

STAND - ALONE

DIGITAL VIDEO RECORDER

OPERATION MANUAL (Rev. 0)

	WARNING RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and Maintenance (servicing) instructions in the literature accompanying the appliance.

COMPLIANCE NOTICE OF FCC:
 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 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 USERS WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT THEIR OWN EXPENSE.
CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER’S AUTHORITY TO OPERATE THE EQUIPMENT.
 THIS CLASS OF DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

The information in this manual is believed to be accurate as of the date of publication.

The information contained herein is subject to change without notice.

Revisions or new editions to this publication may be issued to incorporate such changes.

Important Safeguards

<p>1. Read Instructions All the safety and operating instructions should be read before the appliance is operated.</p> <p>2. Retain Instructions The safety and operating instructions should be retained for future reference.</p> <p>3. Cleaning Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.</p> <p>4. Attachments Never add any attachments and/or equipment without the approval of The manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.</p> <p>5. Water and/or Moisture Do not use this equipment near water or in contact with water.</p> <p>6. Accessories Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.</p> <p>7. Power Sources This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company.</p> <p>8. Power Cords Operator or installer must remove power and TNT connections before handling the equipment.</p> <p>9. Lightning For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.</p> <p>10. Overloading Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.</p> <p>11. Objects and Liquids Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.</p> <p>12. Servicing Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.</p>	<p>13. Damage requiring Service Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions: A. When the power-supply cord or the plug has been damaged. B. If liquid is spilled, or objects have fallen into the equipment. C. If the equipment has been exposed to rain or water. D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation. E. If the equipment has been dropped, or the cabinet damaged. F. When the equipment exhibits a distinct change in performance — this indicates a need for service.</p> <p>14. Replacement Parts When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.</p> <p>15. Safety Check Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.</p> <p>16. Field Installation This installation should be made by a qualified service person and should conform to all local codes.</p> <p>17. Correct Batteries Warning: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.</p> <p>18. Tmra A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.</p> <p>19. Elevated Operating Ambient Temperature If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra).</p> <p>20. Reduced Air Flow Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.</p> <p>21. Mechanical Loading Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.</p> <p>22. Circuit Overloading Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.</p> <p>23. Reliable Earthing (Grounding) Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).</p>
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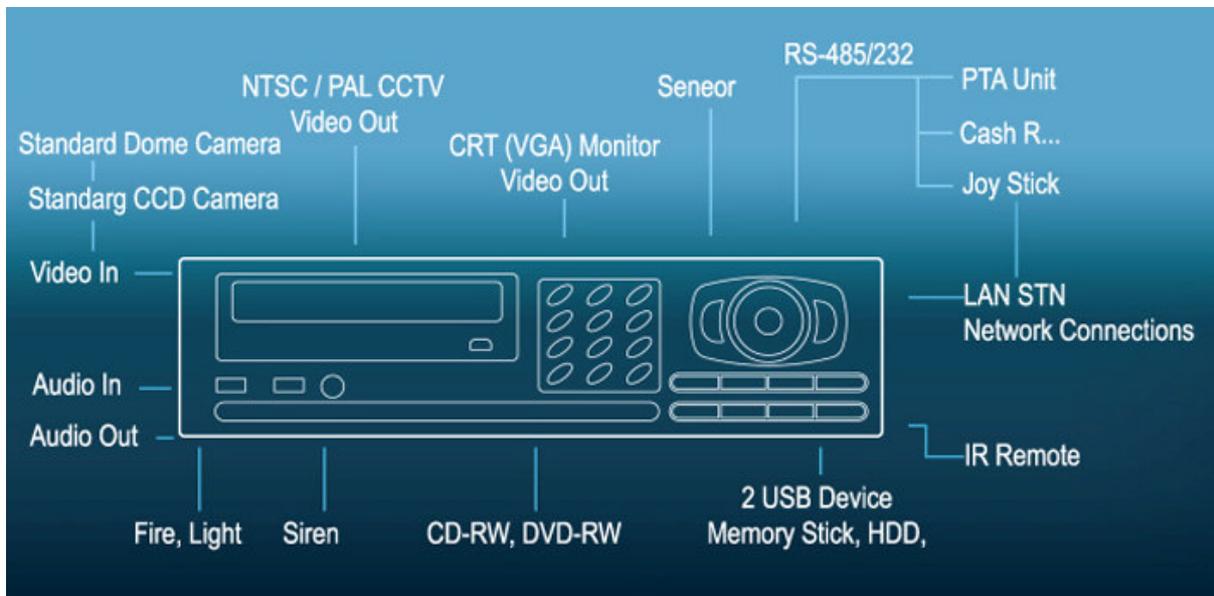
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Chapter 1 — Introduction

1.1 Features

Your color digital video recorder (DVR) provides recording capabilities for four or eight camera inputs. It provides exceptional picture quality in both live and playback modes, and offers the following features:

- 4 or 8 Composite Input Connectors
- Compatible with Color (NTSC or PAL) and B&W (CCIR and EIA-170) Video Sources
- Multiple Search Engines (Time, Event, Overlapped List, Go to First, Go to Last)
- Records up to 120 NTSC Frames per Second (100 PAL Frames per Second)
- “Loop-Through” Video Connectors
- Continuous Recording in Disk Overwrite Mode
- Video Archiving via Ultra SCSI Interface
- Continues Recording while Archiving, Transmitting to Remote Site and during Playback
- Various Recording Modes (Manual / Schedule / Event)
- Audio Recording and Playback
- Alarm Connections Include: Input, Output.
- Built-in Alarm Buzzer
- Live or Recorded Video Access via Ethernet.



<Typical DVR installation.>

1.2 Technical Overview

Your DVR can replace both a time-lapse VCR and a multiplexer in a security installation. However, it has many features that make it much more powerful and easier to use than even the most advanced VCR.

The DVR converts analog NTSC or PAL video to digital images and records them on a hard disk drive. Using a hard disk drive allows you to access recorded video almost instantaneously; there is no need to rewind tape. The technology also allows you to view recorded video while the DVR continues recording video.

Digitally recorded video has several advantages over analog video recorded on tape. There is no need to adjust tracking. You can freeze frames, fast forward, fast reverse, slow forward and slow reverse without image streaking or tearing. Digital video can be indexed by time or events, and you can instantly view video after selecting the time or Event.

Your DVR can be set up for event or time-lapse recording. You can define times to record, and the schedule can change for day, night, weekend and user defined holidays.

The DVR can be set up to alert you when the hard disk drive is full, or it can be set up to record over the oldest video once the disk is full.

Your DVR uses a proprietary encryption scheme making it nearly impossible to alter video.

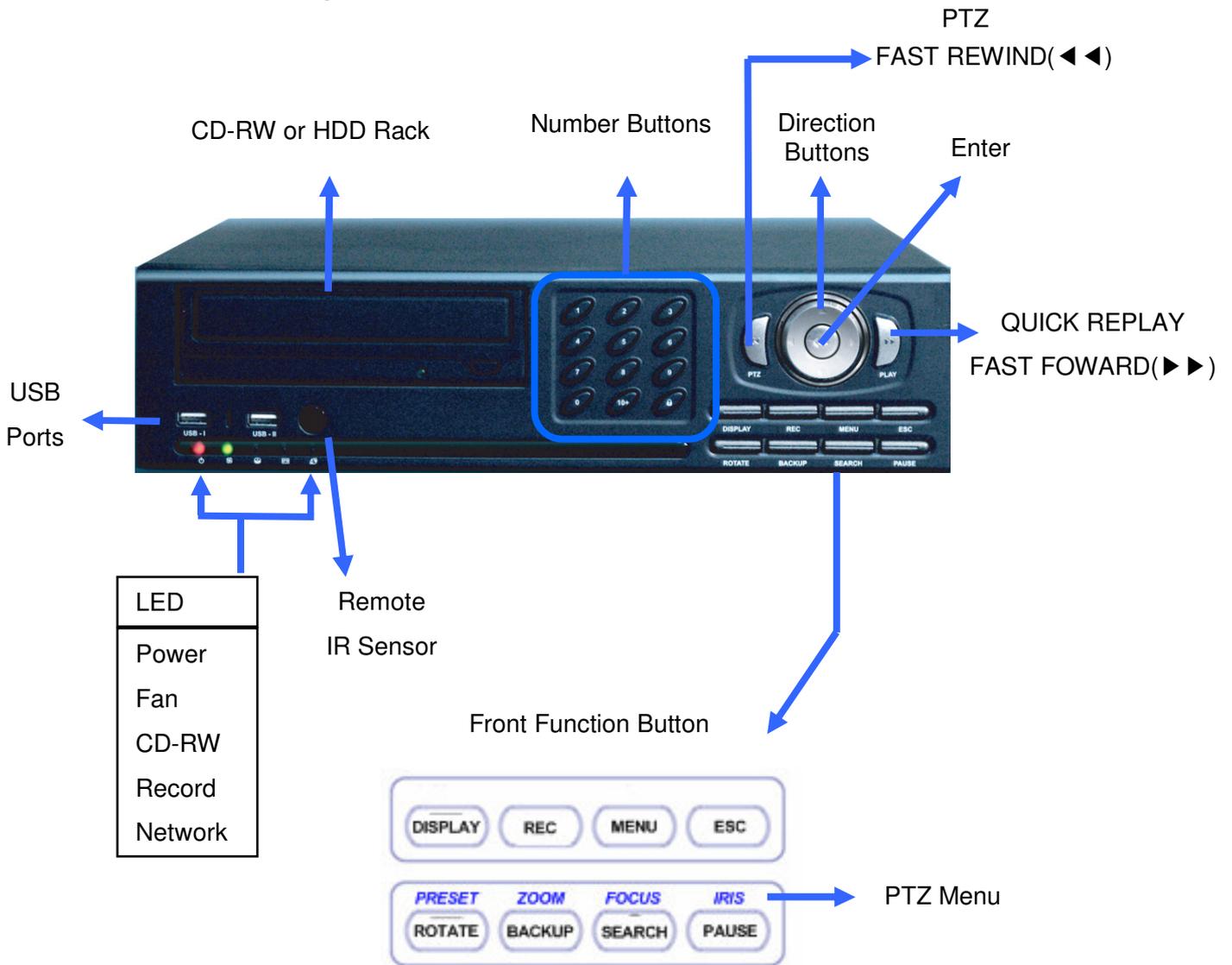
You can view video and control your DVR remotely by connecting via Ethernet. There is a USB port that can be used to back up the clip file video to external hard disk drives or memory sticks.

NOTE: This manual covers the 4-, 8-channel digital video recorders. The DVRs are identical except for the number of cameras and alarms that can be connected and the number of cameras that can be displayed. For simplicity, the illustrations and descriptions in this manual refer to the 8-camera model.

Chapter 2 — DVR Layout

NOTE: Your DVR should be completely installed before proceeding.
(Refer to Chapter 3 — Installation.)

2.1 Front Panel Layout



<DVR front panel.>

The front panel looks and be operated much like a VCR combined with a multiplexer. Many of the buttons have multiple functions. The following describes each button and control. Take a few minutes to review the descriptions. You will use these to initially set up your DVR and for daily operations.

UP, DOWN, LEFT, RIGHT Arrow Buttons

These buttons are used to navigate through menus. They are also used to control Pan and Tilt when in the PTZ mode. The arrow buttons can be used to move the position of the active cameo screen, and also move through screen pages. These buttons also have the following functions.

- ▲ Button: Tilt-up in the PTZ mode and Panorama in the Search mode.
- ▼ Button: Tilt-down in the PTZ mode and Smart Search in the Search mode.
- ◀ Button: Pan left in the PTZ mode and Play backward in the Search mode.
- ▶ Button: Pan right in the PTZ mode and Play forward in the Search mode.

ENTER Button

The Enter button selects a highlighted item or completes an entry that you have made.

NUMBER Buttons (0 ~ 9, +10)

Pressing the individual camera buttons will cause the selected camera to display full screen. They are also used to enter passwords. Use the +10 button to select bigger numbers than 10(For example, +10 and 6 = 16).

LOG OUT Button

Pressing the LOG OUT button exits the menu screen and you have to enter the password again to enter to the Setup menu.

DISPLAY Button

Pressing the DISPLAY button toggles between different display formats.

REC Button (●)

When pressing the REC button in the live mode, you can start or stop the recording in the pre-set mode.

MENU Button

Pressing the MENU button enters the Setup screen. You will need to enter the administrator password to access the Setup. Pressing the button also closes the current menu or setup dialog box.

ESC Button

Pressing the ESC button exits the menu screens or moves to the upper menu.

ROTATE Button / PRESET Button

Pressing the ROTATE button displays another screen whenever you press this button manually. Pressing the PRESET button run preset menu in PTZ mode.

BACKUP Button / ZOOM Button

Pressing the BACKUP button displays the Backup menu. Pressing this button again will exit the Backup menu. This button is also used for the Cut & Save hot key. Refer to the Appendix C. Pressing the ZOOM button run zoom menu in PTZ mode.

SEARCH Button / FOCUS Button

Pressing the SEARCH button displays the Search menu. Pressing the button again will exit the Search menu. This operation is user password protected. Pressing the FOCUS button run focus menu in PTZ mode.

PAUSE Button / IRIS Button

Pressing the PAUSE button while in the live mode will freeze all live screen. Pressing the PAUSE button while in the playback mode will pause the video. Pressing the IRIS button run iris menu in PTZ mode.

RW (Rewind) Button / PTZ Button

Pressing the RW button plays video backward at high speed. Pressing the button again toggles the playback speed from ◀◀, ◀◀◀, ◀◀◀◀ and ◀◀◀◀◀ and the screen displays ◀◀, ◀◀◀, ◀◀◀◀ and ◀◀◀◀◀◀ respectively. Used for zooming out in the PTZ mode. Pressing this button in the Pause mode plays video backward at slow speed. Pressing the button again toggles the playback speed from 1/2, 1/4, 1/8 and 1/16.

Pressing this button in live mode opens a Pan/Tilt/Zoom screen which allows you to control properly configured cameras.

FF (Fast Forward) Button / PLAY Button

Pressing the FF button plays video forward at high speed. Pressing the button again toggles the playback speed from ▶▶, ▶▶▶, ▶▶▶▶ and ▶▶▶▶▶ and the screen displays ▶▶, ▶▶▶, ▶▶▶▶ and ▶▶▶▶▶ respectively. Used for zooming in in the PTZ mode. Pressing this button in the Pause mode plays video forward at slow speed. Pressing the button again toggles the playback speed from 1/2, 1/4, 1/8 and 1/16.

Pressing this button in live mode plays last played video. But if it can't play last played video, it runs 'Go To Last'.

2.2 Front LED Display

POWER LED: 

The POWER LED lights when the DVR is turned on.

FAN LED: 

The FAN LED lights when the fan speed is slow down.

CD-RW LED: 

The CD-RW LED lights when the CR-RW is being used.

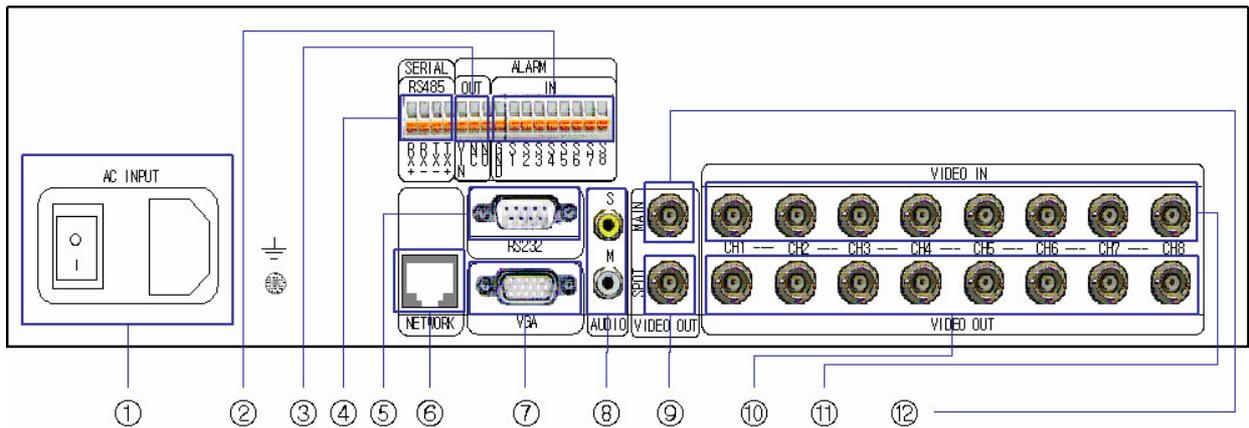
REC LED: 

The REC LED lights when the DVR is recording.

