

DIGITAL VIDEO RECORDER USER GUIDE

4 /8/16CHANNELS

VER XM3K-1.4(S01)



- 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 store the User Guide at an easily accessible location.
- Before connecting and installing any third party cameras, monitors, alarms and computers, please refer to the appropriate instruction manual for proper 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.



SA 1965

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



SA 1966

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.

WARNING:

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

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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 authorized 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 authorized 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 Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.
- The socket-outlet shall be installed near the equipment and shall be easily accessible

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	
USER GUIDE	1	

I.CONTROLS

1. Front Panel

< 4Channel >



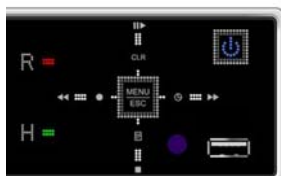
< 8Channel >



< 16Channel >



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, used to move the cursor.



2) [LOG / Playback Stop]

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

② Stop : This button stops playback

3)  [R step or FR / REC]

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

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


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



4) [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 Forwarding during PLAYBACK mode.



3. Menu / ESC Button :

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

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

4. Enter and 10+ button : 

Press this button to save menu settings or Choose channels over 10. For example, Press this key and “6” to see channel “16”.

5. QUAD and Plus button : 

Press this button to display the cameras in multi-screen view. This button also can be used to change channel of DVR or increase numbers of setup menu

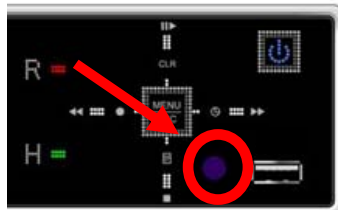
6. Channel / Numeric Buttons :

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.

10. Time Search and Minus button :



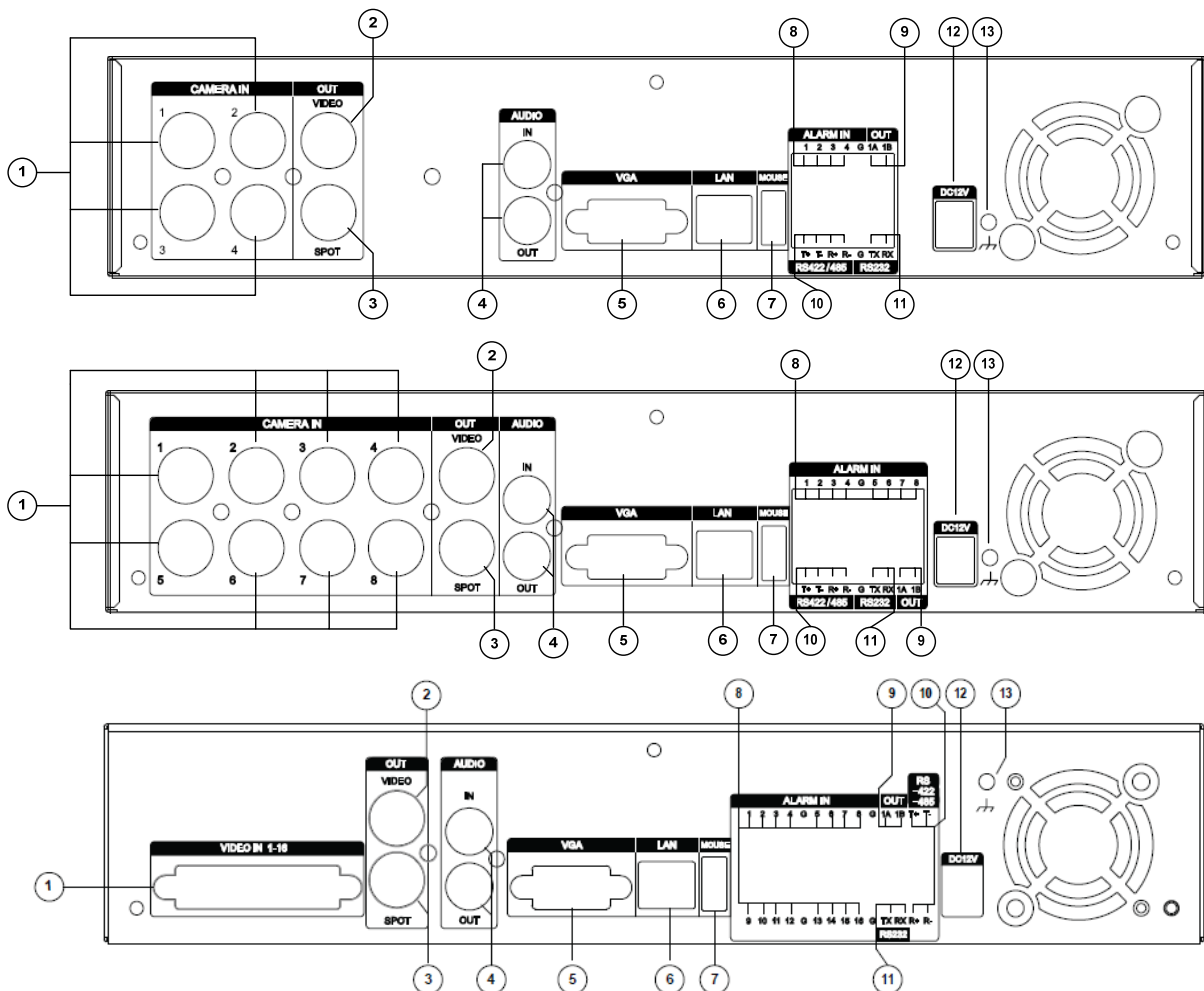
Press this button to enter calendar and time search menu. This button also can be used to change channel of DVR or decrease numbers of setup menu.

11. Backup button:



Press this button to go backup menu. You can set the time and channels to backup footage from the DVR.

2. Rear Panel Connectors



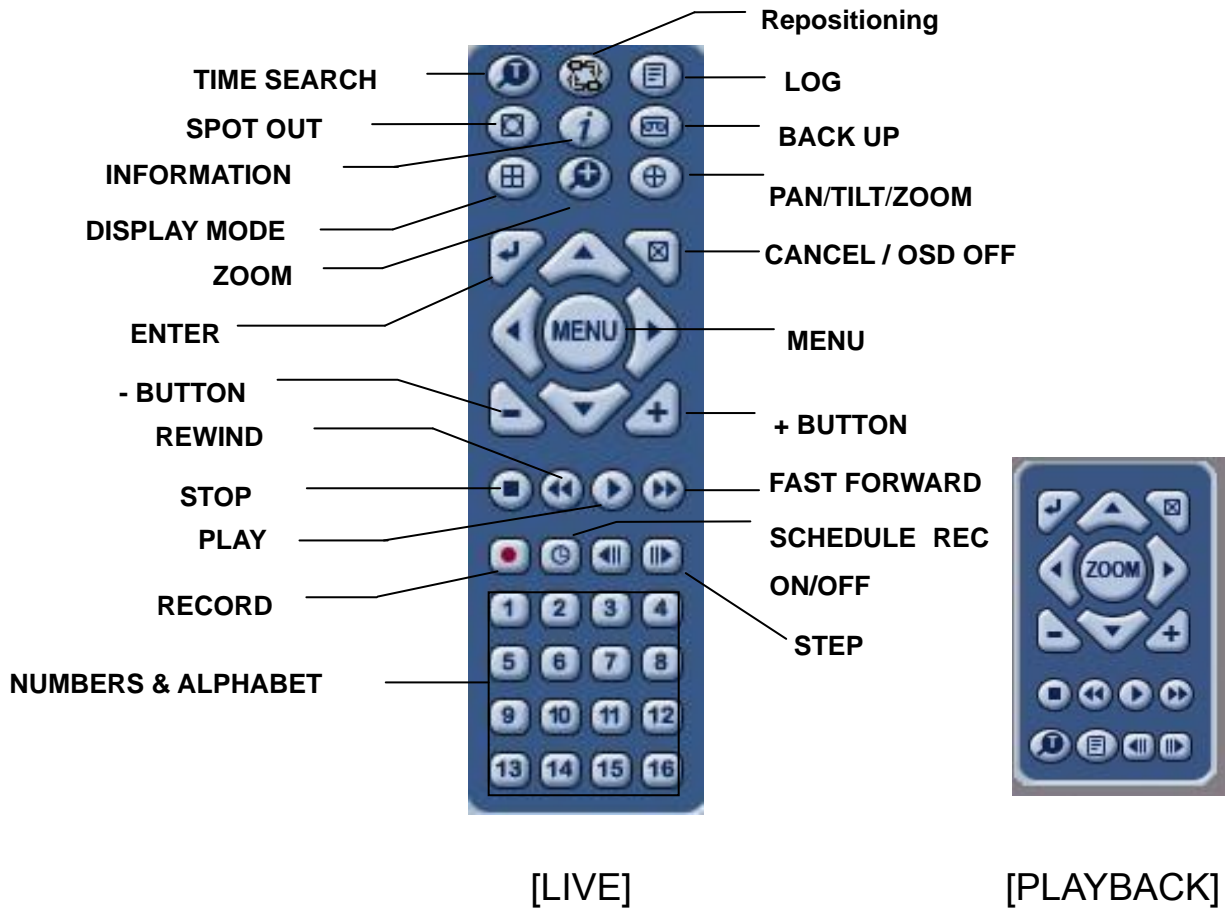
- 1) CAM1~4, 1~8 or 1~16 : BNC input (Camera 1~4, 1~8 or 1~16) connectors
- 2) MONITOR (Composite Output) : BNC standard composite video output connector.
- 3) SPOT : Spot out connector
- 4) AUDIO Input / SPEAKER (Output) connectors : RCA
- 5) VGA out connector
- 6) LAN (RJ-45 Ethernet Port) : For connecting 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, 1~8 or 1~16) : For connecting alarm inputs.
- 9) RELAY (ALARM OUT 1) : For connecting alarm out relays.
- 10) RS-422/485 : 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. If you click right button of your mouse in Live mode and Playback mode, you will see following virtual Remote controllers respectively and Virtual Keypad will be shown to enter PASSWORD and Camera Name etc



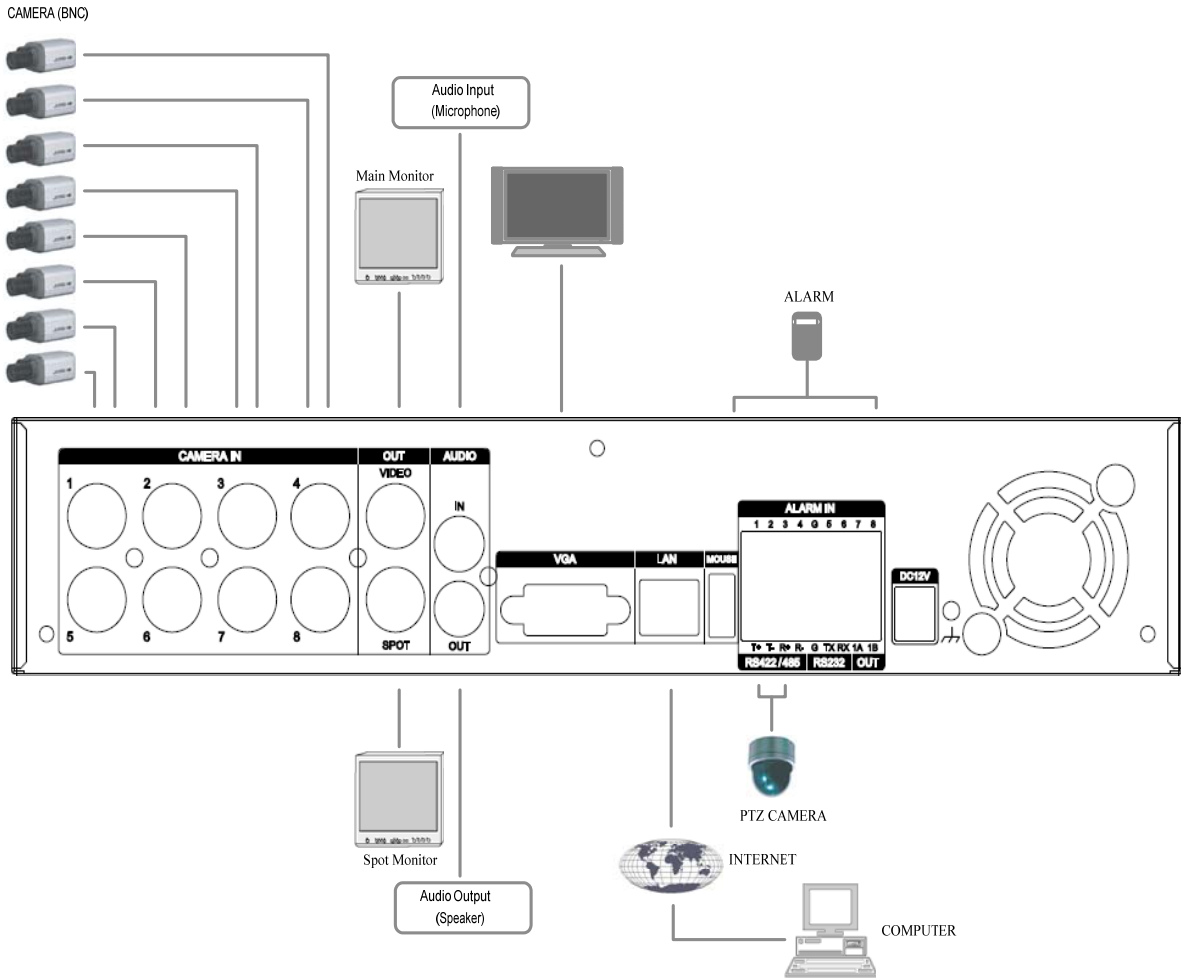
[Virtual Keypad]

II. INSTALLATION & CONNECTIONS

1. Camera, Monitor, Microphone, Alarm sensor and Power cord

1-1. System Configuration Diagram

The following illustration is showing the fully installed system.

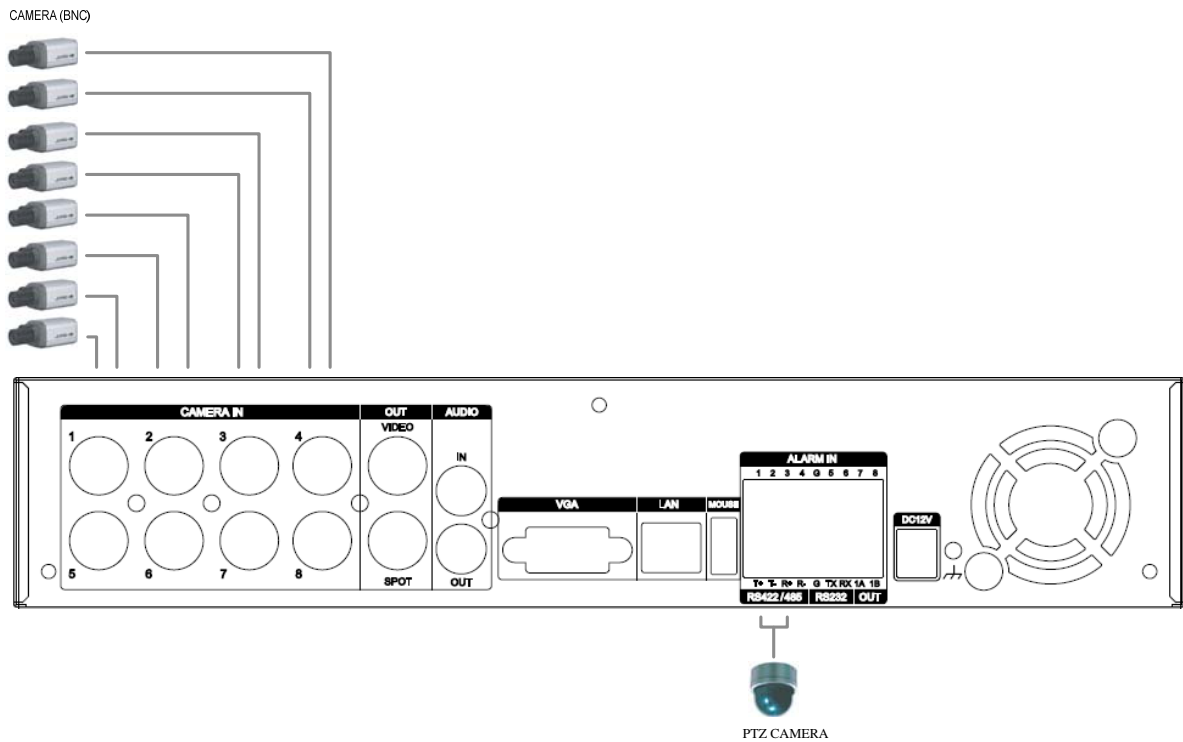


1-2. CAMERA

This product can be installed up to 4~8 cameras.

