

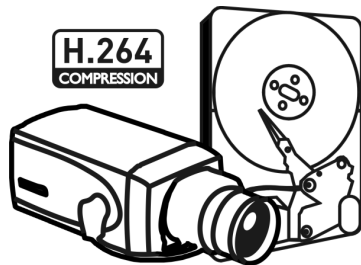
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H.264 DVR

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# User's Manual

- H.264 Stand-Alone DVR
- Independent Dual Display
- Triple Streaming
- PFRM(PC Free Remote Monitoring)
- iPhone, Android Phone Support



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## Preface

We welcome you as a new user of the world's best digital video recorder (DVR), and the leading Digital Video Surveillance System. For effective usage, please read this manual carefully. For future reference, please keep this manual close to hand.

### Copyright/Authentication/Trademark/Limited Warranty

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#### Limited Warranty

- The manufacturer, importer and agent shall not be responsible for accidental damage (including injury) and other damage caused by inappropriate use or operation of this product.
- The information in this manual is prepared based on the current specifications for the product. The manufacturer is currently adding new functions and will continue to upgrade the product with new technology. All specifications may be changed without notice to individual users.

### Cautions

We strongly recommend that users read all safety cautions carefully before operating the product, to operate the product appropriately.

Since the indicated cautions contain critical safety information, they must be fully complied with. The cautions are categorized into Danger, Warning, Caution and Important.

 Danger	Risk of death or serious injury. This is the highest priority danger warning.
 Warning	Risk of serious or lesser degree of injury. May also cause damage to the product or to property.
 Caution	Risk of minor injury or damage.
 Important	Requirements or limitations regarding operation. Users are recommended to read the relevant details carefully so as to operate the product properly and without harm.

The above cautions indicate the degree of damage that may occur due to inappropriate use of the system.



Risk of death or serious injury.  
This is the highest priority danger warning.

- RISK OF EXPLOSION IF BATTERY IS REPLACED BY INCORRECT TYPE. DISPOSE OF USED BATTERY ACCORDING TO THE INSTRUCTIONS.
- THIS EQUIPMENT IS INDOOR USE AND ALL THE COMMUNICATION WIRINGS ARE LIMITED TO INSIDE OF THE BUILDING.
- Please connect the power cord only to the type of AC outlet indicated in the manual or product specification. If connected to other types of power outlet, fire and electric shock may result.
- Do not expose the product to moisture and dampness. Doing so may result in fire and electric shock.
- Do not place heavy objects on top of the power cord. Damage to the power cord may result in fire and electric shock.
- Do not place containers with liquid or small metal objects on top of the product. Liquid or small metal objects getting into the unit may lead to fire and electric shock.
- Do not score, bend, twist, pull or heat the power cord. Damage to the power cord may lead to fire and electric shock.
- Do not remove the top casing of the product. Doing so may result in electric shock. If internal examination and maintenance are deemed necessary, contact the authorized system vendors or installers.
- Do not modify the product in any way. Doing so may lead to fire and electric shock.
- In case of lightning, immediately turn off the power switch and remove the power cord from the power outlet. Failure to do so may result in fire and electric shock.
- Please use only the power cord supplied with the product. Use of other power cords may result in fire and electric shock.
- In case of smoke, smell or noise, immediately turn off the power switch and remove the power cord from the power outlet. Continued operation of the product may result in fire and electric shock. Request a maintenance service from the authorized system vendors or installers.
- If the product is dropped or damaged, turn off the power switch and remove the power cord from the power outlet. Continued operation of the product may result in fire and electric shock. Users should request a maintenance service from the authorized system vendors or installers.
- Do not touch the product with wet hands. Doing so may result in electric shock.



Risk of serious or lesser degree of injury.  
May also cause damage to the product or to property.

- Do not leave the power cord or other cables in passageways. Passers-by may trip and fall.
- Avoid contact with water or beverages. Contact with water or beverages may result in damage that cannot be repaired.
- In case of lightning, immediately turn off the power switch and remove the power cord from the power outlet. The product may otherwise be damaged.
- Excessive current from the product and the camera may result in an electric shock. Connect the power cord to an external device only when the products themselves are disconnected from their power supply.



Risk of minor injury or damage.

- If a foreign substance is stuck to the product, remove it using a soft cloth or tissue. Do not use chemical agents (thinner, solvent, etc.) to remove the substance.
- Do not operate or store the product in the following places.
  - An area that is either too cold or too hot
  - An area of high humidity, or in front of an air-conditioner, or in places subject to sudden temperature changes
  - An area where there is excessive dust
  - Areas where heat from the product cannot be emitted through both of the product's side ventilation openings
- Do not place credit cards/telephone cards/bank account books/tickets and other objects with magnetic properties near the product.
- Static electricity may cause damage to the internal parts of the product. Please remove static electricity from your body before touching the rear panel and internal electronic parts of the product.
- If this product is damaged beyond repair or reaches its maximum service life, dispose of it in compliance with local laws and regulations regarding the disposal of lead and plastic waste.



Important

Requirements or limitations regarding operation. Users are recommended to read the relevant details carefully so as to operate the product properly and without harm.

- The product may not work properly if the power source is unstable or and if electric shock occurs. Make sure the correct rated power is available.
- The product is designed to be proof against electric power failures; however, damage may occur as a result of power failure. Current data may be damaged or data might not be recorded. Make sure to use an Uninterruptible Power Supply (UPS).
- Since the product is designed to record video data on the hard disk, an error in the hard disk or other miscellaneous errors might prevent the product from recording properly. Periodic maintenance is required for proper operation of the product.
- The product is designed for users to configure their own interface. However a user configuration error could lead to operation malfunction. This product should be set up by certified installers only.
- Since the product is connected - and tightly coupled - to exterior accessories (camera, sensor, LAN, Hard Disk, etc.), there is a risk of malfunction from external causes. Ensure periodic maintenance by the certified installers.
- Use the rack mounting handle provided with the product for installation.
- In this product, 1 Kbyte equals 1,024 bytes, 1 Mbyte equals 1,024,000 bytes and 1 Gbyte equals 1,024,000,000 bytes.

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# Chapter 1. Introduction

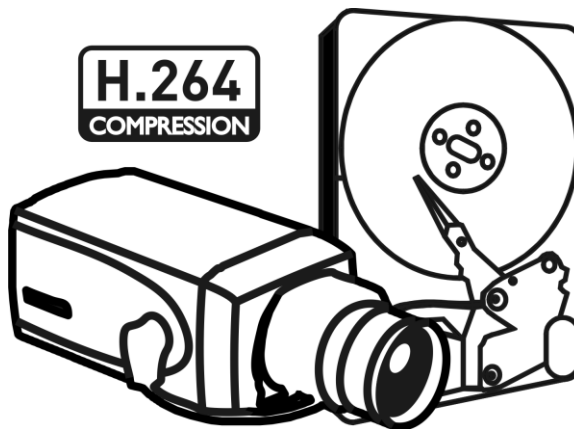
## 1. The System

This product is targeted at expanding DVR market. As the market is expanding from Professional to Consumer and into wider sectors, both price and feature oriented products are highly demanded in these days across different market sectors. This product is designed to fulfill these various aspects of different market sectors. Highly affordable, reliable and usable DVR series to fulfill basic needs of DVR with the most satisfactions.

## 2. General Features

- True H.264 Standard Video Compression
- Embedded Linux System to give you the Ultimate Reliability
- Dedicated DB Structure for Stability
- Various Recording Resolution D1/Half D1/CIF
- PFRM (PC Free Remote Monitoring)
- CMS (Central Monitoring System)
- Easy Setup same like DVR GUI in CMS
- Web Monitoring, Searching and Setup
- Own Media Player for Backup Playback
- Two USB Port for Mouse operation, Multi USB Hub and Backup
- Up to Two SATA HDD and No Limitation of Capacity
- Two- Way Audio
- Multiple DVRs can be operated with One Keyboard Controller
- Text-In & Relay Output Support
- Real Time Recording and Multi Ch. Playback
- Triple Streaming / Digital Zoom(x1, 2, 4, 8)
- iPhone, Android Phone Support
- Independent Dual Display

*Dual Display allows user to use both VGA and CVBS outputs same time with different display options. Two different and individual display modes can be set on each monitor output. Also Live Monitoring on one monitor and Playback on another Monitor can be displayed and controlled at the same time. This function will provide such high flexibility and efficiency for monitoring options for users.*





### 3. Specification

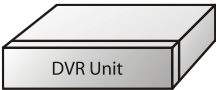





	Model	4ch	8ch	16ch
Video	In	4 BNC	8 BNC	16 BNC
	Out	1 VGA, 1 CVBS (Dual Display)		
	Loop Out	X	8ch (Option-Cable)	16ch (Option-Cable)
Audio	In	4ch Line-in	8ch Line-in (Option-Cable)	
	Out	1 RCA (Line Out)		
Device	Sensor In	4 TTL (3TTL + 1 Emergency Rec Trigger Only)		
	Alarm Out	2 TTL		
	I/O Interface	RS232, RS485, USB2.0 x 2		
Display	Speed	Real Time		
	Resolution	720 x 480 (NTSC), 720 x 576 (PAL)		
	Split Screen	1, 4, PIP, Digital Zoom(x1,2,4,8)	1, 4, 9, PIP, Digital Zoom(x1,2,4,8)	1, 4, 9, 13, 16, PIP, Digital Zoom(x1,2,4,8)
Recording	Compression	H.264 Codec		
	Speed / Resolution	120fps@CIF(N)	240fps@CIF(N)	480fps@CIF(N)
		100fps@CIF(P)	200fps@CIF(P)	400fps@CIF(P)
		120fps@Half D1(N)	240fps@Half D1(N)	240fps@Half D1(N)
		100fps@Half D1(P)	200fps@Half D1(P)	200fps@Half D1(P)
		60fps@D1(N)	120fps@D1(N)	120fps@D1(N)
	50fps@D1(P)	100fps@D1(P)	100fps@D1(P)	
Picture Quality	Very High, High, Standard, Low			
Mode	Time-lapse, Event, Time & Event, Emergency (Panic)			
Playback	Display	1, 4 Digital Zoom(x1,2,4,8)	1, 4, 9, PIP, Digital Zoom(x1,2,4,8)	1, 4, 9, 13, 16, PIP, Digital Zoom(x1,2,4,8)
	Search Mode	Calendar Search, Event Search, Text-In Search, Go to Time		
	Playback Mode	Multi-Channel Normal & Reverse Play, RW & FF ( x2, x4, x8, x16, x32), Frame to Frame, Pause		
Network	Interface	Ethernet (10/100 Base)		
	Protocol	TCP/IP, HTTP, DHCP, UPnP, DDNS		
	Application	Live, Playback, Setup, Notification (Callback, E-Mail), PFRM		
	Device	Web Server, iOS device, Android OS device, Black Berry		
Storage		2x SATA HDD		
Backup		Remote Archiving, External HDD(USB), External USB Memory		
Control		Front Panel Button, USB Mouse, IR Remote Controller, Joystick Controller		
OSD		Graphic User Interface (Multilingual)		
Approval		FCC, CE, KCC		
ROHS		ROHS Compliance		
Power Consumption		DC12V, 3.33A (40W)		
Operating Temperature		5°C ~ 40°C / 41°F~104°F		
Operating Humidity		0%~80% / non-condensing		
Dimension		340(W)x67(H)x265(D)mm / 13.39(W)x2.64(H)x10.43(D)inch		
Weight		2Kg / 4.4lb (without HDD)		

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## Chapter 2. System Installation

### 1. Package Contents

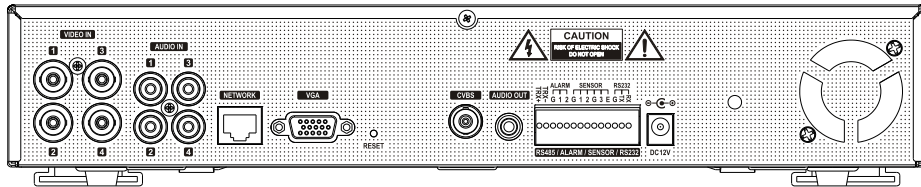
The following components are included in the product:

DVR Unit	 A silver, rectangular DVR unit with the text "DVR Unit" printed on its front face.
DC Adaptor	 A black, rectangular DC adaptor with a power cord and a connector cable.
Power Cord	 A black power cord with a standard three-prong electrical plug and a connector for the DC adaptor.
CD (User's Manual & Network S/W)	 A standard silver-colored compact disc (CD) with a colorful label.
Remote Controller	 A silver and black remote control with numerous buttons and a small display screen.
HDD Bracket	 A green metal bracket designed to hold a hard drive, with mounting holes and a screw.

