BDVR Series

DIGITAL VIDEO RECORDER

User Guide

BDVR-4 4 Channels

BDVR-8 8 Channels

BDVR-1616 Channels

User Guide

- Thank you for purchasing this Digital Video Recorder.
- Before using the Digital Video Recorder, please ensure that you read and understand the User Guide.
- Please retain the User Guide for future reference.
- Before connecting and installing any third party cameras, monitors, alarms and computers, please refer to the appropriate instruction manual for their correct operation.

SAFETY PRECAUTIONS

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).

NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED

SERVICE PERSONNEL.

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 to persons.

SA 1965

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.

SA 1966

WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Contents

Disclaimer

- The information in this manual is believed to be accurate and reliable 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 change
- We makes no warranties for damages resulting from corrupted or lost data due to a mistaken operation or malfunction of the Digital Video Recorder, the software, the hard drives, personal computers, peripheral devices, or unapproved/unsupported devices.

Warning

- Do not cover the ventilation opening or slots on the outer casing. To prevent the appliance from overheating, provide at least two inches of air space around the vent and the slots.
- Do not drop metallic parts through slots. This could permanently damage the Digital Video Recorder. Immediately turn the DVR's power off or unplug the power cord from the power

outlet.　Contact a qualified service personnel authorised by your equipment distributor

- Do not attempt to disassemble or alter any part of the equipment that is not expressly described in this guide.　Disassembly or alteration may result in high voltage electrical shock. Qualified service personnel authorised by your equipment distributor should conduct internal inspections, alterations and repairs.
- Stop operating the equipment immediately if it emits smoke or noxious fumes.　Failure to do so may result in fire or electrical shock.　Immediately turn the DVR's power off, remove the power cable from the power outlet.　Confirm that smoke and fume emissions have ceased. Please consult your DVR distributor.
- Stop operating the equipment if a heavy object is dropped or the casing is damaged. Do not strike or shake.　Failure to do so may result in fire or electrical shock.　Immediately turn the DVR's power off or unplug the power cord from the power outlet.　Please consult your DVR distributor.
- Do not allow the equipment come into contact with, or become immersed in, water or other liquids.　Do not allow liquids to enter the interior.　The DVR has not been waterproofed.　If the exterior comes into contact with liquids or salt air, wipe it dry with a soft, absorbent cloth. In the event that the water or other foreign substances enter the interior, immediately turn the DVR's Power off or unplug the power cord from the power outlet.　Continued use of the equipment may result in fire or electrical shock. Please consult your DVR distributor.

- Do not use substances containing alcohol, benzene, thinners or other flammable substances to clean or maintain the equipment.　The use of these substances may lead to fire.　Use a dry cloth on a regular periodic basis and wipe away the dust and dirt that collects on the device.　In dusty, humid or greasy environments, the dust that collects around the ventilation or the slots on the outer casing over long periods of time may become saturated with humidity and short-circuit, leading to fire.
- Do not cut, damage, alter or place heavy items on the power cord.　Any of these actions may cause an electrical short circuit, which may lead to fire or electrical shock.
- Do not handle the device or power cord if your hands are wet.　Handling it with wet hands may lead to electrical shock.　When unplugging the cord, ensure that you hold the solid portion of the plug.　Pulling on the flexible portion of the cord may damage or expose the wire and insulation, creating the potential for fires or electrical shocks.
- Use only the recommended power accessories. Use of power sources not expressly recommended for this equipment may lead to overheating, distortion of the equipment, fire, electrical shock or other hazards.
- Do not place the batteries near a heat source or expose them to direct flame or heat.　Neither should you immerse them in water.　Such exposure may damage the batteries and lead to

the leakage of corrosive liquids, fire, electrical shock, explosion or serious injury.

● Do not attempt to disassemble, alter or apply heat to the batteries. There is serious risk of injury due to an explosion. Immediately flush with water any area of the body, including the eyes and mouth, or clothing that comes into contact with the inner contents of the battery. If the eyes or mouth contact these substances, immediately flush with water and seek medical assistance from a medical professional.

● Avoid dropping or subjecting the batteries to severe impacts that could damage the casings. It could lead to leakage and injury.

● Do not short-circuit the battery terminals with metallic objects, such as key holders. It could lead to overheating, burns and other injuries.

● The supplied power supply and power cord are designed for exclusive use with the Digital Video Recorder. Do not use it with other products or batteries. There is a risk of fire and other hazards.

Caution

● Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the appliance in an extreme environment where there is high temperature or high humidity. Use the device at temperatures within +0°C - +40°C (32°F - 104°F) and humidity below 90 %. The normal operating power source for this device is DC 12V 50/60Hz.

Preventing Malfunction

● Avoid Strong Magnetic Fields. Never place the DVR in close Proximity to electric motors or other equipment generating strong electromagnetic fields. Exposures to strong magnetic fields may cause malfunctions or corrupt image data.

● Avoid Condensation Related Problems. Moving the equipment rapidly between hot and cold temperatures may cause condensation (water droplets) to form on its external and internal surfaces. You can avoid this by placing the equipment in an airtight, resalable plastic bag and

letting it adjust to temperature changes slowly before removing it from the bag.

● If Condensation forms inside the Digital Video Recorder. Stop using the equipment immediately if you detect condensation. Continued use may damage the equipment. Remove the power cord from the power outlet and wait until the moisture evaporates completely before resuming use.

CAUTION

- Risk of Explosion if a battery is replaced with an incorrect type. Dispose of used batteries in accordance with the instructions.

- The socket-outlet should be installed near the equipment and easily accessible

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Package Contents

Please check the package and contents for visible damage. If any components are damaged or missing, do not attempt to use the unit, contact the supplier immediately. If the unit must be returned, it must be shipped in the original packing box.

CONTENTS	QUANTITY	REMARK
DIGITAL VIDEO RECORDER	1 UNIT	
CLIENT SOFTWARE CD	1	
REMOTE CONTROLLER	1	
BATTERY (COIN-CR2025)	1	
AC ADAPTER	1	
POWER CORD	1	
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I.CONTROLS

1. Front Panel

< 4 Channel >

< 8 Channel>

< 16 Channel>

1. Mode indicator : 3 LEDs display the status of the Digital Video Recorder.

Power (Blue), Recording (Red) and HDD (Green)

2. Playback / Record Control: These functions are used in Live mode or Playback mode.

1) Direction buttons: In Menu setup mode, are used to move the cursor.

2) 目/■ [LOG / Playback Stop]

① Log : Press this button to access the log list.

② Stop : This button stops playback

3) ◄◄/● [R step or FR / REC]

① Reverse Step : This button is used to move backwards, field by field, during STILL mode

② Fast Rewind : This button is used to fast rewind during PLAYBACK mode.

③ REC : Press to start recording. Press the button again to stop.

4) CLR/II► [Clear / Still or Playback] :

① Clear : This button is used to hide the On-Screen-Display information such as the time, date and channel icons. This button removes alert icons on the corner of the screen (AL, VL and PL).   This button is also used to turn off the alarm buzzer.

② Still or Playback: This button is used to still or 1 x playback during playback mode.

5) ⊙/►► [Schedule / F step or FF] :

① Schedule : Press this button to make scheduled recording standby. Press the button again to stop.

② Forward step : This button is used to move forward field by field (picture by picture) during STILL mode

③ F.F. : This button is used to Fast Forward during PLAYBACK mode.

3. Menu / ESC Button : $\frac{MENU}{ESC}$

① Menu : Press this button to display the MAIN MENU screen.

② ESC : Press this button to exit a menu without saving.

4. . Enter :   ↵ ENTER

: Press this button to save menu settings

5. . QUAD

  : Press this button to display the cameras in multi-screen view.

6. . Channel / Numeric Buttons :

Press the buttons to enter data or make selections. Press "–" or "+" to enter appropriate numbers when prompted for a password, or appropriate dates in schedule option mode.

[-, +] : To decrease settings, To increase settings

7. Remote control signal receiver :

Do not block the receiver port on the unit. Doing so may cause the remote controller to function improperly.
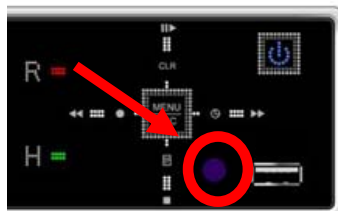
8. POWER button:

Press this button to turn the power on; press again to turn the power off. The POWER LED indicator is lit when the power is on.

9. USB Port: USB port allows light backups of video files to devices.

2. Rear Panel Connectors

1) CAM1~4 or 1~8: BNC input (Camera 1~4 or 1~8) connectors

2) MONITOR (Composite Output) : BNC standard composite video output connector.
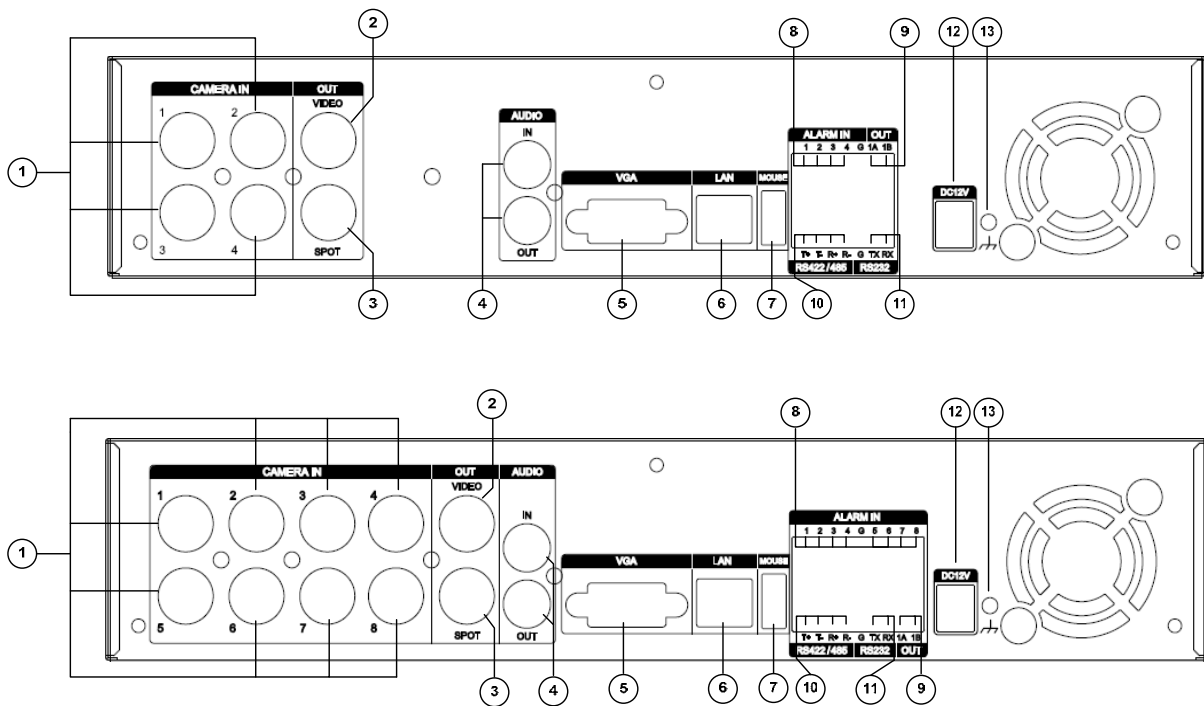
3) SPOT : Spot Out connector

4) AUDIO Input / SPEAKER (Output) connectors : RCA

5) VGA Out connector

6) LAN (RJ-45 Ethernet Port) : For connecting to remote PC via Ethernet network.

7) MOUSE connection : Connect PS2 USB mouse to this port. To use USB only mouse, connect it to USB port at rear panel.

8) SENSOR (ALARM IN 1~4 or 1~8) : For connecting alarm inputs.

9) RELAY (ALARM OUT 1) : For connecting alarm out relays.

10) RS-422 : For connecting to PTZ camera.

11) RS-232C : Development purposes only.

12) POWER : DC power Jack

13) FIELD GND : Ground

3. Remote Controller

4. Virtual Keypad for Mouse Control.

This DVR can be controlled by Mouse. Connect a mouse via USB port before use. Right clicking on the mouse in Live mode and Playback mode, displays the following Virtual Remote Controller and Virtual Keypad and can be used to enter PASSWORD and Camera Name etc

Repositioning

TIME SEARCH
SPOT OUT
INFORMATION
DISPLAY MODE
ZOOM
ENTER
- BUTTON
REWIND
STOP
PLAY
RECORD
NUMBERS & ALPHABET

LOG
BACK UP
PAN/TILT/ZOOM
CANCEL / OSD OFF
MENU
+ BUTTON
FAST FORWARD
SCHEDULE REC ON/OFF
STEP
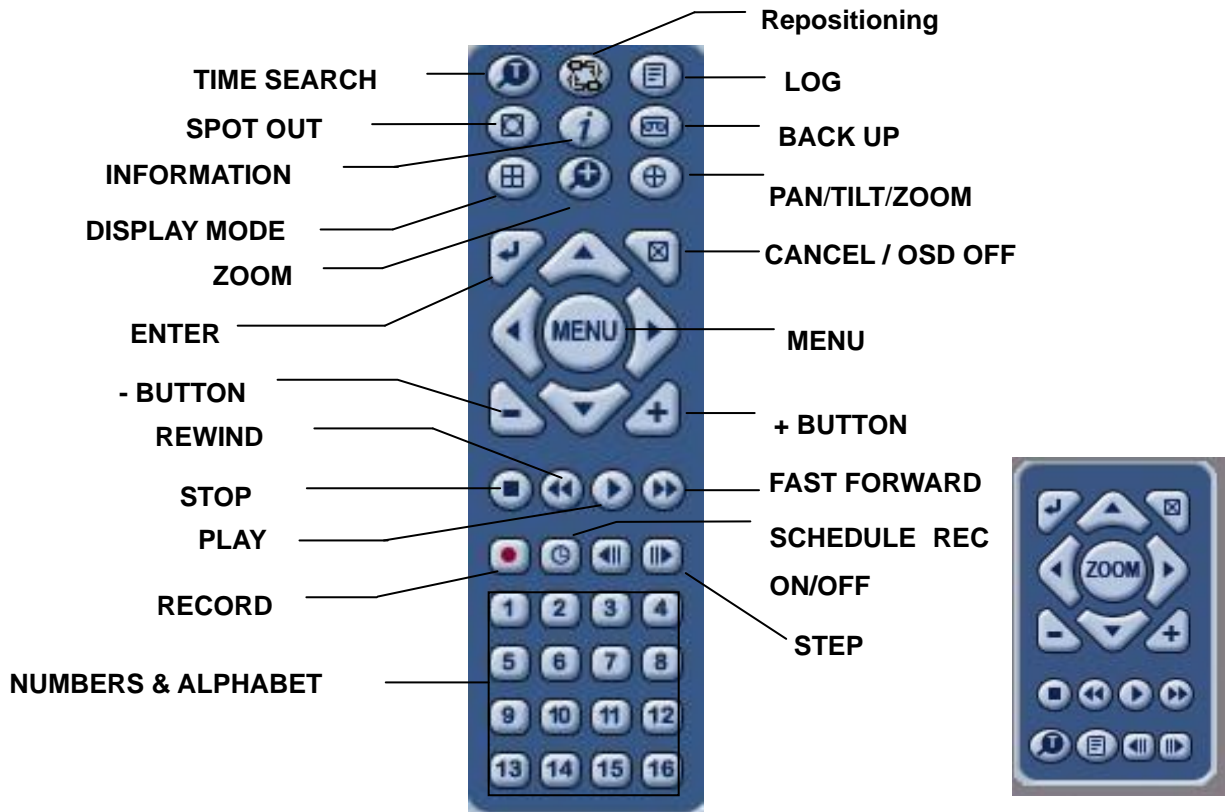
[LIVE]   [PLAYBACK]
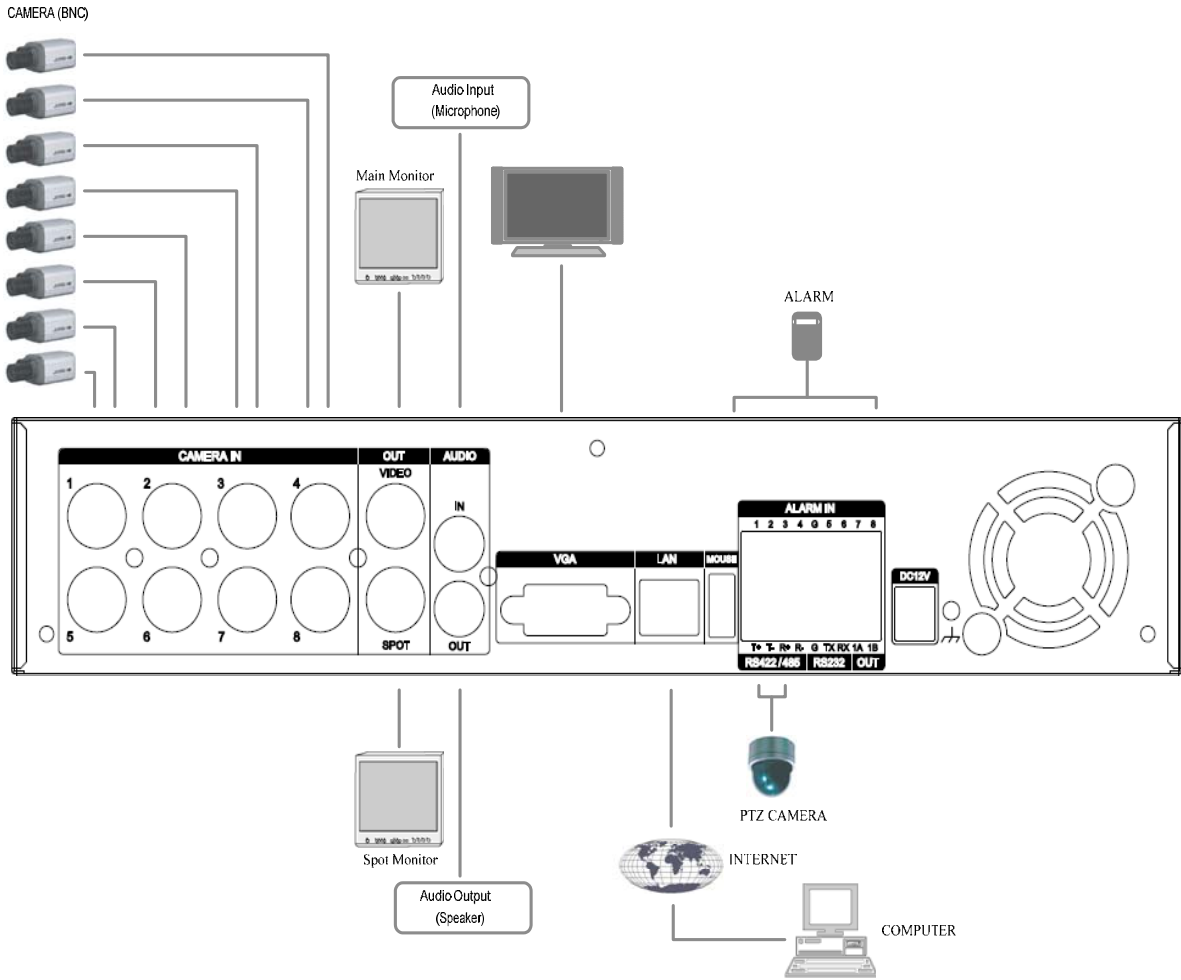
[Virtual Keypad]

II. INSTALLATION & CONNECTIONS

1. Camera, Monitor, Microphone, Alarm Sensor and Power Cord

1-1. System Configuration Diagram

The following illustration is showing a fully installed system.