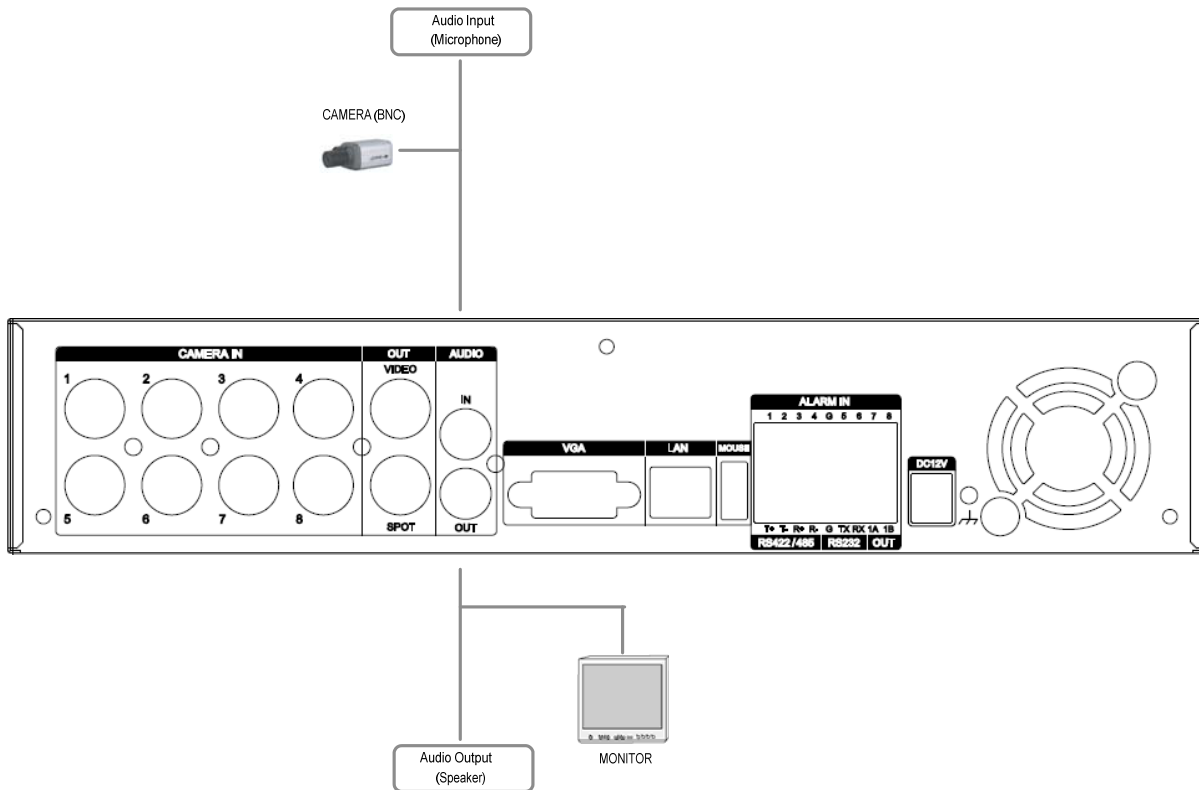
Connect cameras to the VIDEO IN (BNC) on the back panel of the system.

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. If you wish to record and playback audio signal, connect the proper 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-BNC, 1-VGA) on the rear panel of the system. Connect monitors depending on your application.

- 1- BNC for Main composite video output.
- 1- BNC for Spot composite video output.
- 1- 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 color

(d) Windows XP, VISTA

(e) Spare 10/100-BaseT Ethernet Port

(f) Microsoft DirectX 9.0c

It is recommended to have DirectX 9.0c version in Client PC. DirectX 9.0c is available for download from Microsoft homepage

www.microsoft.com/windows/directx.

<Disclaimer>

The remote viewing on network connection may not work on all personal computers due to difference

in personal settings and hardware configurations.

III. QUICK SETUP

To turn on the DVR, press [POWER] button on the front panel or on the remote controller. When the Digital Video Recorder is powered on, the Live Viewing screen will appear in about 30sec.

- 1) Stop recording first to set QUICK SETUP menu. While DVR is recording, TIME and RECORD menu is not activated. .
- 2) Enter the password using Numeric buttons when prompted for a password.



- 3) <The Factory Default password for the unit is "000000">
- 4) Press [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 [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 "Time" on TAP menu by using Directional buttons.
- 2) Enter the Date and Time by pressing numeric buttons on the remote controller or "-/+" on the unit.
- 3) Press [ENTER] button to exit a menu with saving changes. Press [ESC] to exit a menu without making changes.

<Note>

1. Recording mode

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



2. Live mode after time set up

After time set up, press record button to continue recording mode.



2. RECORD

This is an easy setup for recording.



2-1. RECORD MODE

- 1) Select "RECORD MODE" on TAP menu by using Directional buttons.
- 2) Select MODE by pressing "-/+ " buttons on the remote controller or on the unit.
- 3) Press [ENTER] button to exit a menu with saving changes. Press [ESC] to exit a menu without making changes.

RECORD MODE	<ul style="list-style-type: none">• CIF, 4/8Ch: Each channel records at CIF resolution at same rate: 360x240(360x288).• Field, 4/8Ch : Each channel records at Field resolution at same rate: 720x240(720x288).• Frame, 4/8Ch : Each channel records at Frame resolution at same rate: 720x480(720x576)•Frame + CIF: Channel number 1 - 720x480(720x576)+Channel number 2~8 - : 360x240(360x280)
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2.2. RECORD DAYS

- 1) Select RECORDING DAYS by pressing "-/+ " buttons on the remote controller or on the unit.
- 2) Press [ENTER] button to exit a menu with saving changes. Press [ESC] to exit a menu without making changes.

2.3. PRIORITY

- 1) Select "RATE" or "QAULITY by pressing "-/+ " buttons on the remote controller or on the unit.
- 2) "RATE" : DVR is set up with high recording speed mode automatically.
- 3) "QUALITY" : DVR is set up with high picture quality mode automatically. .

2.4 RECORD SETUP INFO

This displays the picture quality and recording speed.

<i>NOTE</i>	<ol style="list-style-type: none">1. START RECORDING : When setup is finished, press [REC] button on the front panel or on the remote controller to start recording,2. For individual recording setup of each channel and more specified setup, enter into RECORD in main menu. Please refer to 3. ADVANCED for how to enter into main menu.
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3. ADVANCED



Select "ON" or "OFF" by pressing "-/+" buttons on the remote controller or on the unit.

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

IV.LIVE VIEWING

1. Display Overview



- (1) (2) (3)

1.

 - (1) Indicate **Alarm** In terminal is triggered by an alarm sensor. To disappear, press [CANCEL/ESC] button on remote controller or [CLR] button on the front panel.
 - (2) Indicate **Motion** detected. To disappear, press [CANCEL/ESC] button on remote controller or [CLR] button on the front panel.
 - (3) Indicate **Video Loss** during Recording. To disappear, press [CANCEL/ESC] button on remote controller or [CLR] button on the front panel.
- (1) (2) (3) (4) (5)

2.

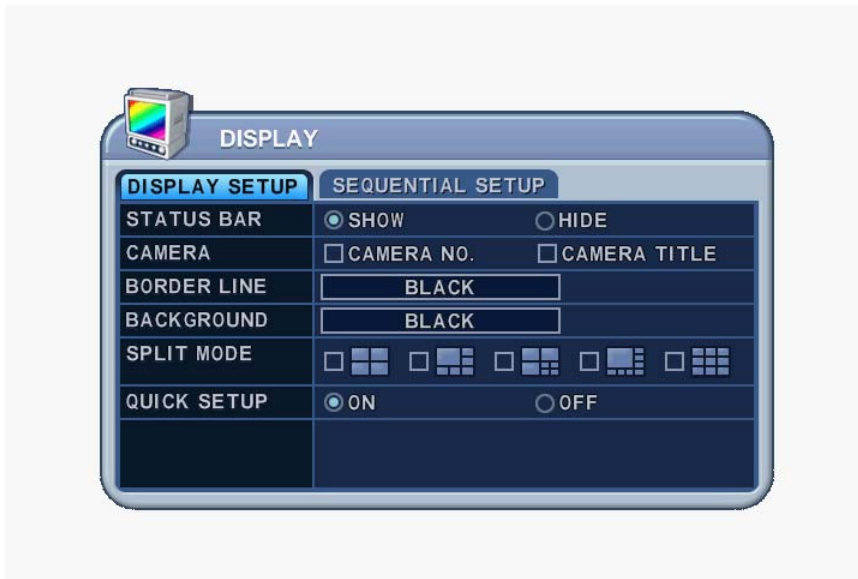
 - (1) Indicate an **USB Device is connected on Front panel**. It's changed to blue color while it's doing backup. If Mouse is connected cursor will be appeared.
 - (2) Indicate the DVR is recording now.
 - (3) Indicate **Schedule Record** mode is on. It's changed to blue color when Schedule Record starts.
 - (4) Indicate **Audio** Data is stored the selected time during playback and turn to blue color.
 - (5) It shows **Number of Client**, which is connected to Network.(MAX:3)
3. : Displays Year, Month, Time and Date.
4. : Show you the remaining recording time of the DVR. If remaining HDD capacity is less than 4GB, this blue "Recycling" icon will be shown up.

2. Multi screen Display and Sequencing

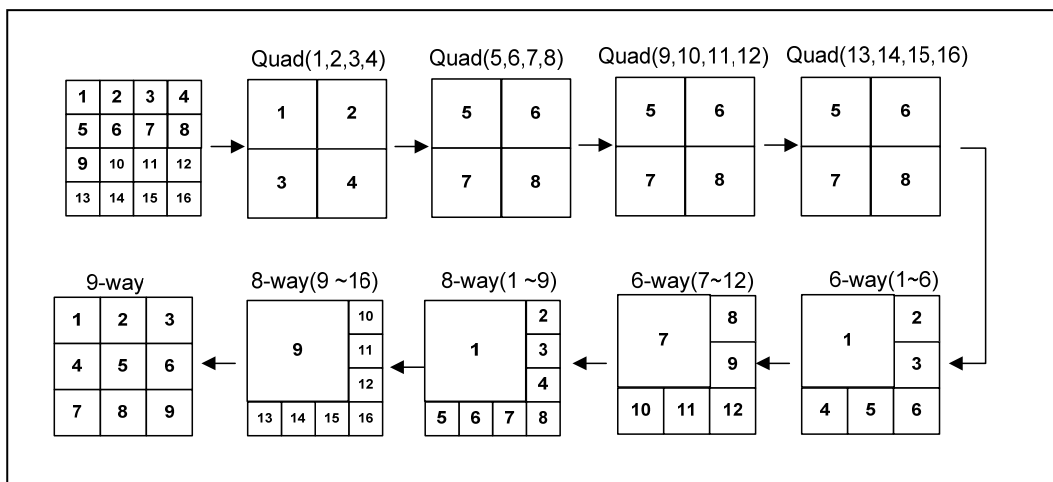
2.1 Full Screen Display

Select any camera for Full screen display by pressing the Number button of the desired camera.

2.2 Multi screen Display and Sequencing Display.






Press **[DISPLAY]** buttons to activate the multi screen display. It is changed the order as shown below among your choice of SPLIT MODE. While in 16-way screen display, press **[DISPLAY]** buttons for 1second to begin full screen sequencing. The sequence mode and dwell times are programmable. For detailed information about configuring those, see “**Sequence Setup**”. If the sequence mode is not activated, it moves to Quad mode instead of Sequencing.

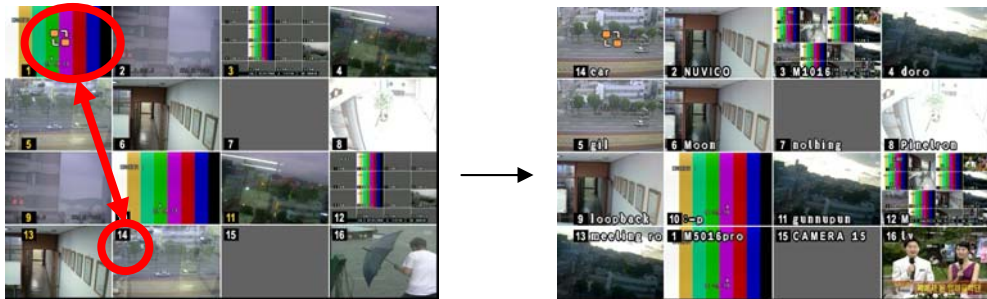


2.3 Repositioning

To reposition a camera view on screen,

2.3.1. Virtual Remote controller

- ① Press  button on virtual remote controller by using mouse,
then  Mark will be displayed on screen. Move  icon to the desired position by pressing directional buttons on remote controller or virtual control pad.
- ② Press a Numeric button to reposition the selected camera. Press [Enter] button to exit here with saving changes.



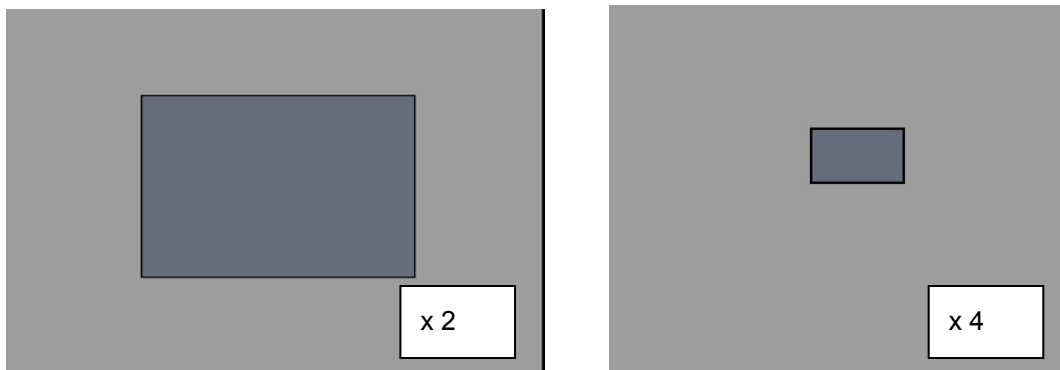
2.3.2. Mouse

: Drag the selected camera to the position you wish to reposition by using 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 screen.

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 IR Remote controller. Zoom area box pops up, as shown below.



