

User's Guide (Ver. 2.0)

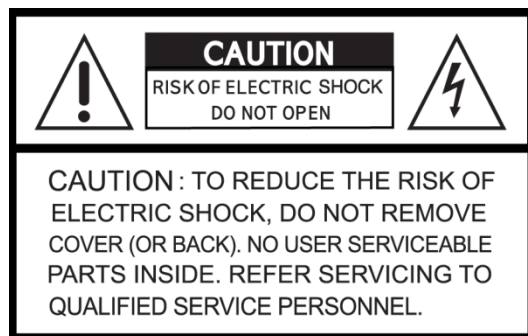
Model: HD-0410S

H.264 Video Compression Digital Video Recorder

About This User's Guide

Before operating the unit, please read this user's guide thoroughly and retain it for future 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 “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock, property damage, personal injury, or death.

WARNING

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

CAUTION

Changes or modifications not approved by the manufacture will void the warranty of the product.

Using an incompatible battery may increase the risk of fire or explosion.

Replace only with the same or equivalent type battery recommended by the manufacture.

Discard used batteries according to manufacturer’s instructions.

These precautions must be followed for safety reasons.



Warning

- Do not use if the unit emits smoke, strange sounds are heard or odor is emitted.
 - Continued use may cause electrocution and/or fire. Immediately remove the power plug from the outlet. Once the unit stops emitting smoke, consult the dealership where this unit was purchased or factory shop for repairs.
 - Do not attempt repairs on your own.
- Make sure the power cable is not damaged.
 - Always use the power cable supplied with the unit.
 - Do not place heavy objects on the power cable or place the power cable near heating equipment. Also, do not bend the power cable forcefully, work upon or staple it. A damaged power cable may result in fire and/or electrocution.
 - Should the power cable become damaged it must be replaced by the dealership where this unit was purchased or factory shop.
- Make sure there is no dust accumulation on the power plug or the outlet.
 - Dust accumulation may result in a short-circuit and heat generation and cause fire.
 - Be especially careful when using an outlet situated in a room exposed to high humidity, condensation and/or dust, or in a kitchen.
 - Periodically remove the power plug from the outlet and clean any dust and dirt between the plug and the outlet.
- Caution when connecting the power cable
 - Connect the power plug directly with the outlet. Faulty connection may result in heat generation and cause fire.
 - Do not use the power cable while it is tied in a bundle. This may result in heat generation and cause fire.
 - When using the extension cord supplied, make sure the power consumption of the connected unit does not exceed the electrical rating of the extension cord. Higher power consumption may result in heat generation and cause fire.
- Disassembly prohibited
 - Do not place your hand inside this unit as this may cause fire and/or electrocution.
 - Consult the dealership where this unit was purchased or factory shop for diagnostics, adjustments, and repairs.
- Do not place any foreign objects inside the unit.
 - Do not insert or push in any metal or combustible object through openings such as air ducts. This may cause fire and/or electrocution.
 - In the event that a foreign object is inside the unit, turn off and unplug the unit. Consult the

dealership where this unit was purchased or factory shop. Continued use may result in fire and/or electrocution.

- Do not place a container holding water or other liquids above the unit when it is connected to power.
 - In the event that water gets inside the unit, turn off and unplug the unit. Consult the dealership where this unit was purchased or factory shop. Continued use may result in a fire or electrocution.
- Do not allow the unit to get wet.
 - This unit is not waterproof. Do not expose the unit to water. This may cause fire and/or electrocution. Do not use in a bath or shower room.
 - In the event that the internal components have been exposed to water, turn the power off and remove the power plug from the outlet. Consult the dealership where this unit was purchased or factory shop. Continued use may cause electrocution and/or fire.
- Do not use during thunder/thunder storms.
 - Do not use during thunder/thunder storms. Never touch the connection cable during thunder/thunder storms. This may cause electrocution.
- Do not place in an unstable position.
 - Doing so may cause accidents and/or breakdowns through falling or toppling.
 - In the event that the unit has been dropped or the casing has been damaged, turn the power off and remove the power plug from the outlet. Consult the dealership where this unit was purchased or factory shop. Continued use may cause electrocution and fire.
- Do not expose to shock or vibration.
 - Stored data may be damaged or lost through hard-disk breakdowns caused by shock/vibration.
- Do not use this unit in areas where it is exposed to the possibility of explosion.
 - Do not use this unit in areas where explosive and/or flammable gases are present. This may cause fire and/or explosion.
- For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.

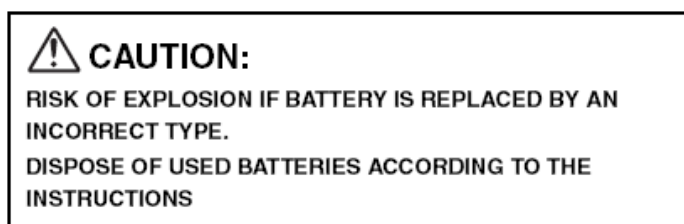


Caution

- Do not pull on the power cable when removing the power plug from the outlet.
 - Hold the power plug when disconnecting the power cable from the outlet. Pulling on the power cable from the outlet. Pulling on the power cable may damage the cord. This may cause fire and/or electrocution.
- Do not touch the power plug with wet hands.
 - Doing so may result in electrocution.
- Do not sit on.
 - Doing so may cause the unit to fall, be damaged and/or result in injury.

- Make sure the cables are connected properly.
 - Connect and install the power cable and connection cable very carefully. Tripping over the cable may result in the unit capsizing or falling and cause injury.
- Do not place heavy objects on connected units.
 - Doing so may affect the stability of the unit and cause it to fall which may result in injury. Doing so may also damage the unit depending on the weight of the object.
- Shipment and portability
 - Never move this unit while the power is turned on.
 - When shipping, remove the power plug from the outlet, confirm that the connection cable has been removed, and store in original packaging. Ship using a method that causes the least amount of shock and/or damage to this unit. Also, do not drop this unit.
- Maintenance when the unit is going to remain unused for long periods of time
 - Remove the power plug from the outlet when the unit is going to remain unused for long periods of time.
- Cleaning the internal components
 - Consult the dealership where this unit was purchased or factory shop for cleaning internal components. Leaving the unit unused for long periods of time may attract dust to the internal components, which in turn may cause fire and/or breakdowns.
- Do not block the cooling fans or air ducts.
 - This unit is equipped with air ducts and cooling fans in order to assist the ventilation of hot air produced by the hard disk drive. Placing covers, placing in a case, or placing inside bookcases may cause heat build up, and may result in fire and/or electrocution.
 - When the unit is set up in a rack, leave open space on all sides.
 - . Leave 5 cm or more of space above and below.
 - . Leave 10 cm or more of space on both sides and on the rear.
- Do not expose to extreme temperatures or humidity changes.
 - Do not place in areas where the unit will be exposed to extreme temperatures (± 10 degrees C per hour) or humidity changes.
- Points on unit positioning
 - This unit is constructed using precision electronic parts. Avoid placing it in areas described below as this may cause faulty operation and/or breakdowns.
 - . In direct sunlight
 - . In places exposed to water
 - . In the vicinity of cooling and heating units or humidifiers
 - . Near the air conditioner where the unit is exposed to cool air
 - . Dusty areas
 - . Areas that contain fire hazards
 - . In the vicinity of volatile substances
 - . Areas where the unit will be exposed to constant vibration (in trains, cars, etc.)
- Cautionary points on condensation

- Droplets may form on the outside when very cold water is poured into a cup. In the same way, droplets may form around the internal components of this unit. This is called condensation.
- Do not use this unit if condensation has formed. Using this unit while condensation is formed may cause breakdowns. In the event of sudden sharp temperature changes, turn off the power and do not use this unit until the temperature of the room where it is positioned stabilizes (about 2 hours). Condensation will not occur while the power is turned on.
- When condensation is likely to occur... Use the unit after turning the power off and leaving it for 1~2 hours.
- **Back up battery**
 - This unit has got a built-in lithium battery used to back up the clock function. The battery continues to operate the clock even when there is a power disruption.
 - The life expectancy of the battery is approximately 2 years. If the battery runs out or leaks, the clock resets when the power is turned off.
 - Battery fluid leaks
 - . In the event that the battery fluid has leaked rinse hands/clothes thoroughly with water.
 - . Loss of eyesight may result if battery fluid enters the eyes. Do not rub the eyes. Immediately rinse with clean water and consult a physician.
 - When disposing of this unit
 - . Consult the dealership where this unit was purchased for information concerning the disposal of the lithium battery.



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.

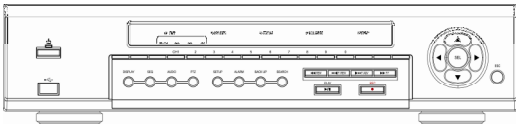





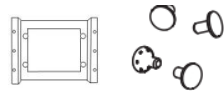



The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the DVR for examination or attempting to fix the unit. The manufacturer may not be held liable for any issues with the unit if the warranty seal is removed.

Warranty for Critical Parts

- HDD, Battery and ATX Power: 2 years (25°C environment)
- Cooling Fan: 3 years (25°C environment)

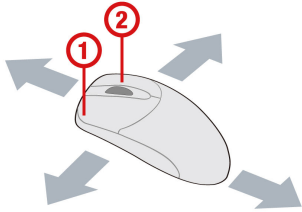
Product Components

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

DVR Unit	
Client Software CD	
Remote Control	
Battery 1.5V (AAA x 2EA)	
User's Guide	
HDD SATA Cable	
HDD Mounting Brackets & Screws	
HDD Mounting Screws	
Power Cable (110V or 220V)	
Mouse	

Items	Quantity
HDD SATA Data Cable	4 EA
HDD Mounting Bracket	2 EA
HDD Mounting Bracket Screw	16 EA

Basic Mouse Functions

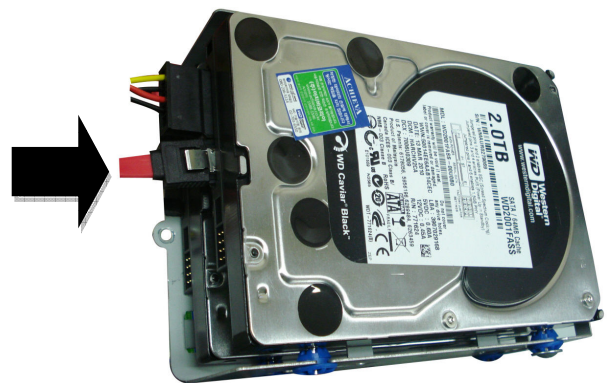
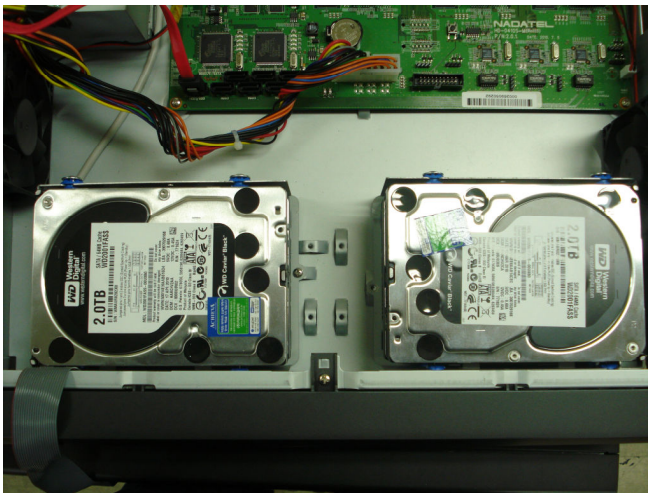


① Left click: SELECT Function or Change Screen Mode

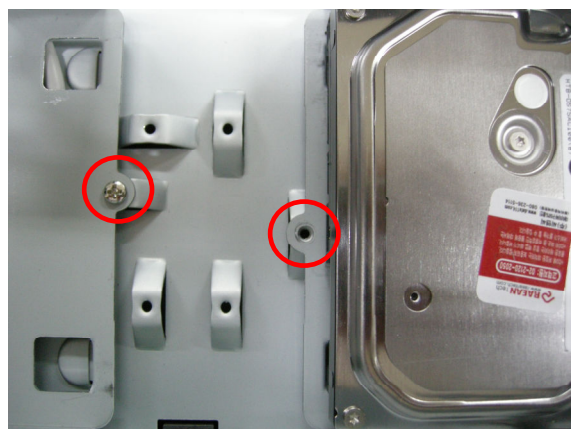
② Right Click: Open Sub Menu

Hard Drive Installation

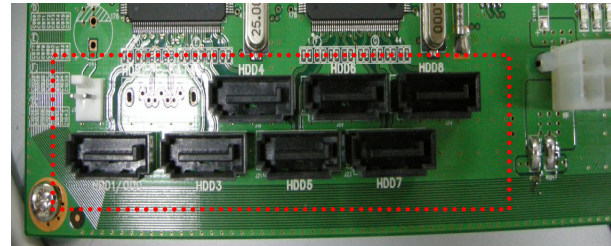
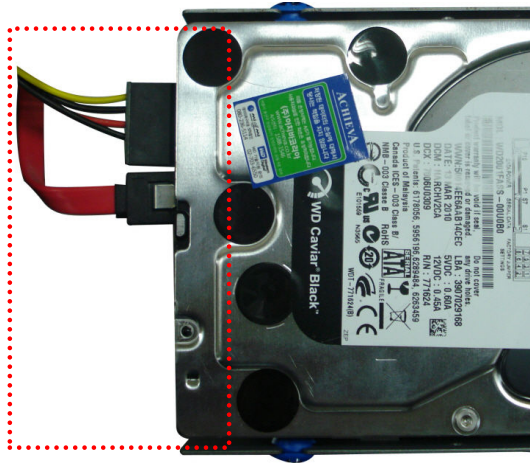
1. Remove the screws and the top cover as specified below.
2. Mount the HDD into the mounting bracket as specified below.



3. Insert the HDD bracket and mounting screw as specified below.



4. Connect the HDD SATA and HDD power cable as specified below.



NOTE) HDD1 and HDD3 are for eSATA. Internal HDD could be distinguished 1 Master HDD and other Slave HDDs. Master HDD should be connected in advance of Slave HDD surely. For instance, the slave HDD should be connected to HDD6, HDD7 or HDD8 if the master HDD is connected to HDD5. In case of ODD, it doesn't matter with the order.

NOTE) HDD ports could be grouped as follows; Group A (HDD5, HDD6, HDD7, HDD8) and 2 Group B (HDD1, HDD2, HDD3, HDD4). If user input the port for ODD to the Group A, user has to input the ports for internal HDD to the Group B and can use just ESATA-B. If user doesn't use ODD, there is not any problem.

NOTE) Please mount all HDDs which you want to use when installing at the first time. It is not allow a movement, removal or supplement of HDD to the system which be in use.

Compatible HDD Models

Seagate	ST32000542AS (Barracuda LP)	2 TB	5900 RPM	32 MB
Seagate	ST31000340SV (Surveillance)	1 TB	7200 RPM	32 MB
Seagate	ST3100528AS (Barracuda)	1 TB	7200 RPM	32 MB
Seagate	ST3500830SCE	500 GB	7200 RPM	8 MB
Seagate	ST3500418AS (Barracuda)	500 GB	7200 RPM	16 MB
Seagate	ST3500410AS (Barracuda)	500 GB	7200 RPM	16 MB
Seagate	ST3250410AS (Barracuda)	250 GB	7200 RPM	16 MB
Seagate	ST3250310SV (Surveillance)	250 GB	7200 RPM	8 MB

Seagate	ST3250318AS (Barracuda)	250 GB	7200 RPM	8 MB
Seagate	ST3160815AS (Barracuda)	160 GB	7200 RPM	8 MB
HITACHI	HDS722020ALA330	2 TB	7200 RPM	32 MB
HITACHI	HDS721010KLA330	1 TB	7200 RPM	32 MB
HITACHI	HDT721010SLA360	1 TB	7200 RPM	16 MB
HITACHI	HDS721010CLA332	1 TB	7200 RPM	32 MB
HITACHI	HDS721050CLA362	500 GB	7200 RPM	16 MB
HITACHI	HDP725050GLA360	500 GB	7200 RPM	16 MB
HITACHI	HDS721032CLA362	320 GB	7200 RPM	16 MB
HITACHI	HDS721025CLA382	250 GB	7200 RPM	8 MB
HITACHI	HDT721025SLA380	250 GB	7200 RPM	8 MB
HITACHI	HDP725025GLA380	250 GB	7200 RPM	8 MB
Western Digital	WD20EADS	2 TB	7200 RPM	32 MB
Western Digital	WD10EACS	1 TB	7200 RPM	16 MB
Western Digital	WD5000AACS	500 GB	7200 RPM	16 MB
Western Digital	WD2500AAKS	250 GB	7200 RPM	16 MB

NOTICE

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

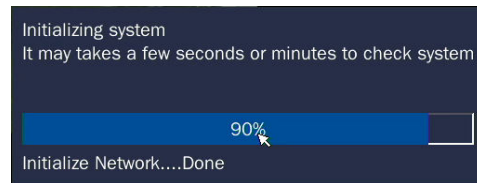
Storage Estimation

HDD	Super	High	Standard	Economy
Capacity	Hour(s)	Hour(s)	Hour(s)	Hour(s)
250GB	23 Hours	1 Days 5 Hours	2 Days 10 Hours	4 Days 20 Hours
500GB	2 Days	2 Days 13 Hours	5 Days 1 Hours	10 Days 2 Hours
1TB	4 Days 3 Hours	5 Days 4 Hours	10Days 8 Hours	20 Days 16 Hours
2TB	8 Days 9 Hours	10 Days 11 Hours	20 Days 21 Hours	41 Days 19 Hours

Recording Condition: 4CH * 1280X720* 30fps * Continuous

Booting the DVR and Basic Time Setting

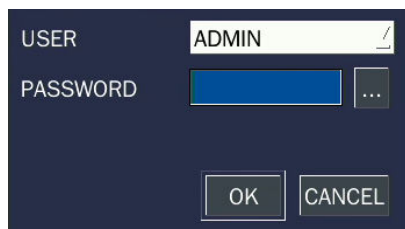
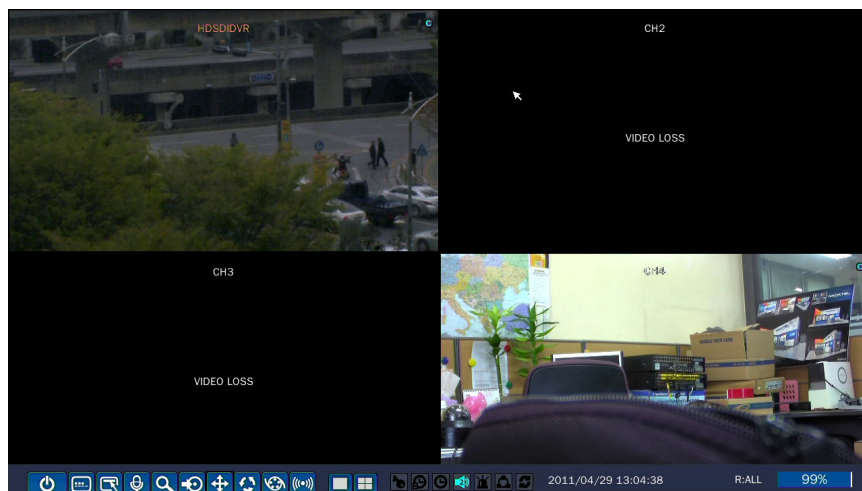
1. During the first start up, the following message will be displayed.



Setting Daylight Saving Time

If the DVR is to be set Day Light Saving Time and be synchronized NTP (Network Time Protocol), Take next steps.

1. Enter the SETUP mode. The default Password is "1111".



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

SYSTEM	
DVR-ID	DVR
DESCRIPTION	...
LANGUAGE	ENGLISH
DATE FORMAT	YYYY/MM/DD
SET DATE & TIME	...
CLIENT ACCESS	ON
NTP	OFF
SEND EMAIL	OFF

OK CANCEL

3. Select DAYLIGHT SAVING.

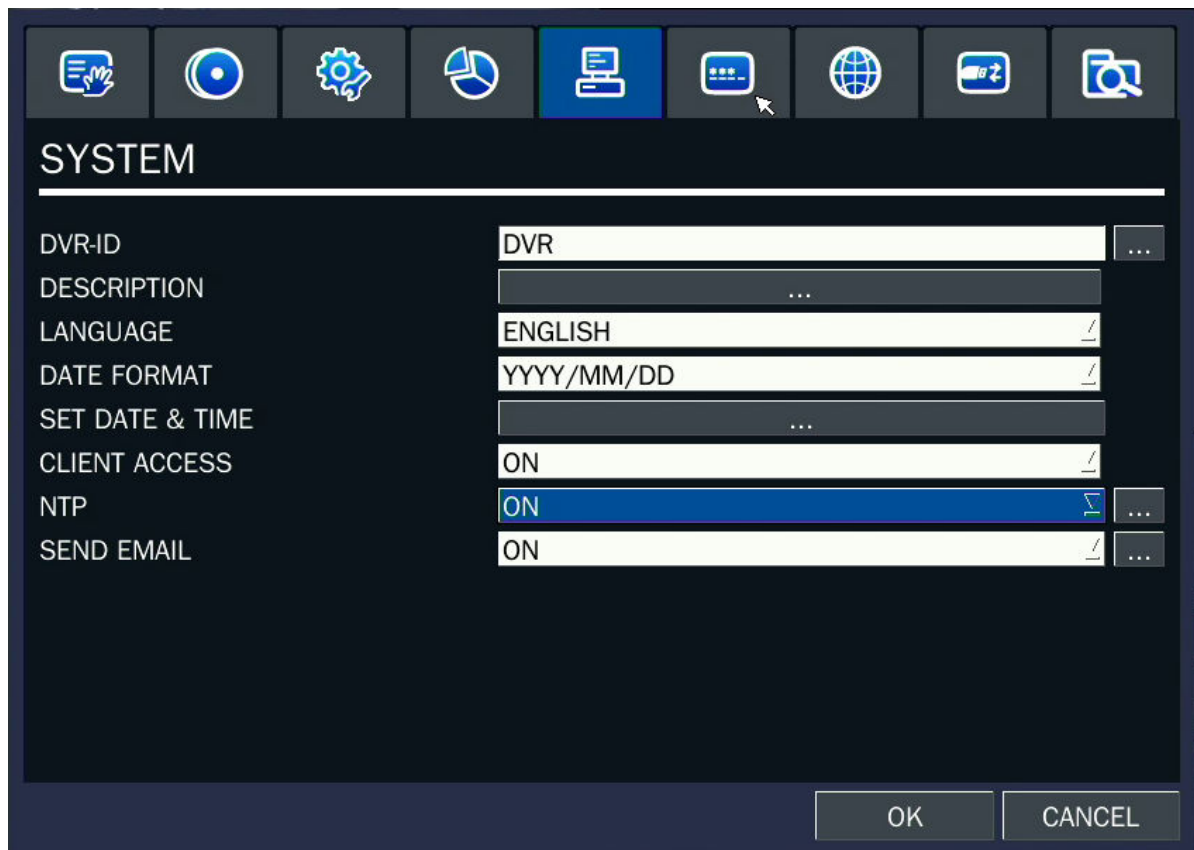
DAYLIGHT SAVING OFF

☐ SET DATE & TIME 2011 / 4 / 27 16 : 59 : 31

OK CANCEL

Setting NTP (Network Time Protocol)

1. When the DVR is connected with internet and the DVR need to be synchronized with NTP (Network Time Protocol), set SETUP>SYSTEM>NTP ON.



SYSTEM		
DVR-ID	DVR	...
DESCRIPTION	...	
LANGUAGE	ENGLISH	/
DATE FORMAT	YYYY/MM/DD	/
SET DATE & TIME	...	
CLIENT ACCESS	ON	/
NTP	ON	/ ...
SEND EMAIL	ON	/ ...

OK CANCEL

2. Select proper TIME ZONE time.



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	3 HOUR(S)	/

OK CANCEL

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

Specifications

			4 CH
Video	Input	Channel Input Level	4 CH HDcctv 720p25/30/50/60, 1080p25/30, 1080i50/60
		Video Loss Check	YES
	Output	Main Monitor Output	1 HDMI
		Sub Monitor Output	1 VGA
		Spot	1 BNC
ATM	Input and Output		4 CH Input & 1 CH Output
	Audio Codec		G.726 (ADPCM)
Alarm	Sensor Input		4 (NC / NO Selectable)
	Alarm Out		1 Alarm Out by Sensor, Motion and Video Loss
Record	Compression		H.264
	Multi Operation		Quadplex (Playback, Recording, Backup, Network)
	Resolution		HDcctv 720p, 1080P
	Recording Quality Grade		5 Levels
	Recording Mode		Continuous, Schedule, Motion, Sensor, Manual
	Motion Detection		Setup by Grid
	Pre Recording		Min. 20 Minute Before an Event
	Post Recording		Max. 60 Seconds
Playback	Multi Decoding		1, 4
	Playback Speed	Single Channel FF/FR	X1/2, 1/4, 2, 4, 8, 16 and 32
		Multi Channel FF/FR	X2, 4, 8, 16 and 32
	Search Mode		Timeline, Event, Archive, Log, Specific Time
Storage	HDD	Interface	Serial ATA
		Capacity of 1 HDD	2TB
		Internal HDD Number	4 EA
	External Storage		1 eSATA
	File System		NaFS2
	Backup	Backup Format	JPEG, AVI and NaFS
		Media	USB, ODD, External HDD, Network
	Raid (TBD)		RAID 0/ 1 / 5 / 6 / JBOD
User Interface	Menu Display		GUI (Graphic User Interface)
	Input Method		IR Remote Control(Optional), Mouse, Keyboard Controller
Serial Port	Console & POS (TBD)		1 RS-232C (D-sub 9pin)
	PTZ & Keyboard Control		2 RS-485
Network	Dynamic DNS		Free DDNS
	Streaming		RTP, RTSP
	Protocols		HTTP, DDNS, NTP

	Network Interface	10/100/1000 Base TX Ethernet (RJ45 1EA)
	Dual Network Streaming	H.264 CIF 120fps
Network Access	Web viewer (1:1)	Live, Search, Backup, PTZF
	3G Mobile Viewer (1:1)	Live, Search/PTZF (Option)
	Client Software (1:1)	Live, Search, Backup, PTZF
	Multi sites Monitoring Software(1:N)	Live, Search, Backup, PTZF
Features	DLS (Day Light Saving)	YES
	Internal Beep	By Alarm, Motion, Video Loss, HDD Error
	Multi Language	Yes
	Software Upgrade	By USB Flash Drive, Network Remote Upgrade (TBD)
	NTP (Network Time Protocol)	YES
	Watermarking	YES
	Digital Zoom	YES
	Remote Setup	YES
General	Operation Condition	0~40C, Humidity 20~80%
	Power	AC 100~127V/200~240V, 5~60Hz, 280W
	Net Weight (Gross Weight)	6KGS (9.5KGS) / 13.2LBS (20.9LBS)
	Unit Dimension (W x D x H)	417mm x 432mm x 99mm / 16.4" x 17" x 3.9"

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

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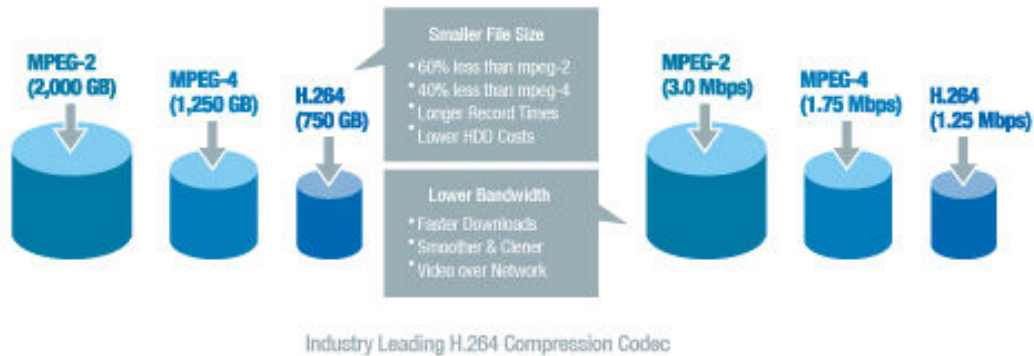
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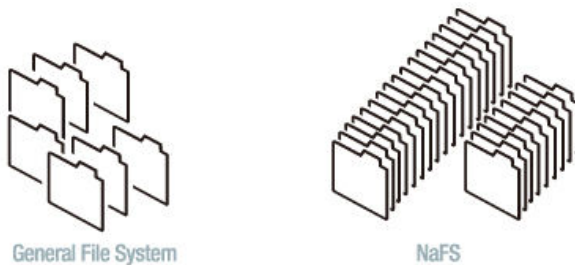
1. Main Features

■ HDcctv Compatible

■ H.264 Video compression



■ Reliable File System

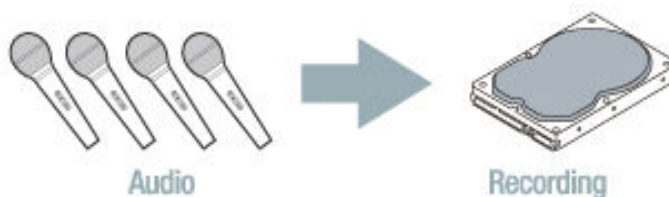


■ 1 Spot

■ HDcctv 720p Recording

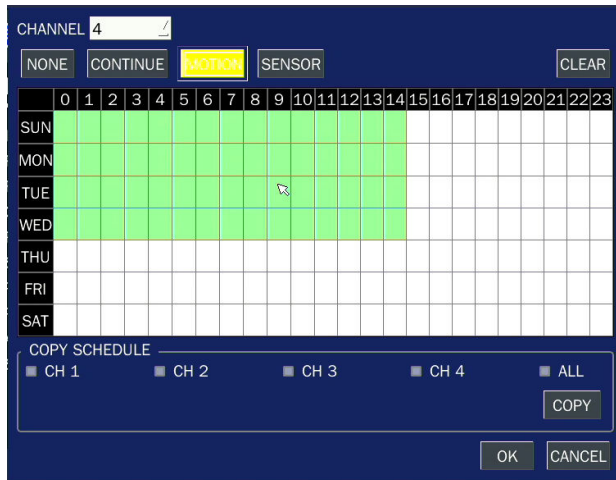
■ HDMI Output (1080p, 1080i, and 720p)

■ 4 Channel Audio Recording

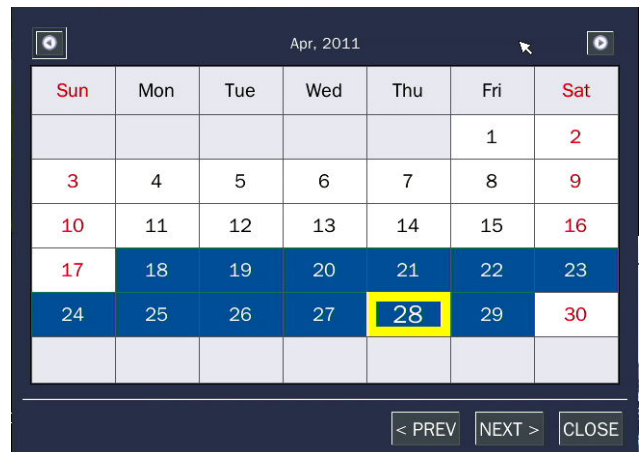
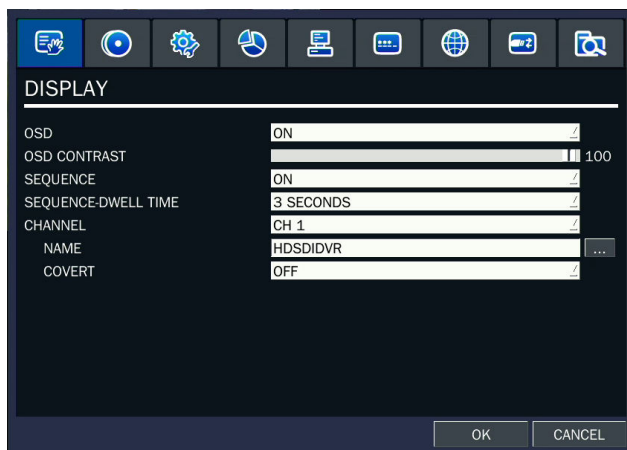


NOTE: Under federal law, the Omnibus Crime Control and Safe Streets Act, 18 U.S.C. Section 2510 et seq., provides that recording conversations is not unlawful if one of the parties consents.

