

VOOK

PROFESSIONAL MONITORING

Digital Video Recorder



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**CHAPTER 1****NOTICE****◆ NOTICE BEFORE INSTALLATION**

This manual serves basic operation on installation, and operation of DVR (Digital Video Recorder).

User who first operates DVR, or is not accustomed to use is strongly recommended to contact manufacturer, or supplier while installation, and to use in order to receive the technical service.

All users have to operate DVR after having read this manual sufficiently even though they are very skilled at this unit. Please keep notice at this manual to protect your safety from danger, or property. Please keep this manual on such a place where can easily be reached after having read it all.

◆ NOTICE FOR SAFETY

Please make sure of usage after bearing the following contents in mind to shorten the safety, and product failure before its operation.

◆ **DO NOT SHOCK IN MOVE, AND INSTALLATION.**

- Please check rating voltage (standard:DC12V5A, high-end:12V8A) before power on.
- Please check power off before installation.
- Avoid any place with moisture because of electric shock, and fire.
- Avoid any place with moisture, dust, or soot.
- Avoid any place with direct sunlight, or heating appliances.
- Avoid high, or low temperature.
- Procure sufficient air ventilation for the connection of system wiring.
- Don't install near to electronic devices such as radio, or TV.
- Install in sufficient air ventilation, and no vibration.
- Please take care of not putting the electric product into the cooling fan.
- Don't use water, or cleanser in surface cleaning to prevent an electric shock.
- Please clean system by dry towel in external cleaning.
- Do not pull power cord forcefully.
- Do not place any heavy objects on the main system.
- Do not open, or disassemble DVR without an assistance of qualified service personnel.
- Please power off in case of moving DVR.
- Please equip with the safety facility to diminish the loss for electricity failure, and lighting.
- Do not connect signal cable of camera with DVR system during camera installation.
- Please power off immediately, contact manufacturer, or supplier if you catch strange scent, or smog.



This equipment had been tested and found to comply with the limits for CLASS A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

FCC Compliance Statement

Caution : Any change, or modification in construction of this device which are not expressly approved the party responsible for compliance could avoid the user's authority to operate the equipment .

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



2.1 FEATURES**1. SURVEILLANCE**

- ▶ Real time moving picture (Max. MPEG-4 480 Frame (Basic 16CH)) .
- ▶ Multi screen display (Basic on 16CH): Single / 4 / 6 / 9 / 13 / 16 .
- ▶ PIP (Picture In Picture) .
- ▶ Auto sequence.
- ▶ Multi output monitor (Output monitor 1, Spot 1, S-Video 1, VGA 1).
- ▶ PTZ (Pan / Tilt / Zoom).
- ▶ Digital Zoom (X2)
- ▶ Mosaic function .
- ▶ Video loss sensor detection.
- ▶ External alarm, and recording event list for motion detection.
- ▶ Supported user friendly GUI interface, remote controller, and mouse.

2. RECORDING

- ▶ Recording in high quality of MPEG-4 real time motion picture
- ▶ Recording resolution setup adjustable to backup capacity (16CH Max. 480 frame)
- ▶ Multi recording for manual, event, and schedule.
- ▶ One time system for display, recording, playback, backup, and network.
- ▶ Easy setup for recording resolution, and motion detection part.
- ▶ Supported manual, and reserved recording function.
- ▶ Supported Individual channel recording.

3. PLAYBACK

- ▶ Playback by event, time, and channel.
- ▶ Mouse controlled search
- ▶ Playback for still image, and search for still display detection.
- ▶ Playback by event list (sensor, motion).
- ▶ Easy search with remote controller, and mouse.
- ▶ Digital zoom in playback display screen (Digital Zoom X2)

4. NETWORK

- ▶ Supported PPPoE, Static and DHCP.
- ▶ Supported itself, and general DDNS.
- ▶ TCP/IP.
- ▶ Unlimited multi access (Recommended 5).
- ▶ Supported multi mode (LIVE/PB/NETWORK BACKUP/FILE PLAY)
- ▶ Multi DVR Control
- ▶ Remote Control
- ▶ PTZ Control
- ▶ Save AVI
- ▶ Save & print still
- ▶ Auto update
- ▶ Web viewer
- ▶ File viewer
- ▶ CMS NetViewer

5. AUDIO

- ▶ One time recording for real time 4CH audio input.
- ▶ U2 Series / S2 Series - Input : 4CH(rear), Output : 1ch(rear)
S1 Series -- Input : 1CH(rear), Output : 1ch(rear)
- ▶ Audio channel selectable.

6. BACKUP

- ▶ Backup by network viewer.
- ▶ Supported multi backup function : CD $\pm$ R, CD $\pm$ RW, DVD $\pm$ R, DVD $\pm$ RW and USB Drive.

7. OTHERS

- ▶ S-Video, Spot output.
- ▶ Alarm In/Out, RS-485, RS-232 Connections.
- ▶ Connection of loop-through.
- ▶ Supported multi language.
- ▶ One remote controller for Max. 5 DVRs.
- ▶ Easy operation with USB mouse.
- ▶ Easy firmware upgrade with USB, network.

2.2 PACKING DETAILS

DVR includes main unit, and its following accessories in the package packing. Please check all items if there is all packed inside as below.

DVR UNIT

U2-series



S2-series



S1-series



	Contents	U2	S2	S1
	Program CD	○	○	○
	Remote controller	○	○	○
	Quick guide	○	○	○
	User manual	○	○	○
	Batteries	○	○	○
	Power cord	○	○	○
	Adaptor	○ (12V8A)	○ (12V8A)	○ (12V5A)
	HDD screw	○	○	○
	Rack mount	○	X (OPTION)	X
	Sata HDD data cable	4	3	1

2.3 NAMES AND FUNCTION

2.3.1 FRONT PANEL

PREMIUM DVR - U2 Series



SECTION	NO	NAME	FUNCTION
BACKUP	1	DVD RW	Back up recording & playback video in DVD/CD
	2	USB 2.0	External connector (USB & MOUSE)
FUNCTION	3	INFO	Show information for DVR system, HDD and firmware
	4	DISPLAY	Change divided display in live & playback mode
	5	PTZ	Control function of PTZ
	6	BACK UP	Go to backup mode
SEARCH 1	7	SEARCH	Go to search mode
	8	REW	Rewind (MAX.x32)
		PLAY/PAUSE	Play / Pause
		FAST	Fast forward
		STOP	Stop
RECORDING	9	REC	Recording or not
SYSTEM SETUP	10	Q.MENU	Go to Q.MENU mode
LED	11	POWER	Power ON/OFF
		REC	Recording
		ALARM	Sensor event
		NET	Network connection
REMOTE CONTROLLER	12	SENSOR	Remote controller receiving sensor
POWER	13	POWER	Safety power ON/OFF
SEARCH 2	14	JOG-SHUTTLE	Controller for playback direction speed and step playback
DIRECTION	15	ENTER	Operation

STANDARD DVR – S2 Series



SECTION	NO	NAME	FUNCTION
CHANNEL	1	CH 1-10	Channel selection in live, and play back display
BACKUP	2	USB 2.0	External connector of USB, and mouse
FUNCTION	3	DISPLAY	Change split display in live, and play back
	4	AUTO	Sequence operation, and stop
	5	PIP	Another display in one channel display.
	6	OSD	Icon, time table, and channel name in monitor display.
	7	INFO	System status, HDD status, and firmware information.
	8	BACK UP	Back up mode.
	9	PTZ	Use, or stop of PTZ function.
LED SIGNAL	10	POWER	Electric status.
		REC	Recording feasibility
		ALARM	Event detection
		NET	Network connection
POWER SUPPLY	11	POWER	Stable stop of system operation
SYSTEM SETUP	12	Q.MENU	Q.MENU mode
PLAYBACK, RECORD AND ETC.	13	REC	Urgent recording
	14	REW	Reverse play back speed in play back mode
		PLAY/PAUSE	Play back start, or temporary pause
		FAST	Forward play back speed in playback mode
		STOP	Stop play back mode, and return to live display mode
	15	SENSOR	Remote controller sense
	16	SEARCH	Search mode
	17	◀ ▶	Left & right direction key, and channel change
		▲ ▼	Up & down direction key, and channel change
		ENTER	In case of execution CHOICE, change into single display from live, and play back display
BACKUP	18	DVD RW	Backup for recorded, and stored video by DVD/CD

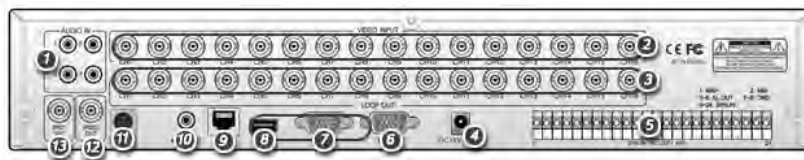
COMPACT DVR – S1 Series



CLASSIFICATION	NO	NAME	FUNCTION
BACKUP	1	USB 2.0	External terminal(USB, Mouse)
SEARCH	2	SEARCH	Search mode
LED DISPLAY	3	REW	Reverse play back speed in play back mode
		PLAY/PAUSE	Play back start, or temporary pause
		FAST	Forward play back speed in play back mode
		STOP	Stop play back mode and return to live display mode
Q.MENU	4	Q.MENU	Q.MENU mode
MULTIPLE	5	DISPLAY	Multiple display mode
RECORDING	6	REC	Urgent recording
POWER	7	POWER	Stable stop of system operation
DIRECTION KEY	8	▲▼▶◀	Left/right, and up/down direction key. Channel change
REMOTE CONTROLLER	9	SENSOR	Remote controller sensor
LED DISPLAY	10	POWER	Electric status
		REC	Recording
		ALARM	Event detection
		NET	Network connection

2.3.2 REAR PANEL

PREMIUM(U2 Series) & STANDARD(S2 Series) DVR



16CH

NO	INPUT / OUTPUT CONNECTOR NAME	FUNCTION
1	AUDIO IN	Audio input & RCA input connector.
2	CH1~16	BNC input connector of camera
3	LOOP OUT	BNC(loop) output connector of camera
4	DC12V	Connect power code of adaptor socket
5	SEN.IN/AL/485	External sensor input relay output, PTZ camera connector
6	RS-232	RS-232 terminal
7	VGA	LCD monitor output connector
8	USB	External(USB, MOUSE) connector
9	LAN	Network (RJ-45) connector
10	AUDIO OUT	Audio output connector
11	S-VIDEO	S-VIDEO monitor connector
12	VIDEO OUT	Monitor output connector by BNC
13	SPOT OUT	Spot monitor output connector by BNC

PREMIUM(U2 Series) & STANDARD(S2 Series) DVR

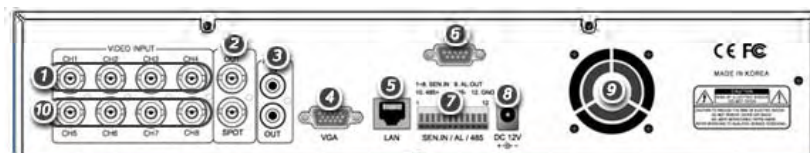


8CH

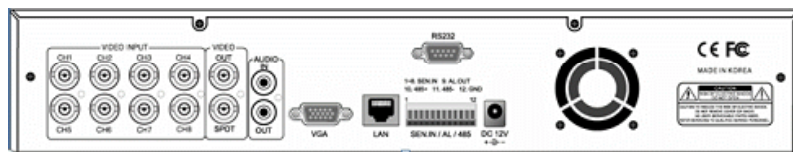


4CH

COMPACT DVR (S1 Series)



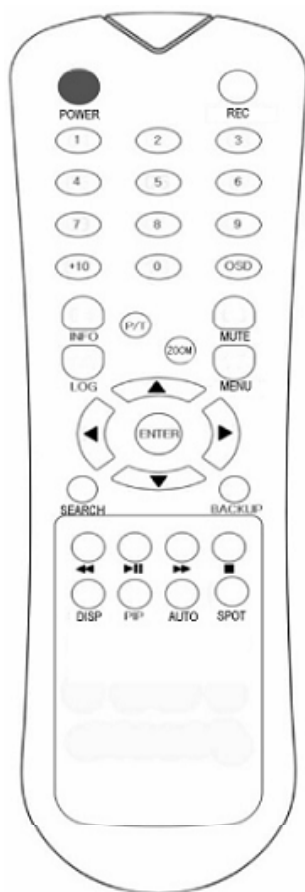
4CH



8CH

No	Input/output terminal	Function
1	CH 1~16	Camera BNC input terminal
2	VIDEO OUT	Monitor output & Spot monitor terminal
3	AUDIO IN,OUT	Audio input & output terminal
4	VGA	LCD monitor terminal
5	LAN	Network terminal (RJ45)
6	RS-232	RS232C terminal
7	SEN.IN/AL/485	External sensor, relay output, PTZ camera terminal
8	DC12V	Adaptor power code socket
9	FAN	Cooling fan
10	LOOP OUT	Camera Loop out terminal

2.3.3 REMOTE CONTROLLER



NO	NAME	FUNCTION
1	POWER	Power ON/OFF
2	REC	Recording
3	CHANNNEL	Channel button
4	OSD	OSD ON/OFF
5	INFO	Information of DVR
6	P/T	PAN/TILT MODE
7	ZOOM	Zoom/Focus mode
8	MUTE	Audio ON/OFF
9	LOG	Log List
10	MENU	Q.MENU
11	▲	Up
12	▼	Down
13	◀	Left
14	▶	Right
15	ENTER	Menu
16	SEARCH	Search recording list
17	BACK UP	Backup
18	◀◀	Reverse play
19	▶▶	Play and pause
20	▶▶▶	Fast forward
21	■	Stop
22	DISP	Display mode
23	PIP	PIP mode
24	AUTO	Auto sequence
25	SPOT	Spot monitor

2.3.4 Q-MENU



- | | | | |
|---|---|---|-------------------------------|
|  | Group Conversion |  | Rec : Recording ON/OFF |
|  | System Setup |  | Search recording |
|  | Display : Screen division
(4,6,9,13,16CH) |  | Backup (copy) |
|  | Auto : Auto sequence display |  | Info : System information |
|  | PIP : PIP mode |  | PTZ : Pan-tilt camera control |
|  | Digital zoom |  | Audio : Audio ON/OFF |
|  | OSD ON/OFF | | |

2.4 SPECIFICATION

PREMIUM DVR – U2 Series

Model		KDMH-16U2C4N	KDMH-08U2H2	KDMH-04U2D1
Video Signal	Video Input	16/8/4 Channel Input(BNC) NTSC / PAL, 1V 75 Ohm		
	Video Output	5 Outputs (Composite BNC, VGA, S-Video, Loop through, Spot)		
Compression		Enhanced MPEG-4, M-JPEG		
Pentaplex Operation		Real Time Watching / Recording / Playback / Networking / Back-Up Archiving		
Display	Resolution	NTSC – 704X480 / PAL – 704X576		
	Speed	Real Time Display		
	Mode	16, 13, 9, 6, 4, 1 screen PIP, Auto Screen		
Recording & Playback	Resolution	NTSC – 704X480, 704X240, 352X240, PAL – 704X576, 704X288, 352X288		
	REC & PB Speed	CIF 480ips/400ips HD1 240ips/200ips D1 120ips/100ips	CIF 240ips/200ips HD1 240ips/200ips D1 120ips/100ips	CIF 120ips/100ips HD1 120ips/100ips D1 120ips/100ips
	Mode	Continuous, Schedule, Event(Motion, Sensor)		
	Search	Search by Calendar Search List, Event List, Time List		
Backup	Internal HDD	3		
	Internal DVD	1		
	External Backup	USB		
	Network Backup	TCP/IP(Backup Browser)		
Serial Interface	Pan/Tilt, Zoom, Preset	RS-485, RS-232		
Alarm Control	Sensor Input	16port	8port	4port
	Relay Out	4 port		
Audio	Audio Input	4 Channel Input		
	Audio Output	1 Channel Out		
Network	Interface	TCP/IP		
	Protocol	STATIC, DHCP, PPPoE		
	Browser	Functional Remote Client Software, Web Viewer(HTTP / IE), CMS		
System Control		Front Keypad(6X6) & Jog Shuttle, Remote Controller, Mouse		
Language		Multi OSD		

System Upgrade		USB / Network
	Signal Loss Detection	BEEP / BEEP+OSD / OSD / OFF
	Motion Detect Trace	YES / NO
	Motion Sensitivity	1~8
	Mosaic	ON/OFF
	Zoom	X2
	Dimension	430(W) X 92(H) X 380(D)mm
	Weight	8.0kg(without HDD)
	Power Supply	DC 12V 8A
	Approval	FCC, CE



