# NVR SERIES
# Digital Video Recorder

## Quick Installation Guide

Version: 1.1

2016/03/01

# WARNING, CAUTION & COPYRIGHT

## WARNING

Reduce the risk of fire or electric shock. And do not expose this product to rain.

Do not insert any metallic object through the ventilation grills.

| CAUTION | |
|---|---|
| ⚡ | ❗ |
| 1. The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user on the presence of insinuated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. <br> 2. Areas of High Lightning Strike regions must take note to install a lightning protection device in order to prevent hardware failure or burnout of the KA- series embedded DVR. | The exclamation point within an equilateral rhombus is intended to alert the user on the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product. |
| **RISK OF ELECTRIC SHOCK DO NOT OPEN** | |
| TO REDUCE THE RISK OF ELECTRIC SHOCK <br> DO NOT REMOVE COVER (OR BACK). <br> NO USER-SERVICEABLE PARTS INSIDE <br> REFER SERVICING TO QUALIFIED SERVICE | |

**USER OF THE SYSTEM ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND STATUTES COIPCERNING. THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNAL.  ULTRAK SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS SYSTEM IN VIOLATION OF CURRENT LAWS AND STATUTES.**

1) **The apparatus should not be exposed to dripping or splashing water and that no objects filled with liquids, such as vases, should be placed on the apparatus.**

2) **CAUTION - Danger of explosion if battery is incorrectly replaced.**
   **Replace only with the same or equivalent type.**

3) **The apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earth connection.**

4) **The batteries installed should not be exposed to excessive heat such as sunshine, fire or the like.**

5) **The plug or appliance coupler shall remain readily operable for the purpose of disconnection from the mains**

# Contents :

# 1. Overview

The **Network video/audio recorders** are designed for use within a surveillance system, and are a combination of a hard disk recorder, a video multiplexer, and a web server.    To achieve the highest inter-connectivity and inter-operability, this series of network video/audio recorders are all based on industry-leading front-end to back-end surveillance infrastructure.    With state-of-the-art system architecture, powerful compression/decompression engine, and intelligent recording algorithms, sixfold operation can be easily achieved without sacrificing the increasing demands of functionality, performance, reliability, and availability in the surveillance industry.

## Features

- Up to 8/4-CH 1080p/720p IP CAM can be connected
- **H.264** video compression/decompression with configurable quality
- ADPCM audio compression/decompression
- Real sixfold operation - simultaneous record, live, playback, backup, control, & remote access
- Record capabilities –

IP CAM: 120fps@1080p, 240/200fps@720p.

- Playback capabilities –

IP CAM: 80fps@1080p, 160fps@720p.

- Max 56Mbps incoming bandwidth for IP-CAM
- Realtime live display
- **Support HDMI output and VGA output**
- **Support touch panel with USB interface**
- Event recording, time-lapse recording or both
- Playback search by time or event (alarm, motion, & video loss)
- **Snapshot playback video**
- Versatile display formats: full-screen, 4, 7, and 9 split windows
- Digital zoom, X2 & X4
- Motion detection with programmable area and sensitivity (coming soon)
- Powerful alarm processor with configurable triggering conditions and reactions
- **Support push alarm notification to mobile phones**

**One/two internal 3.5" SATA hard disk drives with storage > 4TB/HDD**

- Video/audio backup to USB2.0 storage devices

- Ethernet/USB 3G interface for remote access through web browser or proprietary remote software, remote alarm notification, FTP video/audio storage, remote setup, and remote software upgrade
- **Free DDNS server**
- **Support UPnP, P2P and QR code**
- **1 I.E./Firefox software for unlimited number of NVRs**
- PTZ control capabilities (coming soon) & RS-485 keyboard control capabilities
- Multi-lingual support
- Multi-level password and authentication key protection to ensure high degree of security
- **Dynamic streaming video for mobile phone or PDA, no Apps required**
- **Dynamic N-Streaming internet/intranet remote access**
- **Free iPhone/iPad/Android/Mac software app.**
- **GPS support**
- **POS support**
- **Support mouse operation**
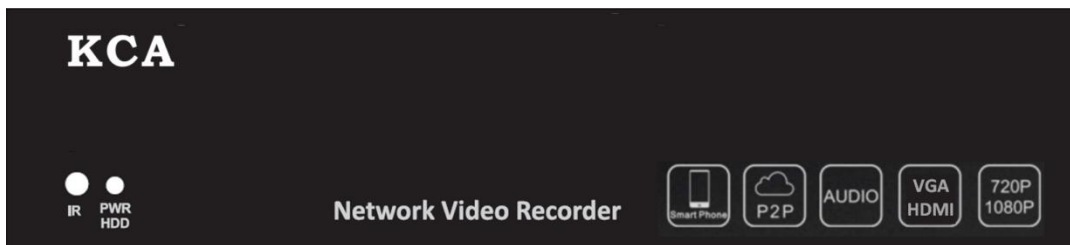
# 2. Panel Introduction

## 2.1 Standard Front Panel
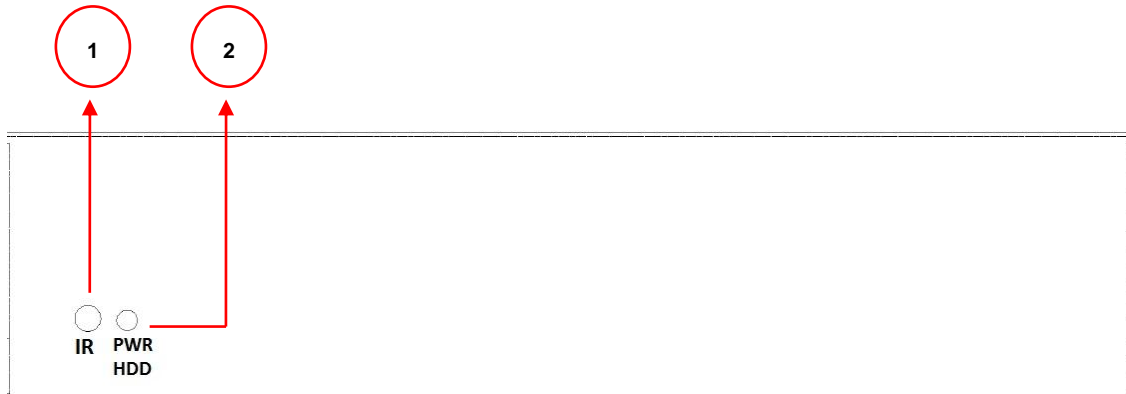


## 2.2 Standard Back Panel
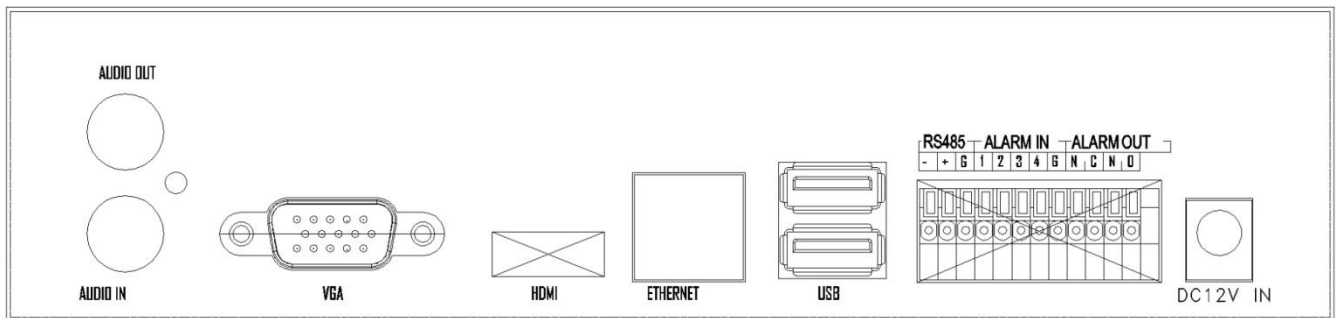


| Front Panel Interface | | | |
|---|---|---|---|
| 1 | IR Receiver | 2 | Power LED 、 HDD LED |
| **Front Back Interface** | | | |
| 1 | Audio Output | 6 | RJ45 Ethernet Port |
| 2 | Audio Input | 7 | USB Port 1 |
| 3 | IR Port | 8 | USB Port 2 |
| 4 | VGA Monitor Output | 9 | RS485 Port |
| 5 | HDMI Monitor Output | 10 | DC 12V Power In |

## 2.3 Remote Controller

The remote controller is an optional accessory to ease the user's operations. You can do all the operations by the remote controller instead of the buttons on the front panel. The effective distance is about 10 meters without any obstacle.



The buttons, the descriptions are as below:

1. **NVR ID Selection Buttons (DVR #1-4)**
   Press these buttons to select the NVR to be controlled by the remote controller. The remote controller can control up to 4 sets of NVRs. Please make sure that the NVR ID (in IR Setup) for each of the NVRs is set correctly.

2. **Alpha-numeric Buttons (1-9, 0, *, #)**
   Press these buttons for camera selection in most of the circumstances. These buttons can also be used to enter text and number in the way similar to most of the mobile phones.

**NOTE：**

The NVR Series input signal need to be pair, CH1/2 both need to be NVR 720P cameras or both to be analog cameras, CH3/4、CH5/6、CH7/8、CH9/10、CH11/12、CH13/14、CH15/16 are all the same.

Ex: If CH1 is NVR 720P camera, CH2 must to be NVR 720P camera too.

3. **Alarm Reset Button**
   Press this button to cancel alarm activation, and return the system to the condition before the alarm was activated.

4. **REC Button**
   Press this button to force manual recording. To stop manual recording, press it again.

5. **MUTE/NEXT Button**

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Press this button to mute the audio.

6. **X2/GOTO Button**

   In full screen display, press this button for Digital Zoom (X2/X4).

7. **MENU / ESC Button**

   Press this button to display the main menu or escape to the upper level display.

8. **Up/BS Button (▲/BS)**

   Press this button to move the cursor or focus window in most circumstances.　In text editing mode, this button is used as "backspace" key.

9. **Down/DEL Button (▼/DEL)**

   Press this button to move the cursor or focus window in most circumstances.　In text editing mode, this button is used as "del" key.

10. **Left/Right Buttons (◄,►)**

   Press these buttons to move the cursor or focus window.

11. **ENTER Button**

   This button is used as "enter" key.

12. **(Split Windows) +/- Buttons ( ⊞ )**

   In split-window display, press these buttons for next/previous split-window display.　In the others, press these buttons to change the contents.

13. **(Vol/Zoom) +/- Buttons ( ◻+ / ◻- / ◯ )**

   Press these buttons to change the volume.

14. **MODE Button**

   Press this button to toggle between live mode and playback mode in main screen display. In some dialogs, this button is used as a miscellaneous function key.　At playing, this button is used as "slow backward".

15. **SEQ Button**

   Press this button to switch to or return from SEQ display mode in main screen display. In some dialogs, this button is used as a miscellaneous function key.　At playing, this button is used as "slow forward".

16. **CALL Button**

    Press this button to switch to or return from full screen display of the focus camera in main screen display.   In some dialogs, this button is used as a miscellaneous function key.

17. **SEARCH Button**

    Press this button to display the search menu in main screen display.   In some dialogs, this button is used as a miscellaneous function key.

18. **Fast Backward Button ( ◀◀ )**

    Press this button for fast backward playback.

19. **Fast Forward Button ( ▶▶ )**

    Press this button for fast forward playback.

20. **Single Step Button ( ▶| )**

    Press this button to play the recorded images frame by frame.

21. **Copy Button ( 📄 )**

    Press this button to copy the playback images to the storage device connected to the USB port.   Press this button again to stop copying.

22. **Play/Pause Button ( ▶/|| )**

    Press this button to play the recorded images, or pause the playback.

23. **Stop Button ( ■ )**

    Press this button to stop the playback.

# 3. Installations

The installations described below should be made by qualified service personnel or system installers.

# 3.1 Basic Connections

Please refer to the following diagram for the connections.
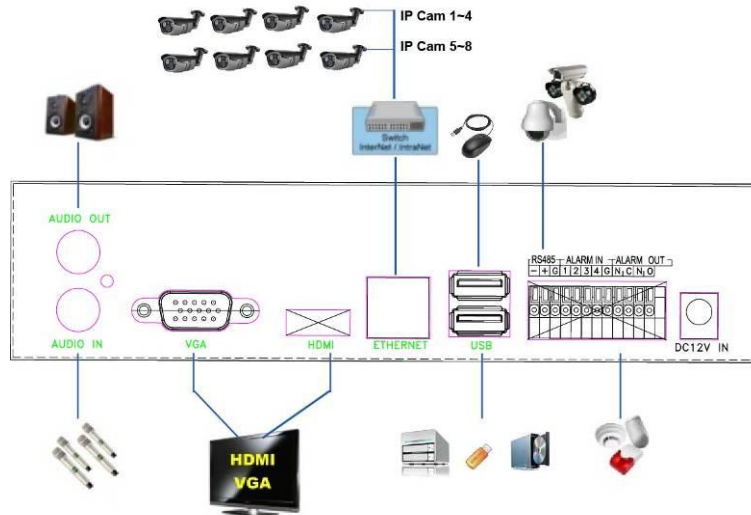


- ■ **Cameras**
  Connect the IP-CAM to the upper Ethernet ports for PoE models or to the LAN connected to the lower Ethernet port for non-PoE models.   Please make sure to setup the related configurations as described in Section 8.1.

- ■ **Main monitor**
  Connect the main monitor output connector (VGA/HDMI) to a surveillance TV/VGA monitor.   The TV/VGA monitor displays selected live or recorded cameras in any available split window format.

  **NTSC/PAL Switch**
  Select NTSC or PAL according to the local TV system. (Adjust switch inside the main board)

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NOTE：

You must select the DVR system before DVR booting. If you want to change the DVR system, please switch off the power of the DVR first.

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■ **Hard disk drive**
Make sure to install at least one SATA hard disk **(Max. storage size < 4TB)** inside the NVR. The steps are as below:

1. Power off the machine, and then use a screwdriver to uncover it

2. Connect the cables.

3. Hold the SATA HDD, and use a screwdriver to fix it.

4. Cover the machine.

Note 1: The HDD must be formatted before it can be used to record video/audio.
Please refer to Section 8.9 to format the HDD.

■ **Power**
Connect DC 12V power source to **DC 12V**.   For PoE models, please also connect DC 48V power source to **DC 48V**.

## 3.2 Optional Connections

■ **Audio input**
Connect the audio input connector to the audio line-out from some audio source.   Please make sure to associate the audio input with the cameras in Camera Setup as described in Section 8.2 accordingly.

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■ **Audio output**
Connect the audio output connector to the audio line-in from speakers.

■ **Alarm input**
Connect the alarm inputs to NC and/or NO type of alarm signals.   Please make sure to setup the alarm configurations as described in Section 8.5 accordingly.

■ **Alarm output**
Connect the alarm output #1 to NC type of alarm signal, or alarm output #2 to NO type of alarm signal.

■ **Ethernet**
Connect the (WAN) Ethernet connector to a standard twisted-pair Ethernet cable for remote access via LAN or internet.   Please make sure to setup the related configurations as described in Section 8.14.

■ **USB 2.0 disk drives, DVD+RW, card reader, etc.**
If the user wants to use USB2.0 peripheral device to retrieve important recorded images and/or audio, please connect it to the USB2.0 port connector.

**I/R remote controller**
The user may use I/R remote controller to control the digital video/audio recorder.

■ **PTZ Camera**

Connect the RS-485 connector to PTZ camera(s) via the appropriate cable.   The system supports a variety of different PTZ cameras, including Pelco D protocol Dome, SamSung SCC-641P, Kalatel Cyber Dome, Bosch AutoDome, etc.   But different PTZ cameras can coexist in a system only if they support the same protocol.   Please make sure to set the PTZ ID of the camera(s), and setup the camera (Section 8.1), and RS-422/485 (Section 8.13) accordingly.
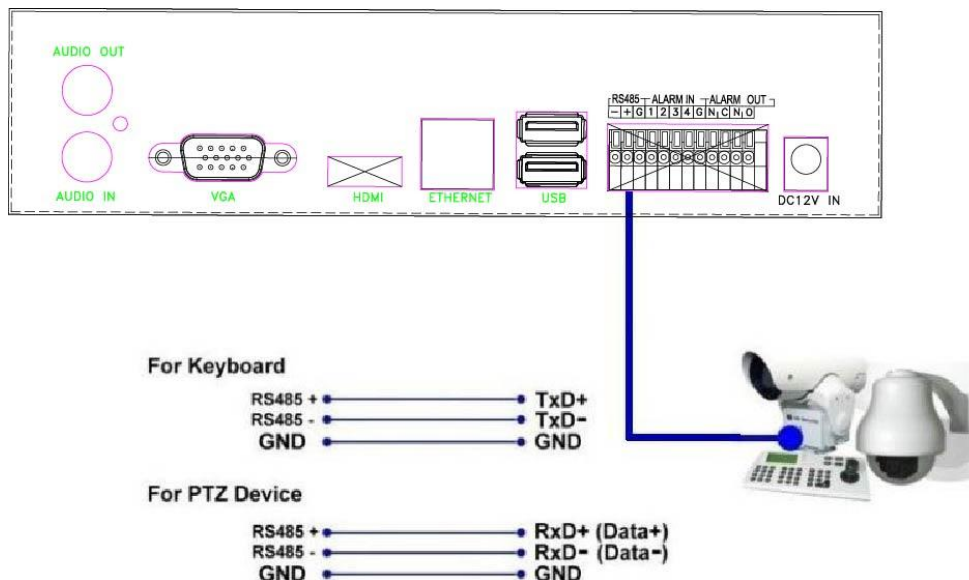


■ **RS-485 keyboard or Terminal**
Connect the RS-485 connector to a RS-485 keyboard controller or VT-100 terminal via the appropriate cables.   Please refer to the diagram above for the correct connection.   Please make

sure to setup the RS-422/485 configurations as described in Section 8.13 accordingly.

■ **POS system**
Connect the RS-485 connector to POS system via the appropriate cable.   The system supports the POS systems which can be connected to the following printers – Epson-TM200, Epson-TMU295, Epson-TMU300, Epson-TMU675, Epson-TMT882, Epson-RPU420, and Epson-MD332S.   Please make sure to setup the RS-485 port (Section 8.13) accordingly.
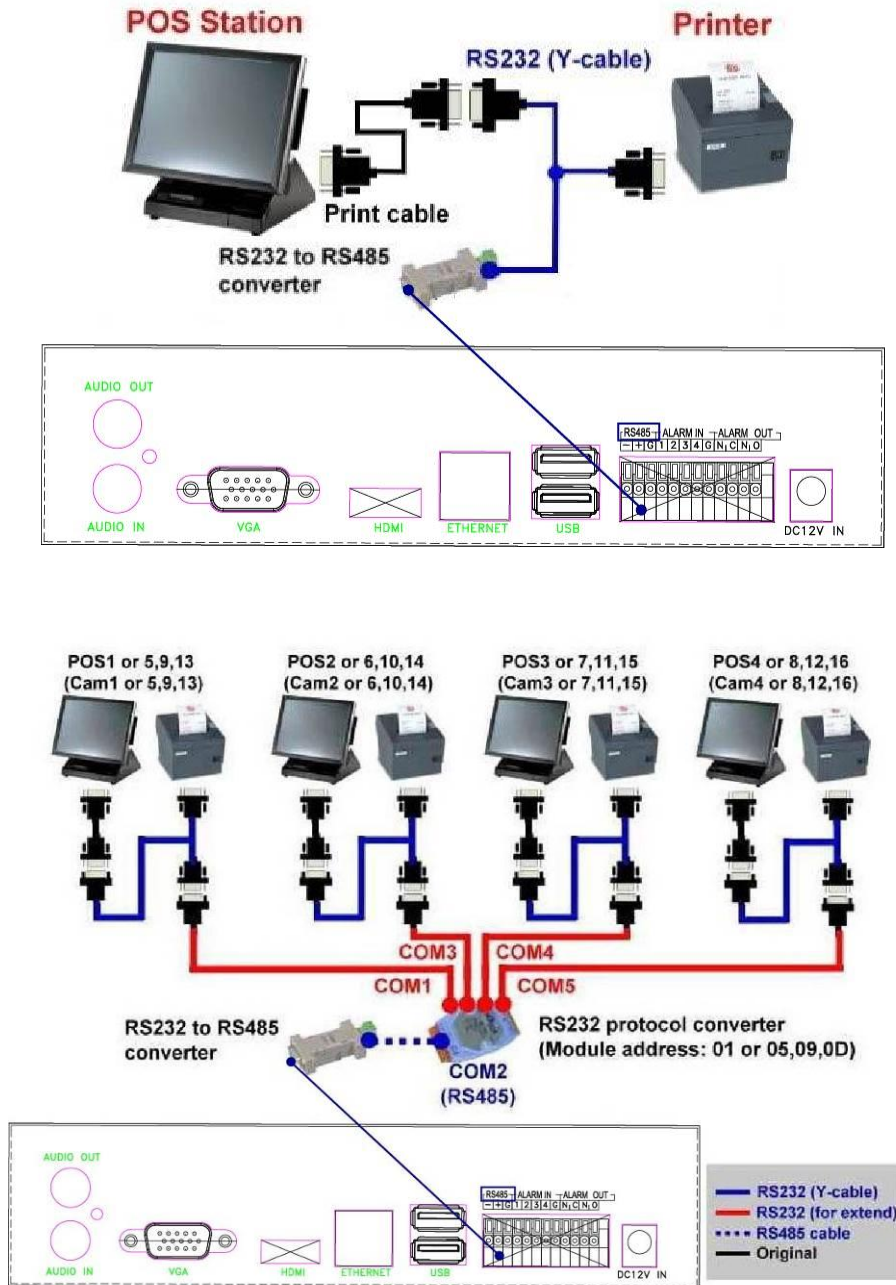
**Top figure: 1-to-1; bottom figure: RS-232/Multiple, 1-to-many**

# 4. Monitor Display Illustration

## 4.1 MONTOR Mode
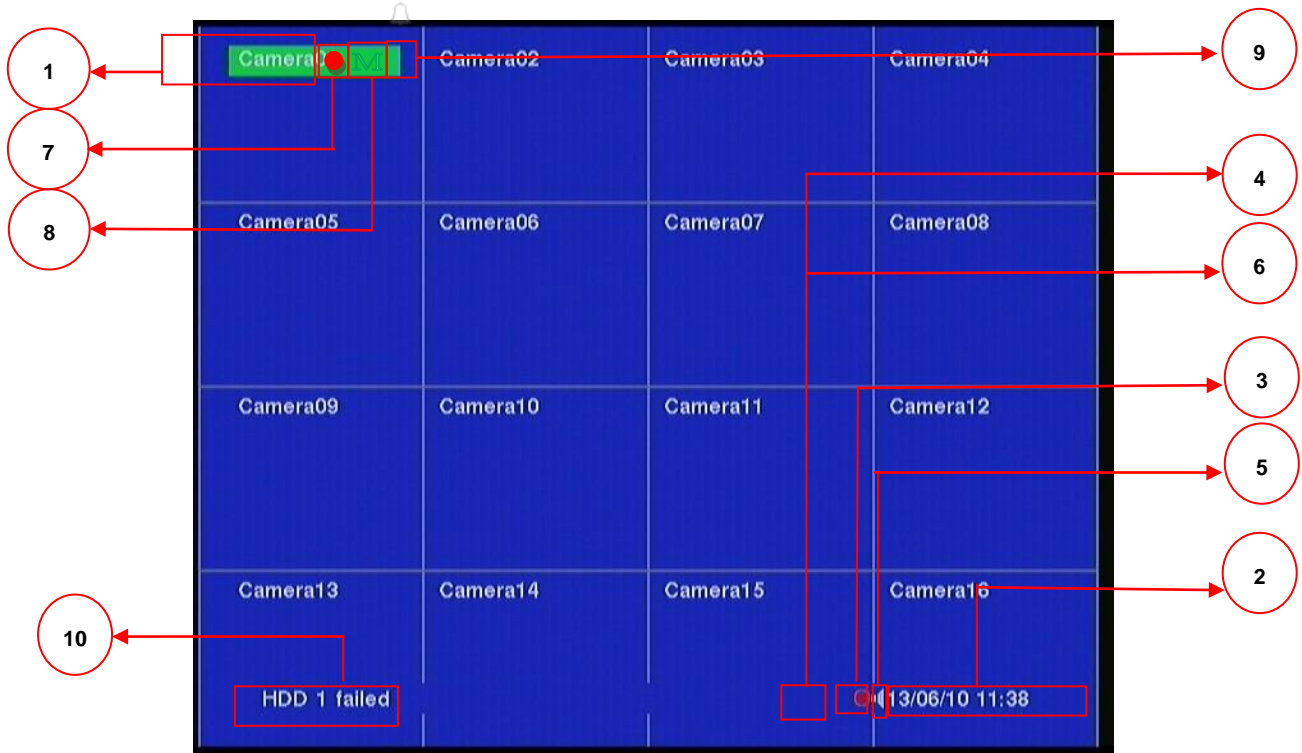


| MONITOR Mode Display illustration | | |
|---|---|---|
| **Number** | **Item** | **Camera explanation** |
| 1 | Camera name | Camera displaying name. |
| 2 | Date / Time | Show the real time date and time information. |
| 3 | Rec | The force manual recording mode |
| 4 | Digital Zoom | enable the digital zoom x2/x4 function |
| 5 | Audio | enable the audio function |
| 6 | SEQ Sign | enable the SEQ function |
| 7 | Record Status | Icon means under recording mode |
| 8 | Motion Status | Icon means under motion detection mode |
| 9 | Alarm Status | Icon means alarm connection |
| 10 | HDD Warring | Warring shows while HDD fail or not install |

## 4.2 <u>PLAYBACK Mode</u>
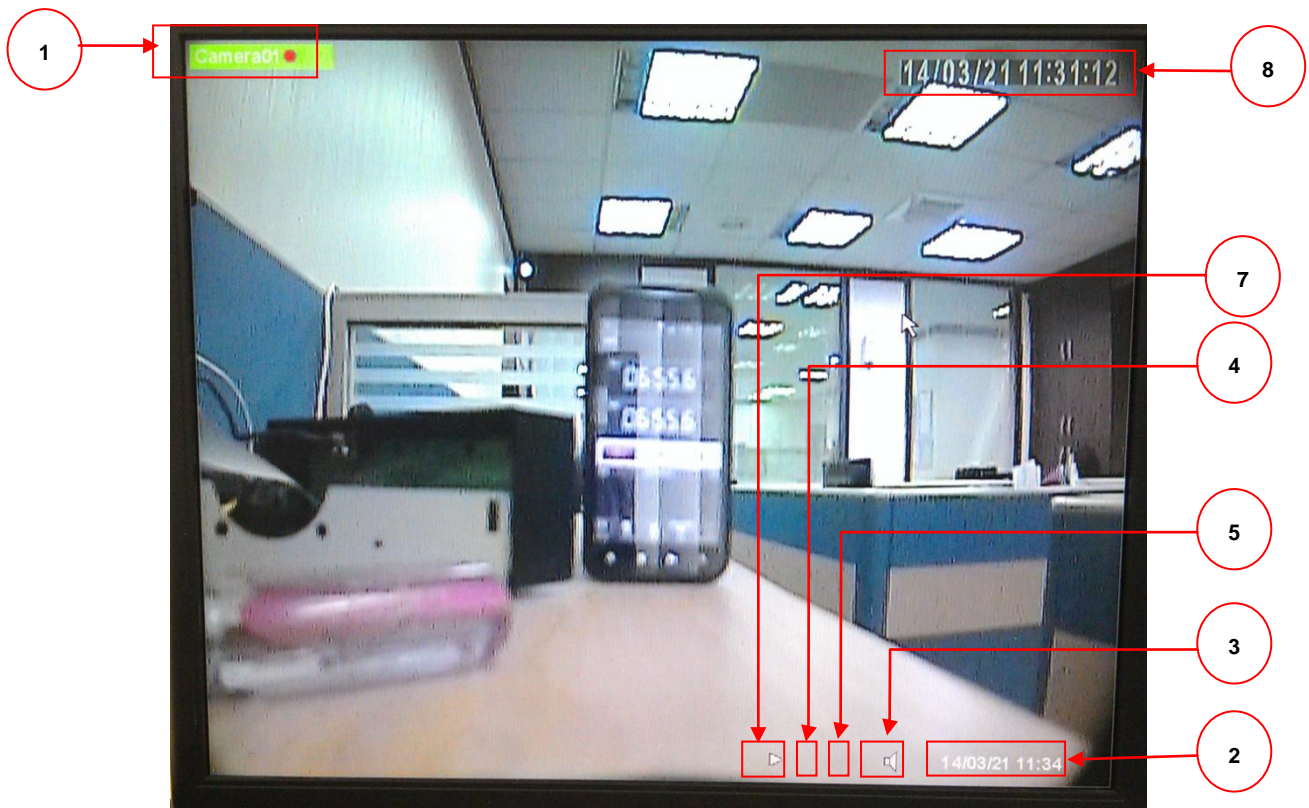


| PLAYBACK Mode Display illustration | | |
|:---:|:---|:---|
| **Number** | **Item** | **Explanation** |
| 1 | Camera name | Camera displaying name. |
| 2 | Date / Time | Shows the real time date and time information. |
| 3 | Audio | Enable the audio function |
| 4 | Digital Zoom | Enable the digital Zoom x2 / x4 |
| 5 | Rec | To force manual recording button |
| 6 | Backup State | The backup function mode |
| 7 | Playback Sign | Enable all playback functions |
| 8 | Date / Time | Show the recording date and time information. |

