

# **H.264 Network DVR**

## **User Manual**

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### **GUI Display with Mouse Control**

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

For the actual display & operation, please refer to your DVR in hand.

# 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

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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: 1014-1006-1008-1008

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# 1. BEFORE USING THIS DVR

## 1.1 Package Content

- |  |  |
|--|--|
| <input type="checkbox"/> DVR                         | <input type="checkbox"/> Manual for IR Remote Controller |
| <input type="checkbox"/> IR Remote Controller        | <input type="checkbox"/> DVR Quick Start                 |
| <input type="checkbox"/> IR Receiver Extension Cable | <input type="checkbox"/> Adapter & Power cord            |
| <input type="checkbox"/> CD Manual                   | <input type="checkbox"/> 9 Pin DSUB Connector            |
| <input type="checkbox"/> HDD screws                  | <input type="checkbox"/> USB Mouse                       |

## 1.2 Front Panel

### 1) LED Indicators

-  DVR is powered on.
-  HDD is reading or recording.
-  An alarm is triggered.
-  Timer recording is on.
-  Under playback status (For 4CH model only).

### 2) CH1 ~ 4

Press the channel number buttons to select the channel to display.

### 3) SLOW

Under the playback mode, press to show slow playback.

### 4) ZOOM

Press to enlarge the picture of selected channel in the FRAME or FIELD recording mode.

### 5)

Press to show the 4 channel display mode.

### 6) SEQ

Press to display each channel in full screen one by one starting from CH1. When the last channel is displayed, it will repeat from CH1 again. To exit this mode, press "SEQ" again.

### 7) LIST (Event List Search)

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.

To quickly search the time you want, select "QUICK SEARCH". For details, please refer to "5.4.1 QUICK SEARCH" at page 17.

### 8) SEARCH

Press to enter the time search menu. For details, please refer to "5.4.1 QUICK SEARCH" at page 17.

### 9) MENU

Press "MENU" to enter the main menu.

### 10) ENTER

Press "ENTER" to confirm the setting.

### 11) (PLAY)

Press to playback the latest recorded data.

12) II (▲) / ■ (▼) / ◀ (◀) / ▶ (▶)

Press ▲ / ▼ / ◀ / ▶ to move up / down / left / right.

Under the playback mode:

Press “ II ” to pause playback.


Press “ ■ ” to stop playback.


Press “ ▶▶ ” to fast forward.

Press “ ◀◀ ” to fast rewind.


13) AUDIO (SLOW + ZOOM)

Press “SLOW” + “ZOOM” to select live or playback audio of the audio channels.


 Live audio from audio channel 1~4  
(indicated in white).


 Playback audio from audio channel 1~4  
(indicated in yellow).

 Audio channel unselected

14) P.T.Z. (  + SEQ)

Press “  ” + “SEQ” at the same time to enter / exit the PTZ control mode.

15) 

Press “  ” to open / close the DVD Writer.

16) USB port

There are two USB ports on the front panel, one for connecting your USB mouse for mouse control, and the other one for connecting your USB flash drive for video backup.

---

**Note:** It's not allowed to have two USB mice or two USB flash drives connected on the front panel.

---

For the compatible USB flash drive list, please refer to “APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST” at page 41.

## 1.3 Rear Panel

1) VIDEO IN (1 ~ 4): Connect to the video connector of a camera.

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**Note:** The DVR will automatically detect the video system of the camera, please make sure that the cameras are properly connected to the DVR and power-supplied before the DVR is turned on.

---

2) AUDIO IN (1~4)

Connect to the audio connector of a camera if the camera supports audio recording.

---

**Note:** To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.

---

3) AUDIO OUT

Connect to a speaker with 1 mono audio output.

4) MONITOR

Connect to a CRT monitor for video output.

---

**Note:** When both MONITOR and VGA are connected, press the left key ◀ on the DVR front panel during DVR power-on to force the video output via MONITOR. For details, please refer to “5.5.6 DISPLAY” at page 23.

---

5) CALL

Connect to a call monitor.

6) VGA

Connect to a LCD monitor directly.

---

**Note:** When both MONITOR and VGA are connected, press the right key ► on the DVR front panel during DVR power-on to force the video output via VGA. For details, please refer to “5.5.6 DISPLAY” at page 23.


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7) IR  
Connect the IR receiver extension line for remote control.

8) EXTERNAL I/O  
Insert the supplied 9 PIN DSUB to this port for connecting external devices (external alarm, etc).  
For detailed I/O port PIN configuration, please refer to “APPENDIX 2” in your user manual.

9) LAN  
Connect to Internet by LAN cable.

10) DC 19V  
Connect to the supplied adapter.

11)  Power Switch  
Switch to “I” to turn on the power, and “O” to turn off the power.

## 2. CONNECTION AND SETUP

Before the DVR is powered on, make sure you have installed a hard disk and connected at least one camera. For details, please refer to the following sections.

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**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.

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### 2.1 SATA HDD Installation

A SATA HDD must be installed before the DVR is powered on.

---

**Note:** It's recommended to clear all data in the hard disk when the DVR is powered on and the date & time are set correctly to ensure the recorded data are not mixed with other data previously saved in the same hard disk. For details, please refer to "2.5 Clear Hard Disk" at page 7.

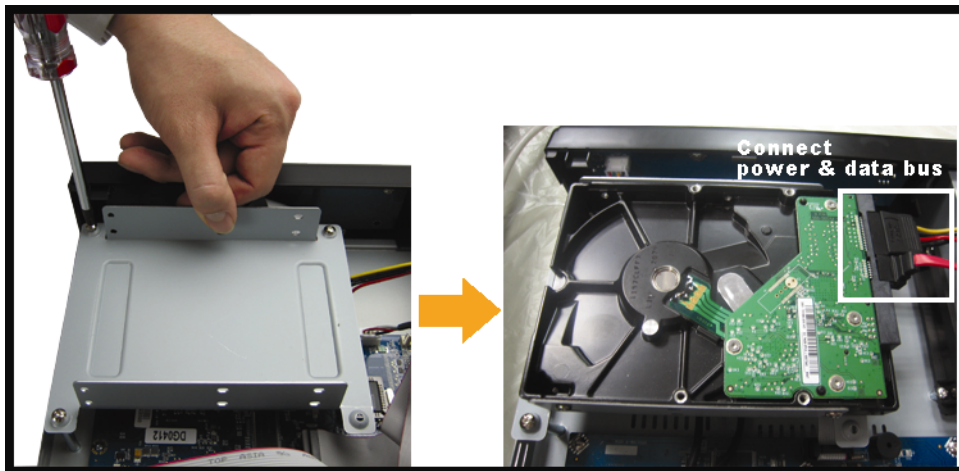
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Step1: Remove the screws on the top cover of DVR, and remove the top cover.

Step2: Remove the HDD bracket. Then, with the PCB side facing up, connect the compatible HDD to the power connector and data bus connector.

Step3: Put the compatible HDD in the bracket, and fasten it with the supplied screws, two for each side.

Step4: Replace the bracket back to the DVR.



Step5: Replace the top cover and fasten the screws you loosened in Step1.

### 2.2 Camera Connection

The cameras must be connected and power-supplied before the DVR is powered on. Connect the camera with the indicated power supply. Then, connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connectors.

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**Note:** For detailed DVR video input ports, please refer to "1.3 Rear Panel" at page 2.

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#### 2.2.1 Normal Camera Connection

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**Note:** For detailed camera installation and connection, please refer to its own user manual.

---

1) Connecting to DVR video input

Connect the camera video output to the DVR video input port with a coaxial cable or RCA line with BNC connector.

2) Connecting to DVR audio input (Optional)

Connect the camera audio output to the DVR audio input port with a coaxial cable or RCA cable with BNC connectors.



3) Connecting to power

Connect the camera with indicated power supply and make sure it's power-supplied.

## 2.2.2 DCCS Camera Connection

**Note:** Only CH1 supports DCCS camera connection.

1) Connecting to DVR video input

Connect the camera video output to the DVR video input port with a coaxial cable, or a RCA cable with BNC connectors.

2) Connecting to power

Connect the camera with indicated power supply.


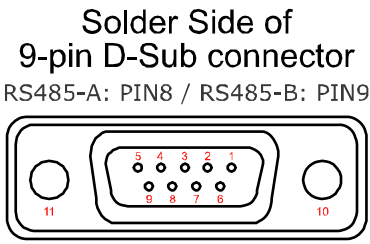
3) Configuring camera parameters (For zoom lens control cameras only)

Set camera parameters when the DVR is powered on. For details, please refer to the camera user manual.

## 2.2.3 PTZ Camera Connection

The following description is taking our brand's PTZ camera as an example.

For detailed PIN / port connection, please refer to "APPENDIX 2 PIN CONFIGURATION" at page 40. For DVR setting to control the PTZ camera, please refer to "5.5.7 RECORD" at page 23. For detailed PTZ camera control and operation, please refer to its own user manual.

RJ11 cable	9 PIN D-Sub Connector
RS485-A: Red wire	RS485-A: PIN 8
RS485-B: Green wire	RS485-B: PIN 9
 <p><b>RJ11 Line</b> RED (RS485-A) GREEN (RS485-B) RJ11 Connector</p>	 <p>Solder Side of 9-pin D-Sub connector RS485-A: PIN 8 / RS485-B: PIN 9</p>
<i>The RJ11 cable is not supplied in the sales package.</i>	<i>D-Sub connector is supplied with the DVR package.</i>

**STEP 1: Get a RJ11 cable with the proper length to your connection.**

Different RJ11 connector may have different wire layout, so the connection might be different. If you cannot control the DVR after connection, please reverse the RJ11 cable connection with the DVR.

**STEP 2: Remove one end of the insulating coating of the RJ11 cable.**

Remove one end of the insulating coating of the RJ11 cable to find the RS485-A and the RS485-B wires, and remove the insulating coating to reveal the naked wires for further connection.

**STEP 3: Twist the RS485-A and RS485-B wires of the RJ11 cable and the speed dome camera together.**

Twist the RS485-A (red) and RS485-B (green) wires of the RJ11 cable to the RS485-A (brown) and RS485-B (orange) wires of the speed dome camera. To protect the naked wires, use the insulation tape to cover on the twisted wires.

**STEP 4: Connect the other end of the RJ11 cable to DVR.**

Solder the RS485-A (red) and RS485-B (green) wires of the RJ11 cable to the corresponding pins on the solder side of the 9 PIN D-Sub connector (as shown above).

## STEP 5: Set the speed dome camera at the DVR side.

Go to “ADVANCE CONFIG” → “REMOTE” to set the speed dome camera.

- a) Select the device to “PTZ”.
- b) Set the ID to the value the same as the one set in the speed dome camera. The default ID of the camera is 000.
- c) Select the protocol to “NORMAL”.
- d) Set the baud rate to the value the same as the one set in the speed dome camera. The default baud rate of the camera is 2400.

ADVANCE CONFIG				
CAMERA	CH1	CH2	CH3	CH4
DETECTION	DEVICE			PTZ
ALERT	ID			000
NETWORK	PROTOCOL			NORMAL
SNTTP	RATE			2400
DISPLAY				
RECORD				
<b>REMOTE</b>				
EXIT				

## 2.3 DVR Power On

This device should be operated only with the type of power source indicated on the manufacturer’s label. Connect the indicated AC power cord to the power adapter, and plug into an electrical outlet. The power LED will be on.

---

**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.

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

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## 2.4 Date and Time Setting

Before operating your DVR, please set the date and time on your DVR **FIRST**.

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**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.

---

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**Note:** For the first time to use the DVR, please power it on for at least 48 hours continuously after the date & time is set correctly. It helps to prevent DVR time from resetting after the disconnecting of DVR power. If the DVR time resets after the disconnecting of DVR power, for example, caused by a power outage, the battery might run out and please replace the battery as described in “APPENDIX 6 DVR BATTERY REPLACEMENT” at page 44.

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Right-click to enter the DVR password with the password keypad. The default administrator password is 0000. The status will be changed from  (key lock) to  (administrator). Then, right-click to show the main menu, and select “QUICK START” → “TIME SETUP” to set the date & time.