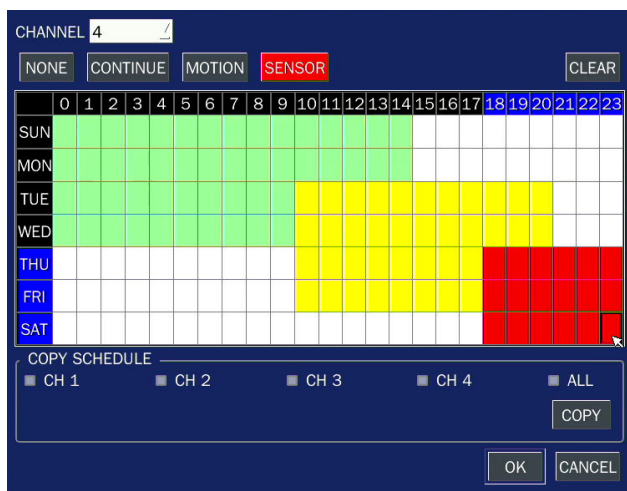
- Automatic Video Input, Video Loss, and HDD Error Detection
- Covert Camera Operation (Provides Enhanced Security)
- Built-in PTZ Camera Control
- Motion Detection



- Easy and Simple Graphic User Interface

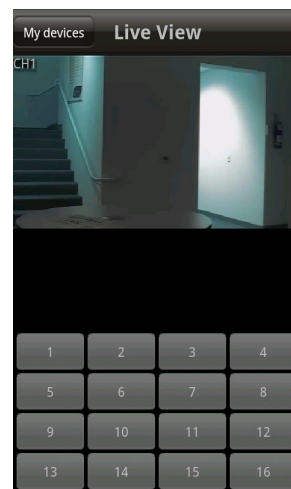
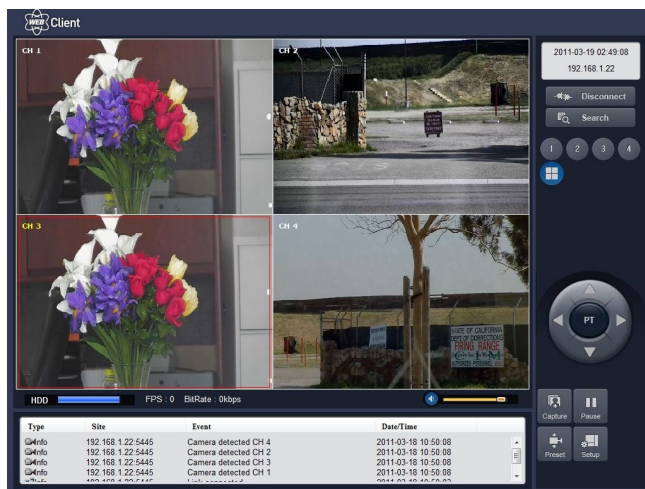
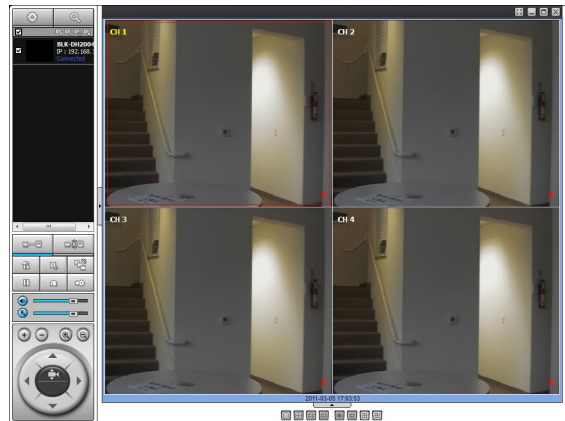
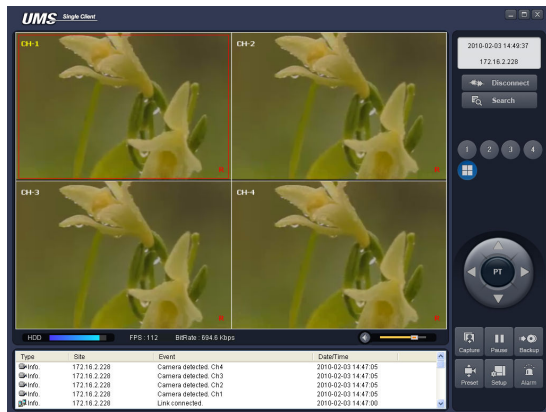


- Simple Scheduler



- Easy Software Upgrade
- Instant and Convenient Backup via USB Flash Drive, Network or DVD-RW

- Exclusive File Format and AVI Backup
- Variety of Ways Network Access via Network Client Software, Web-Viewer, CMS, and Mobile Viewer



- S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology for HDD)
- Simple Quick Setup



2. Name, Function and Connection

2-1. Front Panel

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

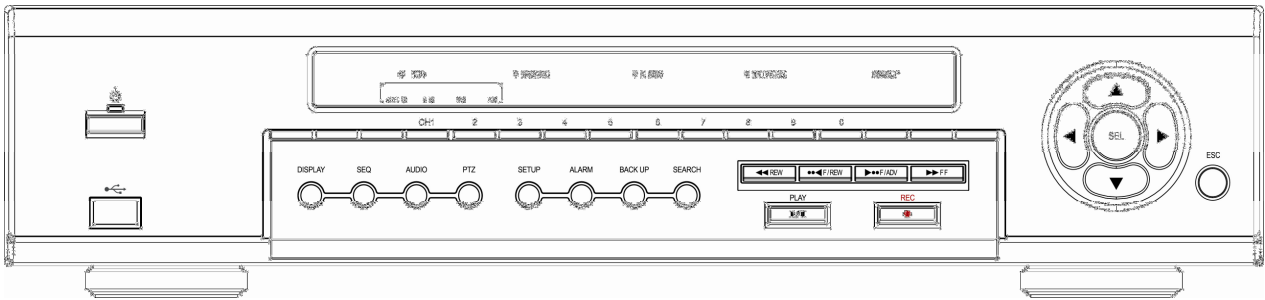


Figure 2.1.1. Front Panel










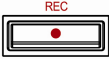
Table2.1.1. Indication Lights

Indication Lights

Name	Description
POWER	Indication light is on when power is applied to the system. Green – Power On, Orange – Power Off
HDD	Indicates that the system is accessing the hard disk.
ALARM	Indicates that sensor(s) is/are triggered or motion is detected.
NETWORK	Indication light is on when client is connected to the system through the network.
CH 1, 2, 3, 4	Indication light is on when the channel is recording.

Front Panel Buttons

Name	Description
DISPLAY	Toggles the screen mode. (Full or Quad)
SEQ	Start auto sequencing of channel in full screen mode. (Toggle)
AUDIO	Set the audio output mode. (Mute, 1 CH to 4 CH)
PTZ	PTZ control operation.
SETUP	Launch SETUP menu.
ALARM	Set the alarm output mode. (On or Off)
BACKUP	Start operations involving archiving in live or playback mode.
SEARCH	Press to go to the search menu. Event search /Time line search /Log /Archive search

ESC	Press for temporal storage of the changed value or to return to previous menu screen.
	Press to move up the menu items in setup mode and to select camera 1 in live mode. It is also used as the number 1 when entering password.
	Press to move right in the menu or to change the values in setup mode and to select camera 2 in live mode. It is also used as the number 2 when entering password.
	Press to move down the menu items in setup mode and to select camera 3 in live mode. It is also used as the number 3 when entering password.
	Press to move left in the menu or to change the values in setup mode and to select camera 4 in live mode. It is also used as the number 4 when entering password.
	Press to select full screen or quad view in live display mode. It is also used to select desired menu item or to store the setup value in the menu.
PLAY/PAUSE	Press to play or to pause the footage in playback mode
	Press to rewind the footage at 1x, 2x, 4x, 8x, 16x and 32x speed in playback mode.
	Jump/Step backward. – In playback mode, the playback position moves 60 seconds backward.
	Jump/Step forward – In playback mode, the playback position moves 60 seconds forward.
	Press to fast forward the footage at 1x, 2x, 4x, 8x, 16x and 32x speeds in playback mode.
	Press to start MANUAL RECORDING
USB PORT	There are USB ports located on the front and rear panel. This USB ports are used to archive footage into a USB storage device or mouse control. (USB 2.0 connector)

2-2. Remote Control



RECORD	Manual recording
DISPLAY	Display of Full, Quad, 9 or 16 split screen
F/REW	Jump 60 seconds backward
PLAY/PAUSE	Play/Pause
F/ADV	Jump 60 seconds forward
REW	Rewind
BACKUP	Backup still or video data
FF	Fast Forward
ALARM	Disable alarm operation
SETUP	Setup menu screen
ID	DVR ID (ID Button + DVR ID number)
AUDIO	Mute, Single (1CH), MIX (4CH)
LOCK	Lock all of key functions
SEQ	Sequence of Full or Quad view
PTZ	PTZ menu screen
SEARCH	Search menu screen
DIRECTION KEY	Direction key
SELECT	Select or display of split screen
ESC	Esc
NUMBER 1~9,0	Channel 1 to 9 / 10 CH->press 0
+10	Channel 11 to 16 11CH->press +10 and number 1 16CH->press +10 and number 6

2-3. Rear Panel

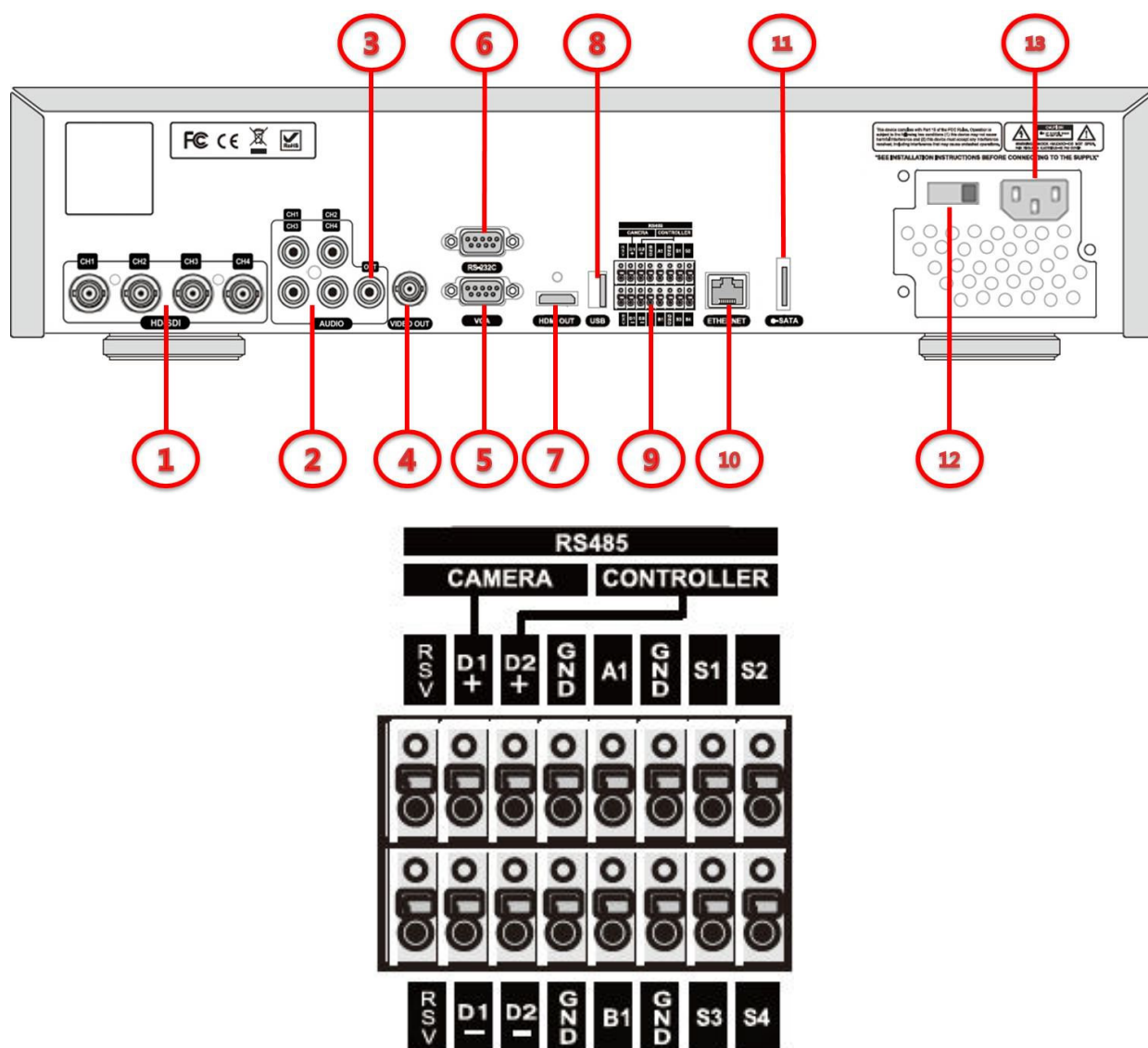


Table 2.2.1. Rear Panel Connections

NO	Connection	Purpose
1	VIDEO IN	4 BNC connectors for video input. (HD-SDI)
2	AUDIO IN	4 connectors for audio input.
3	AUDIO OUT	1 connector for audio output.
4	VIDEO OUT	Spot output
5	VGA	Connector for VGA monitor.
6	RS-232	POS Interface
7	HDMI OUT	Main video output
8	USB Port	Connector for mouse or backup
9	RSV	Reserved PIN for additional feature
	D1+	1 st RS-485 port
	D2+	2nd RS-485 port
	A1, B1	Alarm output connector for alarm device

	SENSOR IN	4 connectors for sensor device connection. (S1 ~ S4)
10	ETHERNET	RJ-45 connector for network function
11	E-SATA	To archive still-image or video into an external storage HDD. Raid nits to be available in the future.
12	Input Voltage	Select input voltage according to local electricity standard
13	POWER INPUT	Power Input for AC110V~250V

3. Setting up the DVR

The following sections detail the initial setup of the DVR.

3-1. Setup – Main Screen and Menu Tree

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



Table 3.1.1. Setup Menu Tree



When the DVR prompts the LOG-IN window, enter the PASSWORD using the virtual keyboard, or the front panel, or 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 SECURITY setup menu.

■ DISPLAY

- OSD
- OSD CONTRAST
- SEQUENCE
- SEQUENCE DWELL TIME
- CHANNEL
 - NAME
 - COVERT

■ RECORD

— CHANNEL

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

■ DEVICE

— ALARM OUT

- SENSOR IN
- MOTION ON
- VIDEO LOSS ON
- ALARM DURATION
- ERROR ALARM

— PTZ

- CHANNEL
- NAME
- SPEED
- ID

— SPOT OUT

- SPOT OUT 1

— CHANNEL

- MOTION ZONE
- MOTION SENSITIVITY

— KEY TONE

— REMOTE CONTROLLER ID

— SENSOR

- TYPE

■ STORAGE

— OVERWRITE

— DISK FORMAT

— DISK INFO

— RECORDING LIMIT

- RECORDING LIMIT DAYS

— S.M.A.R.T

■ SYSTEM

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

■ SECURITY

- USER AUTHENTICATION (ADMIN, NETWORK, USER1, USER2, USER3)
- USER PASSOWRD

■ NETWORK

- NETWORK TYPE (DHCP, STATIC)
- DDNS
 - DDNS SERVER 1
 - DDNS SERVER 2
- NETWORK PORT
 - PORT
 - WEB PORT
- NETWORK STREAM
 - RESOLUTION
 - FRAME RATE
 - QUALITY

■ CONFIG

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

■ QUICK SETUP

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

- DUAL STREAM
 - DUAL RESOLUTION
 - DUAL FRAME RATE
 - DUAL QUALITY

3-2. Setup – Display Mode

In the SETUP menu, select the DISPLAY tab. Then, the DISPLAY menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control and change the value of the menu item. To return to the previous setup menu screen, press the ESC button.

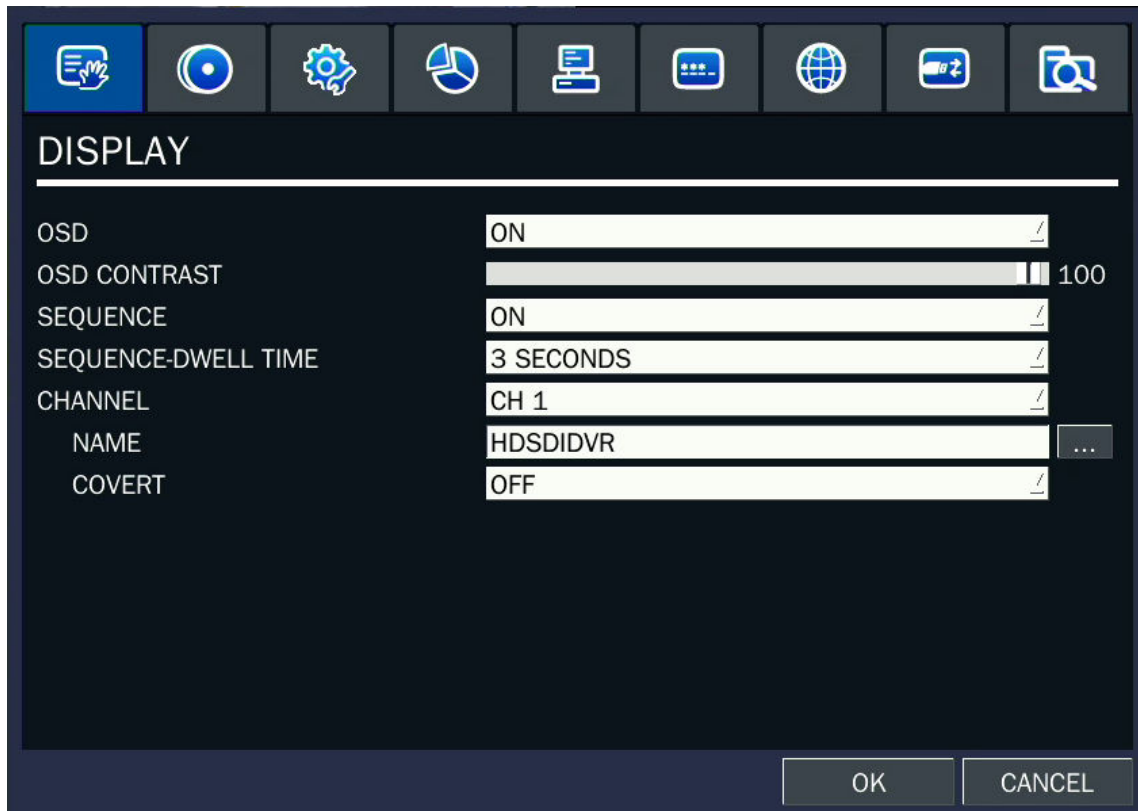


Figure 3.2.1. Display Mode Setup Screen

Table 3.2.1. Menu Items in DISPLAY Mode Setup

Item	Description
OSD	Enable/disable on-screen-display.
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD) (0~100)
SEQUENCE	Enable/disable sequential display of video in full screen mode.
SEQ-DWELL TIME	Set the dwell time of each, single channel display in sequential display mode (3~60seconds)
CHANNEL	Select a channel to apply the name and covert settings change using the mouse or control button (◀ ▲ ▶ ▼) on the remote control.
NAME	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.



COVERT Enable/disable display of the specified video channel in live display mode.

3-3. Setup – Recording Mode

In the SETUP menu, select the RECORD tab. Then, the RECORD menu is displayed as pictured 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 the value has been changed, select OK to confirm the changes. (RESOLUTION, FRAME RATE, QUALITY, RECORDING, PRE RECORD and POST

EVENT RECORD) (Change Picture)

	ALL	1	2	3	4
RESOLUTION	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1920 x 1080
FRAME RATE	10	10	10	10	10
QUALITY	LEVEL 4	LEVEL 4	LEVEL 4	LEVEL 4	LEVEL 4
RECORDING	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS
PRE RECORD	1 MINUTE(S)	1 MINUTE(S)	1 MINUTE(S)	1 MINUTE(S)	1 MINUTE(S)
POST EVENT REC	10 SECON...	10 SECON...	10 SECON...	10 SECON...	10 SECON...
AUDIO	ON	ON	ON	ON	ON

OK CANCEL

RESOLUTION	Select either 1280x720 or 640x360 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. Typical values of the maximum frame rate for videos are 120/100 fps (NTSC/PAL)
QUALITY	Select the recording quality for the specified channel. Options are: Level 1 (Low), Level 2, Level 3, Level 4, and Level 5 (High)
RECORDING	Assign the recording mode for each channel. Options are: Continuous, Motion, Sensor, Schedule or Disable.
SENSOR RECORDING	Enable setting up to 4 sensors for the specified channel using the mouse or the control button (◀ ▲ ▶ ▼) of the remote control.
PRE RECORD	Enable/disable pre-event recording. Pre-event recording time is 15 seconds to 20 minutes (Selectable)
POST EVENT RECORD	Set the post event recording time duration for the specified channel. (10~60 seconds)
AUDIO	Enable/disable audio recording for the specified channel.
SCHEDULE	Set the recording schedule. Press SEL to enter the 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 types using a CONTINUOUS (green), Motion (yellow), Sensor (red), and None

(white). Left-Click and drag the mouse to change the schedule for more than one timeslot.

[COPY Schedule]: To copy the schedule setup from one channel to another, select the channel to copy using the mouse or the (◀ ▲ ▶ ▼) buttons on the remote control, and select to channel to copy to and press the select button. Select OK to confirm the changes.

The figure consists of two screenshots of the 'Schedule Recording Setup Screen' for Channel 4.

Top Screenshot: The screen shows the 'CHANNEL' field set to '4'. Below it are buttons for 'NONE', 'CONTINUE', 'MOTION', 'SENSOR', and 'CLEAR'. A grid represents the 24 hours of the day (0-23) for each day of the week (SUN-SAT). The grid is currently empty. Below the grid is a 'COPY SCHEDULE' section with checkboxes for 'CH 1', 'CH 2', 'CH 3', 'CH 4', and 'ALL', and a 'COPY' button. At the bottom are 'OK' and 'CANCEL' buttons.

Bottom Screenshot: The screen shows the same interface but with a recorded schedule. The 'SENSOR' button is highlighted in red. The grid is filled with colored squares: green for SUN (0-14), MON (0-14), TUE (0-14), WED (0-14), THU (0-14), FRI (0-14), and SAT (0-14); yellow for SUN (15-23), MON (15-23), TUE (15-23), WED (15-23), THU (15-23), FRI (15-23), and SAT (15-23); and red for SUN (24-23), MON (24-23), TUE (24-23), WED (24-23), THU (24-23), FRI (24-23), and SAT (24-23). The 'COPY' button is also visible.

Figure 3.3.2. Schedule Recording Setup Screen

3-4. Setup – Device Mode

In the SETUP menu, select the DEVICE tab. Then, the device menu is displayed as pictured below. Navigate through the menu items 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
ALARM OUT	Set the sensor, motion, and video loss for triggering alarm relay. HDD Error and Video Loss can trigger beeping.
PTZ	Set the PTZ baud rate, protocol, and ID.
CHANNEL	Select specified channel for motion zone setup.
MOTION ZONE	Select either Full Zone or Partial Zone for motion sensing.
MOTION SENSITIVITY	Set the motion sensitivity for the specified channel. Control the motion sensitivity from 1 to 9.
KEY TONE	Enable/disable key tone.
REMOTE CONTROL ID	Select an ID of remote control. 1. Select ID number. 2. Press the same number as ID set in DVR on the remote control. 3. An icon will be displayed on the Live Screen that corresponds to the remote control ID number.0 The options are from 0 to 99

SENSOR	Select sensor NO from 1 to 4.
TYPE	Set the type of sensor for the specified channel. Options are: OFF, NORMAL OPEN, and NORMAL CLOSE.

3-4-1. ALARM-OUT

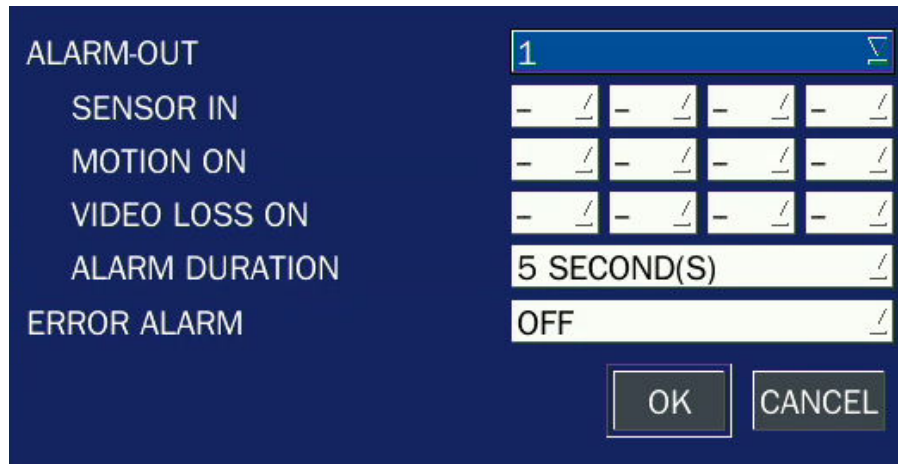


Figure 3.4.2. ALARM-OUT Setup Screen

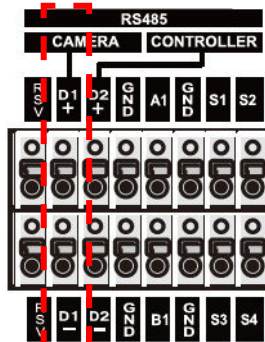
Table 3.4.2. Menu Item in ALARM-OUT Setup Screen

Item	Description
ALARM OUT	Select an Alarm out number. Available No: 4 CH (1)
SENSOR IN	Enable Alarm Out by Sensor up to 4 Inputs.
MOTION ON	Enable Alarm Out by Camera Motion up to 4 cameras.
VIDEO LOSS ON	Enable Alarm Out by Video Loss up to 4 cameras.
ALARM DURATION	Set the alarm dwell time from 5 to 60 seconds.
ERROR ALARM	Set the error type for the alarm beeping activation. The options are OFF, ALL, HDD ERROR and VIDEO LOSS.

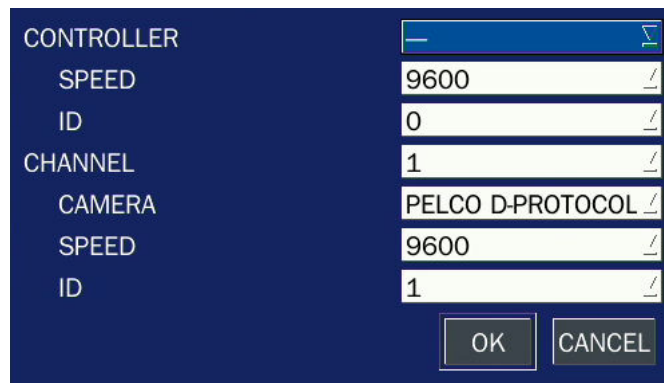
3-4-3 PTZ Setup

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

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



- ② Press the PTZ menu button. Then PTZ menu screen is displayed as below.

The image shows a PTZ Control Setup Screen with a dark blue background. It contains several input fields for configuration. The fields are arranged in two columns. The left column lists the settings: CONTROLLER, SPEED, ID, CHANNEL, CAMERA, SPEED, and ID. The right column shows the corresponding values: a dropdown menu, 9600, 0, 1, PELCO D-PROTOCOL, 9600, and 1. At the bottom right, there are two buttons: OK and CANCEL.

CONTROLLER	
SPEED	9600
ID	0
CHANNEL	1
CAMERA	PELCO D-PROTOCOL
SPEED	9600
ID	1
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

Figure 3.4.4. PTZ Control 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 a 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.

CHANNEL (Channel number that the PTZ is connected to)

CAMERA (Protocol type)

SPEED (Baud Rate) (19200, 14400, 9600, 4800, 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 zone grid screen is not displayed. Only set the level of sensitivity for MOTION SENSITIVITY.

