LCD MONITOR Embedded Stand-Alone DVR

Sleek Design - Easy Operation

BUILT-IN MPEG-4 DVR

4CH User Guide

FUZION

by RUGGED CCTV

Contents

Before you install ---------- 4
Notice for Installation ---------- 5
Warnings and Cautions ---------- 6
SPECIFICATION ---------- 11
Package Contents ---------- 12
System Configuration ---------- 13
Remote Controller ---------- 14
HDD ---------- 15
USB MEMORY ----------16
1. System Setup ---------- 17
1-1. Setup ---------- 17
1-2. Display Setup ---------- 19
1-3. Recording Setup ---------- 20
1-3-1. Motion Detection Setup---------- 21
1-3-2. Schedule Setup---------- 21
1-4. System ---------- 22
1-5. Network ---------- 24
1-5-1. Port ----------25
1-5-2. Classification ----------25
1-6. Recording Equipment----------28
2. Main Functions----------31
2-1. Live Window ---------- 31
2-2. Search window ---------- 33
2-2-1. EVENT Search ---------- 33
2-2-2. TIME LINE Search ---------- 35
2-2-3. GO TO ---------- 36
2-2-4. GO FIRST ---------- 37
2-2-5. GO LAST ---------- 37
2-2-6. LOG List ---------- 37
2-2-7. ARCHIVE Search ---------- 37
2-3. PTZF operation ---------- 39

2-4. Playback mode ····· 40
3. Archiving Video Into USB Memory Stick ····· 41
3-1. Capturing images or video ····· 41
3-2. Transferring still images or videos into USB memory stick ····· 41
3-3. Playing AVI Video from USB memory stick or PC through Network S/W ····· 42
4. NETWORK ····· ····· 43
4-1. Overview ····· 43
4-2. Minimum PC requirements ····· 44
4-3. Installing the program ····· 44
4-4. Live viewer ····· 45
4-2-1. Main user interface ····· ···45
4-2-2. Main control panel ····· 45
4-5. Search and Playback Viewer ····· 48
4-5-1. Main user interface ····· 48
4-5-2. Main control panel ····· 48
4-5-3. Back up ····· 50
4-6. System configuration ····· 51
4-6-1. General ····· 51
4-6-2. Site ····· 52
4-6-3. Event ····· 52
4-6-4. Record ····· 53
4-6-5. Disk ····· 54
4-6-6. Video ····· 55
4-6-7. About ····· 55

Before you install

This is for UX System users.

It is mainly composed of UX System Design, Name, Connection with Related equipment such as Pan/Tilt Control, System Program configuration.

☞ This manual is protected by copyright.
☞ Unauthorized Manual Copies are prohibited.
☞ Note: We do does not take any responsibility for damages resulting from failure to follow manual instructions.
☞ Please ask for help from us or your dealer to disassemble the system for repairs or questions concerning your system.

FCC Verification

Caution : Any changes or modifications in construction of this device which are not expressly
approved by 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 the limits 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 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 his own expense.

CE DoC (Declaration Of Conformity)

Warning : This is a class A product.
In a domestic environment this product may cause radio
Interference in which case the user may be required to take adequate measures.

Notice for installation

All of below notices should be verified before installation and operation.

☞ Do not install DVR in moist, dusty or dirty locations.

☞ Do not expose the system to intense heat or direct sunlight

☞ This system should not be located close to magnetic materials or vibrating equipment.

☞ Do not install the system in environments with extreme temperatures. (Operating Temperature 5 °C ~ 40 °C)

☞ Place the system away from debris that may fall into the ventilation slots of the system.

☞ Ensure the power switch is in the OFF position prior to installation.

☞ Place the system in a location with enough space for cable connections.

☞ Install and operate the system in a well-ventilated place without vibration.

☞ System may be susceptible to interference if placed to close radio or television units.

☞ Do not disassemble system.

☞ Power Overload : Please be sure to connect the system to a power supply within the indicated range.

☞ If a system is connected to the power directly, please ensure it is grounded properly

Warning/Caution

The following describes safety warnings and cautions to protect users and prevent property loss. Please thoroughly read the bellow before operating the system.

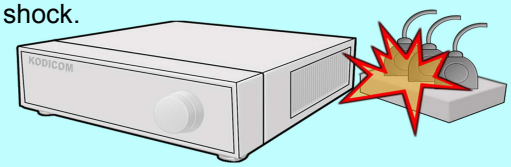
Warnings and Cautions

Warnings If the user is not aware of this warning, the user can be killed seriously injured.	**Cautions** If the user is not aware of this caution, the user can be injured or a property loss may be caused.

Warning

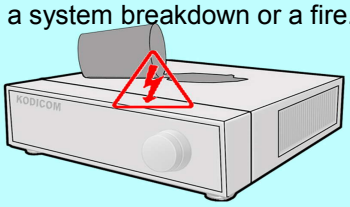
Turn off the system before installing the system. Do not plug in several electric devices to the same outlet.

- This may cause heating, a fire, or an electric shock.



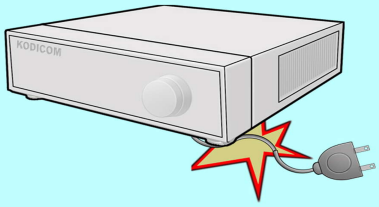
Do not put a liquid container such as water, coffee, or beverage.

- If liquid is poured into the system, it can cause a system breakdown or a fire.



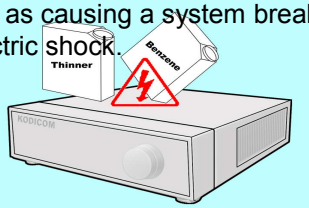
Do not bend the power cable and do not put a heavy object on the power cable causing a damage.

- This may cause a fire.



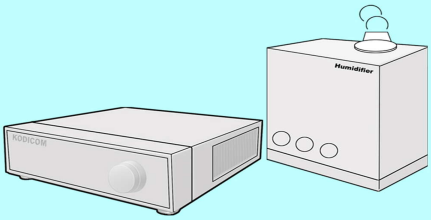
Keep the place where the system is installed always clean after installation. Use dry clothes to clean the system, but do not use water, thinner, or other organic solvents.

- This may damage the surface of the system as well as causing a system breakdown or an electric shock.



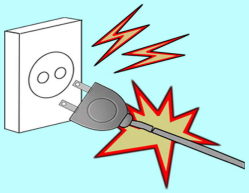
Do not install the system in a humid, dusty, or soot-covered place.

- This can cause a fire or an electric shock



Do not forcefully pull the power cable or touch the plug with wet hands. Do not plug in if the holes on the outlet is too loose.

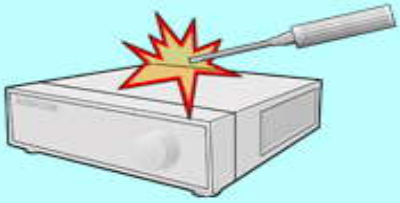
- This may cause a fire or an electric shock.



Warning

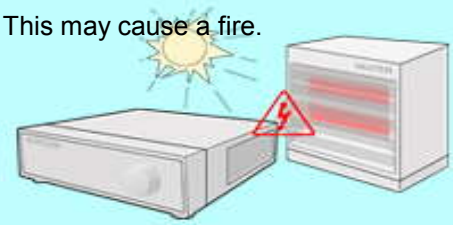
Do not disassemble, repair, or remodel the system by yourself because a high voltage is running in the system.

- This may cause a fire, an electric shock, and injuries.



Install the system in a cool place without direct sunlight, and keep the temperature properly. Avoid candle light and heat-generating devices like a heater. Keep devices and tools away from a place where a lot of people pass.

- This may cause a fire.



Check if any danger such as a humid floor, an ungrounded power extension cable, a torn power cable, or lack of safety grounding. If anything dangerous is found, ask an assistance to your dealer or an engineer.

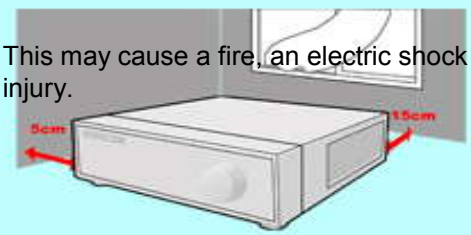
- This may cause a fire or an electric shock.

Install the system in a flat place that is not sealed. Do not stand the system vertically or lean the system.

- When the system falls down, this may result in injuries.

Keep at least 15cm of the distance between the rear part of the system and the wall. Since the power cable connection port, image signal input/output ports, the serial port, the LAN cable port and external input/output ports are installed on the rear part of the system, allowing only a short distance between the wall and the rear part of the system may have cables bent, damaged, or cut.

- This may cause a fire, an electric shock or an injury.



The power outlet must be grounded, and the voltage range must be within 10% of the rated voltage. Do not use the same outlet with a hair dryer, an iron, a refrigerator, or a heating apparatus.

- This may cause a fire, heating, or an electric shock.

Warning

When the system battery is dead, replace the battery with the same type battery or an equivalent one specified by the manufacturer.

A dead battery should be disposed according to the manufacturer's instructions.

- This may cause an explosion.

If the HDD passes its service life, image data stored in the HDD may not be recoverable. If broken images are displayed while playing data stored in the HDD, it means the HDD passed its service life. When this happens, contact your dealer or the service center to have it replaced with a new HDD.

- We are not responsible for deleted data by user's carelessness.

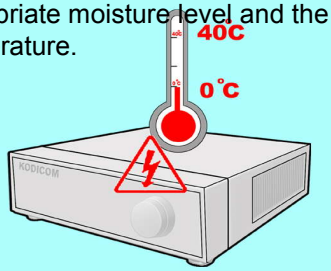
Caution

Do not install the system in a place with strong magnetism, frequencies, or impact, nor near electric devices such as radios and TV sets.

- Install the system in a place without magnetic objects, frequencies, or severe vibration.

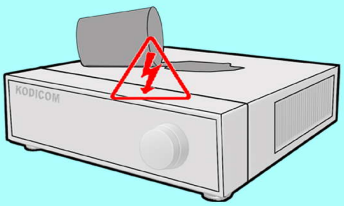
Install the system in a place with an appropriate moisture level and the temperature.

- Install the system in a place with an appropriate moisture level and the temperature.



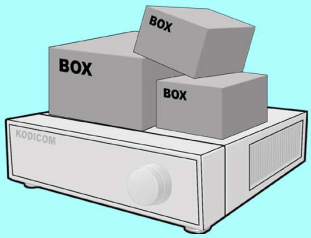
Prevent substances from entering into the system.