QUICK START	
GENERAL	DATE 2009 / NOV / 17
<b>TIME SETUP</b>	TIME 15 : 35 : 53
EXIT	

## 2.5 Clear Hard Disk

It's recommended to clear all data in the hard disk for the first time to use this DVR to ensure the recorded data are not mixed with other data previously saved in the same hard disk.

Right-click to show the main menu, and select "SYSTEM" → "SYSTEM INFO" → "CLEAR HDD". The DVR will reboot when HDD data are cleared. For details, please refer to "5.3.2 SYSTEM INFO" at page 16.

SYSTEM		
TOOLS	BAUD RATE 2400	
<b>SYSTEM INFO</b>	HOST ID 000	
	R.E.T.R 5	
	AUTO KEY LOCK NEVER	
	CLEAR HDD HDD-0	
	RESET DEFAULT SUBMIT	
	REMOTE CONTROL ID 000	
	SERIAL TYPE RS485	
	VIDEO FORMAT NTSC	
	VERSION 1010-1005-1006-1007	
	EXIT	

## 2.6 Password Setting

Right-click to show the main menu, and select "SYSTEM" → "TOOLS" to change the DVR password.

There are two user levels: ADMIN & OPERATOR. For details, please refer to "5.3.1 TOOLS" at page 15.

SYSTEM	
<b>TOOLS</b>	LANGUAGE ENGLISH
SYSTEM INFO	ADMIN PASSWORD SETUP
	OPERATOR PASSWORD SETUP
	UPGRADE SUBMIT
	BACKUP SUBMIT
	EXIT

## 3. GUI DISPLAY WITH USB MOUSE CONTROL

### 3.1 Connect USB Mouse

Connect your USB mouse to one of the USB ports on the DVR front panel, and check if there's a mouse icon (🖱️) on the screen, indicating the USB mouse is detected properly.

Move your mouse to enter the DVR password with the password keypad. The default administrator password is **0000**. The status will be changed from 🔒 (key lock) to 👤 (administrator), and the quick menu bar appears on the left side of the screen.

**Note:** There are two user levels for DVR access which can be set in the main menu "SYSTEM" → "TOOLS". For details, please refer to "5.3.1 TOOLS" at page 15.

#### Password Input



#### Quick Menu: Close












### 3.2 Quick Menu Bar


Move to the arrow mark to extend the quick menu bar and show the five functions as follows:

#### Quick Menu: Open



-  Click to show the channel switch panel and select the channel you want. For details, please refer to "3.2.1 Channel Switch" at page 8.
-  Click to display the playback control panel, and click  to play the latest recorded video clip, or click  to enter the search list. For details, please refer to "4.3 Playback" at page 10.
-  Switch to the channel you want first, and click  to enter the zoom-in mode. In this mode, click and drag the red frame on the bottom left of the screen to move to the place you want to see. To exit this mode, click .
-  Click to select the audio channel you want:  
In the live mode, only the live audio channels can be selected.  
In the playback mode, live and playback audio channels can be selected.
-  Click to enter the PTZ mode and show the PTZ camera control panel. For details, please refer to "3.2.2 PTZ Control Panel" at page 9.

#### 3.2.1 Channel Switch

Click  on the quick menu bar to display the panel as follows:

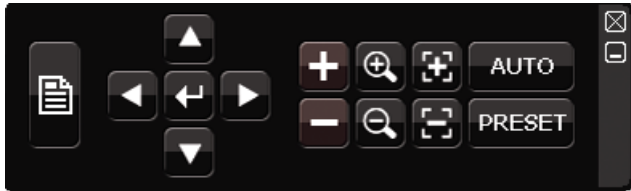


	Video Channel 1~4	Click to switch to the channel you want in full screen.
	Sequence Display	Click to display each channel in full screen one by one starting from CH1. When the last channel is displayed, it will repeat from CH1 again.
	Quad Display	Press to show the 4-channel display mode.

### 3.2.2 PTZ Control Panel

**Note:** In the PTZ control mode, hot point is supported to move the camera view to the specified point after a click.

Click on the quick menu bar to display the panel as follows:



	Camera Menu	Click to enter the camera main menu. For details about each camera menu, please refer to its own user manual.
	Enter	Click to confirm your selection / enter the menu.
	Up / Down / Left / Right	Click to move your selection up / down / left / right, or change settings.
	Zoom in / out max	Click to zoom in on the image to the largest / zoom out on the image to its original size.
	Zoom in / out	Click to zoom in / out the image.
	Focus near / far	Click to adjust the focus of the image.
	Auto mode	Click to activate the auto function. Before using it, you need to assign a specific function that will be enabled when "AUTO" is clicked. For details, please refer to the user manual of the PTZ camera.
	Preset point	Click to enter the PTZ preset point you want to see.

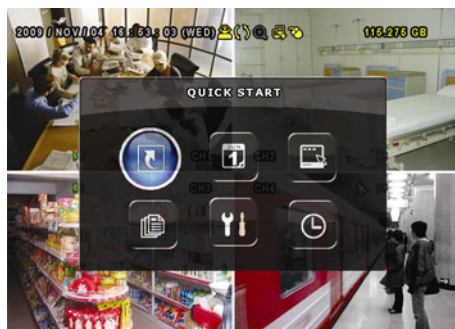
### 3.3 Main Menu

Right-click anywhere on the screen to show the main menu as follows, and right-click again to exit.

For details about each menu and its sub-menus, please refer to "5. MAIN MENU" at page 13.

For details about the menu structure, please refer to "APPENDIX 5 MAIN MENU STRUCTURE" at page 43.

#### Main Menu



	QUICK START	Click to set the status display, image settings, and date & time.
	DATE SETUP	Click to set the date display and daylight saving.
	SYSTEM	Click to set the system configurations.
	EVENT INFORMATION	Click to enter the event search menu.
	ADVANCE CONFIG	Click to set CAMERA, DETECTION, ALERT, NETWORK, SNTP, DISPLAY, RECORD and REMOTE.
	SCHEDULE SETTING	Click to set record timer and detection timer.



# 4. BASIC OPERATION

## 4.1 Live Page



Icon	Function	Icon	Function	Icon	Function
	Live audio channel (1~4)		Playback audio channel (1~4)		Audio channel off
	Digital zoom on		Digital zoom off		Timer recording
	Network disconnected		Internet connected		LAN connected
	USB mouse connected		USB flash drive / device connected		HDD overwrite
	Key lock		PTZ mode on		Sequence
	Administrator		Operator		Motion
	Recording		Alarm		R.E.T.R. ON

## 4.2 Record Icon

### 1) Manual Recording

By defaults, manual recording is on () when the DVR is powered on and a HDD is installed.

### 2) Event Recording

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

### 3) Timer Recording

When timer recording is on, you will see "" on the screen.

### 4) HDD Overwritten

Be defaults, the HDD overwritten function is set to ON, and "" will be shown on the screen.

## 4.3 Playback









Click "" on the quick menu bar to display the playback control panel, and click to play the latest recorded video clip, or click to enter the search list.




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

### 4.3.1 Playback Control


	Fast Forward	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Fast Rewind	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Play / Pause	Click to play the latest recorded video clip immediately, and click again to pause. In the pause mode, click  once to get one frame forward, and click  to get one frame rewind.
	Stop	Click to stop the video playback.
	Slow Playback	Click once to get 1/4X speed playback, and click twice to get 1/8X speed playback.
	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.




### 4.3.2 Event Search

Click  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.

To quickly search the time you want, select “QUICK SEARCH”. For details, please refer to “5.4.1 QUICK SEARCH” at page 17.




### 4.3.3 Audio Playback


In the playback mode, click  on the quick menu bar as many times as needed to select live or playback audio from audio channel 1~4.


 Live audio from audio channel 1~4 (indicated in white).     Playback audio from audio channel 1~4 (indicated in yellow).     Audio channel unselected

**Note:** To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.

## 4.4 User Level Switch

In the key lock mode () , move your USB mouse to display the password input keypad. There are two user levels for accessing the DVR: Administrator () & Operator () .

When the administrator password is entered,  will be shown on the status bar of the screen and all operations are allowed. The default administrator password is 0000.

When the operator password is entered,  will be shown on the status bar of the screen, and the main menu is **NOT** allowed to access. The operator user level needs to be set in the main menu “SYSTEM” → “TOOLS”.

To switch between these two user levels, click the current user level icon to switch to the key lock mode, and move

your mouse to show the password input keypad, and enter the password of the user level you want.

## 4.5 Video Output Switch

It's not allowed to have video output simultaneously on a CRT monitor (connected to MONITOR) and LCD monitor (connected to VGA).

The default video output setting is "AUTO", meaning the DVR will automatically detect the video output source. When VGA and MONITOR are both connected, the default monitor output is VGA.

To change the video output setting manually:

- To force the video output via MONITOR, press the left key ◀ on the DVR front panel at DVR power-on.
- To force the video output via VGA, press the right key ▶ on the DVR front panel at DVR power-on.

The setting is changed when you hear a short beep sound.

OR:

When the DVR is powered on and initialized, right-click to show the main menu, and select "ADVANCE CONFIG" → "DISPLAY" → "DISPLAY OUTPUT PATH".

Select "VGA" to switch to the connected LCD monitor, or "COMPOSITE" to switch to the connected CRT monitor. The DVR will then reboot for the change to take effect.

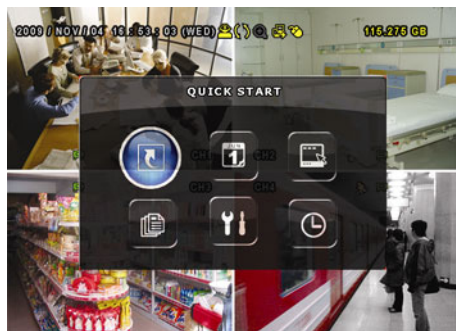
ADVANCE CONFIG		
CAMERA	SCREEN DWELL DURATION	03
DETECTION	VGA OUTPUT	1024 X 768
ALERT	DISPLAY COVERT	ON
NETWORK	HDD DISPLAY MODE	HDD SIZE
SNTP	DISPLAY OUTPUT PATH	AUTO
<b>DISPLAY</b>	ALPHA BLENDING	200
RECORD		
REMOTE		
EXIT		









## 5. MAIN MENU

Right-click anywhere on the screen to show the main menu as follows, and right-click again to exit. For details about the menu structure, please refer to “APPENDIX 5 MAIN MENU STRUCTURE” at page 43.

### Main Menu



	QUICK START	Click to set the status display, image settings, and date & time.
	DATE SETUP	Click to set the date display and daylight saving.
	SYSTEM	Click to set the system configurations.
	EVENT INFORMATION	Click to enter the event search menu.
	ADVANCE CONFIG	Click to set CAMERA, DETECTION, ALERT, NETWORK, SNTP, DISPLAY, RECORD and REMOTE.
	SCHEDULE SETTING	Click to set record timer and detection timer.

## 5.1 QUICK START

### 5.1.1 GENERAL

QUICK START	
<b>GENERAL</b>	CHANNEL TITLE ON
TIME SETUP	EVENT STATUS ON
	DATE DISPLAY ON
	IMAGE SIZE CIF
	QUALITY SUPER BEST
	IMAGE PER SECOND 120
EXIT	

- 1) CHANNEL TITLE  
Select to display the channel title or not (ON / OFF).
- 2) EVENT STATUS  
Select to display the event icons or not (ON / OFF).

---

**Note:** For details about each event icon, please refer to “4.1 Live Page” at page 10.

- 3) DATE DISPLAY  
Select to display the date or not (ON / OFF).
- 4) IMAGE SIZE  
Select one of the image sizes: FRAME, FIELD or CIF.
- 5) QUALITY  
Select one of the 4 quality options: SUPER BEST, BEST, HIGH & NORMAL.
- 6) IMAGE PER SECOND  
Select the images per second for MANUAL RECORD.

## 5.1.2 TIME SETUP

QUICK START	
GENERAL	DATE 2009 / NOV / 17
<b>TIME SETUP</b>	TIME 15 : 35 : 53
EXIT	

### 1) DATE

Set the current date. The default display format is YEAR – MONTH – DATE (Y-M-D).