1-2. CAMERA

This product can be installed for 4~16 cameras, dependant on Model number.

Connect cameras to the VIDEO IN (BNC) on the back panel of the machine.

To connect a PTZ camera, connect the PTZ camera's control line to the RS-422 TX+,

RS-422 TX- terminal and connect the video output to one out of VIDEO IN on the back panel

of the product.
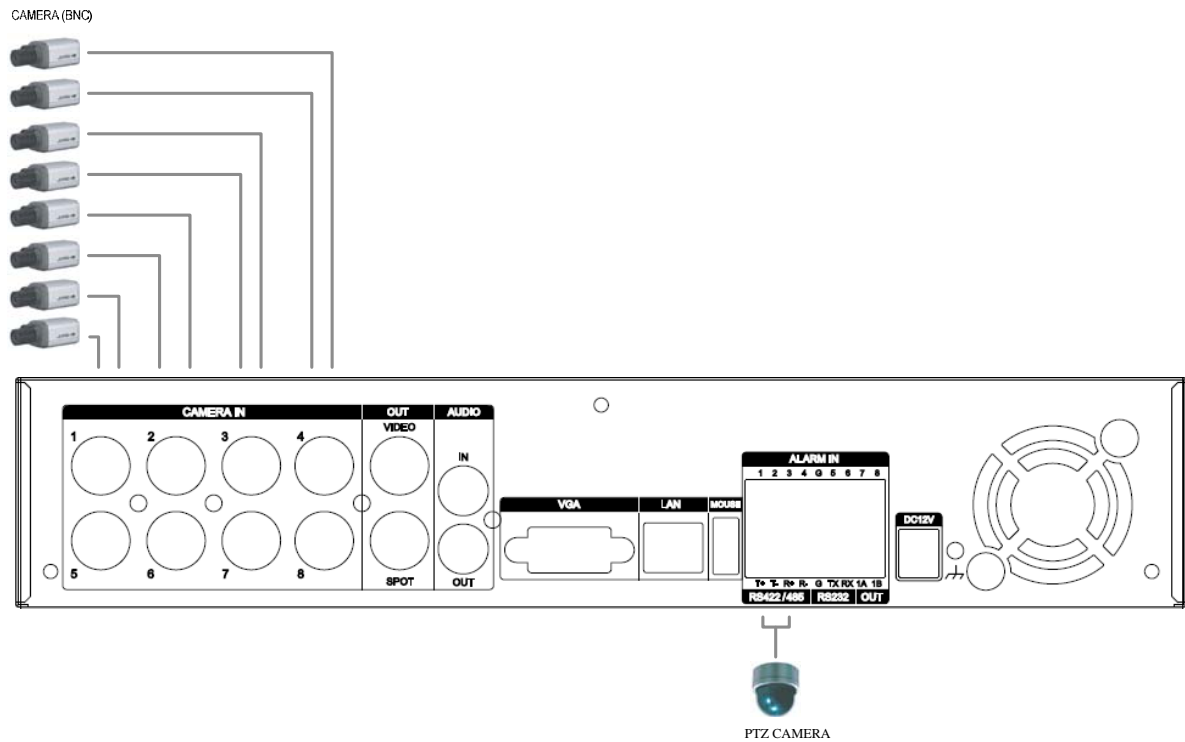
1.3 AUDIO

The system has one channel audio input and output. To record and playback audio signals, connect an audio device (microphone) to the AUDIO IN (1 Vp-p @600 ohms) and speaker to the AUDIO OUTPUT (see illustration below).
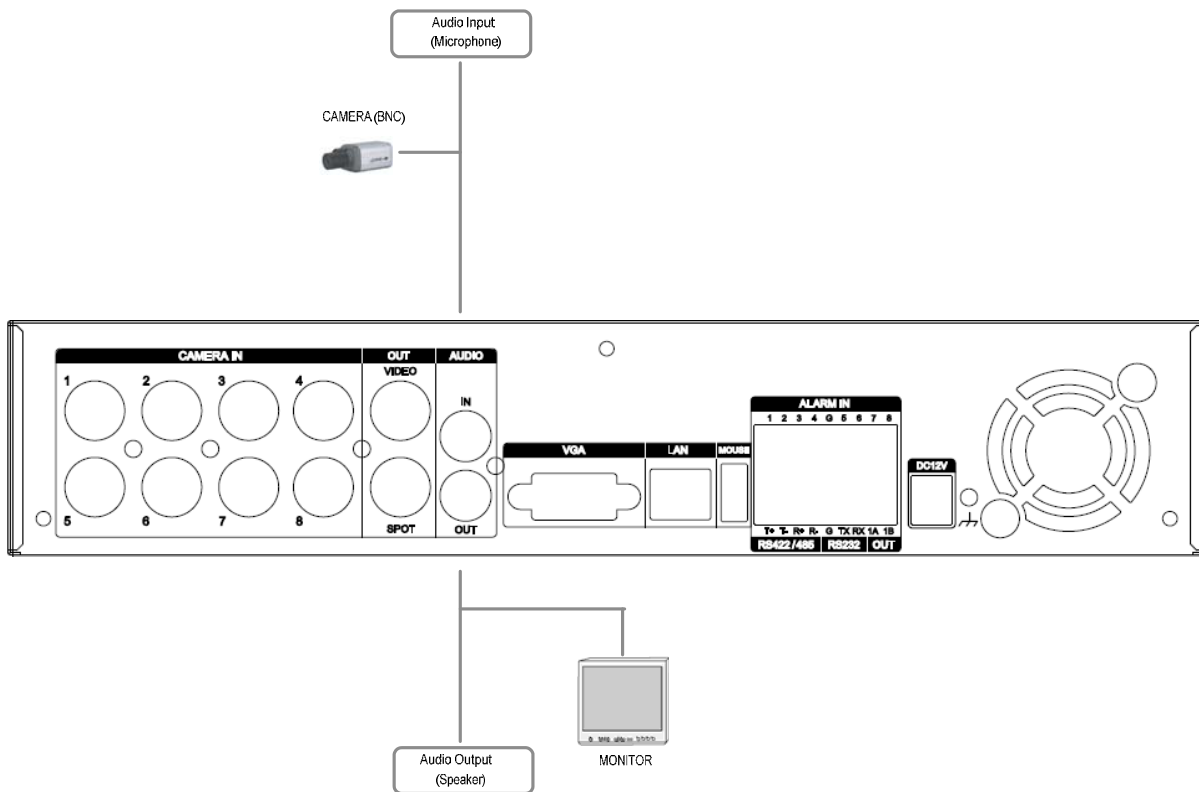
1.4 MONITOR

There are three video outputs (2 x BNC, 1 x VGA) on the rear panel of the system.

Connect monitors depending on your application.

1 x BNC for Main composite video output.

1 x BNC for Spot composite video output.

1 x VGA output.

2. PC System Requirement for Network Connection.

(a) Pentium-4 2.0GHz or higher

(b) 256MB System Memory

(c) 1,024 x 768 Display Resolution, 32 Bit colour

(d) Windows XP, VISTA

(e) Spare 10/100-BaseT Ethernet Port

(f) Microsoft DirectX 9.0c

It is recommended to have DirectX 9.0c loaded on the Client PC. DirectX 9.0c is available for download from Microsoft homepage (www.microsoft.com/windows/directx).

> *<Disclaimer>*
> The remote viewing on a network connection may not work on all personal computers due to differences in personal settings and hardware configurations.

III.QUICK SETUP

To switch on the DVR, press the [POWER] button on the front panel or on the remote controller. When the Digital Video Recorder is powered on, the Live Viewing screenl appears after about 30 seconds.

1) First, stop recording to enter and set the QUICK SETUP menu. While the DVR is recording, TIME and RECORD menus are not activated.
2) When prompted for a password, enter the password using the Numeric buttons.

3) The Factory Default password for the unit is "000000"
4) Press the [MENU] button to display the QUICK SETUP screen.
5) QUICK SETUP menu appears once a password is entered.
6) Use Directional buttons to select Menu and press the [ENTER] button to confirm.

1. TIME

When the Digital Video Recorder is powered on, for the very first time, it is important to set the exact date and time.

1) Select the "Time" menu tab using the directional buttons.
2) Enter the Date and Time by pressing the numeric buttons on the remote controller or "–/+" on the unit.
3) Press the [ENTER] button to exit a menu and save the changes. Press the [ESC] to exit a menu without making changes.

Note:

   1. Recording mode

While recording mode you cannot set the time. Stop recording to change the TIME.

   2. Live mode after time set up

After the time is set up, press the Record button to continue recording.

2. RECORD

There is an easy setup for recording.

2-1. RECORD MODE

1) Select the "RECORD" menu tab using the directional buttons.

2) Select MODE by pressing the "–/+" buttons on the remote controller or the unit.

3) Press the [ENTER] button to exit a menu and save the changes. Press the [ESC] to exit a menu without making changes.

RECORD MODE	• CIF, 4/8Ch: Each channel records at CIF resolution: 360x240 (360x288).
	• Field, 4/8Ch : Each channel records at Field resolution: 720x240 (720x288).
	• Frame, 4/8Ch : Each channel records at Frame resolution: 720x480 (720x576)
	•Frame + CIF:
	Channel number 1 - 720x480 (720x576)+Channel number 2~8 - : 360x240 (360x280)

2.2. RECORD DAYS

1) Select RECORDING DAYS using the "–/+" buttons on the remote controller or the unit.

2) Press the [ENTER] button to exit a menu and save the changes. Press the [ESC] to exit a menu without making changes.

2.3. PRIORITY

1) Select "RATE" or "QAULITY using the "–/+" buttons on the remote controller or the unit.

2) "RATE" : DVR is automatically set up with a high recording speed mode.

3) "QUALITY" : DVR is automatically set up with a high picture quality mode.

2.4 RECORD SETUP INFO

This displays the picture quality and recording speed.

Note: 1. START RECORDING

: When setup is finished, press the [REC] button on the front panel or the remote controller to start recording,

2. To set up individual recording for each channel, or a more specified setup, enter into RECORD on the main menu.

Please refer to 3. ADVANCED on how to enter into the main menu.

3. ADVANCED

Select "ON" or "OFF" using the "–/+" buttons on the remote controller or the unit.

1) "ON" : Select this to enter into the main menu and press the [ENTER] button to exit a menu and save the changes.
   - Escape from "QUICK SETUP" menu by pressing "ESC" button.*
   - Press the MENU button again to enter into MAIN MENU.
2) "OFF" : Select this to stay in the "QUICK SETUP" menu.
3) To return to the Quick SETUP menu from Main Menu, refer to 2-1 DISPLAY SETUP part of this manual

IV.LIVE VIEWING

1. Display Overview

Recording Mode →

Event Indicator →

→ Camera No and Title

→ Status

(1) (2) (3)

1.

(1) Indicates an **Alarm** has been triggered by an alarm sensor. To cancel, press the [CANCEL/ESC] button on the remote controller or the [CLR] button the front panel.

(2) Indicates **Motion** detected. To cancel, press the [CANCEL/ESC] button on remote the controller or the [CLR] button the front panel.

(3) Indicates **Video Loss** during Recording. To cancel, press the [CANCEL/ESC] button on the remote controller or the [CLR] button on the front panel.

(1) (2) (3) (4) (5)

2.

(1) Indicates an **USB Device is connected on Front panel.** It changes to a blue colour while doing a backup. If a Mouse is connected cursor appears.

(2) Indicates the DVR is now recording.

(3) Indicates **Schedule Record** mode is on. It changes to a blue colour when Schedule Record starts.

(4) Indicates **Audio** is stored during the selected playback and turns to a blue colour.

(5) Shows the **Number of Client**, which are connected to the Network (MAX:3).

3. `2003/04/03 THU 06:56:31` : Displays Year, Month, Day, Time and Date.

4. `0345:22` : Shows the remaining recording time of the DVR. If the remaining HDD capacity is less than 4GB, the blue "Recycling" icon is shown.
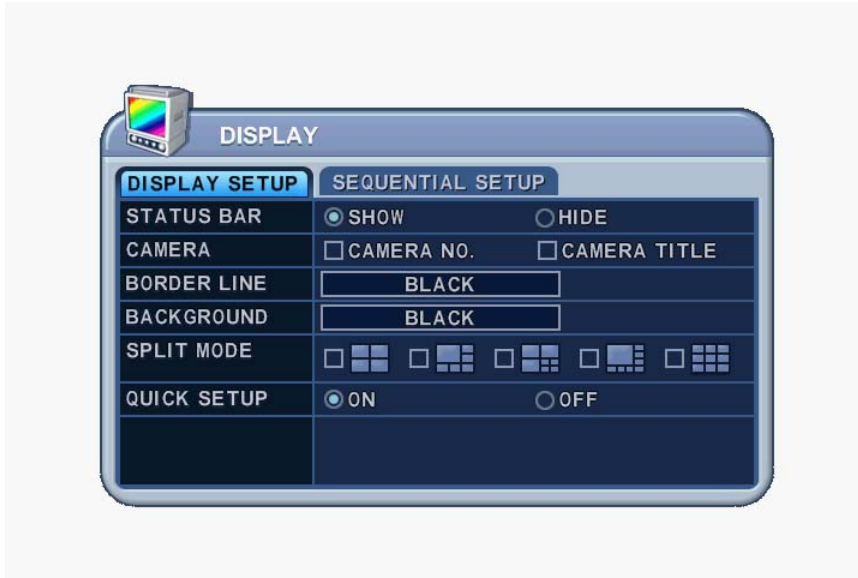
2. Multi Screen Display and Sequencing

2.1 Full Screen Display

Select any camera for Full Screen display by pressing the Number button of the associated camera.

2.2 Multi Screen Display and Sequencing Display.

Press the **[DISPLAY]** button to activate the multi-screen display. It changes in order, as shown below, from the SPLIT MODE choices. When in a 16-way screen display, press the **[DISPLAY]** button for 1 second to begin full screen sequencing. The sequence mode and dwell times are programmable. For detailed information about configuring these, see "**Sequence Setup".**   If the sequence mode is not activated, it moves to Quad mode instead of Sequencing.
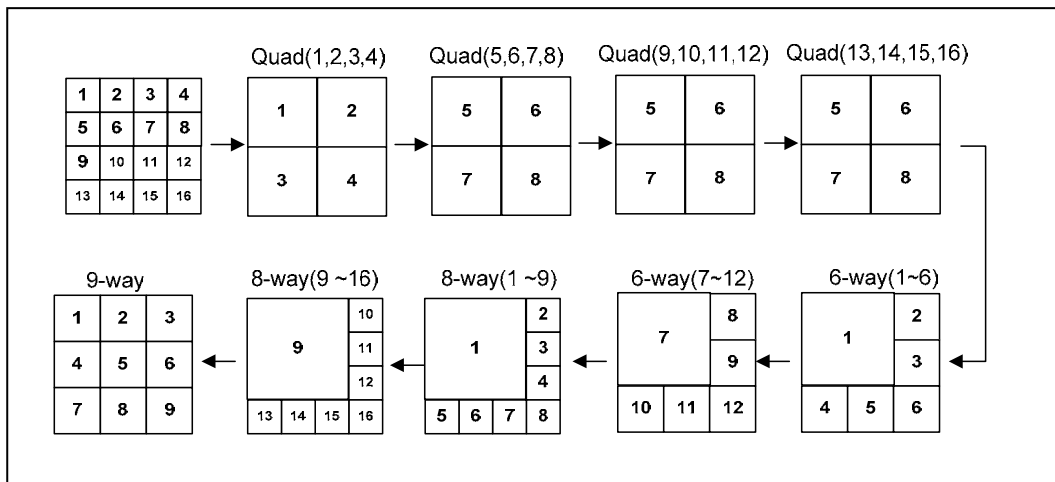
2.3 Repositioning

To reposition a camera view on screen.

