

DUPLEX 4 CHANNEL BASIC

USER'S MANUAL

Thank you for purchasing the product.

We recommend users who install and operate the unit to thoroughly read this manual and other reference manuals indicated in this manual before installation and operation.

The pictures can be different from real system according to specification.

This user's manual is based on Duplex 4 Channel Basic Series. Duplex 4 Channel Basic model support USB socket as a basic backup device, it does not support network function.

This user's manual and the software of Duplex 4 Channel Basic are protected by COPY-RIGHT LAW.

GENERAL SAFETY AND PRECAUTIONS

This model is manufactured to safety international safety standard. Review the following safety precaution to avoid injury and prevent damage to the DVR or any products connected to it.

1. Use a proper power source.

Do not operate this product from a power source that applies more than the specified voltage (90~260 VAC).

2. Never insert metallic material into the DVR case.  This can cause electric shock.

3. Do not operate in wet & dusty condition. Keep product surfaces clean and dry.

Avoid placing the DVR in areas like a damp basement or a dusty hallway.

4. Do not expose this product to rain or use near water.

If the product gets wet, unplug it and contact an authorized dealer immediately.

5. To clean the outside case of the DVR, use a lightly dampened cloth (no solvents).

6. The DVR generates heat during operation. Place the DVR in a well ventilated area. The DVR has a built in fan to properly ventilate the system. Do not block air bent holes (bottom, upper, sides and back) of the DVR case.

7. Do not operate with suspected failures. If there are any unusual sounds or smells coming from the DVR, unplug it immediately and contact an authorized dealer or service center.

8. Do not attempt to remove the top cover.



Warning: Removing the cover of DVR can cause severe electrical shock.

9. Use standard lithium cell battery.  NOTE: Battery is installed in the system.

The standard lithium cell 3V battery located on the mother board should be replaced if the time clock does not hold its time after the power is turned off.



Warning: Unplug the DVR before replacing battery or you may be subjected to severe electrical shock. Properly dispose of old batteries.



Caution: Risk of explosion if battery is replaced by an incorrect type. Do not discard lithium batteries into the trash can or into fire. Dispose in accordance with local waste regulations.

10. Some DVR models use a DC adapter because the power supply is outside the DVR cabinet.

Use only the DC adapter that is supplied.

FCC COMPLIANCE STATEMENT

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

NOTE: This equipment has been tested and found to comply with for a **Class A** digital device, pursuant to part 15 of the **FCC Rules**. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and 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 case the user will be required to correct the interference at this own expense.

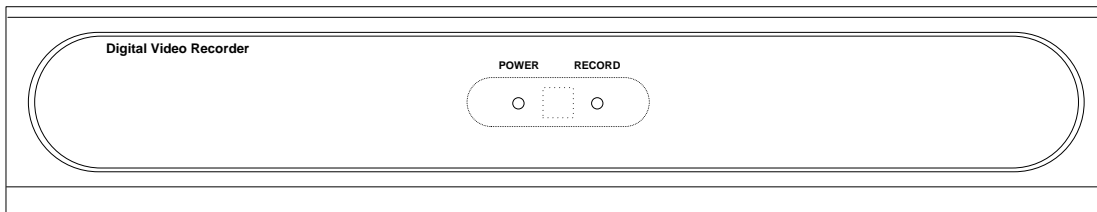
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1. SYSTEM COMPONENTS

Following picture shows the components of a system. Open the package and check the components of the system.



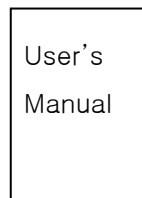
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⑤



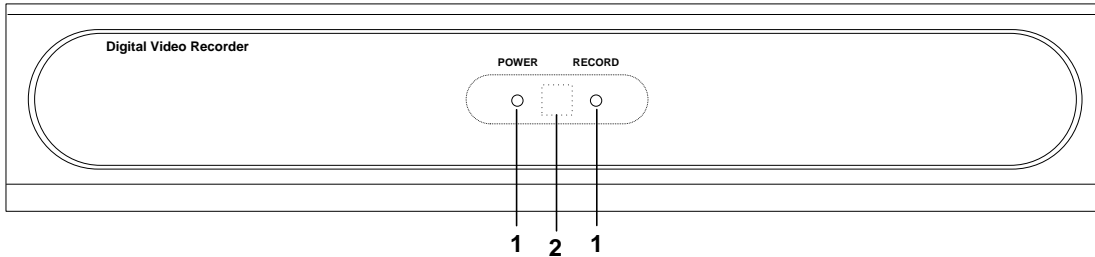
⑥

NO	Components	Volume
1	DVR system	1
2	Power Cord	1
3	AC-DC Adapter 5A, 12V	1
4	User's manual	1
5	CD (viewer and operation& installation guide)	1
6	IR Remote Controller	1

In the case that the system or components have problems, contact with Reference seller or a customer service center. The components may not be identical to the picture shown above.

2. THE NAME OF EACH SECTION

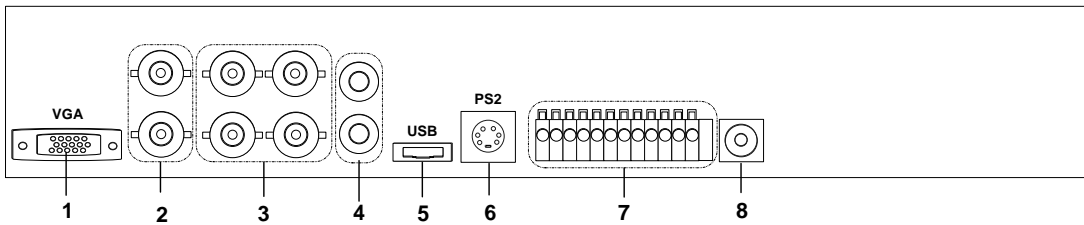
2.1. FRONT PANEL



Each button of a system on front panel has below function.

NO.	NAME	FUNCTION
1	LED	LED for Power, recording, playback.
2	REMOCON	Receive IR remote control signal

2.2. REAR PANEL



NO.	NAME	FUNCTION
1	VGA	Video output port for LCD/Computer monitor.
2	VIDEO OUT	Port for video output.
3	VIDEO IN	Port for video input.
4	AUDIO IN,OUT	Port for Audio in/output.
5	USB	USB Socket for Data back-up/ firmware upgrade.
6	PS/2	Port for mouse that controls screen. Control screen by using mouse.
7	ALARM/SENSOR /PTZ	Control port for alarm, sensor devices and PTZ camera.
8	POWER IN	Port for power adaptor. (+DC 12V, 3.5A)

3. SYSTEM FUNCTION

3.1. START

To connect system with camera and power adaptor on the rear panel of system. After system connection is completed, the system itself tests its condition when power is on. The contents of self test are HDD installation status, formatting for new HDD installation status. In case, Unexpected power off during recording is checked and system records automatically.

You can install max. one HDD in the DVR system. The HDD storage capacity and model name is shown on the screen when DVR system recognize the HDD. If the DVR system can not recognize HDD, DVR system does not booting. If the HDD is not recognized, please install the HDD in order. If the problem appears continuously, please contact to A/S center.

If you use new HDD in DVR system, the system asks you to format new HDD or not after recognizing the HDD. If you put the [PLAY] button, the HDD will be formatted. The formatted HDD is not recognized on Personal Computer. Please be notice when you install new HDD.

Reference If model and quantity of equipped HDD is not shown on HDD test screen, HDD connection is wrong. In that case, User must check the connection of HDD with system.

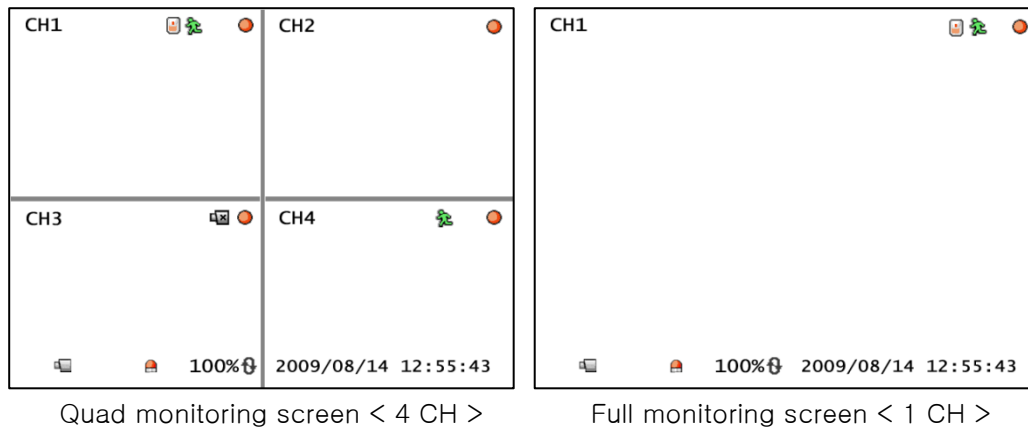
[Recommendation HDD: Seagate, Samsung, Hitachi (MAX 1TB, 1HDD)]






RTC (REAL TIME CLOCK) CHIP keeps the system information. If the battery for RTC is discharged, the system sets to default (factory) value again. Please check the Battery. Users see factory value in setup section.


After system finish initial test and set up, the screen will be changed to 4 Split screen status. However, the system has unexpected POWER OFF during recording, the system will be rebooted when the power on, and continued to record automatically.


3.2. MONITORING

The basic information of system is indicated on the lower part of monitor.

