# H.264 Network DVR User Manual

# **GUI Display with USB 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

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.

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# 1. BEFORE USING THIS DVR

# 1.1 Package Content

| □ DVR   | ☐ HDD screws                      |
|---|-----------------------------------|
| ☐ IR Remote Controller                            | ☐ Manual for IR Remote Controller |
| □ IR Receiver Extension Cable                     | ☐ CD Manual                       |
| □ Adapter & Power cord                            | ☐ USB Mouse                       |
| ☐ 25 Pin DSUB Connector                           |                                   |
| → 4CH Model                                       |                                   |
| □ DVR   | ☐ HDD screws                      |
| ☐ IR Remote Controller (For Selected Models Only) | ☐ Manual for IR Remote Controller |
| ☐ CD Manual                                       | ☐ Adapter & Power cord            |
|   |                                   |
| Front Panel                                       |                                   |
| LED Indicators                                    |                                   |

#### 1)

HDD is reading or recording.

4 An alarm is triggered.

Timer recording is on.

 $\triangleright$ Under playback status.

(I) DVR is powered on.

#### 2) $\parallel (\triangle)/ \parallel (\nabla)/ \leftrightarrow (\triangleleft)/ \Rightarrow (\triangleright)$

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

In the playback mode:

Press " II " to pause playback.

Press "■" to stop playback.

Press "▶" to fast forward.

#### 3) MENU

Press "MENU" to enter the main menu.

#### **ENTER** 4)

Press "ENTER" to confirm the setting.

#### LIST (Event List Search)

Press to quickly search the recorded files by four event lists: RECORD LIST / MOTION LIST / ALARM LIST / TIME LIST, or select FULL LIST to show all the event logs. To quickly search the time you want, select "QUICK SEARCH". Set the time range you want, and select "Start" to play the recorded video clip during the specified time.

6) PLAY

Press to playback the latest recorded data.

7) SLOW

In the playback mode, press to show slow playback.

8) <u>ZOOM</u>

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

9) <u>SEQ</u>

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.

10)

Press to show the 4-channel display mode.

11) CH1 ~ 16 / 1 ~ 8 / 1 ~ 4

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

12) SEARCH

Press to enter the time search menu. Set the time range you want, and select "START" to play the recorded video clip during the specified time.

13) AUDIO (SLOW + ZOOM)

Press "SLOW" + "ZOOM" 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

14) P.T.Z. ( + SEQ) (For Selected Models Only)

Press "H" + "SEQ" at the same time to enter / exit the PTZ control mode.

15) 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 2 COMPATIBLE USB FLASH DRIVE LIST" at page 48.

16) ≜ (For selected models only)

Press "A" to open / close the DVD writer.

#### 1.3 Rear Panel

1) <u>75Ω / HI-IMPEDANCE</u> (For Selected Models Only)

When using Loop function, please switch to HI-IMPEDANCE. When you don't use Loop function, please switch to  $75\Omega$ .

2) <u>VIDEO IN (1 ~ 16 / 1 ~ 8 / 1 ~ 4):</u> Connect to the video connector of a camera. <u>VIDEO LOOP (1 ~ 16 / 1 ~ 8):</u> Video output connector. (For Selected Models Only)

**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.

#### 3) 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.

#### 4) AUDIO OUT

Connect to a speaker with 1 mono audio output.

**Note:** To know how many audio outputs your DVR supports, please refer to its specifications.

#### 5) 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 "4.5 Video Output Switch" at page 17.

6) <u>CALL</u> (For Selected Models Only)

Connect to a monitor specific for sequence display.

7) 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 "4.5 Video Output Switch" at page 17.

8) IR (For Selected Models Only)

Connect the IR receiver extension line for remote control.

#### 9) EXTERNAL I/O

This port is used to connect external devices (such as speed dome cameras or external alarm, etc).

For detailed I/O port PIN configuration, please refer to "APPENDIX 6 PIN CONFIGURATION" at page 53.

# 10) <u>LAN</u>

Connect to Internet by LAN cable.

# 11) DC 19V

Connect to the supplied adapter.

# 12) 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.

**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 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 "5.6.4 Clear All HDD Data" at page 27.

#### For 16CH & 8CH Models

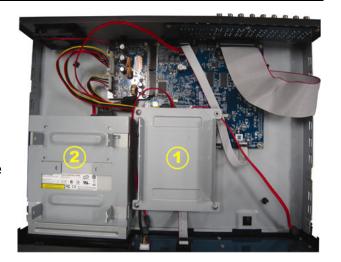
Step1:Loose the screws on the upper cover and open the upper cover of the DVR.

**Note:** The DVR cover is made of metal. Please be careful with its edge when you remove the cover.

Step2: There are two HDD brackets for this DVR as indicated on the right picture.

2-1 To install on the first bracket
Remove the bracket, and align
the screw holes of the bracket
with the HDD's screw holes. Make
sure the PCB side of the HDD is
facing up.

Fasten the HDD to the bracket, and connect the power connector and data bus connector to the HDD. Then, replace the bracket to DVR.

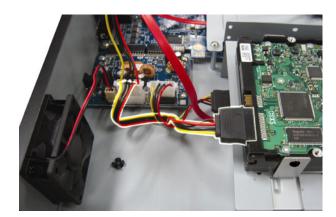


#### 2-2 To install on the second bracket

Connect the power connector and data bus connector to the HDD.

When connecting the power cable, make sure the cable is passed through the power cable of DVD writer. This is to prevent the HDD power cable from interfering with the fan spinning.

Align the screw holes of the bracket with the HDD's screw holes. Make sure the PCB side of the HDD is facing up. Then, fasten the HDD to the bracket.



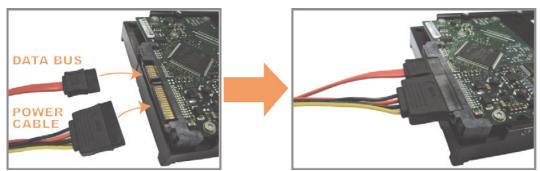
**Note:** For DVD writer installation, please refer to "APPENDIX 7 DVD WRITER INSTALLATION" at page 56.

Step3: Close the upper cover of the DVR, and fasten all the screws you loosened in Step1.

#### For 4CH Model

Step1:Loose the screws on the upper cover and remove it from the DVR. Find the two HDD brackets located on the DVR base.

Step2: Get a compatible HDD, and connect it to the power connector and data bus connector.



Step3: Make sure the PCB side is facing up, and place the HDD between the HDD brackets on the DVR base as shown below.

Make sure the other side of the HDD is contacted with the DVR base for heat conduction.



Step4: Align the screw hole on the each bracket with the screw hole on the each side of the HDD as shown below, and fix the HDD to the bracket with a HDD screw supplied.



Step5: Close the upper cover of the DVR, and fasten all the screws you loosened in Step 1.

## 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.

**Note:** For detailed DVR video input ports, please refer to "1.3 Rear Panel" at page 3.

#### 2.2.1 Normal Camera Connection

**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.

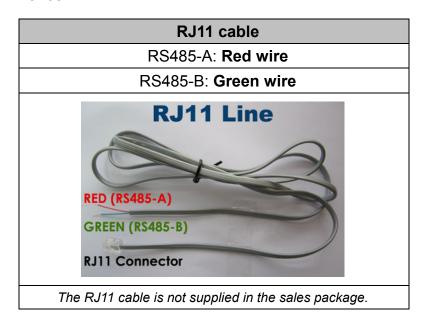
#### 3) Connecting to power

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

#### 2.2.2 PTZ Camera Connection (For Selected Models Only)

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

For DVR setting to control the PTZ camera, please refer to "5.5 PTZ Camera Setting" at page 23. For detailed PTZ camera control and operation, please refer to its own user manual.



#### 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.

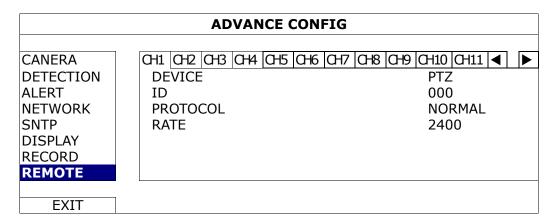
Solder the RS485-A (red) and RS485-B (green) wires of the RJ11 cable to the corresponding pins on the solder side of the optional D-Sub connector.

For DVR PIN configuration, please refer to "APPENDIX 6 PIN CONFIGURATION" at page 53. For connection details, please check with your installer.

#### 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.



#### 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, and check the monitor (either LCD or CRT monitor) is connected to the DVR before the DVR is powered on for correct video output detection.

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

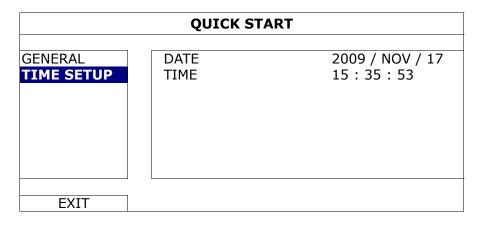
# 2.4 Date and Time Setting

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

**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:** 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 5 DVR BATTERY REPLACEMENT" at page 52.

