/OFF	NETWORK		
PASSWORD CHECK		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
ADMIN	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
USER1	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
USER2	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
USER3	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
USER PASSWORD					ADMIN			
CHANGE					KEEP			
NEW PASSWORD								
CONFIRM PASSWORD								
PLAYBACK AUTHORITY								
		1	2	3	4			
ADMIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
USER1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
USER2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
USER3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
NETWORK LIVE AUTHORITY								
		1	2	3	4			
ADMIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
USER1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
USER2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
USER3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

RELOAD APPLY

## 9-7-7. NETWORK

### WEB SETUP

(ver 1.10.0)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE	INFORMATION
PORT	5445							
NETWORK AUDIO PORT	5446							
WEBPORT	80							
NETWORK TYPE	DHCP							
IP	172.16.2.44							
SUBNET MASK	255.255.0.0							
GATEWAY	172.16.1.254							
1st DNS	168.126.63.1							
2nd DNS	168.126.63.2							
DDNS	OFF							
SERVER1								
DDNS SERVER NAME	bestddns.com							
DDNS INTERVAL	60 MINUTE(S)							
SERVER2								
DDNS SERVER NAME	user_id.dyndns.org							
DDNS ID	user_id							
DDNS PASSWORD	*****							
DDNS INTERVAL	60 MINUTE(S)							
SERVER3								
DDNS HOST NAME	hostname							AUTO
HOST DOMAIN NAME	hostname.okddns.com							
NETWORK STREAM	CH1							
RESOLUTION	CIF							
FRAME RATE	15 FPS							
QUALITY	LEVEL 5(H)							
USE MOBILE	OFF							

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## 9-7-8. UPGRADE

Model Name : SP-DR04  
Current Software : Ver 3.8.2\_20130923

UPGRADE

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Please refer to page 54 for the Remote Upgrade.

## 9-7-9. INFORMATION


MODEL NAME	SP-DR04
SOFTWARE VERSION	Ver 3.8.2_20130923
STORAGE SIZE	870 GB
NETWORK TYPE	DHCP
IP ADDRESS	172.16.2.44
MAC ADDRESS	00:02:69:07:E3:C5
DVR ID	DVR
REMOTE CONTROLLER ID	0

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## 9-8. Operation

### 9-8-1. Addition, Delete, and modify of DVR sites

#### 9-8-1-1. Addition of sites

1. Click  SITE ADDITION button. And then the following window displays.

Site Info

Site Name:

Site Address:

Port Number: 5445

ID:

Password:

OK Cancel

- Site Name: Input a name that properly describes a site.
- Site Address: Input IP address (Public IP address of a router that DVR is connected.) or Domain name that is registered at [www.bestddns.com](http://www.bestddns.com) (default DDNS server)
- Port Number: Input port number of DVR. (default number is 5445)
- ID: Input ID of DVR.
- Password: Input network password of DVR.


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



### 9-8-1-2. Delete of sites

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.