## 2. Connecting Devices

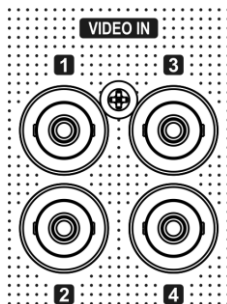
### 2-1. 4 Channel DVR

The rear panel of the 4 channel DVR comprises the following:



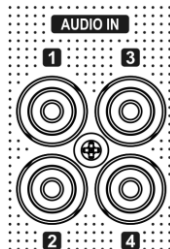
- **Front USB:** Two USB ports are provided to connect external devices like HDD, Flash memory for Backup, System upgrade or USB mouse on the front panel.

#### Video Input



Connect the coaxial cables from the cameras to the BNC video connectors.

#### Audio Input



The DVR can record audio up to 4 sources. Connect the audio sources to the Audio-In RCA connectors. All channels need external pre-amplifiers. It is the user's responsibility to determine if local laws and regulations permit recording audio.

#### Audio Out

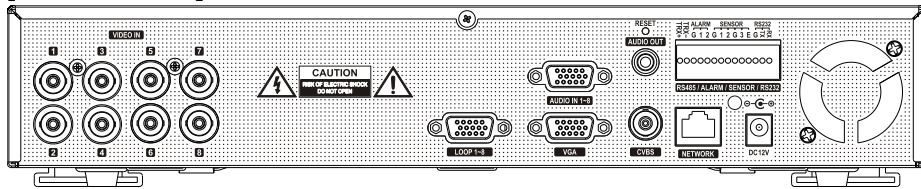


The DVR does not have amplified audio output, so you will need a speaker with and amplifier.

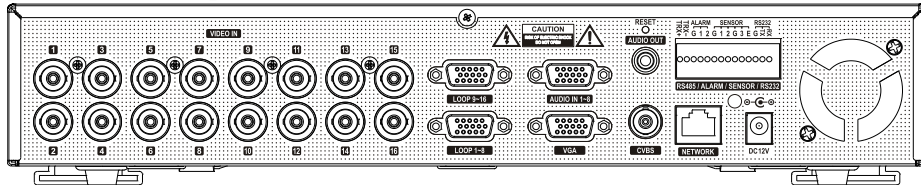
## 2-2. 8/16 Channel DVR

The rear panels of the 8/16 channel DVR comprise the following

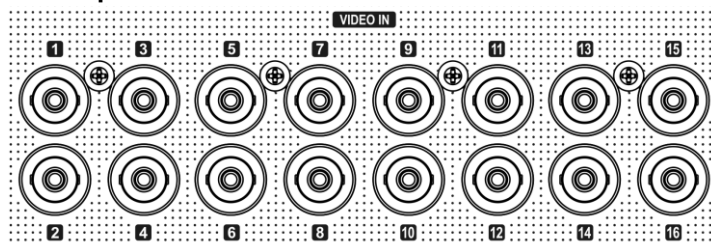
### [8 Channel Model]



### [16 Channel Model]

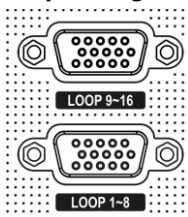


### Video Input



Connect the coaxial cables from the cameras to the BNC video connectors.

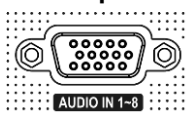
### Loop-Through Video



Connect the coaxial cables from the Loop BNC connector to another device.

**Note:** To use Loop option, additional looping cable will be needed. Please contact your supplier.

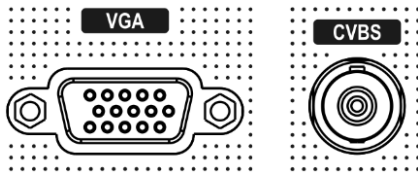
### Audio Input



The DVR can record audio up to 8 sources. Connect the audio sources to the Audio-In Multi-connectors. All channels need external pre-amplifiers. It is the user's responsibility to determine if local laws and regulations permit recording audio.

**Note:** To use Audio option, additional looping cable will be needed. Please contact your supplier.

## Video Output



Connect the monitors to VGA and CVBS out connector. Dual Display allows user to use both VGA and CVBS outputs same time with different display options. Two different and individual display modes can be set on each monitor output. Also Live Monitoring on one monitor and Playback on another Monitor can be displayed and controlled at the same time. This function will provide such high flexibility and efficiency for monitoring options for users.

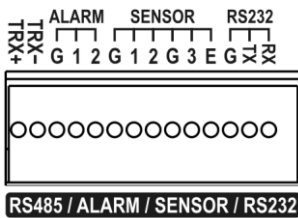
**Note:** VGA Monitor is set as a main monitor when system boots up. To move to another monitor (CVBS) and control it, please use one of following control options.

1. Press and Hold Display button for 3 seconds.
2. Click 2 mouse buttons at the same time.
3. Choose "Move Display Focus" on the contextual menu on GUI.

Please refer to following list for independent dual display/control options.

VGA Monitor	CVBS Monitor
LIVE	LIVE (O)
	PLAYBACK (O)
	PTZ (O)
	DISIGTAL SIGNAGE (O)
	PFRM (O)
PLAYBACK	LIVE (O)
	PLAYBACK (X)
	PTZ (O)
	DISIGTAL SIGNAGE (X)
	PFRM (X)
PTZ	LIVE (O)
	PLAYBACK (O)
	PTZ (O)
	DISIGTAL SIGNAGE (O)
	PFRM (O)
DIGITAL SIGNAGE	LIVE (O)
	PLAYBACK (X)
	PTZ (O)
	DISIGTAL SIGNAGE (O)
	PFRM (O)

## RS485/ALARM/SENSOR

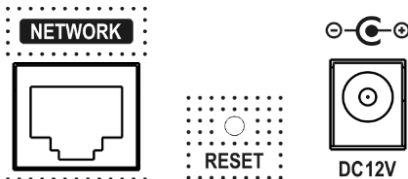


- **RS-485:** The RS485 connector can be used to control PTZ cameras. The DVR can also be controlled remotely by a control keyboard.

- **ALARM:** 2 alarm output connectors are provided to connect external alarms such as sirens or lights. Alarm output connectors are TTL signals.

- **SENSOR:** 3 sensor input and 1 emergency sensor input connectors are provided to connect external devices. You can use sensors to signal the DVR with event. The emergency sensor is designed for Emergency recording only. It will follow Emergency recording setting when it is triggered.

- **RS-232C:** An RS-232C connector is provided to connect an ATM or POS machine for Text-In function. Use a cable with a DB9 (female) connector to connect to the DVR.



- **Network:** Connect a Cat5 cable with an RJ-45 connector to the DVR connector for remote monitoring, remote playback, and remote setup.

See **Chapter 3-2. DVR Configuration** for configuring the Network connections.

- **Reset:** The DVR has a Reset switch that will only be used to return all the settings to the original factory settings. To reset the unit, turn the DVR off first. Turn it on again while poking the straightened paperclip in the reset hole. Hold the switch until the DVR is initializing.

- **Power Connector:** Connect adapter cable to the power connector on the rear panel. (DC12V, 3.33A) Input AC power to the adapter. (Free voltage from 100V to 240V, 50/60Hz)

---

### 3. Cautions

- 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.)

---

## Chapter 3. Using DVR

### 1. Basic Operation

#### 1-1. Front Panel & IR Remote Controller

The DVR should be correctly installed before proceeding. The location and the shape of the buttons may vary depending on the DVR model.

Control	Description
USB Port	Two USB ports are located on the front panel. A USB mouse can be connected USB port dedicated only for mouse as picture directed.
Camera Buttons (1~0)	Pressing camera buttons and Enter button will cause the selected camera to display full screen. Buttons are used to enter passwords.
MENU / EXIT Button	Enters the Setup Menu. User will need to enter the authorized password to assess Setup. In Playback mode, MENU button displays the Playback Menu.
DISPLAY Button	Changes the screen display mode in the current screen or playback screen.
SEQUENCE Button	Displays live channels sequentially.
Up, Down, Left, Right Arrow, ENTER Buttons	These are used to change settings for the product in MENU mode or used in PTZ control mode. (pan, tilt)
BACKUP Button	Copies recorded data to an external storage device.
PLAYBACK Button	Changes to the playback mode from the live mode.
⏸ PAUSE Button	Under playback mode, the button can be used to pause the playback screen. - Display menu to save PTZ preset under PTZ mode.
▶ PLAY Button	Plays the video forward. Press the button repeatedly to increase play speed up to max 32 times (1, 2, 4, 8, 16, 32 times) faster. Use this button to move right when setting the menu. - Focus on far distance under PTZ mode.
◀ R.PLAY Button	Plays the video backward. Press the button repeatedly to increase play speed up to max 32 times (1, 2, 4, 8, 16, 32 times) faster. Use this button to move right when setting the menu. - Zoom Out under PTZ mode.
⏩ STEP FORWARD Button	Move forward by one frame under Pause. Use this button to move up when setting the menu. - Focus on near distance under PTZ mode.
◀ STEP BACKWARD Button	Move backward by one frame under Pause. Use this button to move down when setting the menu. - Zoom In under PTZ mode.
PTZ Button	Changes to the PTZ control mode from the live mode.



ZOOM Button	Zooms the current image on the screen.
PIP Button	Changes to PIP screen mode from live screen.
FREEZE Button	Freeze the current screen.
AUDIO Button	Selects a camera for live & playback audio output.
OSD Button	Turns on/off the OSD display.
LOG Button	Checks the system's log information.
ID Button	Selects the DVR system ID. (Remote controller only)
E.REC Button	Pressing the E.REC button starts Emergency Recording Mode of all camera channels, and displays "!" on the screen. Pressing the button again will stop E.REC mode.
Status LED	Power, HDD, Network, Alarm

## 1-2. Turning on the System

Connecting the power cord will turn on the power of DVR. It will take approximately 10 to 30 seconds for the system to be initialized. Once the system is initialized, it will display live screen, and begin to record video automatically.








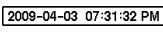

**Note:** To turn off the system, select SHUTDOWN under main menu (MENU > SHUTDOWN) and unplug the power cord when the shutdown message appears.

**Note:** When installing the HDD for the first time, the HDD should be formatted first.  
"MENU > RECORD > Storage > HDD format"














### 1-3. Main Menu

The main menu will appear on the bottom of the screen as shown below.



	Pressing the Menu will bring up the main menu list.
	Shows the size of HDD being used.
	Turns on when the HDD is set to be overwritten.
	Sequence display mode.
	Turns on when the system is connected to the network.
	Turns on when the Alarm is being activated.
	E.REC (Emergency Recording) Mode.
	Displays date & time.
	IR Remote Controller

## 1-4. Display Icons

	No Recording
	Recording (Red)
	E.REC (Emergency Recording)
	Event Recording (Red)
	Pre Event Recording (Blue)
	Motion Detection
	Sensor Detection
	Text In
	PTZ Camera
	Instant Backup
	Clip Maker (Blue)
	Backup (Red)
	Video Loss

## 1-5. User or Admin Login



Press MENU to enter main menu screen. Login in screen appears to enter ID (Administrator or User) and Password. Password can be set up to 8 numbers by the combination of numbers from 0 to 9. The factory default password is 'none' so press OK to log in to the system for a first time log in. Password can be set under password set up option (MENU > SYSTEM > User). System will be automatically log out if it is not in-use for some time. This "Auto Logout Time" can be set under password set up option (MENU > SYSTEM > User).

---

## 1-6. Main Menu

The Main Menu of DVR consists of SYSTEM, DEVICE, DISPLAY, RECORD, NETWORK and EVENT. And each menu consists of various sub menus that allow detail set up of the system. Use Mouse, Remote Controller or Front Buttons to access to each menu.

**Note:** Please make sure the system log out is done when the system setting or operation completed to prevent any unauthorized changes of system settings or operations.

MAIN MENU	SYSTEM	Information
		Date & Time
		User
		Quick Setup
		System Log
	DEVICE	Camera
		Audio
		Alarm
		Keyboard
		RS232 & RS485
	DISPLAY	Display
		VGA
		CVBS
		Digital Signage
	RECORD	Storage
		Record
		Utilities
	NETWORK	Address
		DDNS
		Notification
		Transmission
	EVENT	Sensor
		Motion
		Video Loss
		Text-In
		System
	LOGOUT	
	SHUTDOWN	

---

## 1-7. Contextual Menu



Additional Contextual Menu screen appears by pressing right button on the Mouse. Layout option allows changing Camera on the monitor. Select preferred camera display option on the monitor.

**Digital Signage:** Select Digital Signage output either on VGA or CVBS.

**Camera** : Select camera no.

**Layout** : Select display mode

**OSD** : Select OSD display option with the ATM/POS Text-in

**Freeze** : Pause current image display

**Display** : Select Sequence, Zoom and PIP

**Sequence:** Begin sequence display

**Zoom** : Zoom in image by X1, 2, 4, 8

**PIP** : Select PIP mode and camera

**Audio** : Select Audio outs

**PTZ** : Select PTZ options

**Backup** : Select backup options

**Playback** : Playback recorded data

**Remote** : Select PFRM (PC Free Remote Monitoring)

**E. Record** : Start Emergency Recording

**Log** : Select System/Event log

**Setup Menu:** Enter Main setup menu

For more information on Contextual Menu please refer to '3-2. DVR Configuration.'