---

**Note:** To change the date display format, please refer to "5.2.1 DATE INFO".

---

### 2) TIME

Set the current time in HOUR : MIN : SEC.

## 5.2 DATE SETUP

### 5.2.1 DATE INFO

DATE SETUP	
<b>DATE INFO</b>	DISPLAY DATE OF MODE TEXT MODE
DAYLIGHT	FORMAT Y/M/D
EXIT	

### 1) TIME

Show the date display mode.

### 2) FORMAT

Select one date format from the following three options: Y/M/D, M/D/Y or D/M/Y.

### 5.2.2 DAYLIGHT

DATE SETUP	
DATE INFO	DAYLIGHT SAVING OFF
<b>DAYLIGHT</b>	START TIME
	1ST MON AUG 06:00
	END TIME
	LAST MON OCT 10:00
	ADJUST 01:00
EXIT	

Depending on the time zone you're in:

### 1) DAYLIGHT SAVING



Select to enable (ON) or disable (OFF) this function.

- 2) START TIME / END TIME  
Set the start time and end time.
- 3) ADJUST  
Set the time in HOUR : MIN.

## 5.3 SYSTEM

### 5.3.1 TOOLS

SYSTEM		
<b>TOOLS</b>	LANGUAGE	ENGLISH
SYSTEM INFO	ADMIN PASSWORD	SETUP
	OPERATOR PASSWORD	SETUP
	UPGRADE	SUBMIT
	BACKUP	SUBMIT
EXIT		

- 1) LANGUAGE  
Select the language of the OSD.
- 2) ADMIN PASSWORD  
Click "SETUP" to change the administrator password. The default administrator password is **0000**.  
When you're prompted to enter the DVR password, enter the administrator password, and  will be shown on the status bar of the screen and all operations are allowed.
- 3) OPERATOR PASSWORD  
Click "SETUP" to set or change the operator password. .  
When you're prompted to enter the DVR password, enter the operator password, and  will be shown on the status bar of the screen and the main menu is **NOT** allowed to access.
- 4) UPGRADE  
Save the upgrade files obtained from your installer or distributor in a compatible USB flash drive, and insert it into the USB port at the front panel. Then, click "SUBMIT" to start upgrading.


---

**Note:** Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 41.

---

**Note:** After upgrading firmware, it's recommended to clear all HDD data for the system to work more stably. Before clearing all HDD data, please remember to make video backup.

---

- 5) BACKUP  
Insert a compatible USB flash drive to the USB port at the front panel, or press  to eject the DVD writer and place a DVD-R or CD-R to it.

---

**Note:** Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first. For the list of compatible USB flash drives, please refer to "APPENDIX 3 COMPATIBLE USB FLASH DRIVE LIST" at page 41.

---



3) R.E.T.R

Select the timeout in minute after which the R.E.T.R. function will be activated (3 / 5 / 10 / 30).

4) AUTO KEY LOCK

Set the time-out in second after which the key lock function is activated (NEVER / 30 / 60 / 120).

5) CLEAR HDD

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

It's recommended to clear all data in the hard disk when:

- It's the first time to use this DVR to ensure the recorded data are not mixed with other data previously saved in the same hard disk.
- The DVR firmware is upgraded for the system to work more stably. Before clearing all HDD data, please remember to make video backup.
- DVR date and time are changed accidentally when 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

6) RESET DEFAULT

Click "SUBMIT" to reset all settings as default, and select "YES" to confirm or "NO" to cancel. The DVR will reboot after reset.

7) REMOTE CONTROL ID

This function is available when users need to control two or more DVRs with one IR remote controller. The ID set here is used to identify the DVR the remote controller is going to control. Please also read the user manual of the IR remote controller for details.

8) SERIAL TYPE

Here shows the serial type of the DVR (RS-485).

9) VIDEO FORMAT

Here shows the information of the DVR video format (NTSC / PAL).

10) VERSION

Here shows the firmware version information.

## 5.4 EVENT INFORMATION

### 5.4.1 QUICK SEARCH

EVENT INFORMATION							
<b>QUICK SEARCH</b> EVENT SEARCH HDD INFO EVENT LOG	HARD DISK CHANNEL			ALL HDD			
				<input checked="" type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04
	2009		NOV				
	SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	<b>23</b>	24	25	26	27	28	
29	30						
00         06         12         18         24							
EXIT			<b>15 : 20</b>		SUBMIT		

Step1: Select the hard disk and channel including the video data you want to search.

Step2: Select the month including the video data you want to search from the calendar, and the date with recorded data will be highlighted.

Step3: Select the date you want from the calendar, and the time with recorded data will be highlighted from the time scale bar.

Step4: To immediately play the video clip, click "SUBMIT".

To choose the start time for video playback, move your mouse cursor to the highlighted time, and click to confirm the time when the time display below is the time you want. The video playback is activated right away when you confirm the time.

**Note:** For video playback operations, please refer to "4.3 Playback" at page 10.

### 5.4.2 EVENT SEARCH

EVENT INFORMATION		
QUICK SEARCH	DATE	2009/NOV/19
<b>EVENT SEARCH</b>	TIME	16:13:16
HDD INFO	CHANNEL	1
EVENT LOG	HARD DISK	ALL HDD
	EVENT TYPE	MOTION
	SEARCH	SUBMIT
EXIT		

1) DATE / TIME

Select the specific time period that you want to search.

2) CHANNEL

Select the video channel you want to search.

3) HARD DISK

Select the hard disk including the video data you want to search, or select "ALL HDD".

4) EVENT TYPE

Select the event type you want to search: MOTION or ALARM.

5) SEARCH

Click "START" to start search and play the video data immediately.

### 5.4.3 HDD INFO

You can check the remaining capacity of the connected HDD in this device.

EVENT INFORMATION		
QUICK SEARCH	HDD NUMBER	HDD SIZE
EVENT SEARCH	HDD-0	1.197GB
<b>HDD INFO</b>		
EVENT LOG		
EXIT		

## 5.4.4 EVENT LOG

You can check all the event information (event type, time and channel), or clear all log records.

EVENT INFORMATION			
QUICK SEARCH	EVENT	TIME	COMMENT
EVENT SEARCH	KEY UNLOCK	2009/NOV/19 15:49:07	
<b>HDD INFO</b>	VIDEO LOSS	2009/NOV/19 15:32:05	04
EVENT LOG	POWER ON	2009/NOV/19 15:32:02	
	PREV	NEXT	CLEAN
EXIT			

## 5.5 ADVANCE CONFIG

### 5.5.1 CAMERA

ADVANCE CONFIG				
<b>CAMERA</b>	CH1	CH2	CH3	CH4
DETECTION	BRIGHTNESS			128
ALERT	CONTRAST			128
NETWORK	SATURATION			128
SNTP	HUE			128
DISPLAY	COV.			OFF
RECORD	REC			ON
REMOTE	CHANNEL TITLE			EDIT
DCCS				
EXIT				

1) BRIGHTNESS / CONTRAST / SATURATION / HUE

Click the current value to manually adjust the brightness/contrast/saturation/hue of each channel here. The value is adjustable from 0 to 255.

2) COV.

Select if you want to mask the selected channel under recording (ON / OFF). When this function is activated, the wording "COV." will be shown on the channel screen.

---

**Note:** To hide the wording "COV." When this function is on, go to "DISPLAY", and set "DISPLAY COVERT" to "OFF". For details, please refer to "5.5.6 DISPLAY" at page 23.

---

3) REC

Select if you want to enable recording for the selected channel (ON / OFF).

---

**Note:** When this function is disabled, no manual, event or timer recording will be activated even if any of these three record functions is set to "ON".

---

4) CHANNEL TITLE

Click "EDIT" to input the channel title (up to six characters). The default title is the channel number.

## 5.5.2 DETECTION

ADVANCE CONFIG				
CAMERA	CH1	CH2	CH3	CH4
<b>DETECTION</b>	LS			07
ALERT	SS			03
NETWORK	TS			02
Sntp	DET			OFF
DISPLAY	ALARM			OFF
RECORD	AREA			EDIT
REMOTE				
DCCS				
EXIT				

### 1) LS (Level of Sensitivity)

“LS” is to set the sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default value is 07.

### 2) SS (Spatial Sensitivity)

“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.

The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 03.

---

**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.

---

### 3) TS (Time of Sensitivity)

“TS” is to set the sensitivity regarding how long one object stays in the detection area and triggers the recording. The smaller the value is, the higher sensitivity for motion detection.

The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 02.

### 4) DET

Select if you want to activate the motion detection function for the selected channel (ON/OFF).

### 5) ALARM

Select N.C./ N.O depending on your installation need. The default alarm value is OFF.

### 6) AREA

Click “EDIT” to set the motion detection area.

There are 16 × 12 grids per camera for all channels. Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.



### 5.5.3 ALERT

ADVANCE CONFIG		
CAMERA	EXT. ALERT	ON
DETECTION	INT. BUZZER	OFF
<b>ALERT</b>	KEY BUZZER	ON
NETWORK	VLOSS BUZZER	ON
SNTP	MOTION BUZZER	ON
DISPLAY	ALARM BUZZER	ON
RECORD	HDD BUZZER	ON
REMOTE	ALARM DURATION (SEC)	5
DCCS	HDD NEARLY FULL (GB)	5
EXIT		

1) EXT. ALERT

Select to enable or disable the sound when any external alarm is triggered (ON / OFF).

2) INT. BUZZER

Select to enable or disable the sound (ON / OFF) for all internal buzzers: KEY BUZZER, VLOSS BUZZER, MOTION BUZZER, ALARM BUZZER, and HDD BUZZER.

**Note:** When this item is set to "OFF", item 3) to item 7) will be disabled even though they are set to ON.

3) KEY BUZZER

Select to enable or disable the sound when pressing the buttons on the front panel (ON / OFF).

4) VLOSS BUZZER

Select to enable or disable the sound when video loss happened (ON / OFF).

5) MOTION BUZZER

Select to enable or disable the sound when any motion alarm is triggered (ON / OFF).

6) ALARM BUZZER

Select to enable or disable the sound when any internal alarm is triggered (ON / OFF).

7) HDD BUZZER

Select to enable or disable the sound (ON / OFF) when the HDD remaining capacity reaches to the value set in "HDD NEARLY FULL (GB)".

8) ALARM DURATION (SEC)

Select the duration time for alarm recording in second (5 / 10 / 20 / 40).

9) HDD NEARLY FULL (GB)

If HDD BUZZER is enabled, select the duration time for buzzer notifications when the hard disk available capacity is 5/10/15/20 GB left.

### 5.5.4 NETWORK

The description below is only for STATIC network type. For PPPOE and DHCP settings, you need to set from "Video Viewer".

For details, please download the extended user manual for "Video Viewer" from

<http://www.surveillance-download.com/user/CMS.pdf>.

## STATIC

ADVANCE CONFIG		
CAMERA	NETWORK TYPE	STATIC
DETECTION	IP	192.168.001.010
ALERT	GATEWAY	192.168.001.254
<b>NETWORK</b>	NETMASK	255.255.255.000
SNTP	PRIMARY DNS	168.095.001.001
DISPLAY	SECONDARY DNS	139.175.055.244
RECORD	PORT	0080
REMOTE	SAVE NETWORK SETTING	APPLY
DCCS		
EXIT		

### 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.

### 5) SAVE NETWORK SETTING

Click "APPLY" to confirm the settings.

## 5.5.5 SNTP

Before using this function, please connect your DVR to Internet.

ADVANCE CONFIG		
CAMERA	GMT	(GMT + 8:00) TAIPEI
DETECTION	NTP SERVER	tock.stdtime.gov.tw
ALERT	SYNC PERIOD	OFF
NETWORK		
<b>SNTP</b>		
DISPLAY		
RECORD		
REMOTE		
DCCS		
EXIT		

### 1) GMT

Select your time zone. There are 75 time zones for you to choose.

### 2) NTP SERVER

Click to change the default NTP server to another server they're familiar with, or keep the default NTP server.

### 3) SYNC PERIOD

Select to synchronize the DVR time everyday (DAILY), or turn this function off (OFF).

