

# EasyNet HD PoE NVR

## INSTRUCTION MANUAL

*Please read this guide thoroughly before use and keep it handy for future reference.*

“Nuvico surveillance equipment is designed to be installed and served only by a trained, state-licensed professional installer”.

---

**Thank you for using our product.**

1. This is user's manual for 4ch, 8ch and 16ch NVR(Network Video Recorder).
2. This manual contains product specification and introduction, installation guide, operating guide and other necessary matters for easy understanding. Users should read this user's manual carefully for proper use.
3. Contents in this manual may be changed according to the specification change and feature improvement without any notification.
4. This user's manual shall never be copied without prior agreement and violating this may be a reason for legal punishment on piracy.
5. If there is any incorrect or insufficient content in this user's manual, notify it to Customer Support Center.

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# CH1. Product Introduction

## 1-1. Product Contents

After removing packing materials of this product, check whether all following contents are included.

### **Main Body (NVR):**

This converts the analog video and audio signal to the digital signal and saves on HDD.



### **Adapter(or POWER CABLE only for 16ch):**

This 48V adapter supplies power or power cable to the product.



### **MOUSE:**

This is an controller for convenience.



### **Program CD:**

This contains the User's manual and Client Program for NVR.



### **Remote Controller:**

This is an IR remote controller for convenience.



### **Battery:**

These are 2(two) battery for the remote controller.

## 1-2. Product Characteristics

### **1) High quality picture**

This enables recording and playing high quality digital image based on H.264 compression method.

### **2) High reliability**

With Embedded hardware and software design, this maintains higher product reliability.

### **3) Simple usage**

This allows users to use it conveniently by placing control buttons similar to existing ones on VCR, and users can easily learn the usage.

### **4) Pentaplex System**

Pentaplex System allows live, recording, backup, networking and playback simultaneously.

### **5) Selectable recording setup**

For recording methods, users can select the frame rate, resolution and video quality individually in order to be appropriate for user's environment.

### **6) Remote monitoring**

With using exclusive line or Internet network, you can search or monitor recorded images remotely by installing exclusive client program on Windows PC or Mac.

### **7) Backup**

You can backup with a versatile external USB devices.

### **8) Audio recording**

You can record all sound inputs simultaneously. Moreover, you can listen to the sound in search and live monitoring and play mode.

### **9) Various recording methods**

This provides convenient use with manual recording, recording by dates and days, hourly schedule recording, sensor and motion detection event recording and others to enable unmanned monitoring.

### **10) Various total monitoring features**

You can cover any security scenario through various sensor inputs and contact output control.

**11) Display information in easy-to-understand information method**

This enhanced convenience of user by displaying information (date, time, recording method, recording frame number, HDD capacity and others) in monitoring, recording and playing mode in easy-to-understand way.

**12) P/T/Z control**

By built in RS485, various P/T/Z cameras can be used.

**13) Dual CODEC for video transmission**

NVR can send 120 fps (based on CIF) regardless of the local recording and viewing setup regardless with recording setup.

**14) Web browser support**

You can monitor and playback the video and control the PTZ camera by internet explorer.

**15) Built in S.M.A.R.T.**

You can automatically check the health of the hard disk drives.

**16) Language pack**

Basically NVR has multiple language set, furthermore you can choose the language set if you want.

**17) Spot monitoring**

Spot out can be enable to monitor sequentially in other place.

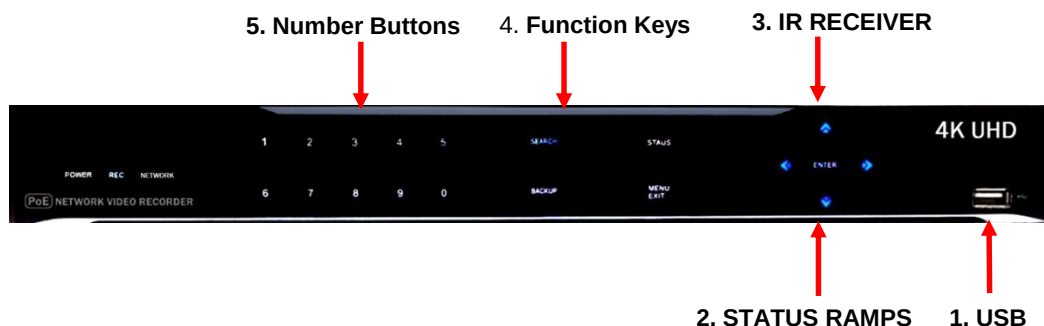
**18) Text inserter(POS Interface)**

You can operate with the POS and ATM.

## 1-3. Name of Each Part

### [Front Panel]

<i LITE 04/08/16 W>



**1. USB** : These USB ports are for mouse and USB devices. You should connect correctly the USB devices and mouse as picture directed.

#### **2. Status lamps**

POWER : Blue color back light. Power indicator.

RECORD : Red. Indicate the recording.

NETWORK : Green. Lit on connecting the network

**3. IR RECEIVER** : It is for remote controller.

#### **4. Function keys**

1) MENU : It will move to the setup screen from the live mode.

2) SEARCH : It will change to the playback mode from the live mode.

3) BACKUP : It will move to the backup screen from the live or play mode.

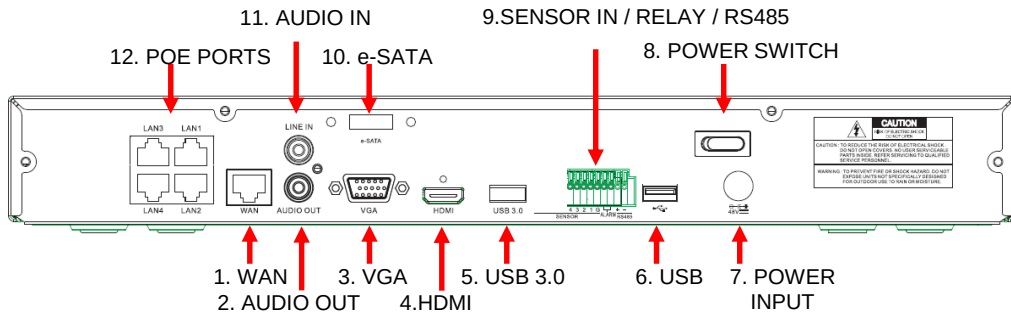
**5. Number buttons** : If you press this button, it will be changed to full screen in live viewing or playback. If you want to go to 16ch, push the 0 and 6.

(※ In menu and password setting, it is automatically converted to number buttons)

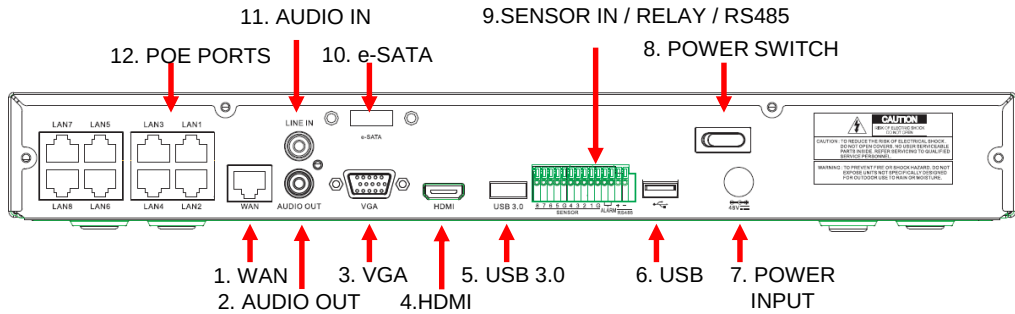


## [Rear Panel]

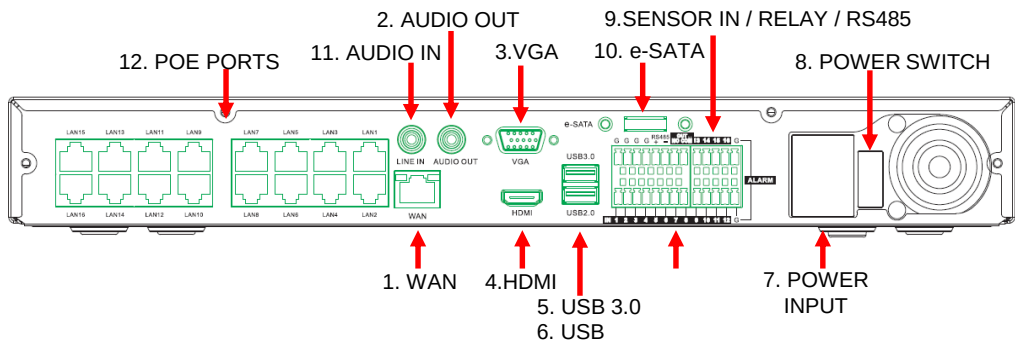
## &lt;4 CH&gt;



## &lt;8 CH&gt;



## &lt;16 CH&gt;



1. **WAN** : This is the Gigabit Ethernet LAN cable connection terminal for NVR.
2. **AUDIO OUT** : RCA audio out terminal.
3. **VGA** : video output for VGA display.
4. **HDMI** : Real HD and 4k output for high resolution monitor.
5. **USB 3.0** : USB 3.0 port for mouse and USB devices. You should connect correctly the USB devices and mouse as picture directed
6. **USB** : USB 2.0 port
7. **POWER INPUT**
8. **POWER SWITCH** : ON/OFF Power switch.
9. **SENSOR IN** : This terminals can be connected to external sensors.  
**RELAY** : This terminal blocks connect external electric devices to the product (Warning Lamp and others).  
**RS485** : For control the pan and tile cameras. Make sure that the polarity.
10. **e-SATA** : e-SATA port for external HDD storage.
11. **AUDIO IN** : RCA audio in terminals.
12. **POE PORTS** : POE connection terminal for IP Cameras.

❖ *For more details, refer to [CH 2. Installation Method and Cautions].*

## CH2. Installation Method and Cautions

### 2-1. Cautions

#### **WARNING**

**Risk of electric shock.**

**Do not open the cover of the product.**

**Servicing of this product by unauthorized personnel is prohibited and will result in a void of warranty.**



**In order to ensure the most stable conditions for power, the use of a UPS (Uninterrupted Power Supply) is recommended.**

- Avoid installing the product where there are direct rays or it is hot by locating near from heat generator. (May cause fire)
- Do not put vase, flowerpot, cup, cosmetics, drug, and anything the contain water on product. (May cause fire or electric shock, and it may injure people by falling)
- Do not insert or drop any metal object (coin, hair pin) or flammable object (match, paper) into air hole. (May cause fire or electric shock)
- Do not put any heavy object on it. (May injure people by being fell or destroyed.)
- Put power plug surely not to be moved. (If not, this may cause fire.)
- Unplug power plug and antenna when there are thunders and lightening. (May cause fire.)
- For cleaning the product, wipe surface with dry towel. Using chemical agent or cleaner may change the color and unpeel paint. Do not put several plugs at same time. (May cause electric shock.) If there is smoke or strange smell, stop operation. In this case, turn the power off and unplug it, and then contact our service center. (If you keep using it, this may cause fire or electric shock.)
- Do not unplug by pulling cord. (If cord is damaged, it may cause fire or electric shock.)
- Do not plug or unplug with wet hands. (May cause electric shock.)

- Keep the power cord untwisted. (May cause fire or electric shock.)
- Use proper adapter. (Using too much electric power may cause fire or electric shock.)
- Do not install it at where exposed to rain and wind and water drop. (May cause fire, electric shock and transformation.)
- Keep away from fire. (May cause fire.)
- Do not disassemble or remodel on your own. (May cause malfunction or electric shock.)
- Do not put next to flammable materials like flammable spray. (May cause fire.)
- Do not install it at a place with too much dirt. (May cause fire.)
- Do not install it on unstable places like shaking table and inclined place or shaking place. (May injure users by falling down or being upside down.)
- Do not put an heavy object on power cord or avoid it from being pressed by the device. (May cause fire or electric shock.)
- In case of using extension cord, do not use several devices at same time. (May cause fire with abnormal heating of extension.)
- When there are dirt on power plug pin or power outlet, clean it nicely. (May cause fire.)
- Do not damage on power cord or plug, and bend or twist or pull too much, and put it between other objects or heat. If power outlet insertion part is not tight, do not use it. (May cause fire or electric shock.)
- Do not drop or give a shock to the product. (May injure people or cause malfunction.)
- Do not touch power adaptor or signal controller. (May cause electric shock.)
- Do not put any object too close to block cooling fan. (May cause fire.)
- In case of exchanging batteries with improper type, there might be danger of explosion.
- For used batteries, throw away separately from other garbage.
- When you take out batteries, avoid children from eating them by mistake. Keep them away from children. (If a child ate them, contact a doctor right away.)

**Note :**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This device complies with the part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operations.

**FCC Warning :**

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

**CE Warning :** This is a Class A product. In a domestic environment this may cause radio interference in which case the user may be required to take adequate measures.

This product has obtained EMI registration.

## 2-2 Product Installation

This product may be composed of camera and monitor in default, and additionally the sensor, microphone, speaker and PC for network can be connected if necessary.

### 2-2-1. Power Connection

1) Connect adapter or power cable to power input terminal at rear side.  
(free voltage from 100V to 240V, 50/60Hz)

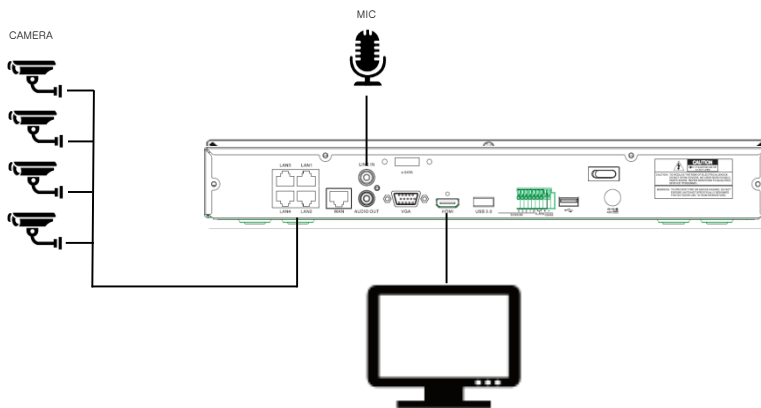
※ You must operate it at the rated voltage instructed on the user's manual. In case power higher than the rated voltage is supplied, it may cause damages on product.

### 2-2-2. Connecting External Device

※ Connect it when power of the product is off.

※ Read through user's manual for the device you are connecting carefully.

#### 1) How to Connect External Video/Audio Device



Connect cameras to POE PORTS by channels.

Connect microphone (AMP) to AUDIO IN by channels.