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.



#### 2.5 Clear Hard Disk

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

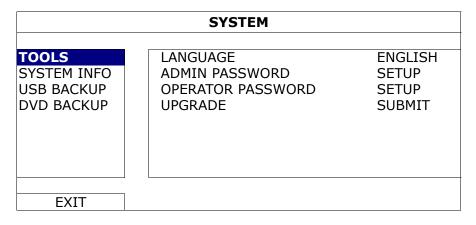
Right-click to show the main menu, and select "SYSTEM" → "SYSTEM INFO" → "CLEAR HDD". The DVR will reboot when HDD data are cleared.

| SYSTEM                                  |  |  |  |  |
|---|--|--|--|--|
| TOOLS SYSTEM INFO USB BACKUP DVD BACKUP | BAUD RATE HOST ID R.E.T.R AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION | 2400<br>000<br>5<br>NEVER<br>HDD-0<br>SUBMIT<br>000<br>RS485<br>NTSC |  |  |
| EXIT                                    |  |  |  |  |

# 2.6 Password Setting

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

There are two user levels: ADMIN & OPERATOR. For details, please refer to "4.4 User Level Switch" at page 17.



# 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 ( $^{\circ}$ ) 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 "4.4 User Level Switch" at page 17.

#### **Password Input**



**Quick Menu: Close** 

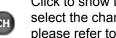


#### 3.2 Quick Menu Bar

Move to the arrow mark to extend the guick 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 13.

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 16.

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 13.

#### 3.2.1 Channel Switch

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

**Note:** The buttons available depend on the model you have.



| 1~16 | Video Channel Number | 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. |
|      |                      | When this function is on, 🚇 will be shown on the status bar.  |
|      | Quad Display         | Press to show the 4-channel display mode.   |
|      | 9-Cut Display        | Press to show the 9-channel display mode.   |
|      | 16-Cut Display       | Press to show the 16-channel display mode.  |

# 3.2.2 PTZ Control Panel (For Selected Models Only)

**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.  |
|---------------------|-----------------------------|--|
| 1                   | Enter                       | Click to confirm your selection / enter the menu.  |
|                     | Up / Down / Left /<br>Right | Click to move your selection up / down / left / right, or change settings.   |
| <b>+</b> / <b>-</b> | Zoom in / out max           | Click to zoom in on the image to the largest / zoom out on the image to its original size.   |
| <b>Q</b> / <b>Q</b> | Zoom in / out               | Click to zoom in / out the image.  |
| <b>3</b>            | Focus near / far            | Click to adjust the focus of the image.  |
| AUTO                | 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              | 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 the menu structure, please refer to "APPENDIX 4 MAIN MENU STRUCTURE" at page 50.

#### Main Menu



|            | QUICK START          | Click to set the status display, image settings, and date & time.                       |
|------------|----------------------|---|
| 1.         | DATE SETUP           | Click to set the date display and daylight saving.                                      |
|            | SYSTEM               | Click to set the system configurations.   |
|            | EVENT<br>INFORMATION | Click to enter the event search menu.   |
| Yi         | ADVANCE<br>CONFIG    | Click to set CAMERA, DETECTION,<br>ALERT, NETWORK, SNTP, DISPLAY,<br>RECORD and REMOTE. |
| $\bigcirc$ | SCHEDULE<br>SETTING  | Click to set record timer and detection timer.  |

# 4. BASIC OPERATION

# 4.1 Live Page



| Icon         | Function                 | Icon         | Function                           | Icon         | Function                |
|--------------|--------------------------|--------------|------------------------------------|--------------|-------------------------|
| 4            | Live audio channel (1~4) | <b>4</b>     | Playback audio channel (1~4)       | 4            | Audio channel off       |
| <b>Q</b>     | Digital zoom on          | <b>(</b>     | Digital zoom off                   | <b>®</b>     | Timer recording         |
| <b>&amp;</b> | Network disconnected     | 8            | Internet connected                 |              | LAN connected           |
| 8            | USB mouse connected      | <b>⇔</b>     | USB flash drive / device connected | 8            | No USB device connected |
| <u>_</u>     | Key lock                 | <u></u>      | PTZ mode on                        | <b>CD</b>    | HDD overwrite           |
| <b>2</b>     | Administrator            | 2            | Operator                           |              | Sequence                |
| €            | Motion                   | $\mathbf{x}$ | Recording                          | <b>(0-0)</b> | Alarm                   |

# 4.2 Record Icon

#### 1) Manual Recording

By defaults, manual recording is on ( $\nearrow$ ) 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 ( $^{\textcircled{\bullet}}$ ) or alarm icon ( $^{\textcircled{\bullet}}$ ) shows on the screen for any motion or alarm event.

#### 3) Timer Recording

When timer recording is on, you will see "9" 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 "O" on the quick menu bar to display the playback control panel, and click I to play the latest recorded video clip, or click I 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

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

#### 4.3.2 Event Search

Click to quickly search the recorded files by four event lists: RECORD LIST / MOTION LIST / ALARM LIST / TIME LIST, or select FULL LIST to show all the event logs.

To quickly search the time you want, select "QUICK SEARCH". Set the time range you want, and select "Start" to play the recorded video clip during the specified time.

# 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  $(\stackrel{\square}{\square})$ , move your USB mouse to display the password input keypad. There are two user levels for accessing the DVR: Administrator  $(\stackrel{\square}{\square})$  & Operator  $(\stackrel{\square}{\square})$ .

When the administrator password is entered, a 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,  $\triangle$  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"  $\rightarrow$  "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         | DE-INTERLACE (For Selected Models Only)         | OFF      |  |  |
| DETECTION      | FULL SCREEN DURATION                            | 03       |  |  |
| ALERT          | QUAD SCREEN DURATION (For Selected Models Only) | 03       |  |  |
| NETWORK        | DISPLAY COVERT                                  | ON       |  |  |
| SNTP           | HDD DISPLAY MODE                                | HDD SIZE |  |  |
| DISPLAY        | DISPLAY OUTPUT PATH                             | AUTO     |  |  |
| RECORD         | ALPHA BLENDING                                  | 200      |  |  |
| REMOTE         |   |          |  |  |
|                |   |          |  |  |
| EXIT           |   |          |  |  |

# 5. FREQUENTLY-USED FUNCTIONS

# 5.1 Quick Search

Press "SEARCH" on the DVR front panel to enter the time search menu as follows:

|           | QUICK SEARCH |
|-----------|--------------|
| DATE      | 2009/NOV/20  |
| TIME      | 15:17:57     |
| HARD DISK | ALL HDD      |
| SEARCH    | START        |

#### 1) DATE / TIME

Select the date & time within which includes the data you want.

#### 2) HARD DISK

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

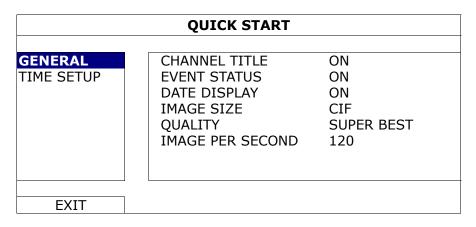
#### 3) SEARCH

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

#### 5.2 Record

# 5.2.1 Quick record setting

Right-click to display the main menu, and select "QUICK START" → "GENERAL".



#### 1) IMAGE SIZE

Select one of the image sizes: FRAME, FIELD or CIF.

#### 2) QUALITY

Select one of the 4 quality options: SUPER BEST, BEST, HIGH & NORMAL.

#### 3) IMAGE PER SECOND

Select the images per second for MANUAL RECORD.

#### 5.2.2 Detailed record setting

Right-click to display the main menu, and select "ADVANCE CONFIG" → "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<br>ALERT | EVENT RECORD ENABLE TIMER RECORD ENABLE               | ON<br>ON   |
| NETWORK<br>SNTP    | EVENT RECORD IPS TIMER RECORD IPS                     | 120<br>120 |
| DISPLAY<br>RECORD  | PRE-ALARM RECORD (For Selected Models Only) OVERWRITE | ON<br>ON   |
| REMOTE             | EVENT RECORD ALL CHANNEL                              | OFF        |
|                    | 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) <u>TIMER RECORD ENABLE</u>

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 (For Selected Models Only)

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 LIMIT (DAYS)

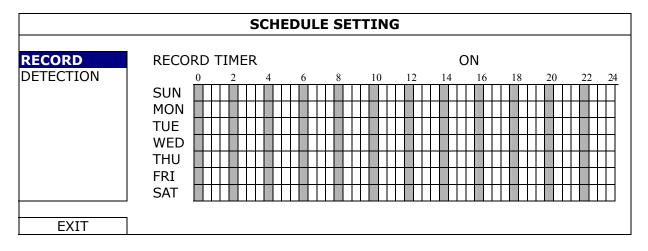
Assign the maximum recording days from 01 to 31 after which all the recorded data will be removed, or select "OFF" to disable this function.