2.3.1. Virtual Remote Controller

① Press the button on the Virtual Remote Controller, using the mouse, and the
 icon is displayed on the screen. Move the icon to the desired position by pressing the
directional buttons on the remote controller or Virtual Control Pad.

② Press a Numeric button to reposition the selected camera. Press the [Enter] button to exit here and
save the changes.
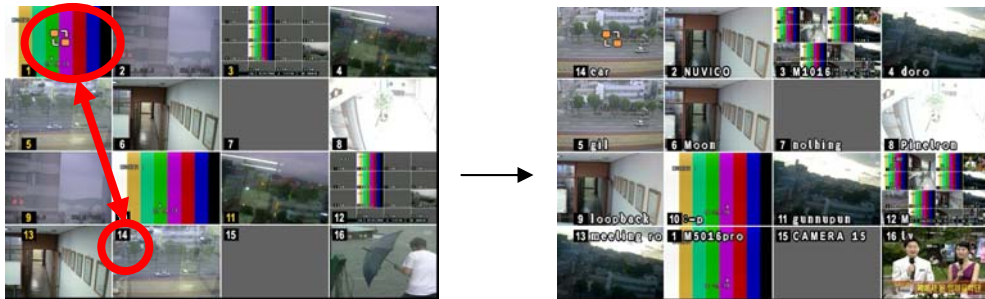
2.3.2. Mouse

Drag the selected camera to the new position using the mouse.

3. Zooming

During Live View mode or Playback, it is possible to zoom into a section of the screen to get a close-up view of the image.

1. To activate the digital zoom, select the full screen display of the camera you wish to zoom.
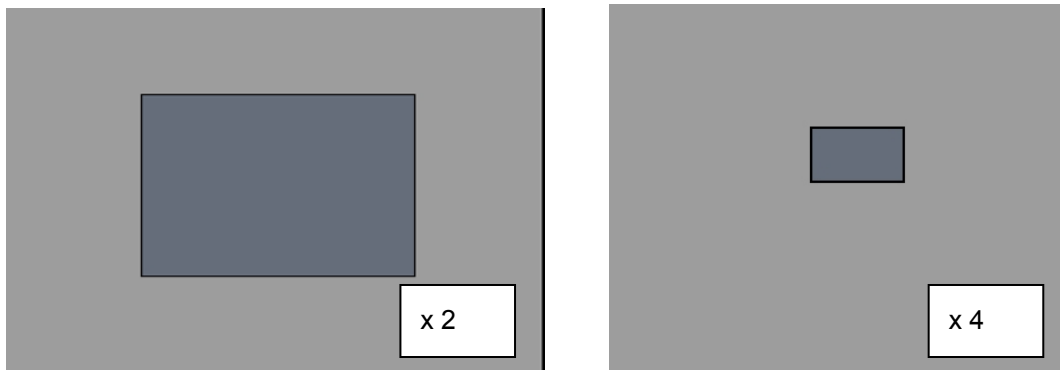2. Then press the **[ZOOM]** button on the IR Remote controller.   A Zoom area box pops up, as shown below.

3. Move the box to the desired position using the directional [▲▼◄►] buttons.
4. Press the [+] button to enlarge the image and the [-] button to zoom out the image.
5. Press the [CANCEL] button to return normal mode.

> **Note:**
>   If the Zoom button is pressed while in a multi-screen display, the zoom operation is not activated. It MUST be a full screen display.

4. Spot Monitor

In addition to the Main Monitor, attaching a Spot Monitor enables a user to monitor specific channels independently from the main monitor.

• Press the **[Spot]** button on the remote controller, then press the number button you wish watch as full screen.
• Press the **[Spot]** button twice to auto switch cameras. The Sequence interval can be set in the Sequential Setup.
• When an alarm has been triggered, that specific channel goes into Full Screen.

V. OPERATION

1. Main Menu Overview

When the DVR is powered on, a Live Viewing screen appears after an initialisation period of about 30 seconds. Press the **[MENU]** button to access the main menu. An Admin Password Box appears. Enter the password using the Numeric buttons on the IR Remote Control or CH increase button on the Front Panel. Default password is '**000000**'. Main Menu is displayed only after a correct password is entered, shown below.

> **Note:** Factory default Admin/User password is 000000. It is recommended that the "PASSWORD" is changed when the DVR is installed. Refer to [System Setup].

1. Use the directional buttons [▲▼◀▶] to select the desired menu. Items selected in the menu are highlighted.

2. Press the [ENTER] button to select the menu and display Sub-Menus. Use the Left/ Right buttons [◀▶] to select tabs on menus. Selected items change to an **[ORANGE]** colour.

   Selected Not selected
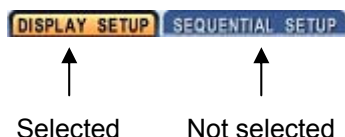
  * It is automatically saves changes when you move between menu tabs.

3. Press the **[ENTER]** button to exit a menu and save the changes.
  Press the **[CANCEL]** to exit a menu without changes.

2. Display Option

2.1. Display Setup

1. Use the directional buttons [▲▼◄►] to select "DISPLAY" menu. Then, press the [ENTER] button to display "DISPLAY SETUP".
2. Use the Left/Right buttons [◄►] to select a menu tab (DISPLAY SETUP SEQUENTIAL SETUP). Selected items change to an [ORANGE] colour.
3. Use the Down [▼] button to specify an option.
4. Use the [-, +] buttons to change values

ITEM	ADJUSTMENT
STATUS BAR	• Select "Show" or "Hide" below the status bar on the Main Monitor. ⬙ Ⓡ ⊙ ▷ ✇1 2003/04/03 THU 06:56:31 75G 0025:45
CAMERA	• Select On-Screen-Display information for Camera Number and Title.
BORDER LINE	• Select Border Line between cameras. **[WHITE → GREY → DARK GREY → BLACK]**
BACKGROUND	• Select Background colour when there is NO VIDEO input. **[GREY → DARK GREY → BLACK → BLUE → WHITE]**
SPLIT MODE	• Display is changed according to the order, as shown, from the choices of SPLIT MODE.
QUICK SETUP	•Select "ON" to resume "Quick SETUP" menu and "OFF" to stay in main menu setup.

5. Save changes and exit the menu, press the [ENTER] button.
   Exit the menu without making changes, press the [CANCEL] button.

2.2. Sequential Setup (Auto Sequence)

ITEM	DEFAULT	ADJUSTMENT
DWELL TIME	2 Sec	• Specify the dwell time of each camera or Multi-screen display. Use the **[-, +]** button : **[1 second ~ 30 second]**
SEQ. MODE	None	• Select desired sequence mode for switching.
FULL SCREEN	ALL	• Select the cameras to be included or excluded from the automatic sequencing.

3. Camera Setup

1. Use the directional buttons [▲▼◄►] to select "CAMERA" menu. Then, press the [ENTER] button to display "CAMERA".

2. Use the Left/Right buttons [◄►] or Number button to select the Camera you wish to configure.

3. Use the Down [▼] button to move to the specified options and use the Left/Right buttons [◄►] to select other items.

4. Use the [-, +] buttons to change values.
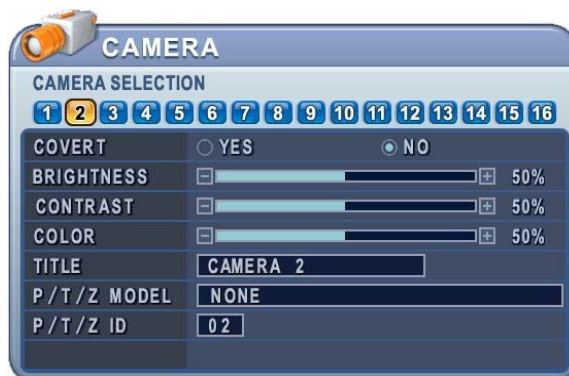
ITEM	DEFAULT	ADJUSTMENT
COVERT	No	• If the Covert Mode is "YES" the selected camera is invisible from all live displays, playback and Network but continues to record. Covert cameras are viewable after changing to "NO".
BRIGHTNESS	50%	• The brightness of each camera can be adjusted by pressing the [-,+] buttons.
CONTRAST	50%	• The contrast of each camera is adjustable by pressing the [-,+] buttons.
COLOUR	50%	• The colour of each camera is adjustable by pressing the [-,+] buttons.
TITLE	Camera #	• A combination of 12 alphanumerics can be entered to label each camera. Press the appropriate Numeric button to type in a camera title. See the table on the next page.
P/T/Z MODEL	None	• Select P/TZ camera model to control.
P/T/Z ID	Camera No	• Select appropriate channel for the PTZ camera. Camera ID means Camera address.

5. Save changes and exit the menu, press the [ENTER] button.

   Exit the menu without making changes, press the [CANCEL] button.

No	1st Press	2nd Press	3rd Press	4th Press	No	1st Press	2nd Press	3rd Press	4th Press
1	A	B	C	1	7	S	T	U	7
2	D	E	F	2	8	V	W	X	8
3	G	H	I	3	9	Y	Z	@	9
4	J	K	L	4	0	.	-	_	0
5	M	N	O	5	10+	SPACE			
6	P	Q	R	6					

<Insert characters from IR Remote Controller >

4. Motion Recording

1. Use the directional buttons [▲▼◀▶] to select "MOTION" menu. Then, press the [ENTER] button to display "MOTION".

2. Use the Left/Right buttons [◀▶] or Number button to select the Camera you wish to configure.

3. Use the Down [▼] button to move specified menu and use the Left/Right buttons [◀▶] to select other items.

4. Use the [-, +] buttons to change values.

ITEM	ADJUSTMENT
RECORD TIME	• Determines the recording duration when motion is detected. [10SEC ~ 300SEC]
CAMERA SELECTION	• Use the Left/Right buttons [◀▶] or Number button to select the Camera you wish to configure.
SENSITIVITY	• Level 1: Low sensitivity~ Level 20: High sensitivity.
MOTION GRID	• Use this menu to setup zones for Motion Detection The screen shown below will overlay over the current video image. • Motion zones are set to OFF – and covered by a GREY mask. • It is divided into 16 Grid and selectable by the Number button on IR Remote. • [icon] : Select All. • [icon] : Cover All.

- Motion detected zones are changed to a BLUE Colour.
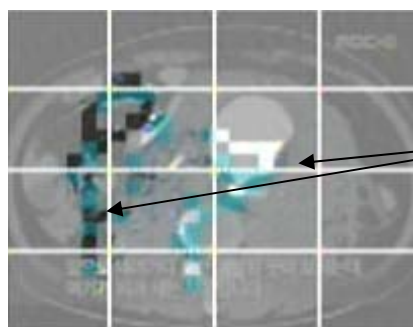
Motion Detected zones

• Use the Numeric button to select Motion Grid. GREY mask is cleared, or use

<+> button to select Motion Grid on the Front Panel. A Running Man Icon is

activated. The <+> button is used for selecting and canceling. Use the <-> button
to escape from the Grid Menu.

• It is also possible to select smaller motion grids for more precise motion
detection using the CMS.

5. Save changes and exit the menu, press **[ENTER]** button. Then go "RECORD" Menu.

6. Select "**ON**" or "**OFF**" to Enable or Disable motion detection, on a per camera basis,
    as shown below.
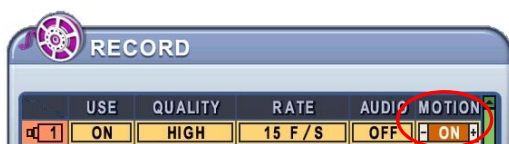
7. Press the **REC** button, and Recording starts according to configured Recording Quality
   and Frame Rate when Motion is detected. It reverts back to stand-by mode after
   motion recording time ends. Camera does not record under normal conditions.

Note: Motion Duration is extended if another motion is detected while in motion
recording.
Note: There may be cases when the recorder's built-in motion detection function does
not operate properly due to the condition of the input video signal, or other factors.
Note: It is recommended that at least 3 motion blocks are selected to get more accurate
motion recording.

5. Continuous Recording (Normal Recording)

The DVR comes with certain preset settings from the factory. Therefore, once the DVR is installed immediate recording is possible by pressing the record button. By default, audio alarm and motion recording are set to OFF.

1. Use the directional buttons [▲▼◄►] to select "RECORD" menu. Then, press the [ENTER] button to display "RECORD".
2. Use the directional buttons [▲▼◄►] to select the Camera you wish to configure.
3. Use the [-, +] buttons to change values.

ITEM	ADJUSTMENT
USE	• Enable or Disable Recording on each camera.
QUALITY	• Specify the record picture quality for each camera. ULTRA → SUPER → HIGH → MIDDLE →LOW
RATE	• Select the recording speed for each camera. : Recording resolutions change between Frame, Field and CIF. <Refer to **System** >
AUDIO	•Select Audio recording: ON or OFF. The audio data is always recorded in real time unlike the video data which could be recorded in various modes, including real time. There may be a slight delay in synchronisation of the audio to video data.
MOTION	•Select Motion Recording ON or OFF. Camera does not record under normal conditions. See the Motion Recording section.

Note: Press the [**MENU**] button on the first line of each item to apply the setting for the remaining channels.

5. Save changes and exit the menu, press the **[ENTER]** button.

6. Pressing the [**REC]** button lights the front panel red REC LED, and recording starts.

7. To stop Recording, press the "**STOP**" button on the IR remote, or the **[REC]** button again on the Front Panel.

< Approximate File Size>

Quality	NTSC			PAL			
	720x480	720x240	360x240	720x576	720x288	360x288	UNIT
LOW	5.1	3.2	2.0	6.1	3.8	2.4	KB
MIDDLE	7.2	4.5	2.8	8.6	5.4	3.4	KB
HIGH	10.2	6.4	4	12.3	7.7	4.8	KB
SUPER	15.4	9.6	6	18.4	11.5	7.2	KB
ULTRA	24.6	15.4	9.6	29.5	18.4	11.5	KB

 * The table is a theoretical calculation because other unknown conditions can affect file size, such as, the condition of the video signal and image noise.

6. Alarm Recording

Always verify the Alarm Record settings prior to starting alarm recording. Please note that alarm recording is independent of any recording modes. Alarm Record starts after Alarm Record Enable.

6.1. Record Setup

1. Use the directional buttons [▲▼◄►] to select the "ALARM" menu. Then, press the [ENTER] button to display "Alarm Record Setup".
2. Use the Left/Right buttons [◄►] to select a menu tab (RECORD SETUP ALARM SETUP).
3. Use the directional buttons [▲▼◄►] to select the Camera you wish to configure.
4. Use the **[-, +]** buttons to change values.

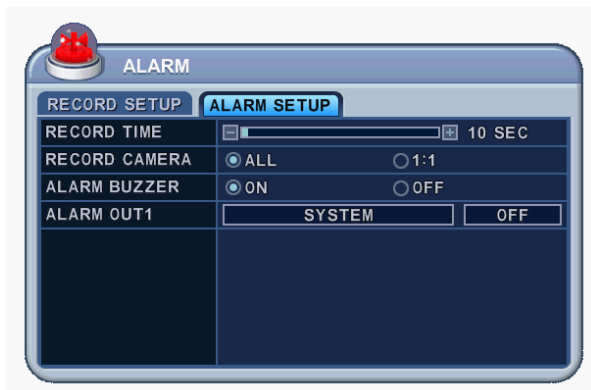| ITEM	ADJUSTMENT
USE	• Enable or Disable Alarm Recording, on a per camera basis.
QUALITY	• Specify the record picture quality for each camera on Alarm Recording. ULTRA → SUPER → HIGH → MIDDLE → LOW
RATE	• Select the recording rate of each camera when an Alarm is triggered
AUDIO	• Select Audio recording: ON or OFF.
INPUT	• Specify the type of Alarm Input device.

Note: Press the [**MENU]** button on the first line of each item to apply the setting for the remaining channels.

5. Save changes and exit the menu, press the [ENTER] button.
   Exit the menu without making changes, press the [CANCEL] button.

6.2. Alarm Setup

ITEM	ADJUSTMENT
RECORD TIME	• Determines the duration of recording after the alarm signal has been activated. [10SEC ~ 300SEC]
RECORD CAMERA	• **ALL:** Start to record All Alarm "ON" channels if any Alarm signal is triggered. • **1:1:** Start to record the Channel on which the Alarm is triggered.
ALARM BUZZER	• **ON:** The Buzzer sounds if an alarm is triggered. The Buzzer sounds for the duration of the RECORD TIME. This buzzer relates to Alarm Out. Configure Alarm Out as "ON" for the Alarm Buzzer. •**OFF:** Disables the ALARM BUZZER function. **Note:** Press the **[-]** button to stop the buzzer immediately. Stopping the buzzer does not stop the alarm recording.

ALARM OUT1	• Configure which relay is triggered when an alarm is activated, per camera. Select from four available options:
	    Video Loss, Motion, Alarm ALL, Each Alarm, System.
	
	Note: If "System" is selected, the relay is triggered when the System has problems such as HDD FAIL, Power Loss etc.
	