### 5.5.6 DISPLAY

ADVANCE CONFIG		
CAMERA	SCREEN DWELL DURATION	03
DETECTION	VGA OUTPUT	1024 X 768
ALERT	DISPLAY COVERT	ON
NETWORK	HDD DISPLAY MODE	HDD SIZE
SNTP	DISPLAY OUTPUT PATH	AUTO
<b>DISPLAY</b>	ALPHA BLENDING	200
RECORD		
REMOTE		
DCCS		
EXIT		

- 1) SCREEN DWELL DURATION  
Select the full screen dwell duration time in second (3 / 5 / 10 / 15).
- 2) VGA OUTPUT  
Here shows the current VGA output resolution.
- 3) DISPLAY COVERT  
Select "ON" or "OFF" to display or hide the wording "COV." when covert recording is activated in "CAMERA".
- 4) HDD DISPLAY MODE  
Select "SIZE" to show the remaining HDD capacity for recording in GB, or "TIME" to show the remaining recording time.
- 5) DISPLAY OUTPUT PATH  
The default video output setting is "AUTO", meaning the DVR will automatically detect the video output source. When a CRT monitor and LCD monitor are both connected, the default video output is via the connected LCD monitor.  
Select "VGA" to fix the video output via the connected LCD monitor, or "COMPOSITE" to fix the video output via the connected CRT monitor.  
When the change is made, the DVR will then reboot for the change to take effect.
- 6) ALPHA BLENDING  
Click to manually adjust the transparent level of the main menu.

### 5.5.7 RECORD

---

**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.

---

ADVANCE CONFIG		
CAMERA	MANUAL RECORD ENABLE	ON
DETECTION	EVENT RECORD ENABLE	ON
ALERT	TIMER RECORD ENABLE	ON
NETWORK	EVENT RECORD IPS	120
SNTP	TIMER RECORD IPS	120
DISPLAY	PRE-ALARM RECORD	ON
<b>RECORD</b>	OVERWRITE	ON
REMOTE	EVENT RECORD ALL CHANNEL	OFF
DCCS	KEEP DATA LIMIT (DAYS)	OFF
EXIT		

- 1) MANUAL RECORD ENABLE  
Set the manual recording function on / off.
- 2) EVENT RECORD ENABLE  
Set the event recording function on / off.
- 3) TIMER RECORD ENABLE  
Set the timer recording function on / off.
- 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 "ON" to overwrite previous recorded data in your HDD when the HDD is full. When this function is on and the HDD is full, the DVR will clear 8GB data from the oldest for continuous recording without notice.
- 8) EVENT RECORD ALL CHANNEL  
Select to record all channels (ON) or record the channel with an event only (OFF) for any event.
- 9) KEEP DATA LIMITS (DAYS)  
Assign the maximum recording days from 01 to 31 after which all the recorded data will be removed, or select "OFF" to disable this function.

### 5.5.8 REMOTE

ADVANCE CONFIG	
CAMERA	CH1   CH2   CH3   CH4
DETECTION	DEVICE PTZ
ALERT	ID 00
NETWORK	PROTOCOL NORMAL
SNTP	RATE 2400
DISPLAY	
RECORD	
<b>REMOTE</b>	
DCCS	
EXIT	

- 1) DEVICE  
For the PTZ camera, select "PTZ".  
*For a zoom lens control camera:*  
The DVR will detect it automatically and display its model number here.  
To configure the parameters for a zoom lens control camera, please refer to "5.5.9 DCCS" at page 25. Different zoom lens control cameras might have different parameter settings. For details, please refer to their own user manuals.
- 2) ID  
Click the current value to set the ID number (0 ~ 255) for the connected PTZ camera if necessary.  
Make sure the ID setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

---

**Note:** To know the default ID of the PTZ camera, please refer to its user manual.

---

3) PROTOCOL

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

4) RATE

Select the baud rate for the connected PTZ camera (2400 / 4800 / 9600 / 19200 / 57600 / 115200).

Make sure the baud rate setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

---

**Note:** To know the default baud rate of the PTZ camera, please refer to its user manual.

---

### 5.5.9 DCCS

---

**Note:** Only CH1 supports DCCS camera.

---

ADVANCE CONFIG			
CANERA DETECTION ALERT NETWORK SNTP DISPLAY RECORD REMOTE <b>DCCS</b>	CH1	CH2	CH3
	CH4	DIAGNOSTIC	START
		MENU	SETUP
	DEVICE	AVK523	
	CONNECTION	OK	
EXIT			

1) DIAGNOSTIC

Click “START” to start examining the DCCS signal transmission between the DVR and the camera. The result will display in “CONNECTION”.

2) MENU

Click “SETUP” to configure the connected zoom lens control camera.

Different zoom lens control cameras might have different parameter settings. For details, please refer to their own user manuals.

---

**Note:** While configuring the camera parameters, the DVR will switch to the corresponding channel, and you can simultaneously preview the effects for the settings.

---

3) DEVICE

Here shows the model number of the camera.

4) CONNECTION

Here shows the examining result for DCCS signal transmission between the DVR and camera. The message is as follows:

MESSAGE SHOWN	MEANING
CHECKING	The DVR is checking the DCCS signal transmission between the DVR and camera.
OK	The signal transmission is fine and the DCCS function works properly.
FAIL	The signal transmission is too weak or not available for the DCCS function to work properly.

## 5.6 SCHEDULE SETTING

### 5.6.1 RECORD

Select "ON" to enable record timer, and select the day and time for this function.

SCHEDULE SETTING	
<b>RECORD</b>	RECORD TIMER
<b>DETECTION</b>	ON
	0 2 4 6 8 10 12 14 16 18 20 22 24
SUN	
MON	
TUE	
WED	
THU	
FRI	
SAT	
EXIT	

**X axis** 0 ~ 24 hours. Each time bar is 20 minutes.

**Y axis** Monday ~ Sunday.

### 5.6.2 DETECTION

Select "ON" to enable record timer, and select the day and time for this function.

SCHEDULE SETTING	
RECORD	DETECTION TIMER
<b>DETECTION</b>	ON
	0 2 4 6 8 10 12 14 16 18 20 22 24
SUN	
MON	
TUE	
WED	
THU	
FRI	
SAT	
EXIT	

**X axis** 0 ~ 24 hours. Each time bar is 20 minutes.

**Y axis** Monday ~ Sunday.

## 6. REMOTE OPERATION

You can also control the DVR remotely via the supplied licensed software “Video Viewer”, Internet Explorer web browser, and Apple’s QuickTime player.

### 6.1 Supplied Licensed Software

The sections below describe frequently-used functions of the Video Viewer. For details about this software and network settings, please download its extended user manual from the following link:


<http://www.surveillance-download.com/user/CMS.pdf>

#### 6.1.1 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 “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  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  →  to key in the default IP address, user name, password, and port number of the DVR you intend to connect.


OR

Click  →  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 .



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  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 "  " → "  " to key in the IP address, user name, password, and port number of the DVR you intend to connect.

OR








Click "  " → "  " 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 "  " .







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


### 6.1.2 Control Panel Overview


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







#### Simplified Version (Default)

-  Address Book
-  Miscellaneous Control
-  Log
-  Record
-  Snapshot
-  Information
-  DVR Control

-  Version
-  Minimize
-  Full Function Display Switch
-  Close Program
-  180° Counterclockwise Image Rotation
-  Snapshot

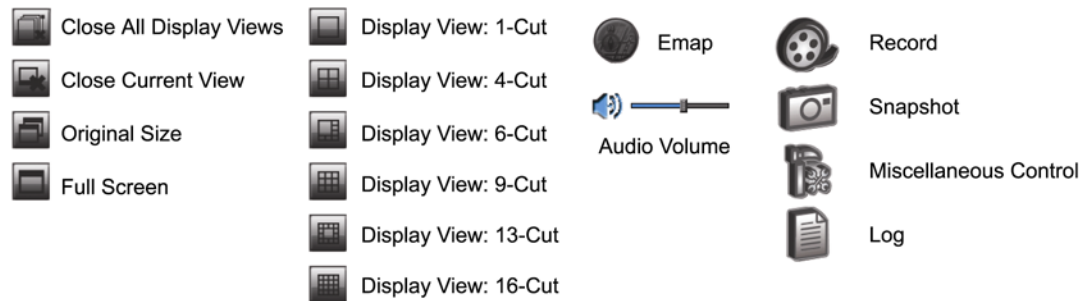
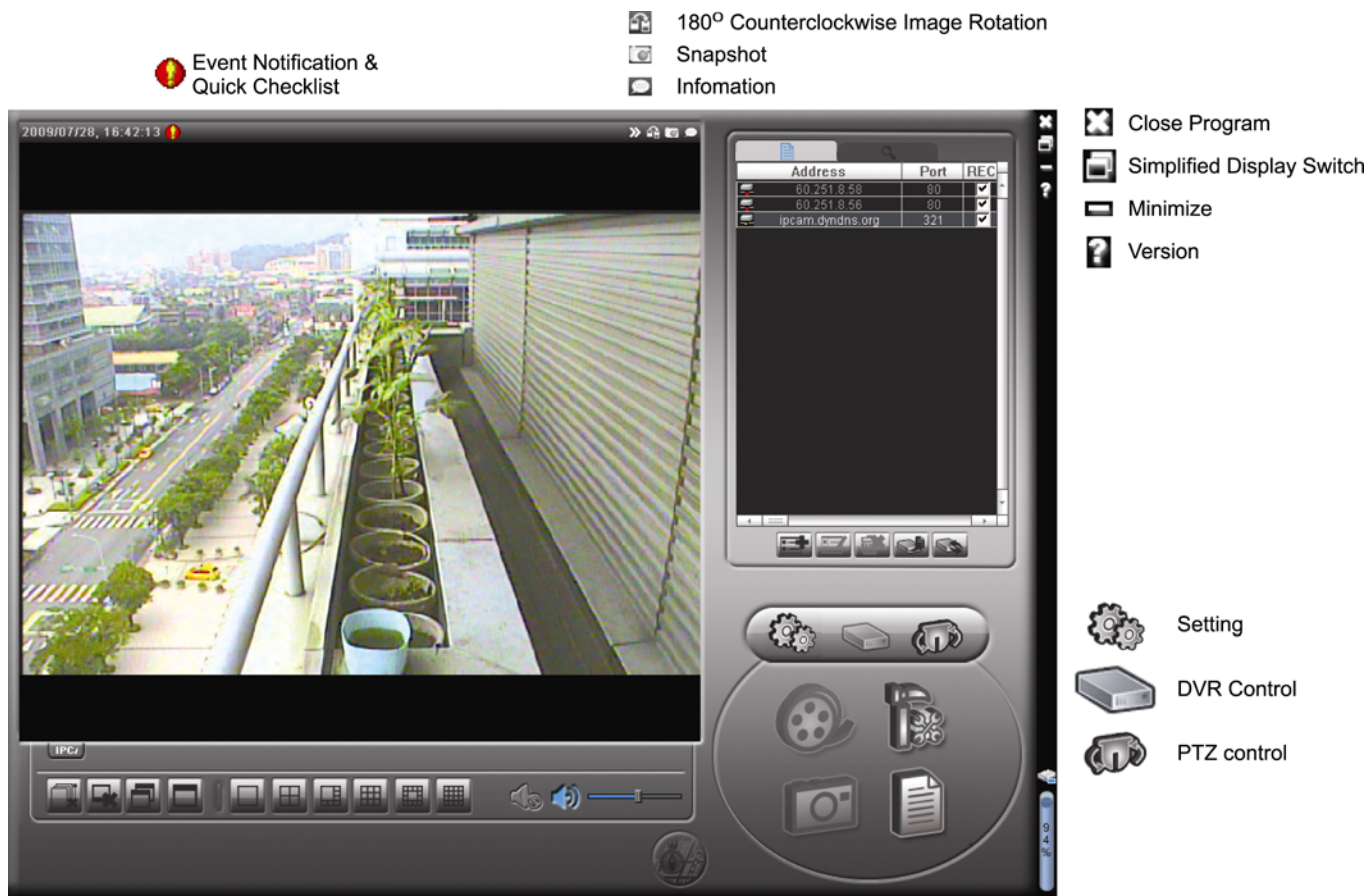
Event Notification & Quick Checklist 



