



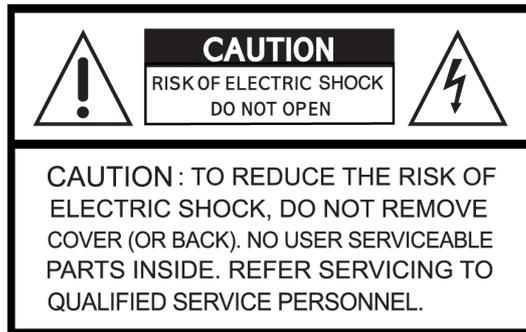
VT-H Series
4, 8, and 16 Channel Digital
Video Recorders with H.264
Compression



- 4 Video Inputs with 1 BNC & 1 VGA Outputs
- H.264 Compression
- Supports both Dynamic and Static IP Addresses
- Up to 120 IPS Recording / Live Display
- Remote Viewing over the Internet or LAN
- Supports one internal SATA Hard Drive
- 250GB to 1TB Internal Storage Options
- Quadplex operation enabling simultaneous recording, playback, networking, and backup
- 4 Alarm Inputs / 1 Relay Out
- Control locally via Included IR Remote
- Backup via Ethernet or USB

VITEK

SAFETY PRECAUTIONS



EXPLANATION OF SYMBOLS



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.



This symbol is intended to alert the user to the presence of unprotected "dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock persons.

WARNING

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

CAUTION

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

CAUTION

Danger of explosion if battery is incorrectly replaced.

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



WARNING

- Do not use if the unit emits smoke, strange sounds is heard, or odor is emitted.
- Make sure the power cable is not damaged.
- Make sure there is no dust accumulation on the power plug or the outlet.
- Disassembly prohibited
- Do not place any foreign objects inside the unit.
- Do not place a container holding water or other liquids above the unit when it is connected to power.

- Do not allow the unit to get wet.
- Do not use during thunder/thunder storms.
- Do not place in an unstable position.
- Do not expose to shock or vibration.
- Do not use this unit in areas where it is exposed to the possibility of explosion.



CAUTION

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

Precautions for supplied AC Adaptor



CAUTION

- Never disassemble or modify.
- Never get the adaptor wet.



CAUTION

- Use only the supplied AC adapter.
- Do not connect to other appliances.
- Do not connect this unit with the AC adapter in areas reachable to children or where pets move freely.
- Never touch the AC adapter with wet hands.
- If the unit emits smoke, strange sounds or smells immediately remove the AC adapter from the outlet.
- Do not use during thunder/thunder storms.

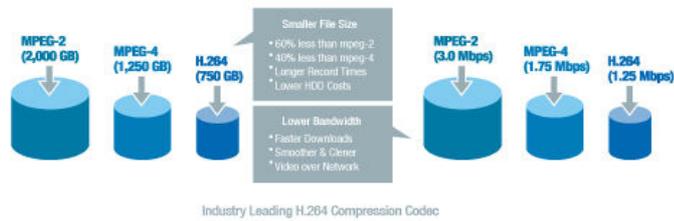


CAUTION

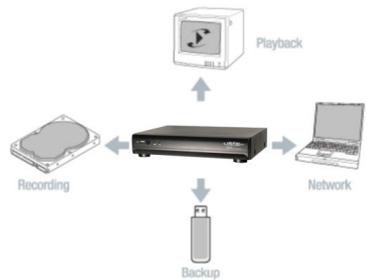
- Make sure the cable is connected properly to preventing damage to a cable

Main features

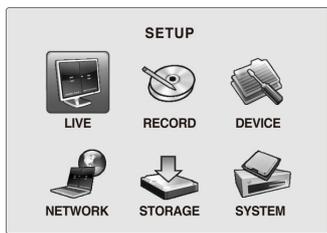
- H.264 Video compression



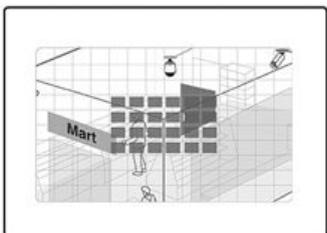
- QUADPLEX operation enabling simultaneous recording, playback, networking, and backup.



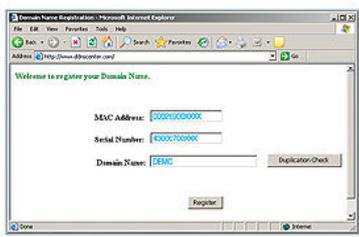
- Instant and convenient data backup & firmware upgrade using USB flash drive
- Simple user interface



- Individual channel setting and operation
- Motion detection record



- Free Dynamic DNS



System components and Installation

Requirements for installation and safety

This chapter is for the requirements for safe installation and use.

This kit should be installed on a flat table or in a rack..

The location in which the DVR is installed in the room is very important for proper operation of the system.

When the DVR is installed too closely together or the location is poorly ventilated, the DVR may not operate properly and maintenance of the DVR may be difficult. Make sure that the air should be sufficiently circulated within the system operating room and the cover of the main system must be tightly fastened to prevent malfunction.

There are high voltage parts inside. Do not open the cover during operation.

The DVR must be installed in a place that meets the following environmental conditions.

- Operating temperature: 5°C ~ 40°C (41°F ~ 104°F)
- Operating humidity: 30% ~ 90% RH
- Input voltage: DC +12V 5A
- Power usage: About 25Watts
- Frequency: 60Hz/50Hz

Main replacement parts

- Hard disk (When HDD is factory-installed.): 1 year (25°C environment)
- Cooling fan: 1 year (25°C environment)
- Battery: 2 years (25°C environment)

CAUTION

During the operation of this product, the fluctuation of input voltage must be within 10% of the rated voltage and the external power outlet must be grounded, otherwise, it may cause electric shock or malfunction of the product.

Do not connect heat-generating appliances to the same power outlet in which the product is plugged, otherwise it may cause a fire or malfunction of the product.

The use of an Automatic Voltage Regulator (AVR) is highly recommended to ensure that stable power is supplied.

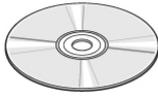
CAUTION

The HDD that is installed in DVR can be replaced or upgraded by and authorized VITEK Repair Center.

Warranty will be void if unit is opened by unauthorized personnel.

Components of DVR Package

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

<p>DVR Set</p>	
<p>Remote Controller</p>	
<p>Battery 1.5V (AAA x 2EA)</p>	
<p>Adaptor and Power cable</p>	
<p>Client Software CD</p>	
<p>User Guide</p>	

SPECIFICATIONS

ITEM		VT-H40 (4CH)	VT-H80 (8CH)	VT-H160 (16CH)	
	Input	Channel, Input Level	4CH, Composite	8CH, Composite	16CH, Composite
		Signal Format	NTSC/PAL		
Video		Video Loss Check	Yes		
	Output	Main Monitor Output	1 CH BNC, 1CH VGA: Selectable		
		Signal Format	NTSC/PAL & VGA		
Audio	Input & Output		-		
	Sensor Input ((NC/NO Selectable)		4	4	4
Alarm	Alarm Output		1 Alarm out by Alarm, Motion, Video Loss		
	Compression		H.264		
	Multi-operation		QUADPLEX (Playback/Record/Network/Backup)		
			352x240	352x240	352x240
	Resolution	NTSC		704x240	704x240
			704x480	704x480	704x480
			352x288	352x288	352x288
Record		PAL		704x288	704x288
			704x576	704x576	704x576
	Recording quality grade		Network, Economy, Normal, High, Fine		
	Recording Mode		Continuous / Schedule / Motion/ Sensor/ Manual		
	Motion Detection		Motion detection setup by Grid		
	Pre Recording		1 fps for 5 seconds before an event		
	Post Recording		10 seconds to 3 minutes after an event		
Display	Frame Rate (/Sec)		NTSC: 30fps/ch, 60 fields / PAL: 25fps/ch, 50 fields		
	Multi-Decoding		1, 4	1, 4, 9	1, 4, 9, 16
Playback	Playback Speed	Single channel	× 2, 4, 8		
		Multi-channels	× 2, 4		
	Search Mode		Timeline, Event, Archive, Log		
		Interface Type	Serial ATA I		
	HDD	Capacity	Up to 1TB		
Storage		Internal HDD	1	1	1
	File system		NaFS		
	Backup	USB Flash drive	Video & Still Image		
		Network	Video & Still Image		
	Menu Display		Text UI		
User I/F	Input Method		Remote control		
	PTZ control & Keyboard DVR control		-		
Network	Dynamic DNS		Yes (Free DDNS)		

	Network Interface	10/100 base-TX Ethernet (RJ-45)
Network Access	Client Software (1:1)	Live, Search, Backup
	Web viewer (1:1)	Live, Search, Backup
	Multi-sites Monitoring System (1:n)	Live, Search, Backup
	DLS (Day Light Saving)	Yes
	Internal Beep	By Alarm, Motion, Video Loss, HDD error
Features	Multi-Language	Yes
	S/W Upgrade	USB Flash drive
	Water - mark	Yes (Exclusive viewer)
Power	Power	DC 12V 3A(for 4CH), DC 12V 5A(for 8,16CH)
Weight	Unit Weight (Gross weight)	1.6 Kgs (3.1 Kgs) / 3.5 Lbs (6.8 Lbs)
Dimension	Unit Dimension (W x H x D)	340 mm x 262 mm x 63 mm / 13.4" x 10.3" x 2.5"

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1. NAME & FUNCTION

1-1. Front panel

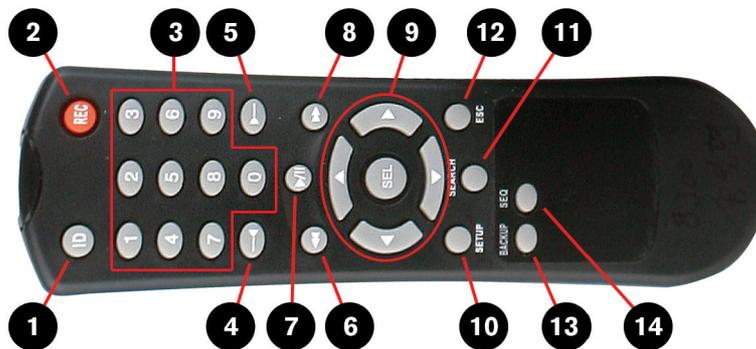


Figure 1.1 Front panel

Table 1.1. Front LED and Port

Name	Description
POWER	LED light is on when power is applied to the system.
HDD	LED light is on when the system is recording video data.
USB port	There is a USB port located on the left side of the front panel. This USB port is used to archive footage into a USB storage device. (USB 2.0 connector)

1-2. Remote control



-
- ① **ID:** When a remote control ID number is set in DVR, press it before number.
 - ② **REC:** To start and stop manual recording.
 - ③ **Number:** To select channel (1, 2, 3, & 4) or to enter DVR ID number.
 - ④ **F/REW: During playback** - To move the playback position 60 seconds backward.
During pause - To move the playback position 1 frame backward.
 - ⑤ **F/ADV: During playback** - To move the playback position 60 seconds forward.
During pause - To move the playback position moves 1 frame forward.
 - ⑥ **REW:** To rewind the footage at 1x, 2x, 4x, and 8x speed during playback.
 - ⑦ **PLAY/PAUSE:** To play or to pause the footage in playback mode.
 - ⑧ **FF:** To fast forward the footage at 1x, 2x, 4x, and 8x speeds during playback.
 - ⑨ **Control button:** Press to move the menu items or select channel.
 - ⑩ **SETUP:** To launch SETUP menu.
 - ⑪ **SEARCH:** To go to the search menu.

⑫ **ESC:** During setting - To return to previous menu screen.

During playback - To exit from playback.

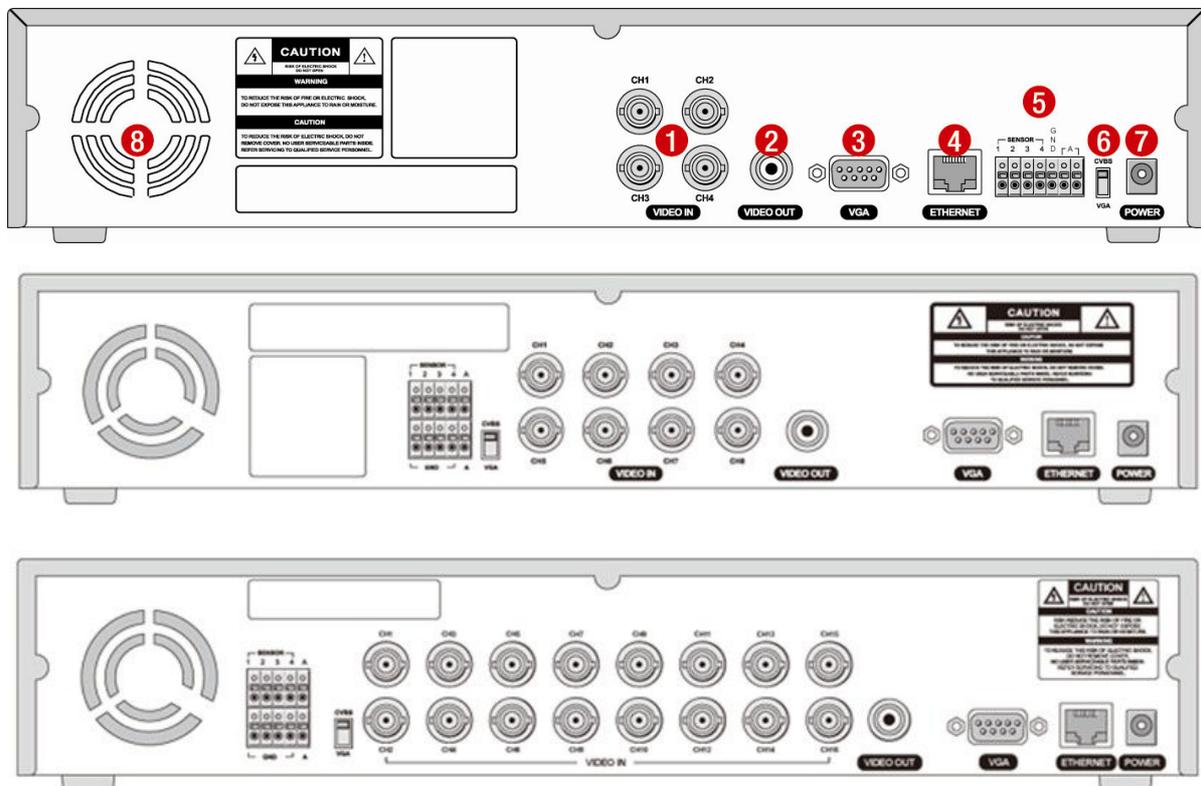
⑬ **BACKUP:** To start operations of backup in live or playback mode. (The same function button as CAPTURE on the front panel of DVR.)

⑭ **SEQ:** To start auto sequencing of the screen in full screen mode. (Toggle)

1-3. Rear panel and connection

1-3-1. Basic connections

- Do not power this system on before all the connections are completed.
- Make sure all the connections are properly. Faulty connection may result in the system being damaged.
- The DC plug of the AC adaptor is easy to be unplugged. Please make sure that the plug is removed.

