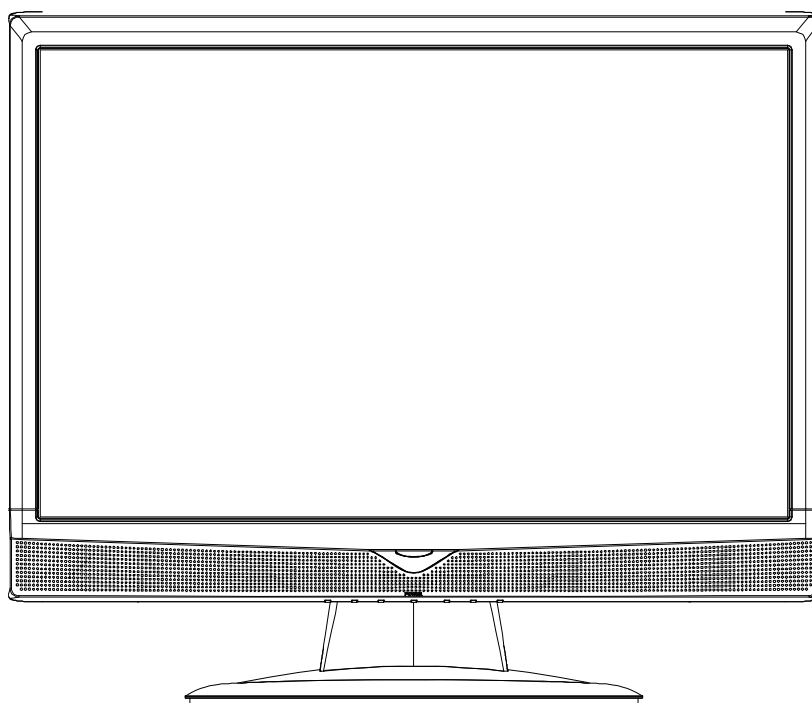


LCD Digital Video Recorder

USER MANUAL



Please read instructions thoroughly before operation and retain it for future reference.

IMPORTANT SAFEGUARD



CAUTION

RISK OF ELECTRIC SHOCK



CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.



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



This 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.



All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly "lead-free" and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.



This apparatus is manufactured to comply with the radio interference requirements.

Disclaimer

The information in this manual was current when released. We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. For the actual display & operation, please refer to your DVR in hand. The content of this manual is subject to change without notice.

The product & company names mentioned herein may be the registered trademarks or tradenames of their respective owners.

Grounding

This is a Safety Class 1 Product (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the instrument is likely to make the instrument dangerous. Intentional interruption is prohibited.

Water & Moisture

Do not expose this product to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the product.

MPEG4 Licensing

THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD ("MPEG-4 VIDEO") AND/OR (ii) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED BY MPEG LA TO PROVIDE MPEG-4 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, LLC. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com).

GPL Licensing



This product contains codes which are developed by Third-Party-Companies and which are subject to the GNU General Public License ("GPL") or the GNU Lesser Public License ("LGPL").

The GPL Code used in this product is released without warranty and is subject to the copyright of the corresponding author.

Further source codes which are subject to the GPL-licenses are available upon request.

We are pleased to provide our modifications to the Linux Kernel, as well as a few new commands, and some tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

<ftp://ftp.dvrtw.com.tw/GPL/AV074/>

Version

Firmware: 1142-1039-1013-1026-0A-0000

Video Viewer: 0119

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1. KNOWING YOUR LCD DVR

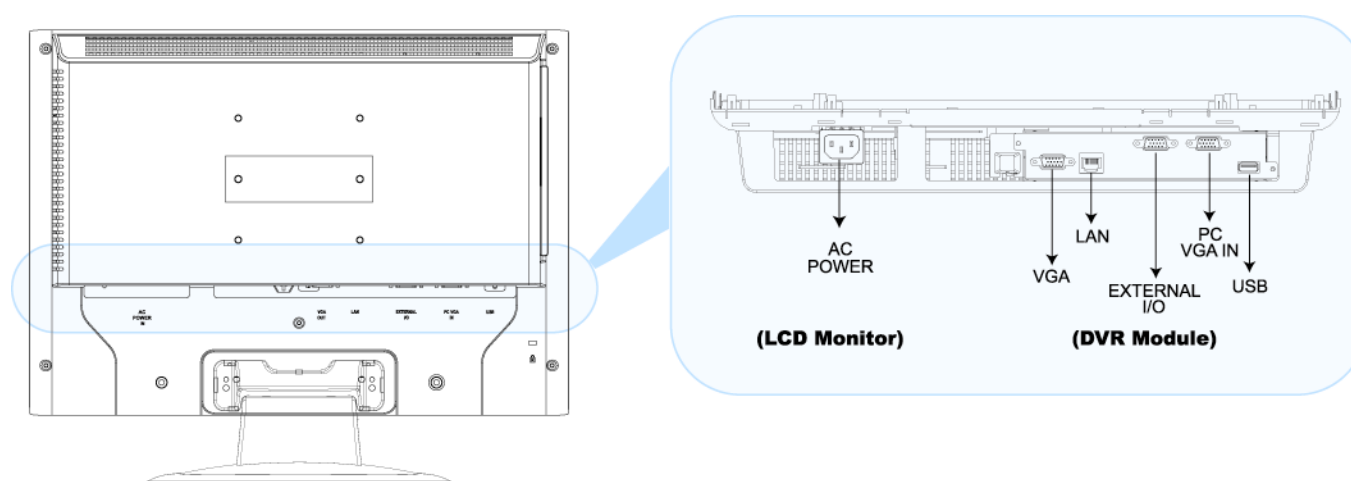
1.1 Rear Panel

Below shows the illustration when the DVR module is installed in the LCD monitor (view from bottom to top).

Note: For how to install the DVR module to the LCD monitor, please refer to "2.2 Install DVR Module to LCD Monitor" at page 4.

For how to remove the DVR module from the LCD monitor, please refer to "APPENDIX 4 DVR MODULE REMOVAL" at page 33.

• Model 1



1) AC POWER

Connect to power with the supplied LCD monitor power cable.

2) VGA OUT

Connect the monitor directly to this jack on the DVR module.

3) LAN

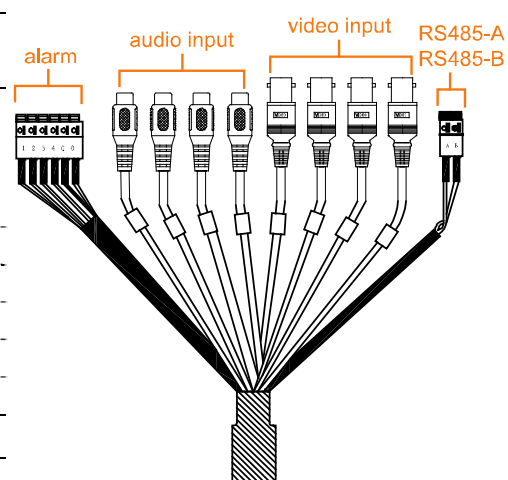
Connect to network with a network cable.

4) EXTERNAL I/O

Connect the supplied external I/O cable for video, audio, alarm, and external device (such as PTZ camera) connection.

Each connector is labeled as follows:

Label	Meaning	Description										
V1 ~ V4	Video Input 1 ~ 4	Connect to video sources, such as cameras.										
A1 ~ A4	Audio Input 1 ~ 4	Connect to audio sources, such as cameras equipped with the audio function.										
1 ~ 4	Alarm: Alarm Input 1 ~ 4	Connect alarm input (1~4) and GND connector with wires. Once an alarm is triggered, the DVR will start recording the corresponding channel, and the buzzer will be on.										
		<table><tr><th>Label</th><th>Corresponding Channel...</th></tr><tr><td>1</td><td>Channel 1</td></tr><tr><td>2</td><td>Channel 2</td></tr><tr><td>3</td><td>Channel 3</td></tr><tr><td>4</td><td>Channel 4</td></tr></table>	Label	Corresponding Channel...	1	Channel 1	2	Channel 2	3	Channel 3	4	Channel 4
		Label	Corresponding Channel...									
		1	Channel 1									
		2	Channel 2									
3	Channel 3											
4	Channel 4											
G	Alarm: GND	Ground										
O	Alarm: Output											
A & B	RS485-A RS485-B	Used to connect to a PTZ camera, keyboard controller, or other compatible external device.										



5) PC VGA IN

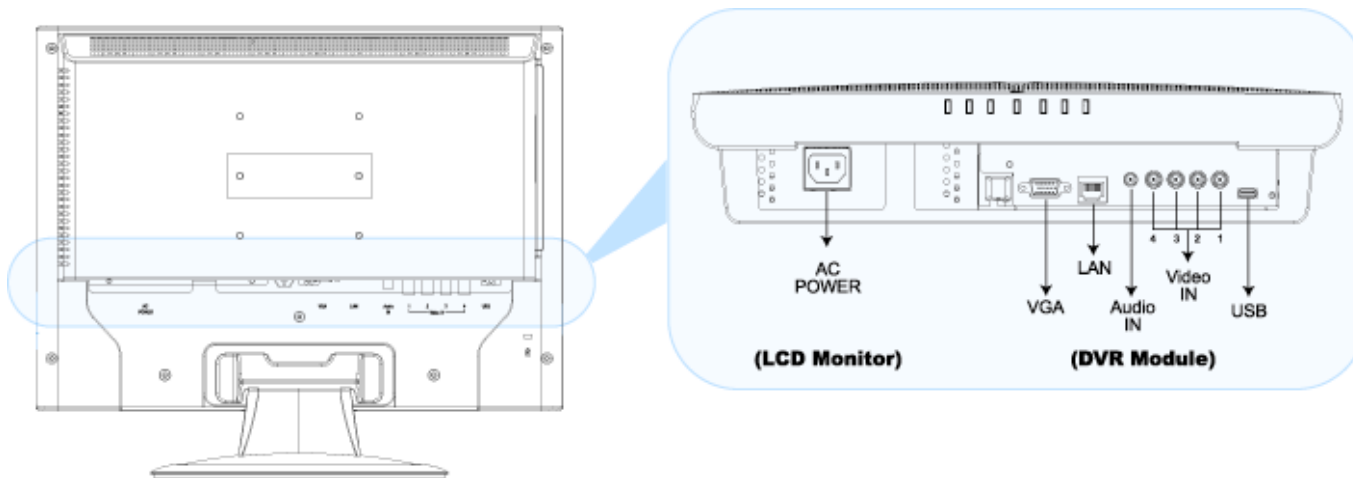
Connect the DVR module and your PC with an additional monitor video cable to switch the display between the DVR and PC.

6) USB

To quickly backup or upgrade firmware/OSD, you can insert a compatible USB flash drive into this USB port.

Before using the USB flash drive, please use your PC to format the USB flash drive as “FAT32” first.

- **Model 2**



7) **AC POWER**

Connect to power with the supplied LCD monitor power cable.

8) **VGA OUT**

Connect the monitor directly to this jack on the DVR module.

9) **LAN**

Connect to network with a network cable.

10) **Audio IN**

Connect to an audio source, such as a camera with the audio function.

11) **Video IN (1 ~ 4)**

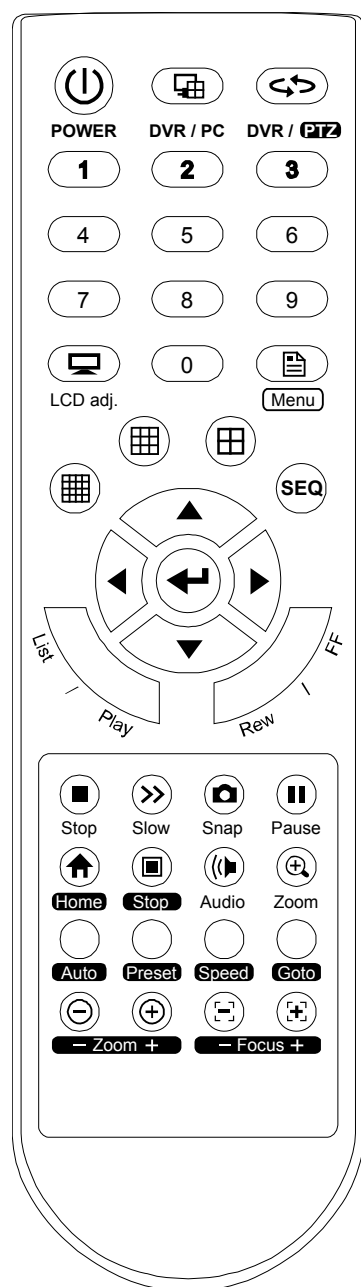
Connect to video sources, such as cameras.

Note: If you want to make a video backup with audio, please make sure whether your DVR supports the audio function, and connect audio cameras to the channels which support the audio function.

12) **USB**

To quickly backup or upgrade firmware/OSD, you can insert a compatible USB flash drive into this USB port. Before using the USB flash drive, please use your PC to format the USB flash drive as “FAT32” first.