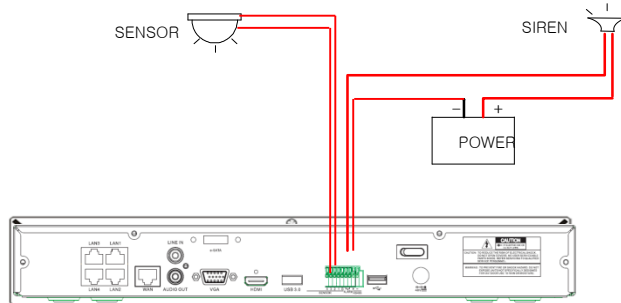
Connect VGA OUT to VIDEO IN of monitor.

Connect HD output to HD Monitor.

Connect AUDIO OUT to AUDIO IN of monitor (or speaker).

## 2) How to connect external sensor

Sensor terminal is composed of 1 input channel and 1 output channel. Sensor out terminal is relay output with 1A, 24V or 0.5A, 125V.



**Sensor In :** Connect the sensors. The sensor are composed of both signal and ground terminals, with a voltage difference of 5V. In the case that the sensor used for input is of the N/O (Normal Open) type, when the voltage difference between the signal and ground falls to 0V (short), the NVR can use this as a trigger to start alarm/sensor based recording.

**Sensor Out :** Connecting external electrical devices

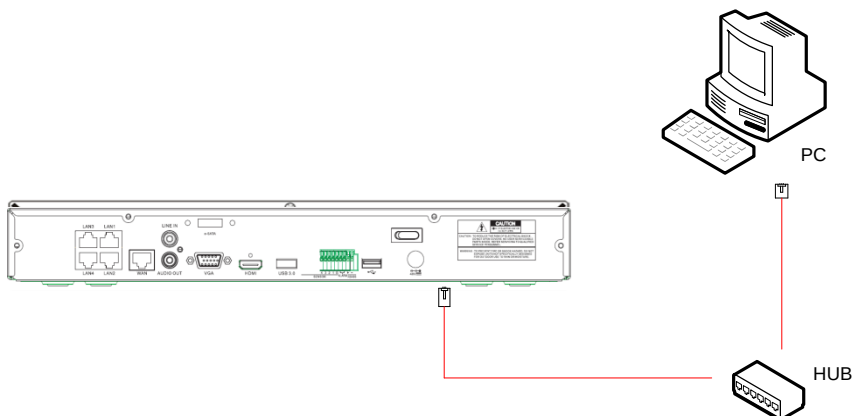
The relay output terminal does not provide power, and functions only on an ON/OFF basis via a relay. Normally, the signal and ground should be on an OPEN basis, and the NVR will complete the relay connection.

## 3) Connecting with PC using LAN cable

If you want to connect NVR to PC directly, use LAN cable, and if you want to use HUB, connect cable via hub.

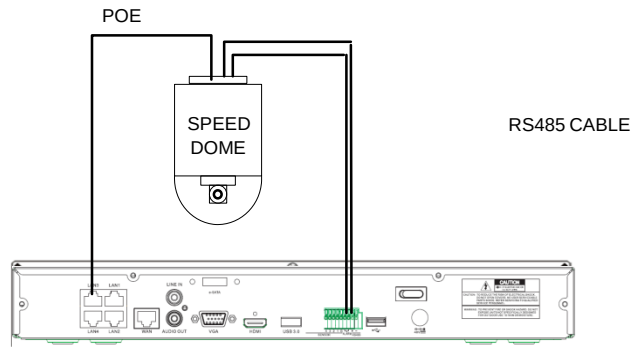
\*Hub : This is a device connecting one office to devices located near with using cable when you organize LAN

\*Cable : This is standard UTP cable used for communication among devices through Hub and others when you organize LAN



#### **4) Connection Using PTZ camera**

In case of using pan and tilt cameras, connect PAN/TILT DRIVE to product as shown at following figure.



#### **5) Installing Hard disk drive**

In case of installing the hard disk drive, open the upper case and install the hard disk drive on the hard bracket. Remember that the main power should be off to install the hard disk drive. If you have any trouble, please contact the technical support.



## CH3. How to Use

### 3-1. General Usage Information

This NVR can be operated with a mouse or remote controller under the four main modes listed below:

**Live Mode** – This is the “main or default” mode. From this mode you can view in real time all currently operating cameras, information regarding camera status, and have access to Pan/Tilt camera controls. In addition, system status information will be shown during live mode, and other modes can be entered from Live mode.

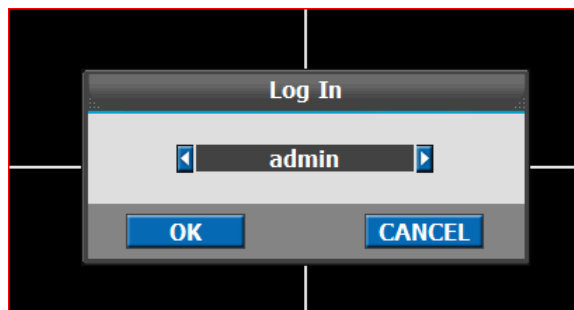
**Setup Mode** – The user will be able to customize settings for Live viewing, Recording, Backup, and Camera related devices under the Setup Mode.

**Search Mode** – In Search Mode, the user will be able to review all recorded footage in the case that an event must be reviewed using a calendar or event based search.

**Backup Mode** – In Backup Mode, the user will be able to archive the desired data to the preferred supported media of their choice (ex. External CD&DVD RW, USB Backup, Remote Client Software, etc.)

**Password Protection** – The NVR system will utilize a user ID and password system to prevent unauthorized usage of this product. Control of the system will only be possible after entering a proper ID and password as illustrated below. (Factory Default settings are blank for these fields).

IDs and passwords should be managed by a system administrator, as different users may be given different levels of access to the NVR.



## 3-2. LIVE Mode

In this section you will know how to split the video mode into 1, 4, 6, 8, 9, 12, 16, as well as auto sequencing, PTZ Control, Mouse control, Setup configurations, Backup.



### 3-2-1. LIVE Mode Control

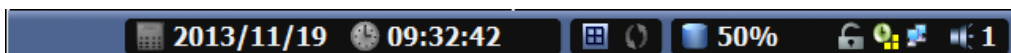
#### 1) Live View Status

You may use the Live Menu Bar located at the bottom for quick shortcuts and view status of certain items.

|                                                                                     |                             |
|-------------------------------------------------------------------------------------|-----------------------------|
|  | Recording indicator         |
|  | Event recording indicator   |
|  | Motion detection indicator  |
|  | Sensor activation indicator |
|  | POS indicator               |

#### 2) Live Menu Bar

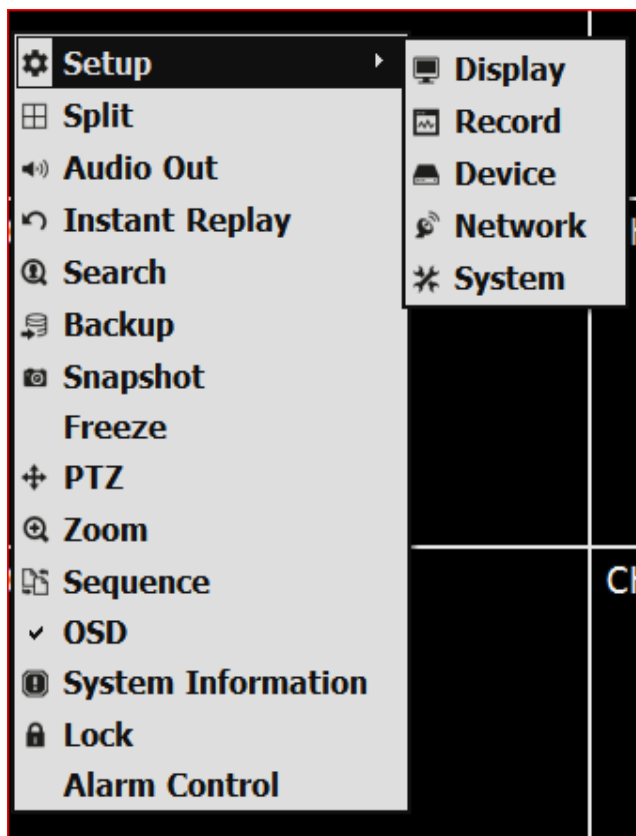
You may use the Live Menu Bar located at the bottom for quick shortcuts and view status of certain items.



|                                                                                   |                                |
|-----------------------------------------------------------------------------------|--------------------------------|
|  | Date                           |
|  | Time                           |
|  | Screen Split mode change       |
|  | Sequence activation            |
|  | Hard drive usage               |
|  | Lock/ Unlock indicator         |
|  | Scheduler activation indicator |
|  | Network connection indicator   |
|  | Audio out channel indicator    |
|  | Audio Mute indicator           |

### 3) Live Popup Menu

By Right-Clicking anywhere on Live Screen, you may view the Live Popup Menu. By using the Live Popup Menu, you can quickly jump to the necessary configuration and settings.

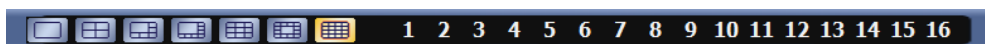


### 3-2-2. LIVE Mode Feature

#### 1) Setup : refer to 3-4

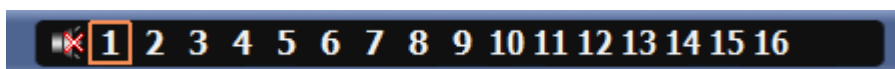
#### 2) Split

Change video split mode for Live View.



#### 3) Audio Out

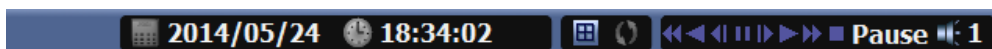
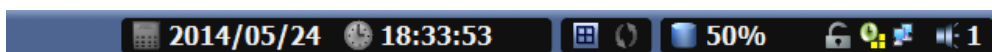
You can choose the audio out from this menu.



#### 4) Instant Replay

This is very convenient function to catch the abrupt accident. During live viewing, you can go directly to the playback screen.

If you choose the 'Instant Replay', the NVR goes to the 'PLAY' with the present time screen. And you can use the functions related playback.



#### 5) Search : refer to 3-3

## 6) Backup

There are two ways to enter the backup. The first one is that right click on the live screen, and the second one is that enter directly from 'Search' upon playback. If you choose the 'backup' from the live menu, below backup screen appears.

- You can set the backup device, time and channel from the backup screen.

The screenshot shows a 'Backup' configuration window. It has several sections: 'Device' with a dropdown set to 'USB' and a 'None' button; 'Type' with a dropdown set to 'exe'; 'From' and 'To' time fields both set to '00:00:00'; a 'Camera' section with checkboxes for 16 channels, all of which are checked; an 'Audio' checkbox which is checked; an 'Event Recording' checkbox which is unchecked; a 'Status' section with 'Estimation', 'All On', and 'All Off' buttons; and a bottom section with 'Start', 'Stop', 'Exit', and 'Full Screen' buttons.

- After clicking the 'Start' button, the backup process begins, and the status bar shows the progress.

This screenshot shows a smaller version of the backup status interface. It features the 'Estimation', 'All On', and 'All Off' buttons at the top. Below them, the status bar shows '[0 MB/ 537MB]' in orange text. At the bottom are 'Start' and 'Stop' buttons.

- Then click the 'Start' button.



## 7) Snapshot

You can save the live snapshot by this menu. All channel will be saved individually to the USB memory by JPG format. You should put in USB memory before saving.

## 8) Freeze

You can freeze the current live video channels.

## 9) PTZ (Pan, Tilt and Zoom)

It is possible to control the pan and tilt camera by itself. Press the 'PTZ' button to enter the PTZ mode. For Menu setting, you can set it by pressing button as displayed at bottom of window.

- You can set the direction of camera by using the arrow buttons.



|               |                                                                          |
|---------------|--------------------------------------------------------------------------|
| Preset[Enter] | Preset setup                                                             |
| One Push[8]   | Auto Focus                                                               |
| Menu[7]       | Camera OSD menu                                                          |
| Zoom -/+      | Zoom out/in with mouse or [1]/[2] buttons on the remote controller.      |
| Focus -/+     | Adjust the focus with mouse or [3]/[4] buttons on the remote controller. |
| IRIS -/+      | Adjust the iris with mouse or [5]/[6] buttons on the remote controller.  |

❖ For more details, refer to [CH 2-2. Connection Using PTZ camera] and [CH 3-4-3. Device]

- **Preset[SEL]** : You can enter the preset number using the keypad appearing the preset button or 'Enter' button on the remote controller.



|                    |                                            |
|--------------------|--------------------------------------------|
| Run[SEL]           | Move to preset number                      |
| Set[Play]          | Set a position and name of a preset number |
| Clear[Stop/Backup] | Clear a preset set                         |
| Exit               | Exit preset mode                           |

❖ How to use Preset

1. Click the right mouse button and choose PTZ from a live pop-up menu.
2. After you move the screen, click the set button and set the position and name.

- ※ If you choose not a specified preset, UNDEFINED is displayed on the screen.
- ※ You can set up to 32. If you choose out of valid range, there is no action.

- **Camera[0]** : You can choose the PTZ camera with mouse or [0] buttons on the remote controller
- **Setup[9]** : If you press Setup using mouse (or [9] button on the remote controller) in PTZ Menu, PTZ setup window will appear. You can set the pan and tilt speed, 32 preset name and tour sequence as well as dwelling time.

**PTZ Setup**

Pan Speed  Tilt Speed   
Preset dwell time  Tour ☐

☒ Preset 1  
☐ Preset 9  
☐ Preset 17  
☐ Preset 25

|          |                          |                      |       |
|----------|--------------------------|----------------------|-------|
| Preset 1 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 2 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 3 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 4 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 5 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 6 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 7 | <input type="checkbox"/> | <input type="text"/> | Clear |
| Preset 8 | <input type="checkbox"/> | <input type="text"/> | Clear |

OK CANCEL

|                   |                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------|
| Pan Speed         | Set pan speed 1~7                                                                       |
| Tilt Speed        | Set tilt speed 1~7                                                                      |
| Preset dwell time | Set preset dwell time 2~6 sec                                                           |
| Tour              | When you check the tour box, the preset tour starts in the order specified by the user. |

❖ How to use Tour  
Choose a preset from upper left to right.

※ If you use not specified presets, it automatically skip the tour.

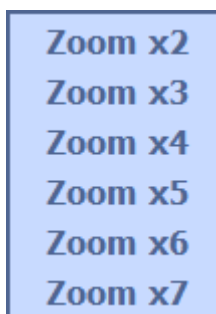


### 10) Zoom

Digital zoom of live screen for selected channel. It can be 8x zoom and also control the position by mouse dragging.



- **Camera[0]** : You can choose the camera for zoom with mouse or [0] buttons on the remote controller.
- **Zoom[9]** : You can zoom with mouse or [9] buttons on the remote controller.