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

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

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

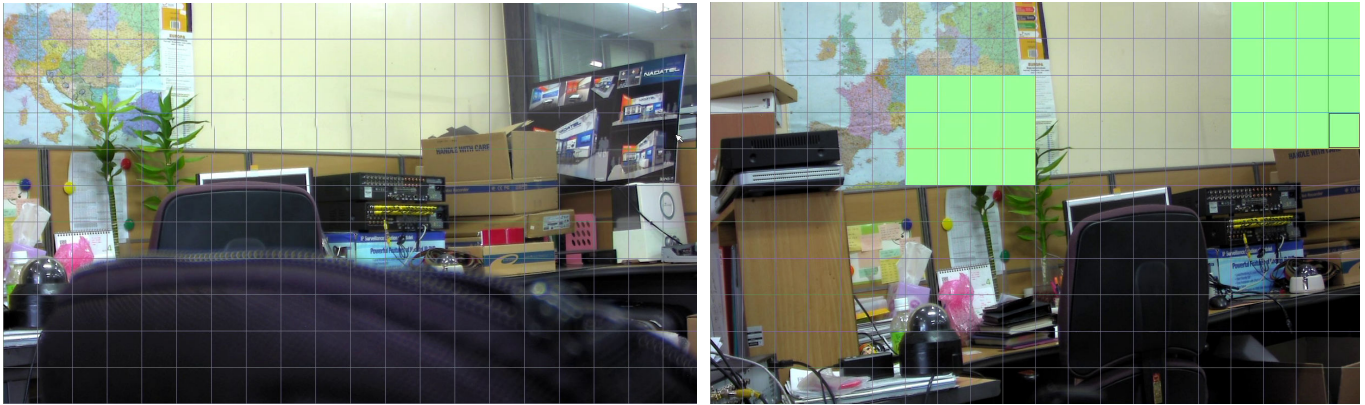


Figure 3.4.5. Motion Zone Grid Screen

3-5. Setup – Storage Mode

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

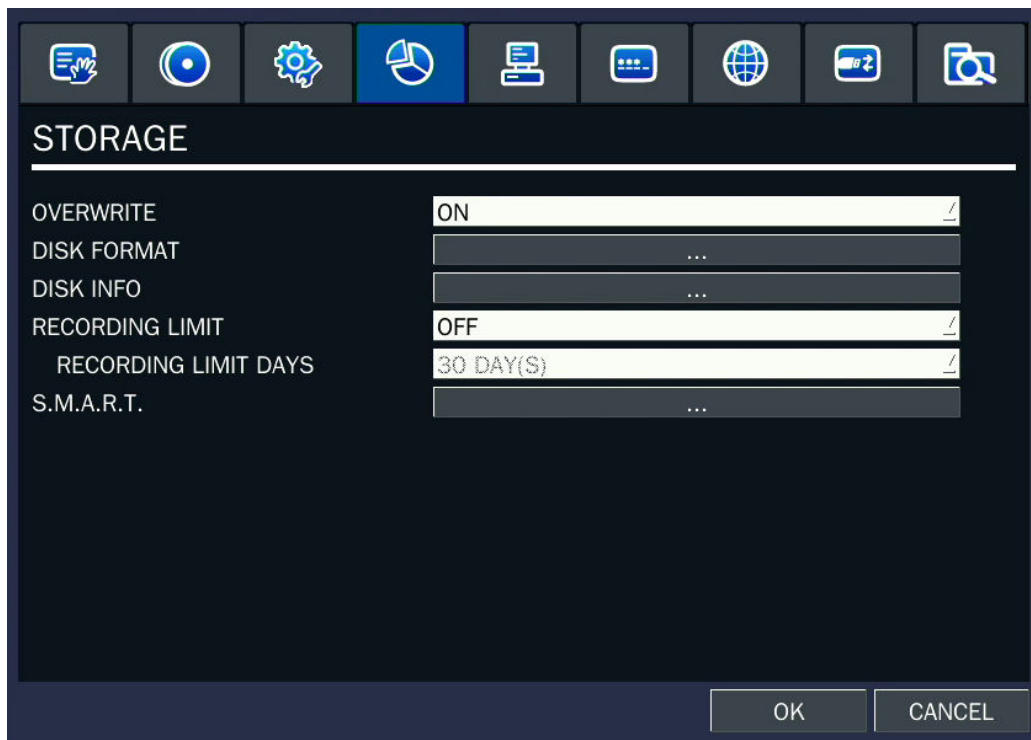
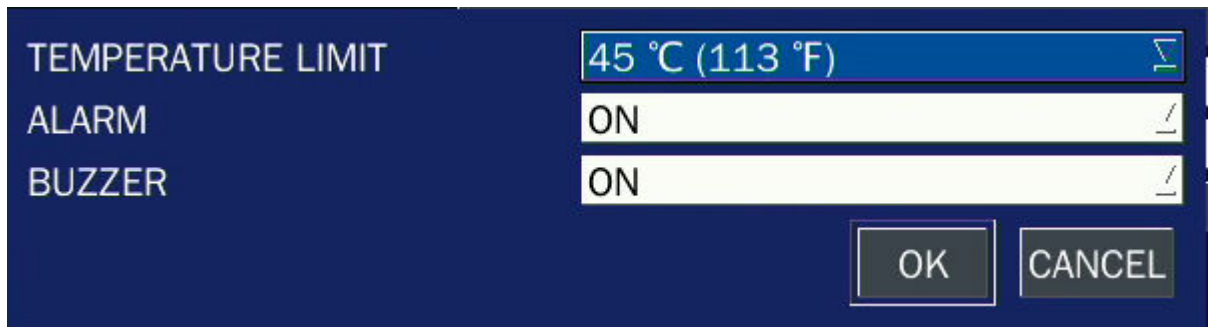


Figure 3.5.1. STORAGE Setup Screen

Table 3.5.1. Menu Items in STORAGE Setup Screen

Item	Description
OVERWRITE	When enabled, the DVR will continue recording and overwrite the oldest existing recorded data once the hard drive is full. When disabled, recording will stop once the hard drive is full.
DISK FORMAT	You will have an option YES or NO for formatting the Hard Drive. Caution:

	We recommend that you archive any data that you may need in the future before you format the hard drive.
DISK INFO	Hard drive information. Displays the following information; HDD Size, HDD Start Time, and HDD Last Time.
RECORDING LIMIT	Enable/disable recording limit.
RECORDING LIMIT DAYS	Set the recording limit days. (1- 90 days) If the RECORDING LIMIT DAYS is set to 1, the data will be overwritten after 24 hours.
S.M.A.R.T	Set the alarm and beep by setting the HDD temperature limit.



3-6. Setup – System Mode

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

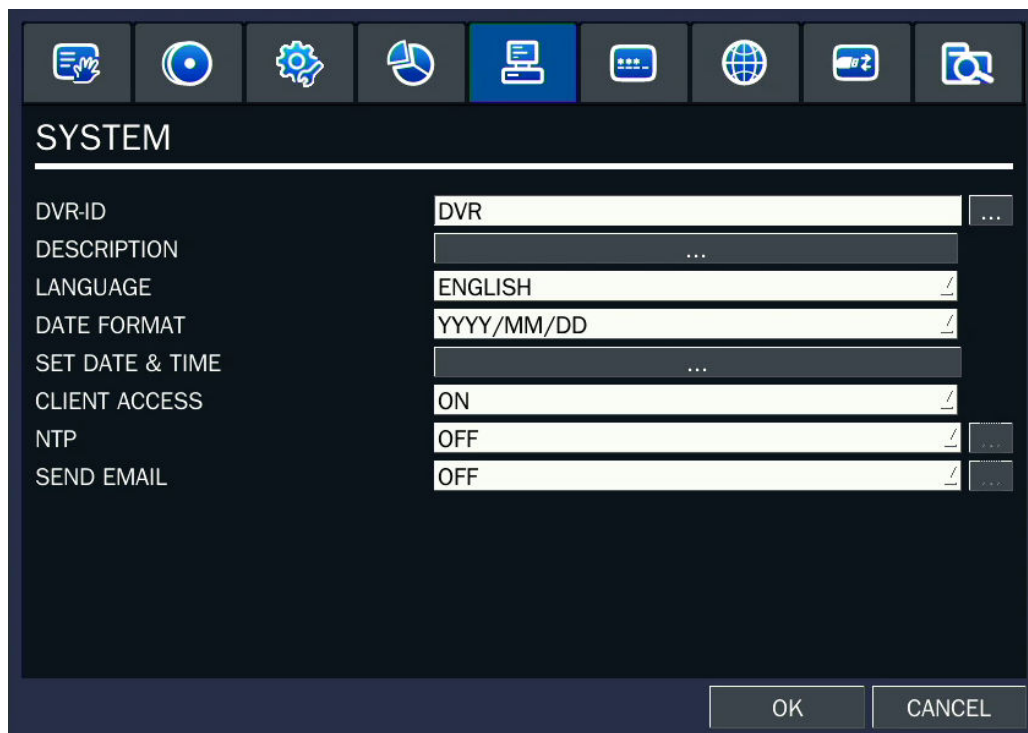

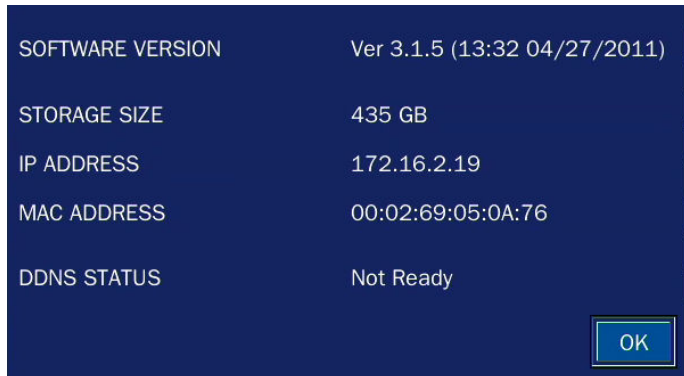


Figure 3.6.1. SYSTEM Setup Screen (Change picture)

Table 3.6.1. Menu Items in SYSTEM Setup Screen

Item	Description
DVR ID	<p>Set DVR ID using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. Press OK to apply the DVR ID.</p>  <p>CAPS (Select either Capital or Lower Case) Backspace: Erase a previous character / Clear: Erase all characters The DVR ID can be made by 10 characters at most.</p>
DESCRIPTION	<p>Press the button to view the system information. (Software version, Storage size, IP address, MAC address and DDNS status)</p> 
LANGUAGE	<p>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, Persian, Croatian, German, Portuguese, Portuguese (Brazil), Arabic)</p>
DATE FORMAT	<p>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)</p>
SET DATE&TIME	<p>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.</p>

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 turned off.
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 EU, 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.

NTP NTP is an abbreviation for Network Time Protocol, which is for synchronizing the time of the computer systems over variable-latency data networks.

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	3 HOUR(S)	/
		OK CANCEL

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, London. Because NTP synchronizes with Greenwich Mean Time (GMT) regardless of geography, users must set their own time difference.

CONNECTON MODE: Select NTP time server connection mode.

INTERVAL: Synchronize the clock by hours which is set on the connection period menu.

TIME: Synchronize the clock at the time daily which is set on the connection period menu.

CONNECTION PERIOD: 1~24 Hours

SEND EMAIL

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

TRANSMISSION MODE	IMAGE	Σ
IP NOTIFICATION	OFF	/
EVENT ALARM	OFF	/
S.M.A.R.T.	OFF	/
MAIL TO	Unspecified	...
MAIL SERVER	Unspecified	...
ID	Unspecified	...
PASSWORD	*****	...
MAIL FROM	Unspecified	...
		OK CANCEL

(change picture)

TRANSMISSION MODE: Sending an image only of the channel that triggered the alarm when an alarm event is triggered.

IP NOTIFICATION: Enable/disable sending e-mail when the IP address of your DVR is changed.

EVENT ALARM: Enable/disable sending e-mail reports on the channel that triggered

the alarm when an alarm event is triggered.

MAIL TO: Enter the appropriate email address to enable sending e-mail reports using a virtual keyboard.

MAIL SERVER: Enter the appropriate mail server information to enable sending daily e-mail reports using a virtual keyboard.

ID: To set the connection user ID for the mail server using a virtual keyboard.
(ex.abcd@abcdefg.com)

PASSWORD: To set the connection password for the mail server using a virtual keyboard.

MAIL FROM: To set the mail address sent to the destination host using a virtual keyboard.

3-7. Setup – SECURITY Mode

In the SETUP menu, select the SECURITY tab. Then, the SECURITY menu is displayed as pictured 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.

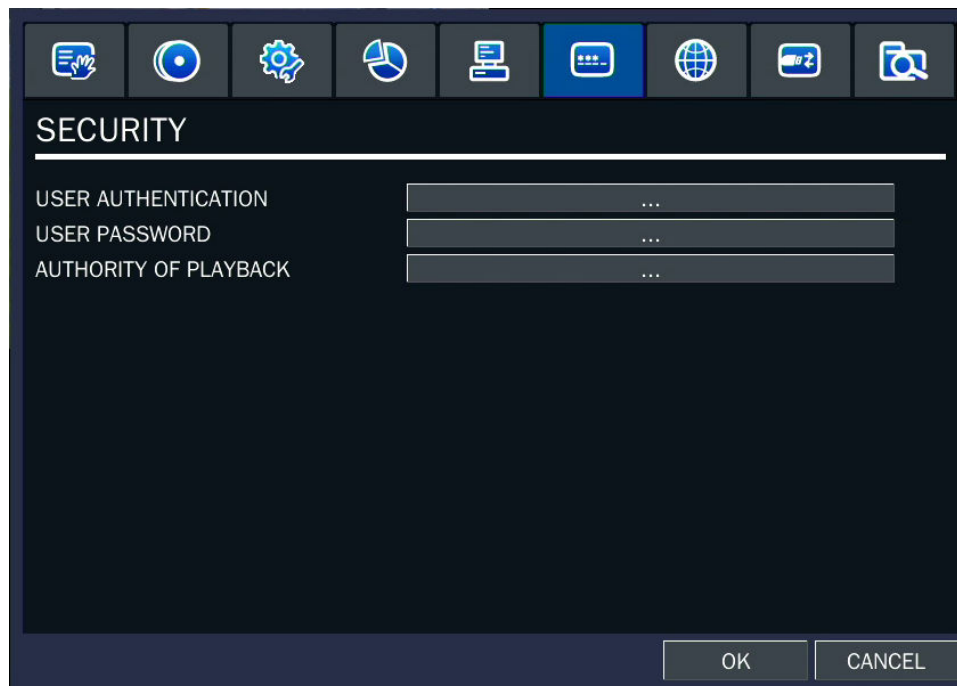


Figure 3.7.1. SECURITY Setup Screen

Table 3.7.1. Menu Items in PASSWRORD Setup Screen

Item	Description
USER	Only the Admin will have access to the menu.
AUTHENTICATIO	PASSWORD CHECK:
N	Select the Checkbox to enable the functions or leave the Checkbox blank to disable the functions.

Setup, Playback(PB), PTZ, Record OFF(R/OFF), and Network

Selected Checkbox: The DVR will ask for a password when the given function is selected for all users.

Blank Checkbox: The DVR will not ask for a password when the given function is selected for all users.

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

OK CANCEL

ADMIN, NETWORK, USER1, USER2, USER3:

Selected Checkbox: The user can access to the function.

Blank Checkbox: The user can not access to the function.

USER PASSWORD Options are ADMIN, NETWORK, 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.

When the user set this function, the login window will appear. Then, the user can select one of user types (ADMIN, USER1, USER2, USER3) using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. The 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

In the SETUP menu, select the NETWORK tab. Then, the network menu is displayed as pictured 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
PORT	Port number (Default: 5445)
WEB PORT	Web Sever Port number (Default: 80)
NETWORK TYPE	Select a type of network connection. Options are: STATIC, DHCP DHCP: DVR will automatically retrieve an IP address from the network. Static: Network information must be manually configured.
IP	Enter IP address that is assigned for the DVR
SUBNET MASK	Enter Subnet Mask that is assigned for the DVR
GATEWAY	Enter Gateway that is assigned for the DVR.
DNS (PRIMARY)	Enter Primary DNS address that is assigned for the DVR
DNS (SECONDARY)	Enter Secondary DNS address that is assigned for the DVR
DDNS	Enable/disable using domain name address through DDNS server. SERVER 1: Select <u>bestddns.com</u> from four DDNS server. (If a different DDNS server is selected, the DVR may not connect properly) SERVER 2: Select this type when wants to use other general-purpose DDNS Server. DDNS INTERVAL: Set the connection interval (5-60 minutes)
NETWORK STREAM	Set the value for network streaming.

*** (Insert Picture for Network Stream) ***

3-8-1. Network Types

3-8-1-1. DHCP

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

ADSL and other network types that use a variable IP address method uses this process to acquire an IP address.



The screenshot shows a network configuration interface with a dark blue header bar containing several icons. Below the header, the title "NETWORK" is displayed. The configuration fields are as follows:

Field	Value	Action
PORT	5445	...
WEB PORT	80	...
NETWORK TYPE	DHCP	...
IP	172.16.2.19	
SUBNET MASK	255.255.0.0	
GATEWAY	172.16.1.254	
DNS (PRIMARY)		...
DNS (SECONDARY)		...
DDNS	OFF	...
NETWORK STREAM	...	

At the bottom right, there are "OK" and "CANCEL" buttons.

Figure 3.8.1. Network Setup Screen – DHCP

3-8-1-3. STATIC

1. For the use of static IP.

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

2. When the DVR is installed on an IP sharer that is connected with ADSL modem, the user can assign a fixed IP address to the DVR from IP sharer itself using "DMZ" function.

Input the IP address set in DMZ into the "IP" address field and Gateway of ADSL modem on "Gateway" field.

Similarly, for Subnet Mask, DNS addresses, input relevant values in IP sharer.

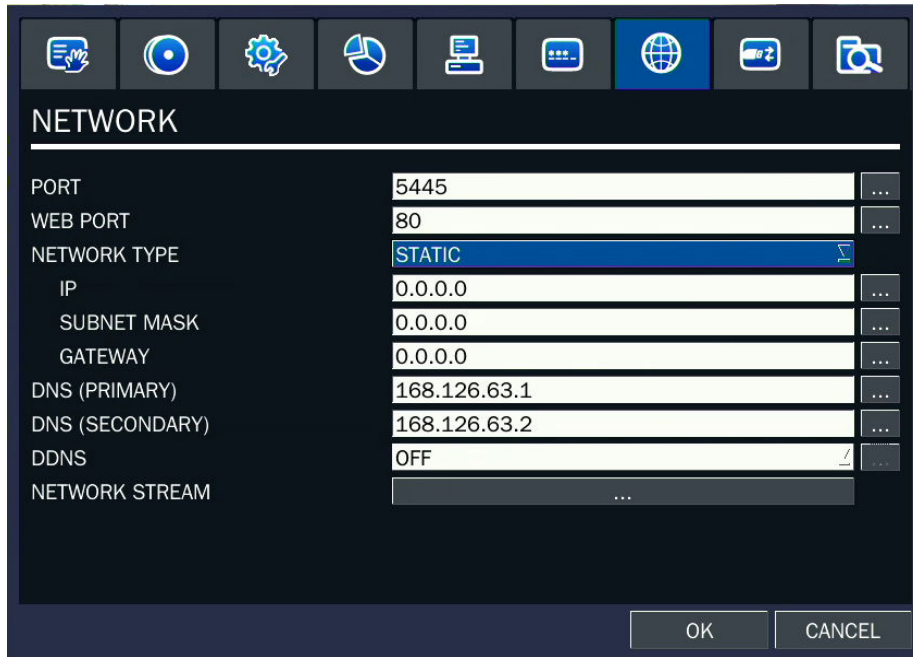


Figure 3.8.3. Network Setup Screen – STATIC (change picture)

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.

3-8-2. DDNS

User can use the function to connect to a network with a domain name. The user can select one type among three DDNS Servers which is supported for free service. The DDNS interval can be set from 5 to 60 minutes. To connect to a network with a domain name, the user must register a MAC address and serial number of the DVR, and create a unique domain name on <http://www.bestddns.com>.

Select [bestddns.com](http://www.bestddns.com) from the three DDNS servers. (If you select other DDNS server, the DVR cannot connect to the DDNS properly.)

Please refer to Appendix: How to connect network section for the detail of the registration.



Figure 3.8.4. Network setup screen – DDNS Server 1

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

Figure 3.8.5. Network Setup Screen – DDNS Server 2

3-8-3. Network Stream

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

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

	ALL	1	2	3	4
RESOLUTION	640 x 360	640 x 360	640 x 360	640 x 360	640 x 360
FRAME RATE	30	30	30	30	30
QUALITY	LEVEL 3	LEVEL 3	LEVEL 3	LEVEL 3	LEVEL 3

OK CANCEL

Figure 3.8.7. Network Setup Screen – Network Stream

3-9. Setup - CONFIG Mode

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

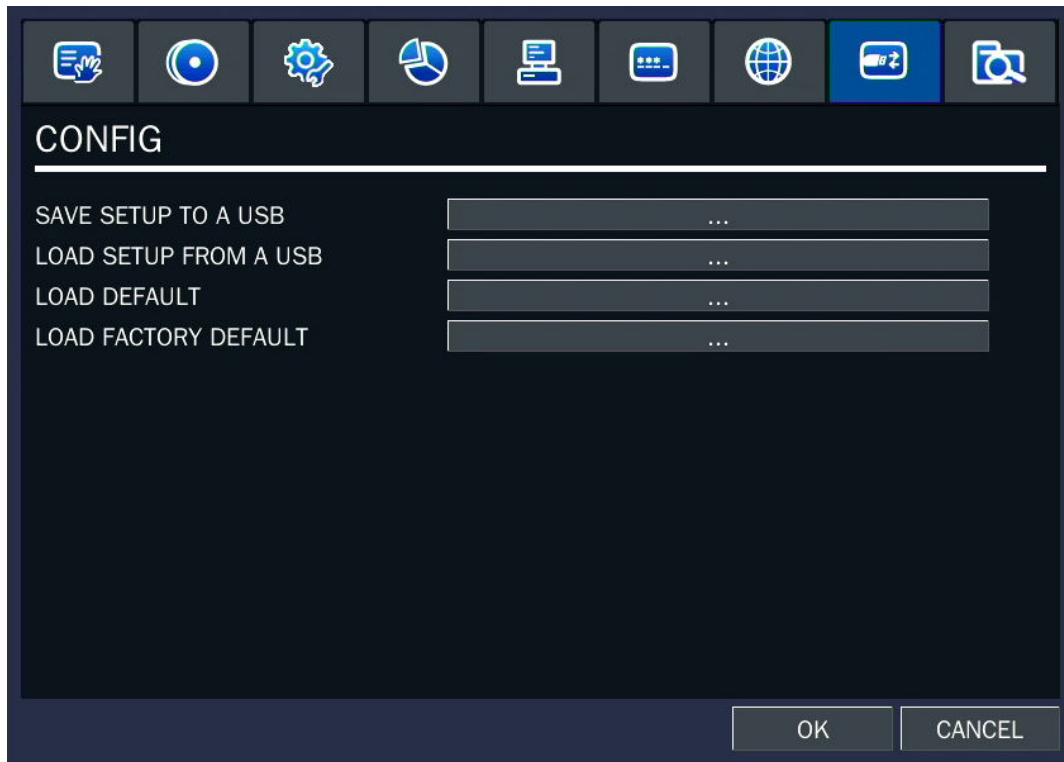
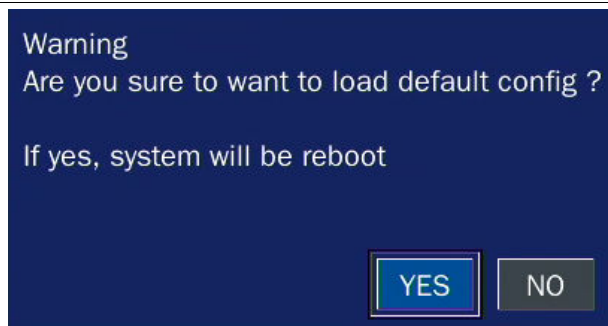


Figure 3.9.1. Configuration Setup Screen

Table 3.9.1. Configuration Setup

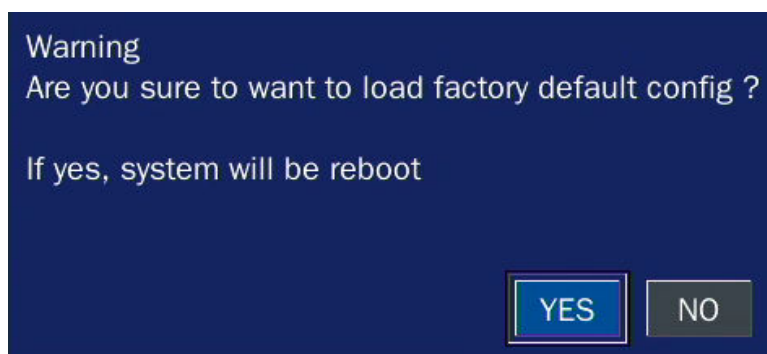
Item	Description
SAVE SETUP TO A USB	User can save the current configuration (Setting values) of the DVR to the USB flash drive. Plug in the USB flash on the front panel and press the button to start the saving process.
LOAD SETUP FROM A USB	User can upload the configuration of the DVR to another DVR using the USB Flash drive. Plug in the USB flash drive on the front panel and press the button to start the loading process.
LOAD DEFAULT	Press the button to reset the system to the default settings.



(The following settings such as **Language, DVR ID, Security User Authentication, Security User P/W, Date format, DLS settings, Network settings, HDD overwrite, Limit recording, HDD serial number, and HDD ERROR time** will not be included.)

**LOAD FACTORY
DEFAULT**

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



3-10. Quick Setup

In the MENU, select the QUICK SETUP tab. Then, the QUICK SETUP menu is displayed as pictured 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 and NETWORK 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
USE QUICK SETUP	Select the Checkbox to use the Quick Setup.
SETUP	When user inputs the DESIRED DAYS to record, the system displays a recommended resolution, frame rate, quality and recording type after calculating the capacity of the installed HDD. At that time, the priority is followed by the order of the items; resolution, frame rate, quality and recording type.
CUSTOMER SETTINGS	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.
DUAL STREAM	User can set the DUAL STREAM. The DUAL STREAM setting takes precedence over the network stream setting of Network menu.

3-11. Saving Setup

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

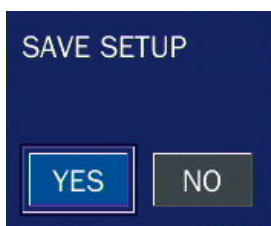


Figure 3.11.1. SAVE SETUP Screen

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.

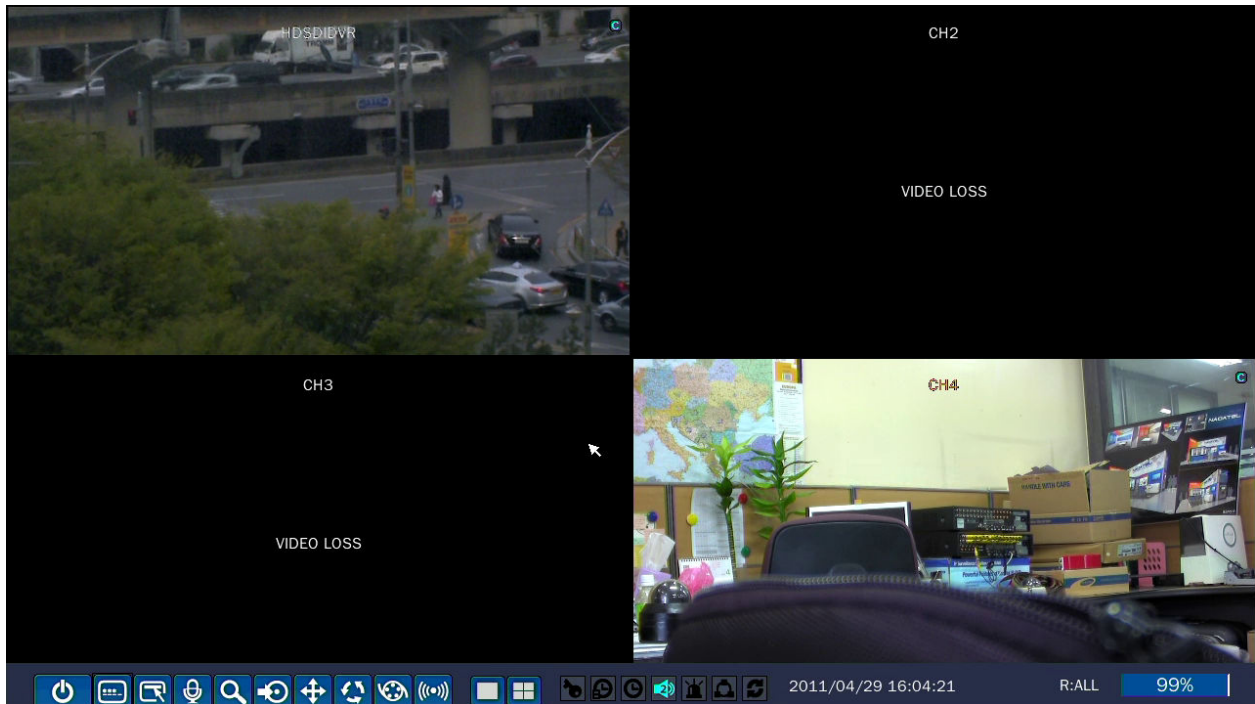








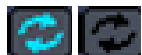
Figure 4.1.1. Live Viewing Screen

Control Bar Auto Hide can be enabled and disabled in the submenu.

Table 4.1.1. Status Indicator Icons in Live Viewing Screen

Icon	Description
	Power On/Off button.
	Lock/Unlock Setup button.
	Setup button. Click this button to go to a setup menu.
	Audio button. Click this button to set an audio reception type; Audio Mute, 1 channel or 4 channels. To set just 1 channel, select a specific channel on the live screen at first.
	Search button. Click this button to enter the search menu.
	Backup button. Click this button to do a back-up.

	Camera PTZ button. Opens the PTZ control menu.
	Sequence button. Click this button to use a sequence function.
	Manual Record button. Click this button to enable manual recording.
	Alarm-out function On/Off button. Select this button to disable the alarm.
	Click the split screen icon to change the current split screen mode using the mouse or SEL button.
	Displays the current date and time.
	Remote control ID display. If a remote ID is not set, the message "A(all)" is displayed.
	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.
	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.
	To mix audio display, press the Audio button on the left side.
	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.

Button	Description
	Select channel to be displayed in full screen mode.
	Switch between full screen and quad display mode.
SEQ	Press to start auto sequencing of the screen in full screen mode. (Toggle)
RECORD	Press to start and stop manual recording.
SEARCH	Press to go to the search menu. Event search /Time line search /Log /Archive search
SETUP	Press to launch SETUP menu.
ESC	Press for temporal storage of the changed value or to return to the previous menu screen.

4-2. SEARCH Screen

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

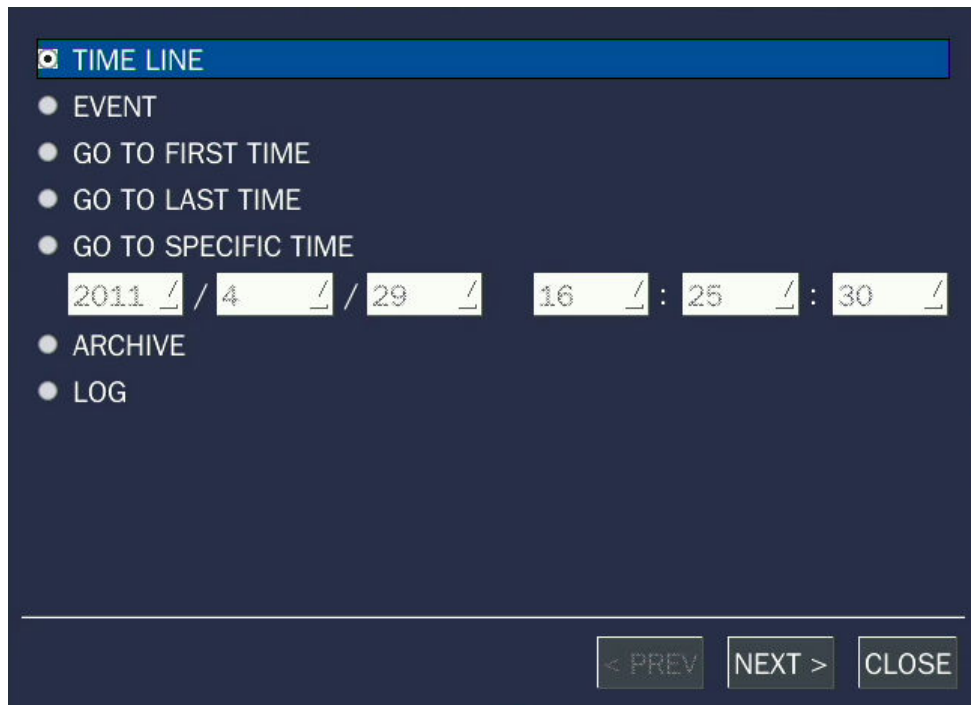
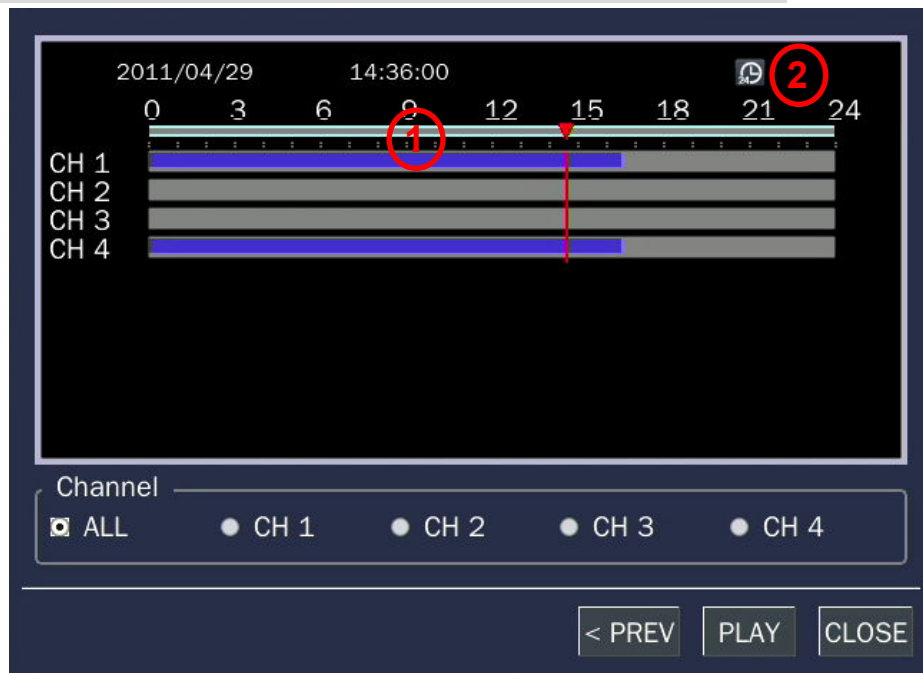


Figure 4.2.1. Search Screen

Enter the password using the control button (◀ ▲ ▶ ▼).