# 4.3 <u>MENU SETTING Mode</u>
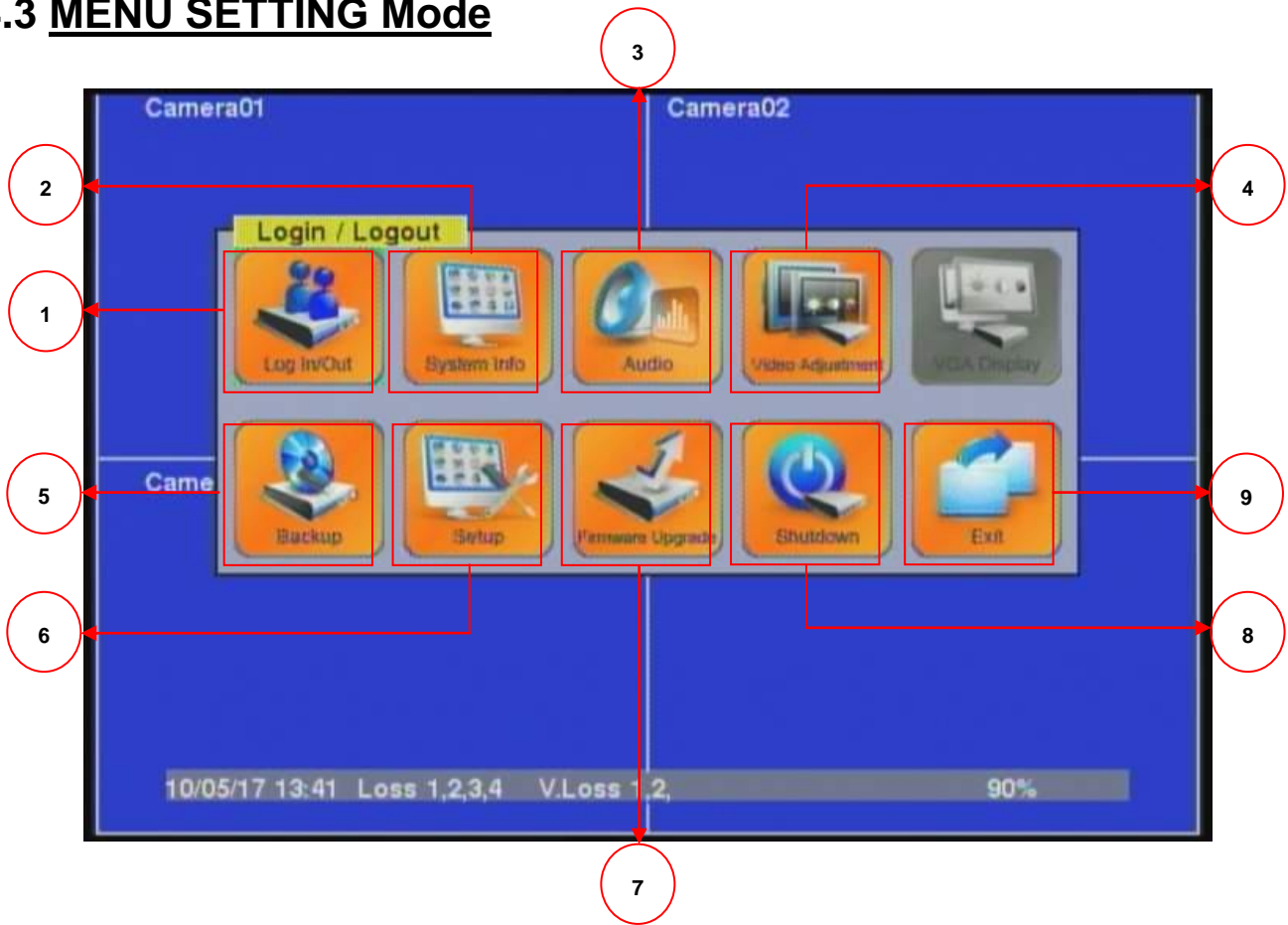


| MENU SETTING Mode Display illustration | | |
|---|---|---|
| **Number** | **Item** | **Explanation** |
| 1 | Log In/Out | Login the DVR through the account |
| 2 | System info | Shows the DVR system information |
| 3 | Audio | Adjust the audio setting of DVR |
| 4 | Video Adjustment | Adjust the camera setting |
| 5 | Backup | Use the backup function |
| 6 | Setup | Enter the SETTING Mode |
| 7 | Firmware | Update the DVR firmware through USB Flash |
| 8 | Shutdown | Switching off the power of the DVR |
| 9 | Exit | Leave the MENU SETTING mode |

## 4.4 <u>SETUP SETTING Mode</u>
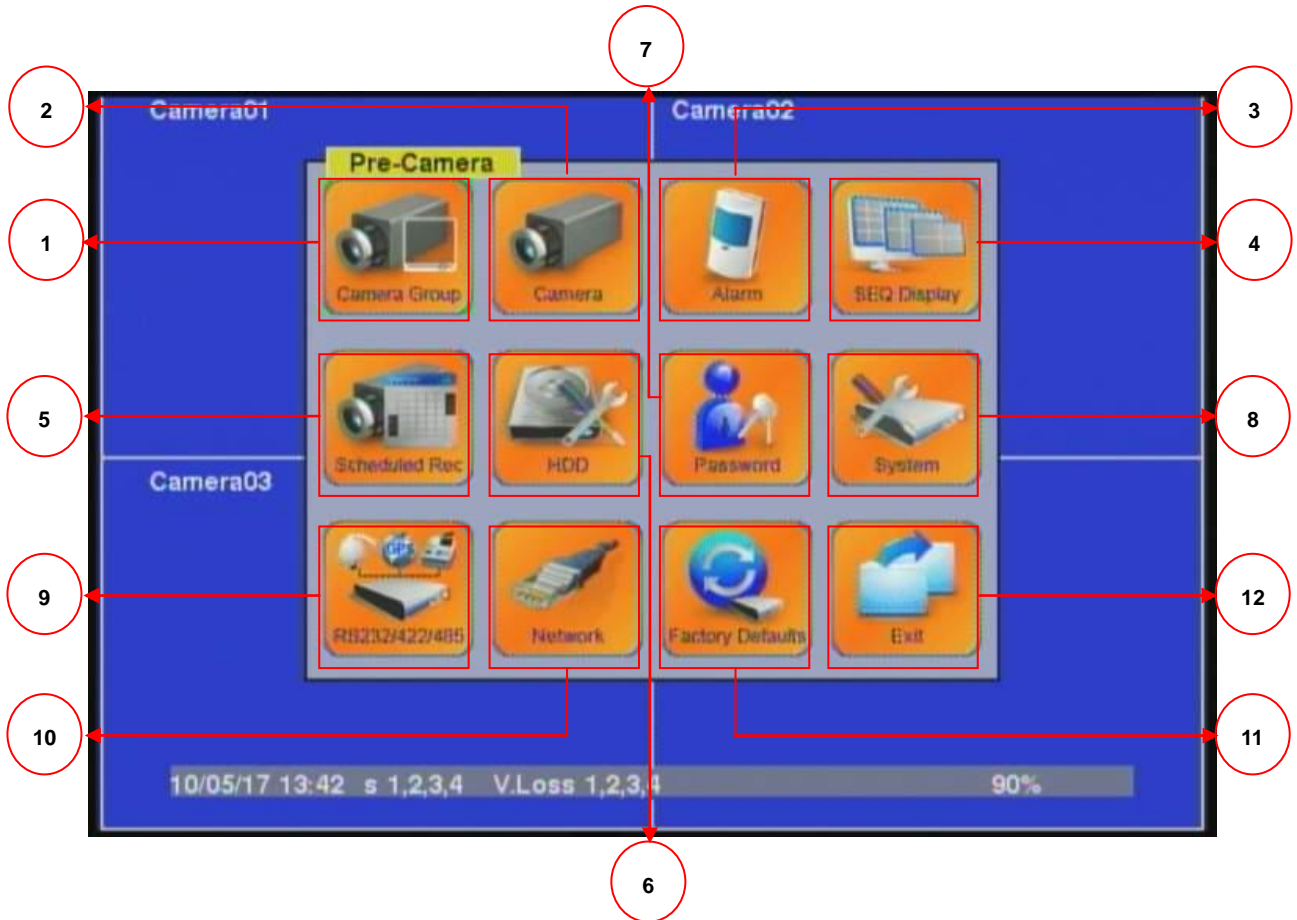


| SETUP SETTING Mode Display illustration | | |
|---|---|---|
| **Number** | **Item** | **Explanation** |
| 1 | Camera Group | Set up the DVR resolution, PTZ and Watermark |
| 2 | Camera | Set up the camera info, motion, quality and fps |
| 3 | Alarm | Set up the extra alarm function |
| 4 | SEQ Display | Set up the SEQ setting |
| 5 | Schedule Rec | Set up the alarm, motion or always recording |
| 6 | HDD | Set up the HDD recording and figure |
| 7 | Password | Manage the DVR's account |
| 8 | System | Set up the DVR time and language |
| 9 | RS485 | Set up the RS485 figure |
| 10 | Network | Set up the IP, DDNS, mail and FTP function |
| 11 | Factory Default | Reset DVR default setting |
| 12 | Exit | Leave the SETUP SETTING mode |

## 4.5 SEARCH Mode
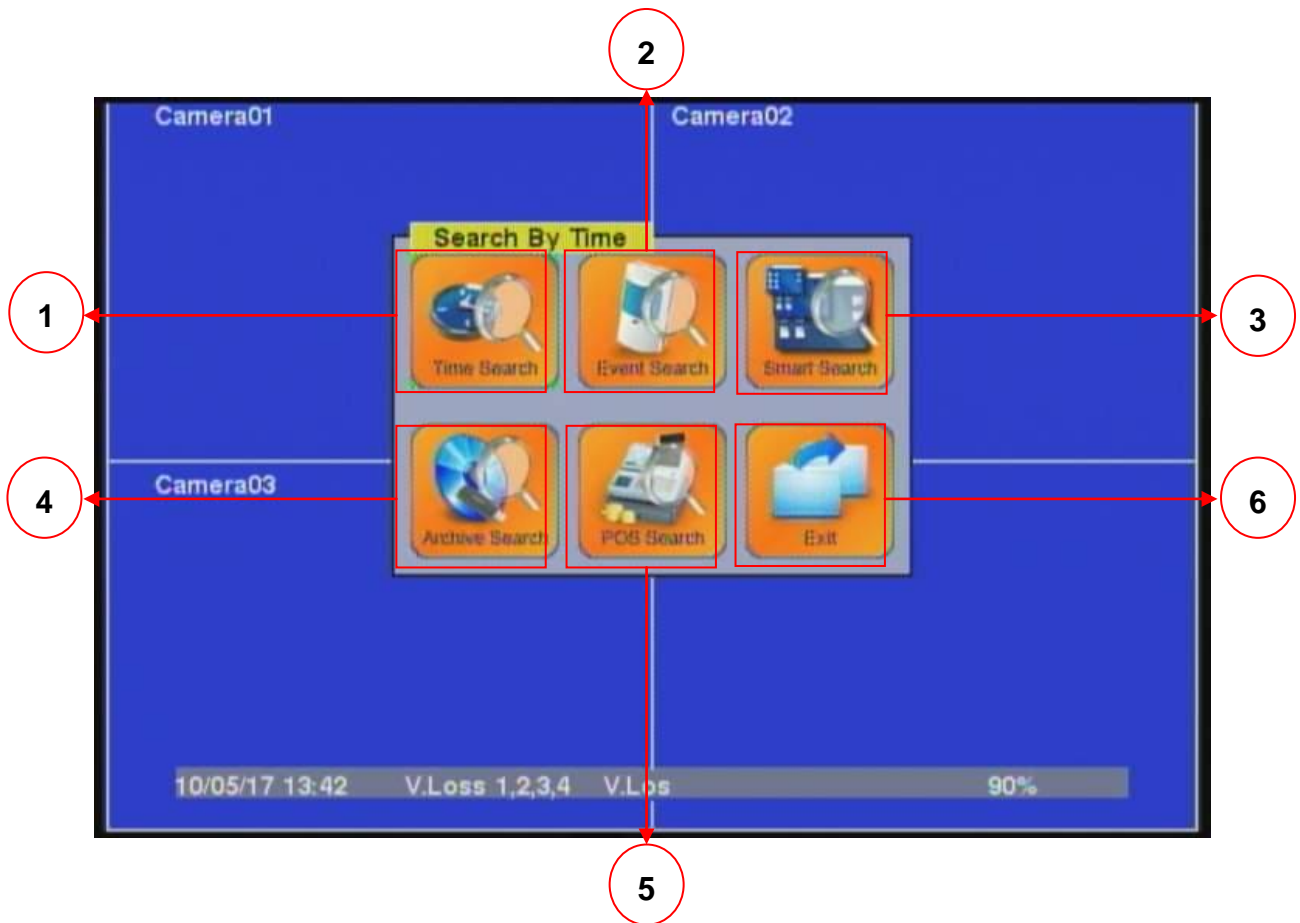


| SEARCH Mode Display illustration | | |
|:---:|:---|:---|
| **Number** | **Item** | **Explanation** |
| 1 | Time Search | Select the date and time to playback the recording video |
| 2 | Event Search | Select the event to playback the recording video |
| 3 | Smart Search | Choose the motion area to playback the recording video |
| 4 | Archive Search | Search the backup device's recording video |
| 5 | POS Search | Define the keyword of pos' recording data for playback |
| 6 | Exit | Leave the SEARCH mode |

# 4.6 Mouse operating Mode

When installing and using the mouse interface, the cursor will be shown on the display for operating the mouse. (as described in Section 5.3)
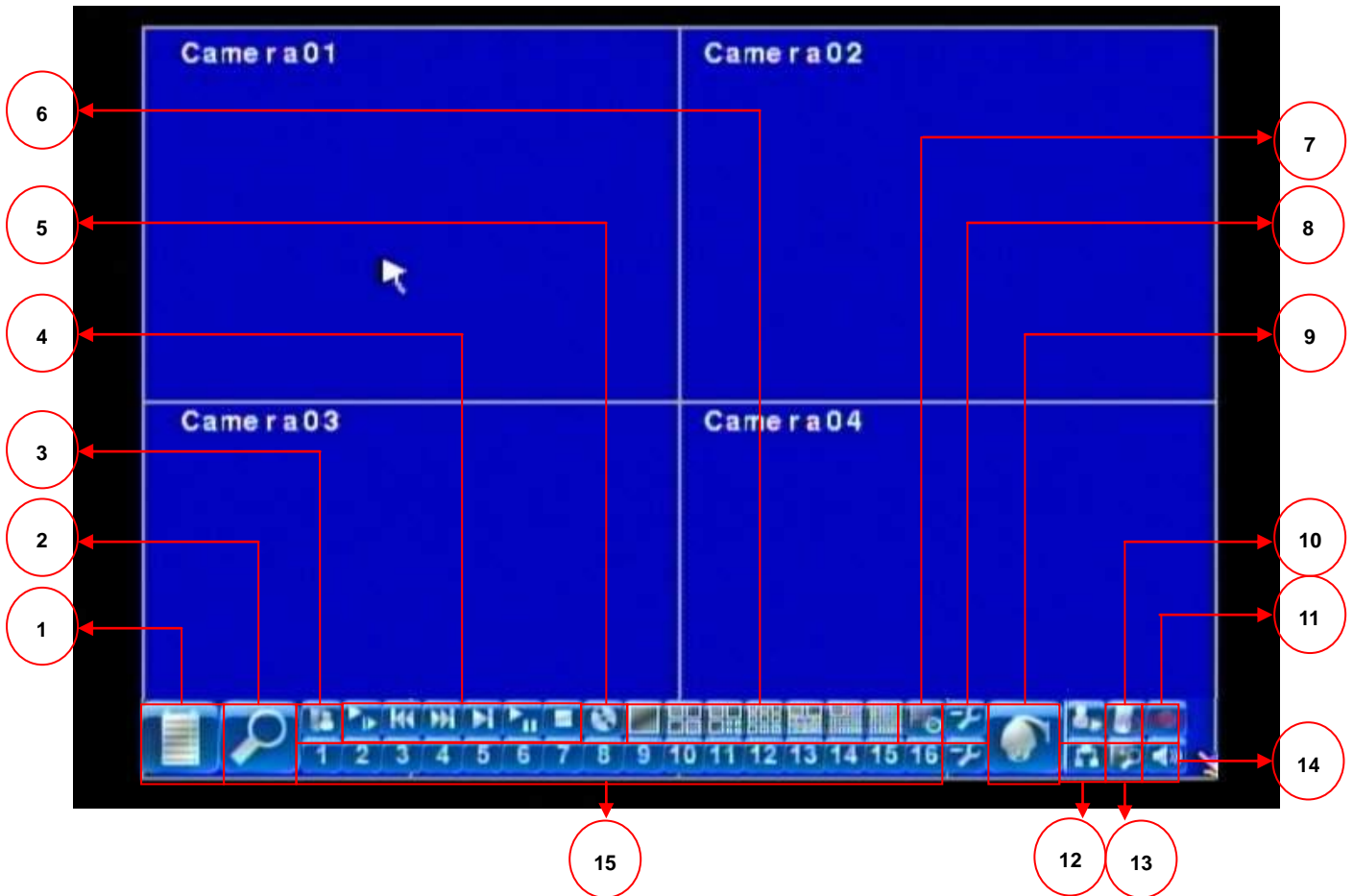


| Mouse Control Illustration | | | |
|---|---|---|---|
| 1 | Menu | 9 | PTZ Setup |
| 2 | Search | 10 | Alarm Reset |
| 3 | ESC | 11 | Scheduled Record |
| 4 | In The PLAYBACK Control | 12 | GPS/POS/ OSD Display |
| 5 | Backup | 13 | X2 |
| 6 | Split-Window Display ( 7 mode ) | 14 | Adjust Volume |
| 7 | SEQ | 15 | 1-16 Chanel Single Display |
| 8 | Switch Bar | | |

# 5. Basic Operations
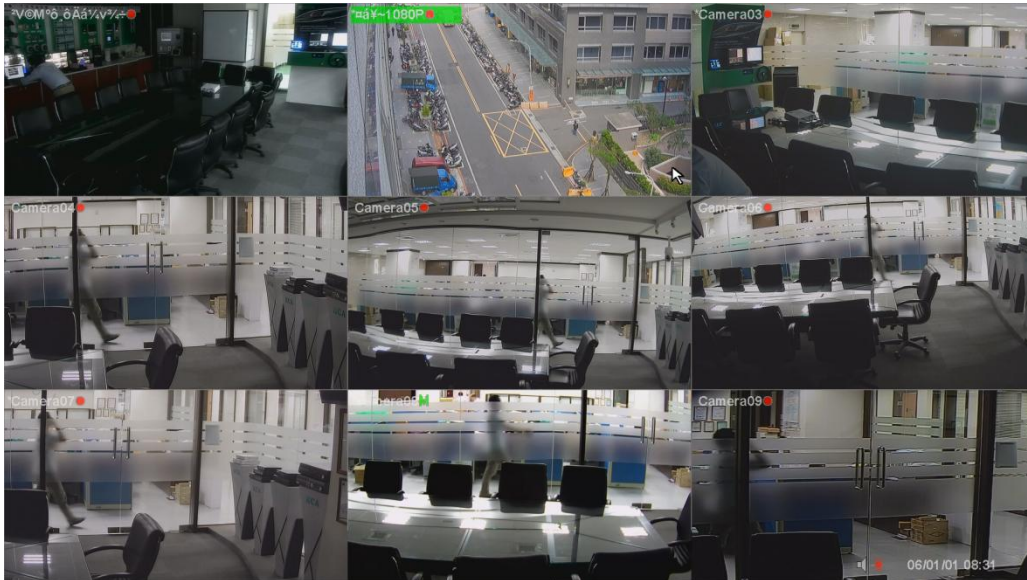


The split-window screen, as shown above, is the main screen after system startup.    There are several types of split-window screens, including 1-Window, 4-Window, 7-Window, and 9-Window.    The system will remember the last one before normal shutdown (as described in Section 5.12) of the system. In addition to the split windows, the system time is displayed on the lower-left corner, the system states on the lower-right corner, and the rolling screen messages, if shown while certain event occurs, on the lower corner.

The system states, from right to left, are described as the followings:

(1) Normal recording percentage,

(2) Alarm recording percentage,

(3) X2 state – X1, X2, or X4,

(4) Manual record ON/OFF – REC shown for ON,

(5) Backup state – Backup icon shown for backup, and

(6) SEQ display ON/OFF or playback state – SEQ icon shown for SEQ display ON, other icons for different playback states.

* If mouse is connected, the mouse operation icons will be shown when the mouse cursor is moved to the bottom of the screen.

* Recording icon, Motion, & Alarm for the camera may be shown after camera title.

## 5.1 Text Input

There are certain circumstances that the system requires the user to enter text, such as system login, camera title setup, and so on.    Please follow the steps below to enter text:

(1) Press **ENTER** to edit the highlighted option.    The flashing cursor will be shown to indicate the editing point.

(2) Press ◄► to move the cursor to the left/right.

(3) Press **code** in text editing mode to change text case.    (If this entry can accept number only, pressing **code** will have no effects.)    Indicators on the screen show the current setting:
**123** = Number only
**abc** = No capital letters
**ABC** = All capital letters
**CODE** = Internal code for the selected language, such as Chinese, Japanese, etc.

(4) Press a number key (**1-9, 0)** repeatedly until the character you want appears (**1** for 1 or space, **2** for 2, a/A, b/B, or c/C, etc.).    If internal **CODE** is selected, a **CODE box** will be shown (after the first code is entered) for each new code to be entered.    Please check the internal code table for the selected language. For 2-byte code, e.g. Chinese or Japanese, the code accepted is from 0000 - FFFF.

(5) Press **mark** to bring up a list of punctuation marks and special characters.    The highlighted character in the list shows the selected one.    Press ▲▼◄► to change the selection.

(6) If you make a mistake, press **BS** to remove the character to the left of the cursor, or press **DEL** to delete the character at the current cursor position.

(7) In text editing mode, internal code box, and mark list, press **ENTER** to exit and save changes, press **ESC** to exit without making changes.


Note: If the user clicks on the left button of the mouse on the item, a **Keyboard Simulator** will be shown.    Click on '#' (or "abc", ..) to change text case.    Click on the alpha-numeric characters to enter text (or CODE).    Click on '*' for **mark**.

## 5.2 Login And Logout

There are three preset password levels in the system, including **Administrator** (highest), **Supervisor**, and **Operator** (lowest).   Besides, the system also provides **Customized** password level.   If the user does not login the system, he/she will be treated as "Guest" and can only view live video display.

The system allows up to 18 user accounts.   The administrator can set up the login name and password for each user.   (Please refer to <u>Section 8.11</u> for Password Setup.)
The Operator can operate live video display, the Supervisor live video display, image playback and archive, and the Administrator everything.

To login/logout the system, press **MENU** in split-window display to call up Menu display, and then press **ENTER** when the highlighted option is **Login/Logout** to enter Login/Logout display as shown.

In Login/Logout display, follow the Text Input method described in <u>Section 5.1</u> to enter the **Login name** and **Password**, press ▲▼ to highlight and select **Login** option, and then press **ENTER** to login the system.   If the user wants to logout the system, just press ▲▼ to highlight and select **Logout** option, and then press **ENTER**.   Press **ESC** to exit without making changes.

There is one factory-preset login name/password abc/123 at **Administrator** level.   The user can use it to login the system for the first time.

**Should the user have forgotten all the administrator-level passwords, please contact the local dealer or installer to recover from it.**


## 5.3 Basic Operations

The basic user's operations after he/she has logged into the system are described below:

**Numeric (Mouse:** [1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16] **)**

Press these buttons to switch to the full-window display for the camera.

**Alarm Reset (Mouse:**  **)**

Press this button to cancel alarm activation, i.e. reset the alarm outputs and silence the buzzer.

**MODE (Mouse:**  **) (Administrator/Supervisor)**

In split-window display, press this button to change circularly the live/playback mode for the focus window and the other windows that form a rectangle on the screen.

**SEQ (Mouse:**  **)**

Press this button to switch to or return from SEQ display mode.   In SEQ display mode, each page in the sequence will be shown for the preset page dwelling time sequentially, and SEQ icon will be shown on the lower-right corner of the screen.

**CALL (Mouse: left-click in focus camera window)**

In split-window display, press this button to switch to or return from full screen display of the focus camera.

**SEARCH (Mouse:**  **) (Administrator/Supervisor)**

In split-window display, press this button to display the search menus.   The system will remember the last one the user chose.

**REC (Mouse:**  **)**

Press this button to force manual recording.   To stop manual recording, press it again.   All cameras will be recorded as if the scheduled record is A/V, and REC will be shown on the lower-right corner of the screen if manual recording is ON.

**MENU (Mouse:**  **) / ESC (Mouse: Right Click)**

In split-window display, press this button to display the versatile menu.   At playback, press this button for the snapshot of the playback video.

**PTZ (Mouse:**  **)**

In split-window display, press this button to enter PTZ control mode if the focus camera is a PTZ

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camera.

**X2 (Mouse:**  **)**

In full screen display, press this button to enter Digital Zoom mode.    Please refer to Section 8.4 Digital Zoom for the detailed operations in Digital Zoom mode.

**▲▼◄► (Mouse: left-click)**

Press these buttons to move focus.    The title of the camera for the focus window is highlighted as shown on the screen.

**Vol+/- (□+/□−), MUTE (Mouse:**  **)**

Press these buttons to control the volume.

⊞ **+/- (Mouse:**  **)**

Press these buttons to circulate up/down among the available split-window displays.

**PAGE (I/R remote controller: #, Mouse: current split-window icon)**

Press this button for page down in multi-split-window displays.

**ENTER (Mouse:**  **)**

Press this button to display the **GPS/POS** data if there's GPS/POS data fed to the DVR/NVR.    Please select the Type (GPS or POS), Position, Background, Rows, and number of Characters on the screen, and then press **ENTER** to display the GPS/POS data, or **ESC** to cancel. **The user may also enable/disable OSD display for certain fields in main screen.**    In **GPS/POS display**, press ▲▼ for page up/down, press **ENTER** to close it, or press **MENU/SEARCH/..** to call up the corresponding display as if there's no GPS/POS display.

## 5.4 Digital Zoom
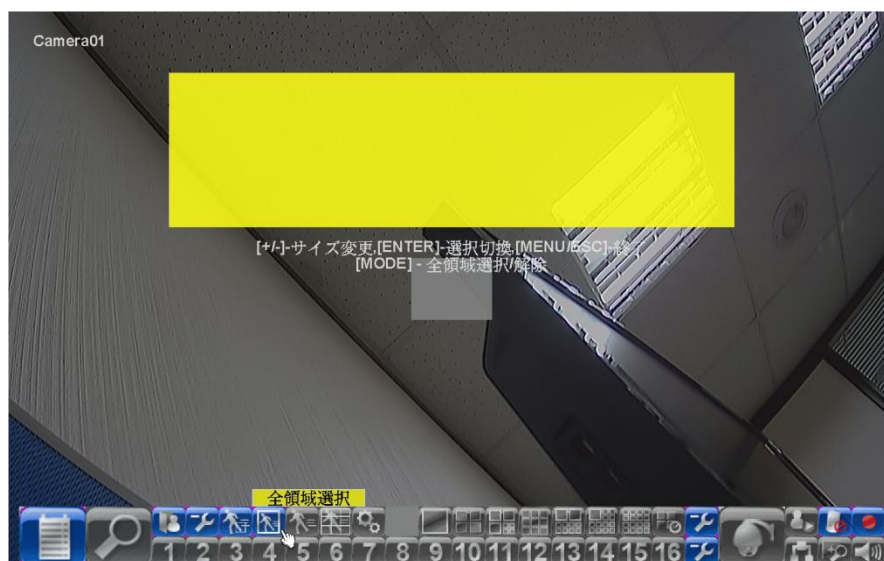


The system supports X2/X4 Digital Zoom function.　To use this function, press X2 button (Mouse:

 ) in full screen display to enter Digital Zoom mode.　There will be a zoom window shown in the video window as shown.　The zoom window (a) will always be shown at zoom factor X1, (b) can be shown or hidden at zoom factor X2, and (c) will never be shown at zoom factor X4.　The operations in Digital Zoom mode are as below:

### ▲▼◄► (Mouse: Click in the video window)

Press these buttons to
move the zoom window if it's shown in the video window, or
navigate the video window around if the zoom factor is X2 or X4.