### 11) Sequence

Sequence Mode On /Off: Switches screens as set on Dwell time under Screen Setup

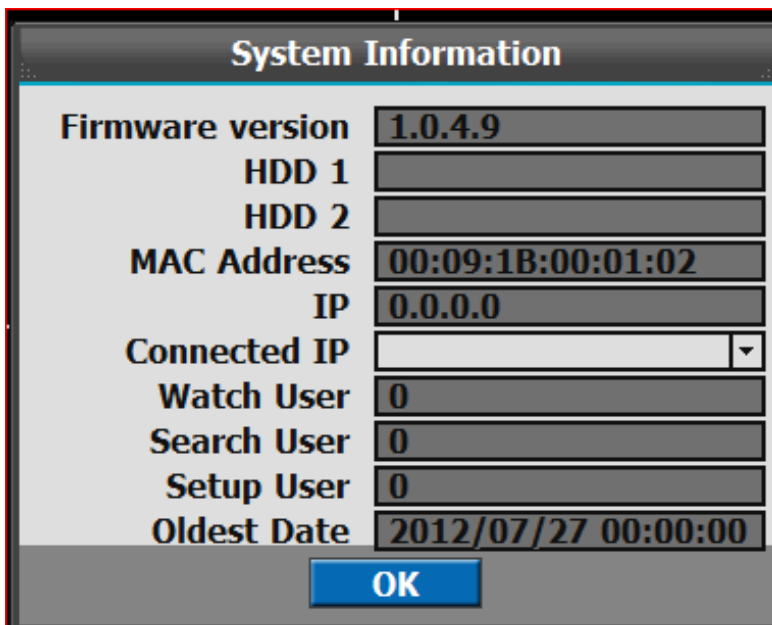
### 12) OSD

This feature shows current settings of product through GUI (Graphic User Interface) and INFO button at front side is used for this feature. When you turn on power, this will show current date and time, System Lock Setting, HDD usage, Video Loss Check, Sensor ON/OFF, Motion Detection Check, Recording Status and Schedule Feature Usage. As you press INFO button once more, GUI disappear->OSD disappear->GUI appear->OSD appear will happen sequentially.

- ❖ GUI (Graphic User Interface): displaying current status on monitor as images
- ❖ OSD (On Screen Display): displaying current status on monitor as character

### 13) System Information

It shows the system information.



| System Information |                        |
|--------------------|------------------------|
| Firmware version   | 1.0.4.9                |
| HDD 1              |                        |
| HDD 2              |                        |
| MAC Address        | 00:09:1B:00:01:02      |
| IP                 | 0.0.0.0                |
| Connected IP       | <input type="text"/> ▼ |
| Watch User         | 0                      |
| Search User        | 0                      |
| Setup User         | 0                      |
| Oldest Date        | 2012/07/27 00:00:00    |
| OK                 |                        |

### 14) Lock/Log In

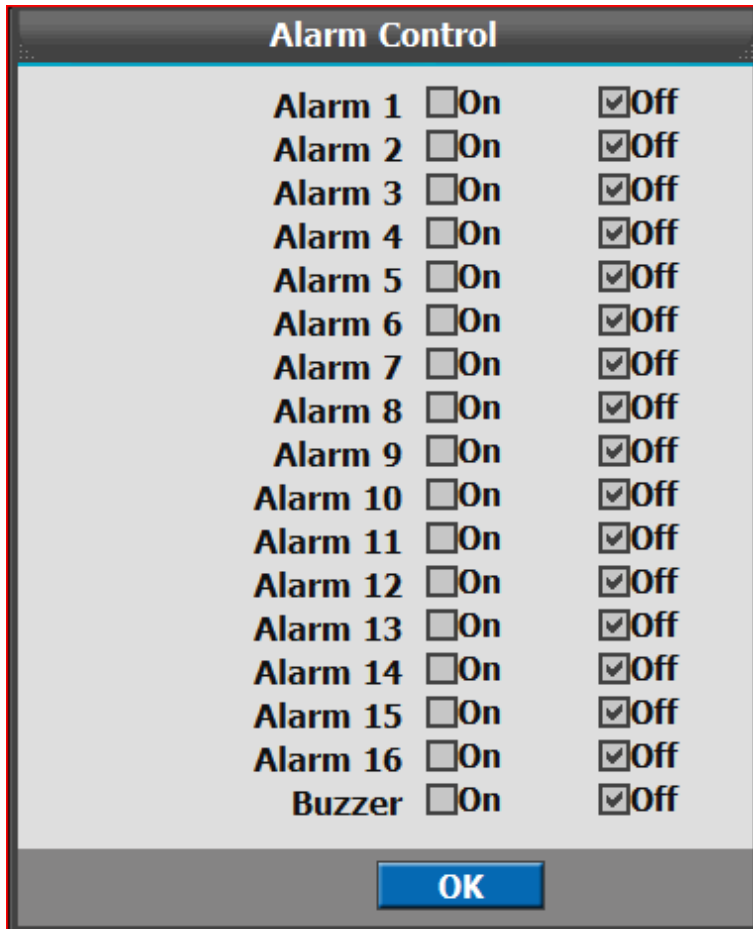
Logs off current user and locks NVR from any further configuration and screen setup until next Administrator logs in.

### 15) Panic Record

manually record all channels in highest quality on the NVR. This type of recording is designed to be used in the case of emergency when something is happening.

### 16) Alarm Control

You can control all alarms connected and the NVR system buzzer.



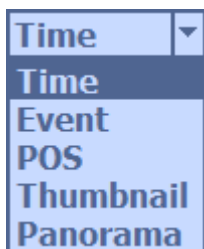
The image shows a software dialog box titled "Alarm Control". It contains a list of 16 items, each with two checkboxes. The first checkbox is labeled "On" and the second is labeled "Off". The "Off" checkbox is checked for all items. At the bottom of the dialog is a blue button labeled "OK".

| Item     | On                       | Off                                 |
|----------|--------------------------|-------------------------------------|
| Alarm 1  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 2  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 3  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 4  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 5  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 6  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 7  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 8  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 9  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 10 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 11 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 12 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 13 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 14 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 15 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alarm 16 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Buzzer   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

OK

### 3-3. Search Mode

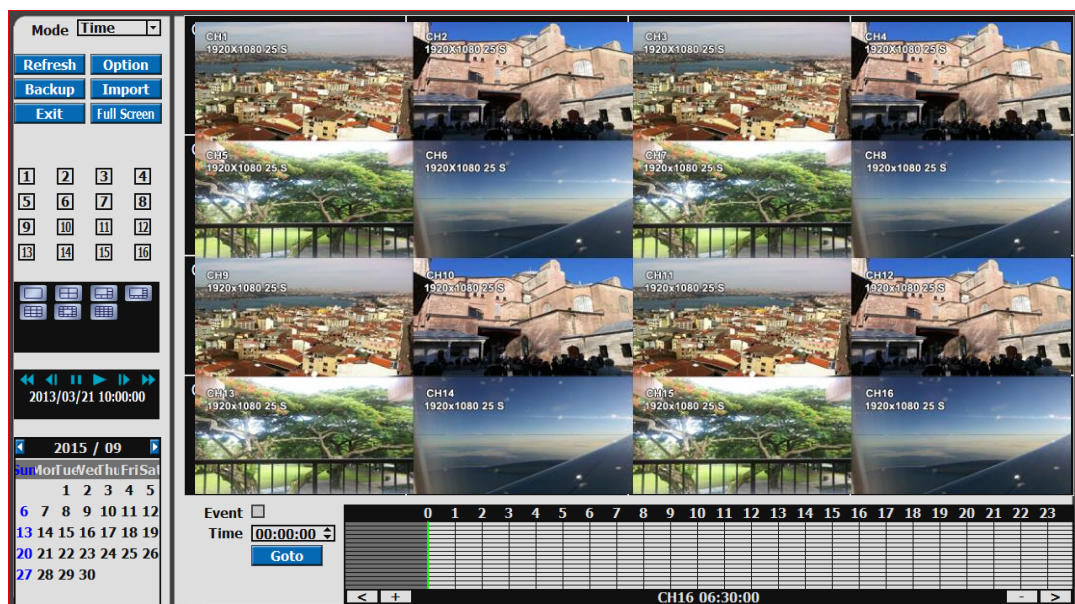
Search mode consists of two different modes of searching. The video data can be selected by 5 modes.



|           |                                                     |
|-----------|-----------------------------------------------------|
| Time      | Search by Month / Day / Time selection.             |
| Event     | Select from Event Log.                              |
| POS       | Search by POS transaction data.                     |
| Thumbnail | Play the specific channel by user defined interval. |
| Panorama  | Play the specific channel continuously.             |

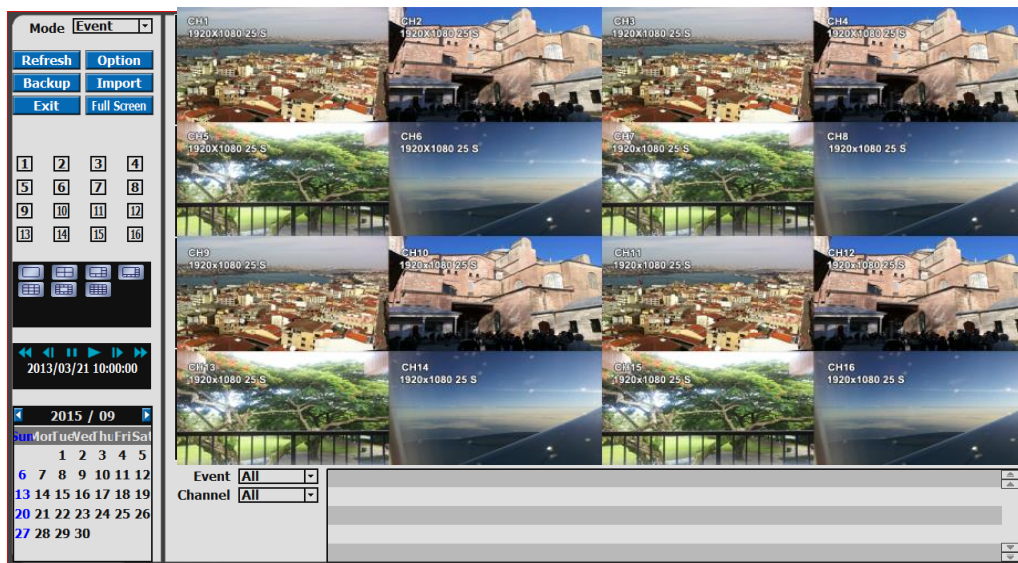
#### 3-3-1. Search Selection Type

##### 1) Time Based search selection



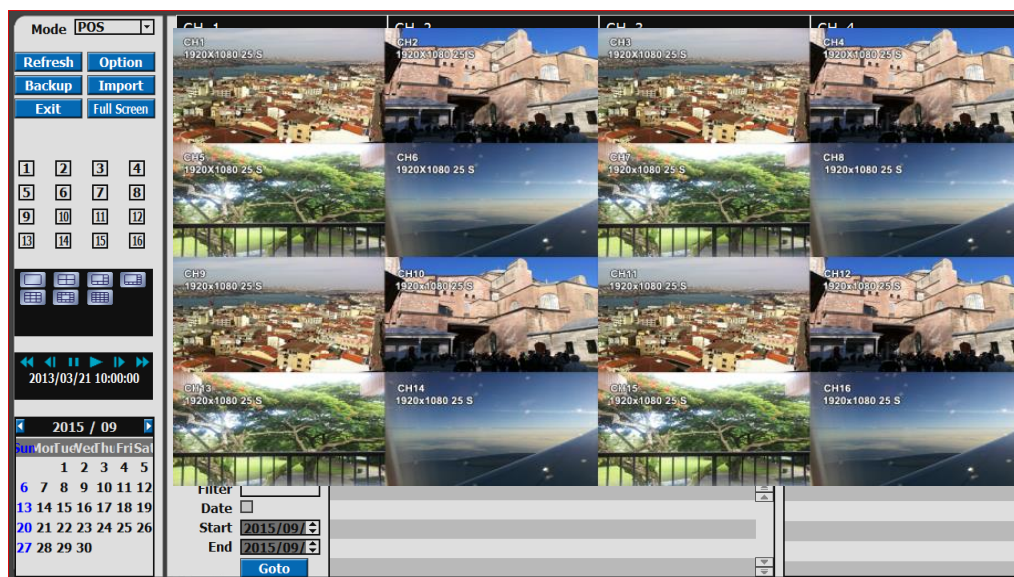
- Select the Date you wish to view by selecting a Date from Calendar.
- Select time you wish to view by selecting a time from Time Line.
- You may click on Refresh, Option, Backup, Import, Exit , Full Screen for additional features and options.

## 2) Event Based Search Selection



- Select search date from calendar
- Event log will be displayed according to the chosen date
- Preview pane above the Event Log will show preview of currently selected video

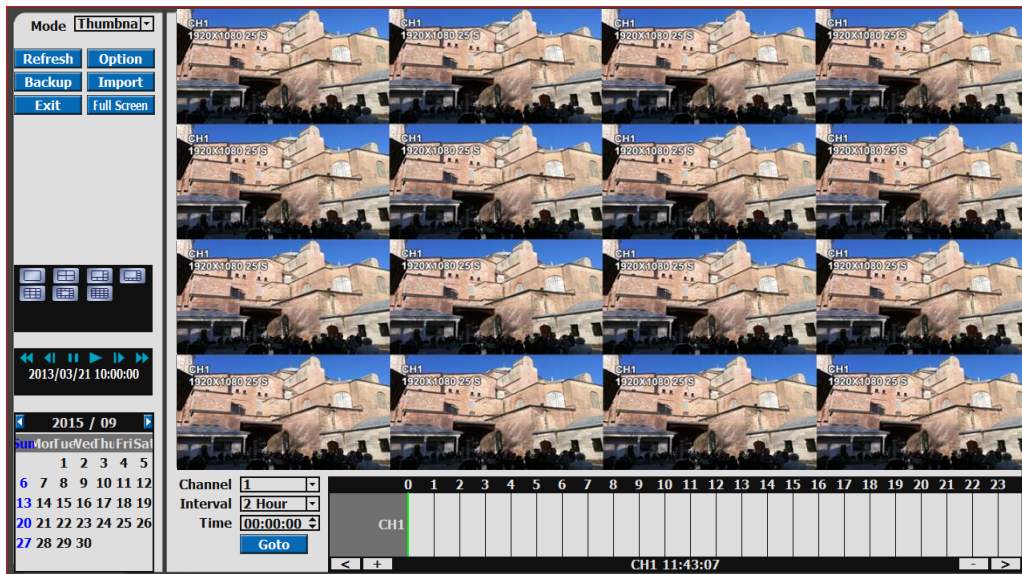
## 3) POS Search



- Select search date from calendar
- POS transaction data will be displayed according to the chosen date
- You can search detail by filter.