1.2 IR Remote Controller



POWER	<ol style="list-style-type: none"> 1. Press shortly to enter the monitor power saving mode. 2. Press long enough to power off the DVR. The system will prompt you to stop recording and confirm the power-off when the DVR is in the record mode. To power on the DVR, press it again.
DVR / PC	Press to switch the display between your DVR and PC. (Applicable only for selected model)
DVR / PTZ	Press to switch the control between your DVR and PTZ camera (if your DVR supports PTZ camera connection). You will see the icon "PTZ" on the display when you're in the PTZ mode.
NUMBER PAD	<p>0 ~ 9:</p> <ol style="list-style-type: none"> 1. Press to switch to the channel you want. 2. In the keylock mode, used to key in the DVR password. 3. In the PTZ mode, used with the key "Goto" to have different functions. (Applicable only for selected model)
LCD adj.	Press to enter the LCD monitor's menu to adjust some setting parameters. You will see the icon "LCD" on the display when you're in the monitor adjustment mode.
Menu	<ol style="list-style-type: none"> 1. Press to enter the DVR menu (in the DVR mode) or PTZ camera menu (in the PTZ mode). 2. In the DVR or PTZ menu, press to exit the menu setting.
4 / 9 / 16	Press to switch the channel display in the 4-cut / 9-cut / 16 cut mode.
SEQ.	<p>Press to switch the channel display one by one in the full screen, and press again to quit.</p> <p>The channel(s) with video loss or covert recording will be skipped when you're in the SEQ. mode.</p>
Arrow Keys	<p>▲ / ▼ / ◀ / ▶: In the menu, press to move the selection up / down / left / right.</p> <p>▲ / ▼: In the setting mode, press to change the function setting.</p>
Enter	Press to enter the sub-menu, or confirm your selection.
List	<p>Press to quickly search the recorded files by four event lists: RECORD LIST / MOTION LIST / ALARM LIST / TIMER LIST, or select FULL LIST to show all the event logs.</p> <p>Select the log you want, and press "Enter" to play the selected file.</p>
Playback Keys	<p>Play: Press to play the recorded video.</p> <p>Rew: Press to fast rewind the playback video.</p> <p>FF: Press to fast forward the playback video.</p> <p>Stop: Press to stop the playback video.</p> <p>Slow: Under the playback mode, press to slowly playback the recorded file.</p> <p>Pause: Press to pause the playback video.</p>
Snap	<p>Press to take a snapshot for the current live video image, and save the image in the USB flash drive.</p> <p>Before using this function, please insert the compatible USB flash drive into the USB port on the DVR module.</p>
Audio	<p>Press to select the audio channel(s) you want in the live or playback mode.</p> <p>In the live mode, you can only hear the live audio; in the playback mode, you can only hear the recorded audio.</p> <p>To make a video backup with audio, make sure the camera supporting audio function is connected to audio input.</p>
Zoom	In the live or playback mode, press to enlarge the image of the selected channel. This function is not applicable when the display mode is set to "DEFAULT".
PTZ Control Keys (Applicable only for selected model)	<p>Home: Press to return to the home position.</p> <p>Stop: Press to stop the auto mode.</p> <p>Auto: Press to enter the auto mode of the PTZ camera.</p> <p>Preset: Enter the menu to set the preset points.</p> <p>Speed: This key is reserved for future use.</p> <p>Goto: To operate the PTZ camera to a specific preset point, press "GOTO" and the number of the point you want.</p> <p>Zoom: Press one of them to adjust the optical zoom in/out ratio of the PTZ camera.</p> <p>Focus: Press one of them to adjust the focus of the PTZ camera.</p>

2. CONNECTION AND SETUP

Note: The DVR is designed to automatically detect the video system of the connected cameras (NTSC or PAL). To make sure the system detection is correct, please check if the cameras are connected to the DVR and power-supplied before the DVR is powered on.

2.1 Install HDD

One SATA HDD should be installed in the DVR module, and it must be purchased separately.

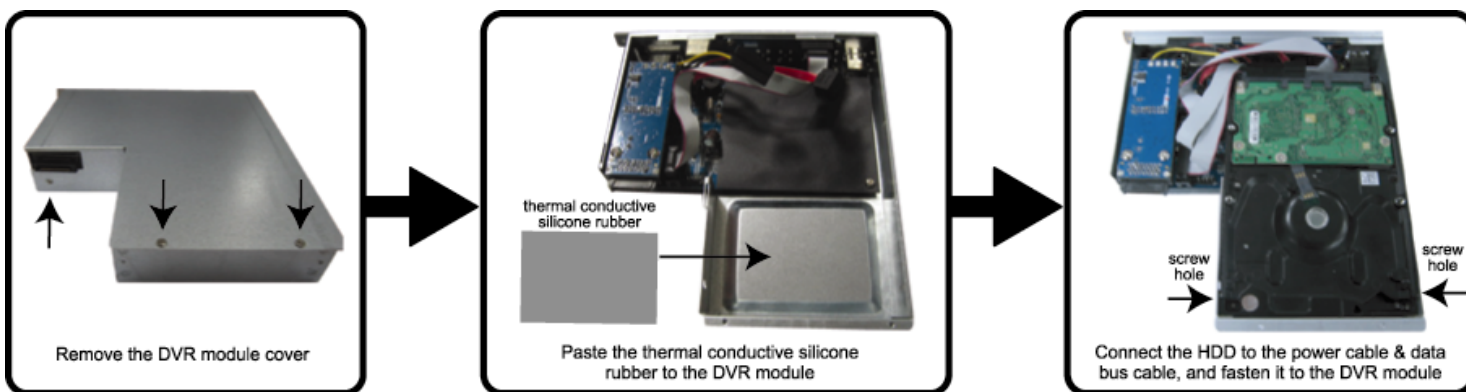
Step 1: Loosen the screws on the upper cover and remove it.

Step 2: Find the thermal conductive silicone rubber in the accessory pack, and paste it to the protrusive surface on the module.

Step 3: With the PCB side facing up, connect the compatible SATA HDD to the data bus and power, and place it in the module.

Step 4: Find the two screw holes on the module, and fasten the HDD to the module with the supplied screws, one for each side.

Step 5: Close the upper cover of the module, and fasten all the screws you loosened in Step 1.

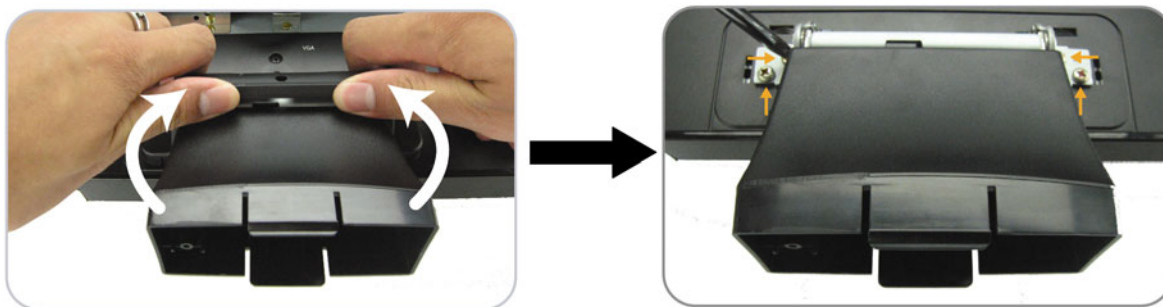


2.2 Install DVR Module to LCD Monitor

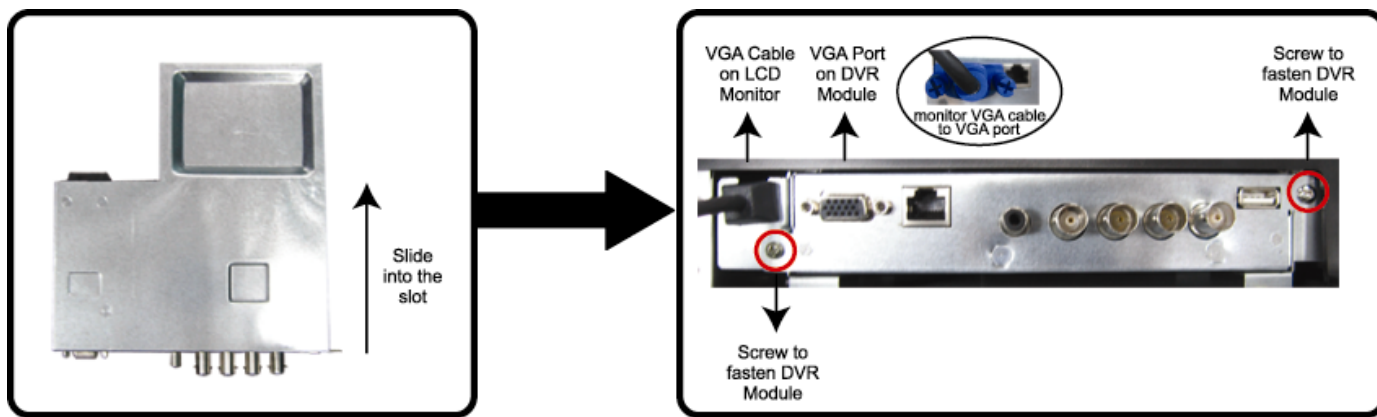
After the HDD is installed in the DVR module, place the module to the LCD monitor.

Note: The illustration below is taking Model 2 as an example.

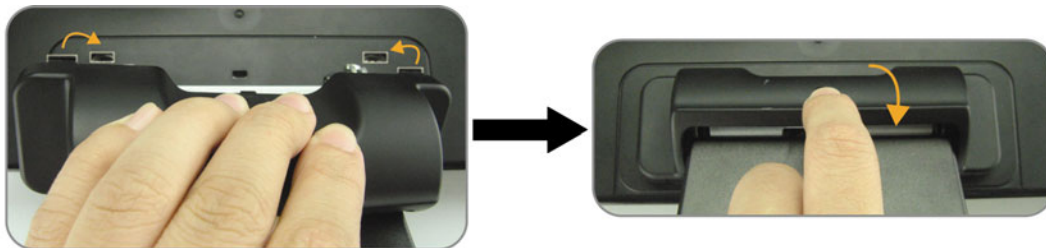
1. Place the monitor face-down on a soft, protected surface.
2. Check if the LCD monitor base is fixed to the monitor.
If no, please skip to the next step; if yes, remove the LCD monitor base as indicated below:
 - a) First, snap off the screw cover from the monitor base.
 - b) Remove the four stand screws.



3. A slot on the rear panel of the LCD monitor is reserved for the DVR module. Find the slot and remove the slot cover.
4. Slide the DVR module to the slot as indicated below.
5. Push the module to the end, and fix it with the supplied screws.
6. Connect the VGA cable on the LCD monitor to the VGA port on the DVR module.



7. Find the supplied monitor base accessories, and fix the monitor base to the monitor as indicated below:
 - a) Fix the monitor base to the monitor with the supplied screws.
 - b) Hook the screw cover removed in the second step to the monitor, and push it downward to lock it.



2.3 Connect Camera

The cameras must be connected and power-supplied before the DVR is powered on. The DVR will automatically detect the video system of the connected camera(s) (NTSC / PAL), and switch itself to the correct system.

- 1) Video cable connection
Connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connector.
- 2) Audio cable connection (if your camera supports the audio function)
Connect the camera audio output to the DVR audio input port with a coaxial cable or RCA cable with BNC connector.
- 3) Power connection
Connect the camera with indicated power supply.

2.4 Power On

Find the power cable supplied with the LCD monitor, and connect it to the power jack "AC POWER" on the LCD monitor, and to the power outlet. The DVR will be on and initialized.

Note: Before the DVR is powered on, make sure the cameras are connected and power-supplied for the detection of the camera video system to be correct.

Note: To ensure that your LCD DVR works constantly and properly, it's recommended to connect the power to an UPS, Uninterruptible Power Supply, for continuously operation. (Optional)

2.5 Set Date and Time

After the DVR initialization is completed, set the date and time first.


Press "Menu" and enter the password to go to the menu list. The default password is 0000. Move to "DATE", and you can set the date / time / daylight saving in the "DATE" menu list.

Note: Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.

Note: DVR time might reset after the disconnecting of the DVR power, for example, caused by a power outage, because the DVR battery is low or even running out of power. If so, please replace the DVR battery, CR2032, as instructed in "APPENDIX 5 DVR BATTERY REPLACEMENT" at page 34.