	• Press the [Cancel] button to stop Alarm Out.
	    It is cleared in order: Alarm>Motion> Video Loss

6. Save changes and exit the menu, press the **[ENTER]** button.

7. Pressing the [**REC**] button, after setting RECORD ENABLE, lights the red REC LED on the front panel and recording starts.

6.3. Recording Priority

<Example 1>

RECORDING STATUS	
USE	**MOTION**
OFF	OFF

ALARM RECORDING STATUS
ON

●   Resulting Actions:

Press the REC button to commence Alarm Recording, based on the configuration shown above.

(Recording Quality (Super), Frame Rate (6F/S) and Audio).

The system reverts back to stand by mode once alarm recording finishes.

The DVR system starts recording only when an alarm is activated.

<Example 2>

RECORDING STATUS	
USE	**MOTION**
ON	OFF

ALARM RECORDING STATUS
ON

●   Resulting Actions:

Press the REC button to commence continuous recording, based on the configuration shown

above (High picture quality at 3F/S without Audio).

If an alarm is triggered on this channel, the configuration changes to Super picture quality

at 6F/S with Audio. The system reverts back to continuous recording once alarm recording

finishes. Alarm Recording takes priority.

<Example 3>

RECORDING STATUS	
USE	**MOTION**
ON	ON

ALARM RECORDING STATUS
ON

● Resulting Actions:

Press the REC button to commence motion recording, based on the configuration shown above (High picture quality at 15 F/S without audio). If an Alarm is triggered on this channel, the configuration changes to Super picture quality at 6F/S with Audio. The system reverts back to stand-by mode for Alarm or Motion once alarm recording finishes.

The DVR system starts recording when an Alarm is triggered or Motion is detected.

> **Note:**
> ● If two or more recording modes (Alarm, Motion or Continuous) are operational, the alarm recording mode takes the highest priority followed by motion and then the continuous recording mode.

7. Schedule Recording

The schedule chart shows a graphical representation of the defined record mode: Mode1~4. However, the schedules are only displayed if a corresponding schedule has been configured in the schedule menu.

1 . Use the directional buttons [▲▼◄►] to select "SCHEDULE" menu. Then, press the [ENTER] button to display "Schedule Chart".

2 . Use the Left/Right buttons [◄►] to select a menu tab (CHART MODE1 MODE2 MODE3 MODE4).

3 . Use the Down button [▼] to select the Day to be configured.
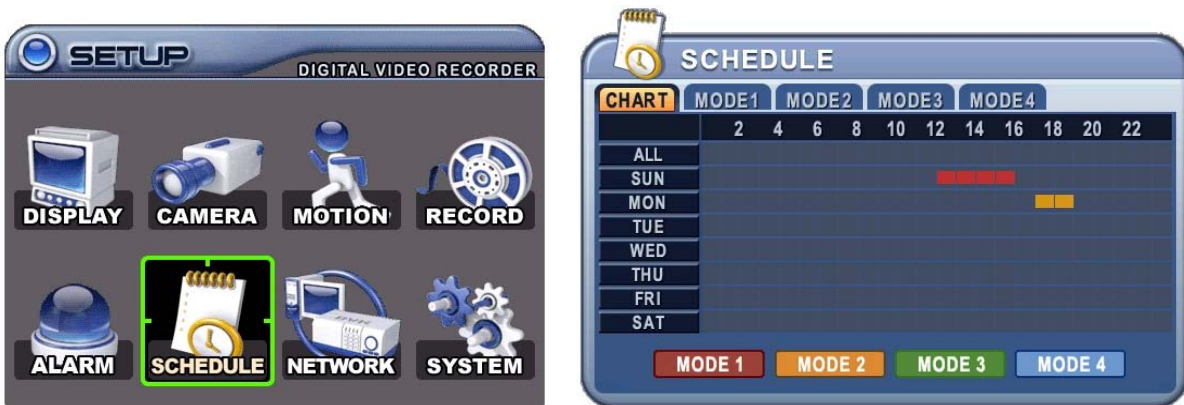
The schedule breaks down the days of the week into eight different categories: ALL, SUN, MON, TUE, WED, THU, FRI and SAT. ALL is for everyday of the week. A Daily schedule has priority over ALL.

4 . Press the **[Enter]** button on one of the eight categories. A detailed menu pops up for the selected Day, as shown below.
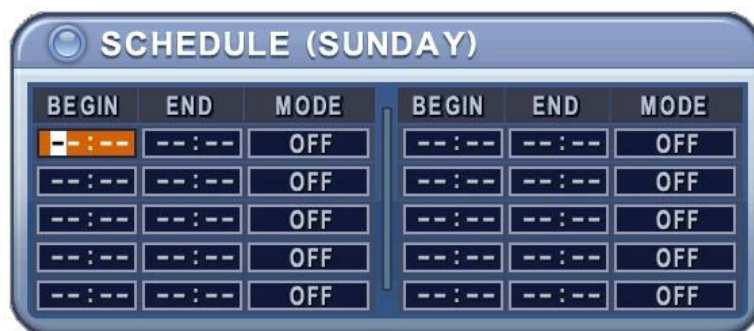
5. Enter the beginning and end time, then select the Record mode for recording.

    (1) BEGIN: The time to start recording.

    (2) END: The time to end recording. The end time must not be before the starting time or the same as the start time.

    (3) MODE: Up to 4 different recording modes can be pre-determined for schedule recording (MODE1 ~ MODE4).

6. Define modes.

*Refer to Basic Recording for set up

Note:

• The recording time uses a 24 Hour clock (00:00 - 23:59). You need to set 2 days if the setting goes over one day.

D/W	BEGIN	END	MODE
Monday	18:00	23:59	MODE 1
Tuesday	00:00	08:59	MODE 1

• The recording does not start when End time is ahead of Start time.

    EXAMPLE

D/W	BEGIN	END	MODE
Monday	18:00	08:59	MODE 1

7. To activate Schedule Recording after configuration, press the SCHEDULE button. The SCHEDULE indicator illuminates. When a program is within the current time, the REC indicator illuminates and the unit begins recording. Please note that if there are no schedules configured the DVR does not record.

8. When the scheduled recording period is over, the REC indicator goes off and recording stops.

9. If you wish to stop recording while Schedule Recording, press the SCHEDULE button. The SCHEDULE indicator goes out and the Schedule Recording Mode is released.
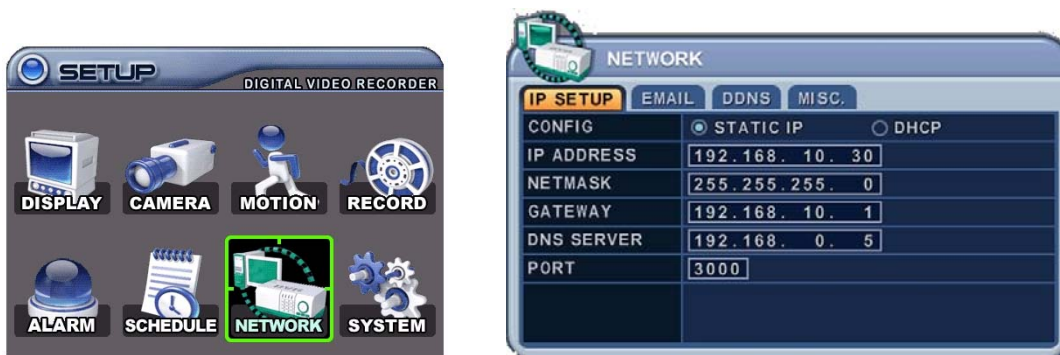
Summary of Combinations

RECORD MODE	MENU	RECORD		ALARM		SCHEDULE
		CAMERA	MOTION	USE	Normal	MODE 1~4
Continuous	RECORD	ON	OFF	OFF	OFF	OFF
Motion	RECORD	ON	ON	OFF	OFF	OFF
Alarm	ALARM	OFF	OFF	ON	ON	OFF
Schedule	SCHEDULE	OFF	OFF	OFF	OFF	ON
Schedule Motion	SCHEDULE	OFF	ON	OFF	OFF	ON
Normal and Alarm	RECORD &ALARM	ON	OFF	ON	ON	OFF
Motion and Alarm	RECORD &ALARM	ON	ON	ON	ON	OFF
Schedule and	ALARM &SCHEDULE	OFF	OFF	ON	OFF	ON

8. Network Setup

A static service has an IP address that remains constant for the duration of the contract with the Internet Service Provider (ISP), whereas a dynamic service consists of an IP address that possibly changes every time a new connection is made through the ISP, or recurrently in a given period of time. Most Internet Service Providers offer both solutions and this manual distinguishes between them, according to commonly available service types, when configuring the DVR for networking purposes.

8.1. IP setup

1. Use the directional buttons [▲▼◀▶] to select "NETWORK" menu. Then, press the [ENTER] button to display "Network".

2. Use the Down button [▼] to specify the connection details.
3. Use the [-, +] buttons to change values.
4. Save changes and exit the menu, press the [ENTER] button.
   Exit the menu without making changes, press the [CANCEL] button.

ITEM	ADJUSTMENT
CONFIG	• STATIC IP: Edit IP address, Gateway and Network Subnet Mask. • DHCP: Dynamic Host Configuration Protocol. It is set automatically from DHCP if there is a Local DHCP server (i.e. Local Router). If DHCP is set to ON, the IP address, Gateway and Subnet Mask are assigned by the DHCP Server (i.e. the Local Area Network Router).
IP Address	• Enter the Static IP address
Netmask	• Enter the address of the Subnet Mask.
Gateway	• Enter the IP address for the internet Gateway Server.
DNS Server	• Verify the address of the domain name system (DNS) Server
PORT	• Select "0000 ~ 9999"

	The DVR's connection port can be changed in case the default port, 7000, cannot be opened. The DVR's service port may be modified to allow the CMS connection.

Note: How to connect the DVR via a Network using **DDNS**
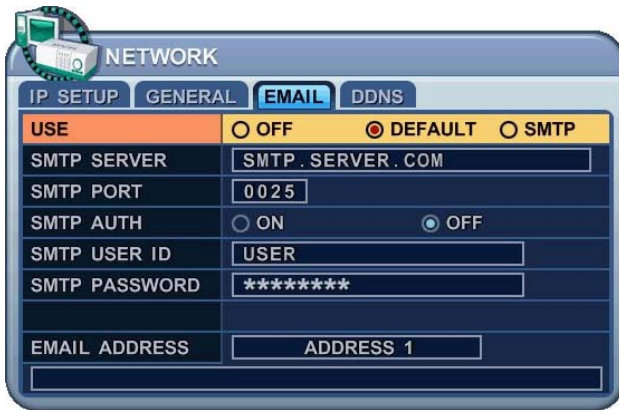
1. Select DHCP.
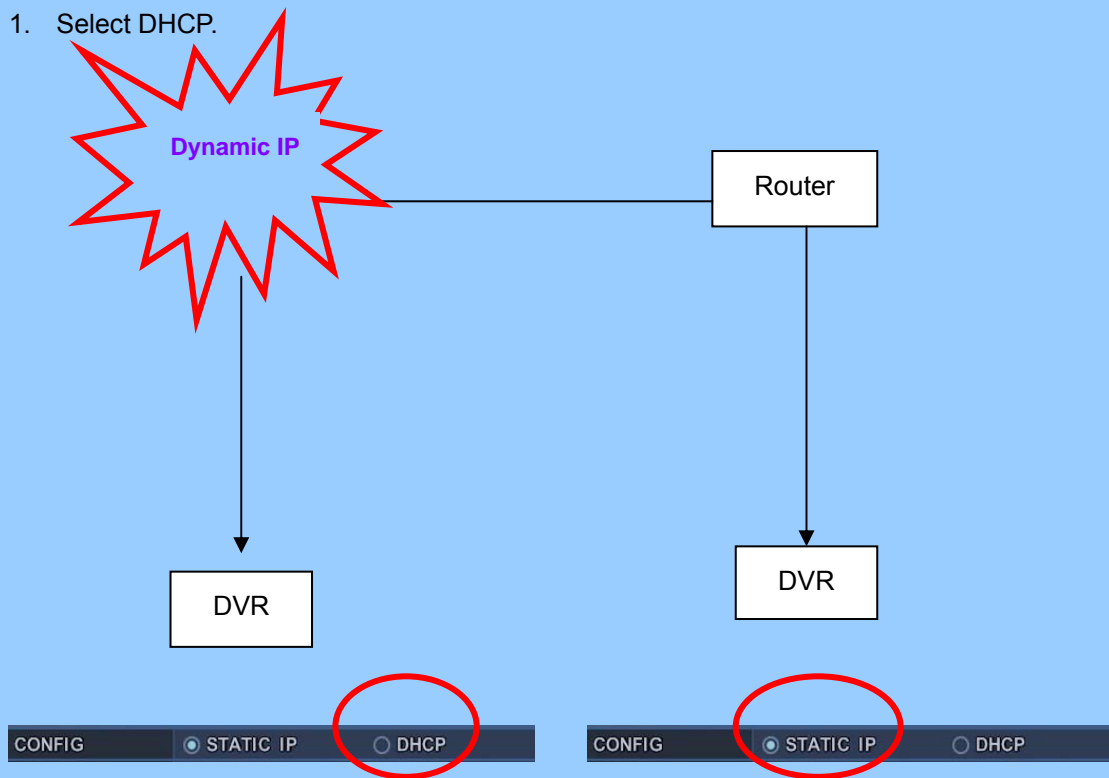
2. Please check "Serial No" on System Menu.
3. Enter DNS name<ex: 0Hhttp://L10020E.**dvrhost.com:7000**> on Web browser or CMS.
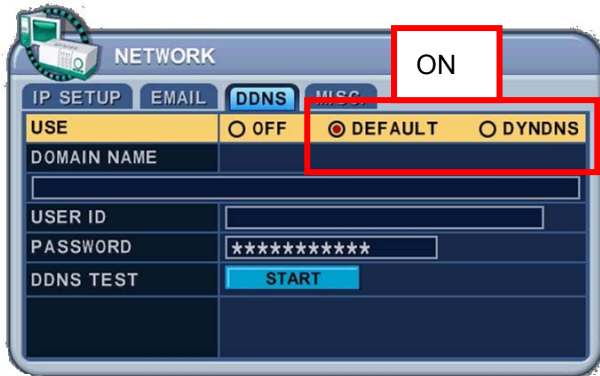
8.2. E-Mail

The DVR is capable of sending e-mails, when an event occurs, to up to 5 different e-mail accounts: Events are Alarm , Video Loss, Power Loss (when power recovers), HDD Failure.

There are two methods of sending an e-mail; Using "Unique" or "Public/ your own mail server".

ITEM		ACTION
USE	OFF	• Select the e-mail notification state: on or off. The default is off.
	Default	• Select the manufacturers default mail server. : You do not need to setup SMTP server.
	SMTP	• Select a SMTP mail server and then setup the SMTP menu below.
SMTP	Server	• Select Highlight SMTP Server and then press numeric buttons to define an e-mail server.
	PORT	• Define the port that the SMTP server will communicate through.
	AUTH	• Select Authentication: on or off. The default is off.
	USER ID	• Enter the user ID of the Mail Server if your server needs Authentication. (It's recognised as lower case letters, even if displayed as capital letters)
	Password	• Enter the password, if your server needs Authentication. (It only recognises lower case, we do not support capital letters)
E-mail Address		• Enter an e-mail address to send the notifications to.

8.3 DDNS

ITEM	ACTION

USE	• OFF : NO use of DDNS
	• DEFAULT : use default "dvrhost.com" server for DDNS.
	  If the DVR's host name (SYSTEM >INFO) is L50AD25, Your DVR's DDNS
	  address is http://L50AD25.dvrhost.com:portNO
	• DYNDNS : to use "Dyndns.com" domain.

Domain Name	• Enter your domain name if you use "Dyndns" server for DDNS.
User ID	• Enter user ID for DDNS.
Password	• Enter user PW for DDNS
DDNS Test	• Test your DDNS address.

8.4. MISC.

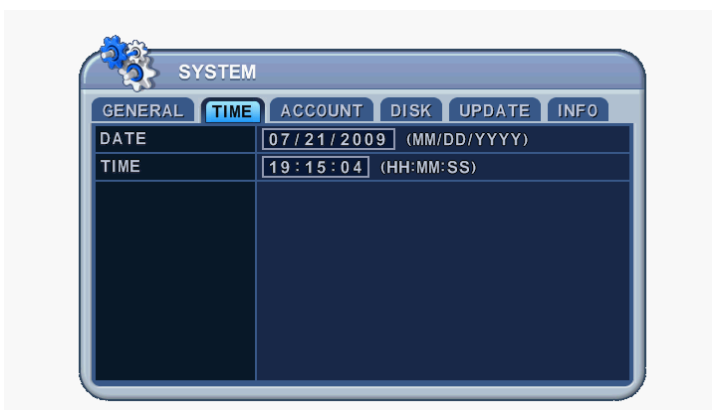| ITEM	ADJUSTMENT
BANDWIDTH	• "Unlimited" is set by default. Select between "64 KBPS ~ 8 MBPS"

9. System Setup

9.1. General
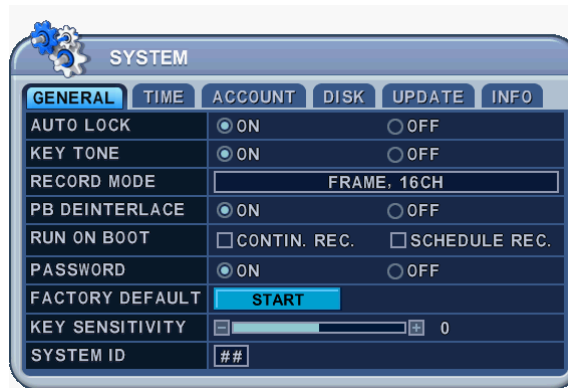
1. Use the directional buttons [▲▼◄►] to select "SYSTEM" menu. Then, press [ENTER] button.
2. Use the Left/Right buttons [◄►] to select menu tabs.
3. Use the Down button [▼] to specify the detail.
4. Use the **[-, +]** buttons to change values.
5. Save changes and exit the menu, press the **[ENTER]** button.
   Exit the menu without making changes, press the **[CANCEL]** button.