STANDARD DVR – S2 Series

Model		KDMH-16S2C4	KDMH-16S2C2	KDMH-08S2C2	KDMH-04S2H1
Video Signal	Video Input	16/8/4 Channel Input(BNC) NTSC / PAL, 1V 75 Ohm			
	Video Output	5 Outputs (Composite BNC, VGA, S-Video, Loop through, Spot)			
Compression		Enhanced MPEG-4, M-JPEG			
Pentaplex Operation		Real Time Watching / Recording / Playback / Networking / Back-Up Archiving			
Display	Resolution	NTSC – 704X480 / PAL – 704X576			
	Speed	Real Time Display			
	Mode	16, 13, 9, 6, 4, 1 screen PIP, Auto Screen			
Recording & Playback	Resolution	NTSC – 704X480, 704X240, 352X240 PAL – 704X576, 704X288, 352X288			
	REC & PB Speed	CIF 480ips/400ips HD1 240ips/200ips D1 120ips/100ips	CIF 240ips/200ips HD1 120ips/100ips D1 60ips/50ips	CIF 240ips/200ips HD1 120ips/100ips D1 60ips/50ips	CIF 120ips/100ips HD1 120ips/100ips D1 60ips/50ips
	Mode	Continuous, Schedule, Event(Motion, Sensor)			
	Search	Search by Calendar Search List, Event List, Time List			
Backup	Internal HDD	2			
	Internal DVD	1			
	External Backup	USB			
	Network Backup	TCP/IP(Backup Browser)			
Serial Interface	Pan/Tilt, Zoom, Preset	RS-485, RS-232			
Alarm Control	Sensor Input	16port	16port	8port	4port
	Relay Out	4 port			
Audio	Audio Input	4 Channel Input			
	Audio Output	1 Channel Out			
Network	Interface	TCP/IP			
	Protocol	STATIC, DHCP, PPPoE			
	Browser	Functional Remote Client Software, Web Viewer(HTTP / IE), CMS			

System Control	Front Keypad(6X6), Remote Controller, Mouse
Language	Multi OSD
System Upgrade	USB / Network
Signal Loss Detection	BEEP / BEEP+OSD / OSD / OFF
Motion Detect Trace	YES / NO
Motion Sensitivity	1~8
Mosaic	ON/OFF
Zoom	X2
Dimension	430(W) X 75(H) X 360(D)mm
Weight	7.50kg (without HDD)
Power Supply	DC 12V 8A
Approval	FCC, CE



COMPACT DVR – S1 Series

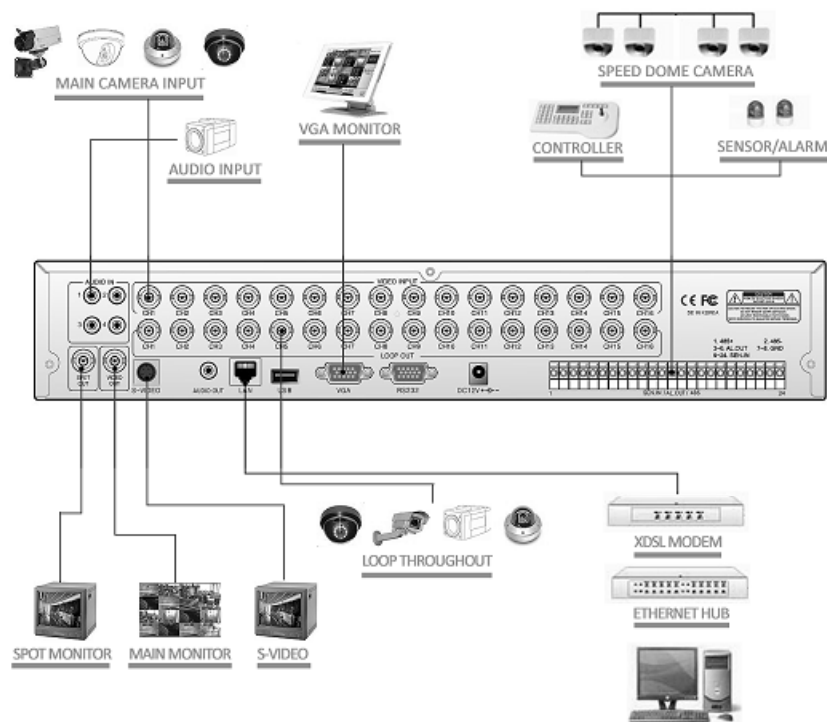
Model		KDMH-8S1C2	KDMH-4S1H1
Video Signal	Video Input	8/4 Channel Input(BNC) NTSC / PAL, 1V 75 Ohm	
Compression		Enhanced MPEG-4, M-JPEG	
Pentaplex Operation		Real Time Watching / Recording / Playback / Networking/ Back-Up Archiving	
Display	Resolution	NTSC – 704X480 / PAL – 704X576	
	Speed	Real Time Display	
	Mode	9, 6, 4, 1 screen PIP, Auto Screen	
Recording & Playback	Resolution	NTSC – 704X480, 704X240, 352X240 PAL – 704X576, 704X288, 352X288	
	REC & PB	CIF 240ips/200ips	HD1 120ips/100ips
	Speed	D1 120ips/100ips	D1 60ips/50ips
	Mode	Continuous, Schedule, Event(Motion, Sensor)	
Search		Search by Calendar Search List, Event List, Time List	
Backup	Internal HDD	1	
	External Backup	USB	
	Network Backup	TCP/IP(Backup Brower)	
Serial Interface	Pan/Tilt, Zoom, Preset	RS-485, RS-232	
Alarm Control	Sensor Input	8port	4port
	Alarm Out	1port	1port
Audio	Audio Input	1 Channel Input	
	Audio Output	1 Channel Out	
Network	Interface	TCP/IP	
	Protocol	STATIC, DHCP, PPPoE	
	Browser	Functional Remote Client Software, Web Viewer(HTTP / IE), CMS	
System Control		Front Keypad(6X6), Remote Controller, Mouse	
Language		Multi OSD	
System Upgrade		USB / Network	

	Signal Loss Detection	BEEP / BEEP+OSD / OSD / OFF
	Motion Detect Trace	YES / NO
	Motion Sensitivity	1~8
	Mosaic	ON/OFF
	Zoom	X2
	Dimension	17.0"x14.1"x3.0"(430x360x75mm)
	Weight	4.5kg(NET),5.0KG(GROSS)
	Power Supply	DC 12V 5A
	Approval	FCC, CE



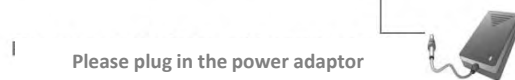
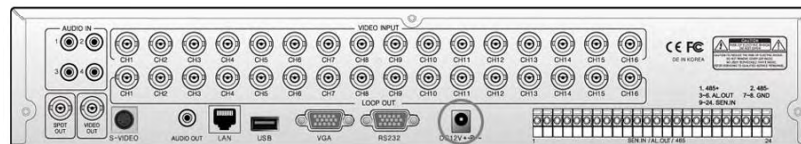
CHAPTER 3 INSTALLATION

3.1 TOTAL CONNECTION DIAGRAM



3.2 INDIVIDUAL CONNECTION

3.2.1 POWER



Please plug in the power adaptor



- Automatic power on, and booting If power supply is on.

NOTE

1. Please connect the provided power adaptor to DVR system.
2. Please use the power adaptor(DC12V 8A), in case of installing 4 HDD.
3. In order to turn off DVR, press "POWER" button and follow the messages.
After that, unplug the power adaptor.

3.2.2 RACK MOUNT INSTALLATION



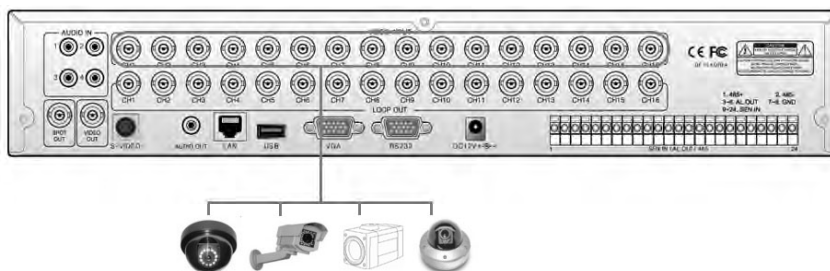
The rack mount can be installed to DVR like the picture. It is available for U2 / S2 series.

3.2.2 VIDEO & AUDIO

■ VIDEO INPUT

Please connect DVR, and CCTV camera with CAMERA IN connector on rear panel by coaxial cable.

This DVR system can be connected with cameras of maximum NO. of 16/8/4.



NOTE

1. Video input type should be either NTSC or PAL, Don't use two types in mix.
2. Automatic setup for 75Ω resistance 75Ω terminal resistance is set up, automatically split into, and becomes Hi-Z status when connected with video output connector under input one.

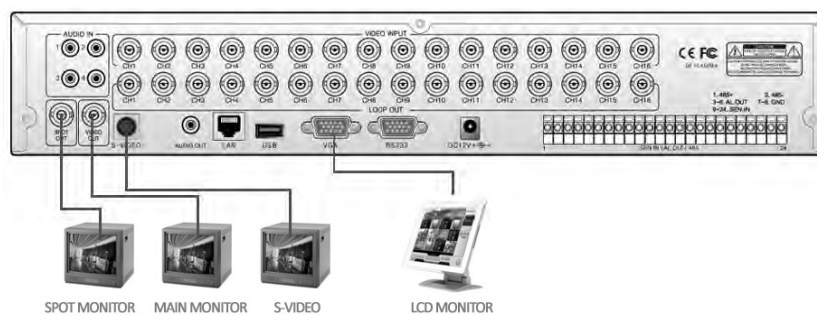
CAUTION

1. Video vibration may be caused when the user connects BNC of camera to the loop connector. Be sure to link it to camera input connector.
2. Too much vibration may be caused in case of connecting BNC connector to camera output without the camera cable.

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VIDEO OUTPUT

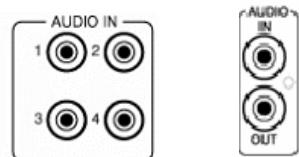
Please connect DVR to monitor with video cables.



AUDIO INPUT

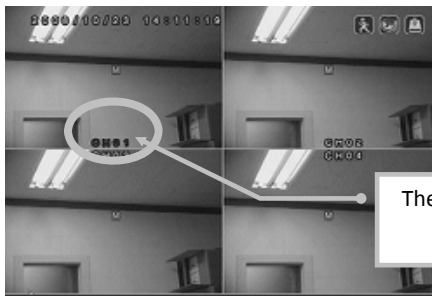
Please connect MIC built-in camera or the external audio device to AUDIO IN connector, in the back of this DVR.

[AUDIO INPUT CONNECTORS]



PREMIUM DVR COMPACT DVR
STANDARD DVR

[AUDIO OUTPUT CONNECTORS]



The channels with audio output are displayed in red

NOTE

Audio Input Setup : Main Menu → Record → Audio Setup

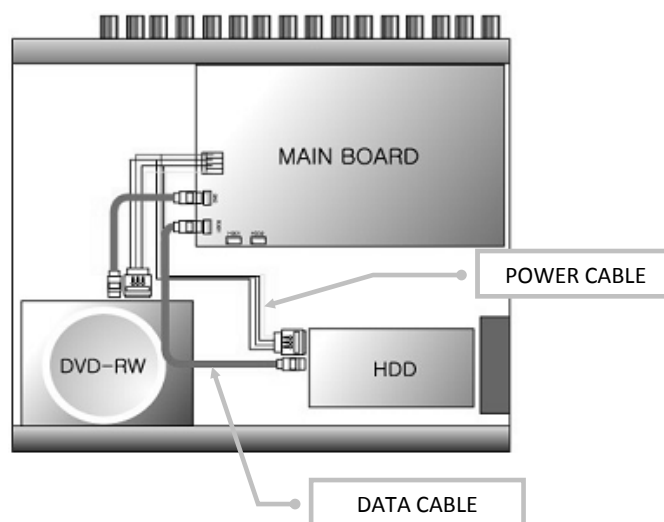
■ AUDIO OUTPUT

Please connect RCA cable of the speaker built-in monitor to audio out connector in the back of DVR

NOTE

1. Four audio input synchronizes audio output for CH1~CH4 in single display.
2. Audio is available for "LIVE" and "PLAYBACK" mode.
3. Audio is not supported in Fast Forward playback in single display mode.

3.2.3 HDD CONNECTION



- ▶ Please fix HDD to DVR unit by screws.
- ▶ Please connect main board to HDD with the power cable.
- ▶ Please assemble DVR and turn it on.

**The format automatically starts after power on. If not, format HDD manually.
Main Menu → System → HDD format**

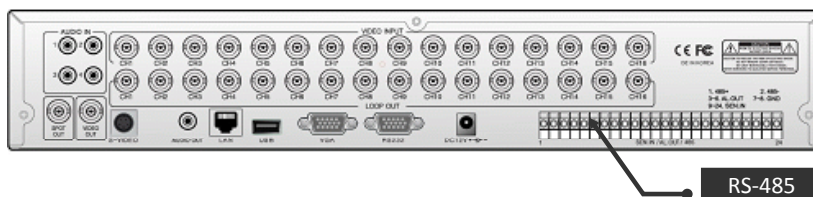
NOTE

1. DVR must power off before installing HDD.
2. For fixing screw to HDD bracket, please don't shock, which may cause HDD breakdown.
3. Please check problem after HDD installation.
4. If HDD is not recognized, please contact HDD manufacturer or Supplier, and change it into new one.
5. DVR automatically formats HDD of which the format type is not supported by DVR.
6. The firmware upgrade is available only when HDD is installed in DVR.
7. When installing HDD (or additional HDD) in DVR, please be sure to connect the data cable to HDD port on main board. If the data cable is connected to DVD port, the recording data may be damaged.

3.2.4 EXTERNAL CONNECTOR

■ SENSOR IN / RS-485

The external sensor terminal, RS-485, receives the data from the external sensor or Equipment. And the data such as the motion detection, motion sensor and video loss is transmitted to the external equipments.



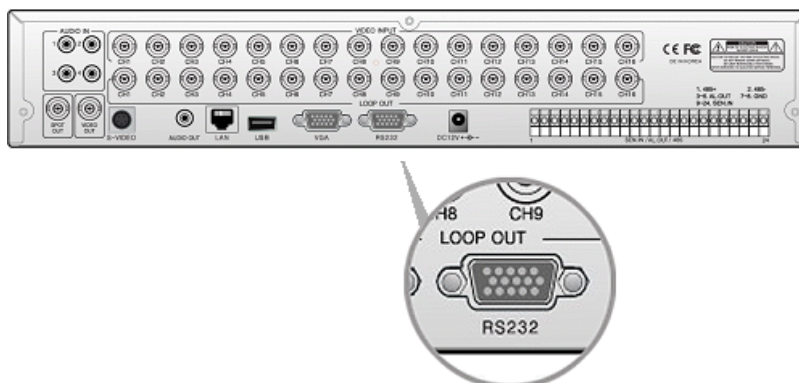
No	Description	No	Description
1	RS 485 +	13	SENSOR INPUT 5
2	RS 485 -	14	SENSOR INPUT 6
3	ALARM OUTPUT 1	15	SENSOR INPUT 7
4	ALARM OUTPUT 2	16	SENSOR INPUT 8
5	ALARM OUTPUT 3	17	SENSOR INPUT 9
6	ALARM OUTPUT 4	18	SENSOR INPUT 10
7	GROUND	19	SENSOR INPUT 11
8	GROUND	20	SENSOR INPUT 12
9	SENSOR INPUT 1	21	SENSOR INPUT 13
10	SENSOR INPUT 2	22	SENSOR INPUT 14
11	SENSOR INPUT 3	23	SENSOR INPUT 15
12	SENSOR INPUT 4	24	SENSOR INPUT 16

NOTE

User can set values in menu

RS-232

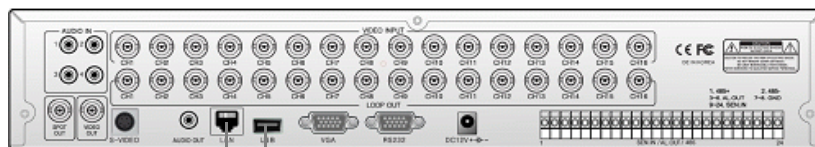
RS-232 is the connection port to the external controller.



No	Description
1	N/C
2	TX 232C
3	RX 232C
4	N/C
5	GND
6~9	N/C

NOTE

User can set values in menu



No	Description
1	VCC
2	USB DATA -
3	USB DATA +
4	GND

No	Description
1	N/C (Not Connected)
2	N/C (Not Connected)
3	RX- (Receive Data-)
4	N/C (Not Connected)
5	N/C (Not Connected)
6	RX+ (Receive Data+)
7	TX- (Transmit Data-)
8	TX+ (Transmit Data+)

4.1 PRE-OPERATION

Please make sure of power voltage before power on.

4.2 POWER CONNECTION

■ POWER ON

Please make sure of power voltage before power on.

1. Connect DVR to D/C power Jack by using the provided power adaptor in the package.
If the power adaptor is connected to DVR, the power is on. The following display appears.



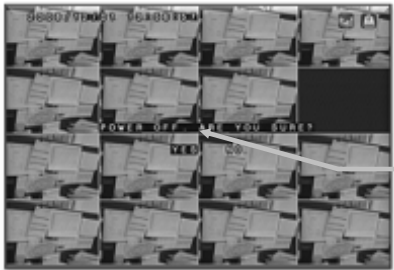
3. Booting time takes about 30 seconds after power is on.
4. Video signal is automatically detected when power is on.
5. The menu values set by user is not changed in sudden power failure.

CAUTION

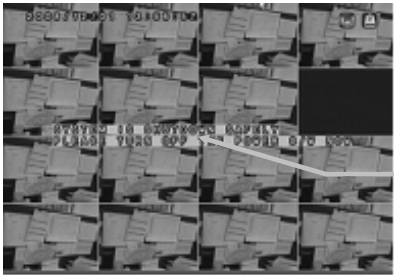
- 1. User is strongly recommended to use the adaptor in the package that manufacturer provides.
- 2. The DVR may be fatally damaged if the different voltage of adaptor is used.