There are 7 ways of search menu such as TIMELINE, EVENT, GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME, LOG, and ARCHIVE on the screen.

How to Search Data On the Time-Line Using the Mouse or Front Key Button



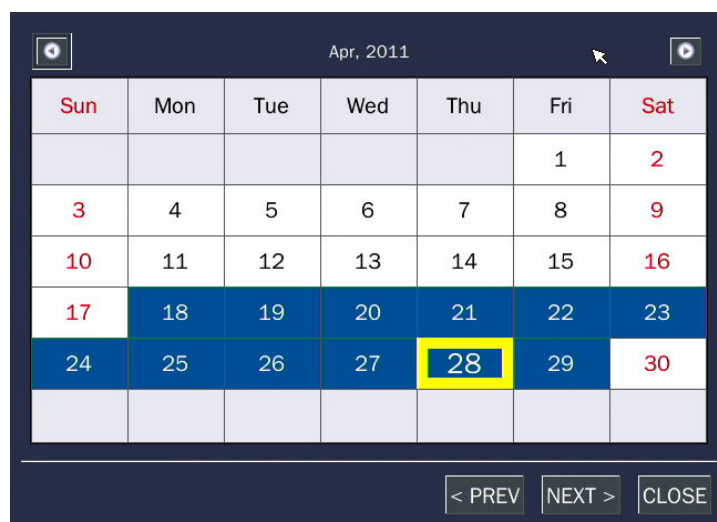
① 1 hour moving: 1-hour time bar (Mouse)/ F/REW and F/ADV button (Front Key)

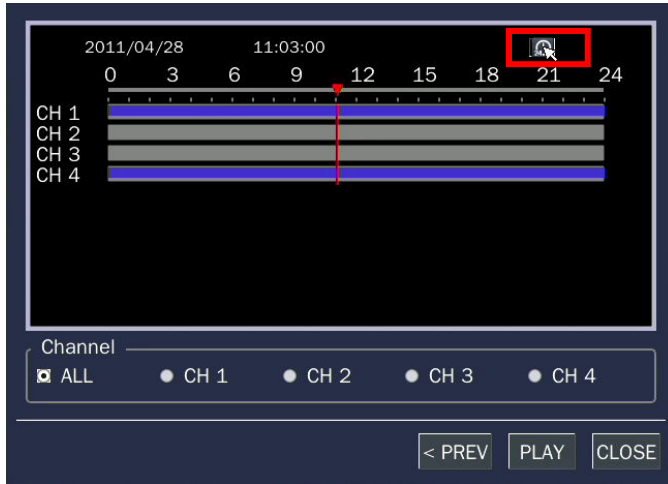
② 5 minute moving: ◀ 12:00:00 ▶ (Mouse)/ control button ◀ ▶ (Front Key)

There are 7 ways of search menu such as TIMELINE, EVENT, GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME, ARCHIVE and LOG on the screen.

4-2-1. TIME-LINE Search

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





When the Timeline menu is selected, the user can see a calendar which has the recorded 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 the PLAY button after selecting the specific time. Press the PREV to return to the SEARCH window.

4-2-2. Event Search

The Event Search window is used to find stored video.

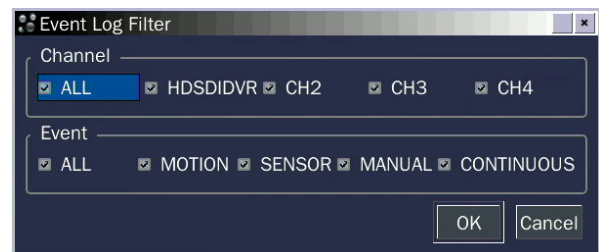


Figure 4.2.2. Event Search Screen

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. Press the PREV to return to the SEARCH window.

4-2-3. 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.

4-2-4. 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.

4-2-5. Go To Specific Time

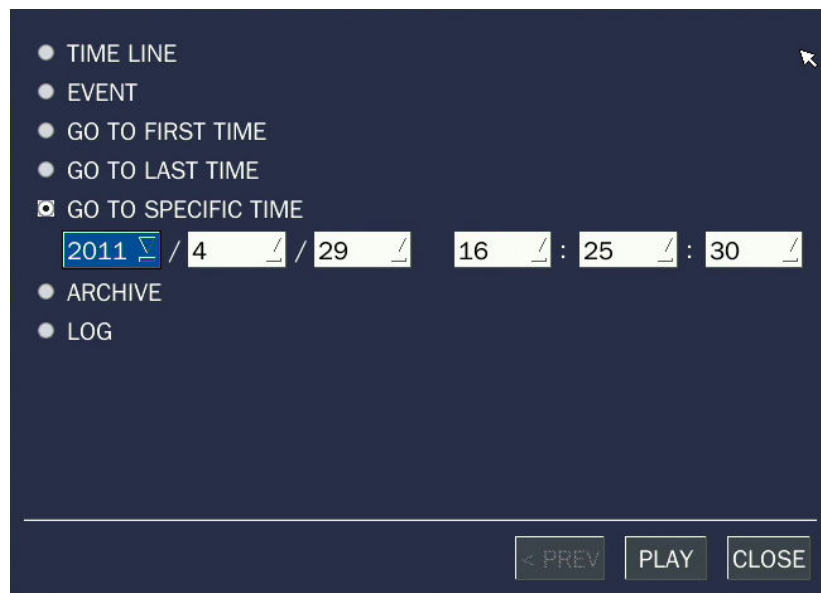


Figure 4.2.3. Go To Specific Time

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.

4-2-6. Archive Search

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



Figure 4.2.4. Archive Search Screen

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

4-2-7. 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 the Log menu is selected, the user can see a calendar which has recording data. Select a specific date and press NEXT button, and then the log data will be displayed. Press the SAVE button to save the data and then the data is saved as a text file format.

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.

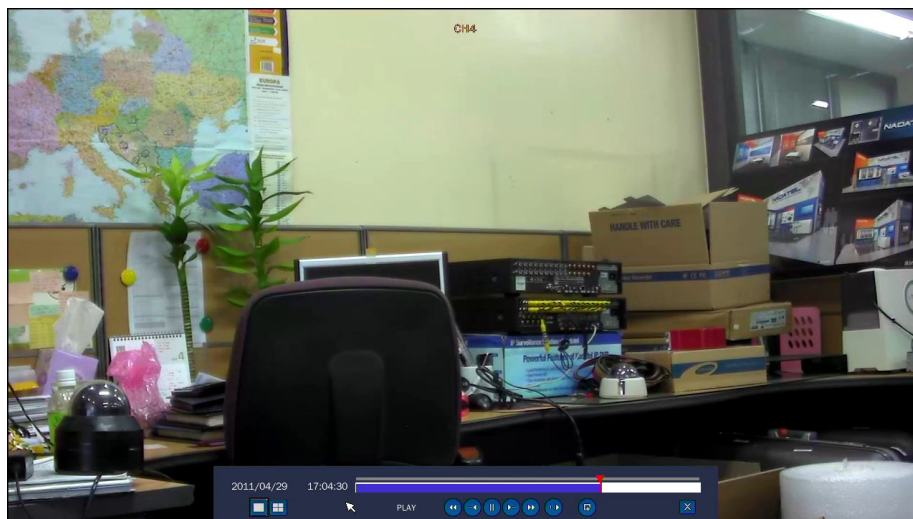









Figure 4.3.1. Play Mode Screen

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 1x, 2x and 4x speeds. Reverse playback speed is shown as -1x(normal), -2x (2 times normal) and -4x (4 times normal) 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.

Figure 5.1. PTZ Control Screen

Table 5.1. Button Functions in PTZ Control

Item	Description
INITIALIZE	Initialize the PTZ settings of the selected camera.
PAN / TILT	Select PAN/TILT using the mouse or the control button (◀ ▲ ▶ ▼) and press SEL button on the remote control. Adjust the tilt (UP/DOWN) / pan (LEFT/RIGHT) position using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control.
ZOOM / FOCUS	Select ZOOM/FOCUS using the mouse or the control button (◀ ▲ ▶ ▼) and press SEL button on the remote control. Adjust the zoom (Mouse Wheel Down or Up/Down button of




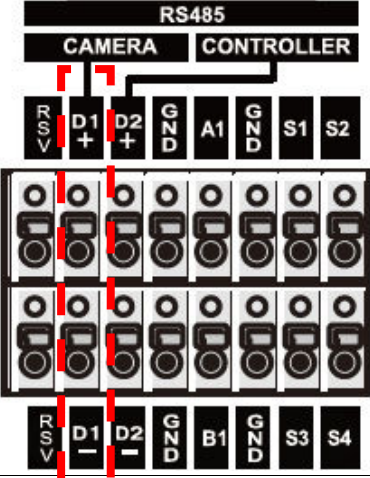
	the remote control)/focus (Mouse Wheel Up or Left/Right button of the remote control) position.
OSD	Select the OSD to enter the menu. Control keys are Right, Left, UP, Down, Select, Far (REW KEY), and Near (FF KEY). Press the ESC button to return to the main menu. Press the PTZ button to escape from the OSD menu.
AUTOSCAN	Press the right key (▶) on the control button to start auto scan Press the left key (◀) on the control button to stop auto scan.
PRESET	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. Press the right key (▶) on the control button and set the number (3 digits) to go to the preset number.
TOUR	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. 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.
NUMBER	Available only on the TOUR and PRESET menu.
	Press the ESC button to return to the main menu.

Table 5.2. Description of RS-485 Port

	Data +
	Data -

6. Back Up

6-1. Still Image Backup onto USB Flash Drive

Still images can be captured and archived onto a USB flash drive or an external hard drive in live mode or while playing back recorded video. In the live mode, press the BACKUP button to launch the archive function or select BACKUP 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 capture a still image.

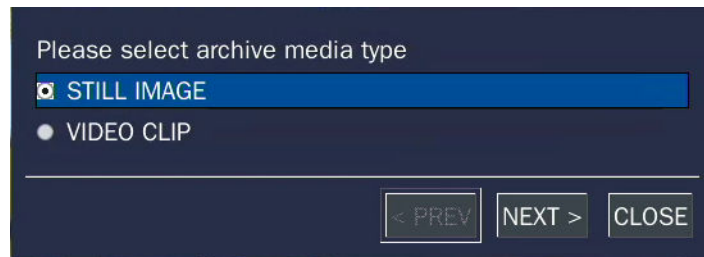


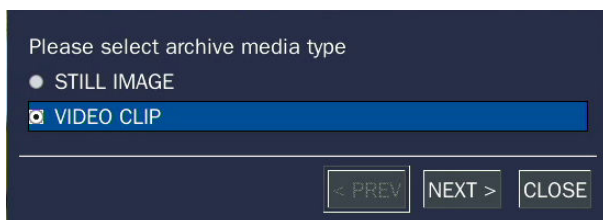
Figure 6.1.1. Still Image Archiving and Backup Screen

NOTICE For a backup using a USB Flash Drive, the file format of the USB flash drive must be FAT32.

6-2. Video Backup onto USB Flash Drive

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

1. When you press BACKUP button, the DVR will ask whether to archive a Still Image or a Video Clip.
2. If the user selects VIDEO CLIP, the DVR will ask for the media type. Select USB Stick to back up less than an hour. Select USB HDD (Huge Backup) to back up from 1 hour to 24 hours.
3. Once you select the channel and duration, the system will start to archive the data to the USB media.



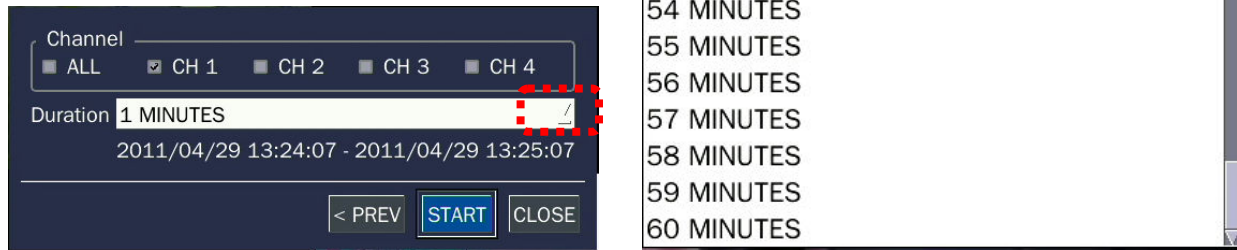


Figure 6.2.1. Video Archiving and Backup Screen

6-3. Transferring Still Images or Video from the ARCHIVE List

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

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

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



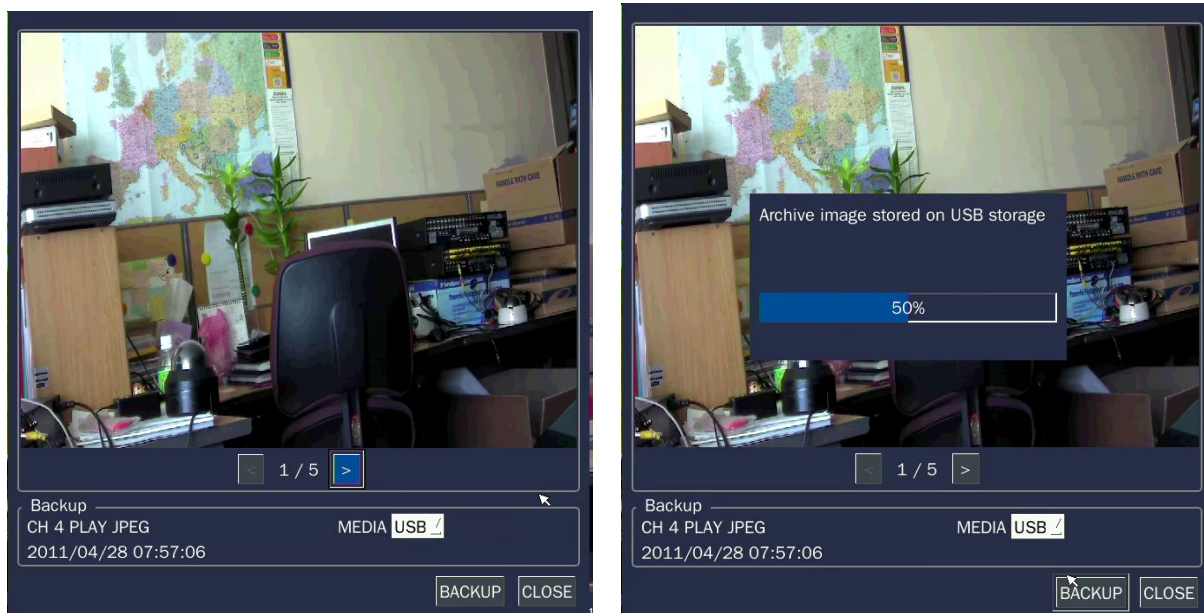
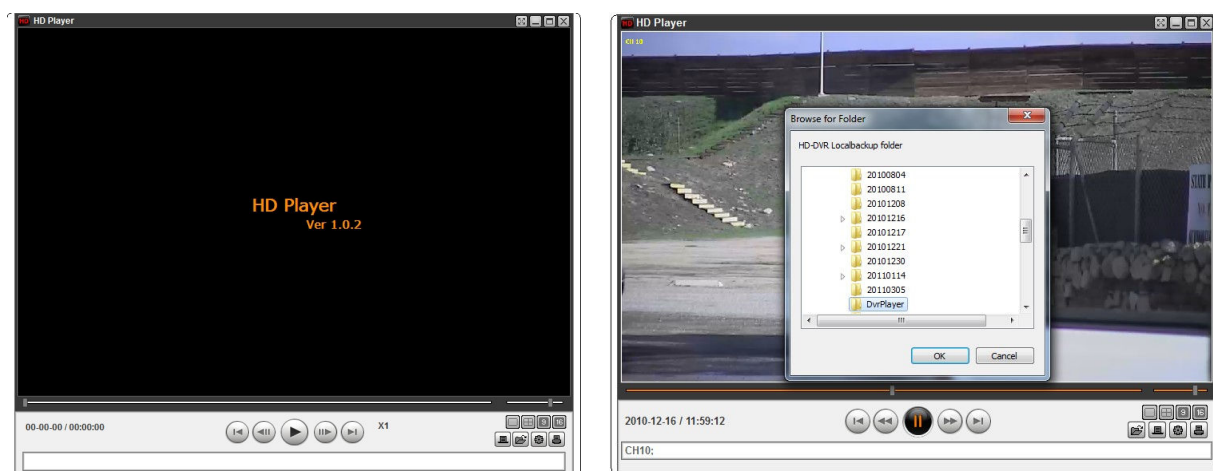


Figure 6.3.1. Archive Search Screen

6-4. Playback of Backup Video

- NSF format: NSF format video can be played back using the player (the HD player) that the DVR copies on USB flash drive with video. This format is only available when the user selects a huge backup. Three files are copied on USB flash drive.
 - NSF File: NSF format video file.
 - HD PLAYER: Exclusive video viewer.
 - Digital Zoon Feature: Use the mouse scroll to use digital zoom in and out feature.



7. Network Access Using the Single Site Network Viewer

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.

7-1. PC Requirements

Minimum PC Requirements

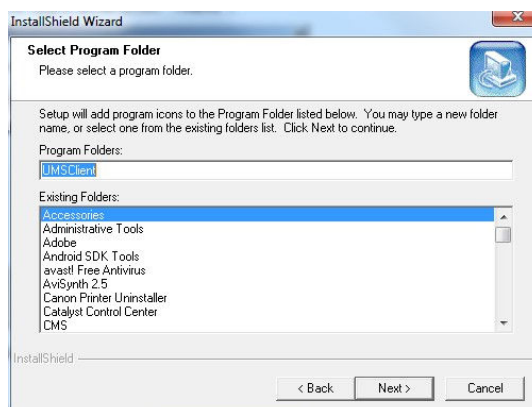
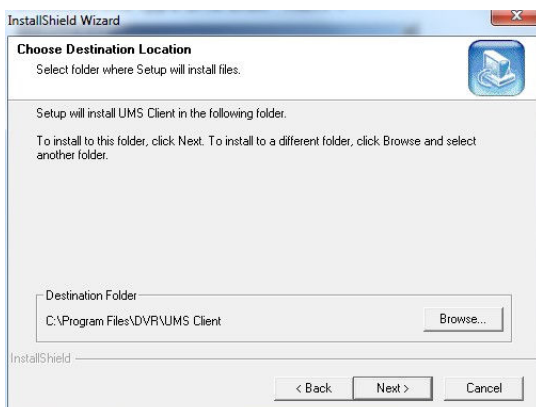
CPU	Intel Core 2 Duo
	1.8Ghz
Memory	1GB DDR2
VGA	256MB
Resolution	1280x720
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100Base T
Others	Direct X 8.1 or Higher

Recommended PC Requirements

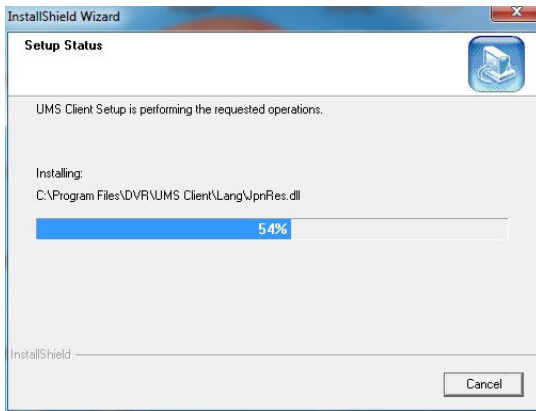
CPU	Intel Core 2 Duo
	3Ghz or higher.
Memory	2GB DDR2 or higher.
VGA	512MB or higher.
Resolution	1920x1080
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100/1000Base T
Others	Direct X 9.0 or higher.

7-2. Installing the Network Viewer

1. Insert the provided CD in the CD drive and double-click “UMS Client(XXXX).exe”
2. Select a destination folder and click “Next”
3. Select the Program Folder and click “Next”

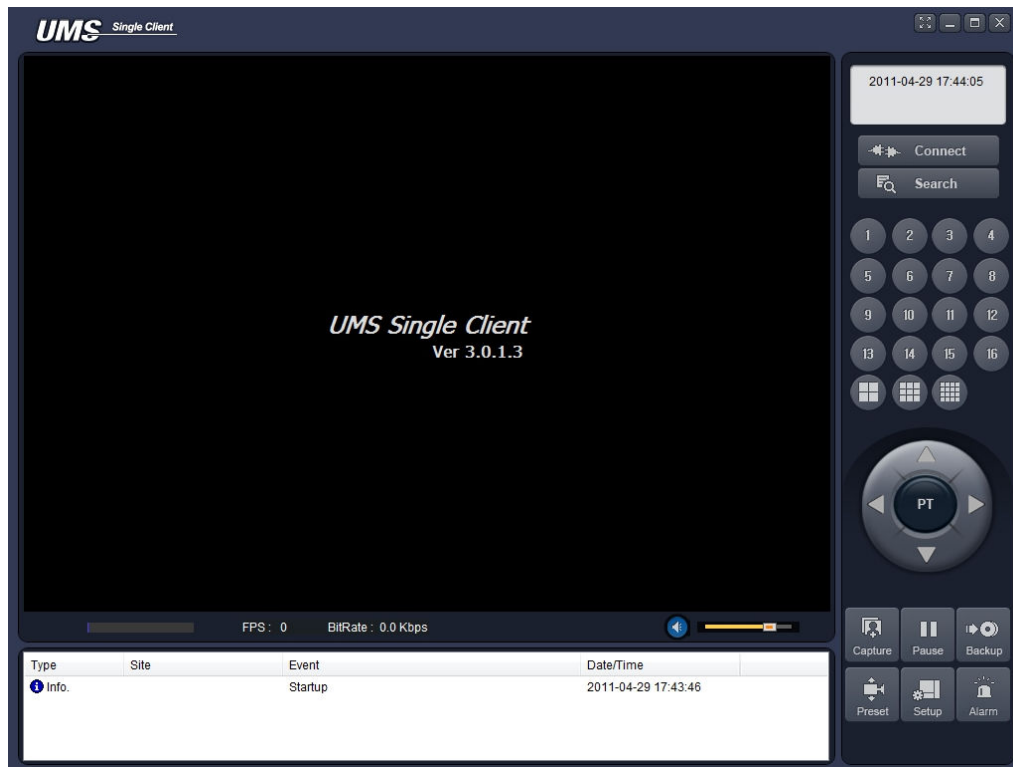




4. The installation process will begin.








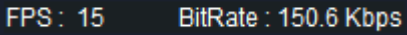

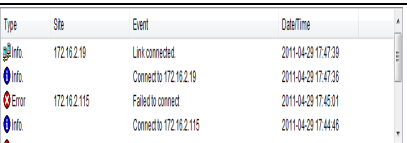


After the installation is completed, “UMS Client” icon is displayed on the desktop.

7-3. Live Monitoring Mode and Functions.



Button	Function	Description
2011-04-29 17:44:05	DATE & TIME	Displays the current date and time.
 Connect	CONNECT/DISCONNECT	Connect/disconnect network connection.
 Search	SEARCH	Switches the live mode to search mode.

	DISPLAY MODE	Select a channel and screen display mode.
	PAN/TILT/ZOOM/ FOCUS	Control the PAN/TILT/ZOOM/FOCUS features on the remote camera.
	CAPTURE	Capture a still image from the live screen.
	PLAY/PAUSE	Play/pause live video.
	ALARM	The ON/OFF button of the alarm output of the DVR. If the DVR has an alarm output, the button will be indicated red.
	SETUP	Display the setup screen of the network viewer.
	HDD USAGE	DVR HDD storage Indicator.
	NETWORK BANDWIDTH	Shows the transferred frames and network bandwidth.
	AUDIO	Adjust the volume. The audio can be turned on or off by clicking the audio icon.
	LOG WINDOW	Shows the even log, date, and time.

Operations of the display mode of the main screen

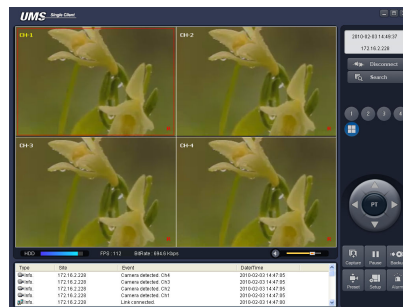
- Single channel display - Click the one of channel button or double-click the channel screen.



- Digital Zoom Feature – Enable digital zoom feature from single channel display. Use mouse scroll to digitally zoom in and out.



- 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.

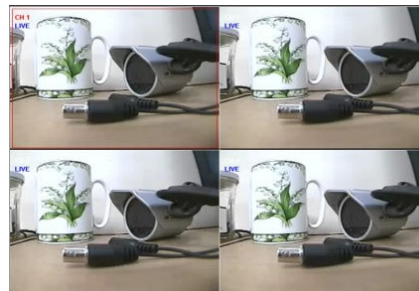
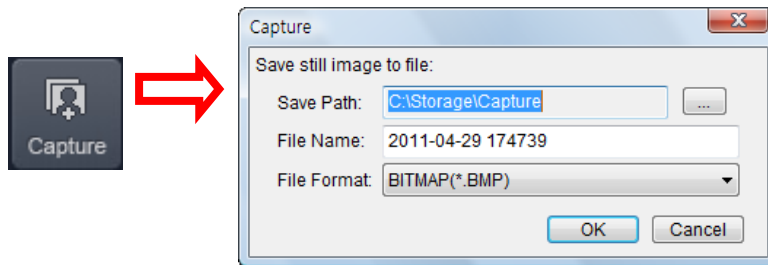


Image capture of live screen

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

1. Click the channel to be captured. Then the selected channel will be highlighted red.
2. Click the CAPTURE button. Then the IMAGE CAPTURE dialog is displayed.

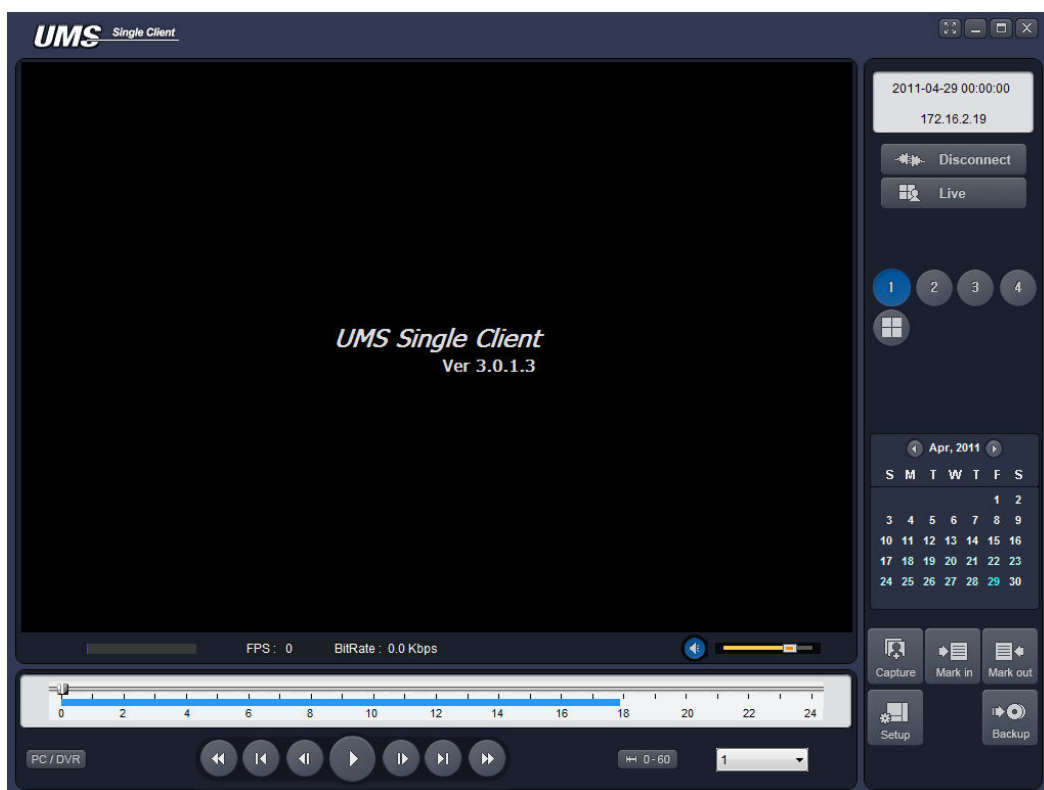


3. Set the SAVE PATH, FILE NAME, and FILE FORMAT and click the OK button to save the captured still image.





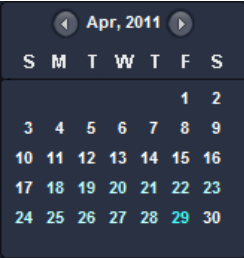
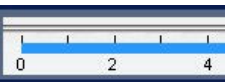

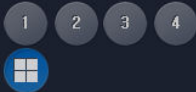
7-4. Bi-directional Audio

The UMS Client allows for bi-directional audio between the client and the DVR unit. The DVR must have an audio input connected, and the PC must have an audio output.

7-5. Remote Search Mode and Functions



Button	Function	Description
<div>2011-04-29 00:00:00</div> <div>172.16.2.19</div>	DATE & TIME	Displays the recording time of the data selected on the time bar at the bottom of the main user interface.
Disconnect	DISCONNECT	Disconnect network connection.
Live	LIVE	Switches the search mode to live mode.

 Capture	CAPTURE	Capture a still image from live screen.
 Mark in	MARK IN	Set the start time for video backup.
 Mark out	MARK OUT	Set the ending time for video backup.
 Backup	BACKUP	Backup the selected recorded video as AVI format.
	SEARCH CALENDAR	The calendar shows dates with recorded video in a light blue and the selected date in dark blue.
	TIMELINE SCALE	The timeline shows recorded data in dark blue on the bar.
	PLAYBACK BUTTON	The playback buttons.
	DISPLAY MODE	Select a channel and screen display mode.

Searching and playing video in the remote DVR

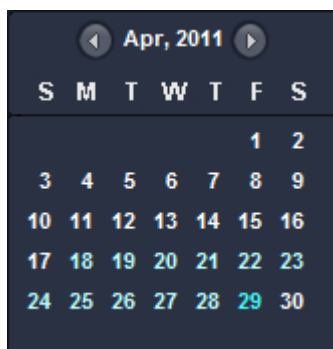
Video recorded in the remote DVR or Video recorded on the PC can be searched and played back.