NET LED: 

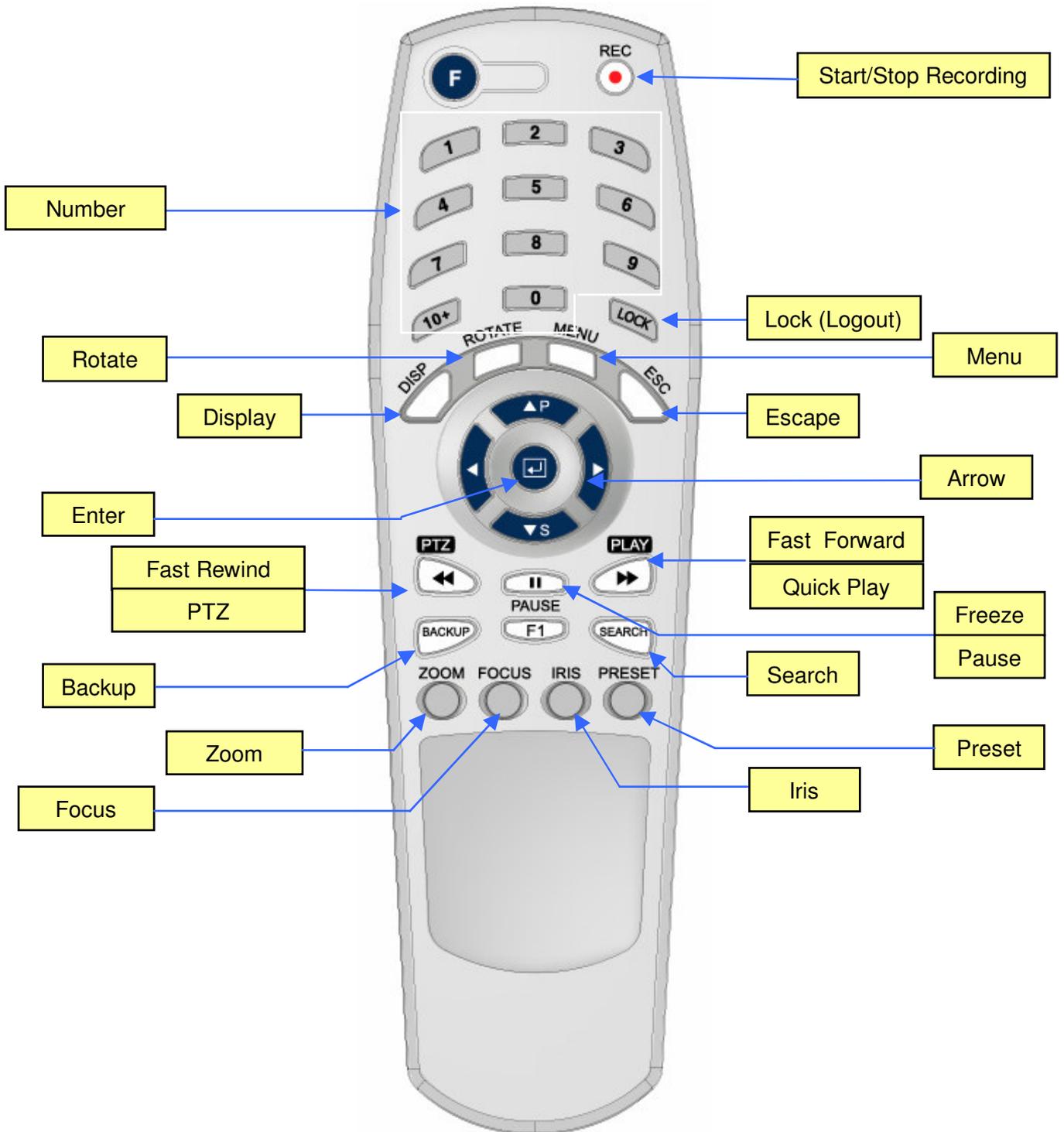
The NET LED lights when the DVR is connected to Network.

2.3 Rear Panel Layout



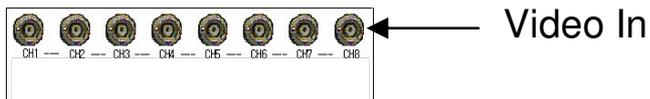
- ① AC POWER INPUT
- ② ALARM IN(SENSOR)
- ③ ALARM OUT
- ④ RS485
- ⑤ RS232
- ⑥ RJ45 ETHERNET PORT
- ⑦ VGA MONITOR
- ⑧ AUDIO INPUT/OUTPUT
- ⑨ SPOT OUTPUT
- ⑩ LOOP OUT (1 ~ 8)
- ⑪ CAMERA INPUT (1 ~ 8)
- ⑫ MAIN MONITOR(COMPOSITE VIDEO OUTPUT)

2.4 IR Remote Controller



Chapter 3 — Installation

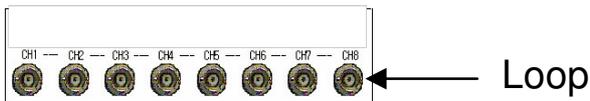
3.1 Connecting the Video Source



< Video input connectors >

Connect the coaxial cables from the video sources to the BNC Video In connectors.

3.2 Connecting the Loop Through Video

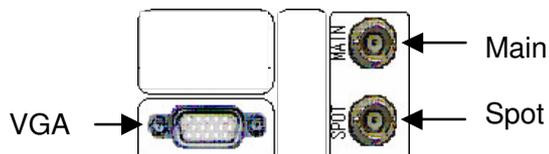


< Video Loop Through connectors.>

If you would like to connect your video source to another device, you can use the Loop BNC connectors.

NOTE: The Loop BNC connectors are auto terminated. Do NOT connect a cable to the Loop BNC unless it is connected to another terminated device because it will cause poor quality video.

3.3 Connecting the Monitor



< Video Out connectors.>

Connect the monitor to either Main or VGA connector.
Connect the spot monitor to the SPOT connector if required.

3.4 Connecting Audio

NOTE: It is the user's responsibility to determine if local laws and regulations permit recording audio.



< Audio In and Out connectors.>

Your DVR can record audio. Connect the audio source to Audio In. Connect Audio Out to your amplifier.

NOTE: The DVR does not have amplified audio output, so you will need a speaker with an amplifier. The audio input can be from an amplified source or directly from a microphone.

3.5 Connecting Alarms



< Alarm Input connector strips.>

NOTE: To make connections on the Alarm Connector Strip, press and hold the button and insert the wire in the hole above the button. After releasing the button, tug gently on the wire to make certain it is connected.

To disconnect a wire, press and hold the button below the wire and pull out the wire.

AI 1 to 8 (Alarm In)

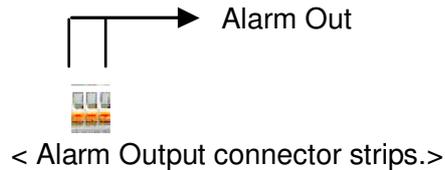
You can use external devices to signal the DVR to react to events.

Mechanical or electrical switches can be wired to the AI (Alarm In) and GND (Ground) connectors. The threshold voltage is 4.3V and should be stable at least 0.5 seconds to be detected.

GND (Ground)

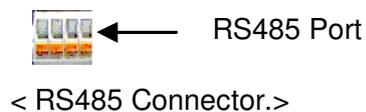
NOTE: All the connectors marked GND are common.

Connect the ground side of the Alarm input and/or alarm output to the GND connector.



The DVR can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Out) and GND (Ground) connectors.

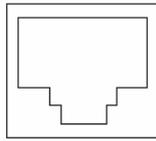
3.6 Connecting to the RS485



The DVR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 half-duplex serial communications signals. The RS485 connector also be used to control PTZ (pan, tilt, zoom) cameras. Connect RX-/TX- and RX+/ TX+ of the control system to the TX-/RX- and TX+/RX+ (respectively) of the DVR.

3.7 Connecting to the Network Port

NET

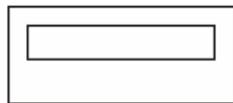


< Network connector.>

The DVR can be networked using the 10/100Mb Ethernet connector. Connect a Cat5 cable with an RJ-45 jack to the DVR connector. The DVR can be networked with a computer for remote monitoring, searching, configuration and software upgrades.

3.8 Connecting to the USB Port

USB



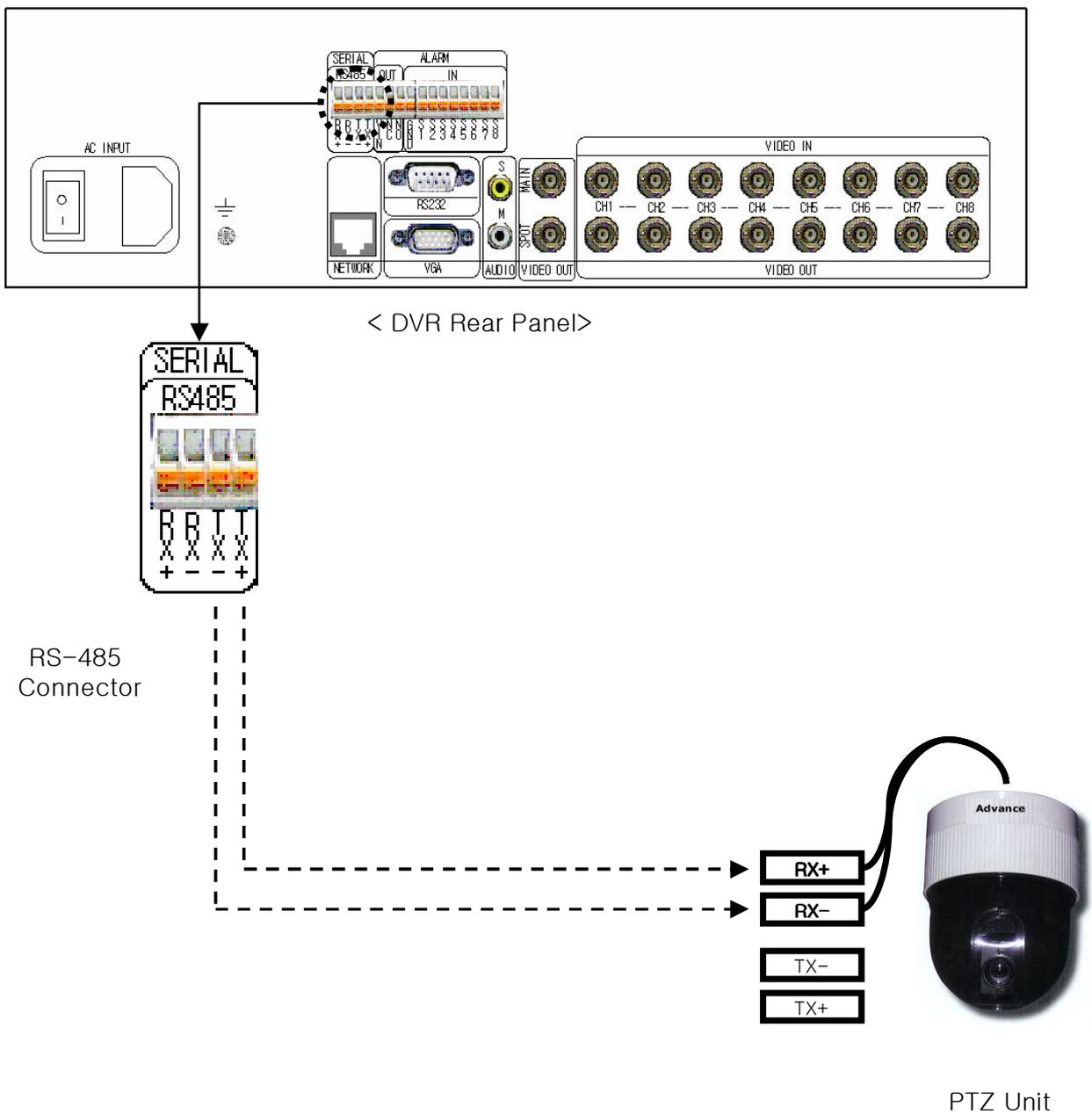
< USB connector.>

A USB port is provided to connect external hard disk drives or USB memory sticks for clip copying video. Position the external hard disk drive close enough to the DVR so that you can make the cable connections, usually less than 6 feet. Use the USB cable provided with the hard disk drive to connect it to the DVR.

3.9 Connecting to the PTZ Camera Unit

Make a connection of PTZ unit to RS485 at the rear panel of DVR.

The DVR supports various PTZ protocols and this protocols can also be selected by each camera as well.



Chapter 4 — Quick Guide

4.1 How to Install

- Install a Hard Disk Drive to your DVR after opening the upper case.
- Connect cameras to the Video In No. 1 ~ 8.
- Connect a Monitor to the Main or VGA. (If necessary, connect the spot monitor to the Spot).
- Connect a Network cable to the Ethernet port.
- Turn on the power sources for cameras, monitor and DVR.

Your DVR will be initialized and it will take approximately 60 seconds. As soon as the DVR completes its initialization process, it will begin showing live video on the monitor and playing live audio through the speaker. The default mode is to display all cameras at once. Pressing any camera button will cause that camera to display full screen. It displays live video and plays live audio until the user enters another mode.

4.2 Common User Interface



Icon	Remark
	Blue color texts are menu names and just texts.
	White color texts can be highlighted and you can change the setting values.
	These buttons are for detail setup with sub-menu.

4.3 Monitoring

Using front key pad :

Select the desired split screen using the front Display and Rotate keys.

To see the FULL screen, use the front number keys.

4.4 How to Record

Press the REC button on the front panel. Your DVR will start recording. To stop recording, press this button again.

4.5 How to Playback

Click the search button of the front panel of DVR to find the date and time of recorded material for playback. User is able to search the video using the variety of playback methods of choice.

4.6 How to set up Networking

When using a dynamic IP, turn on the DHCP (Dynamic IP) in the Ethernet Setup menu. When using a static IP, enter the IP information in the Ethernet Setup menu.

Install the CMS software to your PC and add the DVR information to the CMS.

Chapter 5 — Operation

5.1 Log-in to DVR

This system classifies user category as ADMIN, OPER., USER limiting the access to system operation. Each log-in authority level and access level has been summarized as below, and ADMIN level overrides all.

Press the MENU button to enter the setup screens. The Admin Password screen appears.



< ADMIN PASSWORD.>

Enter the password by pressing the appropriate combination of Camera number buttons and then the Enter button. **Factory Default Password is “1”.**

The log-in window appears when the following buttons are pressed.

Button	Function	Log-in Authority
MENU	Menu	ADMIN
SEARCH	Search	OPERATOR
BACKUP	Backup	OPERATOR
REC	Record/Stop	ADMIN
PTZ	PTZ	USER
PLAY	Play	OPERATOR

5.2 Log-out to DVR

To log-out from the system press the LOCK button at front panel to brute force log-out. The DVR system automatically log-out after a certain time is elapsed.

Button	Function	Remarks
	Lock	It locks DVR as Logout stage

5.3 Live Monitoring

The DVR's controls are similar to a VCR. As with a VCR, the main functions are recording and playing back video. However, you have much greater control over recording and playing back video. You can establish recording schedules based on time of day, night and weekend. The DVR allows you to search through the recorded video using much more sophisticated tools than those available with VCRs. Additional DVR features that are not available with VCRs are remote control and viewing, recording video at the same time you are watching previously recorded video, and printing images to a standard printer.

The Front Panel Display and controls are described in Chapter 2 — DVR Layout.

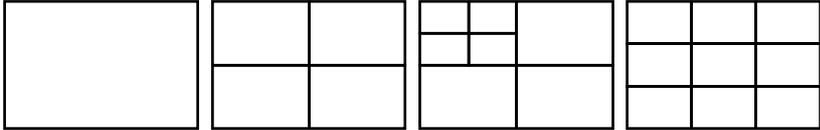
As soon as the DVR completes its initialization process, it will begin showing live video on the attached monitor and playing live audio through the attached speaker. The default mode is to display all cameras at once. Pressing any camera button will cause that camera to display full screen. It displays live video and plays live audio until the user enters another mode.

Pressing the DISPLAY button cycles the DVR through the different display formats.

Pressing the Rotate button allows the manual rotations whenever pressing this button.

When in one of live formats, press the  button and a green square cursor will appear. You can move the cursor by using arrow buttons and please press Number key buttons. It will be changed each others.

Button Details

Button	Function	Remarks
DISPLAY	Display	<p>Pressing the button continuously 1, 4, 7, 9 screen display is sequentially changed. It helps to monitor efficiently by selecting the choice of screen split.</p> 
ROTATE	Sequence	<p>Pressing the button allows automatic sequential screen split for 1, 4, 9 etc. For example, press the button with 4 screen displays change into the next 4 different cameras input with automatically repeating the sequence.</p>
	Enter	Selecting Cameo or displaying
0-9	Number Keys	Used for selecting the corresponding camera directly
10+	10+ Num. Key	Used for entering number bigger than 10

5.4 PTZ Control

The DVR will control cameras with Pan, Tilt and Zoom capabilities. Press the PTZ button to enter the PTZ mode. Then, you can move PTZ camera.



< PTZ Mode View - MOVE.>

You can control the camera using front panel buttons. Press the Left and Right arrow buttons to pan left and right. Press the Up and Down arrow buttons to tilt the camera up and down.

* Regarding the other functions, please refer to the under diagram.

ROTATE	PRESET setting
BACKUP	ZOOM
SEARCH	FOCUS
PAUSE	IRIS

When you press the **BACKUP** button, **ZOOM** would be activated. At this time you can zoom in and out. Press the **Fast Backward** arrow buttons to zoom in. Press the **Fast Forward** arrow buttons to zoom out.



< PTZ Mode View - ZOOM.>

You can control the camera using front panel buttons or by setting up presets, tour, Pattern tour or Group. Press the **MENU** button on the front panel. Then you can see below PTZ menu.



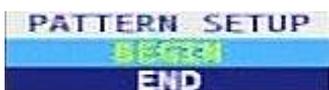
< PTZ MENU.>



Control the speed of cameras.(1~8 Level)



Move the camera position with this which you want and store the position.



Assign the Start and Finish of the Pattern



Turn on and off of the Pattern Tour

You can use Pattern Tour. Highlight the PATTERN ON and press the  button to use Pattern Tour. Your camera will move automatically along the set pattern until you turn off the PATTERN, highlighting the PATTERN OFF and pressing the  button.

PRESET

Your DVR can save 64 presets. Follow the next steps to set up presets. Select the preset number and move the camera by using the front panel buttons.

Button (Function)	Remarks
PTZ ◀◀	Change to PTZ mode Zoom out / Focus out / IRIS close
▶▶	Zoom in / Focus in / IRIS open
Num. Key (0-9)	Allows to move to the corresponding number of camera.
Menu	Show PTZ menu in the PTZ mode
ESC	Return to Live mode from PTZ mode. Returns to the previous menu
Up ▲	Moves camera to upward. Zoom in or focus out
Down ▼	Moves camera to downward. Zoom in or focus in
Left ◀	Moves camera to left
Right ▶	Moves camera to right

5.5 Recording Video & Audio

Recording Video

Once you have installed the DVR following the instructions in *Chapter 3 – Installation*, it is ready to record.

Unless you change the setup, the DVR will start recording when you press the REC button on the front keypad..

Although you be able to record without changing the unit from its original factory settings, you want to take advantages of the DVR's many tools. See *Chapter 4 – Quick guide* for detailed descriptions of the recording mode options of the recording mode options. Here is a brief description of some of the settings:

Recording Audio

If the DVR was set up to record audio. It will record audio when video is recording.

NOTE: Make certain you comply with all local federal laws and regulations when recording audio.