3. Move the box to the desired position using Direction [**▲▼◀▶**] buttons.
4. Press **[+]** button to enlarge the image. Press **[-]** button to zoom out the image.
5. Press **[CANCEL]** button to return normal mode.

<Note>

If the Zoom button is pressed while in a multi-screen display, zoom operation is not activated.

4. Spot Monitor

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

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

V. OPERATION

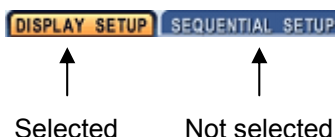
1. Main Menu Overview

When the DVR is powered on, Live Viewing screen will appear after initialization about 30sec. Press **[MENU]** button to access the main menu. An Admin Password Box will appear. Enter the password using Numeric buttons on IR remote controller or CH increase button on Front Panel. Default password is '000000'. Main Menu appears after proper password entered, shown as below.



<Note> Factory default Admin/user password is [000000]. It is recommended to change the "PASSWORD" when you install the DVR. Refer to [System Setup].

1. Use Direction buttons [▲▼◀▶] to select the desired menu. Items selected in the menu are represented in color.
2. Press [ENTER] button to select the menu and display Sub-Menu. Use Left/ Right buttons [◀▶] to select on TAP menu. Selected items changed into **[ORANGE]** color.



*** It is automatically saved changes when you move between TAP menus.**

3. Press **[ENTER]** button to exit a menu with saving changes.
Press **[CANCEL]** to exit a menu without changes.

2. Display Option

2.1. Display Setup

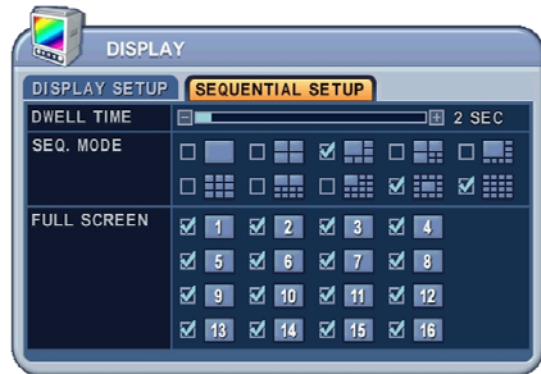


1. Use Direction buttons [**▲▼◀▶**] to select “DISPLAY” menu. Then, press [ENTER] button to display “DISPLAY SETUP”.
2. Use Left/Right buttons [**◀▶**] to select on TAP menu (**DISPLAY SETUP** SEQUENTIAL SETUP). Selected items changed [ORANGE] color..
3. Use Down [**▼**] button to specify.
4. Use [**-, +**] button to change the values

ITEM	ADJUSTMENT
STATUS BAR	<ul style="list-style-type: none"> • Select “Show” or “Hide” below status bar on Main Monitor.
CAMERA	<ul style="list-style-type: none"> • Select On-Screen-Display information for Camera Number and Title.
BORDER LINE	<ul style="list-style-type: none"> • Select Board Line between cameras. <p>[WHITE → GRAY → DARK GRAY → BLACK]</p>
BACKGROUND	<ul style="list-style-type: none"> • Select Background color on NO VIDEO status. <p>[GRAY → DARK GRAY → BLACK → BLUE → WHITE]</p>
SPLIT MODE	<ul style="list-style-type: none"> • Display is changed the order as shown below among your choice of SPLIT MODE.
QUICK SETUP	<ul style="list-style-type: none"> • Select “On” to resume “Quick SETUP” menu and “Off” to stay on main menu setup.

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

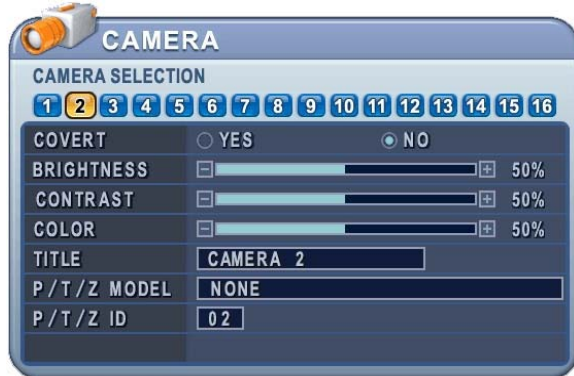
2.2. Sequential Setup (Auto Sequence)



ITEM	DEFAULT	ADJUSTMENT
DWELL TIME	2 Sec	<ul style="list-style-type: none"> Specify the dwell time of each camera or Multiscreen mode is displayed. Use [-, +] button : [1 second ~ 30 second]
SEQ. MODE	None	<ul style="list-style-type: none"> Select desired sequence mode to switching.
FULL SCREEN	ALL	<ul style="list-style-type: none"> Select the cameras to be included or excluded from the automatic sequencing.

3. Camera Setup

1. Use Direction buttons [▲▼◀▶] to select “CAMERA” menu. Then, press [ENTER] button to display “CAMERA”.
2. Use Left/Right buttons [◀▶] or Number button to select the Camera you wish to configure.
3. Use Down [▼] button to move specified menu and use Left/Right buttons [◀▶] to select other item.
4. Use [-, +] button to change the value.



ITEM	DEFAULT	ADJUSTMENT
COVERT	No	<ul style="list-style-type: none"> • If the Covert Mode is “YES”. Selected camera is invisible from all live displays, playback and Network while continuing to record. Covert cameras are viewable after change into “NO” .
BRIGHTNESS	50%	<ul style="list-style-type: none"> • The brightness of each camera can be adjusted by pressing [-,+] buttons.
CONTRAST	50%	<ul style="list-style-type: none"> • The contrast of each camera can be adjusted by pressing [-,+] buttons.
COLOR	50%	<ul style="list-style-type: none"> • The color of each camera can be adjusted by pressing [-,+] buttons.
TITLE	Camera #	<ul style="list-style-type: none"> • A combination of 12 digits and alphabets can be entered to label each camera. Press appropriate Numeric button to type camera title. It's up to 12 characters. See Next chart.
P/T/Z MODEL	None	<ul style="list-style-type: none"> • Select P/TZ camera model to control.
P/T/Z ID	Camera No	<ul style="list-style-type: none"> • Select appropriated channel for the PTZ camera. Camera ID means Camera address.

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

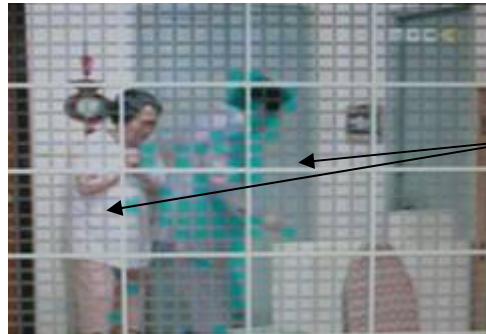
4. Motion Recording

1. Use Direction buttons [▲▼◀▶] to select “MOTION” menu. Then, press [ENTER] button to display “MOTION”.
2. Use Left/Right buttons [◀▶] or Number button to select the Camera you wish to configure.
3. Use Down [▼] button to move specified menu and use Left/Right buttons [◀▶] to select other item.
4. Use [-, +] button to change the value.




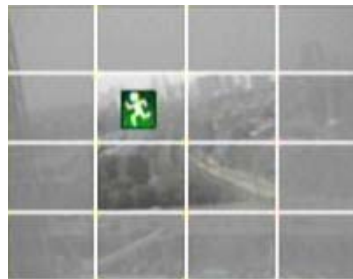
ITEM	ADJUSTMENT
RECORD TIME	<ul style="list-style-type: none"> • Determines the duration of recording when motion is detected. [10SEC ~ 300SEC]
CAMERA SELECTION	<ul style="list-style-type: none"> • Use Left/Right buttons [◀▶] or Number button to select the Camera you wish to configure.
SENSITIVITY	<ul style="list-style-type: none"> • Level 1: Low sensitivity~ Level 20: High sensitivity.
MOTION GRID	<ul style="list-style-type: none"> • Use this menu to setup Zones for the motion detection The screen shown below will overlay the current video image. • Motion zones are set by off – it's covered as GRAY Screen. <div data-bbox="470 1478 941 1809" style="text-align: center;"> </div> <ul style="list-style-type: none"> • It is divided into 16 Grid and selected by Number button on IR Remote. •  : Select All. •  : Cover All.

- Motion detected zones will be changed to BLUE Color.



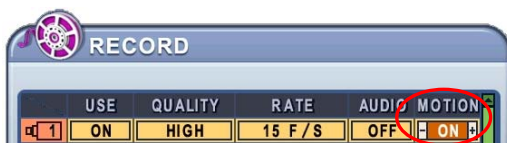
Motion Detected zones

- USE Numeric button to select Motion Grid. GRAY Will be cleared. Or Use <+> button to select Motion Grid at Front Panel. Running Man Icon  will be activated. <+> button is used for selecting and cancel. Use <-> button to escape from Grid Menu.



- It is also possible to select smaller motion grids for more precise motion detection by using 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, as shown below.



7. Press the **REC** button, then Motion recording starts according to configured Recording Quality, Frame Rate when Motion detected. It will be back to stand-by mode after motion recording time is end. Camera does not record under normal conditions.

<Note> Motion Duration will be extended if there is another motion detection while motion recording.

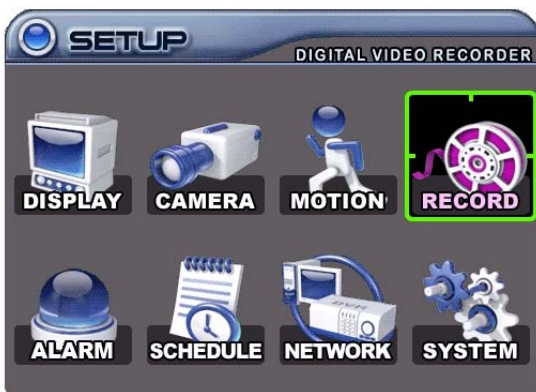
<Note> There may be cases when the recorder’s built-in motion detection function does not operate properly due to the condition of the input video signal or other factors.<

<Note> It is recommended selection of at least 3 motion blocks to get more accurate motion recording.

5. Continues Recording (Normal Recording)

The DVR comes with a certain preset settings from the factory. Therefore once the DVR is installed, immediate recording is possible after pressing the record buttons. By default, audio alarm, motion recording are off.

1. Use Direction buttons [**▲▼◀▶**] to select "RECORD" menu. Then, press [ENTER] button to display "RECORD".
2. Use Direction buttons [**▲▼◀▶**] to select the Camera you wish to configure.
3. Use [-, +] button to change the value.



ITEM	ADJUSTMENT
USE	<ul style="list-style-type: none"> • Enable or Disable Recording on each camera.
QUALITY	<ul style="list-style-type: none"> • Specify the record picture quality for each camera. ULTRA → SUPER → HIGH → MIDDLE → LOW
RATE	<ul style="list-style-type: none"> • Select recording speed for each camera. : Recording resolutions is changed to Frame, Field and CIF mode. <Refer to System >
AUDIO	<ul style="list-style-type: none"> • Select audio recording: ON or OFF. The audio data is always recorded in real time unlike the video data that can be recorded in various modes including real time. There may be a slight delay in synchronization of the audio to video
MOTION	<ul style="list-style-type: none"> • Select Motion Recording ON or OFF. Camera does not record under normal conditions. It is discussed on Motion Recording Section.

<Note> Press [**MENU**] button on each Item at first line to apply all setting for the rest channel.

-
5. **Save changes** and exit the menu, press **[ENTER]** button.
 6. Press **[REC]** button. Then, the red REC LED lights on the front panel and recording starts.
 7. To Record stop, press the “ **STOP**” button on IR remote or **[REC]** button again on Front Panel.

< Approximate File Size >

Quality	NTSC			PAL			UNIT
	720x480	720x240	360x240	720x576	720x288	360x288	
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

* It is calculated by theoretical, therefore it may be different depends on Video Signals or other conditions in actual.

6. Alarm Recording

Please 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 Direction buttons [▲▼◀▶] to select “ALARM” menu. Then, press [ENTER] button to display “Alarm Record Setup”.
2. Use Left/Right buttons [◀▶] to select on TAP menu (**RECORD SETUP** | **ALARM SETUP**).
3. Use Direction buttons [▲▼◀▶] to select the Camera you wish to configure.
4. Use [-, +] button to change the value.

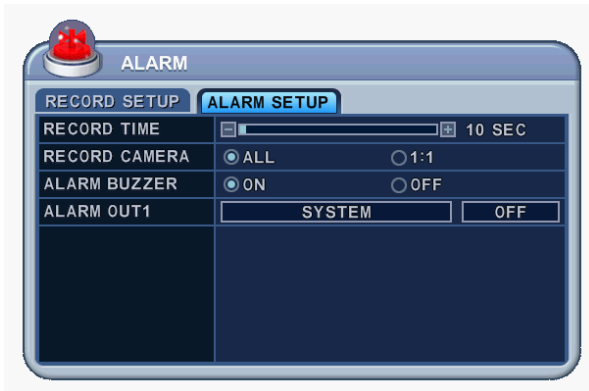


ITEM	ADJUSTMENT
USE	<ul style="list-style-type: none"> • Enable or Disable Alarm Recording on a per camera.
QUALITY	<ul style="list-style-type: none"> • Specify the record picture quality for each camera on Alarm Recording. ULTRA → SUPER → HIGH → MIDDLE → LOW
RATE	<ul style="list-style-type: none"> • Select recording rate of each camera when Alarm is triggered
AUDIO	<ul style="list-style-type: none"> • Select audio recording: ON or OFF.
INPUT	<ul style="list-style-type: none"> • Specify the type of Alarm input Device.

<Note> Press [MENU] button on each Item at first line to apply all setting for the rest channel.

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

6.2. Alarm Setup



ITEM	ADJUSTMENT
RECORD TIME	<ul style="list-style-type: none"> Determines the duration of recording after the alarm signal has been activated. [10SEC ~ 300SEC]
RECORD CAMERA	<ul style="list-style-type: none"> ALL: Start to record All Alarm “ON” channel if there is any Alarm signal is triggered. 1:1: Start to record the channel, which Alarm is triggered.
ALARM BUZZER	<ul style="list-style-type: none"> ON: The buzzer Sounds if an alarm is triggered. The buzzer will sound for the duration of the RECORD TIME. This buzzer related with Alarm Out. Please configure Alarm Out “ON” for Alarm buzzer. OFF: Disables the ALARM BUZZER function. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><Note> Press [-] button to stop the buzzer immediately. Stopping the buzzer does not stop the alarm recording.</p> </div>
ALARM OUT1	<ul style="list-style-type: none"> Configure which relay will be triggered when an alarm is activated per camera. Select from four available options: Video Loss, Motion, Alarm ALL, Each Alarm, System. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><Note> If “System” is selected, the relay will be triggered when System has problems such as HDD FAIL, Power loss etc.</p> </div> <ul style="list-style-type: none"> Press [Cancel] button to stop Alarm Out. It will be cleared by an order: Alarm>Motion> Video Loss

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

7. Press **[REC]** button after setting RECORD ENABLE. Then, the red REC LED lights 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 will revert back to stand by mode once alarm recording is finished.
 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 will be changed to Super picture quality at 6F/S with Audio. The system will revert back to continuous recording once alarm recording is finished. 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 3 F/S without audio). If an alarm is triggered on this channel, the configuration will be changed to Super picture quality at 6F/S with Audio. The system will revert back to stand-by mode for Alarm or Motion once alarm recording is finished. The DVR system starts recording when an alarm is triggered or a Motion is activated.