- This may cause a system breakdown.



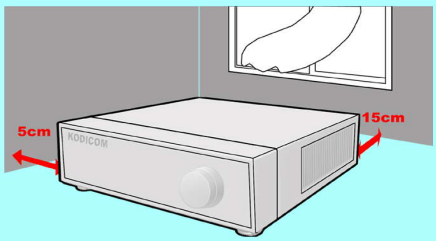
Do not put a heavy object on top of the system.

- This may cause a system breakdown.



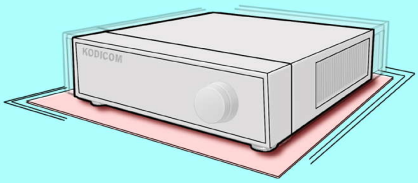
Install the system in a well-ventilated place.

- Keep at least 15 cm of the distance between the rear part of the system and the wall, and 5 cm of the distance between the side part of the system and the wall.



Install the system on a stable flat place.

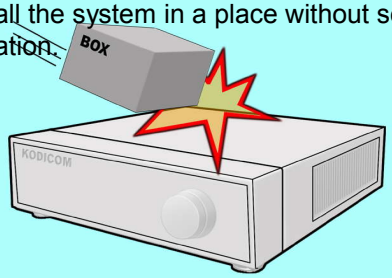
- The system may not properly operate.



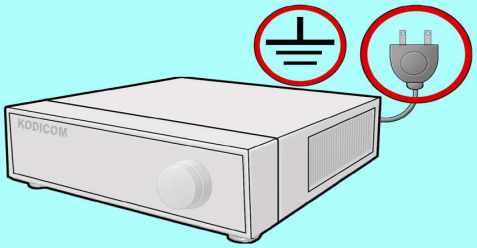
Caution

Strong impact or vibration may case a system breakdown.

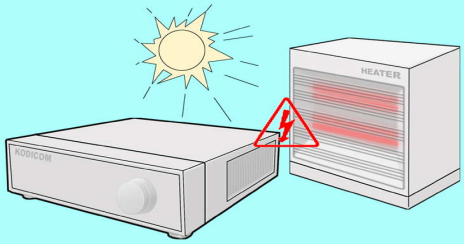
- Install the system in a place without severe vibration.



The outlet must be grounded.

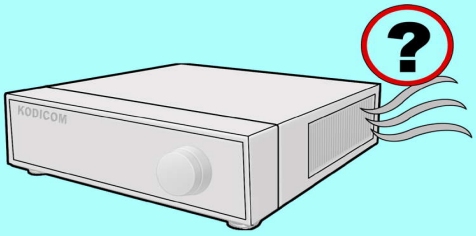


Avoid direct sunlight or an heating apparatus.



If there is strange sound or smell, unplug the power cord immediately and contact the service center.

- This may cause a fire or an electric shock.



Ventilate the air in the system operation room, and firmly fix the system cover.

- A system breakdown might be resulted in by inappropriate environments.

In order to keep the system performance, have your system regularly checked by the service center.

- We are not responsible for the system breakdown due to user's carelessness.

It is recommended to use the Automatic Voltage Regulator (AVR) for stable power supply.

It is recommended to coil the core-ferrite around the connector of the system to avoid electromagnetic interference.

- This is not mandatory, but recommended.

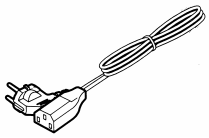
SPECIFICATION

VIDEO	INPUT	4 composite BNC (NTSC/PAL) – 1.0Vp-p	
	OUTPUT (Selectable)	1 composite BNC (NTSC/PAL) – 1.0Vp-p	
		1 VGA	
AUDIO	INPUT & OUTPUT	4 Line In (RCA) 1 Line Out (RCA)	
ALARM	INPUT & OUTPUT	4 & 1	
OS		RTOS	
RECORD	COMPRESSION	MPEG-4	
	VIDEO FORMAT	NTSC	PAL
	RESOLUTION	360x240, 720x480	360x288, 720x576
	RECORDING SPEED	MAX. 120fps/4CH(360x240/CH) MAX. 30fps/4CH(720X480/CH)	MAX. 100fps/4CH(360x288/CH) MAX. 25fps/4CH(720X576/CH)
	MODE	Manual, Motion, Sensor, and Schedule	
	METHOD	By Resolution, fps & Quality	
MULTI TASK	TRIPLEX	Record, playback and transfer	
CONTROL UNIT		IR Type Remote Control and Front keys	
SERIAL PORT	CONSOLE	1 RS-232C	
	CAMERA CONTROL	1 RS-485	
NETWORK	INTERFACE	ADSL, LAN	
	DYNAMIC IP	DDNS	
	LAN PORT	1 10/100-base T Ethernet	
	FUNCTIONS	Live, Search, P/T/Z/F	
HDD	CAPACITY	1EA Max. 250GB	
BACKUP	NETWORK	Still Image & Video data	
	USB STICK	Still Image & Video data	
ELECTRONICAL SPECIFICATION	ADAPTOR	Input: AC100-240V, 50/60Hz, 1.5A	
	CONSUMPTION	About 25W	
ENVIRONMENTAL SPECIFICATION SIZE	TEMPERATURE	5°C ~ 40°C	
	HUMIDITY	30% ~ 90%	
	DIMENSION	388(W) X 170(D) X 430(H)mm	

Package Contents

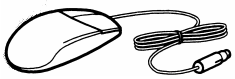
Please check the below listed contents prior to installation!

If there is missing content, Please contact your original seller!