---


## 2. DVR Configuration

### 2-1. SYSTEM

Under SYSTEM menu, System configuration options for general Information, Date & Time, User, Quick Set-up and System Log can be selected.

#### 2-1-1.MENU>SYSTEM>INFORMATION



In the Information screen, DVR Name, System Version, Upgrade, Mac Address and Configuration options can be selected. Highlight and press DVR Name  to enter or change DVR name. Name the DVR by using the virtual keyboard.

To upgrade the system, save the upgrade file to USB Flash Memory and connect it to DVR. Once the Device is connected, press Upgrade button to execute system upgrade.

Upgrade will take approximately 5 minutes. DVR will reboot automatically when the upgrade is completed.

**Note:** DO NOT remove USB Flash Memory or turn off the system during the upgrade. Removing USB Flash Memory or Turning off the system during the upgrade may cause system malfunctioning.

#### Remote Control ID

Enter Remote Control ID to control multiple DVRs individually. If Remote Control ID remains as 0, Remote ID does not have to be selected when using remote controller. It will work as general ID for any remote controls and a remote control will communicate with any DVRs with ID 0.

#### Video Type

The system automatically detects camera signal types as NTSC/PAL. But the system also offers manual selection options for different signal types.

#### Configuration

System settings can be saved and loaded using Configuration option

**Export:** Save settings to USB Flash Memory

**Import:** Load saved settings from USB Flash Memory

**Default:** Load factory default settings

**Note:** Configuration Import does not affect or changes system and network settings.  
Network settings will also not be changed when selecting Default option.

## 2-1-2. MENU > SYSTEM > DATE & TIME

In the Date & Time, Time Zone, Date, Time, NTP Server, Holiday options can be selected.

Highlight and press Time Zone to select right Time Zone.

Select 'Use Daylight Saving Time' if it is applicable. Enter start and end date/time for local 'Daylight Saving Time'.

Press button to set up Date and Time. Press button to select a date & time display format.

Select 'Use NTP' to enter Time Servers to be synchronized with DVR. Highlight and press to enter Time Server using the virtual keyboard. Press 'Update' to synchronize the DVR time with the registered time server.

**Note:** NTP is not essential for DVR operation. Any type of Standard Time Server can be used (e.g. time.windows.com). Time Synch might not be completed due to heavy traffic or delays from the Time Synch server.

Press Holiday to set specific dates for Holiday setup. Set specific date by pressing button. Change and delete dates using and buttons.

**Note:** There are some Holidays falls on different days. Therefore, they have to be updated every year.

## 2-1-3. MENU > SYSTEM > USER

Press User Tab to Enter/Add a new user.

**Auto Login:** Turn On or off Auto Login option at system start.

**Auto Logout:** Turn On or Off Auto Logout option.

Press to add a new user. To remove an existing user, press next to it.

**User Name:** Enter a user name

**Group:** Select a Group which a new user will belong to

**Password:** Set a new password or change a password.

**Note:** DO NOT have to enter Current password when setting password for the first time as there is no default password for Admin/User.




**User**

User Name :

Group : Administrator

Password :



**Group**

Group Name :

	Authority	Camera
1	<input type="checkbox"/> Setup	
2	<input type="checkbox"/> Format	
3	<input type="checkbox"/> Upgrade	
4	<input type="checkbox"/> PTZ	
5	<input type="checkbox"/> Playback	
6	<input type="checkbox"/> Backup	
7	<input type="checkbox"/> Reset Alarm	
8	<input type="checkbox"/> Shutdown	

< 1/2 >

Set user registration and access rights for the system. Press Group tap to add and set group. Press  to add a new group. Enter a group name and select access rights for a group. To remove an existing Group, press  next to it.

Press  to add a new user. To remove an existing user, press  next to it.

**User Name:** Enter a user name

**Group:** Select a Group which a new user will belong to

**Password:** Set a new password or change a password.

**Note:** DO NOT have to enter Current password when setting password for the first time as there is no default password for Admin/User.

## 2-1-4. MENU > SYSTEM > QUICK SETUP

Quick Setup Menu allows easy and basic setup for main system settings.



**Quick Setup - System**

DVR Name :

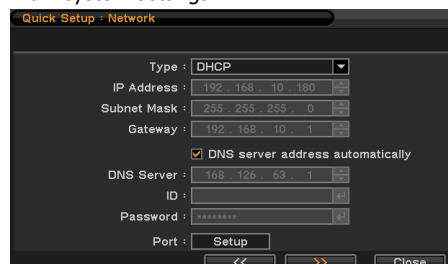
Language : English

Administrator Password :

Time Zone : (GMT+09:00) Seoul

Date : 2012-03-14

Time : 01:45:01 PM



**Quick Setup - Network**

Type : DHCP

IP Address : 192.168.10.180

Subnet Mask : 255.255.255.0

Gateway : 192.168.10.1

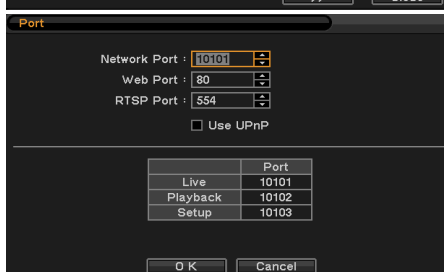
☒ DNS server address automatically

DNS Server : 168.126.63.1

ID :

Password :

Port :



**Port**

Network Port : 10101

Web Port : 80

RTSP Port : 554

☐ Use UPnP

	Port
Live	10101
Playback	10102
Setup	10103



**Quick Setup - Record**

☒ Overwrite

☒ Use Emergency Record

Mode	ips	Quality	Resolution
Time Record	30	Very High	CIF
Event Record	30	Very High	CIF
Emergency Record	30	Very High	CIF



**Quick Setup - Storage**

	Capacity	Type	Usage	Status
1	500.11 GB	HDD	Record	Good
2				



## 2-1-5. MENU > SYSTEM > SYSTEM LOG

Time	Contents
2012-03-14 01:49:14 PM	Setup: Record
2012-03-14 01:49:13 PM	Setup: Address
2012-03-14 01:49:12 PM	Time sync completed
2012-03-14 01:49:11 PM	Setup: Display
2012-03-14 01:49:11 PM	Setup: User
2012-03-14 01:49:11 PM	Setup: Date & Time
2012-03-14 01:49:11 PM	Setup: Information
2012-03-14 01:49:07 PM	Network login (Setup): 192.168.10.76. ...
2012-03-14 01:48:47 PM	Setup: Address
2012-03-14 01:48:46 PM	Network logout (Setup): 192.168.10.76
2012-03-14 01:48:46 PM	Network port changed: 10301

In the System Log, full list of system logs can be searched.

Press **Reload** button to refresh log list. USE button to search log list page by page.

Press **Export** button can be export in txt format.

## 2-2. DEVICE

Under Device menu, Device configuration options for Camera, Audio, Alarm, Keyboard and RS232 & RS485 (POS/PTZ) can be selected.

### 2-2-1. MENU > DEVICE > CAMERA

	Title	Color
1 <input type="checkbox"/>	CAM1	Setup
2 <input checked="" type="checkbox"/>	CAM2	Setup
3 <input checked="" type="checkbox"/>	CAM3	Setup
4 <input checked="" type="checkbox"/>	CAM4	Setup
5 <input checked="" type="checkbox"/>	CAM5	Setup
6 <input checked="" type="checkbox"/>	CAM6	Setup
7 <input checked="" type="checkbox"/>	CAM7	Setup
8 <input checked="" type="checkbox"/>	CAM8	Setup



Set Camera display option. Camera display (video loss display) can be disabled by unmarking the box next to it if there is no camera connected. Press to change Camera title.

Press Setup button under Color to adjust video color. Click or drag a control box to adjust each color level.

	Model	Address	Speed
1 <input type="checkbox"/>	CDC2500	0	5
2 <input checked="" type="checkbox"/>	CNB XPEED	1	5
3 <input checked="" type="checkbox"/>	CYBER SCAN I	2	5
4 <input checked="" type="checkbox"/>	CYNICS	3	5
5 <input checked="" type="checkbox"/>	D-MAX V5.0 II	4	5
6 <input checked="" type="checkbox"/>	ECLIPSE	5	5
7 <input checked="" type="checkbox"/>	PELCO-P	6	5
8 <input checked="" type="checkbox"/>	SAMSUNG TECHWIN	7	5

### PTZ Control

Select channel connected with PTZ camera. Select PTZ from the contextual menu appears by pressing right mouse button.

**Note:** PTZ can only be controlled in single screen mode.

Use icons on screen to control PTZ. By using a mouse, click arrows to move around PTZ and click icons for each functions of PTZ camera.



	Zoom Out
	Zoom In
	Focus on near distance
	Focus on far distance
	Save Presets
	Load Presets



### Covert Setting

Covert setting allows the privacy on monitoring. If Covert is set, live image, Playback image and Remote Live&Playback will not be displayed.

When you have to log-in with User of Administrator group, it will be comes images without covert

Covert can be scheduled by day, time and mode by cameras.

**Covert Low Mode:** No display of video image on screen but OSD still remains on screen.

**Covert High Mode:** Neither of video image or OSD will be displayed on screen.

**Note:** Any Covert options will not affect recording data as it only changes monitoring conditions

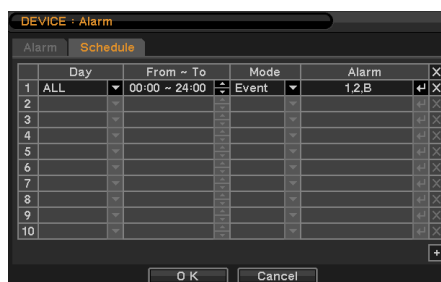
### 2-2-2. MENU > DEVICE > AUDIO



Select Audio for Audio recording.

Gain Control Menu is available for Mic-In inputs only. (8/16ch High. DVR Only) Control Gain value using button.

### 2-2-3. MENU > DEVICE > ALARM



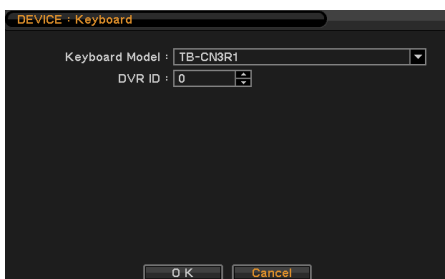
**Alarm duration:** Set Alarm activation time from 5 seconds to 10 minutes.



Select Schedule tap to schedule Alarm operation. Alarm can be set by day, time, mode and inputs (camera).

Press to choose Alarms and set Buzzer with Alarm activation.

## 2-2-4. MENU > DEVICE > KEYBOARD



Press to find and select keyboard from the list.

## 2-2-5. MENU > DEVICE > RS232 & RS485



Press to select a device for each port.

**RS232:** Supports Text In(POS),PTZ,Keyboard

**RS485:** Supports Text In(POS),PTZ,Keyboard

**Note:** Text In devices (e.g. Cash Register) needs to use ASCII code for Text In info on DVR.

## 2-3. DISPLAY

Under Display menu, Display configuration options for OSD and Monitor can be selected.

### 2-3-1. MENU > DISPLAY > DISPLAY




**Language:** Select system language. Press to find available language options.

**Hide Status Bar:** Select On/Off and time to hide Status Bar when system is not in use.

**Move Display Focus by Mouse:** Select On/off to use to two button mouse control for the transitions between the VGA and CVBS.

### 2-3-2. MENU > DISPLAY > VGA



**OSD margin:** Set OSD margin (position) using .




**Sequence Interval:** Set time interval between cameras under sequence mode.

**Event Pop-up:** Pops up the camera image in full screen when pre-set event occurs.

**PIP:** (Picture In Picture) size and its display positions can be selected under PIP menu. Please select desired size and positions of PIP display.

### 2-3-3. MENU > DISPLAY > CVBS



**OSD margin:** Set OSD margin (position) using .



**Sequence Interval:** Set time interval between cameras under sequence mode.

**Event Pop-up:** Pops up the camera image in full screen when pre-set event occurs.

**PIP:** (Picture In Picture) size and its display positions can be selected under PIP menu. Please select desired size and positions of PIP display.

## 2-3-4. MENU > DISPLAY > DIGITAL SIGNAGE

Digital signs use attractive content like video and graphics to get your attention and deliver a message.



**Initiate Digital Signage:** Set Initial Digital Signage as On to display imported Digital Signage Data. Set a time next to it to initiate Digital Signage after system is not in use for the time set.

**Picture Interval (sec):** Select the type of data to be displayed under Digital Signage mode. Select either Video or Image data format. Select the interval time for image data.



**Import:** Retrieve prepared Digital Signage data on USB Memory. Please refer to Appendix C. for how to prepare video digital signage.