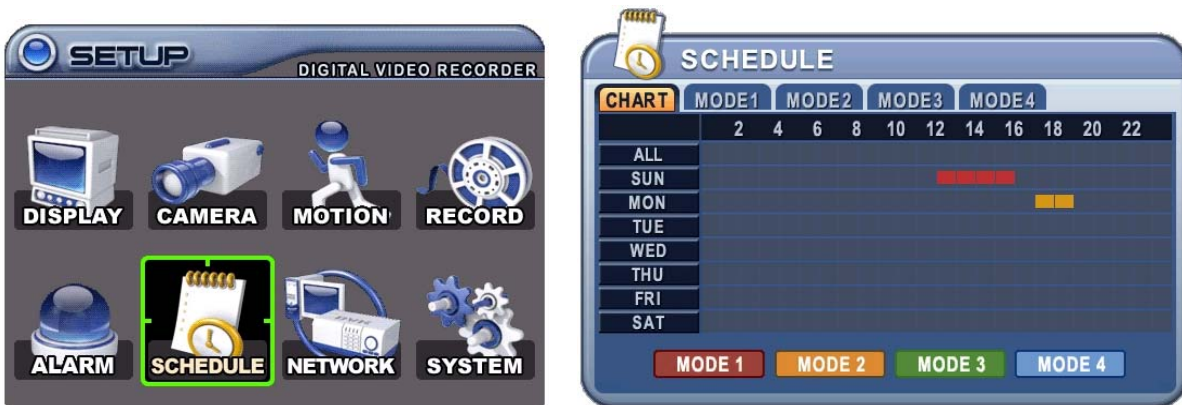
<Note>

- If two or more recording modes (Alarm, Motion or Continuous) are operational, the alarm recording mode takes the highest priority followed by motion and continuous recording modes.

7. Schedule Recording

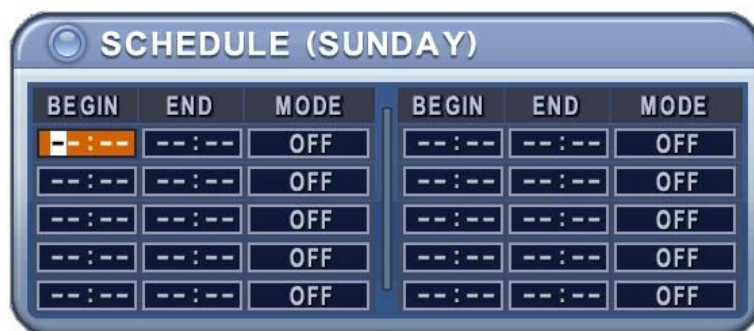
The schedule chart shows a graphical representation of the defined record mode: Mode1~4. However, the schedules are only displayed if a corresponding schedule has been configured in the schedule menu.

1. Use Direction buttons [▲▼◀▶] to select "SCHEDULE" menu. Then, press [ENTER] button to display "Schedule Chart".
2. Use Left/Right buttons [◀▶] to select on TAP menu (CHART MODE1 MODE2 MODE3 MODE4).
3. Use Down button [▼] to select any Day you wish to configure.



It breaks down the days of the week in eight different categories: ALL, SUN, MON, TUE, WED, THU, FRI and SAT. ALL is for everyday of the week. Daily schedule has priority to ALL.

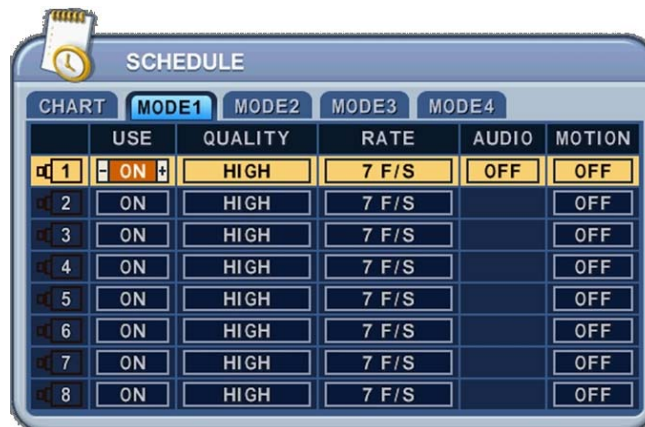
4. Press [Enter] button you wish to configure. The detailed menu pops up for selected Day, as shown below.



5. Enter the beginning and end time, then select Record mode to record.

- (1) BEGIN: The time of recording start.
- (2) END: The time of recording end. The ending time must not be before the starting time or the same as the starting time. It must be any time over the starting time.
- (3) MODE: Up to 4 different recording modes can be pre-determined for schedule recording. (MODE1 ~ MODE4)

6. Define modes below.



* Refer to Basic Recording for set up

<Note>

- The recording time is set by 24H(00:00 - 23:59). You need to set 2 days if the setting is over one day.

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

- The recording would not start when Ending time is ahead of Start time.

EX)

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

7. **To activate the schedule recording after setting, press the SCHEDULE button.**

The SCHEDULE indicator illuminates. When a program covers the current time, the REC indicator illuminates and the unit begins recording. Please note that if there are no schedules configured, then the DVR will not record.

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

9. If you wish to stop recording while scheduled recording, press the SCHEDULE button, then the SCHEDULE indicator goes off and the Schedule Recording Mode is released.

Summary of combination

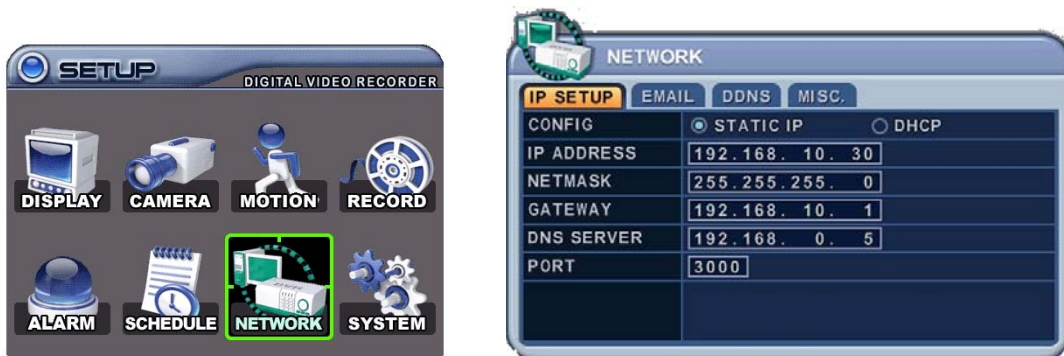
RECORD MODE	MENU	RECORD		ALARM		SCHEDULE
		CAMERA	MOTION	USE	Normal	MODE 1~4
Continuous	RECORD	ON	OFF	OFF	OFF	OFF
Motion	RECORD	ON	ON	OFF	OFF	OFF
Alarm	ALARM	OFF	OFF	ON	ON	OFF
Schedule	SCHEDULE	OFF	OFF	OFF	OFF	ON
Schedule Motion	SCHEDULE	OFF	ON	OFF	OFF	ON
Normal and Alarm	RECORD &ALARM	ON	OFF	ON	ON	OFF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

8. Network Setup

The static service consists of an IP address that remains constant for the duration of the contract of the internet service, whereas the dynamic service consists of an IP address that frequently changes every time a new connection is made through the provided modem, or recurrently in a given period of time. Though most internet service providers offer both solutions, this manual will distinguish the two solutions according to the commonly available service type to configure the DVR for the networking purposes.

8.1. IP setup

1. Use Direction buttons [▲▼◀▶] to select “NETWORK” menu. Then, press [ENTER] button to display “Network”.
2. Use Down button [▼] to specify the detail.
3. Use [-, +] button to change the value.
4. Save changes and exit the menu, press [ENTER] button.
Exit the menu without making changes, press [CANCEL] button.

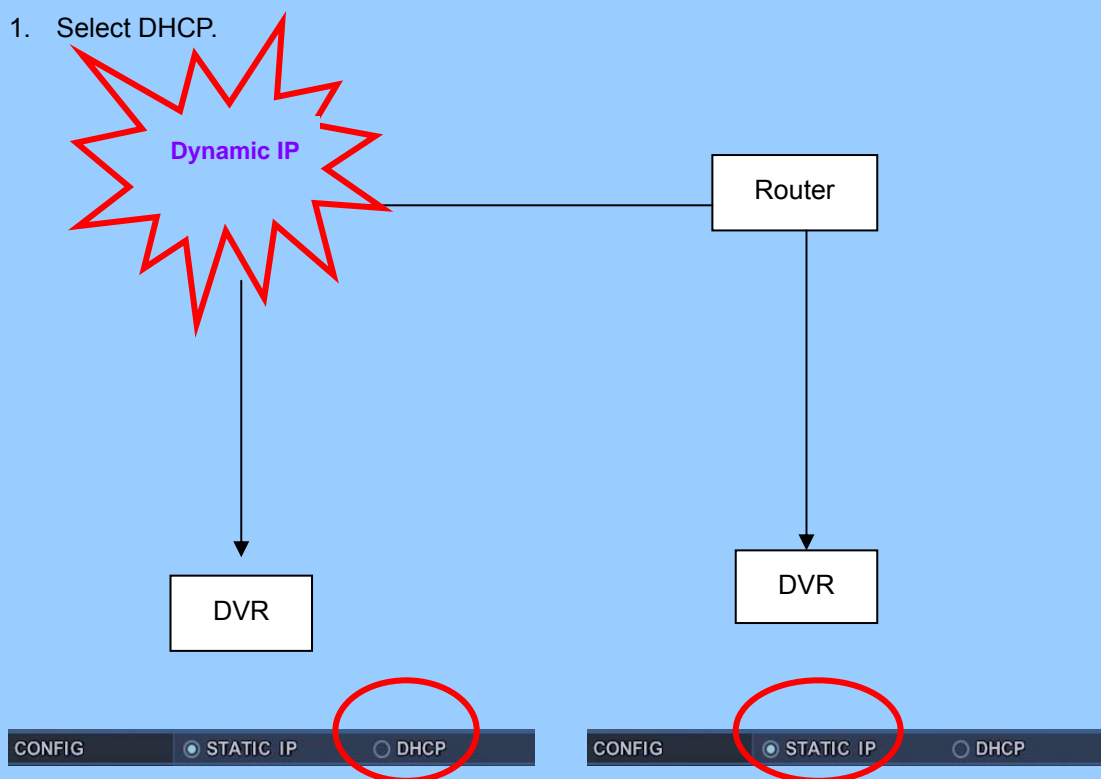


ITEM	ADJUSTMENT
CONFIG	<ul style="list-style-type: none"> • STATIC IP: Edit IP address, Gateway and Netmask. • DHCP: Dynamic Host Configuration Protocol. <p>It is automatically set on from Local DHCP if there is Local DHCP server (i.e. The local Router) . if the DHCP is set to ON, the IP address, Gateway and subnet Mask will be assigned by DHCP server.(i.e.The local area network Router</p>
IP Address	<ul style="list-style-type: none"> • Enter the static IP address
Net mask	<ul style="list-style-type: none"> • Enter the IP address of subnet mask.
Gateway	<ul style="list-style-type: none"> • Enter the IP address for the internet gateway server.
DNS Server	<ul style="list-style-type: none"> • Verify the name of the domain name system

PORT	<ul style="list-style-type: none"> • Select "0000 ~ 9999" <p>The DVR's connection port can be adjusted in case the default port 7000 is blocked. The DVR's service port may be modified to allow the connection from CMS.</p>
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<Note> How to connect the DVR via Network to use DDNS

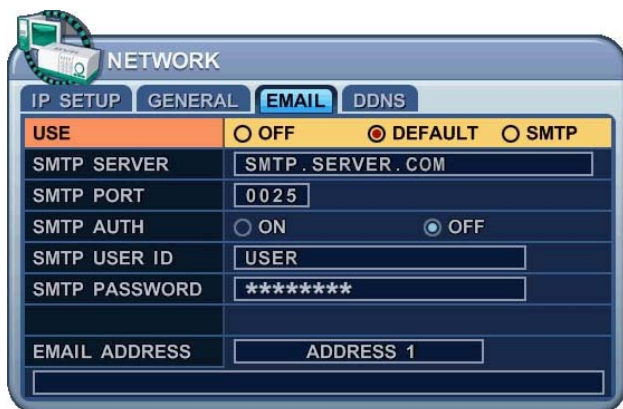
1. Select DHCP.



2. Please check "Serial No" on System Menu.
3. Enter DNS name<ex: <http://L10020E.dvrhost.com:7000>> on Web browser or CMS.

8.2. E-Mail

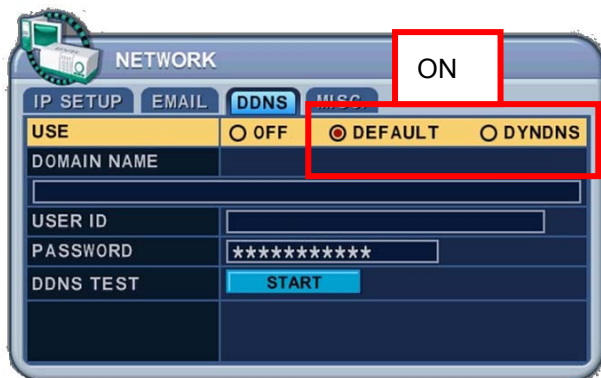
The DVR is capable of sending e-mails when an event occurs to up to 5 different e-mail addresses: Alarm , Video Loss, Power Loss (when power recovered), HDD Failure.



There are two types of sending e-mail method; Using “Unique” or “Public/ your own mail server”.

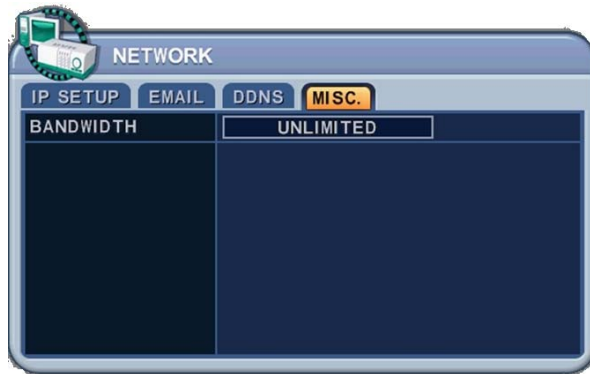
ITEM		ADJUSTMENT
USE	OFF	• Select the e-mail notification on or off. The default is off.
	Default	• Select mail server: Default it is supporting by manufacture. : You do not need to setup SMTP server.
	SMTP	• Select mail server. SMTP then Setup below SMTP menu.
SMTP	Server	• Select Highlight SMTP Server 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 Mail Server if your server needs Authentication. (It is recognized as a small letter, even it's displayed as a Capital Letter)
	Password	• Enter the password, if your server needs Authentication. (It is recognized as a small letter, we do not support capital Letter)
E-mail Address		• Enter a desired e-mail address to send the notifications to.

8.3 DDNS



ITEM	ADJUSTMENT
USE	<ul style="list-style-type: none"> • OFF : NO use of DDNS • DEFAULT : use default “dvrhost.com” server for DDNS. If your 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	<ul style="list-style-type: none"> • Enter your domain name if you use “Dyndns” server for DDNS.
User ID	<ul style="list-style-type: none"> • Enter user ID for DDNS.
Password	<ul style="list-style-type: none"> • Enter user PW for DDNS
DDNS Test	<ul style="list-style-type: none"> • Test your DDNS address.