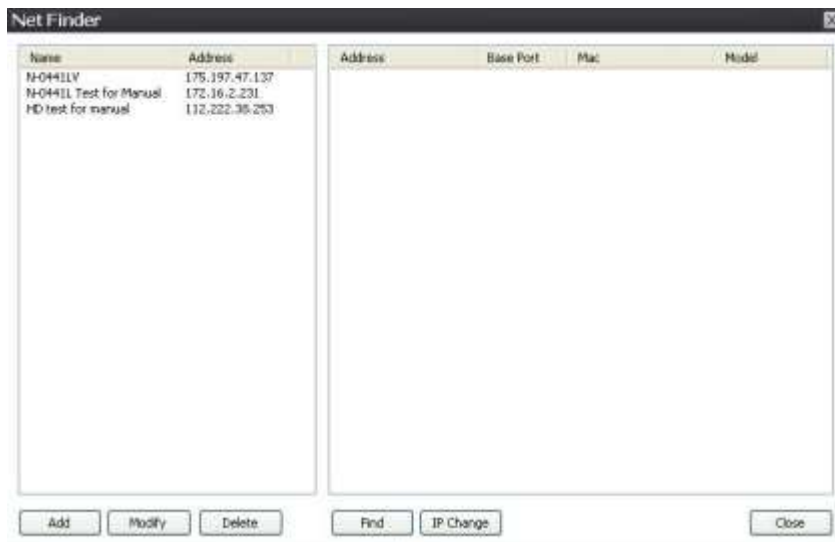


### 9-8-1-3. Modify of sites

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



2. Click  NET FINDER button. And then the following window displays.



3. Click MODIFY button. And then the modified information is applied.




## 9-8-2. Connect and Disconnect

### 9-8-2-1. Connect

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






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



## 9-8-2-2. Disconnect

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

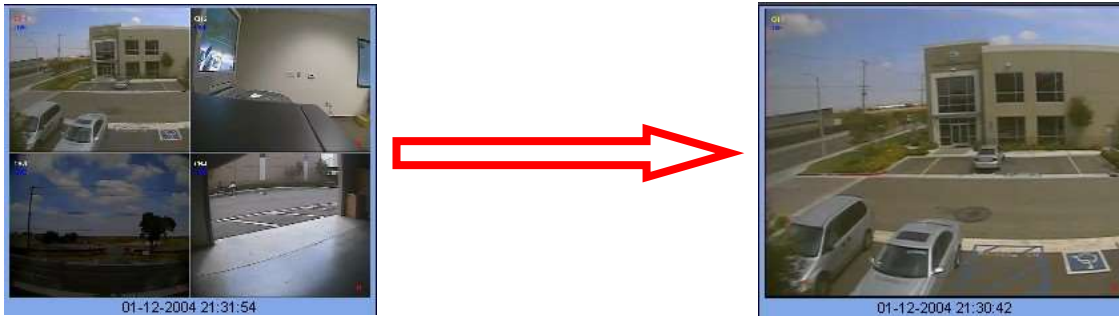



2. Click  DISCONNECT button, and then selected site/sites disconnected.

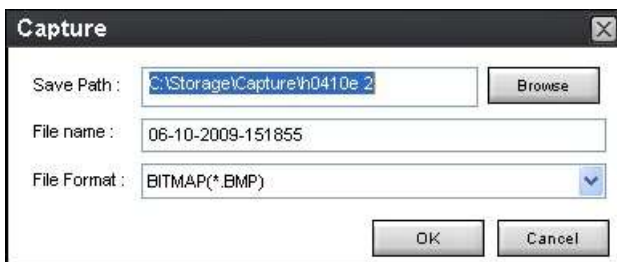


### 9-8-3. Still-image capture during Live

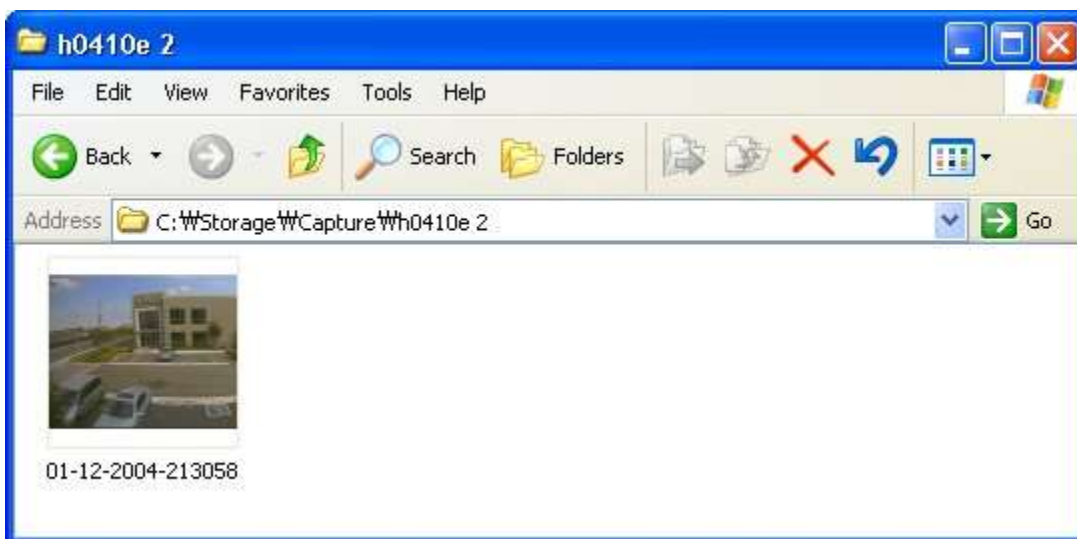
1. Double-click a channel to capture from the display screen. (Otherwise all channels will be captured.).




2. Click  CAPTURE button. And then a Capture window displays.

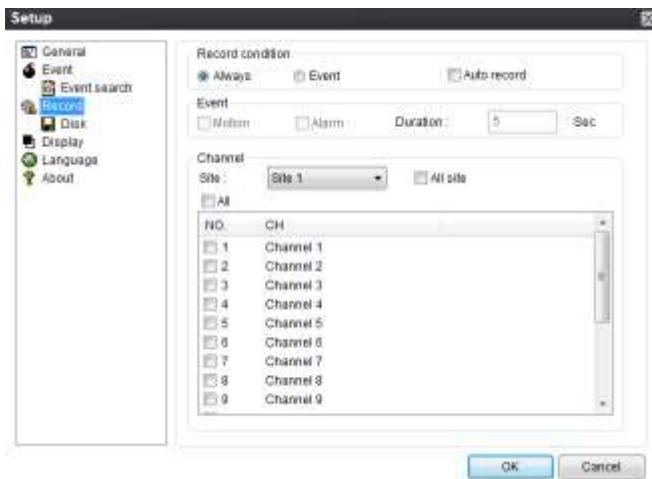


3. Set Save path, File Name, and File Format. And then click OK button.
4. Still image is saved as set in Capture window.

