

# DIGITAL VIDEO RECORDER USER GUIDE

8/16 CHANNELS


VER M5-1.01



- 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.

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## SAFETY PRECAUTIONS



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**

**AVIS : RISQUE DE CHOC ÉLECTRIQUE-NE PAS OUVRIR.**

**CAUTION:**  
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).  
NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED  
SERVICE PERSONNEL.



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



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

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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.

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## 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 100V-240V AC 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, resealable 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.

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# PACKAGE CONTENTS

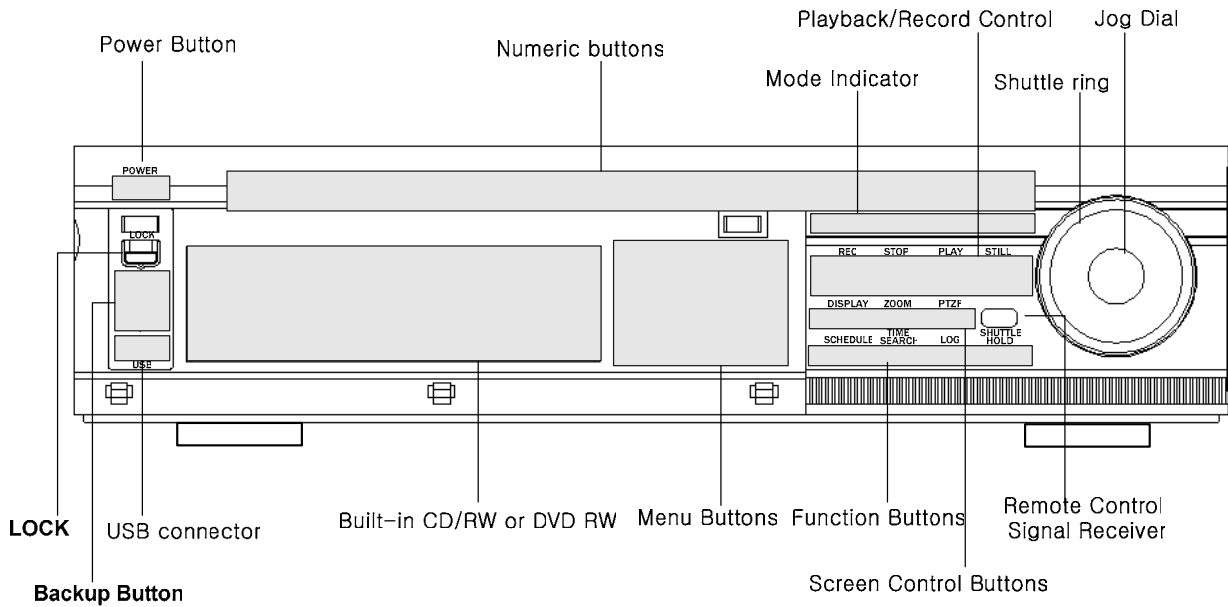
Please check the package and contents for visible damage. If any components are damaged or missing, do not attempt to use the unit, contact the supplier immediately. If the unit must be returned, it must be shipped in the original packing box.

<b>CONTENTS</b>	<b>QUANTITY</b>	<b>REMARK</b>
DIGITAL VIDEO RECORDER	1 UNIT	
CLIENT SOFTWARE CD	1	
REMOTE CONTROLLER	1	
BATTERY (AAAsize)	2	
POWER CORD	1	
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# CONTROLS

## Front Panel

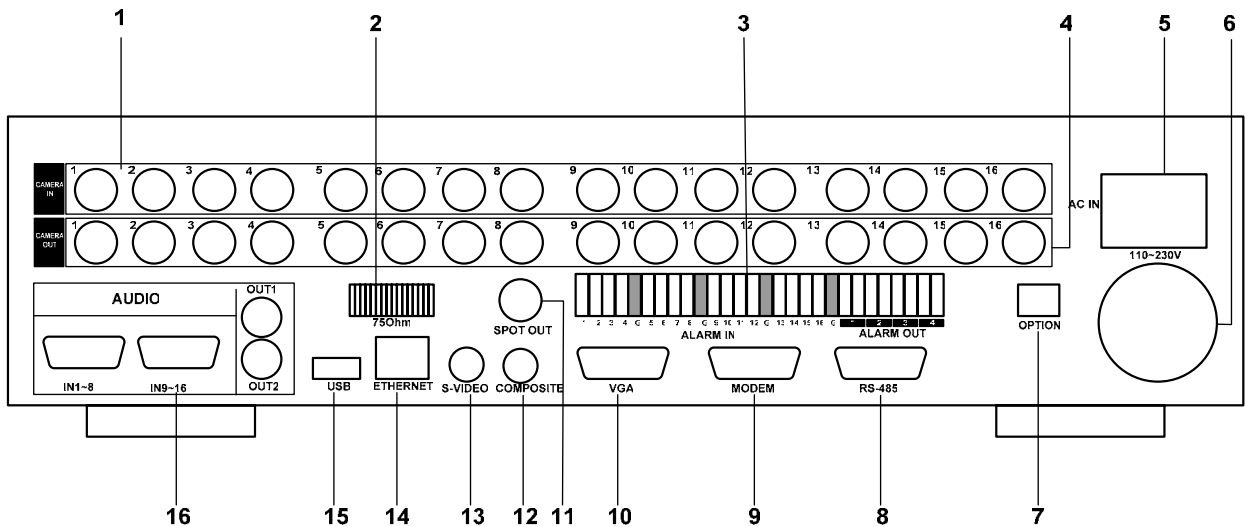


## Buttons

<b>POWER button</b>	<ul style="list-style-type: none"> <li>Press this button to turn the power on; press again to turn the power off. The POWER LED (red) lights/goes off when the power is on/off.</li> </ul>
<b>Numeric Buttons (1-16)</b>	<ul style="list-style-type: none"> <li>These buttons have a number of functions to enter data and to make selections. They are used to enter numerical data when prompted for the password, to make channel/camera selection, to choose the day in schedule option, and to enter alphabets to label each channel.</li> </ul>
<b>Mode Indicator</b>	<p>( Five LED!! XE "LED" 4s display the status of the Digital Video Recorder. From the left, Power (red), Recording (red), Scheduled Recording (green), Button Lock (green) and Network.</p>
<b>Playback / Record Control</b>	<p>( Used to Start and Stop Recording or Playback.</p>
<b>Shuttle Ring</b>	<p>( Used to control the playback speed, and to rewind or forward the image.</p>

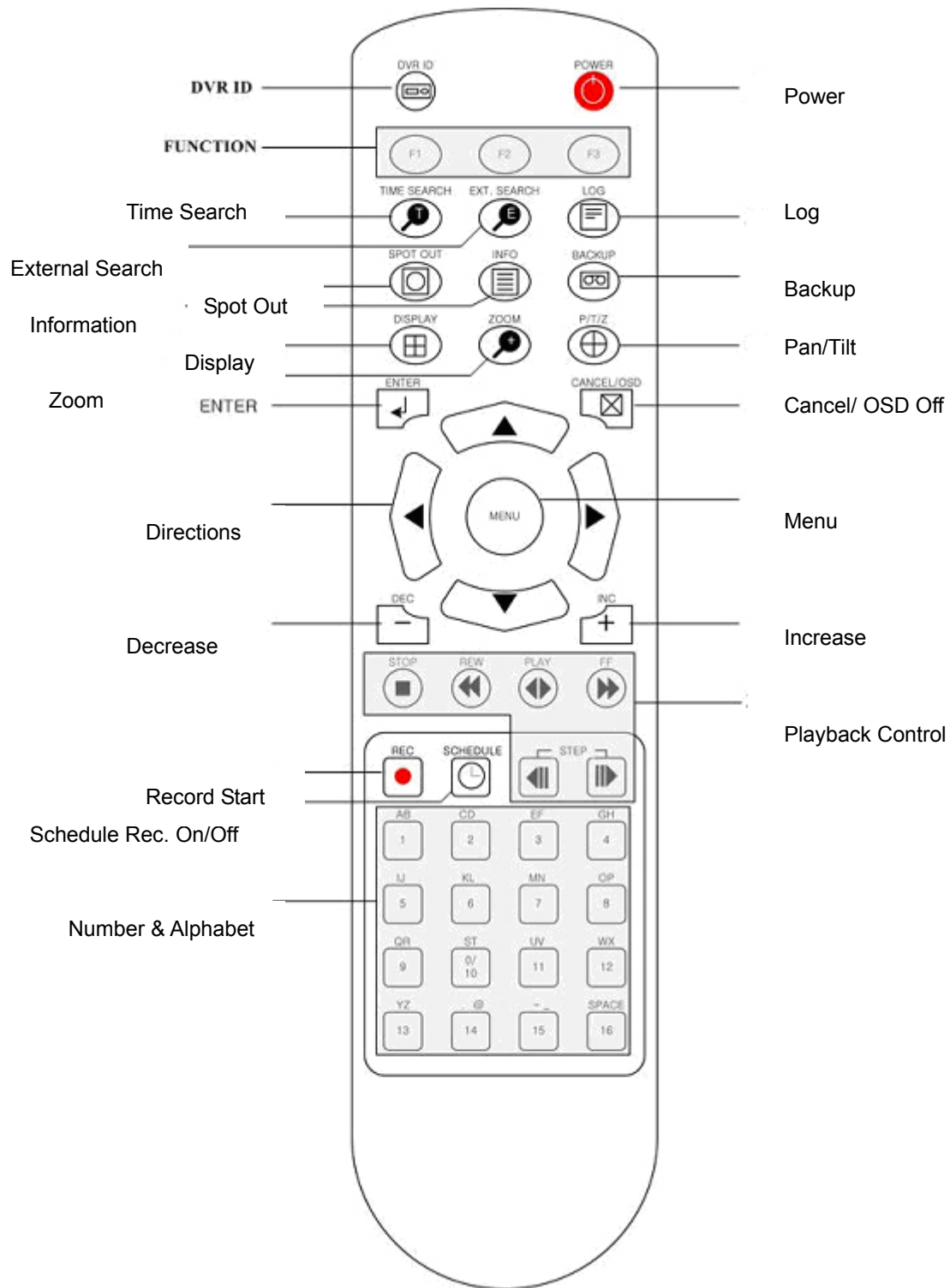
<b>JOG Dial</b>	<ul style="list-style-type: none"> <li>• Used to forward or reverse the image during playback (field-by-field).</li> </ul>
<b>Remote control signal receiver.</b>	<ul style="list-style-type: none"> <li>• Do not block the receiver as the remote controller needs the line of sight to the receiver.</li> </ul>
<b>Screen Control Buttons</b>	<ul style="list-style-type: none"> <li>• [DISPLAY] : Press this button to display the cameras in multi-screen mode or to switch sequence function.</li> </ul>
	<ul style="list-style-type: none"> <li>• [ZOOM]: Press this button to display zoom area box; press [ENTER] to enlarge the image. Pressing cursors can move this zoom area.</li> </ul>
	<ul style="list-style-type: none"> <li>• [P/T/Z/FOCUS]: Press this button to control a PAN/TILT/ZOOM camera via RS-485 connection.</li> </ul>
<b>Function Buttons</b>	<ul style="list-style-type: none"> <li>• [SCHEDULE]: Press this button to make scheduled recording standby. The SCHEDULE LED (green) lights/goes off when the schedule is on/off.</li> </ul>
	<ul style="list-style-type: none"> <li>• [TIME SEARCH]: Press this button to display the Time Search menu.</li> </ul>
	<ul style="list-style-type: none"> <li>• [LOG] : Press this button to display log list. Press this button to display the Alarm Search menu.</li> </ul>
	<ul style="list-style-type: none"> <li>• [REC] : Press this button to start recording.</li> </ul>
	<ul style="list-style-type: none"> <li>• [SHUTTLE HOLD]: This button retains the selected playback or reverse playback speed.</li> </ul>
<b>MENU Button</b>	<ul style="list-style-type: none"> <li>• [ENTER]: Press this button to save menu settings</li> </ul>
	<ul style="list-style-type: none"> <li>• [CANCEL]: Press this button to exit menu without saving.</li> </ul>
	<ul style="list-style-type: none"> <li>• [-, +] : To Decrease settings , To Increase settings</li> </ul>
	<ul style="list-style-type: none"> <li>• [Direction ▲▼◀▶]: In Menu setup mode, used to move the cursor. In Zoom mode, used to move the zoom area.</li> </ul>
	<ul style="list-style-type: none"> <li>• [MENU]: Press this button to display the MAIN MENU screen.</li> </ul>
<b>Backup Button</b>	<ul style="list-style-type: none"> <li>• [BACKUP]: Press this button to begin making a backup copy of the hard drive. If there is no peripheral recording device connected, this button cannot be used.</li> </ul>
	<ul style="list-style-type: none"> <li>• [EXT. SEARCH]: Press this button to start external HDD search.</li> </ul>
<b>LOCK Button</b>	<ul style="list-style-type: none"> <li>• Press this button to lock all units' key buttons including the remote controller. The LOCK LED (green) lights/goes off when the lock is on/off. To release press it again and enter the administer password.</li> </ul>

## Rear Panel Connectors



- 1) **Camera Inputs:** BNC input connectors,
- 2) **75 Ohm Termination**
- 3) **ALARM IN/OUT:** For connecting alarm inputs (1~16) and alarm out relays (1~4).
- 4) **Camera Outputs:** BNC output (looping) connectors.
- 5) **AC power socket**
- 6) **Power Fan**
- 7) **Option:** Not supported
- 8) **RS-485 [D-SUB 9PIN] Connector:** For connecting to PTZ camera.
- 9) **RS-232C [D-SUB 9PIN] :** For connecting to External Modem.
- 10) **VGA out connector**
- 11) **Spot out connector**
- 12) **Composite Monitor Output:** BNC standard composite video output connector.
- 13) **S-VHS Output:** An S-VHS connector for separate luminance and chrominance (Y/C) signals
- 14) **RJ-45 Ethernet Port:** For connecting to remote PC via Ethernet network.
- 15) **USB 2.0 connector:** For connecting USB compatible devices.
- 16) **AUDIO Input (1~8)/Output (2) connectors:** RCA