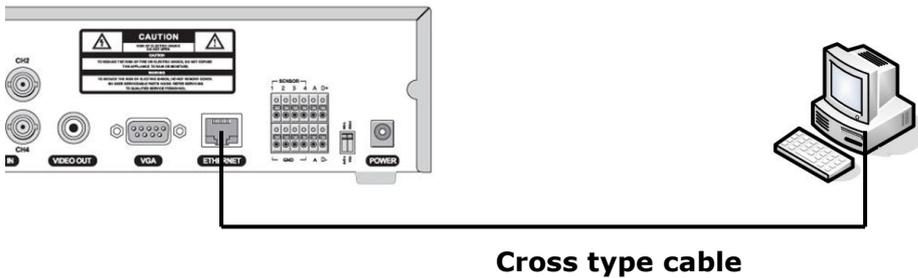


- ① VIDEO IN: Video input terminal
- ② VIDEO OUT: Video output terminal
- ③ VGA: VGA (Video Graphics Array) output terminal. Connects to the PC VGA monitor.
- ④ ETHERNET: Network terminal
- ⑤ SENSOR IN & ALARM OUT: External sensor terminal & External alarm out terminal
- ⑥ CVBS/VGA: System video output format switch
- ⑦ POWER: DC12V input terminal
- ⑧ Cooling fan

1-3-2. Network connections

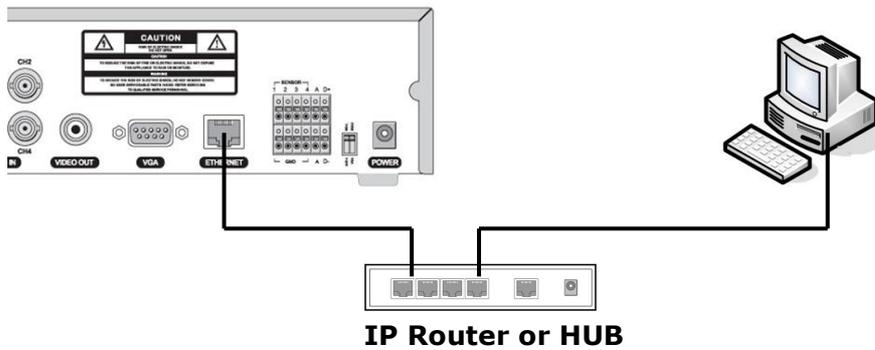
■ **LAN Connection – Using the cross cable, without a switching hub**

Connect to the system directly, using a cross type network cable



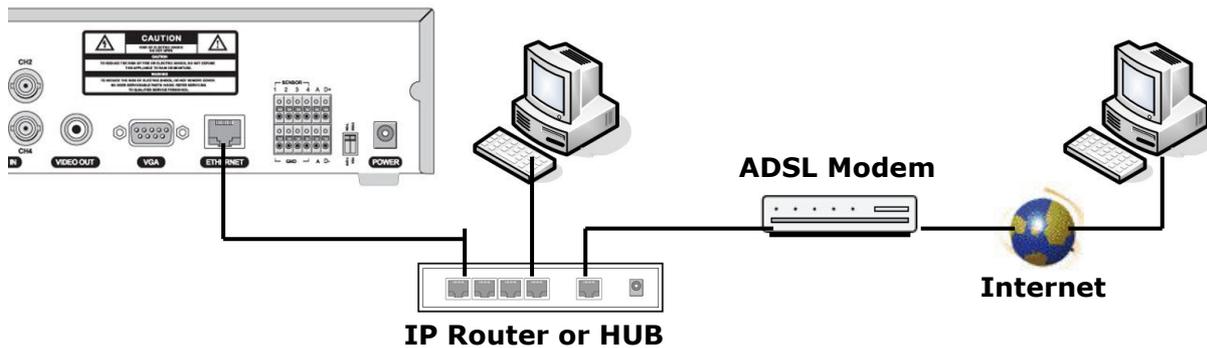
■ **LAN Connection – Using a switching hub**

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



■ **Internet (ADSL) Connection**

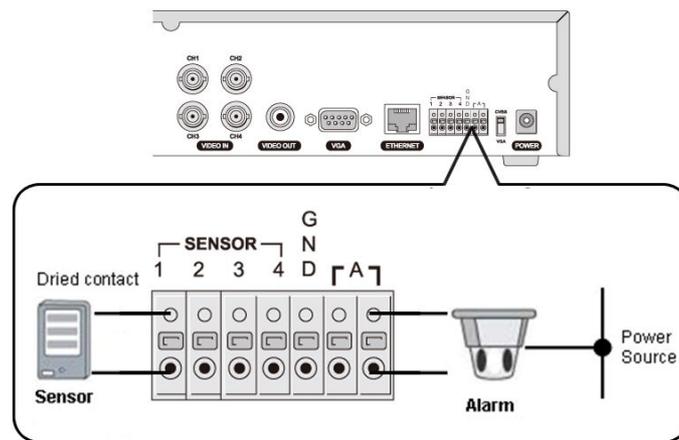
Connect to the system, using an Router or ADSL modem and an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN cable)



NOTICE

If you have a IP line with one IP address (whether it is dynamic IP or fixed IP), but you have more than one internet device (such as PC/PCs and a DVR); to use Router (It is different from a simple Network Hub); you must set up the Router to work with DVR; and you must use a network capable PC within the local Router network to do the setup. Whether you are using an existing Router or a new Router, you must go through the Port Forwarding portion of the setup.

1-3-3. Sensor and alarm connections



SENSOR INPUT: Connect two signal lines of sensor (infrared ray sensor, heat perception sensor, magnetic sensor) to the desired sensor number.

NOTICE
 SENSOR inputs need dried contact only. Do not input any electric signal.

---: Not operational

N/O: Normally open type sensor. When magnetic sensor is closed, sensor sends a signal.

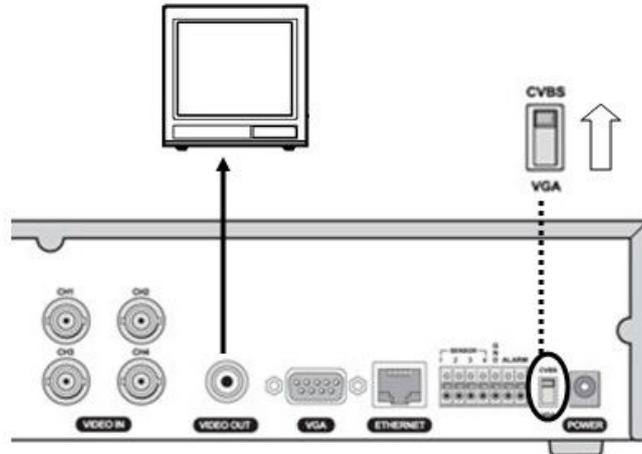
N/C: Normally closed type sensor. When magnetic sensor is opened, sensor sends a signal.

ALARM OUTPUT: Use **Maximum current: 0.5A/125VAC, Maximum voltage: 1A/30VDC**. When controlling lamp and AC operated equipment, control it using separate outside relay. During normal operation the control output contact is maintained at “Open” status, and during control output the output contact is changed to Closed(short)” status.

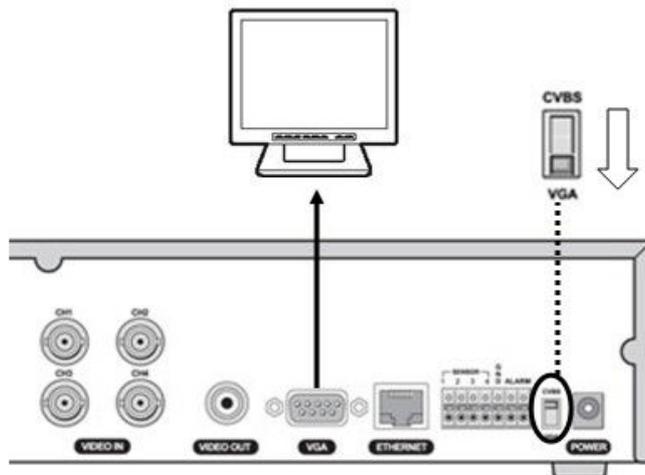
2. PREPARATION

2-1. Selecting the type of monitor (TV monitor and VGA monitor)

2-1-1. CVBS: Select CVBS to connect general TV monitor



2-1-2. VGA: Select VGA to connect computer VGA monitor

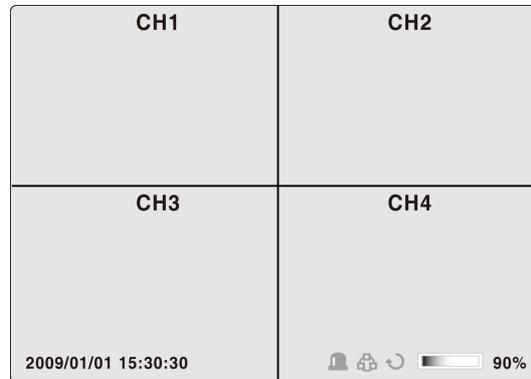


- The general TV monitor terminal and the computer VGA monitor terminal can not be used simultaneously.

2-2. Live screen

During the system is booting, "INITIALIZING" message is displayed. After the system booting is finished, the video inputs from the cameras are displayed.

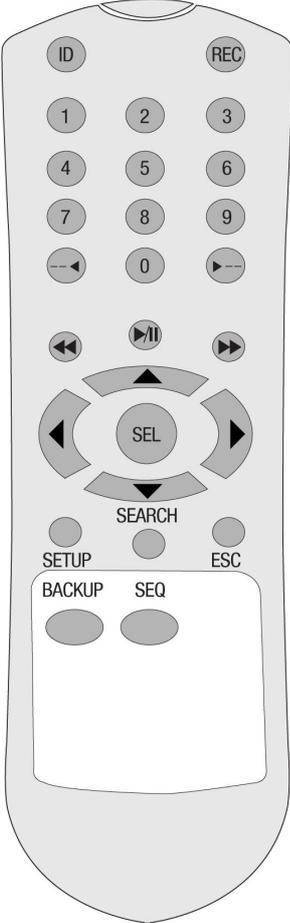
Various indicators showing the status of the DVR are shown as OSD symbols. These OSD and video display can be hidden.



Indicator	Description
C	Continuous recording in progress
R	Manual recording in progress
S	Sensor alarm recording in progress
M	Motion alarm recording in progress
	Indicates that alarm is detected
	Indicates that motion is detected
	Indicates that a network client is connected to the DVR.
	Indicates that sequencing mode is enabled.
	Indicates that remote control ID is not set.
 15%	Displays the amount of recording on the hard disk from 0-99%.

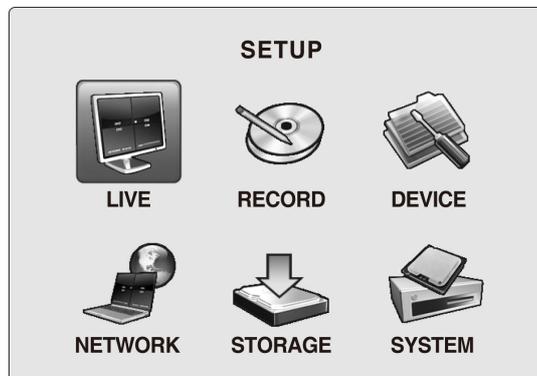
- If camera is not connected or the connector is not properly connected to video input terminal, "NO VIDEO" is displayed on the monitor.

Button functions of the remote control on the Live window

Image	Button	Description
	ID	ID for remote control
	REC	Set or release the manual recording mode
	Numbers	Numbers for remote control ID or channel
		Select channel to be displayed in full screen mode.
		Switch between full screen and quad display mode.
	SETUP	Press to launch SETUP menu.
	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 the previous menu screen.
	BACKUP	Press to capture a still image. The still image will be stored into hard drive. It can be transferred to the USB device.
	SEQ	Press to start auto sequencing of the screen in full screen mode. (Toggle)

2-3. Time setting

1. Press the SETUP button on the remote control. Press Up arrow button four times to enter "1111" (Default password) and press the SEL button. Then the SETUP screen is displayed. The password change is highly recommended to avoid any unauthorized usage.



2. Press the direction button to select the SYSTEM menu and press the SEL button.

SYSTEM	
DESCRIPTION	
DATA FORMAT	DD/MM/YYYY
SET DATE&TIME	
DLS	OFF
ADMIN PASSWORD	
NETWORK PASSWORD	
LANGUAGE	ENGLISH(ENGLISH)
LOAD DEFAULT	
LOAD FACTORY DEFAULT	
LOAD SETUP TO A USB	
LOAD SETUP FROM A USB	
USB UPGRADE	

3. Go to DATE FORMAT field using ▲▼ button and select the date format using ►◀ button.

- YYYY/MM/DD (Ex. 2008/5/6)
- YYYY-MM-DD (Ex. 2008-05-06)
- MM/DD/YYYY
- MM-DD-YYYY
- DD/MM/YYYY
- DD-MM-YYYY

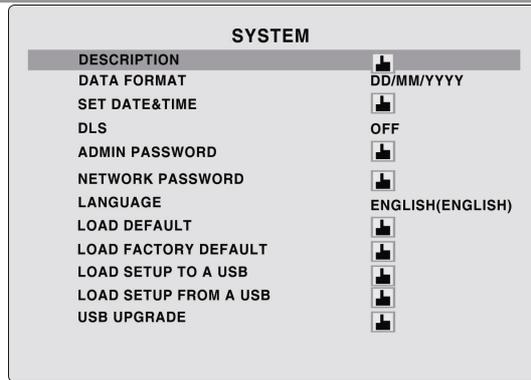
4. Go to DATE & TIME field using ▲▼ button and press the SEL button.

5. **NTP SERVER SET** - NTP is an abbreviation for Network Time Protocol, which is for synchronizing the clocks of computer systems over variable-latency data networks.

DATE & TIME	
NTP SERVER SET	OFF
PRIMARY NTP SERVER	kr.pool.ntp...
SECONDARY NTP SERVER	time.kriss.r...
TIME ZONE	GMT-12:00
CONNECTON MODE	INTERVAL
CONNECTION PERIOD	1
27 / 05 / 2009 18 : 35 :43	

- **PRIMARY NTP SERVER** - Input the address of the primary NTP time server.
- **SECONDARY NTP SERVER** - Input the address of the secondary NTP time server.
- **TIME ZONE** - Greenwich Mean Time(GMT) is a term originally referring to mean solar time at the Royal Observatory, Greenwich in London. Because NTP synchronizes with Greenwich Mean Time(GMT) regardless of geography, users must set their own time difference.
(Ex. KOREA GMT+09:00)
- **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

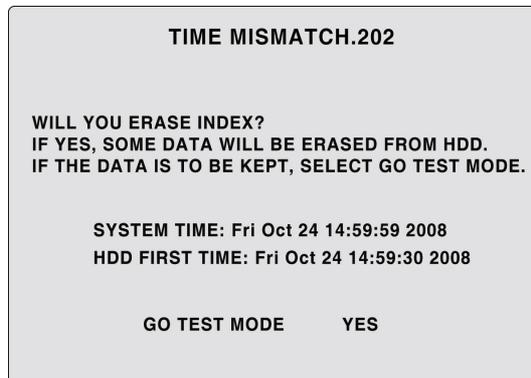
6. Select the date and time that is to be changed using ►◀ button, change a value using ▲▼ button, and press the SEL button. Then UPDATE DATE & TIME screen is displayed.



7. Select CONFIRM and press the SEL button. Then the system will reboot automatically showing “INITIALIZING...” message.

Setting in TIME MISMATCH

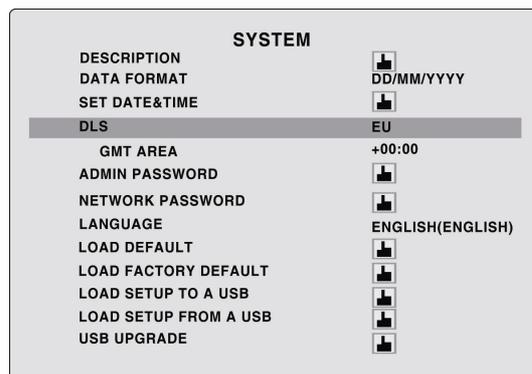
When the time of DVR is set earlier than the time of the last video data on HDD, the following message is displayed.



- Selecting “YES”: the video data between “SYSTEM TIME” and “HDD LAST TIME” will be deleted.
- Selecting “GO TEST MODE”: Select only the video data between “SYSTEM TIME” and “HDD LAST TIME” must not be deleted. Otherwise, do not select “GO TEST MODE”.

2-4. DLS (Day Light Saving) time setting

- **EU Territory** – When your time zone belongs to EU territory
 1. Go to SYSTEM>DLS field using ▲▼ button and select EU using ►◀ button.
 2. Go to GMT AREA field using ▲▼ button and select GMT time of your country from +00:00 to +05:00.