1. Connect to the remote DVR and press the SEARCH button. The live mode will change to the search mode.



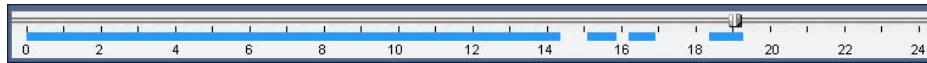
- Searching the video recorded in the remote DVR: Connect to the remote DVR.
- Searching the video recorded in the PC: Do not connect to the remote DVR.

2. Select the date to search the video. (NOTE: Dates highlighted blue are only available for playback)

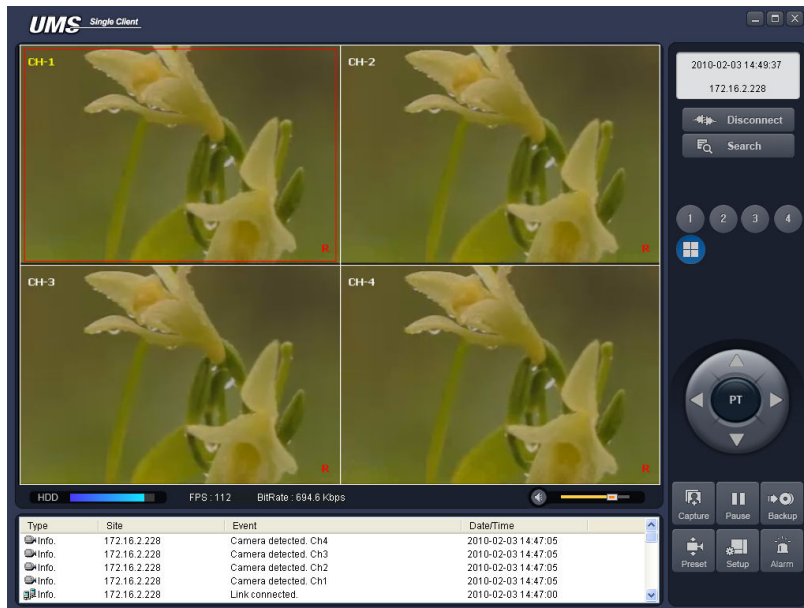


3. Drag the marker on the timeline bar to select the hour. (NOTE: The marker can only be set on the solid blue

bar, which indicates the recorded data)



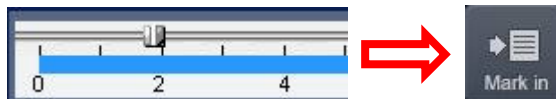
4. Press the PLAY button to begin playback of the recorded data.



Backing up video from the remote DVR

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

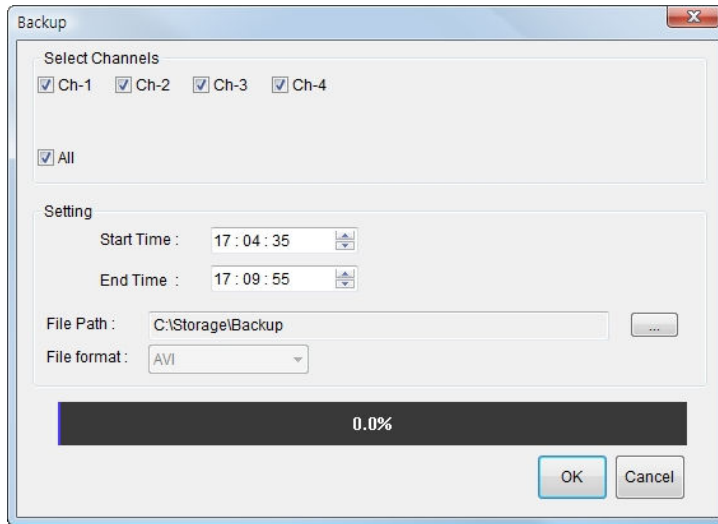
1. Connect to the remote DVR and play the video recorded in the remote DVR.
2. Drag the marker on the timeline scale and press the MARK IN button to mark the video backup starting point.



3. Drag the marker on the timeline scale and press the MARK OUT button to mark the video backup ending point. Then the selected marked time to backup will be highlighted in green. Press the BACKUP button to bring up the BACKUP window.



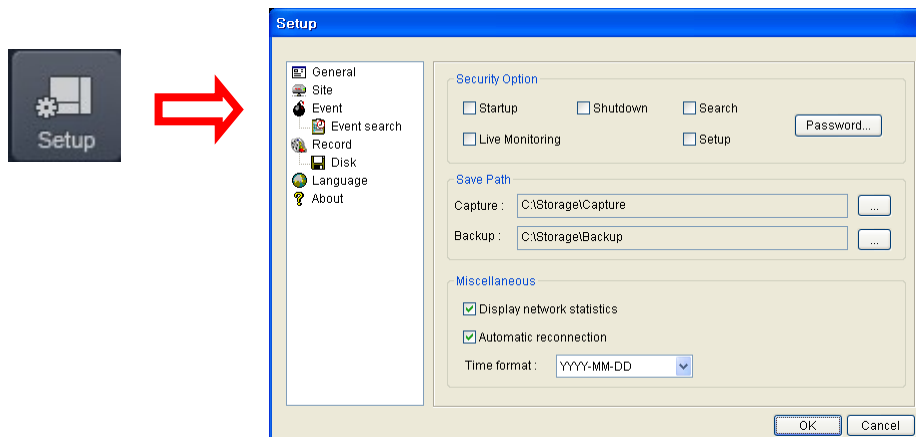
4. In the BACKUP window, select the channels, settings, file path, and the file format. Select the OK button to start the backup process.



- Select Channels: Select channels to backup.
- Start Time / Stop Time: Backup time can be changed.
- File Path: Shows the folder that the backup file is recorded.
- File Format: Select backup file format. (NOTE: File format selection may not be available depending on the firmware version, software version, and the DVR model)

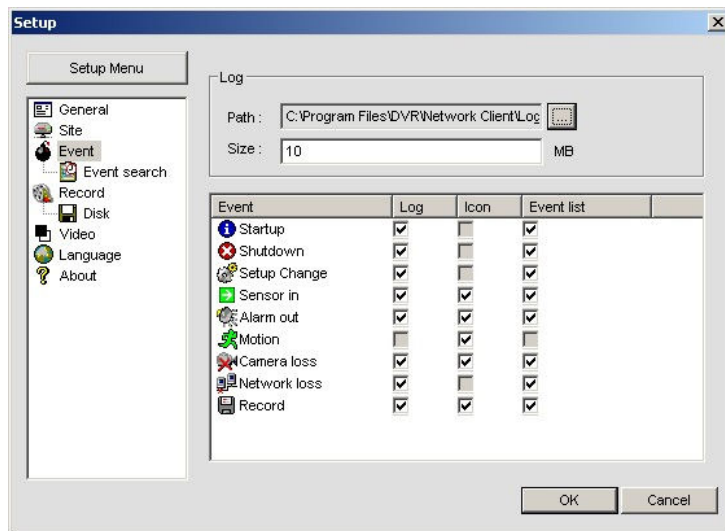
7-6. PC System Configuration

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



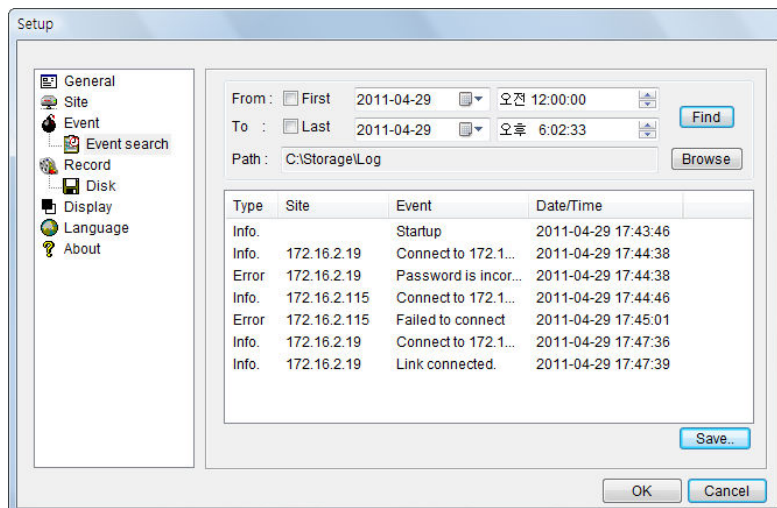
Setting General

Set the Security Option, Save Path, and Miscellaneous.



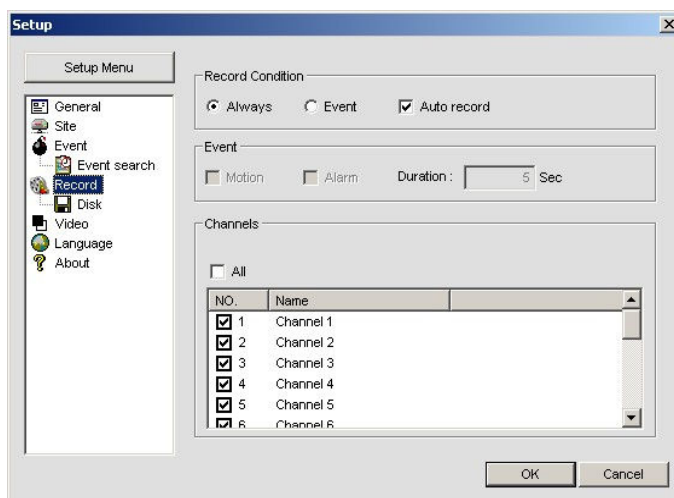
- LOG – Select to save event log into 'log file'.
- ICON – Select to display the event on live video.
- EVENT LIST – Select to show the event in the 'Event List' window of live mode.

Search and check the recorded log data.

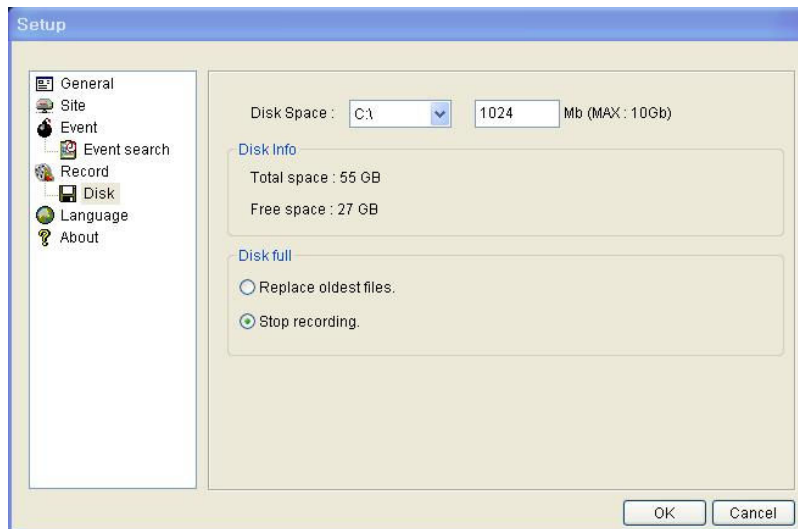


Setting Record

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.



8. Network Access Using the Multi-Sites Network Viewer

8-1. 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.

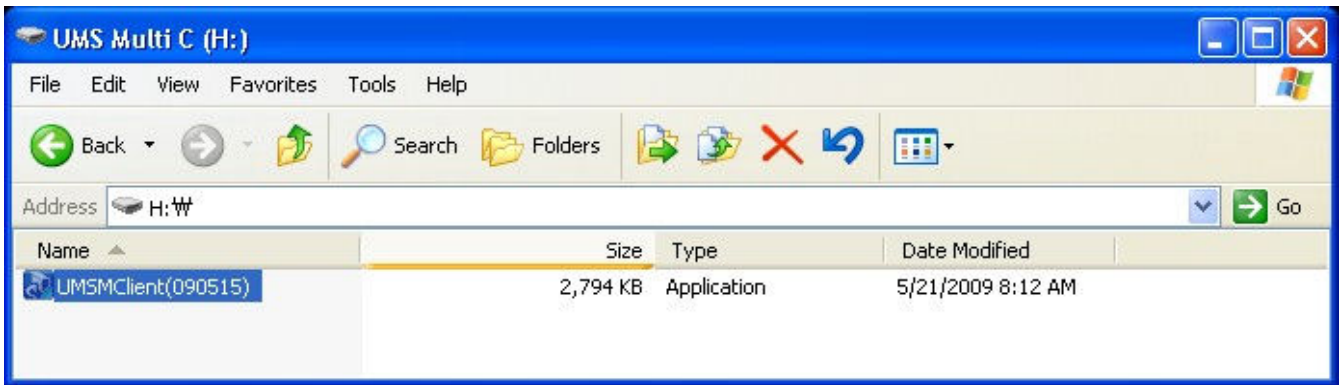
8-2. Minimum PC Requirements

CPU	Intel Core 2 Duo
	1.8Ghz
Memory	1GB DDR2
VGA	256MB
Resolution	1280x720
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100Base T
Others	Direct X 8.1 or Higher

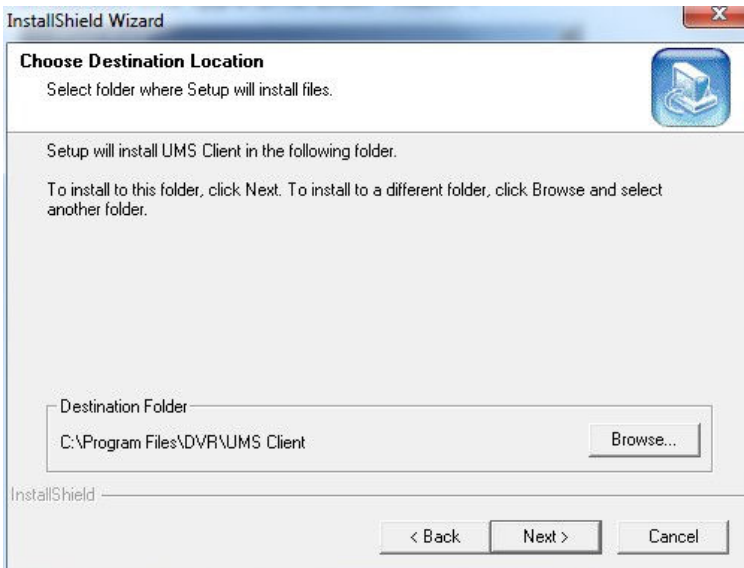
Before installing the program, check the PC specifications. The DVR remote software may not perform correctly if the PC does not meet the minimum requirements.

8-3. Installation of the Program

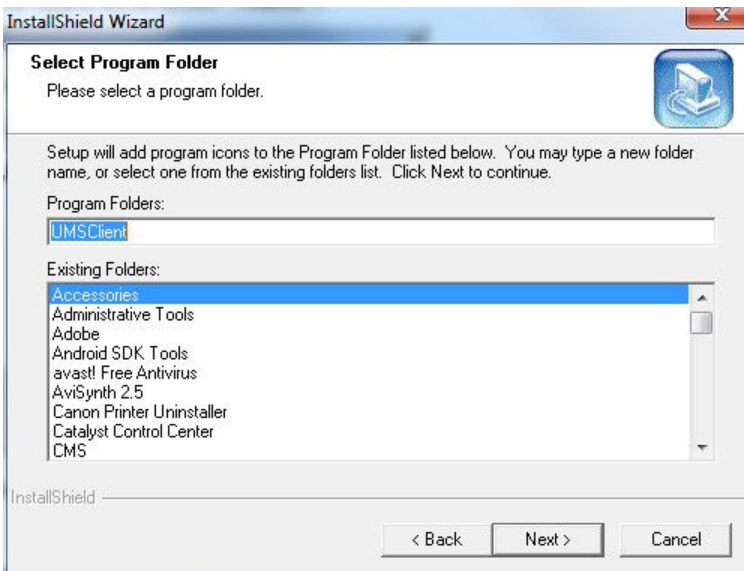
1. Insert the provided CD in the CD drive and double-click "UMSMultiClient (XXXX).exe"



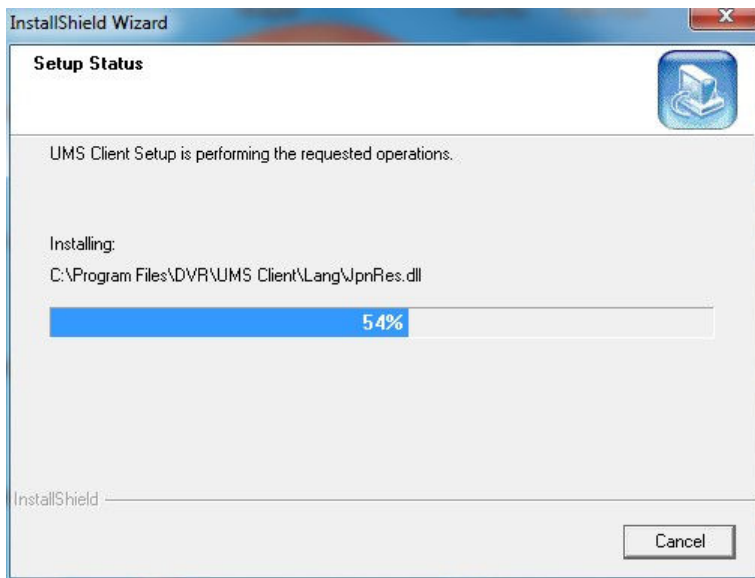
2. Select a destination folder and click “Next”.



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



4. The installation status screen is displayed.



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


















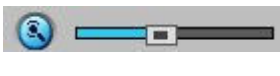

8-4. Live Window










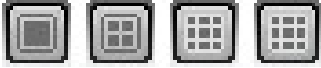
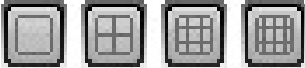
When installation is completed, double click the “**UMS Multi Client**” icon on your desktop to start the program.

8-4-1. Main User Interface



8-4-2. Control Buttons

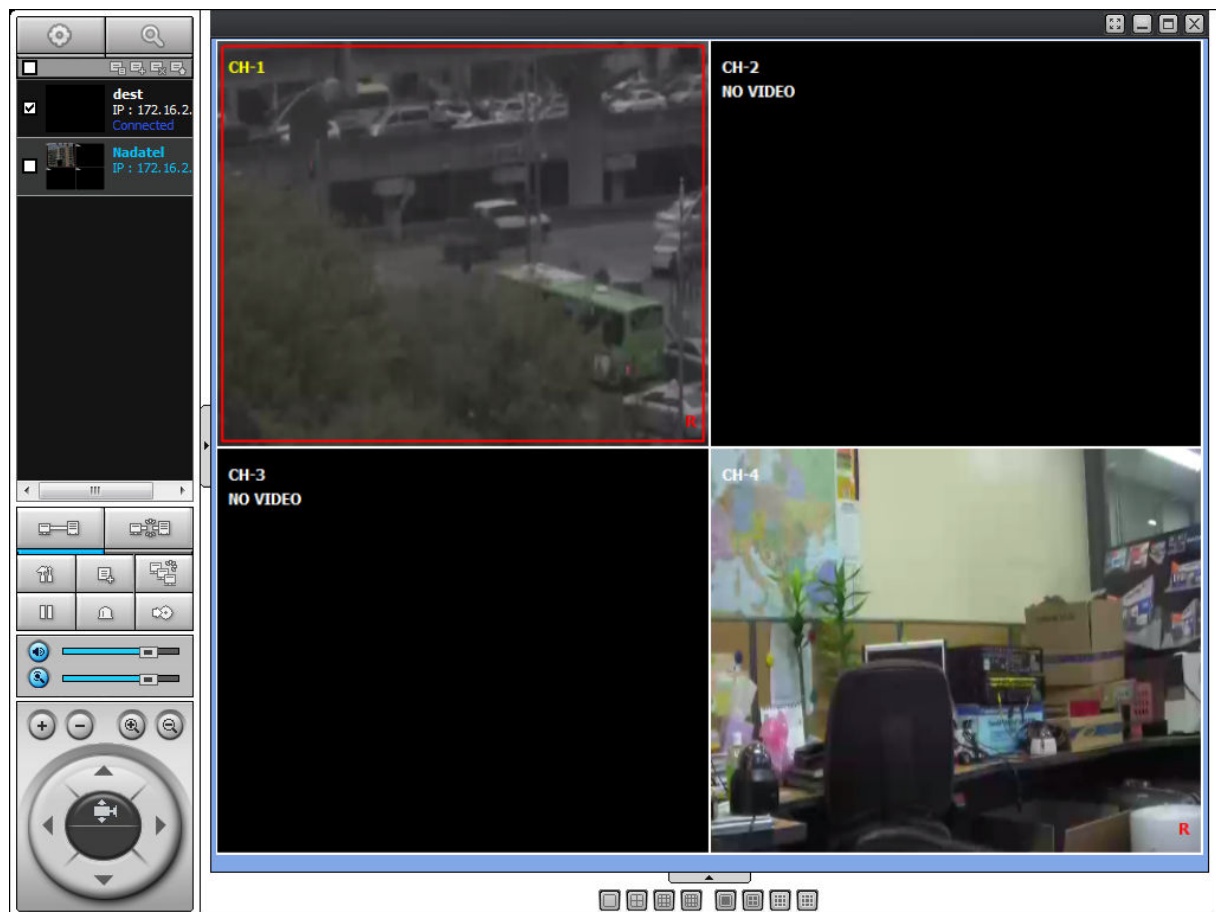
Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote DVR.
 SITE MANAGEMENT	 THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of the connected sites.  SITE ADDITION: Click this icon to open 'Site Addition' window.  SITE DELETE: Click this icon to delete site from the index window, after disconnect a site.  NET FINDER: Select the site from the index window and click this icon to modify the information of specific site.
 CONNECT	Click this icon to connect the selected site/sites.
 DISCONNECT	Click this icon to disconnect the selected site/sites.
 SETUP	Click this icon to setup configuration of UMS MULTI CLIENT.
 CAPTURE	Click this icon to capture a still image.
 EVENT LIST	Opens list of events logged by the UMS Multi Client.
 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 & ZOOM/FOCUS.</p> <p>   PAN left /right   TILT up/down </p> <p>   ZOOM in/out   FOCUS in/out </p>
 <p>CHANNEL SPLIT</p>	<p>To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.</p>
 <p>DVR SITE SPLIT</p>	<p>To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.</p>













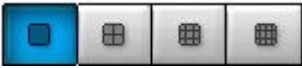


8-5. Search and Playback Window

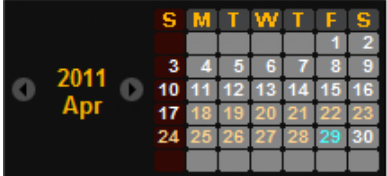
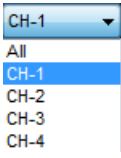




8-5-1. Main User Interface

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




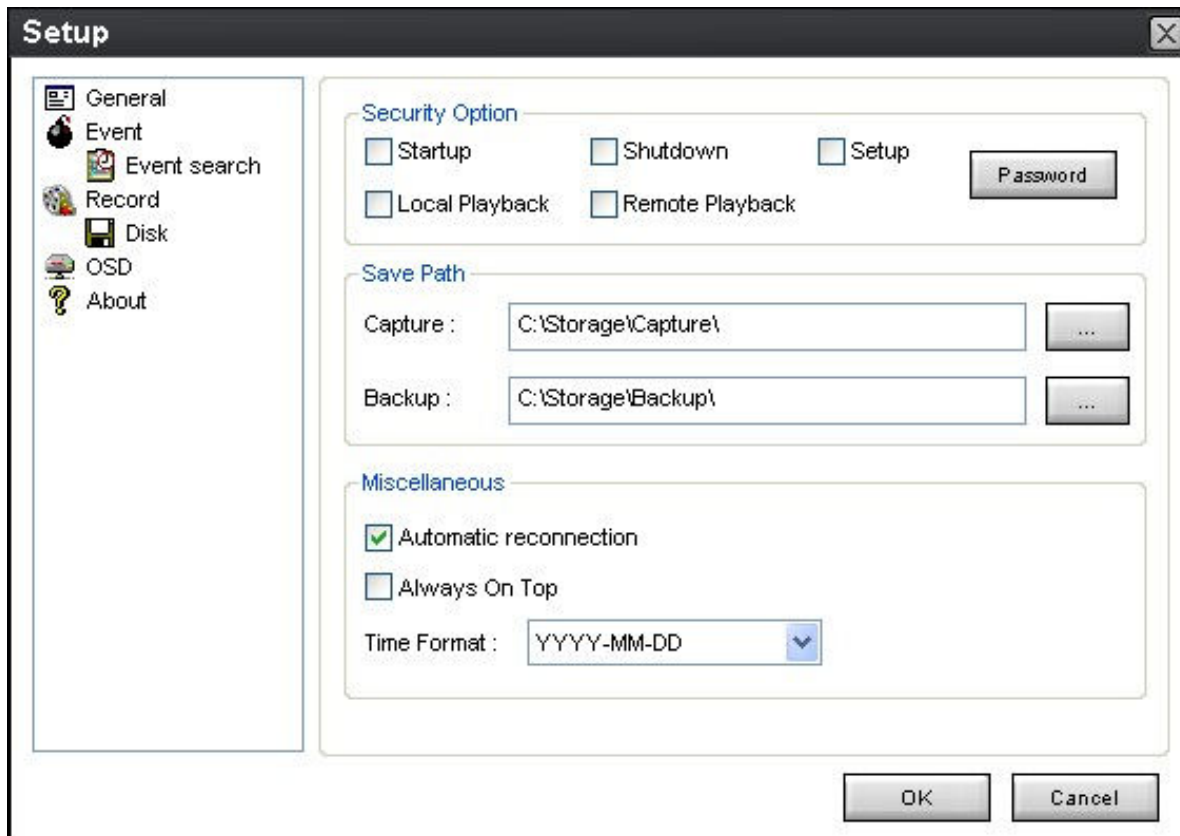
8-5-2. Main Control Panel

Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote DVR.
	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	Opens list of events logged by the UMS Multi Client.
 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.
	To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.
	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
	To select the channel to playback.

	<p>The calendar shows dates with recorded video in color.</p>
	<p>To display the recorded data of selected channel or all channels on a time line scale.</p>
	<p>To change a timeline scale from 24 hours to 60 minutes.</p>   <p>The timeline shows recorded data in color on the bar. You can adjust the timeline scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.</p>
	<p>Playback buttons.</p>

8-6. Setup of UMS Multi Client

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



8-6-1. General

8-6-1-1. 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.

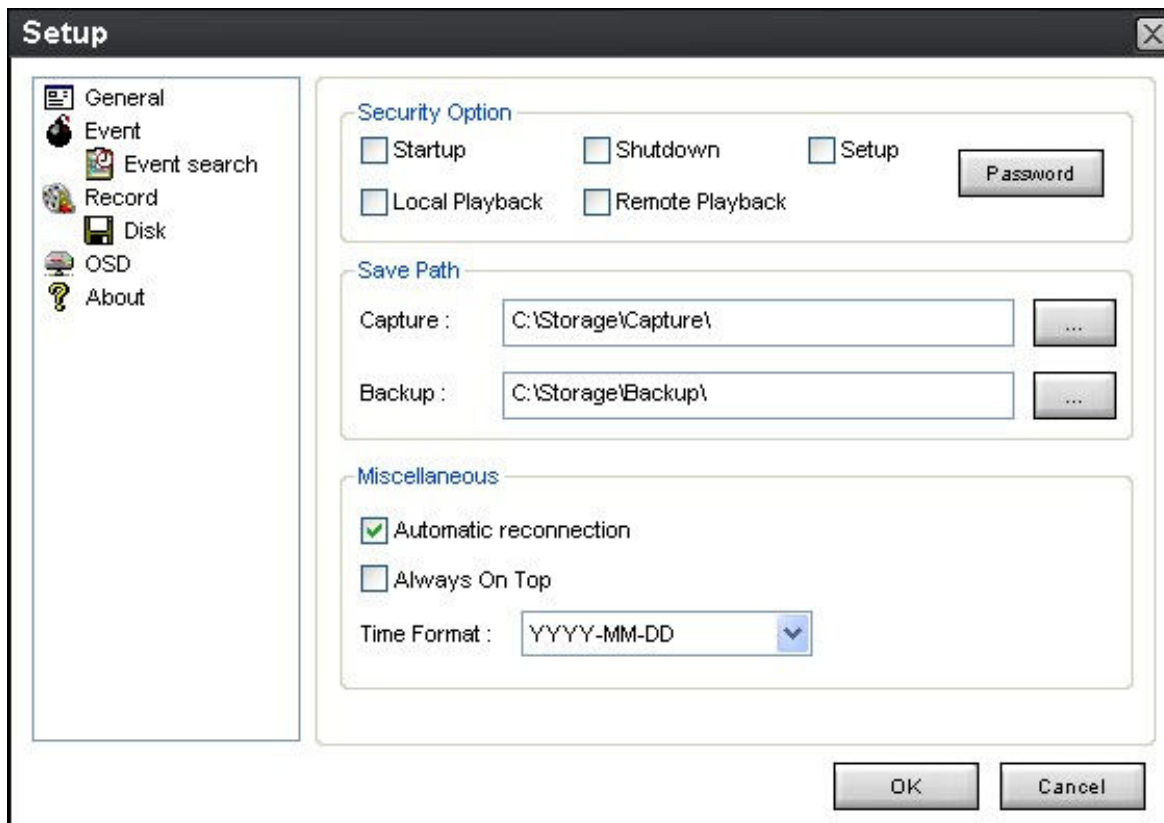
8-6-1-2. Save Path: Specify the location to save captured still image for Capture and Backup data.

8-6-1-3. 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.

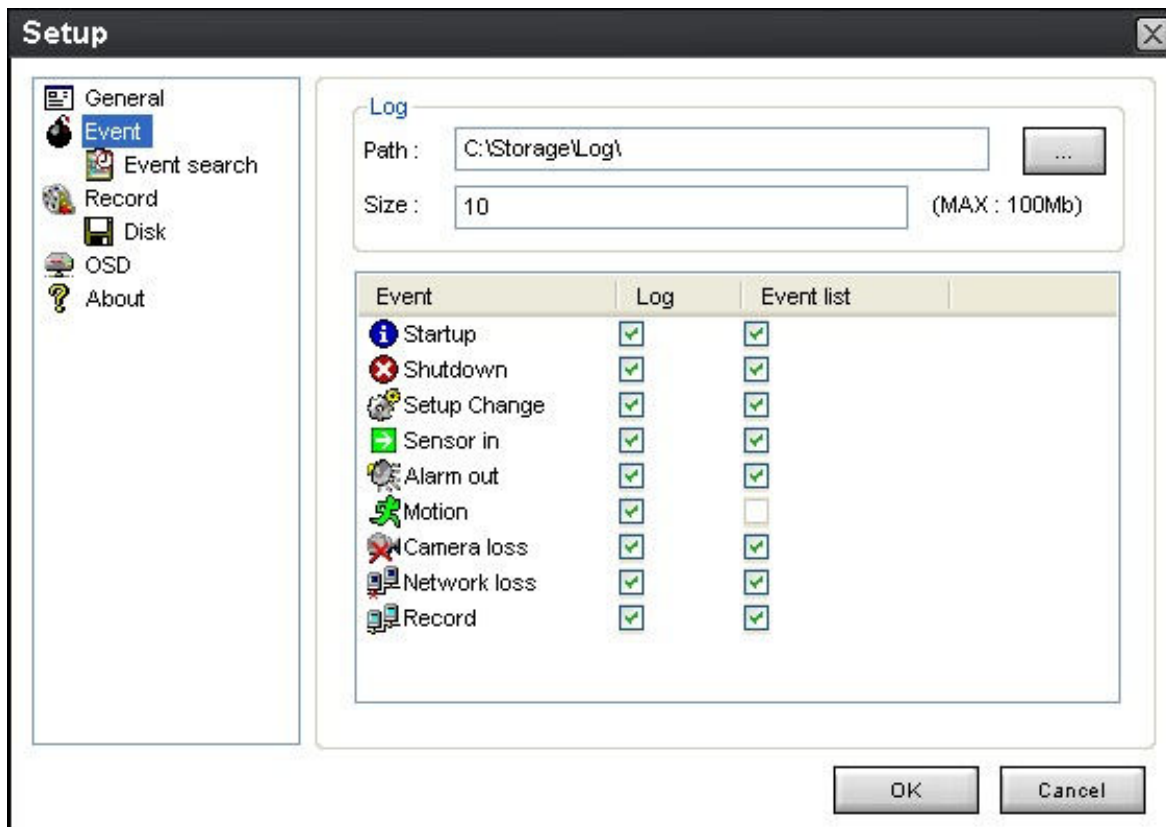
Time Format: Change the way the Client software displays the time.