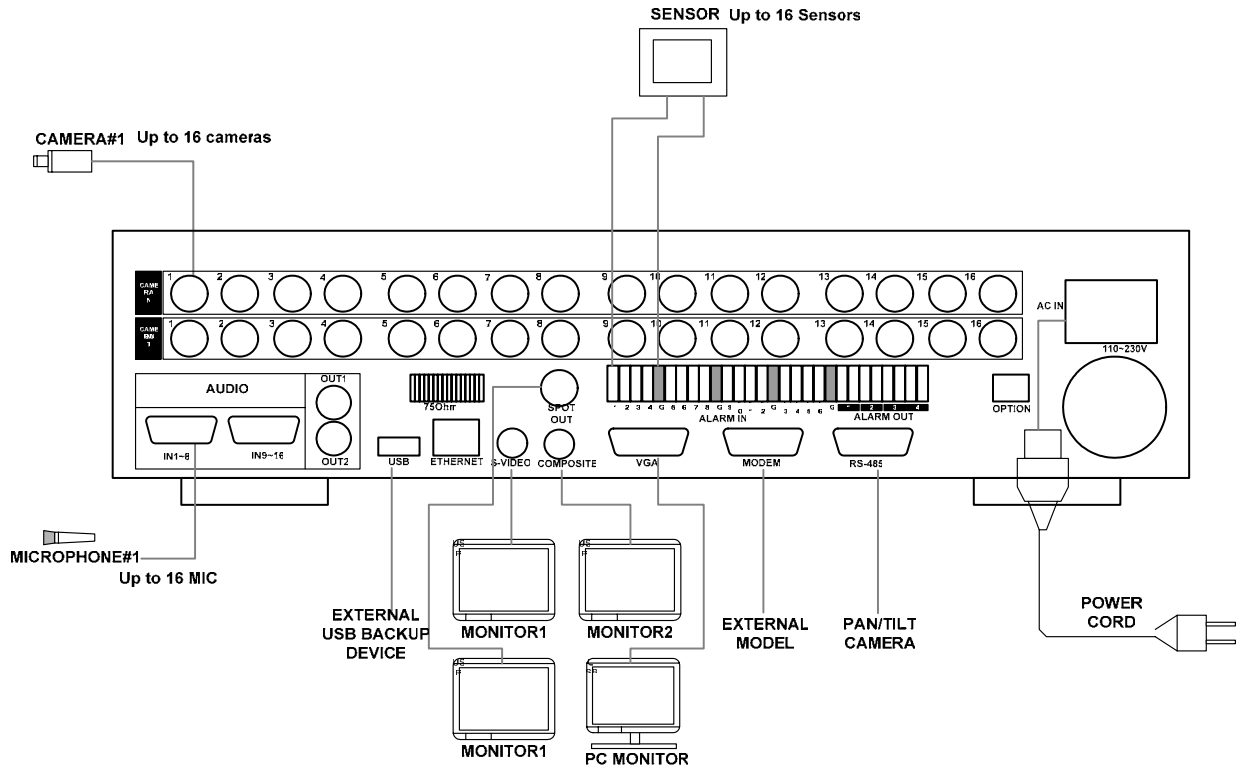
## Remote Controller



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# INSTALLATION & CONNECTIONS.

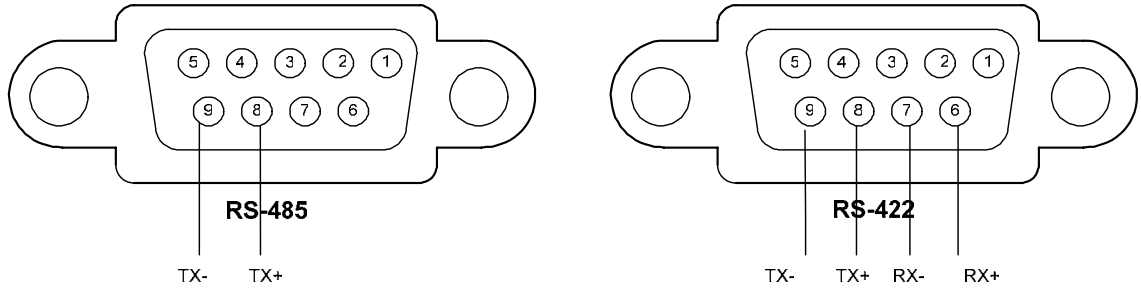
Camera, Monitor, Microphone, Alarm sensor and Power cord.



< Example of 16 ch DVR >

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## PTZ connections.



## PC system requirement for Network connection.

- (a) 500MHz CPU
- (b) 128MB RAM
- (c) 4MB Video Card
- (d) Windows 98SE, 2000, ME
- (e) Spare 10/100-BaseT Ethernet Port
- (f) RJ-45 Network Cable
- (g) CAT-5 UTP Cable for LAN (Crossover cable for direct connect to PC)

### <Disclaimer>

The connection and remote viewing of the DVR may not be successful on all PC's due to the variety of PC's internet connection settings. Please contact the technical support for further assistance.

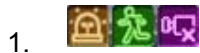
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# LIVE VIEWING

## Display Overview



(1) (2) (3)



- (1) Indicate **Alarm** In terminal is triggered by an alarm sensor. To disappear, press [CANCEL] button.
- (2) Indicate **Motion** detected. To disappear, press [CANCEL] button.
- (3) Indicate **Video Loss** during Recording. To disappear, press [CANCEL] button.

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



- (1) Indicate **Built-in CD R/W** is connected. It's changed to blue color while it's doing backup.
- (2) Indicate an **USB Device is connected on Front panel**. It's changed to blue color while it's doing backup.
- (3) Indicate an **USB Device is connected on Rear panel**. It's changed to blue color while it's doing backup.
- (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:10)

3. : Displays Month, Year, Time and Date.

4. : Displays available HDD space and estimated remaining recording time.

## Multiscreen Display and Sequencing

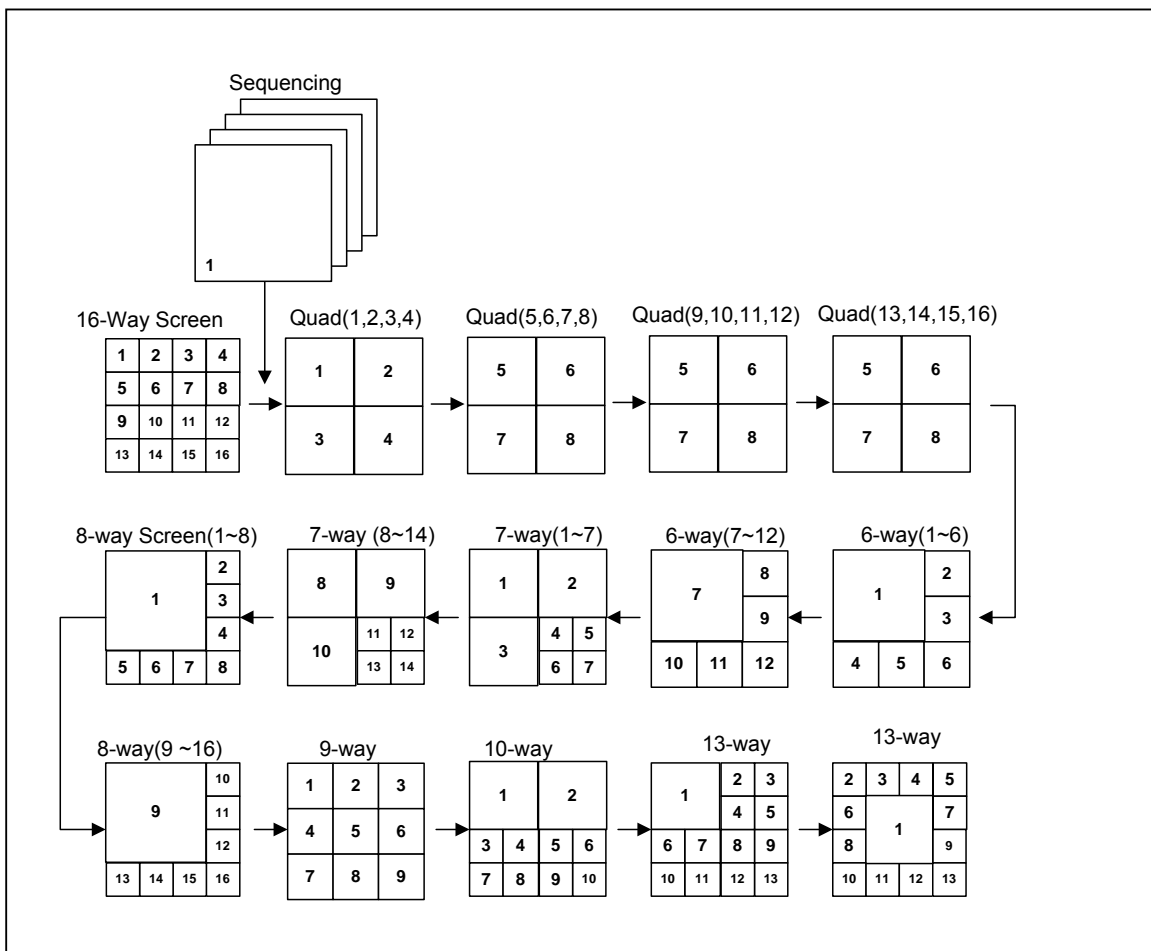
### 1. Full Screen Display.

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

### 2. Multiscreen Display and Sequencing Display.

Press **[DISPLAY]** buttons to activate the multiscreen display. It is changed the order as shown below. While in 16-way screen display, press **[DISPLAY]** buttons 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.





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## 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. 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 **[ENTER]** or **[CANCEL]** button to cancel zoom operation.

### <Note>

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

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# OPERATION

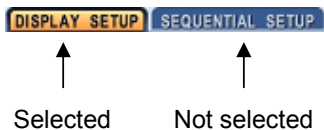
## Main Menu Overview

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. Default password is '111111'. Main Menu appears after proffer password entered, shown as below.



**<Note>** Factory default password is [111111]. 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-Manu. Use Left/ Right buttons [**◀▶**] to select on TAP menu. Selected items changed **[ORANGE]** color.

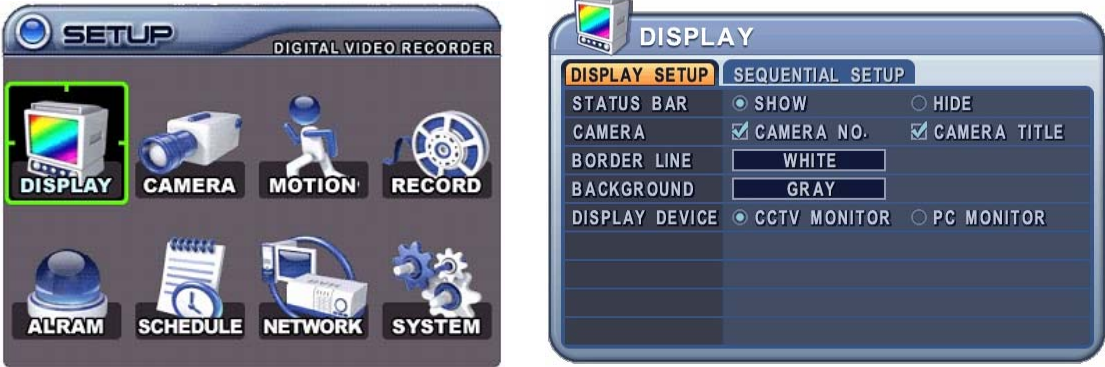


**\* It is automatically saved changes when you move between TAP menus.**

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

# Display Option

## 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"> <li>• Select “Show” or “Hide” below status bar on Main Monitor.</li> </ul>
CAMERA	<ul style="list-style-type: none"> <li>• Select On-Screen-Display information for Camera Number and Title.</li> </ul>
BORDER LINE	<ul style="list-style-type: none"> <li>• Select Board Line between cameras.</li> </ul> <p><b>[WHITE → GRAY → DARK GRAY → BLACK]</b></p>
BACKGROUND	<ul style="list-style-type: none"> <li>• Select Background color on NO VIDEO status.</li> </ul> <p><b>[GRAY → DARK GRAY → BLACK → BLUE → WHITE]</b></p>
DISPLAY DEVICE	<ul style="list-style-type: none"> <li>• Select On-Screen-Display coordinates on Monitor.</li> <li>- CCTV Monitor: Video out through Composite and VGA</li> <li>- PC Monitor : Video out through VGA only</li> </ul>

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

## 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"> <li>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” .</li> </ul>
BRIGHTNESS	50%	<ul style="list-style-type: none"> <li>The brightness of each camera can be adjusted by pressing [-,+] buttons.</li> </ul>
CONTRAST	50%	<ul style="list-style-type: none"> <li>The contrast of each camera can be adjusted by pressing [-,+] buttons.</li> </ul>
COLOR	50%	<ul style="list-style-type: none"> <li>The color of each camera can be adjusted by pressing [-,+] buttons.</li> </ul>
CAMERA TITLE	None	<ul style="list-style-type: none"> <li>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.</li> </ul>
P/T/Z MODEL	None	<ul style="list-style-type: none"> <li>Select P/T/Z camera model to control.</li> </ul>

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

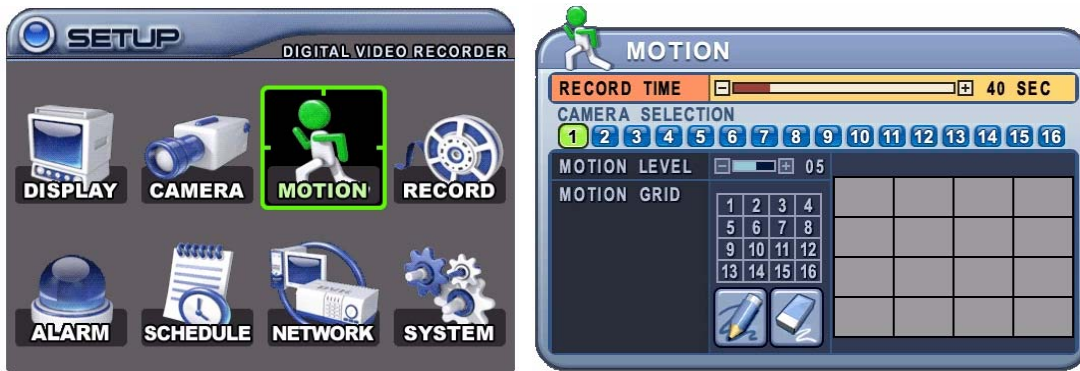
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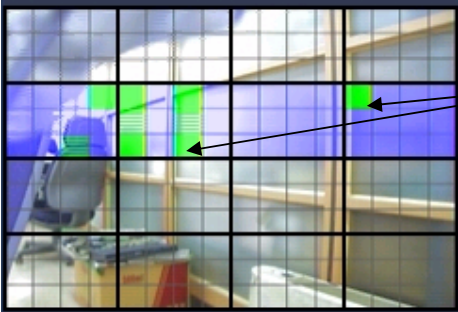
No	1st Press	2nd Press	3rd Press	No	1st	2nd	3rd
1	A	B	1	9	Q	R	9
2	C	D	2	10/0	S	T	10
3	E	F	3	11	U	V	11
4	G	H	4	12	W	X	
5	I	J	5	13	Y	Z	
6	K	L	6	14	.	@	
7	M	N	7	15	-	_	
8	O	P	8	16	SPACE		