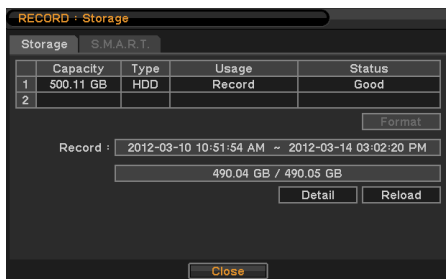
**Schedule:** Schedule Digital Signage by time and date.

**Note:** The digital signage are required own video editor program. Please refer to the appendix F for Digital signage maker page.

## 2-4. RECORD

Under Record menu, Record configuration options for Storage, Record, and Record Tools can be selected.

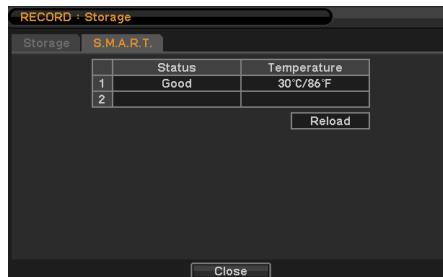
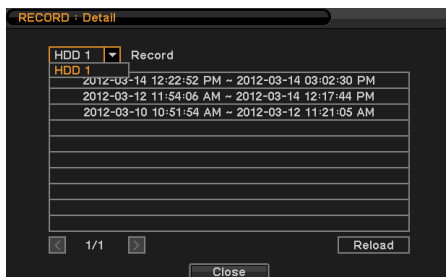
### 2-4-1. MENU > RECORD > STORAGE



In Storage, it displays the installed/connected storage status such as Capacity, Type, Usage and Status.

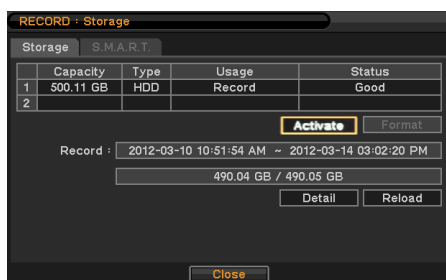
**Format:** Press Format to format selected HDD.

**Record:** Displays the recording period and data stored on HDD.



**Detail:** Display detailed the recording period data stored on selected HDD.

In S.M.A.R.T, HDD status are being displayed including its temeperature. Click Update to get the latest status.

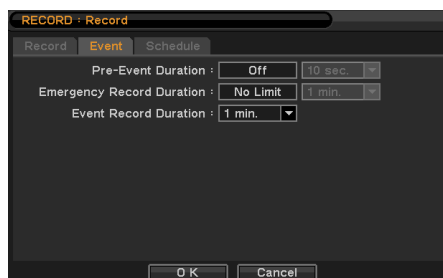


**NOTE:** When you have to replace a mainboard for repair that will be appearing the Activate button in the Storage setup menu. It can be to keep recorded data and mirroring structures continually, if you press the Activate button as like a followed.

**NOTE:** When you have to replace a HDD from the other unit used, please try to HDD one by one.

## 2-4-2. MENU > RECORD > RECORD

In Record, general recording options can be selected including overwrite, resolution, speed, recording quality and etc.



**Overwrite:** Select Overwrite to overwrite recorded HDD data when it is full.

**Use Emergency Record:** Select Emergency record use

**Resolution:** Select recording resolution.

**Note:** The ips needs to be set higher than 1ips for audio recording at D1 or Half D1 recording option, otherwise there would be a time delay between recorded audio and video sync.

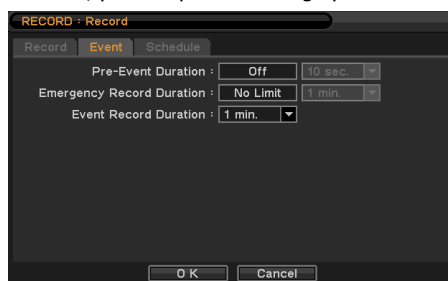
**Auto Deletion (days):** Turn on Auto Deletion to delete any data older than the defined days automatically.

**Time Record:** Set ips/quality for continuous recording

**Event Record:** Set ips/quality for event recording

**Emergency Record:** Set ips/quality for emergency recording mode.

In Event, pre and post recording options for Event can be set.

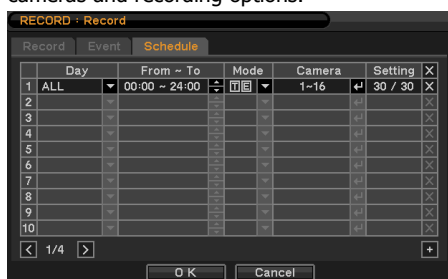


**Pre-Event Duration:** Video Images occurred right before an Event can be recorded by setting Pre-Event under Event Mode. Duration Pre-Event recording can be set using Pre-Event (sec) up to 30 seconds.

**Emergency Record Duration:** Time duration can be set for Emergency recording from 5 seconds to 30 minute or continuously by selecting No Limit option.

**Event REC Duration:** Set recording duration for events up to 30 minutes.

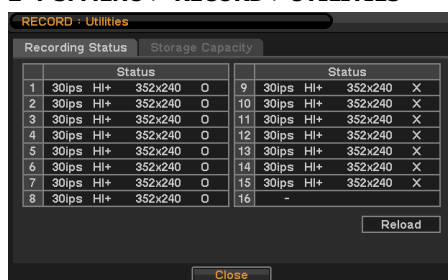
In Schedule, fully detailed and specified recording schedules can be set by day, time, modes, cameras and recording options.



Press  to add a new schedule. To remove an existing schedule, press  next to it. Press setting to set recording options.

**Use Default Setting:** Check Use Default Setting to follow main recording setting under Record menu.

## 2-4-3. MENU > RECORD > UTILITIES



In Recording Status, current recording options and status are displayed.



In Record Utilities, estimated HDD usage and recording period can be calculated. Press Calculate once resolutions, ips, number of cameras and quality are set. The recording period is calculated based the size of HDD installed.

The GB size shows the HDD size requires for a day recording. Day and Hours shows the period can be recorded based on the installed HDD size

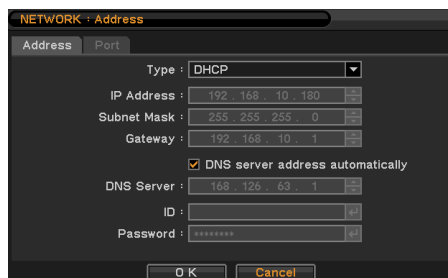
**NOTE:** Changes ips manually. It does not change ips according to the change of resolution.

**NOTE:** Approximate size for each resolution – CIF: 360X240, Half D1: 720X240, DI: 720X480

## 2-5. NETWORK


Under Network menu, Network configuration options for network Address, DDNS, Remote Notification and Transmission can be set up.


### 2-5-1. MENU > NETWORK > ADDRESS



In Address, Information such as Type, IP address, Subnet Mask, Gateway Port and DNS can be set for network connections.

**Type:** Select network type of Static or DHCP.

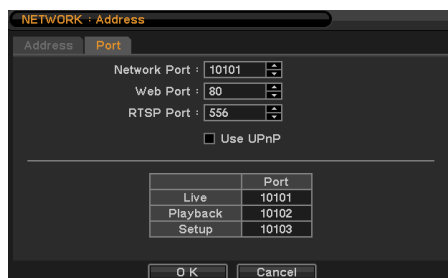
**IP Address:** Enter IP address using  button.

**Subnet Mask:** Enter Subnet Mask using  button.

**Gateway:** Enter Gateway using  button.

**DNS Server address automatically:** Select this option to get DNS Server Address automatically when use DHCP or PPPoE option.

**DNS:** Set up the IP address of the DNS server. If you set up the DNS Server, the domain name of the DVRNS server instead of the IP address can be used during the DVRNS Server setup.



In Port, Select appropriate port number for external access to the system. The port list shows necessary ports to be opened for each operation.

**Network Port:** Set port for DVR Remote Client.

**Web Port:** Set to Webserver port for Web Remote Client.

**RTSP Port:** Set port for Android based devices. (Based Samsung's Galaxy S)

**Use UPnP:** UPnP can solve NAT (Network Address Translation) connection problems with active (Port) mode.

**ID/Password:** ID and Password are required in ADSL(with PPPoE) type.

**Note:** RTSP port is a slightly different each device. Please refer to the device's manual.

**Note:** Default TCP port is 10101 but it can be set from 15,000 to 32,000 if it is necessary.

#### - Default Used Port

1. **TCP 80:** Web Server
2. **TCP 554:** RTSP(Android OS Phone)
3. **TCP 10101 ~ 10104:** Network, Live, Playback, Setup & iPhone
4. **UDP 10110:** Nemon Callback
5. **TCP 10120:** Nemon Transcoder for Blackberry




## 2-5-2. MENU > NETWORK > DDNS



Network options for DDNS can be selected.

**DDNS:** Dynamic Domain Name Server allows dynamic network connections.

**Note:** "www.dvr-ddns.com" offers free registrations or trial for DDNS service. "www.dvr-ddns.com" is recommended if other DDNS is not available.

**Host Name:** Name the DVR or site where it is located using the virtual keyboard by pressing .

**ID/Password:** ID and Password are required for Authentication.

**Note:** How to use DDNS in two ways.

- The factory default is set to a host name based on MAC address. Updates are available by pressing the OK button and then use, or any host name input and then press the update will be check. At this point the user authentication and ID / password are not required.  
(AA: BB: CC: DD: EE: FF - CCDDEEFF.dvr-ddns.com)
- Visiting the DVR-DDNS.COM by internet and created your own account and register an ID / password and then use to User Authentication ID/Password.


For more information on Contextual Menu please refer to 'Appendix B. DDNS Configuration.'

**Note:** The "dvr-ddns.com" is for free DDNS service.

## 2-5-3. MENU > NETWORK > NOTIFICATION



	Address	Port
1	<input checked="" type="checkbox"/> dstech.dyndns.org	10110
2	<input type="checkbox"/>	10110
3	<input type="checkbox"/>	10110
4	<input type="checkbox"/>	10110
5	<input type="checkbox"/>	10110
6	<input type="checkbox"/>	10110
7	<input type="checkbox"/>	10110
8	<input type="checkbox"/>	10110
9	<input type="checkbox"/>	10110
10	<input type="checkbox"/>	10110

In Callback, set up IP addresses of client sites so that Events detected in local system can be notified to multi remote client sites simultaneously. Enter IP addresses of client sites to receive events notifications on remote sites. Press  to pop up the virtual keyboard.

**Callback Interval:** Select Callback Interval to set time interval between consequential events being sent to remote site.

**Note:** Any events occur between the pre-set interval time will not be sent to remote site. e.g. If the interval is set as 30 seconds, only the events occur every 30 seconds since the first event will be sent to remote site.

**Note:** The callback used UDP 10110 port.

In Email, Events can be notified to personal email addresses by text message.

**E-Mail Interval:** Select E-Mail Interval to set time interval between consequential events being sent to remote site via email.

**Recipient:** Enter the email address of a recipient. Up to 5 recipients can be entered.

**Note:** Any events occur between the pre-set interval time will not be sent to remote site. e.g. If the interval is set as 30 seconds, only the events occur every 30 seconds since the first event will be sent to remote site via email.

**SMTP Server:** Enter SMTP server using the virtual keyboard. SMTP server information can be obtained from a system administrator.

**Sender:** Enter the address/name where the email is being sent from.

## 2-5-4. MENU > NETWORK > TRANSMISSION

In Transmission, Network transmission can be controlled with ips and bandwidth.

Mode	ips	Quality	Resolution
Network Live	60	Very High	CIF
Mobile Live	30	Standard	QCIF

**Network Live:** for the LAN or Internet PC or WI-FI mobile device.

**Mobile Live:** for the 3G network device.

**Note:** Network Live ips 60ips@CIF. (PAL: 50ips)

Mobile Live ips 30ips@CIF. (PAL: 25ips)

This speed is total maximum, and depending on the each resolution.

## 2-6. EVENT

Under Event menu, events can be set in synchronization with Sensor, Motion, Video Loss, Text-In, System.

### 2-6-1. MENU > EVENT > SENSOR

Title	Type
SENSOR1	NO
SENSOR2	NO
SENSOR3	NO
EMERGENCY	NO


In Sensor, each sensor can be selected for activation and its type. Select Sensor Type using ☐ button.

**NC:** Normally Closed


**NO:** Normally Opened

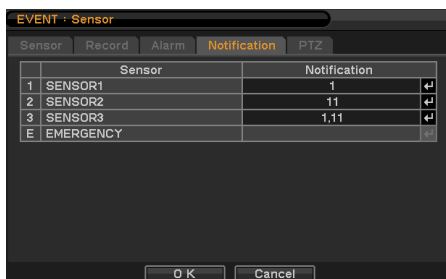
**Note:** 4<sup>th</sup> Sensor is designed for Emergency recording only. It will follow Emergency recording setting when it is triggered.