### ENTER (Mouse: Click in the video window)

Press this button to zoom in the zoom window, from X1 to X2 or from X2 to X4, if the zoom window is shown in the video window.

### X2 (Mouse:  )

Press this button to
show/hide the zoom window if the current zoom factor is X1/X2, or
zoom out the video window back to zoom factor X1 if the current zoom factor is X4.

### ESC (Mouse:  or Right Click)

Press this button to escape from Digital Zoom mode, and return to normal full screen display.    The video window will always return to zoom factor X1.

## 5.5 Menu Display

In split-window display, press **MENU (Mouse:**  **)** to call up Menu display as shown.



There are a variety of displays under Menu display.    In Menu display and all the subsequent displays, the items enabled are shown in black-colored text, and those disabled in white-colored text.    Please refer to Section 8.2 for Login/Logout display.

The user's operations are described as the followings:

**▲▼◄►**
Press these buttons to change the highlighted item.

**ENTER (Mouse: Click in the menu item)**
Press this button to enter the detailed display of the highlighted option.    For the details of each option, please refer to the following sections.

**ESC (Mouse: Right Click)**
Press this button to escape from Menu display, and return to split-window display.

## 5.6 Status Display

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Status**, and then press **ENTER** to call up Status display as shown.

Status display includes Alarm Recording Status, Normal Recording Status, Camera Status, Alarm Input Status, Product Serial Number, and Product Version Number. Press **ESC (Mouse: Right Click)** to escape from Status display, and return to Menu display.

## 5.7 Volume Control

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Volume**, and then press **ENTER** to call up Volume Control display as shown.

**The general operations are as below:**
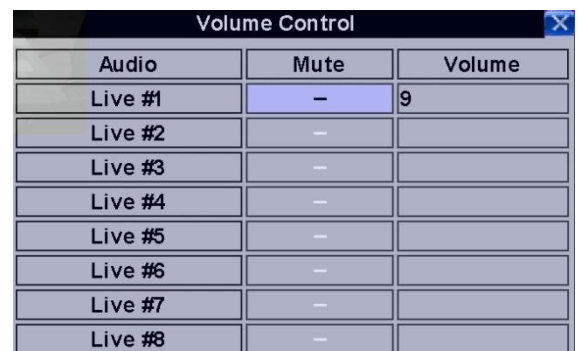
**▲ ▼ ◄ ► (Mouse: Click in the respective item)**
Press these buttons to select the items.

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to



Menu display. If the contents have been modified, a Save dialog will be shown to ask the user to save the changes, press **ENTER** to exit and save, **ESC** to exit without saving.

**Following is a brief description for each item and its specific operations:**

**Mute** – to mute the selected audio channel. Press **ENTER** or **+/-** to check/uncheck this item. The default setting is "**-**" - unchecked.

**Volume** – the volume of the selected audio channel. Press **+/-** buttons to change the value (1-10).

# 5.8 Video Adjustment

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Video Adjustment**, and then press **ENTER** to call up Video Adjustment display as shown.



**There are 4 items which can be adjusted, including Brightness, Contrast, Hue, and Saturation. The operations are as below:**

**▲▼**

Press these buttons to select the items.

**Numeric (Mouse:**  **)**

Press these buttons to change the camera.

**+/-**

Press these buttons to adjust the selected item.

**SEQ (Mouse:**  **)**

Press this button to reset the settings for this camera to factory default values.

**CALL**

Press this button to reset the settings for all cameras to factory default values.

**MODE (Mouse:**  **)**

Press this button to restore the values.

**ESC (Mouse:**  **or Right Click)**

Press this button to escape from this screen, and return to Menu display.    The settings will be saved for future reference.

# 5.9 Display

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Display**, and then press **ENTER** to call up Display dialog as shown.

**There are several items which can be adjusted, including Resolution, Brightness, Contrast, Hue, etc.    Besides, Touch panel models LP080S/LOF150B5A are also supported.    The operations are as below:**

| Display | | |
|---|---|---|
| **VGA / TV** | | |
| VGA Resolution | 1440 X 900 | − + |
| Brightness | 50 | |
| Contrast | 50 | |
| Hue | 50 | |
| Saturation | 50 | |
| Sharpness | 8 | |
| Video Ratio(1/4-W) | Fit Window | |
| [MODE] - Factory Reset. | | |
| **Touch Panel** | | |
| Model | N/A | |
| Calibration | Settings.. | |
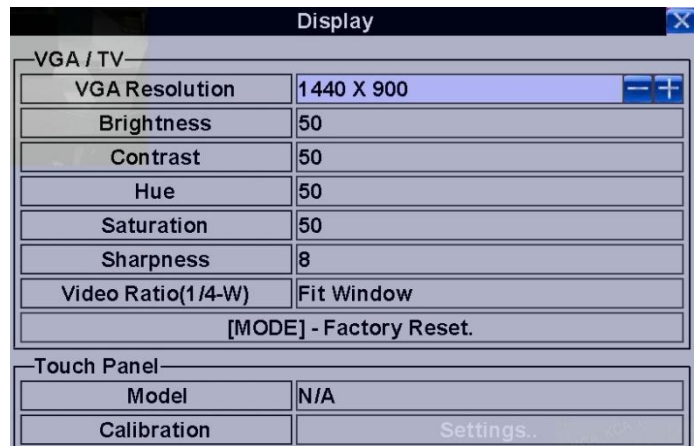
**▲ ▼ (Mouse: Click in the respective item)**
Press these buttons to select the items.

**+/-**
Press these buttons to adjust the selected item.

**MODE (Mouse: Left click)**
Press this button to restore the items above to factory default values.

**Touch Panel Model** – the models supported are **LP080S/LOF150B5A**.    Press **+/-** buttons to change the supported model.    If your touch panel is not listed, you may still select one of the supported models, and use Calibration Settings to try to calibrate the touch panel.    However, it's not guaranteed to be successful.

**Calibration Settings..** – used to calibrate the touch panel.    Press **ENTER (Mouse: Left click)** in **Settings..** to call up Calibration display for the touch panel.    Please follow the screen instructions to

touch the center of  mark until successful or failed.

**ESC (Mouse: Right Click)**

Press this button to escape from this screen, and return to Menu display.    If the contents have been modified, a Save dialog will be shown to ask the user to save the changes, press **ENTER** to exit and save, **ESC (Mouse: Right Click)** to exit without saving.    Please note that the display may not be able to support the resolution selected, and hence the display will show nothing after reboot.    If so, please press **MENU**, **◄**, **ENTER**, **MODE**, **ESC**, **ENTER** one by one to reset the settings to default. The system will reboot again.

## 5.10 Backup Device

In Menu display, press **▲ ▼ ◄ ►** to change the highlighted option to **Backup Device**, and then press **ENTER** to call up **Backup Device** display as shown below.

| Devices | Status | - | Configuration |
|---------|--------|---|---------------|
| USB Drive | - | Connect | Backup | Restore |
| USB DVD | - | Connect | Backup | Restore |
| Int. DVD | - | Connect | Backup | Restore |
| Internal DVD Only: | | [MODE]-Eject | | [SEQ]-Load |

**The system supports a variety of USB 2.0 storage devices, including Storage Disk such as USB 2.0 storage disk drives and DVD Disc (including DVD+RW, DVD+R, and DVD-R).    (DVD-RW is not supported.)    The operations are as below:**

**▲ ▼ ◄ ►**
Press these buttons to select the items.

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to previous display.

**Connect/Disconnect** – If the backup device is disconnected (as shown in Current Status), please plug the device in the USB port and/or insert a DVD for DVD device, and then press **ENTER (Mouse: Left click)** to command the system to connect with it.    If the device is already connected (EX. R/W - Read/write, as shown in Current Status), please press **ENTER (Mouse: Left click)** to command the system software to disconnect with the device, and then unplug the device from the backup port.

**Note 1: DO NOT format the DVD disc for better performance and compatibility.**

**Note 2: Before using USB pen drive, please format it to FAT32 file system by MS-Windows.**

**Note 3: The backup device has to be connected by the system software before it can be used to read/write.   If it failed to connect, please unplug the device, and then plug the device in the USB port again.**

**Note 4: Some backup devices may have compatibility problems.   Please contact your local dealer or installer for the supported devices.**

**Backup**

Press **ENTER (Mouse: Left click)** when this item is selected to backup the configurations of this unit to the corresponding USB device.   **The user may enter the directory to backup the configurations to.**

**Restore**

Press **ENTER (Mouse: Left click)** when this item is selected to restore the configuration files in the corresponding backup device to this unit.   **The user may enter the directory to restore the configurations from.**

**Some USB 2.0 Devices Tested**

USB-Storage Enclosures 5.25" –
Macpower's Alumni Prefect USB 2.0 **-** PF-U2MS

USB-Disk Storage –
Transcend's JetFlash 150/V60 Series, JetFlash V33 8GB
Apacer's Handy Steno AH220
Pretec's i-Disk Wave 512M-Black
Kingston's DataTraveler USB Flash Driver(DTI/512FE)
Kingston's DataTraveler DT100 8GB
SanDisk's Cruzer micro USB Flash Driver
Sandisk's Cruzer Titanium 4GB, Cruzer Contour 4GB
Sony's MICRO VAULT Classic Series
OCZ's ATV 4GB, Rally2 4GB

**DVD Writer –**
Asus DRW-1608P Series
**Pioneer DVR-A11, DVR-X152 Series**
**BenQ EW200G Series**

**LITEON LightScribe DVD Writer SHM-165H6S, 20X DVD Writer DX-20A4P**

**Sony DVD/CD Rewritable Drive Model DRX-810UL Series**

**NEC DVD/CD Rewritable Drive Model ND-4550A Series**

**HP dvd9404e External 18X Super Multi DVD Writer Series**

**Some DVD Discs Tested – Only single-side, single-layer disc supported**

> **Infomedia DVD+R 16X**
>
> **Mitsubishi DVD+RW 1-4X**
>
> **Philips DVD+RW 1-4X**
>
> **Ritek DVD-R 8X, DVD+RW 1-4X**
>
> **Verbatim DVD+RW 1-4X**

# 5.11 Software Upgrade

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Software Upgrade**, and then press **ENTER** to call up Software Upgrade display as shown.
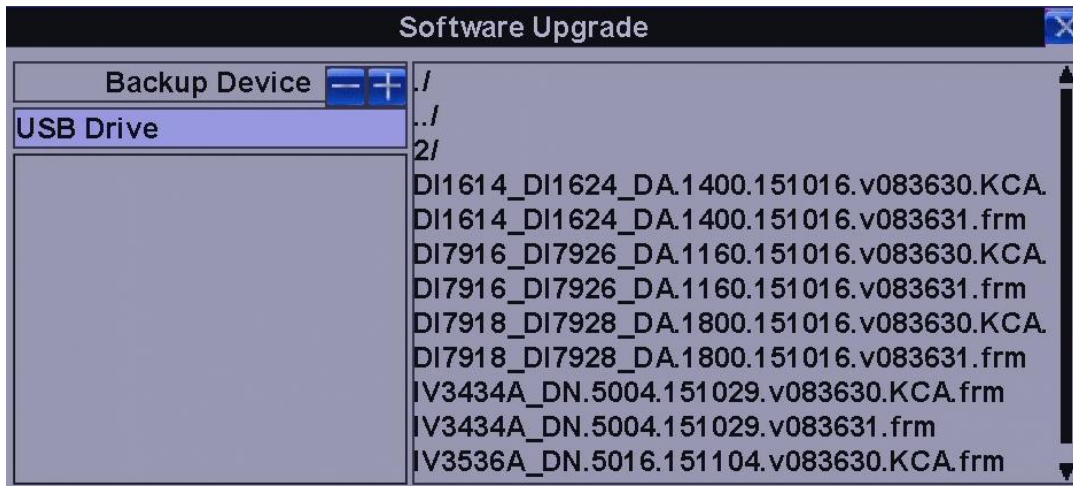


**The operations are as below:**

**▲ ▼ ◄ ► (Mouse: Left click)**

Press these buttons to select the items.

**ESC (Mouse: Right Click)**

Press this button to escape from this screen, and return to Menu display.

**Following is a brief description for each item and its specific operations:**

**Backup Device** – press **ENTER (Mouse: Left click)** to call up Backup Device dialog (if there's no backup device connected).

**Disk Storage** – to select the disk storage to upgrade.    Press **+/-** buttons to select the available storage.

**Upgrade File** – press **ENTER (Mouse: Left click)** to start the upgrade process when the highlighted file is a correct upgrade file.    A confirmation dialog will be shown on the screen, press **ENTER** to confirm to upgrade the system software.

**Note : After the software is upgraded, the system will restart immediately.    The split window display will be shown after restart, please wait a moment**

# 5.12 System Shutdown

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Shutdown**, and then press **ENTER (Mouse: Left click)** to shutdown the system.    A confirmation dialog will be shown on the screen, press **ENTER** to confirm the shutdown.    The system will save all the files and all the states, and then display a power-off message in the rolling screen message area.    The user may power off the system safely when the power-off message is shown.
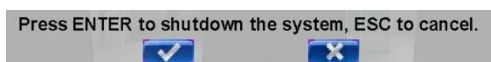
# 6. Audio Input and Output

Connect audio IN or OUT devices through RCA interface.

## 6.1 Audio Input

These RCA connectors accept audio signals supplied from external devices.

## 6.2 Audio Output

These connectors supply audio signals to external devices. Recorded audio will be supplied from AUDIO OUT during playback.

**NOTE：**
The Audio function cannot guarantee power issue. Please check whether the microphone spec. is compatible with the DVR.

# 7. Other Interface

The DVR have some application function for users. Please see the illustration below:

## 7.1 USB Connector (Rear panel)

Connect the USB mouse to this connection.

## 7.2 USB Connector (Front panel)

Connect the port to USB 2.0 compatible storage device, such as Disk drive, DVD+RW, etc.

## 7.3 PTZ Device:

**RS-485 Connector**
Connect this port to RS-485 compatible PTZ camera(s) or keyboard. Please set the Selector Switch correctly.
If there are two PTZ cameras or more need to be connected, it will need to use the parallel way to join the PTZs.

RS485 PVC instrument cable:
22AWG-1P (Twist Pair type)

RS-485: Parallel Circuit for easy Installation
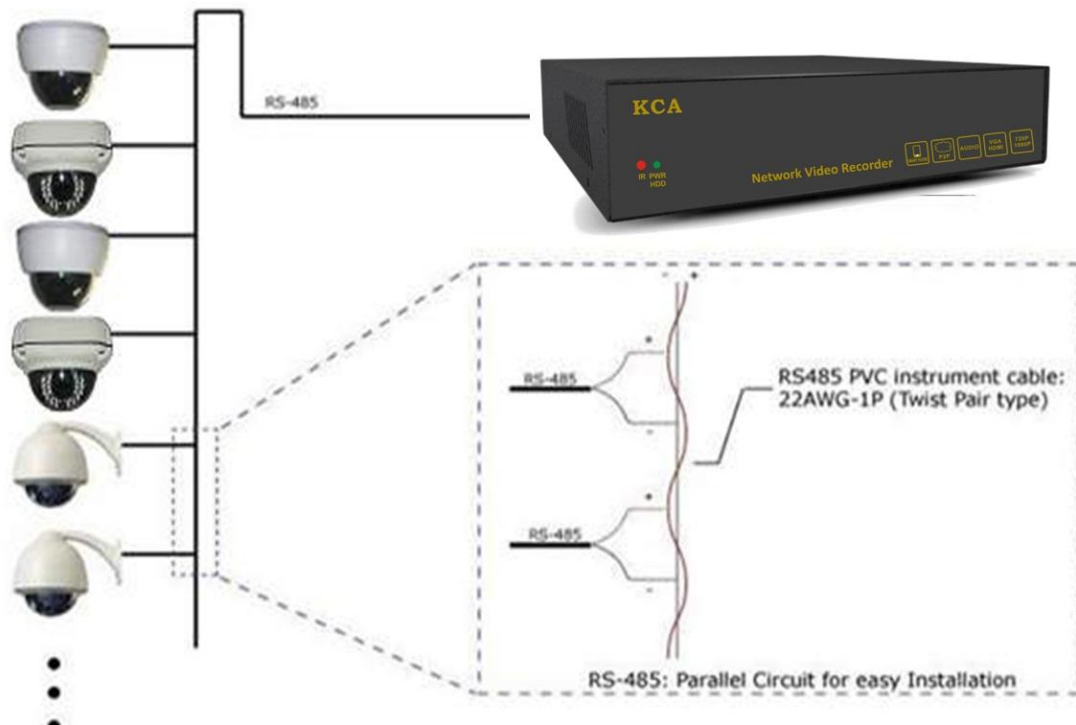
## 7.4 <u>Alarm IN / OUT:</u>

The DVR can work with TTL/COMS alarm signal for LOW & HIGH or N.O & N.C state.

**ALARM INPUT：**
The extra device connects one for the alarm input, the other for GND.  Connect these to external devices such as sensors or door switches.

**ALARM OUTPUT：**
Connect these connectors to 1 Normally Closed (NC) alarm outputs and 1 Normally Open (NO) alarm outputs. Since the DVR cannot supply any power to the extra device, you can connect the power adapter through COM to provide the electric power. When the alarm triggers, the alarm output will work.

## 7.5 <u>RS-485:</u>

In SETUP SETTING Mode, press **Direct Control** button to change the highlighted option to **RS-485**, and then press **ENTER** to call up RS-485 Setup as shown.

# 8. Setup

In Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Setup**, and then press **ENTER** to call up Setup Menu display as shown.　(To enter Setup Menu display of the system, please login as Administrator first.)



The user's operations are described as the followings:

**▲ ▼ ◄ ►**
Press these buttons to change the highlighted item.

**ENTER (Mouse: Left click)**
Press this button to enter the setup of the highlighted option.　For the details of each option, please refer to the following sections.

**ESC (Mouse: Right Click)**
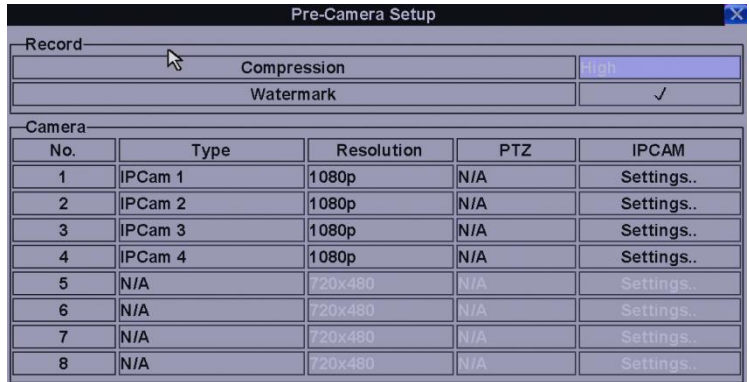Press this button to escape from Setup Menu display, and return to Menu display.

If the user wants to reset all the settings to factory default values, he/she may press ▲ ▼ ◄ ► to change the highlighted option to **Factory Defaults**, and then press **ENTER**.　A confirmation dialog will be shown, press **ENTER** again to make the changes, **ESC (Mouse: Right Click)** to not do it.

# 8.1 Pre-Camera Setup

In Setup Menu display, press ▲ ▼ ◄ ► to change the highlighted option to Pre-Camera, and then press ENTER (Mouse: Left click) to call up Pre-Camera Setup display.

There are up to 8/4 IP CAM which can be connected to the system.   The Pre-Camera Setup allows the administrator to define some fundamental attributes for the cameras.

| Pre-Camera Setup | | | | |
|---|---|---|---|---|
| **Record** | | | | |
| Compression | | | High | |
| Watermark | | | ✓ | |
| **Camera** | | | | |
| No. | Type | Resolution | PTZ | IPCAM |
| 1 | IPCam 1 | 1080p | N/A | Settings.. |
| 2 | IPCam 2 | 1080p | N/A | Settings.. |
| 3 | IPCam 3 | 1080p | N/A | Settings.. |
| 4 | IPCam 4 | 1080p | N/A | Settings.. |
| 5 | N/A | 720x480 | N/A | Settings.. |
| 6 | N/A | 720x480 | N/A | Settings.. |
| 7 | N/A | 720x480 | N/A | Settings.. |
| 8 | N/A | 720x480 | N/A | Settings.. |

The general operations are as below:

## ▲ ▼ ◄ ►

Press these buttons to select the items.

## Numeric

Press these buttons to select the camera.

## ESC (Mouse: Right Click)

Press this button to escape from this screen, and return to Setup Menu display.   If the contents have been modified, a Save dialog will be shown to ask the user to save the changes, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Compression** – Compression ratio of Normal or High.   High compression ratio will result in smaller storage size, and hence longer recording time; but the Normal Record IPS will always be the same as Event Record IPS in Camera Setup, and Dual Streaming will always be used for network video.   Press **+/-** buttons to change the setting.
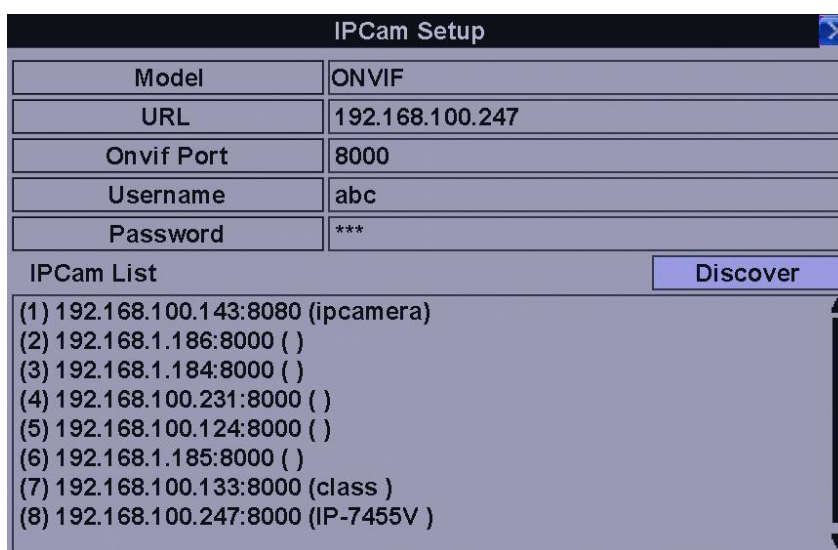
**Watermark –** to record with digital watermark or not.   If yes, all the recorded images for all the cameras will have digital watermark embedded.   Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.   The default setting is " ˘ " - checked.

**Type** – whether this camera is IP CAM or N/A.   If IP CAM, the IP CAM settings will be settable.

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Press **+/-** (Mouse: Left click) to change the type.

**Resolution** – the record resolution for the camera.    For IP CAM, it can be 1080p, 720p or D1.    Press **+/-** buttons to select the resolution.

**PTZ ID** – the PTZ ID of this camera if it's a PTZ camera.    For RS-485 PTZ control, the PTZ ID has to be consistent with the setting of this camera.    Please refer to the manual of the camera for the ID setting. Press **+/-** buttons to change the value (N/A or 0-254).    The default setting is "N/A" – Not Available, which means that it's not a PTZ camera.    Please note that 254 is designated for PTZ control through Ethernet for all IP-CAM.

| IPCam Setup | |
|---|---|
| Model | ONVIF |
| URL | 192.168.100.247 |
| Onvif Port | 8000 |
| Username | abc |
| Password | *** |

IPCam List                                                          Discover

(1) 192.168.100.143:8080 (ipcamera)
(2) 192.168.1.186:8000 ( )
(3) 192.168.1.184:8000 ( )
(4) 192.168.100.231:8000 ( )
(5) 192.168.100.124:8000 ( )
(6) 192.168.1.185:8000 ( )
(7) 192.168.100.133:8000 (class )
(8) 192.168.100.247:8000 (IP-7455V )

Please select ONVIF for the IP CAM that can support ONVIF profile S, or RTSP for IP CAM that cannot.    For ONVIF, user can click on Discover to discover the IP CAM in the LAN automatically, and then click on the IP CAM in the list for the URL and Onvif Port.    For RTSP, please enter Main Stream URI and Dual Stream URI manually.    Please also enter the correct Username and Password for the IP CAM.    Please note that camera setup is not supported for RTSP.    However, live/network view, record, and playback are supported, but users need to configure the bit rate and the frame rate of main/dual stream manually so that the Max. incoming bandwidth won't be exceeded.

## 8.2 Camera Setup

In Setup Menu display, press ▲▼◄► to change the highlighted option to Camera, and then press ENTER (Mouse: Left click) to call up Camera Setup display.

| Camera Setup | |
|---|---|
| Camera | 1 |
| Title | Camera01 |
| Record Quality | 5 |
| Event Record FPS | 4 |
| Pre-record FPS | 4 |
| Normal Record FPS | 4 |
| Adv. | |
| Video Loss | Settings.. |
| Motion Detection | ✓ |
| Motion/Mask | Settings.. |
| Covert | – |
| Call By Event | Off |
| Dwell Time | 10 Sec. |
| Audio | N/A |

The Camera Setup allows the administrator to define the attributes for each camera.　There are up to 8 IP CAM, which can be connected to the system.

The general operations are as below:

### ▲▼◄► (Mouse: Left click)
Press these buttons to select the items.　The display will scroll left/right if the selected item is not shown on the screen.

### Numeric
Press these buttons to select the camera.

### COPY（ 🗐 ）

Press this button to copy all the settings - excluding detailed Motion settings, Video Loss settings, Title/Audio - of the focus camera to all the following cameras.　(EX. focus camera is 1, its settings will be copied to those of cameras 2-8/4.)

### ESC (Mouse: Right Click)
Press this button to escape from this screen, and return to Setup Menu display.　If the Save dialog is

shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Title** – The title (Max. 16 characters) of this camera.　Please follow the Text Input method described in Section 8.1 to modify this item.

**Video Loss Settings..** – used to setup the action settings when video loss is detected for this camera.　Press ENTER (Mouse: Left click) in Settings.. to call up Video Loss Setup display for the camera.　Please refer to Section 8.2.1 for the details.

**Motion Detection** – whether the motion detection of this camera is enabled or not.　　Press ENTER or +/- to check/uncheck this item.　The default setting is " ˘ " - checked.

**Motion Settings**.. – used to setup the motion settings, used for Motion Detection, for this camera.　Press ENTER (Mouse: Left click) in Settings.. to call up Motion Setup display for the camera.　Please refer to Section 10.4 for the details.

**Covert** – covert or not.　If the camera is covert, the video of this camera can only be seen if the user has logged in as Administrator.　Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.　The default setting is " – " - unchecked.

**Call By Event** – whether to switch the monitor to the video of this camera if certain event occurs for this camera.　There are 4 options, including Off, Motion, Alarm, Both (Motion & Alarm).　Press +/- buttons to select one.

**Dwell Time** – the dwell time if Call By Event is set to Motion, Alarm, or Both.　Press +/- buttons to adjust the value (3-60 seconds, discrete).

**Audio** – the AUDIO IN corresponding to this camera.　The audio data for the selected AUDIO IN will be recorded with the video data for this camera.　Press +/- buttons to select none (N/A) or AUDIO Input (1).　The default setting is "N/A".

**Record Quality** – the record quality for this camera.　Press +/- buttons to select the value (1-9, with 1 the lowest (rough) quality, 9 the highest (fine) quality).

**Event Record IPS** – the IPS (Images Per Second) for this camera if certain event (Motion, Alarm) occurs for this camera.　This camera will be recorded at this rate for Post-record time since the event occurs.　(Please refer to the following sections for Post-record time.)　Press +/- buttons to select the

value (0 – 25 (PAL) / 30 (NTSC), discrete).

**Pre-record IPS** – the pre-record IPS for this camera if certain event (Video Loss, Motion, Alarm) occurs for this camera.    This camera is recorded at this rate for Pre-record time before the event occurs. (Please refer to the following sections for Pre-record time.)    For this NVR, the value is always the same as Event Record IPS.