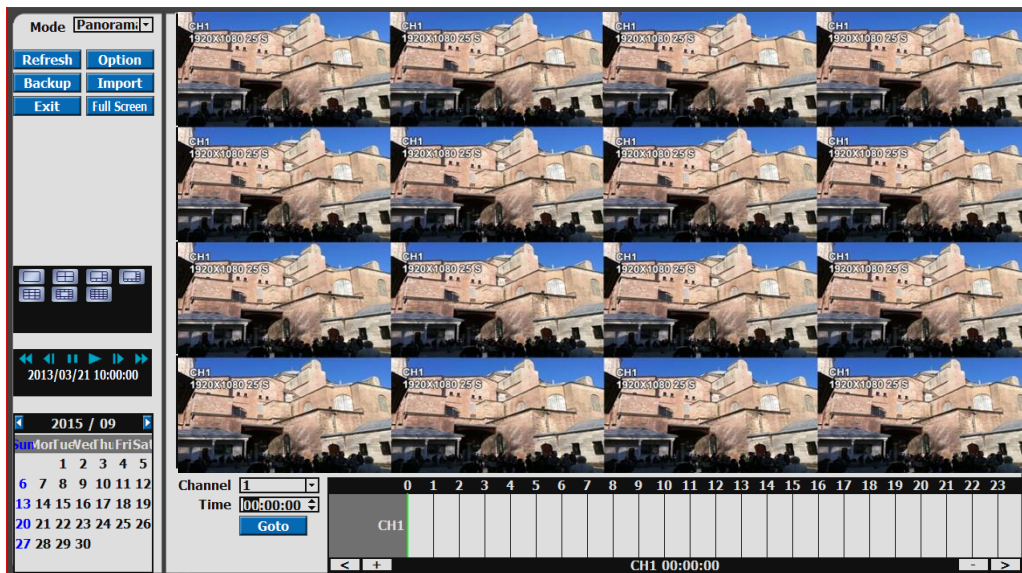


#### 4) Thumbnail Search



- Select search date from calendar
- Choose the channel and interval, then select the time from bar or typing
- The selected channel will be played individually by interval time difference

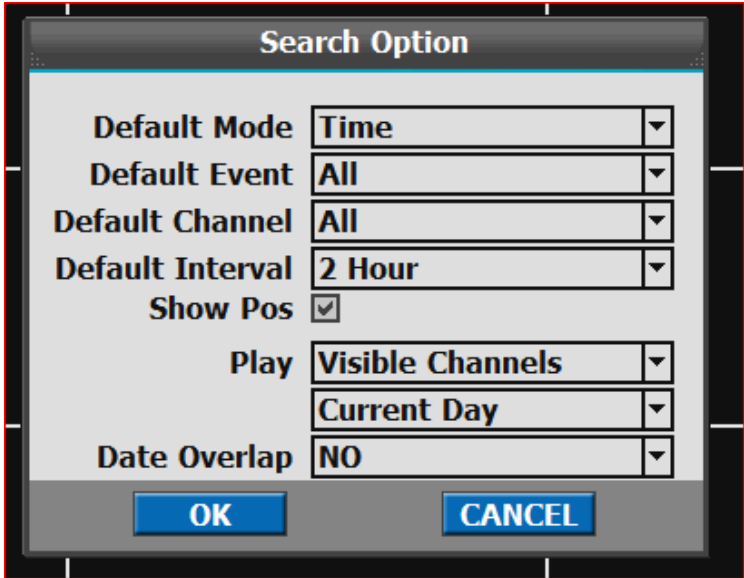
#### 5) Panorama Search



- Select search date from calendar
- Choose the channel and time from bar or typing
- The selected channel will be played continuously. If you want to play faster, use the FF button.

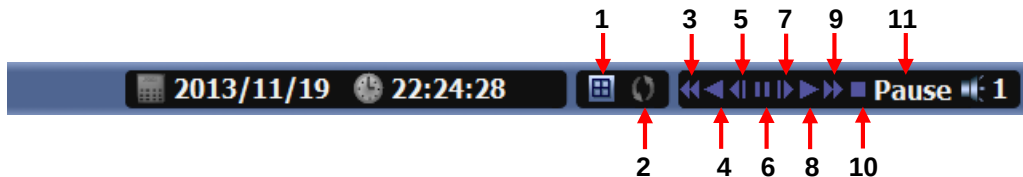
## 6) Search Related buttons

- You may click on Refresh, Option, Backup, Import, Exit , Full Screen for additional features and options

|                    |                                                                                                           |
|--------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Refresh</b>     | Reload all data list.                                                                                     |
| <b>Option</b>      | <p>Search option.</p>  |
| <b>Backup</b>      | Backup recorded data to external USB device.                                                              |
| <b>Import</b>      | Playback recorded data from external USB device.                                                          |
| <b>Exit</b>        | Move to Live video mode.                                                                                  |
| <b>Full Screen</b> | Load playback data to full screen mode.                                                                   |

### 3-3-2. Play Mode

If you choose 'Full Screen', the full screen appear. You can control the play speed in here.



#### ► Play Screen GUI

1. Split Screen
2. Sequence
3. FB (Fast Backward): FB  $\times 2, 4, 8, 16, 32, 64$  times faster
4. Playback : Backward normal speed
5. SB (Slow Backward): SB  $\times 1/2, SB \times 1/4$
6. STILL (Pause) / Frame advance
7. SF (Slow Forward): SF  $\times 1/2, SF \times 1/4$
8. Play : Forward normal speed
9. FF (Fast Forward): FF  $\times 2, 4, 8, 16, 32, 64$  times faster
10. STOP : Stops playing and returns to LIVE Screen.
11. Status information



### 3-4. SETUP Mode

Access Setup menu from Right Clicking mouse button to Popup Menu.  
Configure Display, Record, Device, Network, System which is navigated by clicking on corresponding tab menu at the top of the screen.

|         |                                     |
|---------|-------------------------------------|
| Apply   | Apply changes                       |
| Default | Return to factory default settings. |

#### 3-4-1. Display

Configure OSD and Main Display setting.

##### 1) OSD

The screenshot shows the 'Display > OSD' settings window. It contains the following settings:

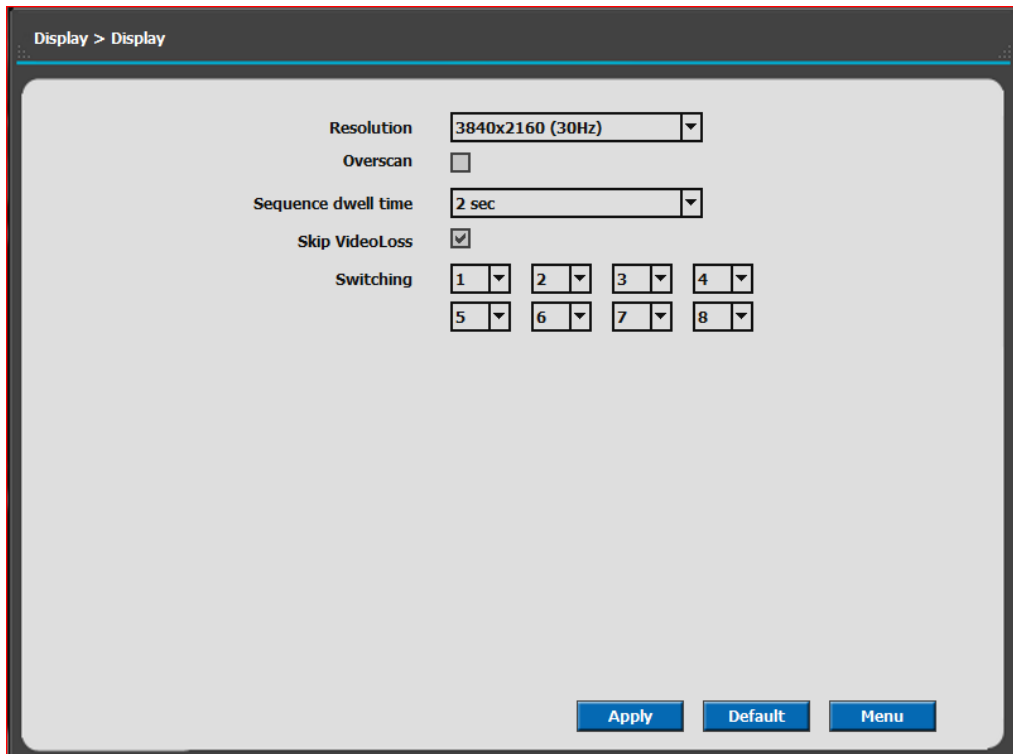
- Date Format: YYYY/MM/DD
- Time Format: 24 HR
- Language: English
- Alpha Blending: A horizontal slider bar.
- OSD: ☒
- Information Bar: Show always
- Display HDD Usage: Percent

At the bottom right, there are three buttons: 'Apply', 'Default', and 'Menu'.

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| Date Format       | YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY                      |
| Time Format       | 24HR, 12H(AM/PM)                                        |
| Language          | Select system language.                                 |
| Alpha Blending    | Adjust transparency of System Menus.                    |
| OSD               | OSD On/Off                                              |
| Information Bar   | Information Menu Bar Hide always/Auto hide/ Show always |
| Display HDD Usage | Percent/Oldest Date                                     |

## 2) Display

- You can use dual monitors that VGA and HDMI show same images.
- Configure and view Resolution, Sequence Dwell Time settings.



|                     |                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| Resolution          | 1280x720(60Hz), 1280x720(50Hz),<br>1280x1024(60Hz),1920x1080(60Hz),<br>1920x1080(50Hz) ,3840x 2160 (30hz) |
| Overscan            | Cut off a bit of each edge of the screen                                                                  |
| Sequence dwell time | 1 sec ~ 60 sec                                                                                            |
| Skip Video Loss     | Skip a video loss channel when you set the<br>sequence of the live screen.                                |
| Switching           | Set a display for the live screen.                                                                        |
|                     |                                                                                                           |
|                     |                                                                                                           |
|                     |                                                                                                           |
|                     |                                                                                                           |

### 3-4-2. Record

Configure and view Event In, Record, Group, Holiday settings

#### 1) Record

Record > Record

Camera1  
Camera2  
Camera3  
Camera4  
Camera5  
Camera6  
Camera7  
Camera8

Rec Type: Continuous [v] [Apply All]

Audio Rec: ☐

Resolution: 4MP

Continuous Recording

FPS: 20.0

Bitrate: 8192

Event Recording

Duration: 15 sec [v]

PreAlarm: 5 sec [v]

Total: 60 (3.4/15M)

Estimated Recording Days: 6.79 Day

[Apply] [Default] [Menu]

|             |            |                                     |
|-------------|------------|-------------------------------------|
| Rec type    |            | None, Conti, Event, C/E             |
| Audio Rec   |            | To select audio recording or not.   |
| ❖ ALL Apply |            | Apply the setting to whole channel. |
| Resolution  |            | It shows the camera resolution.     |
| FPS         |            | It shows FPS of the camera.         |
| Bitrate     |            | It shows Bitrate of the camera.     |
| ❖ Event     | ❖ Duration | 5 ~ 60 sec                          |
|             | ❖ PreAlarm | 0 ~ 30 sec                          |

|                            |                                                       |
|----------------------------|-------------------------------------------------------|
| ❖ Total                    | It shows the total fps.                               |
| ❖ Estimated Recording Days | This is an automatic calculator of the recoding days. |

- ❖ Event recording has priority in recording. In C/E recording, the recording will follow continuous recording setup in normal condition while it would follow event recording setup in event generation.
- ❖ For convenience, you can use the 'Apply All' menu to change with the same preference. You don't have to setup each channel if you using the 'Apply All' function.
- ❖ Duration is to set post event recording time.
- ❖ Pre alarm is to set pre event recording time.
- ❖ Total shows total fps of all channels. If total fps is more than supported, it turns red. If it turns red, you need to set a lower resolution or FPS.
- ❖ Event recording has priority in recording. In C/E recording, the recording will follow conti recording setup in normal condition while it would follow event recording setup in event generation.

## 2) Group

- With this menu, you can set the group using the scheduler. If you choose 'Group' tab, you can see the similar screen with 'Record'. The setting is similar

Record > Group

Group: A

Camera1  
Camera2  
Camera3  
Camera4  
Camera5  
Camera6  
Camera7  
Camera8

Rec Type: Continuous

Audio Rec: ☒

Resolution: 4MP

Continuous Recording

FPS: 20.0

Bitrate: 8192

Event Recording

Duration: 15 sec

PreAlarm: 0 sec

Total: 60 (3.4/15M)

Estimated Recording Days: 6.79 Day

### \* Timestamp

With 'Record' and 'Group' menu, you can check the 'Timestamp' to mark the time on your recording files.

### 3) Schedule

- In recording, Schedule recording setting is most preferred. So if you activate the weekly scheduler, you cannot record manually.
- Schedule On : The weekly scheduler is activated.
- Holiday On : The holiday that set by user is activated.
- Since you can set recording weekly, you can reduce recording of unnecessary time period. In Scheduler window, days and channels are displayed, and recording information for each channel is displayed at bottom of window.

#### ❖ How to set the weekly scheduler

1. Choose 'Scheduler' to 'On'.
2. Choose group and drag to wanted time.
3. Press the time bar  , if you want to set the detailed time.
4. Press 'Enter' button to change the group of the selected area.
5. If you activate 'Holiday' scheduler, choose 'holiday'.

Record > Schedule

Schedule On ☐ Holiday On ☒

|      | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |
|------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| All  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Sun  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Mon  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Tue  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Wed  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Thu  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Fri  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Sat  |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| Holi |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |

Group  
☐ None  
☐ A  
☐ B  
☒ C  
☐ D

< + - >

| Status |      |    |      |
|--------|------|----|------|
| 1      | None | 2  | None |
| 3      | None | 4  | None |
| 5      | None | 6  | None |
| 7      | None | 8  | None |
| 9      | None | 10 | None |
| 11     | None | 12 | None |
| 13     | None | 14 | None |
| 15     | None | 16 | None |

Apply Default Menu

#### 4) Holiday

With this menu, you can add the holidays. Use the 'Add' button for adding the holiday and use the 'Delete' or 'Delete All' buttons for removing the existing holidays.

**Record > Holiday**

2015 / 09

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     | 1   | 2   | 3   | 4   | 5   |
| 6   | 7   | 8   | 9   | 10  | 11  | 12  |
| 13  | 14  | 15  | 16  | 17  | 18  | 19  |
| 20  | 21  | 22  | 23  | 24  | 25  | 26  |
| 27  | 28  | 29  | 30  |     |     |     |

Add

Delete

Delete All

Apply

Default

Menu

## 5) Event In

- With this menu, you can set sensor input, motion detection setup. You can also set each channel individually.
- Although you set Motion Detection and Sensor Setting to On in Event menu, if Event Input in Rec Menu is set to None, it only detects and does not record.