Recording Cameo Window



<Ex) Ch 1 Cameo Window>

REC : Time Recording

M : Motion Recording

S : Sensor Recording

L : Videoloss Recording

Button	Function	Remarks
REC	Record	Start and stop recording button for the current schedule setting

5.6 Searching Video

You can select the media by changing the device beside TARGET. You can playback the recorded video from HDD (Hard Disk Drive), CD or USB.

There are five ways of searching the recorded data on DVR.

QUICK SEARCH : Search for the recorded video data by date/time.

EVENT SEARCH : Search for the event occurred by search date.

OVERLAPPED LIST : Search for the data with overlapped date.

GO TO LAST : Search for the data which are recorded 10 minute ago from the current time.

GO TO FIRST : Search for the data which are recorded at the earliest time among data in the Target device.



< SEARCH MENU.>

TIME SEARCH



< TIME SEARCH 1.>



< TIME SEARCH 2.>

Days with recorded video listed. You can highlight number of the day with recorded video and press the button to select it.

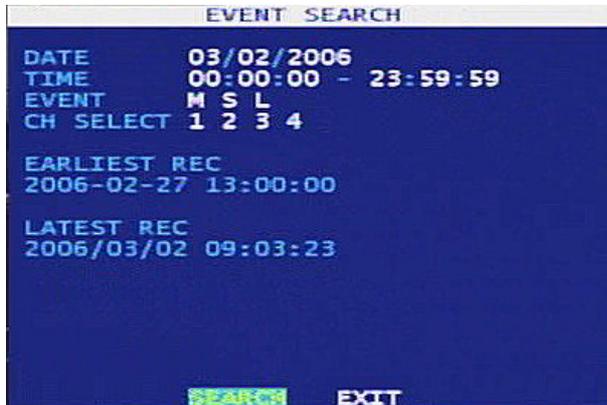
A time bar will be displayed on the TIME SEARCH screen. Hours in which video was recorded will be highlighted with blue. You can use Left and Right arrow buttons to highlight the time bar. Once the time bar is highlighted, you can select time by using the Left and Right arrow buttons.

After selecting hour, you can select the time by the three minutes by pressing the button.

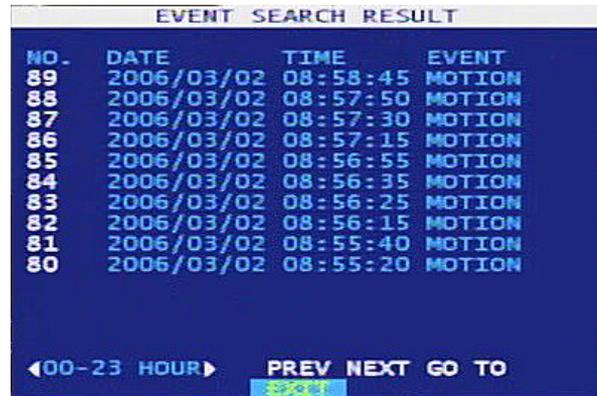
To play the recorded video, highlight the PLAY and press the button.

EVENT SEARCH

Select the EVENT SEARCH in the SEARCH menu.



< EVENT SEARCH.>



< SEARCH RESULT.>

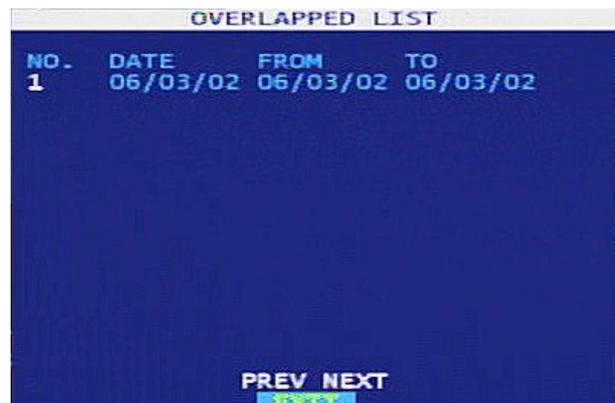
The EVENT SEARCH screen will display changeable Date/Time, recorded information and channel selection. You can change the date/time and select the channels that you want to search.

You can search the recorded video by Motion, Alarm In and Video Loss by turning on or off. Once have selected the events and channels for searching, highlight the SEARCH and press the button.

You will be having a recorded list with events and you can playback by selecting one of them on the list.

OVERAPPED LIST

You can have an overlapped list by selecting OVERAPPED LIST in the SEARCH menu. You can select one of the video files in the list and playback. Your DVR will create the overlapped video list caused by Date/Time changes or applying the DST (Daylight Saving Time).



< OVERAPPED LIST.>

5.7 Playing Video

Normal Playback

It means a normal playback.

It supports forward/backward playback as well as playback speed and pause.

Single Step Playback

Single step playbacks the screen display one frame at a time by pressing left/right button during the pause stage. If you press the button again, it returns to Normal Playback mode.

Single Step playback is useful for the viewing of specific video image in details.

Smart Playback

Pressing the down button from Normal Playback mode, Smart Playback is activated.

Forward/Backward playback is possible and pressing down button during the playback changes to Normal Playback mode. Pressing Status button once again will resume the Smart Playback mode.

It is convenient to search and playback the incident that occurred over a given single day.

Panorama Playback

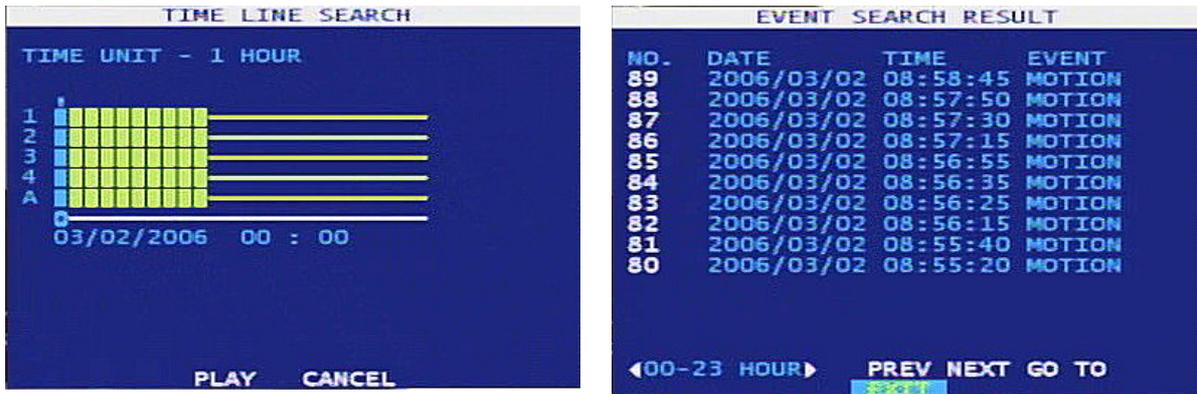
Pressing up direction key from a single screen playback mode. If you want to change the layout(4/9/16 screen panorama), press the DISPLAY button.

Panorama playback does display a single frame of the video into several screen frame by frame.

It is very useful feature to monitor a specific video image being changed into.

Normal Playback

Normal playback means a steady speed playback. Pressing PLAY button allows to display the video that has been searched through Searching Video.



High-speed Playback (,)

During the playback, press FAST REWIND or FAST FORWARD button.

Low-speed Playback (+ , +)

After stopping the playback, press FAST REWIND or FAST FORWARD to have low-speed playback. It supports up to 4 different speeds.

Step Playback (+ , +)

When playback is paused, LEFT or RIGHT button is changed to Step Button. Clicking the Step Button allows to playback one frame at a time.

Smart Playback

It is ideal playback for video with many movements. It is useful for fast checking of video clips. To start Smart Playback, press DOWN button while playing. And to return to normal play, press DOWN button Once more

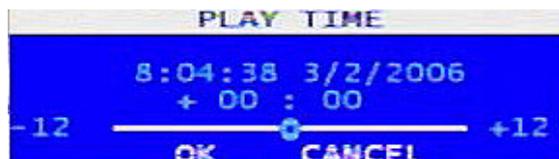
Panorama Playback

To start Panorama Playback, press UP button while playing. And to return to normal play, press UP button Once more. Pressing DISPLAY button changes layout division 4/9/16.



Go To JUMP Search

It is the function allows to jump into the desired time frame. It is possible to jump by hour or minute. It is possible to perform the function by pressing UP button on front keypad on playing recorded video without PAUSE or STEP PLAYBACK. Press Search button to go to JUMP Search.



Button function

Button	Function	Remarks
SEARCH	Search	The first button to sue for search. Pressing the button displays calendar search and event search window.
ESC	Escape	Cancel the playback and change to live screen mode
	Enter	Select Cameo from playback screen
	Fast Rewind	Playback speed up and down control for backward direction Use the button to change Cameo into live or playback mode
	Fast Forward	Playback speed up and down control for forward direction Use the button to change Cameo into live or playback mode
	Pause	Temporary stopping of playback
	Forward Play	Forward playback of video data
	Reverse Play	Backward playback of video data
	Up	PANORAMA Playback
	Down	SMART Playback
DISPLAY	Display	Change the split mode of playback screen

5.8 Copy Video Clip

This is the function that allows to copy a part of video clip during play back into USB or other recording media.



1. Set up the start time

- Press BACKUP on the normal playing mode.

2. Set up the finish time

- Press BACKUP on the normal playing mode.

3. Back up

- Press BACKUP button



Make a copy after confirming the user selected channel and time frame.

Select CD or USB for storage media from TARGET.

- **DvrPlayer** is copied into backup CD or USB device automatically.
- Backup video can be played using **DvrPlayer**.
- (※ [DvrPlayer](#) : Single channel video player similar to Windows Media Player)

Button	Function	Remarks
BACKUP	Backup	Set up the starting and finishing time and into the back up menu

5.9 Backup Video Data

BACKUP TO THE INTERNAL CD-RW (or DVD, USB)

You can backup the recorded video to the built-in CD-RW or DVD-RW, USB. Press the BACKUP button on the front or remote. The following Backup screen will be appeared.



< BACKUP screen.>

You can set up the Date/Time for backup and select the channels. Press the ESTIMATE button and your DVR will calculate the data size and display beside the REQUIRED SPACE. Press the WRITE button and your DVR will prepare the burning to a CD and the CD space is limited up to 650MB.

NOTE: When the data size is bigger than 650MB, you will be asked to put a new CD after burning the first CD.

You will be asked to confirm to backup the data to a CD.

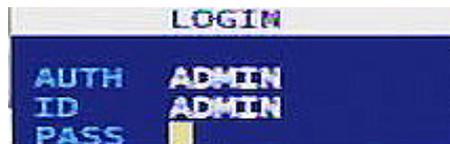
- **DvrPlayer** is copied into backup CD or USB device.
- Backup video can be played using **DvrPlayer**.
- (※ [DvrPlayer : Single channel video player similar to Windows Media Player](#))

Button	Function	Remarks
BACKUP	Backup	Pressing the BACKUP button I for data backup to the saving device.

Chapter 6 — MENU Settings

Before using your DVR for the first time, you will need to establish the initial settings. This includes items such as time and date, camera, audio, remote control, record mode, network and password. Your DVR can be set up using various screens and dialog boxes.

Press the MENU button to enter the setup screens. The Admin Password screen appears.



< ADMIN PASSWORD.>

Enter the password by pressing the appropriate combination of Camera number buttons and then the Enter button. The factory default password is “ 1 “.

6.1 MAINTENANCE



< SYSTEM SETUP.>



TIME / LANGUAGE

You can set up TIME, DATE, DATE FORMAT, TIME ZONE, LANGUAGE.

You can set DATE or TIME when DATE or TIME menu is selected, using ▲ ▼ ◀ ▶ buttons.

If you press the ▶ button, value will be increased and If you press the ◀ button, value will be decreased.

If you press the ▲ button, cursor will be moved to left value and If you press the ▼ button, cursor will be moved to right value.

You can select the date format and time zone by highlighting the boxes beside and pressing the button.

NOTE: When selecting a time zone, the DST (Daylight Saving Time) will be applied in case of using the DST in you region and also your DVR will reboot the system automatically.

NOTE: When selecting the DST OFF, the DST (Daylight Saving Time) will not be applied.



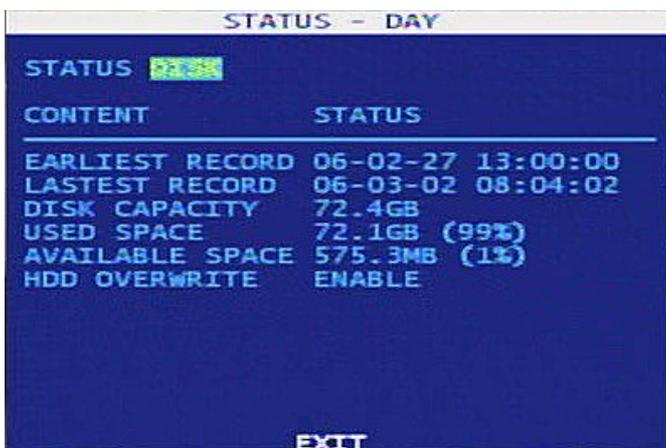
DISK FORMAT

You can format disk.



HDD CHECK

You can check HDD.



DVR STATUS

You can check the status of the DVR. The Status screen displays DISK, Recording, and Audio status.

SYSTEM LOG			
NO.	BEGIN	DATE	SYSTEM LOG
0027	03/02	08:04:59	Playback 2006/..
0026	03/02	08:04:49	Playback 2006/..
0025	03/02	08:04:02	Check Done
0024	03/02	08:04:02	Check HDD-3
0023	03/02	08:04:02	Check Done
0022	03/02	08:04:02	Check HDD-2
0021	03/02	08:04:02	Check Done
0020	03/02	08:04:02	Check HDD-1
0019	03/02	08:04:02	Check Done

EXIT CLEAR

SYSTEM LOG

You can see SYSTEM LOG.

VERSION	
VIDEO FORMAT	NTSC
DVR PROGRAM	1.01.01-P05
PTZ MODULE	1.00
DRIVER MODULE	4.01-4-N
FIRMWARE	0.00.00
MAC ADDRESS	0:6:27:1:8:6a
VIDEO MUX	51005.0
VIDEO CODEC	60115.0
VIDEO I/O	40618.0

EXIT

VERSION

You can see system VERSION.

6.2 DEVICE



< DEVICE SETUP.>



CAMERA / PTZ

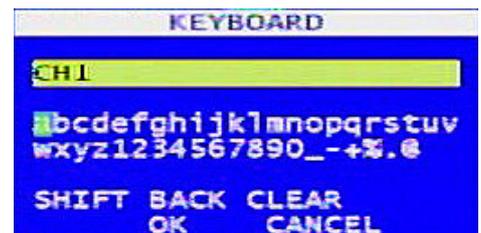
You can set up CAMERA NAME, CAMERA ON/OFF SECURITY function ON/OFF, changing PTZ value

ALL

You can select CHANNEL among ALL, CAMERA NAME etc.

You can assign names to each camera by highlighting the boxes below CAMERA NAME. A virtual keyboard allows you to enter camera names.

NOTE: Refer to Appendix B – How to use the virtual keyboard.



You can set up each PTZ camera by highlighting the boxes below PTZ .

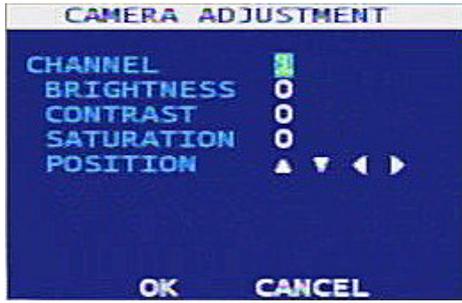
You can set up the baud rate, data bit, parity and stop bit by highlighting the boxes below PORT and press the   button.

You can set up IDs for each channel on the ID heading by highlighting the boxes below ID and press the   button.

You can set up PTZ camera type by highlighting the boxes below TYPE and press the   button.

Select your camera from the list and press the   button

You will need to connect the camera to the RS485 terminal on the back of the DVR following the camera manufacturer's instructions.



CAMERA ADJUSTMENT

You can set up BRIGHTNESS, CONTRAST, SATURATION, POSITION.

The ADJUSTMENT screen displays the brightness, contrast, saturation, hue and position.

You can select the channel by highlighting the box right CHANNEL and pressing the ◀ ▶ button.

You can adjust the brightness, contrast, saturation and hue by highlighting the headings.

You can change the position of the screen by highlighting the arrow buttons of the POSITION and pressing the ◀ button.

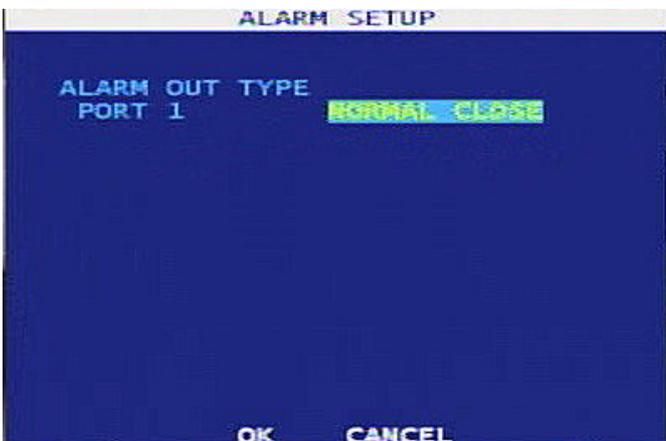
Apply to all channel on the all channel mode.

NOTE: Highlight the OK button and press the ◀ button to save your changes in the sub-menu.



SENSOR SETUP

You can set up SENSOR TYPE.



ALARM SETUP

You can set up ALARM TYPE.



MONITOR SETUP

You can set up VIDEO FORMAT, ALPHA BLENDED, SCREENPOSITION, TV OUT ON/OFF (Screen becomes smaller on the TV out mode.).



SCREEN ROTATE

You can set up video out put SCREEN ROTATION. You can set up only DWELL TIME on this menu. And on the live mode you can choice SCREEN ROTATION ON/OFF.



SPOT SETUP

You can set up SPOT PORT, SPOT INTERVAL TIME, SPOT CAMERA.