**Normal Record IPS** – the normal record IPS for this camera.    This camera will be recorded at this rate if no event occurs.    Press **+/-** buttons to select the value (0 – Pre-record IPS for this camera, discrete). Please note that for High compression ratio in Pre-Camera setup, Normal Record IPS is always the same as Event Record IPS.
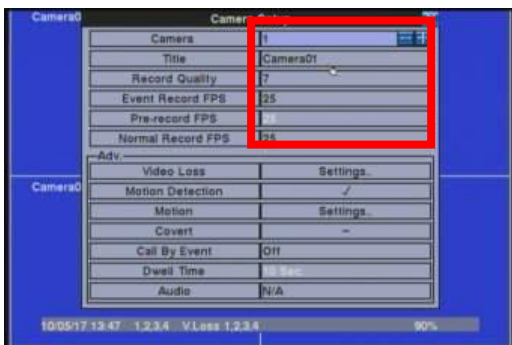
● **RECORD Settings :**

Select "SETUP" of the main menu.                          Select "Camera"



Set each camera's "Title, Record Quality,            Confirm this setting and save.
Record Fps."

- **Motion Settings :**
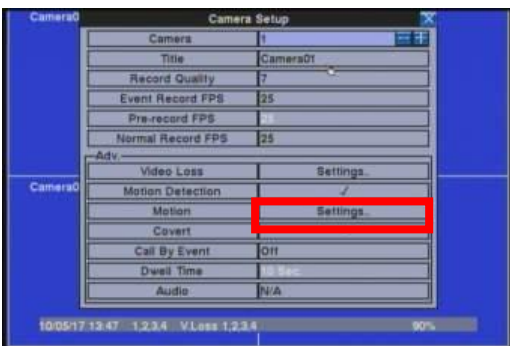
Select "SETUP" of the main menu.                    Select "Camera"



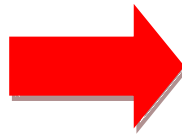Select Detection to enter the "Settings"            Into Motion mode.



In the Motion mode, press "$+/-$" button to maximize or minimize the area.



Press the button to set/reset the whole video area

Press the button to test the motion detection of the camera



Choose the area where you want to displace, Click "ESC" to save this config setup
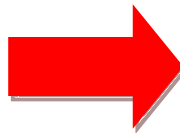


## 8.3 Video Loss Setup

In Camera Setup, press **ENTER** to call up Video Loss Setup of the selected camera as shown when the highlighted option is **Video Loss Settings..** of the camera to setup.    The Video Loss Setup allows the administrator to define how the system responds to the detected video loss for the camera.

**The general operations are as below:**

**▲▼ (Mouse: Left click)**
Press these buttons to select the items.

**Numeric (ENTER)**
Press these buttons to select the camera.

**COPY（🗐）**

Press this button to copy the Video Loss settings of the focus camera to all the following cameras.    (EX. focus camera is 1, its Video Loss settings will be copied to those of cameras 2-8/4.)

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to Camera Setup display.    If the Save dialog is shown, press **ENTER** to exit and save, **ESC (Mouse: Right Click)** to exit without saving.

**Following is a brief description for each item and its specific operations:**

**Duration** – response duration to define at most how long (in seconds) the Alarm Out relay and the Buzzer will keep being triggered after video loss is detected for this camera.    However, the Alarm Out relay and the Buzzer will be reset immediately once the camera returns to normal.    Press **+/-** buttons to adjust the value (3 seconds - 60 minutes, discrete, '-' for 'Forever').

**Camera to go** – the camera to go to the preset position in next field after video loss is detected for this camera.    "Camera to go" camera must be a PTZ camera.

**Go to Preset** – to define the preset position to go to for the "Camera to go" Camera in last field if video loss is detected for this camera.    For more details about preset locations, please refer to Chapter 9 PTZ Control.

**Pre-record** – to define how long before video loss is detected this camera shall be intensively recorded at Pre-record IPS.    Press **+/-** buttons to adjust the value (0-10 seconds, discrete).    Please note that the actual pre-record time may be shorter than the value set if the total size of the pre-record pictures exceeds the pre-record buffer size of the system.

**Alarm Out** – to define which Alarm Output will be triggered when video loss of this camera is detected. Press **+/-** buttons to select none (N/A) or one of the Alarm Outputs (NC (1), NO (2)).

**Buzzer** – to activate the internal Buzzer or not when video loss of this camera is detected.    Press **ENTER** or **+/-** (Mouse: Left click) to check/uncheck this item.    The default setting is " ˘ " - checked.

**Log** – to log to event logs or not.    Press **ENTER** or **+/-** to check/uncheck this item.    The default setting is " ˘ " - checked.

**Screen Message** – to display the event message on the screen or not.    Press **ENTER** or **+/-** to check/uncheck this item.    The default setting is " ˘ " - checked.

**E-mail** – to send the event e-mail to remote station or not.    The e-mail will be sent to the predefined receivers at the moment when the event is triggered.    Press **ENTER** or **+/-** to check/uncheck this item. The default setting is " – " - unchecked.

**FTP** – to send the recorded event video/audio files to FTP server or not.    Press **ENTER** or **+/-** to check/uncheck this item.    The default setting is " – " - unchecked.

# 8.4 Motion Setup

**In Camera Setup, press** ENTER **to call up Motion Setup as shown when the highlighted option is** Motion Settings.. **of the camera to setup.    The Motion setup allows the administrator to define how the system responds to the detected motion for the camera.**

| Video Loss Setup-Camera1 | ✕ |
|---|---|
| Duration | 10 Sec.  ━ ┼ |
| Camera To Go | 1 |
| Goto Preset | N/A |
| Pre-record | 5 Sec. |
| Alarm Out | N/A |
| Buzzer | ✓ |
| Log | ✓ |
| Screen Message | ✓ |
| E-mail | – |
| FTP | – |

**The general operations are as below:**

**▲▼ (Mouse: Left click)**
Press these buttons to select the items.

**Numeric**
Press these buttons to select the camera.

## COPY（📑）

Press this button to copy the Motion settings, including Detection settings, of the focus camera to all the following cameras.   (EX. focus camera is 1, its Motion settings will be copied to those of cameras 2-8/4.)

## ESC (Mouse: Right Click)

Press this button to escape from this screen, and return to Camera Setup display.   If the Save dialog is shown, press **ENTER** to exit and save, **ESC (Mouse: Right Click)** to exit without saving.

**Following is a brief description for each item and its specific operations:**

**Duration** – response duration to define at most how long (in seconds) the Alarm Out relay and the Buzzer will keep being triggered after motion is detected for this camera.   However, the Alarm Out relay and the Buzzer will be reset immediately once the camera returns to normal.   Press **+/-** buttons to adjust the value (3 seconds - 60 minutes, discrete, '-' for 'Forever').

**Camera to go** – the camera to go to the preset position in next field after motion is detected for this camera.   "Camera to go" camera must be a PTZ camera.

**Goto Preset** – to define the preset position to go to for the "Camera to go" Camera in last field if motion is detected for this camera.   For more details about preset locations, please refer to Chapter 9 PTZ Control.

**Pre-record** – to define how long before motion is detected this camera shall be intensively recorded at Pre-record IPS.   Press **+/-** buttons to adjust the value (0-10 seconds, discrete).   Please note that the actual pre-record time may be shorter than the value set if the total size of the pre-record pictures exceeds the pre-record buffer size of the system.

**Post-record** – to define how long after motion is detected this camera shall be intensively recorded at Event Record IPS.   Press **+/-** buttons to adjust the value (0 second - 60 minutes, discrete).

**Alarm Out** – to define which Alarm Output will be triggered when motion of this camera is detected.   Press **+/-** buttons to select none (N/A) or one of the Alarm Outputs (NC (1), NO (2)).

**Buzzer** – to activate the internal Buzzer or not when motion of this camera is detected.   Press **ENTER** or **+/- (Mouse: Left click)** to check/uncheck this item.   The default setting is " ˘ " - checked.

**Log** – to log to event logs or not.   Press **ENTER** or **+/-** to check/uncheck this item.   The default

setting is "ˇ" - checked.

**Screen Message** – to display the event message on the screen or not.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is "ˇ" - checked.

**E-mail** – to send the event e-mail to remote station or not.   The e-mail will be sent to the predefined receivers when the event is triggered.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " − " - unchecked.

**FTP** – to send the recorded event video/audio files to FTP server or not.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " − " - unchecked.

## 8.5 Alarm Setup

**In Setup Menu display, press ▲▼◄► to change the highlighted option to** Alarm**, and then press** ENTER **to call up Alarm Setup display as shown.   The Alarm Setup allows the administrator to define the attributes for each alarm input, and the actions if it's triggered.   There are up to 4 alarm inputs which can be connected to the system.**

| Alarm Setup | | | | |
|---|---|---|---|---|
| No. | 1 | 2 | 3 | 4 |
| Normal State | Open | Open | Open | Open |
| Title | AI01 | AI02 | AI03 | AI04 |
| Delay | 0 Sec. | 0 Sec. | 0 Sec. | 0 Sec. |
| Duration | 10 Sec. | 10 Sec. | 10 Sec. | 10 Sec. |
| Alarm Out | N/A | N/A | N/A | N/A |
| Buzzer | √ | √ | √ | √ |
| Focus Camera | 1 | 2 | 3 | 4 |
| Pre-record | 5 Sec. | 5 Sec. | 5 Sec. | 5 Sec. |
| Post-record | 10 Sec. | 10 Sec. | 10 Sec. | 10 Sec. |
| Goto Preset | N/A | N/A | N/A | N/A |
| Notification | √ | √ | √ | √ |
| FTP | − | − | − | − |

**The general operations are as below:**

**▲▼◄► (Mouse: Left click)**
Press these buttons to select the items.

**Numeric**

Press these buttons to select the alarm input.

**COPY** （▤）

Press this button to copy the settings of the focus alarm input to all the following alarm inputs. (EX. focus alarm input is 1, its settings will be copied to those of alarm inputs 2-4.)

**ESC (Mouse: Right Click)**

Press this button to escape from this screen, and return to Setup Menu display. If the Save dialog is shown, press **ENTER** to exit and save, **ESC (Mouse: Right Click)** to exit without saving.

**Following is a brief description for each item and its specific operations:**

**Normal State** – press **+/-** buttons to select **N/A**, **Close**, **Open**, **Close(Level)** or **Open**(**Level**). Please check the signal type, normally close or normally open, connected to the alarm input terminal on the rear panel of the system. If there's no signal connected, please select **N/A** – Not Available , and the following items will not be settable. The default setting is **Open**. **Please note that for Close (Level) and Open (Level), the Duration and Post-record mentioned below will keep being activated when the alarm input is at alarm state.**

**Title** – The title (Max. 8 characters) of this alarm input. Please follow the Text Input method described in Section 5.1 to modify this item.

**Delay** – the alarm input will be treated as if it's triggered Delay time (0-15 seconds) later after being really triggered, 0 sec. for no delay.

**Focus Camera** – the camera corresponding to this alarm input.

**Duration** – response duration to define at most how long (in seconds) the Alarm Out relay and the Buzzer will keep being triggered after this alarm input is triggered or returns to normal. Press **+/-** buttons to adjust the value (3 seconds - 60 minutes, discrete, '-' for 'Forever').

**Go to Preset** – to define the preset position to go to for the Focus Camera if this alarm input is triggered and the Focus Camera is a PTZ camera. For more details about preset locations, please refer to Chapter 9 PTZ Control.

**Pre-record** – to define how long before this alarm input is triggered the Focus Camera shall be intensively recorded at Pre-record IPS. Press **+/-** buttons to adjust the value (0-10 seconds, discrete).

Please note that the actual pre-record time may be shorter than the value set if the total size of the pre-record pictures exceeds the pre-record buffer size of the system.

**Post-record** – to define how long after this alarm input is triggered or returns to normal the Focus Camera shall be intensively recorded at Event Record IPS.   Press **+/-** buttons to adjust the value (0 second - 60 minutes, discrete).

**Alarm Out** – to define which Alarm Output will be triggered when this alarm input is triggered.   Press **+/-** buttons to select none (N/A) or one of the Alarm Outputs (NC (1), NO (2)).

**Buzzer** – to activate the internal Buzzer or not when this alarm input is triggered.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " ˘ " - checked.

**Log** – to log to event logs or not.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " ˘ " - checked.

**Screen Message** – to display the event message on the screen or not.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " ˘ " - checked.

**Notification** – to notify mobile phones and/or send the event e-mail to remote station or not.   The mobile phones with alarm notification from the NVR enabled will be notified, and the e-mail will be sent to the predefined receivers when the event is triggered.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " ˘ " - checked.

**FTP** – to send the recorded event video/audio files to FTP server or not.   Press **ENTER** or **+/-** to check/uncheck this item.   The default setting is " – " - unchecked.

## 8.6 Main / SEQ Display Setup

In Setup Menu display, press ▲ ▼ ◄ ► to change the highlighted option to **Main/SEQ Display**, and then press **ENTER** to call up Main/SEQ Display Setup.

The Main/SEQ Display Setup allows the administrator to define the display pages in SEQ Display for main monitor and call monitor. Please note that Call Monitor supports 1/4 split window display.

The general operations are as below:

▲▼◄► (Mouse: Left click)
Press these buttons to select the items.

ESC (Mouse: Right Click)
Press this button to escape from this screen. If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

Call Monitor 1/4W (disabled) – select split window of Call Monitor. Press +/- buttons to select the desired value.

Main Display Type – "Default" for default main display type and "SEQ" for main display to use SEQ settings.

CVBS (disabled) – CVBS out for "Main Monitor" or "Call Monitor".

Main Display Called By Event – to switch the main monitor to the video of the event camera or not.

Total Pages – total pages for this SEQ Display Type. The maximum number varies according to the display type. Press +/- buttons to select the desired number from the available list.

**Dwell Time** – the dwell time (3 ~ 60 seconds, discrete) for each page of this display type. Press **+/-** buttons to change the value.

**Page Settings..** – used to set the camera in each viewing window for each page of this SEQ Display Type. Press **ENTER (Mouse: Left click)** to call up Display Page Setup as shown.



In Display Page Setup, the split window display for the current page is shown. And the title of the camera for the focus window is highlighted. Following is a brief description for the operations:

**▲ ▼ ◄ ► (Mouse: Left click)**
Press these buttons to move the focus window.

**Numeric (Mouse:** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 **)**
Press these buttons to change the camera for the current page.

**+/- (Mouse:** ▲ ▼ **)**

Press these buttons to change the current page for this SEQ Display Type.

**ESC (Mouse:** ▣ **or Right Click)**
Press this button to escape from Display Page Setup, and return to SEQ Display Setup.

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# 8.7 Scheduled Record Setup

In Setup Menu display, press ▲▼◄► to change the highlighted option to Scheduled Record, and then press ENTER to call up Scheduled Record Setup.

| Scheduled Record Setup | | | | |
|---|---|---|---|---|
| **Mode** | All | | | — + |
| **Camera** | - | | | |
| ← | | T1 | | → |
| **Weekday** | **Start** | **Alarm** | **Motion** | **Normal** |
| SUN | 00:00 | A/V | A/V | A/V |
| MON | 00:00 | A/V | A/V | A/V |
| TUE | 00:00 | A/V | A/V | A/V |
| WED | 00:00 | A/V | A/V | A/V |
| THU | 00:00 | A/V | A/V | A/V |
| FRI | 00:00 | A/V | A/V | A/V |
| SAT | 00:00 | A/V | A/V | A/V |
| [MODE]-Easy Setup | | | | |
| [COPY]-Copy | | | | |

The Scheduled Record Setup allows the administrator to define when and how to record for the system. There are up to 16 time segments (T1 – T16) for each weekday.

The general operations are as below:

### ▲▼◄► (Mouse: Left click)
Press these buttons to select the items.    The display will scroll left/right if the selected item is not shown on the screen.

### COPY （ 🗈 ）

Press this button to copy the settings of (1) the focus camera to all the following cameras, or (2) the focus weekday to all the following weekdays.    (EX. focus weekday is TUE, its settings will be copied to those of weekdays WED-SAT.)

### MODE (Mouse: Left click)
Press this button to enter Easy Setup for Schedule Record as described in the following paragraphs.

### ESC (Mouse: Right Click)

Press this button to escape from this screen, and return to Setup Menu display.    If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Mode** – the schedule below applies to All cameras or Individual camera.    Press **+/-** buttons to change the value.

**Camera** – select the camera if Individual is selected.    Press **+/-** buttons to select the camera.

**Start** – the start time of this time segment, increment at 30 minutes.    (The end time of this time segment is implicitly set as the start time of next time segment, or the start time of the first time segment of the same weekday if it's the last one.)    Press **+/-** buttons to select the desired start time.

Example: If the user sets the start time of T1/MON as 9:00, T2/MON as 18:00, T3-T16/MON as N/A (Not Available), then T1/MON is 9:00-18:00, T2/MON is 0:00-9:00, and 18:00-24:00.

**Alarm** – record mode (No, Video, Audio/Video) when certain alarm input is triggered.    "OFF" is for alarm detection OFF.    Press **+/-** buttons to change the value.    Please note that the alarm is the alarm for the focus camera (in Alarm Setup) if Individual is selected.

**Motion** – record mode (No, Video, or Audio/Video) when motion is detected for certain camera.    "OFF" is for motion detection OFF.    Press **+/-** buttons to change the value.

**Normal** – normal record mode, including No, V (Video only), or A/V (Audio/Video).    Press **+/-** buttons to change the value.

Note: In a time segment, if both Alarm and Motion are set to "OFF", the audio/video will be treated as Normal unless there's Video Loss.

**Scheduled Record** – Easy Setup

The Scheduled Record – Easy Setup allows the administrator to use a simpler and easier way to setup the scheduled record of the system.
In Easy Setup, there are Six Selectable Recording Modes: Alarm+Motion+Normal, Alarm+Motion, Alarm, Motion, Normal, and No Record.
Video & Audio are all recorded for the selectable Recording Modes except "No Record".
After the Easy Setup, the time segments for each weekday in Scheduled Record will be updated accordingly.

The operations are as below:

## ▲ ▼ ◄ ►
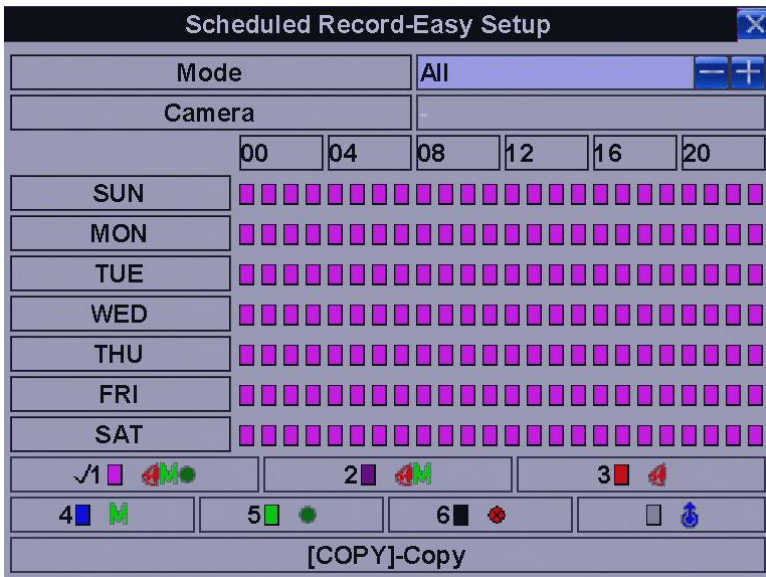
Press these buttons to move the focus.

## COPY（🖹）

Press this button to copy the settings of the focus camera to all the following cameras.    (EX. focus camera is 2, its schedule settings will be copied to those of the cameras 3-4/8.)

## Numeric 1-6 (Mouse: Left click)

Press these buttons to select the active Recording Mode.    The user may also press ENTER when the focus is on the Recording Mode to activate it.    The Recording Modes are : "1" – Alarm+Motion+Normal, "2" – Alarm+Motion, "3" – Alarm, "4" – Motion, "5" – Normal, "6" – No Record, and Others (which is not selectable).

## +/- (Mouse: Left click and drag)

Press these buttons to set the focus interval (one grid for one hour) upwardly/downwardly to the Active Recording Mode.    The user may also press ENTER to set the focus interval to the Active Recording Mode.

## ESC (Mouse: Right Click)

Press this button to escape from this screen, and return to Scheduled Record Setup display.    The time segments for each weekday in Scheduled Record will be updated accordingly.

# 8.8 HDD Setup

In Setup Menu display, press ▲ ▼ ◄ ► to change the highlighted option to HDD, and then press ENTER to call up HDD Setup as shown.

| HDD Format / Clear | | | | ✕ |
|---|---|---|---|---|
| Recording HDD | Alarm : | 1 | Normal : | 1 |
| HDD | 1 | | 2 | |
| Size (GB) | 156 | | - | |
| Normal Record(%) | 0 | | - | |
| Alarm Record(%) | 100 | | | |
| NAS | Setup | | Setup | |
| [MODE]-Format | [SEQ]-Clear | | | |
| [CALL]-Physical Format | | | | |
| HDD format succeeded. | | | | |

In the surveillance applications, alarm video/audio is much more important than normal video/audio. So, this digital video/audio recorder is designed to allow the user to divide each HDD into alarm partition and normal partition.   And, alarm video/audio will be recorded in alarm partition, normal video/audio in normal partition.

The HDD Setup allows the administrator to format/clear each HDD, set Alarm Record size and Normal Record size of each HDD, and define the behaviors for Alarm Record and Normal Record if it reaches the end of the last HDD in the system.

The general operations are as below:

▲ ▼ ◄ ► (Mouse: Left click)
Press these buttons to select the items.

MODE => Format/Clear (Mouse: Left click)
Press this button to format/clear the HDDs as described in Section 8.9.

SEQ => Advanced HDD Setup (Mouse: Left click)
Press this button to enter Advanced HDD Setup as described in Section 8.10.

**ESC** (Mouse: Right Click)

Press this button to escape from this screen, and return to Setup Menu display.    If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Size (GB)** – the total HDD storage in GB (Giga-Byte) for Alarm Record and Normal Record respectively.    This item is just for information.    Please refer to Section 8.9 for more detailed information and setup of each individual HDD.      Please note that if the total alarm record size is zero, the alarm video/audio will be recorded in normal record partition.    Please note that if the total normal record size is zero, the normal video/audio will be recorded in alarm record partition.

**Auto Overwrite** –

Atomatic overwrite of the recorded video/audio from HDD#1 when the Alarm/Normal Record disk drive capacity reaches the end of the last HDD.    If Auto Overwrite is disabled and the Alarm/Normal Record disk drive capacity reaches the end, the system will not overwrite the recorded video/audio, and hence not record Alarm/Normal video/audio, until the user presses the Alarm Reset button.    Press ENTER or +/- to check/uncheck this item.    The default setting is " ˘ " - checked.

**HDD Full Action** –

Ations when Alarm/Normal Record disk drive capacity reaches the end of the last HDD.    Press ENTER or +/- to check/uncheck this item.    The default setting is " ˘ " - checked.

**Duration** –

Rsponse duration to define at most how long (in seconds) the Alarm Out relay and the Buzzer will keep being triggered after the corresponding partition, Alarm Record or Normal Record, is full.    Press +/- buttons to adjust the value (3 seconds - 60 minutes, discrete, '-' for 'Forever').

**Alarm Out** –

Define which Alarm Output will be triggered when the corresponding partition, Alarm Record or Normal Record, is full.    Press +/- buttons to select none (N/A) or one of the Alarm Outputs (NC (1), NO (2)).

**Buzzer** –

Activate the internal Buzzer or not when the corresponding partition, Alarm Record or Normal Record, is full.    Press ENTER or +/- to check/uncheck this item.    The default setting is " ˘ " - checked.

**Log** –

log to event logs or not.    Press ENTER or **+/-** to check/uncheck this item.    The default setting is " ˘ "
- checked.


**E-mail** –

Send the event e-mail to remote station or not.    The e-mail will be sent to the predefined receivers
when the event is triggered.
Press ENTER or **+/-** to check/uncheck this item.    The default setting is " – " - unchecked.


## 8.9 HDD Format

In HDD Setup display, press MODE to call up HDD Format/Clear screen as shown.

| HDD Setup | | ✕ |
|---|---|---|
| Record Type | Alarm Record | Normal Record |
| Size (GB) | 315 | -4534542 |
| Auto Overwrite | ✓ | ✓ |
| HDD Action | | |
| HDD Full Action | ✓ | ✓ |
| Duration | 10 Sec. | 10 Sec. |
| Alarm Out | N/A | N/A |
| Buzzer | ✓ | ✓ |
| E-mail | – | – |
| [MODE] - HDD Format / Clear | | |
| [SEQ] - Advanced HDD Setup | | |

The HDD must be formatted before it can be used to record video/audio.    The HDD Format/Clear
screen allows the administrator to format and/or clear each HDD, and set the size for Alarm Record
partition and Normal Record partition for each HDD.    Please make sure there's no remote user before
formatting the HDD.

Please note that if NAS device is connected and setup correctly, it will be always the last storage in the
HDD list.

The general operations are as below:


**MODE** => Format (Mouse: Left click)
Press this button to format the HDD.    A confirmation dialog will be shown on the screen, press
ENTER to confirm, or ESC to cancel.    Please note that it would take about 40 seconds to format a
brand new 160GB HDD.

Note: If the HDD has not been formatted, it will be formatted and partitioned with default record size,

100% for Alarm and 0% for Normal.   If it has been formatted, it will be formatted according to the Alarm REC Size (%) and Normal REC Size (%) displayed on the screen, but the previously recorded contents within the new size won't be cleared and will be accessible.

**SEQ** => Clear (Mouse: Left click)
Press this button to clear the HDD.   A confirmation dialog will be shown on the screen, press ENTER to confirm, or ESC to cancel.

Note: If the HDD has not been formatted, it will be formatted and partitioned with default record size, 100% for Alarm record and 0% for Normal record.   If it has been formatted (and recorded), it will be partitioned according to the Alarm Record Size (%) and Normal Record Size (%) displayed on the screen, and the previously recorded contents will all be cleared.

**CALL** => Physical Format (Mouse: Left click)
Press this button to physically format the selected HDD.   A confirmation dialog will be shown on the screen, press ENTER to confirm, or ESC to cancel.   Please note that the recording will be always optimized for performance & lifetime no matter it's for the first time or for the one hundredth time. The formatting would take less than 1 minute.   We strongly recommend that the user use this physical format function to format the HDD for the first time.

Note: The HDD will be physically formatted and partitioned with default record size, 100% for Alarm record and 0% for Normal record.   All the previously recorded contents will be cleared.

**ESC** (Mouse: Right Click)
Press this button to escape from this screen, and return to HDD Setup display.   If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Size (GB)** – the total storage in GB (Giga-Byte) for the HDD if it has been formatted.   This item is just for information.

**Alarm Record(%)** – Alarm Record Size (in percentage) for this HDD.   Please follow the Text Input method described in Section 5.1 to change the value.   Please note that if the alarm record percentage for all HDDs is zero, the alarm video/audio will be recorded in normal record partition.   Please note that if the total normal record size is zero, the normal video/audio will be recorded in alarm record partition.

**Normal Record(%)** – Normal Record Size (in percentage) for this HDD.   It equals to (100% - Alarm

Record Size).    This item is just for information.

## 8.10 Advanced HDD Setup

In HDD Setup display, press SEQ to call up Advanced HDD Setup display as shown.
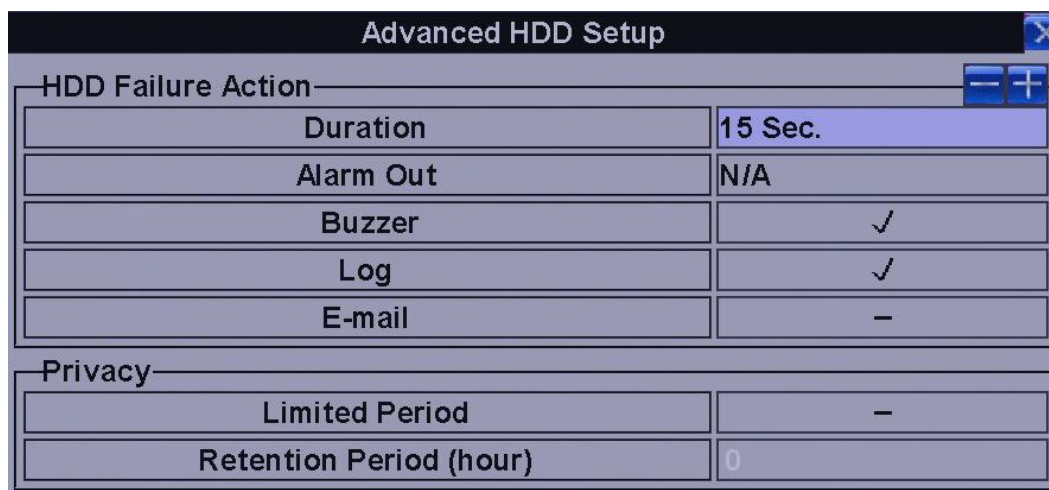


The HDD Failure Action in Advanced HDD Setup allows the administrator to define how the system responds to the detected HDD failure, while the Privacy settings allow the administrator to set the NVR to record for Limited Period and the Retention Period of its HDD storage.
The HDD Failure Action will be triggered if there's no available formatted HDD detected.