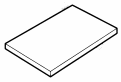
Power Cable

DC 12V ADAPTOR



Mouse

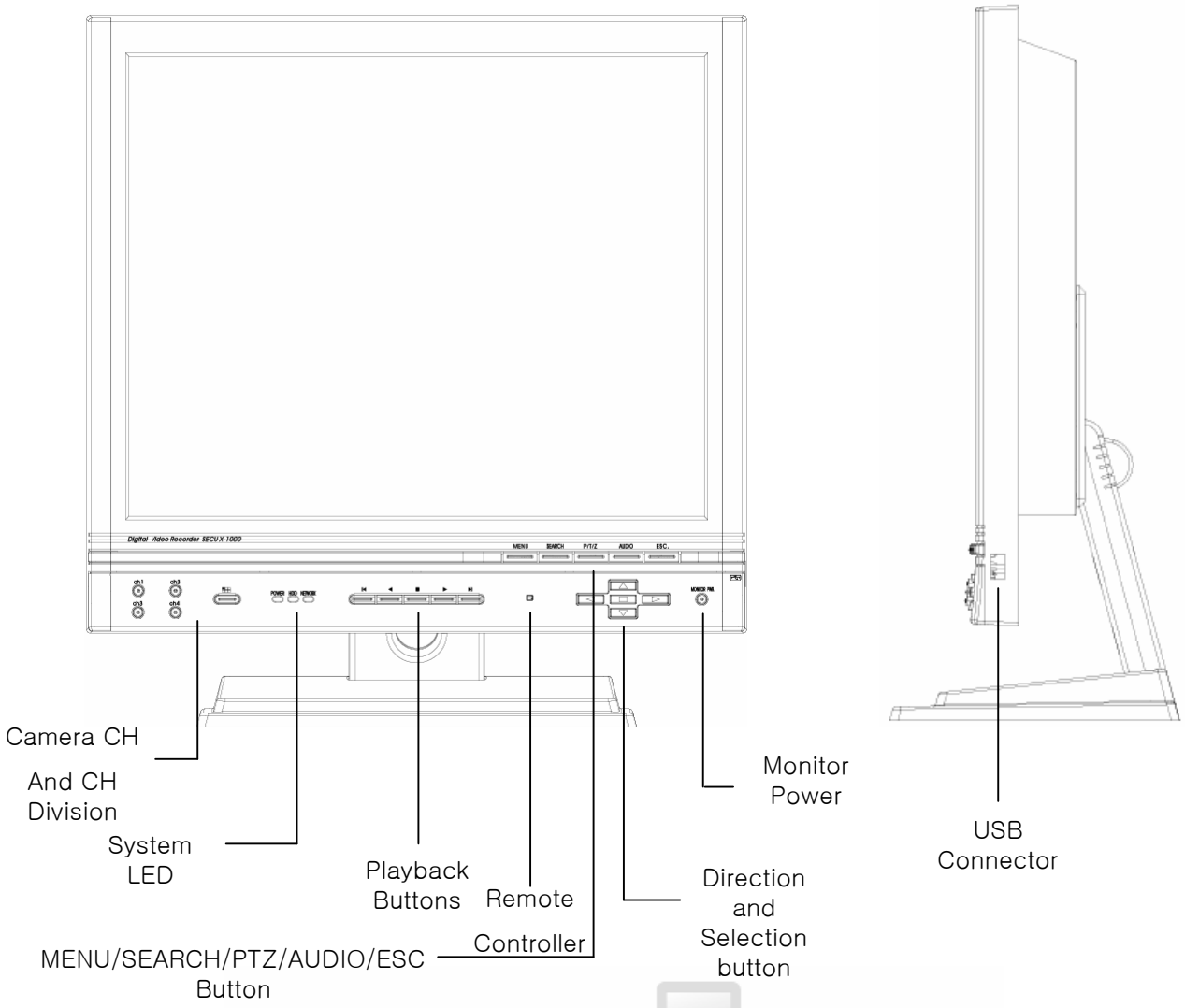
CLIENT SOFTWARE CD

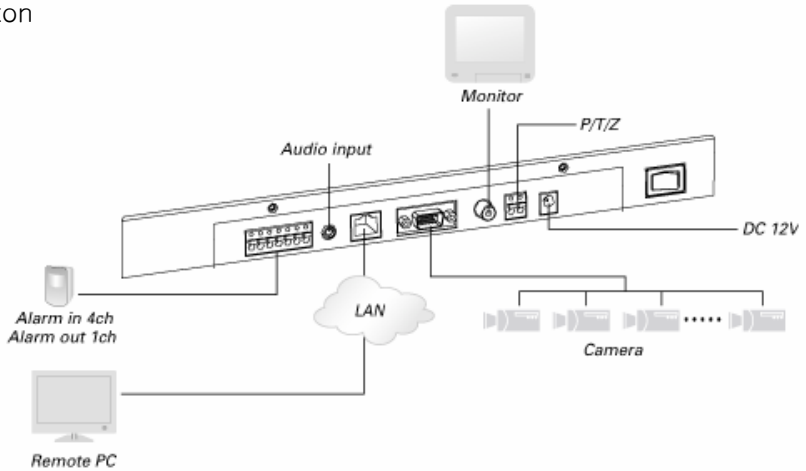


MANUAL

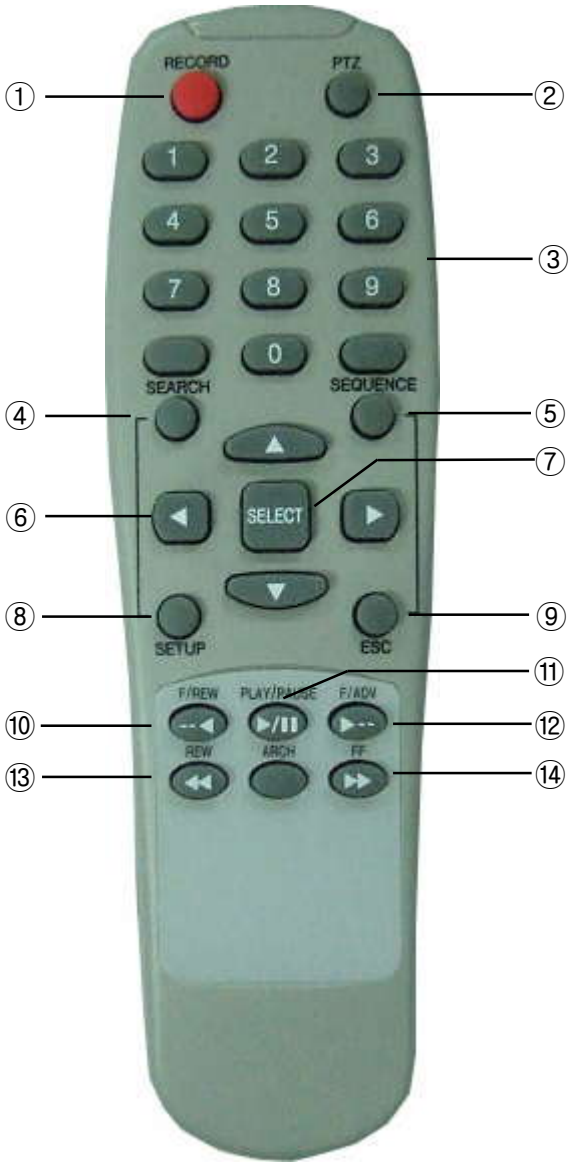
Video Cable

Configuration





Remote Controller



Buttons	Functions
1. RECORD	Record On/Off
2. PTZ	PTZ Mode Convert
3. Number	Camera Ch and Number Input
4. SEARCH	Search Menu
5. SEQUENCE	Channel Sequence
6. ▲	"UP" Button for Menu or Number 1 for Camera and Password.
▶	"Right" Button for Menu or Number 2 for Camera and Password.
▼	"DOWN" Button for Menu or Number 3 for Camera and Password.
◀	"LEFT" Button for Menu or Number 4 for Camera and Password.
7. SELECT	Select and Record Setup
8. SETUP	Go to Main Setup Menu
9. ESC	Go back to Last Setup Menu or Cancel Setup
10. ••◀ F/REW	Play Backward per 60 Sec
11. ▶/II PLAY/PAUSE	Play and Pause
12. F/ADV ▶••	Play Forward per 60 Sec
13. ◀◀ REW	Play Fast Backward
14. FF ▶▶	Play Fast Forward

HDD

BRAND	CAPACITY	RPM	BUFFER	INTEERFACE
Hitachi	80GB	7200RPM	2M	E-IDE
	160GB	7200RPM	8M	E-IDE
	250GB	7200RPM	8M	E-IDE
Maxtor	80GB	7200RPM	2M	E-IDE
	160GB	7200RPM	8M	E-IDE
	250GB	7200RPM	8M	E-IDE
Samsung	80GB	7200RPM	2M	E-IDE
	160GB	7200RPM	2M	E-IDE
Western Digital	80GB	7200RPM	2M	E-IDE
	160GB	7200RPM	8M	E-IDE
	250GB	7200RPM	8M	E-DIE
Seagate	40GB	7200RPM	2M	E-IDE
	80GB	7200RPM	2M	E-IDE
	160GB	7200RPM	2M	E-IDE
	250GB	7200RPM	2M	E-IDE

USB MEMORY

Maker	Model Name	Speed	Capacity	Note
TRANSCEND	JF Series	1.0/2.0	Up to 4GB	
PRETEC	Tiny Series	1.0/2.0	Up to 4GB	
Absolline	Zibn2.0 Series	1.0/2.0	Up to 4GB	
LG	Xtick Series	1.0/2.0	Up to 4GB	
SANDISK	Cruzer Micro Series	1.0/2.0	Up to 4GB	
IOCELL	CELLDISK2.0 Series	1.0/2.0	Up to 4GB	Uninstall shielding Software
Samsung Electronics	SUB Series	1.0/2.0	Up to 4GB	
Imation	Iflash-ex Series	1.0/2.0	Up to 4GB	
HP S100	S100 Series	1.0/2.0	Up to 4GB	
Sony	Micro Vault Series	1.0/2.0	Up to 4GB	

- DVR may be not compatible with a unlisted USB Memory Stick.
- The listed USB Memory Stick recommended

System Configuration

1. DVR Setup

Change the default setup for your application.

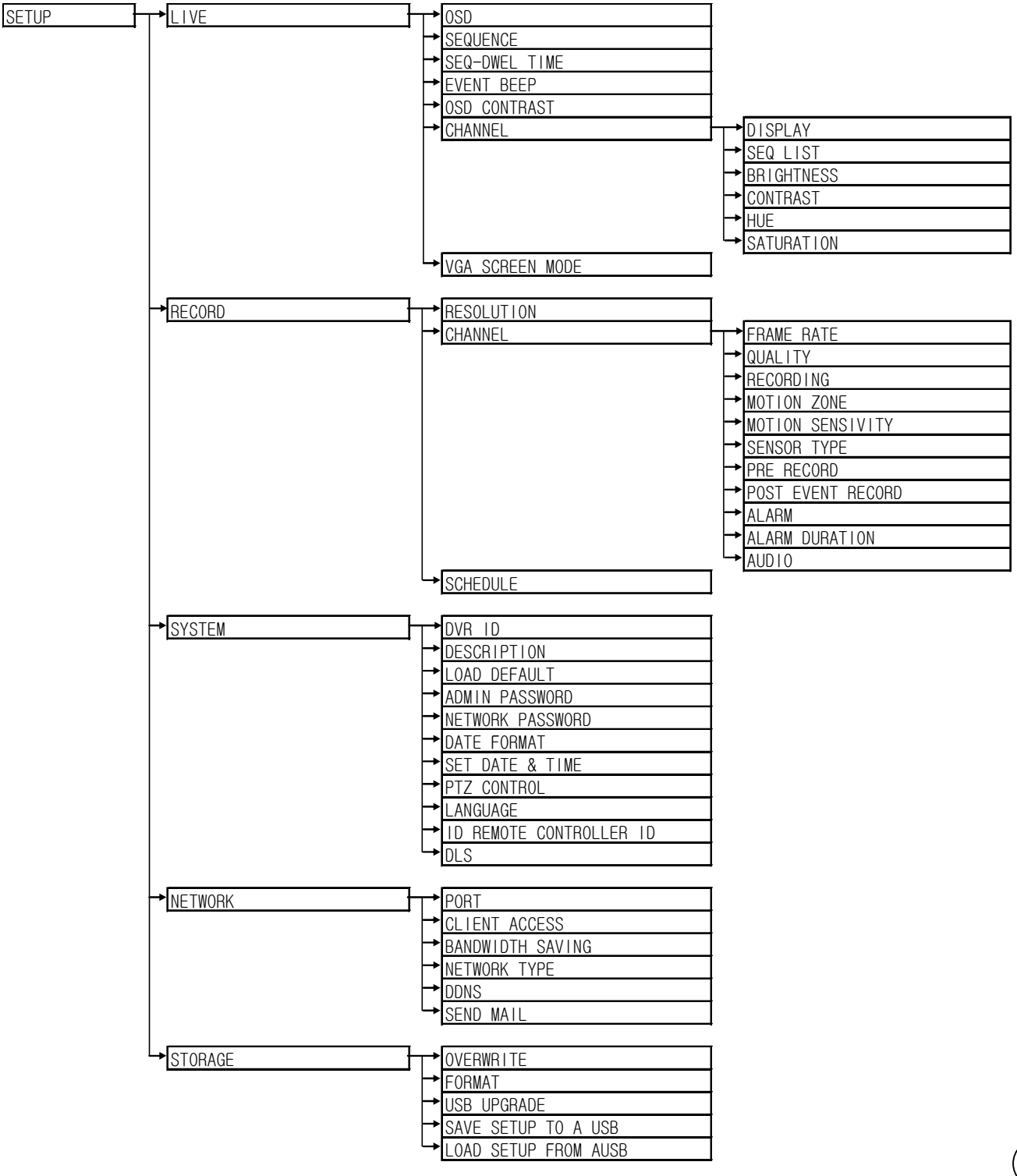
1-1. Setup

Press “1111” (Default Password) with pushing “CH1” Button four times to enter into Main Menu.

[Picture 1-1] Configuration Menu

☞ [Reference]

This Manual is written mainly for the Remote Controller.