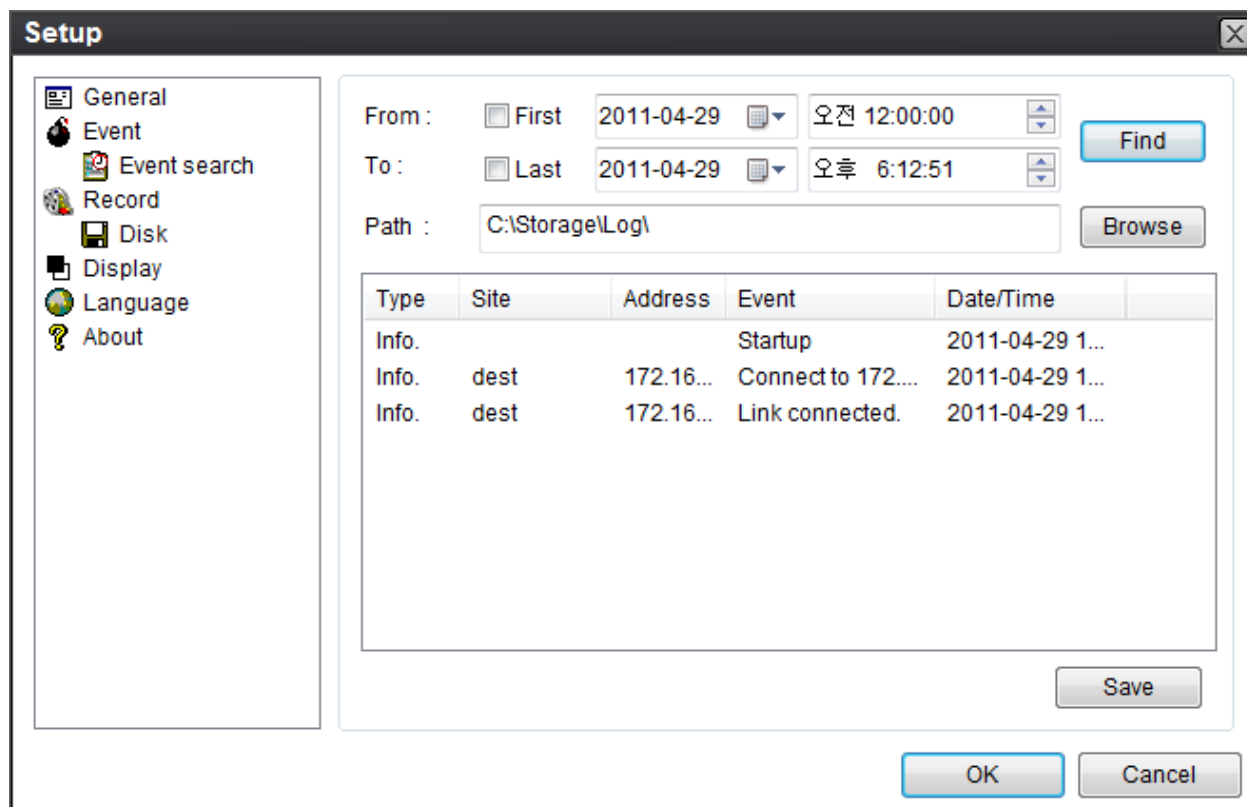
8-6-2. Event

Event log can be archived and searched.

8-6-2-1. Archiving Event Log: Specify the location to save event logs and select event to archive.



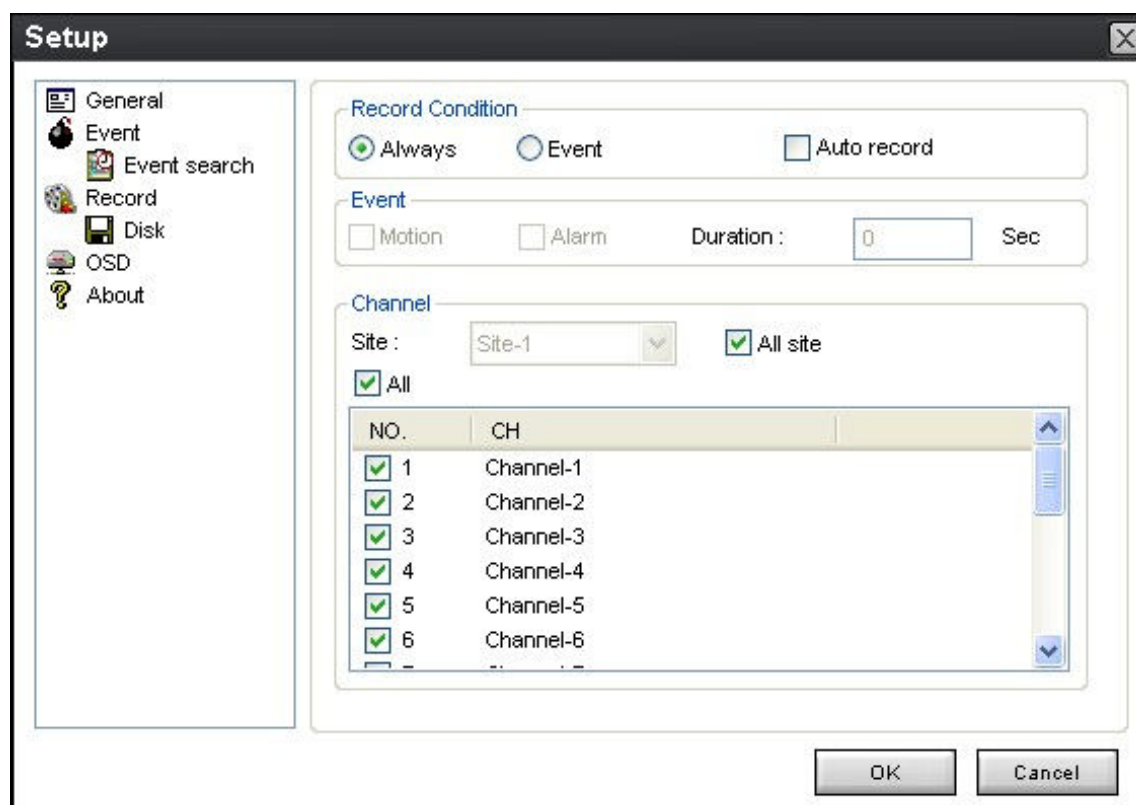
8-6-2-2. Archiving Event Log: Event log can be searched from selected time.



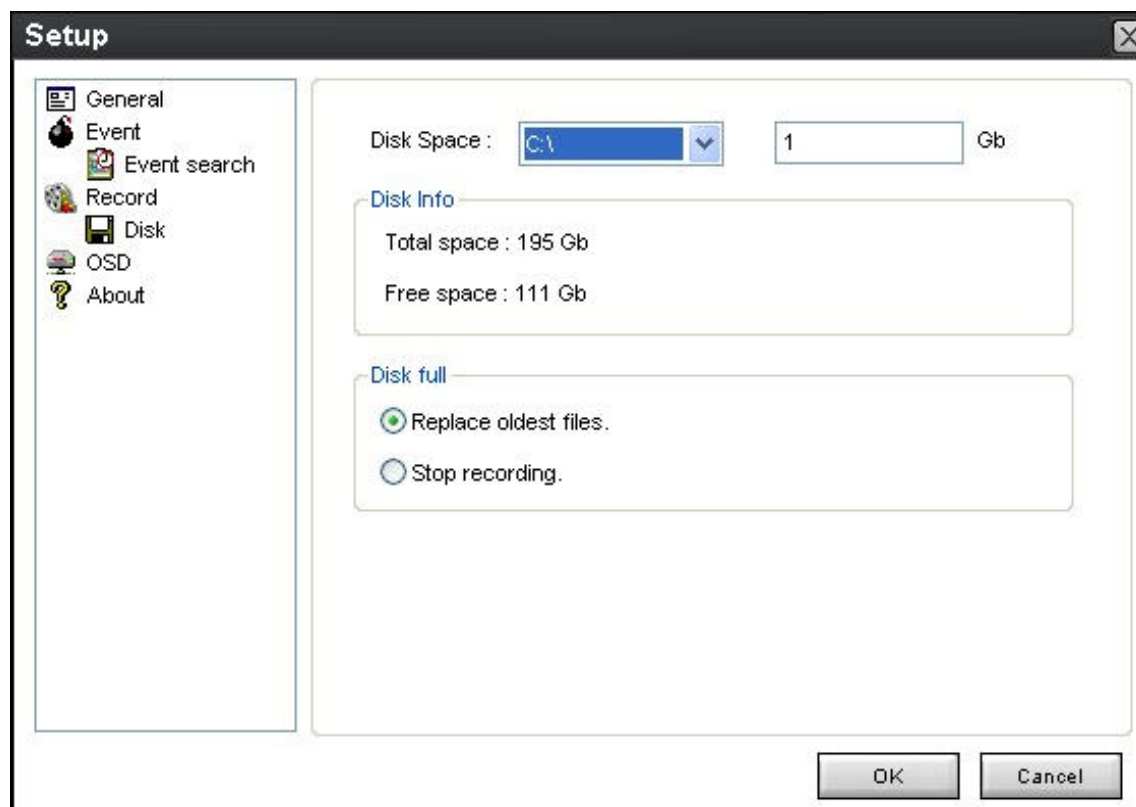
8-6-3. Record

8-6-3-1. Record Setup: You can set the recording conditions as the following; Always, Event, or Auto record. And you can also select target DVR/DVRs and channel/channels.

When you set the recording condition to event, you can set event for motion or alarm with duration.

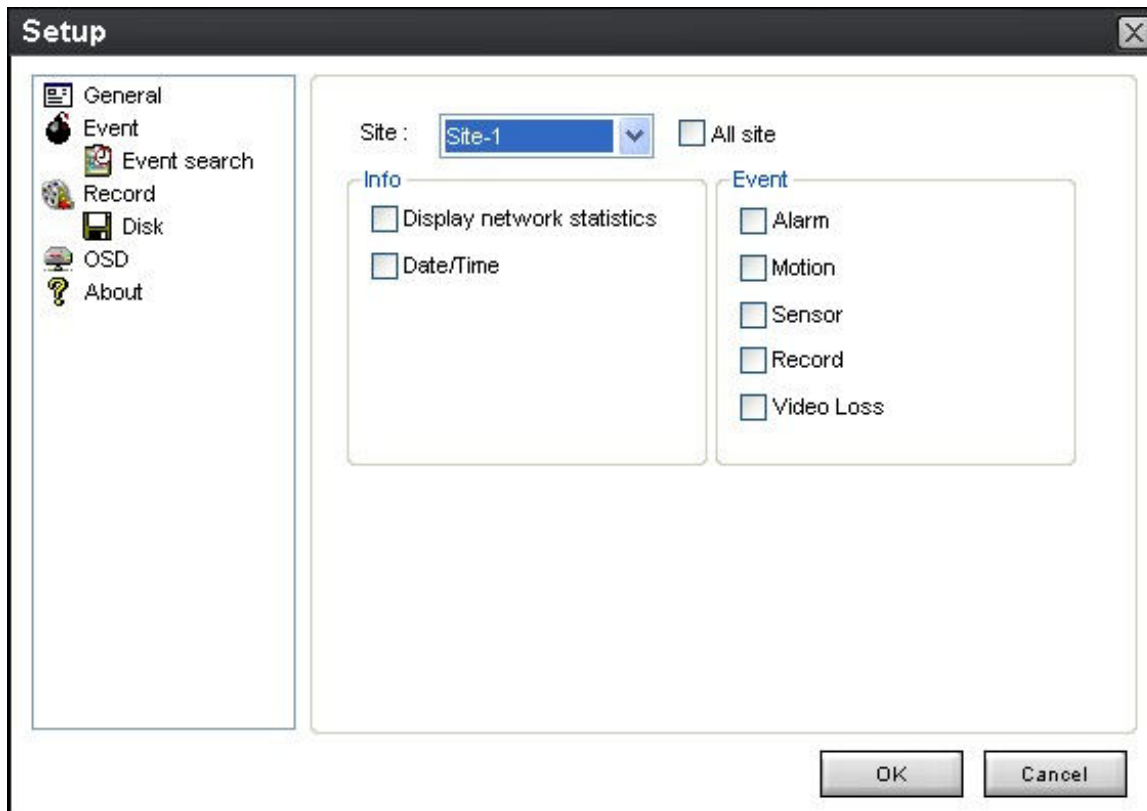


8-6-3-2. Record Local Storage Setup: You can select the local disk to record and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop recording when the maximum amount of disk space is full.



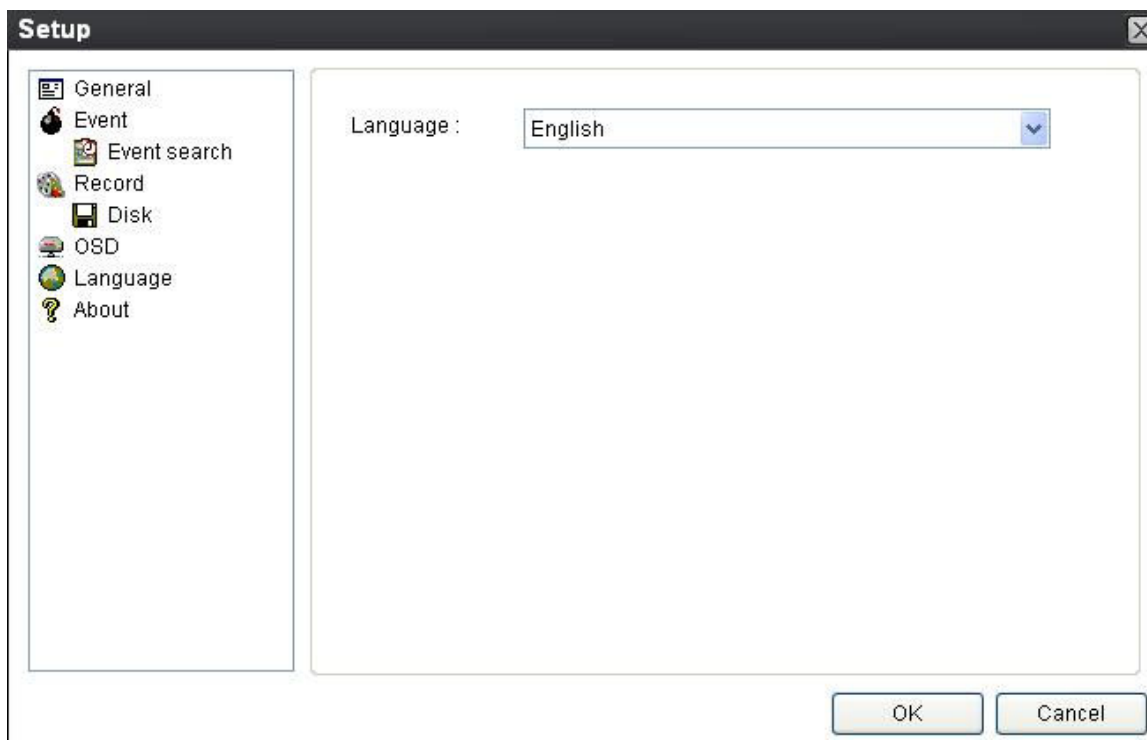
8-6-4. OSD

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



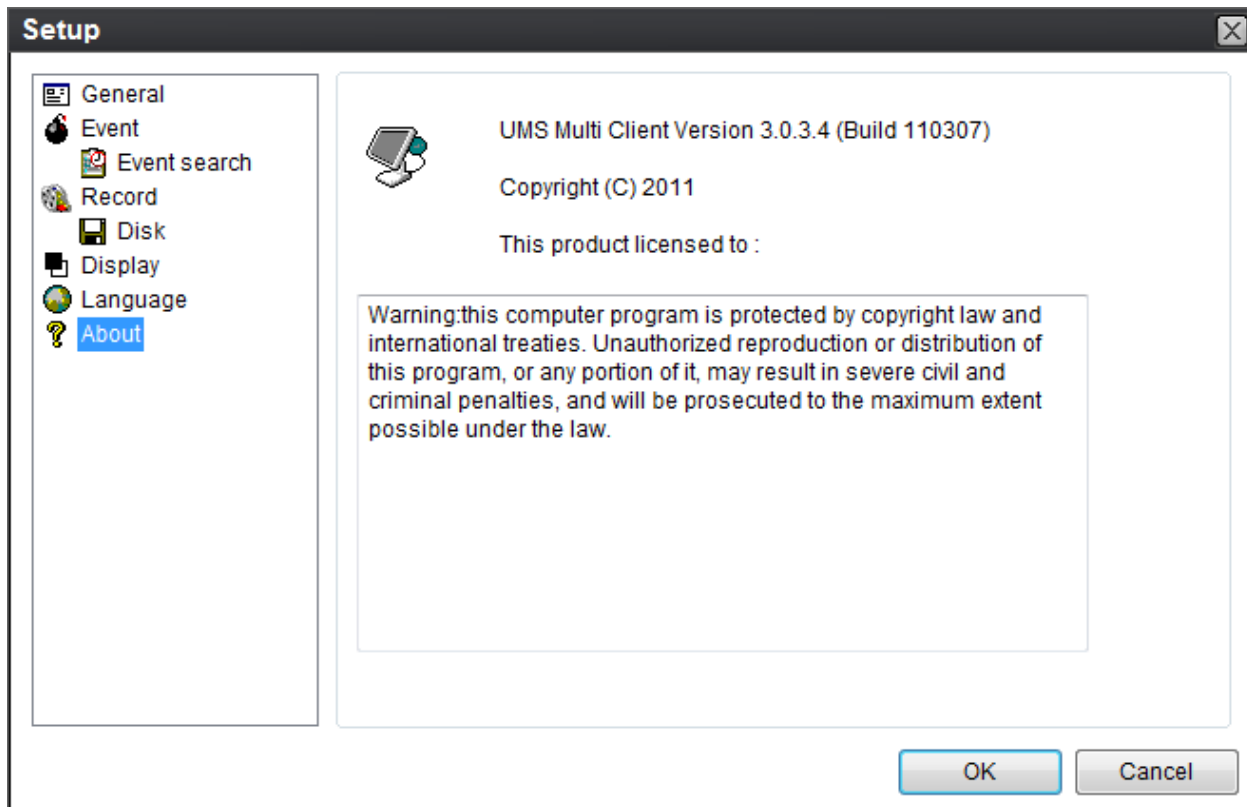
8-6-5. Language

You can select a language to be display.



8-6-6. About

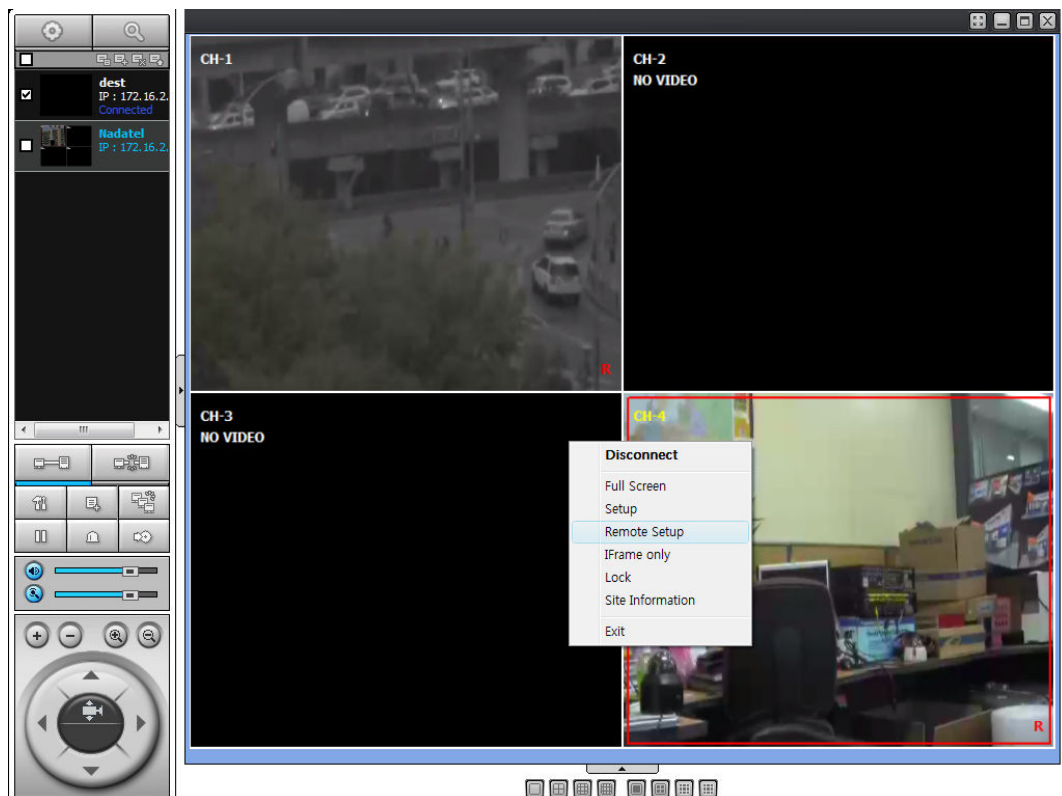
“About” provides network client version information.



8-7. 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 right click on the mouse to open the submenu. Then the following window is displayed as below. Select the **REMOTE SETUP**.



Then the setup window is displayed. The specified menu screen is displayed on the upper left of the screen. Setting is the same as with the DVR menu setting. Refer to the corresponding pages for details on the setting items.

8-7-1. Setting the Display

Enter the password of the DVR when prompted. (NOTE: The default password is 1111)

WEB SETUP (ver 1.04)

PASSWORD:

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

WEB SETUP (ver 1.04)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	NETWORK	UPGRADE
OSD	<input checked="" type="radio"/> ON <input type="radio"/> OFF					
OSD CONTRAST	90					
SEQUENCE	<input checked="" type="radio"/> ON <input type="radio"/> OFF					
SEQUENCE-DWELL TIME	3 SECOND(S)					
CHANNEL	CH1					
NAME	CH1					
COVERT	OFF					
<input type="button" value="RELOAD"/> <input type="button" value="APPLY"/>						

These settings apply to all channels.

OSD: Sets whether to display or not date and time as well as channel number on the screen.

OSD Contrast: Adjust the character contrast on the screen.

Sequence: Setting for automatically switching the displayed video.

Sequence-Dwell Time: Sets the interval for automatically switching the screens.

These settings apply to the specified channel only.

Channel designation

Channel Name: Sets a channel name.

Covert: Sets whether to display or not video from the channel on the monitor.

Apply: Click APPLY to save the changes of the value.

8-7-2. Record

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

WEB SETUP (ver 1.04)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	NETWORK	UPGRADE
CHANNEL		CH1				
RESOLUTION		1280 x 720				
FRAME RATE		30 FPS				
QUALITY		LEVEL 4				
RECORDING		CONTINUOUS				
SENSOR RECORDING		- - - -				
PRE RECORD		1 MINUTE(S)				
POST EVENT RECORD		10 SECOND(S)				
AUDIO		<input type="radio"/> ON <input checked="" type="radio"/> OFF				
EZRecord		APPLY EZRecord				
RESOLUTION		1280 x 720				
FRAME RATE		30 FPS				
QUALITY		LEVEL 4				
RECORDING		CONTINUOUS				
DAYS TO RECORD		4 DAY(S) 23 HOUR(S)				

RELOAD APPLY

These settings apply to the specified channel only.

Channel Designation

Resolution: Sets the resolution for the recordings. The set value applies to an individual channel.

Frame Rate: Sets the recording rate.

Quality: Sets the image quality in 5 levels.

Recording: Sets the recording mode.

Sensor Recording: Sensor recording is performed when an external sensor signal is input to the specified external sensor input terminal.

Pre Record: Sets whether to perform or not pre recording.

Post Event Record: Sets the duration of the event recording.

Audio: Sets whether to perform or not audio recording.

Apply: Click APPLY to save the changes of the value.

8-7-3. Device

Select **Device** to set the motion zone, sensor input/alarm output conditions, PTZ control and spot setting conditions.

8-7-3-1. Device

WEB SETUP

(ver 1.04)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	NETWORK	UPGRADE
ALARM-OUT			1			
SENSOR IN			-			
MOTION ON			-			
VIDEO LOSS ON			-			
ALARM DURATION			5			
ERROR ALARM			OFF			
PTZ						
CHANNEL			CH1			
CAMERA			--			
SPEED			9600			
ID			0			
MOTION						
CHANNEL			CH1			
MOTION ZONE			FULL ZONE			
MOTION SENSITIVITY			9			
KEY TONE			<input type="radio"/> ON <input checked="" type="radio"/> OFF			
REMOTE CONTROLLER ID			0			
SENSOR			1			
TYPE			OFF			

RELOAD APPLY

Setting the Motion Zone/Sensitivity: Select the zone where the motion sensor is active. It is necessary to set a detection frame when PARTIAL ZONE is selected. Select the level of detection sensitivity of the motion sensor. Sensitivity selections: 1~9 (High sensitivity level)

Partial Zone: If selecting Partial Zone, a button is displayed to the right. Click the button and click (or drag) a grid cell in the desired detection frame.

Key Tone: Sets On or Off of Key Tone.

Remote Controller ID: Sets an ID number on the supplied remote control for its identification.

Setting a Sensor Input Terminal: Specify a sensor input terminal number and set the type.

SUBMIT: Saves the changes of the setting values.

8-7-3-2. Alarm Out

Setting an Alarm Output Terminal: Sets the alarm output conditions.

Alarm out No.: Specifies the alarm output terminal number (1~4)

Sensor In: Outputs an alarm signal when the specified external sensor input terminal receives an input.

Motion On: Outputs an alarm signal when the specified video input terminal receives a motion detection signal.

Video Loss On: Outputs an alarm signal when a video loss occurs in the specified video input terminal.

Alarm Duration: Sets the duration of the alarm output signal.

Error Alarm: Sets whether to output or not an alarm signal when the error condition occurs.

(Options are OFF, ALL, HDD ERROR and VIDEO LOSS.)

8-7-3-3. PTZ

Setting the PTZ Control: Sets the communication environment for remotely operating PTZ dome cameras connected to RS485 terminals.

Camera channel designation

Name: Sets the protocol type for the specified channel. When connecting multiple cameras, set the same protocol for all.

Speed: Sets the communication speed. The set value applies to all channels.

ID: Sets the camera ID.

Apply: Click APPLY to save the changes of the value.

8-7-4. Storage

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

WEB SETUP

(ver 1.04)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	NETWORK	UPGRADE
OVERWRITE			<input checked="" type="radio"/> ON <input type="radio"/> OFF			
RECORDING LIMIT			<input type="radio"/> ON <input checked="" type="radio"/> OFF			
RECORDING LIMIT DAYS			30 DAY(S)			
SMART						
TEMPERATURE LIMIT			45°C 113°F			
ALARM			<input checked="" type="radio"/> ON <input type="radio"/> OFF			
BUZZER			<input checked="" type="radio"/> ON <input type="radio"/> OFF			

RELOAD APPLY

Overwrite: To continue recording by overwriting when the hard disk becomes full, check the checkbox.

Record Limit: Sets whether to limit or not the recording data storage period.

Record Limit Days: Sets a recording data storage period.

S.M.A.R.T.: Sets the TEMPERATURE LIMIT of the Hard Disk to trigger the ALARM and the BUZZER.

Apply: Click APPLY to save the changes of the value.

8-7-5. System

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

8-7-5-1. System

WEB SETUP

(ver 1.04)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	NETWORK	UPGRADE
DVR-ID	<input type="text" value="DVR"/>					
DATE FORMAT	<input type="text" value="MM/DD/YYYY"/>					
NTP	<input checked="" type="radio"/> ON <input type="radio"/> OFF					
PRIMARY SNTP SERVER	<input type="text" value="kr.pool.ntp.org"/>					
SECONDARY SNTP SERVER	<input type="text" value="time.kriss.re.kr"/>					
TIME ZONE	<input type="text" value="GMT -8:00 (Los Angeles/Vancouver)"/>					
CONNECTION MODE	<input type="text" value="TIME"/>					
CONNECTION PERIOD	<input type="text" value="3"/>					
SEND EMAIL	<input checked="" type="radio"/> ON <input type="radio"/> OFF					
TRANSMISSION MODE	<input type="text" value="IMAGE"/>					
IP NOTIFICATION	<input type="radio"/> ON <input checked="" type="radio"/> OFF					
EVENT ALARM	<input type="radio"/> ON <input checked="" type="radio"/> OFF					
SMART	<input type="radio"/> ON <input checked="" type="radio"/> OFF					
MAIL TO	<input type="text" value="Unspecified"/>					
MAIL SERVER	<input type="text" value="Unspecified"/>					
ID	<input type="text" value="Unspecified"/>					
PASSWORD	<input type="text" value="....."/>					
MAIL FROM	<input type="text" value="Unspecified"/>					

Setting the System

DVR ID: Sets individual designation to DVRs.

Date Format: Select the date display format (YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY)

NTP: Sets whether to synchronize the time using NTP server or not.

Primary SNTP Server: Input the NTP primary server address.

Secondary SNTP Server: Input the NTP secondary server address.

Time Zone: Select the time zone.

Connection Mode: Select the connection mode to NTP time server.

Time: Synchronize the time at the time that is set.

Interval: Synchronize the time by hours that is set

Connection Period: Set the connection period.

Send EMAIL: Enable/disable send e-mail function.

This setting is used to automatically send a notification e-mail to a specified address when an alarm occurs.

(Memo: The DVR will be forcibly restarted if a value on this screen is changed.)

Send E-Mail: Sets whether to enable/disable e-mail sending function.

Transmission Mode: Enables sending image of the channel that triggered the alarm when an alarm event is triggered.

IP Notification: To send a notification e-mail when the DVR IP address is changed, check the checkbox.

Event Alarm: Sets whether to enable/disable sending e-mail reports on the channel that triggered the alarm when an alarm event is triggered.

Mail Address: Input the destination address.

Mail Server Name: Input the SMTP server name as well as the user ID and password.

Return Mail Address: Set the source e-mail address to be notified to the destination.

Apply: Click APPLY to save the changes of the value.