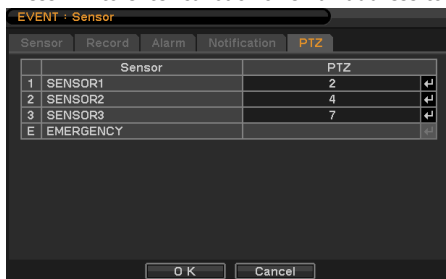
In Record, each sensor can be synchronized with single and multi-cameras. Press  to select cameras to be synchronized with sensors.



In Alarm, each sensor can be synchronized with single and multi-alarms. Press  to select alarms to be synchronized with sensors.



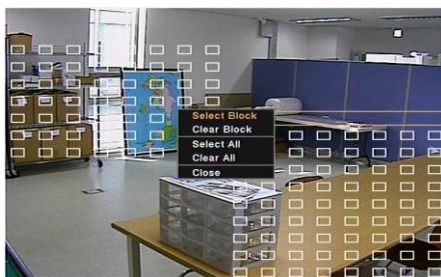
In Notification, each sensor can be synchronized with single and multi-callback or emailing sites. Press  to enter callback or email address to be synchronized with sensors.



PTZ can be sync with Event using its preset function. If Event occurs, PTZ moves to the position where event and positions are preset. The above menu shows, Sensor 1 is set to sync to cameras 2,3,4 and 5. If you click PTZ section, PTZ preset (position) can be set for cameras in the event of Sensor activation.

PTZ event related preset can be sync only with Sensor/Motion/Video Loss events. If there are multi events occur to a camera at same time, it takes events in order of Sensor > Motion > Video Loss.

## 2-6-2. MENU > EVENT > MOTION



In Motion, system provides Motion Detection function. Set Motion Detection using Sensitivity, View and Area options.

**Sensitivity:** Select motion sensitivity from Very Low to Very High.

**View:** On or off the appearance of motion zones on screen when motions are detected.

**Area:** Define the area for motion detection.

Press Setup under Area to define motions detection areas. The blocks indicate the area where is defined for motion detection

**Select Block:** Use arrow keys to move around a box. Select individual blocks to set motion zones. Use number keys to select and unselect blocks (When using a mouse, use a left button).

**Clear Block:** Unselect all blocks inside a box

**Select All:** Select blocks on entire screen.

**Clear All:** Unselect blocks on entire screen.



In Record, each camera can be synchronized with single and multi-motion detections from other cameras. Press [4] to select cameras to be synchronized with motions detections.



In Alarm, each camera with motion can be synchronized with single and multi-alarms. Press [4] to select alarms to be synchronized with cameras for motion events.



In Notification, each camera with motion can be synchronized with single and multi-callback or emailing sites. Press [4] to enter callback or email address to be synchronized with cameras for motion events.



PTZ can be sync with Motion event using its preset function. If Motion is detected, PTZ moves to the position where event and positions are preset.

### 2-6-3. MENU > EVENT > VIDEO LOSS



In Video Loss, single or multi cameras can be synchronized for event recording when there is a video loss. Press to select single or multi cameras to be synchronized with cameras for video loss.



In Alarm, each camera with video loss can be synchronized with single and multi-alarms. Press to select alarms to be synchronized with cameras for video loss.



In Notification, each camera with video loss can be synchronized with single and multi-callback or emailing sites. Press to enter callback or email address to be synchronized with cameras for video loss.



PTZ can be sync with Video Loss event using its preset function. If Video Loss occurs, PTZ moves to the position where event and positions are preset.

## 2-6-4. MENU > EVENT > TEXT-IN



The system allows Text In from POS/ATM machines.

**Note:** For use of POS/ATM, the system must support general ASCII code.

**Text-In Model:** Select Text-In model from the list

**Transaction Begin:** Enter a word which the transaction info to be displayed on screen as a start.

**Any Character:** Check Any Character to start display a text with any character as a start.


**Transaction End:** Enter a word of last line where the transaction info to be displayed on screen as the end. If you want additional lines to be displayed after the transaction end, select more line options.

**Line Delimiter:** Enter a symbol or a word to distinguish the end of lines.


**Ignore String:** Enter a word to ignore strings includes selected word.

**Case Sensitive:** Select Case Sensitive option if distinguish a word with case sensitivity.




In Text In, text event can be synchronized with single or multi alarms. Press  to select camera(s) to be synchronized with text event.



In Alarm, text event can be synchronized with single or multi alarms. Press  to select alarms to be synchronized with text event. If B is selected, system will buzz on alarm detections.

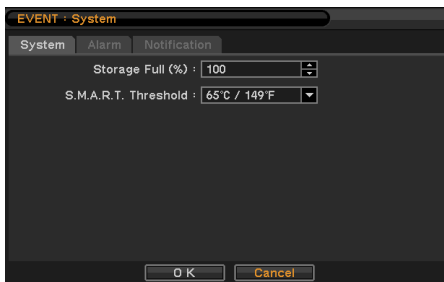


In Notification, text event can be synchronized with single and multi-callback or emailing sites. Press  to enter callback or email address to be synchronized with text event.



PTZ can be sync with Text-In event using its preset function. If Text-In occurs, PTZ moves to the position where event and positions are preset.

## 2-6-5. MENU > EVENT > SYSTEM



In System, S.M.A.R.T function monitors storage conditions such as Temperature, Conditions and Recording. S.M.A.R.T Threshold allows presetting tolerable temperature level of storage. If HDD temperature increases over preset temperature, it will notify a user in various ways according to following settings.

Record Threshold option can be set to notify a message for the indication of HDD storage usage level. Warning message can be notified in various ways as described below.

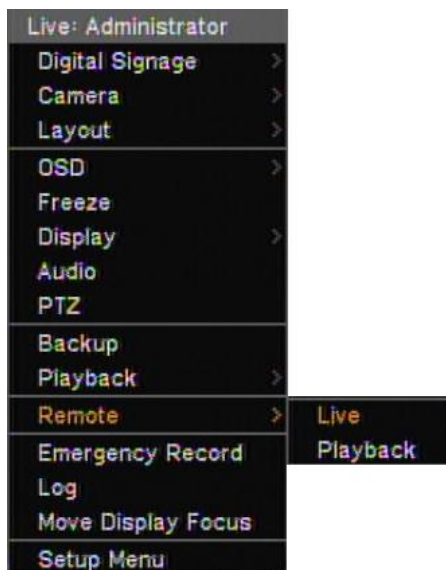


In Alarm, each system event can be synchronized with single and multi-alarms. Press to select alarms to be synchronized with each event. If Alert is selected, system will pop up a warning message on screen.



In Notification, each system events can be synchronized with single and multi-callback or emailing sites. Press to enter callback or email address to be synchronized with system events.

## 2-7. Remote Live & Playback



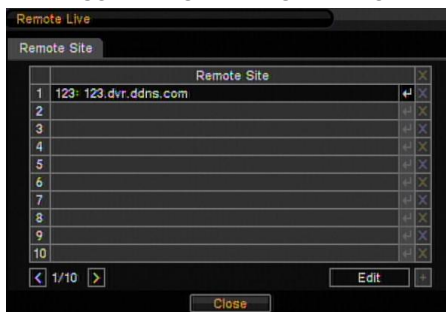
This PFRM function is that can display to Live or Playback the cameras of another DVR on this own screen remotely via the network.

The Remote menu will appear when the right-mouse click or enter of front button pressed.

**Note:** Available one of the VGA or CVBS outputs in live mode.

**Note:** The target DVR should match the specifications,  
(The 16ch product possible access to 4ch & 8ch DVR, but can't control camera number)

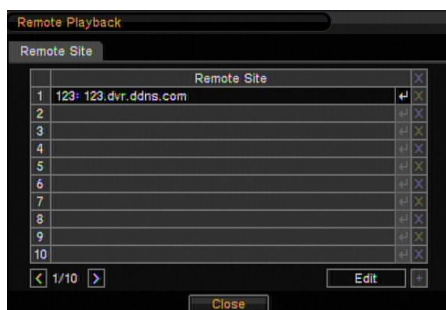
### 2-7-1. CONTEXTUAL MENU > REMOTE > LIVE



Edit: Modify to a registered site or Add a new site.

Note: when it has finished editing or adding, click on the Done button when you want to save.

### 2-7-1. CONTEXTUAL MENU > REMOTE > PLAYBACK

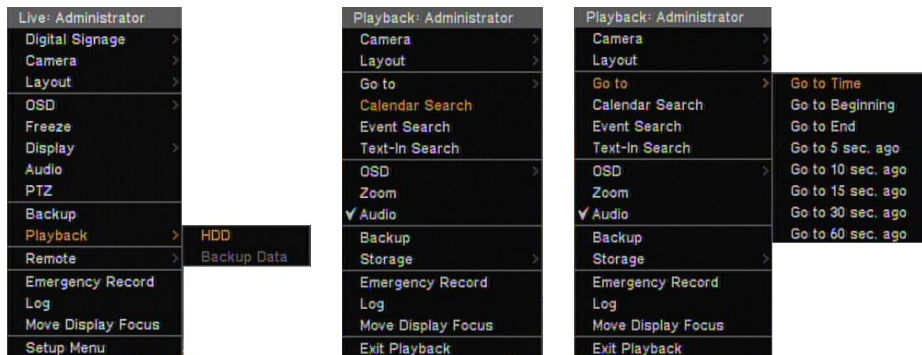


Double click a location to get connected to the site.

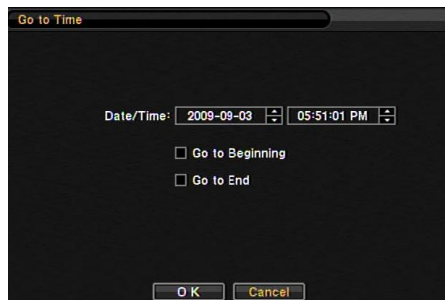


### 3. Playback

The system provides various playback menus to search recorded data. Please press right mouse button on mouse or press playback button on the front panel.



#### 3-1. Go to Time



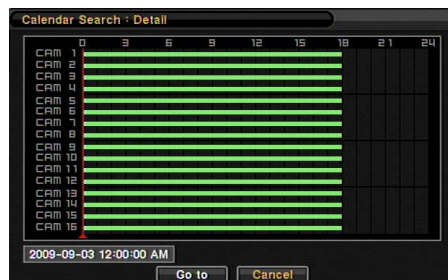
Select Go to Time to search recorded data by time/date. Set time/date using button. Go to Beginning and End options are selectable to search the very first and last data recorded. Once desired settings are completed, press OK to begin playback.

**Go to Beginning:** Move to the very first recorded data.

**Go to End:** Move to the latest recorded data.

**Go to \*sec ago:** Search data by \*seconds Backward from the current time of search

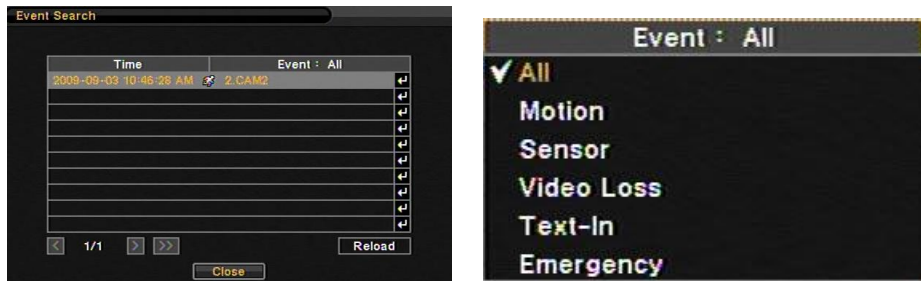
#### 3-2. Calendar Search



Calendar Search provides easy graphical search by displaying numbers (dates). Dates with recorded data will be highlighted. Once you select the date, it will display record time table below. The numbers on the top of the table shows the time frame in 24hours format, and titles on the left indicate cameras numbers. The color bar shows the full information of recorded data on the selected date. Move the indicator (line) to select specific recorded time of the selected date. For a detail display of recorded data please press Detail.

Once desired settings are completed, press Go to begin playback.

### 3-3. Event Search



Event Search provides easy search by event list recorded. Select the date and type of event to find specific data. Press Event: All section on the top of the list to display event search options.

**All:** System displays every event

**Motion:** System displays every events related to Motion

**Sensor:** System displays every events related to Sensor

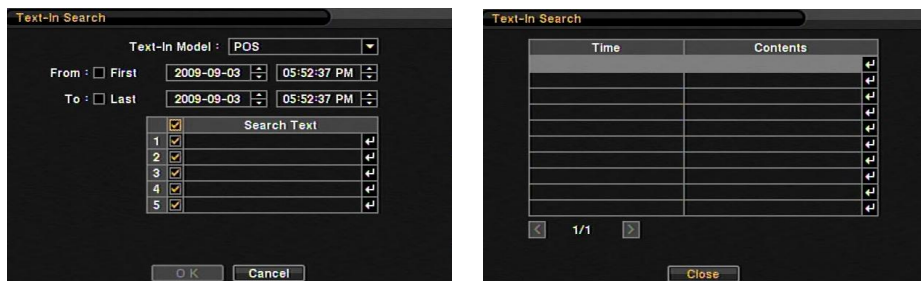
**Video Loss:** System displays every events related to Video Loss

**Text-In:** System displays every events related to Text In

**Emergency:** System displays every events related to Emergency Recording

Once find specific list of event, move up and down button to highlight the log and press it to playback the event data.