POWER OFF

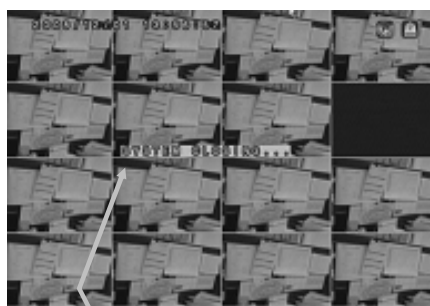
Press red POWER button on front panel.
Its function is mainly to prevent system damage due to suddenly unexpected power off.
Pull off adaptor on rear panel when the message appears below.



Select YES to power off.



System is closing.
In this process, user can not return to "power on" mode.



Pull off the power adaptor on rear panel when "SYSTEM IS SHUTDOWN SAFELY. PLEASE TURN OFF THE POWER S/W NOW" appears.

4.3 LIVE DISPLAY

4.3.1 SINGLE DISPLAY

When user selects one channel in multiple channel mode, this channel is switched over to single channel mode as below. User needs to press one more channel button after +10 button when he selects over channel 10. For example, he needs to press channel 1 Button after +10 Button when selecting channel 11. This channel selection method is the same as both live mode and playback mode.



[Full multiple channel]



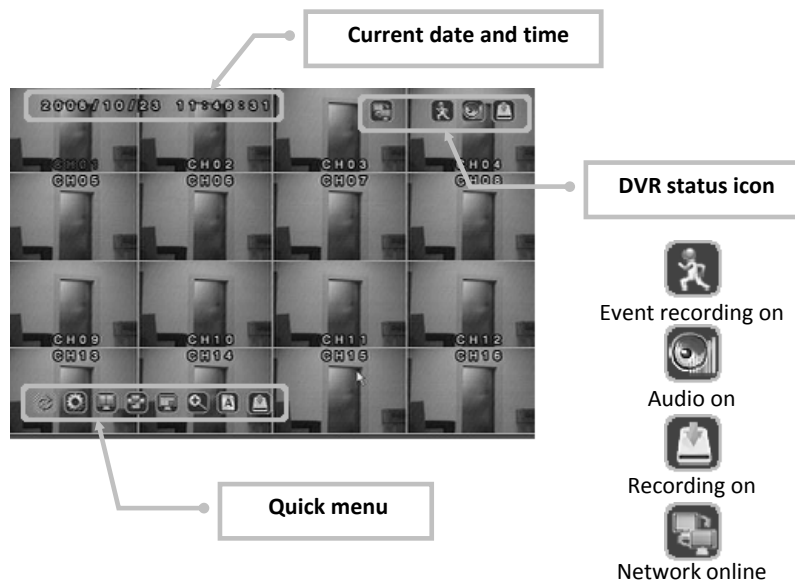
[Single channel]

NOTE

If pressing +10 button twice or any channel button is not followed for about 2 seconds after pressing +10 button, it goes to channel 10.

4.3.2 MULTIPLE DISPLAY

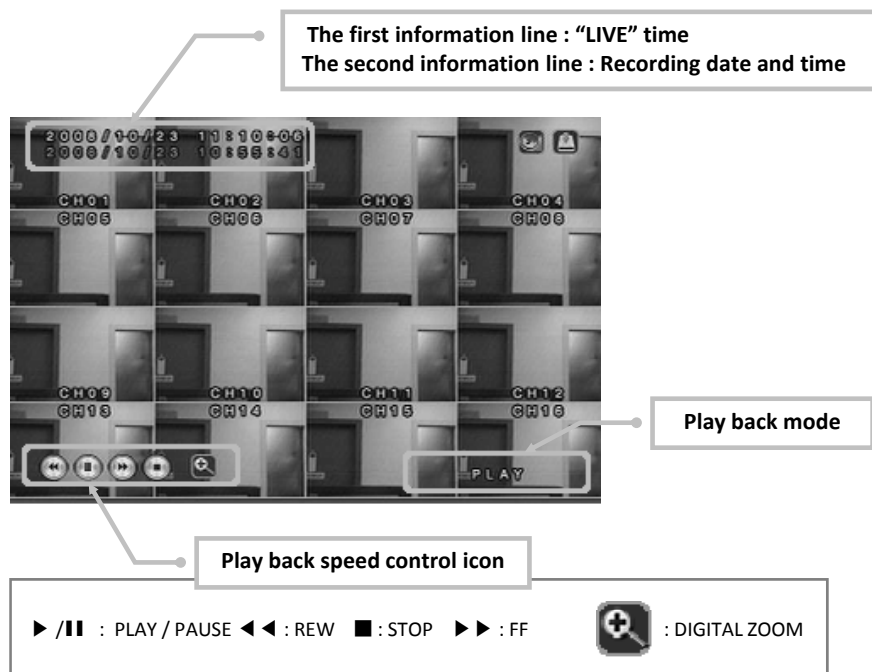
■ LIVE DISPLAY SCREEN



NOTE

For more details, please refer to Q.menu set up.

PLAYBACK DISPLAY MODE



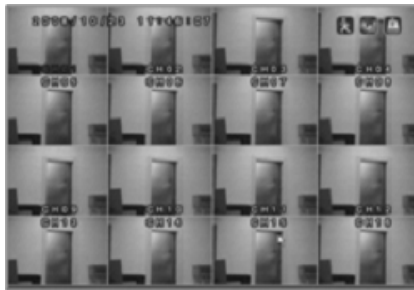
NOTE

The user can play the recording data frame by frame by pressing REW or FF button in playback mode.

In 16 multiple channel, user can move to channel 1 by pressing digital zoom button.

Digital Zoom is available by the mouse or the remote controller in "PLAYBACK" mode.

“DISPLAY” button enables you to select the type of the display.



1. Auto sequence or PIP mode can switchover to 16 channel display mode by pressing DISPLAY button.

2. The display type is switched over to 16 channel display → 13 channel display → 9 channel display → 6 channel display → 4 channel display mode in order by pressing DISPLAY button, or clicking the right button of mouse repeatedly.

NOTE

The user can move to next channel by clicking the right button of mouse in single mode.

To return to divided channel mode, the user needs to press on quick menu  or DISPLAY button on front panel.



13 channel display → 9 channel display → 6 channel display → 4 channel display

The display channel can be changed by pressing UP/DOWN button in divided channel mode as desired.

■ MOSAIC FUNCTION

The user can make a certain area in live mode blurred for private purpose.

Mosaic ON

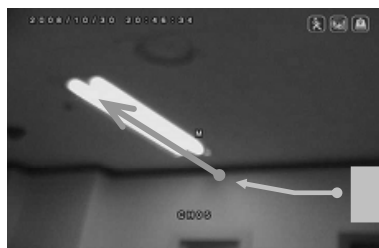


1. Select one channel that user likes to set up.

2. Put the mouse at the starting point you want, and drag it to the desiring area with left-button pressed.

3. This mosaic function is only available in "LIVE" mode, and does not affect any recording data even if it is on when recording is triggered.

Mosaic OFF



Mouse starting point

4. To release this function, drag mouse diagonally from the right bottom of set area with it pressed.

NOTE

This mosaic function is only available at "LIVE" display mode.

4.4 AUTO SEQUENCE (AUTO)

“AUTO” button automatically switch over the single channel display or 4 channels display in order.

- Display mode setup : Main Menu > Display > Sequence > Mode : single or quad
- Interval setup : Main Menu > Display > Sequence > Interval : 1 sec ~ 60 sec.

Press “AUTO” again to display the current channel.

- ▶ press “DISPLAY” button to stop “AUTO SEQUENCE”
- ▶ No video input channel is not displayed in the single channel display mode.

[Single channel]



CH1



CH2



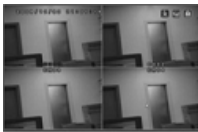
CH3



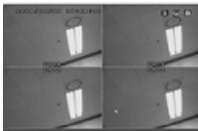
CH4

•
•
•

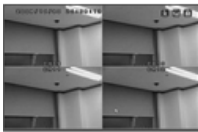
[4 channel]



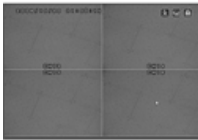
CH1 ,2,3,4



CH5,6,7,8



CH9,10,11,12



CH13,14,15,16

•
•
•

4.5 DIGITAL ZOOM

User can magnify the area 2 times digitally.



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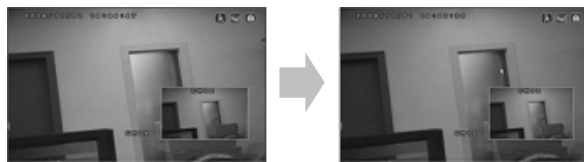
1. Click  on Q.MENU and select the area by pressing the direction key.
2. Press ENTER button, and the image is magnified digitally. This function is available only in the single channel mode.
3. press "ENTER" button again to release.
4. The double-click of the mouse also magnify the image.

4.6 PIP

- ▶ The smaller video is displayed in the single channel mode.
- ▶ The user can monitor main channel and sub channel together in single channel mode.
- ▶ Various PIP modes are displayed when pressing PIP button repeatedly.



- ▶ The sub channel location is changed when pressing PIP button.

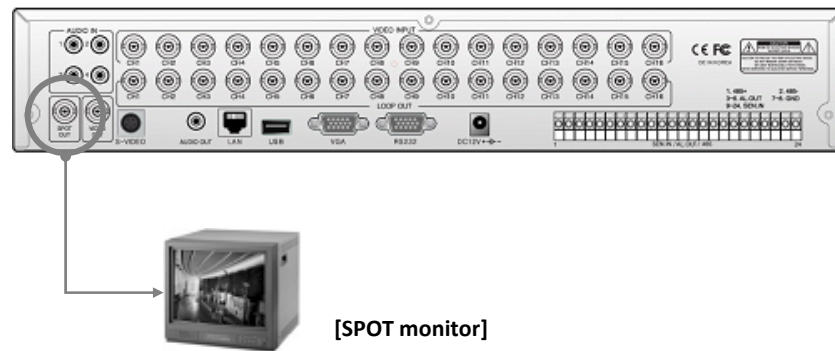


- ▶ The sub channel display is changed by pressing LEFT / RIGHT button of direction key.



- ▶ The main channel display is changed by pressing UP / DOWN button of direction key.
- ▶ To stop this function, press DISPLAY button.

4.7 SPOT

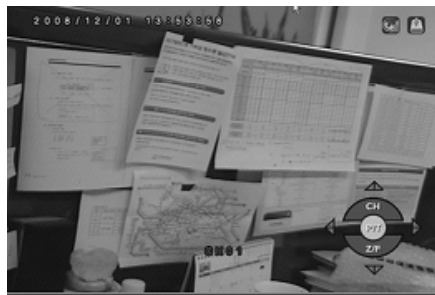


1. SPOT monitor supports only “LIVE” single channel, or “LIVE” 4 channel display.
2. SPOT monitor also supports AUTO SEQUENCE function, and can set up time interval.

4.8 PTZ

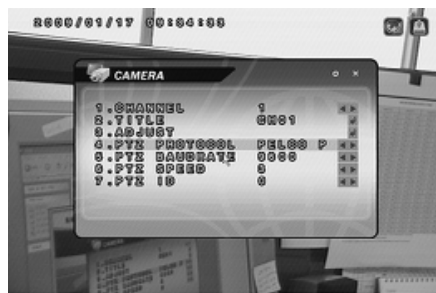
PTZ is used for controlling camera with PAN/TILT/ZOOM/FOCUS.

1. Press PTZ button in "LIVE 16 split channel mode, and single channel mode appears.
2. Press ENTER button, and move to each menu like CH, P/T, Z/F.
3. PTZ camera is controlled with LEFT / RIGHT buttons on front panel, mouse, or remote controller.
4. To release this function, press PTZ button again.



- ① CH : Channel change
- ② P/T : PAN & TILT control
- ③ Z/F : ZOOM & FOCUS control

To function above, please setup PROTOCOL, BAUDRATE, SPEED, ID from MAIN MENU>CAMERA.



CAUTION

Make sure that PTZ speed dome camera is properly installed on the relevant channel before PTZ operation.

NOTE

PTZ mode is available at live single display mode only, not controlled by divided channel display mode.

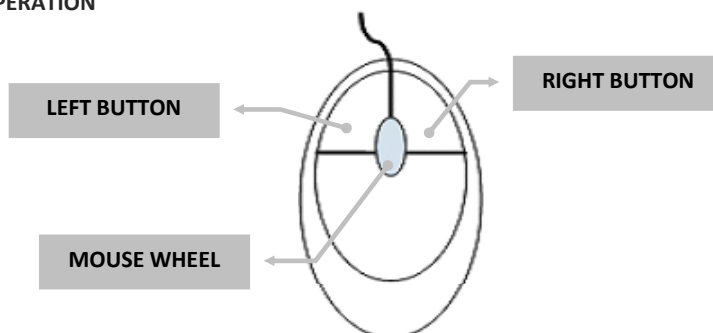
To release this function, press PTZ button again.

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4.9 MOUSE

By using USB mouse, setting values can easily be adjusted, or changed.

■ MOUSE OPERATION



1. Left button

- ① To select menu or to confirm setting value
- ② To move to 16/13/6/4 CH in display screen mode by pressing "DISPLAY" icon.
- ③ To revert into the previous multiple screen mode from 1 CH single screen mode

2. Right button

- ① In display screen mode
 - 13 multiple screen mode : To move to next channel by one channel.
 - 9 multiple screen mode : To move to 1-9 channel and 8-16channel
 - 6 multiple screen mode : To move to next channel by one channel
 - 4 multiple screen mode : To move to 1-4, 5-8, 9-12, 13-16 channel
- ② To move to next channel from single channel in play back mode
- ③ To change sub-channel in PIP mode

■ KEY BUTTON OPERATION ON FRONT PANEL

- 1. ◀▶ : To move cursor to left, or right
- 2. ▼▲ : To move cursor to up, or down
- 3. ↵ : ENTER button. To activate the corresponding function.
- 4. Q.MENU : To get out of current menu

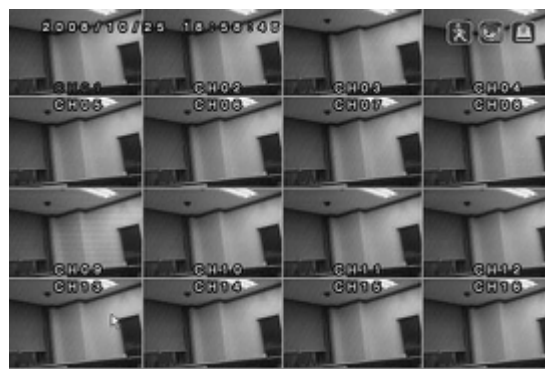
■ Remote controller operation

- 1. ◀▶ : To move to left or right
- 2. ▼▲ : To move to up or down
- 3. ↵ : ENTER button. To activate the corresponding function
- 4. Q.MENU : To get out of current menu

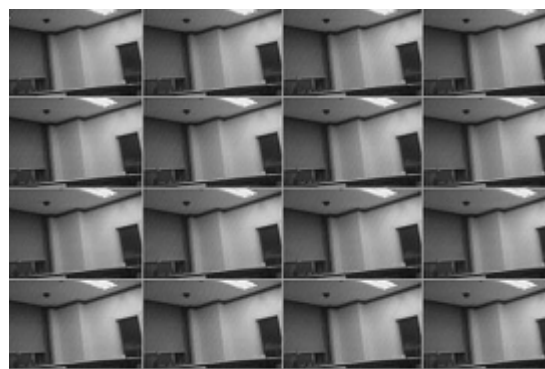
4.10 OSD

- OSD can be removed by pressing “OSD” button or  icon on Q.MENU on the screen.

[OSD ON]



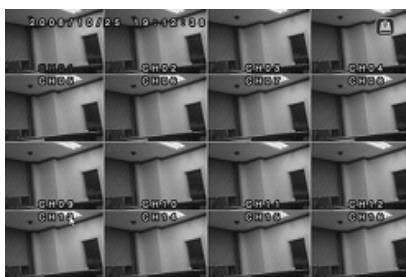
[OSD OFF]



4.11 RECORDING

4.11.1 NORMAL RECORDING

Press REC button, and LED is lighting in red. Recording starts and the recording icon  appears at the right upper side. To stop recording, press REC button again and the recording icon disappears.



CAUTION

1. The schedule recording is set as the factory default.
2. The schedule recording should be disable to stop recording.
3. After the schedule recording is disable, it is possible to start or stop recording by pressing "REC" button.