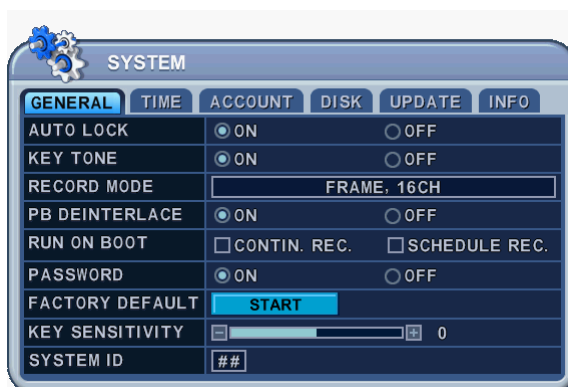
8.4. MISC.



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

9. System Setup

9.1. General

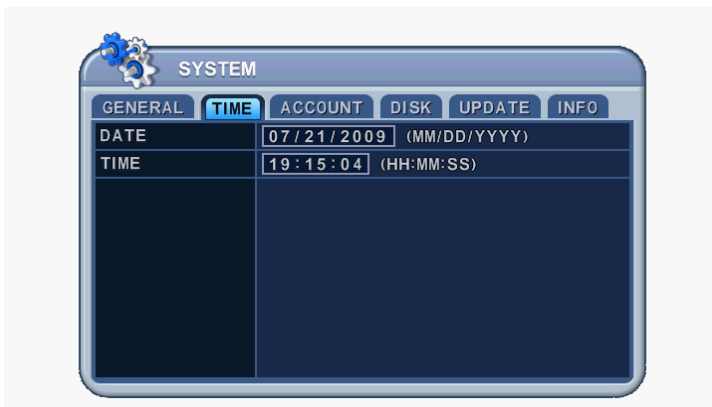


1. Use Direction buttons [**▲▼◀▶**] to select “SYSTEM” menu. Then, press [ENTER] button.
2. Use Left/Right buttons [**◀▶**] to select on TAP menu
3. Use Down button [**▼**] to specify the detail.
4. Use [**-, +**] button to change the value.
5. **Save changes** and exit the menu, press [ENTER] button.
Exit the menu **without making changes**, press [CANCEL] button.

ITEM	ADJUSTMENT
AUTO LOCK	<ul style="list-style-type: none"> The DVR locks all the buttons after three minutes of inactivity like a Screensaver. The buttons can be unlocked with the user password. Default by “OFF”.
KEY TONE	<ul style="list-style-type: none"> 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 by “ON”
RECORD MODE	<ul style="list-style-type: none"> CIF, 4/8Ch: Default setting The system records each camera individually and then multiplexes them. Each channel records at CIF resolution: 360x240(360x288). Field, 4/8Ch: The system records each camera individually and then multiplexes them. Each channel records at Field resolution: 720x240(720x288). Frame, 4/8Ch: The system records each camera individually and then multiplexes them. Each channel records at Frame resolution: 720x480(720x576) Frame + CIF : Channel number 1 - 720x480(720x576) + Channel number 2~8 - : 360x240(360x280)
PB DEINTERLACE	<ul style="list-style-type: none"> ON: Reducing image flickering but less picture quality. OFF: Better picture quality for still image but having flicker for moving picture.
RUN ON BOOT	<ul style="list-style-type: none"> This is the purpose to start REC without pressing REC button when you turn on.

PASSWORD	<ul style="list-style-type: none"> if you choose "OFF", The password window will not be shown except POWER/ SERVICE MENU/ RECORDING STOP/ SCHEDULE RECORDING STOP.
FACTORY DEFAULT	<ul style="list-style-type: none"> To restore factory default settings, stop recording and then execute "START" by using ENTER button.
KEY SENSITIVITY	<ul style="list-style-type: none"> The sensitivity of touch buttons on front panel can be controlled in this setting.
SYSTEM ID	<ul style="list-style-type: none"> 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, and such. Set the ID of IR controller on "00" to control DVRs at the same time, whatever DVR ID are.

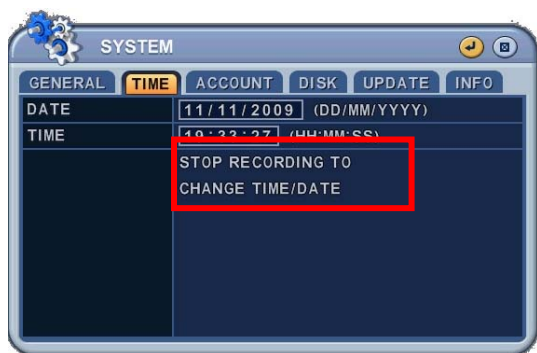
9.2. Time



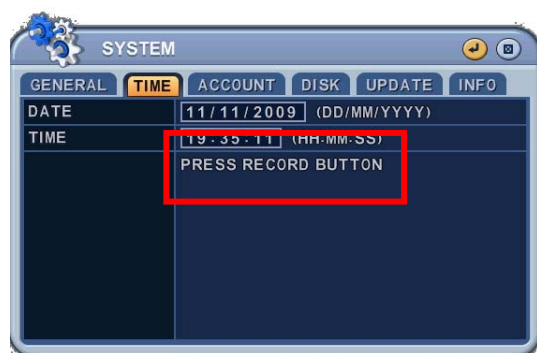
ITEM	ADJUSTMENT
DATE & TIME	<ul style="list-style-type: none"> Enter the Date and Time.

<Note>

While recording mode, you cannot set up time. Stop recording to change TIME/DATE.



< Record mode >



< Live mode after time setup >

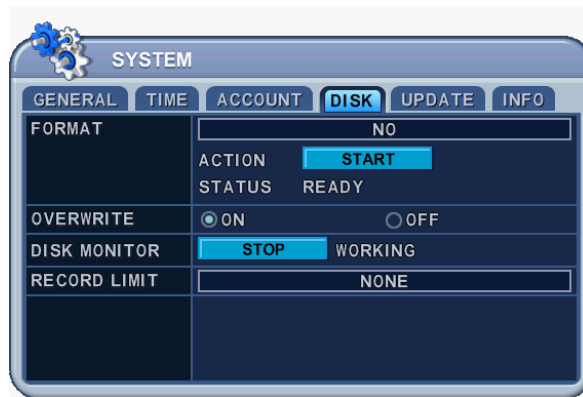
9.3. Account



Admin can define each user's Authority. Select User 1~5 , then select Activate option **on** or **off**. When enabled, it will be possible to check individually under user settings: Monitoring, Playback, Back up, Network, Configuration (Main Menu Setup), Shutdown (Power off).

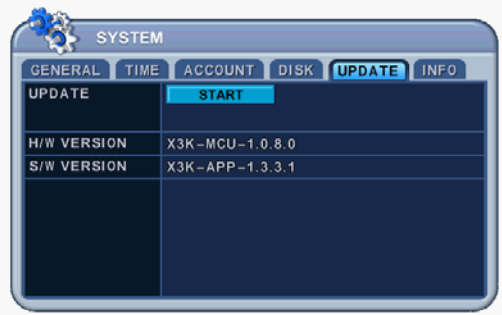
Enter the 6 numbers for the new password, and then re-enter the same password under COMFIRM section. The asterisks will advance automatically as the numbers are entered.

9.4. DISK



ITEM	ADJUSTMENT
FORMAT	<ol style="list-style-type: none"> 1. Stop the DVR completely before the disk format. 2. Use [-, +] button to change select device. <ul style="list-style-type: none"> * Internal HDD * USB – Memory Stick * USB – CD/DVD-RW * USB – HDD <div style="background-color: #e0f0ff; padding: 5px; margin: 5px 0;"> <p><Note> When you format USB-HDD, it is formatted to FAT 32 format type.</p> </div> <ol style="list-style-type: none"> 3. Use down button [▼] to move START, then press [“+” or “-”] button to start formatting. 4. Formatting will begin, and the progress will be displayed at the bottom of the window. Please not that it takes 10~30 seconds for format a HDD. 5. When formatting is finished, it will display COMPLETE, and also SUCCESS at the bottom of the window.
OVERWRITE	<p>Users may select the record 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.</p> <ul style="list-style-type: none"> •ON: By default, the hard disk drive will overwrite from the beginning when it becomes full. •OFF: It stops recording after HDD is full.
DISK MONITOR	<ul style="list-style-type: none"> • It stops automatically if HDD failure happens. It starts to “Monitoring” again after DVR reboot . (Use [-, +] button to stop or start)
RECORD LIMIT	<p>Allows you to configure when the DVR automatically deletes all data from HDD. It lefts the data for below duration from current time.</p> <p>[NONE → 12HOURS → 1DAY~ 6DAYS → 1WEEK ~ 4WEEKS]</p>

9.5. UPDATE.

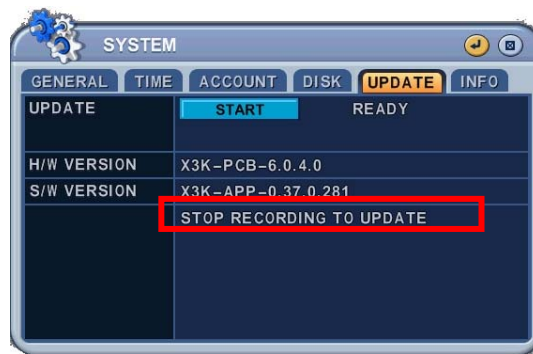


- 1) Download the latest firmware file and copy to USB Flash memory stick in the **Root** Folder.
- 2) Turn on your DVR (If you are using, please stop the recording)
- 3) Plug USB memory stick into the front USB port and check if USB icon shows up on the Status bar.
- 4) Move to upgrade menu and start upgrade by pressing [+]/[enter] button.
- 5) Wait until upgrade finished and show "Success" message, 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 recording mode, you cannot update DVR. Stop recording to update first.

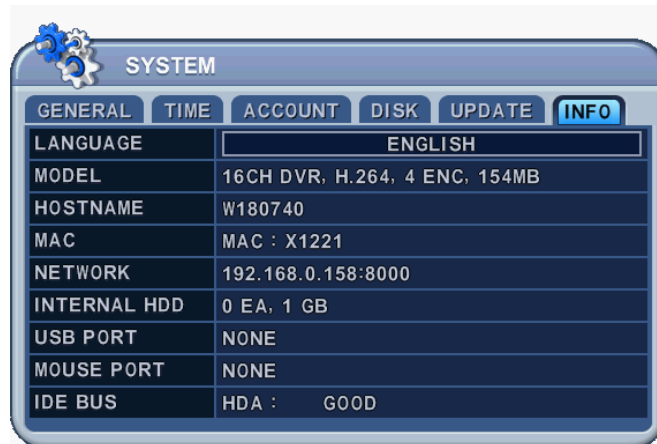


< Record mode>

<NOTE>

1. Please make sure your USB Flash memory stick has enough space for update file size.
2. Do not make special folder into memory stick for these files.
3. Do not format the USB at window, 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 seller before upgrade DVR.

9.6. INFO



Press info button on IR remote to display the information. The other menu is blocked to move. This menu provides information such as listed below.

Indicator	CONDITION
LANGUAGE	<ul style="list-style-type: none"> • Display Current Language and you can change language here.
MODEL	<ul style="list-style-type: none"> • Display Channel Number and compression.
HOSTNAME.	<ul style="list-style-type: none"> • Display hostname and Mac Address.
MAC	<ul style="list-style-type: none"> • Display MAC address
NETWORK	<ul style="list-style-type: none"> • Shows the current IP and Port of this unit.
INTERNAL HDD	<ul style="list-style-type: none"> • Displays numbers of HDD and total HDD size .
USB PORT	<ul style="list-style-type: none"> • Displays what kind of device is connected to the front USB connector.
MOUSE PORT	<ul style="list-style-type: none"> • Displays mouse is connected to mouse port at rear panel.
IDE BUS 0	<ul style="list-style-type: none"> • Shows the Primary HDD status. A : Master, B: N/A <p><note> It will be displayed when the HDD support S.M.A.R.T function. Please change this HDD to NEW HDD in the case of “WARNING”.</p> <p>** “ERROR” means the HDD damaged physically.</p>








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 > Please Refer to **Help Menu** for specific control.




INDICATOR	RESULTING ACTIONS
 [ENTER] Button	<ul style="list-style-type: none"> • Press this button to display “HELP” Menu. Press [ENTER] Button again, or [CANCEL] button to cancel Help Menu. <div style="text-align: center;">  </div>
 [CANCEL] Button	<ul style="list-style-type: none"> • Press this button to cancel “PAN/TITL” Operation.
 [MENU] Button	<ul style="list-style-type: none"> • PTZ camera control interface will be extended to use whole function. Press this button again to make short-cut menu. <div style="text-align: center;">  </div>
	<ul style="list-style-type: none"> • To Tilt up and Down. • To pan Right and Left.
	<ul style="list-style-type: none"> • Zooming In and Out.

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




**** Please Check below items before using PTZ Camera.**

1. RS 422/485 Connection, camera Jumper Setting and etc
2. Set the PTZ Camera ID & MODEL NO at the Display menu

2. Preset & Tour

Button	Function
	Set preset position; SPOT OUT on remote controller Move the PTZ into desired location. Press the Preset button. Custom 1 will illuminate. Set the # for the Preset location. Press Enter to save and exit.
	Go to preset position; INFO on remote controller Press Go to 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 Preset and press Enter. For Example, Auto Tour Button, +5 will start the tour of 1 ~ 5 presets of 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 manufacture's instruction manual for proper jumper settings to match the protocols to 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 the button to increase speed




VII.SEARCH/ PLAYBACK

1. Time Search

- To start playback, press  [Time Search] button, Time search Calendar Menu pops up, as shown below.



- Use Left /Right button to change select Month on .

<Note> It will not be changed if there are no stored data on previous/next month.

<Note> The data are color-coded by category: Alarm(Red) > Motion(Green) > Normal (Yellow)

- Use Up/Down buttons [\blacktriangle]/[\blacktriangledown] to select “DAY” on Calendar. Selected data will be shown as a graphical representation of the recorded video stored on the DVR.
- Select “Hour and Minutes“ or ”the camera“ you wish to playback. Then press [ENTER] button.



<Note>


Time : Multiscreen Display

Camera : Full screen Display

- Press [ENTER] button to start playback.

2. Log List Search/Alarm, Motion Search

The logs can be used to search and review directly to a point in time of the recorded data. Alarm, motion, video loss and system related logs can be searched and played back directly from the time of the incident.

1. To start Event Search, press  [Log] button on the front, then Log List Menu pops up, as shown below.



MENU TAP	CONDITION
ALL	• It has a list of all the events since the initial power on procedure of DVR
SYSTEM	• It shows All Event except for Alarm, Motion, and Video Loss.
NETWORK	• It shows NETWORK List.
ALARM	• It shows All Alarm List.
MOTION	• It shows Motion List.
VIDEO LOSS	• It shows Video Loss List.

2. Use Up/Down buttons [▼▲] to desired "Time" to playback. Use Left/Right buttons [◀▶] to move NEXT page.
3. Press [ENTER] button to start playback.

<Note> Log list is saved on HDD.

<Note> To save log output, please connect USB memory stick into USB port on front. Then press Display button on each category to backup Log data. USB Icon will be flashed as Blue.

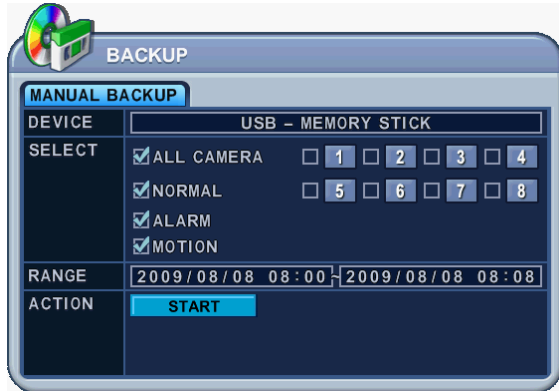
VIII.BACKUP

1. USB Memory Stick Backup

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

<Note> Make sure your USB device has enough space before commencing backups.