The general operations are as below:

▲▼ (Mouse: Left click)
Press these buttons to select the items.

ESC (Mouse: Right Click)
Press this button to escape from this screen, and return to HDD Setup display.    If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

Duration – response duration to define at most how long (in seconds) the Alarm Out relay and the Buzzer will keep being triggered after HDD failure is detected.    Press +/- buttons to adjust the value (3 seconds - 60 minutes, discrete, '-' for 'Forever').

**Alarm Out** – to define which Alarm Output will be triggered when HDD failure is detected.    Press **+/-** buttons to select none (N/A) or one of the Alarm Outputs (NC (1), NO (2)).

**Buzzer** – to activate the internal Buzzer or not when HDD failure is detected.    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.    The default setting is " ˘ " - checked.

**Log** – to log to event logs or not.    Press ENTER or **+/-** to check/uncheck this item.    The default setting is " ˘ " - checked.

**E-mail** – to send the event e-mail to remote station or not.    The e-mail will be sent to the predefined receivers when the event is triggered.    Press ENTER or **+/-** to check/uncheck this item.    The default setting is " – " - unchecked.

**Limited Period** – whether the HDD storage is for limited period or not.    Press ENTER or **+/-** to check/uncheck this item.    The default setting is " – " - No.

**Retention Period (hour)** – the retention period of the HDD storage if Limited Period is " ˘ ".    Please follow the Text Input method described in Section 5.1 to modify this item.    If this item is set as 0, it will be treated as No Limited Period.

## 8.11 Password Setup

In Setup Menu display, press ▲ ▼ ◄ ► to change the highlighted option to Password, and then press ENTER to call up Password Setup as shown.

| Password Setup | | | | |
|---|---|---|---|---|
| Local Guest Level | | | Admin | |
| Remote Guest Level | | | - | |
| Auto Logout | | | - | |
| No. | Login Name | Password | Level | |
| *1 | abc | *** | Admin | Adv. |
| 2 | | | Operator | Adv. |
| 3 | | | Operator | Adv. |
| 4 | | | Operator | Adv. |
| 5 | | | Operator | Adv. |
| 6 | | | Operator | Adv. |
| [MODE] - Set default login | | | | |

The Password Setup allows the administrator to add new users, delete existing ones, and/or modify the user's name, password, and/or level.

There are three default password levels in the system, including Administrator (highest), Supervisor, and Operator (lowest).   The Operator can operate live video display, the Supervisor live video display, image playback and archive, and the Administrator everything.   Beside the default password levels, the user can also set "Customized" user level as described in the following paragraphs.   The system allows up to 18 user accounts.

There is one factory-preset login name/password aa/11 at Administrator level.   The user can use it to login the system for the first time.

The general operations are as below:

**▲▼◄►** (Mouse: Left click)
Press these buttons to select the items.   The display will scroll up/down if the selected item is not shown on the screen.

**MODE** => Select/Deselect as default (Mouse: Left click)
Press this button to select this user as the default one at login, or deselect if this user is the default login user.   An asterisk (*) will be shown preceding the number for the default login user.   And this login name/password will be the default one each time the login dialog is shown, so the user doesn't bother to enter the text to login the system.

**ESC** (Mouse: Right Click)
Press this button to escape from this screen, and return to Setup Menu display.   If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Local Guest Level** – the local access level (Administrator, Supervisor, Operator, -, or any user) without login the system.   Press **+/-** buttons to change the level.

**Remote Guest Level** – the remote access level without login the system.   Press **+/-** buttons to change the level.
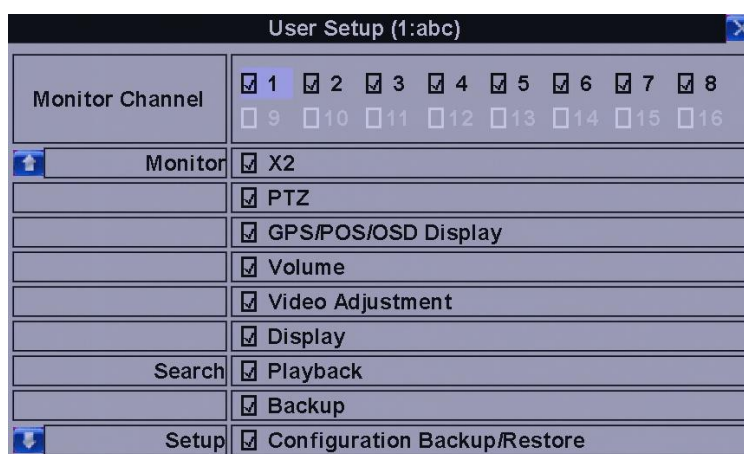
**Auto Logout** – auto logout, if there's no user's operation in 1 minute to 24 hours, or not ("-").   Press **+/-** buttons to change the value.

**Login Name** – please follow the Text Input method described in Section 5.1 to modify this item.

**Password** – this item accepts numbers only.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Level** – the password level (Administrator, Supervisor, Operator, or Customized) for this user.    Press **+/-** buttons to change the level.

**Adv.** – press ENTER (Mouse: Left click) to call up Advanced User Setup as shown below.

| User Setup (1:abc) | |
|---|---|
| Monitor Channel | ☑ 1  ☑ 2  ☑ 3  ☑ 4  ☑ 5  ☑ 6  ☑ 7  ☑ 8 <br> ☐ 9  ☐ 10  ☐ 11  ☐ 12  ☐ 13  ☐ 14  ☐ 15  ☐ 16 |
| Monitor | ☑ X2 |
|  | ☑ PTZ |
|  | ☑ GPS/POS/OSD Display |
|  | ☑ Volume |
|  | ☑ Video Adjustment |
|  | ☑ Display |
| Search | ☑ Playback |
|  | ☑ Backup |
| Setup | ☑ Configuration Backup/Restore |

The Advanced User Setup allows the administrator to setup each user's detailed access right of the system.

The general operations are as below:

**▲▼◄►**
Press these buttons to move the focus.    If the selected item is not shown on the screen, the screen will scroll up or down.

**ESC** (Mouse: Right Click)
Press this button to escape from this screen, and return to Password Setup display.    The Password Setup contents will be updated accordingly.

Following is a brief description for each item and its specific operations:

Monitor Channel 1-8/4 – the user can only monitor those channels "checked".
Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**X2 –** to enable the user to do X2 operation for live/playback video if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**PTZ –** to enable the user to do PTZ operation if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**GPS/POS/OSD Display –** to enable the user to change GPS/POS/OSD Display if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Volume –** to enable the user to change volume if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Video Adjustment –** to enable the user to do video adjustment operation if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Display –** to enable the user to change display settings if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Playback –** to enable the user to playback video/audio if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Backup –** to enable the user to backup video/audio if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Configuration Backup/Restore –** to enable the user to backup/restore configurations if "checked". Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Setup Camera –** to enable the user to do Camera Setup if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Setup Alarm –** to enable the user to do Alarm Setup if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Setup Main/SEQ Display –** to enable the user to do Main/SEQ Display Setup if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Setup Scheduled Record –** to enable the user to do Scheduled Record Setup if "checked".    Press ENTER or +/- (Mouse: Left click) to check/uncheck this item.

**Setup HDD –** to enable the user to do HDD Setup if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Setup Password –** to enable the user to do Password Setup if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Setup System –** to enable the user to do System Setup if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Setup RS-232/422/485 –** to enable the user to do RS-232/422/485 Setup if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Setup Network –** to enable the user to do Network Setup if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Setup Factory Defaults –** to enable the user to restore factory defaults to all setup related configurations if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Software Upgrade –** to enable the user to upgrade NVR software if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

**Shutdown –** to enable the user to shutdown the NVR if "checked".　Press ENTER or **+/- (Mouse: Left click)** to check/uncheck this item.

## 8.12 System Setup

In Setup Menu display, press ▲ ▼ ◄ ► to change the highlighted option to System, and then press ENTER to call up System Setup as shown.

The System Setup allows the administrator to set the system time, time zone, time synchronization, language, etc.

The general operations are as below:

**▲ ▼ ◄ ► (Mouse: Left click)**
Press these buttons to select the items.

| System Setup | | | | |
|---|---|---|---|---|
| **Time Zone** | | | | |
| Taipei [GMT+08:00] | | | | |
| Daylight Saving Time | | – | | |
| | | | | |
| **System Time** | | | | |
| Synchronization | N/A | | | |
| TSP Server | time.windows.com | | | |
| Date | 2015 | Nov | 24 | |
| Time | 16 | 02 | 13 | |
| Display Format | YY/MM/DD HH:MM | | | |
| Language | English | | | |
| Protection Key | 1000 | 1001 | 1002 | 1003 |

ESC (Mouse: Right Click)

Press this button to escape from this screen, and return to Setup Menu display.    If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.    Please note that if the selected language is changed, the user will be asked to reboot the system for the newly selected language to take effect.

Following is a brief description for each item and its specific operations:

**Time Zone –**

press **+/-** buttons to select the time zone for the system.

**Daylight Saving Time** – press ENTER or **+/-** to check/uncheck this item.    The default value is set by selecting a different time zone, but the user may check/uncheck this item if the default setting is checked.

**System Time –**

Synchronization – time synchronized with TSP Server or not.    Press **+/-** to change the value.    The default setting is " – " - unchecked.    Please note that "Local Server" means this NVR is used as TSP server.

**TSP Server –** TSP (Time Synchronization Protocol) server name if Time Synchronization is set to "TSP Server".    The system will try to do time synchronization with the specified TSP server at the system preset interval.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Date –** system date.    Press **+/-** buttons to modify each of these items.

**Time –** system time.    Press **+/-** buttons to modify each of these items.

**Display Format –** format used for the system time displayed on the lower-left corner of the main screen. Press **+/-** buttons to select the desired format.

**Language –** press **+/-** buttons to select the language for the system.    The languages supported include: English, Russian, Simplified Chinese, Spanish, Traditional Chinese, Polish, Turkish, etc.

**Protection Key –** the protection key for the remote access of the system.    Please follow the Text Input method described in Section 5.1 to modify these items.

**Note:** This protection key will be used for authentication when any remote station wants to connect with the system from Ethernet interface, either LAN or internet.    So, the same protection key must be entered to install the remote software if it is to be used to access the system.

## 8.13 RS-232/485 Setup

In Setup Menu display, press ▲▼◄► to change the highlighted option to RS-232/485/IR, and then press **ENTER** to call up RS-232/485/IR Setup as shown.

| RS-232 / 485 / IR Setup | | | ✕ |
|---|---|---|---|
| COM Port | RS-232 | RS-485 | IR |
| Device Type | N/A | N/A | |
| Model | Terminal | Terminal | |
| Baud Rate | 1200 | 1200 | |
| Data Bit | 5 | 5 | |
| Stop Bit | 1 | 1 | |
| Parity | None | None | |
| DVR/NVR/Camera ID | 0 | 1 | - |

The RS-232/485/IR Setup allows the administrator to setup RS-232/RS-485 control port and NVR ID for IR remote.   Please refer to the manuals for the connected devices - PTZ cameras or keyboard controllers – to set the items in RS-232/485 Setup.

The general operations are as below:

**▲▼◄►** (Mouse: Left click)
Press these buttons to select the items.

**ESC** (Mouse: Right Click)
Press this button to escape from this screen, and return to Setup Menu display.   If the Save dialog is shown, press **ENTER** to exit and save, **ESC** (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Device Type** – PTZ, Keyboard, GPS, POS, PTZ+Keyboard or N/A (Not Available).   Press **+/-** buttons to change the type.

**Model** – PTZ model (for PTZ and PTZ+Keyboard), Keyboard model, GPS protocol, or POS printer type of the connected devices.   The PTZ models supported include Pelco D protocol Dome, SamSung SCC-641P, Kalatel Cyber Dome, PIH-series, Dynacolor, Bosch AutoDome, Video Trek, etc. The Keyboard models supported include Terminal (EX. VT-100) and Control Protocol.   For Terminal type, please use the corresponding ASCII characters for code.   The GPS protocol supported is NMEA0183.   The POS printer types supported include Epson General (EX. Epson-TM200,

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Epson-TMU300, Epson-TMU675, Epson-TMT882, Epson-RPU420, and Epson-MD332S) and Epson-TMU295.　Press **+/-** buttons to change the supported model (or protocol).　Please note that if PTZ+Keyboard is selected for Device Type, the Keyboard model is always Control Protocol, and the other settings (Baud Rate, Data Bit, Stop Bit, and Parity) are the same as the PTZ Model selected.　Please also note that the installer must be sure that the Keyboard Control Protocol and the PTZ Protocol won't conflict with each other.

**Baud Rate –** press **+/-** buttons to change the value.

**Data Bit –** press **+/-** buttons to change the value.

**Stop Bit –** press **+/-** buttons to change the value.

**Parity –** (Odd, Even, or None).　Press **+/-** buttons to change the value.

**DVR/NVR/Camera ID –** for PTZ/Keyboard => the device ID for this digital video/audio recorder, and it must not conflict with the other devices connected in the same control port.; for GPS/POS => the Camera ID to receive the GPS/POS data.　For IR => the DVR/NVR ID to receive the IR control signal, "-" to receive any DVR/NVR ID signal.　Press **+/-** buttons to change the ID.

Some GPS Devices Tested

HOLUX GR-213 G-Mouse GPS Receiver
Garmin GPS 18 OEM
GlobalSat BR-355 Cable GPS

## 8.14 Network Setup

The System support view the DVR image via "IE browser" for remote control and remote recording function. Connect this unit to a 10/100Base-T Ethernet network through this port. In Setup Menu display, press ▲▼◄► to change the highlighted option to Network, and then press **ENTER** to call up Network Setup as shown.

| Network Setup | | | | | |
|---|---|---|---|---|---|
| Net Type | DHCP | Notification | FTP | 3G | Adv. |

**Static IP**

| IP Address | 192 . 168 . 100 . 197 |
|---|---|
| Net Mask | 255 . 255 . 255 . 0 |
| Gateway | 192 . 168 . 100 . 254 |
| DNS | 168 . 95 . 1 . 1 |

**PPPoE**

| Username | | Password | |
|---|---|---|---|

| P2P | Off |
|---|---|

**DDNS**

| Type | N/A |
|---|---|
| URL | |

| Username | | Password | |
|---|---|---|---|

The Network Setup allows the administrator to setup all Ethernet network related parameters. Please check with your network administrator to set these parameters correctly.

The general operations are as below:

▲▼◄► (Mouse: Left click)
Press these buttons to select the items.

**ESC** (Mouse: Right Click)
Press this button to escape from this screen, and return to Setup Menu display.   If the Save dialog is shown, press **ENTER** to exit and save, **ESC** (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Net Type –** Static IP, PPPoE, or DHCP.   For internet access, please make sure the below IP Address is a public IP address; otherwise, (1) a router with public IP address is required, and

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the router must be setup for port mapping (forwarding) to the NVR, or (2) CMS server must be used (**Sec. 8.18**).    Press +/- buttons to change the Net Type.

**IP Address –** Ethernet IP address of the "Net Type" above for the system.    To get the static IP address, please contact your local ISP (Internet Service Provider).    Please follow the Text Input method described in Section 5.1 to modify these items.

**Net Mask –** Net Mask for the Ethernet IP address.    Please follow the Text Input method described in Section 5.1 to modify these items.

**Gateway –** Ethernet Gateway IP address.    Please note that the priority of Gateway is (1) Ethernet Gateway and (2) 3G Gateway.    Please follow the Text Input method described in Section 5.1 to modify these items.

**DNS –** DNS (Domain Name Server) IP address for Ethernet.    Please follow the Text Input method described in Section 5.1 to modify these items.

**PPPoE Username –** PPPoE username for the system if PPPoE is used.    Please follow the Text Input method described in Section 5.1 to modify this item.

**PPPoE Password –** PPPoE password for the system if PPPoE is used.    Please follow the Text Input method described in Section 5.1 to modify this item.

**P2P –** if enabled, the QR code of the NVR will be shown on the upper right corner, and users can scan it to access the NVR remotely through the QR code in the future.    Please make sure that TCP hole punching is possible for the NAT, Full-cone or Address restricted cone, of the router connected to internet for the NVR or remote software.

**DDNS Type –** Dynamic, Static, Custom DDNS (Dynamic Domain Name Server) type, etc. Please contact your local DDNS Service Provider to get the DDNS URL, username, and password.    Press +/- buttons to change this item.    If internet is accessible, the user can select "Fly2DNS" for free built-in DDNS server, URL/DDNS Username/DDNS Password will be filled in automatically after the user exits and saves the settings.    The user can change the prefix of the URL afterwards.

**URL –** the URL (Uniform Resource Locators) for the system.    Please follow the Text Input method described in Section 5.1 to modify this item.

**DDNS Username –** DDNS username for the NVR for Static IP, PPPoE, or DHCP.    Please

follow the Text Input method described in Section 5.1 to modify this item.

**DDNS Password –** DDNS password for the NVR for Static IP, PPPoE, or DHCP.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Notification –** press ENTER (Mouse: Left click) to call up Notification Setup.    Please refer to Section 8.15 for the details.

**FTP –** press ENTER (Mouse: Left click) to call up FTP Setup.    Please refer to Section 8.16 for the details.

**3G –** press ENTER (Mouse: Left click) to call up 3G Modem Setup.    Please refer to Section 8.17 for the details.

**Advanced –** press ENTER (Mouse: Left click) to call up Advanced Network Setup.    Please refer to Section 8.18 for the details.
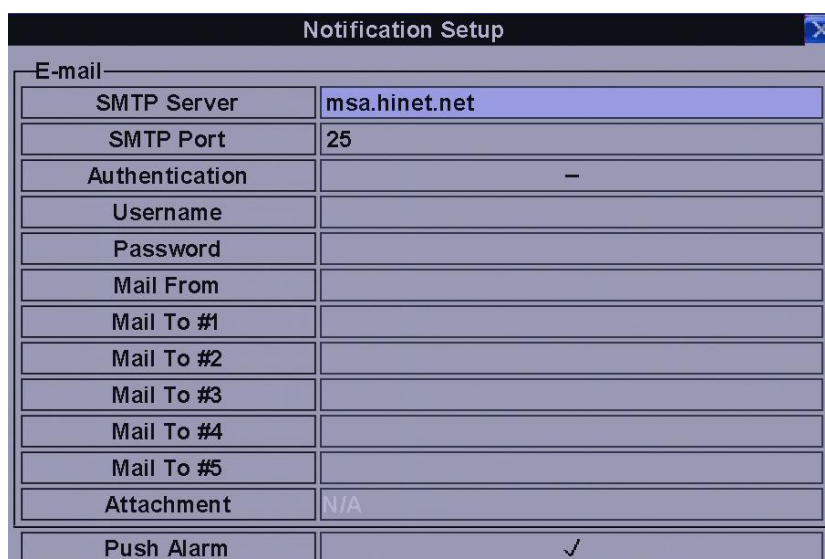
**Note:** If DDNS Type is FreeDNS, the URL must be appended with ",hash", where hash is extracted from the grab URL batch file that is downloaded from freedns.afraid.org.


## 8.15 Notification Setup

In Network Setup, press ENTER to call up Notification Setup as shown when the highlighted option is Notification.

The Notification Setup allows the administrator to set notification (email & push alarm) related parameters.    When an event occurs and Notification/E-mail is enabled for the corresponding action, a notification will be sent based on the parameters set.

| Notification Setup | |
|---|---|
| **E-mail** | |
| SMTP Server | msa.hinet.net |
| SMTP Port | 25 |
| Authentication | – |
| Username | |
| Password | |
| Mail From | |
| Mail To #1 | |
| Mail To #2 | |
| Mail To #3 | |
| Mail To #4 | |
| Mail To #5 | |
| Attachment | N/A |
| Push Alarm | √ |

The general operations are as below:

**▲▼** (Mouse: Left click)

Press these buttons to select the items.

**ESC** (Mouse: Right Click)

Press this button to escape from this screen, and return to Network Setup display.    If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**SMTP Server –** SMTP mail server name.    Please follow the Text Input method described in Section 5.1 to modify this item.

**SMTP Port –** the SMTP port for e-mail transmission.    The default value is 25.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Authentication –** whether the SMTP mail server requires authentication.    Press ENTER or +/- to check/uncheck this item.

**Username –** username if the SMTP mail server requires authentication.    Please follow the Text Input method described in Section 8.1 to modify this item.

**Password –** password if the SMTP mail server requires authentication.    Please follow the Text Input method described in Section 8.1 to modify this item.

**Mail From –** the e-mail address of this NVR unit, i.e. the sender of the e-mails originated from the triggered events.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Mail To #1-5 –** the receivers' e-mail addresses.    The system can send the e-mails originated from the triggered events to up to 5 different receivers.    Please follow the Text Input method described in Section 5.1 to modify these items.

**Attachment (disabled) –** attached picture for the e-mail sent.    The value could be (N/A, Original picture, QCIF picture).    Press +/- buttons to change this item.

**Push Alarm –** whether Push Alarm is enabled for network notification.    Press ENTER or +/- to check/uncheck this item.

## 8.16 FTP Setup

In Network Setup, press ENTER to call up FTP Setup as shown when the highlighted option is FTP.

| FTP Setup | |
|---|---|
| FTP Server (URL or URL:Path) | 192.168.1.253 |
| FTP Port | 21 |
| Username | admin |
| Password | ***** |
| Prefix Of Filename | |

The FTP Setup allows the administrator to set FTP related parameters.    When an event occurs and FTP is enabled for the action, the recorded video/audio for that event will be sent to the FTP server based on the parameters set here.

The general operations are as below:

▲▼ (Mouse: Left click)
Press these buttons to select the items.

ESC (Mouse: Right Click)
Press this button to escape from this screen, and return to Network Setup display.    If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**FTP Server** – FTP server web/IP address with or without directory path.    Please follow the Text Input method described in Section 5.1 to modify this item.

**FTP Port** – the FTP port.    The default value is 21.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Username** – username for this NVR unit in the FTP server.    Please follow the Text Input method described in Section 5.1 to modify this item.

**Password** – password for this NVR unit in the FTP server.   Please follow the Text Input method described in Section 5.1 to modify this item.

**Prefix Of Filename** – the prefix of the filenames for the files sent to the FTP server.   If it's empty, the filenames will be "cam.."; if not, the filenames will be "Prefix-cam..".   For example, if the prefix is "NVR01", then the filenames will be "NVR01-cam..".   Please follow the Text Input method described in Section 5.1 to modify this item.

# 8.17 Modem Setup

In Network Setup, press ENTER to call up 3G Modem Setup as shown when the highlighted option is 3G.
The system displays the screen as shown below:

| 3G Modem Setup | | | | |
|---|---|---|---|---|
| Username | | | | |
| Password | | | | |
| Dial String | *99# | | | |
| APN | | | | |
| PIN | | | | |
| IP Address | 0 | 0 | 0 | 0 |
| Net Mask | 0 | 0 | 0 | 0 |
| Gateway | 0 | 0 | 0 | 0 |
| DNS | 0 | 0 | 0 | 0 |

The 3G Modem Setup allows the administrator to set 3G modem related parameters if USB dongle 3G modem is plugged in the USB port.

The general operations are as below:

**▲▼ (Mouse: Left click)**
Press these buttons to select the items.

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to Network Setup display.

Following is a brief description for each item and its specific operations:

**Username** – username if requested by ISP.   Please follow the Text Input method described in Section 5.1 to modify this item.

**Password** – password if requested by ISP.   Please follow the Text Input method described in Section 5.1 to modify this item.

**Dial String** – the 3G dial command.   Please follow the Text Input method described in Section 5.1 to modify this item.

**APN** – (Optional) APN info.   Please follow the Text Input method described in Section 5.1 to modify this item.

**PIN** – PIN associated with the SIM card used.   Please follow the Text Input method described in Section 5.1 to modify this item.

**IP Address** – 3G IP address for the system.   To get the static IP address, please contact your local ISP (Internet Service Provider).   This field is for information only.
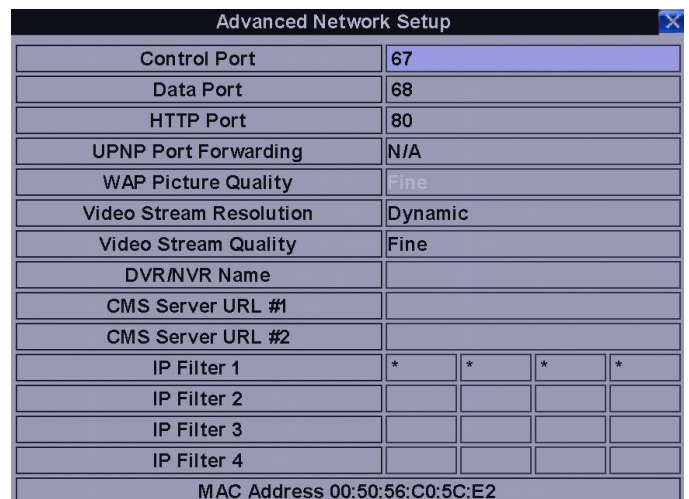
**Net Mask** – Net Mask for the 3G IP address.   This field is for information only.

**Gateway** – IP address for 3G Gateway. Please note that the priority of Gateway is
 (1) Ethernet Gateway and (2) 3G Gateway.   This field is for information only.

**DNS** – DNS (Domain Name Server) IP address for the 3G network.
  This field is for information only.

## 8.18 Advanced Network Setup

In Network Setup, press ENTER to call up Advanced Network Setup as shown when the highlighted option is advanced.

| Advanced Network Setup | | | | |
|---|---|---|---|---|
| Control Port | 67 | | | |
| Data Port | 68 | | | |
| HTTP Port | 80 | | | |
| UPNP Port Forwarding | N/A | | | |
| WAP Picture Quality | Fine | | | |
| Video Stream Resolution | Dynamic | | | |
| Video Stream Quality | Fine | | | |
| DVR/NVR Name | | | | |
| CMS Server URL #1 | | | | |
| CMS Server URL #2 | | | | |
| IP Filter 1 | * | * | * | * |
| IP Filter 2 | | | | |
| IP Filter 3 | | | | |
| IP Filter 4 | | | | |
| MAC Address 00:50:56:C0:5C:E2 | | | | |

The Advanced Network Setup allows the administrator to set advanced network parameters. If the user is not familiar with network administration, please DO NOT modify the items in this dialog.

The general operations are as below:
▲▼ (Mouse: Left click)
Press these buttons to select the items.

**ESC** (Mouse: Right Click)
Press this button to escape from this screen, and return to Network Setup display.   If the Save dialog is shown, press ENTER to exit and save, ESC (Mouse: Right Click) to exit without saving.

Following is a brief description for each item and its specific operations:

**Control Port** – the control port for remote access.   The default value is 67.   Please follow the Text Input method described in Section 5.1 to modify this item.

**Data Port** – the data port for remote access.   The default value is 68.   Please follow the Text Input method described in Section 5.1 to modify this item.

**HTTP Port** – the HTTP (web page) port for remote access.   The default value is 80. Please note that value 0 means to disable HTTP.

**UPNP Port Forwarding** – Use UPnP port forwarding for Control/Data/HTTP port for internet access if the router supports UPnP.   Press +/- buttons to change the value.   If UPnP port forwarding is used, the NVR will try to connect with UPnP router to set Control/Data/HTTP port after the user exits from this screen.   It may take from a few seconds to a few minutes. If setting successful, the last Control/Data/HTTP port will be shown with (*) in front of it.

**WAP Picture Quality** – The WAP picture quality if WAP access is supported for the NVR. Press +/- buttons to change the value.

**Video Stream Resolution** – Network live video stream resolution.   Press +/- buttons to change the value.   For V8.07 or above, "Dynamic" is added for dynamic resolution adjustment based on remote video window resolution and network bandwidth.

**Video Stream Quality** – Network live video stream quality.   Press +/- buttons to change the value.   Please note that the value cannot be changed due to the limitation of the main chip.