- **USA Territory** – When your time zone belongs to USA territory

1. Go to SYSTEM>DLS field using ▲▼ button and select USA using ►◀ button.

SYSTEM	
DESCRIPTION	
DATA FORMAT	DD/MM/YYYY
SET DATE&TIME	▮
DLS	USA
ADMIN PASSWORD	▮
NETWORK PASSWORD	▮
LANGUAGE	ENGLISH(ENGLISH)
LOAD DEFAULT	▮
LOAD FACTORY DEFAULT	▮
LOAD SETUP TO A USB	▮
LOAD SETUP FROM A USB	▮
USB UPGRADE	▮

- **Other Territory** – When your time zone does not belong to USA and EU territory

1. Go to SYSTEM>DLS field using ▲▼ button and select ETC using ►◀ button. Then the summer time setup fields are displayed.

SYSTEM	
DESCRIPTION	
DATA FORMAT	DD/MM/YYYY
SET DATE&TIME	▮
DLS	ETC
BEGIN	MAR 1st: SUN 00H
END	SEP 1st: SUN 00H
ADMIN PASSWORD	▮
NETWORK PASSWORD	▮
LANGUAGE	ENGLISH(ENGLISH)
LOAD DEFAULT	▮
LOAD FACTORY DEFAULT	▮
LOAD SETUP TO A USB	▮
LOAD SETUP FROM A USB	▮
USB UPGRADE	▮

2. Select BEGIN field using ▲▼ button and press the SEL button. Then DAYLIGHT SAVING BEGIN screen is displayed.
3. Select the date and time that is changed using ►◀ button, change a value using ▲▼ button, and press the SEL button.

DAYLIGHT SAVING BEGIN	
MAR 1st SUN 00H	

4. After exit from DAYLIGHT SAVING BEGIN field setting, select DAYLIGHT SAVING END field using ▲▼ button and press the SEL button. Then DLS BEGIN screen is displayed.
5. Select the date and time that is changed using ►◀ button, change a value using ▲▼ button, and press the SEL button.



3. OPERATION - RECORD

The system has 5 recording modes.

- **CONTINUOUS recording** – Recording continuously when the DVR is turned on.
C icon is displayed on the screen.
- **MOTION DETECTION recording** – Recording when the DVR detects motion from input video.
M icon is displayed on the screen.
- **SENSOR recording** – Recording when the external sensor of DVR is set off.
S icon is displayed on the screen.
- **SCHEDULE recording** – Recording according to the schedule setting.
- **None** – No recording
- **Manual recording by REC button** – Recording when the REC button of DVR is pressed.
R icon is displayed on the screen.

RECORD	
RESOLUTION	352 x 240
ALL CHANNEL CONFIG	
CHANNEL	1
FRAME RATE	30f/s
QUALITY	HIGH
RECORDING BY	NONE
PRE RECORD	ON
POST RECORD	5 SECONDS
AUDIO	OFF
SCHEDULE	

DEVICE	
CHANNEL	CH1
MOTION ZONE	FULL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	--
SENSOR	1
TYPE	--
ALARM	OFF
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
PTZ	
REMOTE CONTROL ID	0
BUTTON TONE	OFF

3-1. CONTINUOUS recording

CONTINUOUS recording setting is available for each channel. The DVR records automatically input video in CONTINUOUS recording mode as a factory default, unless RECORDING mode is changed.

- ① Set the basic record menu using ▲▼▶◀ buttons before setting Motion detection.
 - RESOLUTION
 - CHANNEL
 - FRAME RATE
 - QUALITY

Upon connecting cameras, the DVR records input video displaying C on the screen.

- ② To stop CONTINUOUS recording, go to RECORDING BY filed using ▲▼ button and select NONE using ►◀ button.

RECORD	
RESOLUTION	352 x 240
ALL CHANNEL CONFIG	▣
CHANNEL	1
FRAME RATE	30f/s
QUALITY	HIGH
RECORDING BY	NONE
PRE RECORD	ON
POST RECORD	5 SECONDS
AUDIO	OFF
SCHEDULE	▣

- ③ Repeat this step to set the other channel as necessary.
- ④ Press ESC button to go to SAVE SETUP and save the

3-2. MOTION DETECTION recording

A motion detection setting is available for each channel.

- ① Set the basic record menu using the direction buttons before setting Motion detection.

- RESOLUTION
- CHANNEL:
- FRAME RATE
- QUALITY

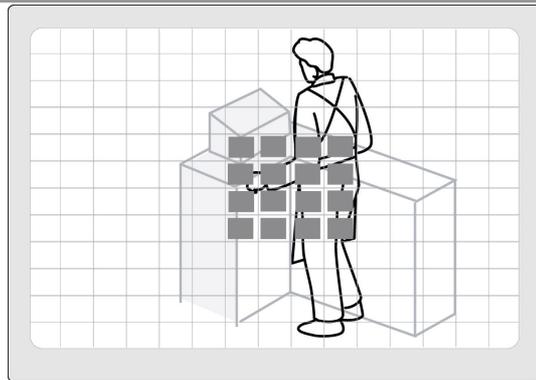
Upon Motion detection, the DVR records input video with these setting.

- ② To select a channel for motion detection recording, go to CHANNEL filed using ▲▼ button and select a channel from CH1, CH2, CH3, and CH4 using ►◀ button.
- ③ Go to RECORDING BY filed using ▲▼ button and select MOTION using ►◀ button.

RECORD	
RESOLUTION	352 x 240
ALL CHANNEL CONFIG	▣
CHANNEL	1
FRAME RATE	30f/s
QUALITY	HIGH
RECORDING BY	MOTION
PRE RECORD	ON
POST RECORD	5 SECONDS
AUDIO	OFF
SCHEDULE	▣

- ④ Go to DEVICE>CHANNEL>MOTION ZONE filed using ▲▼ button and select PARTIAL ZONE using ►◀ button.

DEVICE	
CHANNEL	CH1
MOTION ZONE	PARTIAL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	--
SENSOR	1
TYPE	--
ALARM	OFF
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
PTZ	
REMOTE CONTORL ID	0
BUTTON TONE	OFF



When FULL ZONE is selected, the DVR detects a motion from whole video screen. Set only MOTION SENSITIVITY.

- ⑤ Select the grids for motion detection using ▲▼▶◀button and SEL button. Then the selected grids are displayed in Pink color.
- ⑥ Go to MOTION SENSITIVITY using ▲▼ button and select the sensitivity using ▶◀button.

DEVICE	
CHANNEL	CH1
MOTION ZONE	PARTIAL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	--
SENSOR	1
TYPE	--
ALARM	OFF
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
PTZ	
REMOTE CONTORL ID	0
BUTTON TONE	OFF

⑦ Sensitivity grade: 9 –The highest sensitivity against motion / 1 – The lowest sensitivity against motion

When PRE RECORD is ON, the DVR records 1 fps for 5 seconds before any motion detection.

RECORD	
RESOLUTION	352 x 240
ALL CHANNEL CONFIG	
CHANNEL	1
FRAME RATE	30f/s
QUALITY	HIGH
RECORDING BY	SENSOR
PRE RECORD	ON
POST RECORD	5 SECONDS
AUDIO	OFF
SCHEDULE	

- ⑧ Go to POST RECORD using ▲▼ button and select the time as necessary using ►◀ button.

RECORD	
RESOLUTION	352 x 240
ALL CHANNEL CONFIG	▣
CHANNEL	1
FRAME RATE	30f/s
QUALITY	HIGH
RECORDING BY	SENSOR
PRE RECORD	ON
POST RECORD	5 SECONDS
AUDIO	OFF
SCHEDULE	▣

The available POST RECORD time: 5 to 60 seconds.

- ⑨ Repeat this step to set the other channel as necessary.
 ⑩ Press ESC button to go to SAVE SETUP and save the setting

3-3. SENSOR recording

Sensor is connected to each channel and be used a recording trigger.

- ① Connect a sensor to a sensor terminal on the rear of the DVR. (Refer to page 18)
 ② Set the basic record menu using ▲▼►◀ buttons before setting Sensor recording.
- RESOLUTION
 - CHANNEL
 - FRAME RATE
 - QUALITY

Upon sensor sends a signal to the DVR, the DVR records input video displaying S on the screen.

- ③ To select a channel for sensor triggered recording, go to CHANNEL filed using ▲▼ button and select a channel from CH1, CH2, CH3, and CH4 using ►◀ button.
 ④ Go to RECORDING BY filed using ▲▼ button and select SENSOR using ►◀ button.
 ⑤ Go to DEVICE>CHANNEL>SENSOR RECORDING using ▲▼ button and select the number of sensor that is linked with the video channel using ►◀ button.

DEVICE	
CHANNEL	CH1
MOTION ZONE	PARTIAL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	1
SENSOR	1
TYPE	--
ALARM	OFF
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
PTZ	▣
REMOTE CONTORL ID	0
BUTTON TONE	OFF

- ⑥ Go to PRE RECORD using ▲▼ button and select ON or OFF as necessary using ►◀ button.
 ⑦ Go to POST RECORD using ▲▼ button and select the time as necessary using ►◀ button.
 ⑧ Repeat this step to set the other channel as necessary.

⑨ Press ESC button to go to SAVE SETUP and save the setting.

Alarm setting on activation of event such as motion, sensor, video loss, & HDD fail

When an event is activated, a relay signal triggers the external alarm device.

- ① Connect an external alarm device to the alarm out terminal (Refer to page 18)
- ② Go to DEVICE>ALARM filed using ▲▼ button and select OFF, SENSOR, MOTION, VIDEO LOSS, HDD FAIL, or ALL as necessary using ►◀ button.

DEVICE	
CHANNEL	CH1
MOTION ZONE	PARTIAL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	1
SENSOR	1
TYPE	--
ALARM	SENSOR
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
PTZ	
REMOTE CONTORL ID	0
BUTTON TONE	OFF

③ Go to ALARM/BEEP DURATION using ▲▼ button and select alarm/beep duration as necessary using ►◀ button.

DEVICE	
CHANNEL	CH1
MOTION ZONE	PARTIAL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	1
SENSOR	1
TYPE	--
ALARM	SENSOR
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
PTZ	
REMOTE CONTORL ID	0
BUTTON TONE	OFF

④ Press ESC button to go to SAVE SETUP and save the setting.

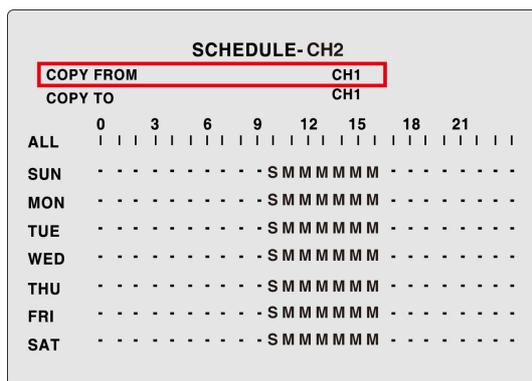
3-4. Manual recording

- ① To start manual recording, press REC button. Then, “R” is displayed on the screen and the DVR starts recording of every channels.
- ② To stop manual recording, press REC button. Then, “R” disappears on the screen and the DVR stops recording of every channel.

3-5. SCHEDULE recording

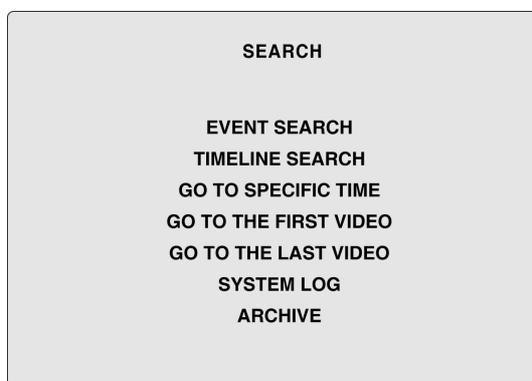
- ① Set the basic record menu using ▲▼►◀ buttons before setting Schedule.
 - RESOLUTION
 - CHANNEL
 - FRAME RATE
 - QUALITY

button. Then the CH1 SCHEDULE recording setting is copied to CH2.



4. OPERATION - PLAYBACK

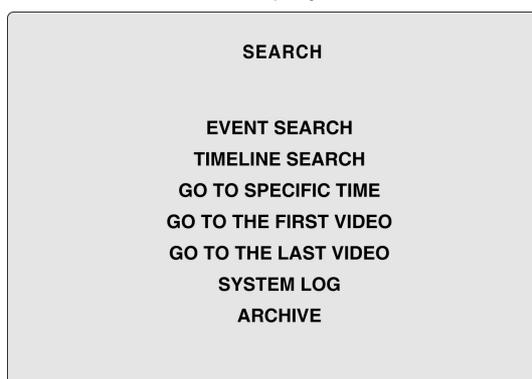
The system has 7 methods of searching a recorded video.



- **EVENT SEARCH** – Searching through the calendar, channel, and recording mode.
- **TIMELINE SEARCH** – Searching through the calendar and the timeline.
- **GO TO SPECIFIC TIME** – Searching through selecting the date and time.
- **GO TO THE FIRST VIDEO** – Searching the oldest recorded video.
- **GO TO THE LAST VIDEO** – Searching the last recorded video.
- **SYSTEM LOG** – View the system log data.
- **ARCHIVE** – Searching the archived JPEG or video data through the calendar.

4-1. EVENT SEARCH

① Press SEARCH button. Then SEARCH menu is displayed.



② Go to EVENT SEARCH and press SEL button. Then SEARCH screen is displayed.



③ Select the date, a channel, and the type of recording mode using ▲▼▶◀ buttons and SEL button.

A: Showing all the recorded data list of every type of recording mode

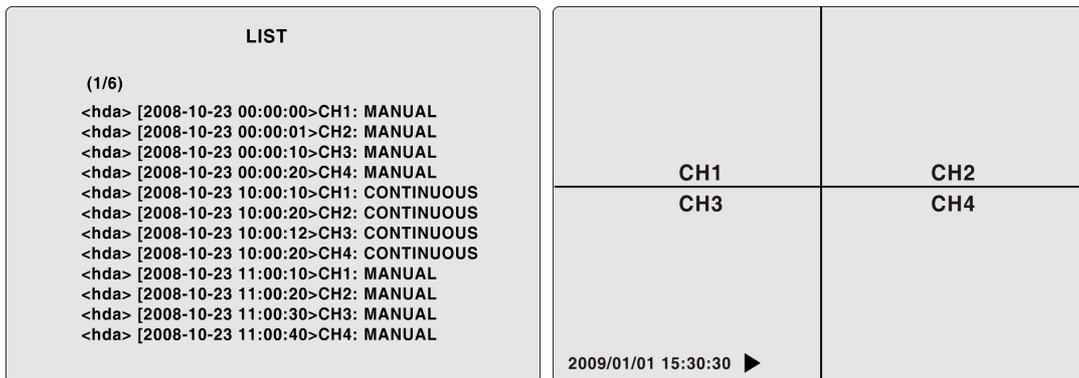
M: Showing the recorded data list by motion detection. (BY MOTION)

S: Showing the recorded data list by sensor detection. (BY SENSOR)

R: Showing the recorded data list by manual recording.

C: Showing the recorded data list by continuous record. (BY CONTINUOUS)

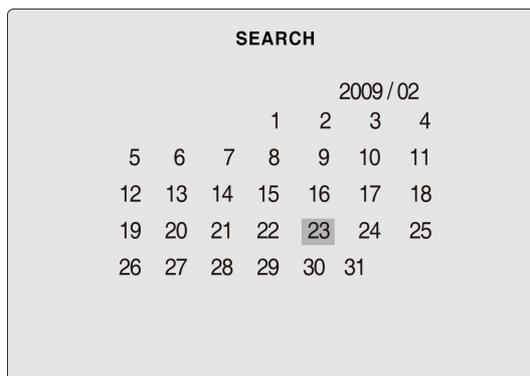
④ Select one of the recording data list using ▲▼ buttons and SEL button. To change pages of the recording data list, use ▶◀ buttons. Then, playback starts.