ITEM	ACTION
AUTO LOCK	•The DVR locks all the buttons after three minutes of inactivity, like a Screensaver. The buttons can be unlocked with the user password. Default is "OFF".
KEY TONE	• By default, the DVR emits a beep every time a button is pressed. Set the key tone to OFF to turn button beep off. Default is "ON"
RECORD MODE	•CIF, 4/8Ch: Default setting The system records each camera individually and then multiplexes them. Each channel records at CIF resolution: 360x288. • Field, 4/8Ch: The system records each camera individually and then multiplexes them. Each channel records at Field resolution: 720x288. • Frame, 4/8Ch: The system records each camera individually and then multiplexes them. Each channel records at Frame resolution: 720x576 • Frame + CIF : Channel number 1 - 720x576 + Channel number 2~8 - : 360x280
PB DEINTERLACE	• ON: Reduces image flickering but also reduces picture quality. • OFF: Better picture quality for still images but may flicker for moving pictures.
RUN ON BOOT	• It's purpose is to start REC, without pressing the REC button, when switched on.

|	
PASSWORD	• If you choose "OFF", the password window is not shown except for POWER/ SERVICE MENU/ RECORDING STOP/ SCHEDULE RECORDING STOP.
FACTORY DEFAULT	• To restore factory default settings Stop recording and then select "START" using the ENTER button.
KEY SENSITIVITY	• The sensitivity of the front panel touch buttons can be controlled with this setting.
SYSTEM ID	• To select the DVR to be controlled with the remote controller, press and hold the DVR ID button. While holding the DVR ID button, press the appropriate DVR ID number. For example, enter 05 for DVR ID 05, enter 43 for DVR ID 43 etc.. • Set the IR controller ID to "00" to control all DVR's at the same time; whatever DVR ID they are.

9.2. Time

ITEM	ADJUSTMENT
DATE & TIME	• Enter the Date and Time.

Note:

When in Recording mode the time cannot be setup. Stop recording to change the TIME/DATE.
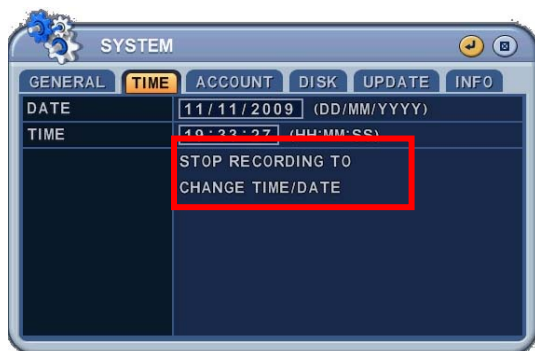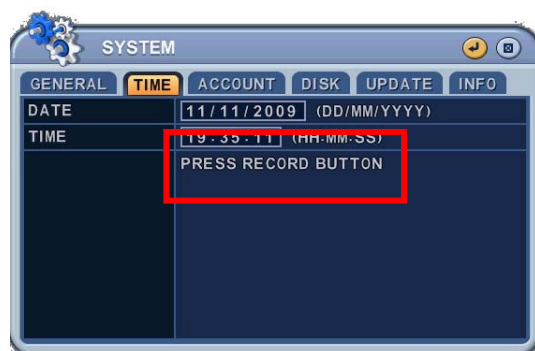
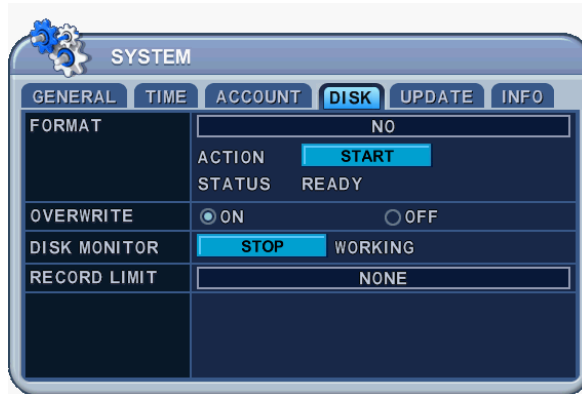< Record Mode>   < Live Mode after time setup >

9.3. Account

Admin can define each User's Authority. Select a User (1~5), then select the Activate option: on or off. When enabled, it's possible to configure individual User settings: Monitoring, Playback, Back up, Network, Configuration (Main Menu Setup), Shutdown (Power off).

Enter the 6 numbers for the new password, and then re-enter the same password under COMFIRM section.   The asterisks advance automatically as the numbers are entered.

9.4. DISK

| ITEM	ACTION
FORMAT	1. Stop the DVR completely before a disk format. 2. Use the **[-, +]** button to change select device. * Internal HDD * USB – Memory Stick * USB – CD/DVD-RW * USB – HDD **Note:** When you format USB-HDD, it is formatted to a FAT 32 format type. 3. Use the Down button [▼] to move START , then press **["+" or " –"]** button to start formatting. 4. Formatting will begin, and the progress is displayed at the bottom of the window. Please note that it takes 10~30 seconds to format a HDD. 5. When formatting is finished, it will display COMPLETE, and also SUCCESS at the bottom of the window.
OVERWRITE	Users can select the recording policy of the system's internal hard disk drive. By default, the system's hard disk drive is set to overwrite from the beginning when it becomes full. •ON: By default, the hard disk drive will overwrite from the beginning when it becomes full. •OFF: It stops recording when the HDD is full.
DISK MONITOR	• It stops automatically if a HDD failure happens. It starts "Monitoring" again after DVR reboot (use the **[-, +]** buttons to stop or start).
RECORD LIMIT	Allows you to configure when the DVR automatically deletes all data from the HDD. It leaves the data for a set duration from the current time. [NONE → 12HOURS → 1DAY~ 6DAYS → 1WEEK ~ 4WEEKS]

9.5. UPDATE.

1) Download the latest firmware file and copy to a USB Flash memory stick in the **Root** Folder.

2) Turn on your DVR (if in use, please stop recording)

3) Plug USB memory stick into the front USB port and check if USB icon shows up on the Status bar.

4) Move to upgrade menu and start the upgrade by pressing [+]/[enter] button.

5) Wait until upgrade finishes and the "Success" message is shown, then Press [+] to restart.

Indicator	CONDITION
H/W VERSION	• Shows the Main PCB version of the system.
S/W VERSION	• Shows the Software version of the system.

Note:

While in recording mode, you cannot update DVR. Stop recording to update.
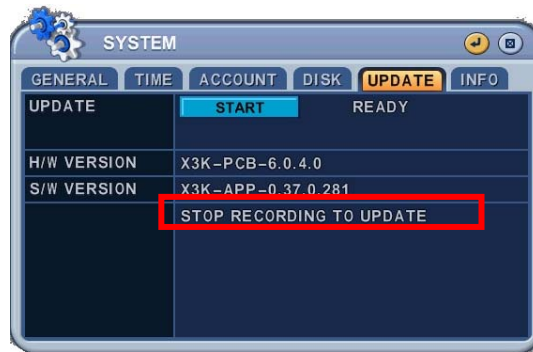
< Record Mode>

NOTE*:*

1. Make sure the USB Flash memory stick has enough space for update file size.
2. Do not make a special folder in the memory stick for these files.
3. Do not format the USB, just remove all files inside.
4. Do not switch OFF or PRESS any key during the upgrade process.
5. Please consult with your installer or dealer before upgrading the DVR.

9.6. INFO

Press the Info button on the IR remote to display system information. Other menus are blocked. This menu provides general information, as listed below:

Indicator	DISPLAY
MODEL	• Display the number of channels and compression.
HOSTNAME.	• Display Hostname and Mac address.
LANGUAGE	• Display the language of this unit.
NETWORK	• Shows the current IP and Port of this unit.
INTERNAL HDD	•Displays numbers of HDD and total HDD size .
USB PORT	• Displays what kind of device is connected to the front USB connector.
MOUSE PORT	• Displays mouse is connected to mouse port on the rear panel.
IDE BUS 0	• Shows the Primary HDD status. A : Master, B: N/A **Note**: It displays if the HDD supports the S.M.A.R.T function. Please change the HDD for a NEW HDD in cases when there is a "**WARNING"**. ** "**ERROR**" It means the HDD could be physically damaged.

VI.PAN/TILT ZOOM CONTROL

1. P.T.Z .Menu

1. To activate the Pan/Tilt Control, select the full screen display of the camera you wish to control.

2. Then press the **[P/T/Z/FOCUS]** button. Shortcut Menu box pops up, as shown below:

	Note: Refer to the **Help Menu** for specific control.

INDICATOR	RESULTING ACTION
 [ENTER] Button	• Press this button to display the **"HELP"** Menu. Press the **[ENTER]** Button again, or the **[CANCEL]** button to cancel Help Menu.
 [CANCEL] Button	• Press this button to cancel "PAN/TILT" operations.
 [MENU] Button	• PTZ camera control interface is extended to use all functions. Press this button again to return to the short-cut menu.
	• To Tilt Up and Down. • To Pan Left and Right.
	• Zoom In and Out.

The layout of the PTZ interface conforms to the layout on the front of the DVR and the remote controller. The Menu button is the guide anchor position for all other buttons. When in PTZ interface mode, all buttons are used for PTZ related operations.

** Please check the following before using a PTZ camera

1. RS 422/485 Connection, Camera Jumper Setting etc.

2. Set the correct PTZ Camera ID & Model No. in the Display Menu

2. Preset & Tour

Button	Function
	Set preset position; SPOT OUT on remote controller Move the PTZ to the desired location. Press the Preset button. Custom 1 illuminates. Set the # for the Preset location. Press Enter to save and exit.
	Go to preset position; INFO on remote controller Press Go button. Enter the desired Preset # and press Enter.
	Start Auto Tour; BACKUP on remote controller Press Auto Tour Button. Press the + button and enter the range of Presets and press Enter. For Example, Auto Tour Button, +5 starts a tour of presets 1 ~ 5 on the PTZ Camera

3. **Custom Functions**

Button	Function
	PTZ custom function 1; DISPLAY on remote controller
	PTZ custom function 2; ZOOM on remote controller
	PTZ custom function 3; P/T/Z on remote controller

Please refer to the PTZ manufacturer's instruction manual for the correct jumper settings to match the protocols in the DVR.

4. PTZ Camera Model - PAN/TILT/ZOOM Camera List

#	Model Name	3X	Speed	Preset	Go to	Tour	A. Pan	A.Tilt	Pat	Me	Esc/ Enter
1	NUVICO, NV 9600 BPS	o	o	o	o	o			o	o	o
2	MERIT LILIN, PIH-7000/7600	o	o	o	o	o	o			o	o
3	VCL, Orbiter Microsphere		o	o	o	o					
4	SAMSUNG, SCC-641		o	o	o	o	o			o	o
5	NEC, NC-21D		o	o	o	o					
6	SUNKWANG, SK2107		o	o	o	o	o				
7	RESERVED		o	o	o	o	o				
8	D-MAX, PTZ PROTOCOL		o	o	o	o	o	o			
9	LG, LPT-A100L P/T/Z						o				
10	HONEYWELL, GCC-655N										
11	WONWOO, PT-101						o				
12~14	PELCO, D 2400~9600	o	o	o	o	o	o		o	o	
15	C&B TECH, AN200			o	o	o					
16	CANON, VC-C4			o	o	o					
17~19	PELCO, P 2400~9600	o	o	o	o	o	o		o	o	
20~22	PELCO, EP 2400~9600		o	o	o	o					
23	PANASONIC, WV-CS/W85x,86x		o	o	o	o				o	o
24	HONEYWELL, HSDN-251N/P		o	o	o	o					
25	GE/KALATEL, CyberDome		o	o	o	o	o				
26	DY ELEC, SmartDome		o	o	o	o	o				
27	BOSCH, TC8560/TC700		o	o	o	o					
28	SYSMANIA, ORX1000										
29	AD, DELTADOME		o	o	o	o			o		
30	HUNT, HTZ-2300		o	o	o	o	o	o			
31	HAZEM, RESERVED			o	o	o	o				
32	RVT, EZ Protocol	o	o	o	o	o			o	o	o
33	LG, MULTIX		o	o	o	o			o		

34	ELMO, PTC-200C/400C		o	o	o	o				
35	NICECAM, MP-1xxx		o	o	o	o				
36	C&B TECH, CNB-PTZ102			o	o	o	o	o		

**Note***: Speed has 0~8 steps*

1 (Slow) – 8 (Fast)

* 0 – Keep pressing these buttons to increase/decrease speed

VII.SEARCH/ PLAYBACK

1. Time Search

1. To start playback, press the ⬜🔍 **[Time Search]** button and the Time Search Calendar Menu pops up, as shown below.

2. Use the Left /Right buttons to change the Month on this bar **09/2004**

> **Note**: It does not change if there is no stored data in previous/next month.
>
> **Note:** Data is colour-coded by category: Alarm (Red) - Motion (Green) – Normal (Yellow)

3. Use the Up/Down buttons [▲▼] to select a "DAY" on the Calendar. Selected data is shown as a graphical representation of the recorded video stored on the DVR.

4. Select "Hour and Minutes", or the camera you wish to playback, and press the **[ENTER]** button.

> **Note:**
> Time : Multi-Screen Display
> Camera : Full Screen Display

5. Press the **[ENTER]** button to start playback.

2. Log List Search/Alarm, Motion Search

The Log Lists can be used to search and review recorded data from a given point in time. Alarm, Motion, Video Loss and System related logs can be searched and played back directly from the time of the incident.

1. To start an Event Search, press the [Log] button on the IR Remote and the Log List Menu pops up, as shown below.

LOG
ALL	SYSTEM	NETWORK	ALARM	MOTION	VLOSS
DATE	TIME	MESSAGE	PAGE-1
07/21/2009	23:19:12	ADMIN (124.137.23.66)
07/21/2009	23:19:12	CONNECT (124.137.23.66)
07/21/2009	23:16:13	DISCONNECT (124.137.23.66)
07/21/2009	23:15:53	SNAPSHOT (124.137.23.66)
07/21/2009	23:15:52	ADMIN (124.137.23.66)
07/21/2009	23:15:50	CONNECT (124.137.23.66)
07/21/2009	23:08:21	DISCONNECT (124.137.23.66)
07/21/2009	23:08:09	CAMERA 2 MOTION

MENU TAB	CONDITION
ALL	• Is a list of all the events since the initial power on procedure of the DVR
SYSTEM	• Shows Events except for Alarm, Motion, and Video Loss.
NETWORK	• Shows the NETWORK List.
ALARM	• Displays all the Alarms Logged.
MOTION	• Shows the Motion Log List.
VIDEO LOSS	• Displays the Video Loss Log List.

2. Use the Up/Down buttons [▼▲] to move to the "Time" to playback. Use the Left/Right buttons [◀▶] to move to the NEXT page.

3. Press the **[ENTER]** button to start playback.

Note*:* Log List is saved on HDD.

Note: To save the log, plug a USB memory stick into the USB port on the front panel. Press the Display button on each category to backup Log data. Blue USB Icon flashes.
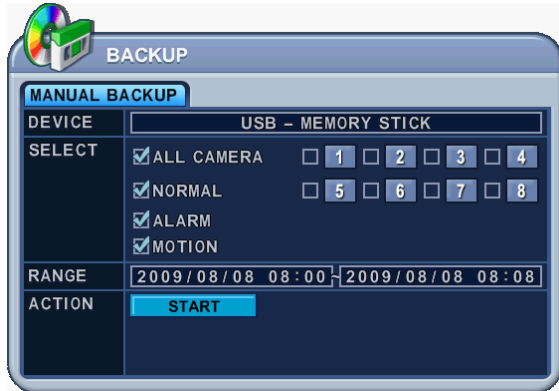
VIII.BACKUP

1. USB Memory Stick Backup

1. Insert a USB Memory Stick into the USB connection port on the front panel.

Note: Make sure the USB device has enough unused space before commencing backups.

2. Press the [BACKUP] button on the front panel to display the backup menu.

3. Use the **[-, +]** button to change selected device: USB - Memory Stick.

4. Select the data for BACKUP.

    (1) NORMAL: Normal Recording Data

    (2) ALARM: Alarm Recording Data

    (3) MOTION: Motion Recording Data

    The illustration above has selected ALL CAMERA, NORMAL, ALARM and MOTION data.

5. Enter the digits as required in 24-hour format and move to .

6. Press the **[ENTER]** button to start the BACKUP.

    * USB icon is highlighted in blue during the backup.

    • If there is not enough space on the USB memory stick, the system does not proceed with the backup.

USB Memory Stick

● The backup progress indicator is displayed at the bottom of the window. While the system is in a backup session, please do not attempt to use the playback function.