# 5.3 Schedule Setting

Right-click to display the main menu, and select "SCHEDULE SETTING".

#### 5.3.1 Record Timer

Click "RECORD". In "RECORD TIMER", select "ON" to enable record timer, and select the day and time for this function.

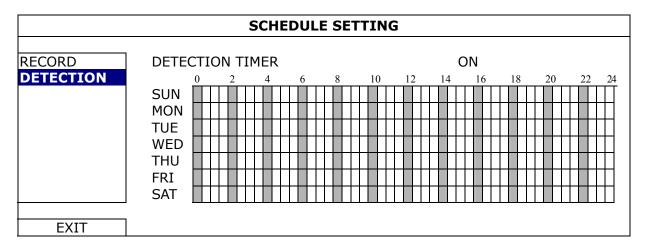


**X axis**  $0 \sim 24$  hours. Each time bar is 30 minutes.

Y axis Monday ~ Sunday.

#### 5.3.2 Detection Timer

Click "DETECTION". In "DETECTION TIMER", select "ON" to enable record timer, and select the day and time for this function.

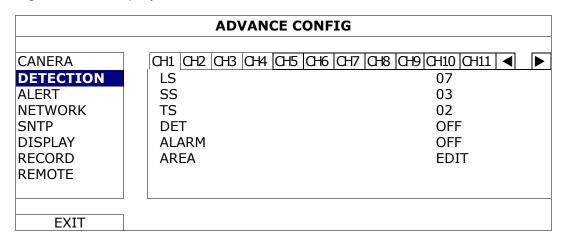


**X axis**  $0 \sim 24$  hours. Each time bar is 20 minutes.

Y axis Monday ~ Sunday.

# 5.4 Detection Setting

Right-click to display the main menu, and select "ADVANCE CONFIG" → "DETECTION".



#### 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) <u>DET</u>

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.

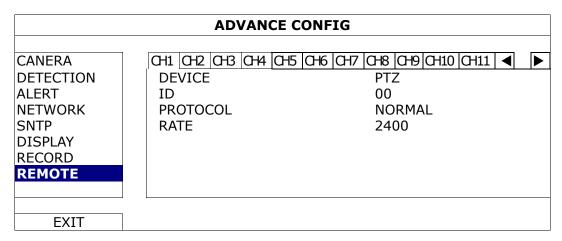
#### 6) AREA

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 PTZ Camera Setting (For Selected Models Only)

Right-click to display the main menu, and select "ADVANCE CONFIG"  $\rightarrow$  "REMOTE".



#### 1) DEVICE

For the PTZ camera, select "PTZ".

#### 2) <u>ID</u>

Click the current value to set the ID number (0  $\sim$  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).

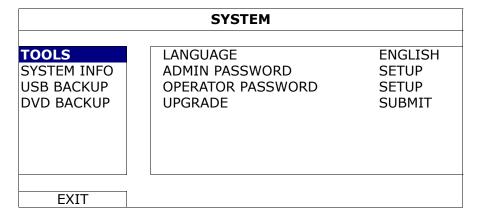
Make sure the baud rate setting of the camera is the same as the setting here, or the DVR will not be able to control the device.

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

# 5.6 System Setting

## 5.6.1 Password Setting

Right-click to display the main menu, and select "SYSTEM"  $\rightarrow$  "TOOLS".



#### 1) <u>ADMIN PASSWORD</u>

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 all operations are allowed.

#### 2) 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  $\triangle$  will be shown on the status bar of the screen and the main menu is **NOT** allowed to access.

## 5.6.2 System Upgrade

**Note:** DVR system upgrade might cause all HDD data cleared when your current system version is too old from the latest version. Therefore, before upgrading the DVR system, check your current firmware version with your installer or distributor, and make video backup if necessary.

Right-click to display the main menu, and select "SYSTEM" → "TOOLS" → "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 2 COMPATIBLE USB FLASH DRIVE LIST" at page 48.

## 5.6.3 Video Backup

Right-click to display the main menu, and select "SYSTEM" → "USB BACKUP" or "DVD BACKUP".

**Note:** DVD BACKUP is only available for selected models. Please check the specifications of your DVR model for details.

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 2 COMPATIBLE USB FLASH DRIVE LIST" at page 48.

| SYSTEM                        |                            |             |      |           |      |  |  |
|-------------------------------|----------------------------|-------------|------|-----------|------|--|--|
|                               |                            |             |      |           |      |  |  |
| TOOLS                         | START DATE                 | 2009/NOV/19 |      |           |      |  |  |
| SYSTEM INFO                   | START TIME                 | 08:30:21    |      |           |      |  |  |
| <b>USB BACKUP</b>             | END DATE                   |             | 200  | 09/NO\    | //19 |  |  |
| DVD BACKUP                    | END TIME                   |             | 17:  | :59:29    |      |  |  |
|                               | CHANNEL                    | ☑ 01        | □ 02 | □ 03      | □ 04 |  |  |
|                               |                            | ☑ 05        | □ 06 | □ 07      | □ 08 |  |  |
|                               |                            | ☑ 09        | □ 10 | $\Box$ 11 | □ 12 |  |  |
|                               |                            | ☑ 13        | □ 14 | □ 15      | □ 16 |  |  |
|                               | HARD DISK                  |             | ALI  | L HDD     |      |  |  |
|                               | BACKUP                     |             | SU   | BMIT      |      |  |  |
|                               | REQUIRE SIZE: 554MB SUBMIT |             |      |           |      |  |  |
|                               | <u> </u>                   |             |      |           |      |  |  |
| EXIT AVAILABLE SIZE: 3788.0MB |                            |             |      |           |      |  |  |

#### 1) START DATE / START TIME

Select the start date & time.

#### 2) END DATE / TIME

Select the end date & time.

#### 3) CHANNEL

Click to select the channel(s).

#### 4) HARD DISK

Select the hard disk containing the video data you need or "ALL HDD".

#### 5) BACKUP

Click "SUBMIT" to start backup.

#### 6) REQUIRE SIZE

To know the size of the expected backup video before backup, click "SUBMIT" to start calculating.

#### Backup File Playback

During the backup process, a file player installer "PLAYER.EXE" will also be copied into your USB flash drive or disk, and you will see the message "CHECK PLAYER" shown on the screen.

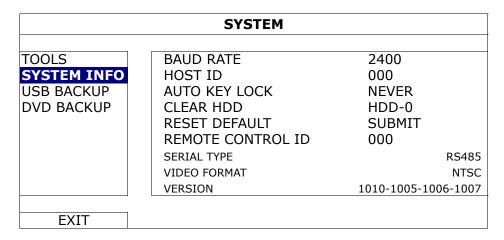
**Note:** The maximum number of CD-R or DVD-R backup files in the CD or DVD is 41.

Insert your USB flash drive or place the CD or DVD into the DVD-ROM drive of your PC. Install the file player "PLAYER.EXE", and double click a backup file to play it directly in your PC and see if the backup is successful.

**Note:** The supported PC operating systems are Windows 7, Vista, XP & 2000.

#### 5.6.4 Clear All HDD Data

Right-click to show the main menu, and select "SYSTEM" → "SYSTEM INFO" → "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.
- 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.

#### 5.7 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.

# <u>STATIC</u>

| ADVANCE CONFIG  |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| CANERA DETECTION ALERT NETWORK SNTP DISPLAY RECORD REMOTE | NETWORK TYPE IP GATEWAY NETMASK PRIMARY DNS SECONDARY DNS PORT SAVE NETWORK SETTING | STATIC<br>192.168.001.010<br>192.168.001.254<br>255.255.255.000<br>168.095.001.001<br>139.175.055.244<br>0080<br>APPLY |  |  |  |  |
| EXIT  |   |  |  |  |  |  |

#### 1) <u>NETWORK TYPE</u>

Select the network type as STATIC and set all the information needed in the DVR.

# 3) <u>NETWORK INFORMATION (IP / GATEWAY / NETMASK)</u>

Key in all the network information obtained from your ISP (Internet Service Provider).

#### 4) <u>DNS (PRIMARY DNS / SECONDARY DNS)</u>

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

#### 5) <u>PORT</u>

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.

#### 6) SAVE NETWORK SETTING

Click "APPLY" to confirm the settings.