6.3 RECORD



< RECORD SETUP.>



TIME SCHEDULE

Set up by recording time
Automatically setup during the night time by day



HOLIDAY

Holiday setup



RECORD SETUP

Record Resolution, FPS, Quality setup

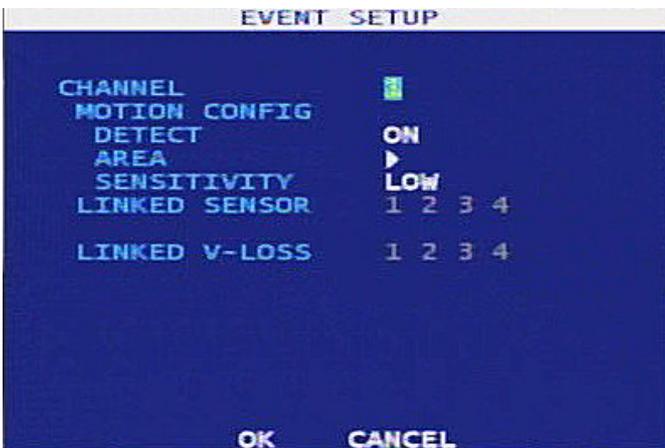
Highlight RESOLUTION and press the ◀ ▶ button. You can select either STD(CIF) or HIGH(HVGA) resolution.

Highlight QUALITY and press the ◀ ▶ button. You can select the recording quality among STD, HIGH and HIGHEST, SUPER.

And time record FRAME RATE also can be set. Highlight the FRAME RATE and press the ◀ ▶ button to set FRAME RATE

You can set up EVENT RECORD time for Day, Night and Weekend. When it is selected time, DVR will record if events are occurred.

And event record SPEED also can be set.



EVENT SETUP

Motion detection, Linked sensor, Linked V-Loss setup



MOTION AREA

Motion area setup
Set all, Clear all, User Set

Press 'Enter' to get into the 'User set' then you may enter the 'Set mode' if you **press No 1 button**. You can set the motion area with direction key.



Press 'Enter' to get into the 'User set' then you may enter the 'Clear Mode' if you **press No 2 button**. You can delete the motion area with direction key.

Press 'Enter' to get into the 'User set' then you may enter the 'Move mode' if you **press No 3 button**. You can move with direction key.



Press the 'Enter' key after complete

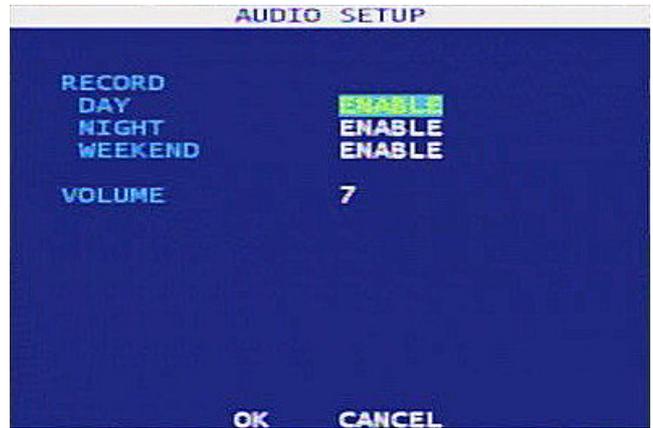


EVENT ACTION

Setting for Event.
 Preset, Pre and post recording time, Transmit to SMS
 Popup duration time, Alarm out setup

AUDIO SETUP

Audio record setup by DAY, NIGHT, WEEKEND and Volume setup.

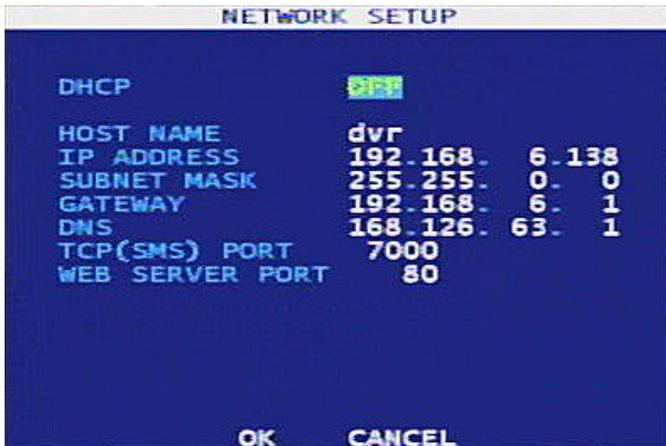


M	Motion event message
L	Video loss event message
S	Sensor event message
M	Motion recording message
L	Video loss recording message
S	Sensor recording message
REC	Time recording message

6.4 NETWORK



< NETWORK SETUP.>

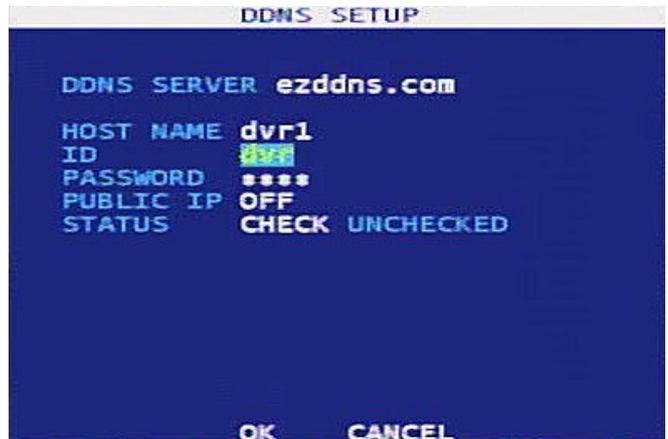


NETWORK SETUP

DHCP Setup
 HOST NAME Setup : It is DVR name when transfer the e-mail.

DDNS SETUP

DDNS SERVER setup
 HOST NAME : Type the DVR name which you already registered on DDNS
 ID : DDNS Login ID
 PASSWORD : DDNS Login Password
 PUBLIC IP : With or Without a ROUTER
 STATUS CHECK : DDNS setup check



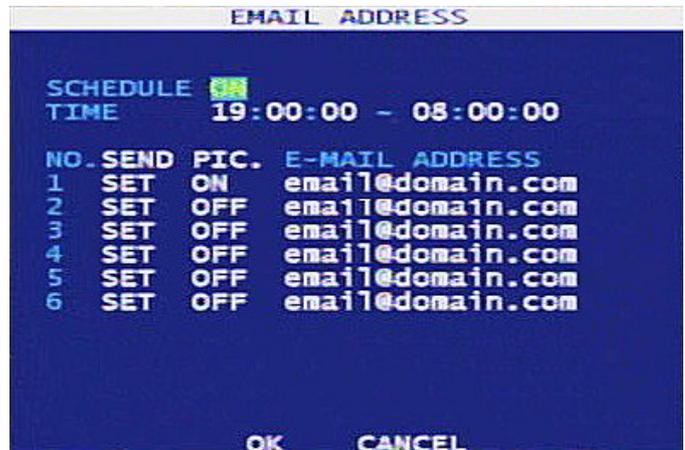


REMOTE ACCOUNT

User account setup for Remote program
There are two different authority level as ADMIN and USER.

E-MAIL ADDRESS

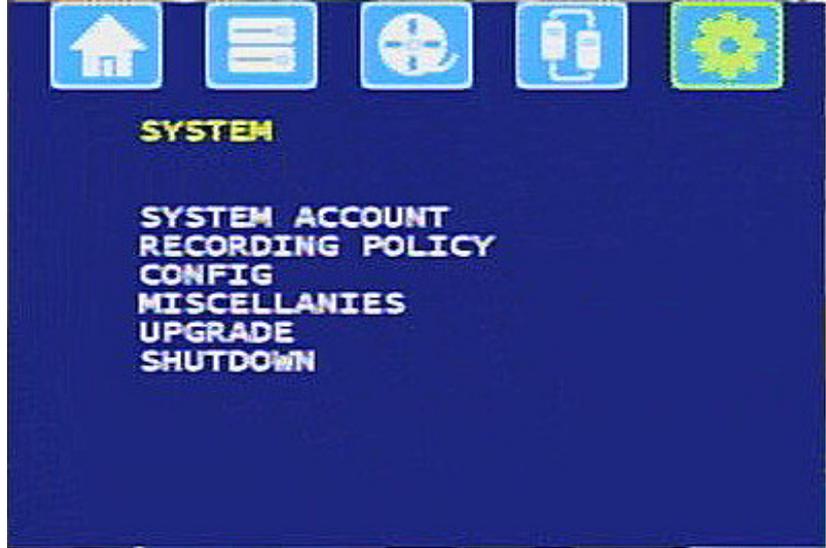
It is E-mail notification setup if any kind of event occurred.
SCHEDULE : Weather to schedule or not



It is E-mail notification as type of event When you press the button of 'SET' or 'SEND'



6.5 SYSTEM



< SYSTEM SETUP.>

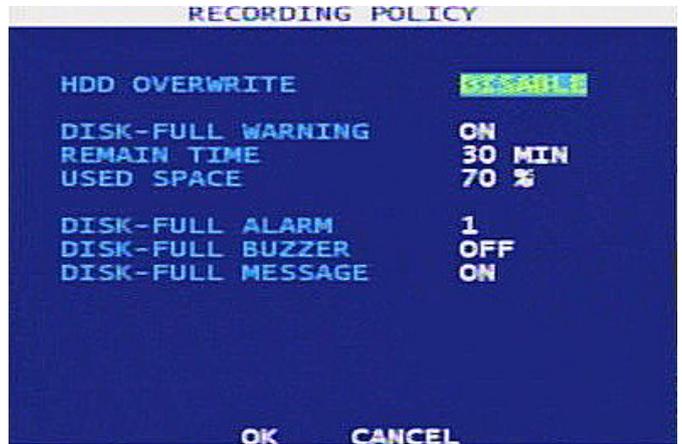


SYSTEM ACCOUNT

USER SETUP
ADMIN, OPERATOR, USER

RECORDING POLICY

RECORDING POLICY SETUP





CONFIGURATION

Save or Recovery of System setting values
If DEFAULT LOAD executes Factory Default.

MISCELLANIES

- Key Tone Setup
- Relate to audio play setup
- Event Popup setup
- OSD Setup
- DATE/TIME : Whether to time indication or not
- EVENT MESSAGE : Whether to notification or not
If some event occurred
- EVENT RECORD MESSAGE :
Whether to notification or not If recording by Event.
- USB RECHECK



UPGRADE

Try if USB Stick can not recognize..

You can upgrade Software newly using USB memory or CD.

- First, connect USB memory to DVR or insert CD.
- Next, Highlight UPGRADE and press the button.
- Then. Upgrade is performing automatically.
- But, You have to select the correct upgrade file, if there are several upgrade files in Device.

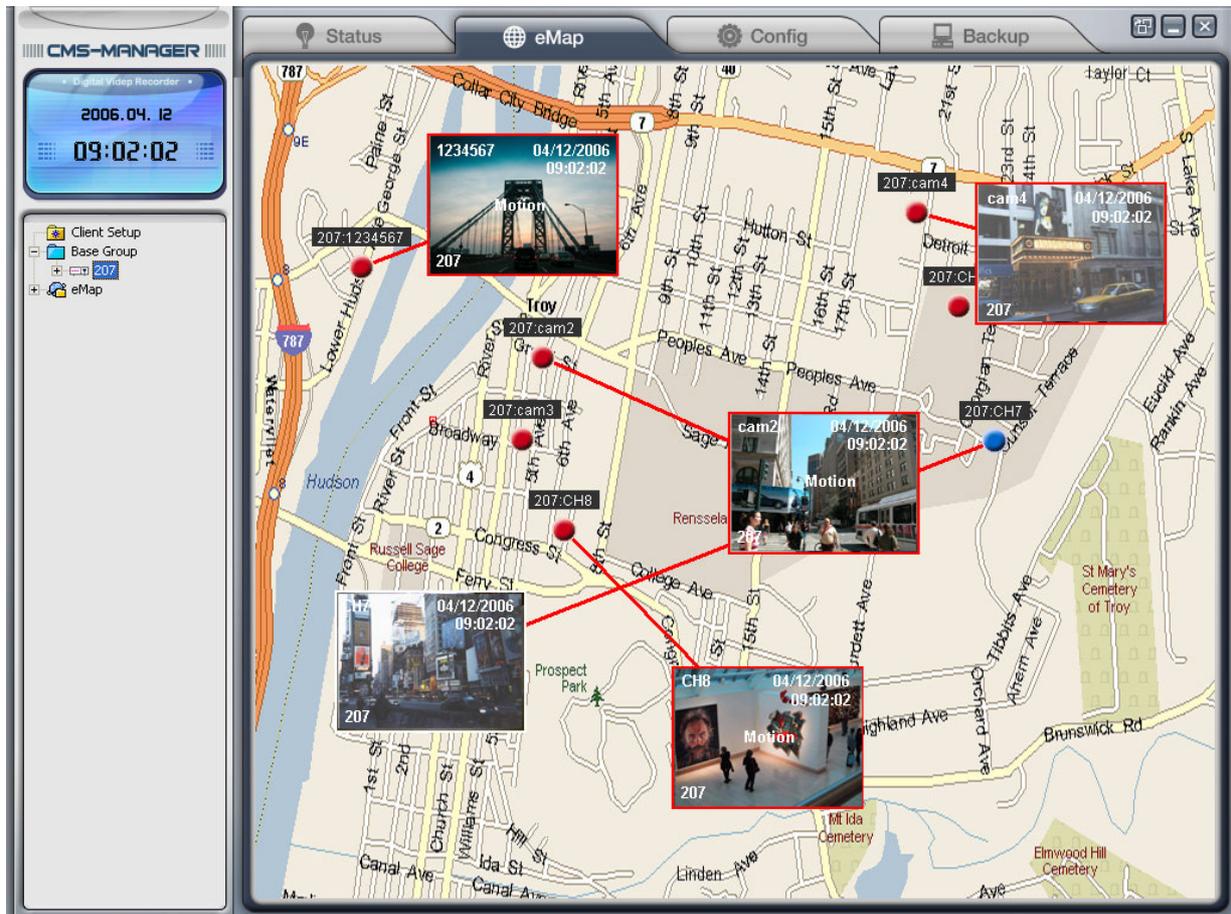
SHUTDOWN

You can shutdown your DVR by highlight the SHUTDOWN in the SYSTEM menu and pressing the  button.

When you highlight the SHUTDOWN and press the  button, You have to input the Admin Password to confirm identification. After then, Your DVR will ask you really want to turn off DVR system.

If you highlight OK and press the  button, DVR system will be downed.

NOTE: To turn off the DVR, you have to power down after SHUTDOWN. The DVR power switch is at the back of the DVR.



CMS (Central Monitoring System)

Chapter 7. CMS Overview

7.1 In This Manual

This manual describes the procedures for operating Remote Central Monitoring System (CMS, hereinafter) designed for the digital video recorder.

7.2 Overview

The Manager consists of CMS, Live Viewer programs.

- Manager: Main administration program
- Viewer: Remote Surveillance & Remote program

7.3 CMS Features

- Check and report the DVR system status at a remote site
- Notification of the event detection from remote sites
- Remote monitoring of live camera images
- Time and event search of recorded images
- Remote software
- E-mapping
- Backup tools at a remote site
- Remote configuration for recording and camera setup

7.4 Product Information

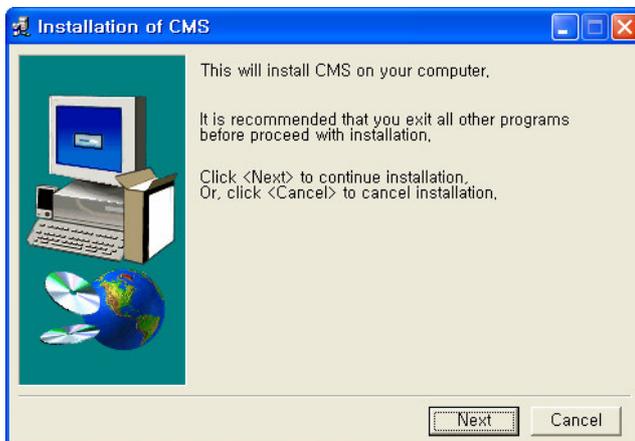
System Requirements

- Operating System: Microsoft Windows 2000 or higher
- CPU: Intel Processor 800Mhz or higher
- RAM: 256MB or higher
- VGA: 16MB or higher

Chapter 8. Installation & Operation

8.1 Installation Procedures

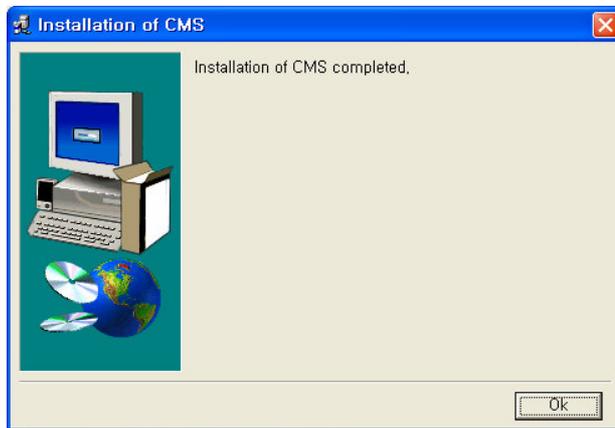
1. Insert the installation CD.
2. Run the "Setup.exe" file.
3. When the following dialog box appears, click "Next".



4. Click "Install".



5. Click “Ok”.



8.2 Operating Procedures

After installing the CMS Software, you can find the “Manager”, “Viewer” on the desktop.



Run the programs by double clicking the icons. The three programs can be displayed at the same time.