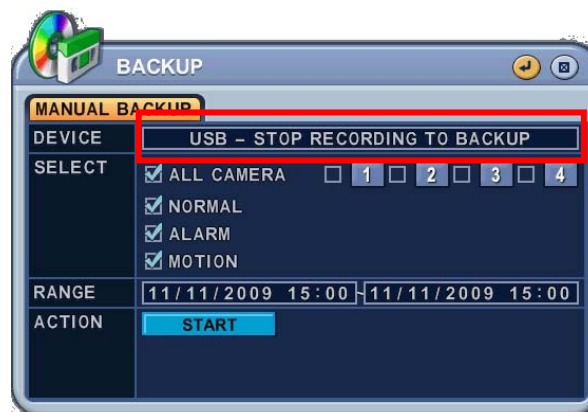7. After the backup process is finished, the USB icon is highlighted in white.

2. External USB HDD Backup

● An external USB-HDD, CD/DVD-RW device is recognised, within 10 seconds, after
plugging in a UBS connection cable to the DVR UBS port.

- Before progressing to Backup, first refer to the notes below

---

Note 1:

Stop recording to back up if using an external HDD or CD/DVD –RW device.

<Record Mode>

Note 2:

Format the USB HDD to FAT32 format type.

If the USB HDD is not formatted to FAT32 type, the message

"USB – HDD (NEED TO FORMAT) is displayed in the device menu.

Please refer to Section 9.2 Disk for more information about formatting the HDD.

- **Start to Backup**

To read USB backup HDD in Windows, please use FAT32 formats.

To use a bigger size HDD, you need to format to our own methods. Format is discussed in "SYSTEM>DISK" Section.

1. Plug in the USB connector to the USB connection port on the front panel.
2. Press the [BACKUP] button to display the backup menu.

3. Use the **[-, +]** button to change select device: USB – HDD
4. Select the data for BACKUP.
   A. NORMAL: Normal Recording Data
   B. ALARM: Alarm Recording Data
   C. MOTION: Motion Recording Data

   The illustration above has selected ALL CAMERA, NORMAL, ALARM and MOTION data.
5. Enter the digits as required in 24-hour format and move to [**START**].
6. Press the **[ENTER]** button to start the BACKUP.

   * USB icon is highlighted in blue during the backup.

   • If there is not enough space on the USB memory stick, the system does not proceed with the backup.

USB Memory Stick

   ● The backup progress indicator is displayed at the bottom of the window. While the system is in backup session, please do not attempt to use the playback function.
7. After the backup process is finished, USB icon is highlighted in white.
   8. When leaving the backup menu, the following message is shown as a reminder.

CF. FAT 32 Formats:

There are two ways to format a HDD to FAT 32

1-1. Format an external USB HDD to FAT 32 using the DVR disk system menu.

> **Note***:* USB HDD is formatted to FAT 32 regardless of HDD capacity.

1-2. Make the partition on the external HDD as 32Gb.

   (Windows only lets you format FAT32 partitions up to 32GB, as MS are trying to make people use NTFS).
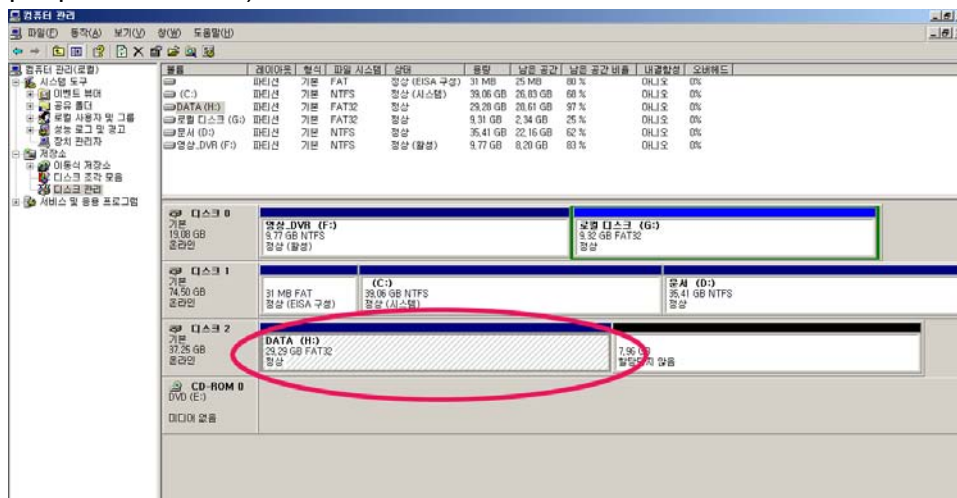
2. Start Backup from DVR to external HDD.

3. To read the backup data use the CMS Local Player.

Note:
- Only FAT32 formatted disks can be read through a Windows PC.
- The data in FAT32 formatted disks cannot be replayed on the DVR.

3. External CD/DVD –RW Backup

● An external USB-HDD, CD/DVD-RW is recognised within 10 seconds after plugging in UBS connection cable to the UBS port in the DVR.

> **Note**
>
> Stop recording when backing up by using an external HDD or an external CD/DVD –RW device.

    1. Plug in the USB connector into the USB connection port on the DVR's front panel.
    2. Press the [BACKUP] button to display the backup menu.
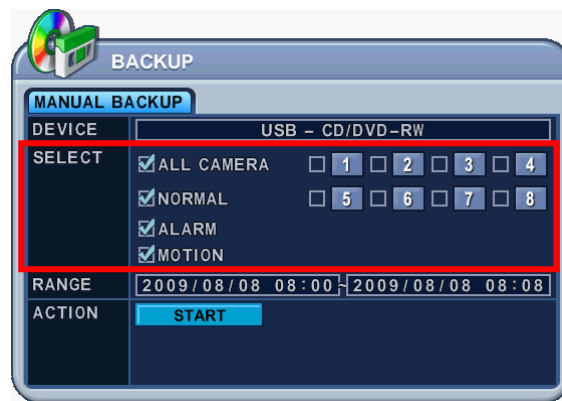
> **Note**:
>
> ● For CD/DVD-RW back up, the SELECT menu option is not available.
> The data backed up to a CD/DVD-RW contains the ALL CAMERA, NORMAL, ALARM and MOTION recording information.

1. Use the **[-, +]** button to change the selected device: USB – CD/DVD-RW
2. Enter the digits as required in 24-hour format and move to **START**.
3. Press the **[ENTER]** button to start the BACKUP.

    * USB icon is highlighted in blue during the backup.

• If there is not enough space the system does not proceed with the backup.

USB Memory Stick

● The backup progress indicator is displayed at the bottom of the window. While the system is in backup session, please do not attempt to use the playback function.
4. After the backup process is finished, the USB icon is highlighted in white.

---

4. How to Play Backup Data form a USB Memory Stick

1. Use the "MCD Player"

- Plug the USB memory stick into your PC. No software installation is required.

2. Double Click on the "MCD Player" in the window and it will play as follows.

3. Back up data can be also be played using the CMS LOCAL PLAYER

5. Back Up Range Setup

It is possible to set up a backup range automatically on Time Search Menu [by Month, Day, Hour and Minute].

Press the **[-] button** to set backup Start time , press the **[+] button** to set End. Selected time will be changed to a **[Light Grey]** Colour.

Selected backup time from 15:05~15:15 is displayed on the Backup range.

IX.CLIENT PROGRAM

- **Central Management Software**

1. DVR Player Program Introduction

The DVR Player Software allows you to view live video, search through archived video, control PTZ camera and have full setup control. DVR Player Software is a kind of Central Management Software for DVR users to fully control up to 10 DVR's (based on 4 channel models) simultaneously at a central station. The DVR system can have up to 3 simultaneous Remote Connections. Each user can perform functions on the DVR system and this does not affect other users. The only exception to this is accessing Setup. Only one user is allowed to access Setup at any given time.

1.1 Installation

PC System Requirement

	Recommended
OS	Windows XP,VISTA
CPU	Pentium Ⅳ 2.8 G
RAM	512MB RAM
Video Card	16MB
HDD Free Space	2 GB
Resolution	1024*768
Other	Direct X 8.0 or higher
	Overlay YUY2 Surface Supported

If the PC does not meet the minimum system requirement, the CMS program may not function properly. All programs related to CMS have been tested under a single task environment; therefore if multiple tasks are run simultaneously, unexpected errors may occur. Moreover, the program may malfunction if inappropriate codecs have been installed on the PC.

CMS may not run if DirectX 6.0 or an earlier version is installed. Please download the latest **Direct X** from Microsoft.

1.2. How to Install

(1) Insert "**Client Install CD**" into the CD-ROM of your PC and Find "DvrPlayerinstaller.exe"

and double click .

(2) Click the 「**NEXT**」 button – see below:
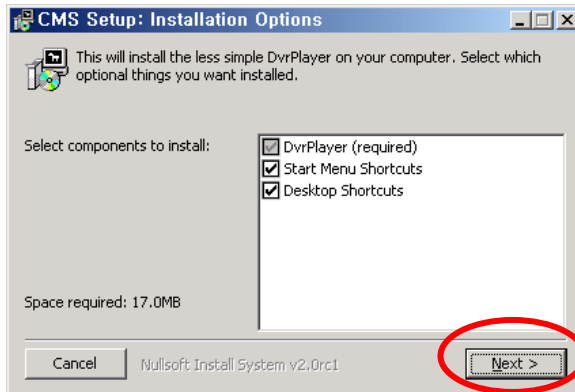
(3) Click the 「**Install**」 button, or, designate a directory for the install then Click "Install".
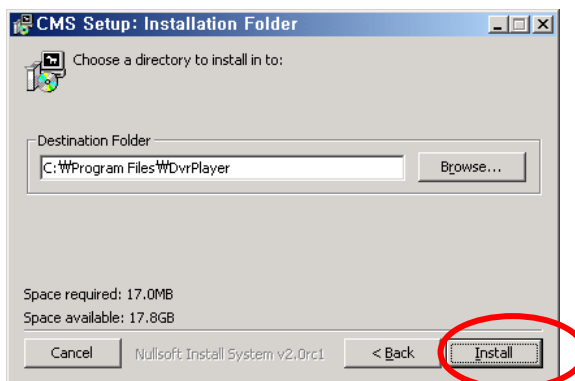
(4) Click the 「**Close**」 button after the message shown below appears.
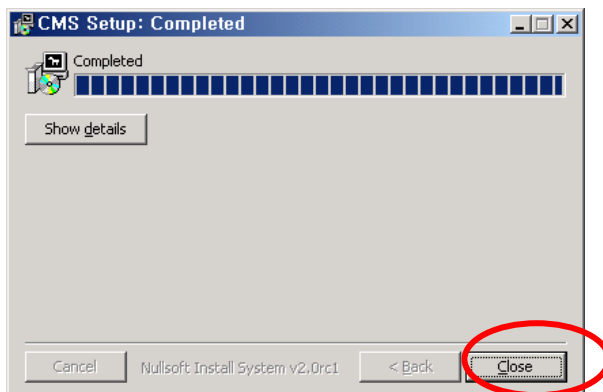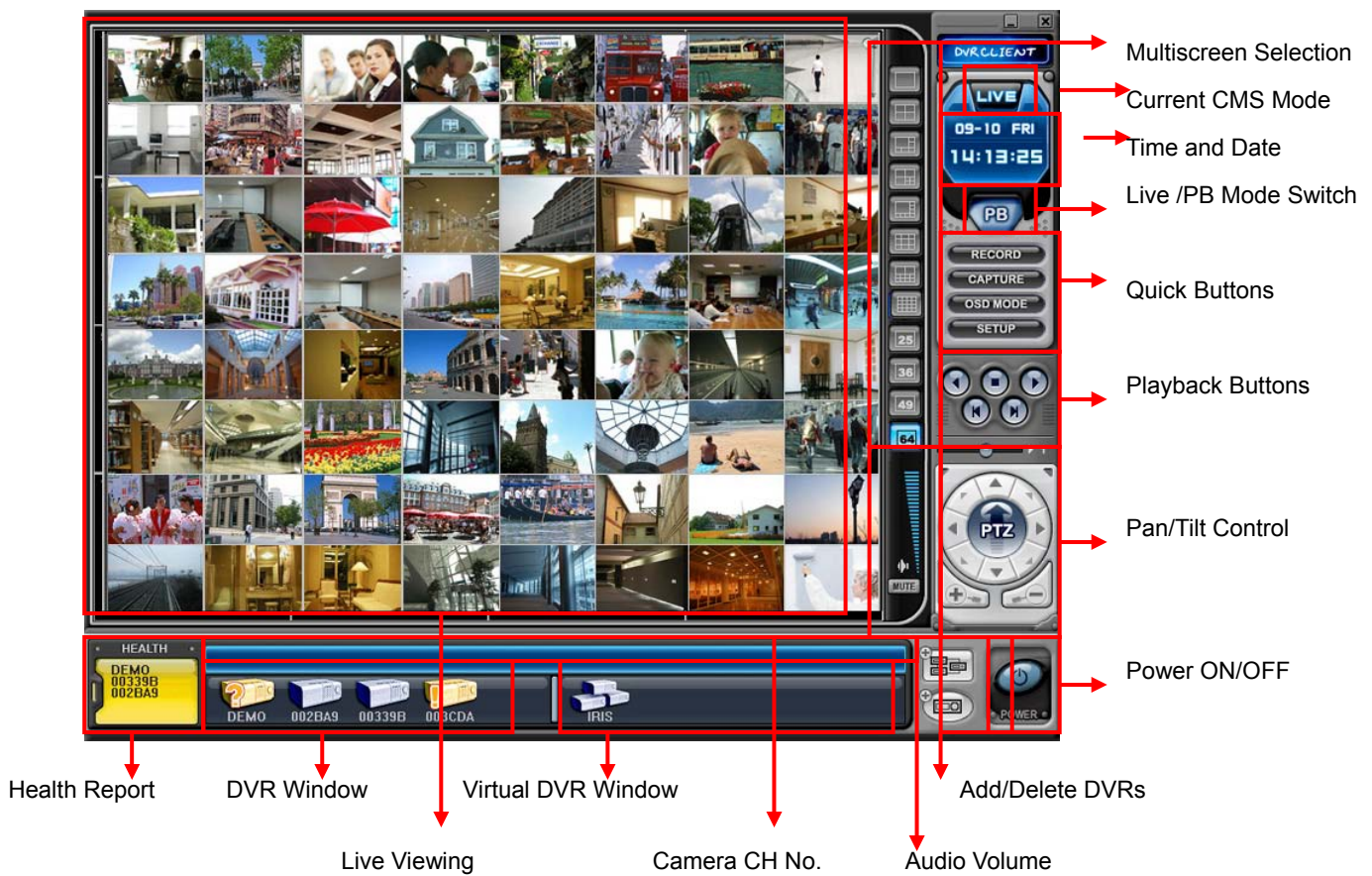

(5) The CMS ICON will be displayed on the PC desktop.

(6) Double click the ICON to start and enter the password to access.

* **Enter "0" as the default password. Refer to CMS Setup to change the password.**

To get rid of this screen, Press "ESC"

2. Features

2.1. CMS Overview

Multiscreen Selection
Current CMS Mode
Time and Date
Live /PB Mode Switch
Quick Buttons
Playback Buttons
Pan/Tilt Control
Power ON/OFF
Add/Delete DVRs
Health Report
DVR Window
Virtual DVR Window
Live Viewing
Camera CH No.
Audio Volume

2.2. Functions

(1) Display Option / Multi-screen Displays

a. Full Screen Display.

b. Quad Screen Display.

c. 6- Way Screen Display.

d. 7- Way Screen Display.

e. 8- Way Screen Display.

f. 9- Way Screen Display.

g. 10- Way Screen Display.

h. 16- Way Screen Display.

i. 25- Way Screen Display.

j. 36- Way Screen Display.

k. 49- Way Screen Display.

l. 64- Way Screen Display.
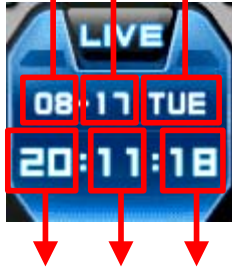
(2) Time and Date Display

Shows the current time on LIVE Mode and Playback time in PB mode.

Month   Day   Day of Week

Hour Minutes Seconds

(3) Live /Playback mode Switch

a. **LIVE**   LIVE Viewing.

b. **PB**   Remote Playback or Playback for downloaded file.

(4) Quick Buttons

a. **RECORD**   Save the current live images. When the remote recording is in

progress,

the record button changes colour to cyan.

(Default Location: C:\Program Files\DvrPlayer\Download)

b. **CAPTURE**   Save a snapshot image or print current monitoring image.

c. **OSD MODE**   OSD On/Off button.

d. **SETUP**   CMS Setup.

*   CMS Setup

① General 1

a) OSD SETUP

72 Select On-Screen-Display information, such as the

Time, DVR Name, Camera Number, Camera Name

and Frame Rates for each camera.

< C.F> Control Hardware Acceleration

ⓐ Click the Advanced button on Display Properties on your PC.

ⓑ Select "Troubleshoot" and slow down Hardware Acceleration.