**<Number button to insert characters >**

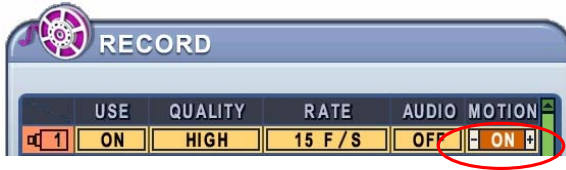
## Motion Recording

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"> <li>• Determines the duration of recording when motion is detected.</li> <li>[20SEC ~ 240SEC]</li> </ul>
CAMERA SECTION	<ul style="list-style-type: none"> <li>• Use Left/Right buttons [◀▶] or Number button to select the Camera you wish to configure.</li> </ul>
MOTION LEVEL	<ul style="list-style-type: none"> <li>• Level 1: Low sensitivity~ Level 20: High sensitivity.</li> </ul>
MOTION GRID	<ul style="list-style-type: none"> <li>• Use this menu to setup Zones for the motion detection The screen shown below will overlay the current video image.</li> <li>• It is divided into 16 Grid and selected by Number button.</li> <li>•  : Select All.</li> <li>•  : Clear All.</li> <li>• Motion detected zones will be changed to GREEN Color.</li> </ul> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Motion Detected zones</p> </div> </div>

- 
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.

## Basic 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	• Enable or Disable Recording on a per camera.
QUALITY	• Specify the record picture quality for each camera. ULTRA → SUPER → HIGH → MIDDLE →LOW
RATE	• Select recording speed for each camera. :Two types of recording modes are available: Field mode and CIF mode. <Refer to <b>System</b> >
AUDIO	•Select audio recording: ON or OFF.
MOTION	•Select Motion Recording ON or OFF. Camera does not record under normal conditions. It is discussed on Motion Recording Section.

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.

**<Note>** Estimated Recording Time varies due to picture quality and capture rate and is updated every 10 seconds due to variation of picture size.



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< Approximate File Size>

Quality	NTSC		PAL		UNIT
	720*240	360*240	720*240	360*240	
LOW	3	1.8	4	2.1	KB
MIDDLE	4	2.3	5.2	2.7	KB
HIGH	7	3	9.1	3.5	KB
SUPER	10	4.7	11.9	5.6	KB
ULTRA	14	7.5	16.9	8.9	KB

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

## Alarm Recording

### 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.



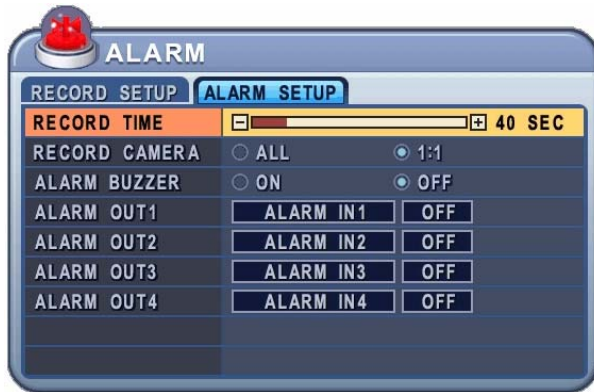
ITEM	ADJUSTMENT
USE	<ul style="list-style-type: none"> <li>• Enable or Disable Alarm Recording on a per camera.</li> </ul>
QUALITY	<ul style="list-style-type: none"> <li>• Specify the record picture quality for each camera on Alarm Recording. ULTRA → SUPER → HIGH → MIDDLE → LOW</li> </ul>
RATE	<ul style="list-style-type: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

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

**<Note> Spot Monitor**

- Press [**Spot**] button, then press number button you wish watch as full screen.
- Press [**Spot**] button twice to auto switch cameras.
- When an alarm is received, the unit switches to a full screen display of the camera in alarm.


## 2. ALARM SETUP



ITEM	ADJUSTMENT
RECORD TIME	<ul style="list-style-type: none"> <li>Determines the duration of recording after the alarm signal has been activated. [20SEC ~ 240SEC]</li> </ul>
RECORD CAMERA	<ul style="list-style-type: none"> <li><b>ALL:</b> Start to record All Alarm "ON" channel if there is any Alarm signal is triggered.</li> <li><b>1:1:</b> Start to record the channel, which Alarm is triggered.</li> </ul>
ALARM BUZZER	<ul style="list-style-type: none"> <li><b>ON:</b> The buzzer Sounds if an alarm is triggered. Stops when the alarm recording stops.</li> <li><b>OFF:</b> Disables the ALARM BUZZER function.</li> </ul>
ALARM OUT1~4	<ul style="list-style-type: none"> <li>Configure which relay will be triggered when an alarm is activated per camera.: Select from Alarm 1~16 or System. Then, Select Enable or Disable Alarm relay out.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>&lt;Note&gt;</b> If you select "System". It will relay will be triggered when System has problems such as HDD FAIL,FAN LOCK etc.</p> </div>


6. **Save changes** and exit the menu, press **[ENTER]** button.
7. Press **[REC]** button. Then, the red REC LED lights on the front panel and recording starts.
8. Camera does not record under normal conditions if you select Normal Record "OFF" but Alarm Record "ON". However, it starts Normal Record if you select both of them as "ON". See the following examples.

<Example 1>




Normal	Motion	Alarm	Resulting Actions
OFF	OFF	ON	Press the <b>REC</b> button, then <b>Alarm</b> recording starts according to configured Recording Quality (Super), Frame Rate (15F/S) and Audio when Alarm is triggered. It will be back to stand-by mode after Alarm recording duration time is end. <b>Camera does not record under normal conditions.</b>

<Example 2>



Normal	Motion	Alarm	Resulting Actions
ON	OFF	ON	Press the <b>REC</b> button, then <b>Normal</b> recording starts with High picture quality at 3F/S without Audio. When <b>Alarm</b> is triggered on this channel, it changed to record with Super picture quality at 15F/S with Audio. It will be back to <b>Normal</b> Recording after Alarm recording duration time is end.

<Example 3>



Normal	Motion	Alarm	Resulting Actions
ON	ON	ON	Press the <b>REC</b> button, then <b>Motion</b> recording starts with High picture quality at 3F/S without Audio when Motion detected. When <b>Alarm</b> is triggered on this channel, it changed to record with Super picture quality at 15F/S with Audio. It will be back to stand-by for Alarm or Motion after Alarm recording duration time is end. <b>Camera does not record under normal conditions.</b>

**<Note>** Normal recording is subordinate to schedule mode on Schedule Recording.

## 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 (⏏).
3. Use Down button [**⏏**] to select any Day you wish to configure.

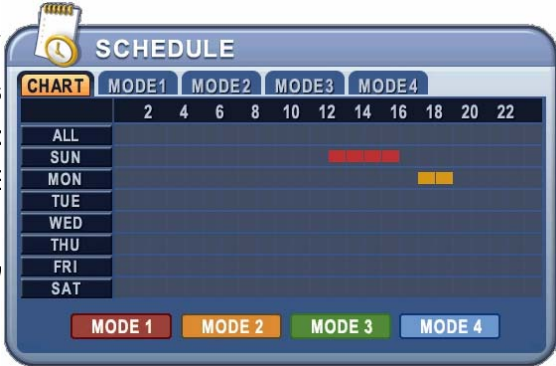
⏏ || SHAPE W\* MERGEFORMAT ¶⏏⏏⏏

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



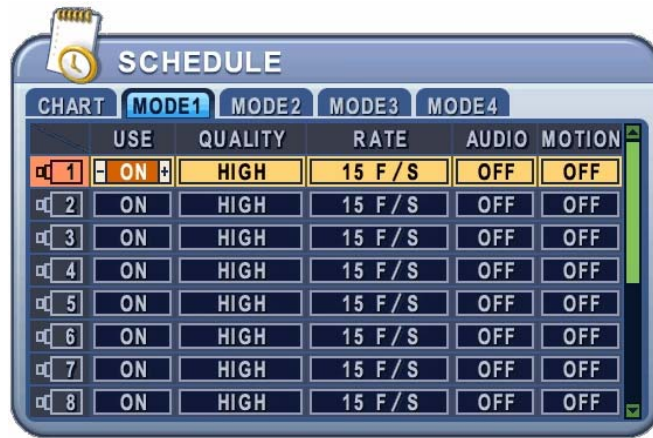
5. Enter the beginning and end time, then select Record mode to record.

- (1) BEGIN: The time of recording start
- (2) END: The time of recording end before the starting time or the same as the starting time.
- (3) MODE: Up to 4 modes can be defined for schedule recording. (MODE 1, MODE 2, MODE 3, MODE 4)



before the starting time. defined for schedule

6. Defined modes below



**<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)

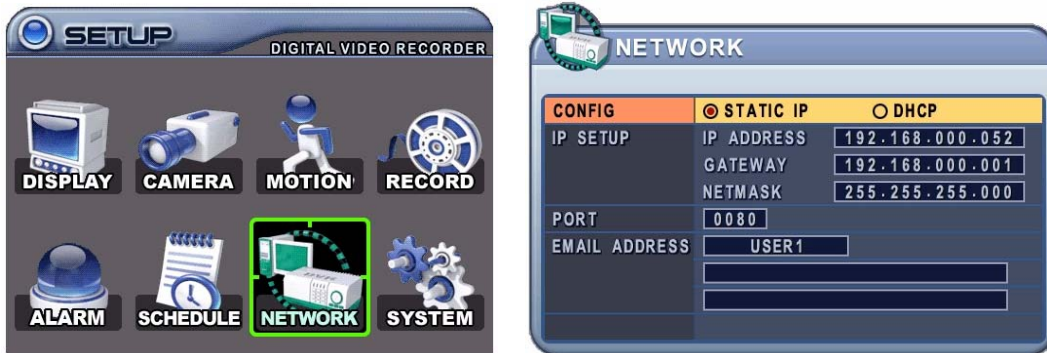
D/W	BEGIN	END	MODE
Monday	18:00	08:59	MODE 1

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

**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.

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"> <li>• STATIC IP: Edit IP address, Gateway and Netmask.</li> <li>• DHCP: It is automatically set on from Local DHCP if there is Local DHCP server. The host name will be unique to the DVR, and will be displayed something similar to M10020E.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>&lt;Note&gt;</b> How to connect the DVR via Network in case of DHCP.</p> <ol style="list-style-type: none"> <li>1. Select DHCP.</li> <li>2. Please check "Serial No" on System Menu.</li> <li>3. Enter DNS name&lt;ex: M10020E.dvrhost.com&gt;</li> </ol> </div>
IP SETUP	<ul style="list-style-type: none"> <li>• Edit "IP ADDRESS, GATEWAY, NETMASK"</li> </ul>
PORT	<ul style="list-style-type: none"> <li>• Select "0000 ~ 9999"</li> </ul>

---

	<p>The DVR's connection port can be adjusted in case the default port 80 is blocked. Often, the internet service providers block the default web broadcasting port 80, therefore disabling any type of web server services being run from commercial or residential internet services. If that is the circumstances, then the DVR's service port may be modified to allow the connection from the remote client program.</p> <p>(Please contact the Network manager for more specific information)</p>
EMAIL ADDRESS	<ul style="list-style-type: none"><li>• The DVR sends notifications to one designated e-mail address when the following events occur: Alarm, Video Loss, Power Loss, HDD Failure and etc (Notify to 5 users)</li><li>• Press appropriate Numeric button to type e-mail address. You don't need to setup SMTP server.</li></ul>



## 1. GENERAL

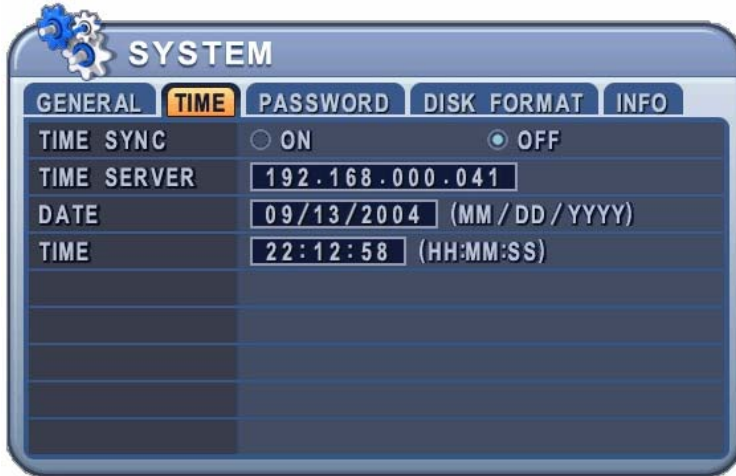
1. Use Direction buttons [**▲▼◀▶**] to select “SYSTEM” menu. Then, press [ENTER] button.
2. Use Left/Right buttons [**◀▶**] to select on TAP menu  
(**GENERAL** TIME PASSWORD DISK FORMAT INFO).
3. Use Down button [**▼**] to specify the detail.
4. Use [**-, +**] button to change the value.
5. **Save changes**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