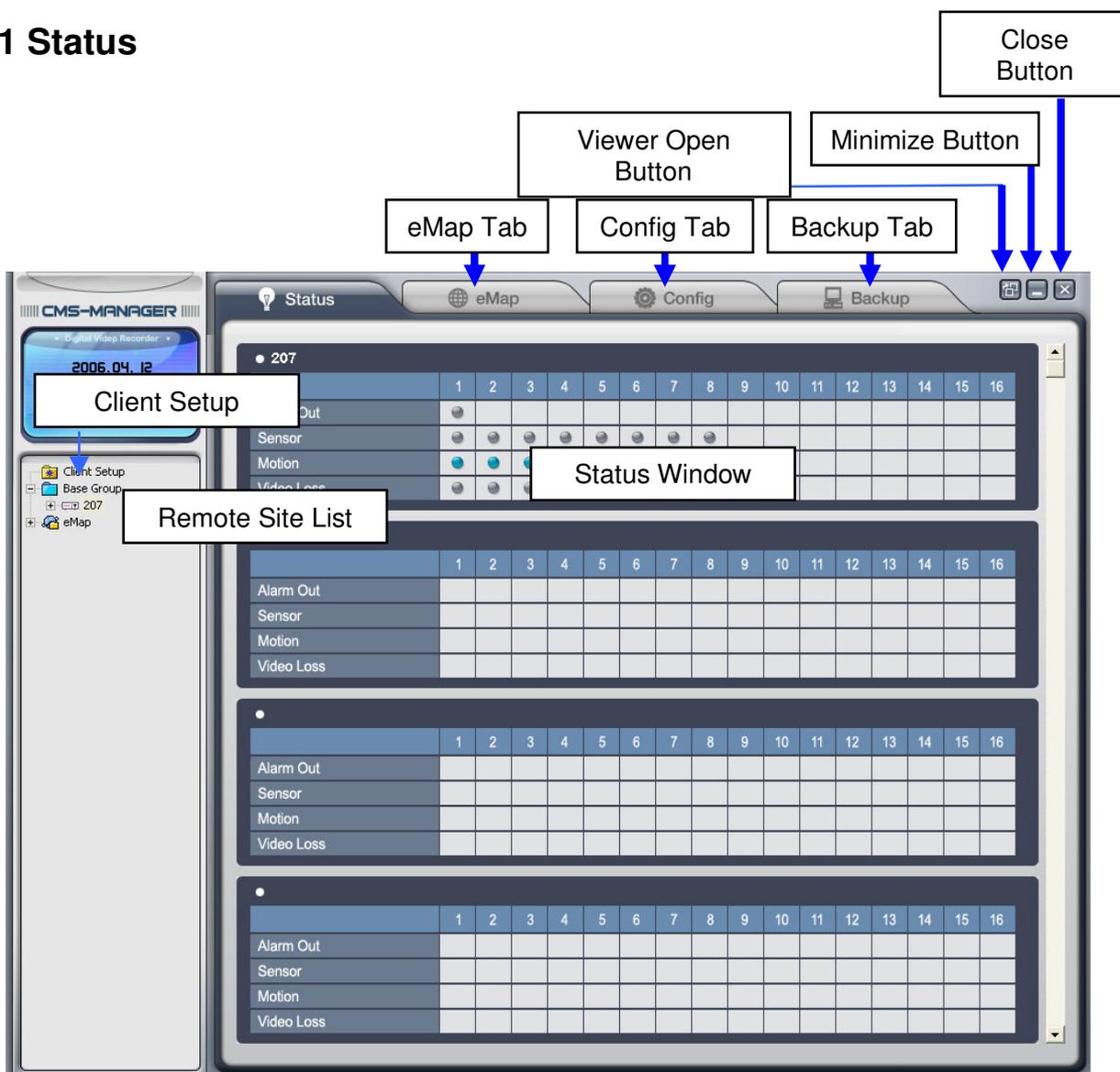
Chapter 9. CMS Manager

9.1 Description

The Manager, the main administration software of the CMS consists of: Status, e-Map, Config and Backup. The CMS program is the integrated software that controls system management, video monitoring, e-Mapping and Backup of multiple remote digital video recorder (DVR, hereinafter) system. The Graphical User Interface (GUI) of the CMS is shown below, and the description of each GUI is followed.

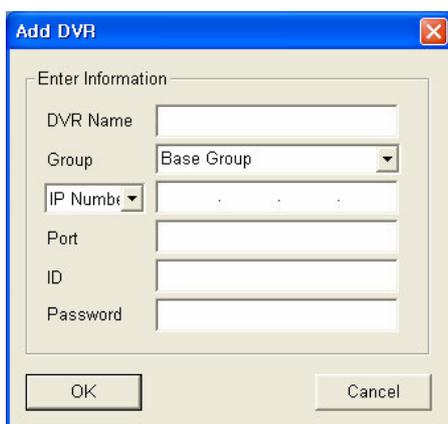
9.2 Functions of the Manager

9.2.1 Status



- Remote Site List: Displays the list of remote sites registered in the CMS.
- Client Setup: Allows to set up the Client PC (Please refer to the next page).
- Close Button: Closes the Manager program.
- Minimize Button: Minimizes the Manager program.
- Viewer Open Button: Activates the Viewer program.
- e-Map Tab: Opens the e-Map page.
- Config Tab: Opens the Configuration page.
- Backup Tab: Opens the Backup page.
- Status Window: Displays the status of the remote DVR system currently connected (motion detection, sensor, Alarm Out, Camera On/Off and Video Loss).

To make the Remote Server List, press the right button of the mouse after locating the mouse pointer on the Remote Site List area and press “Add GROUP”. The below window will appear. Enter the Group name.



After adding a Group, press the right button on the Group name and select “Add DVR”. You can enter the DVR name, IP Address (or Domain or PSTN), Port, ID and password.

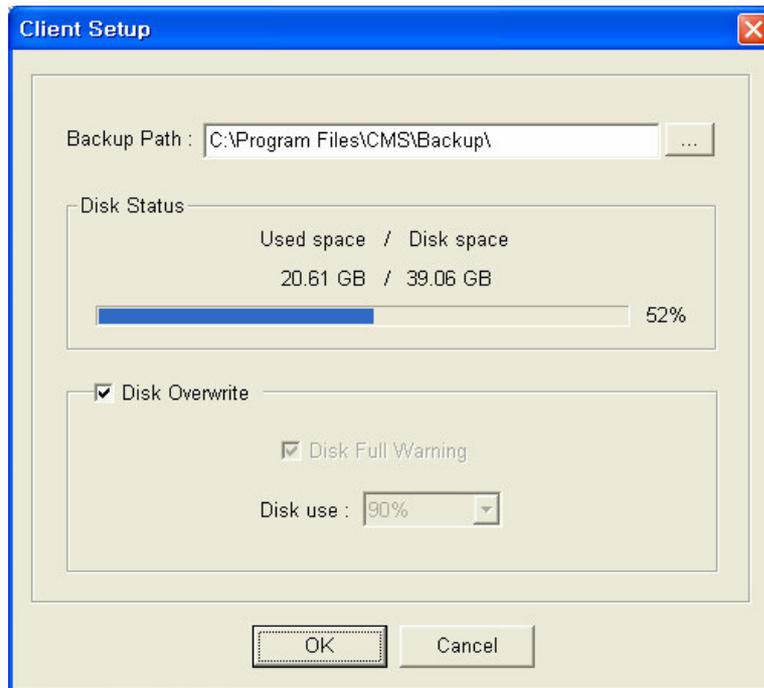
Default: Port – 7000, ID – REMOTE, Password – “1”.

To connect to the DVR, double click the DVR on the Remote Server List.

The connection status window will be popped up and the CMS Status Screen will display the live images from the Server when the connection is completed.

CLIENT SETUP

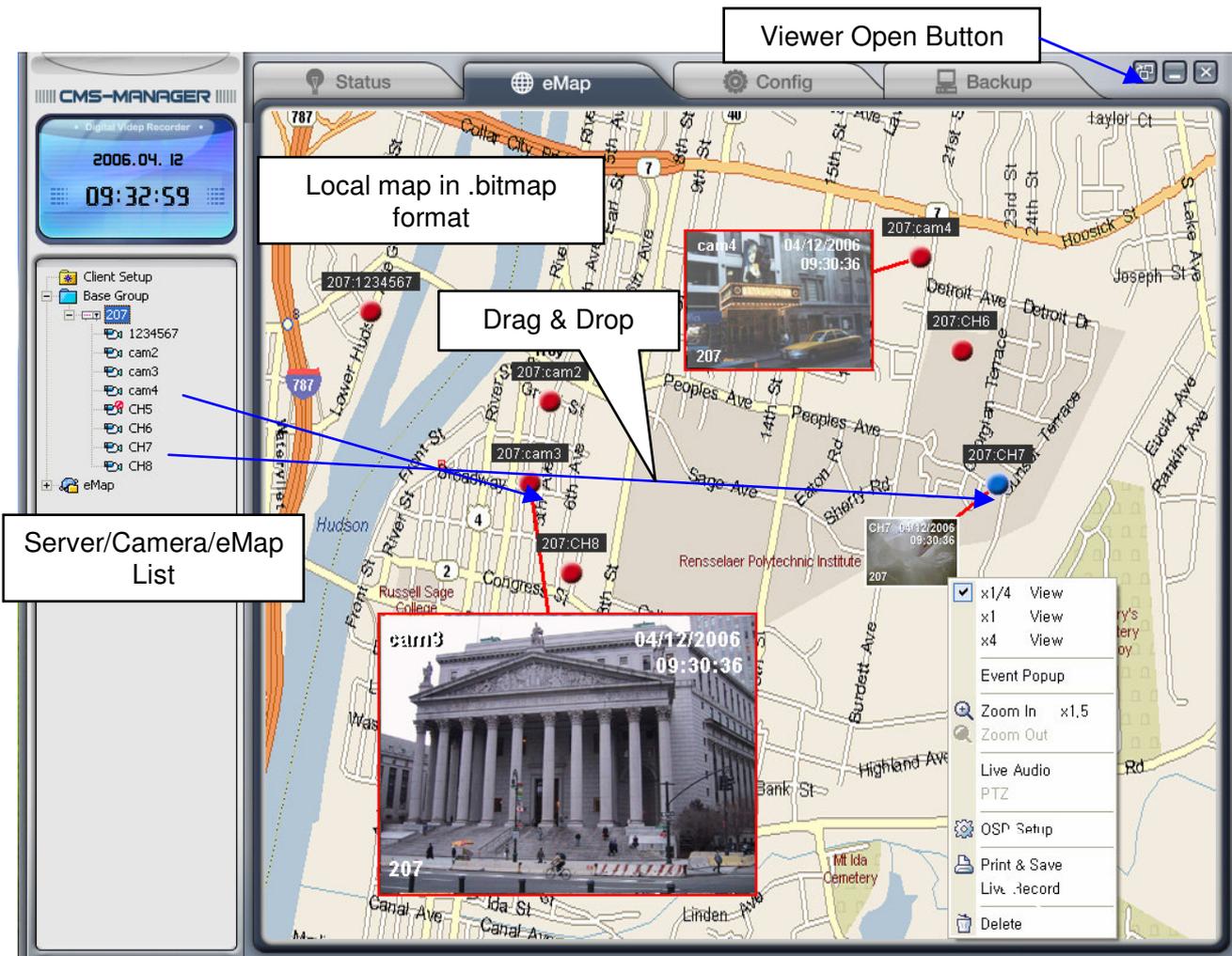
When double-clicking the Client Setup button on the Status page, the below screen will be displayed.



You can change the backup path by pressing  button and the Client Setup screen will display the Disk Status. Also, you can turn on or off select the Disk Overwrite function. When not using the disk overwrite function, you can turn on Disk Full warning and select the Disk Usage % from the down list menu.

9.2.2 e-Map

The e-Map functions allows you mapping by using your local map in .bitmap format. You can locate any camera from any remote server to your map by dragging and dropping from the list. The live screen on the map has convenient hot key by pressing the right button of the mouse. The Graphical User Interface (GUI) of the e-Map is shown below, and the description of each GUI area follows.



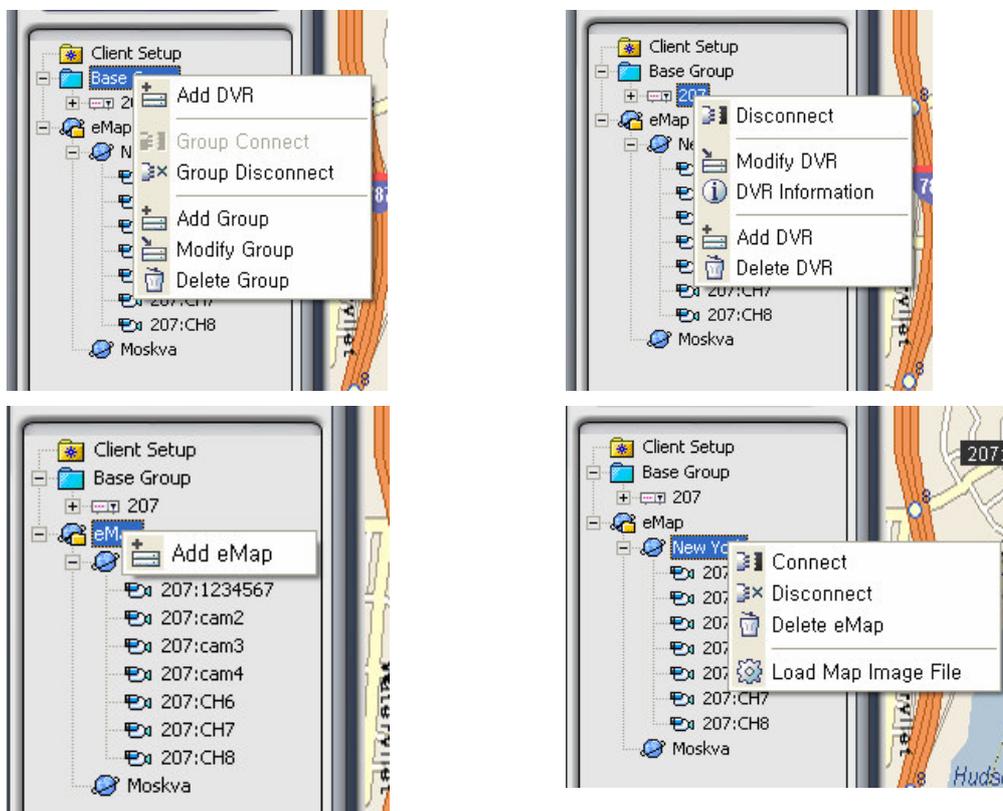
When clicking the right button of the mouse after locating the mouse pointer on a Live Screen, the Pop-up Menu will appear.

- Viewer Size Adjustment: You can adjust the viewer size by selecting x1/4, x1 or x4.
- Digital Zoom: You can zoom in or out to x1.5 or x2.
- Live Audio: You can turn on or off the live audio.
- OSD Setup: You can set up the On Screen Display (OSD) for DVR and Camera Name, Date/Time and Event.
- Print & Save: You can print the Live Image and save it in .jpg format.
- Live Recording: You can record the live screen to your computer. The files will be save to the "C:\Program Files\CMS\Backup\Live\Server Name" folder.
- You can delete the live camera on the map.

When clicking the right button of the mouse after locating the mouse pointer on the Base Group Icon, the Pop-up Menu will appear and you can add/modify/delete Groups and add DVR servers.

When clicking the right button of the mouse after locating the mouse pointer on a DVR server, you can add/modify/delete DVR server or check the server information.

When clicking the right button of the mouse after locating the mouse pointer on the e-Map Icon, the pop-up menu allows you to add e-Map or load new maps.

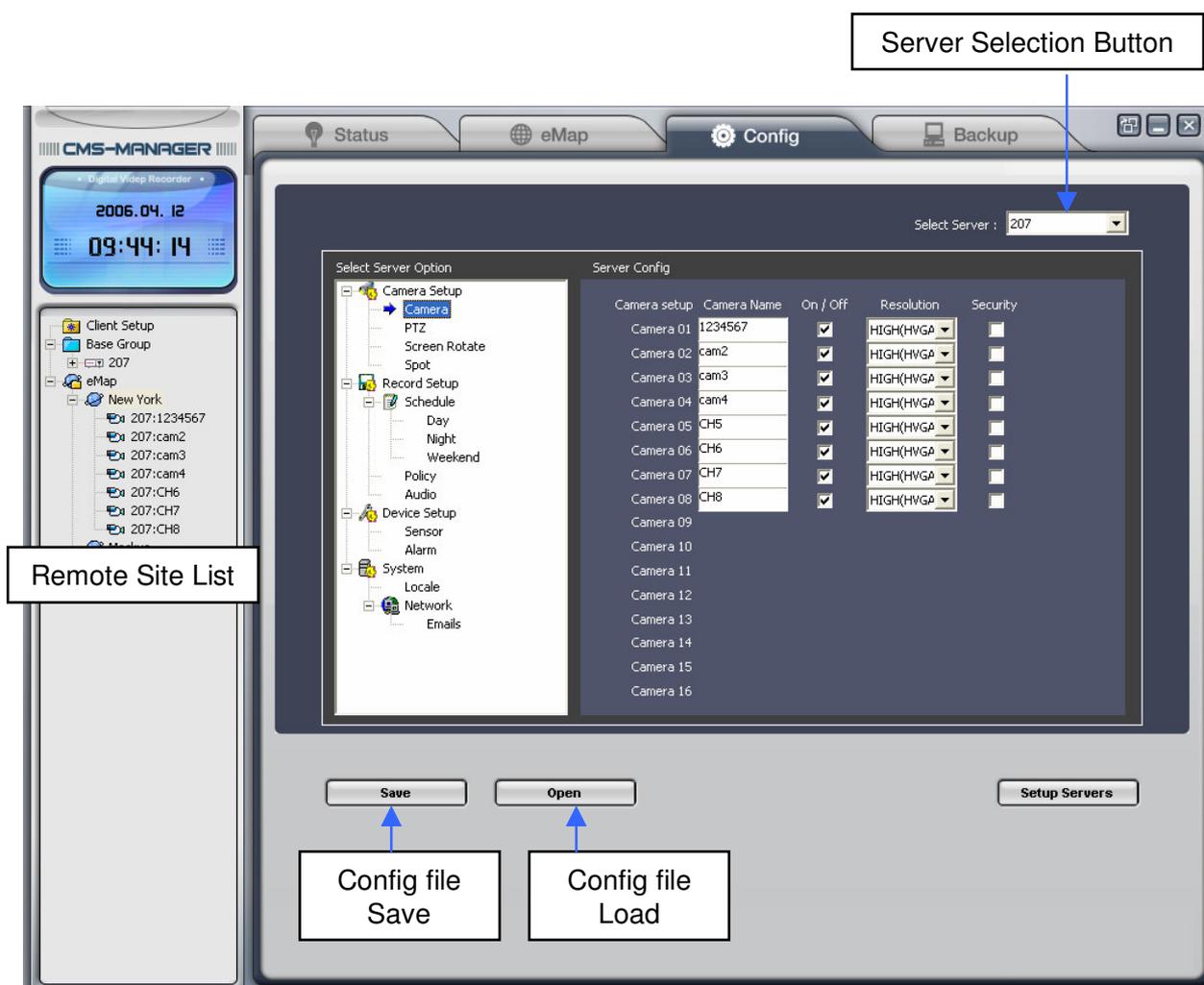


(Hot Key Menus)