NOTE

1. Password approval is pre-requisite to stop recording.
2. The schedule recording enables the user to start recording at the desired date and time

HDD RECORDING CAPACITY TABLE***16CH , HDD250GB/STD**

RESOLUTION		QUALITY 4				QUALITY 3				QUALITY 2				QUALITY 1			
SUPER	7.5	1	day	6	hour	2	day	3	hour	3	day	0	hour	4	day	0	hour
	6	2	day	2	hour	3	day	13	hour	5	day	0	hour	6	day	16	hour
	5	2	day	10	hour	4	day	2	hour	5	day	18	hour	7	day	17	hour
	3	4	day	13	hour	7	day	17	hour	10	day	21	hour	14	day	12	hour
	2	5	day	13	hour	9	day	9	hour	13	day	5	hour	17	day	11	hour
	1	6	day	10	hour	10	day	19	hour	15	day	4	hour	20	day	0	hour
HIGH	15	2	day	23	hour	5	day	2	hour	7	day	5	hour	9	day	19	hour
	10	3	day	18	hour	6	day	11	hour	9	day	4	hour	12	day	16	hour
	7.5	4	day	14	hour	7	day	17	hour	10	day	20	hour	14	day	8	hour
	6	4	day	23	hour	8	day	8	hour	11	day	17	hour	15	day	12	hour
	5	5	day	13	hour	9	day	10	hour	13	day	7	hour	17	day	21	hour
	3	6	day	4	hour	10	day	10	hour	14	day	16	hour	19	day	10	hour
	2	8	day	13	hour	14	day	14	hour	20	day	15	hour	27	day	18	hour
	1	10	day	15	hour	18	day	4	hour	25	day	17	hour	34	day	17	hour
LOW	30	4	day	10	hour	7	day	14	hour	10	day	18	hour	14	day	16	hour
	15	7	day	5	hour	12	day	6	hour	17	day	7	hour	23	day	4	hour
	10	9	day	3	hour	15	day	15	hour	22	day	3	hour	29	day	21	hour
	7.5	11	day	20	hour	20	day	3	hour	28	day	10	hour	37	day	22	hour
	6	12	day	13	hour	21	day	9	hour	30	day	5	hour	40	day	13	hour
	5	12	day	19	hour	21	day	17	hour	30	day	15	hour	40	day	22	hour
	3	14	day	11	hour	24	day	15	hour	34	day	19	hour	46	day	17	hour
	2	16	day	18	hour	28	day	10	hour	40	day	2	hour	53	day	8	hour
	1	17	day	8	hour	29	day	10	hour	41	day	12	hour	55	day	9	hour

- ▶ Please calculate, and apply HDD recording time of 8ch(2 times), or 4ch(4 times) DVR based on this table.
- ▶ This table based on the test result of our R&D Institute.
- ▶ This table is depending on user's environment.

4.11.2 EVENT RECORDING

If “EVENT RECORDING” is setup, the recording automatically begins in detecting the motion or sensor.

4.11.3 SCHEDULE RECORDING

If “SCHEDULE RECORDING” is setup, the recording automatically begins on the desired date and time

4.12 SEARCH

Press SEARCH button and the following SEARCH menu appears on the screen.
The recorded video can be found in each search mode (NORMAL / EVENT / TIME)
DVR can record and search the files at the same time.



To cancel recording search, and to get back to live display mode, press SEARCH button again.

4.12.1 NORMAL SEARCH (DATE AND TIME SEARCH)



① After pressing SEARCH button, move to the date with yellow color, and press ENTER button.



- ② When time graph appears, move to the time user wants, and press ENTER button while time is in yellow color.



- ③ When minute graph appears, move to the area in yellow color, and press ENTER button at the area you want.



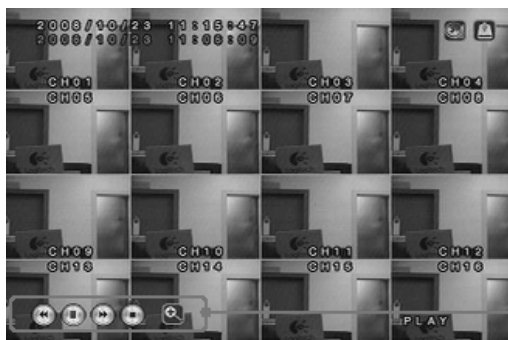
- ④ Recorded video is played back at selected date

** Return to "SEARCH" mode, press "STOP" button.

NOTE

1. Press Q'MENU button to move to each search mode (NORMAL / EVENT / TIME)
2. Press UP/DOWN direction key to search the recording files monthly.
3. The yellow area means there are the recording files.

■ REW,PLAY/PAUSE,FAST,STOP



- ▶ REW : Pressing REW button in playback display mode to rewind the file (x2, x3, x4, x5, x6)
- ▶ FF (Fast Forward) : Press FF button in playback display mode, playback is faster than normal speed (x2, x3, x4, x5, x6)
- ▶ PLAY / PAUSE : Press PAUSE in playback display mode, playback stops temporarily. Press button again, playback starts again.
- ▶ STOP : Press STOP button in playback display mode to move to "SEARCH" mode.

NOTE

Press "FF" or "REW" in "PAUSE" mode to playback the video per frame

4.12.2 EVENT SEARCH

The user can search the recording data by the motion or sensor detection.



- ❶ Press Q. MENU button and move to “EVENT SEARCH” mode.
- ❷ Press “ENTER” button on the date in yellow.
- ❸ Event type : To search event recording data by all, motion, sensor
 - ▶ Motion : Motion detection record
 - ▶ Sensor : Sensor detection record
- ❹ Channel selection : Search the recording data by all channels or each channel.
- ❺ Move to the yellow area on time graph and select the time,
Then, press “ENTER” button, and the event list appears.



PAGE : 0001/0042

It means the current & total page.
Each page has 10 recording files.
Move to next page with left (◀),
right (▶) button and move to
the recording files with up (▲),
down (▼) button.
Select the file and press “ENTER”
to play.

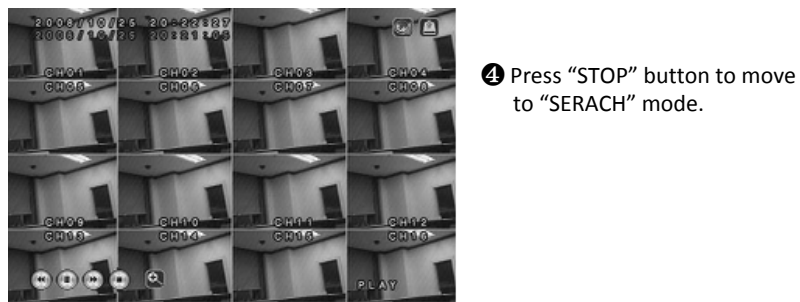
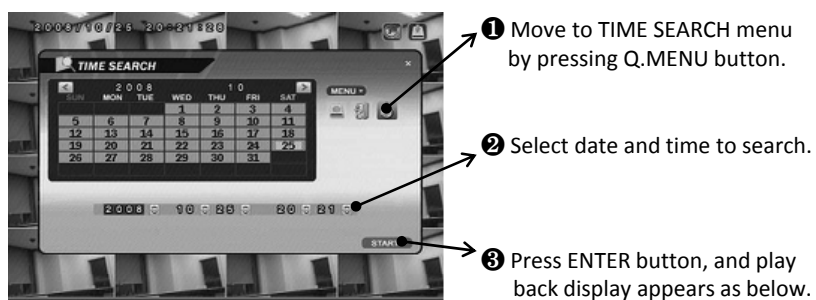
- ⑥ Press “DISPLAY” button to move to the split channel and the below screen appears



- ⑦ Select the changer to playback
- ⑧ Press “STOP” button to move to “SEARCH” mode.
- ⑨ Press “SEARCH” button to close “SEARCH” mode.

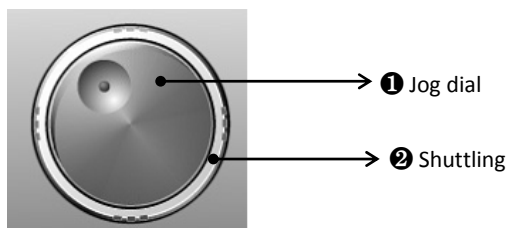
4.12.3 TIME SEARCH

The user select the date and time to search the recording files.



4.12.4 JOG SHUTTLE SEARCH

JOG SHUTTLE is easier to search the recording files.



❶ Jog dial : Convenient to search frame by frame, and the detailed motion in short time in pause mode.

❷ Shuttling : To control, and search playback speed by max. 32 times both in forwarding, and opposite direction.

NOTE

This function is available only for U2 series.

4.13 BACK UP

The user can backup the recording files in DVD±RW,CD±RW, and USB drive. Press "BACKUP" button to "BACKUP" mode and select media to backup.

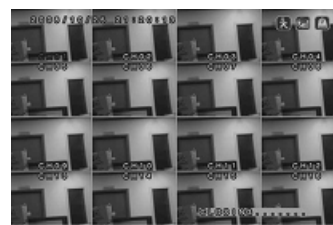
**** MEDIA FOR BACK UP : DVD±RW,DVD±R,CD±RW,CD±R,USB MEMORY STICK**



1. Copying setup



2. Copying...



3. Burning...



4. Closing...



5. Completed

1. Insert blank CD in DVD ROM of DVR.
2. Select DVD from DEVICE selection, and press ENTER button.
3. With the use of direction key button, select channel, date, time and minute to copy respectively.
4. The backup file size is automatically calculated.
5. Press "START" to backup.
6. Press "BACKUP" button to exit to menu.

NOTE

1. The format of DVD ROM begins.
2. Set up START time, and END time is automatically set according to the media capacity. The backup file size can be calculated by changing "START" and "END" time.
3. Max. 4.5GB(4500MB) is the free space in 1 DVD media.
It takes around 35 minutes
4. In abrupt switch off, or copying not carried out normally, take out DVD media, and start it from the first stage.
5. USB copying is in the same way as above.
6. Normal backup may not properly be performed if the free space of USB drive is less than 512 MB .

CAUTION

Don't remove DVD-ROM, or USB drive forcefully while copying.
It may cause system shutdown.

4.14 FILE VIEWER

After the file backup, the below files are generated.



- ① After double-click "FILEVIEWER", the above window appears.
The backup file list is displayed in the left.
The backup file is generated per minute.
- ② Double-click the backup file to playback.



Back up file is generated every 1 minute.

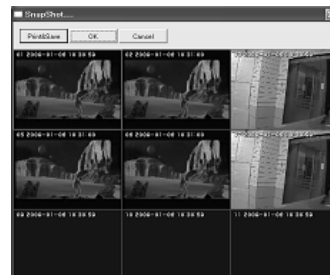
Audio playback speed control

Open the backup files in PC to playback

Display mode

Play, Stop, REW, FF buttons

Still image
Print & archive

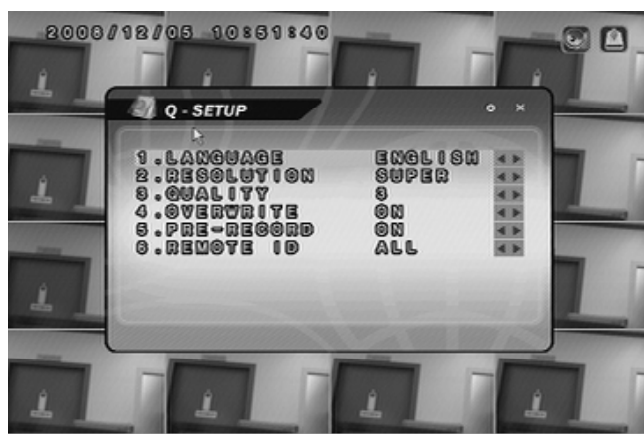


5.1 FACTORY DEFAULT

MAIN MENU	SUB MENU	DEFAULT	
Q.menu	1.Language	English	
	2.Resolution	High	
	3.Quality	3	
	4.Overwrite	Yes	
	5.Pre-record	Yes	
	6.Remote ID	ALL	
Camera	1.Channel	1	
	2.Title	CH01	
	3.Adjust	1.Contrast	5
		2.Brightness	5
		3.Hue	5
		4.Saturation	5
		5.B/W	No
	4.PTZ Protocol	OFF	
	5.PTZ Baudrate	9600	
	6.PTZ speed	3	
	7.PTZ ID	0	
Display	1.Sequence	1.Conversion type	Single
		2.Conversion interval	01 second
	2.OSD Display	1.Icon	Yes
		2.Title	Yes
		3.Date/Time	Yes
	3.Video loss	OSD	
	4.SPOT	1.Mode setup	Single
		2.Interval setup	01 second
	5.Video Format	NTSC or PAL	
Record	1.Resolution	High	Quality 3
	2.Watermark	No	
	3.Schedule Setup	ON	
	4.Audio Setup	1.Input 1	1
		2.Input 2	2
		3.Input 3	3
		4.Input 4	4
		5.LIVE output	Input 1
	5.Overwrite	ON	

MAIN MENU	SUB MENU	DEFAULT			
Event	1.Sensor	OSD			
	2.Sensor type	Off			
	3.Notion	Off			
	4.Motion set	1.Trace 2.Sensitivity 3.Area	Off 4 Off		
	5.Alarm	1.Alarm1 2.Alarm2 3.Alarm3 4.Alarm4	Off Off Motion Loss		
	6.Event time	10seconds			
	7.POP-UP	Off			
	8. Pre-record	On			
Network	1.IP setup	1.Type 2.IP address 3.Subnet 4.Gateway 5.Command Port 6.Video Port 7.Web Port 8.PPPoE	DHCP XXX.XXX.XXX.XXX XXX.XXX.XXX.XXX XXX.XXX.XXX.XXX 9201 9202 80 1.ID 2.Password	12345678 00000000	
	2.DDNS	1.Dns IP 2.Url 3.Port 4.IP Renewal	164.124.101.002 Videonetserver.com 20000 10minutes		
	3.E-MAIL	1.Send E-MAIL 2.SMTP server 3.Period 4.Test	@__.COM	1. Type 2. Name 3. Port 4. Id 5. Pw	default Kornet.net 25 ***** ***** off
	4.DVR_NAME	DVR			
	5.DVR location	DVR01			
System	1.Language	English			
	2.Date, time	1. Type YY-MM-DD			
	3.User setup	1.Admin setup	1.ID 2.Password		
		2.User setup	1.User 2.Id 3.Password 4.Authority Setup Search Backup Rec Off	Off On On On	
	4.HDD format	1.HDD 2.Format	HDD1 No		
	5.Controller	Type	RS-485		
	6.System log				
	7.information				
	8.Reset	1. Factory reset 2. Set -value copy 3. Set-value load			
Update	1.Type 2.Update	USB			
	3.Update (KERNEL)				

5.2 QUICK SETUP



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5.2.1 LANGUAGE - English, Korean, Chinese, Russian Etc.

This DVR supports 14 countries of language. Select a language with the use of left & right direction key. Factory default is English.

5.2.2 RESOLUTION

The recording resolution can be selected super, high and low.

Super (set up till D1 7.5FPS)

High (set up till HD1 15FPS)

Low (set up till CIF 30FPS)

5.2.3 QUALITY / 1, 2, 3, 4

The recording quality can be set from 1 to 4.
The recording files size depends on the quality.

5.2.4 OVERWRITE / ON, OFF

Once HDD capacity reaches the full size, it again returns to the first stage.
It carries out the Overwrite (yes), and records continually. In setting "No",
"HDD FULL" appears at the bottom of display, and record stops.

5.2.5 PRE-RECORD / ON, OFF

The event recording starts 2~3 seconds before the events happens.

5.2.6 REMOTE ID / 1, 2, 3, 4, ALL

Install the various DVRs at the same place, and one remote controller can control various DVRs respectively by granting ID to them. Only remote controller can be used to control. Setting values are ranged into 1~4, and ALL.

5.3 CAMERA



5.3.1 CHANNEL / 1~16

Select channel no to set up

5.3.2 TITLE / CH 1-CH 16

The user can decide the installed camera's name by each channel. Move to "TITLE" and press "ENETR" button and the window appears as below.



Typewrite the name of the camera and press ENTER to change.

NOTE

1. The name should be less 8 letters.
2. Default : channel 1.

5.3.3. ADJUST

1. Contrast : 1-9 stage
2. Brightness : 1-9 stage
3. Hue : 1-9 stage
4. Saturation: 1-9 stage
5. B/W : Yes / No

5.3.4 PTZ PROTOCOL / OFF, PELCO-P, PELCO-D

Select the matching protocol for PANTILT camera installed to the external.

NOTE

**Miss-matching protocol causes no working.
Contact manufacturer, or supplier if specified protocol is required.**

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5.3.5 PTZ BAUDRATE / 2400, 4800, 9600, 19200, 115200

PTZ protocol means telecommunication speed. Select PTZ protocol suitable to installed camera. The low level decreases camera speed of 6 Band ratio.

5.3.6 PTZ SPEED / 0,1,2,3,4

To control the speed of PTZ camera.

5.3.7 PTZ ID / 0~255

To set up PTZ camera ID.

5.4 DISPLAY



5.4.1 SEQUENCE

Sequentially display switchover is set from 1-16 channels in "LIVE" display mode.

1.1 MODE / SINGLE, QUAD



To set up 1 channel, or 4 channel

1.2 INTERVAL (1-60 Second)

5.4.2 OSD DISPLAY

The user can display or remove OSD such as icon, title, date and time in “LIVE” display mode.



2.1 ICON / ON, OFF

Display icon or not

2.2 TITLE / ON, OFF

Display the name of the camera or not

2.3 DATE, TIME / ON, OFF

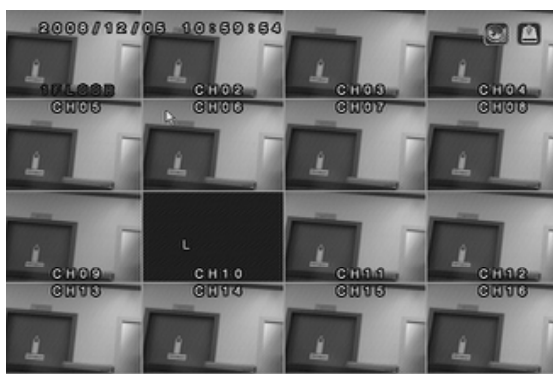
Display date and time or not.