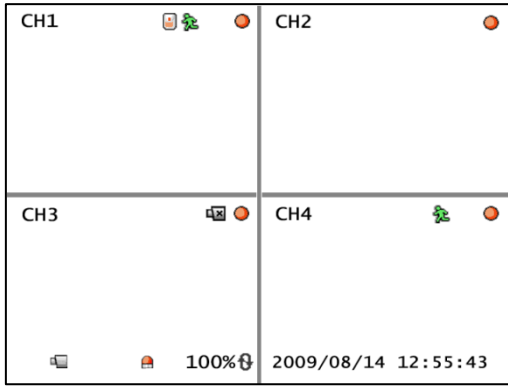


A symbol  indicates record status on current HDD. A symbol  indicates motion sensor. A symbol  indicates that sensor is set on system and activated. The lower part of full screen in DVR shows whole condition of system. A symbol  indicates that DVR monitoring mode. A symbol  indicates that alarm is set on system and activated. A symbol % indicated that the capacity of HDD used.

A symbol  indicates on right of % indicates that 100% of HDD, then it erases data from HDD and records data at the same time. In this condition, HDD has always full of data 100%. [2009/08/14 12:55:43] shows time of system.

The system recognizes Video input signal automatically and system shows video source on screen. In case of no input signal, system shows  mark on screen. But if the camera has connected with system and shows blue screen, please check the connection between system and cameras.

Press the channel button, the selected channel shows on entire screen. If you want to show 4-split screen, press the [ENTER] button.



Quad screen






Full screen

If you press Ch1 button twice, screen is changed to Quad screen of 1~4CH. The channel button or ENTER button is pushed when it will change to the monitor screen divide into four.

4. SETUP

4.1. SETUP STRUCTURE AND INITIAL VALUE

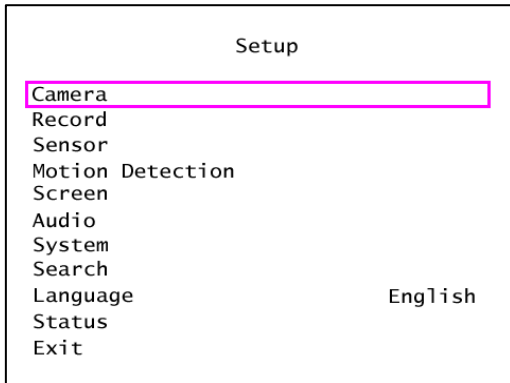
This system has selection menu and initial value composed as below table.

SETUP		FACTORY DEFAULT	
CAMERA	CHANNEL	1	
	DISPLAY	ON (1ch ~ 4ch)	
	BRIGHTNESS, CONTRAST, HUE, SATURATION		
RECORD	RECORD SPEED	7 fps / 60 fps	
	RECORD QUALITY	NORMAL	
	EVENT REC DURATION	10	
	RECORD SCHEDULE	-	
SENSOR	ALARM DURATION	OFF	
	SENSOR1/2/3/4	DISABLE	
MOTION DETECTION	CHANNEL	1	
	SENSITIVITY	OFF	
	ALARM DURATION	OFF	
	MOTION AREA	-	
SCREEN	BORDER	ON	
	VIDEO ADJUSTMENT	-	
	720 VIDEO OUT	OFF	
	AUTO SWITCHING	OFF	
	CHANNEL INFO	ON	
AUDIO	RECORD	ON	
	MUTE	OFF	
	INPUT VOLUME	 (5)	
	OUTPUT VOLUME	 (5)	
SYSTEM	HARD DISK SETUP	OVERWRITE ENABLE FORMAT HDD	YES -
	PASSWORD CHANGE		111111
	TIME SET	TIMEZONE	(GMT+09:00) [SEOUL]
		TIME SET	-

		DAYLIGHT SAVING TIME	NO
		SYNC. FROM NTP SERVER	NO
		NTP SERVER IP	203.117.180.36
	SYSTEM EVENT LIST		-
	LOSS ALARM	-	OFF
	RS485	BAURATE	2400
		DATA BIT	8
		PARITY BIT	NONE
		STOP BIT	1
	PAN/TILT DEVICE	CHANNEL	1
		ID	1
		MODEL	NONE
		PAN/TILT TEST	-
	F/W UPGRADE		-
LANGUAGE			ENGLISH
STATUS			-

4.2. SETUP MENU

When user presses [MENU] button on front panel, the following screen is shown.

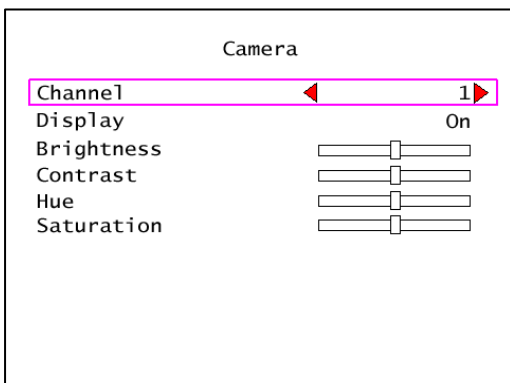


In the setup menu, user can move to each item and change item by pressing [▼(CH3), ▲(CH1)] button. The setup menus are [CAMERA, RECORD, SENSOR, MOTION DETECTION, SCREEN, AUDIO, SYSTEM, SEARCH, LANGUAGE, STATUS, and EXIT].

User presses [ENTER] button on setup to access sub menu. User press [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2)] button and [ENTER] button at the sub menu to get desired value. After that, presses [ENTER] button to return previously menu.

4.2.1. CAMERA SETUP

User can change CAMERA SETUP.



4.2.1.1. CHANNEL

CH 1~4 can be selected. User can control the condition of image from camera.

4.2.1.2. DISPLAY

If users want to display camera screen, select as “ON”, if not select as “OFF”.

4.2.1.3. BRIGHTNESS

Adjust brightness of image. Users can adjust from 1 to 10 levels. The Slider Bar goes to left side, it can be changed to dark. The Slider Bar goes to right side, it can be changed to bright.

4.2.1.4. CONTRAST

User can adjust screen's contrast. User can adjust from 1 to 10 levels. As the Slider Bar goes to left side, the contrast is lower. The Slider Bar goes to right side, the contrast is higher.

4.2.1.5. HUE

User can adjust hue level (from 1 to 10). The Slider Bar goes to left side, color tone is changed to pale, The Slider Bar goes to right side, color tone is changed to deep.

4.2.1.6. SATURATION

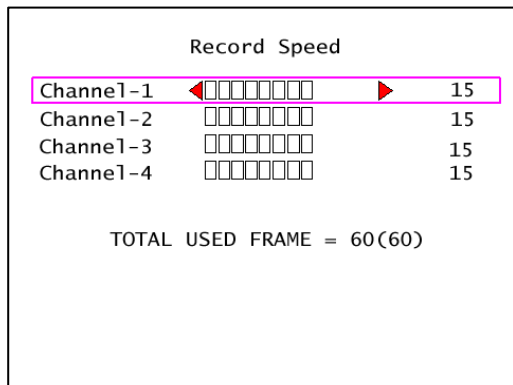
User can adjust saturation level (from 1 to 10). The Slider Bar goes to left side, color tone is changed to pale, As the Slider Bar goes to right side, color tone is changed to deep.

4.2.2. RECORD

User can change RECORD SETUP.

Record	
Record Speed	
Record Quality	Normal
Event Rec Duration	10
Record Schedule	

4.2.2.1. RECORD SPEED



User can select FRAMERATE within 60 frames. Users can divide the frame rate according to their importance.

4.2.2.2. RECORD QUALITY

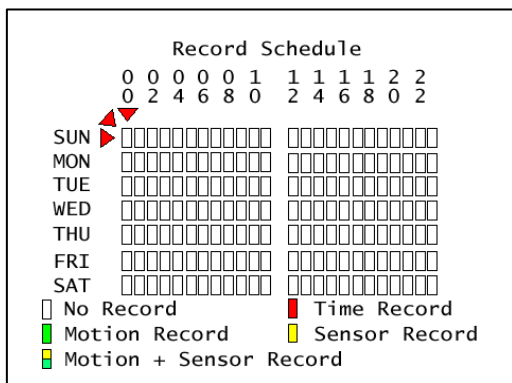
To choose the video quality for recording, go to RECORD QUALITY. Then, use the ENTER (SELECT) BUTTON to choose LOW, NORMAL or HIGH. The higher record quality, the cleaner image will be shown during playback. The lower record quality saves more HDD storage space.

4.2.2.3. EVENT REC DURATION

User can select the time of EVENT (sensor / motion) record duration.

4.2.2.4. RECORD SCHEDULE

To schedule recording is based on a 24-hour clock, user can select the time of recording.



User can move cursor to desired time and select the type of recording by using [▲(CH1), ▼(CH3)] button.

- * **The No Record:** System will not record data during this period.
- * **The Time Record:** System will record data continuously during this period.
- * **The Motion Record:** System will record data when the cameras recognize any motion in designated area during this period.
- * **The Sensor Record:** System will record data when the systems recognize sensor/alarm during this period.
- * **The Motion + Sensor Record:** System will record data when the systems recognize any motion and sensor/alarm.

Press the [▲(CH1), ▼(CH3)] button can make several record type and time, and press [ENTER] button to make change whole schedule as one recording type and time.

4.2.3. SENSOR

Sensor	
Alarm Duration	off
Sensor-1	Disable
Sensor-2	Disable
Sensor-3	Disable
Sensor-4	Disable

4.2.3.1. ALARM DURATION

It indicates how long the alarm lasts after it sets [OFF, 05, 10, 15, 20, 25, 30, CONT]. It sets the alarm duration (in seconds) after alarm is activated. Select “DISABLE” to deactivate sensor recording or if there is no sensor installed in DVR system. To continue the alarm signal on, to select as CONT

4.2.3.2. SENSOR – 1, 2, 3, 4

Each channel has to be set by the type of SENSOR. The initial value is [DISABLE], you can select [NORMAL OPEN TYPE/ NORMAL CLOSE TYPE].