❖ Summary regarding as Event Recording

| Event In         | OSD                                                                               | Sensor | Motion Detection | POS |
|------------------|-----------------------------------------------------------------------------------|--------|------------------|-----|
| Sensor           |  | ON     | OFF              | OFF |
| Motion Detection |  | OFF    | ON               | OFF |
| POS              |  | OFF    | OFF              | ON  |
| All Event        |  | ON     | ON               | ON  |
| None             |                                                                                   | OFF    | OFF              | OFF |

Record > Event In

|          | Event                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|          | 1                                                                                   | 2                                                                                   | 3                                                                                   | 4                                                                                   | 5                                                                                   | 6                                                                                   | 7                                                                                   | 8                                                                                   | 9                                                                                   | 10                                                                                  | 11                                                                                  | 12                                                                                  | 13                                                                                  | 14                                                                                  | 15                                                                                  | 16                                                                                  |
| Camera1  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera2  |  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera3  |  | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera4  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera5  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera6  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera7  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera8  |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera9  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera10 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera11 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera12 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera13 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera14 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |
| Camera15 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  | <input type="checkbox"/>                                                            |
| Camera16 | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            | <input type="checkbox"/>                                                            |  |

Apply Default Menu

### 3-4-3. Device

- Configure and view Camera, Audio, Motion Detection, Alarm Out, PTZ, Controller and POS.

#### 1) Camera

Device > Camera

Signal type: IP Camera Scan

IPC Auto Configuration ☒ Clear

URL: http://10.0.0.12/onvif/device\_service

ID: admin

Password: \*\*\*\*\*

Detected: 4MP20,Audio

|             | Resolution             | FPS             | Bitrate           |
|-------------|------------------------|-----------------|-------------------|
| Main Stream | <span>2560x1440</span> | <span>20</span> | <span>8192</span> |
| Sub Stream  | <span>704x480</span>   | <span>20</span> | <span>896</span>  |

Camera Title: CH 1

Disable ☐

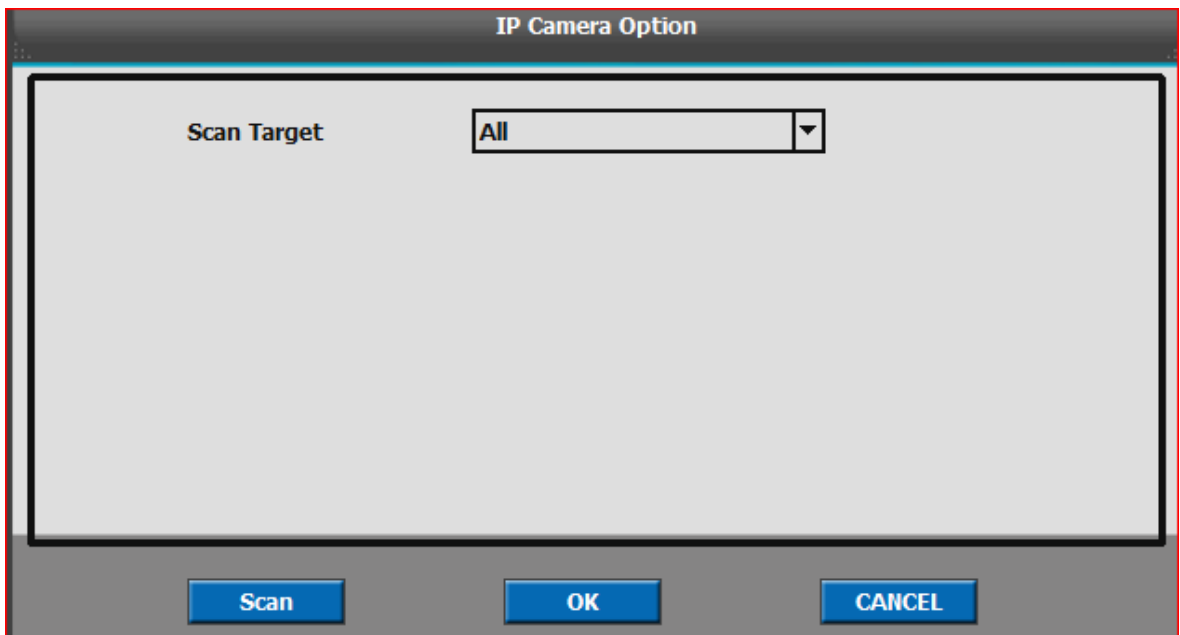
Covert ☐

Apply Default Menu

|                        |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| Signal type            | IP Camera, DVR                                                             |
| ❖ Scan                 | Scan the IP Camera list on your network.                                   |
| IPC Auto Configuration | On/Off IP Camera Auto Configuration                                        |
| URL                    | Type IP Camera address or use Scan function                                |
| ID/Password            | Type ID and password of the camera                                         |
| Detected               | Detected camera video type                                                 |
| Main Stream/Sub Stream | It shows the main and sub stream of the camera.                            |
| Camera Title           | You can set the camera name.                                               |
| Disable                | Disable current camera. It is useful when the signal is bad.               |
| Convert                | Hide current camera from Live view but Record for future searching option. |

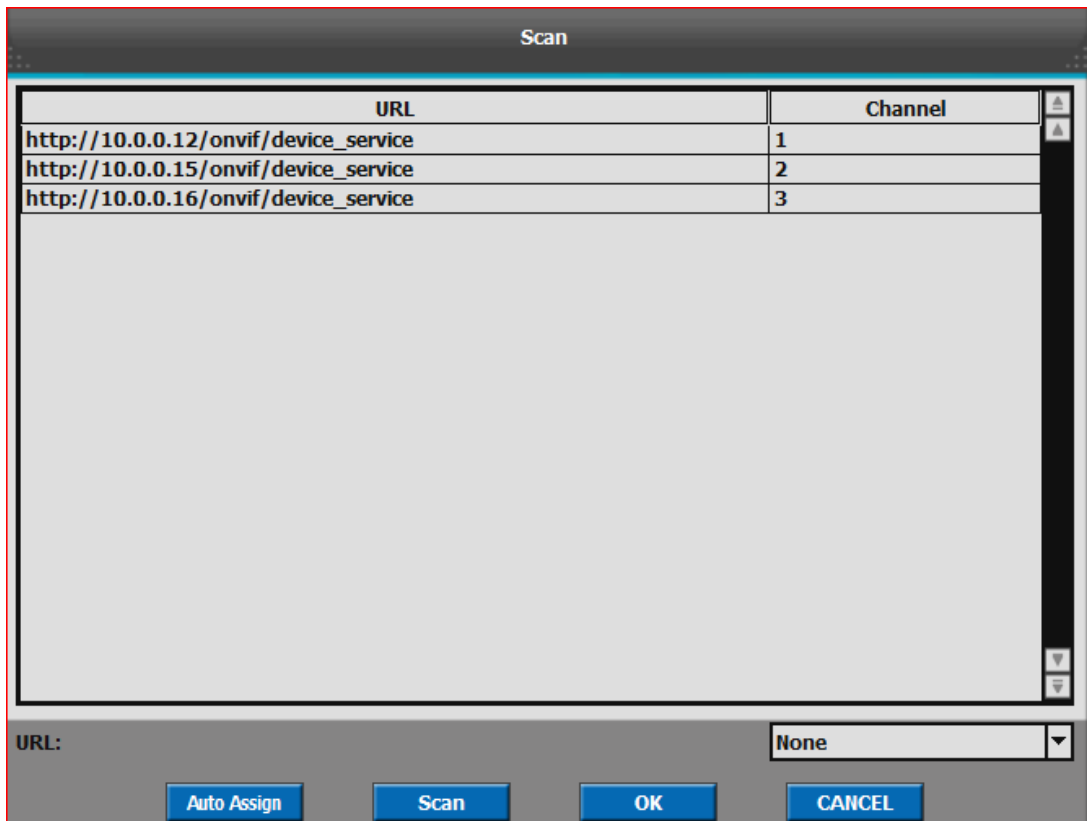


- ❖ For convenience, you can use the 'Scan' function to connect all your IP cameras on your network or NVR. You don't have to setup each channel if you using the 'Scan' function.



|             |                                       |
|-------------|---------------------------------------|
| Scan Target | All or Lan(ETH10) or IP Camera(ETH11) |
| Scan        | Go to Scan mode                       |

❖ Scan mode : you can see all IP cameras on your NVR and network.



|             |                                                     |
|-------------|-----------------------------------------------------|
| Auto Assign | Auto assign IP cameras on the list to each channel. |
| Scan        | Scan IP cameras                                     |

## 2) Audio

Device > Audio

Audio

Audio1 Channel 1 ▼

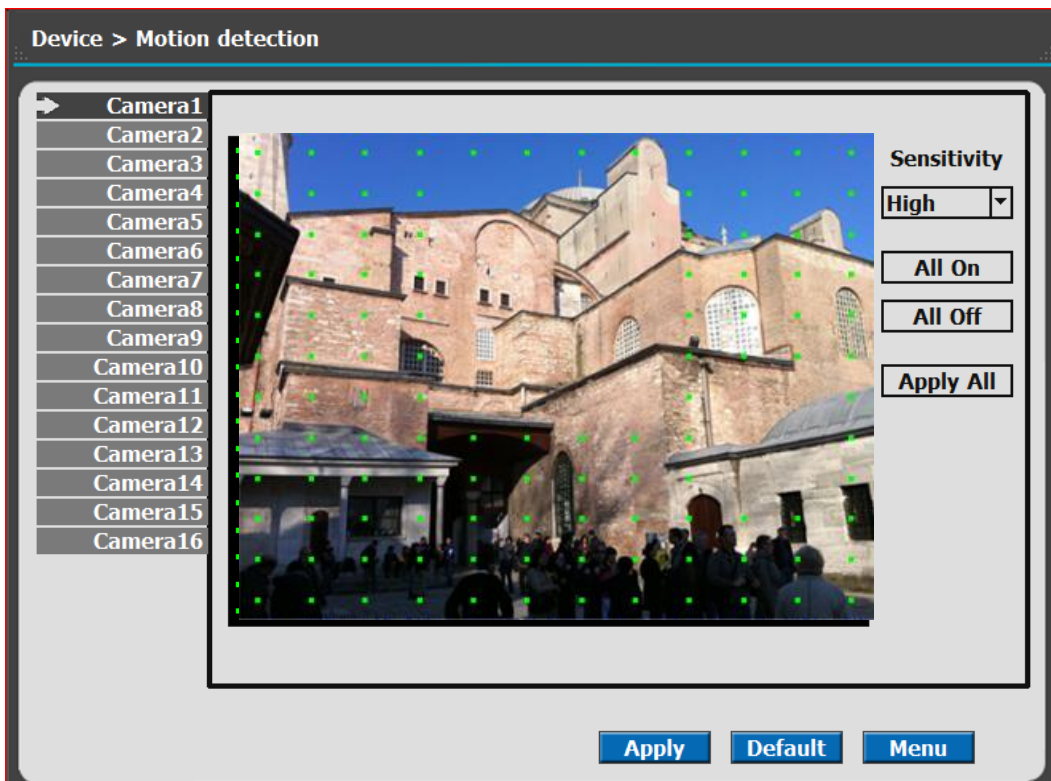
Audio Out Channel 1 ▼

Apply Default Menu

|           |                                                      |
|-----------|------------------------------------------------------|
| Audio 1   | Assign audio input to a video channel.               |
| Audio Out | Select which channel will be heard during Live View. |

### 3) Motion Detection

- Change settings for Motion Grid selection and Sensitivity Level. You can set multiple area.



|             |                                                            |
|-------------|------------------------------------------------------------|
| Sensitivity | Low, Mid, High                                             |
| All On      | This will activate the motion detection of the all area.   |
| All Off     | This will deactivate the motion detection of the all area. |
| Apply All   | Apply the setting to whole channel                         |

#### 4) Alarm Out

- There are 4 types trigger such as sensor input, motion detection, POS and video loss. This setting is related that which trigger will be activate the action such as Relay, Popup, and Buzzer Alarm Out. Each type can have separate Duration value and also linked to selected camera.

Device > Alarm out

→ Sensor Type

- Sensor In
- Motion detection
- POS
- VideoLoss
- Duration
- Name

|   | Type | Channel |    | Type | Channel |
|---|------|---------|----|------|---------|
| 1 | N.O  | 1       | 9  | N.O  | 9       |
| 2 | N.O  | 2       | 10 | N.O  | 10      |
| 3 | N.O  | 3       | 11 | N.O  | 11      |
| 4 | N.O  | 4       | 12 | N.O  | 12      |
| 5 | N.O  | 5       | 13 | N.O  | 13      |
| 6 | N.O  | 6       | 14 | N.O  | 14      |
| 7 | N.O  | 7       | 15 | N.O  | 15      |
| 8 | N.O  | 8       | 16 | N.O  | 16      |

Apply Default Menu

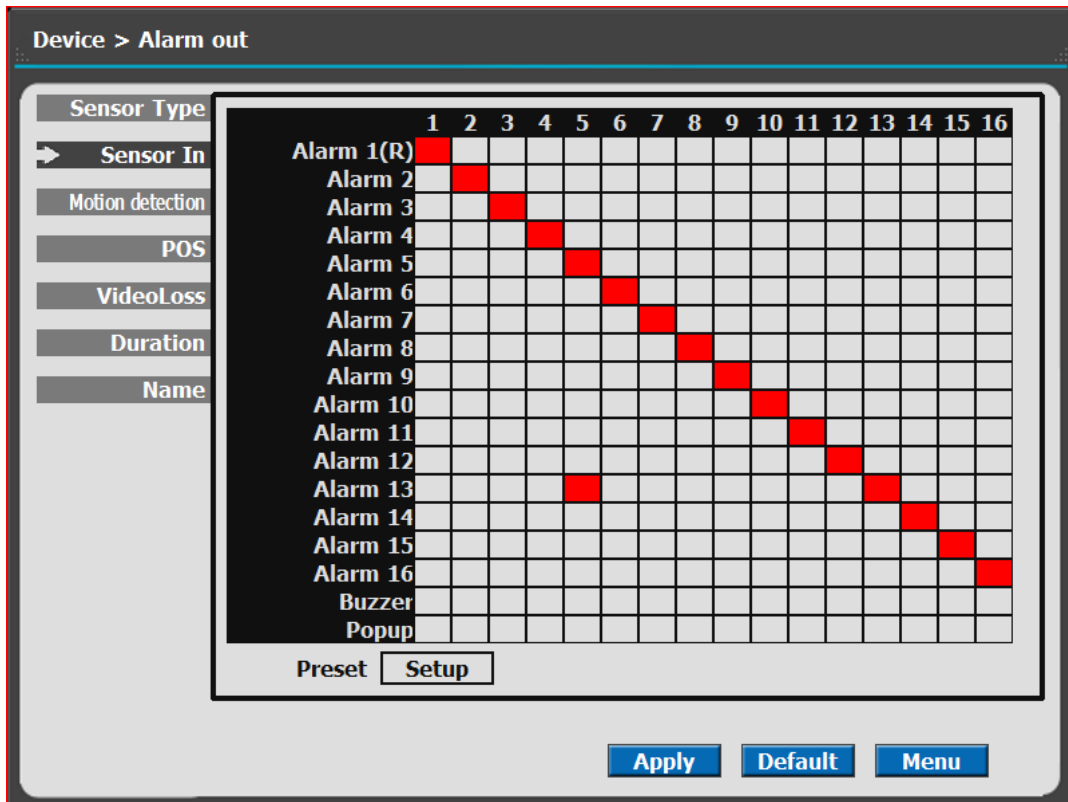
##### 4-1) Sensor Type

Selectable option is N.O. (Normally Open) / N.C. (Normally Close)

❖ For more details, refer to [CH 2. Installation Method and Cautions].(p.17)

## 4-2) Sensor In

- You can choose the action after sensor in between relay, buzzer sound and pop up. Also you can choose more than one action.