2.6 Set Password

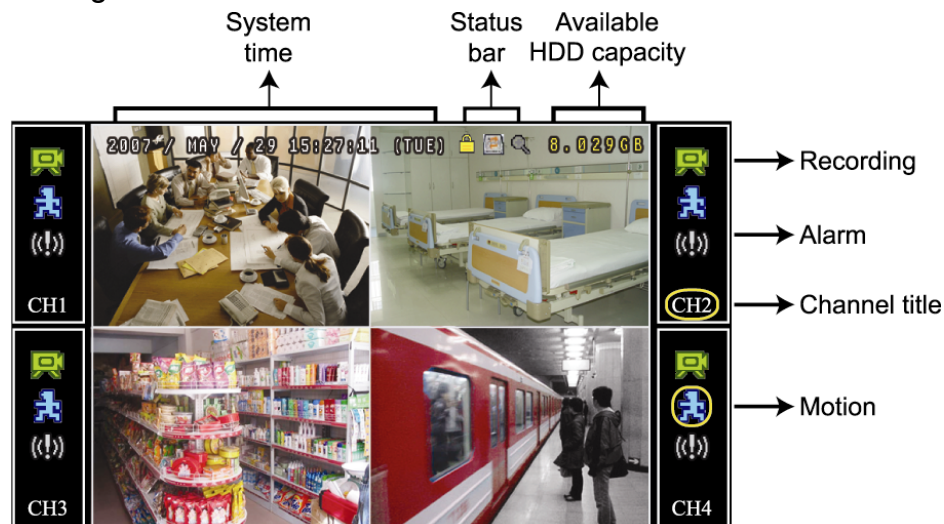
Press “Menu” and enter the password to go to the menu list. Then, move to “ADVANCE” to enter the advanced setting menu.

In the “ADVANCE” menu, move to “SYSTEM INFO”. Select “PASSWORD” and press “” to enter the submenu to set the password (four digits). The default password is 0000.

3. BASIC OPERATION

3.1 Live Page

There are three modes available for the layout of the image display. Below shows the default layout which presents the best ratio for surveillance without image distortion, and the frequently-used status icons for each channel are placed at the left or right side of the screen.



Icon	Function	Icon	Function	Icon	Function	Icon	Function
	Key lock		Key unlock		1st live audio channel		2nd live audio channel
	3rd live audio channel		4th live audio channel		1st playback audio channel		2nd playback audio channel
	3rd playback audio channel		4th playback audio channel		Audio channel unselected		Digital zoom mode
	Digital zoom unselected		HDD overwrite		Timer recording		LCD adjustment
	Recording		Alarm		Motion		

3.2 Recording

By defaults, when the HDD capacity is nearly full, this device will overwrite 8GB data from the oldest for continuous recording without notice.

1) Manual Recording

By defaults, the record icon () shows on the screen when the DVR is powered on and a HDD is installed.

2) Event Recording

When the motion detection or alarm is activated, the motion icon () or alarm icon () shows on the screen for any motion or alarm event.

3) Timer Recording

When the timer record is activated, the timer icon "" shows on the screen.

3.3 Playback

Press "Play" to immediately play the latest recorded video.

Note: There must be at least 8192 images of recorded data for playback to work properly. If not, the device will stop playback. For example, if the IPS is set to 30, the recording time should be at least 273 seconds (8192 images / 30 IPS) for the playback to work properly.

Note: The video playback at the local site might get affected and may not be so fluent if there's any remote surveillance simultaneously going on.

1) Fast Forward / Fast Rewind

You can increase the speed for fast forward and rewind on this device. In the playback mode:

Press “FF” once to get 4X speed forward and press twice to get 8X speed, etc. And the maximum speed is 32X.

Press “REW” once to get 4X speed rewind and press twice to get 8X speed, etc. And the maximum speed is 32X.

Note: During playback, the image size of the recorded data (FRAME, FIELD or CIF) will be shown on the screen.

2) Pause / Image Jog

Press “Pause” to pause the playback.

In the pause mode:

Press “FF” once to get one frame forward.

Press “Rew” once to get one frame rewind.

3) Stop

Press “Stop” to stop the playback and return to the live view.

4) Slow Playback

Press “Slow” to get 1/4X speed playback and press twice to get 1/8X speed playback.

5) Audio Playback

Press “Audio” to select the audio channel you want for audio playback.

The available audio inputs depend on the model you have. For details, please check the specifications of your model.



Playback audio of the 1st audio channel



Playback audio of the 2nd audio channel



Playback audio of the 3rd audio channel



Playback audio of the 4th audio channel

Note: If you want to make a video backup with audio, please make sure whether your DVR supports the audio function, and connect audio cameras to the channels which support the audio function.

3.4 Search

1) Full Event Search

Press “LIST” to show the list for all types of the recorded files. Choose the item you want to see and press “←” to start playback.

2) Search by Time

Press “Menu” to enter the menu list, and go to “ADVANCE” → “EVENT LOG”. Move to “QUICK SEARCH”, and press “←” to enter the quick time search menu. You can search any specific events by time (Year / Month / Day / Hour / Min) and directly play the file you find.

3.5 Firmware / OSD Upgrade

Step 1. Format the USB flash drive as FAT32 format first.

Step 2. Get the upgrade files from your distributor, and save the upgrade files in your USB flash drive (do not change the file name).

Step 3. Insert the USB flash drive into the DVR USB port.

Step 4. Press “Menu”, and move to “ADVANCE” → “SYSTEM INFO”. Move to “UPGRADE”, and press “←”.

Step 5. Select “YES”, and press “←” again to confirm upgrade.

Step 6. Remove the USB flash drive after the system is rebooted.

4. ADVANCED OPERATION

4.1. QUICK SEARCH

You can search any specific events by time and directly play the file you find from the DVR.

Move to "QUICK SEARCH", and press "←". You will see the following submenu items:

1) DATE

Select the specific time period (YEAR / MONTH / DAY / HOUR / MIN) that you want to search.

2) SEARCH HDD

Change to the HDD you want if there are more than 1 HDD in your DVR.

3) START

Move to "START" and press "←" button to search and directly playback the recorded files.

4.2. RECORD

In this menu list, you can set record settings. Press "Menu" on the front panel. The default admin password is **0000**.

Enter the default password, and press "←".

4.2.1. Quick record setting

Move to "QUICK START" → "RECORD". The screen will show the following submenu items:

1) IMAGE SIZE

Select FRAME, FIELD (Selected models only) or CIF.

2) QUALITY

Select one of the four quality options: SUPER BEST, BEST, HIGH & NORMAL.

3) IMAGE PER SECOND

Select the images per second for MANUAL RECORD.

4.2.2. Detailed record setting

Move to "ADVANCE" → "RECORD", and press "←". The screen will show the following submenu items:

1) MANUAL RECORD ENABLE

Start / stop the manual recording function.

2) EVENT RECORD ENABLE

Start / stop the event recording function. When this function is enabled, the recording will be triggered by any motion or external alarm.

3) TIMER RECORD ENABLE

Start / stop the timer recording that is activated according to the scheduled time

4) EVENT RECORD IPS

Select the images per second for EVENT RECORD (Recording that is triggered by alarm or motion).

5) TIMER RECORD IPS

Select the images per second for TIMER RECORD (Recording that is activated according to the scheduled time.).

6) PRE-ALARM RECORD

Select to enable or disable the pre-alarm function (ON / OFF).

When pre-alarm and event recording functions are both activated, the DVR will record 8MB data before an alarm / motion event is triggered.

7) OVERWRITE

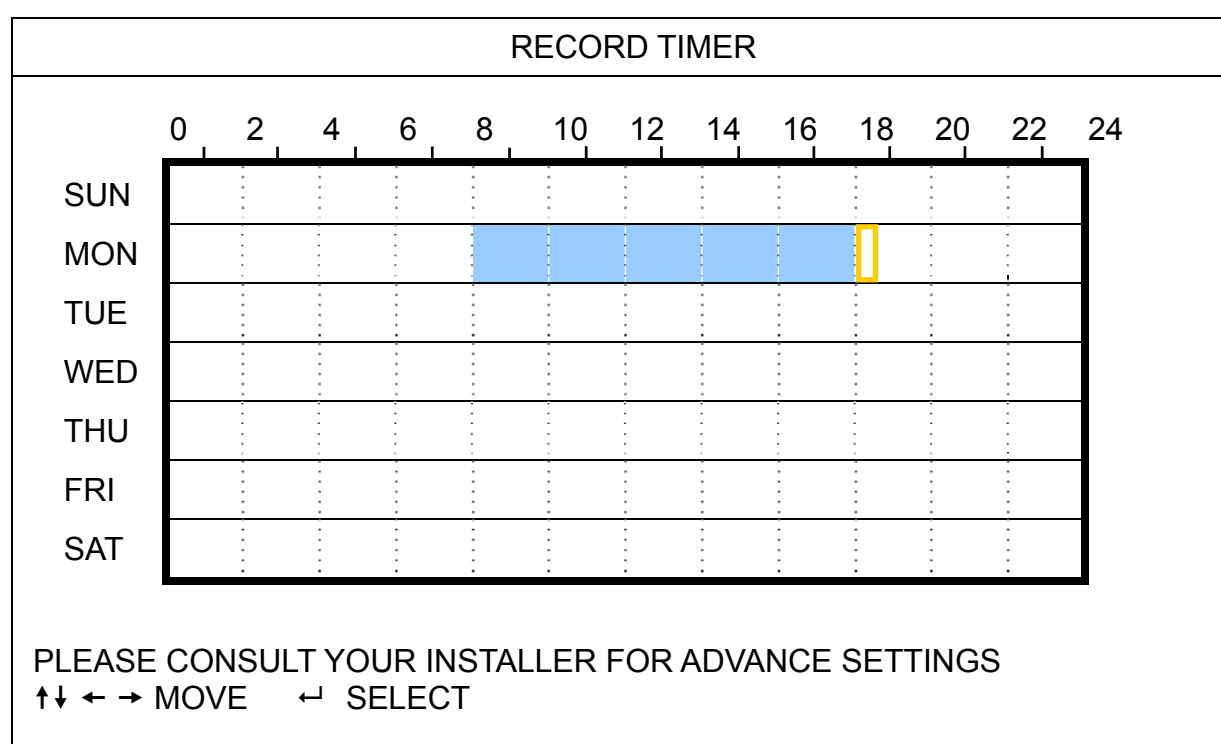
Select to overwrite previous recorded data in your HDD. When the HDD is full under the O/W recording mode, the DVR will clear 8GB data from the oldest for continuous recording without notice.

4.3. TIMER

In this menu list, you can schedule different sets of time for recording and detection function. Move to "TIMER", and press "←". Select to enable (ON) or disable (OFF) the recorder timer and / or detection timer functions.

1) RECORD TIMER

Use ▲ / ▼ to change the setting (ON / OFF). When it's set to "ON", press "←" to go to its submenu for further settings.



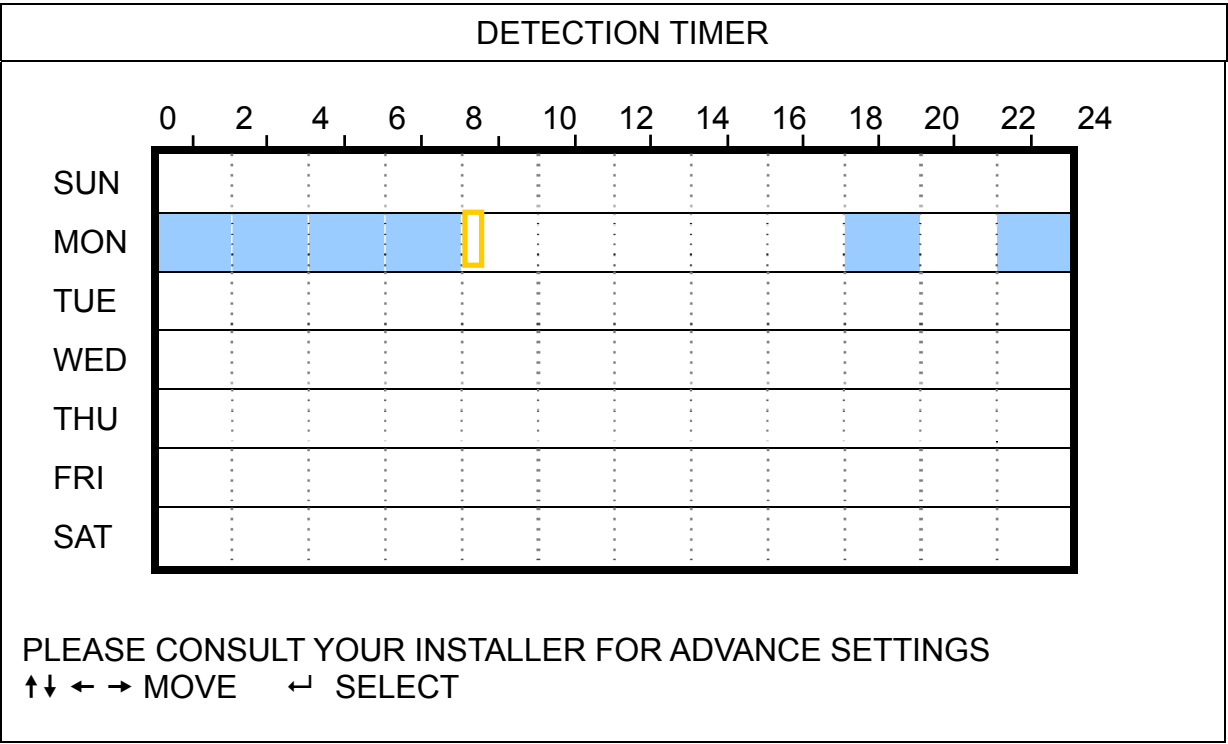
X axis 0 ~ 24 hours. Each time interval within a square is two hours (divided into four 30-minutes).

Y axis Monday ~ Sunday.