4.2.4. MOTION DETECTION

Select Motion detection. It is available when the system recognizes the movement.

Motion Detection	
Channel	1
Sensitivity	Off
Alarm Duration	Off
Motion Area	

4.2.4.1. CHANNEL

Select each channel for record.

4.2.4.2. SENSITIVITY

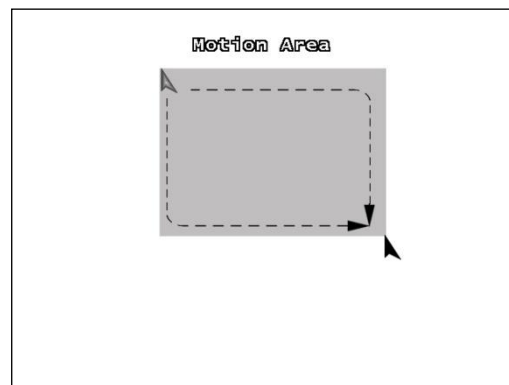
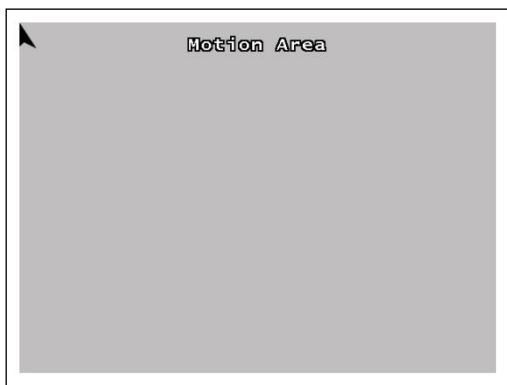
It adjusts the sensitivity of the built-in motion sensor on the DVR system while recording. The higher the number, the higher the sensitivity is. In that case, record can be occurred by small noise.

4.2.4.3. ALARM DURATION

By changing the value in the Alarm duration, you can adjust how long the alarm will last in seconds. User should installed alarm device in the system.

4.2.4.4. MOTION AREA

Follow the direction to select Motion area.



Locates cursor to start point using [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2)] button.

After pressing [ENTER] button locates cursor to end point using [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2)] button. Press [ENTER] button again.

[Note] We recommend you to choose motion detection area carefully because only one area can be selected.

[Using the mouse button]

Press left button of mouse and drag mouse to select motion detection area for record.

4.2.5. SCREEN

User can select the screen location and the line of quad channel's border.

Screen	
Border	On
Video Adjustment	
720 Video Out	Off
AUTO SWITCHING	Off
Channel Info	On

4.2.5.1. BORDER

You can make the white border line around each channel to appear or disappear by using this option to be on or off.

4.2.5.2. VIDEO ADJUSTMENT

You can move the entire video screen using up, down, left, and right key.

4.2.5.3. 720 VIDEO OUT

The output resolution can be adjusted by 720 sizes.

4.2.5.4. AUTO SWITCHING

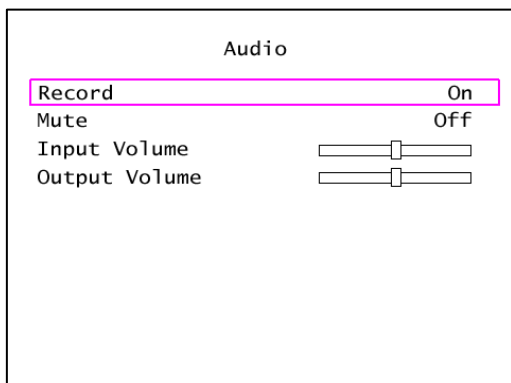
It is a function to convert between screens. It becomes a conversion of the screen by the automatic operation at a set interval time if the "FF" key is pushed on the LIVE screen.

4.2.5.5. CHANNEL INFO

The presence of channel information seen on the LIVE screen can be selected.

4.2.6. AUDIO

The option to adjust the Audio input/output of DVR system.



4.2.6.1. RECORD

Make the record "ON" to enable sound recording when a microphone device is attached in AUDIO INPUT port on the system.

4.2.6.2. MUTE

Control the Audio output.

4.2.6.3. INPUT VOLUME

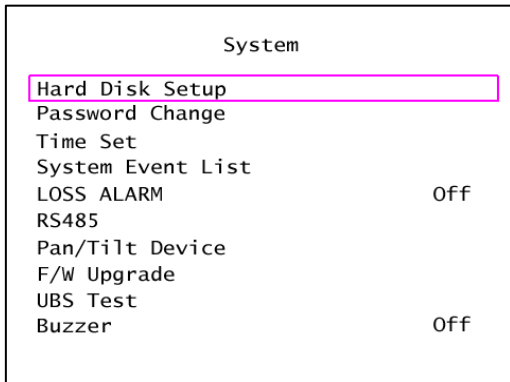
Adjust input volume level of sound.

4.2.6.4. OUTPUT VOLUME

Adjust output volume level of sound.

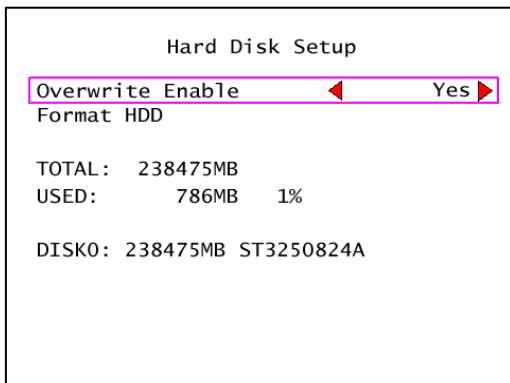
4.2.7. SYSTEM

In this menu, you can see the information of the hard disk drive installed on the system, change the system password, and adjust current time on the system, initialize system and etc.



4.2.7.1. HARD DISK SETUP

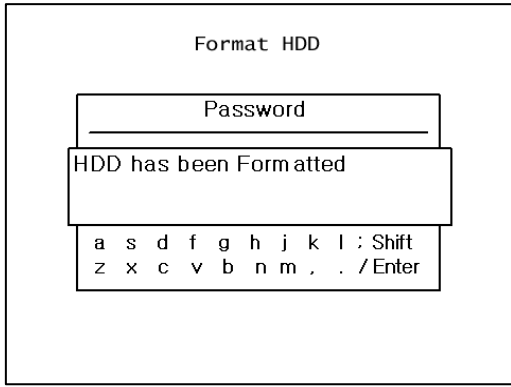
Set up Hard Disk Drive condition.



The information of Hard Disk Drive is shown on the screen. TOTAL means the total capacity of HDD, USED means the rate of HDD used.

* **OVERWRITE ENABLE:** If you choose YES, recording continues. However, recorded data in HDD is erased gradually when HDD has no space to record.

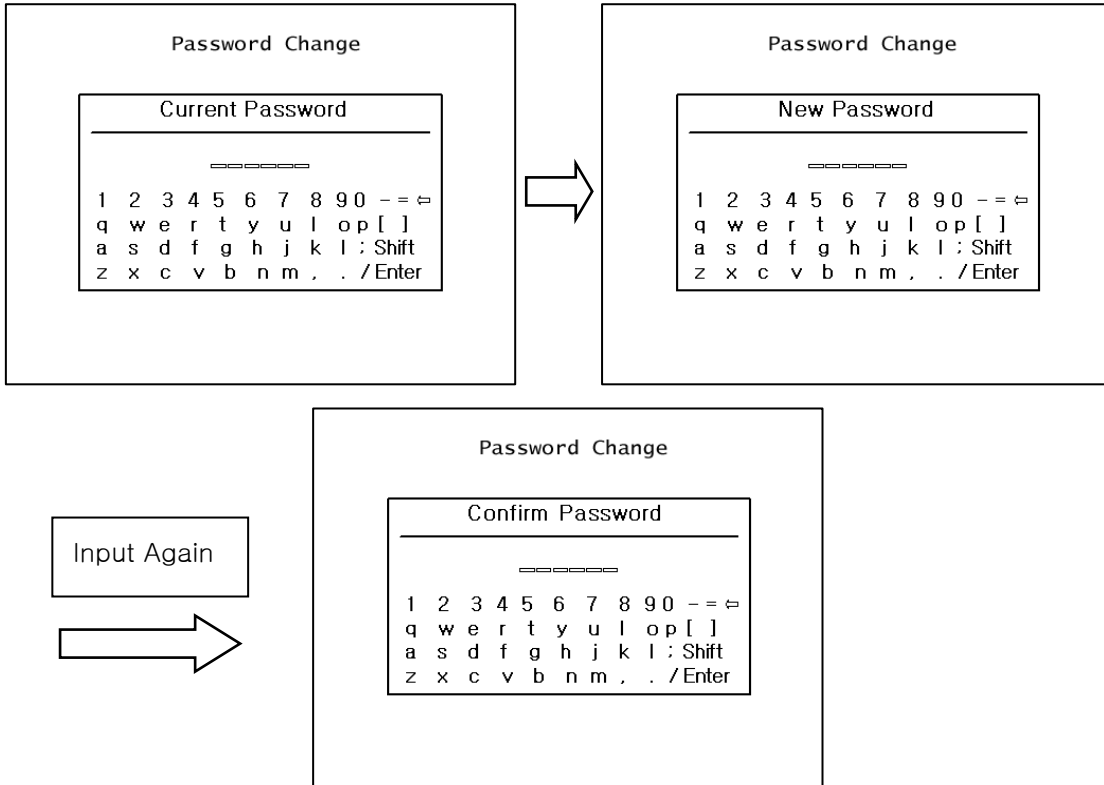
* **FORMAT HDD:** If you format the hard disk drive, all the recorded data stored on the hard disk drive will be deleted. Remind that the system has no restore option once the hard disk drive is formatted.