# 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 "a" 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 "Program 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 "

" → "

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

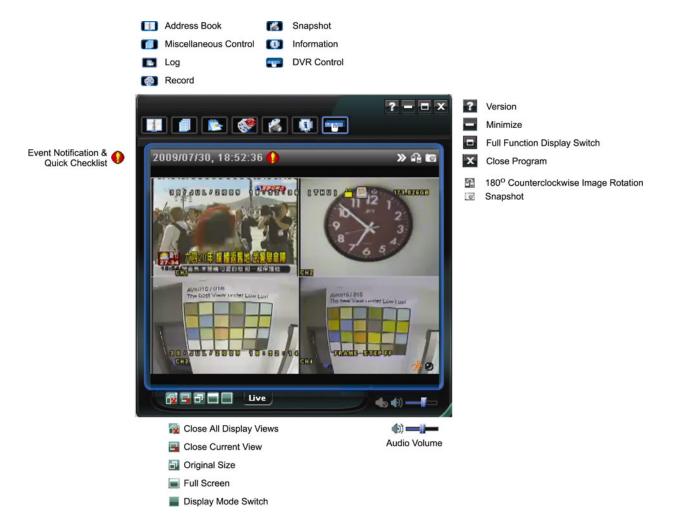
OR

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)



# **Full Function Version**



# **Main Button Overview**

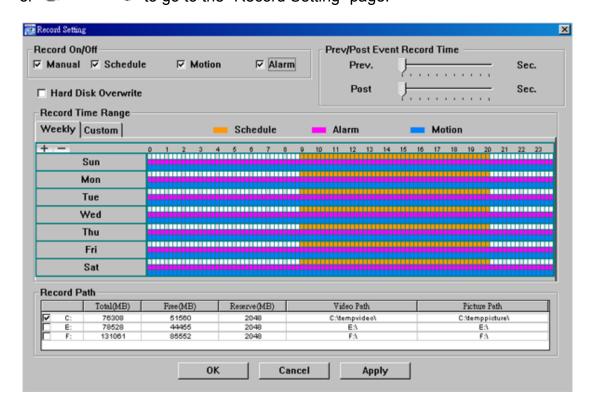
| Button     |                  |                          |   |                   |  |
|------------|------------------|--------------------------|---|-------------------|--|
| Simplified | Full<br>Function | Function Description     |   |                   |  |
| -model     | áu               | Address 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<br>Control | A   | Remote<br>Config  | Click to go into the detailed DVR setting.   |
|            |                  |                          |   | Record<br>Setting | Click to go to the detailed record setting.  |
|            |                  |                          |   | Custom<br>Setting | Click to choose the language of this program. The language change will take effect when this program is closed and executed again. |
| 12         |                  | Log                      | Click to view all event and recording logs, search the desired log(s) by date, or playback the recording of the selected log. |                   |  |

| Button                   |                     |                         | Description   |  |
|--------------------------|---------------------|-------------------------|---|--|
| Simplified Full Function |                     | Function                |   |  |
| ( <b>*</b> )             | <b>⊕</b> , <b>⊕</b> | Record /<br>Record Stop | Click to start / stop the manual recording.   |  |
| 16                       | O                   | Snapshot                | Click to take a snapshot of the current view. The snapshot will be saved in the path you specified in "Record Setting". |  |
| Ø.                       | 0                   | 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 "  $\blacksquare$  " or "  $\blacksquare$ " to go to the "Record Setting" page.



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

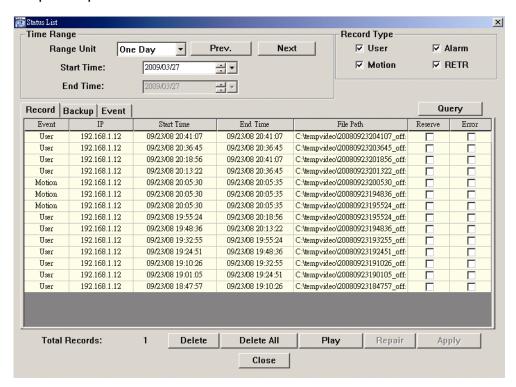
- · Record type
- · Hard disk overwriting
- · Pre- / post-alarm record time
- · Record time setting
- · Record path

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.

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 "List" or "List", 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.

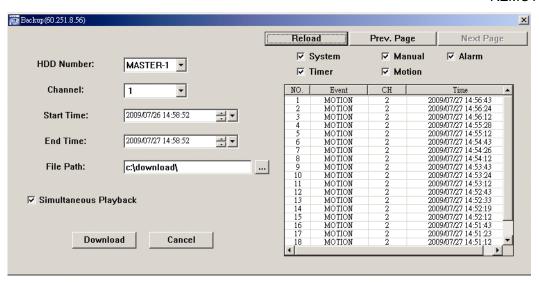


To immediately play a recording, select a log from the list, and click "Play", or double-click the selected log.

# **Network Backup**

Click "III" → "III", or click "III" 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.  • 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.  |
| 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.  |
|                       | 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.

**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.

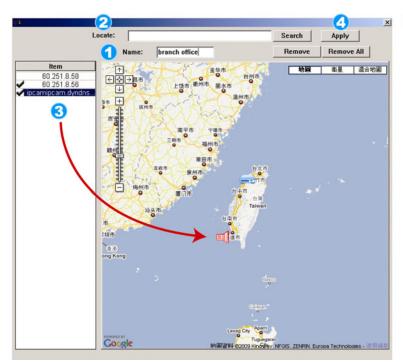
# How to Add an E-Map Group

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

**Note:** To know where the buttons are, please refer to "Simplified Version (Default) at page 31, and "Full Function Version" at page 32.



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.

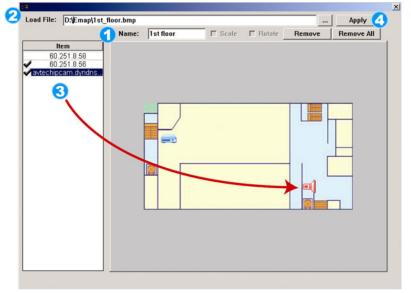


### How to add a Google E-Map group:

- Enter the name of this Google E-Map group.
- Enter a specific address or landmark, and click "Search".

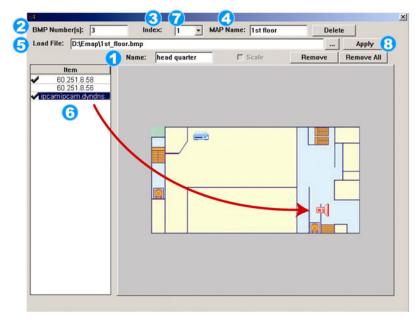
Move to the map and drag to the location you want.

- Click and drag the IP address to where it's located in the current level.
- Click "Apply" to save and finish.



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

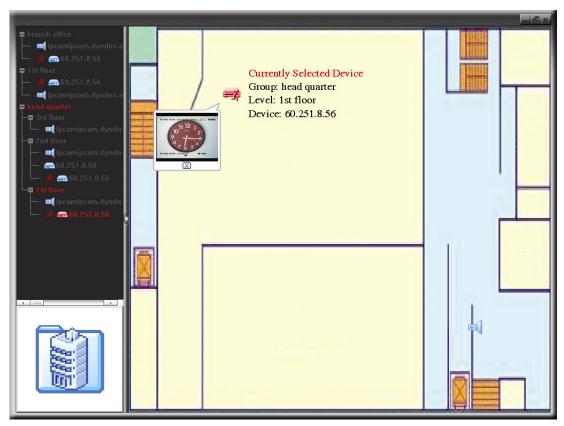
- Enter the name of this single E-Map group.
- Click "..." to browse the map file in BMP or JPEG.
- Click and drag the IP address to where it's located in the current level.
- Click "Apply" to save and finish.



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

- Enter the name of this building E-Map group.
- Enter the total levels of this building.
- 3 Select the level of the building from the drop-down list.
- Enter the name of the level.
- Click "..." to browse the map file in BMP or JPEG.
- Click and drag the IP address to where it's located in the current level.
- 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.
- 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.

URL address box, and press "Enter".

**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

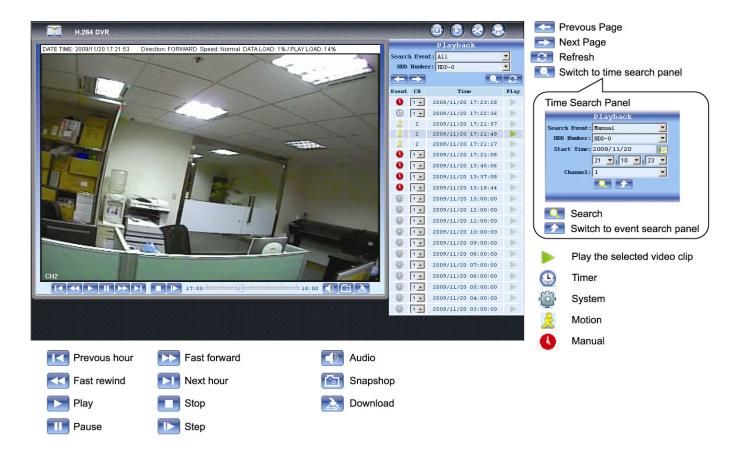
Step 2: Enter the user name and password, the same as the ones used for video viewer login, and click "OK". You will see a similar screen as the following when the login information is correct.