Operation Move to the start time point, and press "←" to set the start time point (marked in red color). Then, press ▲ / ▼ / ◀ / ▶ to set the timer-recording schedule. After setup, press "←" again to create an ending time point (marked in yellow color) and press "Menu" to exit.

2) DETECTION TIMER

Use ▲ / ▼ to change the setting (ON / OFF). When it's set to "ON", press "⏮" to go to its submenu for further settings.



- X axis 0 ~ 24 hours. Each time interval within a square is two hours (divided into four 30-minutes).
- Y axis Monday ~ Sunday.
- Operation Move to the start time point, and press "⏮" to set the start time point (marked in red color). Then, press ▲ / ▼ / ◀ / ▶ to set the timer-recording schedule. After setup, press "⏮" again to create an ending time point (marked in yellow color) and press "Menu" to exit.

Note: This function here is only for detection timer setup and activation.

4.4. DETECTION

In this submenu, you can set up detection-related functions.

Move to "DETECTION", and press "⏮". The screen will show the following submenu items:

1) TITLE

Show the camera title of each channel set in "CAMERA".

2) DET

The available options vary depending on the model you have.

For Model 1 & 2: Select if you want to activate the motion detection function for the selected channel (ON/OFF).

For Model 3 & 4: Select HIGH / NORMAL / LOW to activate the motion detection function with different sensitivity for the selected channel, or select OFF to disable this function.

3) AREA

Press "ENTER" to set the detection area. You will see similar screens as the following:

Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.

There are two different methods to set the detection area depending on the model you have.

Model 1



Transparent blocks are the area under detection.



Press "ENTER" to confirm the start area.



Press ◀ / ▶ to choose the width of the detection area.



Press ▲ / ▼ to choose the height of the area.

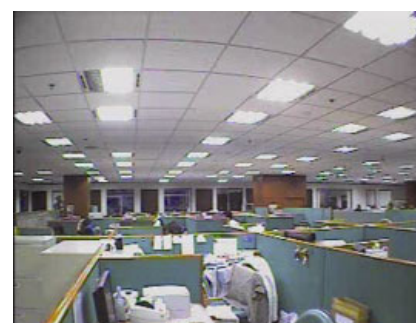
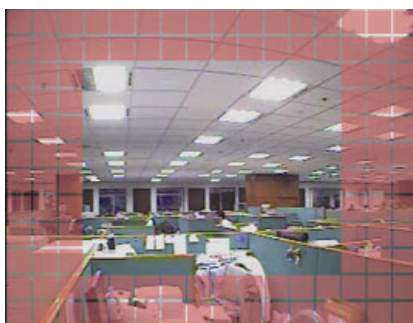


You can also set up multi-detection area. When any movement is detected, you will see the grids are flashing.



*Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.

Model 2



*Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.

There are three detection areas for your choice:

Press "▲" or "◀" once to broaden the detection area.

Press "▼" or "▶" once to narrow the detection area.

4) LS (Level of Sensitivity) (Selected model only)

"LS" is to set the sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection.

5) SS (Spatial Sensitivity) (Selected model only)

"SS" is to set the sensitivity for detecting the size of one object (the number of the grids) on the screen. The smaller the value is, the higher sensitivity for motion detection.

Note: The default setting of SS is 03, which means once an object is detected more than 3 grids, the system will get triggered. So the value of SS must be less than the number of grids that you set up for the motion detection area.

6) TS (Time of Sensitivity) (Selected model only)

"TS" is to set the sensitivity regarding how long one object stays in the detection area and triggers the recording. Depending on the model you have, you may see either of the following methods:

- Select a value -- The smaller the value is, the higher sensitivity for motion detection.
- Select an option – HIGH / NORMAL.

7) RE (Reference) (Selected model only)

"RE" is to set a reference for detection. The default value is 10, which means the DVR will compare 10 continuous images at one time according to the sensitivity of LS, SS, TS simultaneously.

8) ALARM (Selected model only)

Select N.C. (Normally Closed) / N.O. (Normally open) / OFF for the alarm polarity. The default alarm value is OFF.

4.5. REMOTE (Selected model only)

In this menu list, you can set up remote devices to work properly.

Move to "REMOTE", and press "←". You will see the following submenu items:

1) TITLE

Show the camera title of each channel set in "CAMERA".

2) DEVICE

Select the device type (CAMERA / PTZ) according to the connected camera for each channel.

3) ID

Set the ID number (0 ~ 255) for a PTZ camera. After connecting to a PTZ camera correctly, the default ID of the PTZ camera will be shown on the screen.

4) PROTOCOL

Select NORMAL (our protocol), P-D (PELCO-D) or P-P (PELCO-P) protocol.

5) RATE

Set the baud rate of each channel (2400 / 4800 / 9600 / 19200 / 57600 / 115200). For the connected cameras, such as PTZ and speed dome cameras, etc., please make sure their baud rate setting is the same as the setting here.

4.6. SYSTEM INFO

In this menu list, you can check or change some system settings.

The submenu items are described below:

1) SERIAL TYPE (Selected model only)

Show the serial type of the DVR (RS485).

2) BAUDRATE (Selected model only)

Set the baud rate of the DVR (2400 / 9600 / 19200 / 38400 / 57600 / 115200).

3) HOST ID (Selected model only)

Set the ID of the DVR (0 ~ 254).

4) PASSWORD

Press "←" to reset the password for accessing the DVR system. You can set the password up to 4 digits.

5) RESET DEFAULT

Press "←" to reset all settings as default, and select "YES" to confirm or "NO" to cancel.

6) CLEAR HDD

Select the HDD you want to clear. Press "←", and select "YES" to confirm to clear HDD or "NO" to cancel.

7) UPGRADE

Before using the USB flash drive, please use your PC to format the USB flash drive as FAT32 format first. Then, save the upgrade file in a compatible USB flash drive, and insert it into the USB port at the front panel. Press "←", and select "YES" to confirm upgrade or "NO" to cancel.

Note: To use this function, you need to have the upgrade file saved in a compatible USB flash drive, and insert it into the USB port at the front.

Note: Do not disconnect the power of your DVR while the upgrade process is in progress, or the DVR functions may not work normally or be unable to use.

- 8) AUTO KEYLOCK (SEC)
Set the time-out in second after which the key lock function is activated (NEVER / 30 / 60 / 120).
- 9) LANGUAGE
Select the language of the OSD.
- 10) VIDEO FORMAT
Here shows the information of the DVR video format (NTSC / PAL).
- 11) VERSION
Here shows the firmware version information.

4.7. NETWORK

In this menu list, you can set up the network.
Move to “NETWORK”, and press “←” to enter the submenu. The submenu items are described below.

4.7.1. STATIC

- 1) NETWORK TYPE
Select the network type as STATIC and set all the information needed in the DVR.
- 2) NETWORK INFORMATION (IP / GATEWAY / NETMASK)
Key in all the network information obtained from your ISP (Internet Service Provider).
- 3) DNS (PRIMARY DNS / SECONDARY DNS)
Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).
- 4) PORT
The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

STATIC	
NETWORK TYPE	STATIC
IP	192 . 168 . 001 . 012
GATEWAY	192 . 168 . 001 . 254
NETMASK	255 . 255 . 252 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

4.7.2. PPPOE

- 1) NETWORK TYPE
Select the network type as PPPOE.
- 2) USER NAME / PASSWORD
Set the “username” and “password” subscribed from your ISP supplier

3) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

4) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

PPPOE	
NETWORK TYPE	PPPOE
USER NAME	EMPTY
PASSWORD	EMPTY
IP	000 . 000 . 000 . 000
GATEWAY	000 . 000 . 000 . 000
NETMASK	000 . 000 . 000 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

Note: The PPPOE function needs to have one “username” and one “password” subscribed from one ISP supplier, and a “DDNS account” to correspond the dynamic IP address to a specific “Hostname”.

4.7.3. DHCP

1) NETWORK TYPE

Select the network type as DHCP.

2) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

3) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

DHCP	
NETWORK TYPE	DHCP
IP	000 . 000 . 000 . 000
GATEWAY	000 . 000 . 000 . 000
NETMASK	000 . 000 . 000 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

Note: This DHCP function needs to be supported by a router or a cable modem network with DHCP services, and a “DDNS account” to correspond the dynamic IP address to a specific “Hostname”, for this function to work properly.

4.8. BACKUP

In this menu list, you can choose to make a copy for a specified period time to a compatible USB flash drive for your own purpose.

Note: Before making a video backup with audio, you need to make sure whether there's any audio camera connected to the channel which supports audio recording, and there's any recorded data for the channel.

4.8.1. USB BACKUP



Before making USB backup, please check if:

- a). The USB flash drive is supported by your DVR. If not, the message "USB ERROR" will be shown on the screen.
For the list of the compatible USB flash drives, please refer to "APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST" at page 31.
- b). The format of your USB flash drive is "FAT 32". If no, please format it to "FAT 32" in your PC.
- c). There is no data in the USB flash drive. If yes, it's recommended to clear all data in the USB flash drive before starting the backup.

Note: When USB backup starts, it's not allowed for OSD menu operation or network backup in order to keep the consistency of the video data.

Note: You can backup up to 2GB video data for one-time USB backup. To backup more data, please set the time & channel(s) you want, and start USB backup again.

Move to "BACKUP", and press "  ". You will see the following submenu items:

- 1) START TIME
Select the start time of the backup.
- 2) END TIME
Select the end time of the backup.
- 3) AVAILABLE SIZE
Display the available capacity in the inserted USB flash drive.
- 4) CHANNEL
Select channels by pressing "  " button to change the symbol in front of the channel number.
Symbol " ☒ " means that this channel is selected to backup.
Symbol " ☐ " means that this channel is not selected to backup.
- 5) HDD NUM
Select the HDD containing the data you need.
- 6) START
Press "  " to start copying the chosen data to the USB flash drive.

Backup Video Playback on PC

During the backup process, a file player installer will also be copied into your USB flash drive. After the backup is completed, "BACKUP SUCCESS" will be prompted on the screen.

Insert your USB flash drive into your PC, and find the file player installer, "PLAYER.EXE". Double-click the installer to install the file player by following the on-screen instructions. Then, double click any backup file to play it directly in your PC and see if the backup is successful.

Note: The supported PC operating systems are Windows Vista, XP & 2000.

5. REMOTE OPERATION

You can also control the DVR remotely via the supplied licensed software “Video Viewer” (hereafter called the “Video Viewer”), IE web browser, and Apple’s QuickTime player **ONLY** when your DVR supports the network function.

Note: The buttons and functions described below may differ from the actual ones and are for selected model only.

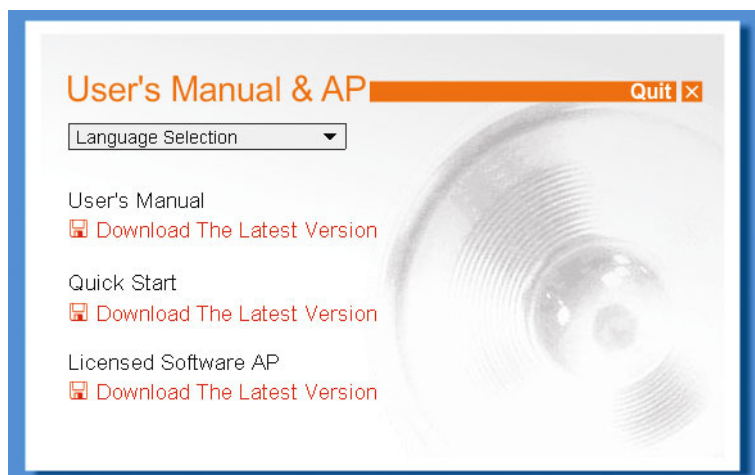
5.1. Video Viewer


5.1.1. Installation & Network Connection

1) Install the software

Step1: Place the supplied CD into your CD-ROM or DVD-ROM drive. The program will be automatically run.

Step2: Click “Licensed Software AP” to install Video Viewer immediately, or click “Download The Latest Version” under “Licensed Software AP” to download the latest version of Video Viewer from the Internet.



Step3: Follow the on-screen instructions to finish the installation. When the installation is completed, a shortcut icon “” will be placed on your PC desktop.

2) Network Connection



➤ Local Connection (via LAN)



LAN is used when it's the first time to remotely access the DVR and you need to configure the network setting of your DVR based on your network type in advance.

a) Connect the DVR to your PC via a RJ45 network cable. The default DVR values are as follows:

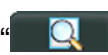

Item	Default Value
IP address	192.168.1.10
User name	admin
Password	admin
Port	80


b) Set the PC's IP address as “192.168.1.XXX” (1~255, except 10) in order to make the PC and DVR under the same domain.

c) Double-click “” icon on your PC desktop to enter the control panel. By defaults, the “Address Book” () panel will be displayed on the right side of the control panel.

d) Click “” (Address Book) → “” (Add) to key in the default IP address, user name, password, and port number of the DVR you intend to connect.

OR




Click “” (Search) → “” (Refresh) to search the available IP address(es) of other DVR(s)

under the same domain as your PC's IP address. The found address(es) will be listed, and can be added into the address book by clicking " (Add into address book).




- e) Double-click the IP address you just added into the address book to log in.