-  Close All Display Views
  -  Close Current View
  -  Original Size
  -  Full Screen
  -  Display Mode Switch
-  Audio Volume



# Full Function Version






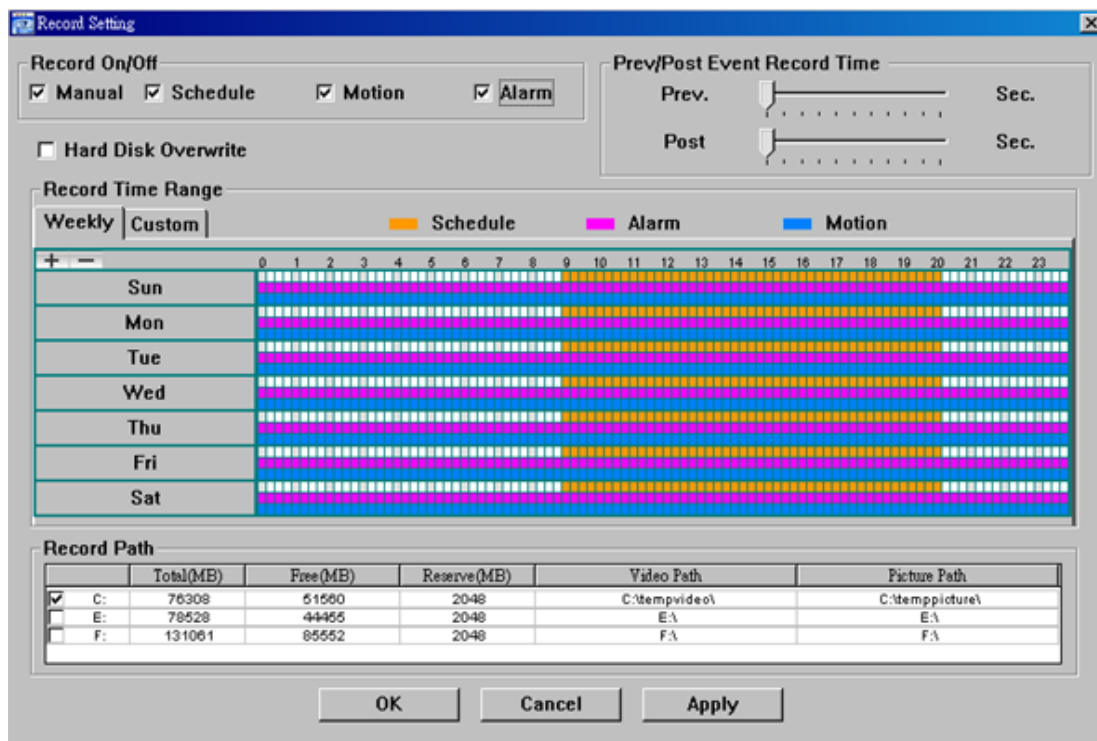
## Main Button Overview

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.

### 6.1.3. 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:

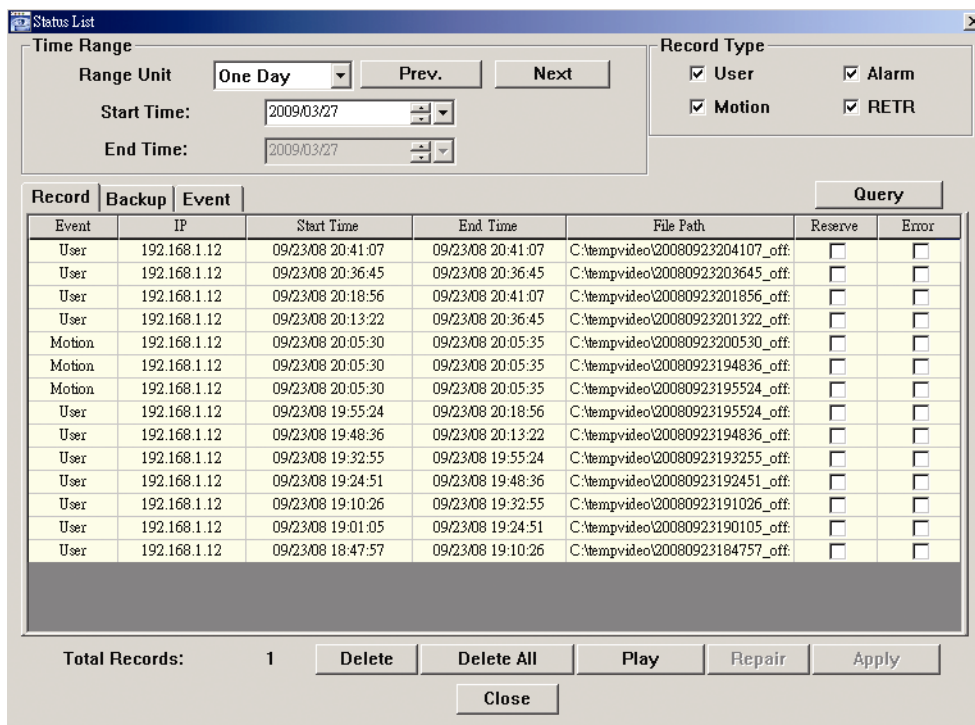
- Record type
- Hard disk overwriting
- Pre- / post-alarm record time
- Record time setting
- Record path

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.

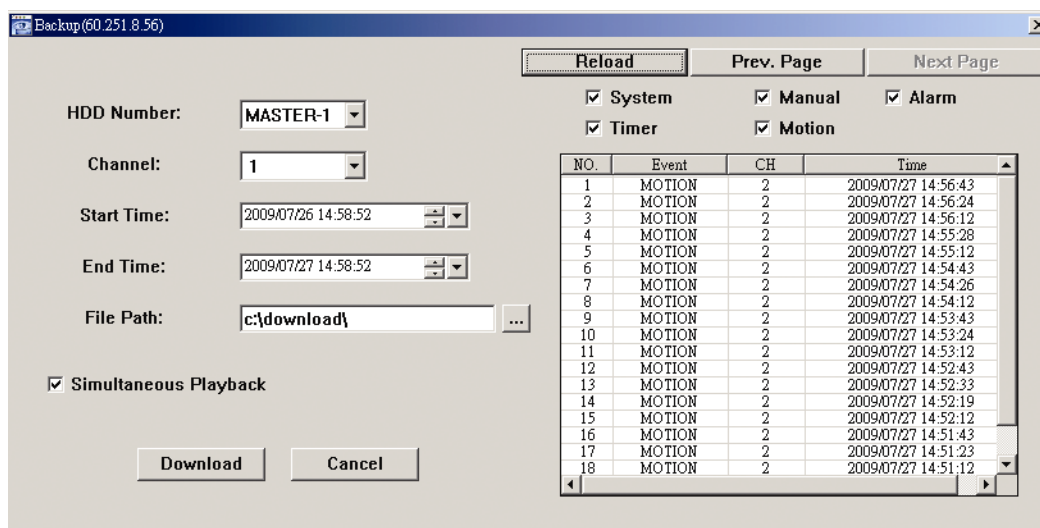


To immediately play a recording, select a log from the list, and click “Play”, or double-click the selected log.

## 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 currently selected IP address.



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	Select an event log from the event list. This list shows all logs in the specified DVR from the latest to the earliest. <ul style="list-style-type: none"> <li>To quickly find the events you need, check or uncheck the event type “System” / “Manual” / “Alarm” / “Motion”, and select the log you want.</li> <li>To view the earlier or later logs that are not shown in the current page, click “Prev. Page” or “Next Page”.</li> <li>To refresh the event list, click “Reload”.</li> </ul>
File Path	Assign the location where the backup files are saved.
Simultaneous Playback	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.

Function	Description
	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.
Download / Cancel	Click "Download" to start or "Cancel" to discard the video backup.

#### 6.1.4. E-Map

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

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**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.

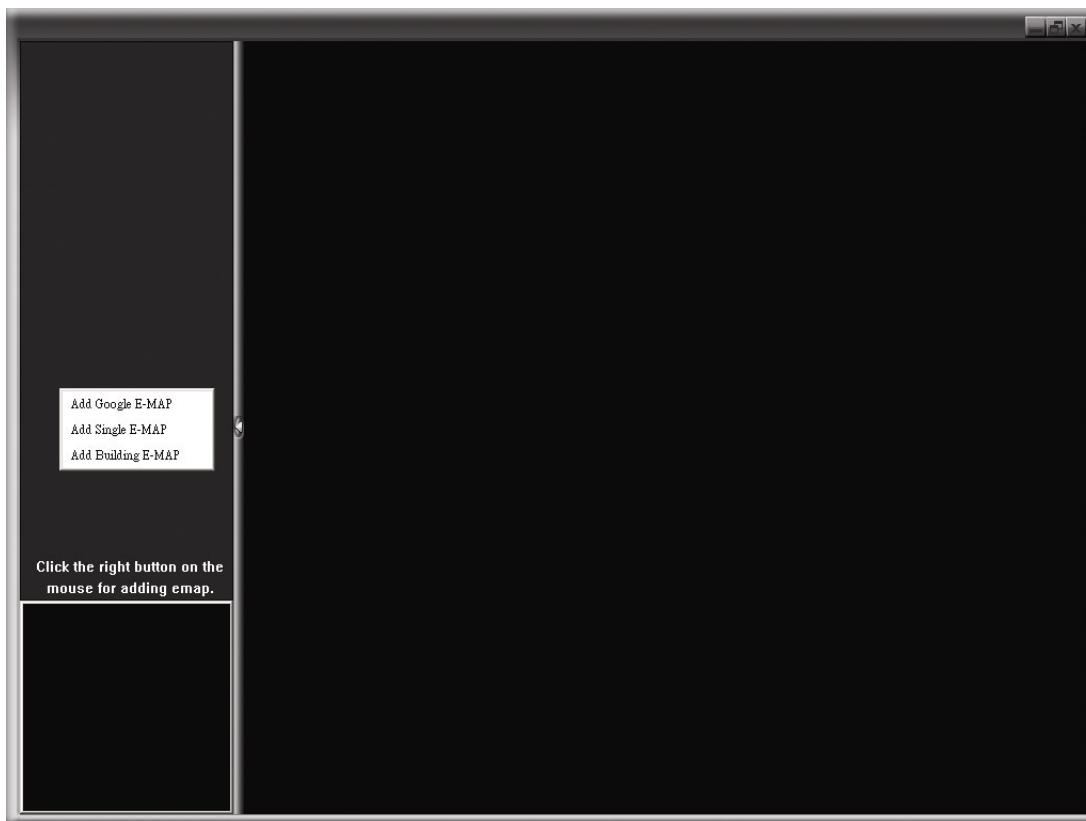
##### How to Add an E-Map Group

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.

---

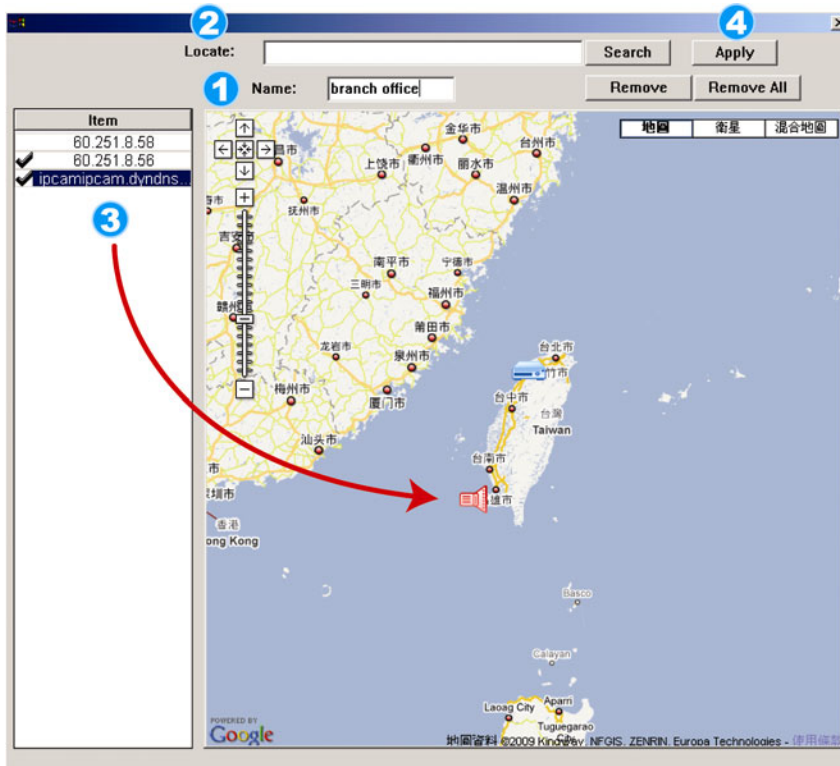
**Note:** To know where the buttons are, please refer to "Simplified Version (Default) at page 28, and "Full Function Version" at page 29.