When you choose this option, the system will ask you password before formatting. The default password is [111111].

4.2.7.2. PASSWORD CHANGE

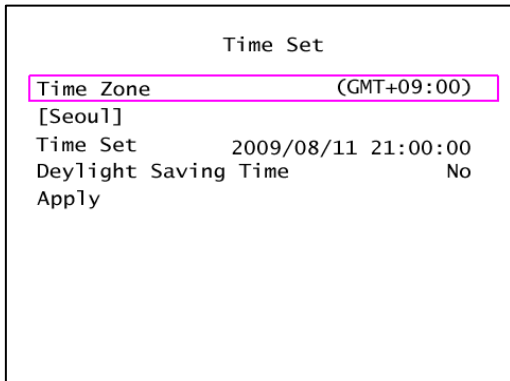
Change the password of DVR system.



You can use a combination of any buttons on the DVR front panel to change a new password. Press [ENTER] button to finish. The changing is finished properly, the message [PASSWORD CHANGED] is shown on the screen.

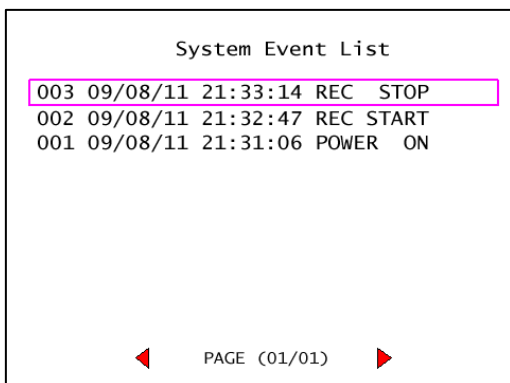
4.2.7.3. TIME SET

Adjust the current date and time of system.



- * **TIME ZONE:** You can adjust the current time through the internet time server.
- * **TIME SET:** To move the cursor on the screen, [**▲(CH1)**, **▼(CH3)**] button on the front panel press [ENTER] button to move desired date and time and [**▲(CH1)**, **▼(CH3)**] to change number.
- * **DAYLIGHT SAVING TIME:** Summer Time can advance the time by one hour from standard time. This function is for user to use day time effectively. "Yes" for Summer time or "No" for Standard time.
- * **APPLY:** After adjusting the time, you have to move the cursor to APPLY, press [ENTER] button to apply new time information.

4.2.7.4. EVENT LIST



EVENT LIST function enables playback by event. The EVENT LIST on menu, it shows all past activities of system operation such as power on/off, recording start/stop, sensor on/off and etc showing recording year/date/time in list. Play by EVENT LIST, using [▲(CH1), ▼(CH3)] button, select the event that you want to playback and press [ENTER] button. It playbacks the recorded video data.

4.2.7.5. RS-485

RS485	
Baudrate	2400
Data Bit	8
Parity Bit	None
Stop Bit	1

- * **BAUDRATE:** Adjust the data transmission speed of PTZ camera.
- * **DATA BIT:** Adjust data transmission bit of PTZ camera.
- * **PARITY BIT:** Adjust data transmission error check bit of PTZ camera.
- * **STOP BIT:** Adjust bit which shows the end of data transmission of PTZ camera.

4.2.7.6. PAN/TILT DEVICE (PTZ CAMERA)

Pan/Tilt Device	
Channel	1
ID	1
Model	None
Pan/Tilt Test	

- * **CHANNEL:** Select a camera channel where PTZ camera is connected.
- * **ID:** Assign the own ID of PTZ camera.

* **MODEL:** Currently, our system supports PELCO D camera. Therefore, we recommend the PELCO PT camera for our system.

* **PAN/TILT TEST:** You can test Pan and Tilt operation of PT camera, using front keypad or PC client from remote location.

4.2.7.7. F/W UPGRADE

The system support Firmware Upgrade through USB host (USB memory stick). You can simply upgrade the system once you connect the USB memory stick that contains a firmware file.

4.2.8. STATUS

Status	
F/W Version (4CH)	LC_2.01.006
HDD Used	5MB/152627MB

Firmware version and information of the HDD use capacity on DVR are shown now. Detailed information such as IP ADDRESS and MAC ADDRESS to the network setting is output. Presence and IP ADDRESS information on use to the DDNS setting are shown.

4.2.9. EXIT

Exit
Exit & Save Changes
Exit & Discard Changes
Load Setup Default

4.2.9.1. EXIT SAVE CHANGES

Save the changed value and return to monitoring mode.

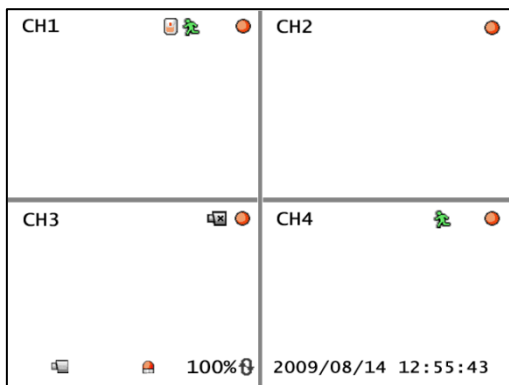
4.2.9.2. EXIT DISCARD CHANGES


Return to monitoring mode without saving the changed value. The changed value is not applied to the system.



4.2.9.3. LOAD SETUP DEFAULT

The system menu value will be changed to factory default.

5. RECORD FUNCTION



Channel with  symbol indicate that channel is in record mode. Above picture shows CH 1~4 is in record mode. Information in lower part indicates HDD used and date. If date is wrong, see (Setup → System → Time set) to change date.

Record Schedule	
	0 0 0 0 0 1 1 1 1 2 2
	0 2 4 6 8 0 2 4 6 8 0 2
SUN	  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
MON	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
TUE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
WED	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
THU	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
FRI	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SAT	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> No Record <input type="checkbox"/> Time Record <input type="checkbox"/> Motion Record <input type="checkbox"/> Sensor Record <input type="checkbox"/> Motion + Sensor Record	

There are several types of record mode such as No Record, Time Record, Motion Record, Sensor Record, Motion + Sensor Record.

White box indicates No Record.

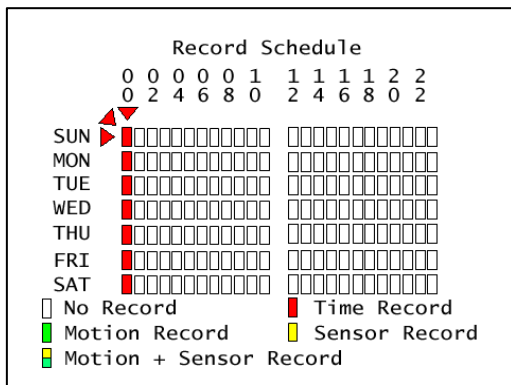
Red box indicates continuous record. Continuous record dose not be affected by sensor input.

Green box indicates motion detection, it is activated by movement.

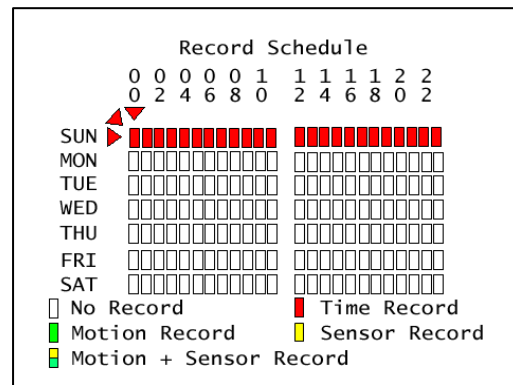
Yellow box indicates sensor record. Sensor record is activated by sensor detection.

Green and yellow box indicates motion detection and sensor record. One of these is detected then system records image.

5.1. OPERATING



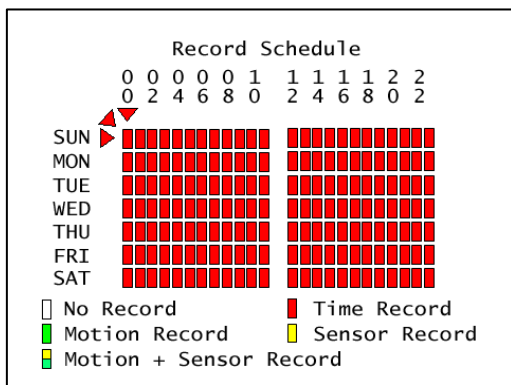
[SELECT COLUME CELL]



[SELECT ROW CELL]

Use [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2)] button to move desired position. If the REW key is pushed, the entire cell on a horizontal side is selected. If the REC key is similarly pushed, the entire cell on a horizontal side is selected.

Please select hoped the recording method, day of the week, and time, and select the cell.



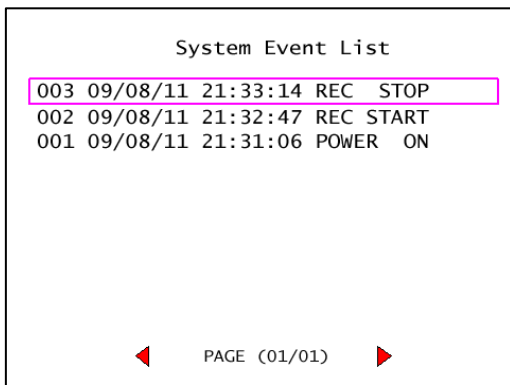
[SELECT TOTAL CELL]

If the [PTZ(SLOW)] key is pushed after the Enter button is pushed when a whole cell is selected like the picture above, a whole cell is selected. 24 hour continuous recording is executed from Sunday to Saturday when reserved like the above-mentioned schedule. The displayed figure is to express for 24:00 o'clock from 00:00 o'clock. one cell means is one hour.