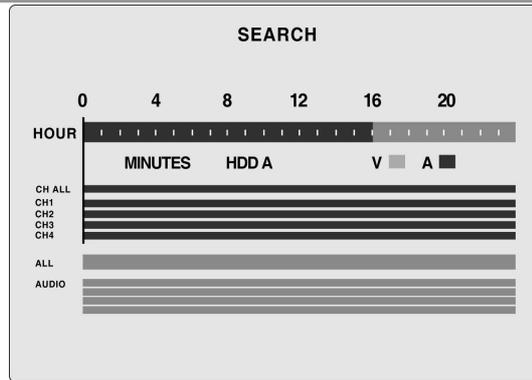
4-2. TIMELINE SEARCH

① Press SEARCH button. Then SEARCH menu is displayed.

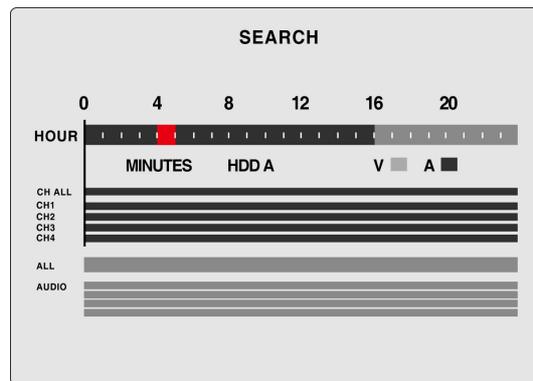
② Go to TIMELINE SEARCH and press SEL button. Then SEARCH calendar screen is displayed.



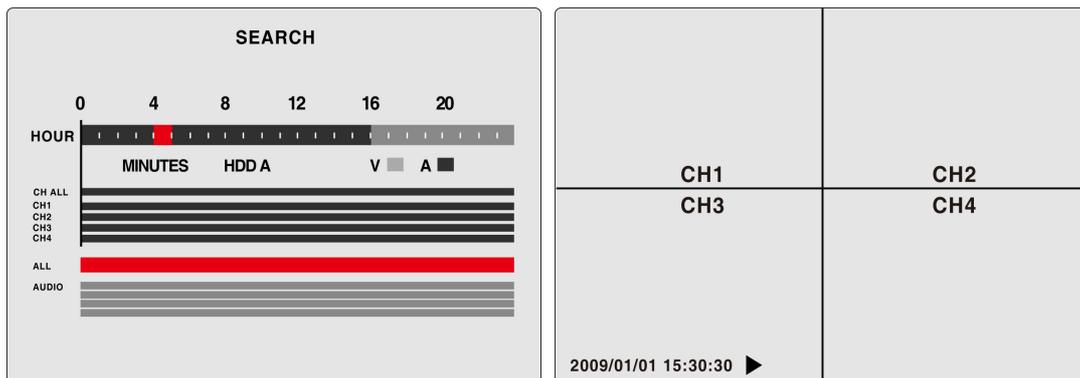
③ Select the date using ▲▼▶◀ buttons and SEL button. Then Timeline screen is displayed.



④ Move the vertical Yellow line to the time between 0 to 24 HOUR using ►◀ buttons and SEL button.



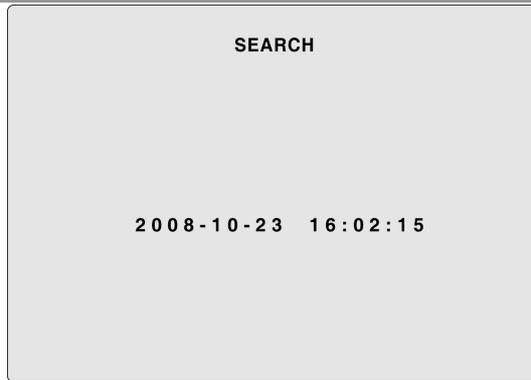
⑤ Move the vertical Yellow line to the time between 0 to 60 MIN using ►◀ buttons and SEL button. Then, playback starts.



4-3. GO TO SPECIFIC TIME

① Press SEARCH button. Then SEARCH menu is displayed.

② Go to GO TO SPECIFIC TIME and press SEL button. Then SEARCH screen is displayed.



- ③ Select the date and time using ▲▼▶◀ buttons and press SEL button.
- ④ Then, playback starts. When there is no recorded data, the closest data to the selected time is played back.

4-4. GO TO THE FIRST VIDEO

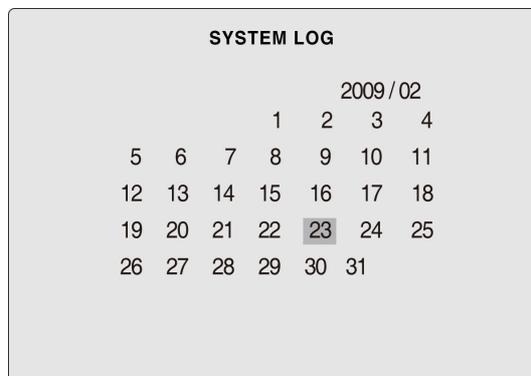
- ① Press SEARCH button. Then SEARCH menu is displayed.
- ② Go to GO TO THE FIRST VIDEO and press SEL button. Then, playback of the oldest recorded video data starts.

4-5. GO TO THE LAST VIDEO

- ① Press SEARCH button. Then SEARCH menu is displayed.
- ② Go to GO TO THE LAST VIDEO and press SEL button. Then, playback of the last recorded video data starts.

4-6. SYSTEM LOG

- ① Press SEARCH button. Then SEARCH menu is displayed.
- ② Go to SYSTEM LOG and press SEL button. Then SYSTEM LOG calendar screen is displayed.



CAPTURE KEY: BACKUP LOG – User can back up the system log of the selected date to USB memory stick.

- ③ Select the date using ▲▼▶◀ buttons and press SEL button. To change pages of the log data list, use ▶◀ buttons. Then, log list screen of the date is displayed.



4-7. ARCHIVE

The archived still-images or video on the Live screen or Playback screen can be searched and played back.

- ① Press SEARCH button. Then SEARCH menu is displayed.
- ② Go to ARCHIVE and press SEL button. Then ARCHIVE calendar screen is displayed.



- ③ Select the date using ▲▼▶◀ buttons and press SEL button. Then ARCHIVE LIST screen is displayed.



- ④ Select one of the archived data list using ▲▼ buttons and press SEL button. To change pages of the archived data list, use ▶◀ buttons. Then, the archived still-image or the first frame of video data is displayed.

5. OPERATION - BACKUP TO USB FLASH DRIVE

JPEG and video can be backed up to USB flash drive.



When USB flash drive cannot be recognized, please try to format USB flash drive as FAT

- Archiving and backup JPEG in Live mode – JPEG image can be archived on HDD and be backed up to USB flash drive in live mode.
- Archiving and backup VIDEO in Playback mode – JPEG, AVI, or EXCLUSIVE VIDEO can be archived on HDD and be backed up to USB flash drive in playback mode.
- Backup JPEG, AVI, or EXCLUSIVE VIDEO from ARCHIVE search – JPEG, AVI, or EXCLUSIVE VIDEO can be backed up from ARCHIVE search menu.
- Playback of AVI or EXCLUSIVE VIDEO – AVI can be played back using Media Player software. EXCLUSIVE VIDEO can be played back using the exclusive viewer.



When the selected list is video, VIDEO TYPE screen is displayed.

- AVI: When AVI is selected, the video is backed up as AVI format.
- EXCLUSIVE VIDEO: When this is selected, the video is backed up as an exclusive video format that can be played back using the exclusive viewer.

5-1. Archiving and backup JPEG in Live mode

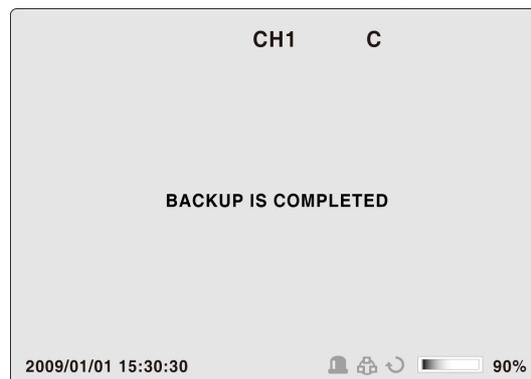
- ① Connect a USB flash drive to the USB terminal.
- ② Press BACKUP button at the scene to be backed up. “JPEG IMAGE IS ARCHIVED ON HDD” is displayed.



- ③ Then SAVING screen with backup status bar is displayed after “CHECKING USB” message.



- ④ After the backup is done, “BACKUP IS COMPLETED” message is displayed.



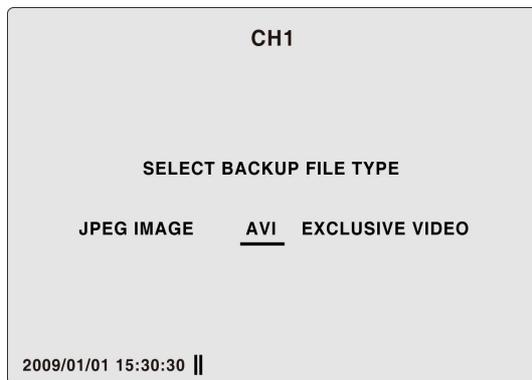
- ⑤ When the DVR cannot recognize USB thumb drive or no USB thumb drive is connected to the USB terminal, “PLEASE CHECK BACKUP DEVICE” message is displayed.

5-2. Archiving and backup VIDEO in Playback mode

- ① Connect a USB flash drive to the USB terminal.
- ② Press SEARCH button and go to the video to be backed up.

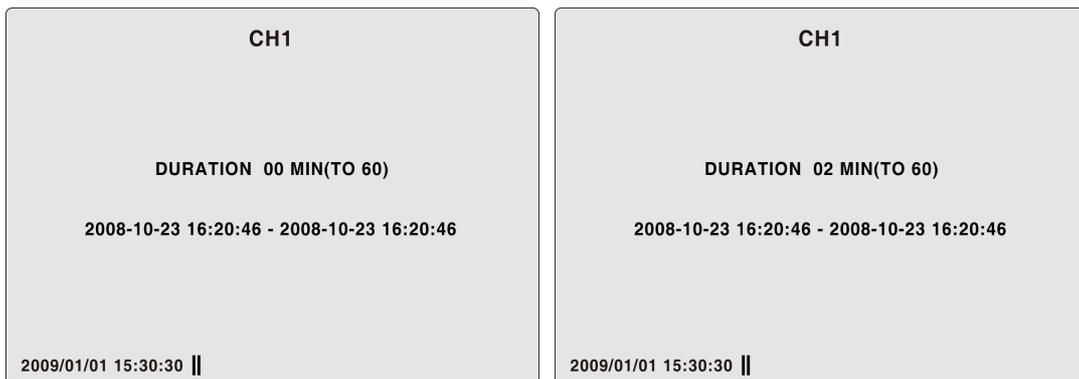


③ Press BACKUP button at the scene of video to be backed up. Then SELECT BACKUP FILE TYPE screen is displayed. Select a file type from JPEG, AVI, or EXCLUSIVE VIDEO using ►◀ buttons and press SEL button. Then DURATION screen is displayed.

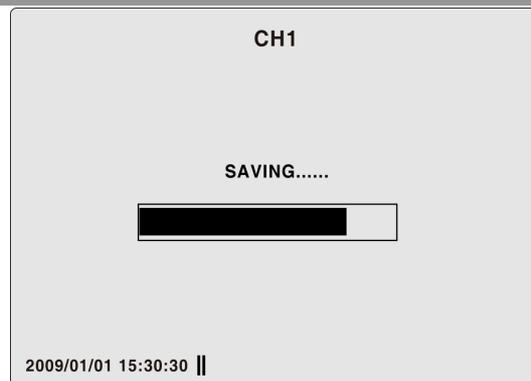


When JPEG IMAGE is selected, please take the same backup procedure as 5-1. ③

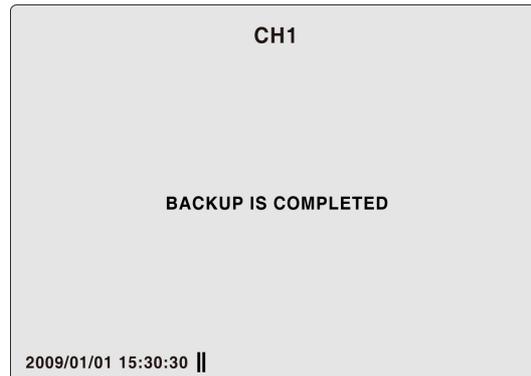
⑤ Set the duration to be archived and backed up from the scene of video using ▲▼ buttons and press SEL button.



⑥ Then SAVING screen with backup status bar is displayed.

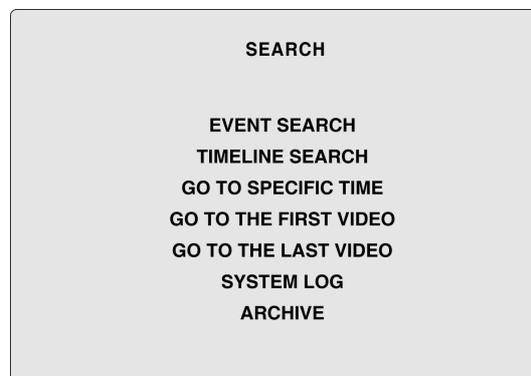


- ⑦ After the backup is done, “BACKUP IS COMPLETED” message is displayed.



5-3. Backup JPEG, AVI, or EXCLUSIVE VIDEO from ARCHIVE search

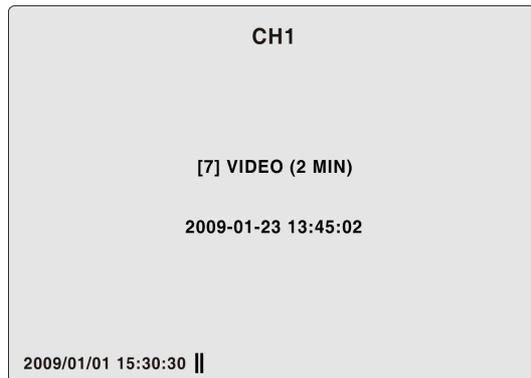
- ① Press SEARCH button. Then SEARCH screen is displayed.



- ② Go to ARCHIVE field using ▲▼ buttons and press SEL button. Then ARCHIVE search calendar is displayed. Select the date in Red using ▲▼▶◀ buttons and SEL button. Then LIST screen is displayed.

ARCHIVE												LIST
2009 / 02												
				1	2	3	4					
5	6	7	8	9	10	11						(1/1)
12	13	14	15	16	17	18						[2009/01/23 13:43:02] LIVE JPEG
19	20	21	22	23	24	25						[2009/01/23 13:41:02] LIVE JPEG
26	27	28	29	30	31							[2009/01/23 13:45:02] VIDEO (2 MIN)
												[2009/01/23 13:49:02] VIDEO (3 MIN)

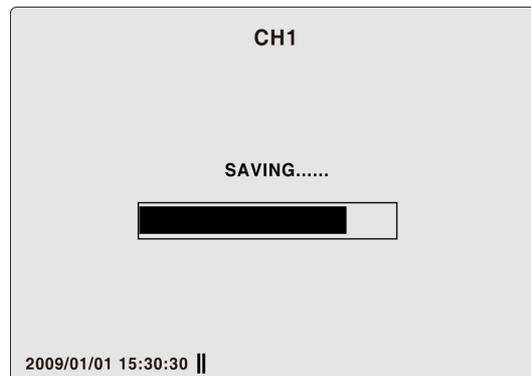
③ Select VIDEO from a list using ▲▼ buttons and SEL button. Then a paused image or the first scene of the video is displayed.