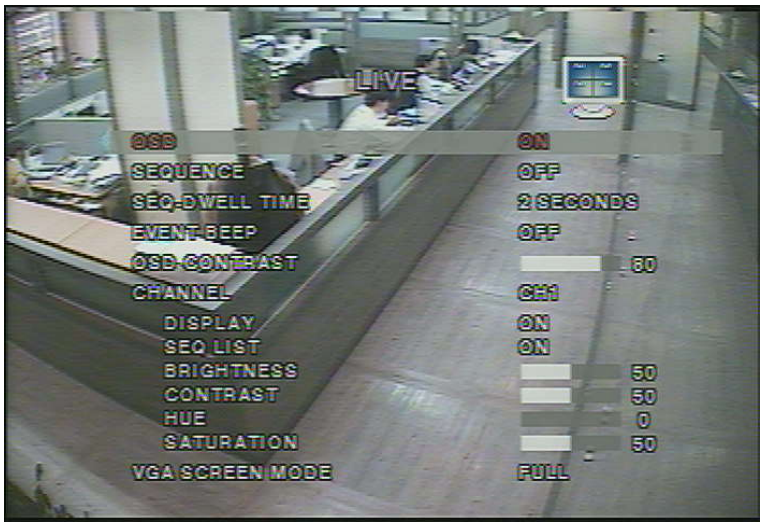

SETUP
LIVE
OSD
SEQUENCE
SEQ-DWEL TIME
EVENT BEEP
OSD CONTRAST
CHANNEL
DISPLAY
SEQ LIST
BRIGHTNESS
CONTRAST
HUE
SATURATION
VGA SCREEN MODE
RECORD
RESOLUTION
CHANNEL
FRAME RATE
QUALITY
RECORDING
MOTION ZONE
MOTION SENSIVITY
SENSOR TYPE
PRE RECORD
POST EVENT RECORD
ALARM
ALARM DURATION
AUDIO
SCHEDULE
SYSTEM
DVR ID
DESCRIPTION
LOAD DEFAULT
ADMIN PASSWORD
NETWORK PASSWORD
DATE FORMAT
SET DATE & TIME
PTZ CONTROL
LANGUAGE
ID REMOTE CONTROLLER ID
DLS
NETWORK
PORT
CLIENT ACCESS
BANDWIDTH SAVING
NETWORK TYPE
DDNS
SEND MAIL
STORAGE
OVERWRITE
FORMAT
USB UPGRADE
SAVE SETUP TO A USB
LOAD SETUP FROM AUSB

1-2. Display Configuration

Go to Live Menu and Select “ENTER” for Display Configuration

Item	Description
OSD	Enable/disable on-screen-display
SEQUENCE	Enable/disable sequential display of video channels in full screen mode
SEQ-DWELL TIME	Dwell time for each cannel display in sequential display mode
EVENT BEEP	Enable/Disable internal beep alert sound.
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD)
CHANNEL	Select the channel for applying the following settings.
DISPLAY	Enable/disable display of the video channel in live display mode
SEQ LIST	Enable/disable the specified channel to be included in sequential display mode.
BRIGHTNESS	Change the brightness value for the specified channel
CONTRAST	Change the contrast value for the specified channel
HUE	Change the hue value for the specified channel
SATURATION	Change the saturation value for the specified channel
VGA SCREEN MODE	Change VGA Screen Mode (Full or Each Channel)

[Picture 1-2] Live Menu Configuration



[Picture1-2] Live Picture Configuration

1-3. Recording Configuration

This is for Motion, Alarm, Sensor Recording Setup.

Manu item	Description
RESOLUTION	Set resolution to either full or quad.
CHANNEL	Select the channel for applying the following settings.
FRAME RATE	Set the frame rate for the specified channel. The sum of the frame rate values from each channel cannot exceed maximum frame rates for a particular recording resolution. Typical values of the maximum frame rate for NTSC video are 120/100fps for QUAD (360*240(NTSC)/360*288(PAL)) and 30/25 fps for FULL (720*480(NTSC)/720*576(PAL)).
QUALITY	Select the recording quality for the specified channel from normal, high, and superior.
RECORDING	Assign the recording mode for each channel. Recording modes: Continuous, Motion, Sensor, and Disable.
MOTION ZONE	Select Full Zone or Partial Zone for motion sensing. If the Partial Zone is selected, screen will be change as shown in figure 1.3.1
MOTION SENSITIVITY	Set the motion sensitivity for the specified channel. Control the motion sensitivity from 1 to 9.
SENSOR TYPE	Set the type of sensor for the specified channel from none, N/O (normal open), and N/C (normal closed).
PRE RECORD	Enable/disable pre-event recording. Pre-event recording time is 5 sec and only intra-frames are recorded for pre-event recording.
POST EVENT RECORD	Set post event recording time duration for the specified channel
ALARM	Enable/disable alarm generation for the specified channel.
ALARM DURATION	Set alarm time duration for the specified channel.
AUDIO	Enable/disable audio for the specified channel
SCHEDULE	Set recording schedule. If this menu item is selected, screen will change as shown in figure 1.3.2

[Table 1-3] Recording Menu Configuration

[Picture1-3] Recording Menu Configuration

1-3-1. Motion Detection Setup

Setup the area for Motion Detection Recording with “Direction” and “Enter” Buttons.

Check selected cells with different color.

[Picture1-3-1] Motion Detection Configuration

1-3-2. Schedule Recording

You can select your type of recording (Motion, Sensor, or Continuous) at one hour intervals for the week.

Button	Function
	Select Recording type
	Go Up
	Go Right

Button	Function
	Go Down
	Go Left
ESC	Escape

[Picture1-3-2] Schedule Recording

1-4. System

You can setup Password, Date, Camera Control and Language

Item	Description
DVR ID	The name of the system. Press the SEL button and move through the position for each alphanumeric character by pressing the LEFT and RIGHT buttons. UP/DOWN buttons are used to change character for each location.
DESCRIPTION	Press SEL to see system information.
LOAD DEFAULT	Choose OFF or ON. If selecting ON, press the SEL button to load defaults.
ADMIN PASSWORD	Set the password for the administrator. Once this menu is selected, the DVR will ask you current password and new password. Follow the procedure provided by the DVR. The password numbers (1,2,3,4) can be inputted by using direction keys. , , , and respectively. The default password is 1111.

Item	Description
NETWORK PASSWORD	Set the password of network client. Once this menu is selected, the DVR will ask you current password and new password. The DVR will guide you through the entire process of setting up the user password. The password numbers (1,2,3,4) can be inputted by using direction keys. , , , respectively.The default password is 1111.
DATE FORMAT	Select the preferred date and time display.
SET DATE & TIME	Set the present date and time. If DLS function is ON, user can not enter into this menu and change date and time.
PTZ CONTROL	Set the camera speed, number, type and ID
LANGUAGE	Select a language.
REMOTE CONTROLLER ID	Select an ID for the remote controller. 1. Select ID from 1 to 9. 2. Press the same number as ID set in DVR on the remote controller 3. The icon will be displayed on the Live screen of the DVR that responded to the remote controller.
DLS	User can set to ON or OFF for DLS (Daylight Saving) by using LEFT or RIGHT

[Picture1-4] System Setup

[Picture1-4-1] Name Setup

[Picture1-4-2] Information Setup

[Picture1-4-3] Date and Time Setup

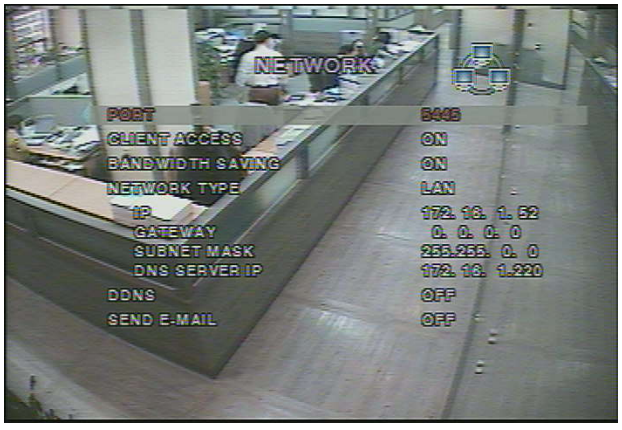
[Picture1-4-4] PTZ Control Setup

1-5. Network

To setup a type of Network and Client Connection information

Item	Description
Port	Port No (Default : 5445)
Client Connection	Remote Client Program Connection
I-Frame	Used for Low speed Network Solution (Setup “OFF” in Low speed Network)
Network	Select Available Network (LAN, DHCP, ADSL)
DHCP	DHCP➔ used for Dynamic IP and detect the changed IP Address automatically
ADSL	Selected for ADSL Connection at PPPoE (ID and P/W)
LAN	IP ➔ Input IP Address for DVR GATEWAY ➔ Register Gateway for Network SUBNET MASK ➔ Register Subnet Mask for Network
DDNS	Turn “DDNS” on to use Domain Name from DDNS Server for Remote Network Connection instead of IP Address. DDNS Server Name ➔ “ddns.umbddns.com” –Default. (Do not change this) [Notice] Register last 4 digit numbers of Mac address (System Menu --> System Information) to our main server for DDNS Connection. IP Address of DDNS Server will also be registered occasionally.

[Table 1-5] Network Configuration Menu



[Picture1-5] Network Configuration

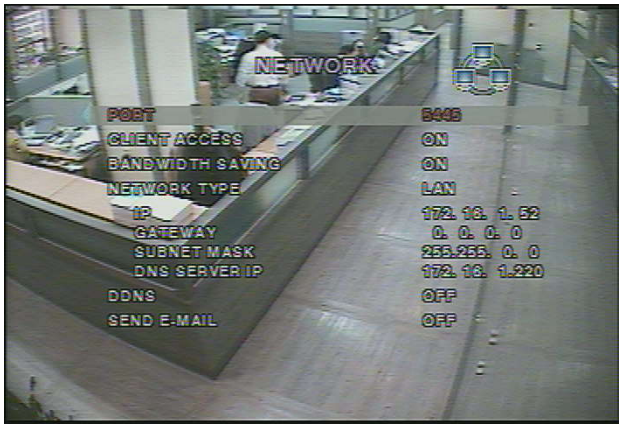
1-5-1. Port

5445-5447 are the fixed port numbers used to avoid conflict between the internal communication protocols

1-5-2. Network

Select one type of Network for application

◈ LAN



Picture. Network LAN Configuration

It is used for Network Connection with Static IP or Router.

Network Configuration

1. Static IP (Refer to Network Manager)
2. Connected with Router on ADSL

With setting up “DMZ” or "Port Forwarding", Router itself grants Internal Static IP Address. Every router is different and if you have any questions on how to do this you will need to call the provider of your internet service or your router manufacturer, and tell them you need to port forward ports 5445-5447 in the TCP direction, to the IP address of your DVR.

Item	Description
IP	Input IP Address for DVR
GATEWAY	Input IP Address and Gateway
SUBNET MASK	Input Subnet Mask for Networking

[Table 1-5-2] LAN

◈ DHCP

Picture. Network DHCP Configuration

Select DHCP to use the DHCP option when connecting the DVR to a network. An IP address is automatically assigned by the DHCP server, which assigns IP address and other parameters to new devices automatically. To see the DVR's IP address, select DESCRIPTION from the SYSTEM menu.
If the network connection does not allow additional IP addresses, then an IP sharing device will be needed. In this case, forwarding may be needed to allow for a network connection. For more information on port forwarding, see the documentation for your IP sharing device or your network administrator.

◈ ADSL

Picture. Network ADSL Configuration

This is used for Internet connection with User ID and P/W on PPPoE.