ITEM	ADJUSTMENT
SYSTEM ID	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Set the ID of IR controller on “00” to control DVRs at the same time, whatever DVR ID are.</li> </ul>
AUTO KEY LOCK	<ul style="list-style-type: none"> <li>• The DVR locks all the buttons after three minutes of inactivity. The buttons can be unlocked with the user password.</li> </ul>
KEY TONE	<ul style="list-style-type: none"> <li>• By default, the DVR emits a beep every time a button is pressed. Set the key tone to off to turn button beep off.</li> </ul>
INTERNAL HDD	<p>This option determines whether the DVR writes over old files when the hard drive becomes full.</p> <ul style="list-style-type: none"> <li>• REPEAT RECORD: It starts to overwrite HDD from the oldest file.</li> <li>• MANUAL: It stops recording after HDD is full.</li> </ul>
EXTERNAL HDD	<ul style="list-style-type: none"> <li>• Same with Internal HDD for External HDD</li> </ul>
RECORD SIZE	<ul style="list-style-type: none"> <li>• <b>CIF</b> : DVR records each camera individually and then multiplexes them.</li> </ul>

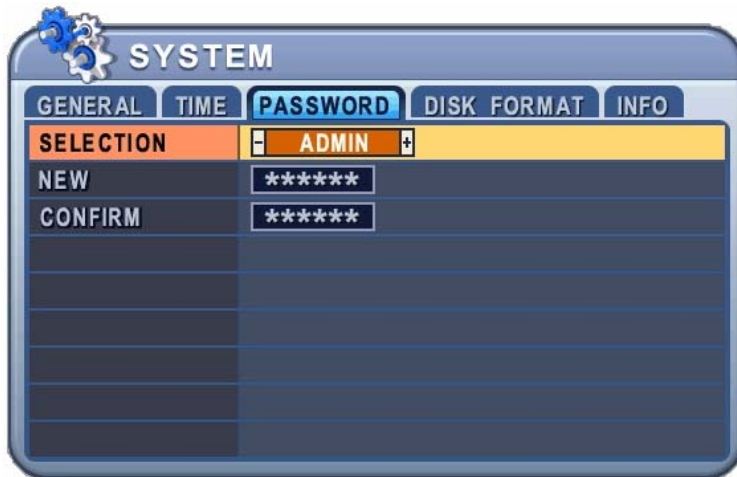
	<p>Each channel records at Field resolution: 360*240(360*288).</p> <ul style="list-style-type: none"> <li>• <b>Field</b> : DVR records each camera individually and then multiplexes them.</li> </ul> <p>Each channel records at Field resolution: 720*240(720*288).</p>
--	--

## 2. TIME



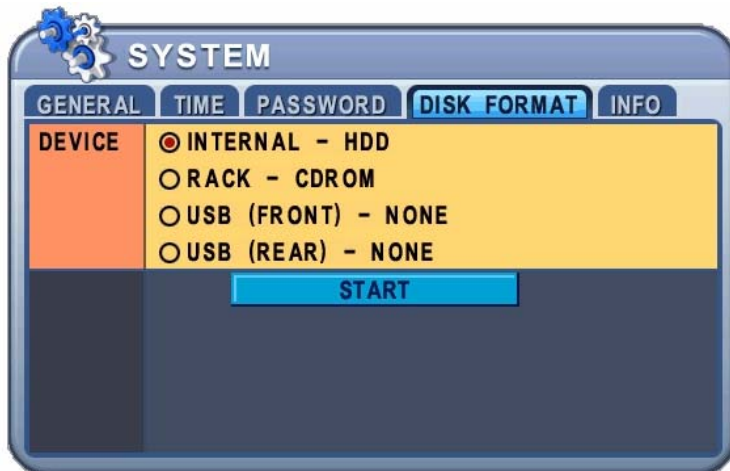
ITEM	ADJUSTMENT
TIME SYNC	<p>If several DVRS are installed and connected via network, one of the DVRS may be set as the master clock. This unit will control the date and time for all of the other units.</p> <ul style="list-style-type: none"> <li>• ON: It is set as the Slave Clock.</li> <li>• OFF(Default): Master Clock or The unit which does not use Time Sync Function.</li> </ul>
TIME SERVER	<ul style="list-style-type: none"> <li>• Enter the IP of Master clock DVR when the unit is set as [ON] on Time Sync Menu.</li> </ul>
DATE & TIME	<ul style="list-style-type: none"> <li>• Enter the Date and Time.</li> </ul>


## 3. PASSWORD



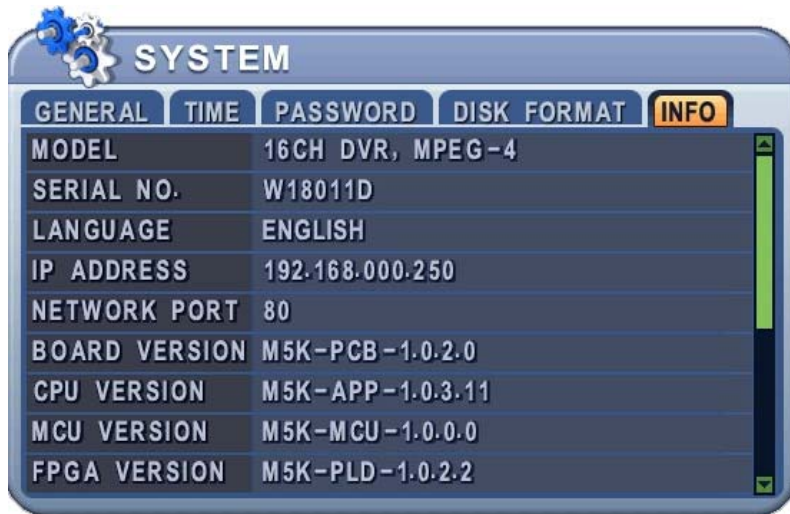
ITEM	ADJUSTMENT
SELECTION	• Select "ADMIN" or "USER1~USER5" to change password.
NEW	• Enter the NEW PASSWORD
CONFIRM	• Enter the new password to confirm

#### 4. DISK FORMAT



1. Stop the DVR completely before the disk format.
2. Use [-, +] button to change select device..
3. Use down button [▼] to move , then press [ENTER]button to start formatting.

#### 5. INFO



This menu provides information such as listed below.








Indicator	CONDITION
MODEL	• Display Channel Number and compression.
SERIAL NO.	• Display the Unique Number of this unit(Host Name).
LANGUAGE	• Display the language of this unit.
IP ADDRESS	• Shows the current IP of this unit.
NETWORK PORT	• Shows the current Port Number of this unit.
BOARD VERSION	• Display the Board version of this unit.
CPU VERSION	• Shows the CPU version of this unit.
MCU VERSION	• Shows the Micom version of this unit.
FPGA VERSION	• Shows the FPGA version of this unit.
INTERNAL HDD	•Displays total HDD size.
RACK DEVICE	• Displays what kind of device is installed into RACK : DVD or CD/ HDD
USB (FRONT)	• Displays what kind of device is connected to the front USB connector.
USB (REAR)	• Displays what kind of device is connected to the rear USB connector.
TEMPERATURE	• Shows the temperature status of CPU and System: Good-Bad-Warning
VOLTAGE	• Shows the status of Power supply: Good-Bad-Warning
FAN	• Shows the FAN status of CPU and System. : Good-Bad-Warning

# PAN/TILT Zoom Control

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

---

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

1. RS 232/485 Connection , camera Jumper Setting and etc
2. Set the PTZ Camera ID & MODEL NO at the Display menu

**\* Preset / GoTo / Auto Tour**

Automatic PTZ control offers basic automatic pan,tilt, or pan and tilt for the PTA cameras. It is also possible to customize the PTZ path as well as the focus, zoom and iris of the PTZ camera. All of these features can be stored as a preset.



**1. PRESET**

1) After moving the PTZ camera to the desired position, then press PRESET button.

2) Custom 1 will be activated.



3) Select the Preset number, then press [Enter] to confirm the selection.

**2. GOTO**

- Press [GOTO ] button then Numeric button to move preset positrons.

**3. Auto Tour**

- Press [Auto Tour] button then numeric button. . For example, enter 05 for auto tour, it will start to automatic tour from 001 to 005 .

---

# BACKUP

## Built-in CD R/W

1. Insert a blank Media into Built-in CD.

### <Note>

If there are data in CD-RW(Re-writable) or DVD-RW, please format the CD-RW or DVD-RW first. Disk Format is discussed in System Menu.

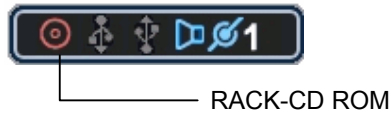


2. Press [BACKUP] button and the backup menu will appear.



3. Use Left/Right buttons [◀▶] to select on TAP menu (MANUAL BACKUP AUTO BACKUP)
  4. Use [-, +] button to change select device: Rack-CD Rom.
  5. Please select the data for BACKUP.
    - (1) NORMAL: Normal Recording Data
    - (2) ALARM: Alarm Recording Data
    - (3) MOTION: Motion Recording Data
  6. Enter the numbers as required in 24-hour format, then move to START
  7. Press [ENTER] button to start BACKUP.
-

- 
- \* CD indicator will be changed to BLUE Color that the backup is in session.



8. When finished, the CD icon will changed to Grey color, and then eject the media.

- *If there is not enough space on the media, the DVR will automatically eject the disk when it's full, then will resume the process once a new media is inserted in to the drive.*

**<Note>**

Backup process to the CD-RW and DVD-RW only works on manual method due to the limited capacity of the medium.

- \* The CD Playback software will simply “**auto-run**” and does not require the installation of software on you PC



**<Note>**

Please Refer to [LOCAL PLAYER] section to read Back-up Device.



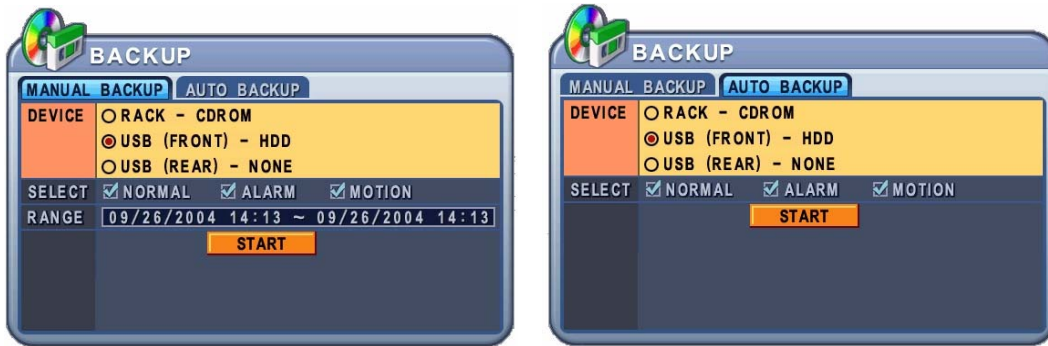
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## External USB HDD

1. Please connect to external HDD to USB port on Front or Rear.
2. The USB indicator will be appeared after connection, which takes about 5sec.



3. Press [BACKUP] button and the backup menu will appear. There are two methods of backing up the content of the internal hard drive onto the external devices.



### (1) MANUAL BACKUP

- Use Left/Right buttons [◀▶] to select “Manual Backup” on TAP menu
- Use [-, +] button to change select device: USB(Front or Rear)-HDD.
- Please select the data for BACKUP.
- Enter the numbers as required in 24 hour format, then move to **START**.
- Press **[ENTER]** button to start BACKUP.
  - \* USB indicator will be changed to BLUE Color that the backup is in session.

### (2) AUTO BACKUP

- Use Left/Right buttons [◀▶] to select “Manual Backup” on TAP menu
- Use [-, +] button to change select device: USB(Front or Rear)-HDD.
- Please select the data for BACKUP.
- Press **[ENTER]** button to start BACKUP.
  - \* It will start to back up from the latest file.

---

## USB Flash Memory (SNAP SHOT)

- Current Live or Playback images can be saved as JPEG into Flash Memory stick.

1. Please connect to external USB Flash Memory to USB port on Front or Rear.
2. When an external hard drive is connected through the USB port on Front or Rear, USB indicator will be appeared.




4. Press **[ENTER]** button to start save a snap image current monitoring or playback image.
5. USB indicator will be changed to BLUE Color whenever the backup is in session.



# SEARCH/ PLAYBACK

## Time Search

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



- Use [-, +] 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 [↑/↓] 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.

- Press [ENTER] button to start playback.

## Log List Search/ Alarm, Motion Search

- To start Event Search, press !! EMBED Visio.Drawing.6 Menu pops up, as shown below.

### <Note>

Time : Multiscreen Display

Camera : Full screen Display

MENU TAP	CONDITION
ALL	<ul style="list-style-type: none"> <li>It has a list of all the events since the initial power on procedure of DVR</li> </ul>
SYSTEM	<ul style="list-style-type: none"> <li>It shows All Event except for Alarm, Motion, and Video Loss.</li> </ul>

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

## EXTERNAL SEARCH

1. Please connect to external HDD to USB port on Front or Rear.  
(Insert a backup Media into Built-in CD/DVD.)
2. Press [EXT. SEARCH] button. Then External Search menu will appear.



3. Please select the device to search, then press [ENTER] button. Time search Calendar Menu pops up, as shown below.



4. Following steps are discussed on "SEARCH"

**<Note>**

Do not try to search for failed backup CD.

---

# CLIENT PROGRAM

## - Central Management Software

### INSTALLATION

#### 1. PC system requirement

	Minimum	Recommended
<b>OS</b>	Windows 98SE, 2000, ME, XP	Windows XP
<b>CPU</b>	Pentium II Celeron 333	Pentium □ 2.8 G
<b>RAM</b>	128MB	512MB RAM
<b>Video Card</b>	4MB	16MB

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<b>HDD Free Space</b>	20MB	2 GB
<b>Resolution</b>	1024*768	1024*768
<b>etc</b>	Direct X 6.0 or higher	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.

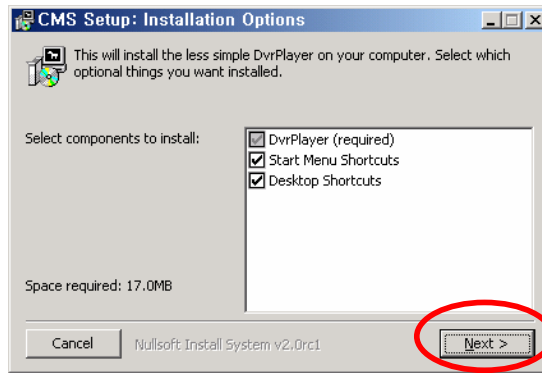
CMS may not run if DirectX 6.0 or earlier version is installed. Please download the latest **Direct X** from Microsoft.