NOTE

It is impossible to remove OSD in “PLAYBACK” mode.

5.4.3 VIDEO LOSS

When the real-time camera video loss occurs, it advises BLANK loss status to the relevant channel, or show "L" letters.



- ▶ OFF : Not Supported
- ▶ OSD : Display video loss status in letter on display
- ▶ OSD + BEEP : Display video loss status in letter, and buzzer sound.
- ▶ BEEP : Display video loss in buzzer sound

5.4.4 SPOT / SINGLE , QUAD



Select single and QUAD mode.
Set up switchover interval of SPOT monitor.

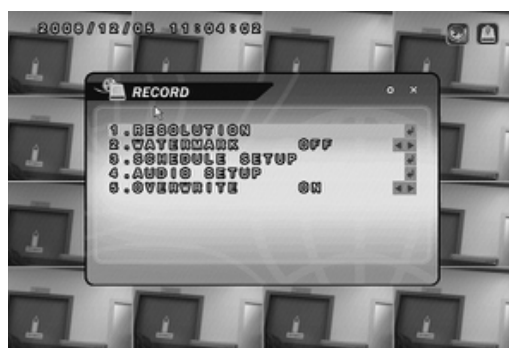


When the switchover interval is disable, set one channel of 1~16 ones.
The function of auto display conversion can be added.

5.4.5 VIDEO FORMAT / NTSC, PAL

User can set the receiving type of respective camera installed in each area.

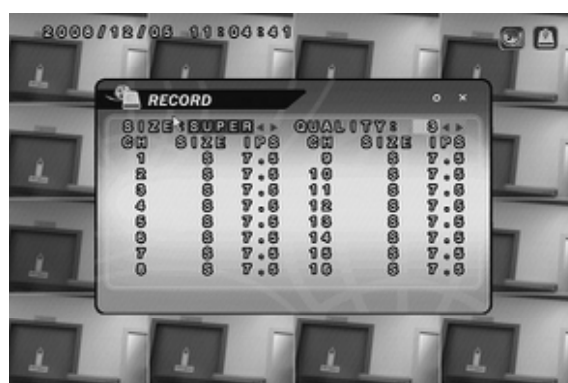
5.5. RECORD



5.5.1 RESOLUTION

The user can select the resolution

- ① SUPER (QUALITY) 1 / 2 / 3 / 4 7.5 ips per channel



- ② HIGH (QUALITY) 1 / 2 / 3 / 4 15IPS per each channel



- ③ USER SUPER (QUALITY) 1 / 2 / 3 / 4
HIGH (QUALITY) 1 / 2 / 3 / 4
LOW (QUALITY) 1 / 2 / 3 / 4

The user is able to set resolution, quality. If the user doesn't want recording, please select "OFF" in IPS. In "PLAYBACK" mode the blue screen is displayed in the channel of which IPS is off.

[Recording setup display-USER]



[Recording playback display]



④ LOW (QUALITY) 1 / 2 / 3 / 4 each channel 30FPS



NOTE

1. The recording resolution setup is related to HDD capacity.
2. The recording level (Quality) can be set to 1, 2, 3, 4.
3. Overwrite ON : When HDD does not have enough space to backup, return to the first, and recording starts by overwriting the old data.

***RECORDING RESOLUTION**

Resolution				Record ips	Quality				
1	704x480	D1	Super	1	4	3	2	1	
2	704x480	D1	Super	2	4	3	2	1	
3	704x480	D1	Super	3	4	3	2	1	
4	704x480	D1	Super	4	4	3	2	1	
5	704x480	D1	Super	5	4	3	2	1	
6	704x480	D1	Super	6	4	3	2	1	
7	704x480	D1	Super	7.5	4	3	2	1	
8	704x240	HD1	High	1	4	3	2	1	
9	704x240	HD1	High	2	4	3	2	1	
10	704x240	HD1	High	3	4	3	2	1	
11	704x240	HD1	High	4	4	3	2	1	
12	704x240	HD1	High	5	4	3	2	1	
13	704x240	HD1	High	6	4	3	2	1	
14	704x240	HD1	High	7.5	4	3	2	1	
15	704x240	HD1	High	10	4	3	2	1	
16	704x240	HD1	High	15	4	3	2	1	
17	352x240	CIF	Low	1	4	3	2	1	
18	352x240	CIF	Low	2	4	3	2	1	
19	352x240	CIF	Low	3	4	3	2	1	
20	352x240	CIF	Low	4	4	3	2	1	
21	352x240	CIF	Low	5	4	3	2	1	
22	352x240	CIF	Low	6	4	3	2	1	
23	352x240	CIF	Low	7.5	4	3	2	1	
24	352x240	CIF	Low	10	4	3	2	1	
25	352x240	CIF	Low	15	4	3	2	1	
26	352x240	CIF	Low	30	4	3	2	1	

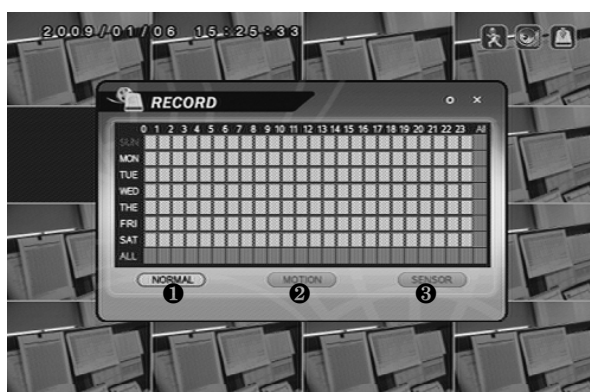
* Factory Default : "High", and Level "3".

5.5.2 WATERMARK / ON, OFF

Select whether or not the watermark is on.

5.5.3 SCHEDULE SETUP

Select "DATE" & "TIME" and press "ENTER" button. The color turns yellow.



- ❶ **NORMAL (Yellow)** : The recording begins on the selected date & time.
- ❷ **MOTION (Blue)** : The recording begins when the motion is detected on the selected date & time
- ❸ **SENSOR (Red)** : The recording begins when the sensor is detected on the selected date & time.

The schedule recording enables the user to record on the selected date and time.



Schedule record release



Schedule record setup

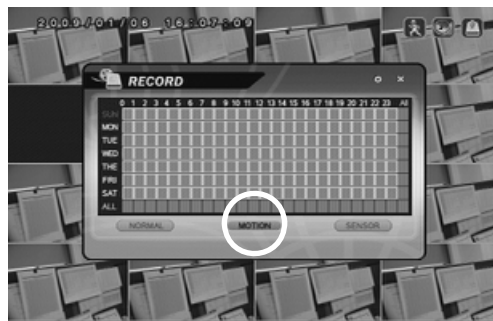
Select "ALL" and press "ENTER" to record the whole date & time.

① NORMAL (Yellow green)



1. The recording begins on the selected date & time.
2. Move to "DATE" & "TIME" with the direction key.
3. Press "ENTER" to select and press "ENTER" again to release.

② MOTION (Sky blue)



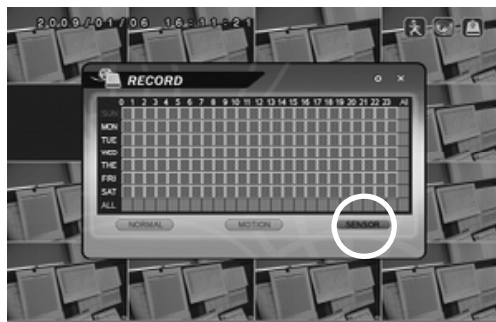
1. The recording begins when the motion is detected on the selected date & time.



NOTE

The following is needed when motion recording is set up.

- 1) **NORMAL recording setup ON** : As above picture, 'M' appears on display when not having motion recording from 9~11 AM to 16~18PM, but event recording list is not appeared. At normal recording, recording works normally.
- 2) **NORMAL recording setup OFF** : As above setup, undesignated area is not recorded.
→ In all recording, "NORMAL" recording setup has its priority.
- 3) Event list is recorded for 10 seconds from the first motion detection. (if 10 seconds are set up). If motion is continually detected for 10 seconds, recording time is prolonged, and shows one event list.
- 4) Normal recording is more secure than motion recording when the place (bank, train station, etc) motion is going on for long times.

**③ SENSOR (Orange)**

Automatically recording sensor video that is detected at the time of area painted in orange.

NOTE

If schedule recording is set, it has recording prior to motion and sensor one in turn.

5.5.4 AUDIO INPUT1,INPUT2,INPUT3,INPUT4,LIVE OUTPUT

Maximum 4 audio input, and one audio output.

In activating audio function, audio icon  appears at the top of display screen.



▪ **Input** : Select 4 channel of 1~16 ones, and input.

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▪ **Output** : Select one of 4 input channels. The channel color turns red.

5.5.5 OVER WRITE / ON, OFF

When HDD reaches full size of capacity, it returns to the first stage, and continually records by overwriting. In "NO", "HDD FULL" message appears at the bottom of display screen, and record stops.

5.6 EVENT

User can set up with 'ENTER' button, or MOUSE the detailed article necessary to event record 

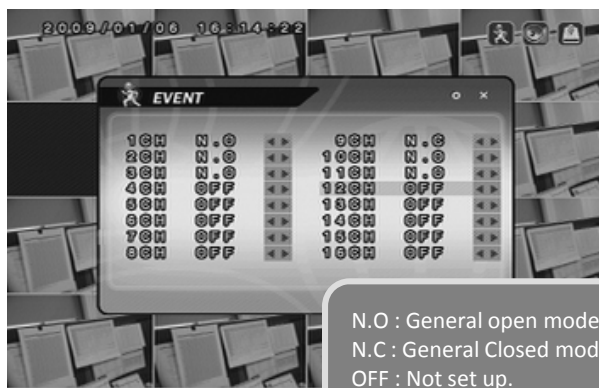


5.6.1 SENSOR / OFF, OSD, OSD + BEEP, BEEP

In sensor detection, select display mode on screen.

5.6.2 SENSOR IN

- ▶ CH 1 ~ 16 N.O / N.C / OFF
- ▶ User can set up the sensor mode for the relevant channel.



5.6.3. MOTION - OFF, OSD, OSD + BEEP, BEEP

Select how to alarm when the motion is detected.



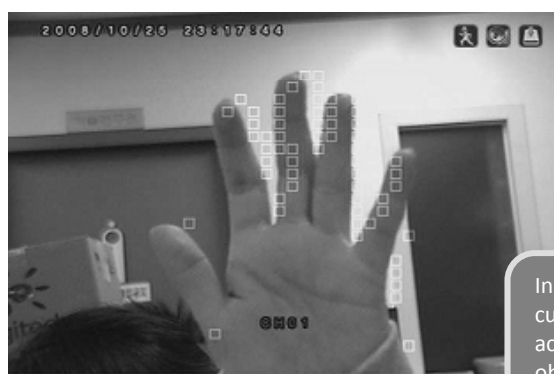
If "OSD" is selected, "M" appears.

5.6.4 MOTION SET

Setup the motion detection in detail



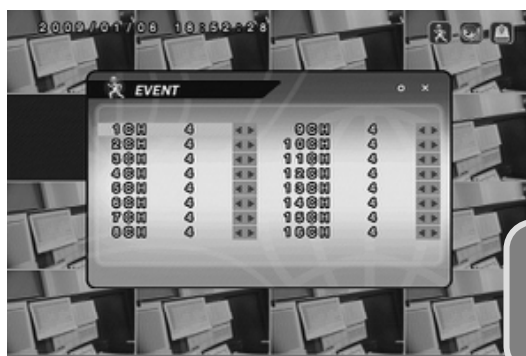
(1) TRACE (ON, OFF)



In motion sensor detection, cursor appears in activation according to the moving objects.

(2) SENSITIVITY (1 - 8)

User can set up moving sensitivity by each channel.



The sensitivity can be selected from 1 to 8.

(3) AREA (FULL, SET, OFF)



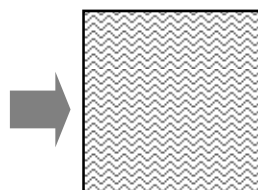
The user can select the motion detection area when "SET" is selected

- FULL : Full part
- SET : User's area set up
- OFF : Not set up

- ▶ In "SET" position, the selected area appears on the display in green by pressing "ENTER" button with direction key moving.
- ▶ In using "MOUSE", drag left mouse, and set up its area in the below direction.



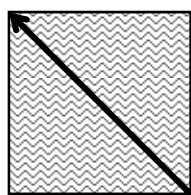
[Mouse release]



[Part setup as much as drag]

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- ▶ In "SET" position, it is changed into display of yellow green when pressing "ENTER" button with direction key moving.



Mouse position

By dragging the set area by mouse in diagonal direction, it is released.

5.6.5 ALARM



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- ▶ Alarm 1 Sensor, Motion, LOSS, OFF , NETWORK
- ▶ Alarm 2 Sensor, Motion, LOSS, OFF , NETWORK
- ▶ Alarm 3 Sensor, Motion, LOSS, OFF , NETWORK
- ▶ Alarm 4 Sensor, Motion, LOSS, OFF ,[NETWORK](#)

5.6.6 RECORD TIME (10 SECOND ~ 10 MINUTE)

- ▶ In the event occurrence, continual recording time is set.
- ▶ When the event happens before the continual recording time is released, recording time is extended from the point of its occurrence.

5.6.7 POP - UP / ON , OFF

- In the event occurrence, the relevant display is enlarged, and popped up to the full display.

5.6.8 PRE - RECORD / ON , OFF

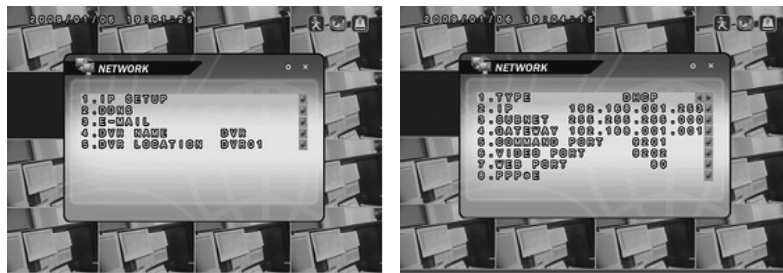
- When “PRE-RECORD” is on, the recording begins 2~3 seconds before the event is detected.

ex) If event is triggered at 3:10, it records videos from 3:09: 57.

5.7 NETWORK SETUP

5.7.1 IP SETUP

Allocate IP address to DVR



1) IP Type (STATIC / DHCP / PPPoE)

Select the type to match user's network environment .

1-1) STATIC : Fixed IP

The user directly sets up IP information ISP allocated.

1-2) DHCP : Floating IP

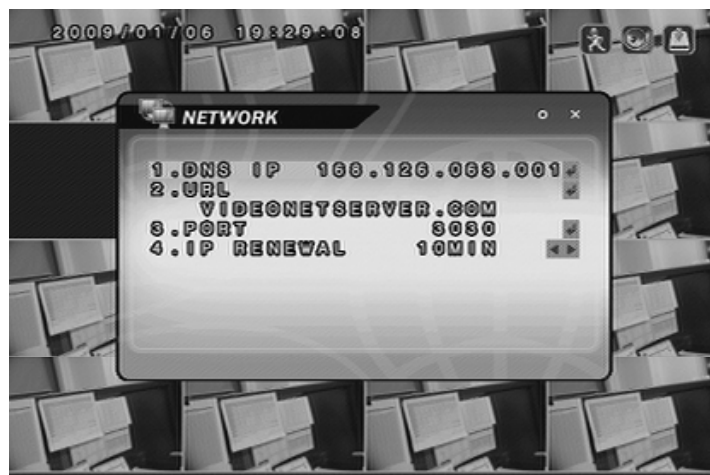
DVR automatically receives IP address by DHCP server.

1-3) PPPoE : DVR is connected to WAN without sharing internet (router).

User should insert ID, and password ISP provides.

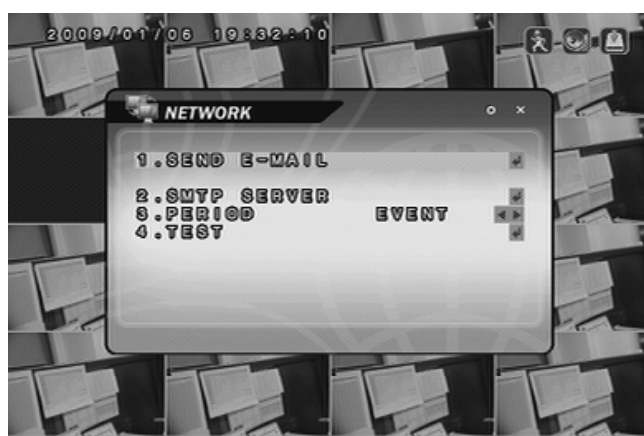
- 2) IP address (000.000.000.000)
Input IP address that ISP (internet service provider) provides.
- 3) Subnet mask (000.000.000.000)
Input the address of subnet mask ISP (internet service provider) provides.
- 4) Gateway (000.000.000.000)
Input the gateway address ISP (internet service provider) provides.
- 5) COMMAND PORT (9201)
COMMAND PORT is subject to the relevant network status (like fire-wall, etc.).
The factory default is set in 9201.
- 6) VIDEO PORT (9202)
It is required for video transmission by network.
- 7) WEB PORT (80)
It is needed for monitoring by internet explorer without client software program. (Net viewer).
- 8) PPPoE (PASSWORD / ID)
Input password and ID ISP (internet service provider) provides

5.7.2 DDNS



- 1) As DNS server(videonetserver.com) is already established,
the user's DNS server is not required.
- 2) IP RENEWAL (10 MINUTES / 20MINUTES / 30MINUTES)
DVR send its IP address to DNS server regularly for renewal.