➤ Remote Connection (via Internet)

When the network configuration of your DVR is completed, you can access your DVR remotely via Internet.

- a) Double-click " icon on your PC desktop to enter the control panel. By defaults, the "Address Book" panel will be displayed on the right side of the control panel.
- b) Click " (Address Book) → " (Add) key in the IP address, user name, password, and port number of the DVR you intend to connect.

OR

Click " (Search) → " (Refresh) to search the available IP address(es) of other DVR(s) under the same domain as your PC's IP address. The found address(es) will be listed, and can be added into the address book by clicking " (Add into address book).

- c) Double-click the IP address you just added into the address book to log in.

8.1.2 Control Panel Overview

Two control panels are available and can be switched depending on your use habit.

Simplified Version (Default)

Address Book Snapshot

Miscellaneous Control Information

Log DVR Control

Record

Version


Minimize

Full Function Display Switch


Close Program

180° Counterclockwise Image Rotation


Snapshot

Event Notification & Quick Checklist 

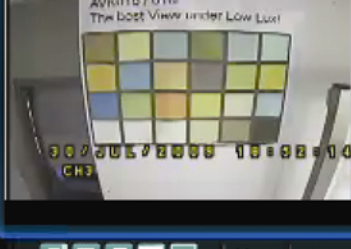
2009/07/30, 18:52:36
173.026GB



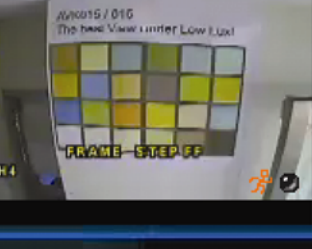
CH1



CH2



CH3





CH4


Live


180° Counterclockwise Image Rotation


Snapshot


 Close All Display Views

 Close Current View

 Original Size

 Full Screen

 Display Mode Switch

 Audio Volume

Full Function Version






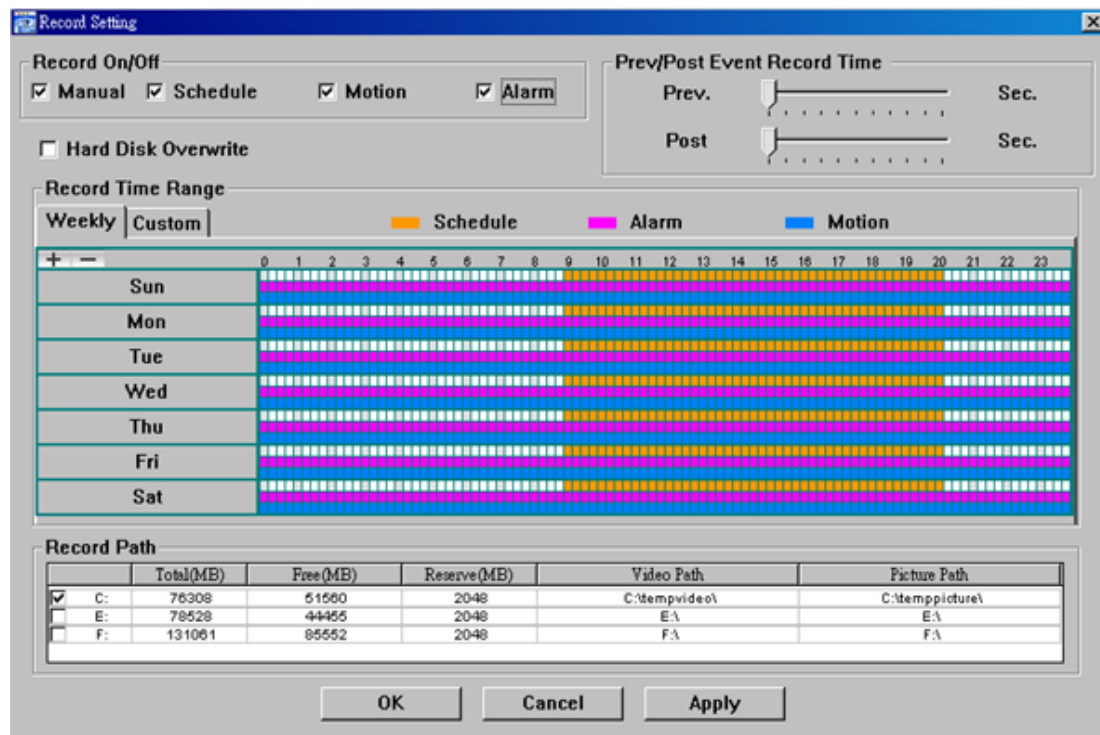
Main Button Overview

Button		Function	Description		
Simplified	Full Function				
		Address Book	Click to show the predefined IP address(es). You can add, remove or search the IP address to log in the DVR remotely.		
		Miscellaneous Control		Remote Config	Click to go into the detailed DVR setting.
				Record Setting	Click to go to the detailed record setting.
				Custom Setting	Click to choose the language of this program. The language change will take effect when this program is closed and executed again.
		Log	Click to view all event and recording logs, search the desired log(s) by date, or playback the recording of the selected log.		
		Record / Record Stop	Click to start / stop the manual recording.		
		Snapshot	Click to take a snapshot of the current view. The snapshot will be saved in the path you specified in "Record Setting".		
		Information	Click to show the current network connection details.		
		DVR Control	Click to go to the DVR control panel to operate the DVR remotely.		

5.1.3. General Operation



Record

To record remotely at the same time for any event or alarm at the DVR side, click “” or “” → “” to go to the “Record Setting” page.





In the “Record Setting” page, you can set the following items:

- Record type
- Hard disk overwriting
- Pre- / post-alarm record time
- Record time setting
- Record path

If “Manual” is checked, click “” or “” on the main control panel to start the manual recording immediately, and the recordings will be saved in the specified location. The red text indication “REC” will be shown at the top left corner of the image display view.

If “Motion” and / or “Alarm” are checked, the recording function will also be enabled at the remote side when any event is triggered at the DVR side, and the recordings will be saved in the specified location.

Playback

To play a recording, click “” or “”, and select the “Record” tab or “Backup” tab. A list of all the recordings will be shown by defaults, and you can also sort out the logs you want to speed up the search time.

Status List

Time Range
Range Unit: **One Day** **Prev.** **Next**
Start Time: 2009/03/27
End Time: 2009/03/27

Record Type
☒ User ☒ Alarm
☒ Motion ☒ RETR




Record Backup Event **Query**

Event	IP	Start Time	End Time	File Path	Reserve	Error
User	192.168.1.12	09/23/08 20:41:07	09/23/08 20:41:07	C:\tempvideo\20080923204107_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 20:36:45	09/23/08 20:36:45	C:\tempvideo\20080923203645_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 20:18:56	09/23/08 20:41:07	C:\tempvideo\20080923201856_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 20:13:22	09/23/08 20:36:45	C:\tempvideo\20080923201322_off	<input type="checkbox"/>	<input type="checkbox"/>
Motion	192.168.1.12	09/23/08 20:05:30	09/23/08 20:05:35	C:\tempvideo\20080923200530_off	<input type="checkbox"/>	<input type="checkbox"/>
Motion	192.168.1.12	09/23/08 20:05:30	09/23/08 20:05:35	C:\tempvideo\20080923194836_off	<input type="checkbox"/>	<input type="checkbox"/>
Motion	192.168.1.12	09/23/08 20:05:30	09/23/08 20:05:35	C:\tempvideo\20080923195524_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 19:55:24	09/23/08 20:18:56	C:\tempvideo\20080923195524_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 19:48:36	09/23/08 20:13:22	C:\tempvideo\20080923194836_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 19:32:55	09/23/08 19:55:24	C:\tempvideo\20080923193255_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 19:24:51	09/23/08 19:48:36	C:\tempvideo\20080923192451_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 19:10:26	09/23/08 19:32:55	C:\tempvideo\20080923191026_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 19:01:05	09/23/08 19:24:51	C:\tempvideo\20080923190105_off	<input type="checkbox"/>	<input type="checkbox"/>
User	192.168.1.12	09/23/08 18:47:57	09/23/08 19:10:26	C:\tempvideo\20080923184757_off	<input type="checkbox"/>	<input type="checkbox"/>

Total Records: 1 **Delete** **Delete All** **Play** **Repair** **Apply** **Close**

To immediately play a recording, select a log from the list, and click “Play”, or double-click the selected log.

Network Backup

Click “” → “”, or click “” to go into the “Backup” page as follows, and you can select a specific time range or event to make a video backup remotely.

The file(s) you backup will be from the current selected IP address.

Note: Before enabling the network backup function, make sure the DVR is not in the playback mode, or the DVR will stop playback.

Backup(60.251.8.56)

Reload **Prev. Page** **Next Page**

☒ System ☒ Manual ☒ Alarm
☒ Timer ☒ Motion

HDD Number: **MASTER-1**
Channel: **1**
Start Time: 2009/07/26 14:58:52
End Time: 2009/07/27 14:58:52
File Path: c:\download\ ...

☒ Simultaneous Playback

Download **Cancel**

NO.	Event	CH	Time
1	MOTION	2	2009/07/27 14:56:43
2	MOTION	2	2009/07/27 14:56:24
3	MOTION	2	2009/07/27 14:56:12
4	MOTION	2	2009/07/27 14:55:28
5	MOTION	2	2009/07/27 14:55:12
6	MOTION	2	2009/07/27 14:54:43
7	MOTION	2	2009/07/27 14:54:26
8	MOTION	2	2009/07/27 14:54:12
9	MOTION	2	2009/07/27 14:53:43
10	MOTION	2	2009/07/27 14:53:24
11	MOTION	2	2009/07/27 14:53:12
12	MOTION	2	2009/07/27 14:52:43
13	MOTION	2	2009/07/27 14:52:33
14	MOTION	2	2009/07/27 14:52:19
15	MOTION	2	2009/07/27 14:52:12
16	MOTION	2	2009/07/27 14:51:43
17	MOTION	2	2009/07/27 14:51:23
18	MOTION	2	2009/07/27 14:51:12

Function	Description
HDD Number / Channel	Specify the hard disk (HDD Number) and channel number (Channel) within which have the video data you need.
Download by Time	Specify the time range within which has the video data you want in the “Start Time” and “End Time” columns.
Download by Event	<p>Select an event log from the event list. This list shows all logs in the specified DVR from the latest to the earliest.</p> <ul style="list-style-type: none"> To quickly find the events you need, check or uncheck the event type “System” / “Manual” / “Alarm” / “Motion”, and select the log you want. To view the earlier or later logs that are not shown in the current page, click “Prev. Page” or “Next Page”. To refresh the event list, click “Reload”.
File Path	Assign the location where the backup files are saved.

Function	Description
Simultaneous Playback	<p>To view the backup images simultaneously when the download process is in progress, select the checkbox “Simultaneous Playback”. You will see the backup images while the images are being downloaded to the PC or notebook.</p> <p>To simply backup images without previewing, deselect the checkbox “Simultaneous Playback”. You will only see a message box indicating the total time needed, the current status and the saving location.</p>
Download / Cancel	Click “Download” to start or “Cancel” to discard the video backup.



5.1.4. E-Map

Video Viewer is also a Central Management System (CMS) software, which allows network device control & management for up to 16 devices simultaneously.

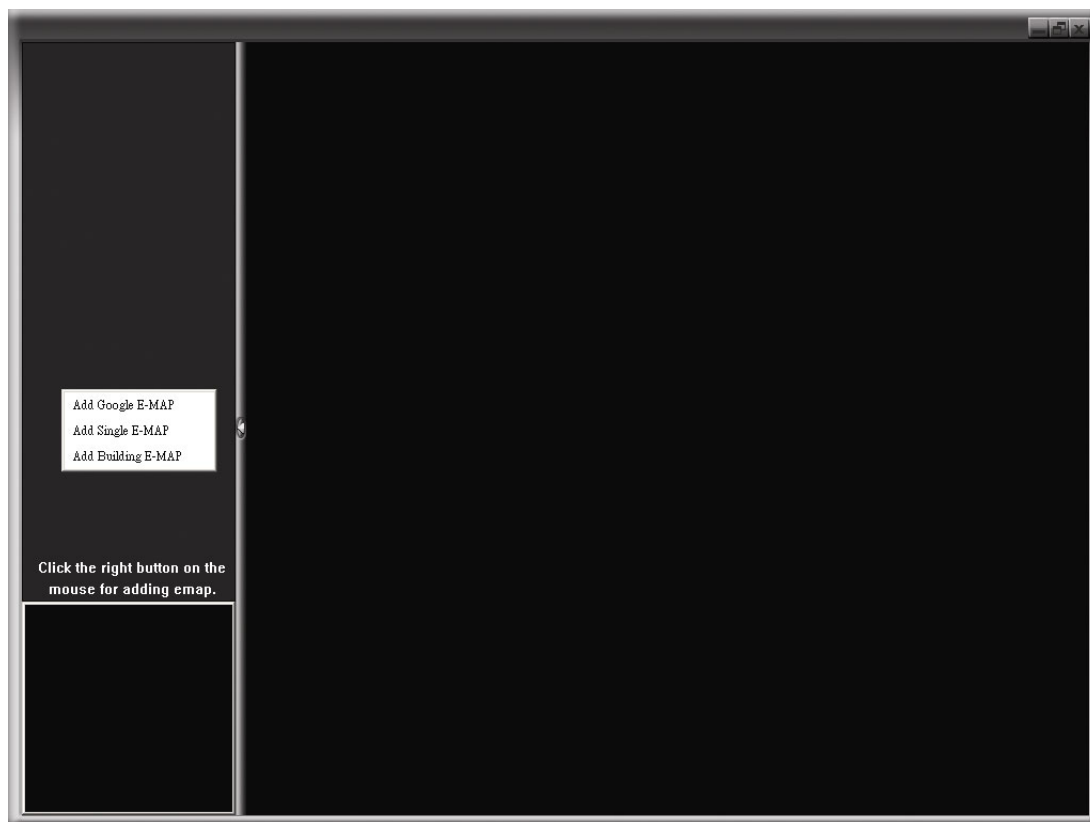
Note: Before using this function, make sure Video Viewer is connected to all the devices (up to 16) you want to monitor.