[Notice] Don't setup this option on VDSL or connection with a Router which doesn't need ID and P/W for Network!
You will more then likely be using the DHCP or LAN Configuration Setup.

Item	Description
ID	Input ID for ADSL connection
Password	Input Password for ADSL connection.

[Table 1-5-2] ADSL

◈ DDNS

DDNS Setup is used to get Domain Address after DDNS Server registration with assigned MAC Address to each DVR.
(Twelve digit number on Bar-Code or Twelve digit number behind MAC Address in SYSTEM INFORMATION)
It can connect Network consistently with the registered Domain Name independent of change of IP Address.
(Example : abcd.umbddns.com)
DDNS Server Name : ddns.umbddns.com is fixed as default
(Do not change this DDNS Server Name.)

◈ E-Mail Notification
In dynamic IP Application, changed IP Address is forwarded and informed to the registered e-mail address.

1. IP Notification : Select “ON” to notify Network information through the registered e-mail address.
2. Event Alarm : Select “ON” to notify channel triggered by Alarm through the registered e-mail address.
3. E-mail Address : Input Users e-mail address.
4. Mail Server Name: Input e-mail server name
   Input same ID and P/W as your internet mail
5. Return e-mail address : Input another mail address when your registered mail address is not available.

1-6. Storage

Storage Setup and HDD Format

Item	Description
Overwriting	Overwrite existing material when hard disk drive is full
HDD Format	Format hard disk drive
USB Upgrade	The DVR is designed to be upgraded through firmware updates. In order to upgrade, the upgrade firmware must firstly be downloaded and copied into a USB device. Create a new folder in the USB memory stick and copy the upgrade firmware “app.bin” into the folder. **This folder name should be “upgrade”.** After the upgrade firmware is copied into the USB memory stick, do the following: 1. Connect USB memory stick into the USB port. 2. Go to the STORAGE and select the USB UPGRADE. 3. Select CONFIRM and then the upgrading will start automatically. 4. After the upgrade is completed, DVR will reboot automatically.
USB Recording	Setup value can be saved onto USB memory stick.
USB Load	Setup value that is saved on USB memory stick from **SAVE SETUP TO A USB** can be uploaded. After the upgrade is completed, DVR will reboot automatically and Setup value will be applied.

[Table 1-6] Storage Menu

[Figure1-6] Storage setup screen

[Figure1-7] Storage setup –USB UPGRADE

[Figure1-8] Storage setup – SAVE SETUP TO A USB

[Figure1-9] Storage setup – LOAD SETUP FROM A USB

2. Main Function

2-1. Live Window

In the Live window, video inputs from the cameras are displayed on the configuration of the live setup. Figure 2-1 shows the layout of the live screen. Various indicators showing the status of the DVR are shown as OSD symbols. Refer to Table 2-1 for the meanings of the indicators.

[Figure2-1] Live display screen

Key	Description
	Continuous recording in progress
	Manual recording in progress
	Sensor alarm recording in progress
	Motion alarm recording in progress
	Indicates no alarm event
	Alarm indicator. When there is an alarm (sensor alarm or motion alarm) in the video channel, this icon will be highlighted in bright red.
	Indicates that alarm output is activated.
	Indicates that a network client is connected to the DVR.
	Indicates that sequencing mode is enabled.

[Table 2-1] Signal Description

Key	Description
	Indicates the HDD is being recycled
	Indicates the percentage of recorded data into HDD
	Indicates there is no video signal input

[Table2-1] Signal Description

Button	Description
	Select channel to be displayed in full screen mode.
	Switch between full screen and quad display mode.
SEQ	Press to start auto sequencing of the screen, in full screen mode. (Toggle)
RECORD	Press to start and stop manual recording.
SEARCH	Press to go to the search menu. Event search /Time line search /Log /Archive search
ARCH	Press to capture a still image. The still image will be stored into the hard drive. It can then be transferred to a USB device.
PTZ	Press to control PTZ operation
SETUP	Press to launch SETUP menu.
ESC	Press for temporal storage of the changed value or to return to the previous menu screen.

[Table 2-2] Button Description

2-2. Search window

Press the MISC (SEARCH) button in live mode to enter SEARCH window.

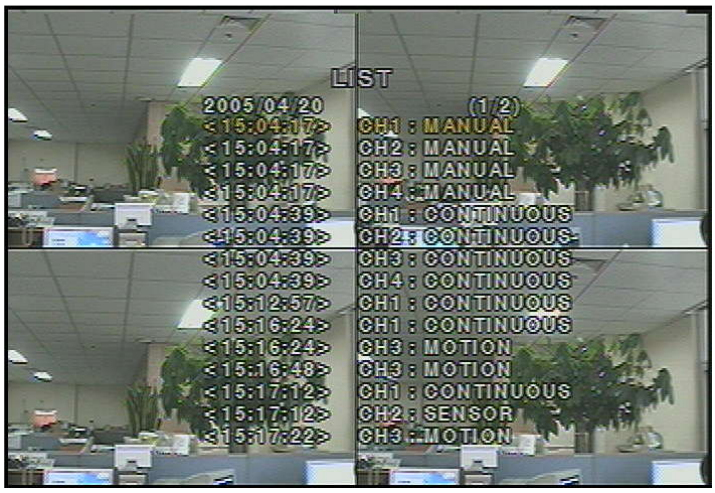
2-2-1. EVENT Search

The EVENT SEARCH window is used to find stored video. 3 categories of search filters can be applied: DATE, CHANNEL, and TYPE. Use the SEL button to move down the categories and use the UP button to move up the categories. The ESC button will return user to the live screen.

Searching for an event:

1) Select the date of the video to begin searching, Use the LEFT or RIGHT button to navigate through the day. Use the UP or DOWN button to change the values.
2) Once you have selected the date, press the SEL button to move to the CHANNEL selector.
3) Use the LEFT or RIGHT button to change the channel selection from ALL to any of the four available channels.
4) Once you have selected the channel, press the SEL button to move to the TYPE selector.
5) Use the LEFT or RIGHT button to change the type of recording to ALL, MOTION, SENSOR, MANUAL, CONTINUOUS.
6) Once you have selected the type of recording to search for, press the SEL button to produce a list of instances that fit the search criteria.

[Picture 2-2-1] Event search screen



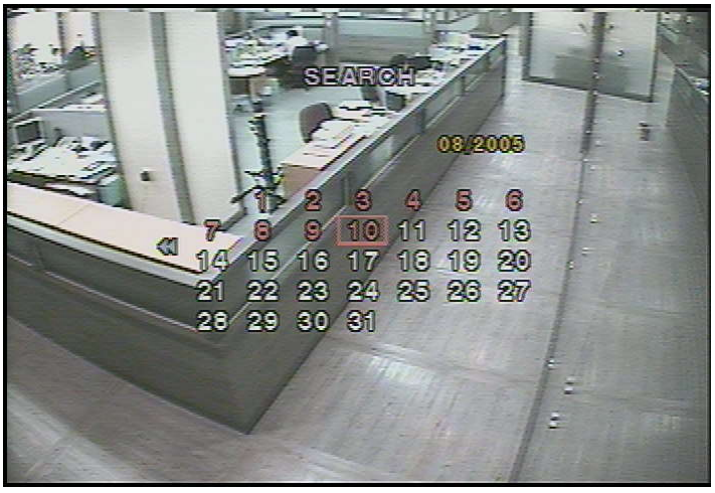
[Picture 2-2-2] Event search list screen

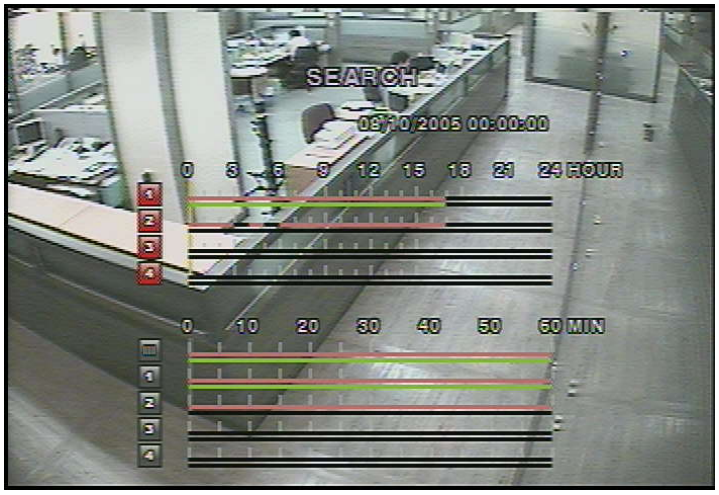
7) Use the UP and DOWN button to scroll through the onscreen listings.
8) Use the LEFT and RIGHT buttons to display events that happened previous to or after the current selection.
9) Once the desired event has been selected, press the SEL button to playback the selected video.
10) Press the ARCH button to archive the video into HDD.

2-2-2. TIME LINE Search

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

1) Select the date of the video to begin searching by using the LEFT or RIGHT button to navigate through the day.
2) Once you have selected the date, press the SEL button to move to the time line search window.
3) Use the LEFT or RIGHT button to select a time zone on the 24 hours time table. Once you have selected the time zone, press the DOWN button to move to the 60 minutes time table and select all or each channel for playing back the recorded video.
4) Once you select the time zone, then move the time line select Bar (yellow) to the point you wish to start playing video (recorded video is indicated by a Red underline) by using the LEFT or RIGHT button.
5) Press the SEL button to playback the recorded video.
6) Press the ARCH button to archive the video into HDD.

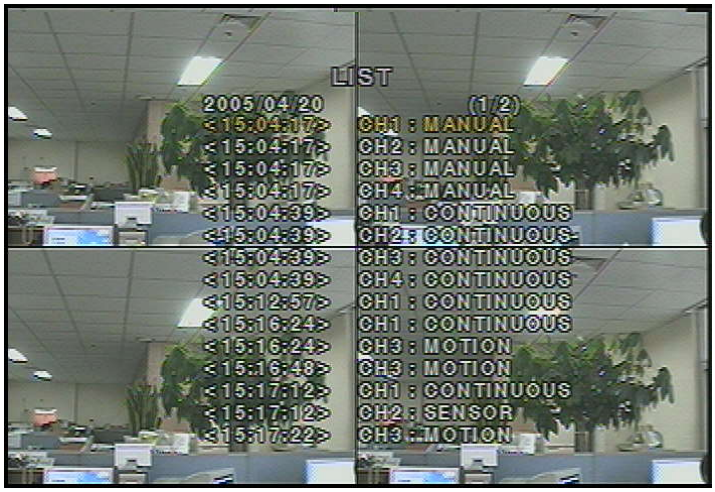




[Picture 2-2-3] Time line search screen

2-2-3. GO TO

You can search for specified data by setting the time and date in this menu. Use the LEFT or RIGHT button to move from left to right in this menu. Use the UP or DOWN button to set the date and time.