5.7.3 E-MAIL



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1) SEND E-MAIL

_____@_____com

In EVENT happening, insert e-mail address to send the message when the event happens.

2) SMTP SERVER

Insert SMTP & DNS server.

2-1) TYPE DEFAULT / USER

2-2) NAME KORNET.NET

2-3) PORT 25

2-4) ID *****

2-5) PW *****

3) PERIOD (ONCE / EVENT / OFF)

Once : send an e-mail once a day.

Event : send an e-mail whenever the event happens.

Off : Do not send an e-mail.

4) TEST

Send a test e-mail.

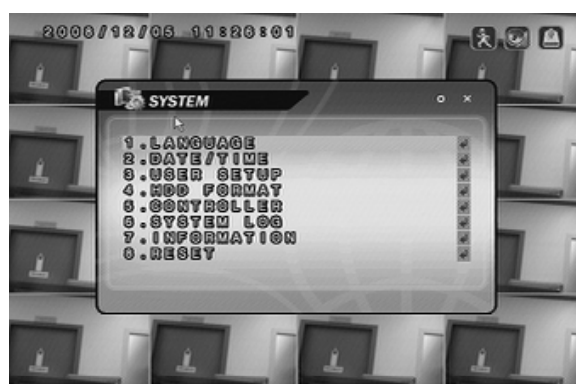
5.7.4 DVR NAME (DVR)

Input each ID of DVR to verify each DVR in CMS

5.7.5 DVR LOCATION (DVR01)

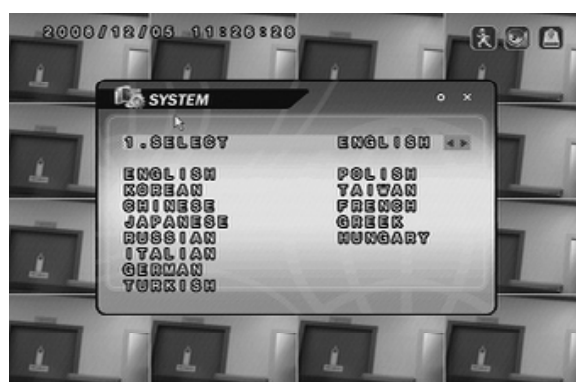
Input the location DVR is placed.

5.8 SYSTEM



5.8.1 LANGUAGE

Press "ENTER" to select "LANGUAGE"



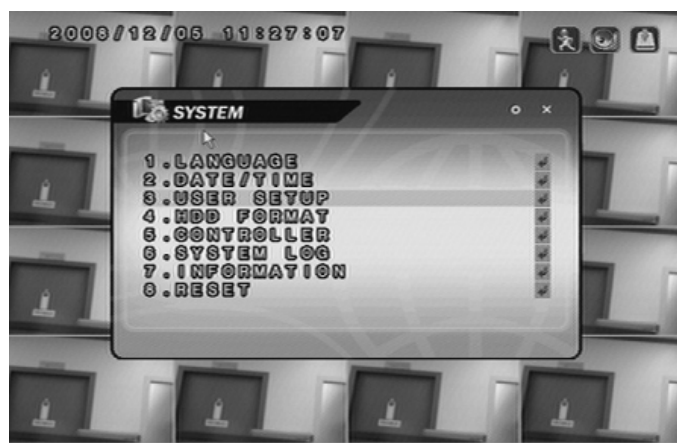
5.8.2 DATE / TIME

On the receipt of this DVR, set the current time correctly, and start recording.



5.8.3 USER SETUP

Setup the authority for users.

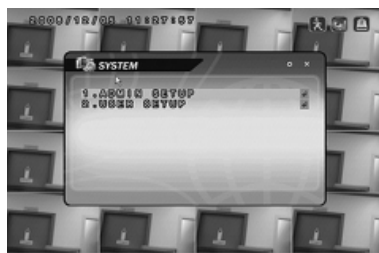


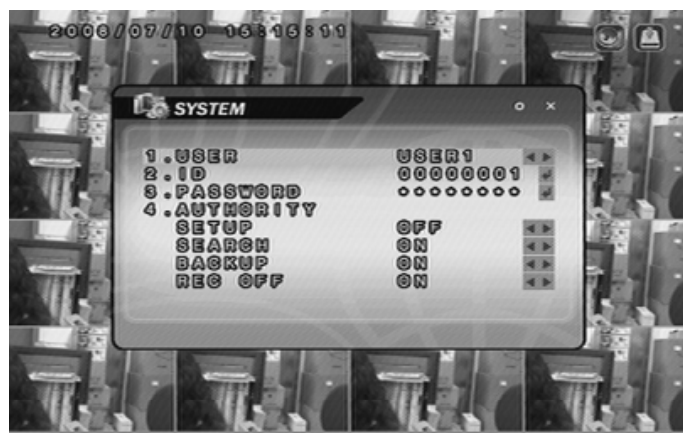
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1) ADMIN SETUP

- ▶ ID XXXXXXXX
- ▶ PASSWORD XXXXXXXX

Admin mode has the authority to set up, and release all functions of DVR.





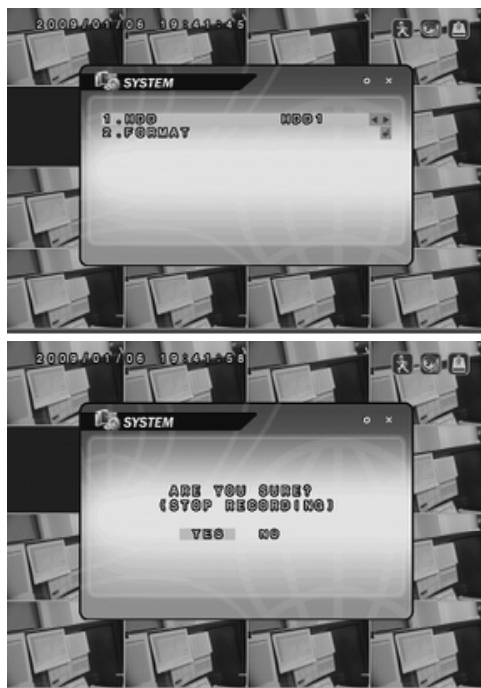
2) USER SETUP

- ▶ USER USER 1 ~ USER 3
- ▶ ID xxxx
- ▶ PASSWORD xxxx
- ▶ AUTHORITY
- ▶ SETUP ON / OFF
- ▶ SEARCH ON / OFF
- ▶ BACKUP ON / OFF
- ▶ REC OFF ON / OFF

User mode is entitled to set up, and release some functions of DVR. According to administrator's purpose, it can limit the authority of users.

5.8.4 HDD FORMAT

If HDD is formatted, all data is deleted. Please backup the files before formatting HDD.



Select "YES" to format

NOTE

HDD format is to delete all data in HDD.
Please backup the files before formatting.

5.8.5 CONTROLLER

To set up the interface for the external controller.



- 1) RS-232
 - ▶ BAUDRATE 115200
 - ▶ DATA BIT 8 BIT
 - ▶ PARITY NONE
 - ▶ STOP BIT 1 BIT

- 2) RS-485
 - ▶ BRAUDRATE EACH
 - ▶ DATA BIT 8 BIT
 - ▶ PARITY NONE
 - ▶ STOP BIT 1 BIT

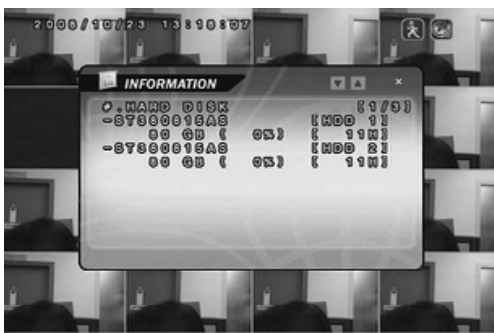
5.8.6 SYSTEM LOG

As a menu to check all data for DVR use, user can check information such as menu access, manual record, switch on/off, network access, back up, and search.



5.8.7. INFORMATION

Display the information about HDD, USB Drive, DVD-RW, Network, Firmware

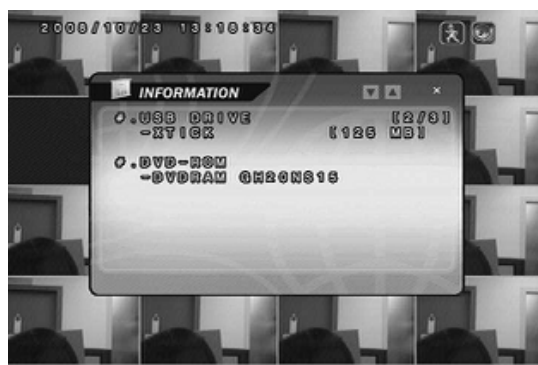


- ▶ Total capacity of HDD (The used space of HDD)
- ▶ [Free space of HDD]



- ▶ Network IP and Mac address
- ▶ Current software version

☒ Press up & down button to move to next page.



- ▶ USB Model No. / Total Capacity
- ▶ DVD RW Model No.

5.8.8. RESET

Reset the factory defaults of DVR

1) FACTORY RESET (YES / NO)



Select "YES" to reset.

2) SET - VALUE COPY (YES / NO)

Select "YES" to copy the settings.

3) SET - VALUE LOAD (YES / NO)

Select "YES" to load the settings. DVR will reboot after loading the settings.

NOTE

"SET-VALUE COPY" & "SET-VALUE LOAD" are useful to apply the same settings to a number of DVRs

5.9 UPDATE

User can update DVR system with new firmware easily by USB Drive and network.

DVR system update should be available only when HDD is installed.

5.9.1 USB UPDATE

5.9.2 NETWORK UPDATE



- ① For network update, DVR should be connected into internet line.

NOTE

It may fail due to user's Internet environment.
In this case, USB update is recommend.

② Update DVR by network.

(Main menu > System update > Device - network > Update - Yes)

It normally takes 4 ~ 6 minutes.



5.9.3 UPDATE

In system update menu, it shows current firmware version and new one.

- ▶ OLD S/W : it means current firmware version.
- ▶ NEW S/W : it means new firmware version to update.

MULTI NET VIEWER PROGRAM

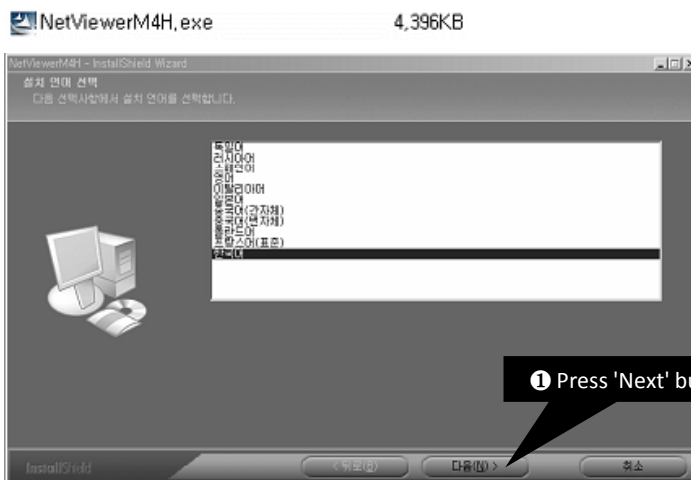
6.1 DEFINITION

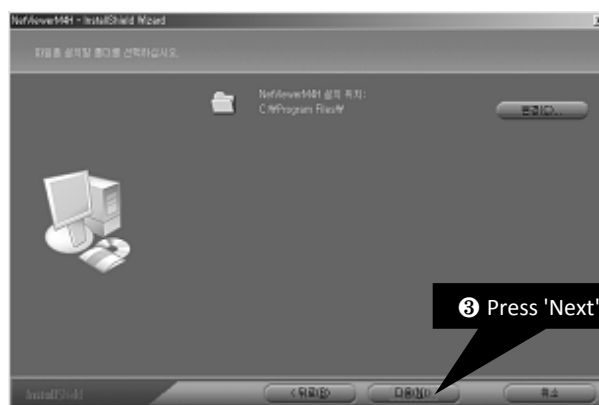
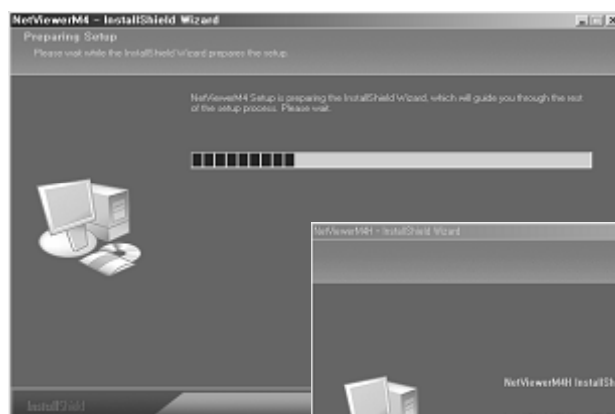
Net Viewer is a client software that enables users to operate DVR (monitor, playback, and backup) remotely through network.
Please kindly read out this manual thoroughly for set up, and proper operation.

6.2 NET VIEWER SETUP

6.2.1 INSTALLATION

Insert program CD in the package into CD(DVD)-ROM in your PC and double click the icon (NetViewerM4H.EXE) below.







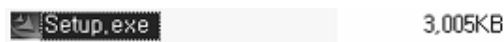
- 5 After the installation, “CMS_NetViewer” icon is generated in the desktop.
- 6 Along with the icon in the desktop, DVR_NetViewer folder is generated in "All Programs".



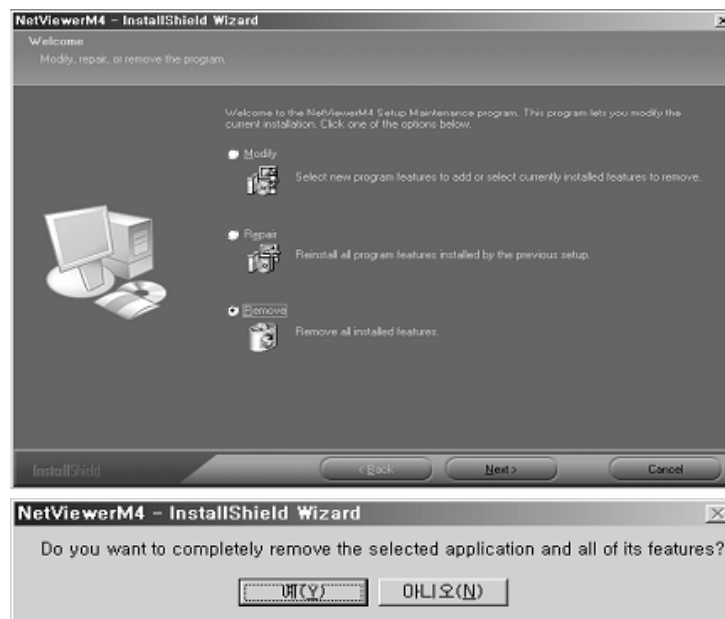
6.2.2 PROGRAM REMOVAL

(1) Program removal by Setup.exe

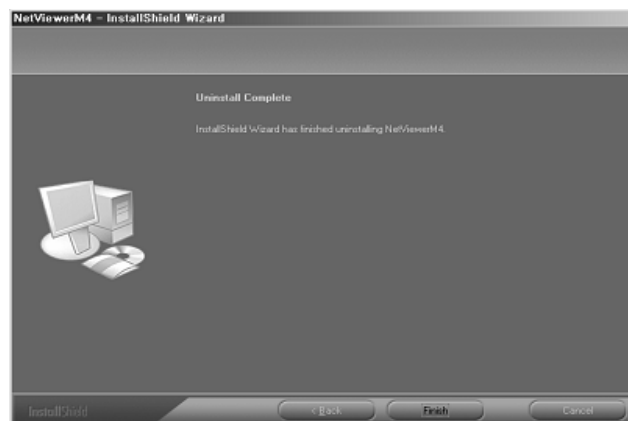
❶ Double click the icon of Setup.exe.



❷ Select "Remove" and press "Next" button.

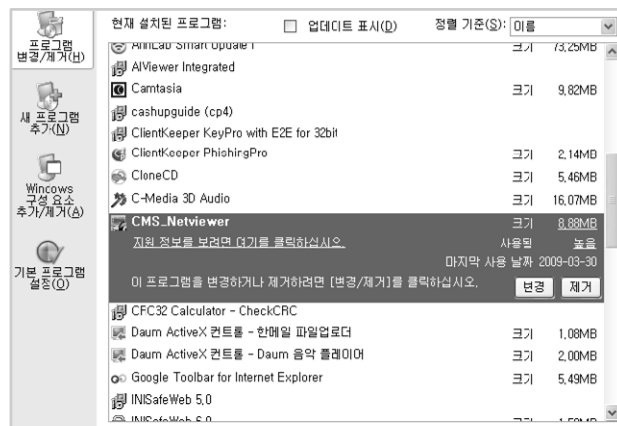


❸ Select "Y" button.