## 2. HOW TO INSTALL

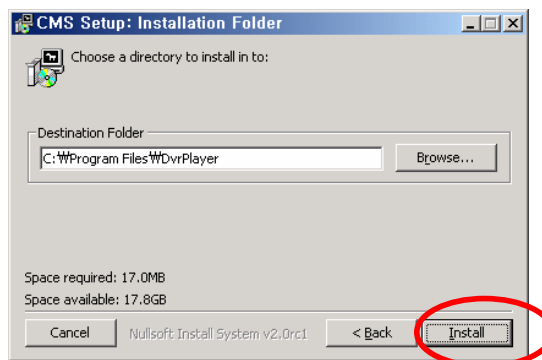
- (1) Insert "**Client Install CD**" to CD-ROM of your PC and Find "DvrPlayerinstaller.exe" and

double click  DvrPlayerInstaller.exe .

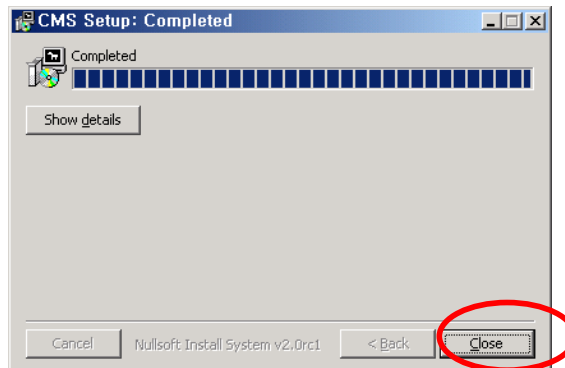
- (2) Click 「**NEXT**」 button below:




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



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



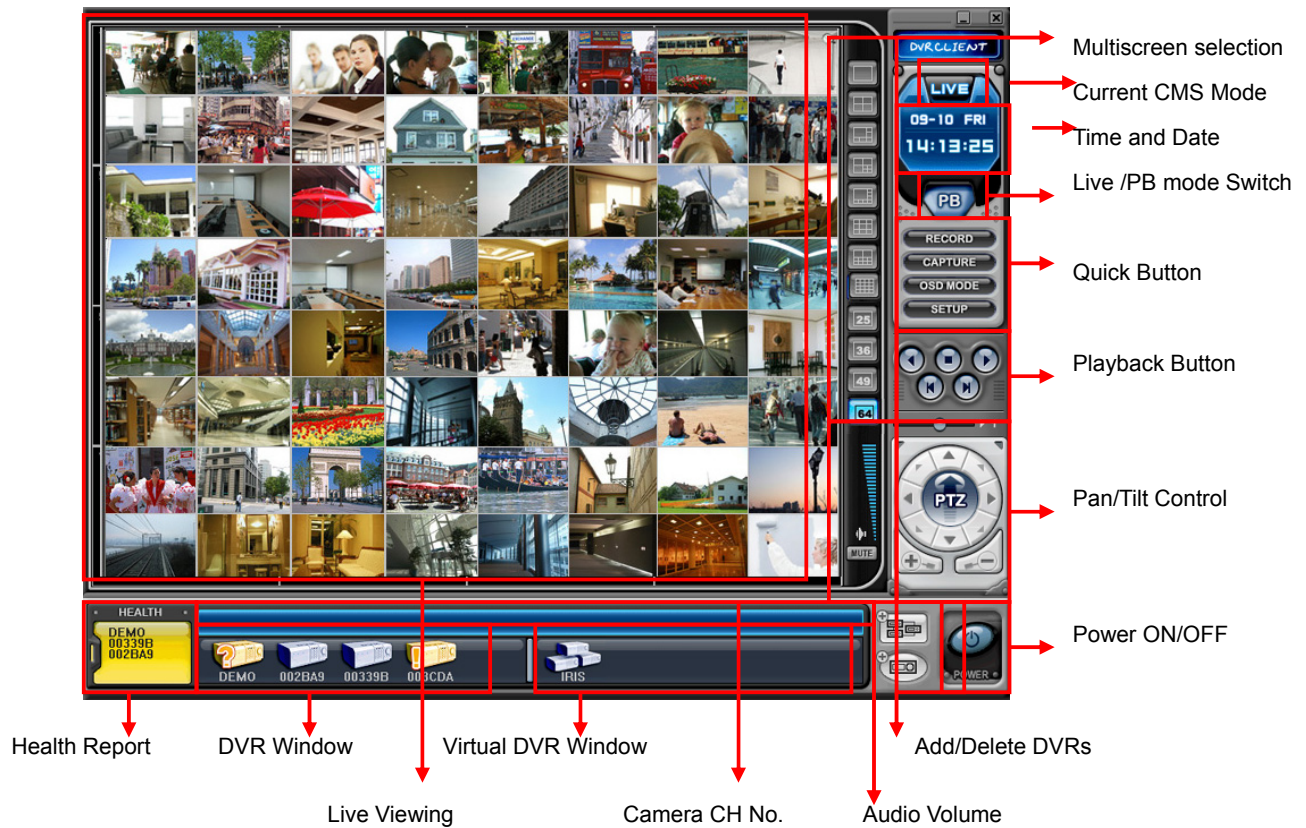
(4) The ICON  of CMS will be displayed on your desktop.

## FEATURES

### 1. CMS Overview













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## 2. Functions

### (1) Display option / Multiscreen Displays

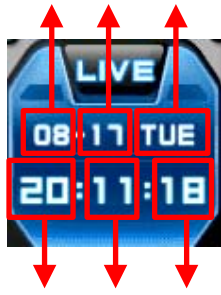
- |  |                        |   |                         |
|--|------------------------|---|-------------------------|
| a.  | Full Screen Display.   | g.  | 10- Way Screen Display. |
| b.  | Quad Screen Display.   | h.  | 16- Way Screen Display. |
| c.  | 6- Way Screen Display. | i.  | 25- Way Screen 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.



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Month Date Day of Week







Hour Minutes Seconds

(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



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

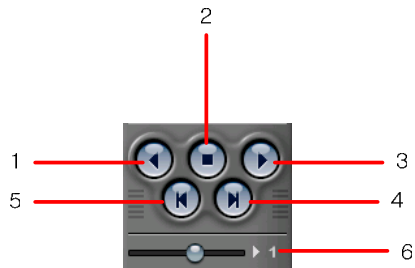
**< C.F> Control Hardware Acceleration**

- Click the Advanced button on Display Properties on your PC.
- Select "Troubleshoot" and slow down Hardware Acceleration.

The first screenshot (a) shows the 'Display Properties' window with the 'Advanced' button circled in red. The second screenshot (b) shows the 'Troubleshoot' tab with the 'Hardware acceleration' slider set to 'None', also circled in red.

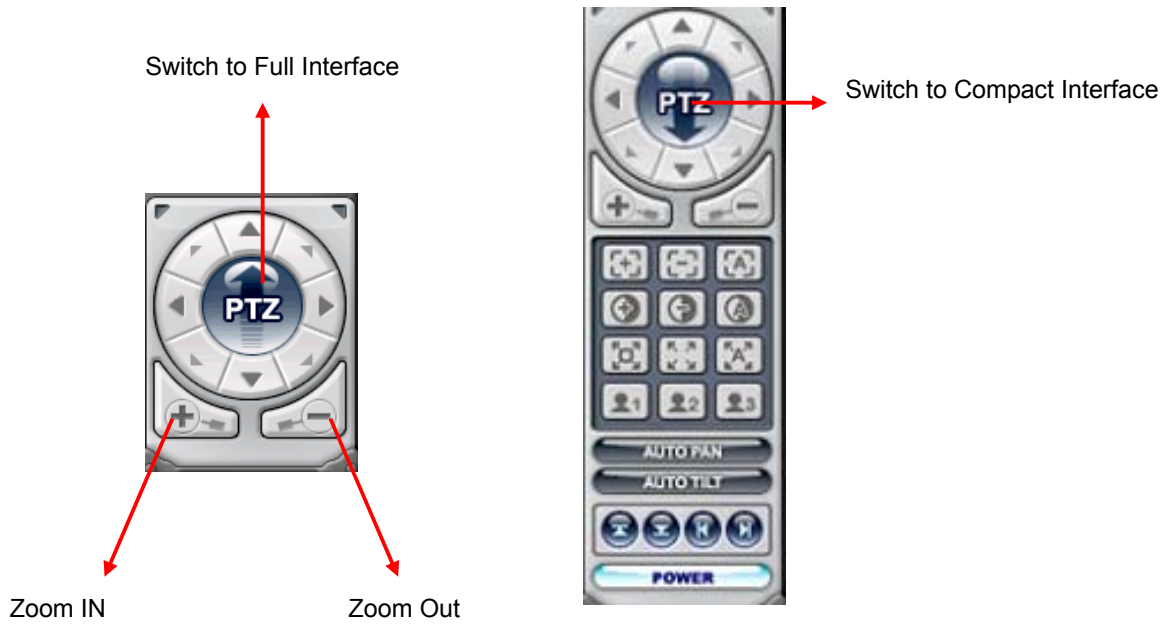
(5) Playback Control Buttons

- 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.






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 right 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.
	Delete Tour address.
	Run 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

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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



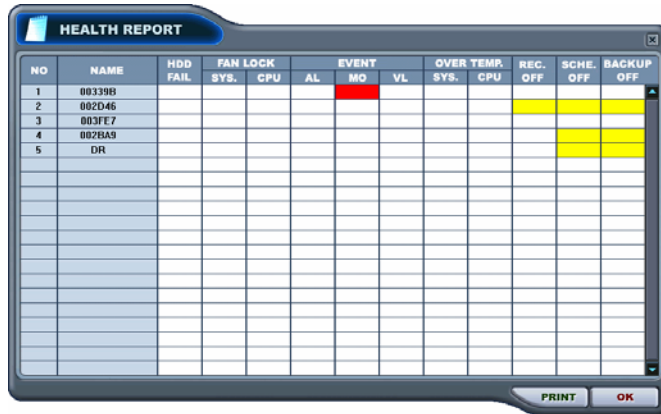
The color remains blue as long as the DVRs are functioning within the normal parameters. It will display the DVR's set name only with the following functions: Record Start, Backup operation Start, Schedule On


**\* 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

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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.

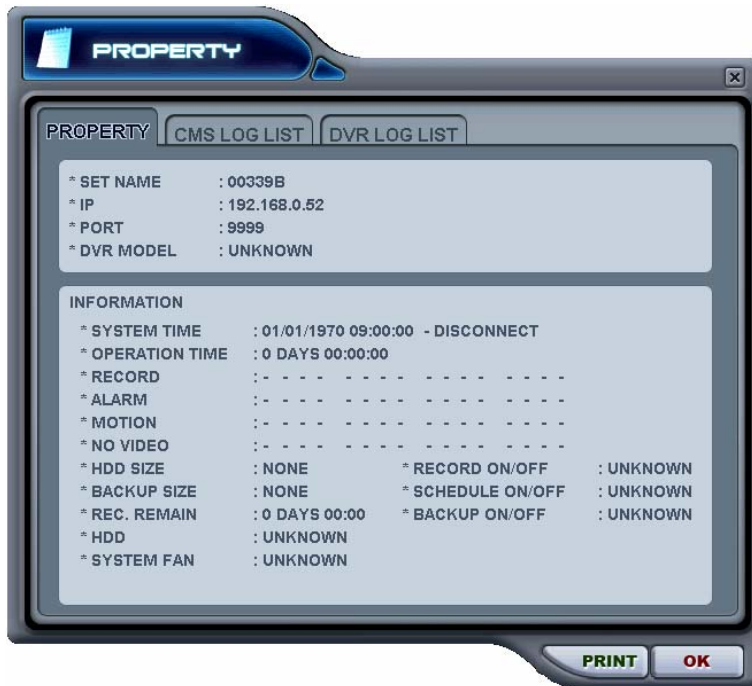
**<Note>In case of network connection error or power failure, DVR Number and DVR Name will blink in red**

- 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.
  - 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
- 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
  - H16XX : 16ch for Wavelet Series
  - H08XX: 8ch for Wavelet Series
  - H04XX: 4ch for Wavelet Series
  - M5008: 8ch for MPEG Series
  - M5016 :16ch for MPEG Series
- 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.

**\*\* 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.



**DVR CONTROL**

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## 1. Set List Manager

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



### (1) Auto Scan

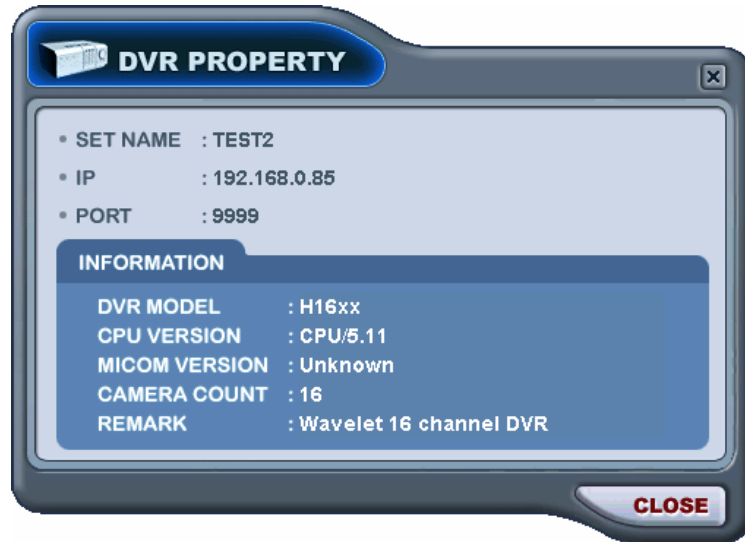
It automatically tracks down DVRs connected local network but skips over already on the list. The DVR Host Name is entered automatically to the title and default Password is 111111.

### (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: 80 <Default>
- 4) Password: Select from the following options:
  - User Password: Live Monitoring and remote Playback, Search.
  - 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.