| NO. | Function | Description  |  |
|-----|----------|--|--|
| 1   | Home     | Click to go to the main page of the DVR.   |  |
| 2   | Playback | Click "D" 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 43. |  |
| 3   | Config.  | Click to go to the detailed DVR setting.   |  |
| 4   | PTZ      | Click to enter the PTZ mode.   |  |

| NO. | Function                | Description  |  |  |
|-----|-------------------------|--|--|--|
| 5   | Channel Selection       | Click one of the number to switch to the channel you want to see in full   |  |  |
|     | Chamier Colcotion       | screen.  |  |  |
| 6   | Display Mode            | Elick 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".  |  |  |
|     |                         | H.264 / QuickTime  |  |  |
| 7   | Web Transmission        | 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          | BEST / HIGH / NORMAL / BASIC   |  |  |
|     | Change Quality          | Click to change the image quality.   |  |  |
| 9   | Change Resolution       | 4 CIF / CIF  Click to change the image resolution (4CIF: 704*480 / CIF: 352*240)   |  |  |
|     |                         | 81234  |  |  |
|     |                         | Select the audio channel you want for listening to the live audio.   |  |  |
| 10  | Audio Channel Selection | <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 3.                            |  |  |
|     |                         | neans mute.  |  |  |
|     |                         | To disable the mute status, click this icon again and select the audio channel you want.   |  |  |

# 6.2.1 Event Playback & Download



| <b>I</b> / | Previous /<br>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.  |  |  |
|------------|-------------------------|---|--|--|
| <b>≥</b>   | Fast<br>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.  |  |  |
| <b>*</b>   | 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.  Note: 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 3. |  |  |
| <b>a</b>   | Snapshot                | Click to take a snapshot of the current view, and save it to the specified path in your PC set in "☑" → "General".  |  |  |
| <b>2</b>   | Download                | Click to download the current video clip to the specified path in your PC.  |  |  |

# **APPENDIX 1 SPECIFICATIONS**

# > For 16CH / 8CH Models

|   |                  | 16CH   | 8CH   |  |  |
|---|------------------|--|---|--|--|
| Video System  |                  | NTSC / PAL (   | NTSC / PAL (auto detection)   |  |  |
| Video Compression Format                            |                  | H.264  |   |  |  |
| Video Input<br>(composite video signal 1 Vp-p       | <b>75</b> Ω BNC) | 16 channels  | 8 channels  |  |  |
| Video Loop Output<br>(composite video signal 1 Vp-p | <b>75</b> Ω BNC) | 16 channels  | 8 channels  |  |  |
| Video Output (BNC) M                                | ain Monitor      | For stab   | le display  |  |  |
| C   | all Monitor      | For seque  | nce display   |  |  |
| Video Output (VGA)                                  |                  | Built-in VGA interfa   | ace for LCD monitor   |  |  |
| Audio Input / Output                                |                  | 4 audio inputs, 2 a  | udio outputs (Mono)   |  |  |
| Maximum Recording Rate                              | Frame            | 704×480 pixels with 120 IPS <ntsc> /<br/>704×576 pixels with 100 IPS <pal></pal></ntsc>  | 704×480 pixels with 60 IPS <ntsc> /<br/>704×576 pixels with 50 IPS <pal></pal></ntsc> |  |  |
|   | Field            | 704x240 pixels with 240 IPS <ntsc> /<br/>704×288 pixels with 200 IPS <pal></pal></ntsc>  | 704x240 pixels with 120 IPS <ntsc> / 704x288 pixels with 100 IPS <pal></pal></ntsc>   |  |  |
|   | CIF              | 352×240 pixels with 480 IPS <ntsc> /<br/>352×288 pixels with 400 IPS <pal></pal></ntsc>  | 352×240 pixels with 240 IPS <ntsc> / 352×288 pixels with 200 IPS <pal></pal></ntsc>   |  |  |
| Image Quality Setting                               |                  | SUPER BEST / BES   | ST / HIGH /NORMAL   |  |  |
| Hard Disk Storage                                   |                  | Accommodates 2 SATA HDDs (1 HDD capacity up to 2TB)  |   |  |  |
| Quick Search  |                  | Time / Motion / Alarm search mode  |   |  |  |
| SATA Interface                                      |                  | Built-in   |   |  |  |
| VGA Interface                                       |                  | Bu   | ilt-in  |  |  |
| Recording Mode                                      |                  | Manual / Timer / Mo  | tion / Alarm / Remote   |  |  |
| Multiplex Operation                                 |                  | Live display / record / playbac  | k / backup / network operations   |  |  |
| USB Mouse Control                                   |                  | Y  | ES  |  |  |
| Motion Detection Area                               |                  | 16 × 12 grids per ca   | mera for all channels   |  |  |
| Motion Detection Sensitivity                        |                  | 3 adjustable parameter   | rs for accurate detection   |  |  |
| Pre-alarm Recording                                 |                  | YES  |   |  |  |
| Backup Device                                       |                  | DVD Writer (Optional) / USB 2.0 flash drive / Network  |   |  |  |
| Web Transmitting Compres                            | sion 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 & Google Chrome web browsers / QuickTime player |   |  |  |
|   |                  | (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  |   |  |  |
| IR Remote Control                                   |                  | YES (IR receiver built-in)   |   |  |  |
| Mobile Surveillance                                 |                  | YES (including iPhone, BlackBerry, WinCE, J2ME & Android)  |   |  |  |
| Picture Zoom  |                  | 2X digital zoom  |   |  |  |
| PTZ Control   |                  | YES  |   |  |  |
| Alarm I/O   |                  | 16 inputs, 1 output  | 8 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%)       | < 64 W                                   |
| Operating Temperature          | 10°C ~ 40°C (50°F~104°F)                 |
| Dimensions (mm)**              | 432(W) × 90(H) × 326(D)                  |
| System Recovery                | System auto recovery after power failure |
| Optional Peripherals           | Keyboard controller                      |

<sup>\*</sup> The specifications are subject to change without notice.
\*\* Dimensional Tolerance: ±5mm

# > For 4CH Model

|                                     |                    |  | Model 1   | Model 2                                    |  |
|-------------------------------------|--------------------|--|---|--|--|
| Video System                        |                    | NTSC / PAL (auto detection)  |   |  |  |
| Video Compression Format            |                    | H.264  |   |  |  |
| Video Input<br>(composite v         | ideo signal 1 Vp-p | 75Ω BNC)   | 4 cha   | annels                                     |  |
| Video Outpo                         | ut (BNC)           |  | Main Monitor: F   | or stable display                          |  |
| Audio                               | Input              |  | 4 audio inputs  | 1 audio input                              |  |
| (Mono)                              | Output             |  | 1 audio   | o output                                   |  |
| Maximum F                           | Recording Rate     | Frame  | 704×480 pixels with 30 IPS <nts< td=""><td>SC&gt; / 704×576 with 25 IPS <pal></pal></td></nts<>         | SC> / 704×576 with 25 IPS <pal></pal>      |  |
|                                     |                    | Field  | 704×240 pixels with 60 IPS <ntsc< td=""><td>&gt; / 704×288 pixels with 50 IPS <pal></pal></td></ntsc<>  | > / 704×288 pixels with 50 IPS <pal></pal> |  |
|                                     |                    | CIF  | 352×240 pixels with 120 IPS <ntsc< td=""><td>&gt; / 352×288 pixels with100 IPS <pal></pal></td></ntsc<> | > / 352×288 pixels with100 IPS <pal></pal> |  |
| Image Qual                          | ity Setting        |  | SUPER BEST / BES  | ST / HIGH /NORMAL                          |  |
| Hard Disk S                         | Storage            |  | Accommodates 1 SATA   | HDD (capacity up to 2TB)                   |  |
| Quick Searc                         | ch                 |  | Time / Motion / A   | larm search mode                           |  |
| SATA Interfa                        | ace                |  | Bu  | ilt-in                                     |  |
| VGA Interfa                         | ce                 |  | Bu  | ilt-in                                     |  |
| Recording I                         | Mode               |  | Manual / Timer / Mo   | tion / Alarm / Remote                      |  |
| Multiplex O                         | peration           |  | Live display / record / playback / backup / network operations  |  |  |
| USB Mouse                           | Control            |  | YES   |  |  |
| Motion Dete                         | ection Area        |  | 16 × 12 grids per ca  | mera for all channels                      |  |
| Motion Dete                         | ection Sensitivity |  | 3 adjustable parameter  | rs for accurate detection                  |  |
| Pre-alarm Recording                 |                    | YES NO   |   |  |  |
| Backup Dev                          | vice               |  | 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                       |                    | Supports licensed software "Video Viewer" / Internet Explorer,<br>Mozilla Firefox & Google Chrome web browsers / QuickTime player<br>(5 users access simultaneously) |   |  |  |
|                                     |                    |  | *Operating System: Windows 7 / Vista / XP / 2000  |  |  |
| Network Pro                         | otocol             |  | TCP/IP, PPPOE, DHCP and DDNS  |  |  |
| Fully Remo                          | te Independent (   | Operation  | YES   |  |  |
| Event Notifi                        | cation             |  | By FTP / E-Mail   |  |  |
| IR Remote Control                   |                    | YES (IR receiver built-in)   |   |  |  |
| Mobile Surveillance                 |                    | YES (including iPhone, BlackBerry, WinCE, J2ME & Android)  |   |  |  |
| Picture Zoom                        |                    | 2X digital zoom  |   |  |  |
| PTZ Control                         |                    | YES NO   |   |  |  |
| Alarm I/O                           |                    | 4 inputs, 1 output 4 inputs, 0 output  |   |  |  |
| Key Lock (Password Protection)      |                    | YES  |   |  |  |
| Local User Level                    |                    | Administrator & Operator   |   |  |  |
| Video Loss Detection                |                    | YES  |   |  |  |

|  | Model 1                  | Model 2               |  |
|--|--------------------------|-----------------------|--|
| Camera Title Supports up to 6 letters                  |                          | to 6 letters          |  |
| Video Adjustable                                       | Hue / Saturation / Co    | ontrast / Brightness  |  |
| Date Display Format                                    | YY/MM/DD, DD/MM          | I/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 failu |                          | y after power failure |  |
| Optional Peripherals                                   | Keyboard controller NO   |                       |  |