### 3-4. Text-In Search



Text In Search provides easy search by transactions. Search for Time and Transaction information. Press Search for detail information.

**Text In Model:** Select a model type for Text In

**From:** Set beginning time to start search or select first for search from the first data.

**To:** Set end time to end search or select last for search to the last data.

**Search Text:** Enter any words to search text data include the words.

Once entering all the search information, press OK to start Text In search.

### 3-5. Backup Data Playback



Backup files on backup Medias can be played on DVR. Insert the media with backup files and select a file to playback it on DVR.

### 3-6. Playback Control



**R.Play:** Reverse Playback

**Step Backward:** Go to the previous image

**Pause:** Freeze or Stop current image

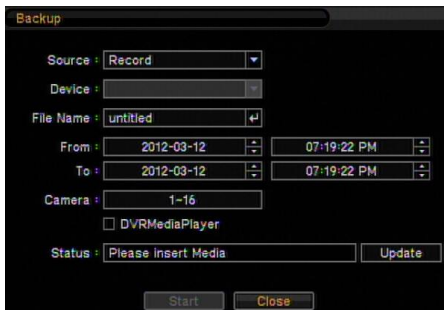
**Step Forward:** Go to the next image

**Play:** Play the data at normal speed

To control the backward and forward playback speed, press on ◀ or ▶ repeatedly. Playback speed can increase up to x32.


## 4. Backup

### 4-1. Backup



In the BACKUP, the recorded data can be selected for backup to USB devices.

Press USB Device ☒ to select the type of USB Device connected to the system.

Select date & time period of data to be backup using  button.

Select Camera number to be backup or all to backup all the data recorded during the selected period. To back up recorded Audio with video data together select Audio.

Status shows capacity of the device being prepared for backup, and it will show backup progress during backup.



The files saved (backup) in DVDMediaPlayer (.exe) format allows multi camera backup and the files would not require any specific codec for playback on PC. To open and play a file saved in DVDMediaPlayer (.exe) double click the file and it will automatically be played on Internet Explore window.

**Note:** The backup process could be slowdown if the system is being monitored/playback on the remote using the client program during the backup process.

**Note:** "DO NOT remove the backup media while the data backup is being processed. It may cause critical damage to either the media or system if the backup media is removed during the backup process."

---

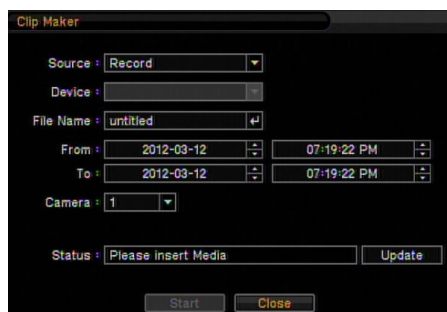
## 4-2. Instant Backup

Press backup button to start Instant Backup during the playback. Instant Backup window will appear when press backup button during the normal playback mode. Select Device, File Name, Audio and press Start to continue the playback and backup. The Backup Icon will appear on the screen during the Instant Playback. Press backup button one more time to stop and complete Instant Backup.

**Note:** "DO NOT remove the backup media while the data backup is being processed. It may cause critical damage to either the media or system if the backup media is removed during the backup process."

**Note:** Playback speed will be slower than usual while instant back up is processing.

## 4-3. Clip Maker



Clip Maker allows creating single channel backup file which can be played on PC. Select Clip Maker option on the popup menu during the live or pause mode on the playback.

Select the backup option for Clip Maker. Press **Start** button to create Clip Maker. Use Quick Time player to play the file created using Clip Maker

**Note:** The Clip Maker file type is mp4 format and cannot stored audio data. Normal backup and DVDMediaPlayer backup will be stored audio data.

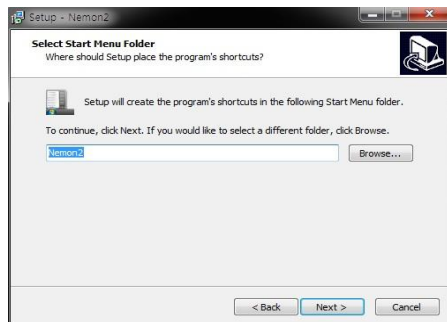
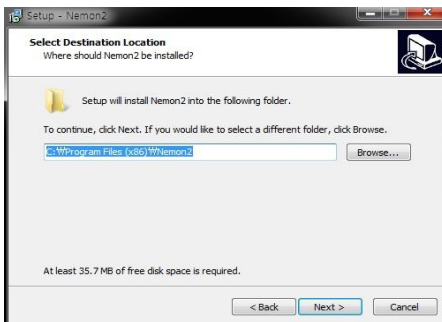
# Chapter 4. Remote Software NEMON2

## 1. NEMON2 Installation

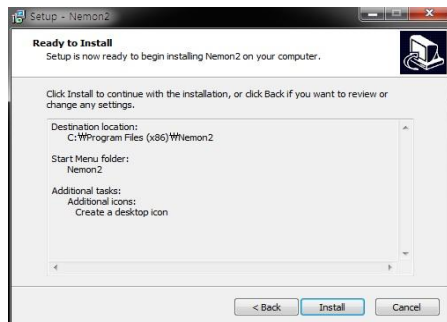
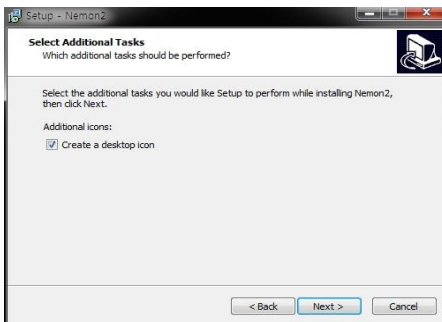


Find Software CD contains 'Nemon2Setup.exe' in the box and Insert CD into PC.

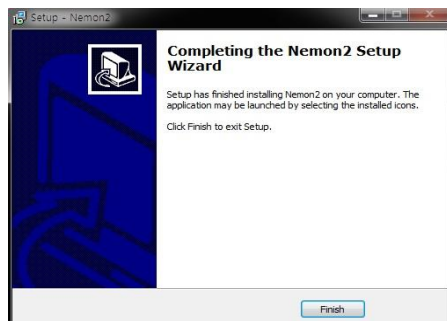
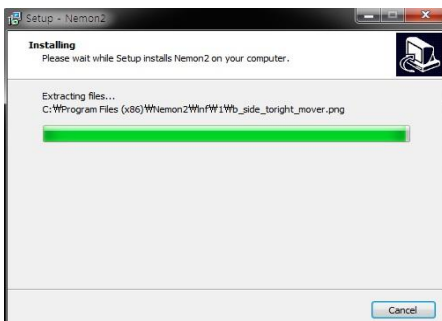
Double click on Nemon2Setup.exe file to start installation procedure. When the following dialog box appears, click **Next**.



After selecting program folder and desired option, click **Next**.



When the following dialog box appears, click **Next**.



Click **Finish** to complete installation procedure.

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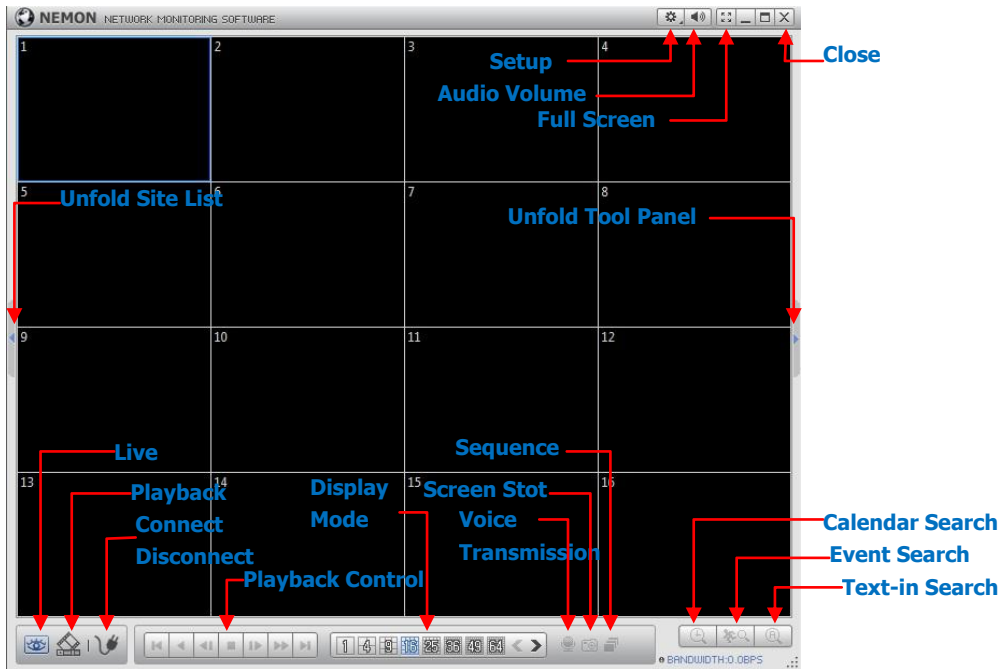
## 2. Using NEMON2

### 2-1. Starting the Software

Double click on 'Nemon2' icon on PC to run the software.

Main screen of the remote software appears as shown below.

**Note:** A minimum resolution should be more than 1024 x 620 and a recommendable one is over 1280 x 1024.



The Log In window will appear when Nemon program starts. Select user level as each user will have different authority level over the system control depend on the preset up. Enter OK once the user level is selected as the default password is 'none'.

**Live:** Click the image to enter the live mode.

**Playback:** Click the image to enter the playback mode.

**Connect / Disconnect:** Click button to connect a site as live or playback mode.

**Playback Control:** Use buttons to control playback images. (Stop, Move by Image, Play, Rewind/Forward, and Move to First/End)

**Display Mode:** Select display modes. (Single screen, 4, 9, 16, 25, 36, 49, 64 and full screen)  
Change Display Page: Change Display Mode to Previous or Next page in camera order.

**Voice Transmission:** Click button to transmit remote voice to the local DVR.

**Screenshot:** Capture the current screen and save it as an image file.

**Sequence:** Display images on pre-selected sites in sequence mode.

**Setup:** To change set up on Nemon S/W or a remote DVR.

**Audio Volume:** Click Audio icon to select audio volume and mute options.

Select a camera to receive Audio of the selected camera (highlighted in border lines).

**Full Screen:** Display image on full screen mode.

**Close:** Click the icon to close the software.

The below options are only selectable under playback mode.

**Calendar Search:** Search data on a graphic calendar and time table.

**Event Search:** Search data using recorded event logs.

**Text-In Search:** Search data using recorded Text-In data from POS/ATM device.

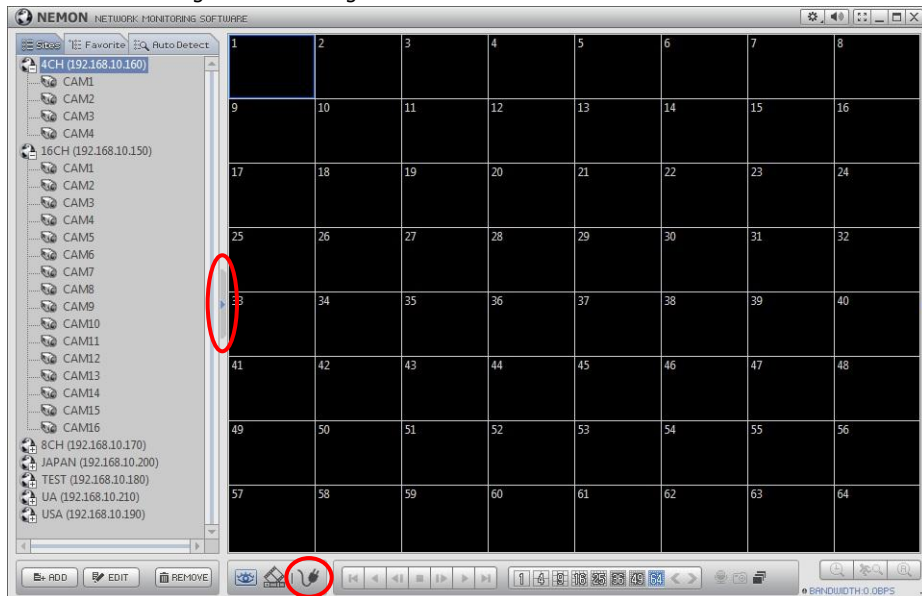


**Backup:** Shows backup options as below:

- **Save as MP4:** Save the recorded data in MP4 file format (Video Only).
- **Backup:** Backup the recorded data (Video with Audio).