9.2.3 Config

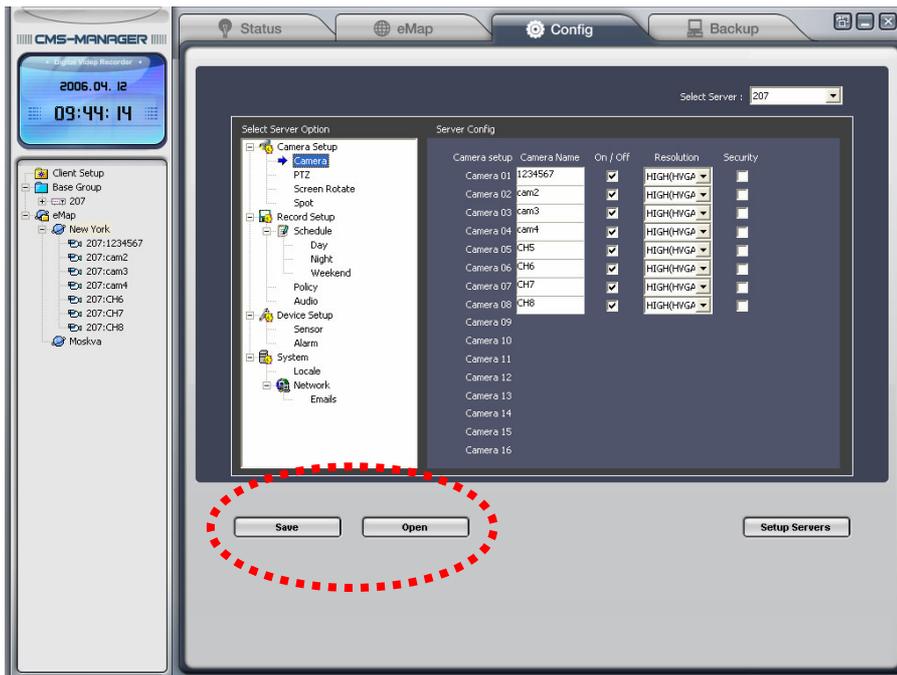
The Manager allows to change the local server settings remotely but this function is user password protected. The Graphical User Interface (GUI) of the Config is shown below, and the description of each GUI area follows.

You can save the current configuration by pressing the Save button and load the saved configuration by pressing the Open button.



Also, you can save configuration to your PC by pressing the Save button after changing the menu or you can load saved configuration from your PC.

When pressing the Save button, the current configuration will be saved to the “C:\Program Files\CMS\Backup\Config” folder.

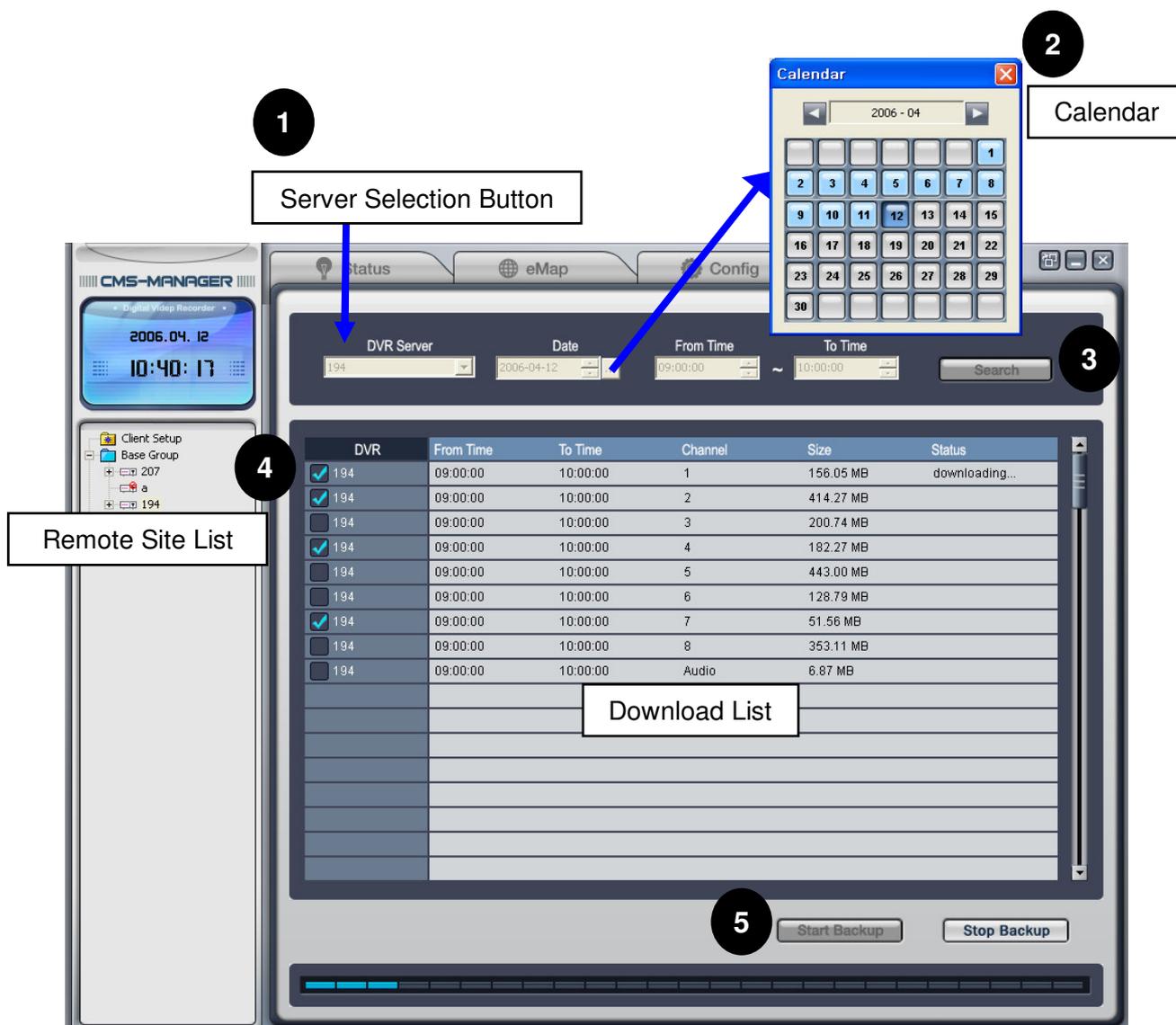


9.2.4 Backup

1. Select the server which you want to backup from DVR server.
2. After selecting server you will see the calendar for data, Blue color shows you recorded data's.
3. After choosing the date for backup and entering starting time and finish time, Click the Search Button and it will show you the recording data of download list.
4. Select the check-box of item which you want to backup.
5. Press the Start Backup button.
6. You can playback the downloaded files by using the Mini Player.

The downloaded files will be save to the “C:\Program Files\CMS\Backup\Direct\Server Name\Date” folder.

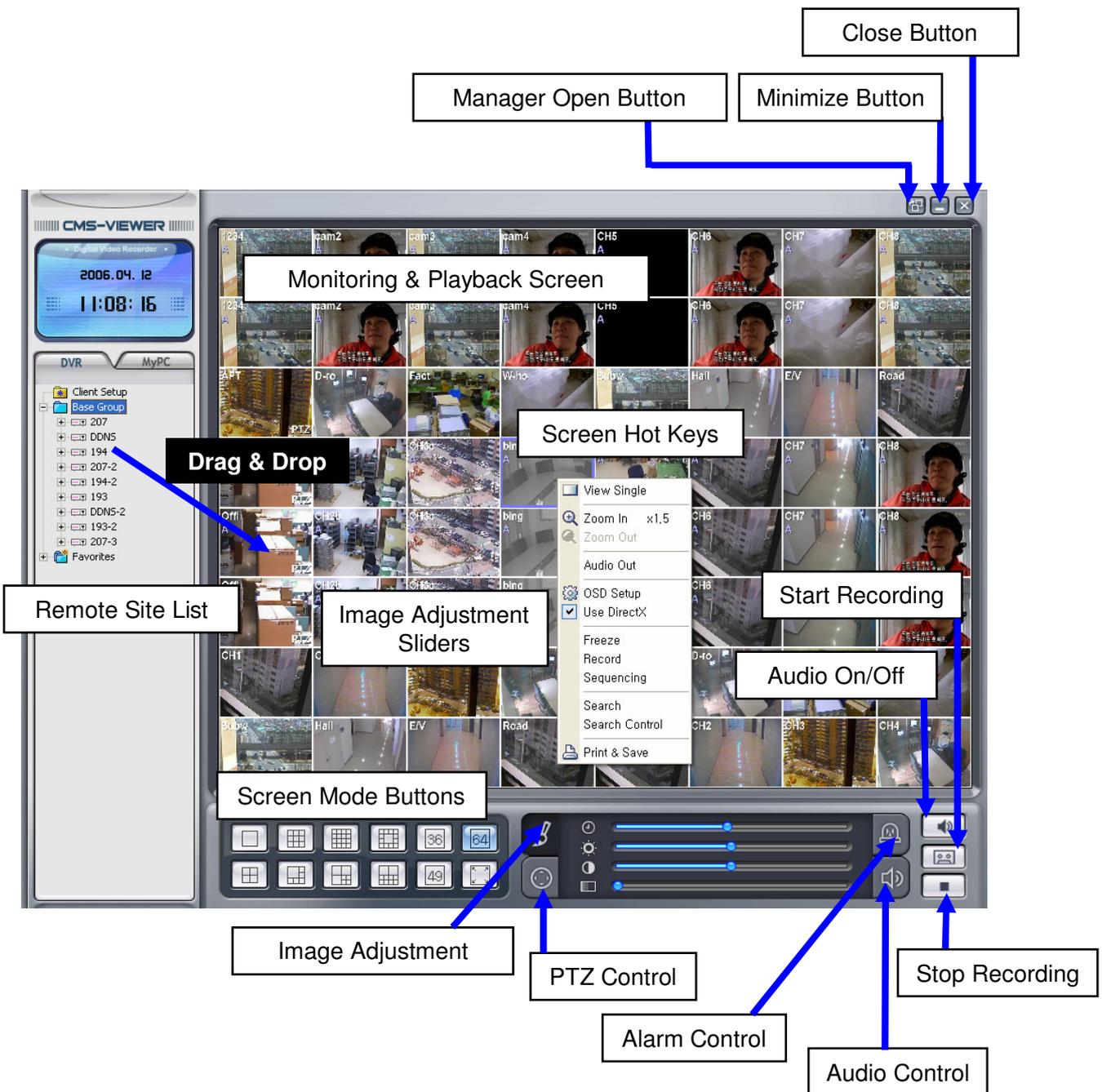
NOTE: The Mini Player can playback the downloaded files that have been completed.



Chapter 10. CMS Viewer - Live

10.1 Description

The CMS Viewer is powerful and reliable remote surveillance software, which provides a 64ch remote monitoring function for video or recorded images in real time from either a single or multiple sites and it allows to assign each channel to display live video or playback recorded video at the same time. In addition, when events are detected at a remote site, the CMS Viewer displays the event information, and allows users to access the remote site directly to search the image associated with the event. The GUI of the CMS Viewer is shown below and the description of each GUI are follows. You can use the hot key menu by pressing the right button of the mouse on each GUI area.



- Monitoring/Playback Screen: Displays or plays back images from selected cameras.

NOTE: Displays “PB” on the screen while playing back video. No Video when the remote DVR system has no video input.

- Screen Hot Keys: Allows to use the Screen hot key menu by pressing the right button of the mouse on the Monitoring/Playback Screen area.
- Close Button: Closes the Viewer program.
- Minimize Button: Minimizing the Live Viewer program.
- Manager Open Button: Opens the Manager program.
- Remote Site List: Displays registered Servers.

NOTE: The registered servers in Manager appears without registering.

- Screen Mode Buttons: Allows selection of single/quad/3x3/4x4/6/7/10/13/36/64/Select all channels/ Full Screen.
- Utility Buttons: Enables various CMS Viewer utility programs (Image Adjustment, PTZ control, Audio Control and Alarm Control).
- Image Adjust Sliders: Allows adjustment of viewed images (Frame Rate, Brightness, Contrast and Filter).
- Live Audio: Allows to turn on or off Live Audio.
- Start Recording: Allows to start recording.
- Stop Recording: Allows to stop recording.

10.2 Functions of the CMS Viewer - Live

Remote Sites

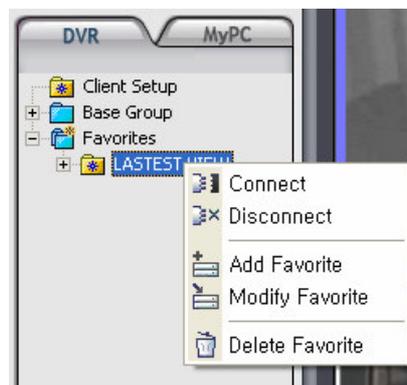
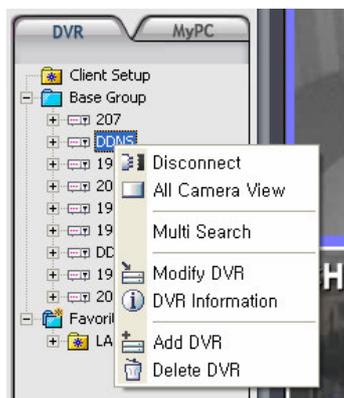
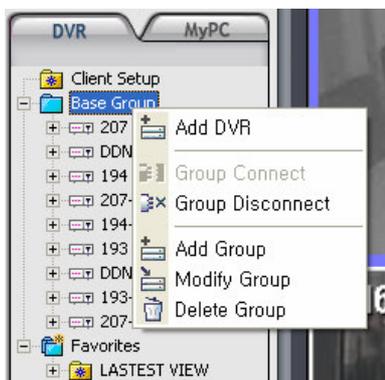
► Adding/Deleting remote sites

Click the right button of the mouse on the Remote Site List area. The hot key menu will appear. Add a Group first and you can assign multiple servers to a Group. Refer to the below Figures.

You can add or delete Groups as shown below by the hot key menu.

Click the right button of the mouse on a Group to add a DVR, connect/disconnect the Group or add/modify/delete the Group.

Click the right button of the mouse on a remote server to display the hot key menu. You can add/delete/modify the DVR and display the DVR information.



► Adding/Deleting favorites

Click the right button of the mouse on Favorites to add/modify/delete Favorites.

► **Connecting the site**

Double-click the registered DVR or select “Connect” on the hot key menu. Then press the “All Camera Menu” on a Pop-up menu. All the channels from the DVR server will be displayed. You can locate any camera from any server and swap the viewed camera channels by dragging and dropping.

► **Screen Mode Buttons**

To select the screen mode, click one of the 12 buttons shown below.

You can also select all channels or Full Screen mode button.



► **Single-screen mode**

To view a specific image in the single-screen mode, move the cursor to that image and double click the left mouse button.

► **Return to the previous screen mode**

To return to the previous screen mode from the single-screen mode, double click the left mouse button in the monitoring/playback window.

► **Screen Hot Key Menu**

Press the right mouse button on the monitoring/playback window to display the hot key menu shown on below.



Select the screen mode between single or multi.

Zoom In/Out to 1.0x, 1.5x or 2x.

Turn On/Off Live Audio.

Selecting OSD Menu, DVR Name/Camera Name/Date/Time/Event.

Turn On/Off the Direct X.

Freeze the viewed image.

Turn On/Off Recording.

Turn On/Off Auto-Sequencing.

Allows to search the recorded video for playback.

Pop-up the Search Control Pad.

Print or Save the viewed image in .jpg format.

Utility Buttons

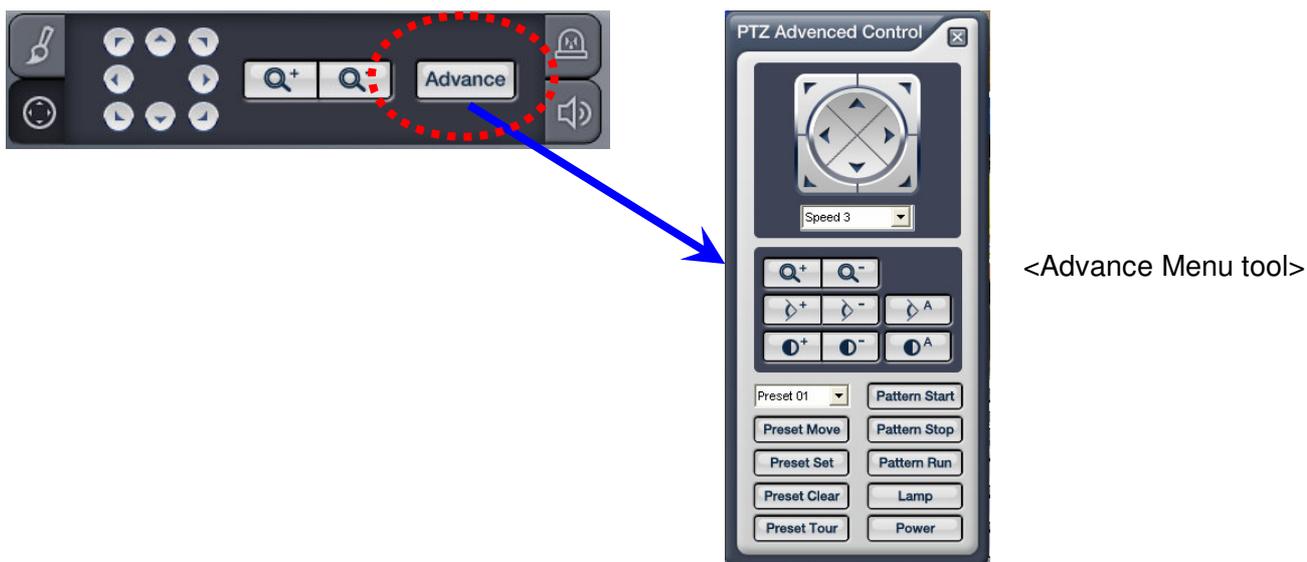
► Image Adjust Sliders

Adjust the Frame Rate, Brightness, Contrast and Filter by controlling the sliders shown below.