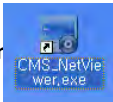


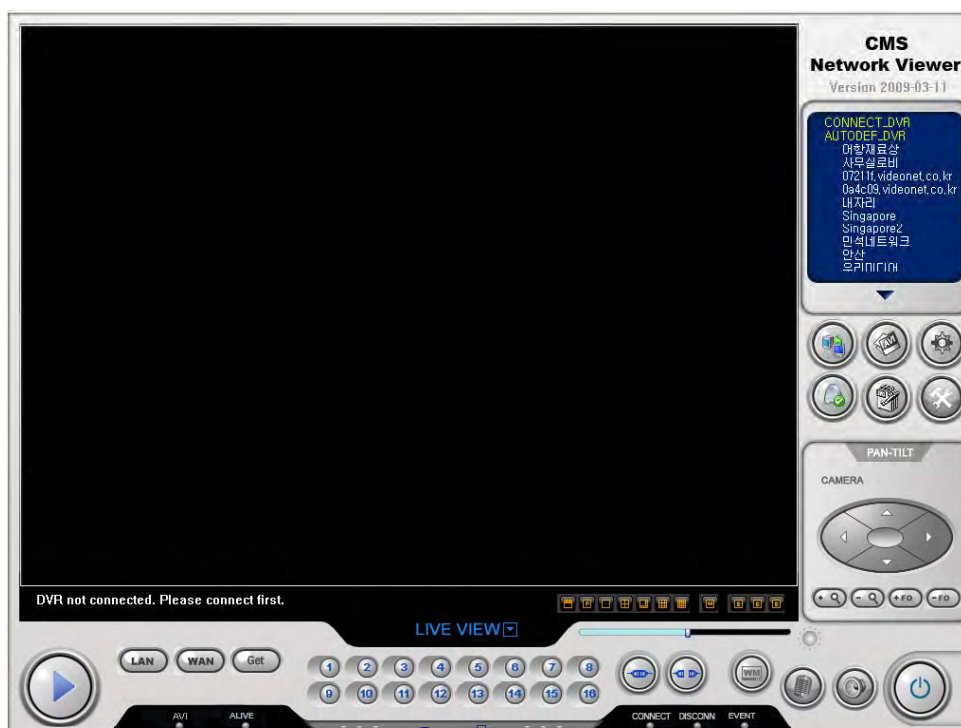
④ Click "Finish" button and Net viewer is uninstalled.

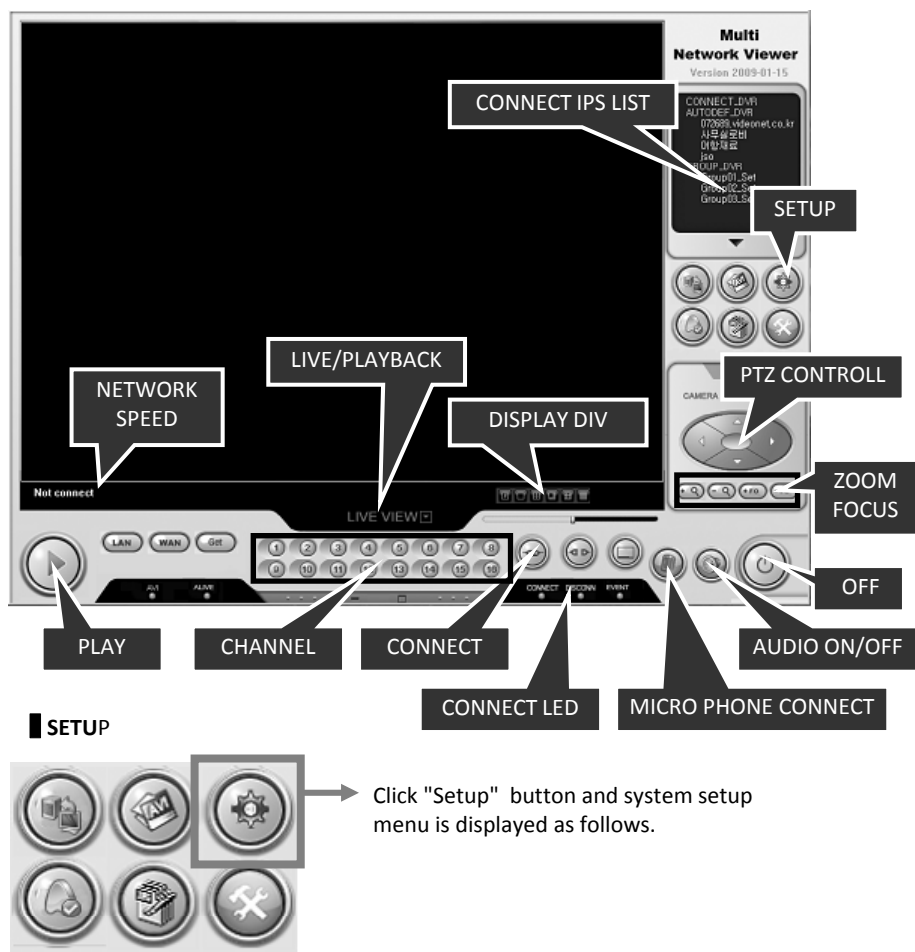
(2) Program removal by Window's Program additional and removal

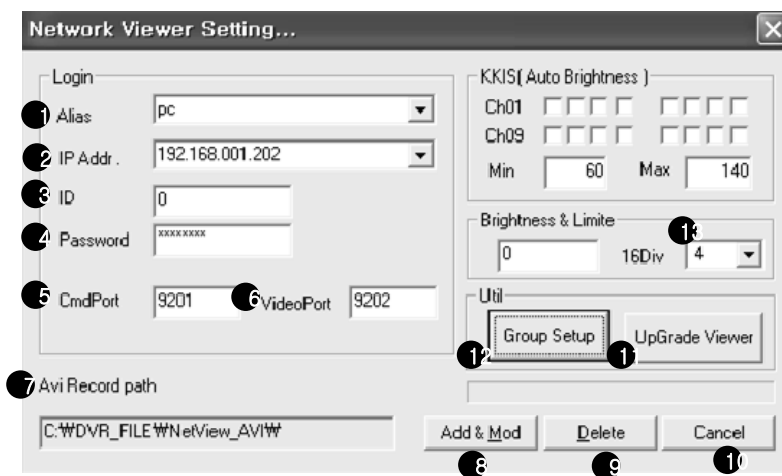


6.2.3 NETVIEWER FUNCTION

Double click the icon  and the program is displayed on screen as follows.







- ① **DVR Name** : Input DVR name.
- ② **IP address** : Input DVR IP address or Host Name (MAC address).
MAC address is defined as the last 6 digits of Host Name.
i.e.) 000001.videonetserver.com
- ③ **ID** : Input the ID registered in DVR.
cf) Default ID : 00000000 / PASSWORD : 00000000
- ④ **Password** : Input DVR password
- ⑤ **Command port** : Open "9201" from router.
- ⑥ **Video port** : Open " 9202" from router.
- ⑦ **Avi save directory** : Select directory location that Avi file is saved in.
- ⑧ **ADD & MOD** : Add or modify setting values.
- ⑨ **Delete** : Delete IP address.
- ⑩ **Cancel** : Get out of setup menu.
- ⑪ **Upgrade** : Upgrade program version.
- ⑫ **Group setup**
- ⑬ **Transmission speed limit**: Limit max. display speed according to graphic card specifications.

2) Login : Make sure of setup values saved in setup menu and press "OK" button.



[CONNECT] [DISCONNECT]

Logon...

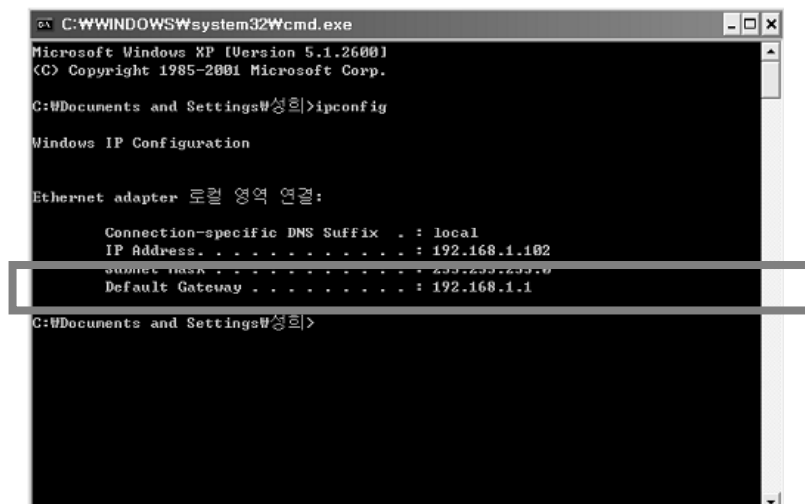
Alias	사무실2	OK	Click
IP Address	192.168.1.203	Cancel	
ID	00000000	Cmd	9201
Password	XXXXXXXX	Video	9202

How to set up IP router (Model : ZIO / INB5241SRe)

NOTE

Each IP router had its own setup method. Please refer to manual for details.

1. Boot your computer.
2. Follow the steps as below.
 - Start -> Run (R) -> put in 'cmd' in the blank bar.
 - Punch in 'ipconfig' at "C: \Documents and Settings \Your PC name".
 - Identify the default gateway numbers.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\성희>ipconfig

Windows IP Configuration

Ethernet adapter 로컬 영역 연결:

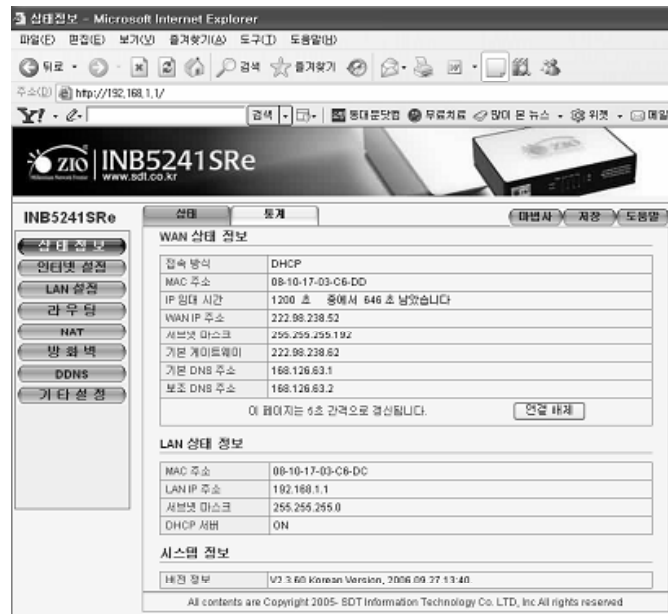
    Connection-specific DNS Suffix  . : local
    IP Address. . . . .               : 192.168.1.102
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 192.168.1.1