## 2-2. Site List Panel

The remote sites also can be registered on Site List Panel. Use **ADD**, **EDIT**, and **REMOVE** buttons on the bottom to register and managed the remote sites and favorite sites.



Drag and Drop the listed sites on to the display section to connect the sites. Each camera can be dragged and dropped to arrange independent displays. This allows making a display by a group of cameras from the different sites.

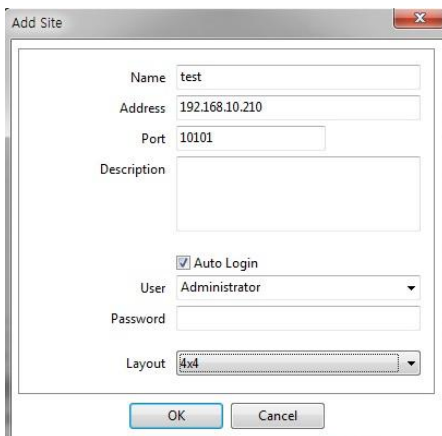
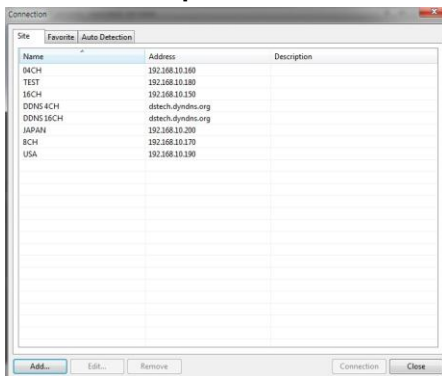
Once the group of cameras from the different sites has been set, move Favorite tap to save this new setting as a new Favorite site.

**Note:** Each camera can be dragged and dropped onto displays only in Sites. (Not Favorites and Auto Detection)

**Note:** Camera positions (CH locations) can be exchanged or move around by Drag & Drop.



## 2-2-1. Site Set Up



Click button to display registered remote locations or add new locations.

Click **Add** button to add remote location and required information.

**Name:** Enter Site Name

**Address:** Enter IP address or domain name of the site

**Port:** Enter port number if there is a specific port to be set for the software

**Description:** Enter the description of the site

**Auto Login:** If do not want the Log In window to be popped up every time starting the remote S/W, check Auto Login to skip User/Password authentication process

**User:** Select the type of user from the list

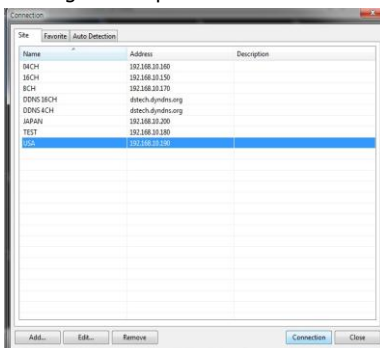
**Password:** Enter the password of DVR

**Layout:** Select desired display layout for the site when it is connected

**Note:** Layout can be changed after begin connected using the display option on the menu.

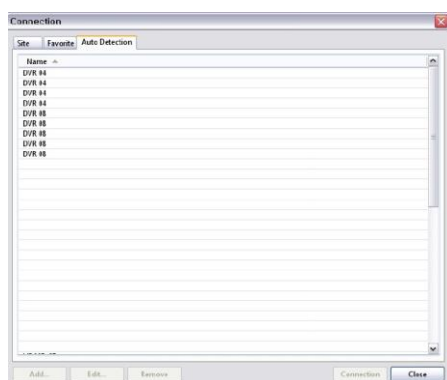
Click **OK** to save information and complete the registration.

Double click the location or Highlight it and click **Connection** button to get connected to the site Or drag and drop the listed sites on to the display section to connect the sites.





## 2-2-2 Auto Detection

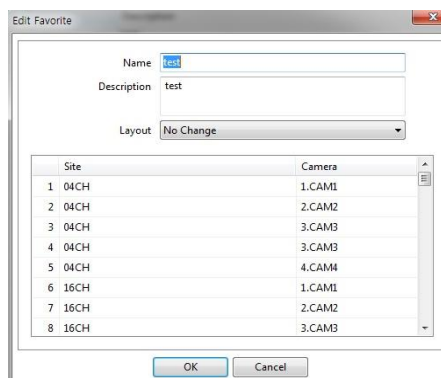
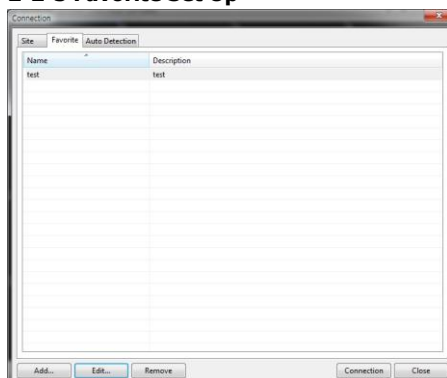


The DVR and Client program on PC start searching each other once they are on the same local network. The Auto Detection menu shows the DVRs detected on the same local network.

**Note:** This function is only available on local networks. No settings are required if both DVR and PC use DHCP. But if the Static IPs is used, DVR and PC need to have same subnet info and with different static IP address.

**Note:** Auto Detection finds DVRs on the local network automatically. To use this function, Apple® Bonjour® needs to be installed in PC. Please refer to <http://www.apple.com/bonjour> for more details and download.

## 2-2-3 Favorite Set Up



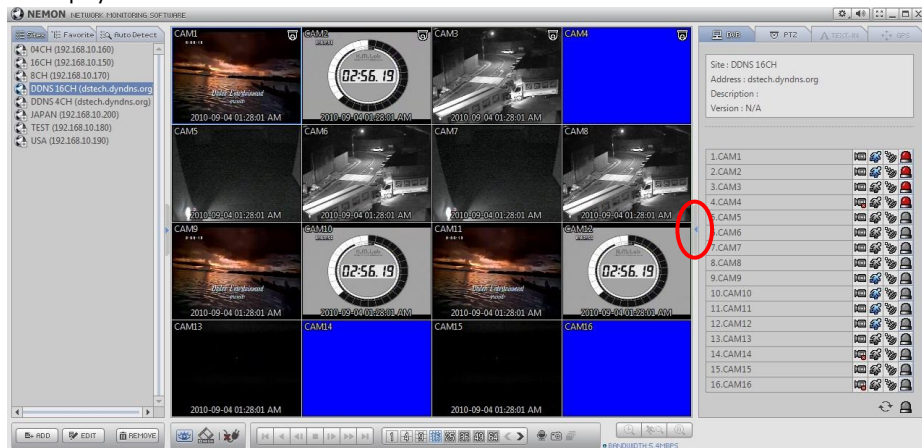
Favorite function allows multi-site management. Up to 64 different cameras and sites can be monitored and managed on one screen. Select **Favorite** tap.

Enter the group name and description. Up to 64 different cameras or sites can be grouped and displayed together. Select sites and cameras from the drop down list by clicking ☐ button.

**Note:** Sites should be registered under 'Site' menu before setting the favorite.

## 2-3. Tool Panel

Tool panel can be DVR Status, PTZ Control and Text-in search also GPS is for Mobile DVR tracking under playback mode.



### 2-3-1. DVR Status



DVR tap shows Video Loss, Motion Detection, Sensor Detection status of currently connected remote site. User can activate a remote alarm on DVR Status options.

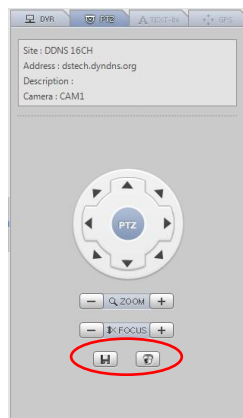


**Reload:** Refresh the latest DVR status info.



**Reset Alarms:** Turn off activated Alarms on the DVR.

### 2-3-2. PTZ



The second tap of Tool Panel is PTZ controller. Once DVR is connected in Live mode and select the PTZ view CH, it will display the site info and activate the PTZ controllers.



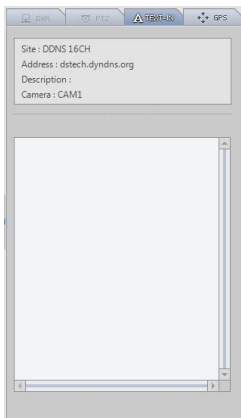
**Set Preset:** Save PTZ camera's current location. Up to 16 Presets can be saved.



**Move to Preset:** Move PTZ cam based on the preset settings.

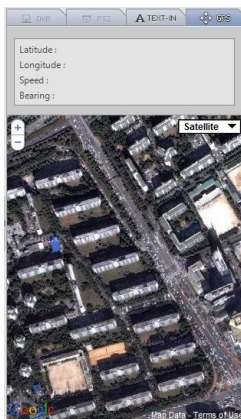
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### 2-3-3. TEXT-IN



GPS Displays recorded TEXT-IN info. TEXT-IN tap is activated under playback mode only.

### 2-3-4. GPS



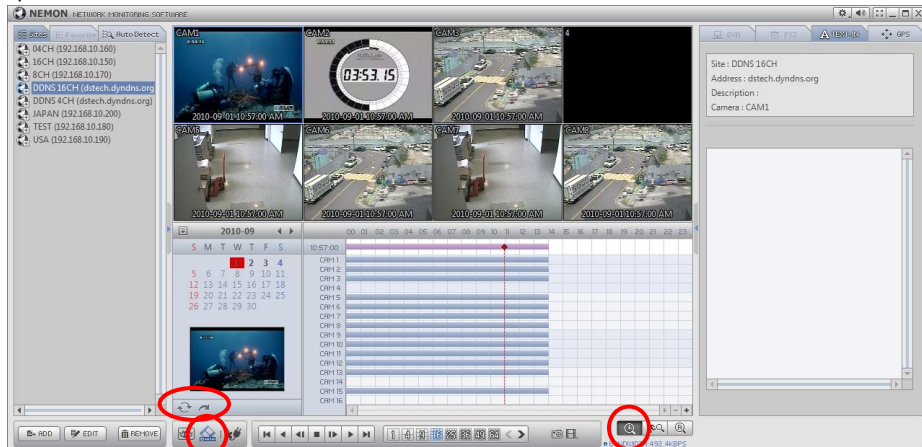
GPS is for Mobile DVR tracking under playback mode. GPS data is recorded with images using built in GPS on Mobile DVR. This data will be displayed on Google Map under playback mode.

**Note:** the GPS function isn't used for this DVR.

## 3. Remote Playback

### 3-1. Calendar Search


Calendar Search Panel appears when a site is connected under playback mode as shown below. Time bar will appear once the date is selected and the image preview will appear when the specific time is selected on the time bar.



Use below buttons to control the playback image.

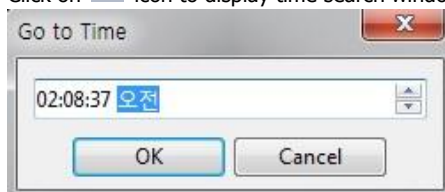
#### Playback Control Button

-  Beginning
-  Reverse Play / Rewind
-  Step Backward
-  Stop
-  Step Forward
-  Play / Fast Forward
-  End


Click on  icon refresh and update the calendar info.

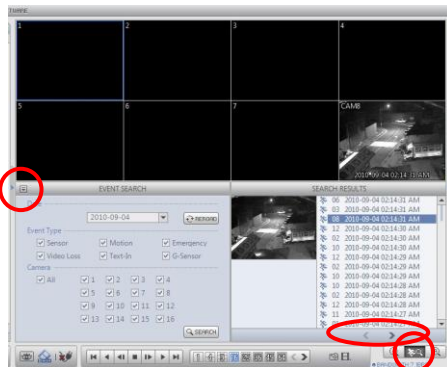
### 3-2. Go To Time

Click on  icon to display time search window. Enter specific time to search the data.





### 3-3. Event Search


Select  Event Search on the bottom of the screen to open Event Search Panel. Enter Date, Event Type and etc and select **SEARCH** button to retrieve the search results.

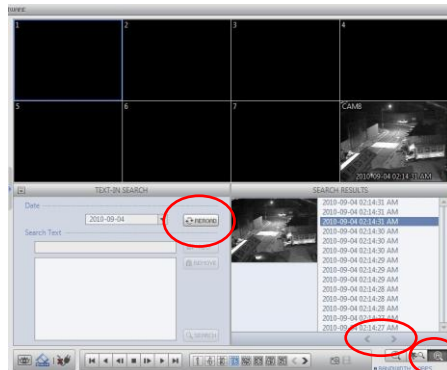


Select an event from the list for playback.



Search through the list using   buttons. Select the date of event search for from the Date list. Select all or specific camera numbers for related event search. Type of events can be selected from the list for detail and effective search.

### 3-4 Text-In Search

Select  Text-In Search on the bottom of the screen to open TEXT-IN Search Panel. Enter Date and Text and select **SEARCH** button to retrieve the search results.




Select a text-in event from the list for playback.