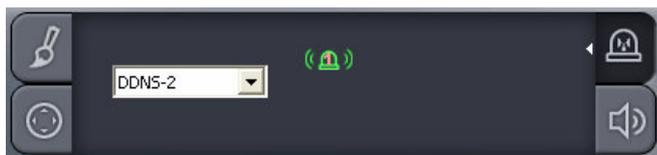
► PTZ Control

Control the connected PTZ cameras by using the control pad shown below.



► Alarm

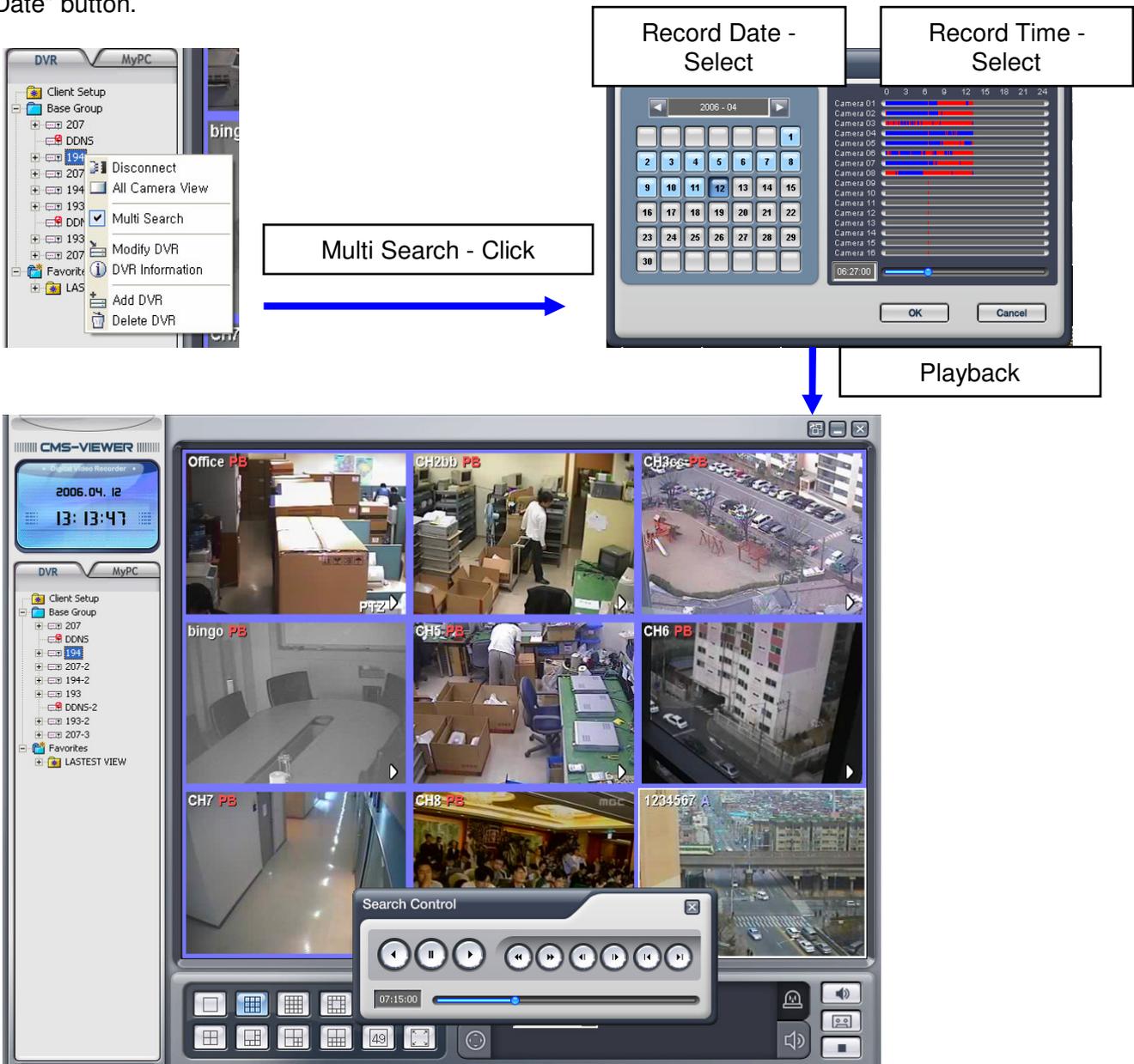
Control the Alarms by using the control pad shown below. Select a server from a drop list menu and you can control the Alarms.



Chapter 11. CMS Viewer - Search

11.1 Description

the system searches for recorded images by date/time and plays back the found images. Selecting a date from the calendar initializes time search. The dates for which recording is available are displayed in blue color. When entering the search mode, recorded information available from the selected date is shown on the recording status table. The recorded data are displayed by time (in hour segments). A Red line indicates the selected time (in hour segment) that will be played back. Go to a specific hour by clicking the mouse or dragging the pointer on the desired hour segment. Video image will be played back starting with the first image captured within the one-hour segment. If you want to view images for a different date, select the date in the calendar by pressing the “Select Date” button.



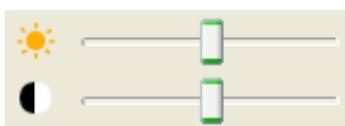
Chapter 12. DVR Mini Player

12.1 Description

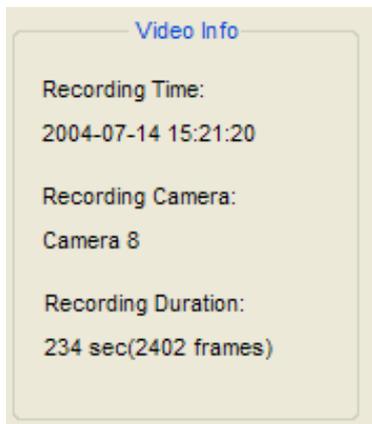
DvrPlayer is a single channel playback player for individual video file. Once DvrPlayer is installed, it works with Windows for file click, Drag & Drop to playback the video. AVI, JPEG file conversion, print is supported.



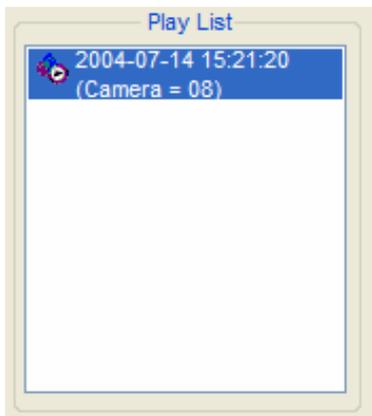
-   : Moves one frame each forward/backward
-   : Fast forward/backward playback
-   : Forward/backward playback
-  : Pause playback
-  : Open playback file
-  : Open AVI, JPEG conversion window
-  : Open printing window
-  : Toggle to full screen or original screen
-  : Turn on or off Audio
-  : Hide or display video information



: Controls Brightness and Contrast of the images



: Displays video file information for playback



: Automatically adds list of files for playback

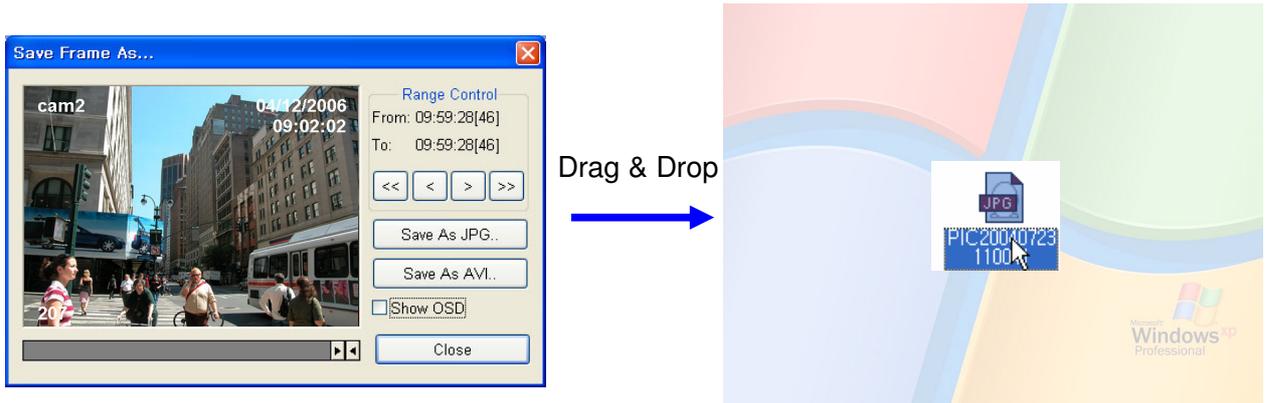


: Playback toolbar for a full screen display (There is automatic hiding function)

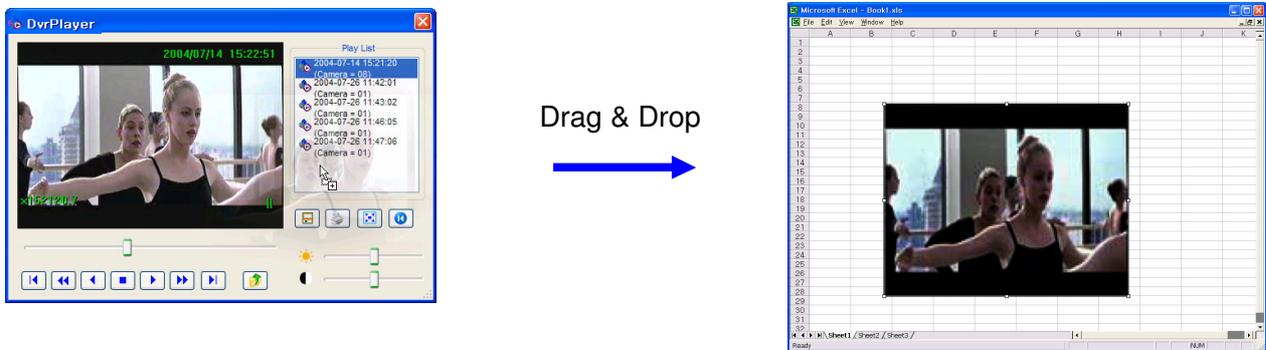
12.2 Drag & Drop

DvrPlayer software supports Drag & Drop GUI. Next we will take a look at Drag & Drop which is integrated with Lava Net.

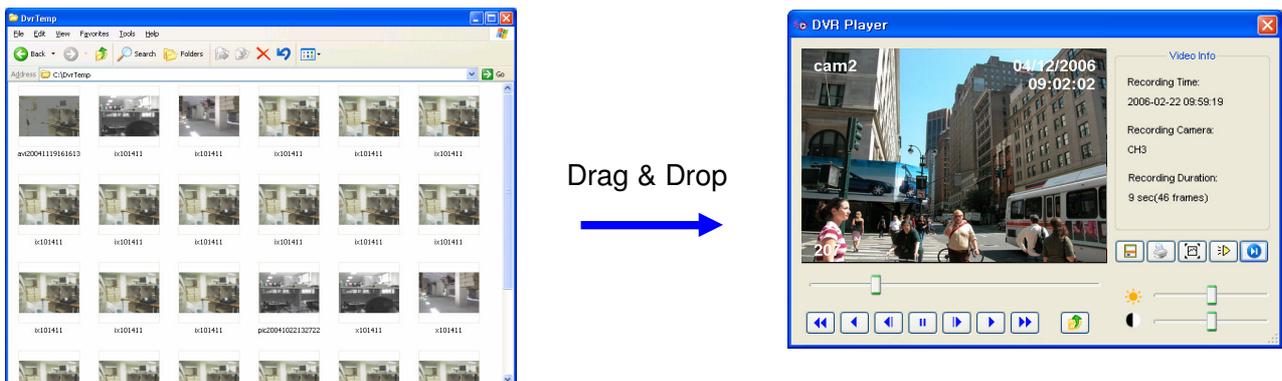
1. When you drag playback window from DvrPlayer into Save Frame, Print Frame the image can be saved as Jpeg. The desktop of Windows XP system displays the current image as dragged one and created Jpeg file name has date and time of creation.



2. You can do Drag &Drop into MS Office product such as Ms Word, Excel, etc. The following image shows the image of Drag & Drop performed into MS-Word.

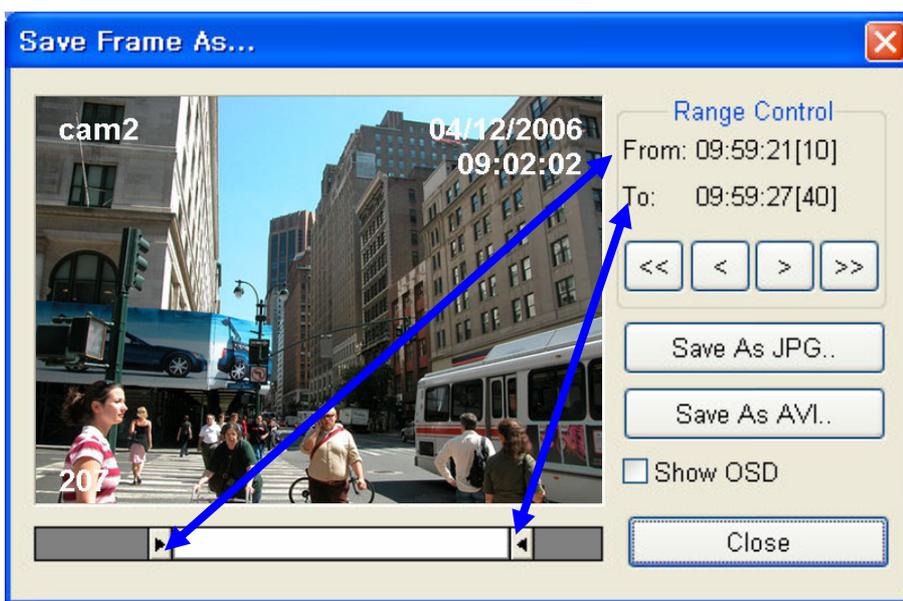


3. DvrPlayer is able to playback a single or multiple video files from Windows Explorer by Drag & Drop. Dragged file is added to Play List subsequently.



12.3 Save Frame Usage

DvrPlayer allows to convert the DVR proprietary video format into JPEG, AVI. It is also possible to change into MPEG4, DVIX using additional video codec.



From: 09:59:21[10]

Shows the first frame information. (HH:MM:SS [Frame Number])

To: 09:59:27[40]

Shows the last frame information



Move the first frame location of segment. The appropriate frame is displayed



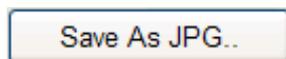
Set the last frame location of segment. The appropriate frame is displayed



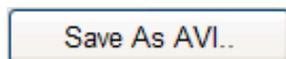
Moves 5 frames forward/backward for the segment of first/last frame



Moves one frame forward/backward for the segment of first/last frame

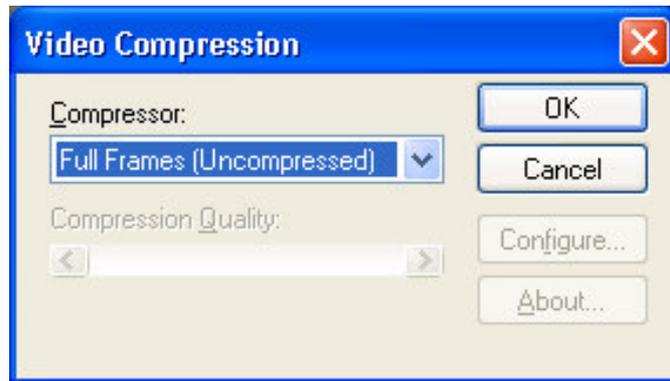


Saving the displaying screen frame into the JPEG file



Save as AVI format the user selected range of video

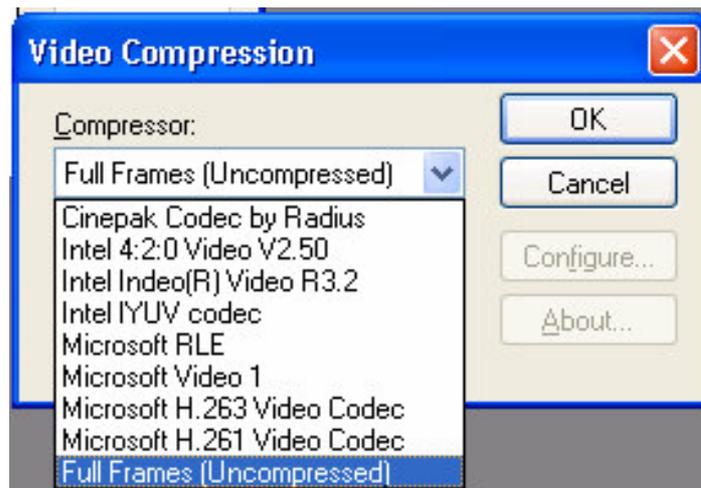
1. Saving without compression : Generally, it is suitable to save a small video clip. Large video file, for example, to save over an hour without compression the file size can exceed over 1GB. It may not be played with Windows Media Player or recognized by other types video player.



2. Using compression Codec : It is possible to save a large video file over an hour long into AVI file format. The file created using compression Codec is small. Codec format that can process 24 Bit RGB is supported. Most of the recent Codec can be used.

The following is the list of Codec installed in Windows. Supported Codec are as following.