E-Map is ONLY available when the control panel is switch to the full function version.

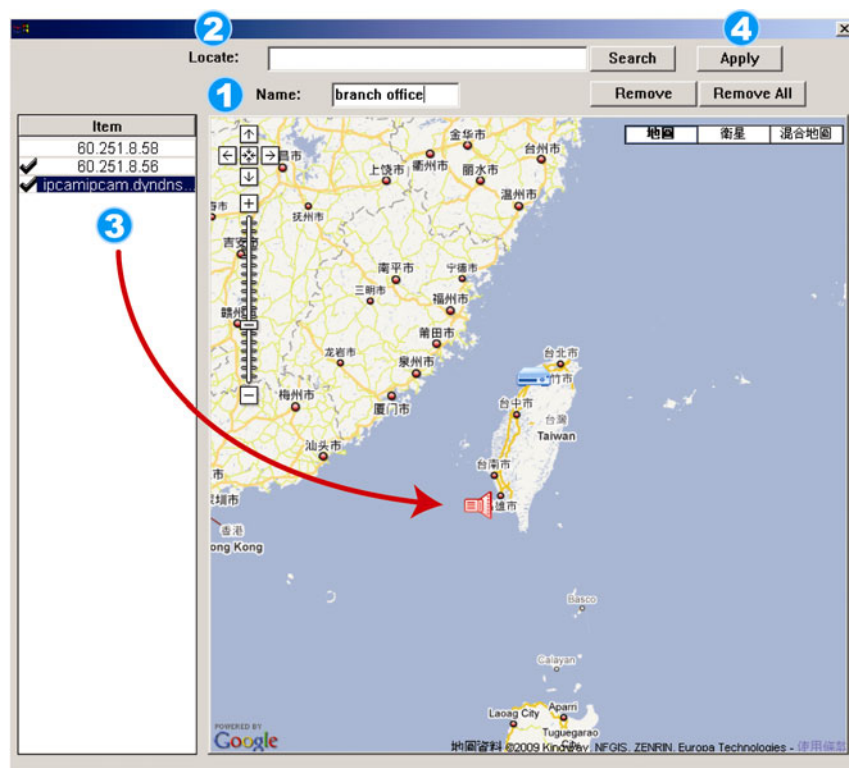
How to Add an E-Map Group

STEP1: In the simplified version, click “” to switch the control panel to the full function version, and click “” to enter the E-Map page as follows.

Note: To know where the buttons are, please refer to “Simplified Version (Default) at page 18, and “Full Function Version” at page 19.

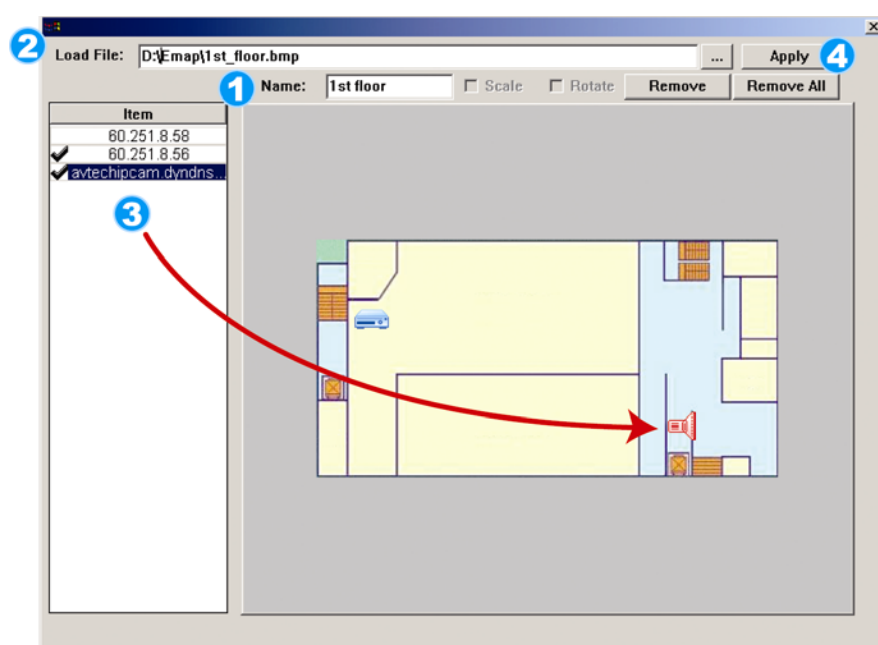


STEP2: Right-click to show the shortcut menu on the top-left panel, and select the E-Map group you want to add. There are three E-Map groups you can add: Google E-MAP, Single E-MAP, and Building E-MAP.



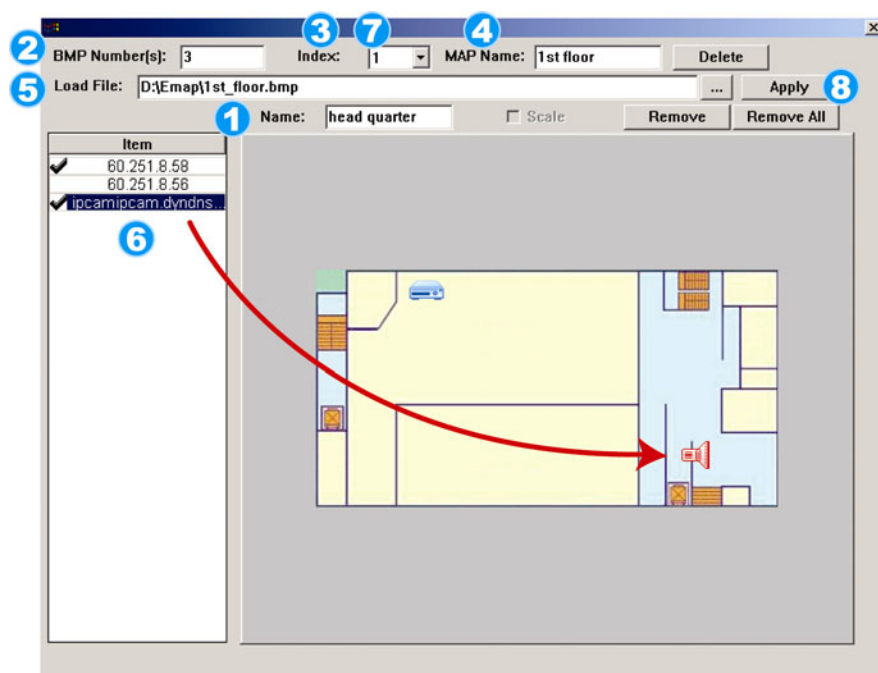
How to add a Google E-Map group:

- 1 Enter the name of this Google E-Map group.
- 2 Enter a specific address or landmark, and click "Search".
OR
Move to the map and drag to the location you want.
- 3 Click and drag the IP address to where it's located in the current level.
- 4 Click "Apply" to save and finish.



How to add a single E-Map group:

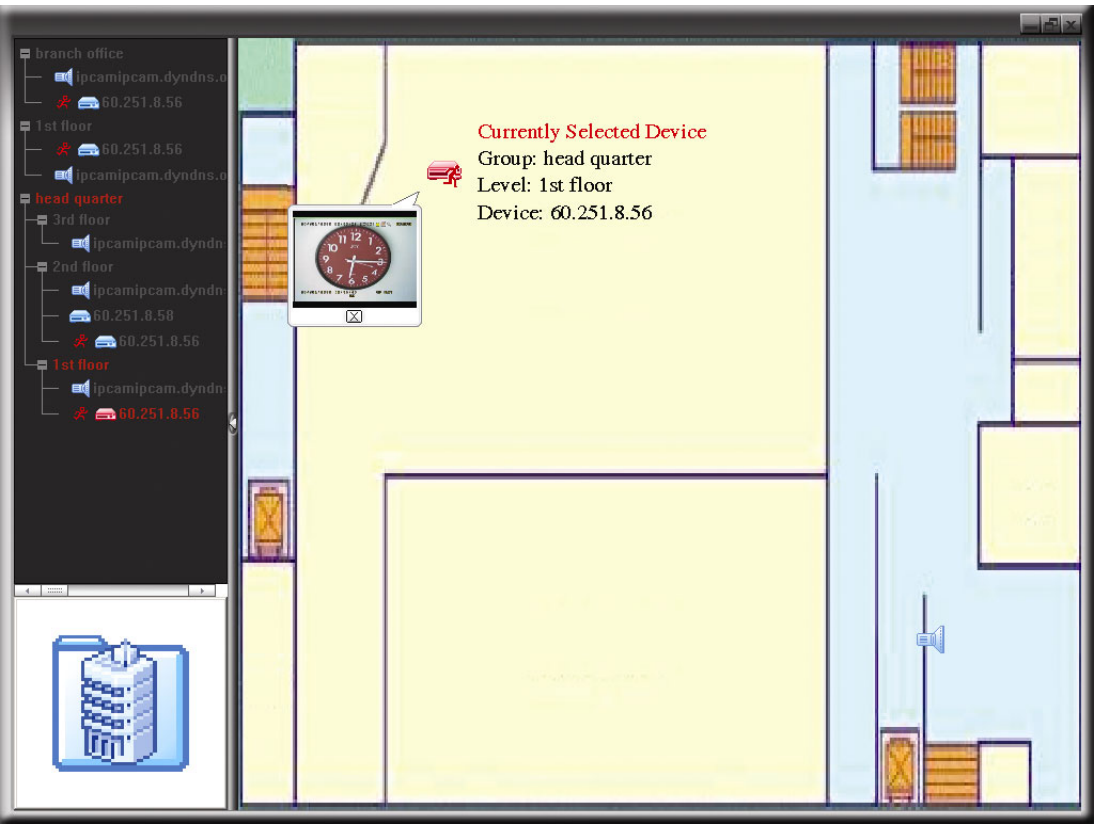
- 1 Enter the name of this single E-Map group.
- 2 Click "..." to browse the map file in BMP or JPEG.
- 3 Click and drag the IP address to where it's located in the current level.
- 4 Click "Apply" to save and finish.






How to add a building E-Map group:

- 1 Enter the name of this building E-Map group.
- 2 Enter the total levels of this building.
- 3 Select the level of the building from the drop-down list.
- 4 Enter the name of the level.
- 5 Click "..." to browse the map file in BMP or JPEG.
- 6 Click and drag the IP address to where it's located in the current level.
- 7 Go back to STEP 3 to select other level of the building, and repeat from STEP 3 to 6 until the setup for all levels are finished.
- 8 Click "Apply" to save and finish.

STEP3: When the E-Map group is created, you will see the tree on the top-left panel, showing all the devices you've added to this group.