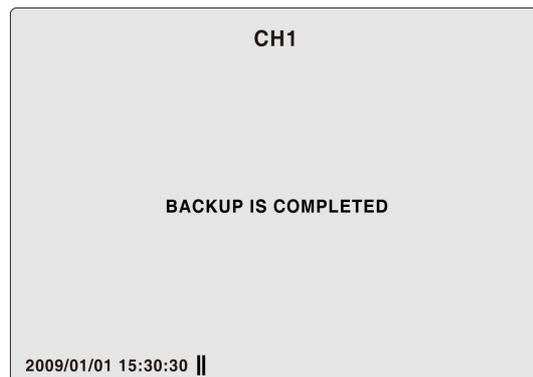
④ Press BACKUP button.

⑤ Select AVI or EXCLUSIVE VIDEO using ►◀ buttons and press SEL button.

⑥ Select USB FLASH DRIVE using ►◀ buttons and press SEL button. Then SAVING screen with backup status bar is displayed.



⑦ After the backup is done, "BACKUP IS COMPLETED" message is displayed.



5-4. Playback of AVI or EXCLUSIVE VIDEO

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

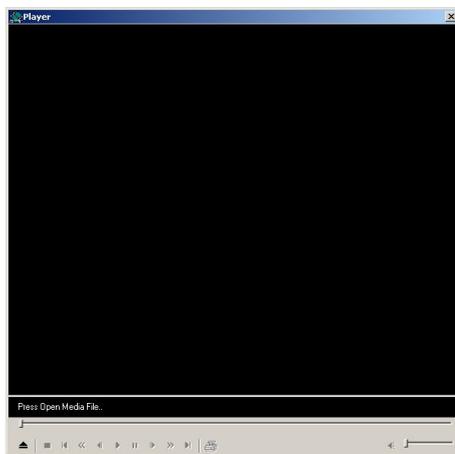
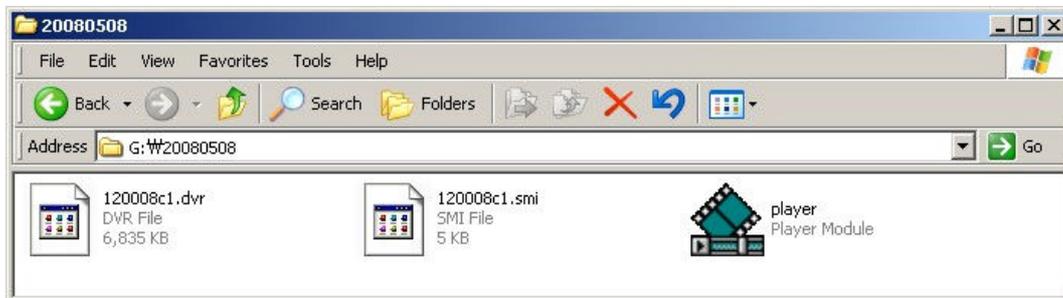
When PC doesn't have proper H.264 CODEC, the media players can not playback the AVI format video. Then install CODEC that is provided on the CD-ROM.

- **DVR (Exclusive video format):** DVR format video can be played back by the player (the exclusive

viewer) that the DVR copies on USB thumb drive with video.

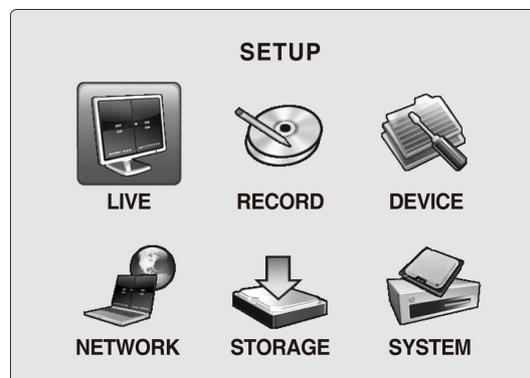
Three files are copied on USB thumb drive

- DVR file: Exclusive format video file.
- SMI file: Title file of date and time.
- PLAYER: Exclusive video viewer.

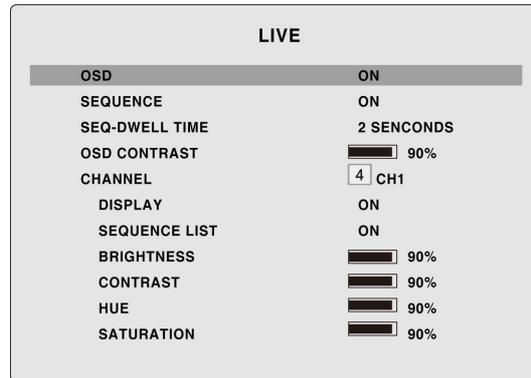


6. SETUP

Press the SETUP button on the remote control, then the password window is displayed. The default password is 1111, which can be entered by pressing the up button 4 times and then pressing the SEL button. After input password, the SETUP screen is displayed.



6-1. LIVE



Item	Description
OSD	Enable/disable OSD (on-screen-display).
SEQUENCE	Enable/disable sequential display of video channels in full screen mode.
SEQ-DWELL TIME	Dwell time for each channel display in sequential display mode.
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD)
CHANNEL	Select the channel for applying the following settings.
DISPLAY	Enable/disable display of the video channel in live display mode
SEQUENCE LIST	Enable/disable the specified channel to be included in sequential list.
BRIGHTNESS	Change the brightness value for the specified channel
CONTRAST	Change the contrast value for the specified channel
HUE	Change the hue value for the specified channel
SATURATION	Change the saturation value for the specified channel

OSD – Select ON/OFF using ►◀ buttons.

ON: OSD (on-screen-display) such as the time, date, the channel, and the characters and symbols are displayed on the screen.

OFF: OSD (on-screen-display) is NOT displayed, except recording indicator icons.

SEQUENCE – Select ON/OFF using ►◀ buttons.

ON: Channel in full screen mode is rotated.

OFF: Channel on a single live screen is NOT rotated.

SEQ-DWELL TIME – Select channel sequence interval time using ►◀ buttons.

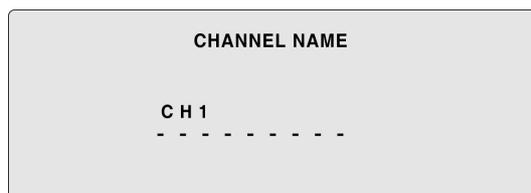
Setting values: 1, 2, 3, 4, ~ 56, 57, 58, 60 seconds.

OSD CONTRAST – Set the contrast of OSD on the screen using ►◀ buttons.

Setting values of the display bar: 20% (the most transparent) ~ 100%

Renaming of CHANNEL

- ① Select CHANNEL using ►◀ buttons and press SEL button. Then the CAMERA TITLE screen is displayed.



② Input characters using ▲▼▶◀ buttons.



Setting of CHANNEL - Select CHANNEL to set the video setting as bellows using ▶◀ buttons

DISPLAY – Select ON/OFF using ▶◀ buttons.

ON: The live screen of the channel is displayed.

OFF: The live screen of the channel is NOT displayed.

SEQUENCE LIST – Select ON/OFF using ▶◀ buttons.

ON: The channel is included in sequencing channels.

OFF: The channel is NOT included in sequence list.

BNRIGHTNESS – Set the brightness of the channel using ▶◀ buttons.

Setting values of the display bar: 0% ~ 100% (The most brightness)

CONTRAST – Set the contrast of the channel using ▶◀ buttons.

Setting values of the display bar: 0% ~ 100% (The most contrast)

HUE – Set the hue of the channel using ▶◀ buttons.

Setting values of the display bar: 0% ~ 100%

SATURATION – Set the saturation of the channel using ▶◀ buttons.

Setting values of the display bar: 0% ~ 100%

6-2. RECORD



Menu item	Description
RESOLUTION	Set the resolution to either 704x480(NTSC)/704x576(PAL), or 352x240(NTSC)/352x288(PAL).
ALL CHANNEL CONFIG	Set the values for all channels at once. (FRAME RATE, QUALITY, RECORDING, PRE REC, and POST REC)
CHANNEL	Select the channel for applying the following settings.
FRAME RATE	Set the frame rate for the specified channel. The sum of the frame rate values from each channel cannot exceed maximum frame rates for a particular recording resolution. The maximum frame rate: - 120/100fps - 352x240(NTSC)/352X288(PAL) - 30/25 fps - 704x480(NTSC)/704X576(PAL)
QUALITY	Select the recording quality for the specified channel from NETWORK, ECONOMY, NORMAL, HIGH, FINE.
RECORDING BY	Assign the recording mode for each channel. Recording modes: CONTINUOUS, MOTION, SENSOR, SCHEDULE, and NONE.
PRE RECORD	Enable/disable pre-event recording. Pre-event recording time is 5 sec and only intra-frames are recorded for pre-event recording.
POST RECORD	Set post event recording time duration for the specified channel
SCHEDULE	Set recording schedule.

RESOLUTION – Select the resolution for the recording using ► ◀ buttons.

352x240: The input video is recorded as 352x240 resolution.

704x240: The input video is recorded as 704x240 resolution.

704x480: The input video is recorded as 704x480 resolution.

The resolution setting is applied to every channel.

ALL CHANNEL CONFIG – Set the values for all channels at once.

(Frame rate, Quality, Recording by, Pre record, Post record)

Setting of CHANNEL - Select CHANNEL to set the recording setting as bellows using ► ◀ buttons

FRAME RATE – Set the frame rate value using ► ◀ buttons.

The total frame rate when resolution is 704X480(NTSC) / 704X576(PAL): 30/25

The total frame rate when resolution is 352X240 (NTSC) / 352X288(PAL): 120/100

QUALITY – Select the quality of the recording video using ► ◀ buttons.

Setting values: FINE, HIGH, NORMAL, ECONOMY, and NETWORK (default: HIGH)

RECORDING BY – Select the recording mode using ► ◀ buttons.

CONTINUOUS: The input video is recorded when the DVR is turned ON.

MOTION: The input video is recorded when the motion is detected.

SENSOR: The input video is recorded when the external sensor is activated.

SCHEDULE: The input video is recorded according to SCHEDULE setting.

NONE: The input video is NOT recorded.

PRE RECORD – Select ON/OFF of the pre-recording on the event using ►◀ buttons.

ON: The 1ips of video for 5 seconds is recorded before the event (motion detection or sensor activation).

OFF: No pre-recording.

POST RECORD – Set the recording time after the event using ►◀ buttons.

Setting values: 5 ~ 30 seconds

SCHEDULE – Set the recoding schedule of each channel.

6-3. DEVICE

DEVICE	
CHANNEL	CH1
MOTION ZONE	PARTIAL ZONE
MOTION SENSITIVITY	9(HIGHEST)
SENSOR RECORDING	--
SENSOR	1
TYPE	--
ALARM	OFF
BEEP	OFF
ALARM/BEEP DURATION	5 SEC
REMOTE CONTORL ID	0
BUTTON TONE	OFF

Item	Description
CHANNEL	Select the channel for applying the following settings.
MOTION ZONE	Select Full Zone or Partial Zone for motion sensing.
MOTION SENSITIVITY	Set the motion sensitivity for the specified channel.
SENSOR RECORDING	Select the channel to link with sensor.
SENSOR	Select the sensor for applying the following settings.
TYPE	Set the type of sensor for the specified channel from none, NOEMAL OPEN & NORMAL CLOSE
ALARM	Select from OFF, SENSOR, MOTION, VIDEO LOSS, HDD FAIL, & ALL..
BEEP	Select from OFF, SENSOR, MOTION, VIDEO LOSS, HDD FAIL, & ALL...
ALARM/BEEP DURATION	Set alarm and beep duration
REMOTE CONTROL ID	Select the ID of remote control.
BUTTON TONE	Enable / Disable the sound tone of front buttons.

CHANNEL - Select CHANNEL to set the recording setting as bellows using ►◀ buttons

MOTION ZONE – Select the motion zone type using ►◀ buttons.

FULL ZONE: The motion on the whole screen is detected.

PARTIAL ZONE: The motion on the pre-set detection grid is detected.

MOTION SENSITIVITY – Set the level of motion detection sensitivity using ►◀ buttons.

SENSOR RECORDING – Select the sensor to link with the recording channel using ►◀ buttons..

SENSOR - Select a sensor to set the type using ►◀ buttons

TYPE – Select the external sensor type using ►◀ buttons.

---: No operation NOEMAL OPEN: Normal open type sensor NORMAL CLOSE:
Normal close type sensor

ALARM - Select an event to link with alarm using ►◀ buttons.

- OFF: An event signal is NOT linked with the external alarm.
- SENSOR: A sensor event signal is linked with the external alarm.
- MOTION: An event signal of sensor is linked with the external alarm.
- VIDEO LOSS: An event signal of video loss is linked with the external alarm.
- HDD FAIL: An event signal of HDD failure is linked with the external alarm.
- ALL: Every event signal is linked with the external alarm.

BEEP - Select an event to link with beep using ►◀ buttons.

- OFF: An event signal is NOT linked with the internal beep.
- SENSOR: A sensor event signal is linked with the internal beep.
- MOTION: An event signal of sensor is linked with the internal beep.
- VIDEO LOSS: An event signal of video loss is linked with the internal beep.
- HDD FAIL: An event signal of HDD failure is linked with the internal beep.
- ALL: Every event signal is linked with the internal beep.

ALARM/BEEP DURATION - Select the length of alarm and beep output using ►◀ buttons.

Setting values: 5 / 6 / 7 ~ 57 / 58 / 59 / 60 seconds

REMOTE CONTROL ID (Example: Number 3)

① Select REMOTE CONTROL ID using ▲▼ buttons and select the ID number from 3 using ►◀ buttons. And exit from the setup menu.

② Press the ID button on the remote control and press a number 3 button. Then  icon is displayed on the screen.

BUTTON TONE - Enable / Disable the sound tone of front buttons using ►◀ buttons.

6-4. NETWORK

NETWORK	
PORT	5445
WEB PORT	80
CLIENT ACCESS	ON
BANDWIDTH SAVING	ON
NETWORK TYPE	DHCP
DDNS	OFF
SEND E-MAIL	

Item	Description
PORT	Individual port for network streaming when connecting the DVR to a multiple unit network. (Default: 5445)
WEB PORT	Port for Web Viewer, default : 80
CLIENT ACCESS	Enable/Disable remote access through client software.
BANDWIDTH SAVING	Enable/Disable only key frame transmission when the network bandwidth is not enough.
NETWORK TYPE	Set the type of network connection. Options are: LAN, DHCP, ADSL Default : DHCP
DDNS	Enable/disable using domain name address through DDNS server.
SEND E-MAIL	Send an e-mail notification with captured image when event happened.

PORT

- ① Select PORT using ▲▼ buttons and press SEL button. Then the SET PORT screen is displayed.
- ② Input a port number using ▲▼▶◀ buttons and press SEL button.

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

Network access beyond Router

In order to access beyond Router (Firewall), user must open 1 TCP port that is set on NETWORK > PORT for Command, Live steaming, and Search streaming. If this port is not open properly, user can not access DVR beyond a router. (Example: When NETWORK/PORT is set as 5445, 5445 TCP port of IP address of DVR must be open.)

Notice for remote backup

User must open 1 additional TCP port for remote backup as AVI format. If this port is not open properly, the remote backup function does not work. (Example: When NETWORK/PORT is set as 5445, 5446 TCP port of IP address of DVR must be open.)

If DVR sets port number with 5445, TCP port of 5445 on router should be opened.

WEB PORT - Input a web port number using ▲▼ buttons.

SET WEB PORT

8 0

Web viewer Network access beyond Router

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

CLIENT ACCESS – Select ON/OFF using ►◀ buttons.

ON: Remote access through client software is allowed.

OFF: Remote access through client software is NOT allowed.

BANDWIDTH SAVING – Select ON/OFF using ►◀ buttons.

ON: Only a key frame is transmitted. Favorable for use of low network bandwidth.

OFF: Every frame is transmitted. Mostly, set “OFF” for normal use..