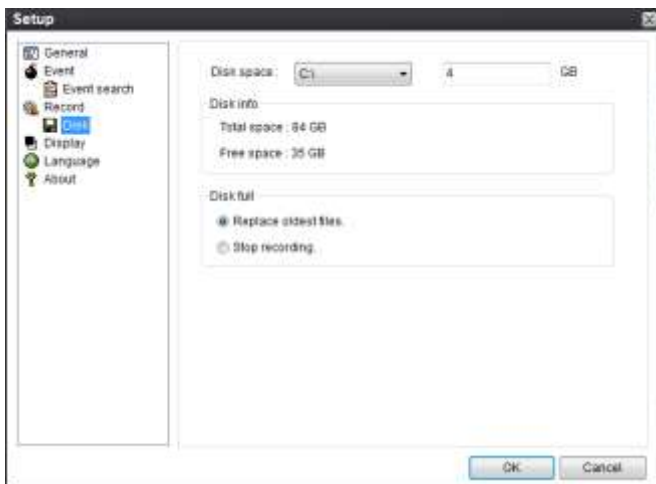


### 9-8-4. Recording video on local PC during Live

1. Click  SETUP button. And then a setup window display.
2. Select Record and set the values.

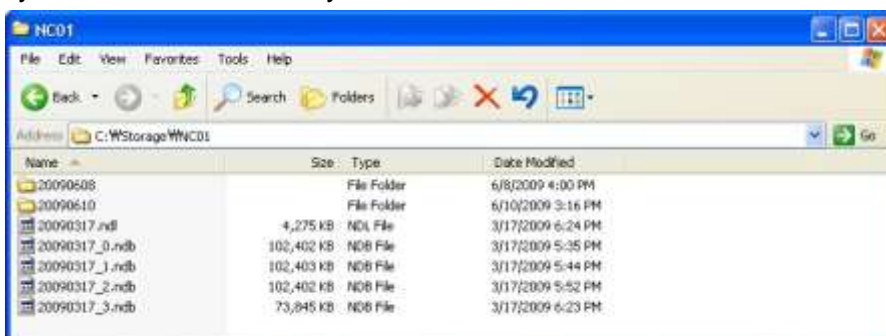


3. Select Disk and set the values.




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

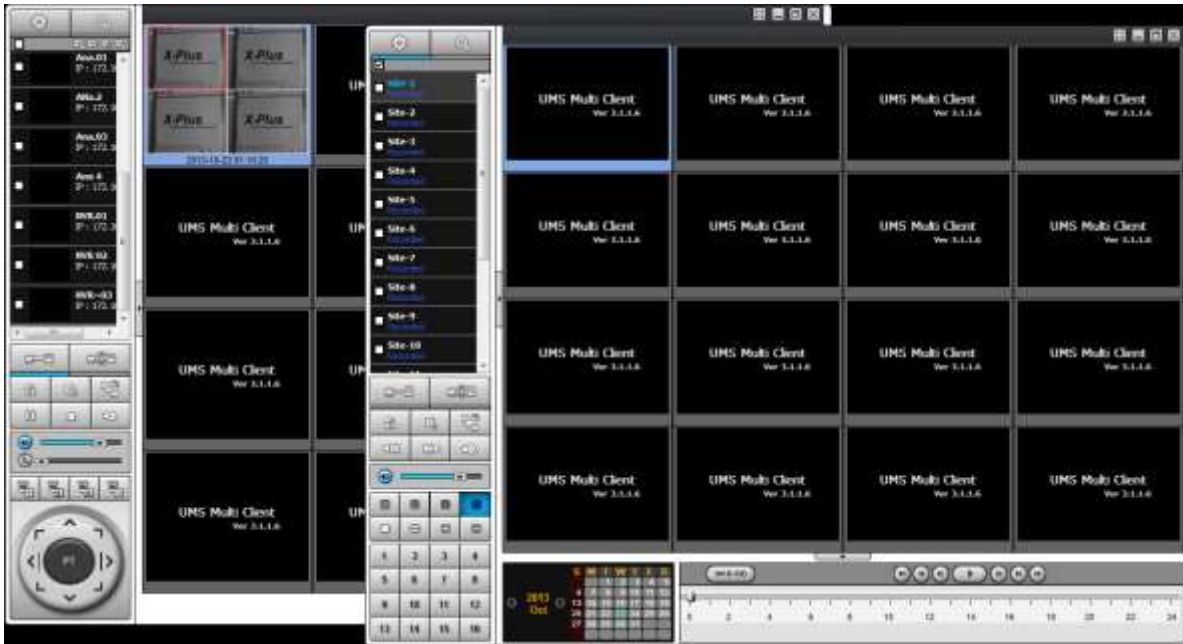
5. Live video data is recorded as set in Record and Disk setup. These video data can be searched and play-backed with Local Playback.