[Picture 2-2-4] GO TO search screen

2-2-4. GO FIRST

You can access to the first data which has been recorded into the HDD disk by pressing this menu.

2-2-5. GO LAST

You can access to the last data which has been recorded into the HDD disk by pressing this menu.

2-2-6. LOG List

User can see the log list by selecting this item.

[Picture 2-2-5] GO TO search screen

2-2-7. ARCHIVE Search

The ARCHIVE SEARCH window is used to find the stored video.

1) Select the date on the calendar to begin searching by using the LEFT or RIGHT button.
2) Once you have selected the date, press the SEL button to move to the list of recorded data.
3) Use the UP or DOWN button to scroll through the onscreen listings.
4) Once the desired event has been selected, press the SEL button to see the selected video in paused mode.
5) Press the ARCH button to archive the video into USB memory stick.

[Picture 2-2-6] Archive search screen

[Picture 2-2-7] Archive search list screen

2-3. PTZ operation

To operate the PTZ functions, connect the controller to the RS-485 port on the rear panel.
In the PTZ control setting in the setup menu, user can select or set the protocol type of the camera which is the same as the one that is installed on the site. If the camera has a specific camera ID, select the camera ID using Left or Right button.
The PTZ function button is found on the front panel. Once you press the PTZ button, the screen will appear as in figure 4.3.1. Highlight the item to select and control the cameras by using the UP and DOWN or LEFT and RIGHT buttons. Please refer to the table 4.3.1. for description.

[Picture 2-3] Figure 4.3.1. PTZF control screen

Button	Description
PAN / TILT	Use the UP or DOWN button for TILT and LEFT or RIGHT button for PAN of the selected camera.
ZOOM / FOCUS	Use the UP or DOWN button for ZOOM in or out and LEFT or RIGHT button for FOCUS near or far of the selected camera.
INTIALIZE	Initialize the PTZ settings of the selected camera.

[Table 2-3] Button functions in PTZF control

2-4. Playback mode

During the playback of a recorded event, the mode changes from SEARCH to PLAY. While in PLAY mode, you may return to SEARCH LIST by pressing the ESC button. Playback starts in quad mode with channel 1 highlighted by default. If audio is enabled, it will only play from the highlighted channel.

Button	Description
ESC	Return to the previous menu screen, search list, or exit menu
◀◀ REW	Press to rewind the footage at 1x, 2x, and 4x speeds. Reverse playback speed is shown as -1x (normal), -2x (2 times normal), and -4x (4 times normal) at the bottom right of the screen.
●●◀ F/REW	Jump/Step backward. – The playback position moves 60 seconds backward.
▶/II PLAY/PAUSE	Press to play or pause recorded video.
F/ADV ▶●●	Jump/Step forward –Playback position moves 60 seconds forward.
FF ▶▶	Press to fast forward the footage at 1x, 2x, and 4x speeds. Playback speed is indicated as +1X, +2X, and +4X for normal, twice, and 4 times of the regular speed at the bottom right of the screen.
	Select channel 1 to be highlighted.
	Select channel 2 to be highlighted.
	Select channel 3 to be highlighted.
	Select channel 4 to be highlighted.
	Switch view between quad and full screen mode displaying highlighted channel.
ARCH	Press the ARCH button to archive the video into HDD.

[Table 2-4] Button functions in Playback mode

3. Archiving Video into USB Memory Stick

To archive a still image or video to a USB storage device, user must first capture a still image or video to the hard drive.

3-1. Capturing images or video

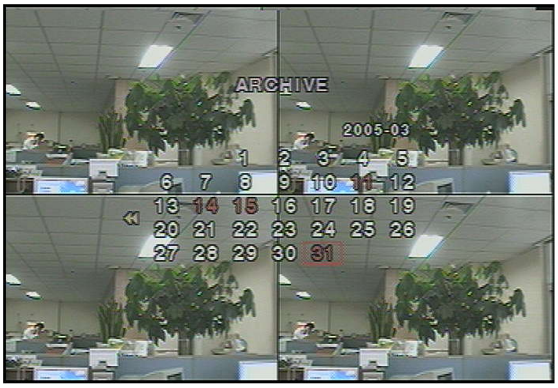
Still images can be captured and stored into the hard drive in live mode or while playing back recorded video. In live mode, press ARCH button to capture and store the still image. Once you press the ARCH button, the screen will be displayed as shown in Figure 3-1

[Figure3-1] Archive mode screen

In playback mode, the DVR will ask whether to store still image or video. If the user selects still image or video, it will store captured image or video into the HDD. User can find the list of archived data in ARCHIVE search menu.

3-2. Transferring still images or videos into USB memory stick

To begin transferring stored image or video into a USB memory stick, connect a USB memory stick. In live mode, press the SEARCH button to bring up the ARCHIVE search screen which will allow you to specify a date and time to search for stored images or videos.



[Figure3-2] Archive search screen

Press the SEL button to retrieve lists of archived image or video

[Figure3-3] Archive search screen

Select and display one of the files on the screen in the archived list by using the UP or DOWN button, and then press the ARCH button to transfer the data into the USB memory stick. If there is not enough space in the USB memory stick, the DVR will popup the message that there is no space in the USB memory stick.

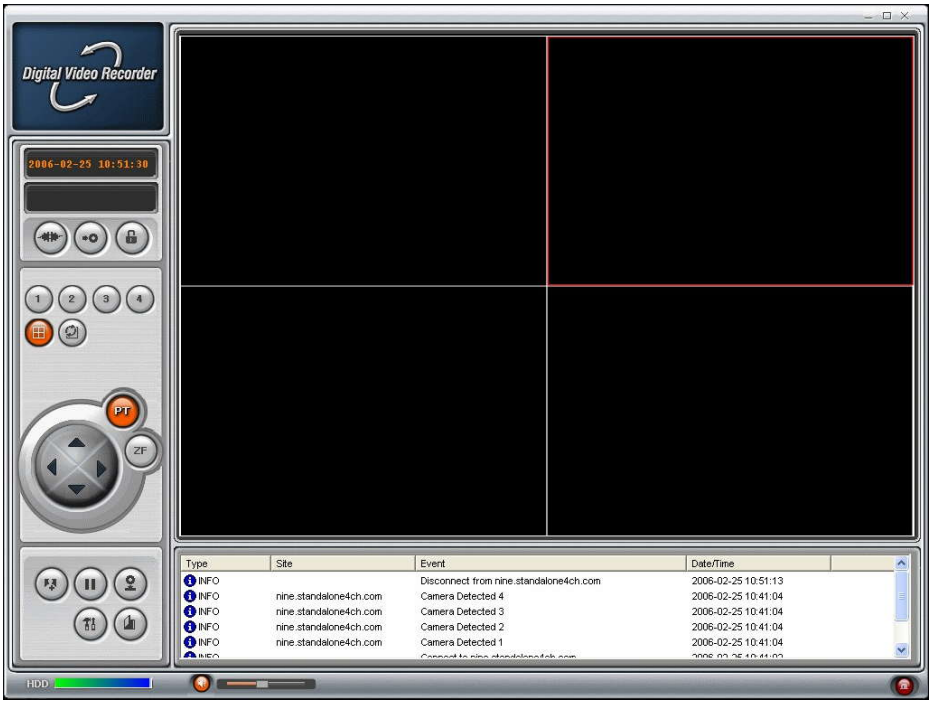
NOTICE
During the backup, the DVR will operate in Simplex

3-3. Playing AVI video from USB memory stick or PC through Network S/W

If there is not the proper CODEC installed in PC, it is possible that the backup data can not be play-backed. In case of that the backup data in USB device is not properly played back in multi-media S/W on PC, user needs to install 'ffswhow' CODEC that is supplied on the Network Client S/W CD.

4. NETWORK

The DVR provides a live remote monitoring feature. Remote monitoring requires installation of a software client program on your PC. A LAN connection using the RJ45 connector on the rear panel is mandatory for remote connection. For local operation purposes, the frame rate is limited to 1 frame/sec when there is no recording operation in the DVR. When recording is under progress, video frame rate for the live monitoring will follow the recording frame rate.



[Picture3-1] Client Main Screen

4-1. Overview

The remote software supports remote live viewing, search, playback and system configurations.
By installing the remote software on a Window PC, you can monitor real-time and recorded images via optional Ethernet network. This includes the ability to monitor video, playback recorded video and change operating parameters.

NOTICE
DVR allows maximum 4 users to access by network. In high bandwidth network, maximum 4 users can access on one DVR. But in low bandwidth network, one user network access is highly recommended.