**DVR/NVR Name** – The "DVR/NVR Name" used in the "CMS Server" if CMS Server (described below) is (to be) connected with the DVR/NVR.    Please follow the Text Input method described in Section 5.1 to modify this item.

**CMS Server URL #1-2** – the URL (Uniform Resource Locators) for the CMS Server #1 and #2. The DVR/NVR will connect with up to two CMS servers automatically once it's running. Please note that with this feature, the NVR needs not to be a web server, while the CMS server needs to be a web server.    Please follow the Text Input method described in Section 5.1 to modify these items.

**IP Filter #1-4** – the IP filters #1-4 for remote access.    Only those PCs with IP addresses matching one of the IP filters can access the DVR/NVR remotely. Please follow the Text Input method described in Section 8.1 to modify these items.

**Note:** If the Control Port or Data Port is not available or accessible during remote access, the system will reset the ports to their default values, i.e. 67/68.

## 8.19 Factory Default

The DVR can be set back to original factory default figures through this function. Press the "Direction Control" button to reset the DVR to factory default figure. You can also use the mouse to make the adjustments.
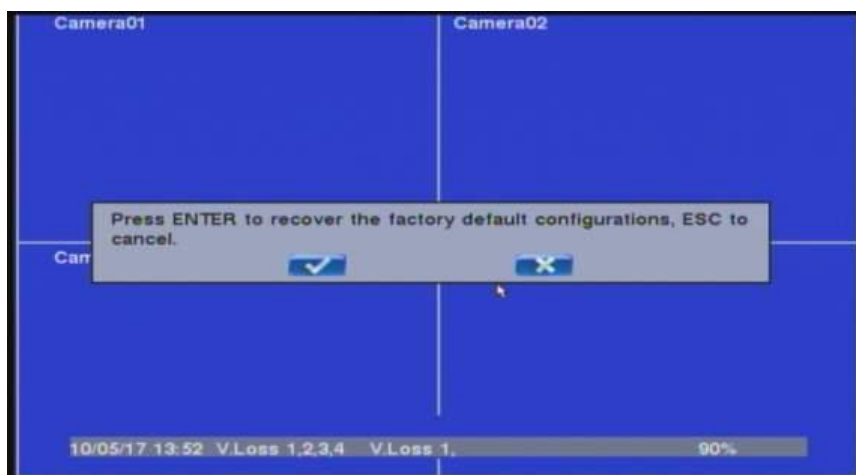


| NOTE： |
| :--- |
| When you want to reset the default setting, the DVR display will pop-up the confirmation window to check again with customer. |

# 9. PTZ Control

The netwprk video/audio recorder supports a variety of PTZ cameras.    The user can easily control the PTZ cameras through the operations described in this Chapter if those PTZ cameras have been connected and setup correctly.    Please refer to Section 3.2 Optional Connections for the connections.    Please refer to Section 8.1 Pre-Camera Setup to set the PTZ ID of each PTZ camera, and Section 8.13 RS-232/485/IR Setup to setup the control port.

If a camera is also a PTZ camera, there will be an asterisk (*) preceding its title in its video window in split-window display.    Please press **PTZ** button **(Mouse:** **)** to enter PTZ control mode if the focus camera is a PTZ camera.    The asterisk (*) will be changed to inverse color to indicate that the camera is now in PTZ control mode.

In PTZ control mode, the user's operations can be divided into general operations and miscellaneous function specific operations, and are described as the followings:

**General operations:**

**PTZ (Mouse:** **)**

Press this button to exit PTZ control mode.    The asterisk (*) will be changed back to normal color.

**▲▼ (Mouse: Left-click in the up/down area of the video window)**

Press these buttons to tilt the camera up/down.

**◄► (Mouse: Left-click in the left/right area of the video window)**

Press these buttons to pan the camera left/right.

**ZOOM ( 🔍 ) +/- (Mouse:**  **)**

Press these buttons to zoom in/out the camera.

**GOTO (Mouse:**  **)**

Press this button to move the camera to the preset position.    Press numeric buttons **0-9** to enter the number of the preset position to move the camera to.    **The range of the preset positions is 00-254.**

**NEXT**

Press this button for the next miscellaneous function.    The miscellaneous functions include Focus, Iris, Auto PAN, SEQ, Preset, and Pan Speed.    And the active one will be shown on the lower right corner of the screen.    The miscellaneous function specific operations are described in the following table.

**Miscellaneous function specific operations:**

| Active function | Operations | Descriptions |
|---|---|---|
| Focus | **+/-**<br>**ENTER** | focus far/near **(Mouse:**  **)**<br>auto focus **(Mouse:**  **)** |
| Iris | **+/-** | Iris increase/decrease **(Mouse:** **)** |
| Auto Pan (3)<br>**(Mouse:** **)** | **+/-**<br>**ENTER**<br>**\***<br>**#** | Auto pan speed is shown in parenthesis<br>increase/decrease speed<br>start/stop Auto Pan<br>set start position<br>set end position |
| SEQ (5 sec.)<br>**(Mouse:** **)** | **+/-, NUMBER**<br>**ENTER** | SEQ dwell time is shown in parenthesis.<br>  If SEQ mode is on, the camera will goto<br>  preset position 0-9 (or 1-10) sequentially.<br>change dwell time<br>start/stop SEQ mode, an asterisk (*) will<br>  be shown if SEQ mode is on |
| Preset (1)<br>**(Mouse:**<br> **,** **)** | **+/-, NUMBER**<br>**ENTER**<br>**#** | Preset location is shown in parenthesis<br>change Preset location<br>set Preset location<br><span style="color:red">clear Preset location</span> |
| Pan Speed (3)<br>**(Mouse:** **)** | **+/-** | Manual pan speed is shown in parenthesis<br>increase/decrease speed |

# 10. Search/Playback/Archive

There are five ways to search the recorded video/audio for playback:

(a) Search by time,

(b) Search by event,

(c) Search archived files, and

(d) **POS search.**

In split-window display, press **SEARCH** button **(Mouse:** **)** to call up Search Menu display as shown.



## 10.1 Search By Time:

The screen for Search By Time is shown as below
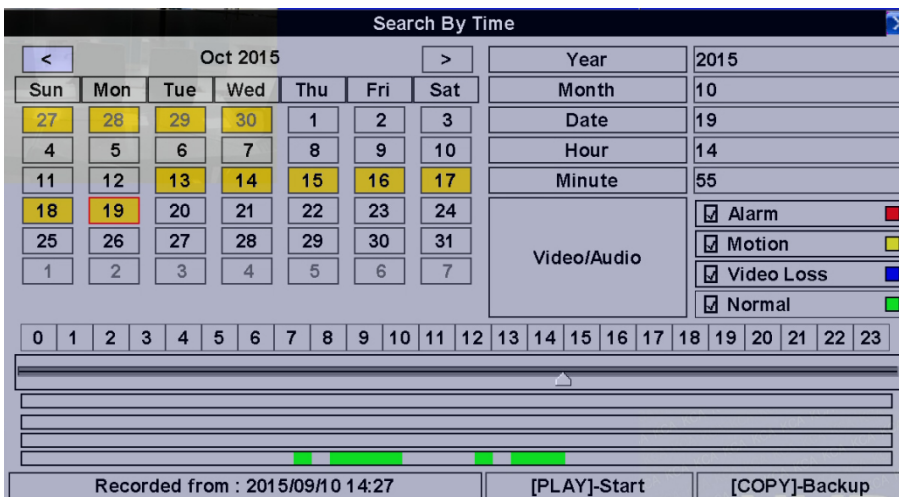
**The Status field will show the 'Recorded from' time based on the selected Video/Audio before searching - alarm partition if any of Alarm, Motion, or Video Loss, is checked, and normal partition if Normal is checked.   Above the status field is the 24H time slider and alarm/motion/video loss/normal recording status (from top to bottom).**

**The general operations are as below:**

### ▲▼◄► (Mouse: Left click)

Press these buttons to select the items.

### ESC (Mouse: Right Click)

Press this button to escape from this screen, and return to split-window display.

### Play Button ( ▶/‖) (Mouse: Left click)

Press this button to start playing the recorded video/audio with the selected search time and video/audio type.   **If there's no camera in playback mode, all the cameras in the current split window will be set to playback mode.**

### Copy Button ( ▤ ) (Mouse: Left click)

Press this button to **backup (copy)** the selected type of recorded video/audio starting from the **Search Time** (described below) in the HDD to the connected backup device **without playback**.   The Backup display (described in Section 10.6) will be shown.   **Please note that this kind of backup is performed in the background, and the user can still do almost all the operations.**

**Following is a brief description for each item and its specific operations:**

**Search Time** – (**Year**, **Month**, **Date**, **Hour**, **Minute**) for the recorded video/audio.   The playback (or backup) will start from the time entered here when the user press the playback buttons (or Copy button) later.   Press **+/-** buttons to modify each item.   User can also select the calendar on the left by mouse click or **ENTER** key, and select the time by mouse dragging the slider icon, or ◄► key for one-minute decrement/increment and **-/+** key for thirty-minute decrement/increment.

**Video/Audio** – (**Alarm**, **Motion**, **Video Loss**, **Normal**).   Check the types of the recorded video/audio you want to search for playback.   Press **ENTER** or **+/-** to check/uncheck each item.

## 10.2 Search By Event:

The screen for Search By Event - Log display, is shown below:
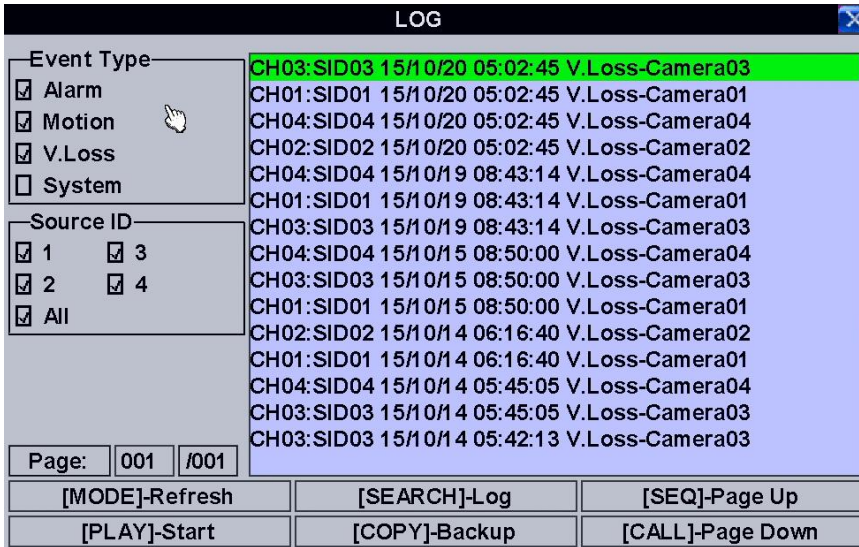


There are four different types of event logs, including Alarm, Motion, Video Loss, and System.    And up to 6000 most recent event logs can be stored in the system.

**The general operations are as below:**

**▲▼◄► (Mouse: Left click)**
Press these buttons to select the items.

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to split-window display.

**MODE** => Refresh **(Mouse: Left click)**
Press this button to refresh the log display.    If there are new event logs after the screen is last updated, the log list shown will be updated accordingly.

**SEARCH** => Log **(Mouse: Left click)**
Press this button to export the event log to backup device.    The **Log File dialog** will be shown as below.
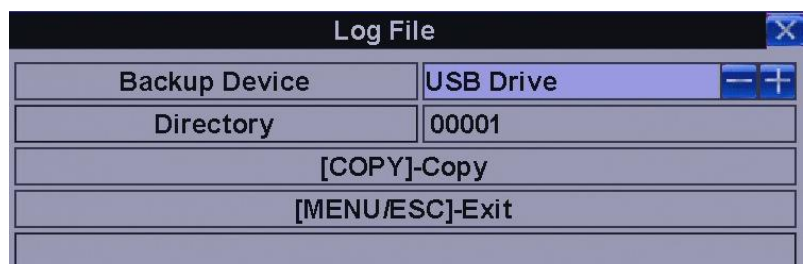
Please select the backup device, and enter the directory name you want, and then press **COPY** to copy the event log to the selected backup device.

**SEQ** => Page Up **(Mouse: Left click)**
**CALL** => Page Down **(Mouse: Left click)**
Press **SEQ/CALL** to Page Up/Down the Log display.

**Numeric (ENTER) (Mouse: Left click in the page number shown)**
Press these buttons to select the display page of the event logs, the log list will also be updated.

**Following is a brief description for each item and its specific operations:**

**Event Type** – the type of the events (**Record**, **Alarm**, **Motion**, **Video Loss**, **System**) to be shown in the log list.   The Event Type "System" includes all system related events, such as power on/off, and will not trigger recording.   Press **ENTER** or **+/-** to check/uncheck the event type for the log list.

**Source ID** – the source which triggered the event.   For Alarm, it's the alarm input number; for Motion and Video Loss, it's the camera number.   It's used to filter the events to be shown in the log list.   Press **ENTER** or **+/-** to check/uncheck each item.   **You may check/uncheck "All" for faster operation.**

**Log List** – the event logs according to the Event Type and Source ID selected.   The user may (1) press **ENTER (Mouse: Left click)** to select/deselect the highlighted log in this list, (multiple logs can be selected in this way) (2) press **Play Buttons ( ▶/ll, ▶▶) (Mouse: Left click)** to playback all the selected logs, or (3) press **Copy Button ( 🗐 ) (Mouse: Left click)** to **backup (copy)** all the selected recorded video/audio to the connected backup device **without playback**.      The Backup display (described in <u>Section 8.6</u>) will be shown.   **Please note that this kind of backup without playback is performed in the background, and the user can still do almost all the operations.**   Please refer to <u>Section 8.7 Playback For Search By Event</u> for the detailed operations for event playback.

## 10.3 Search archived files:

The screen for Search Archived Files is shown below:

| Search Archived Files | ✕ |
|---|---|
| **Backup Device** | ./ |
| USB Drive | ../ |
| Used: 16956(MB), available: 13699(MB) | 1015/ |
| | 1118/ |
| | 2013/ |
| | ??/ |
| | @eaDir/ |
| | @quarantine/ |
| | @tmp/ |
| **[MODE] - Delete File/Directory** | |

**The operations are as below:**

**▲▼◄► (Mouse: Left click)**
Press these buttons to select the items.

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to split-window display.

**Following is a brief description for each item and its specific operations:**

**Backup Device** – press **ENTER (Mouse: Left click)** to call up Backup Device dialog (if there's no Backup device connected).

**Disk Storage** – to select the disk storage to search the archived files.
Press **+/-** buttons to select the available storage.

**Archived File List** – the archived files in the selected Disk Storage.   Please select the file, and then press **ENTER** to enter Archived File Playback display of the selected file in this list, or press **Play Button ( ▶/❚❚ ) (Mouse: Left click twice)** to playback it directly.   Please refer to Section 10.7 Playback For Archived Files for the detailed operations.   Besides, you may press **MODE (Mouse: Left click)** to delete the selected file.

## 10.4 POS Search:

The screen for POS Search is shown below:

**The Status field will show the 'Recorded from' time in the HDDs before searching or the search result after searching.**

**The general operations are as below:**

**▲▼◄► (Mouse: Left click)**
Press these buttons to select the items.

**ESC (Mouse: Right Click)**
Press this button to escape from this screen, and return to split-window display.

**SEARCH / MODE (Mouse: Left click)**
Press this button to start searching the recorded video/audio with the selected search time, camera, and key word.   The search result will be shown on the right half of this dialog.   **To prevent the system from overloading by POS Search, up to 500 matched files or 200 GB of HDD storage for each record partition, alarm or normal, from the start time will be searched.**

**SEQ** => Page Up **(Mouse: Left click)**
**CALL** => Page Down **(Mouse: Left click)**
Press **SEQ/CALL** to Page Up/Down the Matched file display.

**Numeric (ENTER) (Mouse: Left click in the page number shown)**
Press these buttons to select the display page of the matched files in the list.

**Following is a brief description for each item and its specific operations:**

**Camera ID** – the camera to be searched for matched files.   Press **+/-** buttons to change the camera ID.

**Key word** – the key word for the POS data of the camera to be searched for matched files.
**The POS data containing the key word will be selected as matched.**   If key word is empty, all POS data will be selected.   Please follow the Text Input method described in Section 5.1 to input this item.

**Start/End Time** – (**Year**, **Month**, **Date**, **Hour**, **Minute**) for the POS data for the recorded video/audio. The files will be searched from the start time to the end time entered here when the user press the **SEARCH/MODE** button later for the matched files.   Press **+/-** buttons to modify each item.

**Matched file List** – the matched files (HDD ID & time are shown) according to the selected search time, camera, and key word.   The files are shown from the oldest to the newest, and its page number is shown on the lower-left corner.   The user may (1) press **ENTER** to enter POS Search Playback display

of the selected matched file in this list, (2) press **Play Button ( ▶/‖) (Mouse: Left click twice)** to

playback it directly, or (3) press **Copy Button ( 📄) (Mouse: Left click)** to **backup (copy)** the

selected recorded video/audio to the connected backup device **without playback**.   The Backup display
(described in Section 8.6) will be shown.   **Please note that this kind of backup without playback is
performed in the background, and the user can still do almost all the operations.**   Please refer to
Section 8.10 Playback/Archive For POS Search for the detailed operations for POS search playback.


# 10.5 Playback / archived For Search By Time:


In split-window display, press **MODE** button **(Mouse:        )** to change circularly the live/playback

mode for the focus window and the other windows that form a rectangle on the screen.   The video
windows for the windows in playback mode are grayed, while those in live mode display live video.

Please refer to Section 8.3 Basic Operations for how to change the camera(s) in the playback
windows(s).   After the playback windows and cameras are all set as you want, you may use the
following buttons to control the playback:


## Play/Pause Button ( ▶/‖) (Mouse:        )

Press this button to play the recorded video/audio searched at forward speed 1X, or pause the playback.
If the playback is paused, press this button again to resume playing.   Note that audio can only be
played at forward speed 1X.


## Stop Button ( ■ ) (Mouse:        )

Press this button to stop playing the recorded video/audio.   If the user press   ▶/‖ button later, the
playback will start from the beginning.


## Fast Forward Button ( ▶▶) (Mouse:        ), Slow Forward Button (SEQ) (Mouse:  ) =>
## (Mouse:   to toggle)

Press this button for fast/slow forward playback.   Each time this button is pressed, the forward
playback speed will become faster/slower, from 2X, 4X, 8X, up to 64/16X, and then back to 2X.

**Fast Backward Button ( ◀◀ ) (Mouse: ◀◀ ), Slow Backward Button (MODE) (Mouse:  ) =>**

**(Mouse: ▶ to toggle)**

Press this button for fast/slow backward playback.   Each time this button is pressed, the backward playback speed will become faster/slower, from 2X, 4X, 8X, up to 64/16X, and then back to 2X.

**Single Step Button ( ▶▍ ) (Mouse: ▶▍ )**

Press this button to play the recorded images frame by frame.

**ENTER (Mouse:  )**

Press this button to display the GPS/POS data if there's GPS/POS data accompanied with the playback camera.   Please select the Type (GPS or POS), Position, Background, Rows, and number of Characters on the screen, and then press **ENTER** to display the GPS/POS data, or **ESC** to cancel.   Press **ENTER** again to not display it.

**MENU (Mouse:  ) – Software version V7.92 or above**

At playback, press this button for the snapshot of the playback video.   A confirmation dialog will be shown, press **ENTER** to snapshot, **ESC (Mouse: Right Click)** to exit without snapshot.   The snapshot picture will be saved in the directory /Snapshot in the connected backup device.

**Copy (  )(Mouse: Left click)**

Press this button to copy or stop copying the playback video/audio to the storage device connected to the USB port.   The **Backup display** will be shown as below.

| Backup | | |
|---|---|---|
| Backup Device | USB Drive | |
| Backup Speed | 8 | |
| Directory | 00001 | |
| Cameras | ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐10 ☐11 ☐12 ☐13 ☐14 ☐15 ☐16 ☐GPS | |
| GPS File Format | TXT | |
| End Time | Year | 2015 |
| | Month | 11 |
| | Date | 24 |
| | Hour | 15 |
| | Minute | 30 |
| [COPY]-Apply | [STOP]-Stop | [MENU/ESC]-Cancel |
| Used: 16957(MB), available: 13698(MB) | | |

Following is a brief description for the operations in Backup display:

## ▲▼◄► (Mouse: Left click)

Press these buttons to select the items.

## Copy Button ( 📋 )(Mouse: Left click)

Press this button to start backup (copy) or apply the revised settings if it's copying, and return to the previous display.   There will be a **Copy** icon on the lower-right corner indicating that the selected video/audio is being archived to the storage device.   **For DVD disc, the files won't be written to the disc until the storage size reaches 1 GB or the user stop copying.   Writing to the disc may take more than 1 minute for every 100 MB (depending on the disc type).**

## Stop ( ■ ) (Mouse: Left click)

Press this button to stop copying and return to the previous display.   The **Copy** icon will be disappeared.

## ESC (Mouse: Right Click)

Press this button to cancel, and return to the previous display.

**The description for each item and its specific operations is as below:**

**Backup Device** – the backup device connected to the system.   Press **ENTER (Mouse: Left click)** on the left button to call up **Backup Device dialog** if there's no backup device connected.   Press **+/-** buttons on the right selection to select the connected device.   **Please follow the steps described in** **Section 5.10 Backup Device to connect the backup device before copying.**

**Backup Speed** – 1-9, with 1 the lowest speed, 9 the highest speed.   Press **+/-** buttons to select the value.

**Directory** – the directory to store the archived files.    Please follow the Text Input method described in Section 5.1 to input the directory.

**Cameras** – the video/audio of the cameras to be archived.    Press **ENTER** or **+/-** to select/deselect each of the selectable cameras.   **If the camera with GPS data is selected, the GPS data will be saved with the camera video in the same file.   The user may save GPS data only (without saving camera video) by selecting GPS.**

**GPS File Format** – for the backup of GPS data only.   The supported formats are **TXT** and **KML**. Press **+/-** buttons to select the value.

**End Time** – (**Year**, **Month**, **Date**, **Hour**, **Minute** ) for the recorded video/audio for the **backup without playback** of **Search By Time**.   The files will be backup from the start time to the end time when the user press the **COPY** button **(Mouse: Left click)** to start copying.   Press **+/-** buttons to modify each item.

**Search Button ( 🗐 ) (Mouse:** 🔍 **)**

Press this button to display the playback slider bar as shown below.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

The left-most is the start time and its slider, the right-most is the end time and its slider, and the middle is the current playback time and its slider.   Following is a brief description for the operations in playback slider bar:

**▲▼ (Mouse: Left click)**

Press these buttons to select the focus slider.

**◄► repeatedly & ENTER Button (Mouse: Left click and drag)**

Press **◄►** repeatedly and then press **ENTER** to move the focus slider to a new time.   The whole playback slider bar will be updated accordingly.

**Playback Buttons ( ▶/‖, ■ , ▶▶, ◀◀, ▶‖ )**

These playback buttons are still operational as described above.

**ESC (Mouse: Right Click)**

Press this button to not show the playback slider bar.

Except the playback buttons, the user can still do all the other operations in split-window display as if there is no playback.   Please refer to Section 5.3 Basic Operations for the operations of the other buttons.

**Note : The format of the GPS filename is YYYYMMDD-hhmmss.txt (or .kml), where YYYY stands for year, MM month, DD date, hh hour, mm minute, and ss second.   GPS file can be**

displayed in the archived file list, but cannot be played.　　Please use GPS applications such as Google Earth, PaPaGO, etc. to read/convert its contents.

**Note : For each camera and each backup, a batch file will be generated as well as the backup files. A directory "/SelfPlayer" will also be generated if it's not existing in the backup storage device. The user can use the batch file to self-playback the corresponding backup files in a PC.　　If the PC has not been installed with the required player components, those components will be installed by running the batch file except Windows Vista.　　For Windows Vista, please run /SelfPlayer/SelfPlayerInstall.exe manually to install the required player components.**
**To copy self-playback files, please copy the batch file and the backup files to the destination directory, and copy the whole directory "/SelfPlayer" to the root directory of the destination device.**

# 10.6 Playback / archived For Search By Event:

In Log display, press **Play Buttons ( ▶/‖) (Mouse: Left click)** to playback the selected logs.　　This display is the same as full screen display of the main display, and the playback buttons are effective.

**The operations are as below:**

**Playback Buttons ( ▶/‖, ■ , ▶▶, ◀◀, ▶‖, 🖹, ENTER, MODE, SEQ, SEARCH) (Mouse:**

 , ..)

These buttons are all the same as in Section 8.6 Playback/Archive For Search By Time.

**The Other Buttons**
All the other buttons are the same as in Section 8.3 Basic Operations.

## 10.7 Playback For archived Files:

In Search Archived Files display, press **ENTER** to enter Archived File Playback display of the selected file, or press **Play Button ( ▶/‖) (Mouse: Left click twice)** to playback it directly. This display is the same as full screen display of the main display, and the playback buttons are effective.

**The operations are as below:**

**Playback Buttons ( ▶/‖, ■ , ▶▶, ◀◀, ▶|, ENTER, MODE, SEQ, SEARCH) (Mouse: ▶‖, ..)**

These buttons are all the same as in Section 10.5 Playback/Archive For Search By Time.

Please note that **COPY** button ( 🗐 ) is not effective in this display.

### The Other Buttons

All the other buttons are the same as in Section 5.3 Basic Operations.


## 10.8 Playback / Archive For POS Search

In POS Search display, press **ENTER** to enter POS Search Playback display of the selected matched file, or press **Play Button ( ▶/‖) (Mouse: Left click twice)** to playback it directly. This display is the same as full screen display of the main display, and the playback buttons are effective.

**The operations are as below:**

**Playback Buttons ( ▶/‖, ■ , ▶▶, ◀◀, ▶|, 🗐, ENTER, MODE, SEQ, SEARCH) (Mouse:**

**▶‖, ..)**

These buttons are all the same as in Section 10.5 Playback/Archive For Search By Time.

### The Other Buttons

All the other buttons are the same as in Section 5.3 Basic Operations.

# 11. DDNS Application

The DDNS service will provide this function. The domain name corresponds with the IP address. But you need to apply for an account from the DynDns.org website. The DynDns.org website provides free service to worldwide users. The following illustration will teach you the step by step method. Please follow the function illustration below:



1. Please input the "DynDns.org" website (http://www.dyndns.com) on Internet Explorer then click the "Connect" button.

2. If you have the account in the DynDns.org, you can skip the illustration to no.9. However, if you do not have an account, please sign up for a new account.

3. You will see the new Account creation form. Input the needful information such as: **"User Information"** and see the **"Terms of Service"** and tick if you accept the terms. You can input other information by yourself.
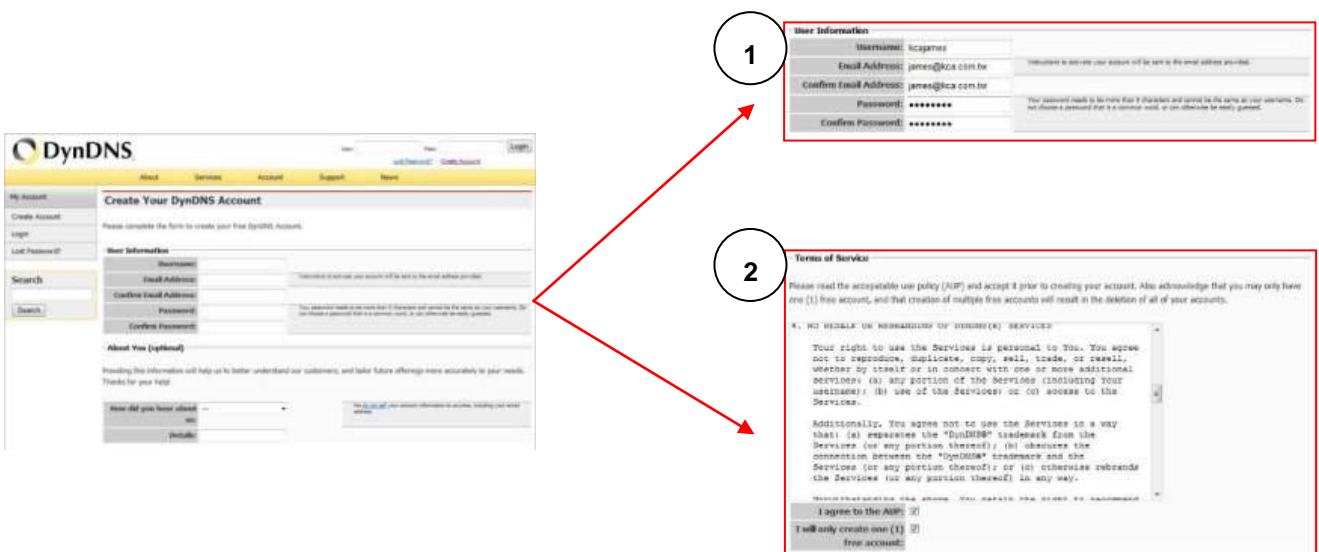
4. After inputting the details, please click the "Create Account" button. If the data is correct, the website will display the "Account Created" information



5. You will receive the confirmation email from DynDns.org. Please check your email. When you receive the email, please visit the confirmation address to complete the account creation process.