- Choose a sensor connected to a channel.
- If a sensor does not work, please check again the sensor type.
- Alarm 1 is relay out.

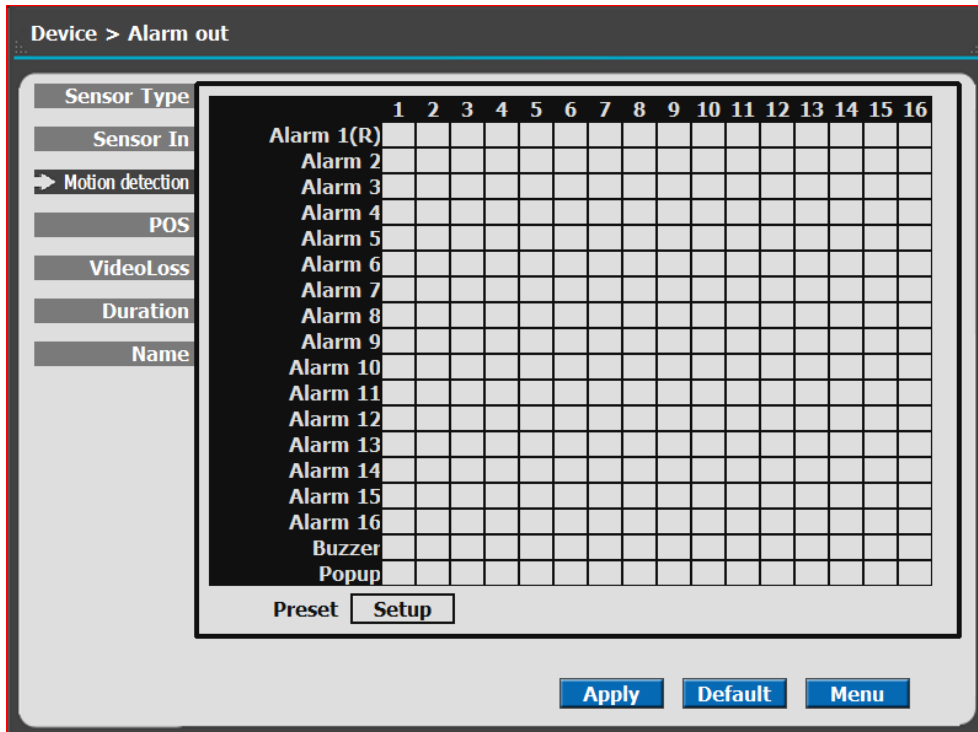
- Also you can choose more than one action. Furthermore you can set the preset position number by motion detection. If you push the 'setup' you can see the preset screen.

| Sensor1  | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9        | 10   | 11 | 12 | 13 | 14 | 15 | 16 |
|----------|------|---|---|---|---|---|---|----------|------|----|----|----|----|----|----|
| Camera1  | None |   |   |   |   |   |   | Camera2  | None |    |    |    |    |    |    |
| Camera3  | None |   |   |   |   |   |   | Camera4  | None |    |    |    |    |    |    |
| Camera5  | None |   |   |   |   |   |   | Camera6  | None |    |    |    |    |    |    |
| Camera7  | None |   |   |   |   |   |   | Camera8  | None |    |    |    |    |    |    |
| Camera9  | None |   |   |   |   |   |   | Camera10 | None |    |    |    |    |    |    |
| Camera11 | None |   |   |   |   |   |   | Camera12 | None |    |    |    |    |    |    |
| Camera13 | None |   |   |   |   |   |   | Camera14 | None |    |    |    |    |    |    |
| Camera15 | None |   |   |   |   |   |   | Camera16 | None |    |    |    |    |    |    |

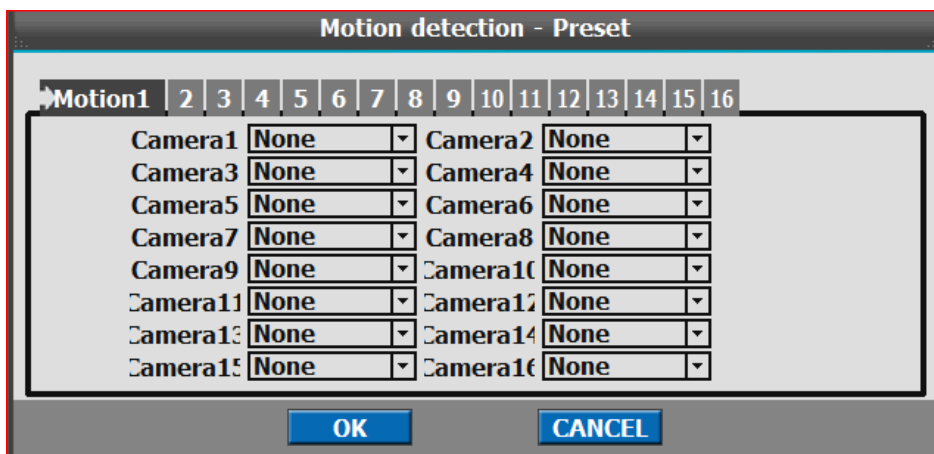
- You can assign the preset position individually by specific motion.

### 4-3) Motion Detection

- You can choose the action after motion detection between relay, buzzer sound and pop up.



- Also you can choose more than one action. Furthermore you can set the preset position number by motion detection. If you push the 'setup' you can see the preset screen.



- You can assign the preset position individually by specific motion.



#### 4-4) POS

- You can choose the action after POS transaction or video loss between relay, buzzer sound and pop up.

Device > Alarm out

| Sensor Type      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Sensor In        |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Motion detection |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| → POS            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| VideoLoss        |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Duration         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Name             |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 1(R)       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 2          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 3          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 4          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 5          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 6          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 7          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 8          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 9          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 10         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 11         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 12         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 13         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 14         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 15         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 16         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Buzzer           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Popup            |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |

Apply Default Menu

- Also you can choose more than one action.

#### 4-5) Video Loss

- You can choose the action after motion detection between relay, buzzer sound, and pop up.

Device > Alarm out

| Sensor Type      |  |
|------------------|--|
| Sensor In        |  |
| Motion detection |  |
| POS              |  |
| ➔ VideoLoss      |  |
| Duration         |  |
| Name             |  |

|            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Alarm 1(R) |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 2    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 3    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 4    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 5    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 6    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 7    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 8    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 9    |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 10   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 11   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 12   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 13   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 14   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 15   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Alarm 16   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Buzzer     |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Popup      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |

Apply Default Menu

- Also you can choose more than one action.

#### 4-6) Duration

- You can choose the duration time from 5 to 60 seconds after motion detection between relay, buzzer sound, pop up and preset.

Device > Alarm out

| Sensor Type      |                    |                  |
|------------------|--------------------|------------------|
| Sensor In        | Alarm 1(R) 5 sec ▾ | Alarm 11 5 sec ▾ |
| Motion detection | Alarm 2 5 sec ▾    | Alarm 12 5 sec ▾ |
| POS              | Alarm 3 5 sec ▾    | Alarm 13 5 sec ▾ |
| VideoLoss        | Alarm 4 5 sec ▾    | Alarm 14 5 sec ▾ |
| ➔ Duration       | Alarm 5 5 sec ▾    | Alarm 15 5 sec ▾ |
| Name             | Alarm 6 5 sec ▾    | Alarm 16 5 sec ▾ |
|                  | Alarm 7 5 sec ▾    | Buzzer 5 sec ▾   |
|                  | Alarm 8 5 sec ▾    | Popup 5 sec ▾    |
|                  | Alarm 9 5 sec ▾    |                  |
|                  | Alarm 10 5 sec ▾   |                  |

Apply Default Menu

#### 4-7) Name

- You can set a name of the alarms.

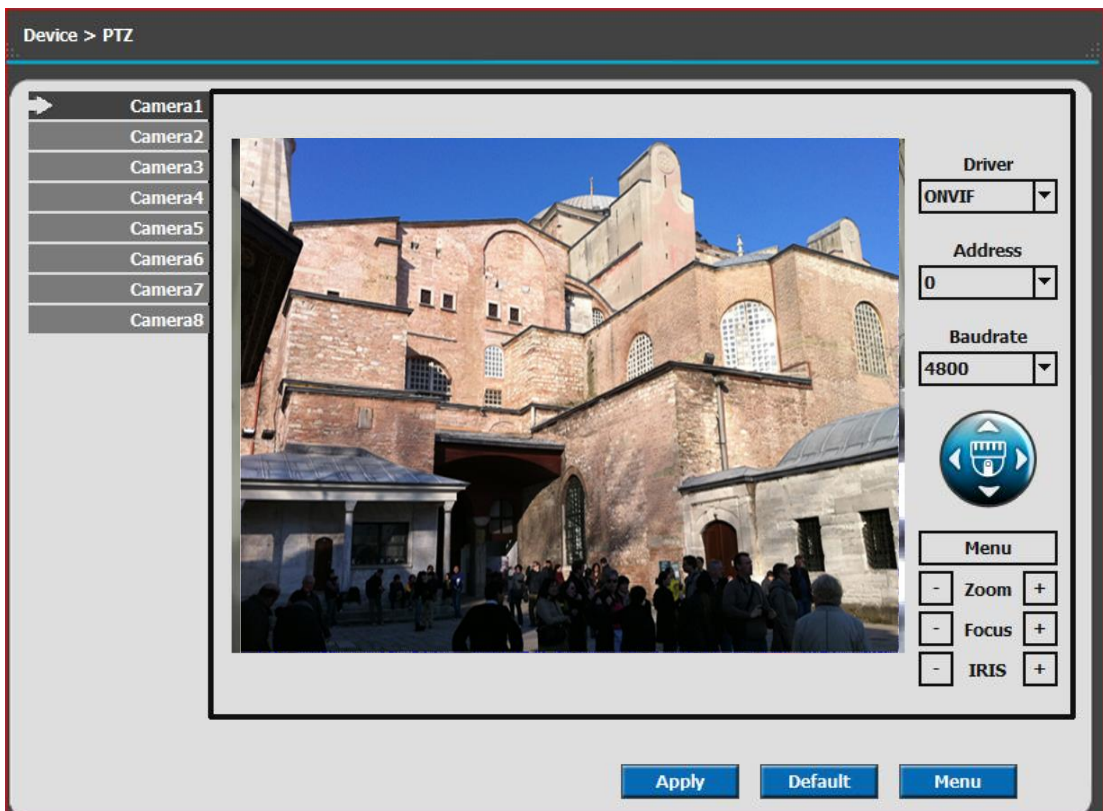
Device > Alarm out

| Sensor Type      |  |  |
|------------------|--|--|
| Sensor In        |  |  |
| Motion detection |  |  |
| POS              |  |  |
| VideoLoss        |  |  |
| Duration         |  |  |
| → Name           |  |  |

|            |                                       |          |                                       |
|------------|---------------------------------------|----------|---------------------------------------|
| Alarm 1(R) | <input type="text" value="Alarm 1"/>  | Alarm 11 | <input type="text" value="Alarm 11"/> |
| Alarm 2    | <input type="text" value="Alarm 2"/>  | Alarm 12 | <input type="text" value="Alarm 12"/> |
| Alarm 3    | <input type="text" value="Alarm 3"/>  | Alarm 13 | <input type="text" value="Alarm 13"/> |
| Alarm 4    | <input type="text" value="Alarm 4"/>  | Alarm 14 | <input type="text" value="Alarm 14"/> |
| Alarm 5    | <input type="text" value="Alarm 5"/>  | Alarm 15 | <input type="text" value="Alarm 15"/> |
| Alarm 6    | <input type="text" value="Alarm 6"/>  | Alarm 16 | <input type="text" value="Alarm 16"/> |
| Alarm 7    | <input type="text" value="Alarm 7"/>  |          |                                       |
| Alarm 8    | <input type="text" value="Alarm 8"/>  |          |                                       |
| Alarm 9    | <input type="text" value="Alarm 9"/>  |          |                                       |
| Alarm 10   | <input type="text" value="Alarm 10"/> |          |                                       |

### 5) PTZ

Configure Pan/Tilt/Zoom camera for control via NVR System and Remote client.



|          |                              |
|----------|------------------------------|
| Driver   | Choose Driver to Onvif.      |
| Address  | No configuration is required |
| Baudrate | No configuration is required |

- You have to set Comport value according to the connected camera.
- ❖ For connection of PAN/TILT Camera Receiver part, refer to user's manual of the related PAN/TILT Camera.



|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## 6) Controller

This sets the ID of remote control. If you have many NVRs in the same place, you can control separately the NVR by different remote control ID.

### ❖ Remote controller ID setup

Use the ID setup and number key to set the ID of remote control on the remote controller. You may check the ID by pressing the remote control key. The ID should be the same between the NVR and remote control.

And you can turn it on/off the key sound.

Device > Controller

Remote Controller ID: All

Key Buzzer: ☒

System Keyboard: None

01

Apply Default Menu

|                      |             |
|----------------------|-------------|
| Remote Controller ID | All, 00 ~99 |
| Key Buzzer           | ON / OFF    |

## 7) POS

This sets the POS interface(text inserter) with the NVR and cash register.

※ If you are using a USB hub, you can use up to 4 USB POS.