4-2. Minimum PC requirements

	Minimum	Recommended
CPU	Intel Pentium III	Intel Pentium IV
	500Mhz	2Ghz
MEMORY	128MB	256MB
VGA	16MB	64MB
RESOLUTION	1024 X 768	1024 X 768
DISK SPACE	10MB	10MB
OS	Windows 2000	Windows 2000
	Professional, XP	Professional, XP
NETWORK	10/100 Base T	10/100 Base T
OTHERS	DirectX 8.1 or Higher	DirectX 8.1 Higher

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

4-3. Installing the program

1. Insert the provided CD into the CD-ROM drive of your PC.
2. Run

to start the installation process.
3. Follow the onscreen directions.
4. Double click the

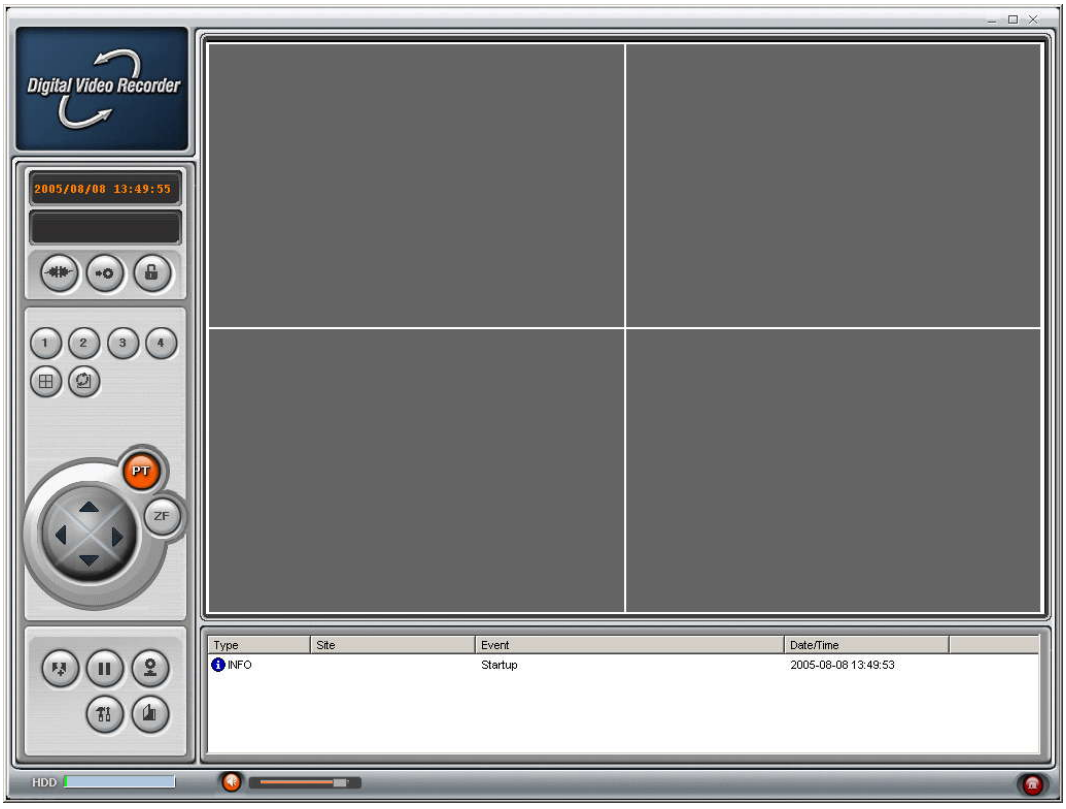
icon to start the program

4-4. Live viewer

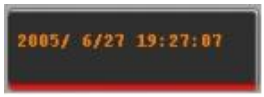
When installation is complete, double click the

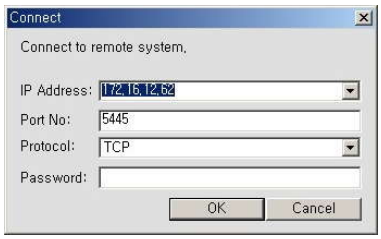
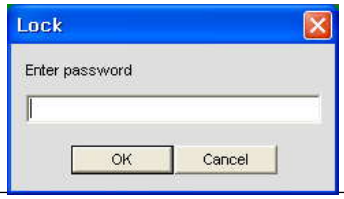
icon on your desktop to start the program.

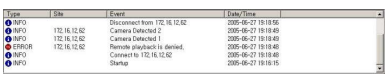
4-4-1. Main user interface



4-4-2. Main control panel

Button	Description
	Displays the current date and time.
	Click this icon to connect to the DVR

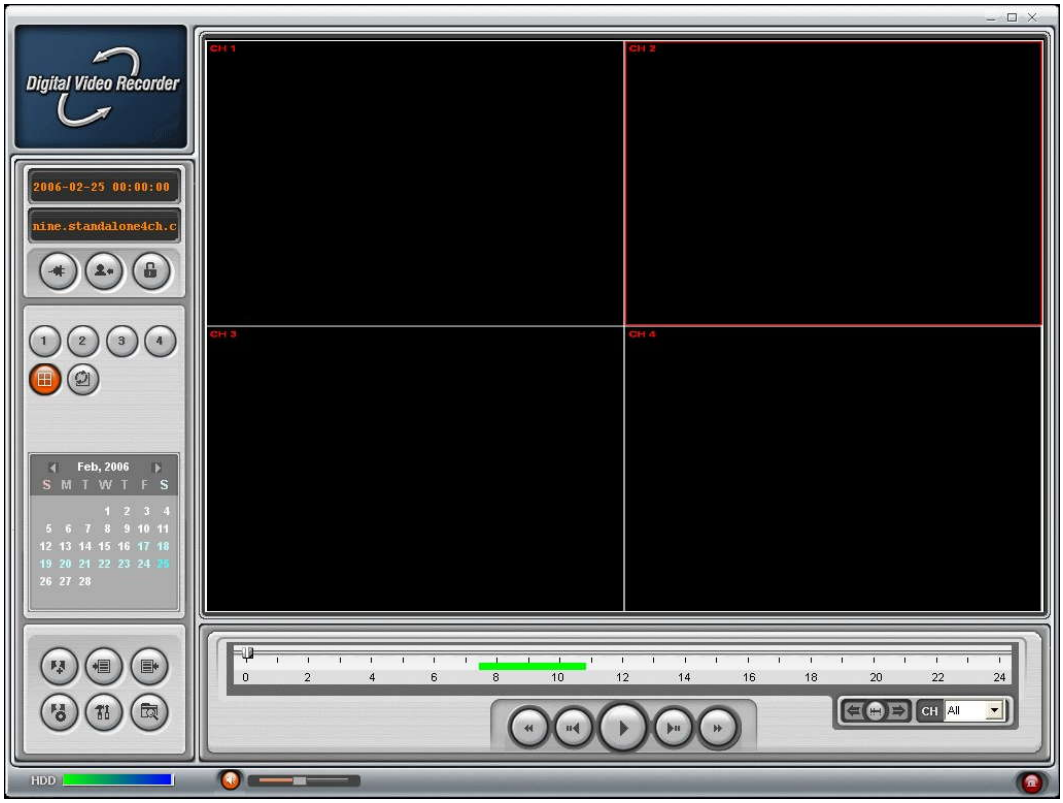
Button	Description
	Once you click the connection icon, this pop up window appears. Enter the IP address and the port number. Then select the protocol type and enter the password. ***Caution*** :Port No: It should be the same as the DVR's port No. Password: It should be same as the DVR's network password. (The default password is 1111)The Remote access should be set to on in the NETWORK setup menu on DVR.
	Click this icon to disconnect from the DVR
SEARCH	Click this icon to search for recorded videos.
LIVE	Click this icon to see live video.
LOCK	Click this icon to lock all operations of client software
UNLOCK	Click this icon to unlock all operations of client software.
	Once you click the lock or unlock icon, this pop up window appears. You need to remember the pass word and enter the password when you try to operate the client software again. (We will not be able to help you with this password if you forget what it is.)
	User can control PAN/TILT & ZOOM/FOCUS of the remote camera. PAN left /right TILT up/down ZOOM in/out FOCUS in/out
PLAY	Click this icon to play live video.

Button	Description
PAUSE	Click this icon to pause live video.
RECORD	Enable or disable recording of live video to local disk which has been set in setup menu
CAPTURE	Click this icon to capture a still image
	Once you click the capture icon, this pop up window appears. The still image is captured in either jpeg or bmp file format.
SETUP	Click this icon to enter setup configuration of client software.
	Click this icon to exit from the operations of client software.
	Alarm indicators for each channel.
	Full screen
	Quad screen
SEQUENCE	Click this icon for Sequential display of each channel in full screen mode.
	Use the volume control bar to set the audio level. You can select the audio on or off by clicking the audio icon
	HDD storage Indicator of DVR.
	It shows the client connection information.
	Max/Min/Exit of the client viewer
	The alarm output indicator lights up for 5 seconds if alarm output is activated on the DVR.

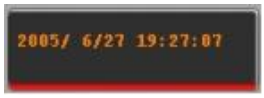
4-5. Search and Playback Viewer

4-5-1. Main user interface

You can access the search window by clicking the search icon on the upper left corner of the main user interface.



4-5-2. Main control panel

Button	Description
	Displays the recording time of the selected data by adjusting of scale in the middle of the bottom of the main user interface.
	Click this icon to see live video.
	Click this icon to exit from the operations of client software

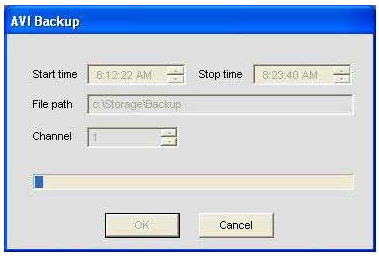
Button	Description
CAPTURE	Click this icon to capture a still image of recorded video.
	Once you click the capture icon, this pop up window appears. The still image is captured in either jpeg or bmp file format.
MARK IN	Click this icon to set the beginning time for backup of the recorded video in AVI format (after you have selected the time to start on the timeline.)
MARK OUT	Click this icon to set the ending time for backup of the recorded video in AVI format (after you have selected the time to end on the timeline.)
BACKUP	Click this icon to backup the recorded video in AVI format.
	The calendar shows dates with recorded video in a light blue and the selected date in dark blue.
	The timeline shows recorded data in dark blue on the bar. You can adjust the time line scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.
	Click to play the recorded video.
	Click to pause the displayed video.
	Click to fast forward the video at 2x and 4x speeds in playback mode.

Button	Description
	Click to rewind the video at 2x and 4x speeds in playback mode.
	Click to reverse 1 frame.
	Click to advance 1 frame
	Quad screen
	Use the volume control bar to set the audio level. You can select the audio on or off by clicking the audio icon

4-5-3. Back up

You can backup the recorded videos in AVI format on search viewer.

1. First you have to set the beginning time by using the scale. Please click MARK IN icon , when the scale of the Green timeline is located on the target time as the beginning time of backup.
2. Set the ending time on the blue timeline by dragging the scale on the target time as the ending time of backup and clicking MARK OUT icon . Then, color of the timeline between the beginning time and ending time will be changed into dark Green.
3. Next, click the backup icon and the pop up window appears as below



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

4-6. System configuration

Click the setup icon to setup the configuration of DVR.

4-6-1. General

Once you click the setup icon, this pop up window appears. Select security options and set a password.
Then when you access any of the selected functions, you need to enter the password.
You can also set the save path for capturing and backup.