6. Click the red square to finish creating the account.
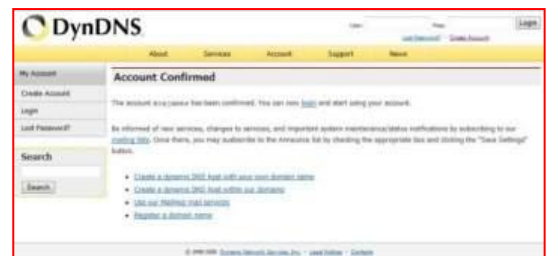


7. You can now login to DynDns.org, using the username and password on main webpage.
After login, please click on the "Service" button to set the DDNS function.



8. Please select the **"Dynamic DNS"** button.

9. Click the "Get Started" button to add the new Hostname.
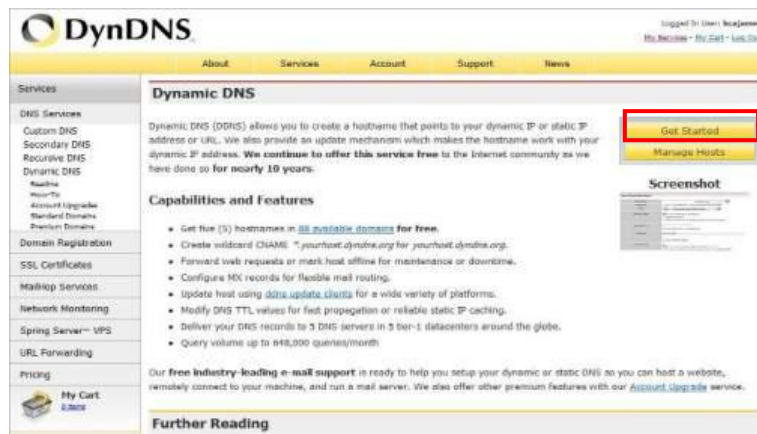


10. Set the "Hostname" and "IP Address" by yourself. You can enter your favorite domain name to "Hostname", and input the correct "IP address" to IP Address. Finally, click the "Add Host" to finish the setting.
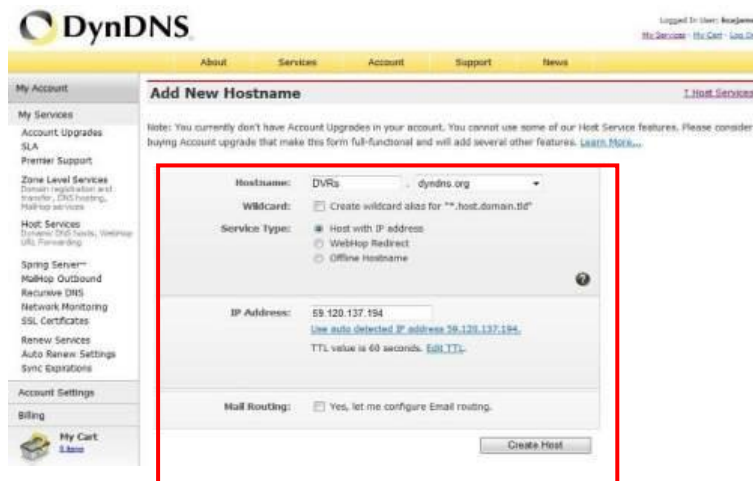


11. The DDNS information will display on the webpage in the end.



12. Please try to connect to the DVR through domain name.

13. If you cannot connect the DVR through the domain name, you can test the DDNS service on your PC.

14. Please open the "command mode" from **"Start Menu"**.

15. Input the command: c:\>ping xxxxx.dyndns.org and press [**ENTER**].

**NOTE**： The "xxxxx" is your domain name.

16. If the command mode display the figure information. Your DDNS is correct.
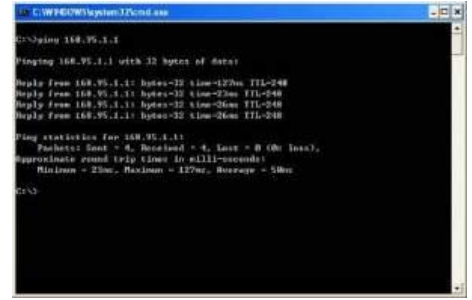


17. If the command mode display the **"timed out"** information. Your DDNS is wrong.



# 12. USB/DVD Playback

After backup the videos, the USB flash/DVD will include the "SelfPlayer" software and backup recording image file. You can direct to view the backup image through PC/Laptop. You need to plug the USB flash/DVD into PC, and then open the disk of USB flash/DVD.



Click "SelfPlayer.exe" to execute the DVR software



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Click the "File" area then click the "Open" button to select the backup recording file.　Open the USB/DVD disk. (Example F:).　The Backup file default name is the "0001".
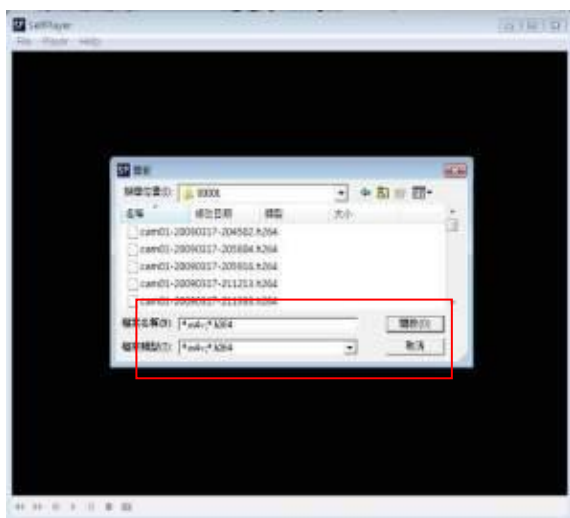


After select the backup recording file, the DVR will automatically play the image.
Click the channel to display the full image on the monitor

# 13. Remote view

You can remotely view the image of DVR through the worldwide internet browser. Just input the IP address or domain name on "I.E Browser". The remote function would support viewing image, playback image and recording image.

**System Requirements of Remote PC**

It is recommended to access the digital video/audio recorder using a PC that meets the following system requirements.

- **PC**
  IBM PC/AT compatible with Intel$^{®}$ Pentium$^{®}$ 4, 1.7 GHz or above CPU.

- **OS**
  MicroSoft$^{®}$ Windows$^{®}$ XP, Windows$^{®}$ 2000 with SP4, Windows$^{®}$ Vista, Win7 or Win8.

- **Monitor**
  1024 x 768 or above.

- **Memory (DRAM)**
  512MB, or 1024MB for Windows$^{®}$ Vista.

- **Web Browser**
  MicroSoft$^{®}$ Internet Explorer$^{®}$ 6.0 or above.

- **DirectX**
  MicroSoft$^{®}$ DirectX$^{®}$ 9.0 or above.

- **Others**
  Windows XP KB319740 Package if Windows XP SP2 is installed.

**DirectX$^{®}$ End-User Runtime 9.0**
It has been installed in your PC successfully.   If not, please logon to web page to get the free download of it.

| NOTE： |
| --- |
| Web Page: |
| http://www.microsoft.com |

**Windows XP KB319740 Package**
It has been installed in your PC successfully if the PC is running **Windows XP SP2**.   If not, please logon to web page to get the free download of it, or install it from the corresponding directory in the CD.   (This package is a bug fix for Windows XP SP2.)

**NOTE**：

Web Page:

http://www.microsoft.com/downloads/details.aspx?FamilyId=9B5EDFC8-A4BB-4080-9063-651
8166E2DAB&amp;amp;displaylang=en

**The VGA Setting from PC/Laptop**

Please go to Start->Setup->Control, select Display->Settings, and set the Screen Resolution to at least 1024x768 and Color to 32-bit. You need to change the security setting of I.E Browser. Please follow the step by step illustration as below:

Open the I.E Browser → select the "Tools" →  "Internet Options".
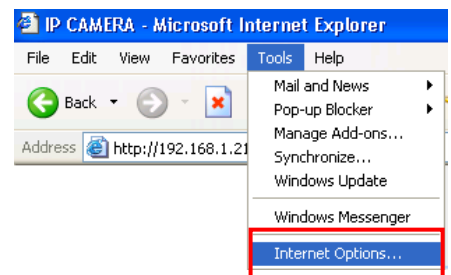
Select the "Security" bookmarker → Custom Level→ Security Settings→
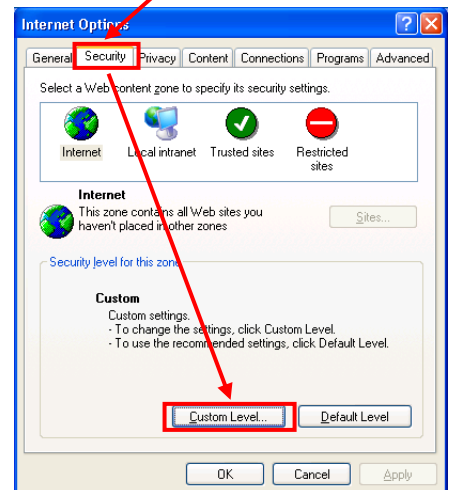
**NOTE**：

The domain name or IP address of the digital video/audio recorder has been set as trusted web site in your PC, and the (https:) server verification for trusted web site is unchecked.  If not, please go to Tools->Options->Security in your I.E. to do the settings.  For I.E. 7, please set the Security level for this zone to Low.

Enabled or prompt the selection of <u>Download unsigned ActiveX</u> <u>controls</u>,

And then click the "OK" button to leave setting.
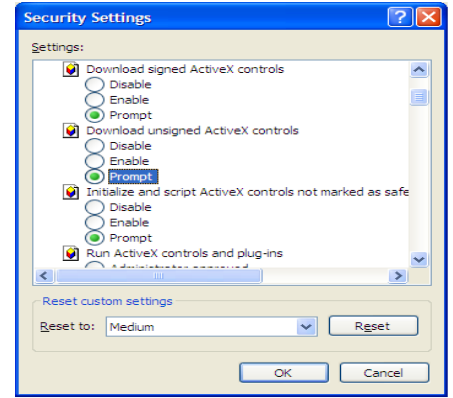
Open the I.E Browser and input the IP address or domain name of DVR.　Press the "connect" button.

The I.E Browser will pop-up the window, please click the "Install" button to set up the software of ActiveX.　After install finish, the Internet Explorer pop-up the window again.　Please input the user name and password to enter the network viewing mode.
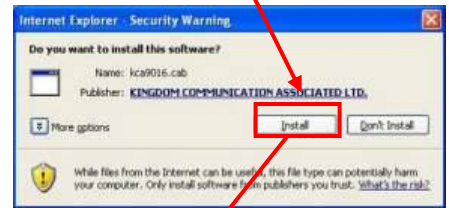
**NOTE：**
The default username is "abc"；the default password is "123".　The account is the same the DVR account

After the above-mentioned items have been done correctly, restart your web browser and enter the domain name or IP address (EX. http://192.168.1.100 if HTTP port is 80, or http://192.168.1.100:800 if HTTP port is 800) of the digital video/audio recorder in the Location/Address field of the web browser.   The plug-in software in the system will be downloaded and run automatically in the web browser.

When the user leaves I.E., he/she may be asked to save changes to files, please enter the directory name (or use default if only one profile is needed), click on OK or Yes to save the changes.
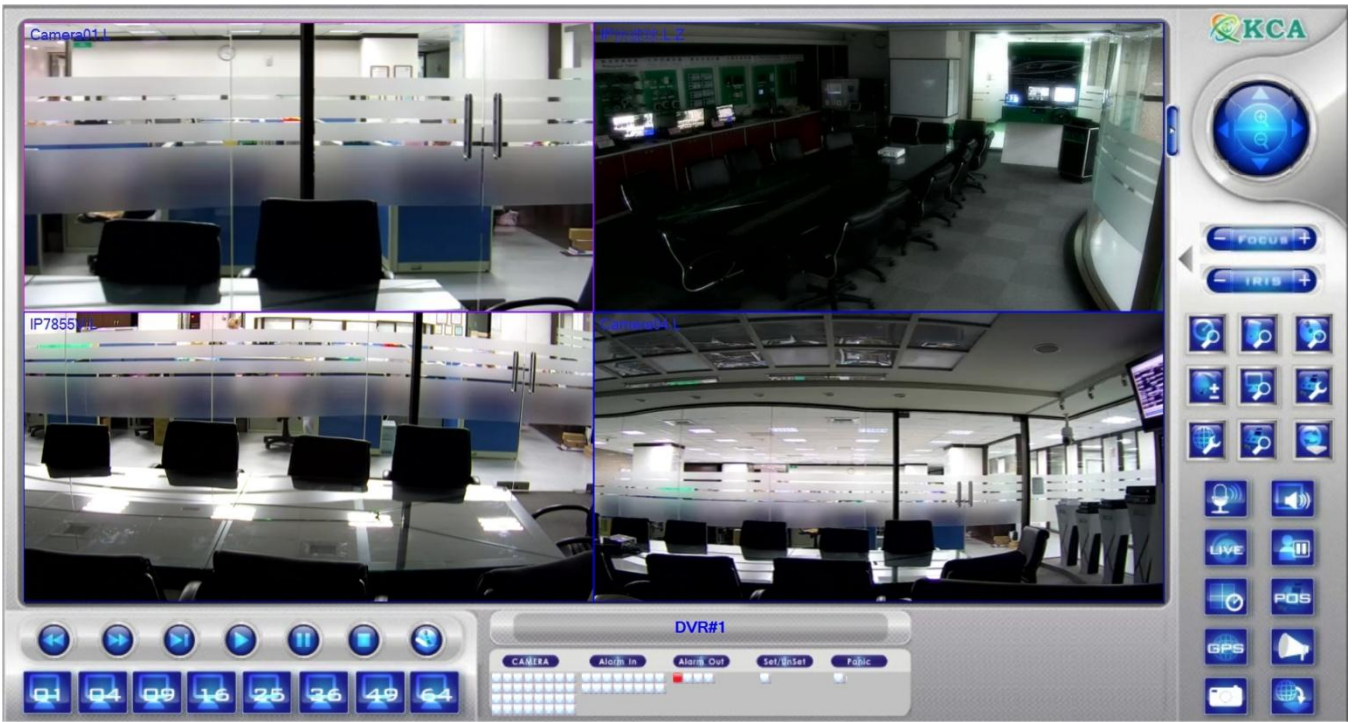


The operations and descriptions for these icons are as below:

■ In video window, right-click the mouse button to call up Camera/Playback/Print Dialog.   (Left) click on Playback or Camera number to change the window to the corresponding camera and live/playback mode.   The user may click on the "Print" button to print the video to the printer, or "Snapshot" the video.   **The user may also double click for 1-Window display.**

**Click on these icons to switch the video aspect ratio between 4:3 and 16:9.**



Click on these icons for 1/4/9/16/25/36/49/64-Window display.

For 4/9 split windows, the user can click on the icon, and select a different display page.

Click on this icon to toggle between live mode and playback mode for all the video windows.



Click on this icon to freeze/unfreeze the video images for all the video windows.



Click on this icon to enable/mute the audio input from the PC, button down for enable, button up for mute.   If enabled, the audio input from the PC will be sent to the DVR/NVR.   The default setting is 'mute'.



Click on this icon to enable/mute the audio output from the camera for the focus window (or DVR/NVR), button down for enable, button up for mute.



Click on this icon to show/hide the GPS data for (1) the selected DVR/NVR, or (2) the DVR/NVR for the focus camera, button down to show, button up to hide.



Click on this icon to show/hide the POS data **(for 9-split-window or larger video window)** for (1) the selected DVR/NVR, or (2) the DVR/NVR for the focus camera, button down to show, button up to hide.



Click on this icon to backup video/audio, and the Backup dialog will be shown.   Please select the DVR/NVR, cameras, event type, destination directory, execution time, and data range, and then click on "Apply" or "OK" to backup, or "Cancel" to cancel.   Please note that Execution of "Now" or "Once" is one-time backup, while "Daily" is daily backup.



Click on this icon for snapshot of the focus camera.

DVR#1

**The device name of the selected DVR/NVR is shown.** Click on this icon, and the available DVR/NVRs will all be shown. The user may type alphanumeric characters to get the matched DVR/NVRs. Click on one of them to select a new DVR/NVR. The 1/4/9/16 split-window video display, the camera status, and the alarm input/output will all switch to correspond to the newly selected DVR/NVR. There's "Multiple" in the device list, the user can select it to display camera video from different DVR/NVRs in 4/9/16 split window display.



**Playback panel** for playback buttons, including Fast Backward, Fast Forward, Single Step, Play, Pause, Stop, and Copy (from left to right). **Please note that the Copy function can be used to archive both live and playback streams.** Please check/uncheck the cameras to be archived when the Copy Dialog is shown, and then click on OK or Apply button. If the user click on Apply button and select & highlight one of the cameras, the current copying status for that camera will be shown in the dialog. **For "SelfPlayer" (described in Sec. 8.8 ) to work correctly, please copy the file "vcredist_x86.exe" in the CD to Windows directory such as "/WINDOWS" or "WINNT".**



**PTZ control panel**. If the camera in the focus window is a PTZ camera, these buttons in the PTZ control panel can be used for PTZ control. The operations include Tilt Up/Down, Pan Left/Right, Zoom In/Out, Focus Near, Focus Far, Iris – (darker), Iris + (brighter).

**Camera** 

Status indicators for cameras 1-8/4 (GREEN for normal, RED for motion) for the selected DVR/NVR. Click on any of these icons to select the corresponding camera of the selected DVR/NVR to be displayed in the focus window.

**Alarm In**

Status indicators for alarm inputs 1-4 (GREEN for normal, RED for alarm) for the selected DVR/NVR.

## Alarm Out

Alarm outputs 1-2 (GREEN for normal state, RED for triggered state) for the selected DVR/NVR. For Administrator, click on any of these icons to control the corresponding alarm output from normal to triggered, or from triggered back to normal.
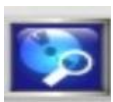
Click on this icon to call up Search-by-time dialog.   Please select the time (Year, Month, Date, Hour, and Minute) and recorded video/audio type (Alarm, Motion, Video Loss, and Normal) to search for playback.   Click on Search button to start the search of the recorded video/audio.   (If it failed, the result will be shown on the title of the dialog.)   Now, you may use the playback buttons to play the recorded video/audio.   **If there's not any camera in playback mode, all cameras will be searched and played.   A playback slider will be shown at playback for "Search By Time".**
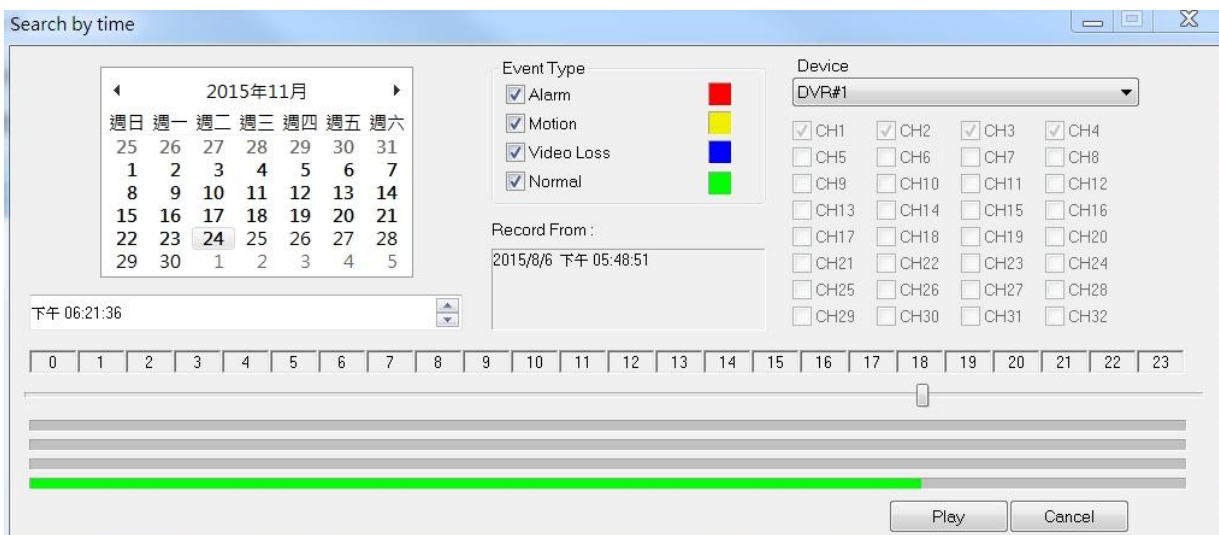
**The operations are similar to DVR/NVR local operations, except the user may click on the bottom area of the playback slider to drag it to a different location.**

Click on this icon to call up Search-by-event dialog.   The event logs will be shown on the screen. Please select the device, event type, and source ID to search for the event logs.   Click on Refresh, Up, or Down to update the event logs.   Click on the desired event log to highlight and select it. Click on the OK button to search the recorded video/audio for the highlighted event log.   Now, you may use the playback buttons to play the recorded video/audio.



Click on this icon to call up search-PC-video dialog.   Please select the **file(s)**, and then click on Open.   Now, you may use the playback buttons to play the recorded video/audio in the file(s).



Click on this icon to call up POS-Search dialog.   Please select the DVR/NVR, camera, key word, and start/end time, and click on "Search", then the matched POS data will be shown.   Please select the desired POS data, and click on "Backup" or "Play" to backup or play the recorded video/audio corresponding to the POS data.



Click on this icon to show/hide full PTZ control panel.   The user can click on the PTZ Panel (but outside of any object in it) (to call up the **Context menu**) to move it.
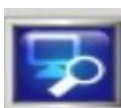


Click on this icon to call up Setup dialog.   **Unlimited number of DVR/NVRs can be added to the device list.**   Following is a brief description for each item:

■ **Device Name** – any meaningful name for the (DVR/NVR) device.

■ **Address** – IP address or URL domain name for the device.   It should be the same as the IP address (for Static IP) or URL (for PPPoE) in Network Setup for the (DVR/NVR) device.

■ **Control Port** – the control port for the device.   The default value is 67.

■ **Data Port** – the data port for the device.   The default value is 68.

◼ **Video Stream** – "Record" – live video same as recording stream, or "Extra" – extra network stream (set as in Sec. 8.18 Advanced Network Setup) if dual streaming is supported for the device.   The default value is "Record".

◼ **User Name** – the login user name for the device.   It must be in the list in Password Setup for the device.   Please note that **different levels of users have different available operations.**

◼ **Password** – the corresponding password for the login user name for the (DVR/NVR) device.

◼ **Auto Connection** – whether the user wants to connect automatically to this (DVR/NVR) device.

◼ **Connected** – whether this PC is connected with the device now.   If a DVR/NVR is connected, the user may select it, and click on "Reboot" to reboot it.

The other properties in the dialog are similar to those described in Chapter 8.
Please refer to Chapter 8 for the detailed descriptions.   Besides, the user can **download/upload** the configurations from/to the connected DVR/NVR, or **open**/**save** the configurations from/to the designated directory.

Click on this icon to call up remote Software Upgrade dialog.   The current software version of the DVR/NVR(s) will be shown in the "status" field.   Please select the DVR/NVR device and upgrade file in the PC, and then click on Start button to start the software upgrade process.   The Upgrade status will be updated according to the progress.   When the upgrade file is uploading, the user may click on Stop/Close button to stop the upgrade process.

**Note : There must be at least one formatted HDD in the DVR/NVR for the remote upgrade to succeed.   After the software in the DVR/NVR is upgraded, the DVR/NVR will restart immediately and the PC will be disconnected from the DVR/NVR.   Please do step 7 in Before Logging On, and then re-run the I.E. to connect to the DVR/NVR again.**

Click on this icon to call up GPS Configuration dialog.   Please select the device.   Then select **Display attributes** and **Output attributes** for **Live** & **Playback** respectively.   If **Data Exchange File** is enabled, the corresponding GPS data will be output to the file specified.   Please note that

**Tag** and **Icon** are to be used by GPS software such as Google Earth for display purpose. If **COM Port** is enabled, the corresponding GPS data will be output through the specified COM port of the PC. The output data can be used as input by GPS application software such as Google Earth.



Click on this icon to call up POS Configuration dialog. Please select the device. Then select **Video Window or Pop-up Window** to show the POS data. All the other attributes are similar to those for the DVR/NVR.

---

**NOTE：**

Please note that there are up to 8 users can logon this DVR simultaneously.

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The video images can be displayed in several types of split-window screens, including 1/4/9/16-Window for single DVR and 25/36/49/64 for multiple DVRs. And the focus window is surrounded by a frame border. In addition to the video windows, there are different icons on the lower corner and the right corner of the screen for status display and control.

---

**NOTE：**

The ".L" following the camera title stands for Live display, ".P" for Playback, and the camera title with white background has detected motion.

---

**NOTE：**

The frame rate is limited by the bandwidth of the network and the pre-record IPS of the camera

The picture quality depends on the recording resolution and recording quality of the camera

About the IPS and quality setting please make reference to the chapter of **Camera.**

---

When the user leaves I.E., you may be asked to save changes to files, please click on OK or Yes to save the changes. The operations and descriptions for these icons are as below: In video window, right-click the mouse button to call up Camera/Playback/Print Dialog. (Left) click on Playback or Camera number to change the window to the corresponding camera and live/playback mode. The user may also click on the "Print" button to print the video to the printer, or "Snapshot" the video.

# 14. Support GPS / POS

The DVR can support all GPS / POS on the market.