<sup>\*</sup> The specifications are subject to change without notice.
\*\* Dimensional Tolerance: ±5mm

# **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

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 4 MAIN MENU STRUCTURE**

| GENERAL  GUALITY  IMAGE GERE  QUALITY  IMAGE PER SECOND  DATE  TIME  DATE OF MODE  FORMAT  DATE OF MODE  FORMAT  DAYLIGHT DAYLIGHT GENORE  FORMAT  DAYLIGHT SAVING  LANGUAGE  ADMIN PASSWORD  OPERATOR PASSWORD  OPE |     |                   |                                |   |
|--|-----|-------------------|--------------------------------|---|
| DATE DISPLAY IMAGE SIZE OUALITY OATE OUTP TIME DATE SETUP  DATE SETUP  DATE SETUP  DATE SETUP  DATE INFO DISPLAY DATE OF MODE FORMAT DAYLIGHT SAVING ADMIN PASSWORD OPERATOR O |     | QUICK START       | GENERAL                        | CHANNEL TITLE   |
| USB BACKUP DVD BACKUP TOWN FORMAT USB BACKUP TOWN FOR SHEARCH HDD INFO EVENT INFORMATION  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ALERT  ALERT  ALERT  IN BUZZER ALARM AREA ALERT  NETWORK SNTP GMT  GMT  ALIGNATIVE  GMT  ALARM ALERT  ALARM ALERT  ALERT  NETWORK SNTP GMT  GMT  GMT  ALT NET Selected Models Only) FULLS SCREEN DEVERTED  ALARM AREA ALERT  NIT BUZZER ALARM ALERT  NIT BUZZER ALARM ALAR |     |                   |                                |   |
| TIME SETUP  DATE SETUP  DATE SETUP  DATE SETUP  DATE SETUP  DATE SETUP  DATE INFO  DISPLAY DATE OF MODE FORMAT  DAYLIGHT  DAYLIGHT  DAYLIGHT SAVING  LANGUAGE  ADMIN PASSWORD  OPERATOR  |     |                   |                                | DATE DISPLAY  |
| TIME SETUP  DATE SETUP  DATE INFO  DATE INFO  DISPLAY DATE OF MODE FORMAT  DAYLIGHT  DAYLIGHT  DAYLIGHT  DAYLIGHT SAVING  LANGUAGE ADMIN RASSWORD  DOPRATIOR RASSWORD  DOPRATIOR RASSWORD  DOPRATIOR RASSWORD  DORRANDE BAUD RATE HOST ID AUTO KEY LOCK OLEAR HOD RESET DEFAULT REMOTE CONTROL ID SERVAL TYPE VIDEO FORMAT VERSION  USB BACKUP (For Selected Models Conly)  ADVANCE CONFIG  DETECTION  DETECTION  LS SS SATURATION HUE COV. REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT  RET BETT ALERT INT. BUZZER MOTON BUZZER ALARM BU |     |                   |                                |   |
| TIME SETUP  DATE SETUP  DATE INFO  DISPLAY DATE OF MODE FORMAT  DAYLIGHT  DAYLIGHT  DAYLIGHT  DAYLIGHT SAVING  LANGUAGE  ADMIN PASSWORD  OPERATOR PASSWORD  OPERATOR PASSWORD  OPERATOR  SYSTEM INFO  BAUD RATE HOST ID AUTO REY LOCK  CLEAR RIDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT  VERSION  USB BACKUP (For Selected Models Only)  OUICK SEARCH HOD INFO  EVENT LOG  BRIGHTNESS  CONTRAST  SATURATION  HUE COV. REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT INT BUZZER KEY BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM DUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM DUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM DUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM DUZZER ALARM BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER ALARM BUZZER ALARM BUZZER ALARM BUZZER HOD BUZZER ALARM  |     |                   |                                |   |
| DATE INFO DISPLAY DATE OF MODE FORMAT DAYLIGHT DAYLIGHT DAYLIGHT DAYLIGHT SAVING LANGUAGE ADMIN PASSWORD OPERATIOR RASSWORD UPGRADE SYSTEM TOOLS LANGUAGE ADMIN PASSWORD UPGRADE SYSTEM INFO BAUD RATE HOST ID AUTO KEY LOCK CLEAR HOD RESET OF FAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP FOR Selected Models Only) FOR Selected Models Only) EVENT INFORMATION  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ALERT BETT SATURATION HUB CCV REC CHANNEL TITLE  DETECTION LS SS TS DET ALARM AREA ALERT INT. BUZZER MOTION BUZZER MOTION BUZZER ALARM DURATION (SEC) HOD NEARLY FULL (GB)  NETWORK SNTP GMT INT. SELECTED MORE SNC PERIOD DISPLAY DEINTERLACE (For Selected Models Only) FULL SCREEN DURATION COLAR SCREEN DURATIC COLAR SCREEN DURATION COLAR SCREEN DURATION COLAR SCREEN DURATI |     |                   |                                | IMAGE PER SECOND  |
| DATE SETUP  DATE INFO  DISPLAY DATE OF MODE FORMAT  DAYLIGHT  DAYLIGHT  DAYLIGHT SAVING  LANGUAGE ADMIN PASSWORD OPERATOR PASSWORD UPGRADE  SYSTEM INFO  SYSTEM INFO  BAUD RATE HOST ID AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only)  QUICK SEARCH HDD INFO EVENT LOG  BRIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT  ALERT  ALERT  NT BUZZER KEY BUZZER MOTION BUZZER MACH BUZZER MOTION BUZZER ALARM DURATION (SEC) HDD NEZER OLD ALARM DURATION (SEC) HDD NEARLY FULL ((GB)  NETWORK SNTP GMT NTP SERVER SYNC PERIOD DE-INTERLACE (For Selected Models Only) FULL SOREED DURATION OUAD SCREED DURATION   |     |                   | TIME SETUP                     |   |
| TOOLS  DAYLIGHT  DAYLIGHT SAVING  LANGUAGE  ADMIN PASSWORD  OPERATOR PASSWORD  OPERATOR PASSWORD  OPERATOR PASSWORD  OPERATOR PASSWORD  BAUD RATE  HOST ID  AUTO KEY LOCK  CLEAR HDD  RESET DEFAULT  REMOTE CONTROL ID  SERIAL TYPE  VIDEO FORMAT  VERSION   EVENT INFORMATION  OULCK SEARCH  EVENT SEARCH  HOD INFO  EVENT LOG  CAMERA  BRIGHTNESS  CONTRAST  SATURATION  HUE  COV.  REC  CHANNEL TITLE  DETECTION  LS  SS  TS  OET  ALARM  AREA  ALERT  ALERT  INT. BUZZER  KEY BUZZER  MOTION BUZZER  ALARM BUZZER  HOD BUZZER  ALARM DURATION (SEC)  NETWORK  SNITP  GMT  NITP SERVER  SYNC PERIOD  DEINTERLACE (For Selected Models Only)  FULL SCREEN DURATION  NET SERVER  SYNC PERIOD  DEINTERLACE (For Selected Models Only)  FULL SCREEN DURATION  OUAD SCREEN DURATION  OUAD SCREEN DURATION  |     |                   |                                | TIME  |
| SYSTEM  TOOLS  LANGUAGE ADMIN PASSWORD OPERATOR PASSWORD UPGRADE  SYSTEM INFO  BAUD RATE HOST ID AUTO KEY LOCK CLEAR HOD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VIDEO FOR | JUN | DATE SETUP        | DATE INFO                      | DISPLAY DATE OF MODE  |
| SYSTEM  TOOLS  LANGUAGE ADMIN PASSWORD OPERATOR PASSWORD UPGRADE  SYSTEM INFO  BAUD RATE HOST ID AUTO KEY LOCK CLEAR HDD RESET DEPAULT REMOTE CONTROL ID SCRIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only)  EVENT INFORMATION  CAMERA  ADVANCE CONFIG  ADVANCE CONFIG  BRIGHTNESS CONTRAST SATURATION HUE COV REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT INT. BUZZER KEY BUZZER WOTION BUZZER ALARM DURATION SEC) HODD NETO  NETWORK  NETWORK  SNTP GMT NTP SERVER IND NEZER ALARM DURATION (SEC) HODD NEZER ALARM DURATION (SEC) HOD BUZZER ALARM DURATION (SEC) HOD NEZER PROPERIOR NETWORK SNITP GMT STYLE PERIOD DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION OUAD SCREEN DURATION   | 1   |                   |                                | FORMAT  |
| ADMIN PASSWORD  OPERATOR PASSWORD  UPGRADE  SYSTEM INFO  BAUD RATE HOST ID AUTO KEY LOCK CLEAR HOD RESET DETAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT  USB BACKUP DVD BACKUP (For Selected Models Only)  EVENT INFORMATION  OUICK SEARCH EVENT SEARCH HIDD INFO EVENT LOG  ADVANCE CONFIG  BEIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  DETECTION LS SS TS DET ALARM AREA ALERT INT. BUZZER KEY BUZZER MOTION BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER ALARM BUZZER HOD BUZZER ALARM BUZZER BU |     |                   | DAYLIGHT                       | DAYLIGHT SAVING   |
| OPERATOR PASSWORD UPGRADE  SYSTEM INFO  BAUD RATE HOST ID AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only)  EVENT INFORMATION  QUICK SEARCH EVENT SEARCH HDD INFO EVENT LOG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ALERT  DETECTION  LS SS TS OCY REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT  ALERT  ALERT INT BUZZER WOTON BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER ALARM BUZZER HDD BUZZER ALARM BUZZER ALARM BUZZER HDD BUZZER ALARM BUZZER |     | SYSTEM            | TOOLS                          | LANGUAGE  |
| UPGRADE  | 53  |                   |                                | ADMIN PASSWORD  |
| SYSTEM INFO  BAUD RATE HOST ID AUTO KEY LOCK CLEAR HOD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only)  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  ALERT ALERT INT. BUZZER MOTION BUZZER MOTION BUZZER MOTION BUZZER ALARM BUZZER MOTION BUZZER ALARM BUZZER MOTION BUZZER ALARM BUZZER BUZZER ALARM BUZZER ALARM BUZZER BUZ |     |                   |                                | OPERATOR PASSWORD   |
| HOST ID AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only) (For Selected Models Only) (For Selected Models Only)  ADVANCE CONFIG  ADVANCE CONFIG  CAMERA  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  CAMERA  BRIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA ALERT  ALERT  ALERT  ALERT  EXT. ALERT INT. BUZZER NOTON BUZZER ALARM BUZZER ALAR |     |                   |                                | UPGRADE   |
| AUTO KEY LOCK CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only)  ADVANCE CONFIG  AD |     |                   | SYSTEM INFO                    | BAUD RATE   |
| CLEAR HDD RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only) (For Selected Models Only)  ADVANCE CONFIG  BRIGHTNESS CONTRAST SATURATION HUE COV REC COV REC CHANNEL TITLE  LS SS TS DET ALARM AREA AREA ALERT  INT. BUZZER NOTION BUZZER ALARM BUZZER ALARM BUZZER ALARM BUZZER ALARM BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  NETWORK SNTP  GMT NTP SERVER SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION QUAD SCREEN DURATION   |     |                   |                                | HOST ID   |