## 9-8-5. Local Playback and Remote Playback

### 9-8-5-1. Playback of recorded video on local PC

1. Click  LOCAL PLAYBACK button. And then Playback Window display over 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 slide window.




4. Move scroll bar on where there is video data and Play button.

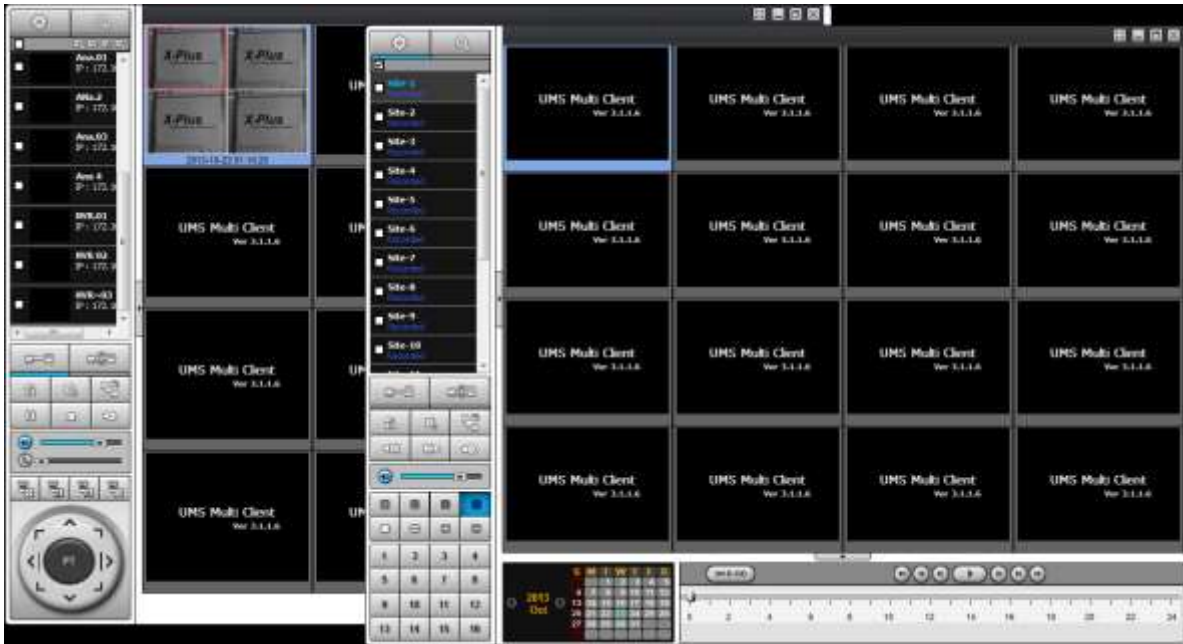


5. Video data that is recorded on local PC will be play-backed.




## 9-8-5-2. Playback of recorded video on remote DVR

1. Click  REMOTE PLAYBACK button. And then Playback Window display over Live Window.

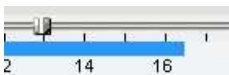


2. Select site to connect from the directory window.

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



4. Move scroll bar on where there is video data and Play button.



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

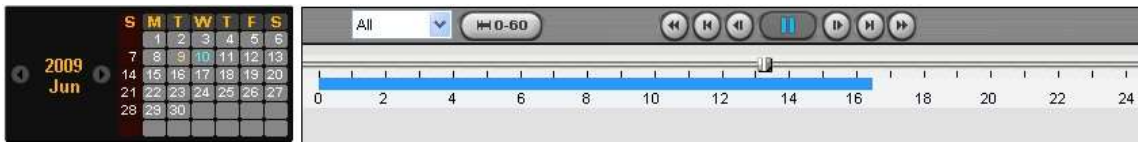



#### 9-8-6. AVI Backup during playback

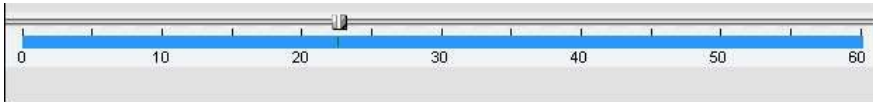
You can back up the recorded videos in AVI format during playback.




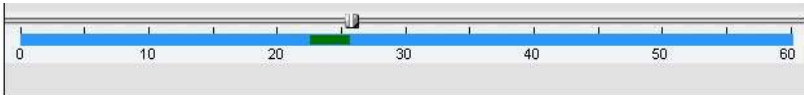
1. Double-click the target channel to backup.
2. Select the beginning time by using the search calendar and slide bar.