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



3. Use [-, +] button to change select device: USB - Memory Stick.
4. Please select the data for BACKUP.
 - (1) NORMAL: Normal Recording Data
 - (2) ALARM: Alarm Recording Data
 - (3) MOTION: Motion Recording Data

The illustration to the left has selected ALL CAMERA, NORMAL, ALARM and MOTION data.

5. Enter the numbers as required in 24-hour format, then move to **START**.
6. Press [ENTER] button to start BACKUP.

* USB icon will be highlighted in blue during the backup.

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



USB Memory Stick

- The backup progress indicator will be displayed at the bottom of the window. While the system is in backup session, please do not perform playback.
7. After backup process is finished, USB icon will be highlighted in white.

2. External USB HDD Backup

- External USB-HDD, CD/DVD-RW is recognized within 10 seconds after plug in UBS connection cable to UBS port in DVR.

- Before progress to Backup, refer to below Note first.

<Note 1.>

Stop recording to back up when you want to back up by using external HDD or CD/DVD – RW.



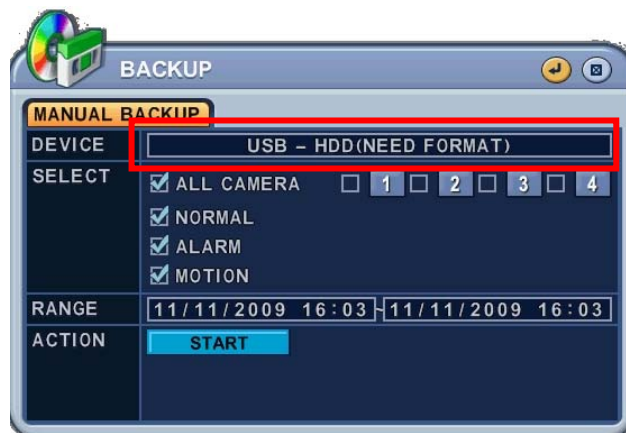
<Record mode>

<Note 2. >

Format USB HDD to FAT 32 format type in PC or DVR set.

If USB HDD is not formatted to FAT 32 type, you can see message "USB – HDD (NEED TO FORMAT) in Device menu.

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



- Start to backup

To Read USB backup HDD in Window, please use FAT32 formats.


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

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



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

The illustration to the left has selected ALL CAMERA, NORMAL, ALARM and MOTION data.

5. Enter the numbers as required in 24-hour format, then move to .
6. Press [ENTER] button to start BACKUP.

* USB icon will be highlighted in blue during the backup.

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



USB Memory Stick

- The backup progress indicator will be displayed at the bottom of the window. While the system is in backup session, please do not perform playback.
7. After backup process is finished, USB icon will be highlighted in white.
 8. When users get out of backup menu, the following message will be shown up to alert.



<CF. FAT 32 Formats>

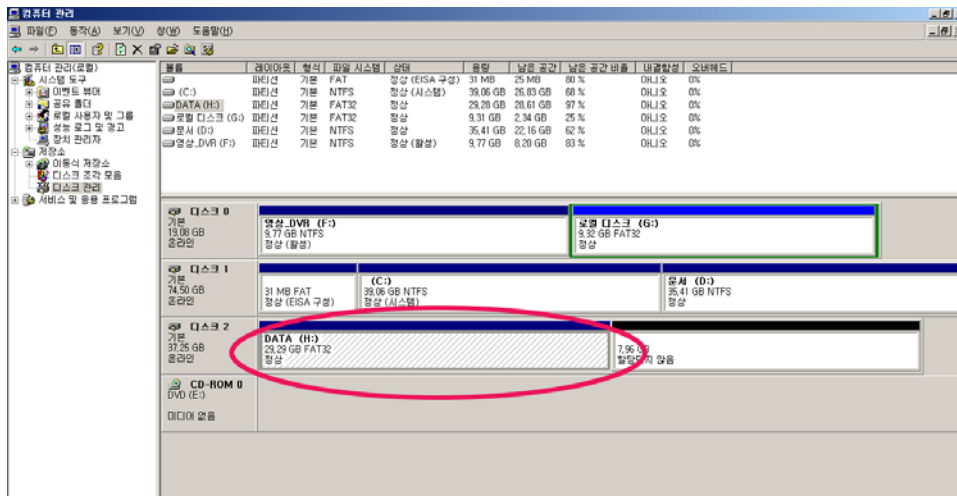
There are two way to format HDD to FAT 32 type.

1-1. Format external USB HDD to FAT 32 type by DVR in disk of system menu.

<Note> USB HDD will be formatted to FAT 32 type regardless of HDD capacity.

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

(Windows will only let 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 CMS Local Player.

<Note>

- ONLY FAT 32 Format disk will be read through Window PC.
- The data in FAT 32 format disk is not replayed on DVR.

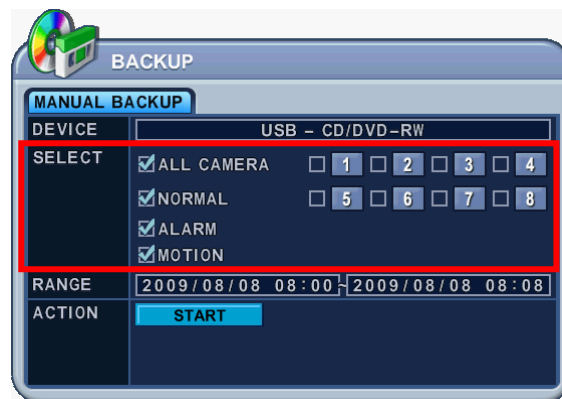
3. External CD/DVD –RW Backup

- External USB-HDD, CD/DVD-RW is recognized within 10 seconds after plug in UBS connection cable to UBS port in DVR.

<Note>

Stop recording to back up first when you want to back up by using external HDD or external CD/DVD –RW.

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



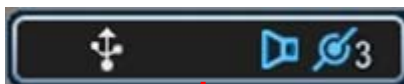
<Note>

- For CD/DVD-RW back up, the select option is not available. The data will be backed up to CD/DVD-RW of All cameras and normal, alarm, motion recording together.

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

* USB icon will be highlighted in blue during the backup.

- If there is not enough space on your USB memory stick, the system will not proceed with backup.



USB Memory Stick

- The backup progress indicator will be displayed at the bottom of the window. While the system is in backup session, please do not perform playback.
4. After backup process is finished, USB icon will be highlighted in white.

4. How to Play Backup data in USB Memory Stick Backup

1. With "MCD Player"

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

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

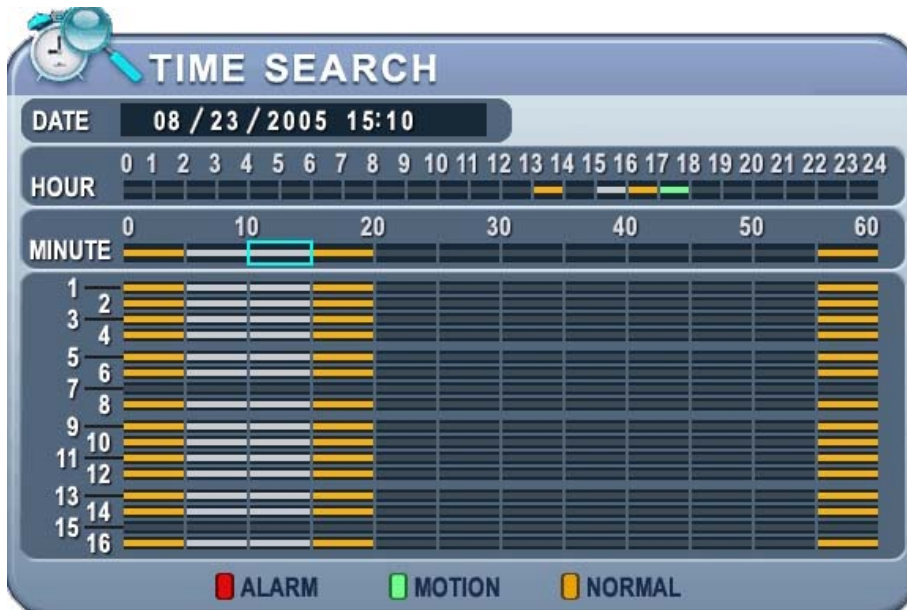


3. Back up data can be also be played by [LOCAL PLAYER]

5. Back up Range Setup

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

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



Selected backup time from 15:05~15:15 will be displayed on 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 DVRs (based on 4 channels) 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 will not affect the 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
etc	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 error may occur. Moreover, the program may malfunction if inappropriate codecs have been installed on the PC.

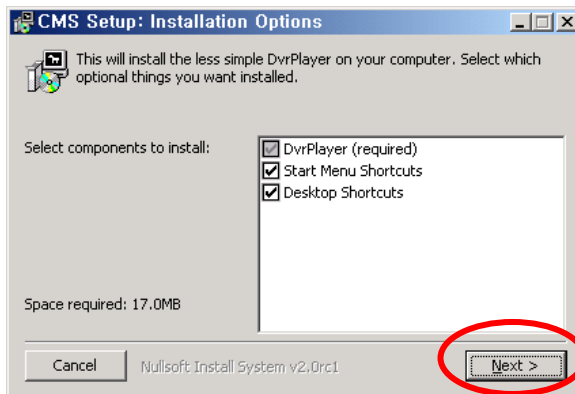
CMS may not run if DirectX 6.0 or earlier version is installed. Please download the latest **Direct X** from Microsoft.

1.2. How to Install

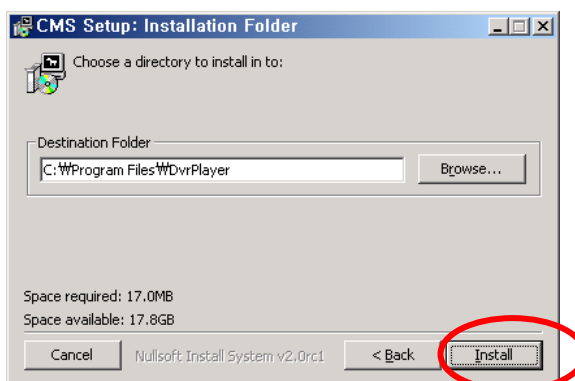
- (1) Insert “Client Install CD” to CD-ROM of your PC and Find “DvrPlayerinstaller.exe” and

double click  DvrPlayerInstaller.exe

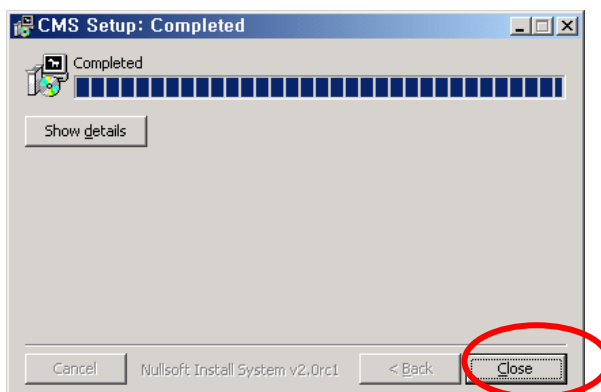
- (2) Click 「NEXT」 button below:





- (3) Click 「Install」 . Otherwise, designate a directory for Install then Click “Install”.



- (4) Click 「Close」 Button after below images appears.



- (5) The ICON  of CMS will be displayed on your desktop.

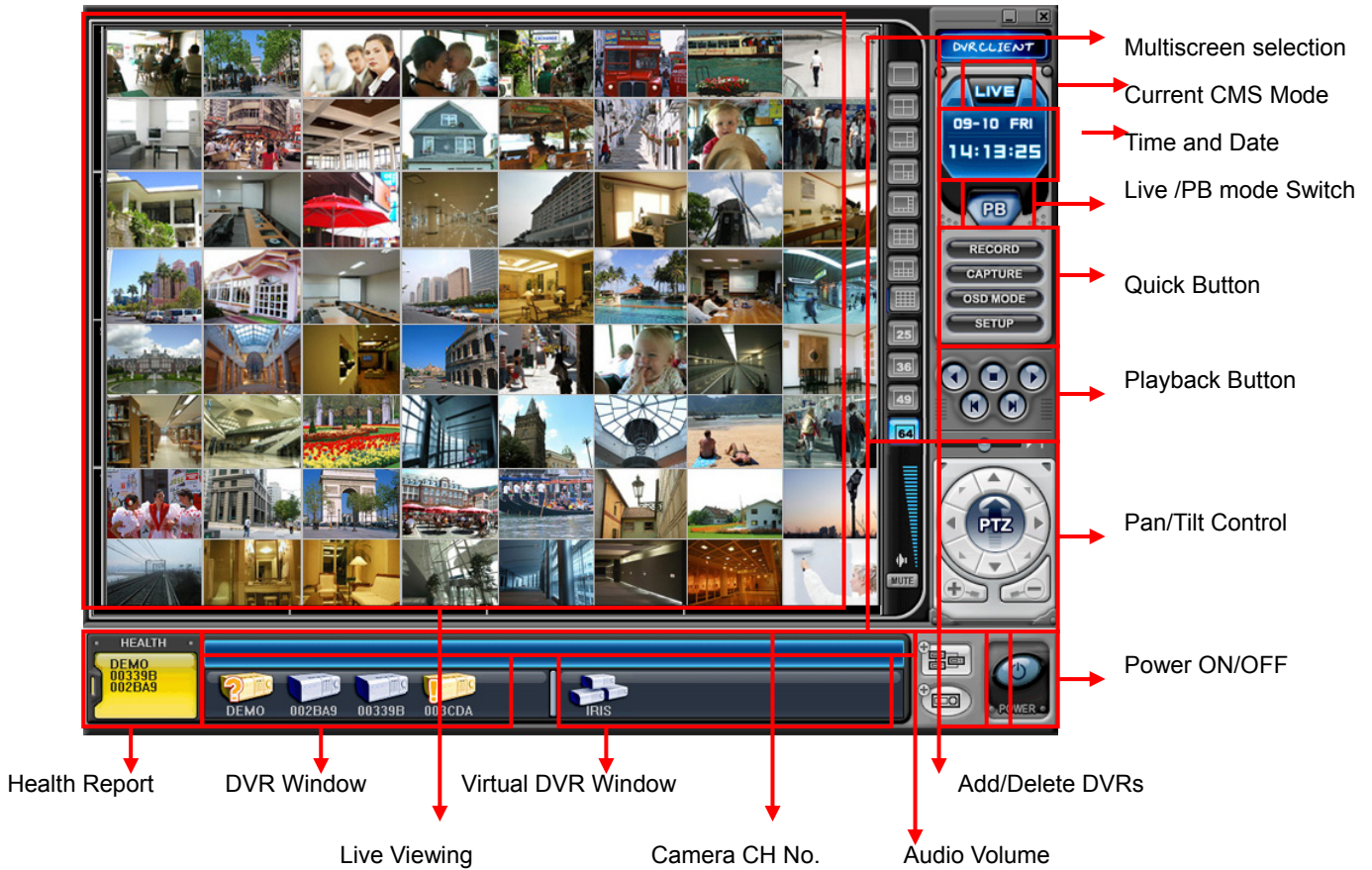
(6) Double click the ICON  to start, enter the password to access.