**POS**

Serial

USB1(X)

USB2(X)

USB3(X)

USB4(X)

Channel: 1

Baudrate: 2400

Start Word:

End Word:

Ignore Word:

Number of add line: 0

Overlay Position: Upper Left

Text Overlaying Duration: 60 sec

Apply Default Menu

|                          |                                                                                                         |
|--------------------------|---------------------------------------------------------------------------------------------------------|
| Channel                  | Select a Channel of POS                                                                                 |
| Baudrate                 | Select a baudrate of POS                                                                                |
| Start Word               | Type a start word of transaction                                                                        |
| End Word                 | Type a end word of transaction. Text will be embedded into the picture between start word and end word. |
| Ignore Word              | Type a word which you want ignore during text insertion.                                                |
| Number of add line       | This will determine the adding line after end word. (0~4)                                               |
| Overlay Position         | This will determine the text position.                                                                  |
| Text Overlaying Duration | This will determine how long display the text up to 120 seconds. (60~120 sec)                           |



## ❖ How to Connect POS

1. Connect USB to RS232 serial cable between POS and NVR.



\*POS

USB



\*NVR

USB

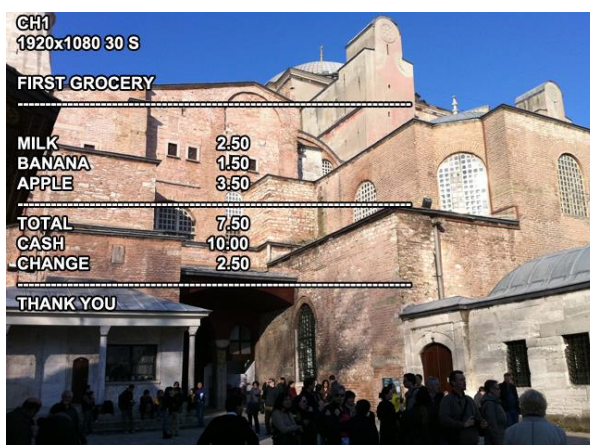
2. To set manually, at first you should know the setting values of the POS. You can get the information from the POS setting screen.

| Register | Info    | Condition | Setting |  |  |  |  |  |  | ETC |
|----------|---------|-----------|---------|--|--|--|--|--|--|-----|
| Counter  | POS     | Place     | Receipt |  |  |  |  |  |  |     |
| Setting  | Setting | Setting   | Setting |  |  |  |  |  |  |     |

| Device Setup    |       |       |      |            |  |
|-----------------|-------|-------|------|------------|--|
| Device          | Use   | Part  | Port | Protocol   |  |
| Barcode Scanner | No    |       |      |            |  |
| Receipt Printer | Yes   | PR4RT | COM1 | 4800,8,n,1 |  |
| Cashbox         | No    |       |      |            |  |
| Information     | No    |       |      |            |  |
| Printer1        | No    |       |      |            |  |
| Printer2        | No    |       |      |            |  |
| Printer3        | No    |       |      |            |  |
| Printer4        | No    |       |      |            |  |
| Barcode Printer | No    |       |      |            |  |
| Terminal1       | No    |       |      |            |  |
| Terminal2       | No    |       |      |            |  |
| Terminal3       | No    |       |      |            |  |
| Terminal4       | No    |       |      |            |  |
| Telephone       | No    |       |      |            |  |
| Save            | Close |       |      |            |  |

3. If your setting is correct, you can see the below NVR screen on transaction. (This is the popup screen. You can set popup in the 'Event In' setup.)



### 3-4-4. NETWORK

Configure and view Address, Port, DDNS, E-mail, Control and Status settings.

#### 1) Address

Configure Network information for Remote client connection.

Network > Address

NVR Name: ED-C800HD

MAC Address: 00:09:1b:27:00:04

Type: Ethernet

DHCP: ☐

IP: 208.88.59.118

Subnet Mask: 255.255.255.128

Gateway: 208.88.59.1

DNS Auto: ☐

DNS IP: 4.2.2.1

Apply Default Menu

|                                               |                                                                                                                                                                                                                                                              |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NVR Name                                      | Type the URL of NVR using virtual keyboard.                                                                                                                                                                                                                  |
| Type                                          | It can be supported only Ethernet.                                                                                                                                                                                                                           |
| DHCP<br>(Dynamic Host Configuration Protocol) | Set whether you want to use DHCP or not (On/Off). If you connect LAN after setting it to On, IP is allocated automatically. If you set it to Off, you have to input IP. DHCP is a protocol that allows managers to manage and allocate IP address centrally. |
| IP                                            | Type the IP address.                                                                                                                                                                                                                                         |
| Subnet Mask                                   | Type the subnet mask.                                                                                                                                                                                                                                        |
| Gateway                                       | Type a gateway.                                                                                                                                                                                                                                              |
| DNS Auto                                      | If you connect LAN after setting it to On, DNS IP is allocated automatically. If you set it to Off, you have to input DNS IP.                                                                                                                                |
| DNS IP                                        | Type the DNS IP.                                                                                                                                                                                                                                             |

## 2) Port

There are 4 kinds of ports for the case such as watch, search, setup and web. You can individually set the port number of the NVR. The default is 8000. You can choose from 8000 to 9999.

If you activate 'uPNP (Universal plug and play)' box, NVR connects the router automatically with these port number. You don't have to setup the router.

Network > Port

Watch: 7000 (6000-9999)

Search: 7000 (6000-9999)

Setup: 7000 (6000-9999)

Web: 80 (80,6000-9999)

RTSP: 8554 (6000-9999)

ONVIF: 8994 (6000-9999)

uPNP: ☐

uPNP Test

Status:

Apply Default Menu

|           |                                   |
|-----------|-----------------------------------|
| Watch     | Type the port. (6000~9999)        |
| Search    | Type the port. (6000~9999)        |
| Setup     | Type the port. (6000~9999)        |
| Web       | Type the port. (80,6000~9999)     |
| RTSP      | Type the port. (6000~9999)        |
| ONVIF     | Type the port. (6000~9999)        |
| uPNP      | ON / OFF                          |
| uPNP Test | Test uPNP                         |
| Status    | It shows the test result of uPNP. |

### 3) DDNS

This is the function to automatically change the IP of NVR to URL. This product supports the automatic DDNS service using manufacture's internal server. Also you can choose DynDNS.

**Network > DDNS**

DDNS Type:

DDNS Server:

Port:

Domain name:

ID:

DDNS Password:

Duration:

Status:

|               |                                                                             |
|---------------|-----------------------------------------------------------------------------|
| DDNS Type     | Choose a DDNS type.                                                         |
| DDNS Server   | Defend on the DDNS type, it will be auto-typed or disable.                  |
| Port          | Defend on the DDNS type, it will be auto-typed or disable                   |
| Domain name   | Type the port of the email account.                                         |
| ID            | Defend on the DDNS type, it will be auto-typed or type the ID of your DDNS. |
| DDNS Password | type the DDNS password.                                                     |
| Duration      | choose the time sync frequency with DDNS server.                            |
| DDNS Test     | Test your DDNS.                                                             |

#### 4) E-mail

You can send the event with snapshot by email. Fill all the information correctly and push the 'Email Test'. Also you can select each event individually by 'Event Set'.

Network > E-mail

E-mail On ☐

Receptior

Sender

SMTP Server

Port

Authentication ☐

SSL ☐

Account

Password

|                |                                                             |
|----------------|-------------------------------------------------------------|
| Receptior      | Type the email address of the receptior.                    |
| Sender         | Type the name of the sender.                                |
| SMTP Server    | Type the SMTP server of the email account.                  |
| Port           | Type the port of the email account.                         |
| Authentication | Set whether you want to use authentication or not (On/Off). |
| SSL            | Set whether you want to use SSL or not (On/Off).            |
| Account        | Type the email account of the sender.                       |
| Password       | Type the password of the send's email account.              |
| Duration       | Set the duration time to send continuous mails.             |
| E-mail Test    | Test the email account.                                     |
| ❖ Event Set    | Set events                                                  |
| ❖ Snapshot Set | Set snapshot                                                |

❖ **Event Set**

Set events to send the email.

|            | 1                        | 2                        | 3                        | 4                        | 5                        | 6                        | 7                        | 8                        | 9                        | 10                       | 11                       | 12                       | 13                       | 14                       | 15                       | 16                       | All                      |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Sensor     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Motion     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| VideoLoss  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| POS        | <input type="checkbox"/> |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | <input type="checkbox"/> |
| S.M.A.R.T. | <input type="checkbox"/> |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
| System log | <input type="checkbox"/> |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
| Add Image  | <input type="checkbox"/> |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |

Interval: 10 sec

|            |                                                 |
|------------|-------------------------------------------------|
| Sensor     | Detect a sensor input.                          |
| Motion     | Detect a motion detection.                      |
| Video Loss | Detect a video loss.                            |
| POS        | Send inserted text of POS to the email.         |
| S.M.A.R.T. | Send checked HDD S.M.A.R.T result to the email. |
| System log | Send system log to the email.                   |
| Add Image  | Send a snapshot of events to the email.         |

❖ **Snapshot Set**

Set the regular hour for snapshot to send the email.

|         | 1                        | 2                        | 3                        | 4                        | 5                        | 6                        | 7                        | 8                        | All                      |
|---------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Channel | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Interval: Off

## 5) Streaming

Set a streaming for network connection.

Network > Streaming

Camera1

On ☒

High Resolution

FPS

Quality

Bandwidth 24576 Kbps

Low Resolution

FPS

Quality

Bandwidth 2688 Kbps

Apply Default Menu

|            |                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| On         | Set whether you want to use the channel on Network or not (On/Off).                                                                                   |
| Resolution | Showing the resolution from camera (High and Low)                                                                                                     |
| FPS        | Showing the frame rate.(1~30 fps)                                                                                                                     |
| Quality    | Showing the picture quality.(Super, High, Med, Low)                                                                                                   |
| Bandwidth  | Showing the video transmission of the low resolution.                                                                                                 |
| Total      | Total shows total fps of all channels. If total fps is more than supported, it turns red. If it turns red, you need to set a lower resolution or FPS. |

## 6) Status

Network > Status

Total BPS (Kbps)

| User  | IP           | Port | Kbps  | Description |
|-------|--------------|------|-------|-------------|
| admin | 208.88.59.68 | 7000 | 37.86 | setup       |

[Refresh](#) [Menu](#)



### 3-4-5. SYSTEM

Configure and view system Date/Time, User Authority, Storage, System Log and Configuration settings

#### 1) Date/Time

**System > Date/Time**

Timezone

Daylight Saving Time ☐

Date

Time

NTP Server

NTP Check

|                                    |                                                                                                                                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Timezone                           | Choose the time zone of your site. If you using the NTP function, it must be set correctly to your zone.                                                                                            |
| Daylight Saving Time               | It enables to adapt the day light saving time automatically.                                                                                                                                        |
| Date / Time                        | This sets product time. Input time by pressing number buttons after moving cursor with direction buttons. Be careful to move to backward. The overlapped data will be deleted with warning message. |
| NTP (Network Time Protocol) Server | This function is to change the time of NVR automatically via network. Press the 'Enter' button and using the virtual keyboard, type the address of NTP server.                                      |
| NTP Check                          | choose the time sync frequency.                                                                                                                                                                     |
| Sync                               | Sync the time and NTP.                                                                                                                                                                              |

## 2) User Authority

This sets User authority individually. You can give to each users the authorities such as setup, search, backup, PTZ, network and camera control.

**System > User Authority**

| User    | ID    | Password | Setup                               | Search                              | Backup                              | PTZ                                 | Network                             | Network Event Notification | Camera | Lock   |
|---------|-------|----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------|--------|--------|
| admin   | admin | Setup    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Setup                      | Setup  | 10 Min |
| User 1  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 2  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 3  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 4  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 5  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 6  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 7  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 8  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 9  |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 10 |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 11 |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 12 |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 13 |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 14 |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |
| User 15 |       |          |                                     |                                     |                                     |                                     |                                     |                            |        |        |

**Buttons:** Apply, Default, Menu

|                            |                                           |
|----------------------------|-------------------------------------------|
| ID                         | Type an ID.                               |
| Password                   | Type a password.                          |
| Setup                      | Authorizes the setting of the system.     |
| Search                     | Authorizing the search of the system.     |
| Backup                     | Authorizing backup of the system.         |
| PTZ                        | Authorizing PTZ of the system.            |
| Network                    | Authorizing network of the system.        |
| Network Event Notification | Authorizing a network event notification. |
| Camera                     | Authorizing a camera.                     |
| Lock                       | select the auto-lock time.(Off, 1~10 min) |

### 3) Storage

Display the information and usage of the hard disk drives.

System > Storage

| DVR |  |        | eSATA |  |  |
|-----|--|--------|-------|--|--|
| 1   |  | Format |       |  |  |
| 2   |  | Format |       |  |  |
| 3   |  | Format |       |  |  |
| 4   |  | Format |       |  |  |

|   |  |        |
|---|--|--------|
| 1 |  | Format |
| 2 |  | Format |
| 3 |  | Format |
| 4 |  | Format |
| 5 |  | Format |
| 6 |  | Format |

|    |  |        |
|----|--|--------|
| 7  |  | Format |
| 8  |  | Format |
| 9  |  | Format |
| 10 |  | Format |
| 11 |  | Format |
| 12 |  | Format |

Total

HDD 0/160 GB

Format

HDD Check

Run

HDD Overwrite

☒

Disk Mirroring

☐

Auto Deletion

Off

Alarm Check HDD

1 ☐ 2 ☐ 3 ☐ 4 ☐

Alarm Check HDD (eSATA)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐

Alarm out

Off

Apply

Default

Menu

|                 |                                                                                                                                        |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Total           | Display the HDD usage being used for the product. If you press the 'Enter' button on here, all the hard disk drives will be formatted. |
| HDD Check       | Check the HDD.                                                                                                                         |
| HDD Overwrite   | Determine whether you want to continue recording if there is no spare saving space at hard disk drives.                                |
| Auto Deletion   | You can select the holding period of the data. If you choose 'OFF', the NVR keep the maximum data regarding the HDD capacity.          |
| Alarm Check HDD | There is an alarm if there is no HDD or no format. It is useful to check the HDD absence.                                              |
| Alarm out       | You can choose Buzzer or Relay.                                                                                                        |

#### 4) S.M.A.R.T :Self-Monitoring Analysis and Reporting Technology

This function lets you probe the hard disk drives and investigate the status of the drivers automatically.