ⓐ   →   ⓑ

---
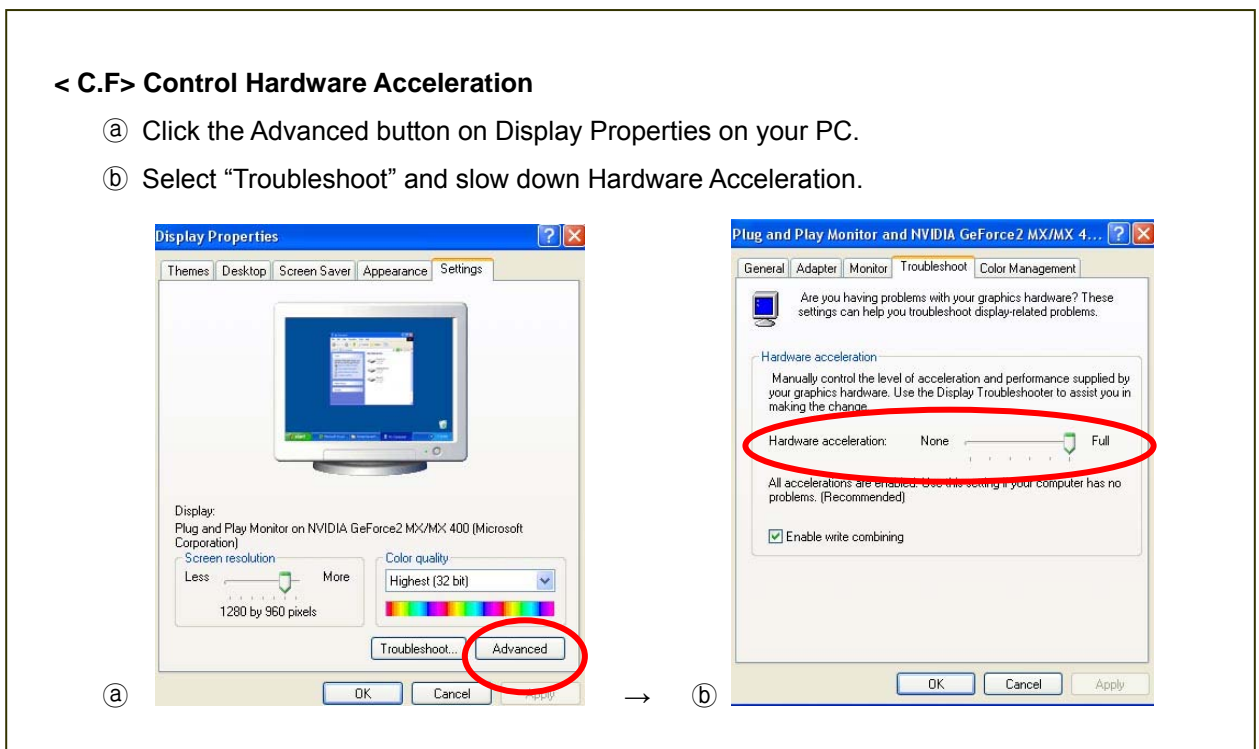
② GENERAL 2

a) POS

Setting to limit the POS item search.

\<Not supported this model\>

b). Log

Setting to limit the Display of Logs.

c). Check Watermark

Setting to check for watermark.

d) Auto Full Screen for Alarm Event

Setting to perform a full screen pop-up for an alarm event.

③ Password

– Changing the password

a) Old Password: Enter the current password.

b) New Password: Enter the NEW password.

   c) Confirm Password: Enter the New password to confirm.

   - Press the **APPLY** button to change the password. (NOT the OK button)

Note: This password is for protecting access when CMS is launched. This is different from your DVR password.

---

④SOUND

   Audio alert setting for the CMS. You can toggle to enable or disable the sound from the software.

- Connect: CMS emits a sound when a DVR connects.

- Disconnect:　CMS emits a sound when a DVR disconnects.

- Alarm: CMS emits a sound when an alarm is triggered from the DVR.

- Motion:　CMS emits a sound when the DVR detects a motion.

- Video Loss:　CMS emits a sound when there is a Video Loss.

(5)　Playback Control Buttons

　　　- These buttons only function when reviewing downloaded files.
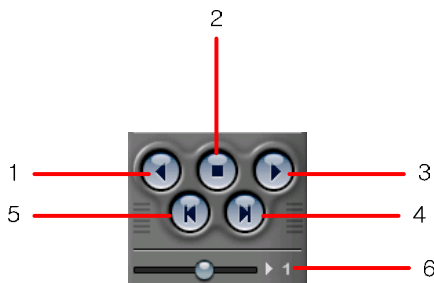
1. . To begin reverse playback, press Reverse Play button

2. To stop playback, press the STOP button.

3. To start playback, press the PLAY button.

4. To view the field directly before the field you watched.

5. To view the field directly after the field you watched..

6. To Control playback speed on Local DVR mode.

(6)　　　PAN/TILT Control Button

Switch to Full Interface

Switch to Compact Interface

Zoom In

Zoom Out
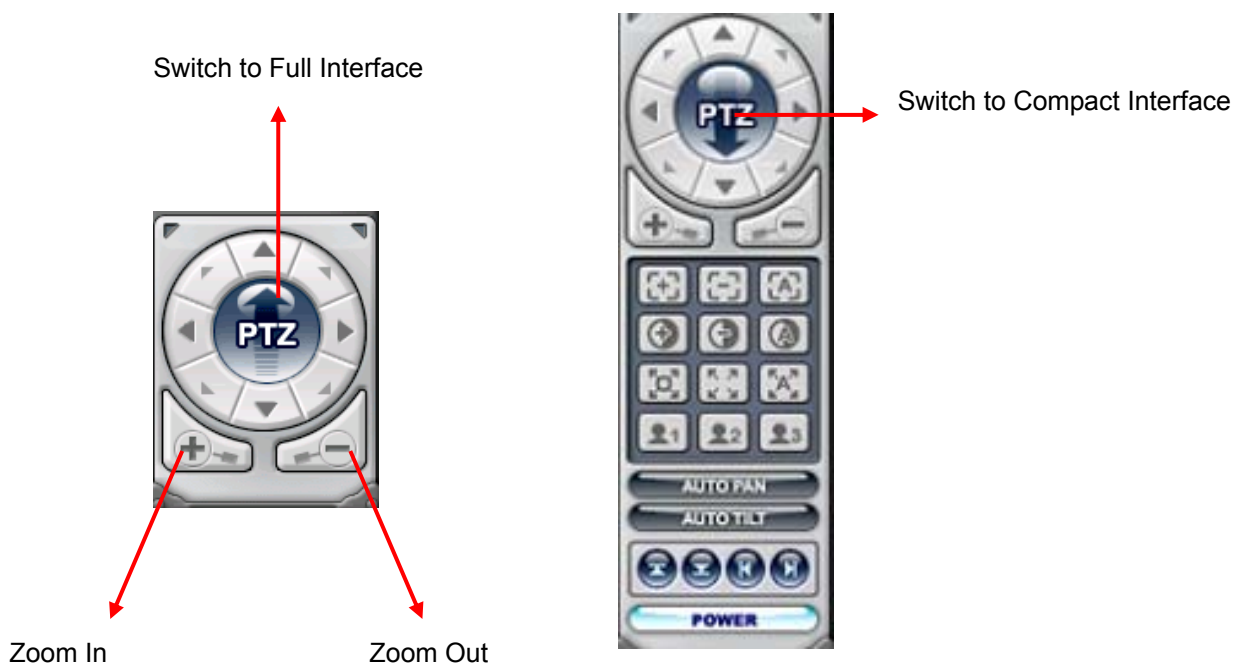
If one or more Pan/Tilt/Zoom Cameras are installed on the DVR, they can be individually selected and controlled using the PTZ control box. To control a channel-specific PTZ camera, simply click on the channel where the PTZ camera is connected.

a. Pan and Tilt

Indicator	Resulting Action	Indicator	Resulting Action
	To tilt up		To tilt down
	To pan left		To pan right
	To go upper left hand.		To go upper right hand.
	To go down left hand.		To go down left hand.

b. Focus

Indicator	Resulting Action
	Focus Far
	Focus Near

Indicator	Resulting Action
	Focus Auto

c. Iris

Indicator	Resulting Action
	Iris Open
	Iris Close
	Iris Auto

d. Tour

Indicator	Resulting Action
	Set Tour by clicking. Tour depends upon the address range of the connected Pan/Tilt Camera.
	Go To, Calls up preset
	Start Automatic Tour

e. Special Function Key

 Have various functions dependant upon PTZ camera.

f. Auto Pan

Indicator	Resulting Action
	Set Auto Pan to left boundary.
	Set Auto pan to right boundary.
	Run Auto Pan function.

g. Auto Tilt

Indicator	Resulting Action
	Set Auto Tilt to upper boundary.
	Set Auto Tilt to lower boundary.
	Run Auto Tilt function.

h. Pan/ Tilt Power

 Stand by Pan/Tilt or Turn on/off the lights of a P/T/Z camera.

(7)   HEALTH

Displays the names of the last five DVR's having a problem, or an event. The colour changes, based on the event or problem reported from the DVR. See below.

a.   Red

The colour changes to red when critical functions of the DVR are interrupted or have failed: Connection Fail, Connection Time Out, Disconnect Power Fail, Fan Lock, System Fail, HDD Fail, Power Fail Recover, Fan Lock Recover, System Fail Recover, HDD Fail Recover

b.   Yellow

The colour changes to yellow when recording and alarm related events occur: Video Loss, Video Loss Recover, Alarm Detect, Motion Detect, Record Stop, Schedule Off, Backup Operation Stop

c.   Blue

The colour remains blue as long as the DVRs are functioning within normal parameters. It displays the DVR's name only with the following functions: Record Start, Backup Operation Start, Schedule On

* Health Report

The Health Report menu is provided so users can quickly have an overview of the condition of all connected DVR's. A maximum of 300 DVR statuses can be checked, such as, Failure, Event, Recording Mode etc

Health Report can be accessed at any time by double-clicking "HEALTH".   The detail log lists

can be showed by double clicking Name on Health Report or ICON on DVR Window.

Block Colour	Condition
Solid RED	An Event or a problem has occurred.
Blinking RED	Current event or a problem.
Solid YELLOW	Current status of the DVR.

Note: In cases of network connection errors or power failure, DVR Number and DVR Name will blink in red

    a. HDD FAIL: Notify Hard Drive Disk failure during the operation.

    b. FAN LOCK

        a) SYS. FAN: It shows a FAN defect inside the DVR

        b) CPU FAN: It shows CPU FAN defect

    c. EVENT

        a) AL:　Alarm

        b) MO:　Motion

        c) VL:　Video Loss

    d. OVER TEMP. (**Not supported on this model)**

        a) SYS.: DVR temperature check

        b) CPU: CPU temperature check

    e. REC. OFF : Indicate REC LED ON/OFF on DVR

    f. SCHE. OFF: Indicate Schedule LED ON/OFF on DVR

        <Not supported on this model>

    g. BACKUP OFF: Indicate Backup status on DVR

** DVR Properties

The Properties of the DVR can be viewed by Double Clicking "DVR NO or DVR NAME".

This menu provides information as listed below.

     a.   DVR MODEL

     b.   SYSTEM TIME: Display the time and date of DVR

     c.   RECORD   : Configure current Normal recording channel.

     d.   ALARM   : Configure current Alarm recording channel.

     e.   MOTION   : Configure current Motion recording channel.

     f.   VIDEO LOSS   : Configure current Video Loss channel.

     g.   HDD SIZE   : Available HDD/ Total HDD

     h.   BACKUP SIZE : Available USB HDD/ Total USB HDD

     i.   REC. REMAIN   : Estimated Remaining Recording Time

     j.   HDD   : It shows defect of Hard Disk.

     k.   SYSTEM FAN   : It shows defect of FAN. (**Not supported on this model)**

** CMS LOG LIST

	DATE / TIME	MESSAGE
INFO	2004/08/17 19:19:29	Connect
INFO	2004/08/17 18:09:50	Connect
INFO	2004/08/17 18:02:41	Connect
INFO	2004/08/17 17:32:07	Connect
INFO	2004/08/17 12:27:42	Connect
INFO	2004/08/17 12:25:59	Connect
INFO	2004/08/16 10:11:29	Connect
INFO	2004/08/13 17:25:46	Record Start
INFO	2004/08/13 17:25:46	Connect
ERR	2004/08/13 17:24:25	Connection Time out
WARN	2004/08/13 17:23:48	Record Stop
INFO	2004/08/13 15:48:43	Record Start
INFO	2004/08/13 15:36:23	Connect
ERR	2004/08/13 15:35:44	Connection Time out
WARN	2004/08/13 15:35:16	Record Stop
INFO	2004/08/13 15:23:43	Connect
INFO	2004/08/13 14:45:27	Connect

PRINT   OK

This menu shows the CMS log while the CMS is operating. For more specific information for each DVR, please refer to DVR Log list.

** DVR LOG LIST

- Shows the same log list as per the DVR Set. It has a list of all the events since the initial power on procedure of the DVR.

	DATE / TIME	MESSAGE
	Aug,17,2004, 20:36:11	NETWORK CONNECT
	Aug,17,2004, 20:34:02	NETWORK CONNECT
	Aug,17,2004, 20:32:03	NETWORK CONNECT
	Aug,17,2004, 20:31:55	NETWORK CONNECT
	Aug,17,2004, 20:08:14	NETWORK CONNECT
	Aug,17,2004, 20:08:08	NETWORK CONNECT
	Aug,17,2004, 20:07:52	NETWORK CONNECT
	Aug,17,2004, 20:07:16	NETWORK CONNECT
	Aug,17,2004, 19:46:48	NETWORK CONNECT
	Aug,17,2004, 19:46:48	NETWORK CONNECT
	Aug,17,2004, 19:25:29	NETWORK CONNECT
	Aug,17,2004, 18:15:52	NETWORK CONNECT
	Aug,17,2004, 18:13:54	NETWORK CONNECT
	Aug,17,2004, 18:13:34	NETWORK CONNECT
	Aug,17,2004, 18:12:59	NETWORK CONNECT
	Aug,17,2004, 18:12:41	NETWORK CONNECT
	Aug,17,2004, 18:12:34	NETWORK CONNECT

PRINT   OK

- Selected message or time will be play-backed by double clicking.

3. DVR Control

3.1. Set List Manager

- Set List Manger is mainly used to add or delete DVR's on the CMS. Click button to start the Set List Manager.

(1) Auto Scan

It automatically tracks down DVR's connected to the local network but skips over those already on the list. The DVR Host Name is entered automatically to the title and the default Password is 000000 (USER).

(2) Add to List

Please follow these steps to add a DVR on CMS.

1) Set Name: Type in DVR title to be displayed on the Monitoring window, Health window and DVR Window.

2) IP: Enter the IP address<ex:192.168.0.52> or DNS name. <ex: demo.dvrhost.com>

3) Port: 7000<Default>

4) Password: Select from the following options:
   - User Password: Depends on user privileges
   - Admin Password: All functions.

5) Add to List: Click "Add to List" to complete the addition of the DVR onto CMS list.

6) Save changes and exit the menu: Select "OK".

7) Exit the menu without making change: Click "Cancel"
   ● APPLY: Is used for changing the configuration of selected DVR.

(3) DEL FROM LIST: Delete selected DVR from CMS List.

(4) SETUP: It shows the menu setting of selected DVR.

(5) PROPERTY: This menu provides information such as DVR Name, IP number & port, Software version, and what kind of DVR it is.

3.2. Condition of DVR

The Condition of DVR menu is provided so that users can quickly check the condition of each connected DVR.   What each Icon means is listed below.

(1) Normal

A Blue colour DVR means the DVR is working without any problem.

When you click this icon, it displays the current live view.

(2) Network Connection in Progress

An Orange colour DVR means CMS is trying to connect to the DVR through a network. When this icon is clicked, it shows the message < Connecting... Please stand by> with "try again" and "cancel " button

(3) Network Error/Disconnection

Pink coloured DVR means the disconnection of DVR caused by network error or invalid password. CMS tries to connect to the DVR every 30 sec in case of network connection errors. When you click this icon, it shows this message <Network connection error> or <Invalid Password>. Please change the password [Set List Manager] in the case of an invalid password.

(4) System Abnormality

Orange coloured DVR means there is an event or system problem. When you double click this icon, the CMS Log List pops up.
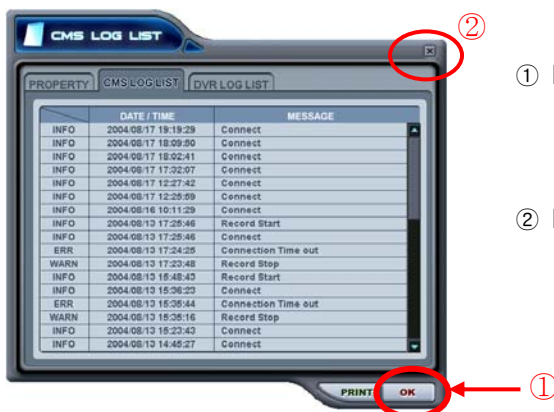
① Exit the menu, clear the statuses and return to blue coloured DVR : Select "OK"
② Exit the menu and keep the previous statuses: Select "x (Close)"

3.3. Indication of Camera

In addition to the Health Status Report, and supplementary information from the DVR icons in the DVR window, the Camera Status Bar displays the status of individual cameras. The cameras are displayed according to the selected channel.

(1) Click the desired DVR

(2) Shows the camera information.

(3) What each Icon means is listed below.

1) (Blue)   : Video Input is connected without recording.