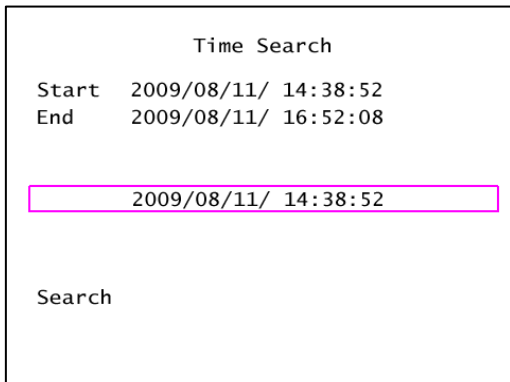
6. SEARCH AND PLAYBACK FUNCTION

6.1. SEARCH FUNCTION

You can find last file by order when you press [PLAY] button. Press [TIME] button to find file you desired. When you press [PLAY] button, screen shows below picture. Press [▲(CH1), ▼(CH3)] button to locate desired event. Press [ENTER] or [PLAY] button to play image recorded in HDD.

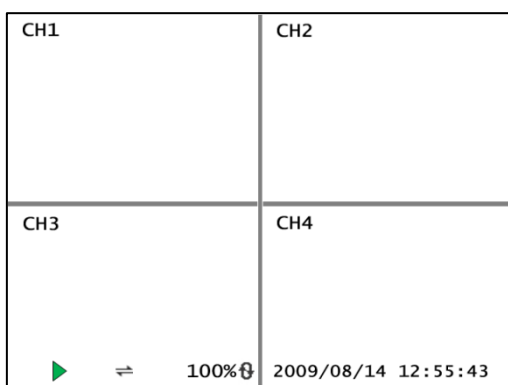


You can search recent 127 events on the event list. Select the [REC START] and playback. If you search the recorded data by time, press [TIME] button. Below screen will be shown at the screen.



The time on screen shows record start and stop time. You can find the time what you want to check, you can change the number of date and time by using [▲(CH1), ▼(CH3)] button and then press [ENTER] button to playback data recorded.

6.2. PLAYBACK FUNCTION



Quad monitoring screen < 4 CH >

This is an enhanced playback option, it support playback function while recording. Playback function has several modes as below.

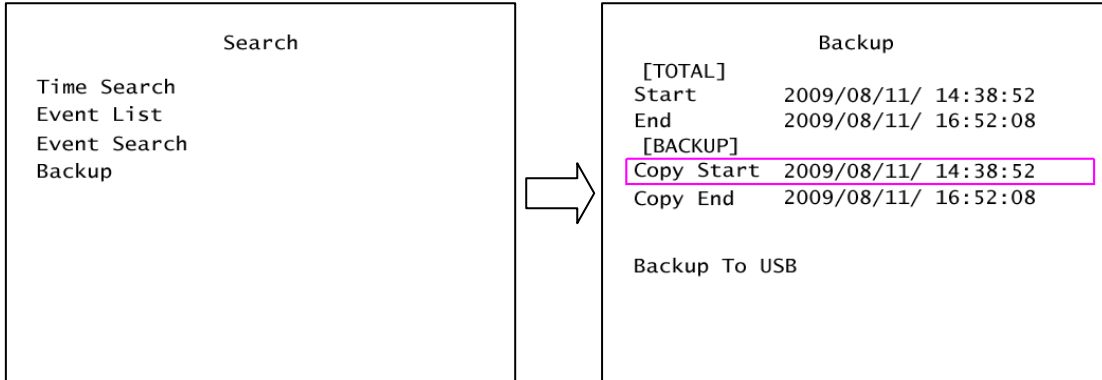
BUTTON NAME	FUNCTION
PLAY/PAUSE	Playback data / Pause data.
REC	Start record/ Stop to record.
FF	Fast Forward. Speed Options are 3 levels. Press FF button to change playback speed.
REW	Rewind the playback. Speed Options are 3 levels. Press REW button to change playback speed.
STOP	Stop playback and return to monitoring mode.

You can playback data using [TIME] button or [PLAY] button. The playback mode has PLAY, FF, and REW. The image recorded by EACH MODE can be displayed with QUAD or FULL screen. If you want to change the playback images on screen, use [CHANNEL1~CHANNEL4, ENTER] button.

The basic information of the image recorded is shown in lower part of screen. It shows time of the image recorded, playback speed.

6.3. BACKUP FUNCTION

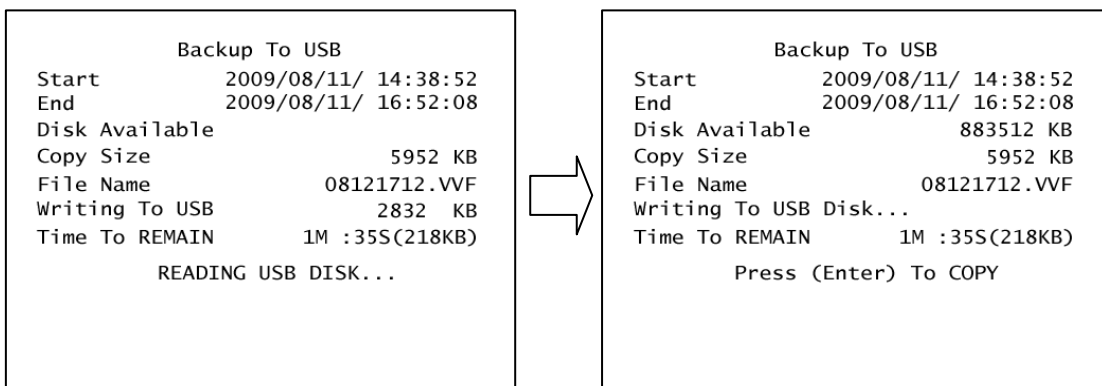
Our DVR system has enhanced back-up features so that it's possible to transfer to the video data image recorded on the hard disk drive to USB memory stick.



6.3.1. BACK-UP VIA USB MEMORY STICK

In order to save video data, you must playback data recorded. You press [**▲**(CH1)] button when you find start point to backup and press [**▼**(CH3)] button when you find end point to backup. Data volume is shown as [KB] unit. You press [TIME] button to backup.

If USB storage capacity is larger than the volume of data, it show the message [PRESS (ENTER) TO COPY] on screen. Then, press [ENTER] button to back-up data.



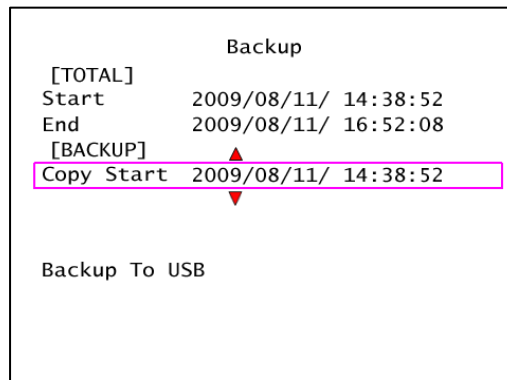
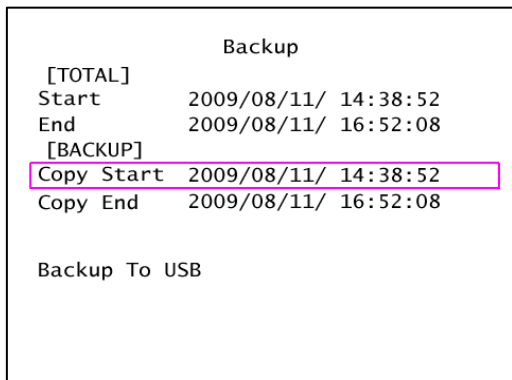
Notice Check the storage capacity of USB memory stick in advance.

If the volume of data is larger than USB storage capacity, it shows the message [CAPACITY IS NOT ENOUGH] on screen. The basic USB backup capacity is 4GB.

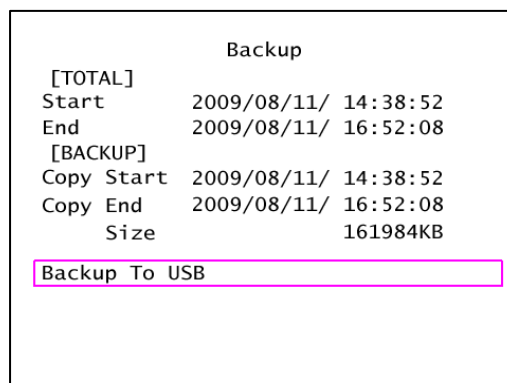
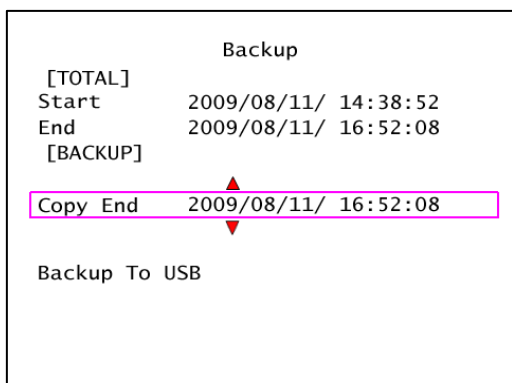
(Press the [MENU] button to cancel, and secure the enough storage space and continue to backup)

6.3.2. USE OF BACK-UP FUNCTION

You can select desired time period to back-up data recorded. [TOTAL] indicates total time of data in DVR. [BACKUP] indicates desired time of data recorded.