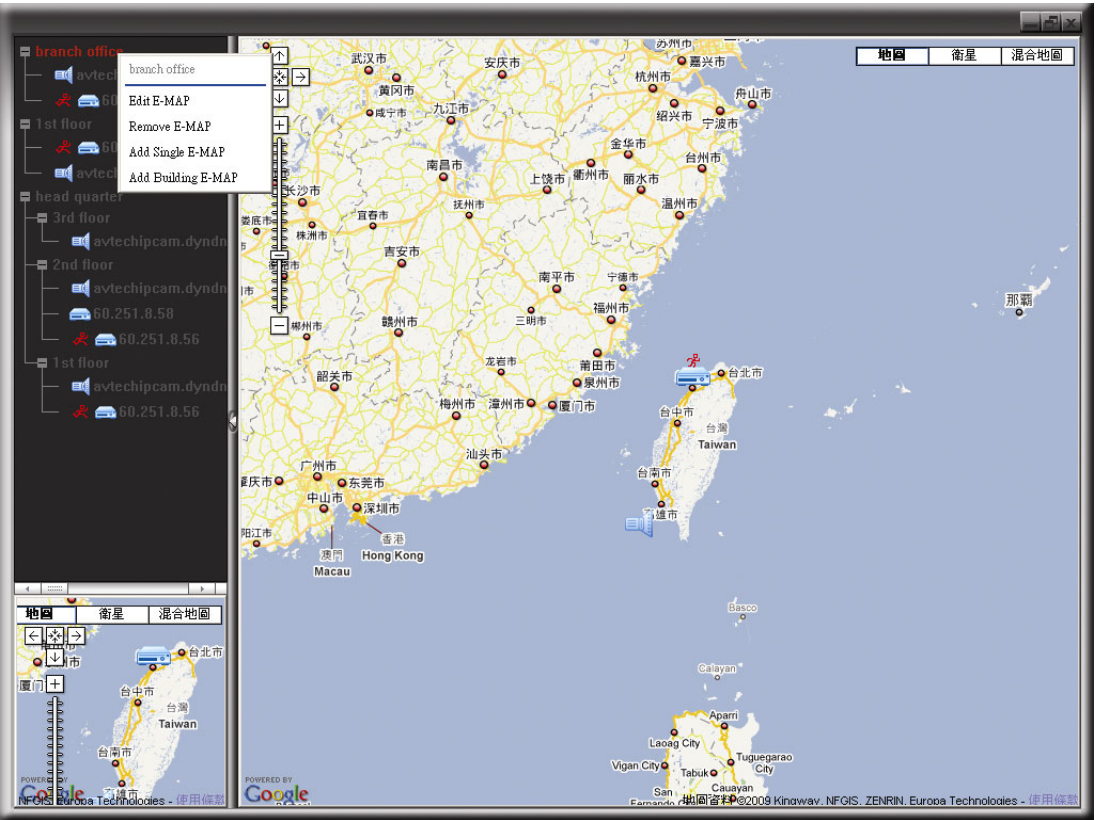
Icon	Description
	The connected device is camera. When it's selected, it will become red.
	The connected device is DVR. When it's selected, it will become red.
	For any motion or alarm event, it will appear on the screen to catch your attention. To know what's happening quickly, double-click the device icon on the E-Map to show the live view.

How to Edit / Remove an Existing E-Map Group

➤ For Google E-Map Group

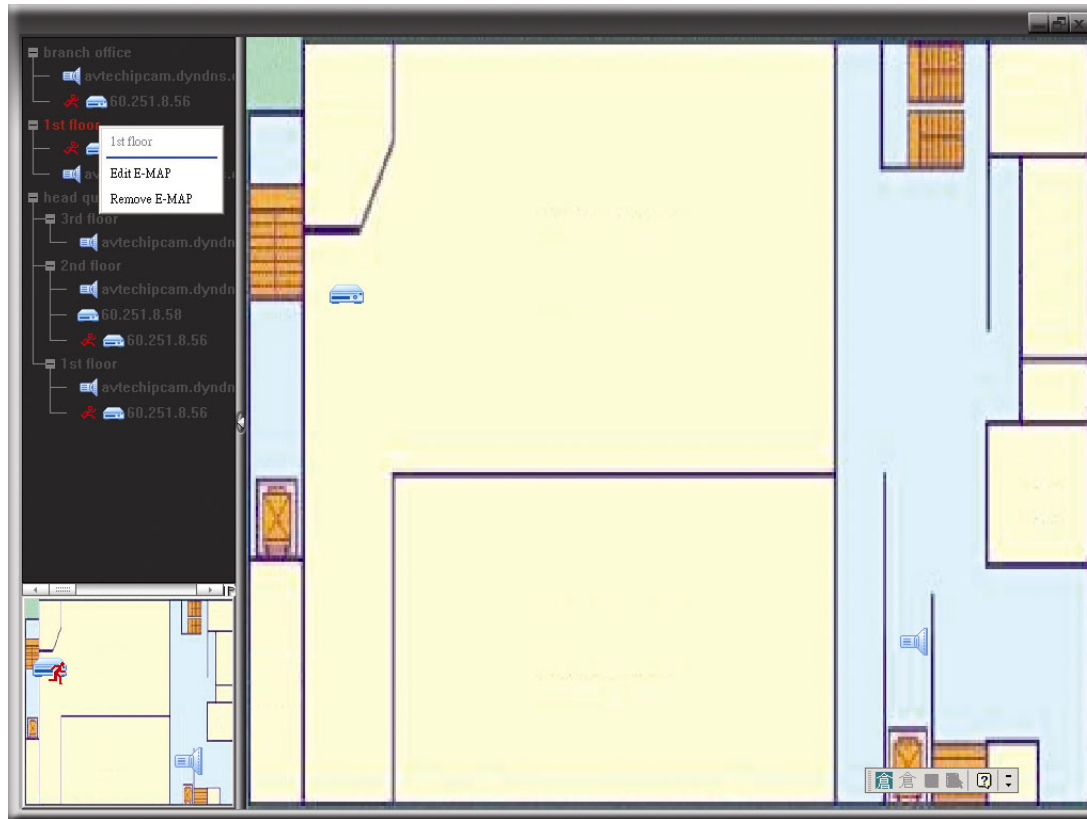
Right-click on the group name to show the shortcut menu list, and select “Edit E-MAP” or “Remove E-MAP” as needed.

You can also add a single E-Map group (Add Single E-MAP) or Building E-Map group (Add Building E-MAP) into the existing Google E-Map group.



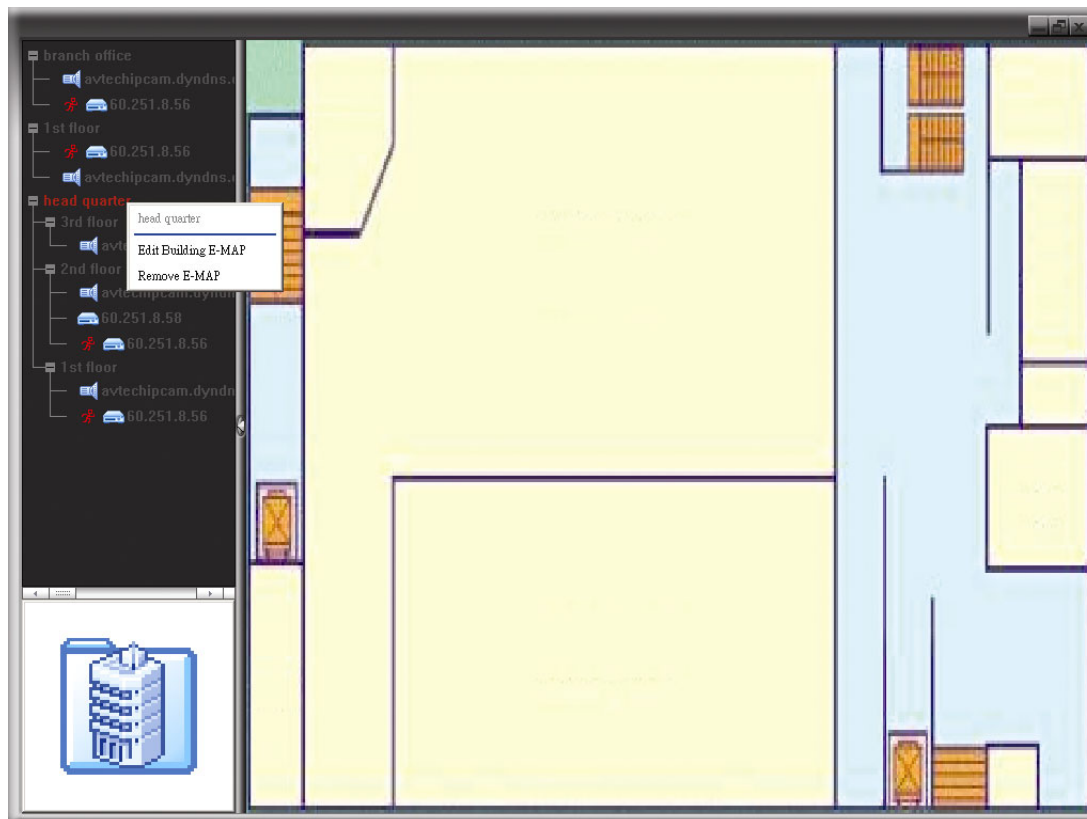
➤ For Single E-Map Group

Right-click on the group name to show the shortcut menu list, and select “Edit E-MAP” or “Remove E-MAP” as needed.

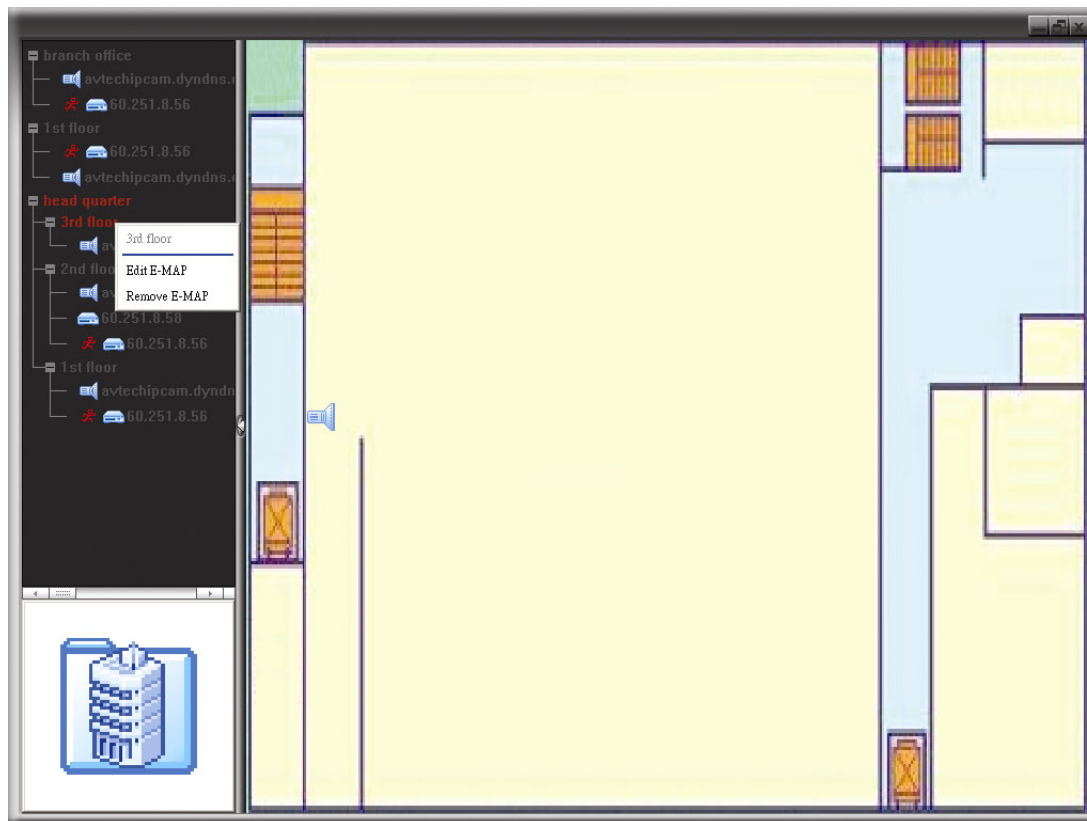


➤ For Building E-Map Group

Right-click on the group name to show the shortcut menu list, and select “Edit Building E-MAP” or “Remove E-MAP” as needed.



To edit or remove a certain level of the building E-Map group, right click on the level name, and select “Edit E-MAP” or “Remove E-MAP” as needed.



5.2. IE Web Browser

Note: The supported PC operating systems are Windows Vista / XP / 2000.

Step 6: Key in the IP address used by your DVR in the URL address box, such as 60.121.46.236, and press Enter. You will be prompted to enter the user name and password to access the DVR.










If the port number your DVR used is NOT 80, you need to key in the port number additionally. The format is **ipaddress:portnum**. For example, for IP address 60.121.46.236 and port No. 888, please key in "http://60.121.46.236:888" into the URL address box, and press "Enter".

Step 7: Enter the user name and password, the same as the ones used for video viewer login, and press "OK". You will see a screen when the login information is correct.

Note: The buttons and functions described below may differ from the actual ones and are for selected model(s) only.



NO.	Function	Description
1	Home	Click to go to the main page of the DVR
2	Config.	Click to go to the detailed DVR setting.
3	PTZ	Click to enter the PTZ mode.
4	Channel Selection	Click one of the number to switch to the channel you want to see in full screen.
5	Selection	Click to go to the previous / next channel, or change setting.
6	Display Mode	Click to show 4-cut display. Click to display each channel one by one, starting from CH1. When the last channel is displayed, it will start from CH1 again. To exit from this display mode, press any other channel display button.
7	Menu and Arrow Keys	Click to enter the menu / exit the menu mode. / : Move the cursor up / down to select the previous / next menu or sub-menu function, or change the setting. / : Move the cursor left / right to the previous / next sub-menu items.
8	Event	Click to enter the playback search settings screen.
9	Snapshot	Click to take a snapshot for the current view, and open another browser window to display the captured image.
10	Key Lock	Click to enable the DVR key lock function. To unlock the DVR, key in your password, and press .
11	Enter	Click to confirm the setting or enter your selection.
12	Digital Zoom	Click to zoom in / out the selected channel image.