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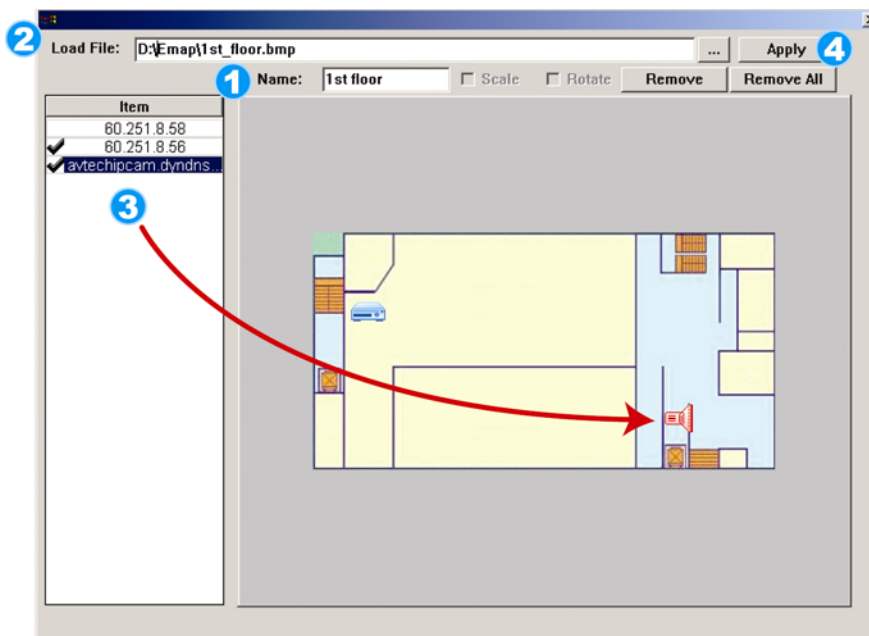
STEP2: Right-click to show the shortcut menu on the top-left panel, and select the E-Map group you want to add. There are three E-Map groups you can add: Google E-MAP, Single E-MAP, and Building E-MAP.





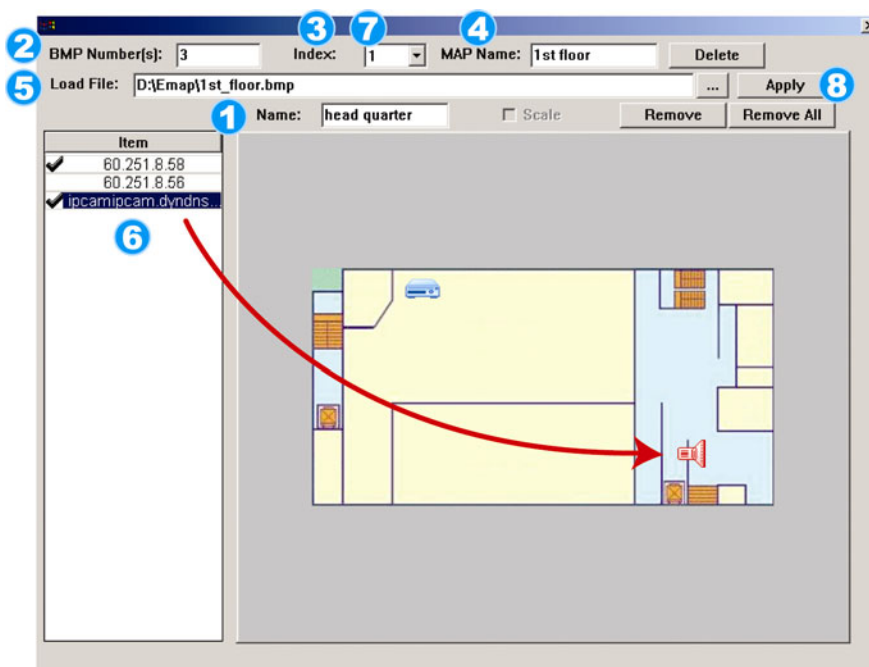
### How to add a Google E-Map group:

- 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:

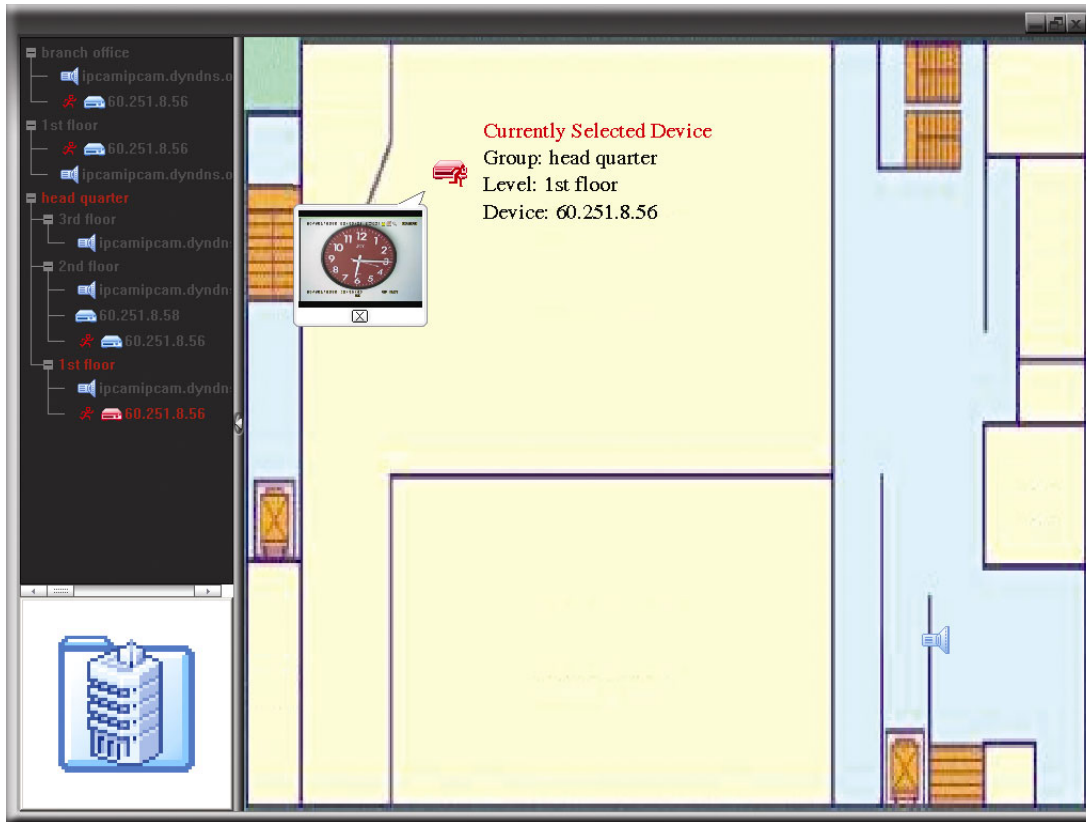
- 1 Enter the name of this single E-Map group.
- 2 Click "..." to browse the map file in BMP or JPEG.
- 3 Click and drag the IP address to where it's located in the current level.
- 4 Click "Apply" to save and finish.






### 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.



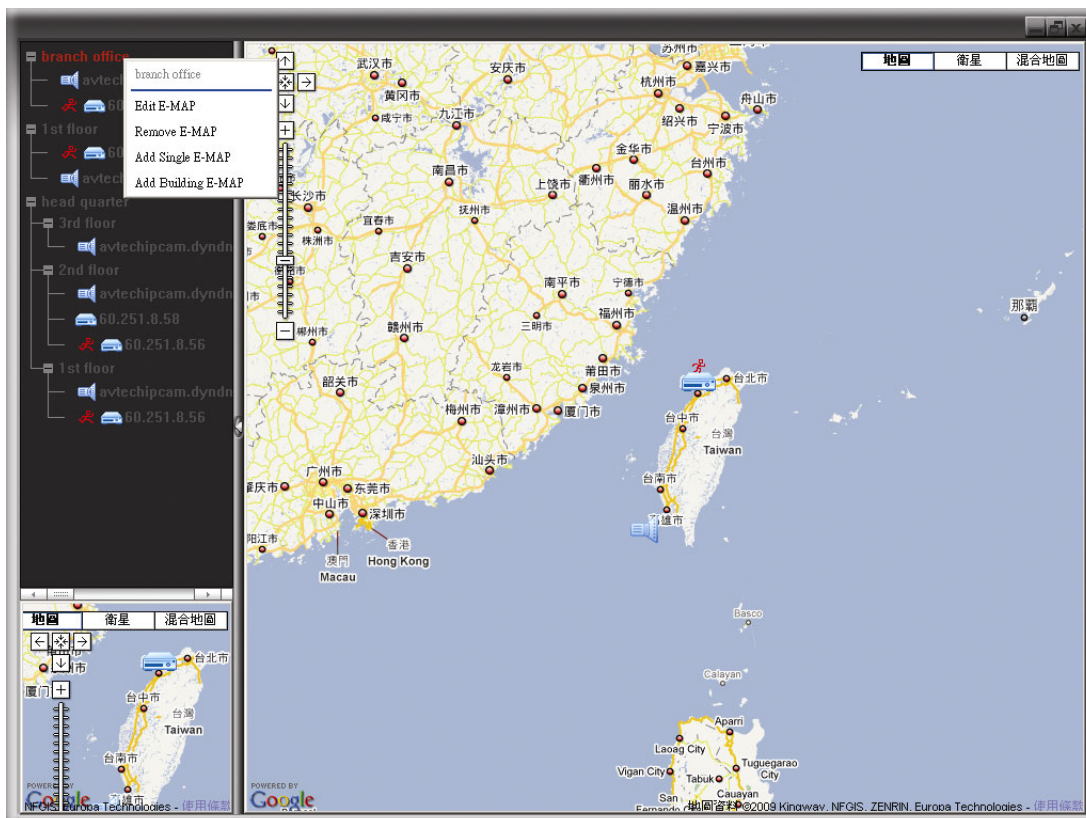
Icon	Description
	The connected device is camera. When it's selected, it will become red.
	The connected device is DVR. When it's selected, it will become red.
	For any motion or alarm event, it will appear on the screen to catch your attention. To know what's happening quickly, double-click the device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