**System > S.M.A.R.T.**

**S.M.A.R.T. On** ☒

**S.M.A.R.T.**

Check Day

Boot Message

**Temperature**

Check Time

Limit

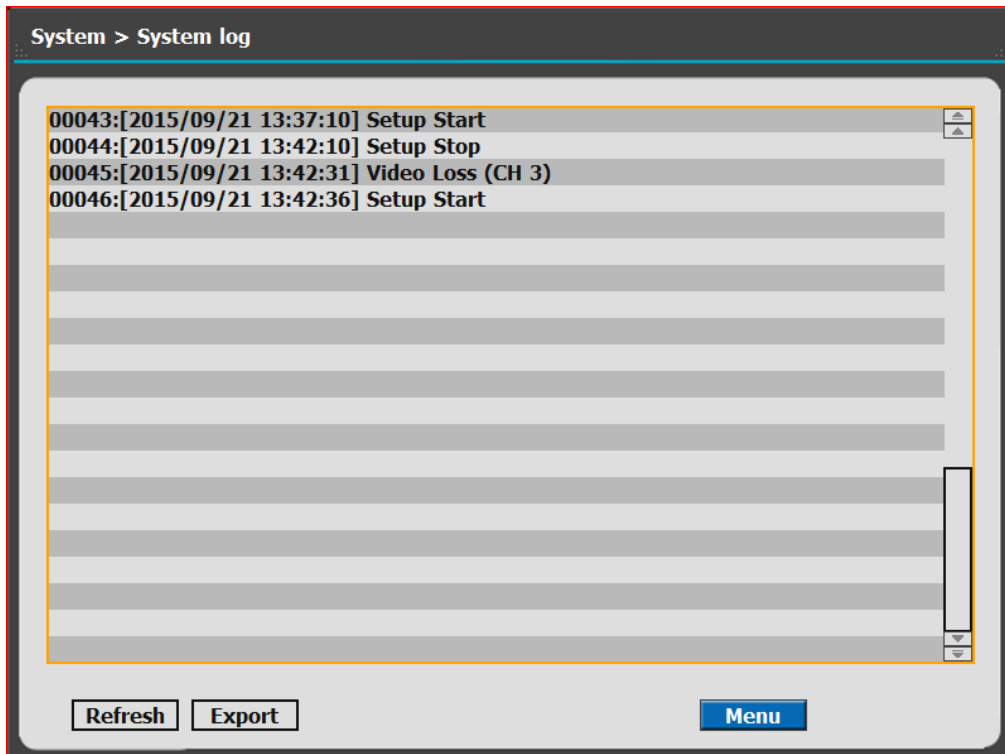
Alarm out

|   | Error/Test | Temperature | Reallocation(Sector) | Used(Day) |
|---|------------|-------------|----------------------|-----------|
| 1 |            |             |                      |           |
| 2 |            |             |                      |           |
| 3 |            |             |                      |           |
| 4 |            |             |                      |           |

| S.M.A.R.T.    |                                                         |
|---------------|---------------------------------------------------------|
| S.M.A.R.T. On | Set whether you want to use S.M.A.R.T. or not (On/Off). |
| Check Day     | Determine the date to perform the S.M.A.R.T.            |
| Boot Message  | The number of message of showing the errors.            |
| Temperature   |                                                         |
| Check Time    | Temperature check period.                               |
| Limit         | The upper tolerance of the hard disk drive temperature. |
| Alarm out     | You can choose Buzzer or Relay                          |

## 5) System Log

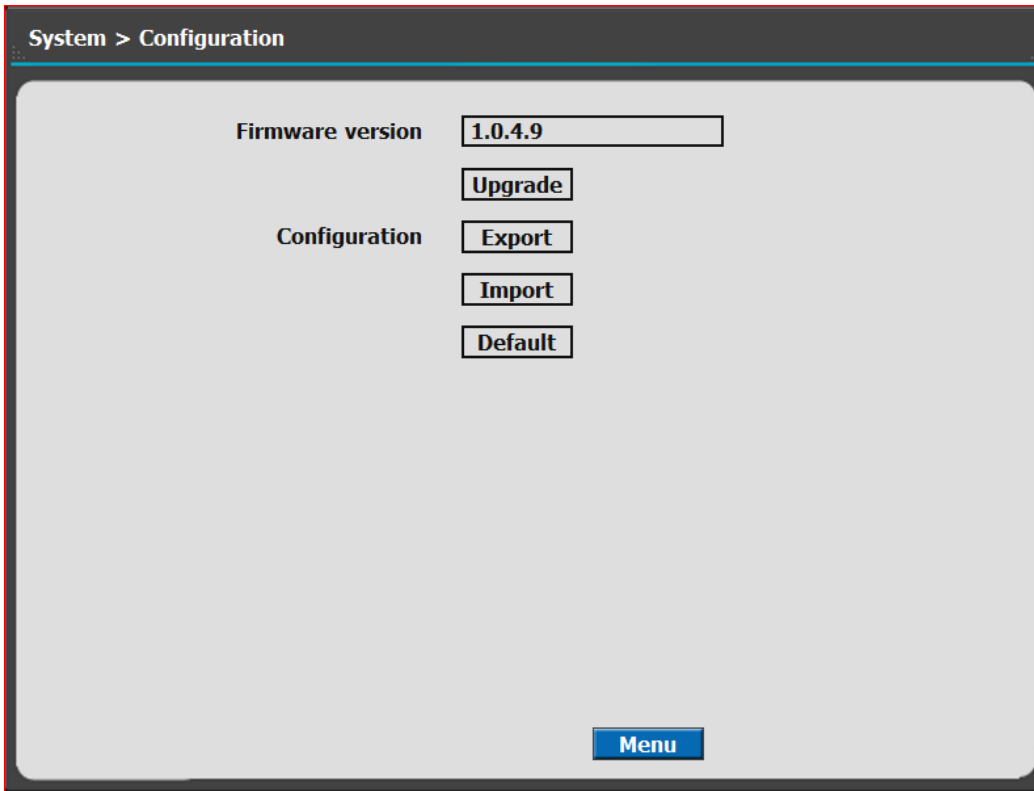
You may view all System administration log from Setup → System → System Log. Also you can export the system log and easily send it to technical support for trouble shooting.



|         |                         |
|---------|-------------------------|
| Refresh | Refresh the system log. |
| Export  | Export the system log.  |

## 6) Configuration

Shown at the following screen, from Setup → System → Firmware, you may view the current firmware version as well as Upgrade the firmware and additionally, Export, Import, and Default NVR Configuration.



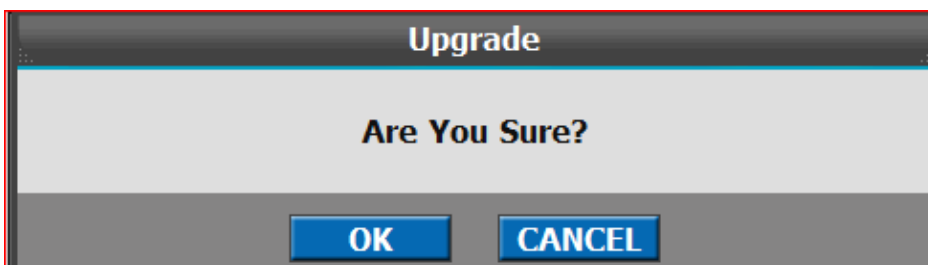
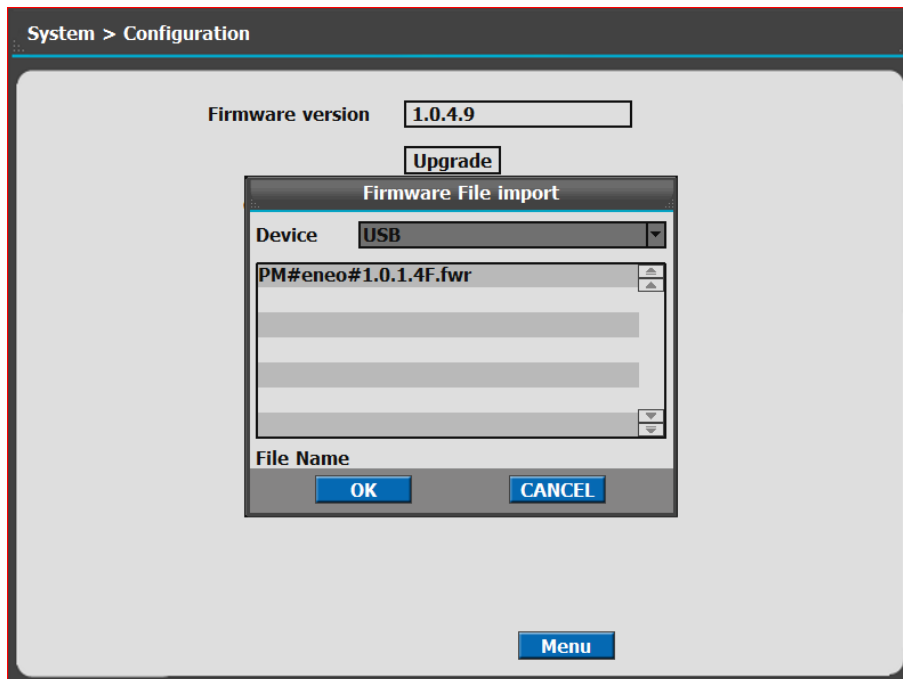
|                  |                                     |
|------------------|-------------------------------------|
| Firmware version | Show the firmware version.          |
| Upgrade          | Upgrade the firmware.               |
| Export           | Export system settings.             |
| Import           | Import system settings.             |
| Default          | Return to factory default settings. |

You should connect correctly the USB devices, before you use firmware upgrade, export and import.

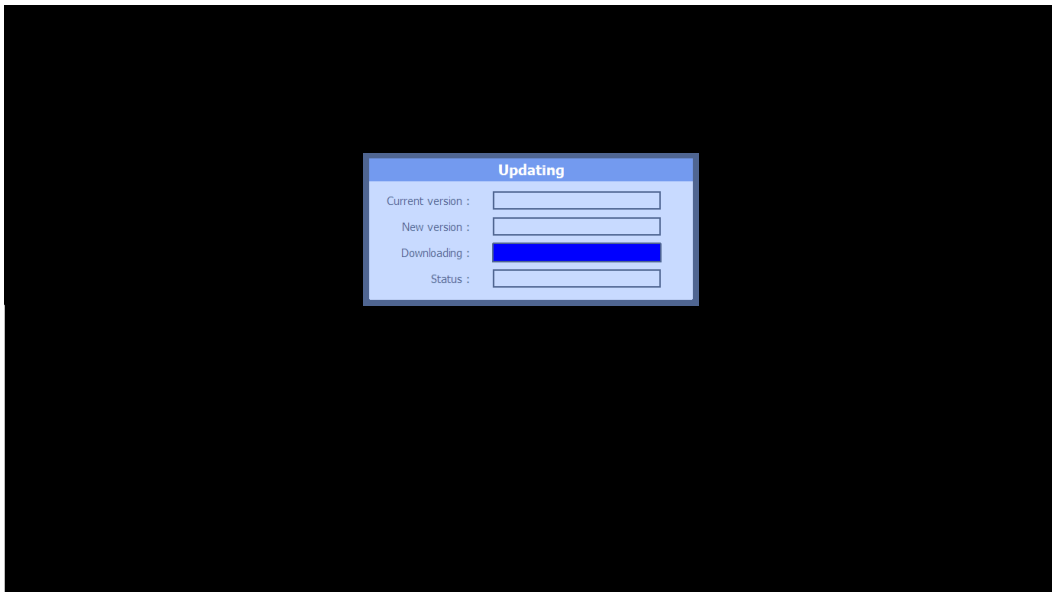
### 3-5. Firmware Upgrade

If you want to upgrade, please follow that;

1. Download the latest firmware to USB memory root directory.
2. Put this memory to USB slot of NVR.
3. Choose 'Upgrade' and you can see the below screen will appear.
4. Select the desired file, then choose 'OK'.



If you choose OK, you can see the below download window on the NVR screen.



 **WARNING!!!**

Do not turn off the power during download procedure. If you power off manually, all memory will be deleted !

※ After upgrading, NVR will reboot automatically. Before rebooting, do not operate manually !



## Trouble Shooting

| Symptom                                                                                                                                     | Checkpoint                                                                                                                                             | Countermeasure                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● Can't turn on power.</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>● Is NVR connected to power supply cable?</li> </ul>                                                            | <ul style="list-style-type: none"> <li>● Connect power cable</li> </ul>                                                                                                     |
| <ul style="list-style-type: none"> <li>● There is no image on monitor</li> </ul>                                                            | <ul style="list-style-type: none"> <li>● Are NVR and monitor turned on?</li> <li>● Are cables of NVR connected?</li> </ul>                             | <ul style="list-style-type: none"> <li>● Turn on power.</li> <li>● Connect NVR cable.</li> </ul>                                                                            |
| <ul style="list-style-type: none"> <li>● Only INFO OSD is on monitor and no image</li> </ul>                                                | <ul style="list-style-type: none"> <li>● Is camera turned on?</li> <li>● Are cables of NVR and monitor connected?</li> </ul>                           | <ul style="list-style-type: none"> <li>● Turn on camera.</li> <li>● Connect cables of NVR and monitor.</li> </ul>                                                           |
| <ul style="list-style-type: none"> <li>● There is Video Loss message.</li> </ul>                                                            | <ul style="list-style-type: none"> <li>● Is NTSC/PAL setting normal?</li> <li>● Is connection between NVR and camera normal?</li> </ul>                | <ul style="list-style-type: none"> <li>● Check whether NTSC/PAL setting is SETUP properly</li> <li>● Check whether NVR and camera are connected properly</li> </ul>         |
| <ul style="list-style-type: none"> <li>● Can't search with Client Program.</li> </ul>                                                       | <ul style="list-style-type: none"> <li>● Isn't another user using same IP?</li> </ul>                                                                  | <ul style="list-style-type: none"> <li>● Use it after another use finishes using it. If another user is searching NVR remotely with same IP, you can not search.</li> </ul> |
| <ul style="list-style-type: none"> <li>● Motion Detection doesn't work well</li> </ul>                                                      | <ul style="list-style-type: none"> <li>● Isn't it too bright or too dark?</li> </ul>                                                                   | <ul style="list-style-type: none"> <li>● Increase Motion Detection sensitivity.</li> <li>● Install camera closer.</li> </ul>                                                |
| <ul style="list-style-type: none"> <li>● There are differences between Live screen and actual condition during remote monitoring</li> </ul> | <ul style="list-style-type: none"> <li>● Isn't camera installed too far away?</li> </ul>                                                               | <ul style="list-style-type: none"> <li>● Since it buffers Live images, there might be changes with actual condition. (1~2 sec)</li> </ul>                                   |
| <ul style="list-style-type: none"> <li>● Live doesn't work well in remote monitoring</li> </ul>                                             | <ul style="list-style-type: none"> <li>● Is it set to True Color?</li> <li>● Are PC specifications and VGA Card specifications appropriate?</li> </ul> | <ul style="list-style-type: none"> <li>● Refer to recommended Client PC specifications in 4-1 Installing Client Program?</li> </ul>                                         |