3. Click  MARK IN button, when the scale of the timeline is located on the target time as the beginning time of backup.



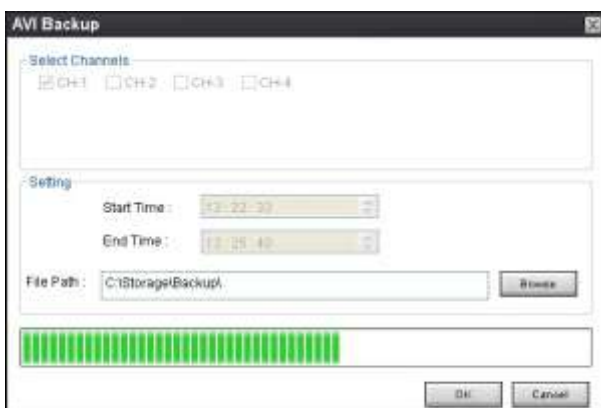
4. Set the ending time on the blue timeline by dragging the scale on the target time as the ending time of backup and clicking  MARK OUT button. Then, color of the timeline between the beginning time and ending time will be changed into dark Green.



5. Click  BACKUP. And then the window appears 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 set in AVI Backup window. AVI format video can be played back by Window

Media Player™ or other media player that is compatible with AVI format video.



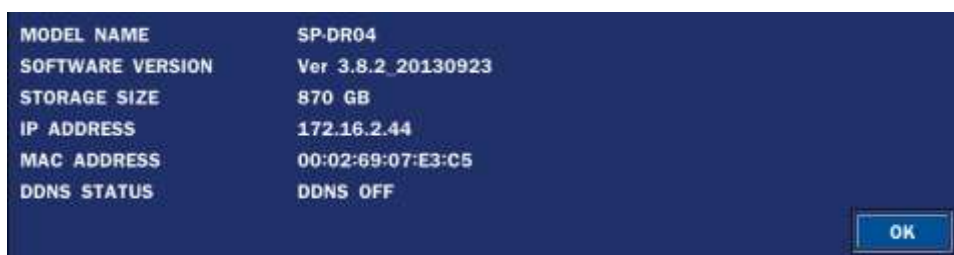
### Notice

When it does a backup with NSF format, user can do a playback using the DVR player. The DVR player is installed with the S/W in user's PC.

## 10. Network – By an web-browser viewer

The DVR provides a live remote monitoring feature by web-browser viewer.

1. Check the IP address of the DVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS.



2. Input the IP address or Domain name address that you pre-registered on [www.bestddns.com](http://www.bestddns.com) on the address field and press "Go".





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



4. Click "Install" to download ActiveX control.



5. Web Browser Viewer is displayed as bellow.



6. Click CONNECT button on the Left upper corner of web-viewer. Then "Connect" dialog is displayed. Enter IP address (or Domain name address that you pre-registered on [www.bestddns.com](http://www.bestddns.com), Port number and Password and click "Connect"



- Server address: Input IP address of the DVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS or Domain name address that you pre-registered on [www.bestddns.com](http://www.bestddns.com).
- Port: Input Port number (The number is set on SETUP>NETWORK>PORT.)
- ID: Input ID of DVR.
- Password: Input network password of DVR.  
(The number is set on SETUP>SYSTEM>NETWORK PASSWORD.)

7. Then the cameras connected to the DVR are displayed on the screen.



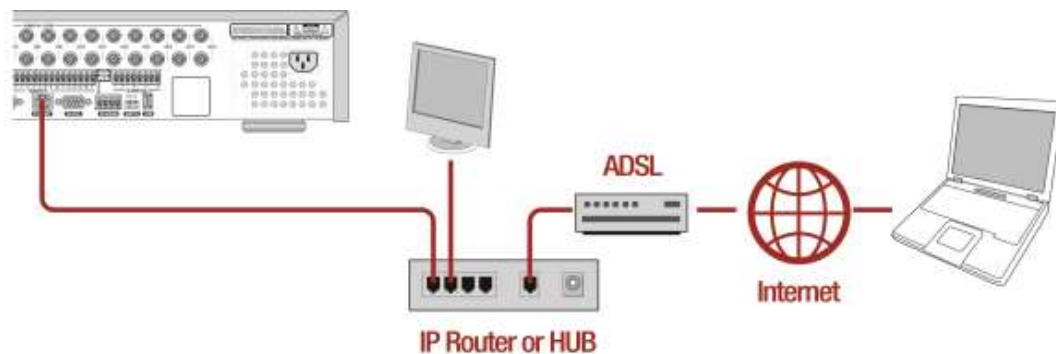
9. SETUP: The menu settings for the DVR unit can be set from a PC, via network. Refer to the detail of Remote Setup description of UMS Multi Client. Please check the detail to the page 77, Remote Setup.

## APPENDIX: How to connect network

### A. How to set IP address of the DVR and open TCP port of the router?

The port forwarding is dependent on the brand and model of the router. The port forwarding is required to allow access to the DVR beyond a router.