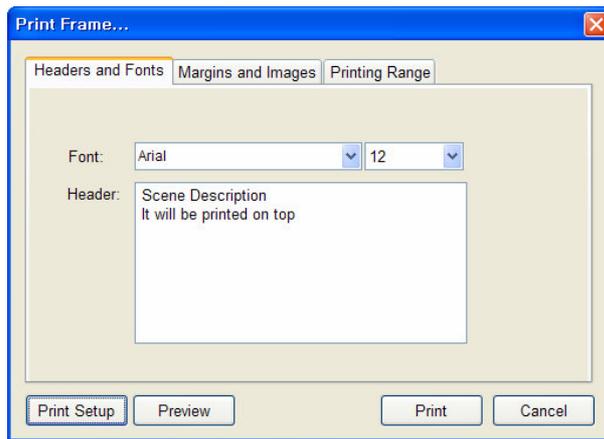
Intel Indeo, Microsoft Video 1, Xvid, DivX, 3ivx, Microsoft MPEG-4, Microsoft Windows Media Video 9, M-JPEG V3/2000 are supported.



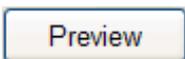
12.4 Print Frame

it supports various functions for Printing

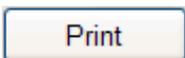
Especially, You can print the continuous motions into one printout by “Split” function.



Select a printer.

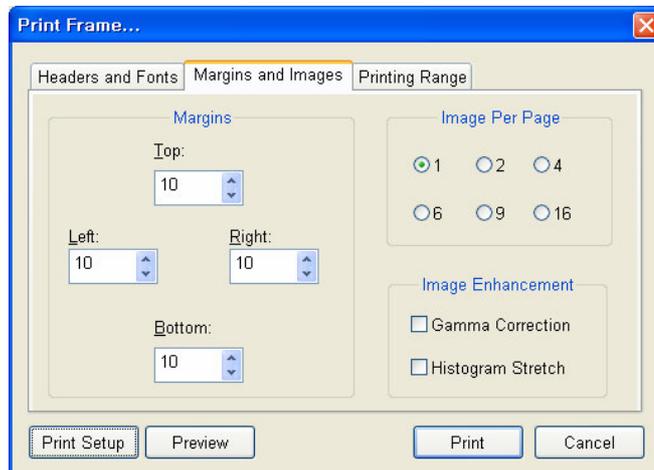


Preview before printing

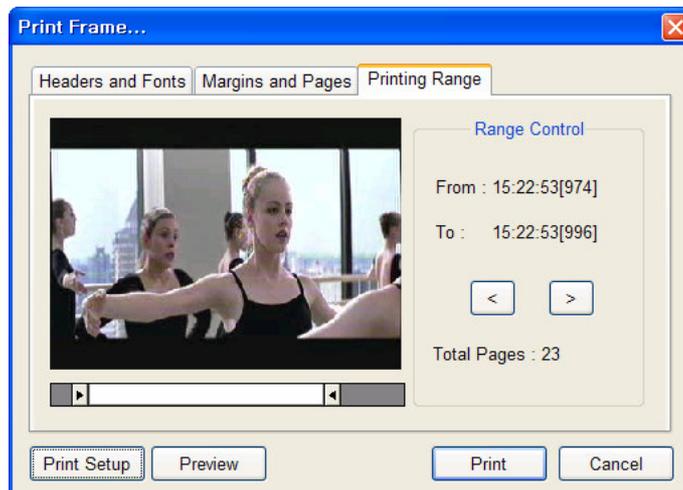


Printing.

2. Print Margin & Page Setting : Sets for printer margins and the number of frame to print for each page.



3. Print Area Setting : Sets the printing area of video frame. The area is given +/- 15 frame from the paused (or stopped) image frame. User can print maximum 30 pages of frame.

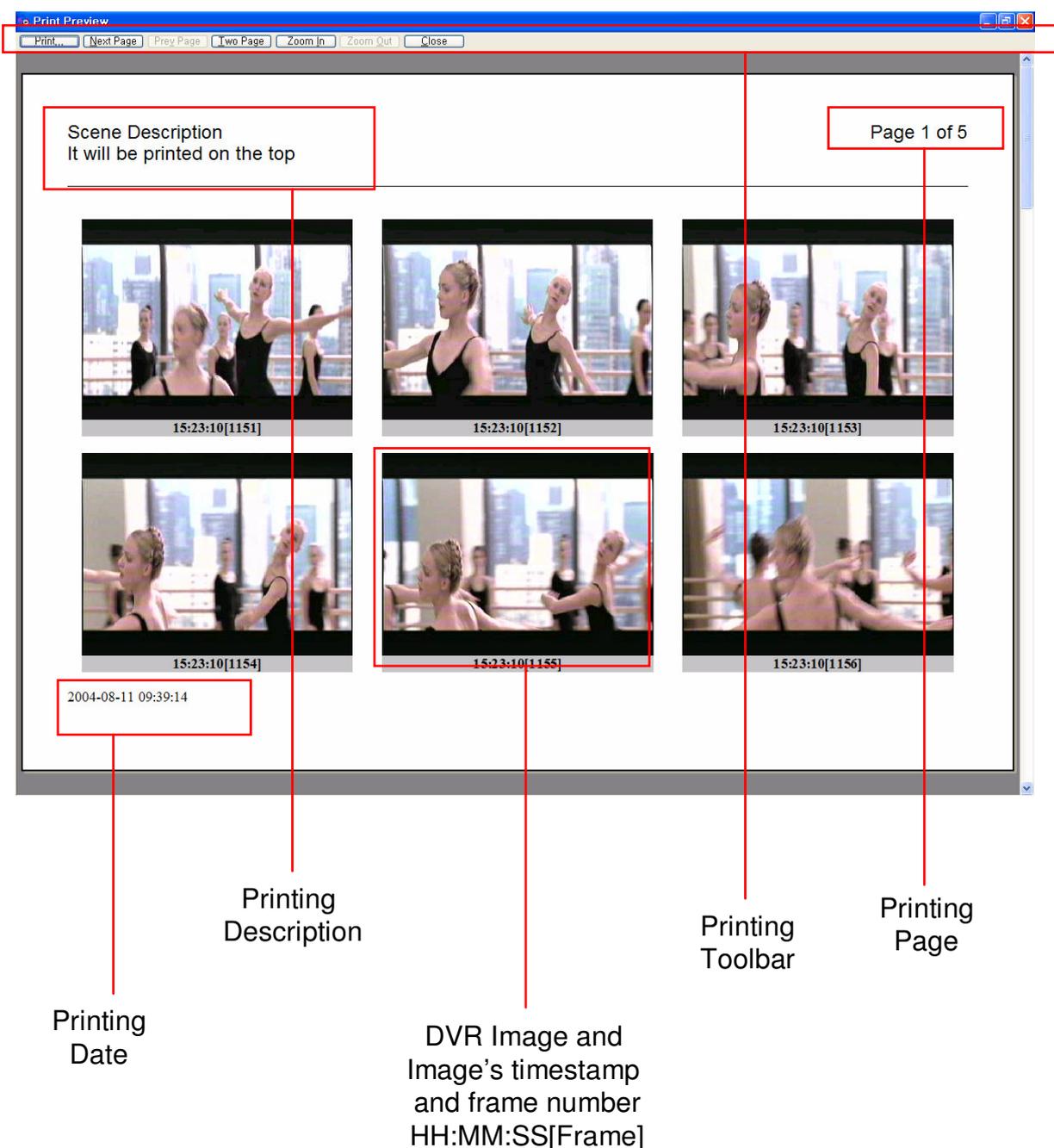


4. Preview : After you set printing range, Images per page (split mode), Printing description, Page Orientation then you print preview with Preview Button

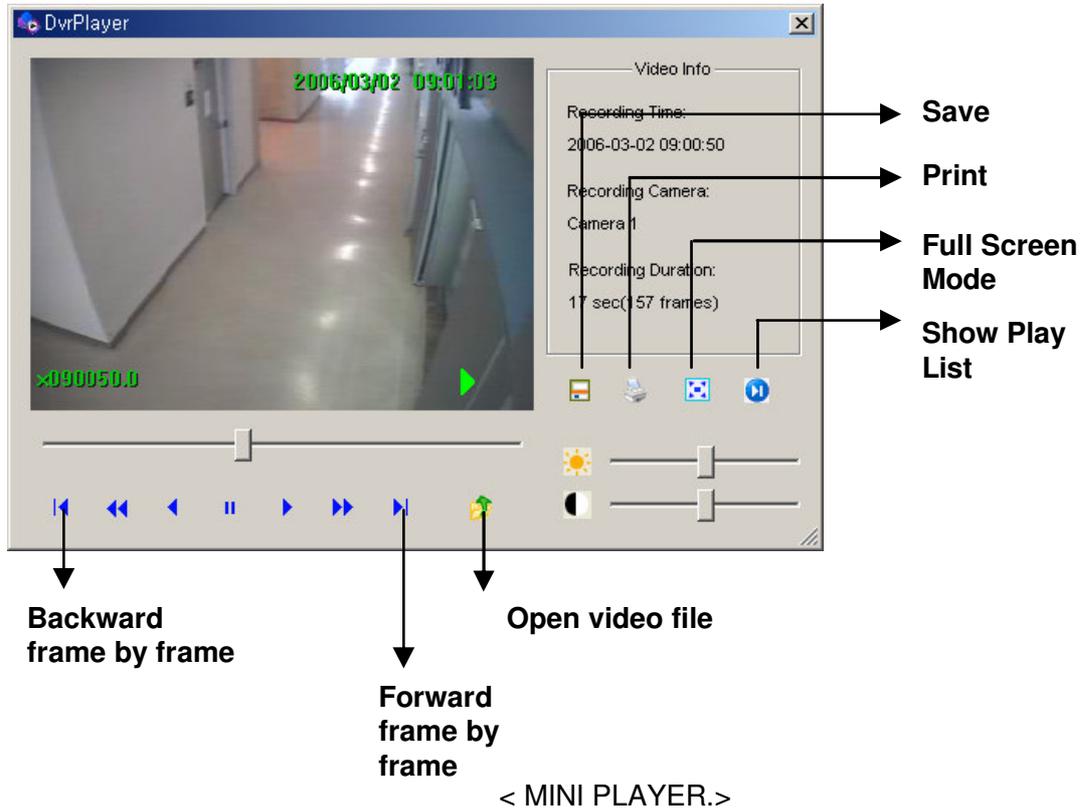
In print preview mode, you can print directly by clicking print button on the top most toolbar

Following picture show that Print preview with A4 Landscape, 3x3 Split Mode

(※If Printer not installed correctly or wrong printer driver, print preview may not work)

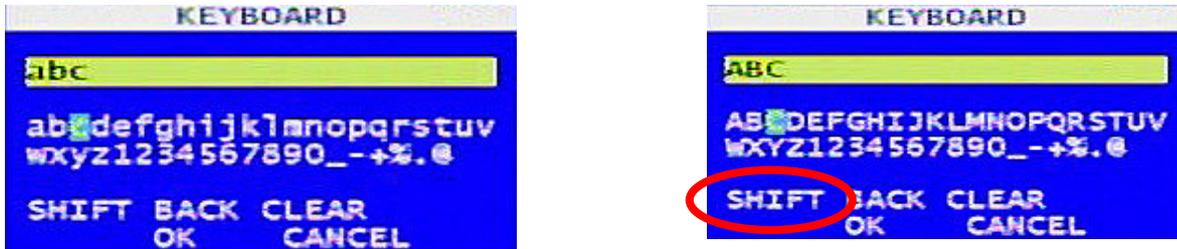


Appendix A – Reviewing Backup (Clip) Images



Your DVR will download the Mini Player with the backup files. You can play the backup files with the Mini Player on your PC and convert the files to .JPG or .AVI format.

Appendix B – How to use the virtual keyboard



< VIRTUAL KEYBOARD >

You will be using the virtual keyboard when setting up the DVR. Highlight the button and press the button to enter.

The SHIFT button switch the capital letters and the small letters. Exactly, upper two figures of virtual keyboard will be toggled when you highlight the SHIFT and press the button.

the BACK button has a cursor be moved left and one last character be deleted.

The CLEAR button clean all input characters in the text box.

If you want to use input words and exit, highlight the OK and press the button.

If you don't want to use input words and exit, highlight the CANCEL and press the button.

Appendix C – Using Hot Keys

Smart Playback:

Press the DOWN arrow button when playing back video. In the Smart Playback mode, your DVR will play back the recorded video that has motions.

Panorama Playback:

Press the UP arrow button in a single channel playback.

NOTE: The Panorama playback is working in single channel screens only. You can change the screen to 2x2, 3x3, 4x4 formats by pressing the Up arrow button in the Panorama mode.

Cut & Save:

BACKUP → BACKUP → BACKUP. You can set up the start time by pressing the Spot button first time and set up the end time by pressing the Spot button again. Press the Backup button after setting up the start and end time.

Appendix D - Troubleshooting

Problem	Possible Solution
No Power	<ul style="list-style-type: none">• Check power cord connections.• Confirm that there is power at the outlet.
No Live Video	<ul style="list-style-type: none">• Check camera video cable and connections.• Check monitor video cable and connections.• Confirm that the camera has power.• Check camera lens settings.
Live Video Very Bright	If a cable is attached to the "Loop" connector, make certain it is connected to a properly terminated device.
Mouse is not working	Press the FREEZE to reset the mouse.
DVR has stopped recording	If hard disk is full, you will either need to delete video or set the DVR to the Overwrite Mode.

Appendix E – Specifications

		4ch	8ch
Video	Inputs	• 4 CH Composite videos (BNC Type)	• 8 CH Composite videos (BNC Type)
	Outputs	• CRT(VGA) Monitor • 1 Spot CCTV Monitor (NTSC/PAL)	• CCTV Monitor (NTSC/PAL)
Monitoring	Display	• NTSC : 120fps • PAL : 100fps	• NTSC : 240fps • PAL : 200fps
	Screen split	• 1/4 Split	• 1/4/7/8 Split
Recording	Performance	• NTSC CIF(120fps),HVGA(60fps) • PAL CIF(100fps),HVGA(50fps)	• NTSC CIF(120fps), HVGA(60fps) • PAL CIF(100fps), HVGA(50fps)
	Resolution	• NTSC : CIF(336x224), HVGA(672x224) • PAL : CIF(336x272), HVGA(672x272)	
	Compression	• Advanced MPEG4	
	Mode	• Motion detection, Sensor, Schedule • Variable compression rate, recording frame, motion sensitivity	
	Storage media	• Internal 2 HDD	• Internal 4 HDD
	Audio	• 1 Channel, G.726 Compression	
Playback	Mode	• Multi-channel playback , Smart playback, Panorama playback	
	Searching	• By Channel, Time, Date, Motion detection, Sensor events	
Remote Monitoring S/W		• Central Management Software (CMS)	
Alarm/Sensor		• 1/4	• 1/8
Camera Control		• Pan/Tilt, Zoom, Focus, Iris	
Back-up		• Through External USB2.0 Ports (Memory Stick, HDD, CD R/W) • Removal HDD, CD-R/W, DVD-R/W • Remote S/W	
Hardware Spec.	Size / Weight	• 350(W) x 400(D) x 88(H) : 2U Rack Mount Kit / • 6 kg	
	Power	• Max. 65W, 90~264(47Hz~63Hz) / Max. 120W, 90~264(47Hz~63Hz)	
	UPS	• External UPS (Option)	

Appendix F – DVR FAQ

General

Q. What does Embedded Linux mean?

A. Embedded Linux means that the operating system of the DVR has been implanted onto the CPU (Central Processing Unit). This means that the system response time is faster, is more stable, and that the core of the DVR is never affected by external factors, such as virus, hacking, and system failure due to hard drive abnormalities.

Q. Is the DVR up-gradable by CD or network ?

A. Both are possible by CD-RW and client program.

Q. How can I reset DVR to the factory default setting?

A. Load the factory default setting from CONFIG menu.

Live Monitoring

Q. Is it possible Live screen monitoring with specific cameras?

A. You can set the camera sequence through CAMEO swap.

Recording

Q. How do you record?

A. Using the Time Record and Event Record from RECORD menu, or Default Record button allows to record.

Q. What is Time Recording?

A. It is recording that is not related to event recording.

Q. What does that Event mean?

A. That means Motion, Alarm In, Video-loss event activity.

Q. What is Event Recording?

A. It only records when the event occurs and that triggers the recording.

Searching & Playing Video

Q. How to playback the video?

A. Search time and event to playback from Search menu.

Q. Is it possible to view Live screen during the playback?

A. It is possible to see using Live Cam Change from CAMEO Menu during the playback.

Q. Is it possible to copy the wanted section of video during the playback?

A. Yes, select starting and ending time with Spot key, then using the Backup key to save.

Backup

Q. Is it possible to backup to DVD media?

A. DVD-RW device is installed then it is possible.

Q. Can USB memory stick be used?

A. Yes.

Network

- Q. Does it support dynamic IP?
- A. Set the Dynamic IP from Ethernet Setup allows to use it.
- Q. Mail is not sent out.
- A. All the setting in Ethernet Setup value should be set correctly.

Miscellaneous

- Q. Is it possible to use either mouse, joystick or keyboard through the USB port?
- A. Mouse input device and memory stick is supported as the primary device.
- Q. What type of cameras should be used?
- A. NTSC or PAL system cameras are OK to use.

Product Warranty

Product name		Model	
Serial NO.		Date of purchase	
Dealer		TEL	Address
Customer name		TEL	Address

Warranty period – 1 year

As warranty period is counted from the date of purchase, it is recommended that you get the date of purchase to be written.
 (If you are not sure about the date of purchase, the warranty period is counted from the date when six months are passed from the date of manufacture.)

Free service

We will recompense in accordance with free service or Consumer Damage Compensation, Ministry of Finance and Economy's Notification, in case there is any failure of performance or function, which occurred naturally under normal use of product within one year (warranty period) after purchasing the product.

Pay service

1. In case of failure due to consumer's mistake
 - in failure due to the careless handling, repair or conversion of the consumer
 - in failure due to the repair by unqualified person instead of dealer or service center engineer
 - in failure or damage due to falling or such things during relocating after installing
 - in failure due to abnormality of used power or inferiority of the networks and apparatus that is attached to this product

2. In case of other reasons such as disasters (fire, salt damage, flood, landslip, etc....)