Press [▲(CH1), ▼(CH3)] button to move [START], then use [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2)] button to select desired data and time. Press [MENU] to return previous condition.



Press [▲(CH1), ▼(CH3)] to move [Copy End], then use [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2)] button to select desired data and time. Press [MENU] button and [▲(CH1), ▼(CH3)] button to finish set-up. Screen shows total capacity of data as [KB] unit. Press [▲(CH1), ▼(CH3)] button to select [Backup To USB], then screen shows the information of USB memory stick. If USB storage capacity is larger than the volume of data, it shows the message [PRESS (ENTER) TO COPY] on screen. Then, press [ENTER] button to backup data.

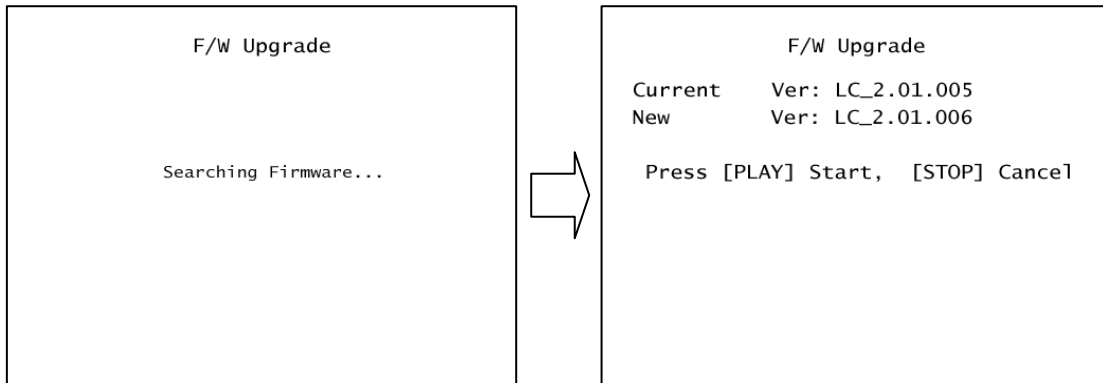

```
Backup To USB
Start          2009/08/11/ 14:38:52
End            2009/08/11/ 16:52:08
Disk Available 883512 KB
Copy Size      5952 KB
File Name      08121712.VVF
Writing To USB Disk...
Time To REMAIN 1M :35S(218KB)
Press (Enter) To COPY
```

If the volume of data is larger than USB storage capacity, it shows message [CAPACITY IS NOT ENOUGH] on screen. Please check first the USB memory space and backup before backup the larger volume data. The capacity that can be backed up is CD650MB, DVD4GB, and USB 4GB.

Reference The DVR system support backup function during recording.

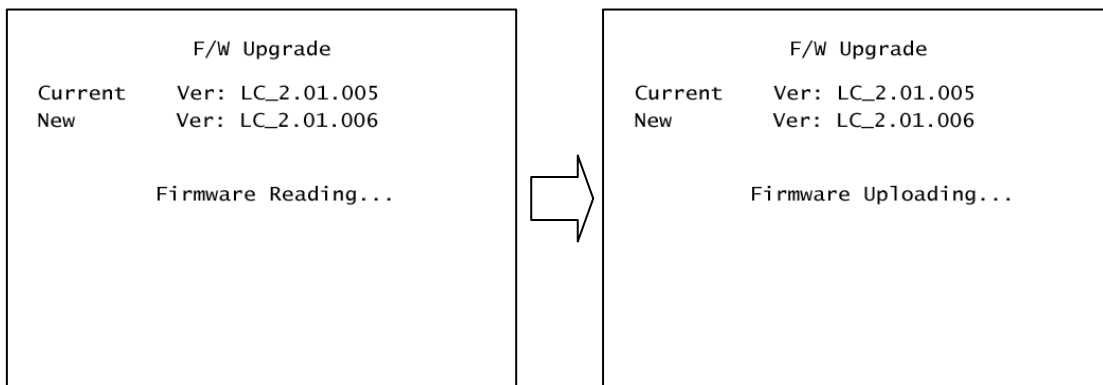
7. FIRMWARE UPGRADE

The system support FIRMWARE UPGRADE via USB memory stick.



(SETUP→SYSTEM→F/W UPGRADE) Download the upgrade FIRMWARE file via USB memory stick. And then connect it into USB socket. First press [MENU] button and move to [F/W UPGRADE].

If the system recognizes the USB memory, it shows the DVR firmware version and new firmware version on screen. Press [PLAY] button to upload firmware. If you stop the upload, press [STOP] button.



The upload is in processing normally, the message [FIRMWARE UPLOADING...] is showed on screen. The uploading is finished, the system will be rebooted. After system is rebooted, the initial screen shows the new firmware version. Please check the firmware version on the top of screen.

Notice If the system is recording, you can process the FIRMWARE UPGRADE. Please check the status of recording, if the recording is on stop recording and upgrade FIRMWARE.

8. PTZ (PAN/TILT-ZOOM) CONTROL

This supports PTZ function with PELCO-D via RS485 serial interface. Press the [PTZ] button on monitoring mode to enter PTZ control mode. PTZ control buttons are described at the table as below.

BUTTON	Description
PTZ(SLOW)	Enter/Exit PTZ control mode.
▲ (CH1)	The camera moves UP.
▶ (CH2)	The camera moves RIGHT.
▼ (CH3)	The camera moves DOWN.
◀ (CH4)	The camera moves LEFT.
REW	ZOOM OUT
FF	ZOOM IN
CH1~CH4 (Select PTZ camera)	Select the camera ID for PTZ control. The camera ID is the same as channel No.

Press [PTZ(SLOW)] button, the PTZ control menu will be appeared on screen.

At present, camera is not chosen, press [CH1~4] button each then, correspond camera is socket.

If the PTZ camera is connected to CH1, select CH1 using channel button, press [▲(CH1), ▼(CH3), ◀(CH4), ▶(CH2), MENU] button to control the camera. Press [PTZ] button to exit.

9. HOW TO USE A MOUSE

You can use a mouse to set DVR and playback data record. First of all, confirm connection between PS/2 mouse and DVR. Otherwise, DVR cannot recognize a mouse.

* Set DVR using a mouse

Setup window will be shown when you click right button of mouse at viewing mode. If you move mouse point on menu screen, purple color box is moved. You select menu and click left button of mouse to access menu desired.

At the menu, in order to change setting value, click left button of mouse on [◀, ▶] icon. After setting is finished, you click right button of mouse to exit from menu.

* Playback data using a mouse

You move to [Setup → Search] or [Setup → System → Event list] and you can playback data desired. If you click right button of a mouse during playback, then you can easily control a icon on the left side of lower part. When you find starting point of date for backup, press [▲] button to select starting point. Playback goes to ending point for backup, then press [▼] button to select ending point. Click [USB] to move backup screen, then execute backup.

* Advanced reservation record using a mouse

You can record desired time period using a mouse.

Move to [Set-up→Record→Record Schedule] and locate a mouse at desired time period and date. Click a mouse to backup data.

* Control viewing screen using a mouse

You can magnify image screen using a mouse. At the viewing screen, if you click left button of mouse twice (double click), desired channel screen is changed to full screen.

Double click again, and then go back to previously screen.

10. CLIENT PROGRAM (Vx4SLPlayer)

Our system comes with software [ Vx4SLPlayer.exe] for remote monitoring, recording, DVR controlling or playback of backup video data on computer.



< PLAYER MODE >



< FILE MENU >

10.1. PLAYER MODE


If you want to see the image through the PC via back-up devices, follow below instructions.

10.1.1. PLAYBACK METHOD

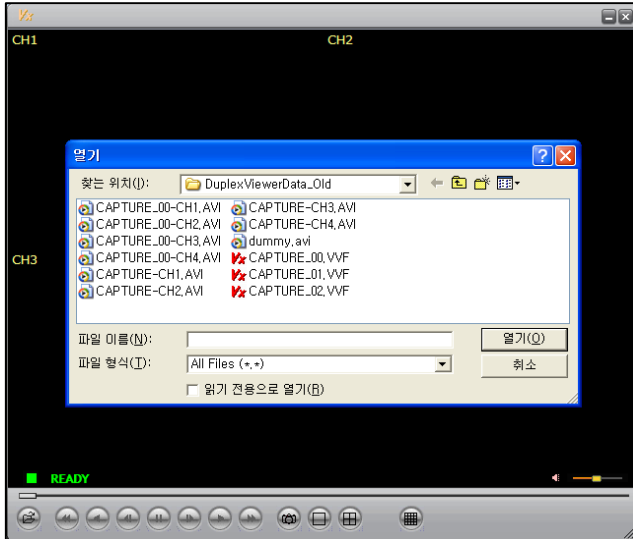
Connect the USB memory stick with PC, put CD to CD/DVD Drive of PC.