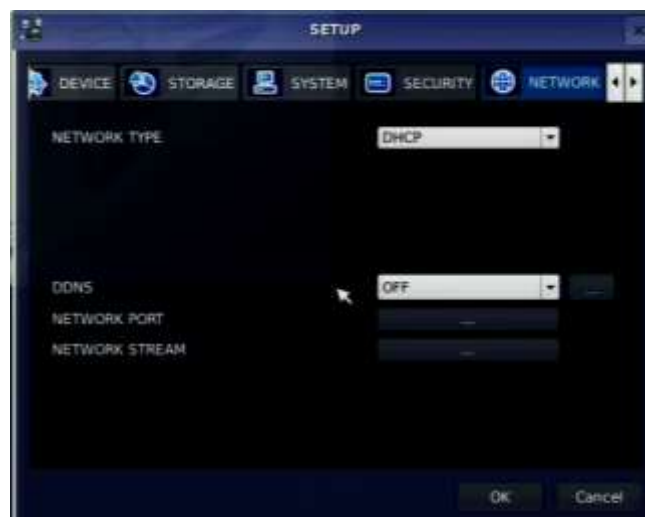
**Connect network cable between DVR and Router or ADSL modem.**



1. Default network setting on DVR are
  - Port: 5445
  - WEB Port : 80
  - Network : DHCP
2. From PC connected in the same Router, find IP address, Gateway, and Subnet mask by IPCONFIG command in command prompt.



3. But if IP is something else like 192.168.x.xxx., you should change IP address, Subnet, Gateway on the DVR. Go to SETUP>NETWORK>LAN of the DVR and change the IP settings to be like IP: 192.168.XXX.XXX and Gateway: 192.168.XXX.XXX. (Refer to the user's manual of Router.)



Open your web browser. Enter the router IP address in the address bar (The router IP address are different with the brand and model.), click GO.



4. Enter the user name and password (**admin** is default) and press the **OK** button.

A login dialog box with a yellow background. It has two text input fields: 'User name:' with 'admin' entered and a user icon on the left; and 'Password:' with six dots entered. Below the password field is a checkbox labeled 'Remember my password' which is unchecked. At the bottom are 'OK' and 'Cancel' buttons.

5. Select the Port Range Forwarding tab.

A screenshot of the 'Port Range Forwarding' configuration window. At the top are tabs: 'Setup', 'Wireless', 'Security', 'Access Restrictions', and 'Applications & Gaming'. The 'Access Restrictions' tab is selected, and within it, the 'Port Range Forward' sub-tab is active. Below the tabs is a table with columns: 'Application', 'Start', 'End', 'Protocol', 'IP Address', and 'Enable'. The first row has the following values: 'Application' is empty, 'Start' is '554', 'End' is '554', 'Protocol' is 'Both' (selected from a dropdown), 'IP Address' is '192.168.1' and '1', and 'Enable' is a checked checkbox.

6. Enter the each field.
- Application: Enter a description of the DVR (Example: store1)
  - Start: Enter the first number of the port you need to port forward (Example: 5445)
  - End: Enter the last number of the port you need to port forward (Example: 5445)
  - Protocol: Select Both.
  - IP address: Enter the IP address of the DVR on SETUP>NETWORK>LAN>IP ADDRESS.
  - Enable: Check the enable box.
7. Select the Save settings button located on the bottom of the window. Then Port forwarding is finished.

Two buttons side-by-side: 'Save Settings' and 'Cancel Changes', both with a blue gradient background.

### Network access beyond a router

In order to access the DVR remotely beyond a router (firewall), the user must open TCP port for command level, live channels and storage channels. User need to open 2ports numbers on the router; the DVR port number 5445 and the WEB port number 80.

If this port is not opened properly, user cannot access DVR beyond a router.

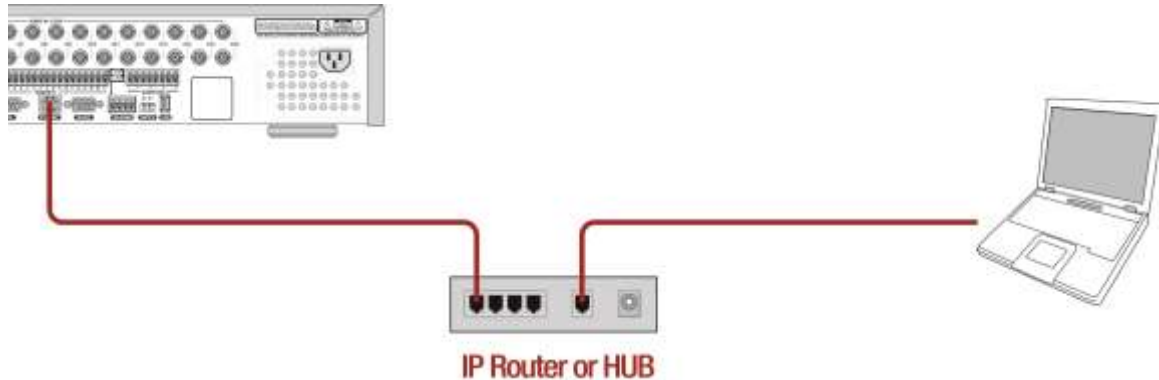
You can learn how to port forward many kinds of Routers from the bellow site.