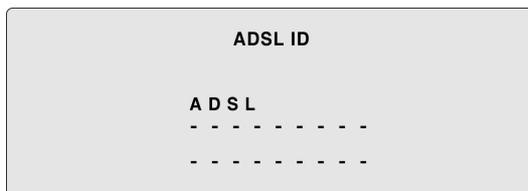
Setting of NETWORK TYPE - Select NETWORK TYPE using ►◀ buttons.

DHCP – DVR automatically get IP varying from time to time from network.

An IP address is automatically assigned by the DHCP server, which automatically assigns IP address and other parameters to new devices. When ADSL or other network being used adopts variable IP method, not fixed IP. This option is used as a way to automatically get IP address.

ADSL

- ① Select ID using ▲▼ buttons and press SEL button.
- ② Input the registered ID that is necessary for ADSL connection using ▲▼►◀ buttons and press SEL button.



- ③ Select PASSWORD using ▲▼ buttons and press SEL button.
- ④ Input the registered PWSSWORD that is necessary for ADSL connection using ▲▼►◀ buttons and press SEL button.
- ⑤ Press ESC button. Then the APPLY NETWORK ADDRESS screen is displayed.



- ⑥ Select CONFIRM using ►◀ buttons and press SEL button. Then the DVR reboots automatically.

Use this ADSL (PPPoE) function when the network type connected to the DVR is PPPoE method. If ADSL type is not using inputting IP and Password like VDSL or DVR is installed in IP sharer, a user can not select this function. In this case, a user should select DHCP or LAN.

LAN

- ① Select IP ADDRESS using ▲▼ buttons and press SEL button. Then the IP ADDRESS input screen is displayed.
- ② Input the IP address that is assigned for the DVR using ▲▼▶◀ buttons and press SEL button.

<p>IP ADDRESS</p> <p>172.016.001.052</p>

- ③ Repeat ② for the GATEWAY, SUBNETMASK, and DNS as necessary.

<p>SUBNET MASK</p> <p>255.255.000.000</p>
<p>GATEWAY</p> <p>000.000.000.000</p>
<p>DNS SERVER IP ADDRESS</p> <p>172.016.001.220</p>

- ④ Press ESC button. Then the APPLY NETWORK ADDRESS screen is displayed.
- ⑤ Select CONFIRM using ▶◀ buttons and press SEL button. Then the DVR reboots automatically.

1. Regarding to the use of fixed IP please ask your network administrator if you do not have this information.
2. When DVR is installed in IP sharer that is connected with ADSL, a user can assign fixed IP to DVR from IP sharer itself using "DMZ" function out of such sharer.

Setting of DDNS – Select ON/OFF using ▶◀ buttons.

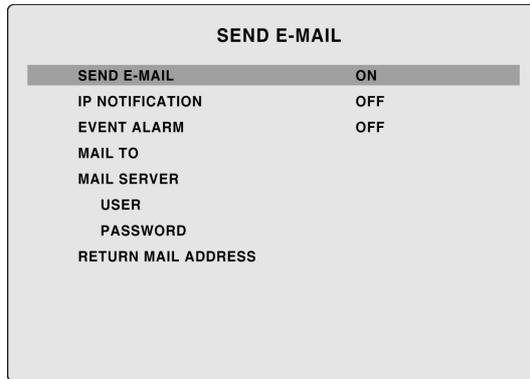
ON: The network access by the pre-registered domain name address that is pre-registered on www.ddnscenter.com is allowed. DDNS SERVER NAME appears.

OFF: The network access by the pre-registered domain name address that is pre-registered on www.ddnscenter.com is NOT allowed.

CAUTION: Do not change this sever name, ddnscenter.com. If this is changed, the DDNS service cannot be used.

Send E-mail – Using ►◀ buttons, select ON. Then the SEND E-MAIL screen is displayed.

Using ▲▼ buttons, set up mail information



IP NOTIFICATION: Enable/disable sending information on IP address of DVR when it is changed

EVENT ALARM: Enable/disable sending e-mail reports when event alarm occurred.

MAIL TO: Enter the appropriate email address to enable sending daily e-mail reports.

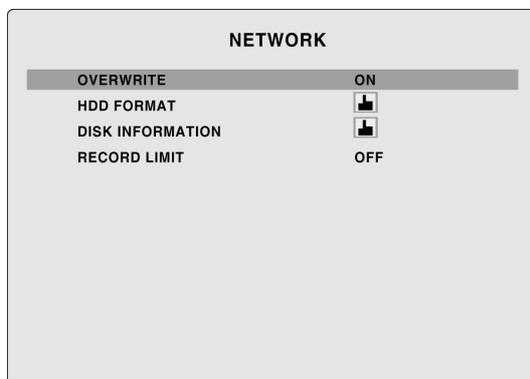
MAIL SERVER NAME: Enter the appropriate email server information to enable sending daily e-mail reports.

USER: Enter the ID of email address.

PASSWORD: Enter the password of email address.

RETURN MAIL ADDRESS: Enter the e-mail address for return email. When e-mail does not deliver or not work properly, the return email will be delivered to this e-mail address.

6-5. STORAGE



Item	Description
OVERWRITE	Enable/Disable Overwrite existing old video data when hard disk drive is full
HDD FORMAT	Format hard disk drive
DISK INFORMATION	Shows the HDD information
RECORD LIMIT	Set the limit days for recording to the hard disk drive from 1 to 60 days

OVERWRITE – Select ON/OFF using ►◀ buttons.

ON: When the HDD is fully recorded, former video data is deleted to record the new video data.

OFF: When the HDD is fully recorded, the recording stops.

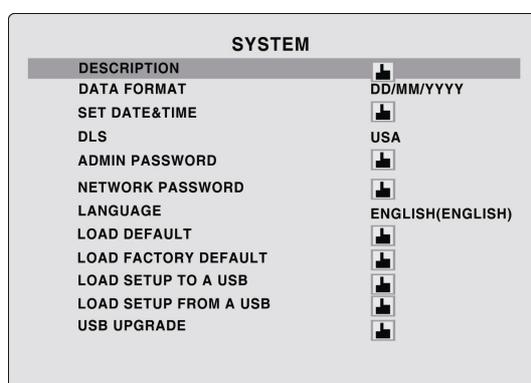
HDD FORMAT

- ① Select FORMAT using ►◀ buttons and press SEL button. Then the FORMAT screen is displayed.
- ② Select CONFIRM using ►◀ buttons and press SEL button. Then the “FORMATTING” message is displayed and HDD formatting starts.
- ③ After HDD formatting is completed, the DVR reboots automatically.

DISK INFORMATION – Shows the HDD information.

RECORD LIMIT – Select the day using ►◀ buttons.

Setting values: 1 / 2 / 3 / 4 ~ 57 / 58 / 59 / 60 days.

6-6. SYSTEM

DESCRIPTION	Press SEL to see system information.
DATE FORMAT	Select the preferred date and time display.
SET DATE & TIME	Set the NTP SERVER and present date and time.
DLS	Set DLS (Daylight Saving).
ADMIN PASSWORD	Set the password for the administrator. The default password is 1111.
NETWORK PASSWORD	Set the password of network client. The default password is 1111.
LANGUAGE	Select a language.
LOAD DEFAULT	Choose OFF or ON. If selecting ON, press the SEL button to load defaults.
LOAD FACTORY DEFAULT	Select ON to reset the system to the factory default settings.
SAVE SETUP TO A USB	User can save the current menu setting value to the USB memory stick.
LOAD SETUP FROM A USB	User can upload the menu setting value of DVR to another DVR using the USB Memory stick.
USB UPGRADE	The firmware of DVR can be upgraded through USB port

DESCRIPTION – Select DESCRIPTION using ▲▼ buttons and press SEL button.

MAIN BOARD VERSION: Displays the version of the system main board.

FIRMWARE VERSION: Displays the version of the system firmware.

STORAGE SIZE: Displays the capacity of the HDD.

IP ADDRESS: Displays the IP address of the DVR.

MAC ADDRESS: Displays the MAC address of the DVR.

DATE FORMAT – Refer to “2-3. Time setting”

SET DATE & TIME – Refer to “2-3. Time setting”

DLS – Refer to “2-4. DLS (Day Light Saving) time setting”.

ADMIN PASSWORD – Select ADMIN PASSWORD using ▲▼ buttons and press SEL button.

Then the ADMIN PASSWORD screen is displayed.

NETWORK PASSWORD – Select NETWORK PASSWORD using ▲▼ buttons and press SEL button.

Then the NETWORK PASSWORD screen is displayed.

Changing of PASSWORD (ADMIN/NETWORK)

- ① Select ADMIN PASSWORD / NETWORK PASSWORD using ▲▼ buttons and press SEL button.
Then the Current password input screen is displayed.
- ② Enter the current password using ▲(1)▶(2)▼(3)◀(4) buttons and press SEL button. Then the New password input screen is displayed.
- ③ Enter the new password using ▲(1)▶(2)▼(3)◀(4) buttons and press SEL button. Then the confirm password input screen is displayed.
- ④ Enter the same password as the new password using ▲(1)▶(2)▼(3)◀(4) buttons and press SEL button. Then the “PASSWORD CHANGED” message is displayed.

LANGUAGE – Select LANGUAGE using ▲▼ buttons and Select a language using ▶◀ buttons.

LOAD DEFAULT – Select LOAD DEFAULT to initialize the setting using ▲▼ buttons and press SEL button, Select confirm. Then LOAD DEFAULT screen is displayed.

The DVR is rebooted automatically when LOAD DEFAULT is confirmed

LOAD FACTORY DEFAULT – Select LOAD FACTORY DEFAULT to initialize the setting using ▲▼ buttons and press SEL button. Select confirm.

NOTE
Every setting value of the DVR will be initialized as factory-setting value.

SAVE SETUP TO A USB

- ① Connect USB thumb drive to the USB port.
- ② Select SAVE SETUP TO A USB using ▲▼ buttons and press SEL button. Then the CONFIRMATION screen is displayed.
- ③ Select CONFIRM using ▶◀ buttons and press SEL button. Then the saving the menu setting value starts automatically.

SAVE SETUP TO A USB STICK

CHECK SUCCESS

- ④ After saving is completed, the SYSTEM menu screen is displayed.

LOAD SETUP FROM A USB

- ① Connect USB thumb drive that has a menu setting value to the USB port.

- ② Select LOAD SETUP FROM A USB using ▲▼ buttons and press SEL button. Then the CONFIRMATION screen is displayed.
- ③ Select CONFIRM using ►◀ buttons and press SEL button. Then the uploading the menu setting value starts automatically..



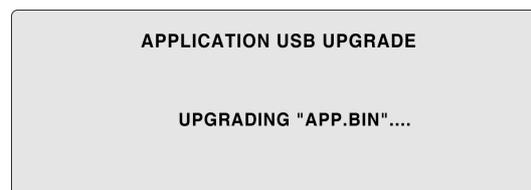
- ④ After uploading is completed, then the DVR reboots automatically.

USB UPGRADE

- ① Download the firmware of the DVR from the web-site of the manufacturer.
- ② Create a new folder (**This folder name should be "upgrade"**) in the USB thumb drive and paste the firmware "apph-xxx.bin" into the folder.
- ③ Connect USB thumb drive to the USB port.
- ④ Select USB UPGRADE using ►◀ buttons and press SEL button. Then the APPLICATION USB UPGRADE screen is displayed.



- ⑤ Select CONFIRM using ►◀ buttons and press SEL button. Then the upgrading starts automatically.



- ⑥ After upgrading firmware is completed, the DVR reboots automatically.

7. Network access using the Exclusive 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.

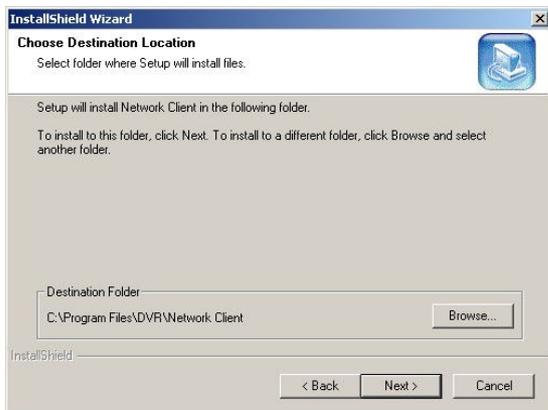
7-1. PC requirements

- CPU: Intel Pentium IV 1.2Ghz or higher
- Memory: 256MB (512MB or higher is recommended.)
- VGA memory: 16MB (64MB or higher is recommended.)
- Resolution: 1024x768
- O/S: Windows 2000, XP Professional, XP home
- Direct X: DirectX 8.1 or higher

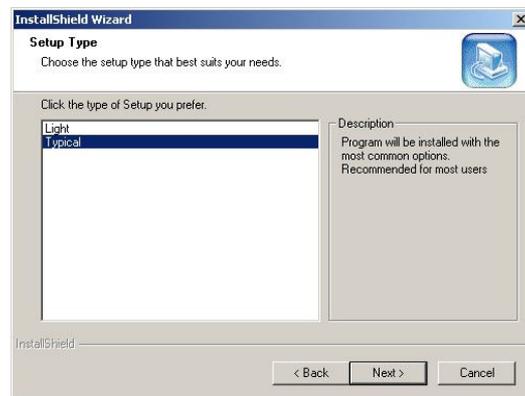
7-2. Installing the network viewer

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

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



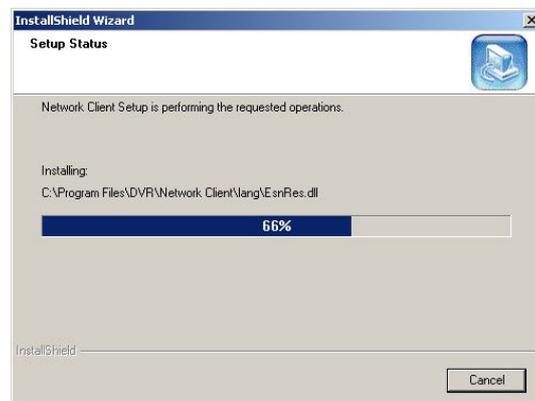
3. Select the type and click “Next”.



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



5. The setup status screen is displayed.

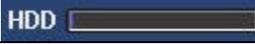


6. After the installation is completed, “UMS Client”  icon is displayed on the desktop.

7-3. Live monitoring mode and functions.



Button	Function	Description
	DATE & TIME	Displays the current date and time.
	CONNECT/DISCONNECT	Connect/disconnect network connection..
	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 live screen.
	PLAY/PAUSE	Play/pause live video.
	ALARM	The ON/OFF button of the alarm output of the DVR. When an alarm of the DVR is output, this button becomes 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.
	LOG WINDOW	

Operations of the display mode of the main screen

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



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



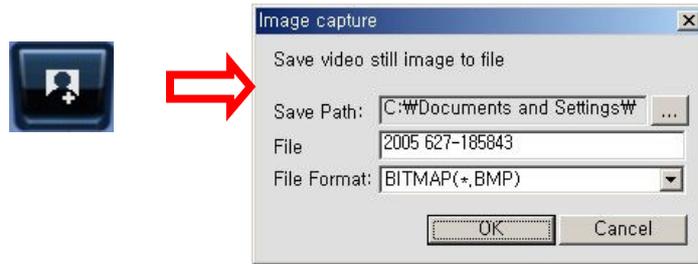
- Full screen display - Click the maximize button to display only screen and hidden the operation panel.