* 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



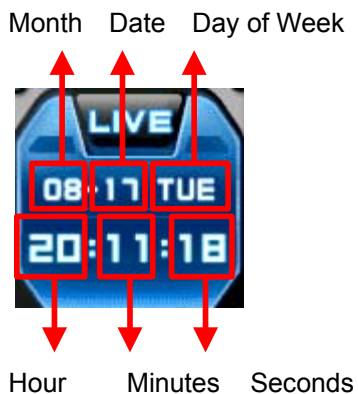
2.2. Functions

(1) Display option / Multiscreen Displays



- | | | | | | |
|----|---|------------------------|----|--|-------------------------|
| a. |  | Full Screen Display. | g. |  | 10- Way Screen Display. |
| b. |  | Quad Screen Display. | h. |  | 16- Way Screen Display. |
| c. |  | 6- Way Screen Display. | i. |  | 25- Way Screen Display. |
| d. |  | 7- Way Screen Display. | j. |  | 36- Way Screen Display. |
| e. |  | 8- Way Screen Display. | k. |  | 49- Way Screen Display. |
| f. |  | 9- Way Screen Display. | l. |  | 64- Way Screen Display. |

(2) Time and Date Display





It shows you current time on LIVE Mode and Playback time on PB mode.



(3) Live /Playback mode Switch

- a.  LIVE Viewing.
- b.  Remote Playback or Playback for Downloaded file.

(4) Quick Button

- a.  Save the current live images. When the remote recording is in progress, the record button will change its color to cyan.
(Default Location: C:\Program Files\DvrPlayer\Download)
- b.  Save a snap image or print current monitoring images.
- c.  OSD On/Off button.
- d.  CMS Setup.

* **CMS Setup**

① **General 1**



a) **OSD SETUP**

Select On-Screen-Display information such as the Time, DVR name, Camera Number, Camera Name, Frame Rates for each camera.

b) **OVERLAY (Default)**

It is recommended to use OVERLAY for transmission speed up. Please cancel the Overlay function if there is broken screen caused by Invalid Video Driver installed. If you still have the abnormal screen problem, please slow down the Hardware Acceleration.

c) **Video Mode**

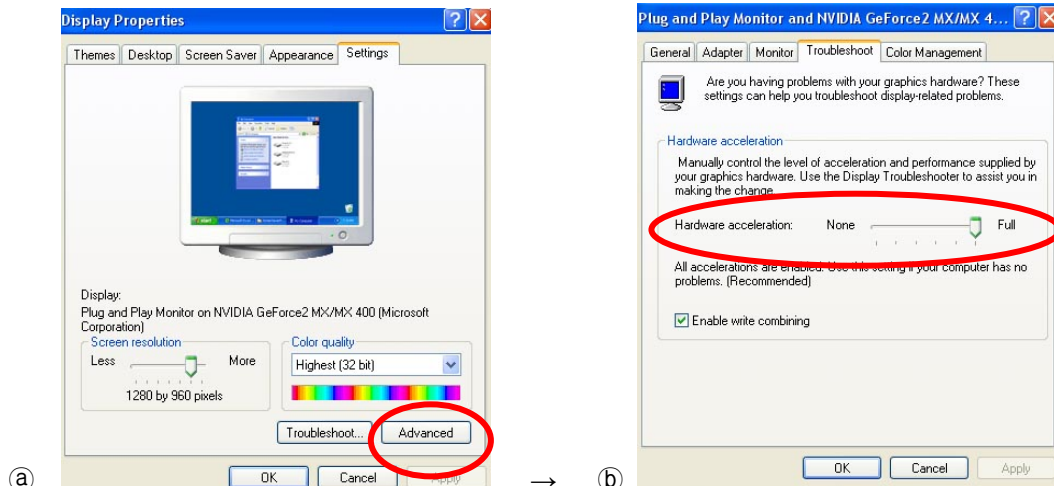
Select NTSC or PAL

d) **DOWNLOAD**

Designate a directory for file Download

< C.F> Control Hardware Acceleration

- a) Click the Advanced button on Display Properties on your PC.
- b) 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 alarm event.

③ Password



– Changing the password

a) Old Password : Enter your current password.

b) New Password: Enter the NEW password.

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

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

<Note> This password is for protection screen when you launched CMS. This is different from your DVR password.

④ SOUND

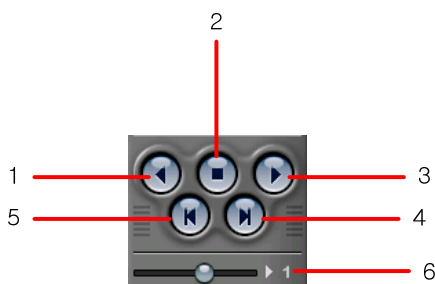
Audio alert setting for the CMS. You can toggle to enable the sound or to disable the sound from the software.



- Connect: CMS will emit a sound when a DVR connects.
- Disconnect: CMS will emit a sound when a DVR disconnects.
- Alarm: CMS will emit a sound when an alarm is triggered from the DVR.
- Motion: CMS will emit a sound when the DVR detects a motion.
- Video Loss: CMS will emit a sound when there is a Video Loss.

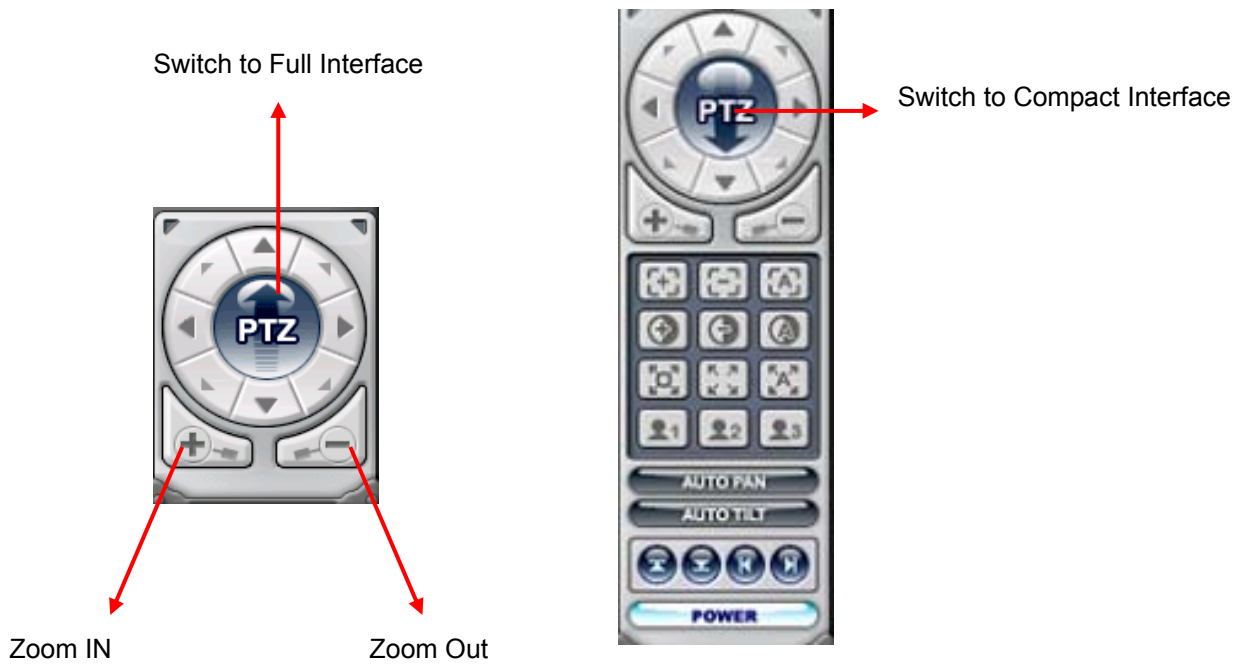
(5) Playback Control Buttons

- 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 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.






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 Actions	Indicator	Resulting Actions
	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 Actions
	Focus Far
	Focus Near
	Focus Auto

c. Iris

Indicator	Resulting Actions
	Iris Open
	Iris Close
	Iris Auto

d. Tour




Indicator	Resulting Actions
	Set Tour by clicking. Total address is depends on connected Pan/Tilt Camera.
	Go To, Calls up preset
	Start Automatic Tour

e. Special Function Key






It has various function depends on PTZ camera

f. Auto Pan

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

g. Auto Tilt

Indicator	Resulting Actions
	Set Auto Tilt to upper boundary.
	Set Auto Tilt to down boundary.
	Run Auto Tilt function.

h. Pan/ Tilt Power



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

(7) HEALTH

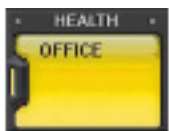
Displays the name of the last five DVRs with an problem or event. The color will change appropriately based on the event or problems reported from the DVR.

a. Red



The color changes to red when critical functions of the DVR is interrupted or has 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 color 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

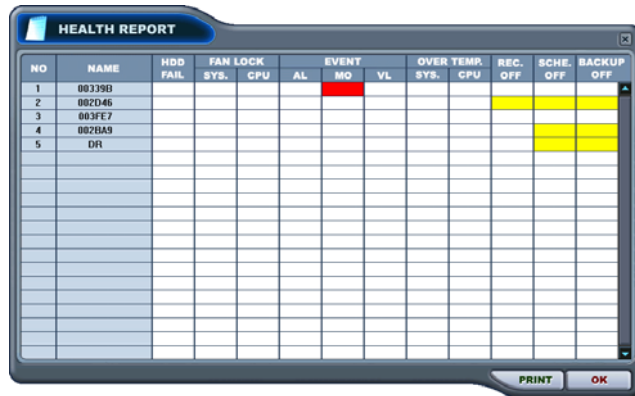
c. Blue




The color remains blue as long as the DVRs are functioning within the normal parameters. It will display the DVR's set name only with the following functions: Record Start, Backup operation Start, Schedule On

*** Health Report**

Health Report menu is provided so that users may quickly overview all the condition of connected DVR. You can check maximum 300 DVR statuses such as Failure, Event, Recording Mode and 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.

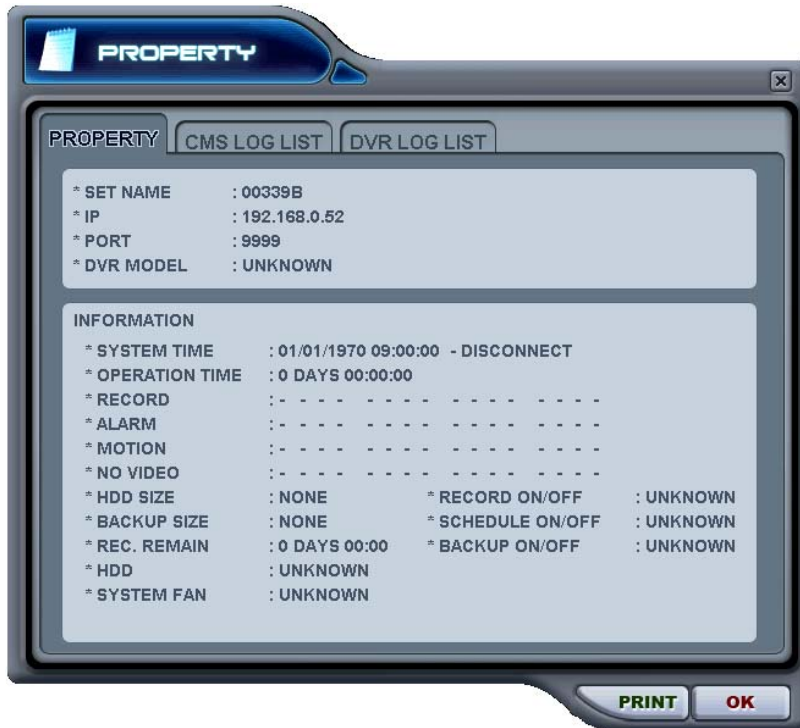
Block Color	Condition
Solid RED	An Event or a problem had occurred.
Blinking RED	Current event or a problem.
Solid Yellow	Current status of the DVR.

<Note>In case of network connection error 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 defect of FAN on side of DVR
 - b) CPU FAN: It shows defect of FAN on CPU
- c. EVENT
 - a) AL: Alarm
 - b) MO: Motion
 - c) VL: Video Loss
- d. OVER TEMP. **(Not supported in 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 in this model>
- g. BACKUP OFF: Indicate Backup status on DVR

** DVR Property

The Property of DVR can be viewed by Double Click "DVR NO or DVR NAME".



This menu provides information such 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 in this model.**)

**** CMS LOG LIST**



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

**** DVR LOG LIST**


- It shows the same log list with DVR Set. It has a list of all the events since the initial power on procedure of DVR.



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

3. DVR Control

3.1. Set List Manager

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



(1) Auto Scan

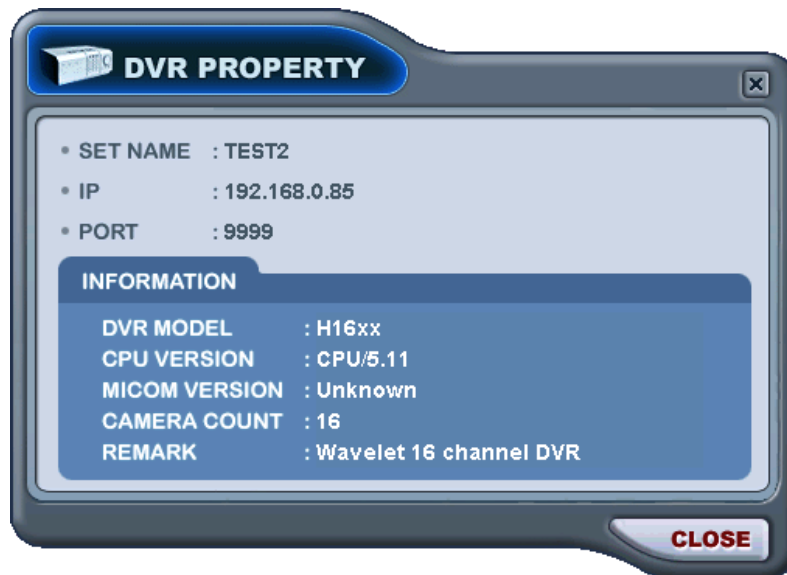
It automatically tracks down DVRs connected local network but skips over already on the list. The DVR Host Name is entered automatically to the title and default Password is 000000(USER).

(2) Add to List

Please follow steps to add desired DVR on CMS.

- 1) Set Name: Type on DVR title to display on 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: It depends on user privilege
 - Admin Password: All functions.
- 5) Add to List: Click "Add to List" to complete add the DVR onto CMS list.
- 6) Save changes and exit the menu: Select "OK".
- 7) Exit the menu without making change: Click "Cancel"
 - APPLY: It 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 is.



3.2. Condition of DVR

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

(1)Normal



Blue colored DVR means the DVR is working without any problem.
When you click this icon, it displays current live view.

(2)Network Connection in progress



Orange colored DVR means CMS is trying to connect to the DVR through network. When you click this icon, it shows the message < Connecting... Please stand by> with “try again” and “cancel “ button

(3)Network Error/Disconnection

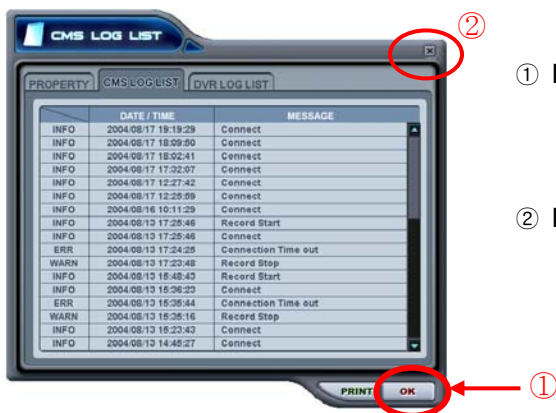



Pink colored DVR means the disconnection of DVR caused by network error or invalid password. CMS try to connect the DVR at every 30 sec in the case of network connecting error. When you click this icon, it shows this message <Network connection error> or <Invalid Password>. Please change the password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

(4)System abnormality



Orange colored DVR means there is an event or system problem.
When you double click this icon, CMS Log List pops up.