### How to Edit / Remove an Existing E-Map Group

➤ For Google E-Map Group

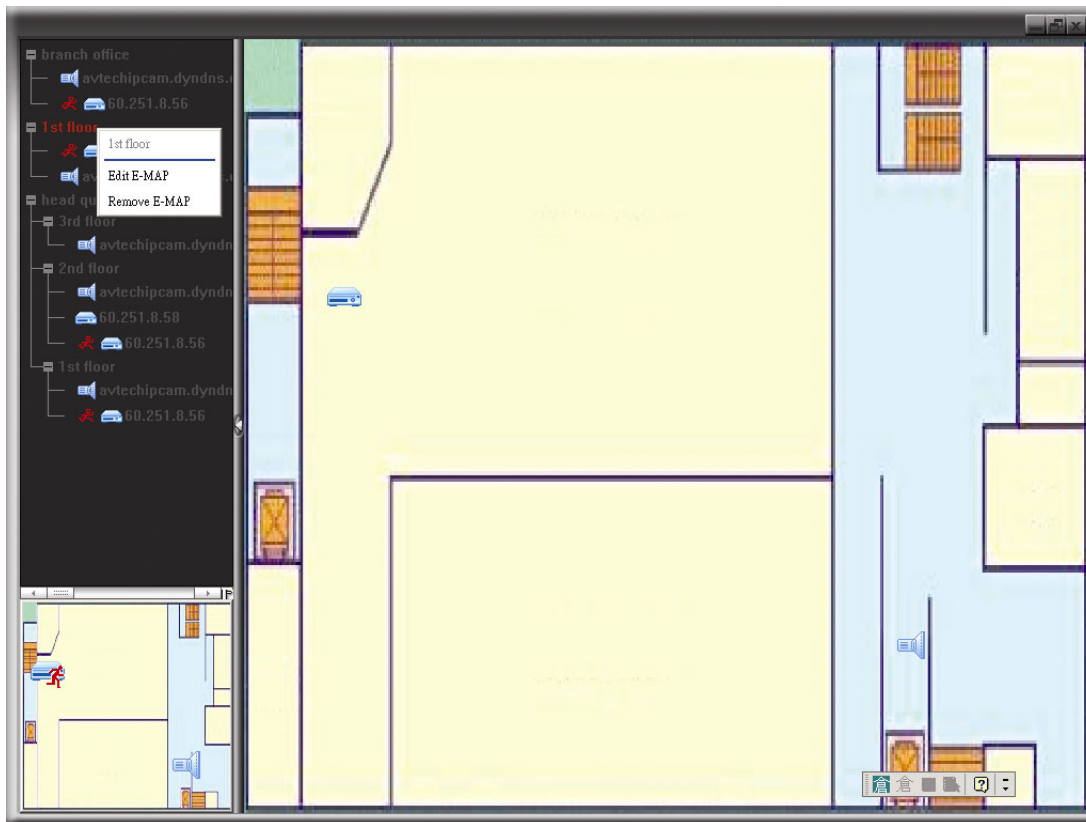
Right-click on the group name to show the shortcut menu list, and select "Edit E-MAP" or "Remove E-MAP" as needed.

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.



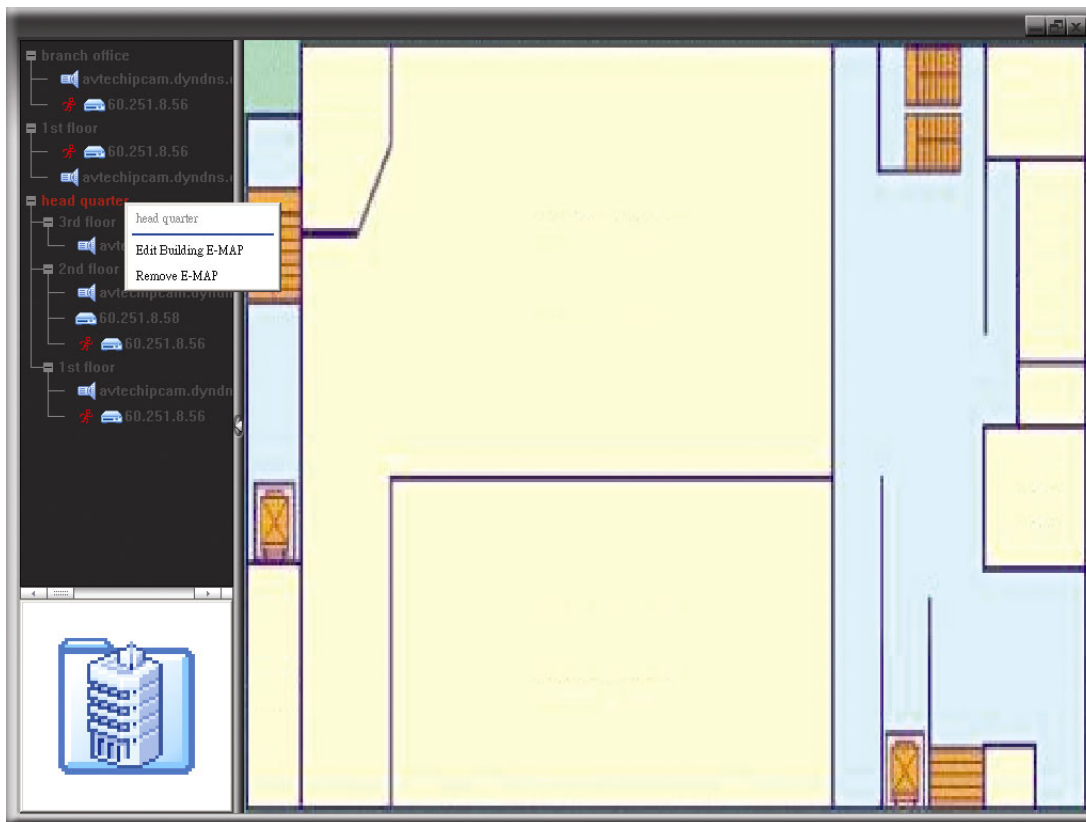
➤ For Single E-Map Group

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

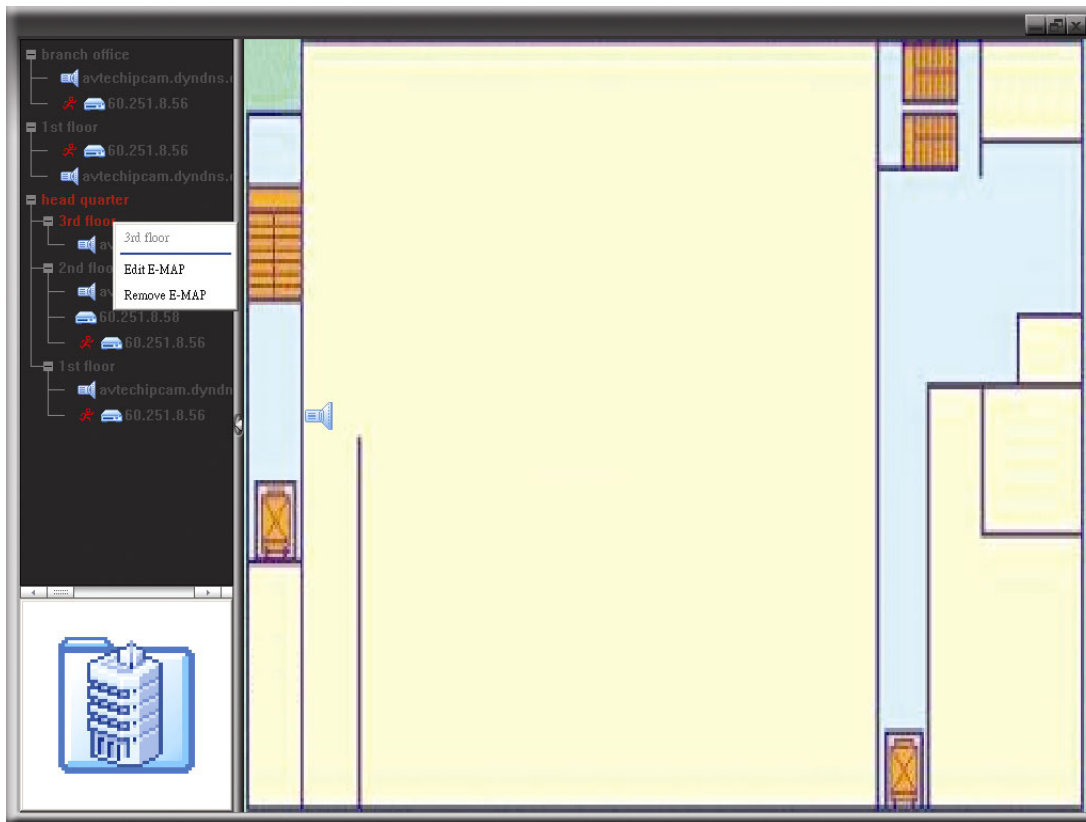


➤ For Building E-Map Group

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.





## 6.2 IE Web Browser

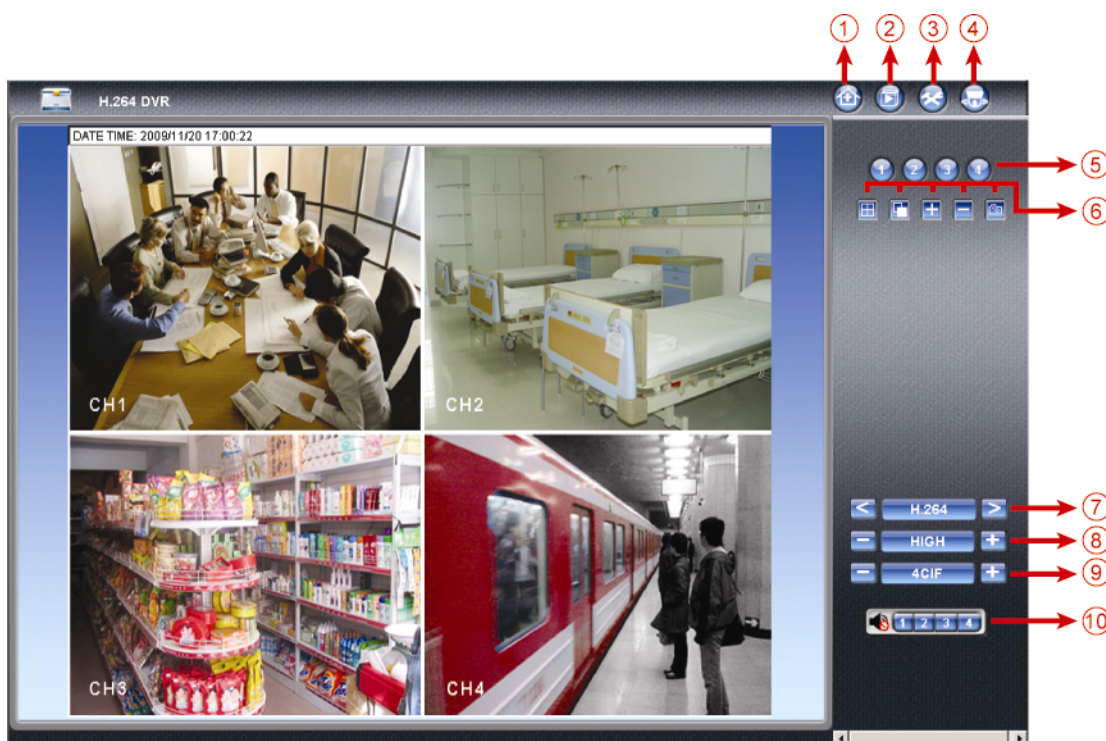
You can view the images or operate your DVR with IE web browser.

**Note:** The supported PC operation systems are Windows 7, Vista, XP and 2000.



Step 1: 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".