Activate the client program [Vx4SLPlayer]

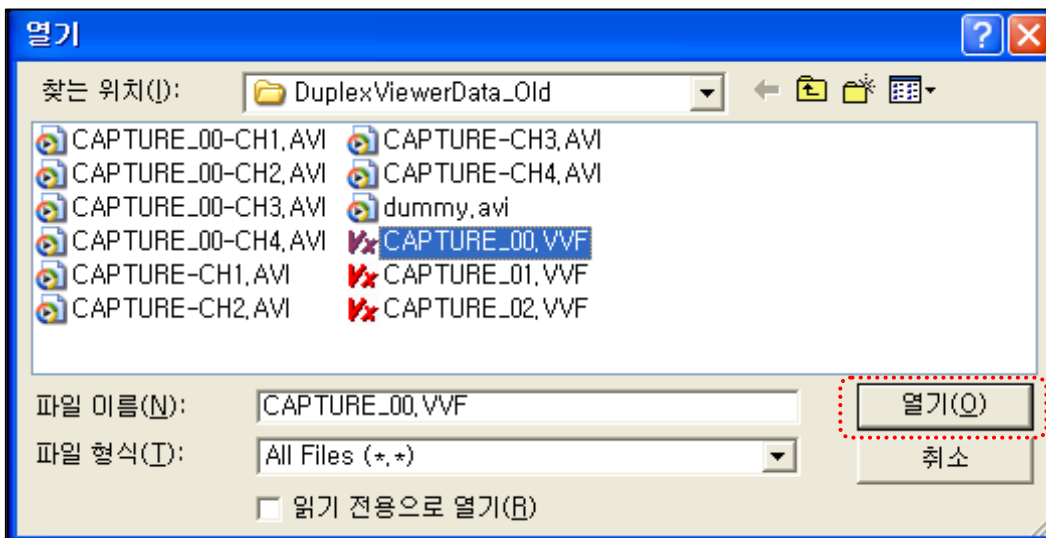


Use mouse left button to click  on left side-bottom of player. Press mouse right button to choose [Open file] on player program.

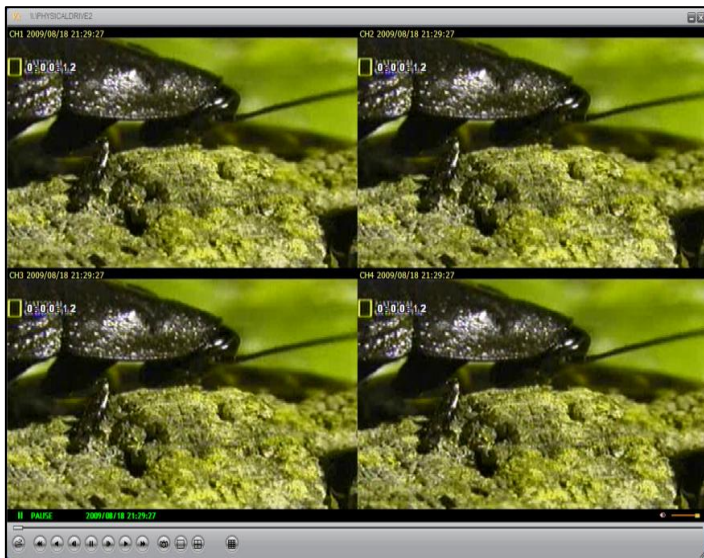
When pop-up windows is shown as below you find data backup.



The backup file which is from DVR system, are save as *.VVF of *.NVF format. Open the video stream file what you want to playback.



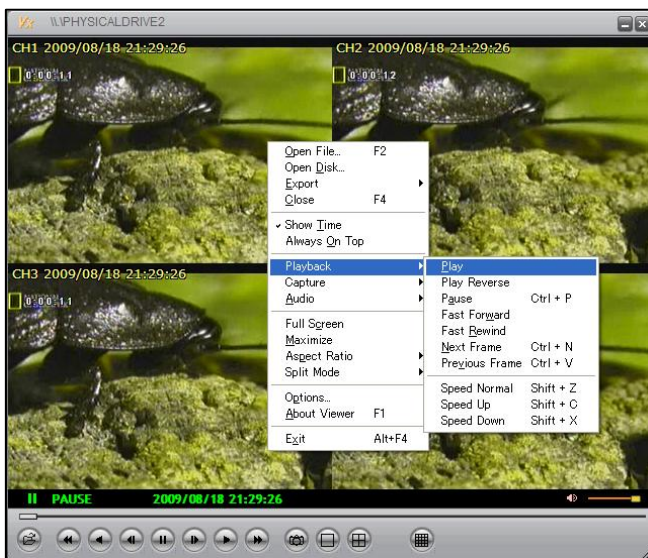
The player shows the video image files which is selected.



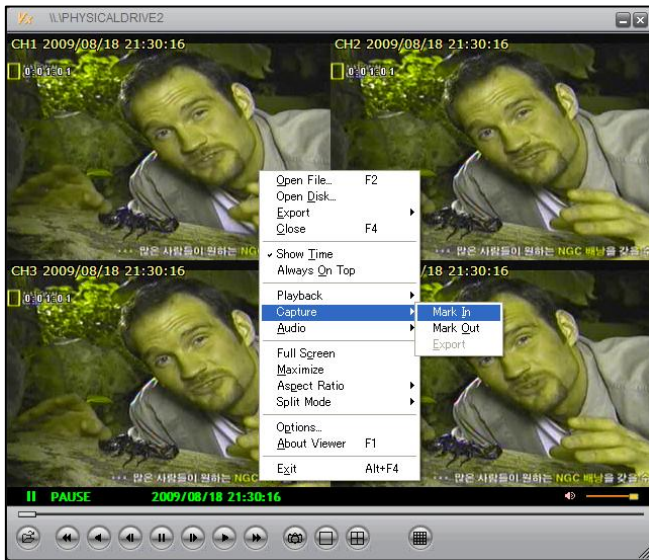
10.1.2. PLAYER MENU

10.1.2.1. PLAYBACK

The playback menu has Play, Play Reverse, Pause, Fast Forward, Fast Rewind, Next Frame, Previous Frame, Speed Normal, Speed Up and Speed Down function. These function buttons are arranged in bottom of player program.



10.1.2.2. CAPTURE



Playing data can be backed up to a local computer.

Mark In means beginning of the backup and Mark Out means the end of the backup.

The data backup starts if the “Do Export” button is pushed. The preserved video image file becomes preservation at the position set by an optional menu and is saved by *.VVF file format. (Initial folder setup: “C:WVxCapture”)

10.1.2.3. AUDIO

Control the Audio Volume.

You can control the option [MUTE ON/OFF].



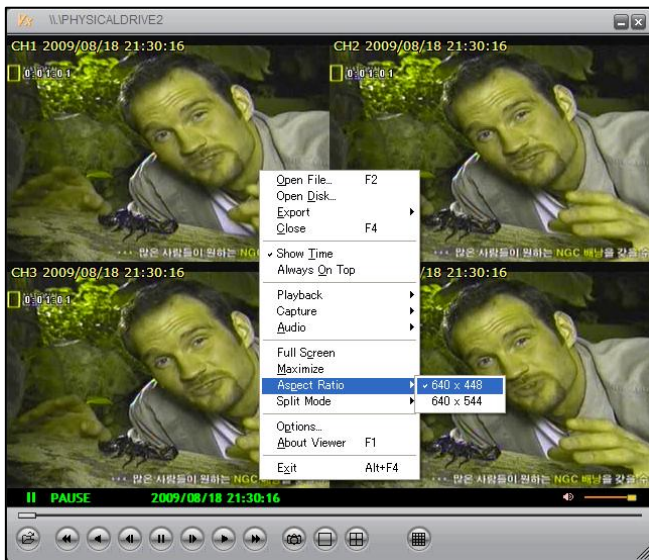
10.1.2.4. FULL SCREEN

If you click [Full Screen], you can see screen as a full screen or type [Alt + Enter].
Double click upper part of program, then screen is magnified.



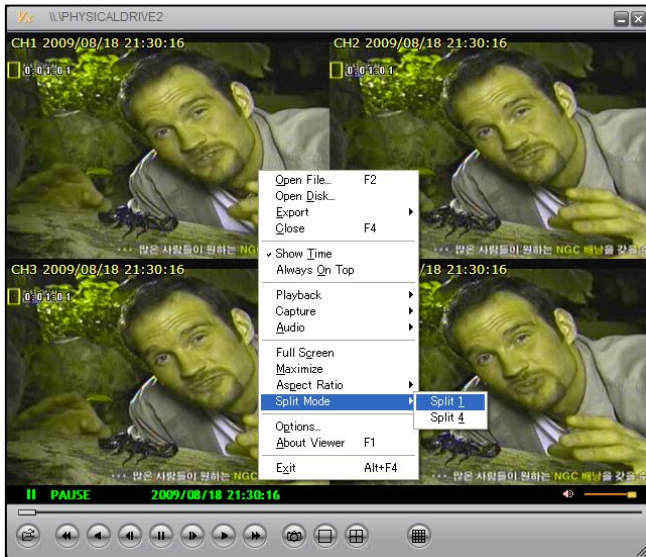
10.1.2.5. ASPECT RATIO

You can adjust the screen size as [640x448] or [640x544].



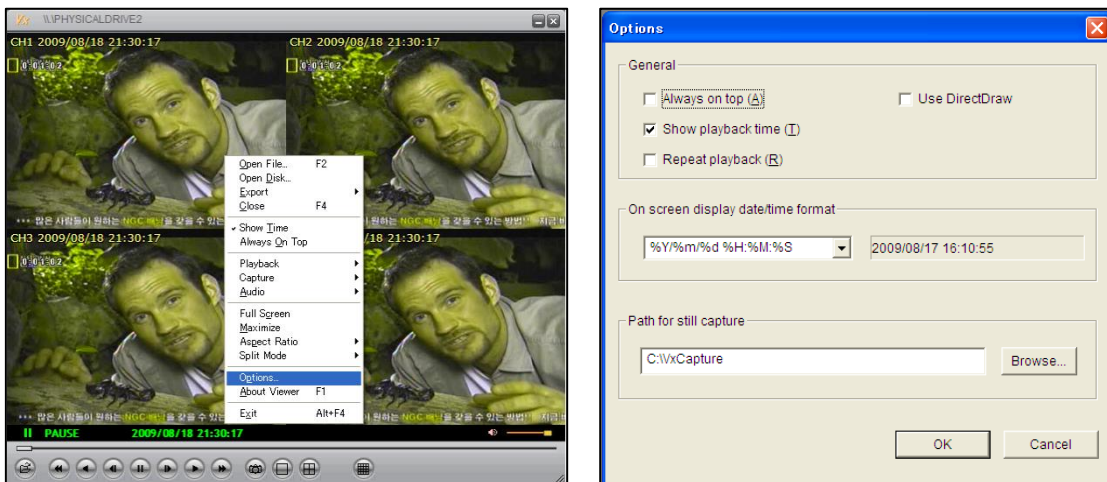
10.1.2.6. Split Mode

The Split mode can be changed to 1ch full screen, 4ch Quad screen, 9ch split screen.