Image capture of live screen

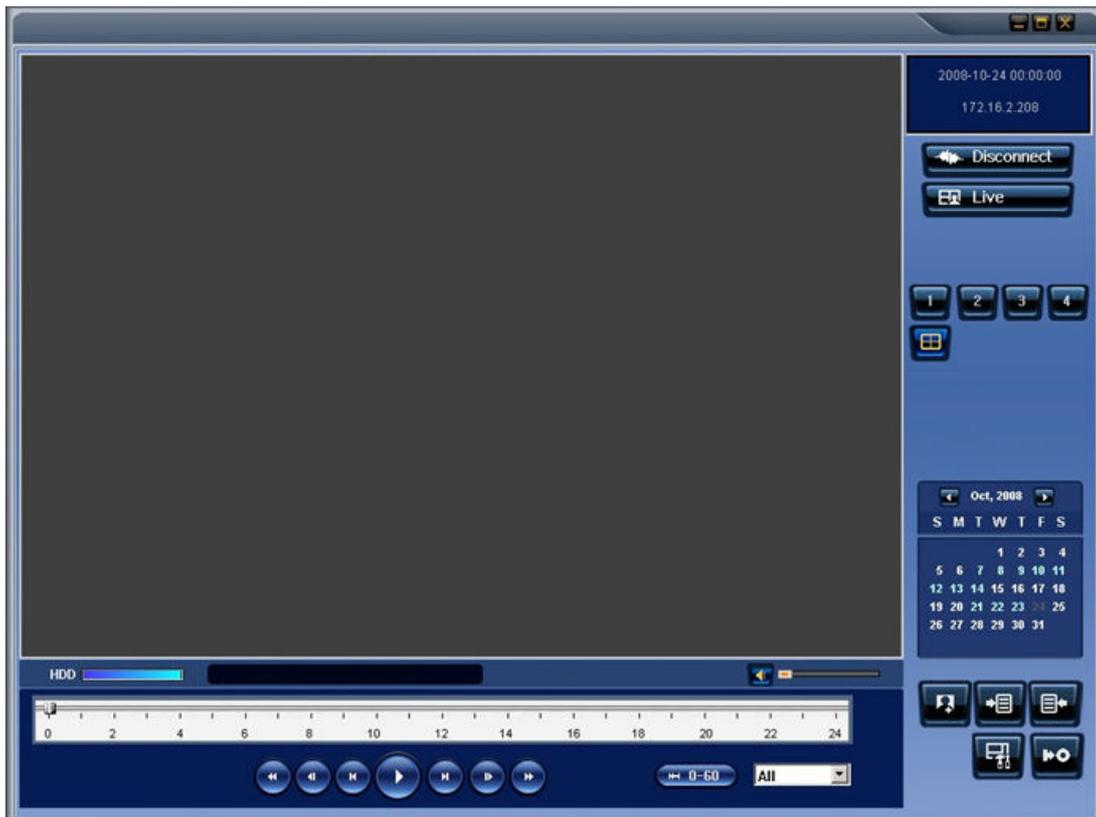
Still-image of live screen can be captured and saved as BMP or JPEG file.

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

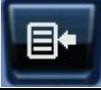
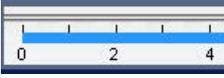


3. Set the conditions and click OK button. Then still-image is saved.

7-4. Remote search mode and functions



Button	Function	Description
	DATE & TIME	Displays the recording time of the data selected on the time bar at the bottom of the main user interface.
	DISCONNECT	Disconnect network connection..
	LIVE	Switches the search mode to live mode.
	CAPTURE	Capture a still image from live screen.

	MARK IN	Set the start time for video backup.
	MARK OUT	Set the ending time for video 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 BAR	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 the network to the remote DVR and press SEARCH button. Then the mode is changed from the live mode to the search mode.

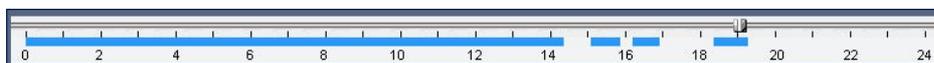


- Searching the video recorded in the remote DVR: Connect the network to the DVR..
- Searching the video recorded in the PC: Do not connect the network to the DVR.

2. Select the date to search the video.



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



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



Backup of video in the remote DVR

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

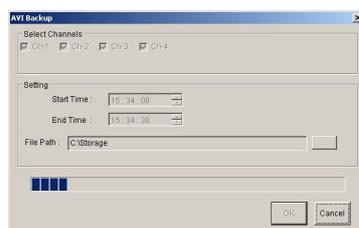
1. Connect the network to the remote DVR and play the video recorded in the remote DVR.
2. Drag the slider on the time scale and drop to the start time for video backup and press the MARK IN button.



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



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



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

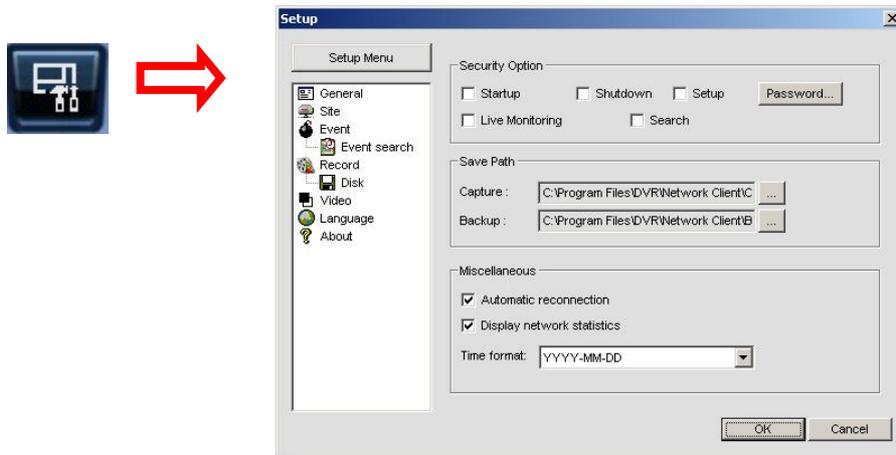
Notice for remote backup

User must open 1 additional TCP port for remote backup as AVI format over DSL network. If this port is not open properly, the remote backup function does not work.

(Example: When NETWORK/PORT is set as 5445, 5446 TCP port of IP address of DVR must be open.)

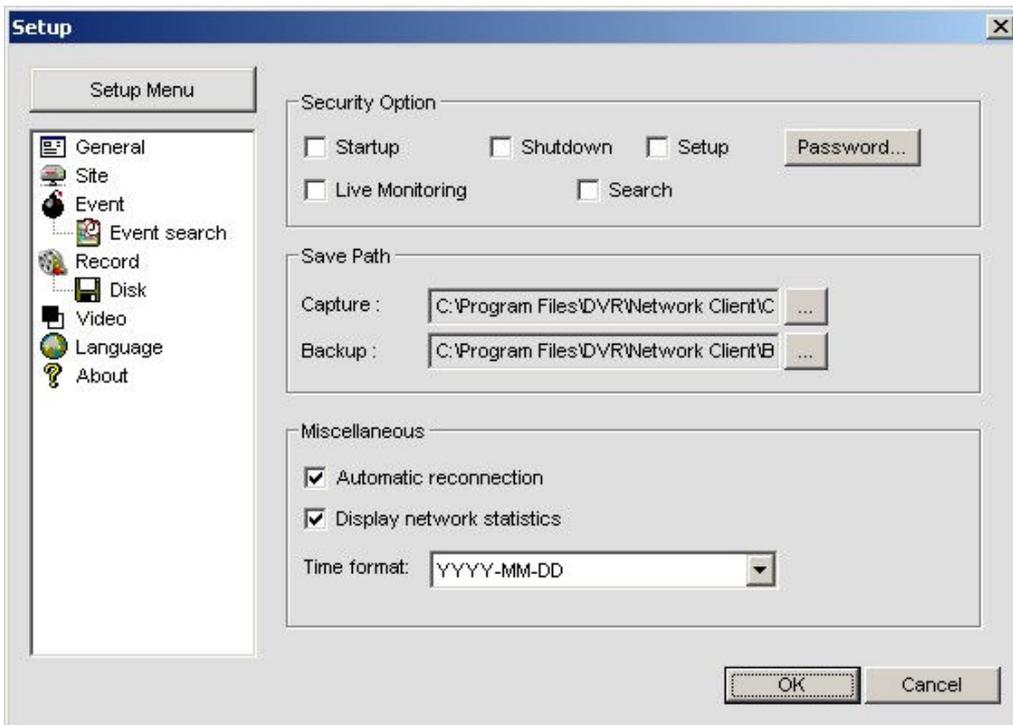
7-5. PC System configuration

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



Setting General

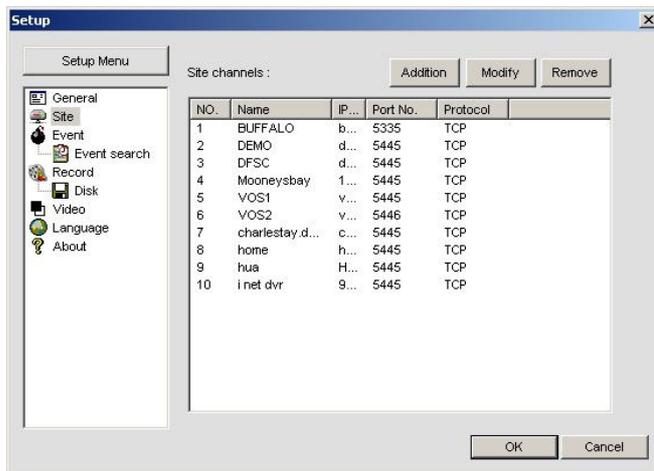
Set security options, save path, and Automatic reconnection.



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

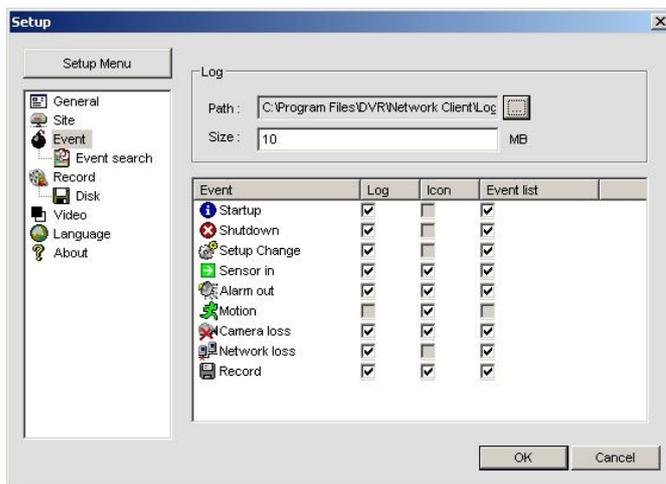
Setting Site

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



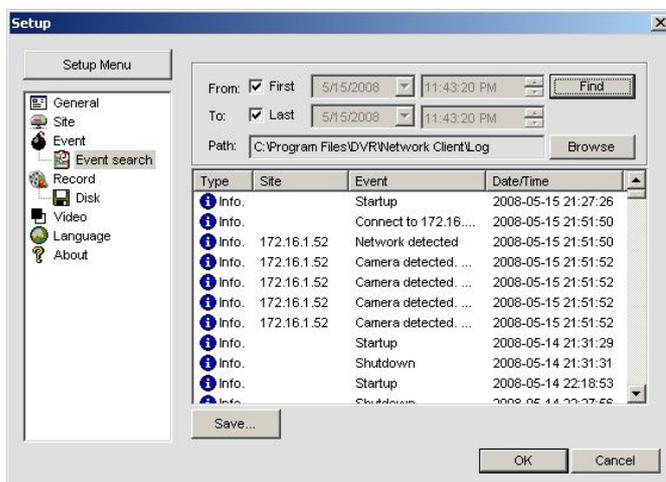
Setting Event

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



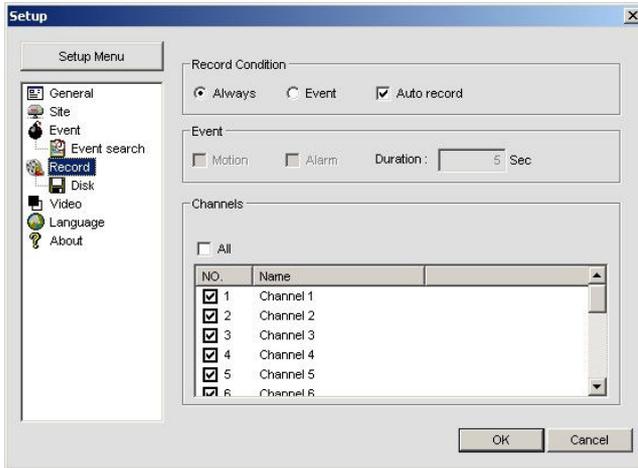
- LOG – Select to save event log into 'log file'.
- ICON – Select to display the event on live video.
- EVENT LIST – Select to show the event in the 'Event List' window of live mode.

Search and check the recorded log data.

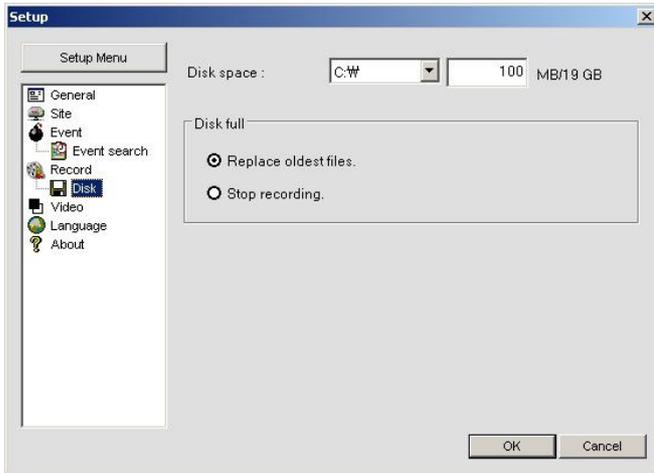


Setting Record

Set the recording conditions and select channels to record.

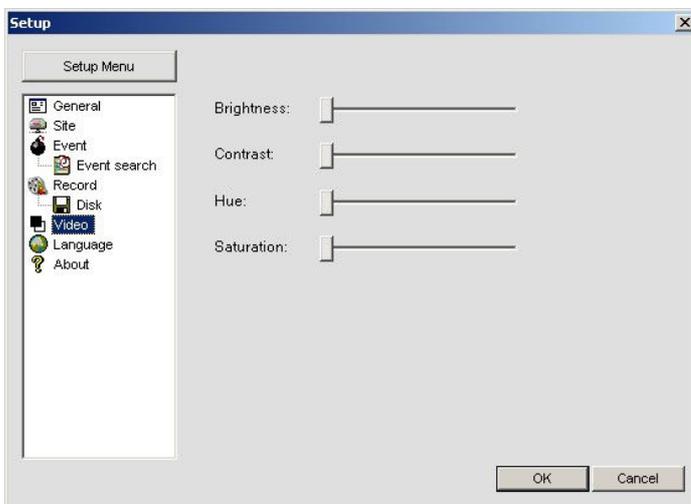


Select the local disk to use and the amount of disk space you want to allow the program to use for recording.



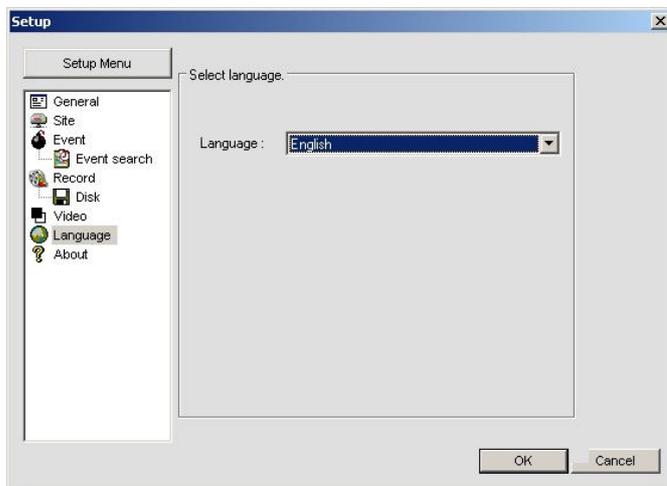
Setting Video

Set the video screen.



Setting Language

Select the language of the network client viewer.