| RESET DEFAULT REMOTE CONTROL ID SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP DVD BACKUP DVD BACKUP DVD BACKUP EVENT INFORMATION  QUICK SEARCH EVENT SEARCH HDD INFO EVENT LOG  ADVANCE CONFIG  BRIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  LS SS TS DET ALARM AREA ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER VLOSS BUZZER ALARM BUZZER HDD BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  NETWORK SNTP  GMT NTP SERVER SYNC PERIOD DISPLAY  DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION QUAD SCREEN DURATION   |     |                   |                                | AUTO KEY LOCK   |
| REMOTE CONTROL ID  |     |                   |                                | CLEAR HDD   |
| SERIAL TYPE VIDEO FORMAT VERSION  USB BACKUP DVD BACKUP (For Selected Models Only)  QUICK SEARCH EVENT SEARCH HDD INFO EVENT LOG  ADVANCE CONFIG  ADVANCE CONFIG  ADVANCE CONFIG  BRIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  DETECTION LS SS TS DET ALARM AREA  ALERT  EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER ALA |     |                   |                                | RESET DEFAULT   |
| USB BACKUP   DVD BACKUP   (For Selected Models Only)   |     |                   |                                | REMOTE CONTROL ID   |
| USB BACKUP   |     |                   |                                | SERIAL TYPE   |
| USB BACKUP DVD BACKUP (For Selected Models Only)  EVENT INFORMATION  QUICK SEARCH EVENT SEARCH HDD INFO EVENT LOG  EVENT LOG  CAMERA  BRIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION SECO HDD NEZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD MEARLY FULL (GB)  NETWORK  SNTP  GMT NTP SERVER SYNC PERIOD  DISPLAY  DEINT SIGNATION QUAD SCREEN DURATION QUAD SCREEN DURATION   |     |                   |                                | VIDEO FORMAT  |
| DVD BACKUP   (For Selected Models Only)  |     |                   |                                | VERSION   |
| For Selected Models Only)  |     |                   | <del> </del>                   |   |
| ADVANCE CONFIG   |     |                   |                                |   |
| EVENT SEARCH   HDD INFO  |     |                   | (For Selected Models Only)     |   |
| HDD INFO   | 4   | EVENT INFORMATION | QUICK SEARCH                   |   |
| ADVANCE CONFIG   CAMERA   BRIGHTNESS   CONTRAST   SATURATION   HUE   COV.   REC   CHANNEL TITLE  |     |                   | EVENT SEARCH                   |   |
| ADVANCE CONFIG  CAMERA  BRIGHTNESS CONTRAST SATURATION HUE COV. REC CHANNEL TITLE  DETECTION  LS SS TS DET ALARM AREA  ALERT  ALERT  INT. BUZZER KEY BUZZER VLOSS BUZZER WOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT NTP SERVER SYNC PERIOD DISPLAY  DEINTRIACE (For Selected Models Only) FULL SCREEN DURATION QUAD SCREEN DURATION   |     |                   | HDD INFO                       |   |
| CONTRAST SATURATION HUE COV. REC COV. REC CHANNEL TITLE  DETECTION LS SS TS DET ALARM AREA ALARM AREA  ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER VLOSS BUZZER WOTION BUZZER ALARM BUZZER ALARM BUZZER ALARM BUZZER HDD BUZZER ALARM BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  NETWORK SNTP GMT NTP SERVER SYNC PERIOD DISPLAY DEINTERLACE (For Selected Models Only) FULL SCREEN DURATION QUAD SCREEN DURATION   |     |                   | EVENT LOC                      |   |
| SATURATION   HUE   COV.   REC   CHANNEL TITLE  |     |                   | EVENT LOG                      |   |
| HUE  | 44  | ADVANCE CONFIG    |                                | BRIGHTNESS  |
| COV.   REC   | Yi  | ADVANCE CONFIG    |                                |   |
| REC  | Yi  | ADVANCE CONFIG    |                                | CONTRAST  |
| CHANNEL TITLE  | Yi  | ADVANCE CONFIG    |                                | CONTRAST<br>SATURATION  |
| DETECTION  | Yi  | ADVANCE CONFIG    |                                | CONTRAST SATURATION HUE COV.  |
| SS   TS   DET     ALARM   AREA     ALERT   EXT. ALERT     INT. BUZZER     KEY BUZZER     VLOSS BUZZER     MOTION BUZZER     ALARM BUZZER     HDD BUZZER     HDD BUZZER     ALARM DURATION (SEC)     HDD NEARLY FULL (GB)      NETWORK     SNTP   GMT     NTP SERVER     SYNC PERIOD     DISPLAY   DE-INTERLACE (For Selected Models Only)     FULL SCREEN DURATION     QUAD SCREEN DURATION  | Yi  | ADVANCE CONFIG    |                                | CONTRAST SATURATION HUE COV. REC  |
| TS   DET   ALARM   AREA   ALERT   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   DE-INTERLACE (For Selected Models Only)   FULL SCREEN DURATION   QUAD SCREEN DURATION  | Yi  | ADVANCE CONFIG    | CAMERA                         | CONTRAST SATURATION HUE COV. REC  |
| DET  | Yi  | ADVANCE CONFIG    | CAMERA                         | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS   |
| ALARM AREA  ALERT  EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  NETWORK SNTP  GMT NTP SERVER SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | CAMERA                         | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS  |
| AREA  ALERT  EXT. ALERT  INT. BUZZER  KEY BUZZER  VLOSS BUZZER  WOTION BUZZER  ALARM BUZZER  HDD BUZZER  ALARM DURATION (SEC)  HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT  NTP SERVER  SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | CAMERA                         | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS   |
| ALERT  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  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | CAMERA                         | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET   |
| INT. BUZZER  | Yi  | ADVANCE CONFIG    | CAMERA                         | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM   |
| 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  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA  |
| VLOSS BUZZER   | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT   |
| MOTION BUZZER  ALARM BUZZER  HDD BUZZER  ALARM DURATION (SEC)  HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT  NTP SERVER  SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER   |
| ALARM BUZZER  HDD BUZZER  ALARM DURATION (SEC)  HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT  NTP SERVER  SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION  | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER  |
| HDD BUZZER  ALARM DURATION (SEC)  HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT  NTP SERVER  SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION  | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER   |
| ALARM DURATION (SEC) HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT  NTP SERVER SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER   |
| HDD NEARLY FULL (GB)  NETWORK  SNTP  GMT  NTP SERVER  SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION  | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER  |
| NETWORK   GMT   NTP SERVER   SYNC PERIOD   | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER HDD BUZZER  |
| SNTP  GMT  NTP SERVER  SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION                      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC)  |
| NTP SERVER SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION  ALERT               | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC)  |
| SYNC PERIOD  DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION  | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)   |
| DISPLAY  DE-INTERLACE (For Selected Models Only)  FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)   |
| FULL SCREEN DURATION  QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK      | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  GMT NTP SERVER   |
| QUAD SCREEN DURATION   | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK SNTP | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER WOTION BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  GMT NTP SERVER SYNC PERIOD   |
|  | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK SNTP | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  GMT NTP SERVER SYNC PERIOD DE-INTERLACE (For Selected Models Only)           |
| (For Selected Models Only)   | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK SNTP | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER VLOSS BUZZER MOTION BUZZER ALARM BUZZER ALARM BUZZER HDD BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  GMT NTP SERVER SYNC PERIOD DE-INTERLACE (For Selected Models Only)           |
|  | Yi  | ADVANCE CONFIG    | DETECTION  ALERT  NETWORK SNTP | CONTRAST SATURATION HUE COV. REC CHANNEL TITLE LS SS TS DET ALARM AREA EXT. ALERT INT. BUZZER KEY BUZZER VLOSS BUZZER WOTION BUZZER ALARM BUZZER ALARM BUZZER ALARM BUZZER ALARM DURATION (SEC) HDD NEARLY FULL (GB)  GMT NTP SERVER SYNC PERIOD DE-INTERLACE (For Selected Models Only) FULL SCREEN DURATION |