**POS - Application**

Print cable

Printer

POS

RS-232 Y-Cable

KCA
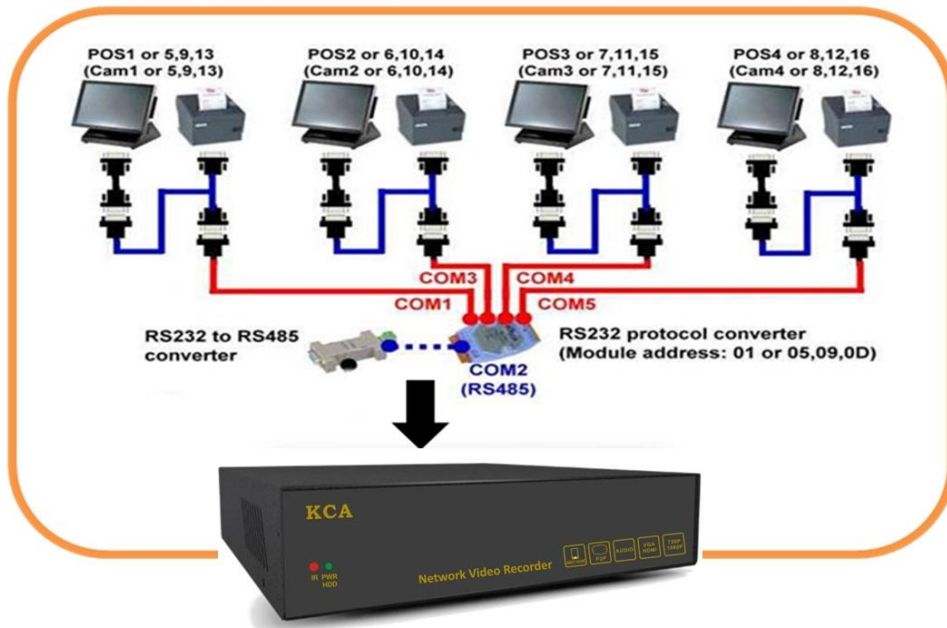Network Video Recorder
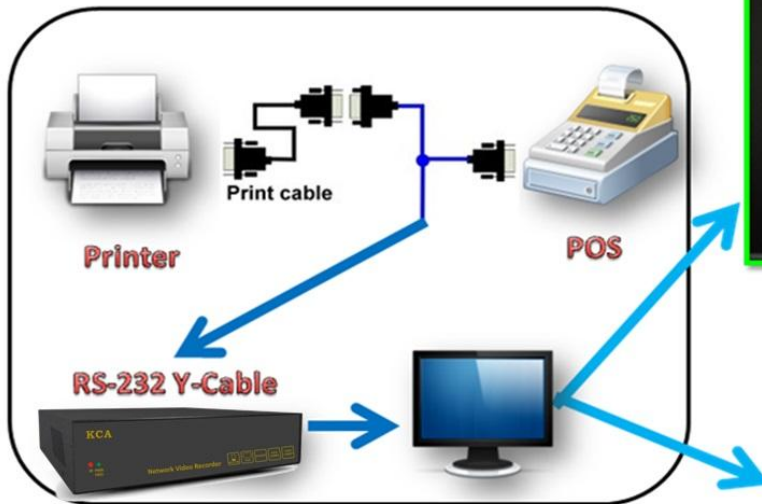
**Checkout data display**

**Search POS Images**

Through the RS-232 Port to connect POS & Printer.
Allows users to search for event's images and
POS checkout data in the same time.
All of information could be uploaded to display on screen

- Through the RS-232 series to connect with more POS and Printer.
- Use the "RS-232 protocol converter" to reach COM mechanism for multiple POS

## Connect up to 16 POS in the same time



POS1 or 5,9,13 (Cam1 or 5,9,13)   POS2 or 6,10,14 (Cam2 or 6,10,14)   POS3 or 7,11,15 (Cam3 or 7,11,15)   POS4 or 8,12,16 (Cam4 or 8,12,16)

COM3  COM4
COM1  COM5

RS232 to RS485 converter   COM2 (RS485)   RS232 protocol converter (Module address: 01 or 05,09,0D)

KCA   Network Video Recorder

## GPS



**DVR's GPS positioning system to find your destination.**



DVR 3   DVR 2   DVR 1
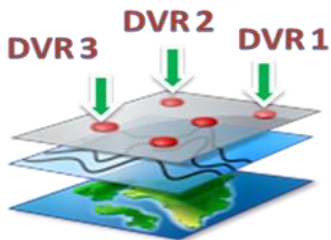
**Full management of different DVRs in wide area (Interlocking Google earth)**



**Automatic Driving Surveillance Recorder with GPS**

# 15. Support Hardware List

There are many HDD spec. Please read the suggested list to buy the applicable hardware that combine with the DVR. The DVR can support the HDD storage until 2TB.

| Compatible HDD List | | |
|---|---|---|
| **3.5"** | **2.5"** | **SSD** |
| Seagate ST32000542AS 2TB | Toshiba MJA2500BH 500G | Intel SSDSA2M080G2GC |
| Seagate ST31500341AS 1.5TB | Fujitsu MHZ2160BH 160G | Intel SSDSA2CW120G3 |
| Seagate ST31000528AS 1TB | WD WD3200BEVT 320GB | Intel SSD 320 Series 80GB |
| Seagate ST31000340NS 1TB | WD WD5000BEVT 500GB | Intel SSD 320 Series 120GB |
| Seagate ST31000322CS 1TB | | Intel SSD 320 Series 300GB |
| Seagate ST37500528AS 750GB | | |
| Seagate ST37500330AS 750GB | | |
| Seagate ST3500410SV 500GB | | |
| Seagate ST3500418AS 500GB | | |
| Seagate ST3500320SV 500GB | | |
| Seagate ST3500320AS 500GB | | |
| Seagate ST3500312CS 500GB | | |
| Seagate ST3320620SV 320GB | | |
| Seagate ST3160815AS 160GB | | |
| Seagate Barracuda XT 3TB | | |
| WD WD20EADS 2TB | | |
| WD WD20EVDS 2TB | | |
| WD WD15EADS 1.5TB | | |
| WD WD10EVVS 1TB | | |
| WD WD10EADS 1TB | | |
| WD WD10EACS 1TB | | |
| WD WD10EVDS 1TB | | |
| WD WD1002FBYS 1TB | | |
| WD WD640AVVS 640GB | | |
| WD WD5002ABYS 500GB | | |
| WD WD5000AAKS 500GB | | |
| WD WD2500AAKS 250GB | | |
| WD WD2500AVJS 250GB | | |
| WD WD2500AVVS 250GB | | |
| WD WD1600AVJS 160GB | | |
| WD WD1600AAJS 160GB | | |
| Hitachi HCT721010SLA360 1TB | | |
| Hitachi HDS721075KLA330 750GB | | |
| Hitachi HCP725050GLA380 500GB | | |
| Hitachi HDS721050CLA362 500GB | | |

**NOTE：**

The DVR almost support all HDD on the market. The list is the reference data for user.

# 16. Support USB Flash and DVD List

There are many USB Flash and DVD spec.  Please read the suggested list to buy the applicable hardware that combine with the DVR.

| Type | Format |
|---|---|
| USB-Storage Enclosures 5.25" | Macpower's Alumni Prefect USB 2.0 **-** PF-U2MS**.** |
| USB-Disk Storage | Transcend's JetFlash 150/V60 Series, |
| | Apacer's Handy Steno AH220, |
| | Pretec's   i-Disk Wave 512M-Black |
| | Kingston's Data Traveler USB Flash Driver(DTI/512FE) |
| | SanDisk's Cruzer micro USB Flash Driver |
| | Sony's MICRO VAULT Classic Series |
| DVD Writer | Asus DRW-1608P Series |
| | Pioneer DVR-A11, DVR-X152 Series |
| | BenQ EW200G Series |
| | LITEON Light Scribe DVD Writer SHM-165H6S, 20X DVD Writer DX-20A4P |
| | Sony DVD/CD Rewritable Drive Model DRX-810UL Series |
| | NEC DVD/CD Rewritable Drive Model ND-4550A Series |
| | HP dvd9404e External 18X Super Multi DVD Writer Series |
| | Infomedia DVD+R 16X |
| | Mitsubishi DVD+RW 1-4X |
| | Philips DVD+RW 1-4X |
| | Ritek DVD-R 8X |
| | Ritek DVD+RW 1-4X |
| | Verbatim DVD+RW 1-4X |

# 17. PDA / Mobile Phone Remote Access

The digital video/audio recorder can also be remotely accessed by using a web browser installed on a PDA or mobile phone.



(1) Supports **xHTML** and **MJPEG file format**
(2) The screen resolution will at **240x320** or above.
(3) Support iOS / Android / Firefox / Symbian 6.0 / Linux / Windows Mobile

Please enter the domain name or IP address of the digital video/audio recorder in the Location/Address field of the web browser, and the remote login display will be shown.
For most of the mobile devices, the DVR will automatically redirect to the correct web page, EX. http://192.168.1.89/wap.htm for IP address http://192.168.1.89.
If not, please enter the full address with /wap.htm, the user may need to enter http://192.168.1.89:800/wap.htm if HTTP port has been changed to 800.)
Please enter the correct login name and password for the digital video/audio recorder to login the system, and the screen will be shown as below.

# 18. Firefox browser Remote Access

Users want to use Firefox browser to access the system, make sure that the following:

1. Execute Firefox.
2. Login "http://ietab.mozdev.org" web,
3. Select Tools>IE Tab option.
4. Select Sites Filter.
5. Select "Sites list here will always render using embedded IE", and add the
   http://xxx.xxx.xxx.xxx/ie.htm sites to the local pc.



ietab

resources: Home | Installation | Source Code | Members | Bugs | Screenshots

## Installation

The IE Tab latest version, you can download it from the following link.

**Download IE Tab from AMO(MozillaUpdate)**

Or you can download IE Tab from the following alternative link.
Just right-click **"Save link as..."**, and drag downloaded **xpi** file into browser window to manually install.

6. Enter DVR path http://xxx.xxx.xxx.xxx/ie.htm

## 19. GuardCMS Installation guide for iPad / iPhone

Step 1: On your iPad or iPhone, find the APP Store icon [App Store] and open icon function.



Step 2: a) On the APP store page, click on the "Search" function icon [Search] at the bottom

        right field marked.

      b) On the top blank search option marked 2 (b), type "guardcms" and search for our application.

      c) After searching, the page will show our application.

      d) Click on [FREE >] to proceed.
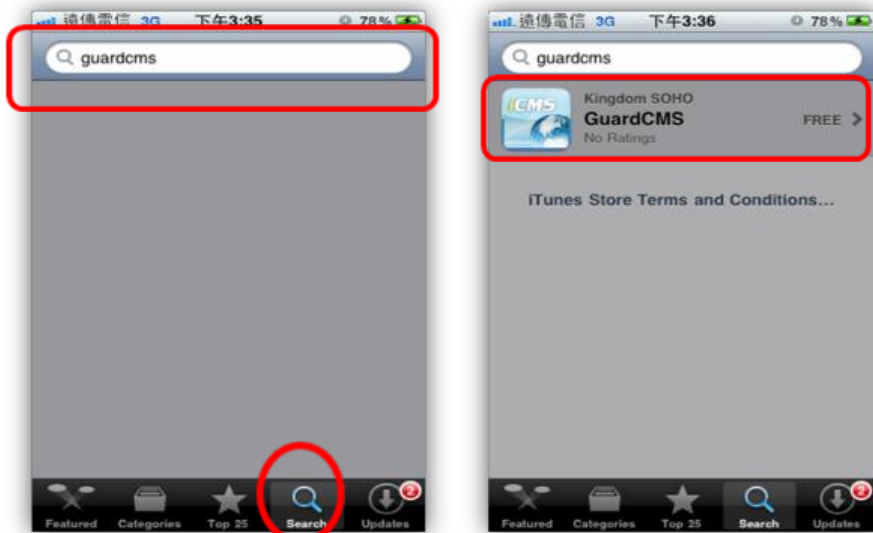
Step 3:    After clicking on free, the next page shows you the information about our
software application.

Tap on the FREE icon again  FREE  and the icon changes to  INSTALL .
Tapping on this  INSTALL  icon will install our application to your iPhone or iPad.



Step 4:    After installation, our GuardCMS icon    will appear on your iPhone or
iPad screen.
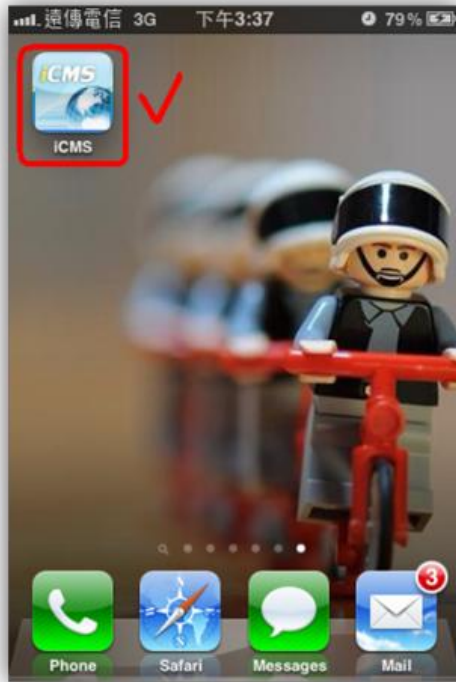
# GuardCMS User manual

1. To start GuardCMS application, find our GuardCMS icon  on your iPhone or iPad and open function.



2. The main page shows the features of our GuardCMS application.

3. In order to add the DVR device which you want to view remotely into the GuardCMS application, please select the "Add" icon on the top left hand corner.
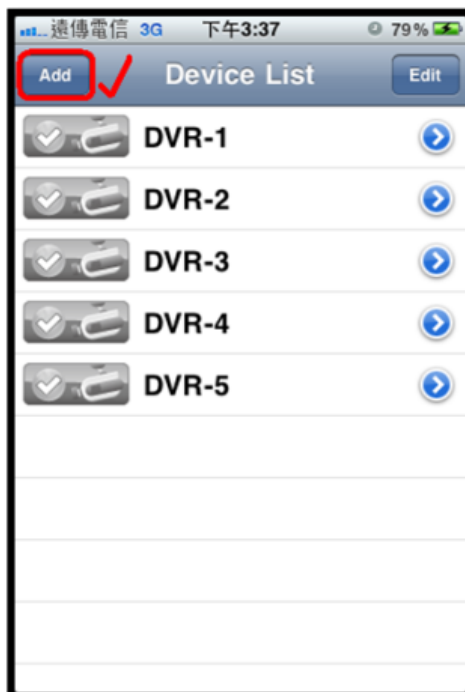
4. When you press "Add", the application will need you to set the Name, Address, Control Port, Data Port, User Name, Password and Auto Connection requirement. Please follow the instructions on the Diagram 4.0 shown below and then press "OK" to save and exit the settings.
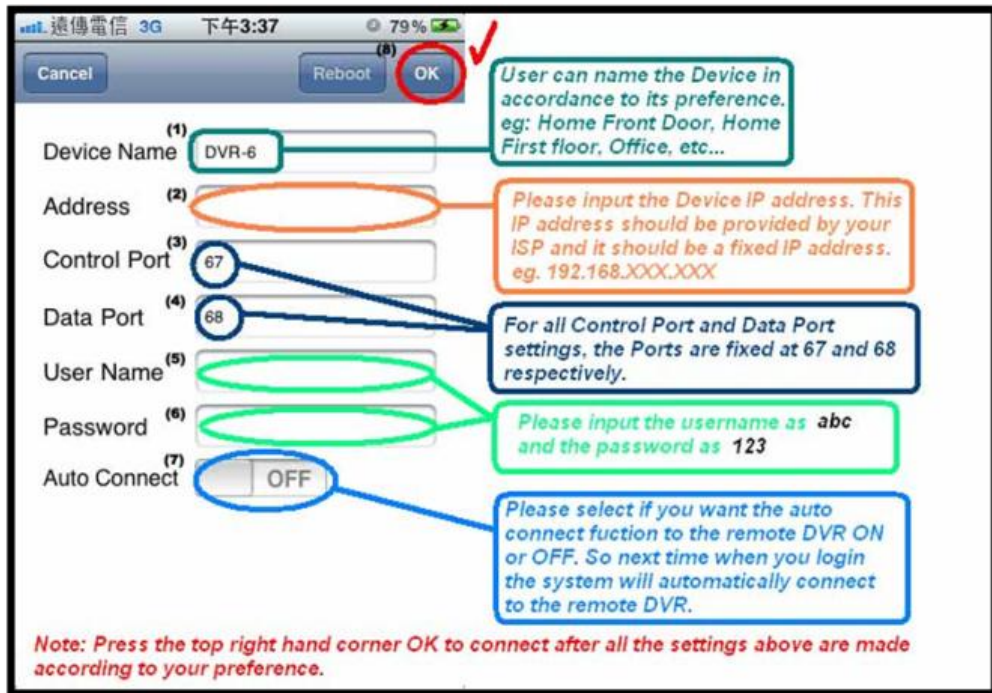
5. After successful setting, Diagram 5.0 will show up on your iPhone or iPad.



(C) Multi DVR selection:
If more than one DVR remotely connected, press on this area and select the DVR you want to view.

(B) Channel display selection:
✓ 1 ~ 16 channels.
✓ Full Screen x 1
✓ Quad Screen x 4
✓ 9 Grid Screen
✓ 16 Grid Screen

Live Channel Display:
Quad x 4 channels.

Current Date and Time

(A) Function Button

6. The Function Buttons illustration:



| (1) | Audio-In Function. | (4) | Time Search Function. |
| (2) | Audio-In Function. | (5) | Event Search Function. |
| (3) | Snap Shot Function. | (6) | Alarm In / Out. |

7. Channel Display Selection:

**(i) User Can Select from 1 – 16 channels**



(a) Full Screen Mode

(b) Quad Screen x 4 channels

(c) 9 Grid Display

(d) 16 Grid Display

8. Multi DVR selection:



When you select this area (1), the various DVR which you have successfully set will be shown (2). Please select the DVR which you want to view by tapping on it and it will connect to the selected DVR.

9. Time Search Function illustration:



Time Search Function.



1) Select the Date and time for playback of recorded data.

2011/5/11 下午3:38:00

2) Press Play for playback display.

10. Event Search Function illustration:



Event Search Function.
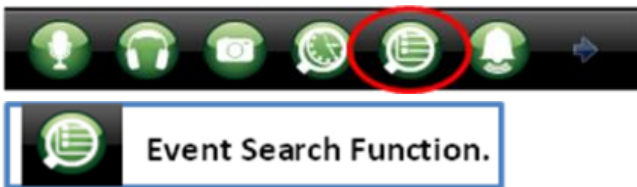
**Bottom icon Functions:**

(i) Refresh

(ii) Previous Page

(iii) Next Page
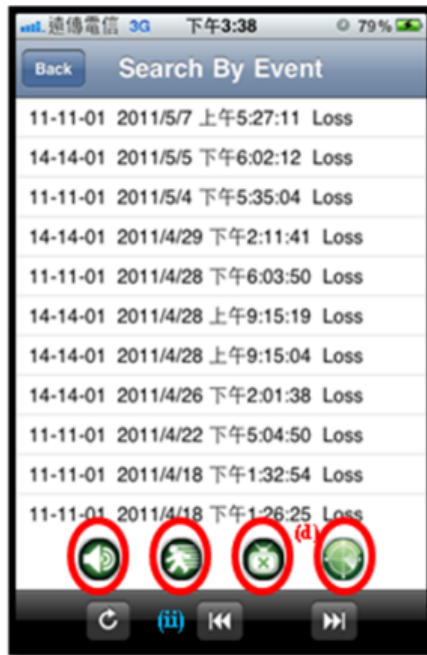
Event List by:

 (a) Alarm

 (b) Motion

 (c) Video Loss

 (d) Event Search

11. Alarm Input and Output Status:

If the Alarms are connected, then the display shows the number of alarms connected. You can select to switch on or switch off the Alarm out.
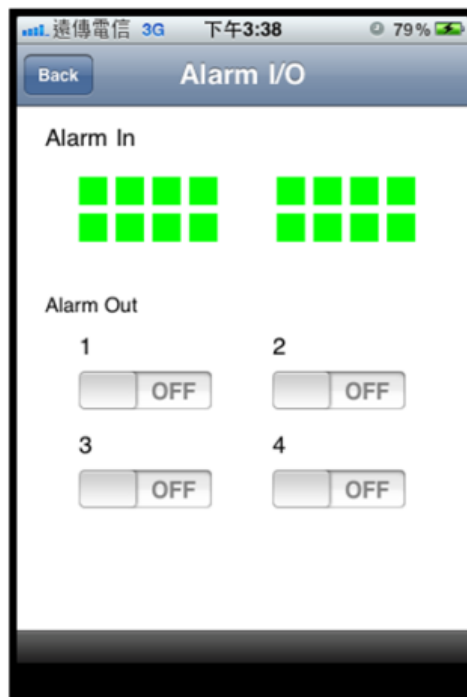
**GuardCMS: Using PC (web based) internet download illustration.**

_**Step 1**_: In the web browser address, type the following link:

https://market.android.com

The "Android Market" page will be shown as below.
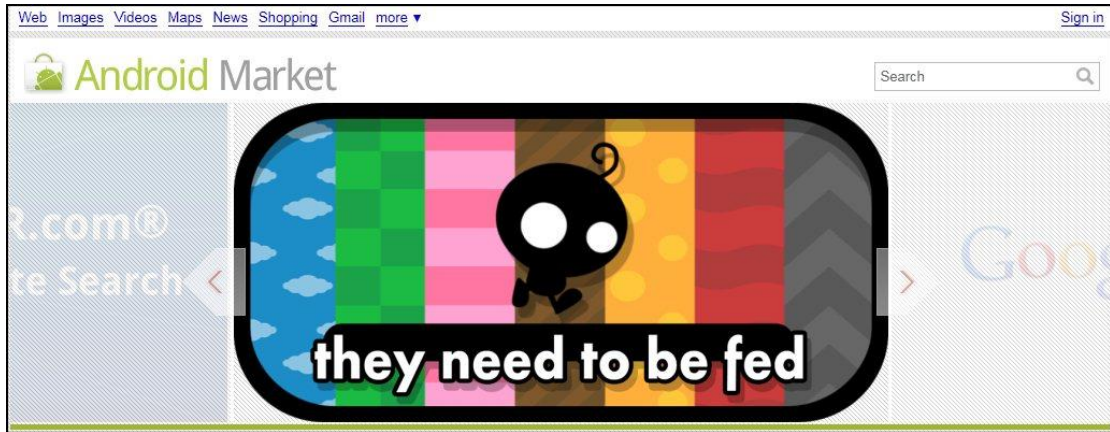


_**Step 2**_: In the top right hand search area, type "guardcms" and press search icon 🔍 to find our application.
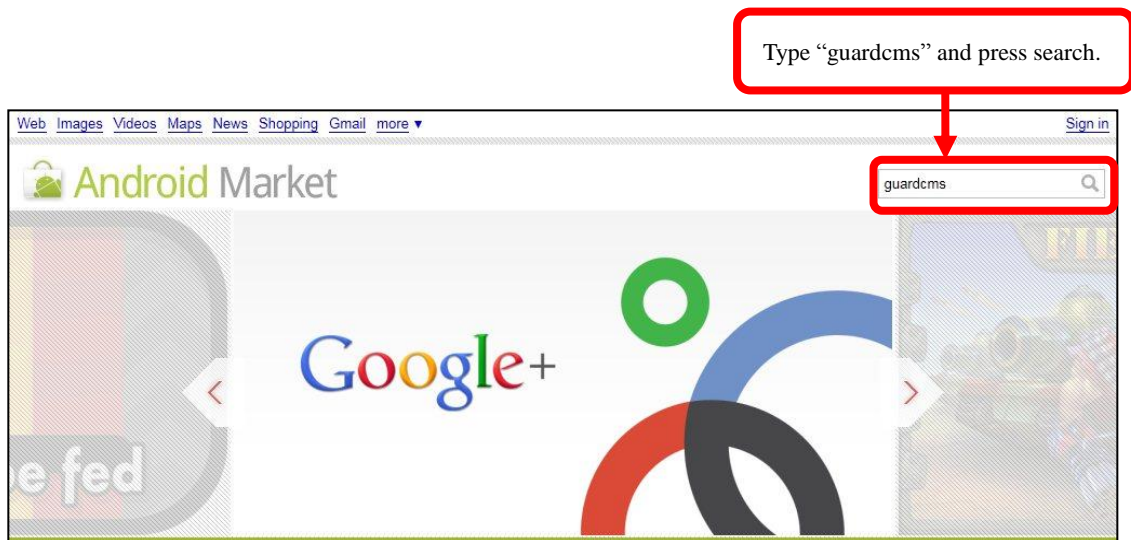


_**Step 3**_: The search result will show our "GuardCMS" application.

_Note:_ To install the application, please check that your mobile device is connected to the computer.
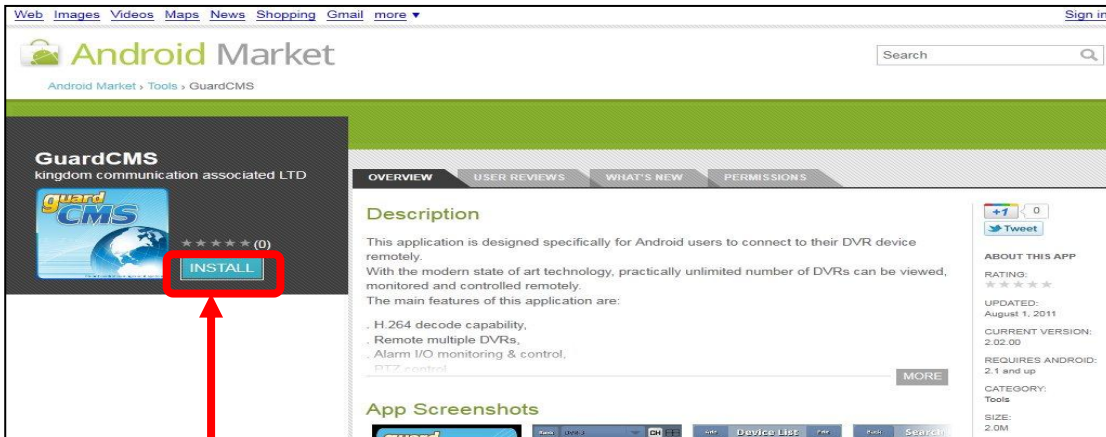
Our "guardcms" application.
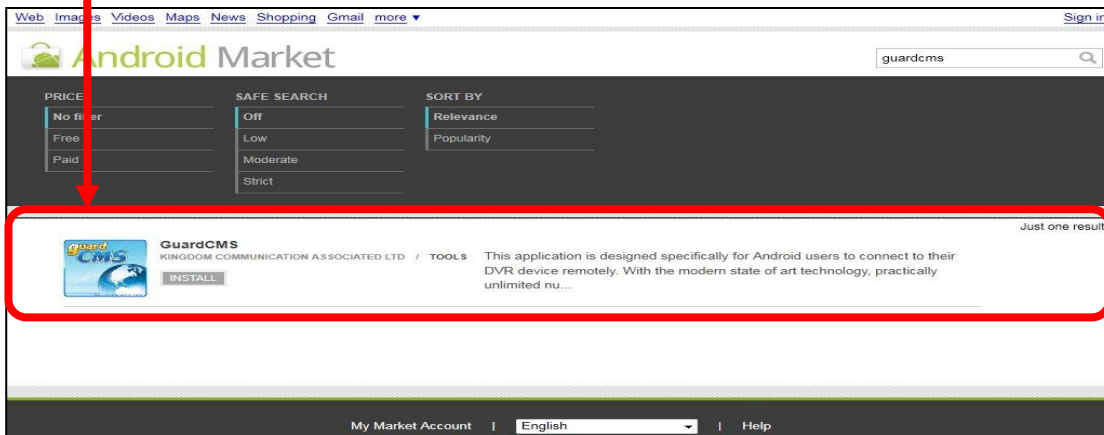


**Step 4:** (i) Click on the "GuardCMS" photo to view the application overview.
(ii) After reading the overview, user's can press "Install" to start the
installation process.
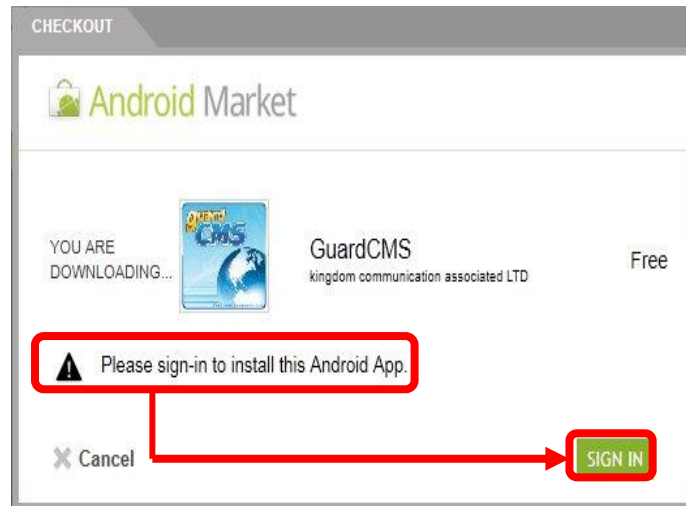
Click here to view app. overview..
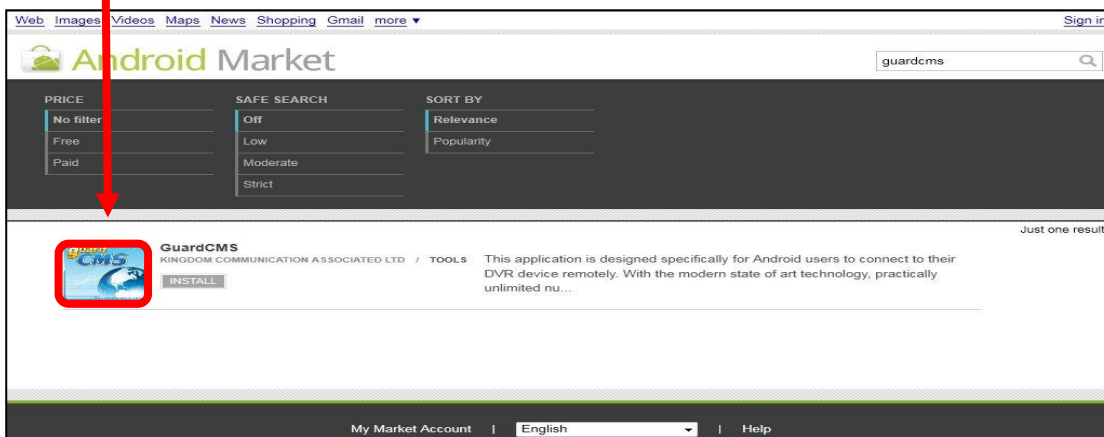


***GuardCMS Application Overview:***

Click here to install app. to your mobile device...

***Step 5:*** Users will need to sign in to their google account in order to install this
application.



Please follow the steps and after successful installation, this app. will be shown on your mobile
device.



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