## 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

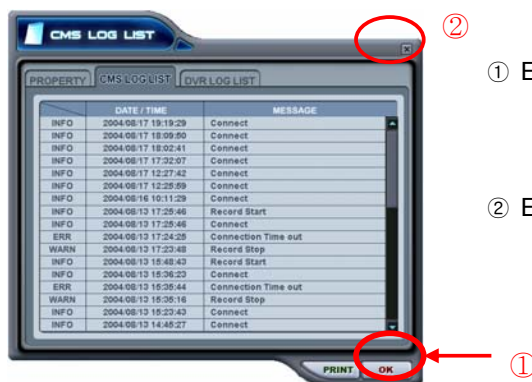



Pink colored DVR means the disconnection of DVR caused by network error or invalid password. CMS try to connect the DVR at every 30 sec in the case of network connecting error. When you click this icon, it shows this message <Network connection error> or <Invalid Password>. Please change the password 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  
 : Select “OK”
- ② Exit the menu with keeping previous statuses:  
 Select “x (Close)”

## 3. Indication of Camera

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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.

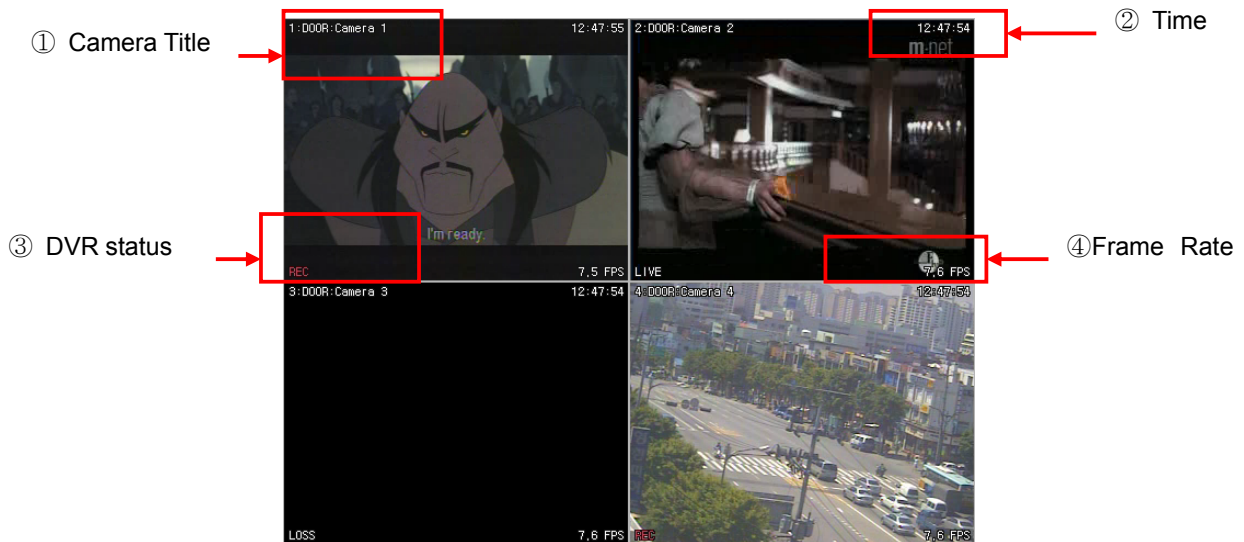
## 4. Live Viewing

(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.

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(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.

(6) **Dual Display** (Simultaneous Playback with Live Viewing)

Individual channels can be selected and begin remote playback while the rest of the channels are in live monitoring mode. Dual display is available for both individual DVRs and Virtual DVRs.

- 1) Select any camera for playback during live monitoring. Context Menu will appear on screen by Right- clicking.





- 2) Select Search. Remote Search Menu will appear, as shown below.



- 3) Select desired DVR and Time & Date for Playback. To begin playback, click "Play" button. (See "Playback" section).



**<Note>** If there are no minutes data for the selected time, it means there is no recorded video for the selected camera.



4) Selected camera begins playback during live viewing.



5) To stop playback, Right clicking.

6) Then, Context Menu will appear. Select "Live".

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## 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 four types of Context Menu on playback during Live viewing. Click Right Mouse Button to display Context Menu.



- 1) SEARCH: Remote Search for Playback. (See Next page Playback)
- 2) LIVE: To stop playback and come back to live viewing.
- 3) FULL SCREEN: Full Screen Display.

- (3) There are seven types of Context Menu on each DVR.




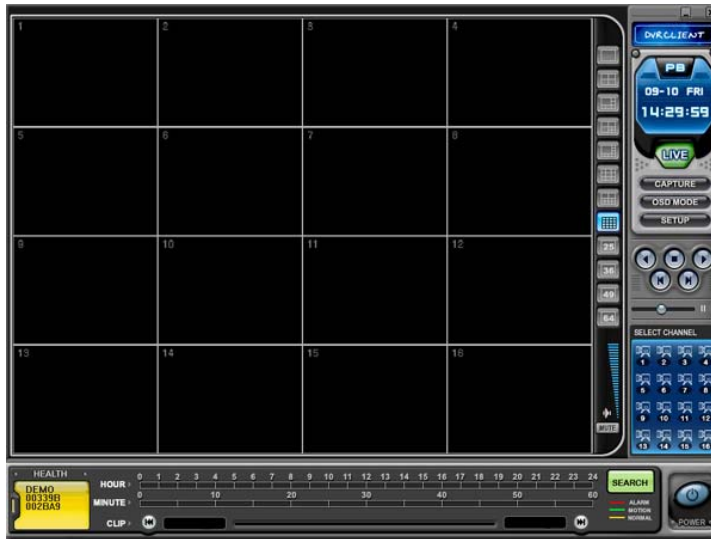
- 1) LIVE: Live display for selected DVR.
- 2) PROPERTY: DVR information. See page 56
- 3) CMS LOG LIST: See page 57
- 4) DVR LOG LIST: See page 57
- 5) SETUP: See "DVR Menu Setup" page72
- 6) REMOVE: Delete the selected DVR from DVR Window.


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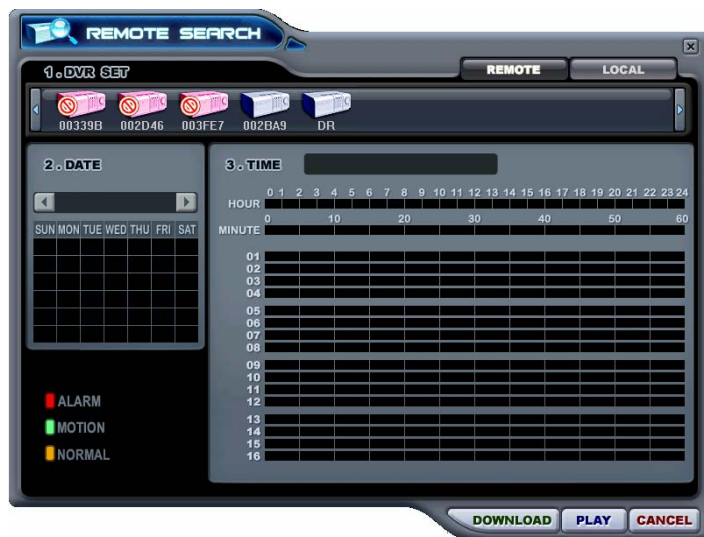
## 6. Playback

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.

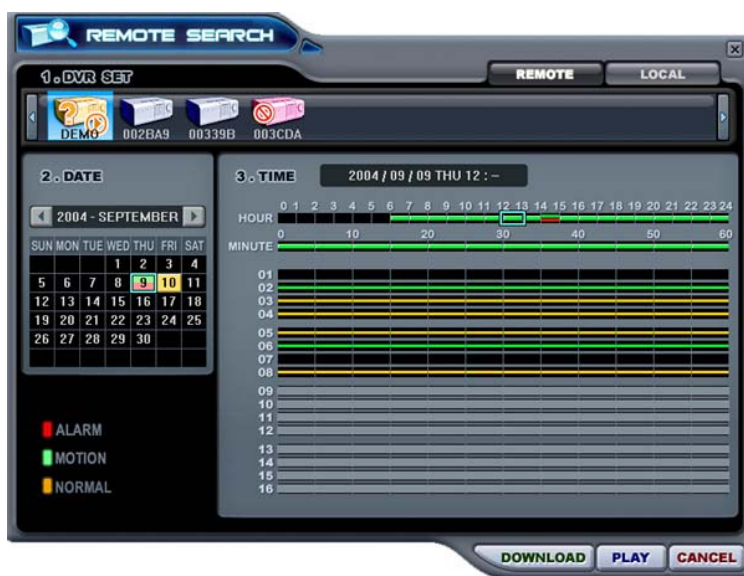


(4) Select **REMOTE** button or **LOCAL** button for playback.

### 1) Remote Playback

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

- ① Select **REMOTE** 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 and click **PLAY** button to start playback.



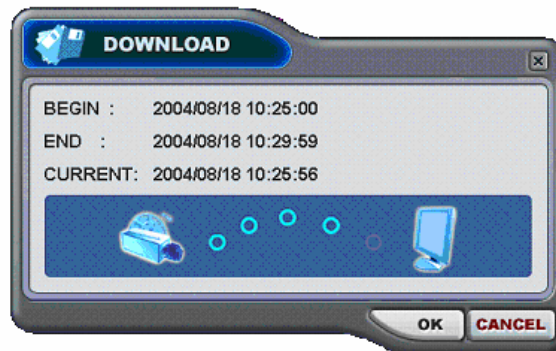
2) Remote Download

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 CD through the Set.
-



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## 7. DVR Menu Setup

DVR Menu Setup allows modification of various system settings to the DVR through CMS as it would be done on the DVR by accessing it's menu.

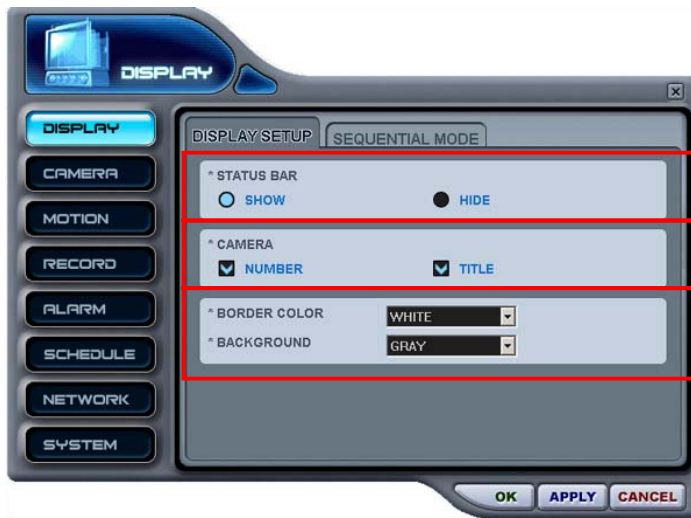
Select any DVR for Menu setup. Context Menu will appear on screen by Right- clicking.



DVR SETUP Menu pops up, as shown below.

(1) Display

1) Display Setup

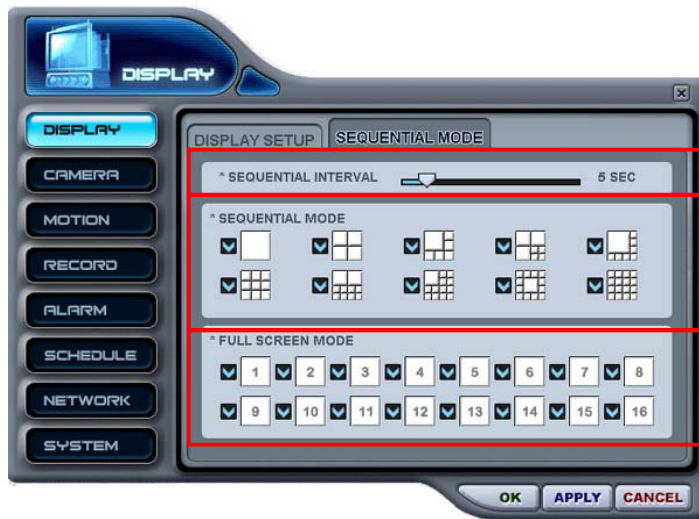


a. Status bar: Show or Hide

b. Camera: Select OSD information for camera

c. Select Border Color or Background Color.

2) Sequential Mode



- a. Sequential Interval: 1~30 sec.
- b. Select Sequential Mode
- c. Select camera for Full Screen Mode sequential.

(2) Camera Setup



- a Select Camera: 1~16
- b Select Covert On/OFF
- c Adjust Brightness, Contrast and Color : 0%~99%
- d Enter the camera title: up to 12 characters.
- e Select P/T/Z Camera

(3) Motion Record Set up



- ① Record Time : Adjust Post-Event Duration.
- ② Camera : Select camera for
- ③ Motion Level Adjust Motion Sensitivity (1~20)
- ④ Motion Grid: Select Motion Grid to activate.

(4) Record Setup



- ① Select Enable or Disable to Record.
- ② Adjust Picture Quality.
- ③ Adjust Filed rate, Activated Motion and/or Alarm features On/Off
- ④ Audio Record On/Off
- ⑤ Select Motion Record ON/OFF.