### APPENDIX 4 MAIN MENU STRUCTURE

|                  | ADVANCE CONFIG   | DISPLAY                    | 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           |
|                  |                  |                            | (For Selected Models Only) |
|                  |                  |                            | OVERWRITE                  |
|                  |                  |                            | EVENT RECORD ALL CHANNEL   |
|                  |                  |                            | KEEP DATA LIMIT (DAYS)     |
|                  |                  | REMOTE                     |                            |
|                  |                  | (For Selected Models Only) |                            |
| $lack{f \Theta}$ | SCHEDULE SETTING | RECORD                     |                            |
| رق               |                  | DETECTION                  |                            |

# **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, <u>right away</u> 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.



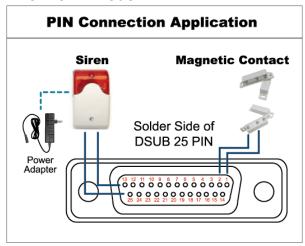
Step5: Get a new battery with the side of "CR2032" facing up, and install it to the mainboard.

Step6: Replace the 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 10, and "5.2 Record" at page 19.

# **APPENDIX 6 PIN CONFIGURATION**

### For 16CH Model



### \* The D-Sub connector shown above is optional.

### Siren:

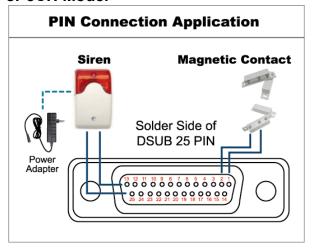
When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

# **Magnetic Contact:**

When the magnetic contact is opened, the alarm will be triggered and the recording is on.

| PIN   | FUNCTION              | DESCRIPTION   |            |                                 |        |
|-------|-----------------------|---|------------|---------------------------------|--------|
| 1     | GND                   | GROUND  |            |                                 |        |
|       |                       | Connect ALARM INPUT (PIN 2 9) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on.           |            |                                 |        |
|       |                       | PIN   | Alarm      | Corresponding video channel     | _      |
|       |                       | PIN 2   | 1          | CH1                             | _<br>_ |
|       |                       | PIN 3   | 3          | CH3                             | _      |
| 2~9   | ALARM INPUT           | PIN 4   | 5          | CH5                             | =      |
|       |                       | PIN 5   | 7          | CH7                             | _      |
|       |                       | PIN 6<br>PIN 7  | 9          | CH9<br>CH11                     | =      |
|       |                       | PIN 7<br>PIN 8  | 13         | CH13                            | _      |
|       |                       | PIN 9   | 15         | CH15                            | _      |
|       |                       |   | 10         | 01110                           | =      |
| 10~11 | PIN OFF               | NA  |            |                                 |        |
| 12    | RS485-A               |   |            |                                 |        |
| 13    | 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. |            |                                 |        |
| 14    | PIN OFF               | NA  |            |                                 |        |
|       | ALARM INPUT           | Connect ALARM INPUT (PIN 15 – 22) and GND (PIN 1) connector with wires.  Once an alarm is triggered, the DVR will start recording and the buzzer will be on.      |            |                                 |        |
|       |                       | PIN<br>PIN 15   | Alarm<br>2 | Corresponding video channel CH2 | _      |
|       |                       | PIN 16  | 4          | CH4                             | =      |
| 15~22 |                       | PIN 17  | 6          | CH6                             | _      |
| 13~22 |                       | PIN 18  | 8          | CH8                             | =      |
|       |                       | PIN 19  | 10         | CH10                            | _      |
|       |                       | PIN 20  | 12         | CH12                            | _      |
|       |                       | PIN 21  | 14         | CH14                            | _      |
|       |                       | PIN 22  | 16         | CH16                            | _      |
| 23~23 | PIN OFF               | NA  |            |                                 |        |
| 24    | RS485-B               |   |            |                                 |        |
| 25    | EXTERNAL ALARM<br>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. |            |                                 |        |

### For 8CH Model



\* The D-Sub connector shown above is optional.

### Siren:

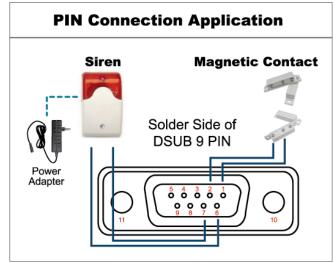
When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

# **Magnetic Contact:**

When the magnetic contact is opened, the alarm will be triggered and the recording is on.

| PIN    | FUNCTION              | DESCRIPTION  |  |
|--------|-----------------------|--|--|
| 1      | GND                   | GROUND   |  |
| 2~5    | ALARM INPUT           | Connect ALARM INPUT (PIN 2 – 5) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on.  PIN Alarm Corresponding video channel PIN 2 1 CH1 PIN 3 3 CH3 PIN 4 5 CH5 PIN 5 7 CH7       |  |
| 6 ~ 11 | PIN OFF               | NA   |  |
| 12     | RS485-A               |  |  |
| 13     | 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.  |  |
| 14     | PIN OFF               | NA   |  |
| 15~18  | ALARM INPUT           | Connect ALARM INPUT (PIN 15 – 18) and GND (PIN 1) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on.  PIN Alarm Corresponding video channel PIN 15 2 CH2 PIN 16 4 CH4 PIN 17 6 CH6 PIN 18 8 CH8 |  |
| 19~23  | PIN OFF               | NA   |  |
| 24     | RS485-B               |  |  |
| 25     | EXTERNAL ALARM<br>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.  |  |

### For 4CH Model



\* The D-Sub connector shown above is optional.

### Siren:

When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

## **Magnetic Contact:**

When the magnetic contact is opened, the alarm will be triggered and the recording is on.

| PIN   | FUNCTION              | DESCRIPTION  |  |
|-------|-----------------------|--|--|
| 1~4   | 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 Alarm Corresponding video channel PIN 1 1 CH1 PIN 2 2 CH2 PIN 3 3 CH3 PIN 4 4 CH4 |  |
| 5     | GND                   | GROUND   |  |
| 6     | EXTERNAL ALARM<br>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.  |  |
| 7     | EXTERNAL ALARM<br>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.  |  |
| 8     | RS485-A               | For Selected Models Only   |  |
| 9     | RS485-B               | For Selected Models Only   |  |
| 10~11 | GND                   | GROUND   |  |