10.1.2.7. Option

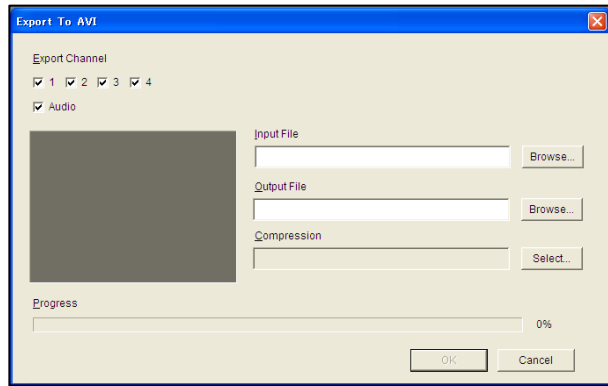
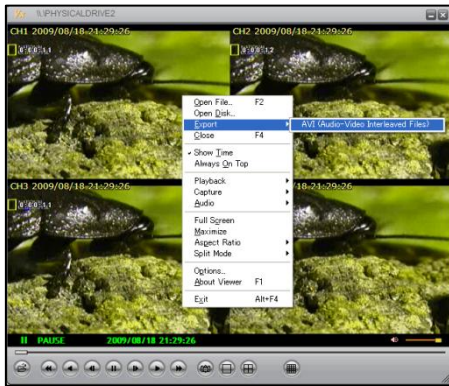
Play repeat, date and time format, the folder saved the capture screen of moving picture are changeable.



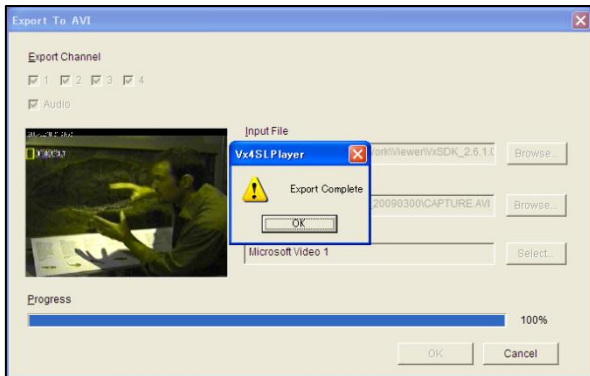
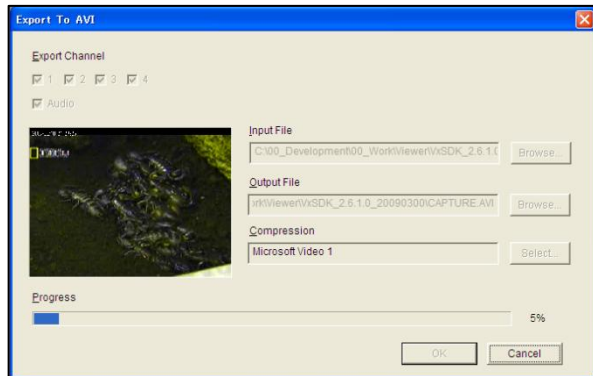
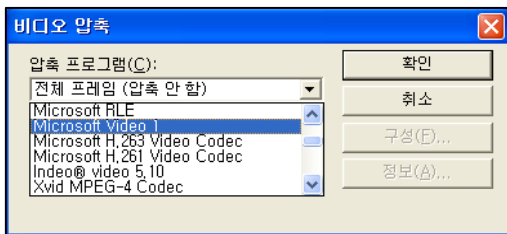
- * **Always on top:** Highest level on window.
- * **Use DirectDraw:** Use applied program interface (API) included in Direct X.
- * **Show playback time:** Set to show playback time or not on screen.
- * **Repeat playback:** Repeat playback.
- * **On screen display date/time format:** Set the date/time format on the screen.
- * **Path for still capture:** Set the path for still capture.

10.1.2.8. Export

Save video data backup as AVI format on computer.



Select video data saved on [Input File] and select a place and a name of file for save on [Output File]. Select compression type on [Compression Select] and click [OK]. Click [Export Channel OK], then save process is finish as pictures shown. Image file (AVI) is saved by channel.



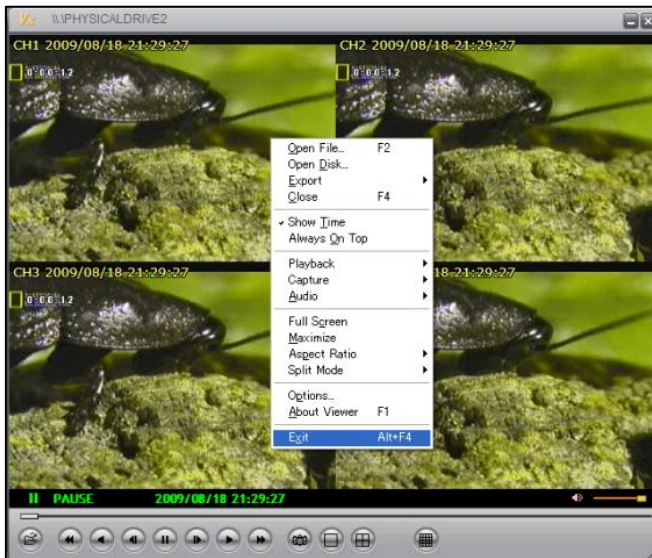
10.1.2.9. Stop Playback File & Close



As shown below, you can click the [CLOSE] to close open program.

10.1.2.10. Close Client Program

As shown below, you can click the [EXIT] or type [Alt + F4] on keyboard to close the program. You can click [X] button on the top-right side of program to close the program.
















10.1.2.11. BUTTON FUNCTION

You can click below buttons on the button of program to operate easily.

Below table shows the icon function.



ICON	Short key	Function
	F2	Open and play video file.
	R	Rewind.
	B	Play Reverse.
	Z	Go one frame backward and Pause.
	P	Pause.
	X	Go one frame forward and PAUSE.
	G	Playback.
	F	Fast Forward.
	-	It will take a single frame of video image while playback and then it will automatically save the image. (Initial folder setup : "C:WVxCapture")
	-	View in 1-channel full screen mode.
	-	View in 4-channel screen mode.
	-	View in 8-channel screen mode.
		Adjust volume or enable speaker sound ON/OFF.

11. Specification

< 4 CH DVR >

Product	Basic	Remark
OS	Real-time OS	
Input channel	4 Channel	
Output channel	2 Channel	
VGA	1 VGA (Option)	
Audio input channel	1 Channel	
Audio output channel	1 Channel	
Video Type	NTSC/PAL	
Monitoring Resolution	720 * 480 Pixels (NTSC) 720 * 576 Pixels (PAL)	
Record Resolution	640 * 224 Pixels (NTSC) 640 * 272 Pixels (PAL)	
VGA Resolution	1024*768	
Monitoring Speed	120 FPS(NTSC) / 100 FPS(PAL)	
Record Speed	15 fps / 60 fps (NTSC) 12.5 fps / 50 fps (PAL)	
Compression Format	MOTION JPEG/ 12~20KB/frame	
Display Mode	1 / 4 Screen	
Recording Mode	Continuous /Motion /Sensor /Scheduled	
Motion detection	ON/OFF control, and selectable motion sensitivity	
Sensor/Alarm	4 CH Input / 1 CH Output / Alarm display	
HDD Capacity	250GB 1HDD (MAX 1TB*1HDD)	
PTZ Control	PELCO-D, MERIT LI-LIN(RS485)	
User Interface	Remote Controller, Mouse	
BACKUP	USB 2.0	
MICROSOFT WINDOWS SURPORTS	VIEWER (Vx4SLPlayer.exe)	
Power	DC12V, 3.5A	
Operation Temperature/Humidity	5~40℃/20~80% RH	

12. WARRANTY AND DISCLAIMER

The manufacture does not assume any responsibilities related to the sales of the unit and does not endorse any third party to represent the manufacturer in any way. The warranty does not apply to malfunctions of the unit or its parts resulting from any accident, negligence, misuse, or misapplication. Also, the warranty does not include accessories or components that the manufacturer does not supply.

The warranty is valid for the one year from the data of purchase.

However, the malfunction listed below are not covered by the warranty even during the warranty period. Repair services for the malfunctions below will be available, but with applicable charges.

If any malfunctions occur due to carelessness of the user;

If a user disassembles or replaces any parts of the unit without permission;

If any power other than the rated power is connected to the unit;

If malfunctions occur due to natural disaster (fire, flood, tidal wave, etc.); or,

If consumable parts/items are to be replaced;

The warranty specified herein is only for the units delivered.

Consumers will be charged for examination and repairs after the expiration of the warranty period (one year).

A fee will be assessed for repairs or examination except within the scope of warranty specified herein even during the warranty period.

For out-of-warranty services, please contact your local vender or service center.

Any work by unauthorized personal will not be covered by warranty.