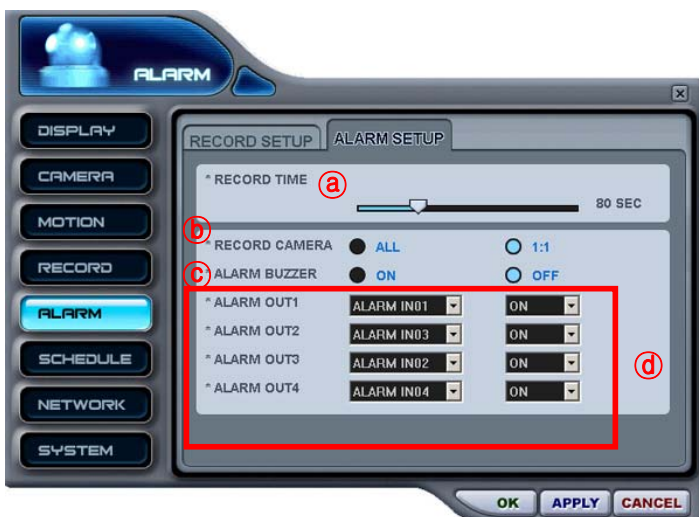
(5) Alarm Record

1) Alarm Record Set up



- Ⓐ Select Enable or Disable to Record.
- Ⓑ Adjust Picture Quality.
- Ⓒ Adjust Filed rate, Activated Motion and/or Alarm features On/Off
- Ⓓ Audio Record On/Off
- Ⓔ Select Alarm Input signal circuit type. ( Normally Close, Normally Open)

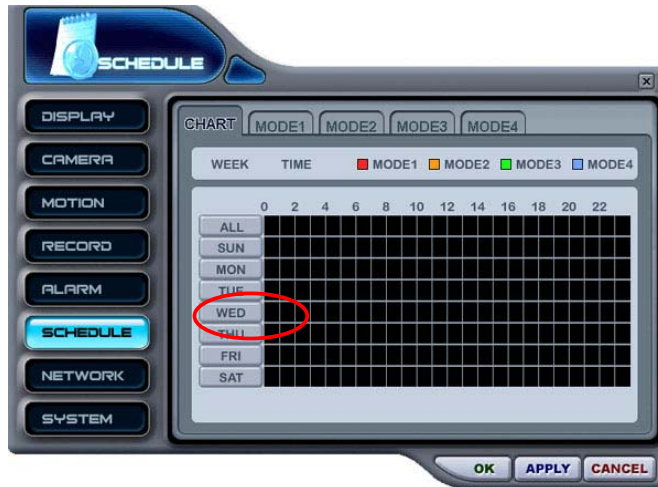
2) Alarm Record Set up



- Ⓐ Record Time: Adjust Post-Event Duration.
- Ⓑ Record Camera : All or 1:1
- Ⓒ Alarm Buzzer: Alarm Buzzer On/Off
- Ⓓ Alarm Out: Configure which relay will be triggered when an alarm is activated per camera.

(6) Schedule Setup

Select any Day for Schedule Setup.

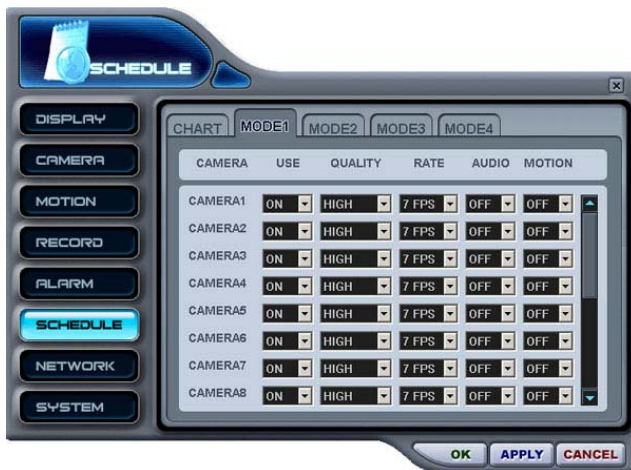


The detailed Menu pops up for selected Day, as shown below.

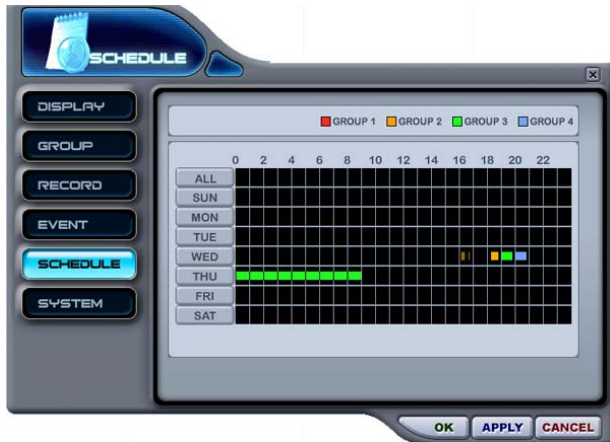


Enter the beginning and end time, and then select Record Mode to record.

Save setup and exit the menu select "OK", or otherwise exit the menu without making changes select "Cancel".

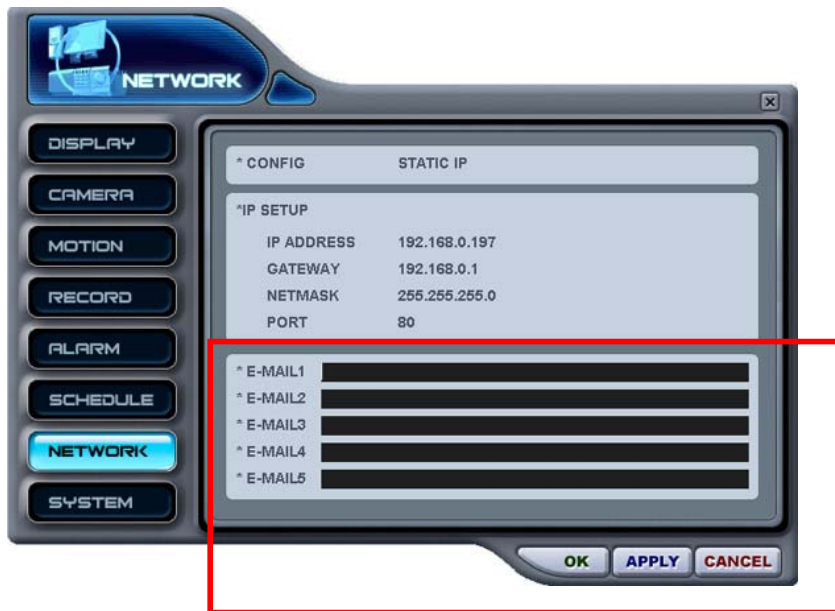


Defined modes as your desired



Schedule Menu shows a graphical representation of the defined record Mode: Mode 1~4. However, the Schedules are only displayed if a corresponding schedule has been configured in the schedule menu page.

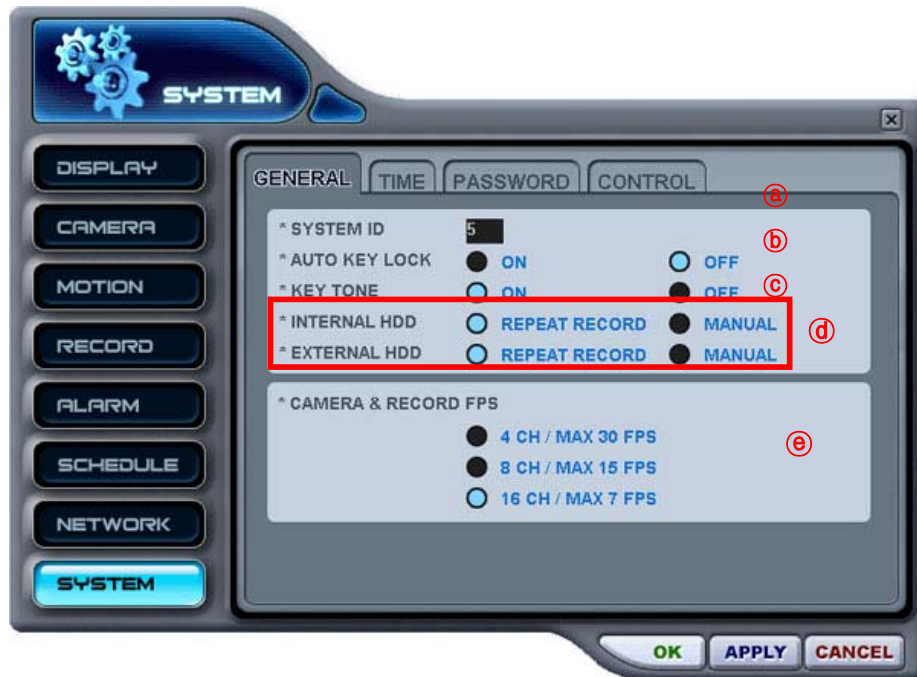
(7) Network Set up



Enter e-mail address for alerts from the DVR up to 5 users.

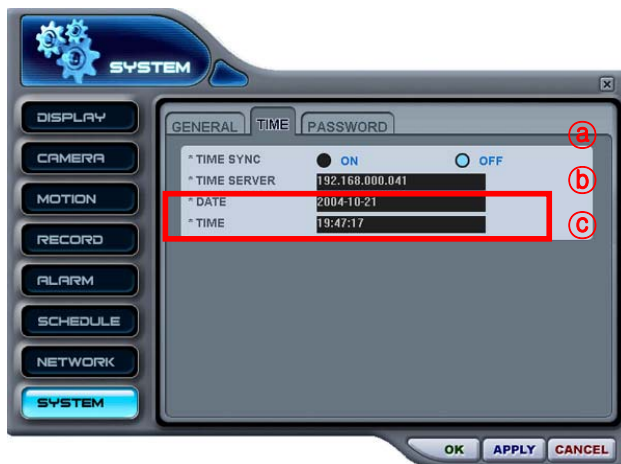
## (8) System Setup

### 1) General



- System ID : Configure Set ID.
- Auto Key Lock: ON/OFF
- Key Tone: Key tone ON/OFF
- Select overwrite HDD.
- Camera& Record Fps : Select Max Recording Frame rate.

### 2) Time



- Time Sync. Select Master or slave clock.
- Configure Time server
- Enter the date and time

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3) Password



Changed the user Password up to 5 users.

4) Control



- d. Stop Recording
- e. Schedule On/Off



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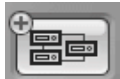
## VIRTUAL DVR


### 1. What is Virtual DVR.

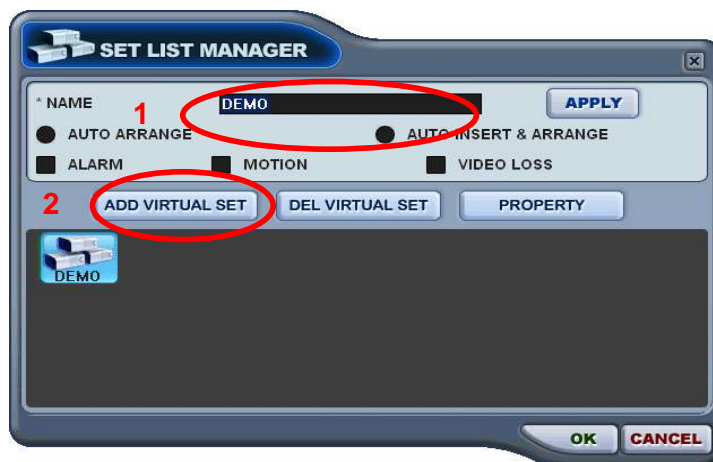
Virtual DVR is not an actual DVR, but a combination, or group of several DVRs already listed under the DVR window. Under one Virtual DVR set, up to 64 DVRs can be added, pulling one camera from each DVR to be displayed. The Virtual DVR behaves in the same way a DVR would, except for the warning notifications.

### 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.

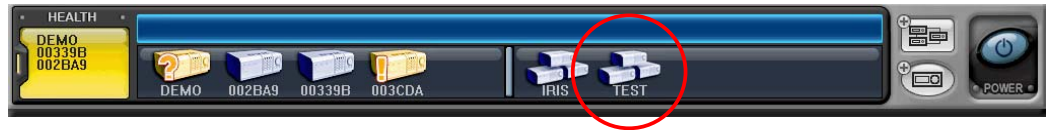
(2) DEL VIRTUAL DVR: Delete selected virtual DVR from CMS list.

(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.

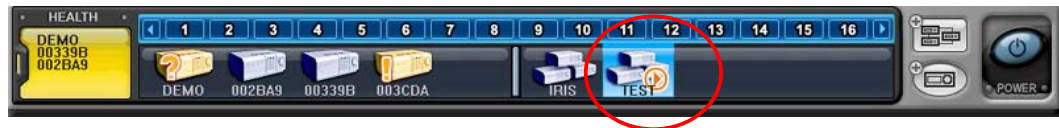


### 3. Editing Virtual DVR

- (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.
- (4) 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 .

- Click the desired DVR to directly drag the desired channel.
- 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.

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

In the following examples, Camera No 1 on 3<sup>rd</sup> 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 way of delete 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 for delete and directly drag to DVR Window or Virtual DVR Window.



## 4. Live Viewing on Virtual DVR

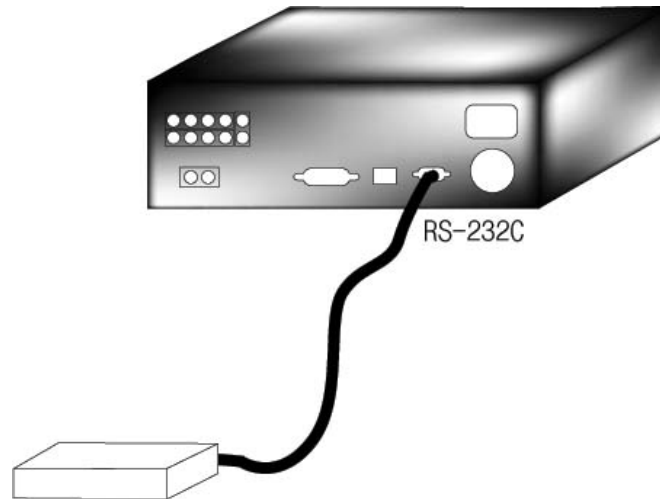
It is exactly same with Actual DVR.

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## Appendix: How to connect modem

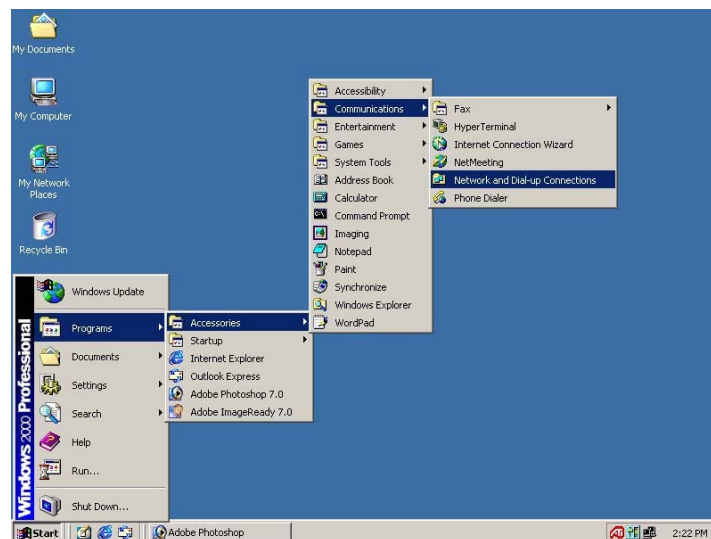
Please follow the next procedure after installed client software. We provide client software in a CD.