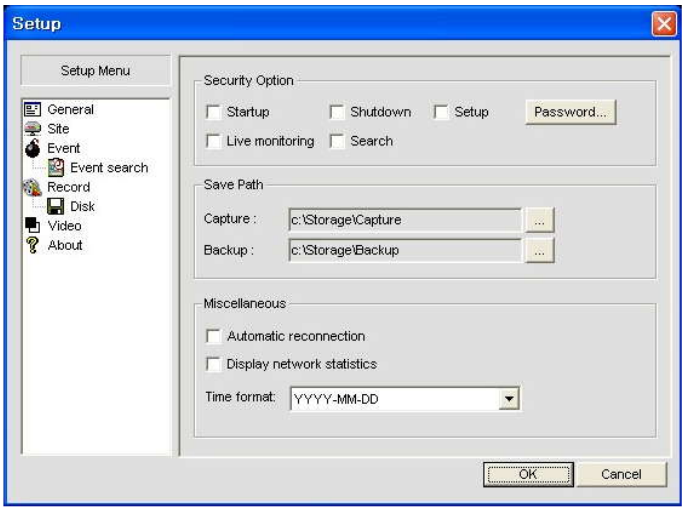
Security Option: Set a password for security options.

Save Path: Specify the location to record the receiving video for Backup and still image for Capture.

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

Display network statistics: If a user selects this function, client S/W will display network status, Bit rate and Frame rate.

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



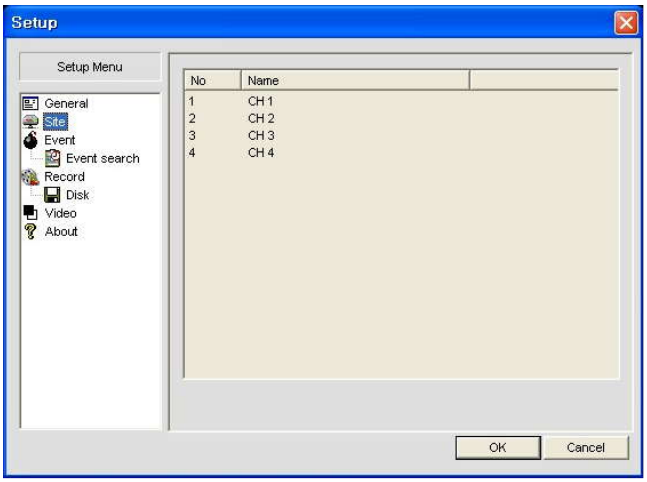
Figures 4-6-1

Initial PW setting: Do not enter any PW on 'Old Password'. Enter the same PW on 'New Password' and 'Confirm Password', then press 'OK' button.

From 2nd PW setting: User needs to enter PW on 'Old Password' to change PW.

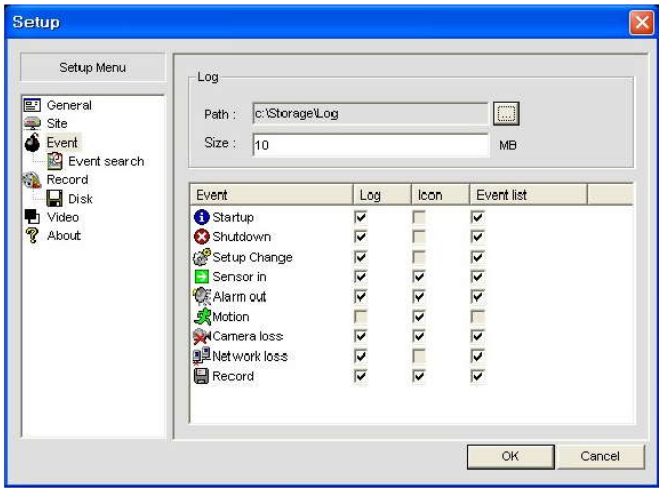
4-6-2. Site

This option shows the channel information of the DVR and allows you to change the channel title.



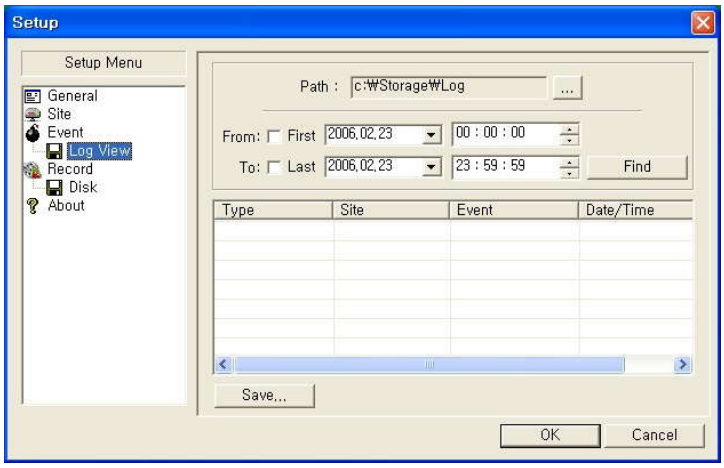
4-6-3. Event

You can set event items, the amount of local disk space you want to allow, and the save path for the log.



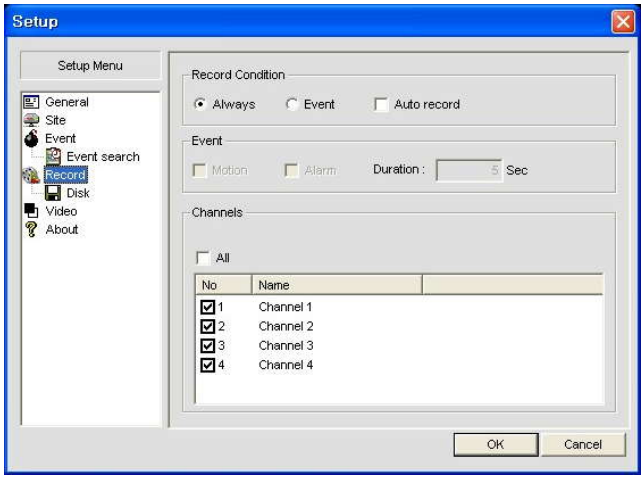
- LOG – Select to save event log into 'log file'.
- ICON – Select to display event on live video.
- EVENT LIST – Select to show event on 'Event List" window of live mode.

You can search and check the recorded log data.

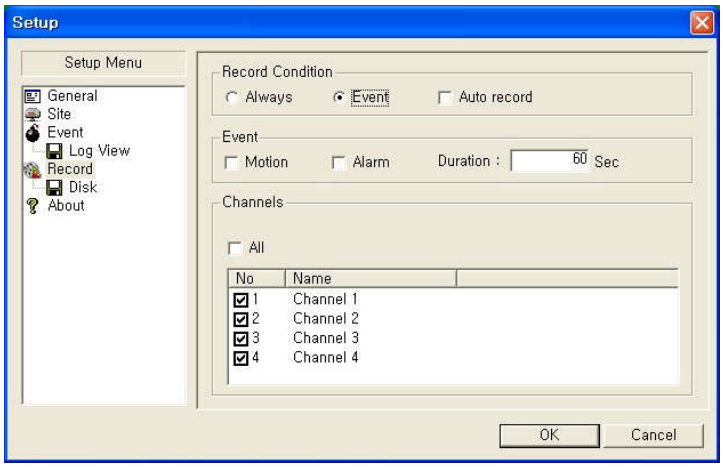


4-6-4. Record

You can set the recording conditions for Always, Event, or Auto recording. You can also select individual channels or all channels to record.

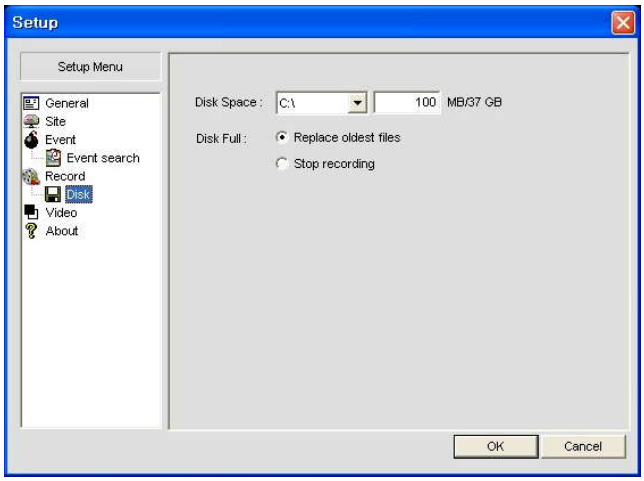


When you set the recording condition to event, you can set event for motion or alarm with duration. And you also can set each or all channels to record.



4-6-5. Disk

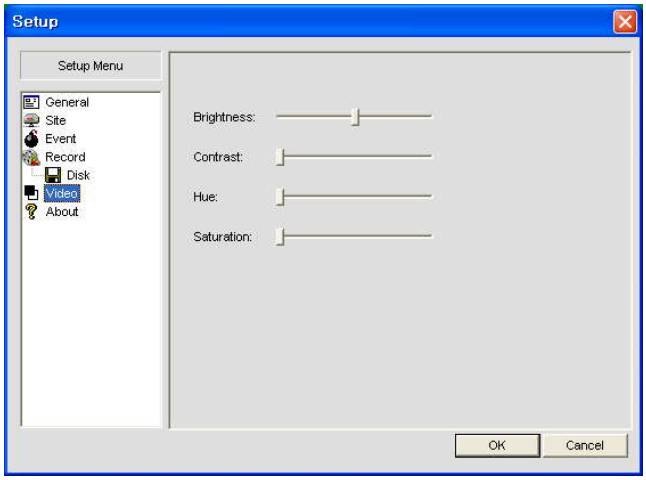
You can select the local disk to use and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop recording when the maximum amount of disk space is full.



4-6-6. Video

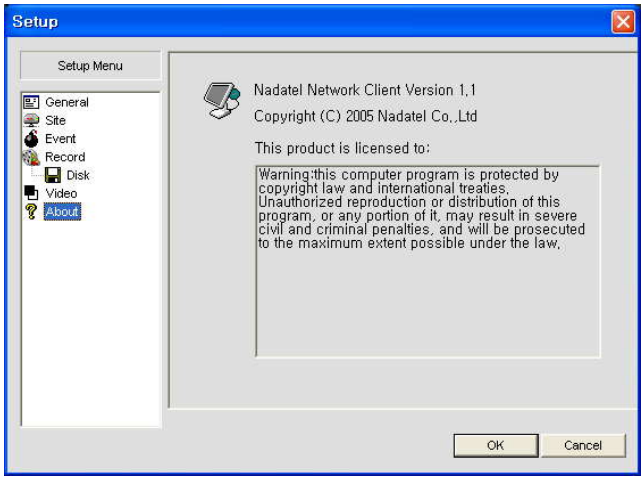
Setup the display color in Client Program

(This is dependant on the installed Video Card in your computer)



4-6-7. About

"About" provides network client version information.



※ All specifications are subject to change without any notice.