NO.	Function	Description
13	Search	Click  to enter the DVR full search menu. You can check all the logs here, and select one of them to playback.
14	Playback control buttons	 (Stop) /  (Play) /  (Rewind) /  (Forward) /  (Pause) /  (Slow Playback) <u>Rewind / Forward</u> Click once to get 4X fast rewind / forward, twice to get 8X, three times to get 16X, and four times to get 32X the highest. <u>Slow Playback</u> Click once to get 4X slow playback and twice to get 8X slow playback.
15	Web Transmission	<u>H.264 / QuickTime</u> QuickTime is Apple Inc.'s multimedia software. You need to have QuickTime installed in you operation system first. When "QuickTime" is selected, you will be promoted to enter the user name and password to access the server of the DVR.
16	Change Quality	<u>BEST / HIGH / NORMAL / BASIC</u> Click to change the image quality.
17	Change Resolution	<u>4 CIF / CIF</u> Click to change the image resolution (4CIF: 704*480 / CIF: 352*240)
18	Audio Channel Selection (Selected model only)	 To hear the live audio remotely, click 1, 2, 3 or 4.  means no camera supporting audio is connected to any audio channel. This function is available only when your DVR supports the audio function, and a camera supporting audio is connected correctly to the DVR. Note: To know whether your DVR supports the audio function, please refer to "APPENDIX 1 SPECIFICATIONS" at page 30.

5.3. QuickTime Player

You can also use the QuickTime player to remotely log into the DVR and check the live view only.

Note: QuickTime is Apple's multimedia software. You need to have QuickTime installed in your operation system first, and you can access the DVR to see the live view.
If you have installed QuickTime, please skip Step 1.

Note: The latest version of QuickTime is V6.4 at the time this manual goes to press, and the supported operation systems are Windows Vista / XP / 2000, and Apple Mac.

Step 1: Go to Apple's official website to download QuickTime. The website address is as follows:

<http://www.apple.com/quicktime/win.html>

- a). Click "Free Download" to go into the download page, and select to download the free player.
- b). Leave your Email address, and click "Free Download Now" to download the latest QuickTime player.
- c). When the download is completed, execute the "QuickTimeInstaller.exe" file, and follow the on-screen instructions to finish the installation procedure.

Step 2: Open your QuickTime player. Select "File" → "Open URL in New Player...", and key in the URL address. The URL format is "rtsp://ipaddress/live/h264" (For example, "rtsp://59.124.231.75/live/h264"). Click "OK" to continue.

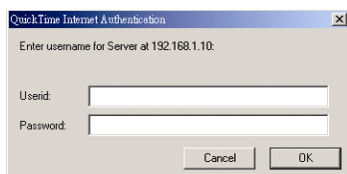


Step 3: A pop-up window will appear and prompt you to enter the authentication information.

Note: If you're not prompted to enter the authentication information, and the error message 10060 appears, go to "Edit" → "Preferences" → "QuickTime Preferences", and select "Streaming Transport" from the drop-down list. Select "Use HTTP", and keep the port ID as 80.

Key in the user name and password for accessing your DVR. The user name and password are the same as the ones you use to log into Video Viewer. If the information is correct, click "OK" to go on. If not, click "Cancel" to quit the accessing.

If the information is correct, press "OK" to go on. If not, press "Cancel" to quit the accessing.



Step 4: When the login is successful, you will see the live view.

APPENDIX 1 SPECIFICATIONS

	Model 1	Model 2
LCD Panel		
Size	18.95" diagonal	
Resolution	WSXGA+ (1440 x 990) pixels	
Aspect Ratio	16:10	
Peak Brightness	300cd/m ² (Typical)	
Contrast Ratio	1000 : 1 (Typical)	
Number of color	16.7M	
Response time	5 ms (Tr+Tf)(Typical)	
Viewing Angle	85/85/80/80 (CR ≥ 10)	
Powerful Scaling and Zooming Engine (Down/Up Scale Support)	YES	
Color Temperature Adjustment	YES	
On-Screen OSD function	YES	
Viewing Aspect Ratio	Full Screen (16:10)	
IR Control (RCU)	YES	
Built-in Speaker	Built-in 1 speaker (1 Watt)	
D-Sub Input	1 D-Sub Input (VGA 15 Pin)	
DVR		
Video System	NTSC / PAL (auto detection)	
Video Compression Format	H.264	
Video Input	Four channels (composite video signal 1 Vp-p 75Ω BNC)	
Audio Input	Four audio inputs	One audio input
LCD Display Mode	Default / Normal / Full LCD display mode selectable	
Maximum Recording Rate (Frame)	720×480 pixels with 30 IPS <NTSC> / 720×576 pixels with 25 IPS <PAL>	
Maximum Recording Rate (Field)	720x240 pixels with 60 IPS <NTSC> / 720×288 pixels with 50 IPS <PAL>	NO
Maximum Recording Rate (CIF)	352×240 pixels with 120 IPS <NTSC> / 352×288 pixels with 100 IPS <PAL>	
Multilingual OSD	YES	
Image Quality Setting	Super Best, Best, High and Normal	
Hard Disk Storage	Accommodates 1 SATA HDD (capacity up to 1TB)	
Quick Search	Time / Event search mode	
SATA Interface	Built-in	
Recording Mode	Manual / Timer / Motion / Alarm / Remote	Manual / Timer / Motion / Remote
Multiplex Operation	Live display / record / playback / backup / network operations	
Motion Detection Area	16 × 12 grids per channel	Three pre-defined detection areas
Motion Detection Sensitivity	Four adjustable parameters for accurate detection	High / Medium / Low
Pre-alarm Recording	YES (8 MB)	
Backup Device	USB 2.0 flash drive / Network	
Web Transmitting Compression Format	H.264	
Ethernet	10/100 Base-T. Supports remote control and live view via Ethernet	
Web Interface	Licensed software “Video Viewer” / Internet Explorer or Mozilla Firefox web browser / QuickTime player (20 users access simultaneously)	
	*Operating System: Windows Vista / XP / 2000; Apple Mac	
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS	
IR Remote Control	YES (IR receiver built-in)	
USB Mouse Control	YES	NO
PTZ Control	YES	NO
Alarm Input / Output	Four inputs, one output	NO
DVR / PC Display Mode	Switchable	NO
Key Lock (Password Protection)	YES	
Video Loss Detection	YES	
Camera Title	Supports up to six letters	
Video Adjustable	Hue / Saturation / Contrast / Brightness (0~255)	Hue / Saturation / Contrast / Brightness (15 levels from –7 to +7)
Date Display Format	YY/MM/DD, DD/MM/YY, MM/DD/YY, and Off	
Daylight Saving	YES	
System Recovery	System auto recovery after power failure	
Power Consumption	22W	
Dimensions (mm)	443(L) x 379.2(H) x 195.2(D)	
Optional Peripherals	Keyboard controller	NO

*The specifications are subject to change without notice.

APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table. If the USB flash drive is not supported by the DVR, the “USB ERROR” message will be shown on the screen.

Note: Please use your PC to format the USB flash drive as “FAT32”.

Note: You can backup up to 2GB video data for one-time USB backup. To backup more data, please set the time & channel(s) you want, and start USB backup again.

MANUFACTURER	MODEL	CAPACITY
Transcend	JFV35	4G
	JFV30	8G
Kingston	DataTraveler	1G
PQI	U172P	4G
Apacer	AH320	2GB
	AH320A	8GB
	AH220	1GB
	AH320	4GB
A-data	RB-18	1GB
Sandisk	Cruzer Micro	2G
	Cruzer Micro	4G
	Cruzer4-pk	2G
Netac	U208	1G
MSI	F200	4G
SONY	Micro Vault Tiny 2G	2G
	Micro Vault Tiny 4G	4G
	Micro Vault Tiny	1G

APPENDIX 3 COMPATIBLE SATA HDD LIST

MANUFACTURER	MODEL	CAPACITY	ROTATION
Seagate	ST3320613AS	320GB	7200 rpm
	ST33500320AS	500GB	7200 rpm
	ST3750330AS	750GB	7200 rpm
	ST31000340AS	1000GB	7200 rpm
WD	WD3200AAKS	320GB	7200 rpm
	WD5000AACS	500GB	7200 rpm
	WD6400AAKS	640GB	7200 rpm
	WD7500AAKS	750GB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
HITACHI	HDT725032VLA360	320GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm

APPENDIX 4 DVR MODULE REMOVAL

To remove the DVR module from the LCD monitor, please follow the steps below.

- **Model 1**

STEP1: Remove the LCD monitor base.

For details, please refer to “2.2 Install DVR Module to LCD Monitor” at page 4.

STEP2: Place the LCD monitor face-down on a soft, protected surface.

STEP3: Remove all cables connected to the DVR module except for the external I/O cable.

STEP4: Remove the two screws which are used to fixed the module to the LCD monitor.

STEP5: With the external I/O cable connected to the module, pull the cable gently to the direction as indicated below, and the module is slid out.



STEP5: Remove the cable.

- **Model 2**

STEP1: Remove the LCD monitor base.

For details, please refer to “2.2 Install DVR Module to LCD Monitor” at page 4.

STEP2: Place the LCD monitor face-down on a soft, protected surface.

STEP3: Remove all cables connected to the DVR module.

STEP4: Remove the two screws which are used to fixed the module to the LCD monitor.

STEP5: Hold the BNC connector(s) for video, and pull the module gently to the direction as indicated below. Then, the module is slid out.



APPENDIX 5 DVR BATTERY REPLACEMENT

DVR time reset after power failure, for example, caused by a power outage, will cause the disorder of the recorded data, and users may have problems in searching the event clip they want. To keep the DVR time from resetting, a non-chargeable lithium battery, CR2032, is installed in the DVR.

However, the DVR time might still get reset when the DVR battery is low or even running out of power. If so, please replace the DVR battery, CR2032, **right away** as instructed below.

➤ How to replace CR2032

Note: The lithium battery, CR2032, is a non-chargeable battery, and should be purchased separately. Please replace only with the same or equivalent type battery in case of danger.

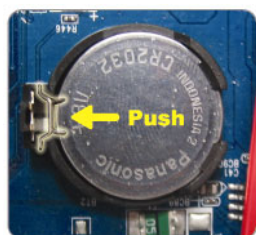
Step1: Stop all DVR recording **immediately** to prevent the disorder of the recorded data. Then, back up the recorded data if necessary.

Step2: Power off the DVR, and disconnect the DVR power.

Step3: Remove the DVR cover, and find the battery on the mainboard.



Step4: Push the release as indicated below to remove the battery.



Step5: Get a new battery with the side of "CR2032" facing up, and install it to the mainboard.

Step6: Replace the sub-board you just removed, and replace the DVR cover.

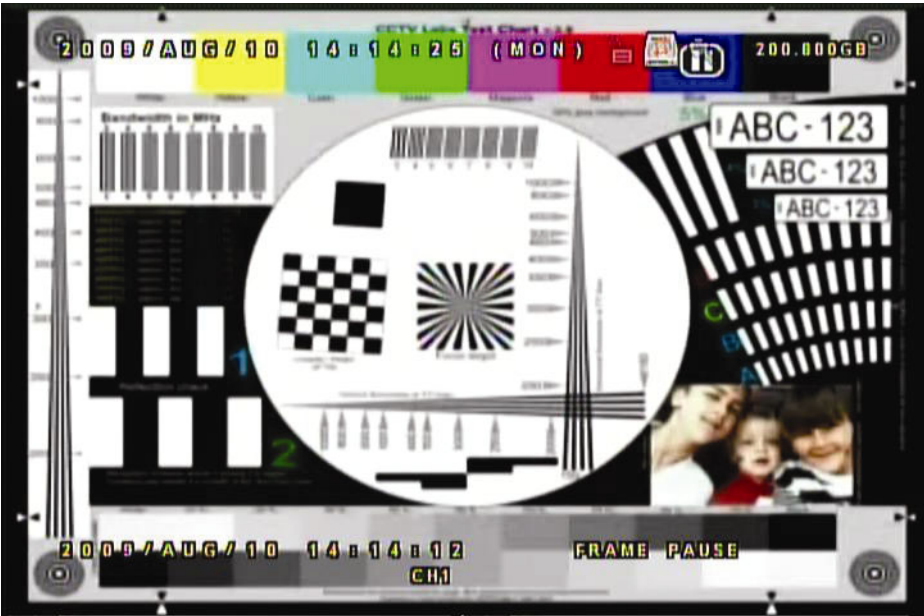
Step7: Connect to DVR power, and turn on the DVR.

Step8: Set DVR date & time, and resume recording. For details, please refer to "2.5 Set Date and Time" at page 5, and "4.2. RECORD" at page 9.

APPENDIX 6 RECORDING TIME TABLE

Testing Environment

The static image source as follows are input to each DVR channel with the highest image quality and IPS in each record mode, and the video system is NTSC.



Recording Time

Please note that the recording time may vary depending on the following three factors, and the data below is for reference only.

- Different camera resolution;
- Different picture complexity;
- Different frequency of the object movement

Note: For the environment with dynamic images, the actual recording time may differ from the data below and needs to be tested based on the actual environment.

Record mode	Quality	IPS	GB/Hour	750GB Record Time (day)
FRAME	SUPER BEST	30	1.104	28.31
FIELD		60	1.062	29.43
CIF		120	1.23	25.41