1. Connect modem to the back of DVR RS-232C.(MODEM)



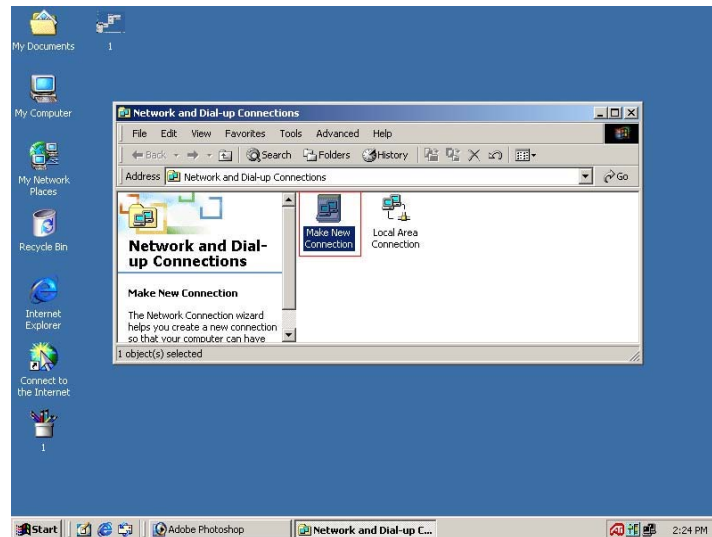
2. Follow the below steps:

Start → Programs → Accessories → Communications → Network and Dial-up Connections

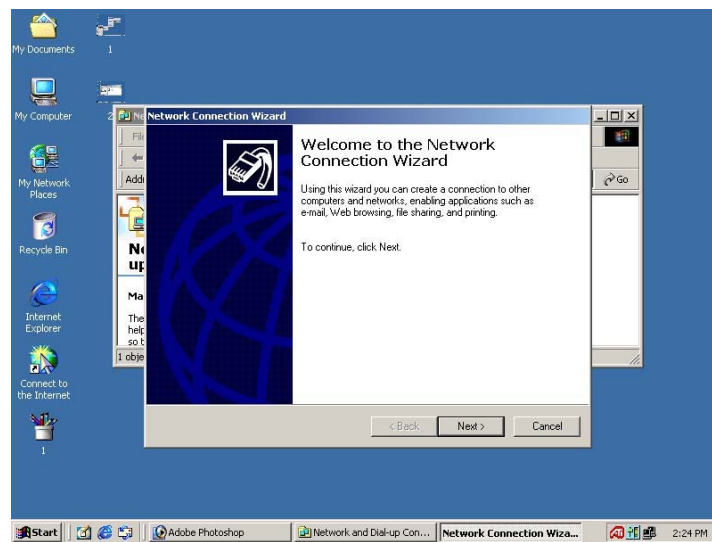


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3. Double click “Make New Connection”.

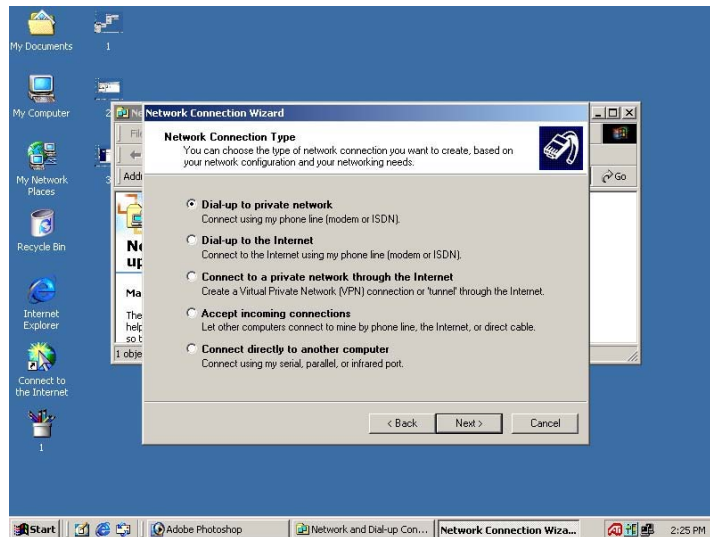


4. Click “Next” at the window of network connection wizard.

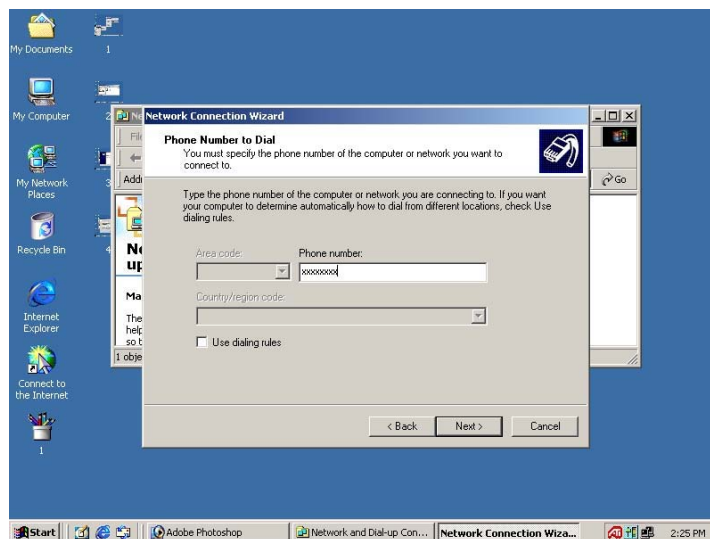


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5. Check “Dial-up to private network” and click “Next”.

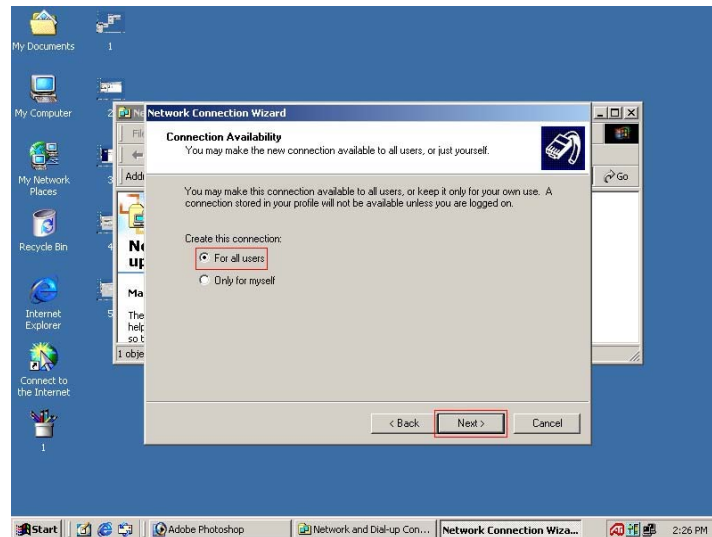


6. Enter the telephone number, which is connected, to the DVR

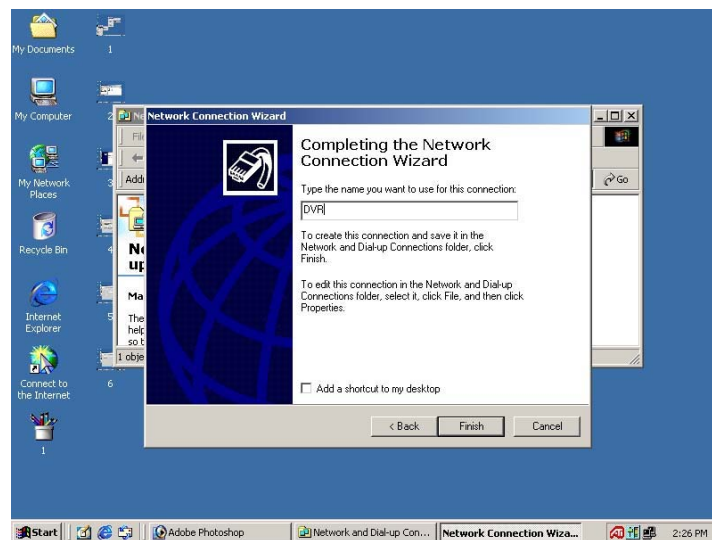


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7. Check “For all user” and click “Next”

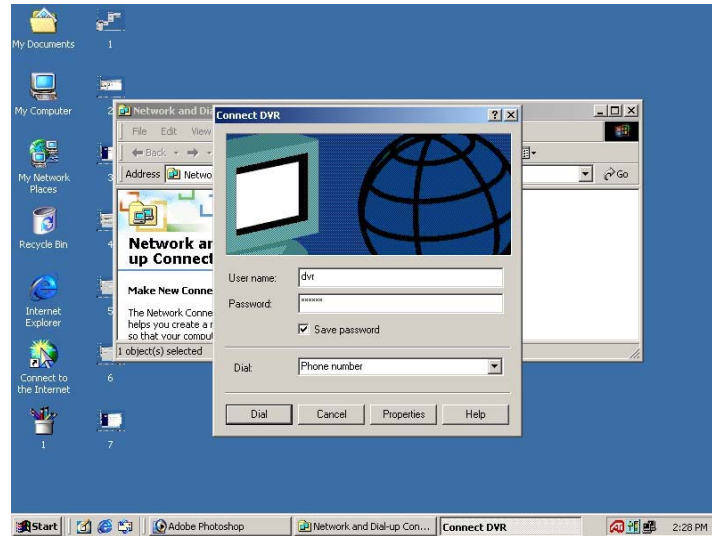


8. Type DVR at the parameter, check “Add a shortcut to my desktop” and click “Finish”

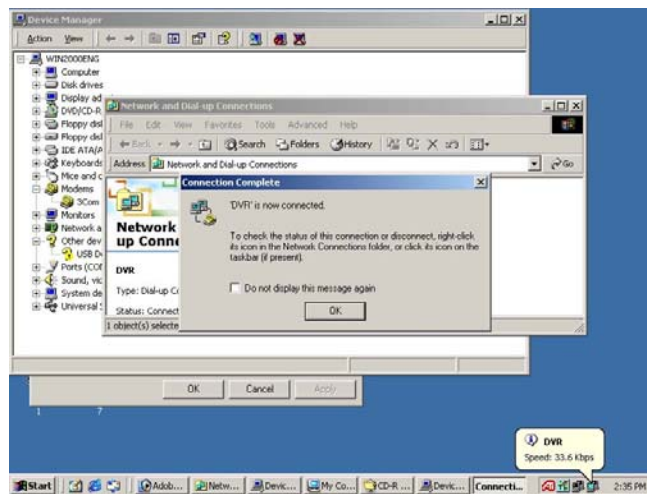




9. Type “admin or user1~5” at the user name and enter the password (Six digits 111111 are initial password) click “Dial”



10. You can find this window if connection is succeed and see the speed of this connection at the bottom tool bar.

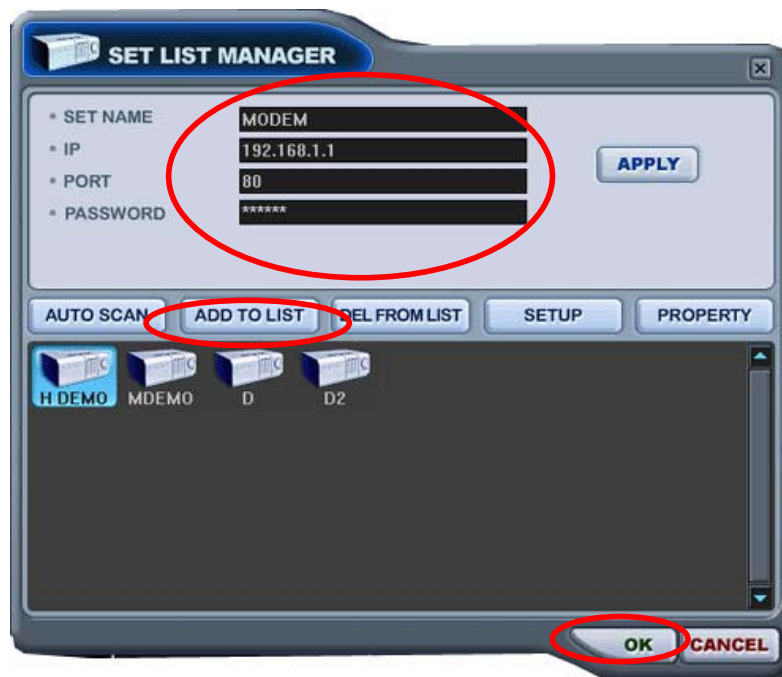


The highest speed of analog modem is 33.6kbps between DVR and the Computer. At the ISP(Internet Service Provider) and digital modem, It's max speed is 56kbps. For more information on connection speed, please contact your modem manufacturer directly.

11. Open CMS and click Set list manager




12. Type on DVR title to display on monitoring window, enter **192.168.1.1** in IP and set port(default 80) and password. Click “Add to List” button and OK to save the configuration.

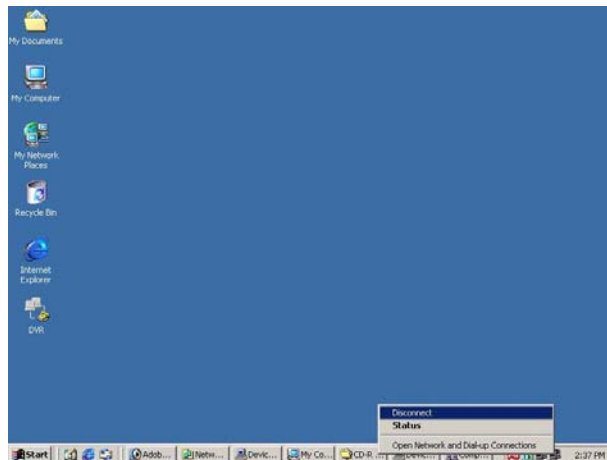


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13. You will see the picture if connected successfully.



14. To disconnect modem, place the cursor on the this  icon and right-click and click “Disconnect”



15. To connect modem to the DVR, just double click on the DVR Icon.