C:\Documents and Settings\성희>
```

3. Key in Default Gateway number in the Internet address bar. (e.g.) 192.168.1.1)



4. You can see the window of ZIO / INB5241SRe.



5. Select "NAT" button.

INB5241SRe

가상 서버 설정

DMZ 호스트 설정

☒ DMZ 호스트 사용 IP 주소 192.168.1.100 적용

UDP 호환성 강화 설정

☐ UDP 호환성 강화 설정 • 옵션을 해제하면 보안성이 높아집니다 적용

가상 FTP 포트 설정

☐ 가상 FTP 포트 사용 포트 번호 1025 적용

가상 서버 설정

이름

대상 IP 주소 192.168.1.

프로토콜 TCP

외부포트

내부포트

추가

순번	이름	대상 IP 주소	프로토콜	외부 포트	내부 포트	삭제
1	DVR-1	192.168.1.100	TCP	5001	5001	삭제
2	DVR	192.168.1.100	TCP	5000	5000	삭제

6. Click "Virtual server setup and input the IP address registered in DVR in "port forwarding" menu.

- * Name : Input DVR name
- * IP address : Input the IP address registered in DVR
- * Protocol : TCP
- * External port : 9201 (Default) (It should be same as the port number set in DVR.)
- * Internal port : 9201

포트 포워드링 포트 트리거 매번사 저장 도움말

가상 서버 설정

이름	MH-MJ
대상 IP 주소	192.168.1.25
프로토콜	TCP
외부 포트	9201
내부 포트	9201
추가	

7. Click "Add" button and the list is displayed as below.

7	MH-MJ	192.168.1.25	TCP	9201	9201	삭제
---	-------	--------------	-----	------	------	----

8. Press "Save" button and the values are saved.

포트 포워드링 포트 트리거 매번사 저장 도움말

9. Conduct port forwarding of the port number 9202 by following steps as above

포트 포워드링 포트 트리거 매번사 저장 도움말

가상 서버 설정

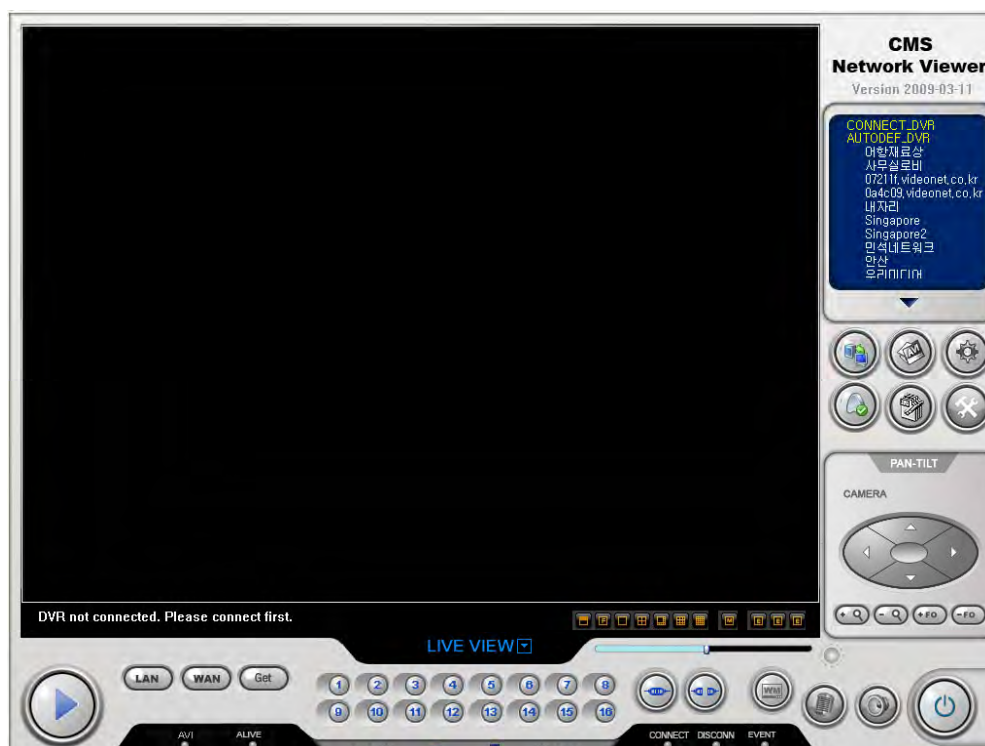
이름	MH-MJ2
대상 IP 주소	192.168.1.25
프로토콜	TCP
외부 포트	9202
내부 포트	9202
추가	

순번	이름	대상 IP 주소	프로토콜	외부 포트	내부 포트	삭제
1	MH-MJ2	192.168.1.25	TCP	9202	9202	삭제

NOTE

**When monitoring DVR via web viewer, web port should be open.
The setup method is same as above. Default is 80.**

- 3) Direct Logon : When double clicking one of DVRs registered in tree view, the DVR is connected and displayed automatically. In case that many DVRs are registered, tree view is dropped down when clicking “▼”.



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Max. 5 DVRs can be connected

When double clicking one of DVR lists registered on AUTO DEF_DVR, the DVR is moved to CONNECT_DVR.

cf) AUTODEF_DVR : The DVR lists registered by SETUP menu.

CONNECT_DVR : The DVR lists connected currently from registered DVR lists.

* When connected properly, Live mode is appeared automatically.

NOTE

Max. 5 DVR can be connected at same time. The transmission speed depends on the network condition and the user's computer specification.

LAN : LAN DVR search



- It shows all connected DVRs.
- It shows all connected DVRs through LAN by pressing Search DVR button.
- "End Search.." appears when DVR search process is finished.
- It is useful for dynamic LAN environment.

CAUTION

This function may be limited on LAN or PC protected by firewall.

② WAN : WAN DVR search



DVR communicates with DNS server (default : videonetserver) every 10 minutes.

- 2008-1-16 13:43:18 : Last time to communicate with DNS server
- 0c0024.videonetserver.com : host name (MAC address)
- 121.192.157.247 : WAN IP of current connected DVR

③ GET : it shows all users connected currently through WAN by pressing Find User button.



LIVE mode



[Full screen display]



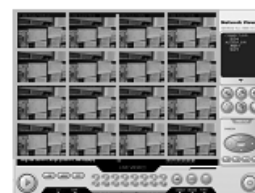
[4ch display]



[8ch display]



[9ch display]



[16ch display]



[49ch display]

- ① Single display : Click channel button or double click channel directly.
- ② 4ch display : Click 4ch display icon.
- ③ 8ch display : Click 8ch display icon.
- ④ 9ch display : Click 9ch display icon.
- ⑤ 16ch display : Click 16ch display icon.
- ⑥ 49ch display : Click 49ch display icon.

NOTE

Screen display mode is available in playback mode.

PLAYBACK mode



① Press red circle and select "PLAYBACK".



② Click "Time" button in PLAYBACK mode.

③ Search menu is displayed as below.



A. Select the month as you want.

B. Select the date.

C. Select the time.

The time bar is appeared in the bottom of search menu, showing recording data in yellow. (Blue part means no recording data.)

D. Select minute and second in details as you want by clicking up/down buttons.

E. Click "OK" button and the data is played.

■ PLAY speed control



PLAY



STOP/PAUSE



Reverse play



Reverse play by frame
(in pause mode only)



Play by frame
(in pause mode only)



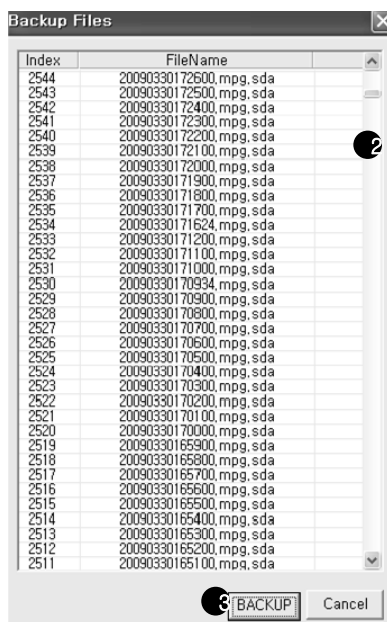
Fast forward

BACKUP



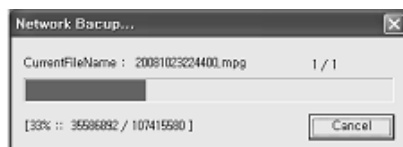
Recording date can be archived in PC for data backup.

① Press backup button and the lists are appears.



② Select the list for backup as you want.

③ Click "backup" button.

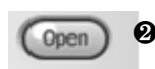


The backup files are saved in
C:\DVR_FILE

* How to play backup file



❶ Select File Play mode.



❷ Press OPEN button.

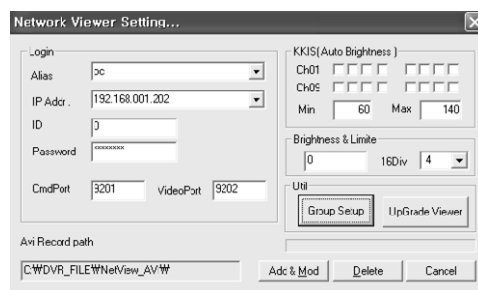


❸ Select BACKUP file.

❹ Backup file is played.



How to convert to AVI file



When live video or record file is converted to AVI file format, it is played on window media player without Net viewer program.

A. AVI file save directory setup

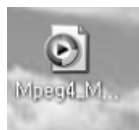
Set save directory as you want like C:\DVR_FILE\NetView_AVI

B. Activation

Select a channel to convert to AVI file and click AVI icon as below.

Then, the color of the icon turns yellow

To release, press it again.



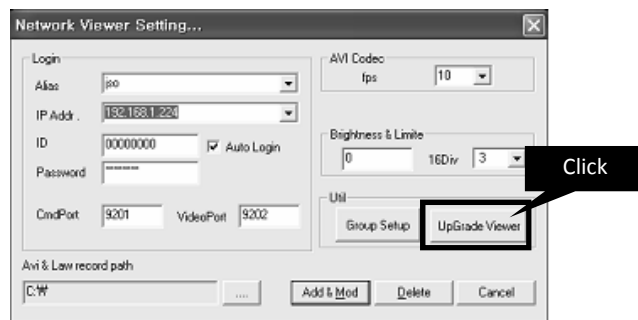
C. File play

Double clicking the converted file and it is played on Window Media Player directly.

UPGRADE

Multi Network Viewer Version 2009-01-15

User can update software version easily just by clicking one button.



LOG LIST



It shows all of DVR log lists generated by system reboot, shutdown, menu setup, network login, network logout and so on.

Index	TIME	EVENT
2595	200807181732	NETWORK LOGIN
2594	200807181725	NETWORK LOGIN
2593	200807181724	NETWORK LOGOUT
2592	200807181718	NETWORK LOGIN
2591	200807181656	NETWORK LOGIN
2590	200807181656	SYSTEM BOOT
2589	200807181655	SHUTDOWN
2588	200807181654	MENU SETUP
2587	200807181654	SYSTEM BOOT
2586	200807181653	NETWORK LOGIN
2585	200807181652	SYSTEM BOOT
2584	200807181647	NETWORK LOGIN
2583	200807181627	NETWORK LOGOUT
2582	200807181624	NETWORK LOGIN
2581	200807181624	SYSTEM BOOT
2580	200807181615	SHUTDOWN
2579	200807181615	MENU SETUP
2578	200807181602	NETWORK LOGIN
2577	200807181601	SYSTEM BOOT
2576	200807181600	SYSTEM BOOT
2575	200807181552	NETWORK LOGIN
2574	200807181543	NETWORK LOGOUT
2573	200807181543	NETWORK LOGIN
2572	200807181542	SYSTEM BOOT
2571	200807180827	NETWORK LOGOUT
2570	200807180827	NETWORK LOGIN
2569	200807180709	NETWORK LOGIN
2568	200807180703	NETWORK LOGIN
2567	200807180703	SYSTEM BOOT

① Network user connect

② Menu setup

③ System Reboot

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Still image save



[16 div Mode still image]



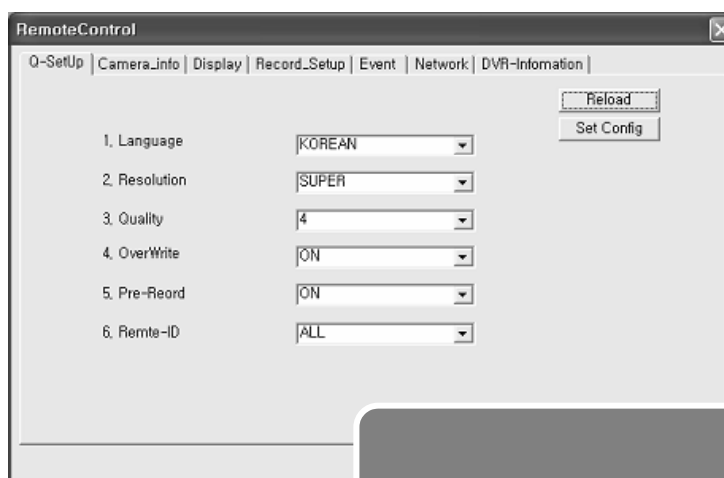
- ① Select display div mode(1,4,6,9,16Div).
- ② click  button.
- ③ Press "SAVE" button to save and press "PRINT & SAVE" to print

Remote Control

It can offer user to adjust menu values remotely.



- ① REROAD :
It reads out menu values from DVR set.
- ② SET CONFIG :
The changed settings is applied to DVR.



"REMOTE CONTROL" is available for "Q.Setup" only

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PTZ control



User can remotely control PTZ camera on NetViewer.

1) PAN / TILT : Control PTZ camera to up/down/left/right direction.

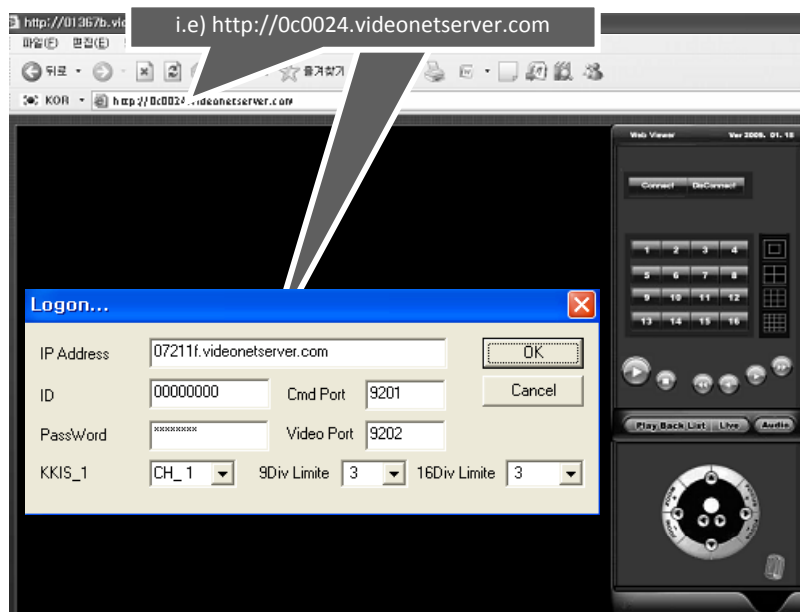
2) Zoom / Focus

6.3 WEB VIEWER

WebViewer enables the user to access to DVR for the remote monitoring by network.

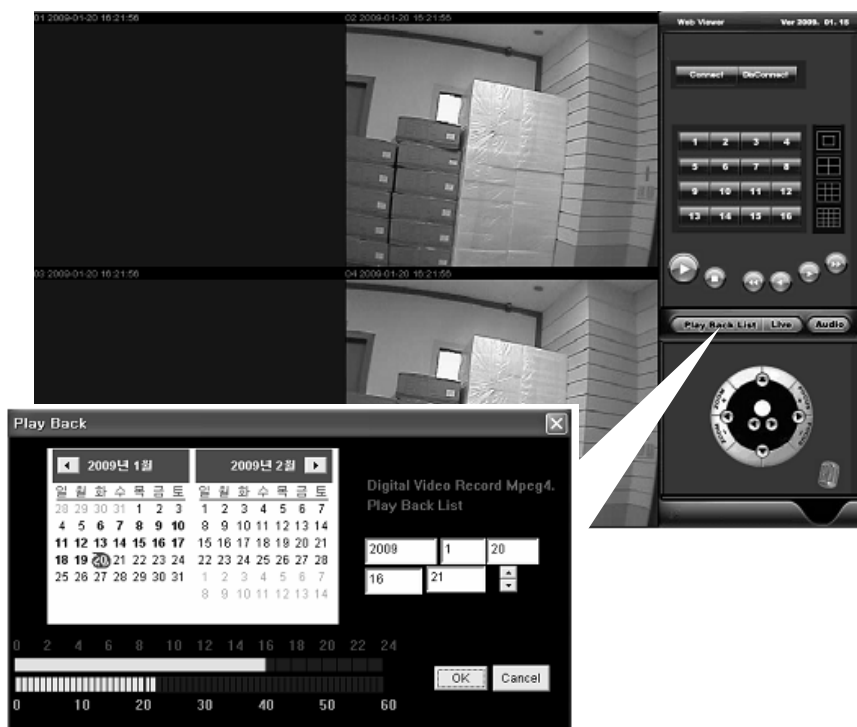
6.3.1 MAC ADDRESS ON IE (INTERNET EXPLORER)

- Type in MAC address of DVR on IE (Internet Explorer).
- You can check MAC address in INFO menu by pressing INFO button in live mode.
- Mac address consists of
"6 digits (the last 6 digits from MAC address)" . videonetserver . com"



- ① IP ADDRESS: Type in MAC address (ie) 0c0024.videonetserver.com)
- ② ID : Input DVR ID (default : 00000000)
- ③ PASSWORD : Input DVR password (default : 00000000)
- ④ PORT : Type in 9201 as CMD port (default) and 9202 as Video port (default).
- ⑤ Press "OK and live mode appears on Net Viewer.

6.3.2 PLAY BACK

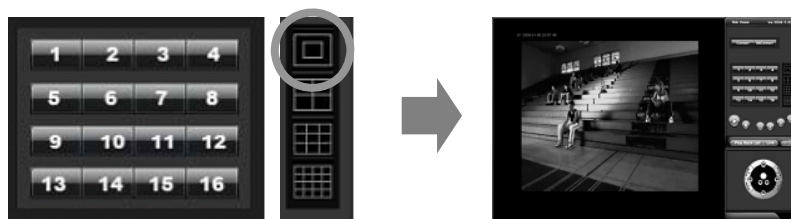


1. Press "PLAYBACK" button and playback menu appears.
2. Type in date and time as want.
3. Press "OK" button and recording data is played.

6.3.3 MULTIPLE DISPLAY

① Single channel mode

Click channel number or double click the channel directly and then it moves to single channel mode.



② Various screen mode

User can move to various screen modes like 4,6,8,16 channel mode. Click the icon and it moves to the screen mode accordingly.



③ Playback speed controll



■ TROUBLE SHOOTING

1. The system power is turn off.

- ▶ Check if power cable is correctly connected .
- ▶ Check if input voltage is correct.
- ▶ If the system power does not turn on while power cable is correctly connected, please contact the supplier, or manufacturer.

2. The system power is turned on, but no video is displayed on the monitor.

- ▶ Check if the monitor power cable is properly connected.
- ▶ Check if the monitor is turned on.
- ▶ Check if the video output cable of the DVR is properly connected to the monitor.
- ▶ Unplug the power cable, and plug in again.

3. The camera numbers are displayed on the screen, but the camera images not displayed.

- ▶ Check if the camera video output is correctly connected to the DVR system.
- ▶ Check if the power cable is correctly connected on the camera.
- ▶ Check if the video cable is working well , or not, which is connected to system from camera.
- ▶ When video is connected with various systems, weak video signal causes this kind of problem from video distributor. In this case, the direct connection with video of relevant camera will find the solution by solving this matter.
- ▶ Turn off DVR system, and turn it on again.

4. The camera video is shown on the screen, but the system doesn't record video.

- ▶ Check if it is set to "NONE" in the record mode of the record setting mode.
- ▶ Turn off the DVR, and turn it on again.

5. Impossible to search for the recorded video.

- ▶ Check if there is a recorded video data when you are trying to search for on the table.
- ▶ If there is no recorded video data, check if it is set to "NONE" in the record mode of the recording setting.

6. The audio data is not played in recorded video data.

- ▶ Check if audio record option is correctly set to the camera you wish to record audio.
- ▶ Check if audio mute is enabled.
- ▶ Check if microphone ,and speaker port are correctly connected on the rear of DVR system.
- ▶ Check if the connected microphone is properly working.
- ▶ Check if the connected speaker is properly operating.

7. The color of videos are strange, or video is shown abnormally.

- ▶ Check if the camera connected to the system has a problem.
- ▶ Check if the camera is not damaged by inserting abnormal camera No. and normal video camera video No. in replacement.
- ▶ Check camera No.
- ▶ Check if the video system setting is the same as your camera system. Depending on your area, the camera system can support either PAL, or NTSC. Relying on the camera video transmission system, video process differs greatly. At this state, video is seen, but hard to recognize it normally.

8. There are much (screen) noise on the image.

- ▶ Check if the video signal output has the problem from camera. Check if the camera is not damaged by inserting another camera into the working video output in replacement.

- ▶ Check if it is cut, or cross-wired, or shortened for the video cable to connect the camera ,and the DVR.
- ▶ Check if there is a high voltage wire around the video cable connecting the camera to the DVR system. It can cause the noise problem to decrease video quality.
- ▶ Check if it is correct for the video cable to connect camera to the DVR system. When a normal power-supplying cable is used instead of the video cable, screen noise can be generated.

9. Sometimes system itself restarts.

- ▶ System itself can restart due to watchdog function when any problem occurs to the DVR.

10. The connected sensor is not working.

- ▶ Check if the type of sensor in event setup menu is the same as the connected sensor.
- ▶ Check if system is set to use the sensor in record schedule window from the recording setting menu.
- ▶ Check if power cable of the sensor is properly connected.
- ▶ Check if signal cable of the sensor is properly connected.

WARRANTY

The quality of this product is guaranteed by strict quality control processes, and testing. If the product becomes non-operational, the warranty may be in operation. The warranty period is valid for 1 year from the date of purchase.

WARRANTY GUIDE

- * Check the Product Warranty Sheet to make sure it is still in effect.
- Check the problem again, and contact the supplier, or manufacturer you purchased DVR unit from.
- About product repair, exchange, or refund, we follow the "compensation regulation for customer's loss" announced by "the Economic Planning Board". (Korea only)

WARRANTY

If the product becomes non-operational, the warranty may be in operation. The warranty period is valid for 1 year (s) from the date of purchase. Service fee, and replacement parts will be charged in below cases:

1. Damaged the user's carelessness.
2. Damaged due to a natural disaster.
3. Damaged due to the user not following the instructions, and cautions written in the user's guide.
4. Damaged due to incorrect power voltage, and/or frequency being used.
5. If the Product Warranty sheet is expired.
6. Damaged due to an engineer not employed by supplier, or manufacturer modifying the system.

If your system is damaged after the expiry of the warranty period, free repair service will not be available. If you wish the system to be repaired, service fee, and replacement parts will be charged.

PRODUCT WARRANTY

Product / Model		
Serial Number		
Dealer		
Purchasing Date		
Warranty Period		year (s) from the purchasing date.
Customer	Name	
	Address	

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- ▶ The Product Warranty Sheet will not be issued again.
- ▶ The Product Warranty Sheet must be filled on the same day as the product's purchase.
- ▶ This document must be shown in order to receive the free repair service.



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VOOK
PROFESSIONAL MONITORING