8. Network – By a web-browser viewer

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

Web viewer Network access beyond Router

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

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

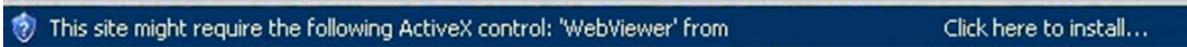
SYSTEM	
DESCRIPTION	⬇
DATA FORMAT	DD/MM/YYYY
SET DATE&TIME	⬇
DLS	USA
ADMIN PASSWORD	⬇
NETWORK PASSWORD	⬇
LANGUAGE	ENGLISH(ENGLISH)
LOAD DEFAULT	⬇
LOAD FACTORY DEFAULT	⬇
LOAD SETUP TO A USB	⬇
LOAD SETUP FROM A USB	⬇
USB UPGRADE	⬇

DESCRIPTION	
VERSION	0.9.13(060126)
QUALITY	76888 MB
IP ADDRESS	0.0.0.0
MAC ADDRESS	00:02:89:00.3AEAS

2. Input the IP address or Domain name address that you pre-registered on www.ddnscenter.com on the address field and press "Go".



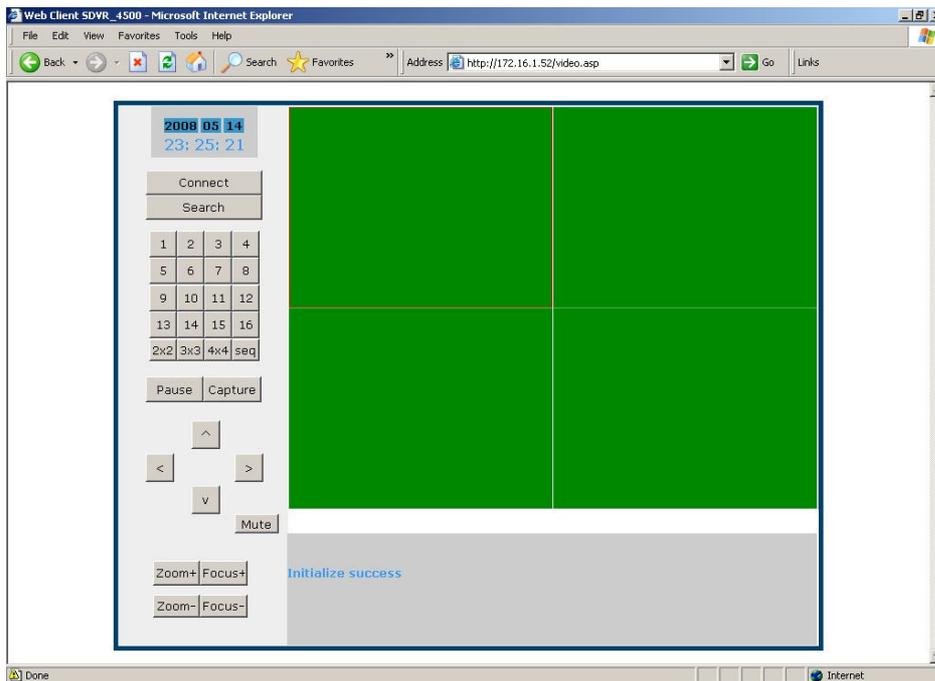
3. Click this bar. Then the dialog box is displayed.



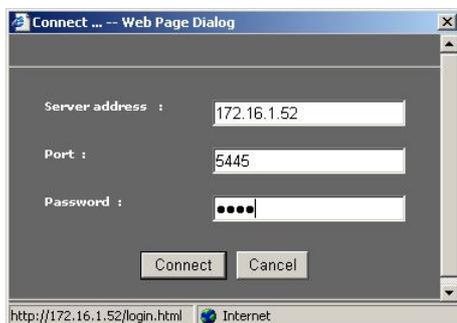
4. Click “Install” to download ActiveX control.



5. Web Browser Viewer is displayed as bellow.



6. Click CONNECT button on the Left upper corner of web-viewer. Then “Connect” dialog is displayed. Enter IP address (or Domain name address that you pre-registered on www.ddnscenter.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.ddnscenter.com
- Port: Input Port number (The number sets on SETUP>NETWORK>PORT)
- Password: Input Password (The number sets on SETUP>SYSTEM>NETWORK PASSWORD)

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

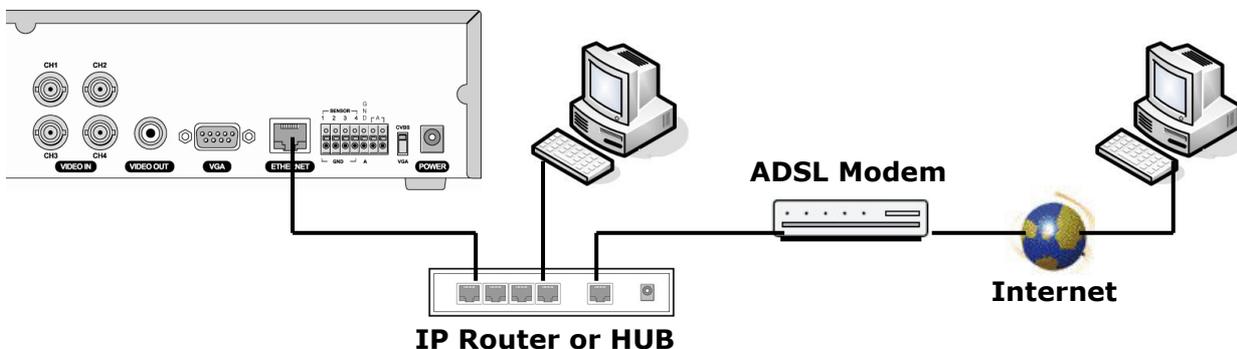


APPENDIX: How to connect network

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

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

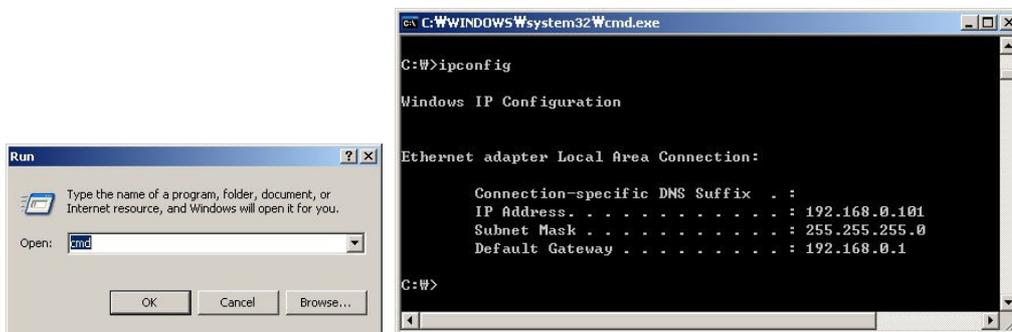
1. Connect network cable between DVR and Router or ADSL modem.



2. Default network setting on DVR are

- Port: 5445
- WEB Port : 80
- Network : DHCP

3. From PC connected in the same Router, find IP address, Gateway, and Subnet mask by IPCONFIG command in command prompt.



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

NETWORK	
PORT	5445
WEB PORT	80
CLIENT ACCESS	0N
BANDWIDTH SAVING	0N
NETWORK TYPE	DHCP
DDNS	OFF
SEND E-MAIL	<input type="checkbox"/>

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



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

User name:
 Password:
 Remember my password

7. Select the Port Range Forwarding tab.

Setup | Wireless | Security | **Access Restrictions** | Applications & Gaming
 Port Range Forward | DMZ

Port Range					
Application	Start	End	Protocol	IP Address	Enable
<input type="text"/>	5445 to	5445	Both	192.168.1.1	<input checked="" type="checkbox"/>

8. 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.
9. Select the Save settings button located on the bottom of the window. Then Port forwarding is finished.

Network access beyond Router

In order to access beyond Router (Firewall), user must open 1 TCP port that is set on NETWORK > PORT for Command, Live steaming, and Search streaming. If this port is not open properly, user can not access DVR beyond a router. (Example: When NETWORK/PORT is set as 5445, 5445 TCP port of IP address of DVR must be open.)

Notice for remote backup

User must open 1 additional TCP port for remote backup as AVI format. If this port is not open properly, the remote backup function does not work. (Example: When NETWORK/PORT is set as 5445, 5446 TCP port of IP address of DVR must be open.)

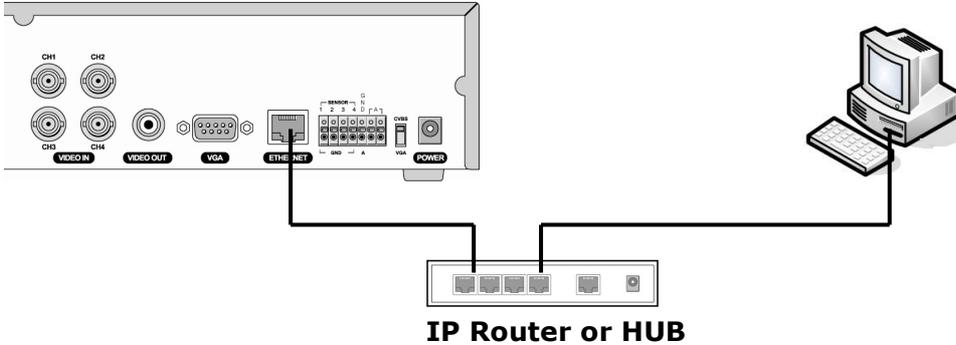
You can learn how to port forward many kinds of Routers from the bellow site.

http://www.portforward.com/english/routers/port_forwarding/routerindex.ht

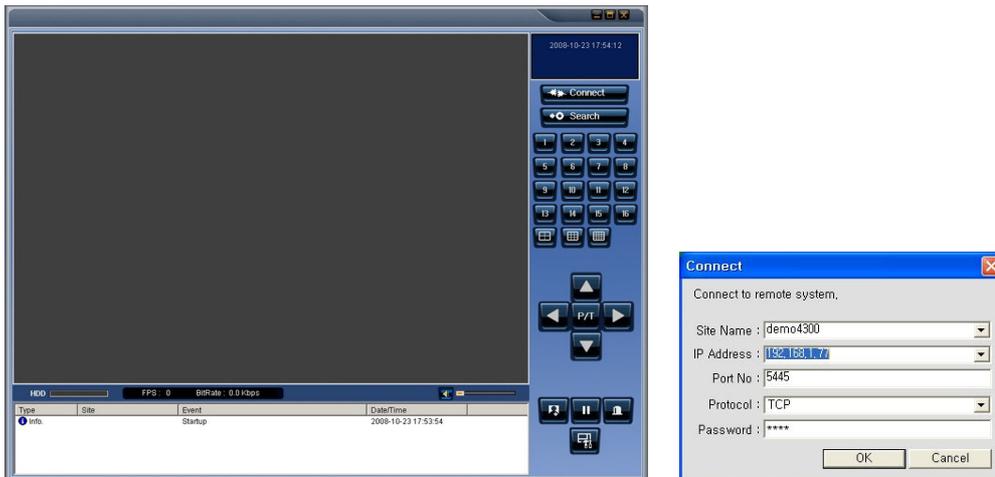
B. How to access DVR from Remote PC?

■ **LAN Connection – Using a switching hub**

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



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

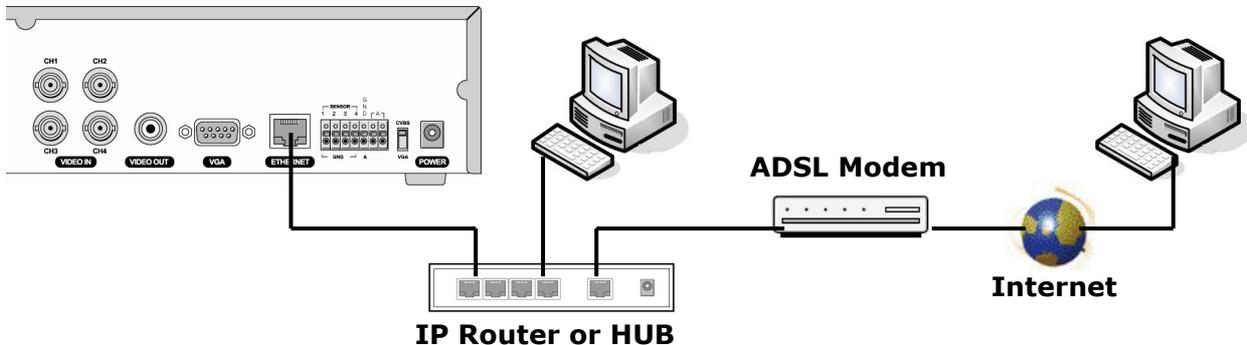


4. Input IP address, Port No., and Password on the connect window. And click OK.

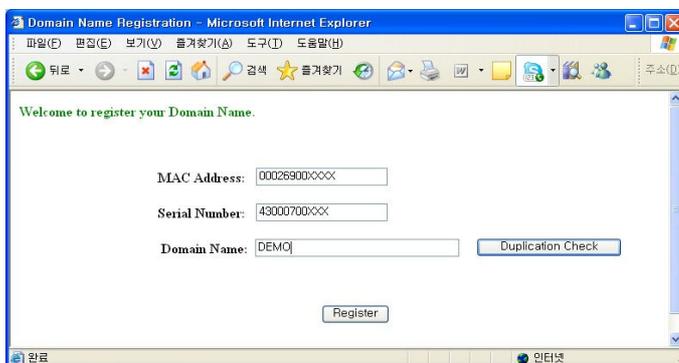


■ Internet (ADSL) Connection using DDNS

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



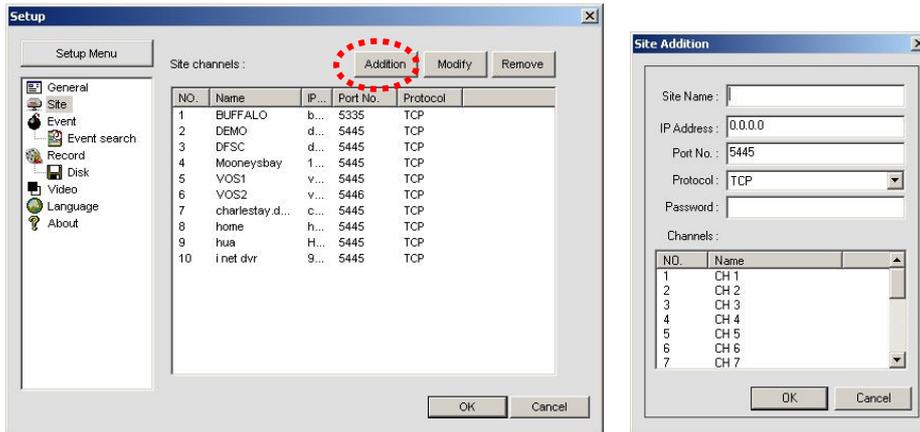
1. Go to SETUP>NETWORK. Set NETWORK TYPE as DHCP and DDNS SERVER as ON. And make sure that DDNS SERVER NAME is ddnscenter.com
2. Go to Setup menu of Router and open TCP port 5445 using Port Forwarding. (Refer to A. How to set IP address of the DVR and open TCP port of the router?)
3. Confirm the Mac address and Serial No. from the label of the rear panel of the DVR.
4. Open the web browser and log on <http://www.ddnscenter.com>



- MAC Address: Input the Mac address (EX. 0002690XXXXX) without a space.
 - Serial Number: Input the Serial No. (EX. 43000700XXX.) without a space.
 - Domain Name: Input Domain Name for your DVR system (Note. Input only Domain Name and never input "ddnscenter.com".)
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. (Refer to Chapter 6. Network access using the Exclusive network viewer)



8. Click  button and add the DVR as necessary.



- Site Name: Input the name of the DVR.
 - IP Address: Input the Domain Name that is registered on <http://www.ddnscenter.com> (EX. XXXXX.ddnscenter.com)
 - Port Number: Input the port number.
 - Protocol: Select TCP.
 - Password: Input the network password.
9. Click CONNECT button. Then the Connect window is displayed.



10. Select the site that you access and click OK.



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