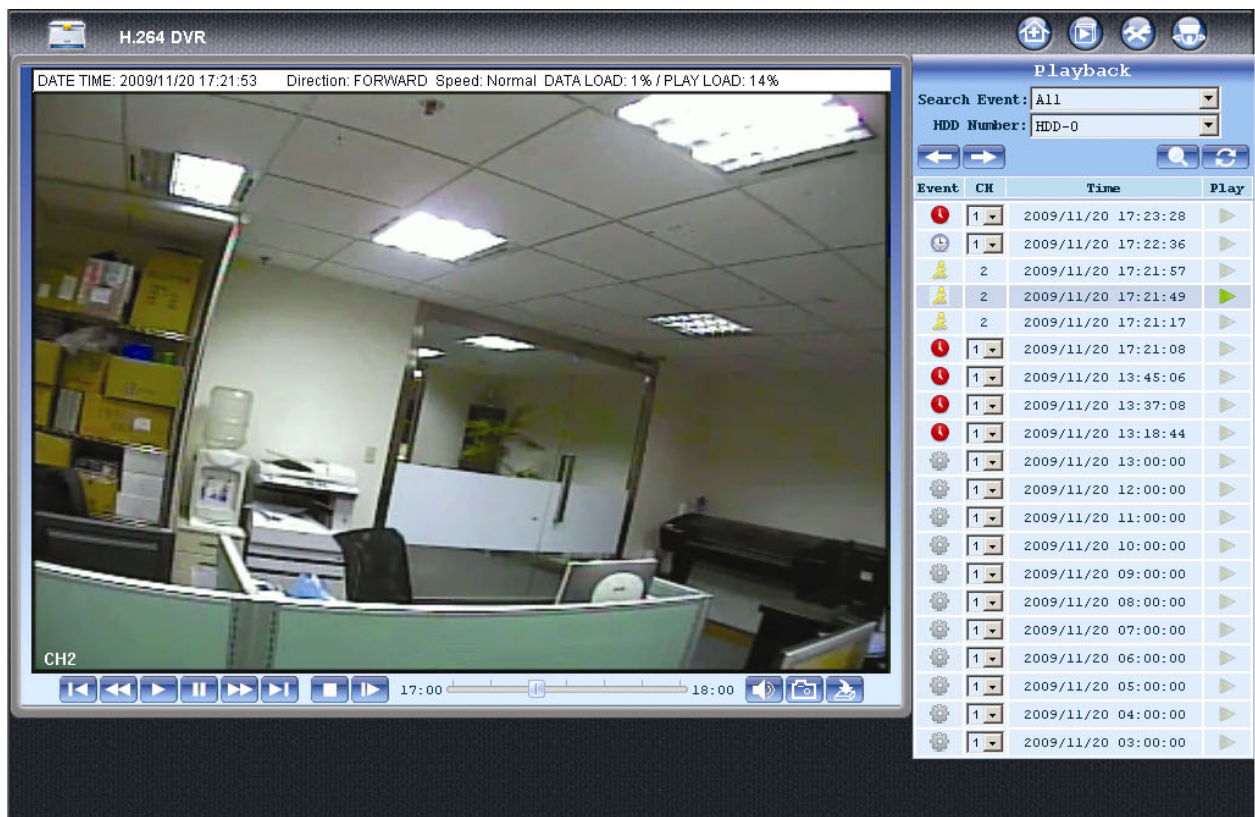
Step 2: Enter the user name and password, the same as the ones used at AP login, and click "OK". You will see a similar screen as the following when the login information is correct.



NO.	Function	Description
1	Home	Click  to go to the main page of the DVR.
2	Playback	Click "" to enter the playback panel where you can search or select the event you want to play and download to your PC simultaneously. For details, please refer to "6.2.1 Event Playback & Download" at page 38.
3	Config.	Click  to go to the detailed DVR setting.
4	PTZ	Click  to enter the PTZ mode.
5	Channel Selection	Click one of the number to switch to the channel you want to see in full screen.
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.
	Selection	Click  or  to go to the previous / next channel, or change setting.
	Snapshot	Click  to take a snapshot of the current view, and save it to the specified path in your PC set in "" → "General".
7	Web Transmission	<b>H.264 / QuickTime</b> 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.
8	Change Quality	<b>BEST / HIGH / NORMAL / BASIC</b> Click to change the image quality.












NO.	Function	Description
9	Change Resolution	<b>4 CIF / CIF</b> Click to change the image resolution (4CIF: 704*480 / CIF: 352*240)
10	Audio Channel Selection	 1 2 3 4 Select the audio channel you want for listening to the live audio. <b>Note:</b> Your camera must support audio recording, and connect to the video channel which supports audio recording and the audio input of the DVR. For details, please refer to "1.3 Rear Panel" at page 2.  means mute. To disable the mute status, click this icon again and select the audio channel you want.

## 6.2.1 Event Playback & Download



The screenshot shows the H.264 DVR playback interface. On the left is a video window displaying a security camera feed of an office. On the right is a 'Playback' panel with a search event dropdown set to 'All' and HDD number 'HDD-0'. Below this is a list of events with columns for Event, CH, Time, and Play. A 'Time Search Panel' is also shown, with search event set to 'Manual', start time '2009/11/20 21:10:23', and channel '1'. To the right of the screenshot are several navigation icons: Previous Page, Next Page, Refresh, Switch to time search panel, Search, Switch to event search panel, Play the selected video clip, Timer, System, Motion, and Manual.

	Previous hour		Fast forward		Audio
	Fast rewind		Next hour		Snapshot
	Play		Stop		Download
	Pause		Step		

	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.
	Fast Forward	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Fast Rewind	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Play	Click to play the current video clip.
	Pause	Click to pause the video playback.
	Stop	Click to stop the video playback.
	Step	In the pause mode, click to get one frame forward.
	Audio	Click to mute the playback if necessary, and click again to restore. <b>Note:</b> Audio is available when your camera supports audio recording, and connects to the video channel which supports audio recording and the audio input of the DVR. For details, please refer to "1.3 Rear Panel" at page 2.
	Snapshot	Click to take a snapshot of the current view, and save it to the specified path in your PC set in  → "General".
	Download	Click to download the current video clip to the specified path in your PC.

# APPENDIX 1 SPECIFICATIONS

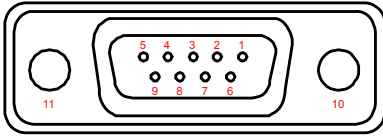
Video System	NTSC / PAL (auto detection)	
Video Compression Format	H.264	
Video Input (composite video signal 1 Vp-p 75Ω BNC)	4 channels	
Video Output (BNC)	Main Monitor	For stable display
	Call Monitor	For sequence display
VGA Output (VGA)	Built-in VGA interface for LCD monitor	
Audio Input / Output	4 audio inputs, 1 audio output (Mono)	
Maximum Recording Rate	Frame	704×480 pixels with 30 IPS <NTSC> / 704×576 with 25 IPS <PAL>
Maximum Recording Rate	Field	704×240 pixels with 60 IPS <NTSC> / 704×288 pixels with 50 IPS <PAL>
Maximum Recording Rate	CIF	352×240 pixels with 120 IPS <NTSC> / 352×288 pixels with 100 IPS <PAL>
Image Quality Setting	SUPER BEST / BEST / HIGH / NORMAL	
Hard Disk Storage	Accommodates 1 SATA HDD (capacity up to 2TB)	
Quick Search	Time / Motion / Alarm search mode	
SATA Interface	Built-in	
Recording Mode	Manual / Timer / Motion / Alarm / Remote	
Multiplex Operation	Live display / record / playback / backup / network operations	
USB Mouse Control	YES	
Motion Detection Area	16 × 12 grids per camera for all channels	
Motion Detection Sensitivity	3 adjustable parameters for accurate detection	
Pre-alarm Recording	YES	
Backup Device	USB 2.0 flash drive / Network / DVD Writer	
Web Transmitting Compression Format	H.264	
Ethernet	10/100 Base-T. Supports remote control and live view via Ethernet	
Web Interface	Supports licensed software "Video Viewer" / Internet Explorer & Mozilla Firefox web browsers / QuickTime (10 users access simultaneously)	
	*Operating System: Windows 7 / Vista / XP / 2000	
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS	
Fully Remote Independent Operation	YES	
Event Notification	By FTP / E-Mail	
R.E.T.R. (Remote Event Trigger Recording)	YES	
IR Remote Control	YES (IR receiver built-in)	
Mobile Surveillance	YES (including iPhone, BlackBerry & WinCE)	
Picture Zoom	2X digital zoom	
PTZ Control	YES	
Alarm I/O	4 inputs, 1 output	
Key Lock (Password Protection)	YES	
Local User Level	Administrator & Operator	
Video Loss Detection	YES	
Camera Title	Supports up to 6 letters	
Video Adjustable	Hue / Saturation / Contrast / Brightness	
Date Display Format	YY/MM/DD, DD/MM/YY & MM/DD/YY	
Daylight Saving	YES	
Power Source (±10%)	DC 19V	
Power Consumption (±10%)	< 42 W	
Operating Temperature	10°C ~ 40°C (50°F~104°F)	
Dimensions (mm)**	343(W) × 59(H) × 223(D)	
System Recovery	System auto recovery after power failure	
Optional Peripherals	Keyboard controller	

\* The specifications are subject to change without notice.

\*\* Dimensional Tolerance: ±5mm

## APPENDIX 2 PIN CONFIGURATION

Solder Side of  
9-pin D-Sub connector



PIN	FUNCTION	DESCRIPTION
<b>1~4</b>	ALARM INPUT	Connect ALARM INPUT (PIN1 – 4) and GND (PIN5) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 1 is Alarm 1. Once the alarm is triggered, the CH1 of the DVR will start alarm-triggered recording. PIN 2 is Alarm 2. Once the alarm is triggered, the CH2 of the DVR will start alarm-triggered recording. PIN 3 is Alarm 3. Once the alarm is triggered, the CH3 of the DVR will start alarm-triggered recording. PIN 4 is Alarm 4. Once the alarm is triggered, the CH4 of the DVR will start alarm-triggered recording.
<b>5</b>	GND	GROUND
<b>6</b>	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.
<b>7</b>	EXTERNAL ALARM NO	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.
<b>8</b>	RS485-A	Using RS-485 serial communication signals, DVR can be controlled by keyboard controller.
<b>9</b>	RS485-B	Using RS-485 serial communication signals, DVR can be controlled by keyboard controller.
<b>10~11</b>	GND	GROUND

## APPENDIX 3 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 4 COMPATIBLE SATA HDD LIST

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table.

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
	WD10EADS	1TB	7200 rpm
	WD15EADS	1.5TB	7200 rpm
	WD20EADS	2TB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
HITACHI	HDT725032VLA360	320GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm

# APPENDIX 5 MAIN MENU STRUCTURE

	QUICK START	GENERAL	CHANNEL TITLE
			EVENT STATUS
			DATE DISPLAY
			IMAGE SIZE
			QUALITY
			IMAGE PER SECOND
		TIME SETUP	DATE
			TIME
	DATE SETUP	DATE INFO	DISPLAY DATE OF MODE
			FORMAT
		DAYLIGHT	DAYLIGHT SAVING
	SYSTEM	TOOLS	LANGUAGE
			ADMIN PASSWORD
			OPERATOR PASSWORD
			UPGRADE
			BACKUP
		SYSTEM INFO	BAUD RATE
			HOST ID
			R.E.T.R.
			AUTO KEY LOCK
			CLEAR HDD
			RESET DEFAULT
			REMOTE CONTROL ID
			SERIAL TYPE
VIDEO FORMAT			
VERSION			
	EVENT INFORMATION	QUICK SEARCH	
		EVENT SEARCH	
		HDD INFO	
		EVENT LOG	
	ADVANCE CONFIG	CAMERA	BRIGHTNESS
			CONTRAST
			SATURATION
			HUE
			COV.
			REC
		DETECTION	CHANNEL TITLE
			LS
			SS
			TS
			DET
			ALARM
		ALERT	AREA
			EXT. ALERT
			INT. BUZZER
			KEY BUZZER
			VLOSS BUZZER
			MOTION BUZZER
			ALARM BUZZER
			HDD BUZZER
		ALARM DURATION (SEC)	
HDD NEARLY FULL (GB)			
NETWORK			
SNTP	GMT		
	NTP SERVER		
	SYNC PERIOD		
DISPLAY	SCREEN DWELL DURATION		
	VGA OUTPUT		
	DISPLAY COVERT		
	HDD DISPLAY MODE		
	DISPLAY OUTPUT PATH		
	ALPHA BLENDING		
RECORD	MANUAL RECORD ENABLE		
	EVENT RECORD ENABLE		
	TIMER RECORD ENABLE		
	EVENT RECORD IPS		
	TIMER RECORD IPS		
	PRE-ALARM RECORD		
	OVERWRITE		
	EVENT RECORD ALL CHANNEL		
	KEEP DATA LIMIT (DAYS)		
REMOTE			
DCCS			
	SCHEDULE SETTING	RECORD	
		DETECTION	

## APPENDIX 6 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.

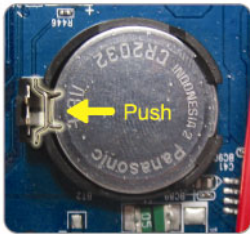
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Step1: Stop all DVR recording **immediately** to prevent the disorder of the recorded data. Then, back up the recorded data if necessary.

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 DVR cover and connect to power.

Step7: Set DVR date & time, and resume recording. For details, please refer to “2.4 Date and Time Setting” at page 6, and “5.5.7 RECORD” at page 23.