[http://www.portforward.com/english/routers/port\\_forwarding/routerindex.htm](http://www.portforward.com/english/routers/port_forwarding/routerindex.htm)

## B. How to access DVR from Remote PC?

### LAN Connection – Using a switching hub

Connect to the system, using a hub (Switching hub) and an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN cable)




1. Run the pre-install the network client software on the supplied CD. (Refer to Chapter 6. Network access using the Exclusive network viewer)
2. Check the IP address from SETUP>SYSTEM>DESCRIPTION of DVR.
3. Run network client software and click  button.

The screenshot shows a 'Site Addition' dialog box with the following fields:

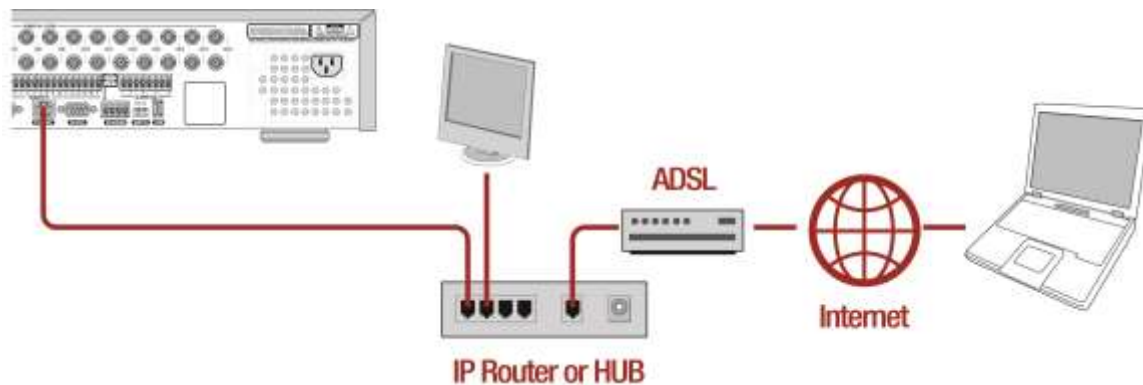
- Site Name:
- Site Address:
- Port Number: 5445
- ID:
- Password:

At the bottom are 'OK' and 'Cancel' buttons.

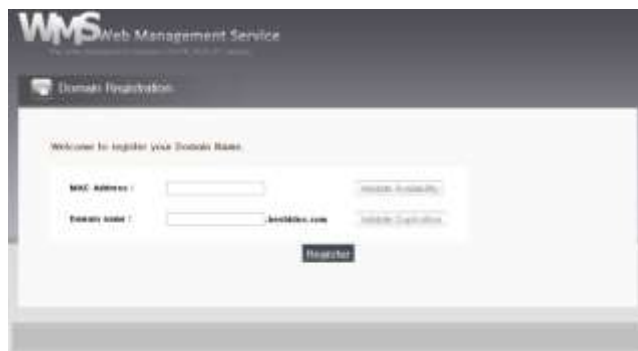
4. Input Site Name, Site Address(IP address), Port No., and Password on the connect window. And click OK. Then, press  button after checking the left check box.


### Internet (ADSL) Connection using DDNS

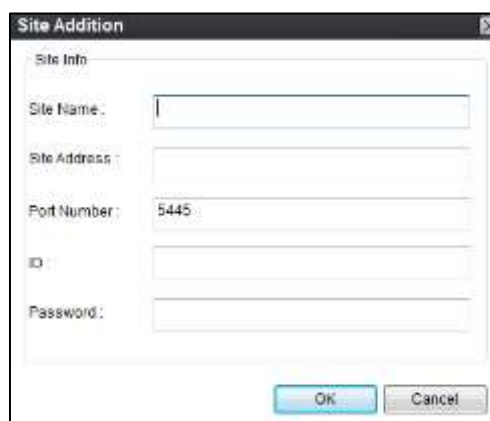
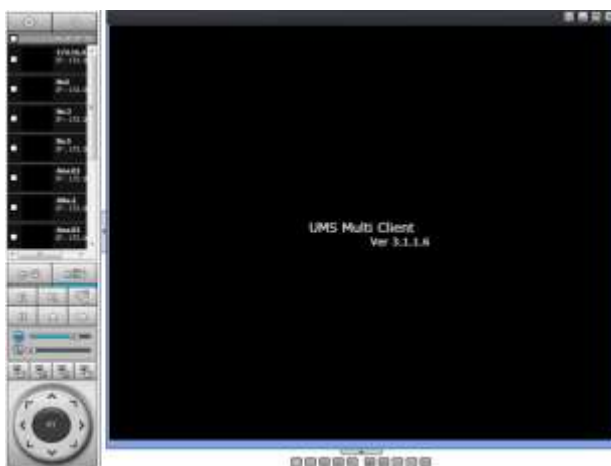
Connect to the system, using an Router or ADSL modem and an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN cable)



1. Go to SETUP>NETWORK. Set NETWORK TYPE as DHCP and DDNS SERVER as ON. And select one type among bestddns.com, okddns.com and ddnscenter.com after setting to DDNS1.
2. Go to Setup menu of Router and open TCP port 5445 and 80 using Port Forwarding. (Refer to A. How to set IP address of the DVR and open TCP port of the router?)
3. Confirm the Mac address and Serial No. from the label of the rear panel of the DVR.
4. Open the web browser and log on <http://www.bestddns.com>.