- ① Exit the menu with clear the statuses and back to blue colored DVR  : Select “OK”
- ② Exit the menu with keeping 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 DVR window, the Camera Status Bar displays the status of individual cameras. The cameras are displayed according to the channel.




(1) Click the desired DVR



(2) then it shows the information of camera.





(3) Each Icon means listed below.

- 1)  (Blue) : Video Input is connected without recording.
- 2)  (Dark Blue) : Video Loss
- 3)  (Red) : Recording the current channel.

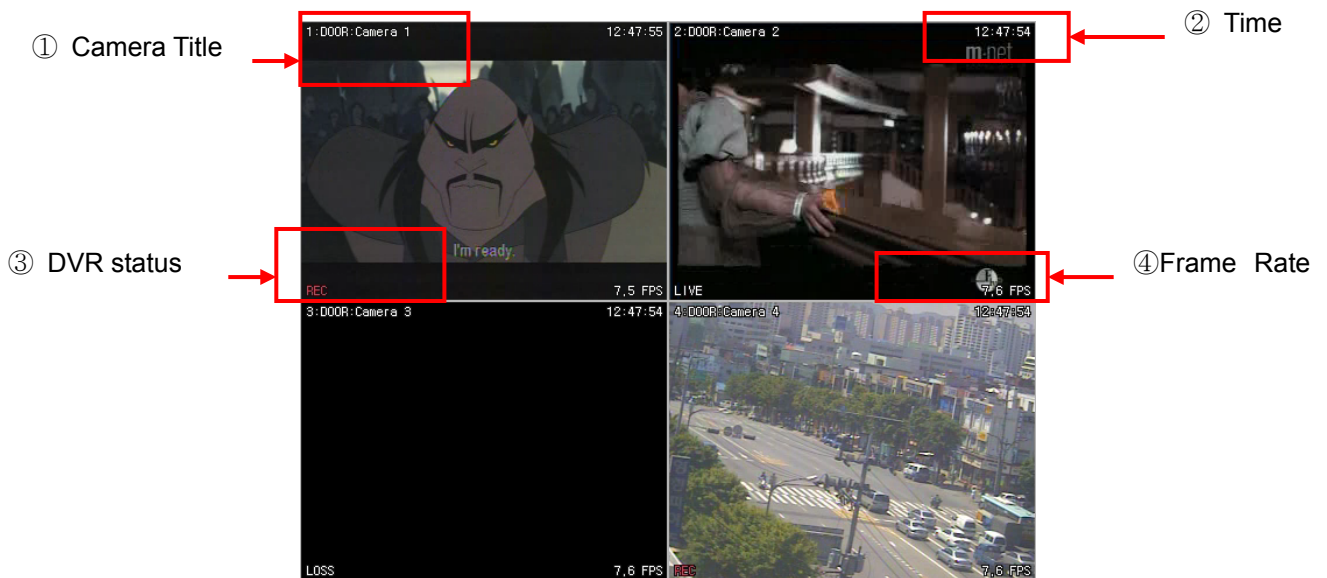
3.4. Live Viewing

(1) Individual DVR monitoring

Double click “  or  “ 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 form the actual recording field rate of the DVR.

(3) Multiscreen Display



Click the individual Multiscreen buttons  to display corresponding multiscreen.

(4) Change the camera position.

Click on each camera to directly switch the desired camera.

(5) Full Screen Display

There are 2 way of Full Screen display.

- 1) Select any camera for Full Screen display by double clicking the window of desired camera. (To come back to previous Live viewing mode, please double click again.)
- 2) Select any camera for Full Screen display by clicking Right Mouse button.

3.5. Context Menu

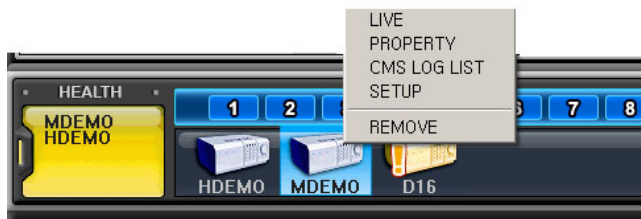
The context menu allows access to the submenus for the channel, DVR and the Virtual DVR. The submenus allow access to various features for each individual submenu type.

- (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 seven types of Context Menu on each DVR.

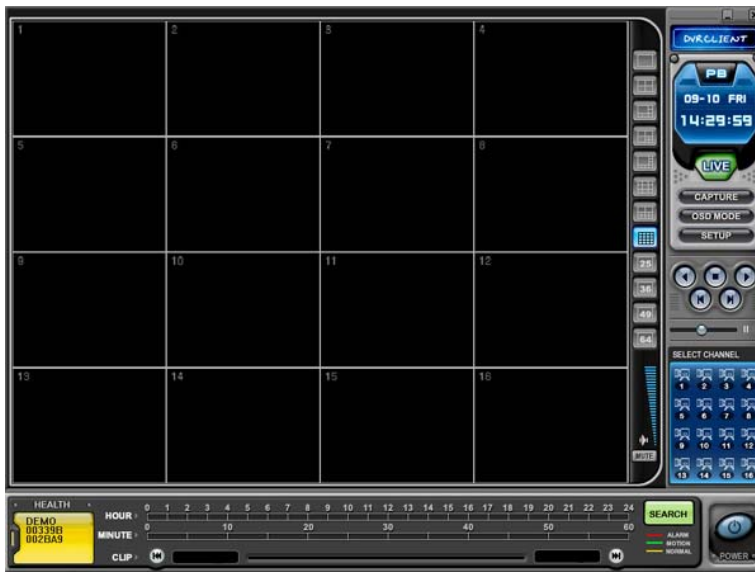



- 1) LIVE: Live display for selected DVR.
- 2) PROPERTY: DVR information
- 3) CMS LOG LIST
- 4) DVR LOG LIST
- 5) SETUP: See "DVR Menu Setup"
- 6) REMOVE: Delete the selected DVR from DVR Window.

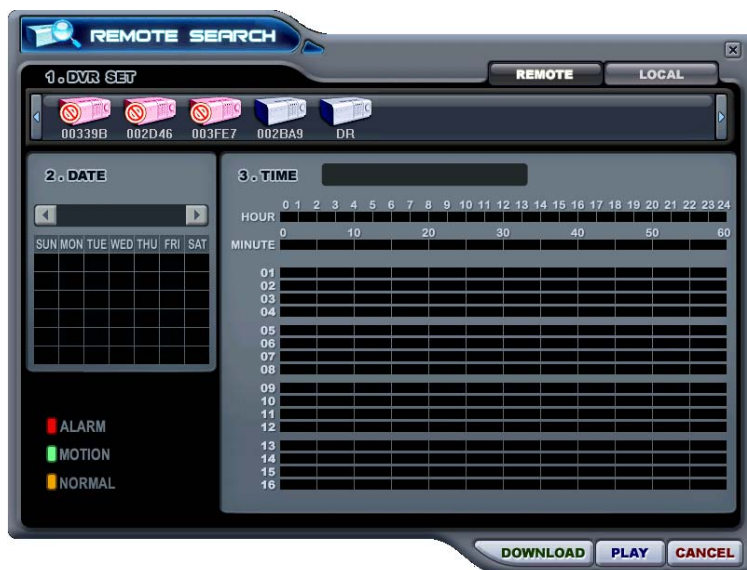
3.6. Playback

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 PB button .
- (2) It will be switched to Playback Mode, as shown below.




- (3) When  button pressed, Remote Search Menu will appear.




- (4) Select  button or  button for playback.

1) Remote Playback

Remote Playback is provided so that users directly playback the stored video on the internal HDD through CMS.

- ① Select  button and desired DVR.
- ② Remote Search shows a graphical representation of the recorded video stored on the DVR. The Data are color-coded by category: Alarm(Red) > Motion(Green) > Normal(Yellow).



- ③ Select desired Date and Time . By Click and drag, it is possible to select longer minutes. Click  button to start playback.



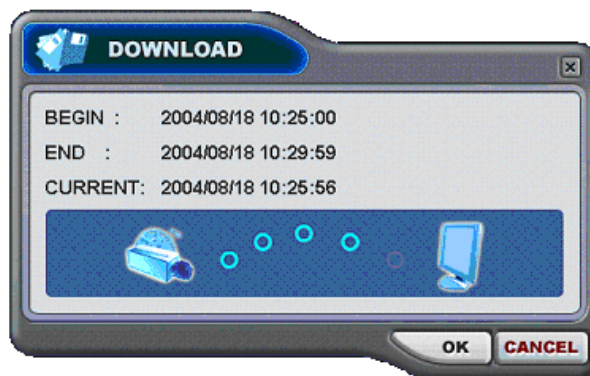
2) Remote Download

Remote Download is provided so that users save on remotely connected computer through CMS.

- ① Select **REMOTE** button and desired DVR.
- ② Remote Search shows a graphical representation of the recorded video stored on the DVR.



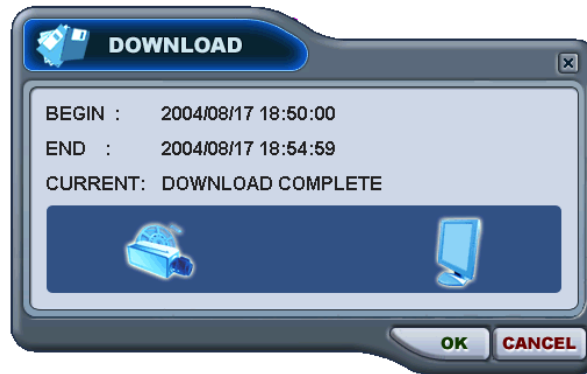
- ③ Select desired date and time and click **DOWNLOAD** button to start save. It will be saved on "C:\Program Files\DvrPlayer\Download". Download directory can be changed on CMS Setup Menu .



- a. BEGIN – END: Indicate the Start time and End time of selected File.
- b. CURRENT : Indicate the time of current downloaded file.
- c. Download Cancel: Select **CANCEL**


-
- d. Download Complete: Current time will be 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  button.
- ② Local Search shows a graphical representation of the stored file on the PC.



- ③ Select desired DVR, Date and time, then click  button to start playback.
- ④  : Deleted selected file from the PC.
- ⑤  : Save selected file onto another folder of the PC or other drive.
- ⑥  :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 as it would be done accessing the DVR menu screen.
- DVR set up can be accessed through the context menu from any DVRs

Select any DVR for Menu setup. Context Menu will appear 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 DVRs already listed under the DVR window. Under one Virtual DVR set, up to 64 DVRs 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 steps to Make Virtual DVR.

- 1) NAME: Enter Virtual DVR title to display on 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. The cameras with events are moved to channel 1 automatically, then arranged in the order of priority.

*** Auto Insert& Arrange :**

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

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

- Check those options to have the cameras with alarm/motion triggers or Video Loss to be prioritized and arranged automatically in either Auto Arrange or Auto Insert& Arrange.

- 2) ADD VIRTUAL DVR: Click "Add Virtual Set" button to make Virtual DVR. Avoid overlapping same name for Individual Sets.
- 3) Save changes and exit the menu : Select "OK"
- 4) Exit the menu without change : Click "Cancel"
- APPLY: It is used for changing the name of selected Virtual DVR.

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

(3) PROPERTY: This menu provides information such as Virtual Set Name, Total number of connected DVR, Total number of selected Cameras and IP information of connected DVRs.



4.3. Editing Virtual DVR

- (1) Double click the desired Virtual DVR .



- (2) The selected Virtual DVR will be activated and it is indicated with “ ▷ ”



- (3) Select any of Multiscreen to Display.

There are two way to add cameras: one is Whole DVR and the other is selected camera on each DVR.

- 1) Whole cameras of desired DVR .

- ① Click the desired DVR to directly drag the desired channel.
- ② The camera will be added in numeric order from selected channel to end, depends on connected number of cameras on DVR.

In the following examples, 8ch DVR draged to channel Number 5



2) Any selected camera on DVR.

- ① Click any DVR on DVR Window while Virtual DVR is activating.
- ② After camera icons displayed, any camera on DVR to directly drag the desired channel.

In the following examples, Camera No 1 on 3rd DVR is dragged to Channel No 14.



< Note > In the case of overlapping on same channel, New Camera will replace existing camera.

(5) Delete Camera.

There are two ways of deleting the camera from CMS.

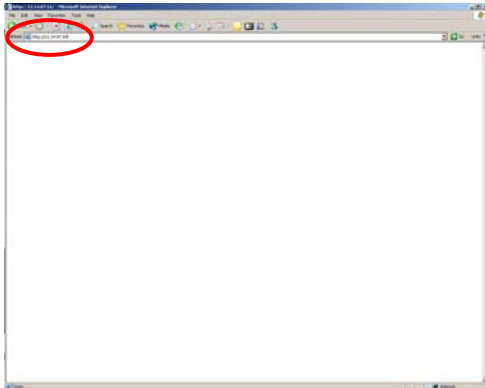
- 1) Select any camera for delete during live monitoring. Context Menu will appear on screen by Right clicking. Select " REMOVE"
- 2) Select any camera to delete and directly drag to DVR Window or Virtual DVR Window.



4.4. Live Viewing on Virtual DVR

It is exactly same as Actual DVR.

Appendix 1: VIEW ONLY



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

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

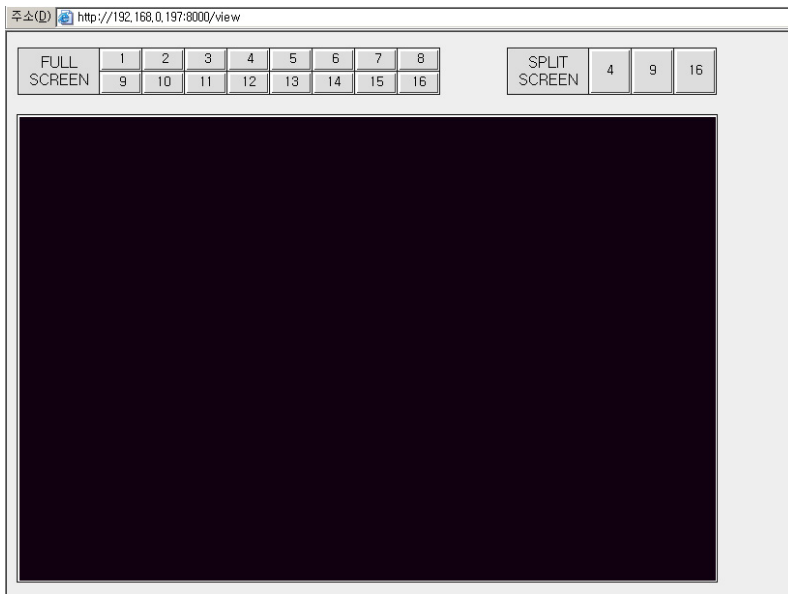
Above illustrates example of a unit when it is utilizing port 7000.



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 purpose for view.



Specifications		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), Mouse
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, Color 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		RS422/485, Ethernet(10/100 Base-T), USB 2.0
HDD		1 INTERNAL HDD
Network		LAN, WAN, Internet,
Remote		Client Software, Internet Explorer

WEEE Symbol 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 wastes 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.

<Memo>