2) (Dark Blue) : Video Loss
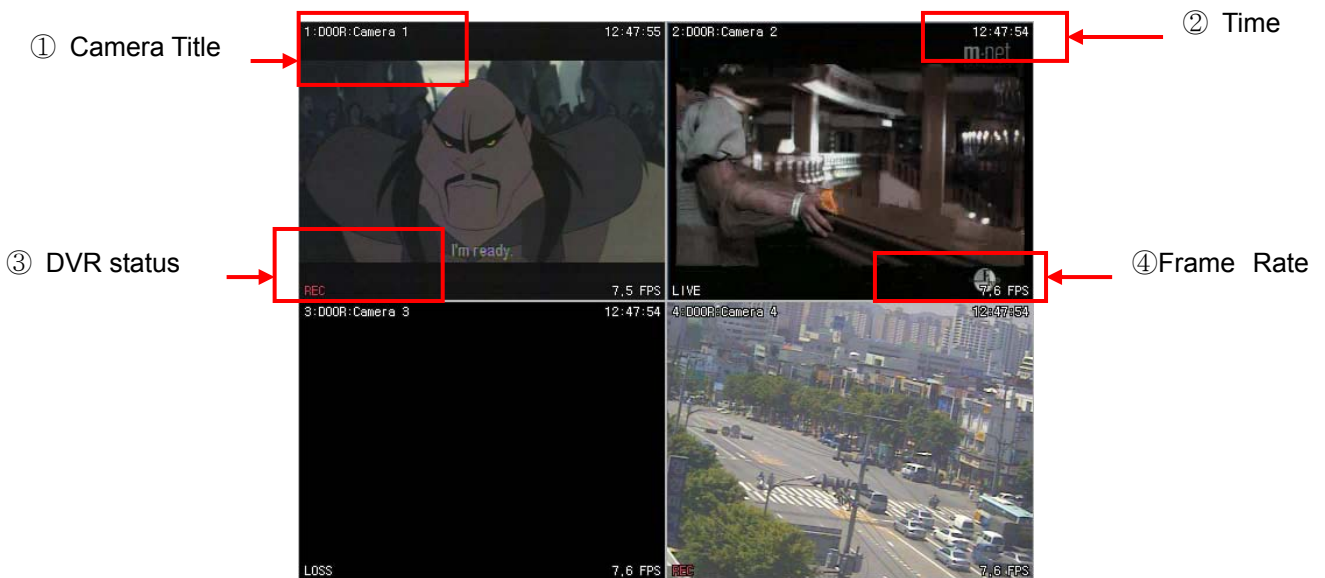
3) (Red)   : Recording the current channel.

3.4. Live Viewing

    (1)   Individual DVR monitoring

Double click " [icon] or [icon] " to display live.

  (2)   On-Screen Indicators

      There are four types of On-Screen Indicators. OSD Display can be chosen in the CMS Set UP.

   1) Camera Title: Displays the following orders: Camera Number- DVR Name or Host Name

                -Camera title

   2) Time   : Displays time.

   3) DVR Status: Displays REC, Network Connection, Video Loss, Event, and Current Status.

Indicator	Condition
REC	Normal Recording
Wait	At the initial connecting
Loss	Video Loss
Close	Disconnected from DVR
Alarm	Alarm Recording
Motion	Motion Recording
PB	Playback for selected channel.
Live	Live viewing

   4) Field per Second: Network transmission speed. The transmitted field rate is different from the

      actual recording field rate of the DVR.

(3) Multi-Screen Display

Click the individual Multi-screen buttons to display the corresponding multi-screen.

(4) Change the Camera Position.

Click on each camera directly switch to the desired camera.

(5) Full Screen Display

There are two way to get a Full Screen display.

1) Select any camera for Full Screen display by double clicking the window of desired camera (to return to the previous Live viewing mode, double click again).

2) Select any camera for Full Screen display by clicking Right Mouse button.

3.5. Context Menu

The context menu allows access to the submenus for the channel, DVR and the Virtual DVR. The submenus allow access to various features for each individual submenu type.

(1) There are three types of Context Menu during Live Viewing. Right Clicking to display Context Menu.

1) SEARCH: Remote Search for Playback.
2) FULL SCREEN: Full Screen Display.

(2) There are six possible types of Context Menu on each DVR.

1) LIVE: Live display for selected DVR.

2) PROPERTY: DVR information

3) CMS LOG LIST

4) DVR LOG LIST

5) SETUP: See "DVR Menu Setup"

6) REMOVE: Delete the selected DVR from DVR Window.
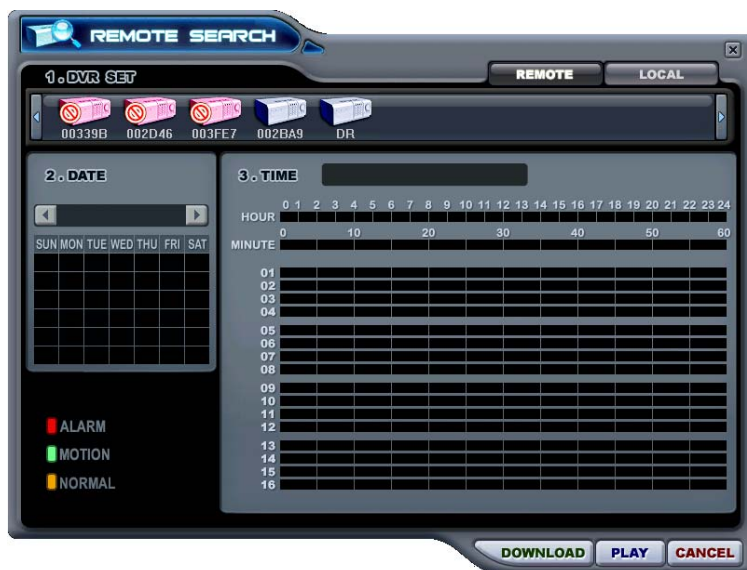
3.6. Playback

DVRs that have been added onto the DVR window using the DVR Set List Manager can be accessed in Playback Mode for remote playback, or to download the files onto the remote PC.   Unlike the live mode, only one DVR can be accessed at a time

(1) To start playback, press the PB button .

(2) It will switch to Playback Mode, as shown below.
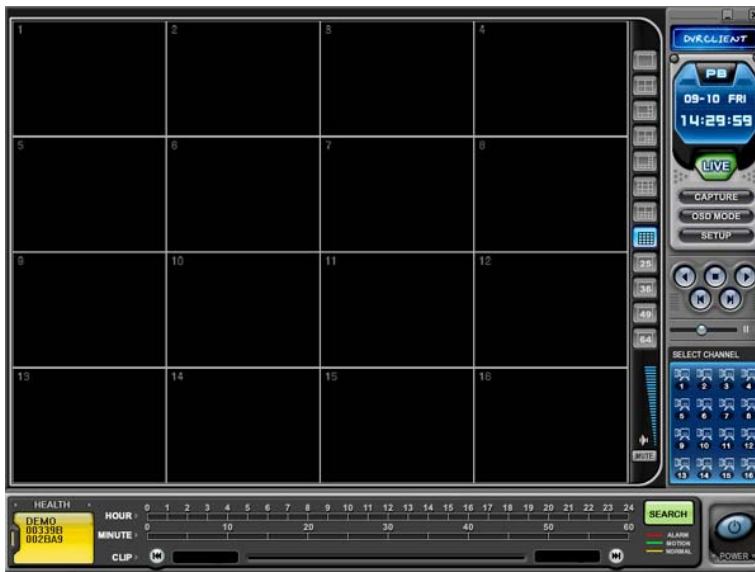
(3) When the button is pressed, the Remote Search Menu appears.

(4) Select the button or the button for playback.

1) Remote Playback

Remote Playback is provided so users can directly playback the stored video (on the internal HDD), via the CMS.

① Select the **REMOTE** button and the desired DVR.

② Remote Search shows a graphical representation of the recorded video stored on the DVR. The Data is colour-coded by category: Alarm (Red), Motion (Green) and Normal (Yellow).

③ Select Date and Time. By Clicking and dragging, it is possible to select longer periods of time. Click the **PLAY** button to start playback.

2) Remote Download

Remote Download is provided so users can save on remotely connected computers via the CMS.

① Select the **REMOTE** button and the desired DVR.

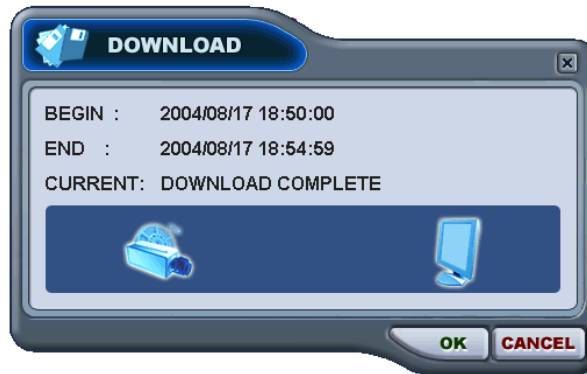② Remote Search shows a graphical representation of the recorded video stored on the DVR.

③ Select date and Time and click the **DOWNLOAD** button to start saving. It is saved, by default, in "C:\Program Files\DvrPlayer\Download". The Download directory can be changed on the CMS Setup Menu .
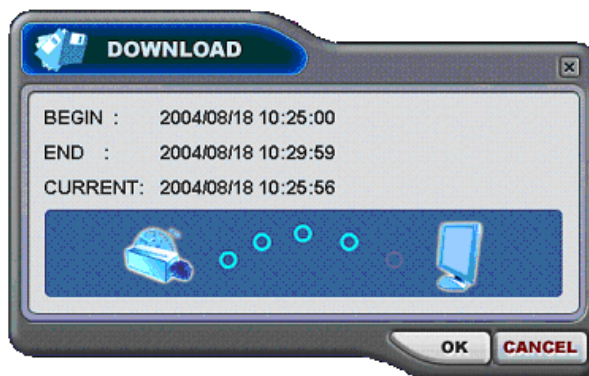
    a.   BEGIN – END: Indicate the Start and End times of the selected File.

    b.   CURRENT   : Indicate the time of current downloaded file.

    c.   Download Cancel: Select **CANCEL**

d. Download Complete: Current time is changed to message "Download Complete" after the download has been completed, as shown below.

Click

3) LOCAL

Local Menu is mainly used to review the data downloaded from a DVR through CMS.

① Select the **LOCAL** button.

② Local Search shows a graphical representation of the stored file on the PC.

③ Select desired DVR, Date and time, then click **PLAY** button to start playback.

④ **DELETE** : Deleted selected file from the PC.

⑤ **SAVE AS** : Save selected file into another folder on the PC or other drive.

⑥ **OPEN FILE** :To review back-up device through the Set.

3.7. DVR Menu Setup

-DVR Menu Setup allows modification of various system settings to the DVR through CMS, just as it
would be done by directly accessing the DVR menu screen.

- DVR set up can be accessed through the context menu from any DVR.

Select any DVR for Menu setup. Context Menu appears on screen by right- clicking.

4. Virtual DVR
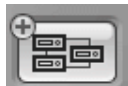
4.1. What is Virtual DVR.

Virtual DVR is not an actual DVR but a combination, or group of several DVR's already listed under the DVR window. Under a Virtual DVR set, up to 64 DVR's can be added, pulling one camera from each DVR to be displayed. The Virtual DVR behaves in the same way a DVR would, except for the warning notifications.

4.2. Virtual Set List Manager

Virtual Set List Manager is used to add or delete Virtual DVR set on CMS.
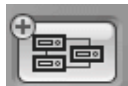
Click button to start the Set List Manager. Set List Manager Menu pops up, as shown below.

(1) ADD to CMS List

Please follow these steps to make a Virtual DVR.

1) NAME: Enter Virtual DVR title to display on the CMS window.

---

* **Auto Arrange:**

 - Check this option to have the CMS arrange cameras with any of the events occurring from a virtual DVR with registered cameras. Cameras with events are automatically moved to channel 1, then arranged in order of priority.

* **Auto Insert & Arrange:**

 - Check this option to have the CMS add, prioritise and arrange cameras with any of the events occurring from any cameras.

* **Alarm / Motion / Video Loss:**

- Check these options to have cameras with Alarm/Motion triggers or Video Loss to be prioritised and arranged automatically in either Auto Arrange or Auto Insert & Arrange.

---

2) ADD VIRTUAL DVR: Click "Add Virtual Set" button to make a Virtual DVR. Avoid overlapping similar names for Individual Sets.

3) Save changes and exit the menu : Select "OK"

4) Exit the menu without change :   Click "Cancel"

   ● APPLY: Is used for changing the name of selected Virtual DVR.

(2) DEL VIRTUAL DVR: Delete the selected virtual DVR from CMS list.

(3) PROPERTY: This menu provides information such as Virtual Set Name, total number of connected DVR's, total number of selected Cameras and IP information of connected DVR's.
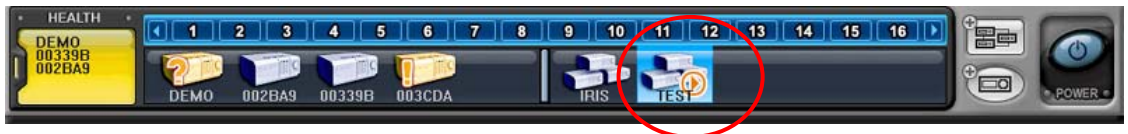
4.3. Editing Virtual DVR

(1)   Double click the desired Virtual DVR .

(2)   The selected Virtual DVR is activated and indicated with " ▷ "

(3)   Select any of the Multi-Screens to Display.

There are two ways to add cameras: one selects a complete DVR and the other selects an individual camera from a DVR.

1) Complete DVR cameras.

① Click the desired DVR and directly drag it into the desired channel.

② The cameras are added in numeric order from the selected channel to the end; depends on the number of cameras connected on the DVR.

In the following example, an 8-Channel DVR is dragged to channel number 5, and fills 5 through 12.

2)   Any selected camera on a DVR.

① Click on any DVR in the DVR Window while Virtual DVR is activated.

② After camera Icons are diplayed, drag a camera directly to the desired channel.

In the following example, Camera 1 on the 3rd DVR is dragged to Channel 14.

①

> **Note:** If cameras overlap on the same channel, the new Camera replaces the existing camera.

(5) Delete Camera.
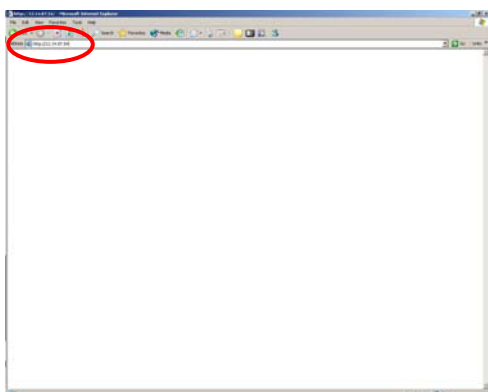
There are two ways of deleting a camera from the CMS.

1) Select any camera for deletion during live monitoring. Context Menu appears on screen by right clicking. Select " REMOVE"

2) Select a camera to delete and drag it directly to DVR Window or Virtual DVR Window.

4.4. Live Viewing on Virtual DVR

Is exactly the same as the viewing on an actual DVR.

Appendix 1: VIEW ONLY

Enter the IP address of the unit in the address page of Internet Explorer.

For example, type in http://192.168.0.250:7000

Above illustrates example of a unit when it is utilising port 7000.

You can either sign in with: admin or user. Next, enter the password for the unit.
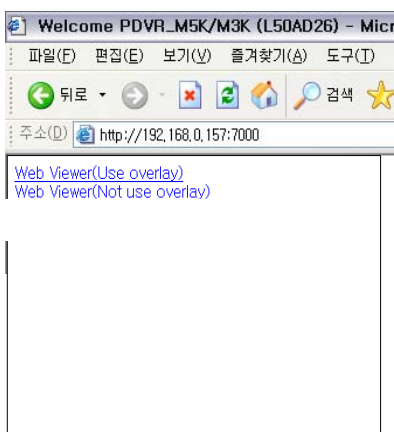
Click on Web viewer to connect to the DVR; only for viewing.

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Specification	4Ch / 8Ch / 16Ch
Video Input	4 , 8, 16
Video Output	Composite, VGA, SPOT-OUT
Compression	H.264

Live Display Resolution		NTSC 720*480, PAL 720*576
Alarm In/Out(Relay)		4/1 , 8/1 16/1
Operating System		EMBEDDED LINUX
System Control		Key Buttons, IR Remote Controller, Remote Software(DVR Player)
Live Display Speed		Real Time
Maximum	NTSC	30 fps 720 x 480 ,60 fps 720 x 240, 120 fps 360 x 240
	PAL	25 fps 720 x 576 ,50 fps 720 x 288, 100 fps 360 x 288
Audio Record		1 IN, 1 Out
Features		
Display		Brightness, Contrast, Colour Adjustment Per Channel
Camera Title		12 Characters per Channel
Recording Mode		Manual, Schedule, Alarm, Motion
Recording Method		5 Levels of Compression Rate / Record Frame Rate Adjustment
Recording Adjustments		Pre-Alarm: 3 sec/ Post-Alarm: 10 sec. ~300 sec.
Motion Detection		Per Channel 4*4 Grids (SET)/ 28 x 24 (CLIENT)/ 20 Sensitivity Levels
Search Mode		Date & Time, Camera , Alarm / Motion
Playback Modes		Forward & Reverse: Pause, Frame by Frame, Normal Speed, 2X, 4X, 8X, 16X
Multi-tasking		Simultaneous Live Display/ Playback, Record or Back-up, Remote Transmission
Watchdog		Power Failure Recovery: Auto Reboot / Maintaining Previous Record Settings
Watermark		Provided
Back Up		USB Flash Memory Stick, External HDD and External CD/DVD-RW
Interface		RS422, Ethernet(10/100 Base-T), USB 2.0
HDD		1 INTERNAL HDD
Network		LAN, WAN, Internet,
Remote		Client Software, Internet Explorer

WEEE Information

**Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)**

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates, that it should not be disposed with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

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