- MAC Address: Input the Mac address (EX. 0002690XXXXX) without any space.
5. Domain Name: Input Domain Name for your DVR system
  6. Click the DUPLICATION CHECK button to see if the domain name is available.
  7. If you see the screen "You can use the Domain name you entered" then click RETURN and click REGISTER button to complete the registration.
  8. Run the pre-install the network client software on the supplied CD. (Refer to Chapter 8. Network access using the Exclusive network viewer)
  9. Click  button and add the DVR as necessary.





- Model: Select one type surely among SDVR series, H DVR series DVR / N series DVR, HD DVR / IP Camera.
- Site Name: Input the name of the DVR.
- Site Address: Input the Domain Name that is registered on <http://www.bestddns.com>. (EX. XXXXX.bestddns.com)
- Port Number: Input the DVR port number.
- Password: Input the network password.



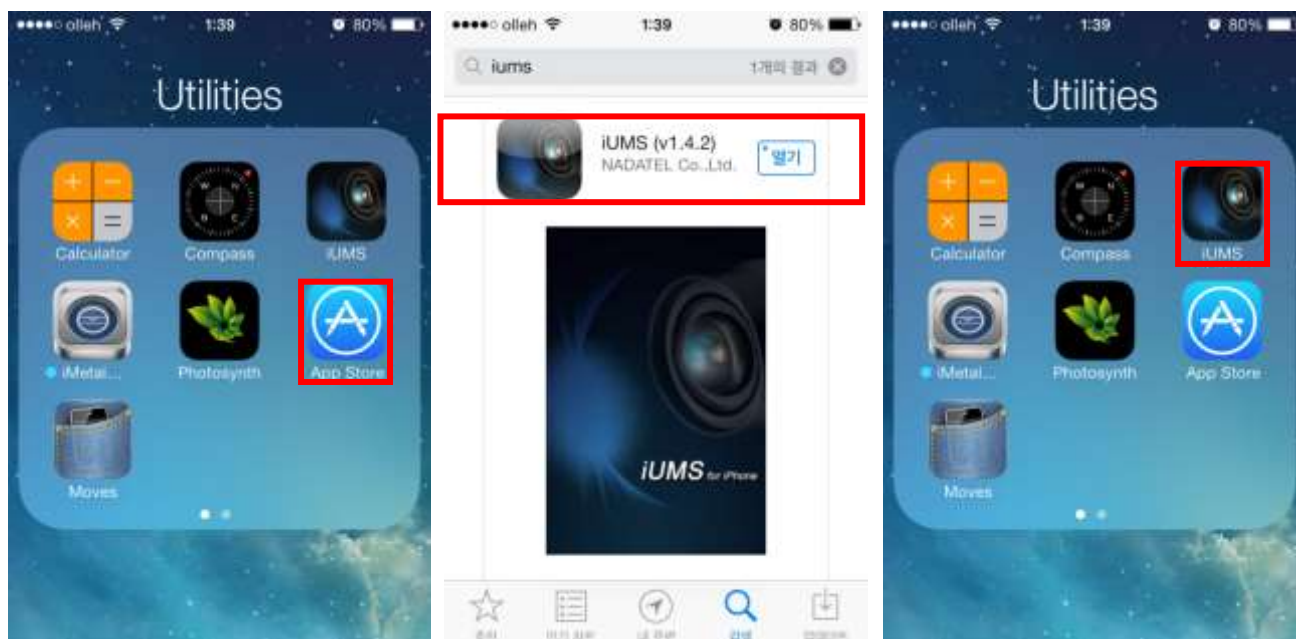
10. Press button after checking the left check box of the site that you will access.





### C. How to access DVR with iPhone?

1. Connect to App Store in iPhone and search “iUMS” to the search menu. Then, download the iUMS application.



2. Register your DVR and input the IP address or domain name, ID and password. Then, press Live or Playback mode. iUMS supports Live mode, Playback mode, PTZ camera control, Audio and Live Zoom functions.



## D. How to access DVR with Android?

1. Connect to Market in Android and search "iUMS" to the search menu. Then, download the iUMS application.



2. Register your DVR and input the IP address or domain name, ID and password. Then, press the specific channel. More functions such as Playback and etc. will be supported to the next version.



- The End -