8-7-7-1. Network

WEB SETUP

(ver 1.04)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	NETWORK	UPGRADE
PORT	5445					
WEBPORT	80					
NETWORK TYPE	DHCP					
IP	0.0.0.0					
SUBNET MASK	0.0.0.0					
GATEWAY	0.0.0.0					
1st DNS	168.126.63.1					
2nd DNS	168.126.63.2					
DDNS	OFF					
DDNS SERVER1 NAME	ddnscenter.com					
DDNS SERVER1 INTERVAL	60 MINUTE(S)					
DDNS SERVER2 NAME	Unspecified					
DDNS SERVER2 ID	Unspecified					
DDNS SERVER2 PASSWORD	●●●●●●●●					
DDNS SERVER2 INTERVAL	60 MINUTE(S)					
CLIENT ACCESS	<input checked="" type="radio"/> ON <input type="radio"/> OFF					
NETWORK STREAM	CH1					
RESOLUTION	1280 x 720					
FRAME RATE	30 FPS					
QUALITY	LEVEL 5(H)					

RELOAD APPLY

Port: When connecting multiple DVRs to the network, set a unique port number to each DVR.

Web Port: Set a web server port number.

Network Type

STATIC: The address setting mode is manual. Input IP, Gateway, Subnet Mask, and DNS server IP.

DHCP: The address setting mode is automatic. Addresses and other information do not need to be set.

DDNS: Set whether to use DDNS service or not.

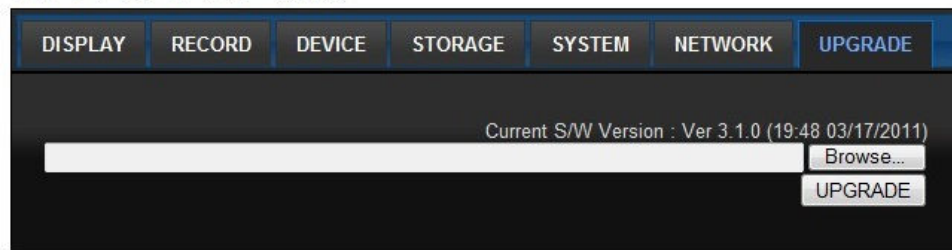
Network Stream: Set the Resolution, Frame Rate, and the Quality.

Apply: Click APPLY to save the changes of the value.

Remote Upgrade

WEB SETUP

(ver 1.04)



RELOAD APPLY


Browse: Select BROWSE to locate the firmware file.

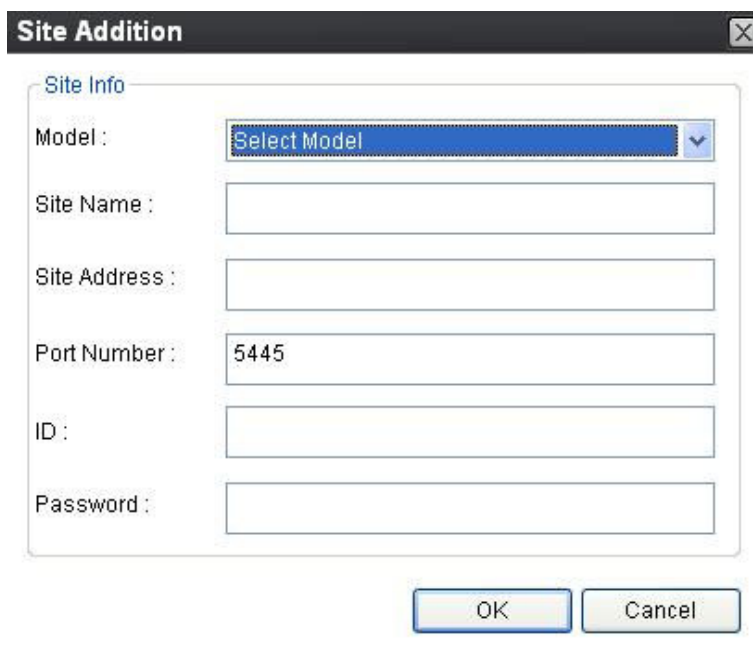
Upgrade: Select UPGRADE to upgrade the firmware of the DVR.

8-8. Operation

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

8-8-1-1. Addition of Sites

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



- Model: User has to select the proper DVR model.
SDVR series, H series DVR
N series DVR, HD DVR
IP Camera
- Site Name: Input a name that properly describes a site.
- IP Address: Input IP address (Public IP address of a router that DVR is connected.) or Domain name that is registered at www.bestddns.com

- Port No.: Input port number of DVR. **Default Port Number is "5445".**
- ID: Input ID of DVR. **Default Port Number is "admin".**
- Password: Input network password of DVR. **Default Port Number is "1111".**


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



8-8-1-2. Deleting a Site

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




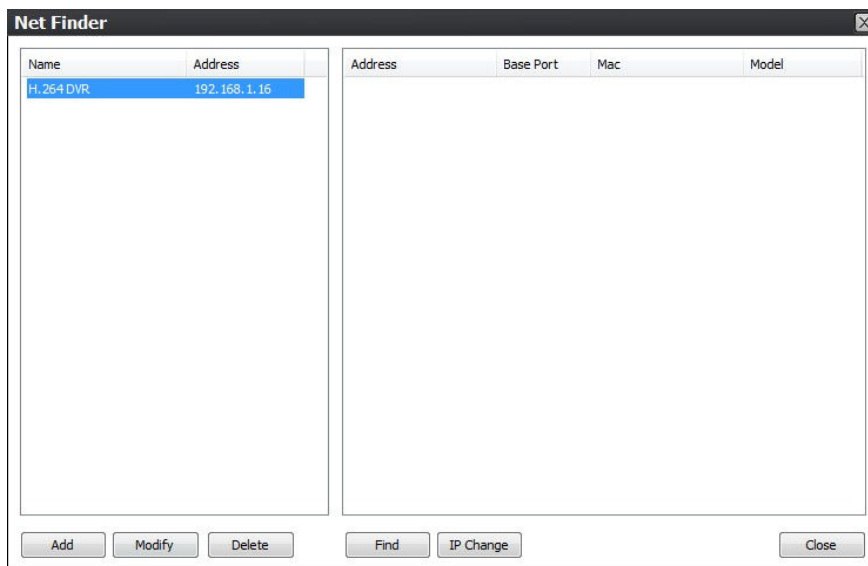
2. Click  SITE DELETE button. And then the selected site/sites is/are deleted.

8-8-1-3. Modify of Sites

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



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



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

Site Info

Site Name : H.264 DVR

Site Address : 192.168.1.16

Port Number : 5445

ID : admin

Password : ••••

Channels

Channels : 16 CH

Ch No.	Name
1	CH-1
2	CH-2
3	CH-3
4	CH-4
5	CH-5


OK Cancel

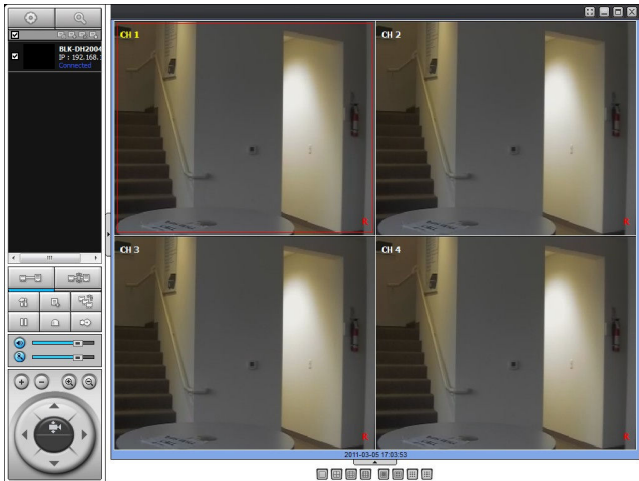
8-8-2. Connect and Disconnect

8-8-2-1. Connect

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




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

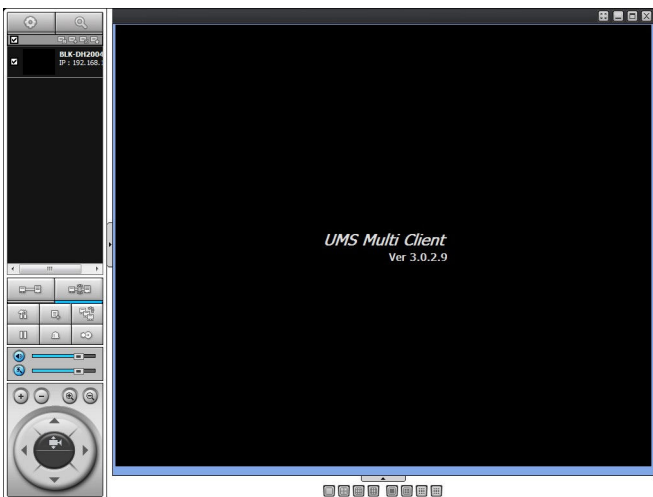


8-8-2-2. Disconnect

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

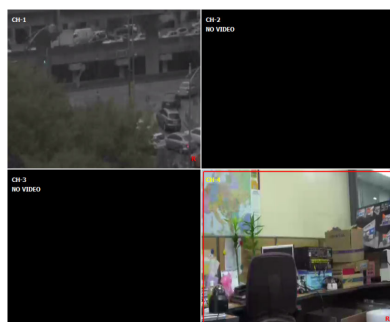


2. Click  DISCONNECT button, and then selected site/sites disconnected.

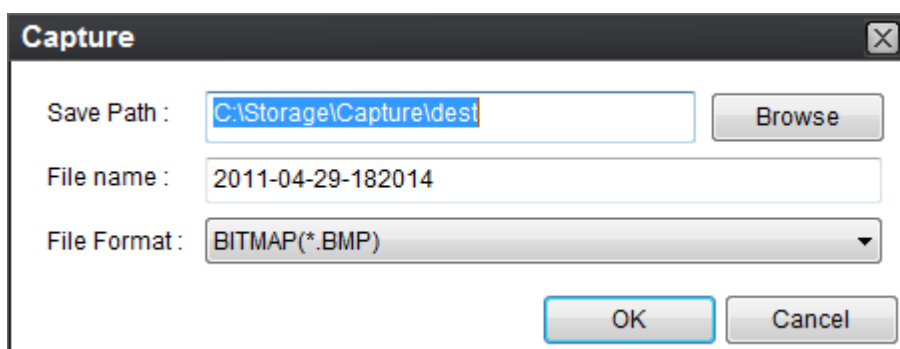


8-8-3. Still-image Capture During Live

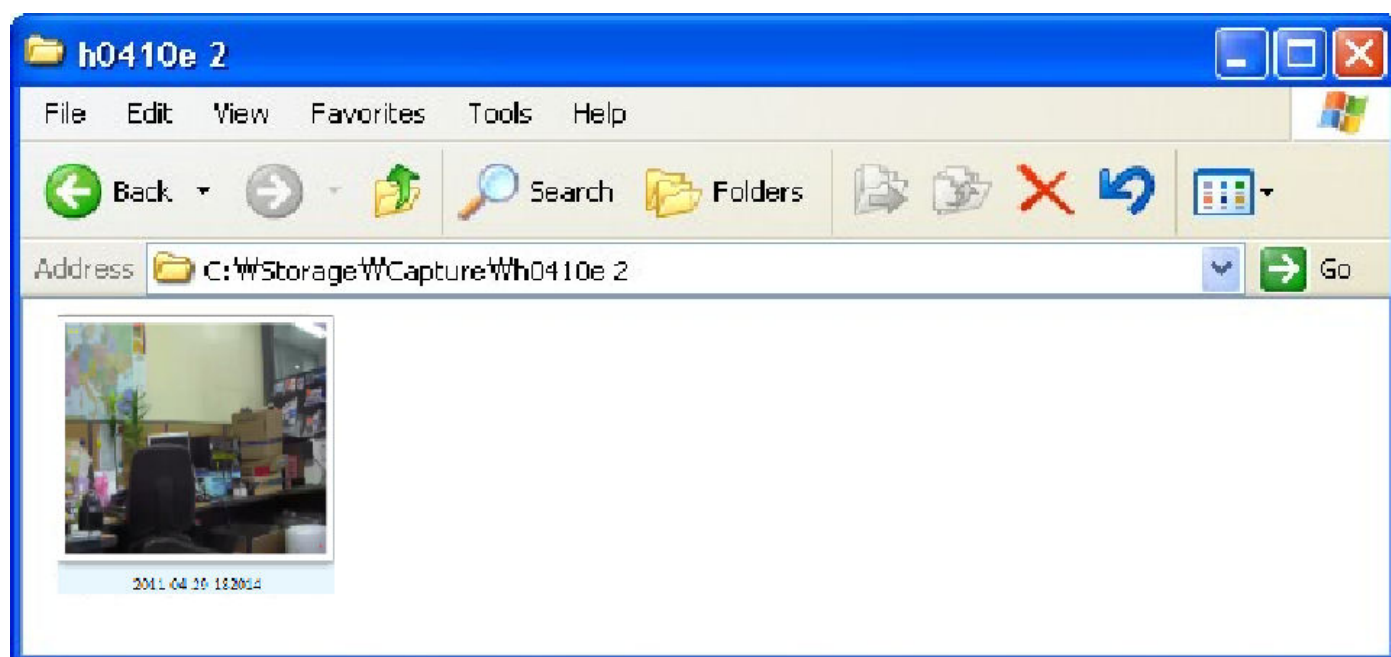
1. Double-click a channel to capture from the display screen. (Otherwise all channels will be captured.).




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

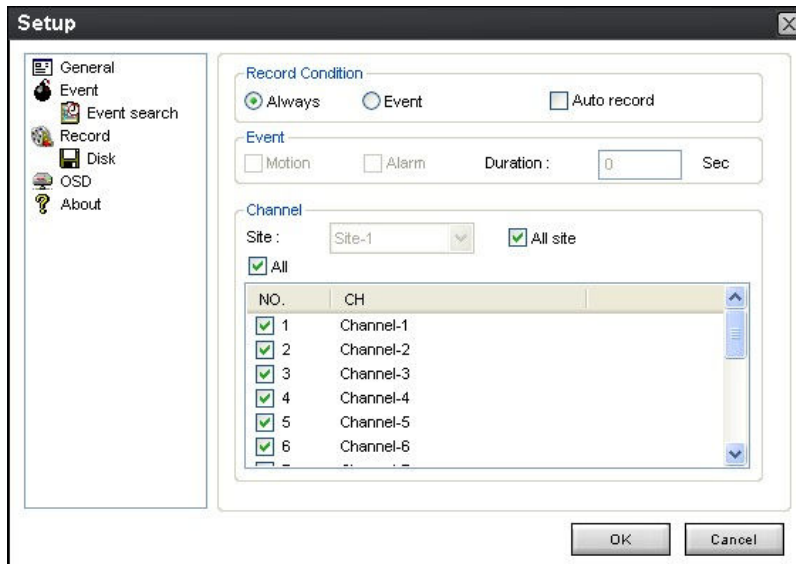


3. Set Save path, File Name, and File Format. And then click OK button.
4. Still image is saved as set in Capture window.

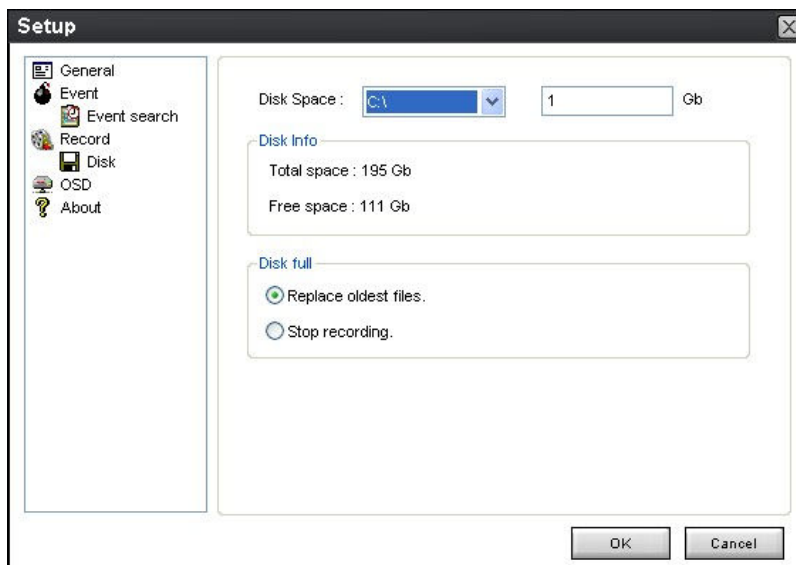



8-8-4. Recording Video on Local PC during Live

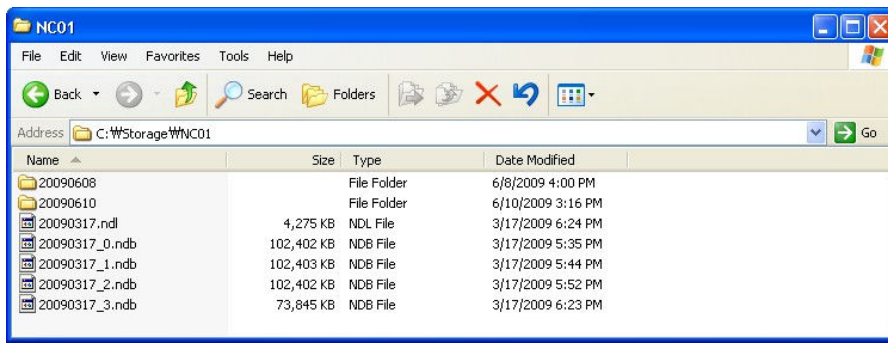
1. Click  SETUP button. And then a setup window will be displayed as below.
2. Select Record and set the values.



3. Select Disk and set the values.




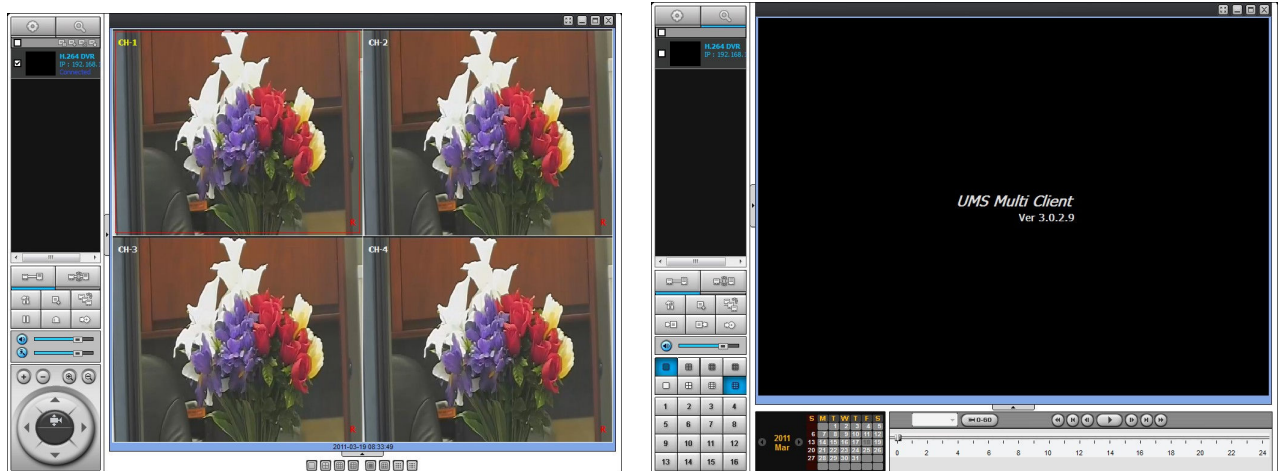
4. Click  RECORD ON button. And the color of button is changed.
5. Live video data is recorded as set in Record and Disk setup. These video data can be searched and play-backed with Local Playback.




8-8-5. Local Playback and Remote Playback

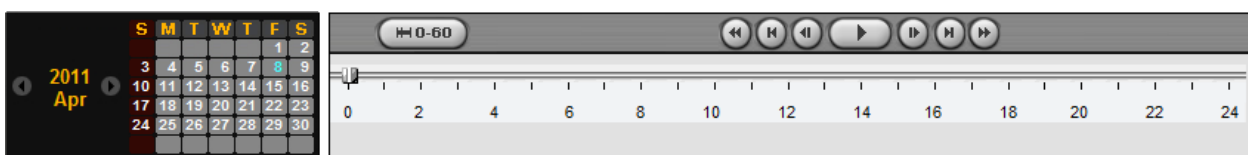
8-8-5-1. Playback of recorded video on local PC

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

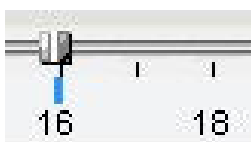


2. Select site/sites to connect from the directory window.

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



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

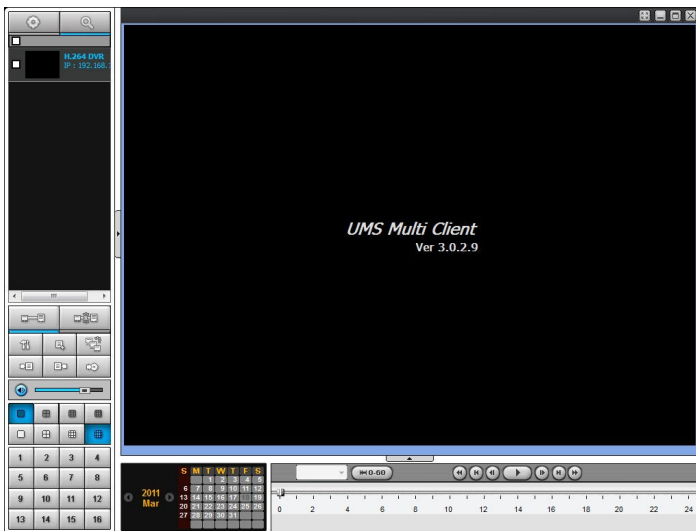



5. Video data that is recorded on local PC will be play-backed.

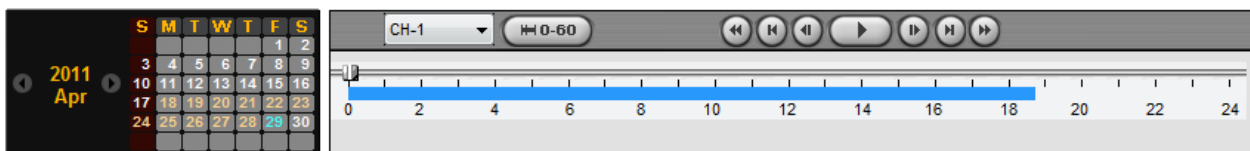


8-8-5-2. Playback of Recorded Video on Remote DVR

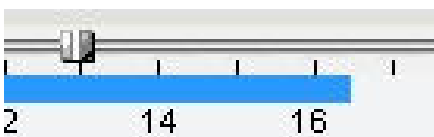
1. Click  REMOTE PLAYBACK button. And then Playback Window will be displayed over the Live Window.



2. Select the site to connect from the directory window.
3. Click  CONNECT button. And then Green bar displays on Search calendar and timeline scale window.



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



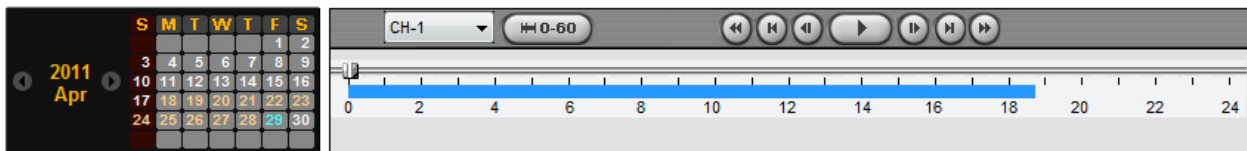
5. Video data that is recorded on the remote DVR is play-backed.




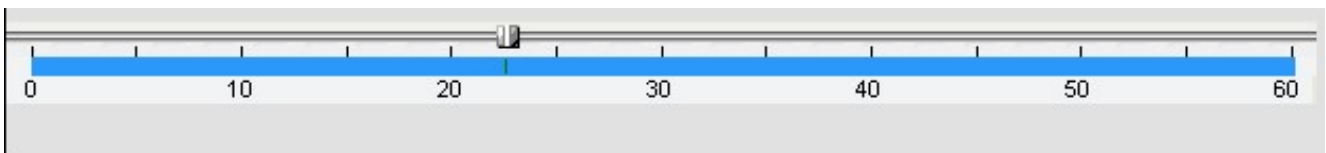
9-8-6. AVI Backup During Playback


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

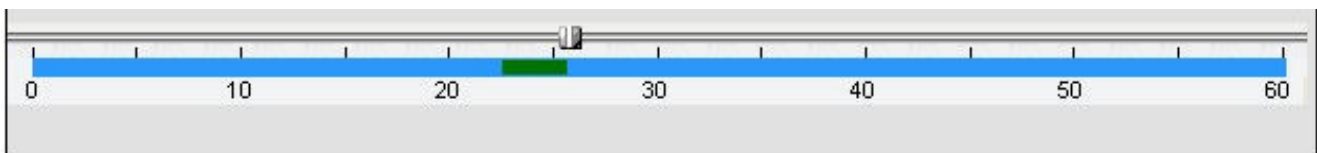
1. Double-click the target channel to backup.
2. Select the beginning time by using the search calendar and timeline scale bar.




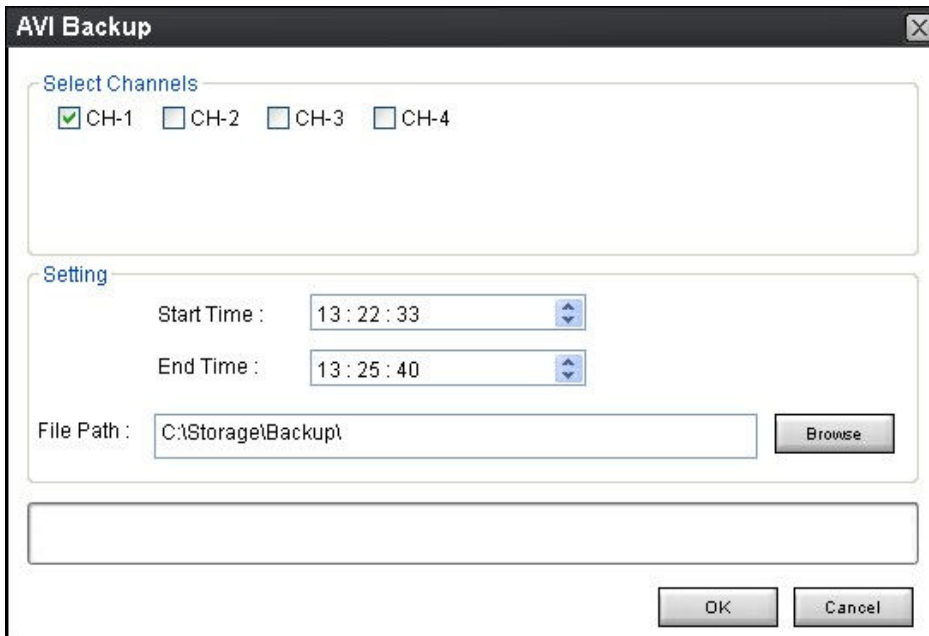
3. Click  MARK IN button on the timeline scale to select the beginning point of the backup.



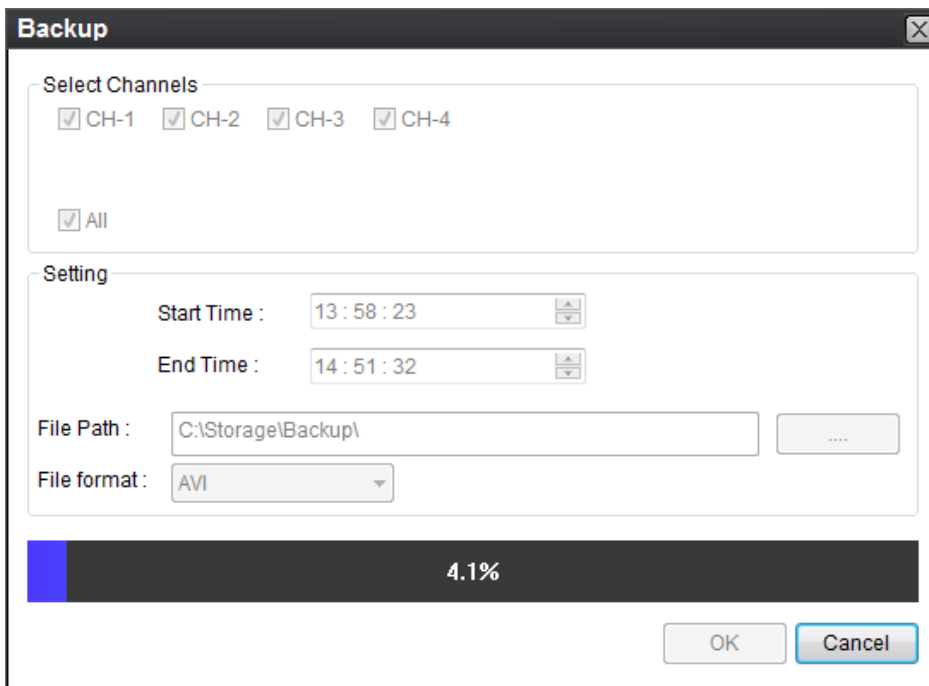
4. Click  MARK OUT button on the timeline scale to select the ending point of the backup. Then, the selected starting point and the ending point on the timeline scale bar will be marked in green.



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



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



7. AVI video data is recorded as 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.



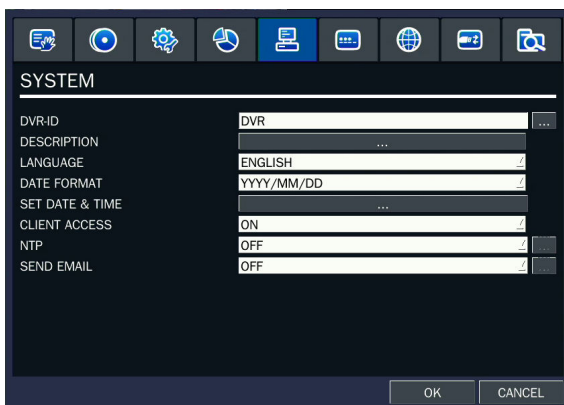
Notice

When backing up as a NSF format, the user can playback using the HD Player, which is downloaded into the USB flash drive or the CD-R, DVD-R with the backup data.

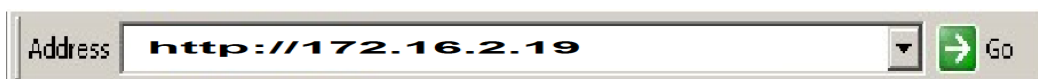
9. Network – By a Web-Browser Viewer

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

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

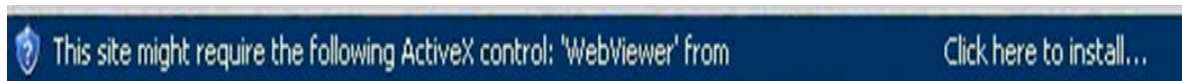


2. Input the IP address or Domain name address that you pre-registered on www.bestddns.com.





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



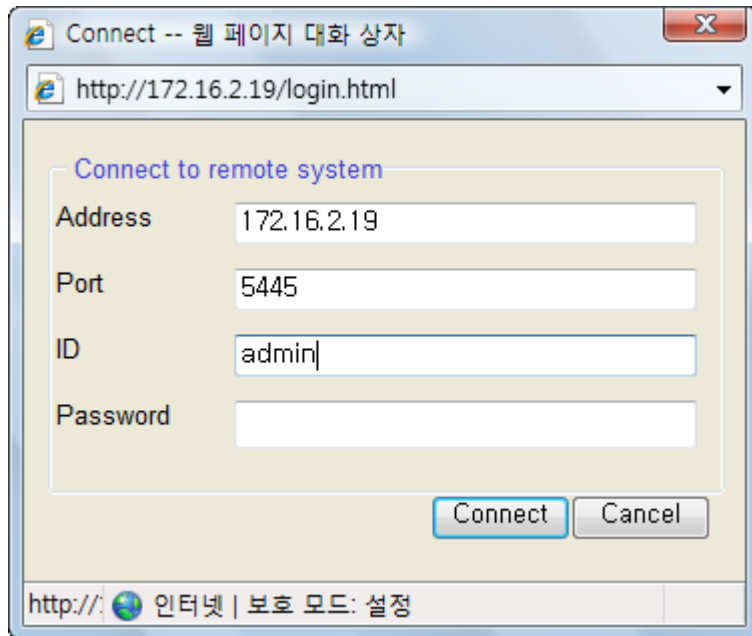
4. Click "Install" to download and install the ActiveX control.



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

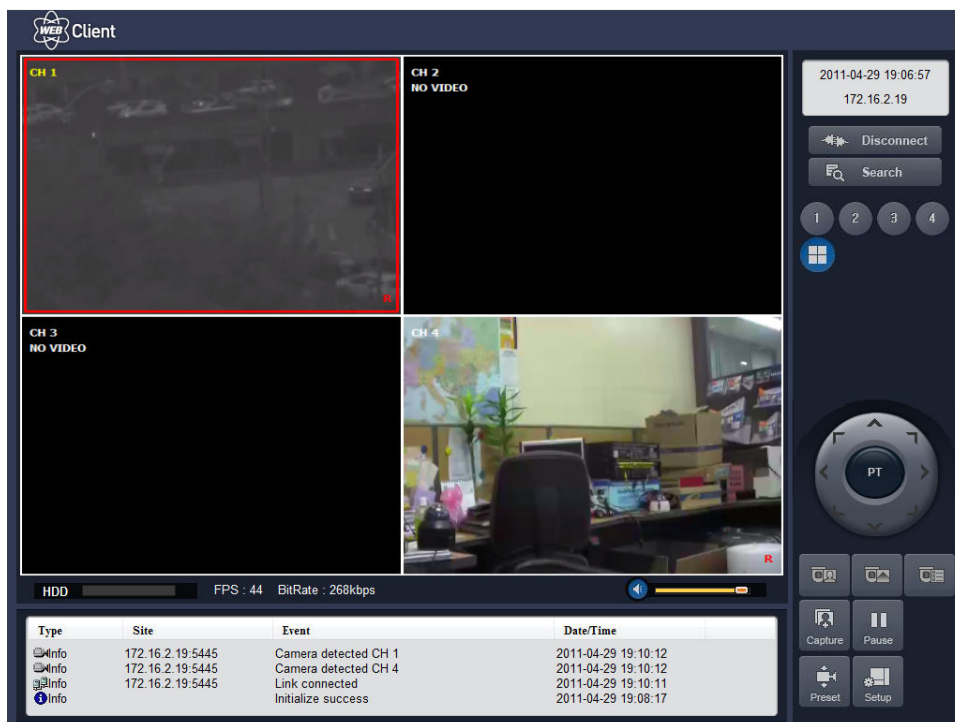


6. Click the CONNECT button on the Left upper corner of web-viewer. Then "Connect" dialog is displayed. Enter IP address (or Domain name address that you pre-registered on www.bestddns.com, Port number and Password and click "Connect"



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



8. 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.

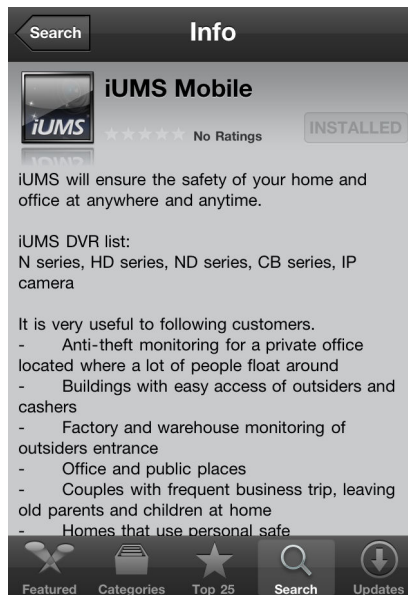
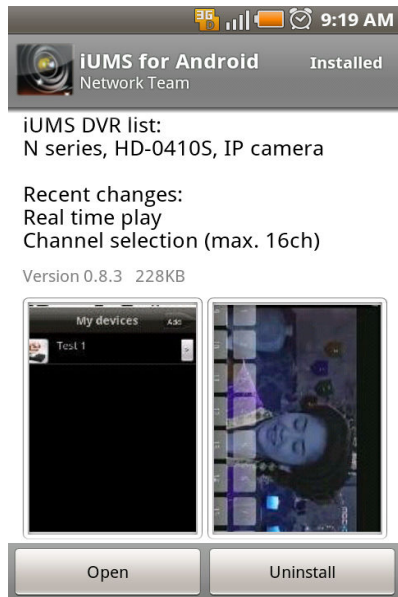
10. Network Access Using the 3G App Viewer

10-1. Installing the 3G App Viewer

1. Enter the Apple App Store (For Apple iPhone Users) or the Android Market (For Android Phone users)



2. Search “iUMS” in the App Store[©] or the Android Market[©]

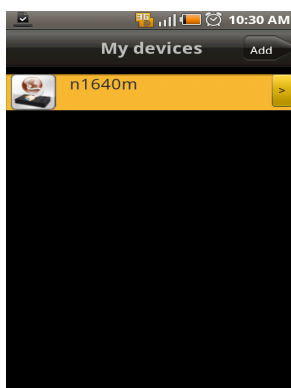


3. Install the “iUMS” app. Then iUMS icon will be display on the phone.



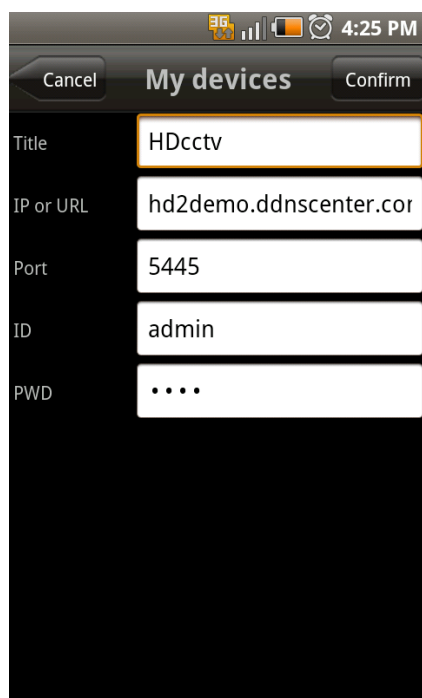
10-2. Live Monitoring

1. Open the installed “iUMS” App



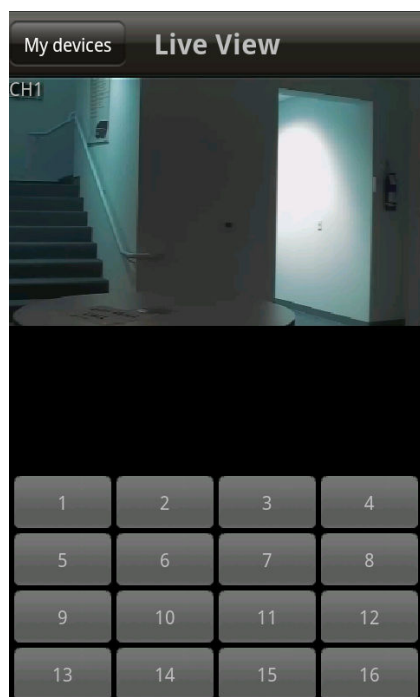
2. Select the ADD in the top right corner for “Site Information”

3. Input the “Site Information” and select  to save the “Site Information”



4. Select the saved site from “My Devices”

5. Select a channel to view. After selecting a channel, the app will display the following channel.



Notice

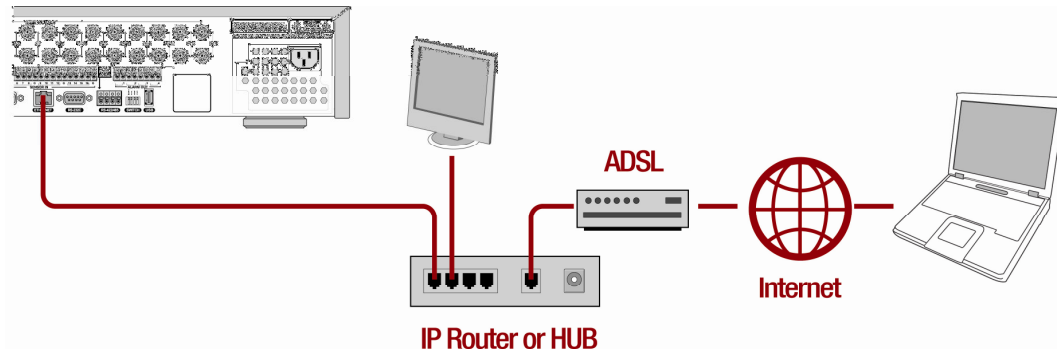
3G Data Usage applied without Wi-Fi connection. Please check with your Phone Carrier.

APPENDIX: How to Connect the Network

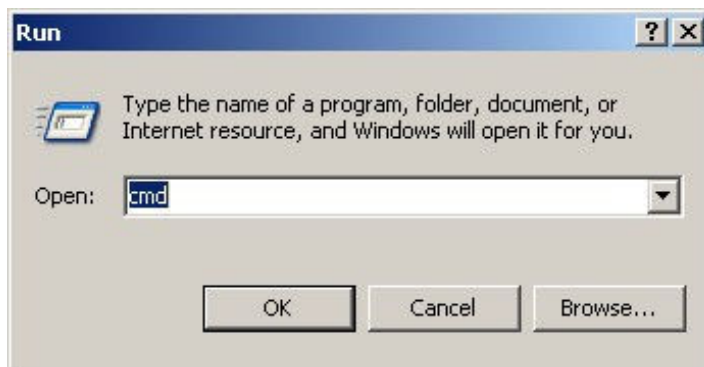
A. How to set the IP address of the DVR and open TCP port of the router?

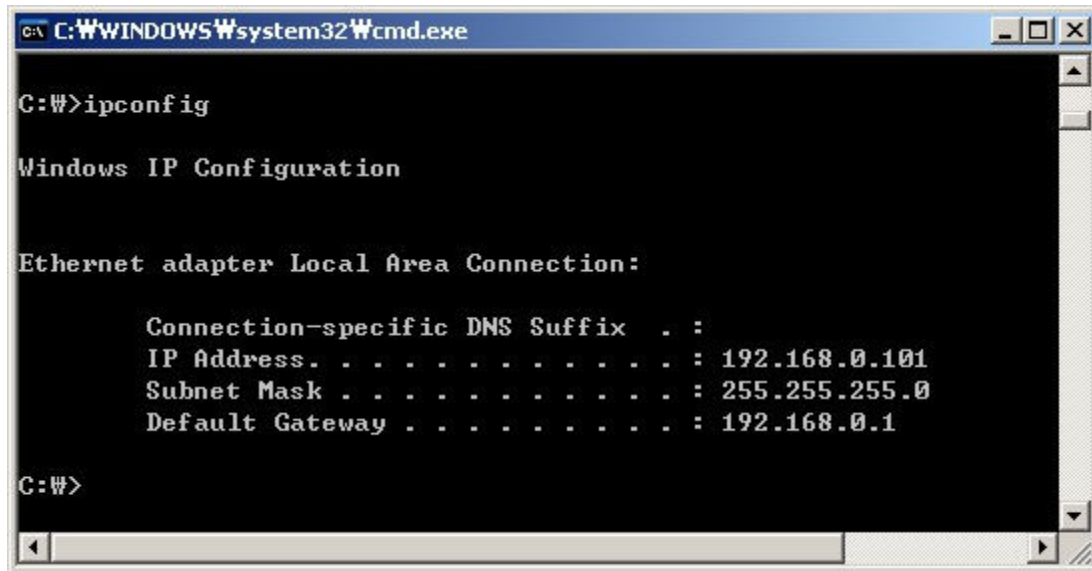
The port forwarding steps will vary depending on the brand and model of the router. Port Forwarding is required to access the DVR remotely. (NOTE: Please check your router's User's Manual for detailed instructions on Port Forwarding)

Connect network cable between DVR and Router or ADSL modem.

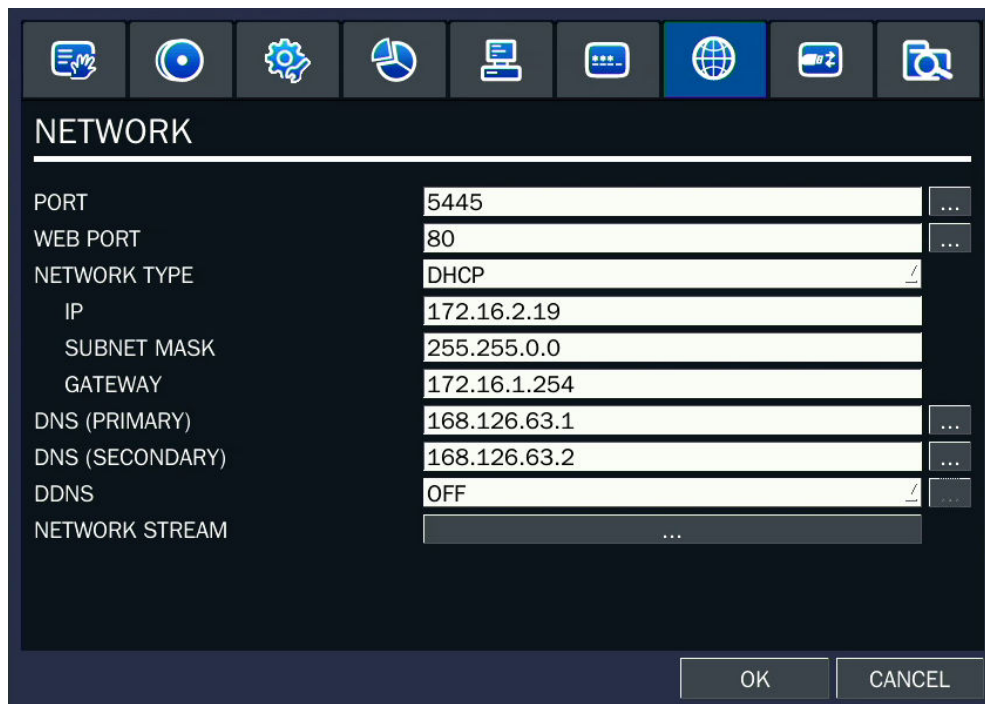


1. Default network setting on DVR are
 - Port: 5445
 - WEB Port : 80
 - Network : DHCP
2. From a PC connected to the same Router as the DVR, select start>run>cmd to open the command prompt. In the command prompt, type "ipconfig" to find the following information; IP Address, Subnet Mask, and Default Gateway.





3. Open the default DVR port 5445 and the Default Web Port 80 on the router if the DVR's NETWORK TYPE is set to DHCP. If the DVR's NETWORK TYPE is set the LAN, input the following information in the DVR; IP Address, Subnet Mask, and Default Gateway.



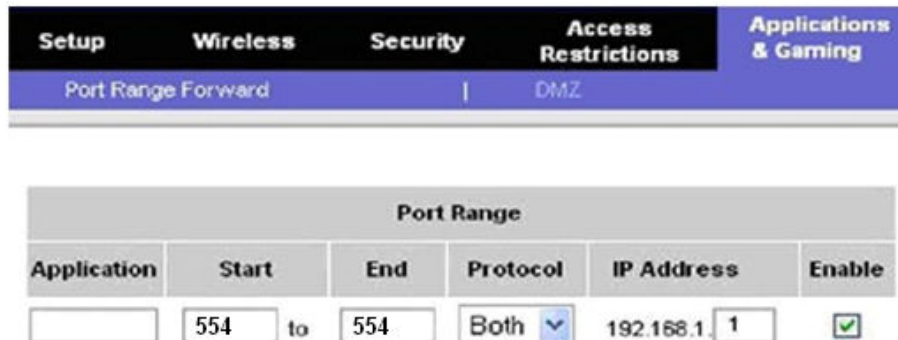
Open your web browser. Enter the router IP address in the address bar and press enter. (NOTE: The routers gateway will vary depending on the brand and model of the router, please refer to your routers user's manual)



4. Enter the user name and password and press the **OK** button. (NOTE: The username and password will vary depending on the brand and model of the router, please refer to your routers user's manual)



5. Select the Port Range Forwarding tab.



Port Range					
Application	Start	End	Protocol	IP Address	Enable
	554	to 554	Both	192.168.1.1	<input checked="" type="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.

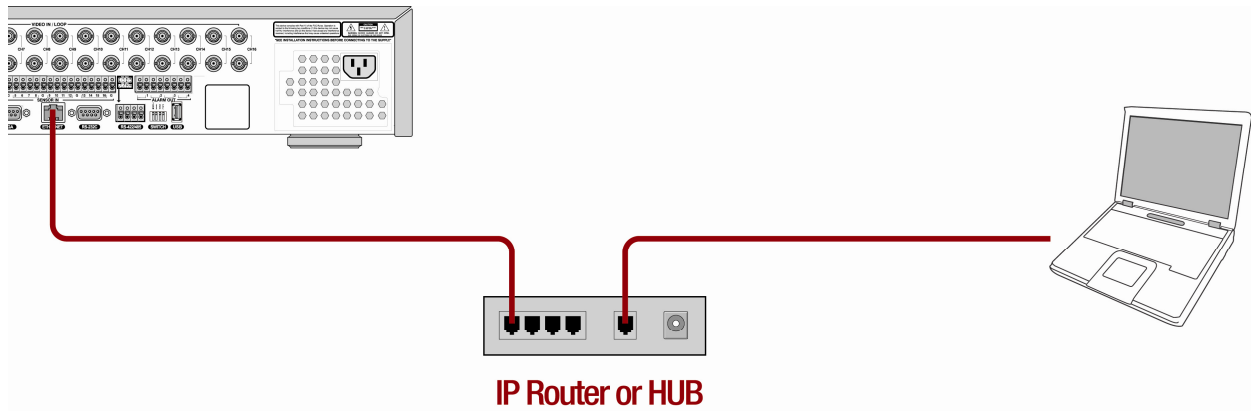


The site below shows steps for port forwarding for specific router models.
http://www.portforward.com/english/routers/port_forwarding/routerindex.htm

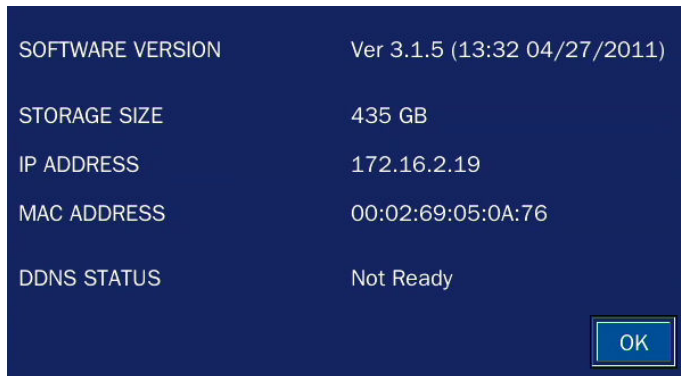
B. How to access DVR from a Remote PC?

LAN Connection – Using a Switching Hub

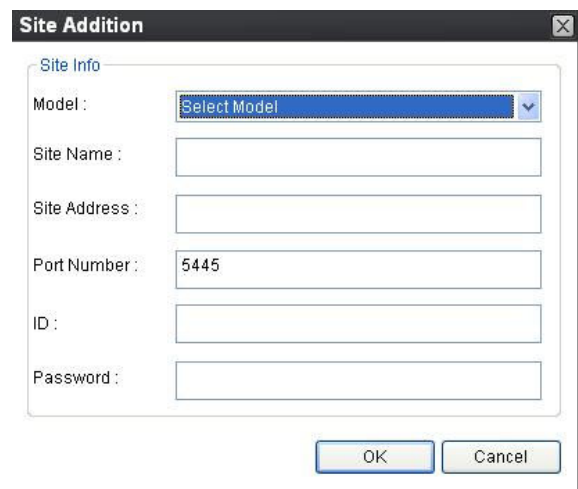
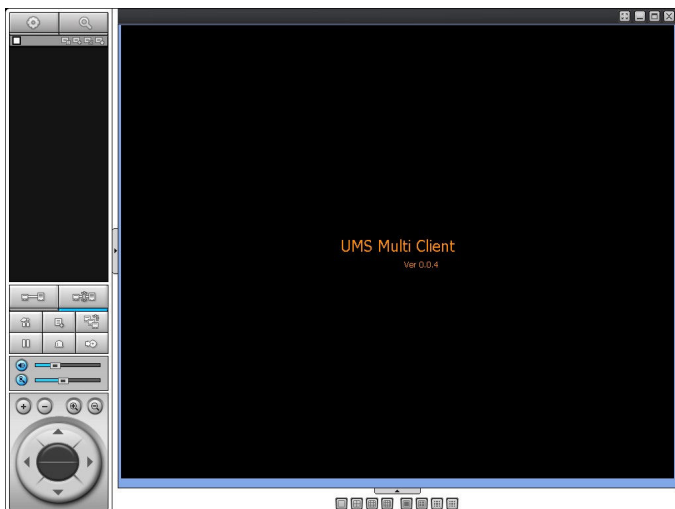
Connect an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN Cable) from the system to a router (hub)



1. Run the pre-install the network client software on the supplied CD.
2. Check the IP address from SETUP>SYSTEM>DESCRIPTION of DVR.

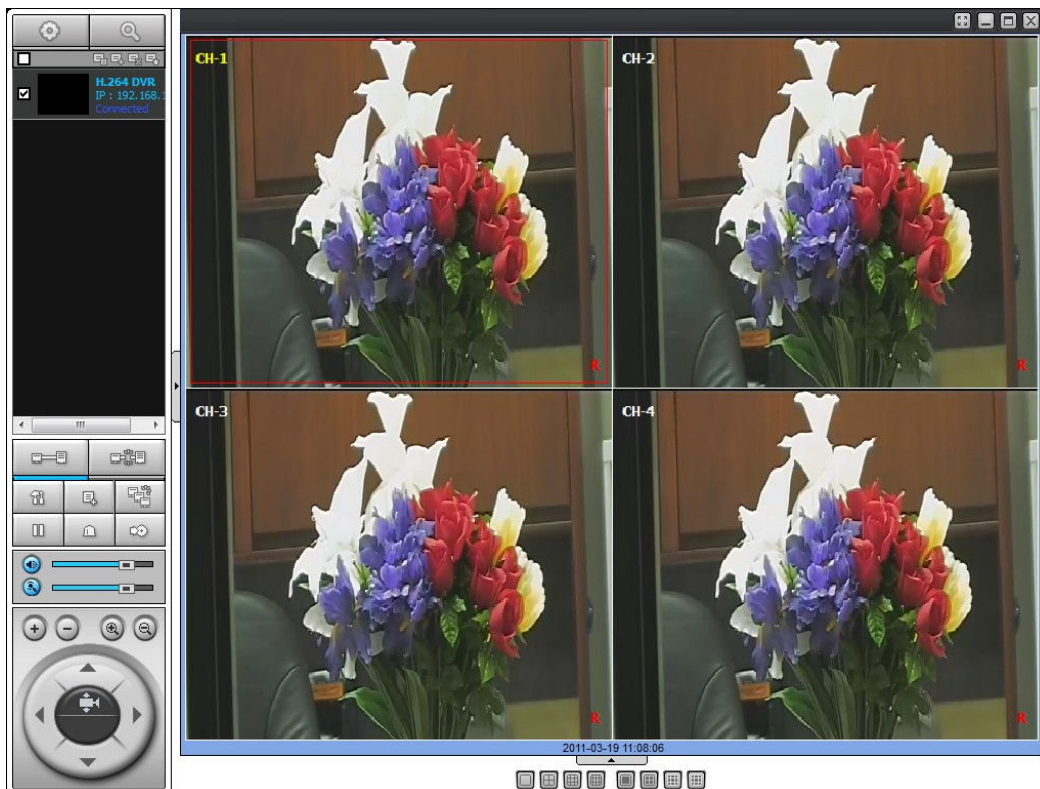


3. Run network client software and click  button.



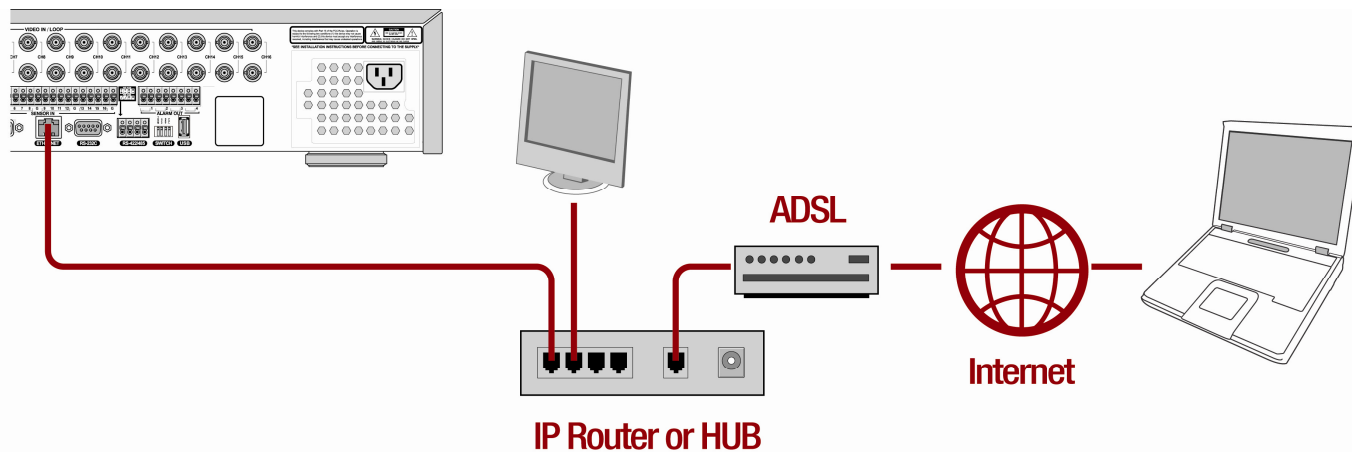
4. Input Site Name, Site Address (IP address), Port No., and Password on the connect window.
 - Site Name: Input a name that properly describes a site.
 - IP Address: Input IP address (Public IP address of a router that DVR is connected.) or Domain name that is registered at www.bestddns.com
 - Port No.: Input port number of DVR. **Default Port Number is "5445".**
 - ID: Input ID of DVR. **Default Port Number is "admin".**
 - Password: Input network password of DVR. **Default Port Number is "1111".**

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

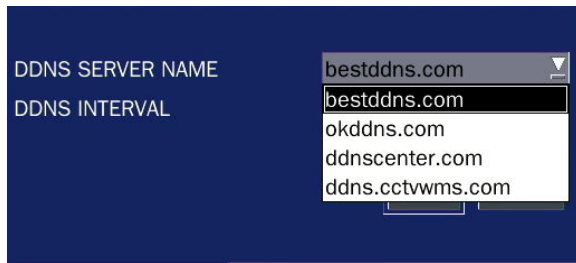


Internet (ADSL) Connection Using DDNS

Connect an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN Cable) from the system to a router (hub)



1. Go to SETUP>NETWORK. Set NETWORK TYPE as DHCP or LAN and set the DDNS SERVER to ON. **And select bestddns.com on DDNS1. (If a different DDNS server is selected, the DVR will not communicate with the DDNS server)**

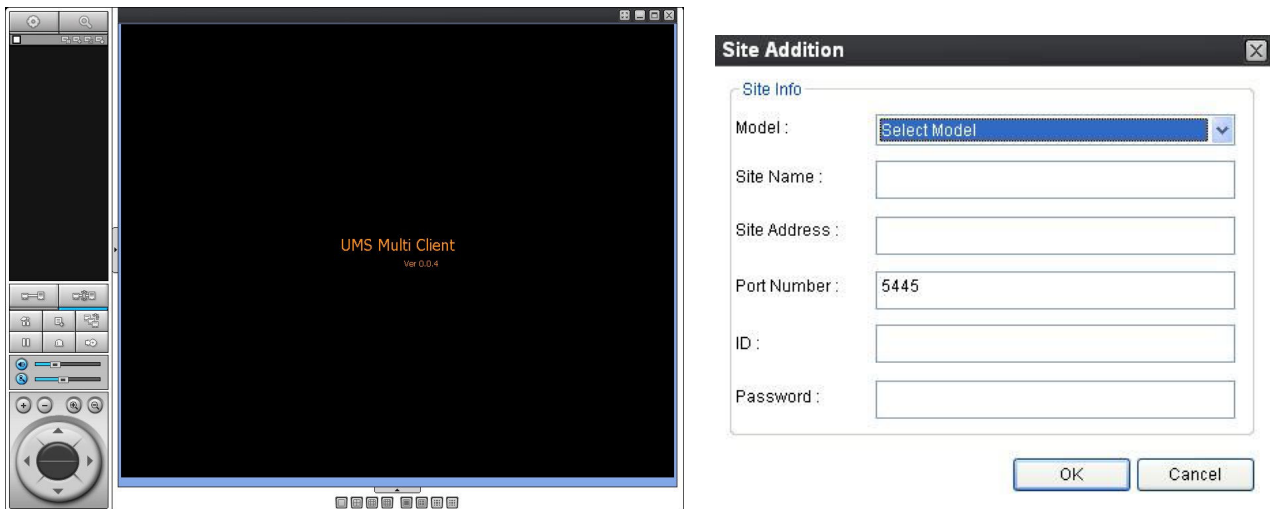


2. Open the TCP port 5445 and the Web Port 80 in the router. (Refer to A. How to set IP address of the DVR and open TCP port of the router?)
3. Confirm the Mac address and Serial Number from the DVR. (NOTE: The Mac Address and the Serial Number of the DVR can be found on the DVR unit's label)
4. Open the web browser and log on [http:// www.bestddns.com](http://www.bestddns.com)

- MAC Address: Input the Mac address of the unit (EX. 0002690XXXXX) without any spaces.
 - Serial Number: Input the Serial Number of the unit (EX. N1640Mxxxxxxxx) without any spaces.
 - Domain Name: Input Domain Name for your DVR system (NOTE: Letters A-Z, numbers 0-9 are only applicable. Do not enter symbols or spaces)
5. Click the DUPLICATION CHECK button to see if the domain name is available.
 6. If you see the screen "You can use the Domain name you entered" then click RETURN and click REGISTER button to complete the registration.
 7. Run the pre-install the network client software on the supplied CD.



8. Click  SITE ADDITION button to add the DVR.



- Site Name: Input a name that properly describes a site.
- IP Address: Input IP address (Public IP address of a router that DVR is connected.) or Domain name that is registered at www.bestddns.com
- Port No.: Input port number of DVR. **Default Port Number is "5445".**
- ID: Input ID of DVR. **Default Port Number is "admin".**
- Password: Input network password of DVR. **Default Port Number is "1111".**

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