Search through the list using   buttons.

## 4. Saving the recorded data

### 4-1. Screen Shot


Select  button to capture the current image during the playback as show below.

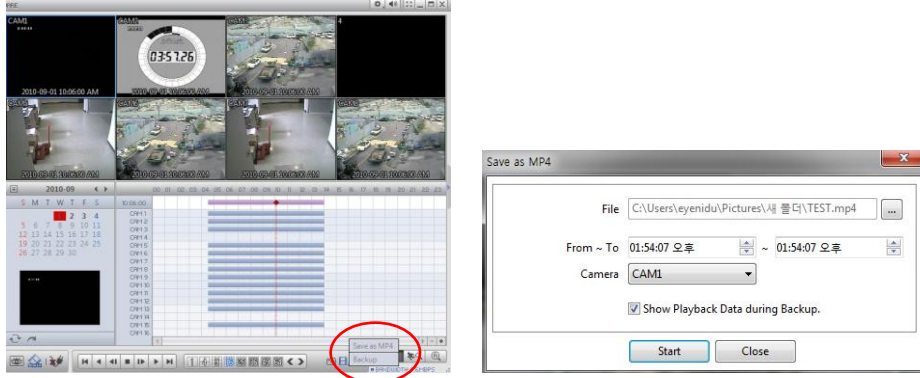


Select **Save...** button to save the image. The Image can be saved in JPEG, BMP and PNG format.

## 4-2. Remote Backup

### Save as MP4

Select  button during the playback and select "Save as MP4" to open the window as shown below to save data in MP4 format without audio.




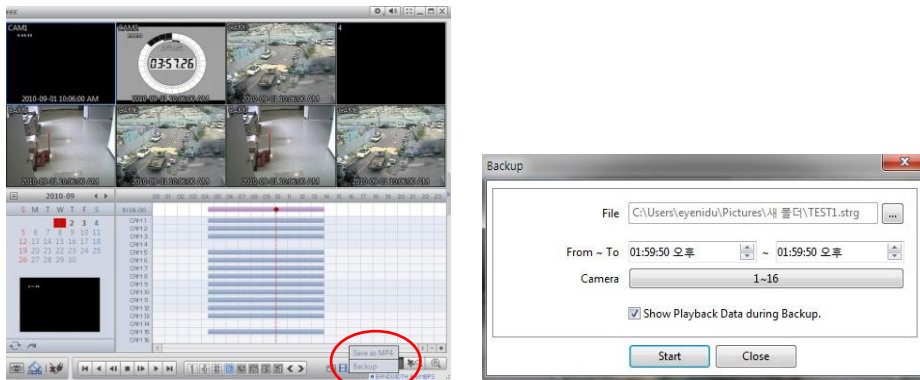
- Enter file name and select Location.
- Select the time period.
- Select Camera number. Press Start to create MP4 file.

**Note:** It doesn't support audio backup in MP4 format.

If both are necessary video with audio, then refer to the '4-3. Backup' menu.

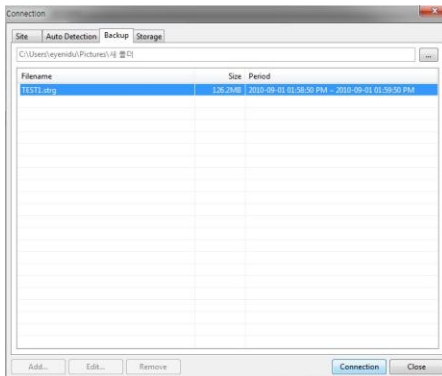
### BACKUP

Select  button during the playback and select "Backup" to open the window as shown below to save data in own video format.




- Enter file name and select Location.
- Select the time period.
- Select Camera number. Press Start to create Backup file.

## 4-4. Play Backup Data

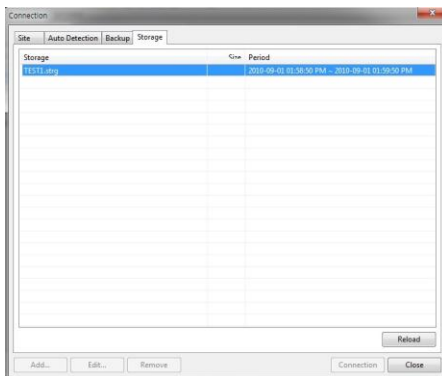


Backed up data (\*.strg) from the local site can be played on the Nemon software.

Select  button during the playback and above window will appear. Select the location where the data is saved. Select the file and click **Connection** to play the video.


**Note:** Recorded Audio can be played on single screen only.

## 4-5. Play Independent HDD data on PC



Independent HDD (removed from a DVR) data can be played on PC using Nemon S/W.


Have the HDD connected to PC using a SATA to USB connector cable. Make sure the HDD is connected to PC properly.

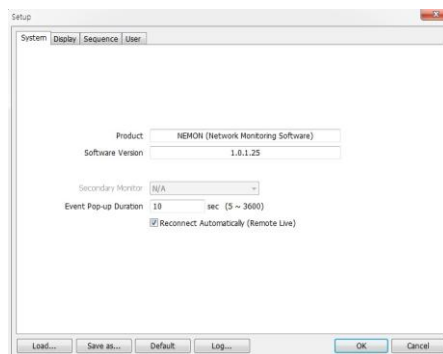
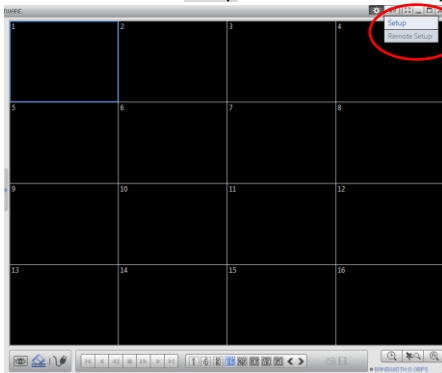
Select  button during the playback. Click **Storage** tap to display HDD information (if HDD is not shown please click **Reload** button to refresh the list). Double click the list or highlight and click **Connection** button.

## 5. Set up

### 5-1 Nemon2 Setup

#### 5-1-1. System Setup

Click on  and **Setup** to enter Nemon setup menu.



**Product:** Displays general information of the S/W.

**Software Version:** Displays current S/W version.

**Secondary Monitor:** Select the secondary monitor when using multi monitors on PC.

**Event Pop-up Duration:** Set the time duration for a camera display when it is displayed in full screen mode in case of event.

**Reconnect Automatically:** Set auto reconnection on Live if the connections are ended by any chances.

**Load:** Load saved data for settings for remote software.

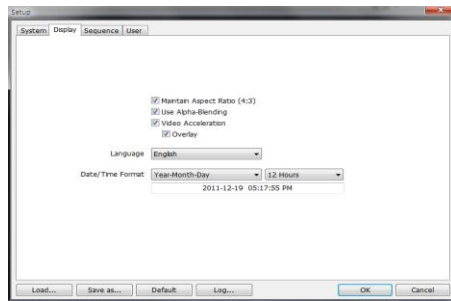
**Save as:** Save current settings of remote software.

**Default:** Set default settings of remote software.

**Log...:** Displays the history of S/W usage.

### 5-1-2. Display Setup

Click on Display tap to enter display setup menu.



**Maintain Aspect Ratio (4:3):** Keep 4:3 ratios on Nemon display screen.

**Use Alpha-Blending:** Enables alpha-blending effect to S/W UI.

**Video Acceleration:** Video Acceleration option enhances natural live image display on the client S/W. Please do not select this option as it may cause improper live image display. Some PC graphic card does not support and

comparable with Video Acceleration option.

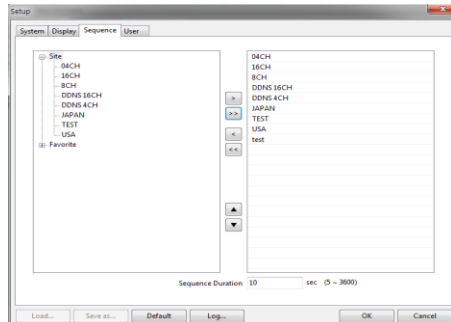
**Note:** There are some graphic cards do not support such functions. In this case, unselect the option as it might result in abnormal system operation.



**Language:** Select language option for the remote software.

**Date/Time Format:** Select Date/Time Format for the remote software.

### 5-1-3. Sequence Setup

Click on Sequence tap to enter sequence setup menu.

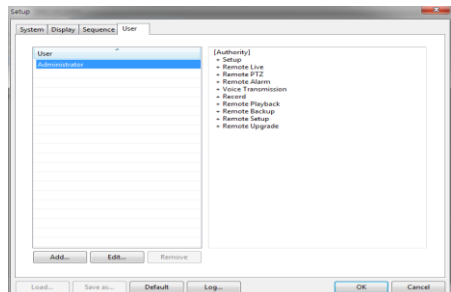


Set sequence mode and sequential sites from registered individual or Favorite sites. Click the site and select  button to add the site into the sequencing list.  button will move the all sites to into the sequencing list.

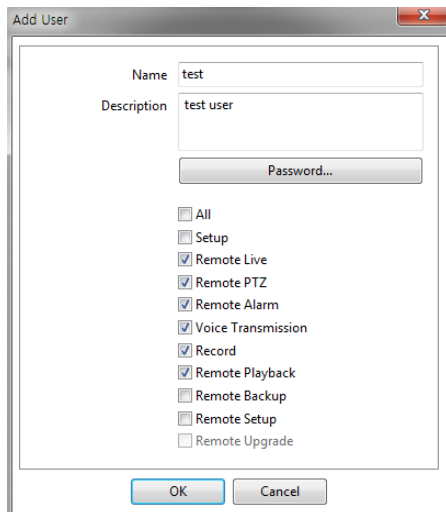
**Sequence Duration:** Set sequence interval time.

### 5-1-4. User Setup

Click on User tap to enter user setup menu.



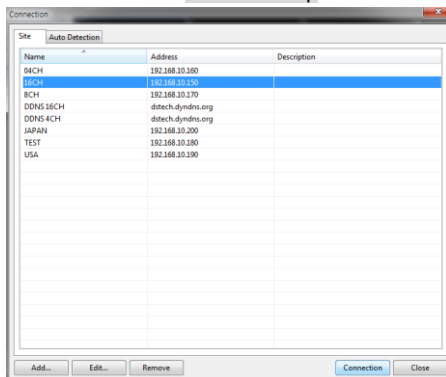




Register Nemon Software users. Each user needs to use the password they set in registration when they log in. Select **Add** to start new user registration.

## 5-2. Remote Setup

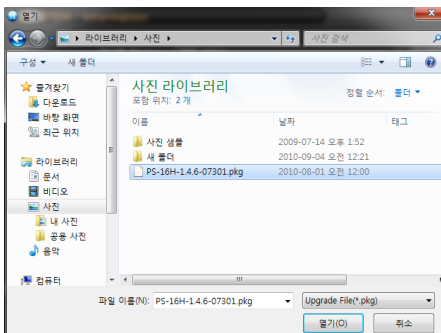
Click on  and Remote Setup to enter remote setup menu.




Select a DVR for setup and select Connection button. Setup menu will appear as show below once it is connected.

## 5-3 Remote Upgrade

The system upgrade can be done through Nemon program on PC.



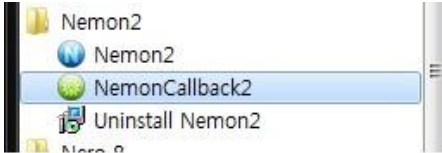
- Click on  and Remote Setup to enter remote setup menu.
- Select Information under System.
- Click Upgrade next to S/W version to find a file for upgrade.
- Select the file location and the file to upgrade the system.

**Note:** Please do not close down Nemon S/W or power off a computer until the system upgrade is completed.

## 6. Nemon Callback2

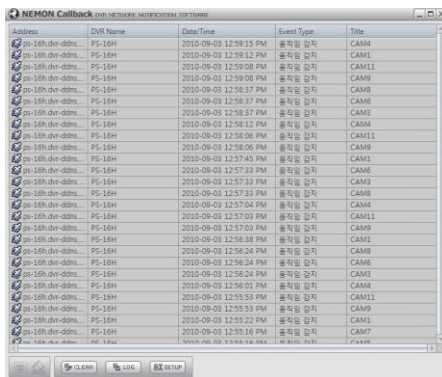
Nemon Callback will be receiving an event from DVR and can be monitoring to the events.

Start-> Program -> Nemon2 -> Nemon Callback2



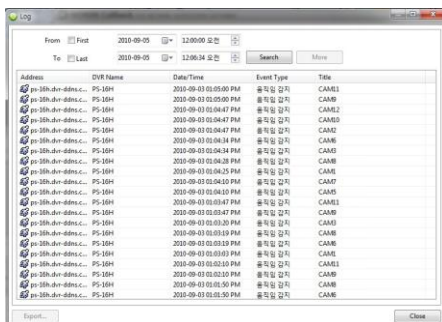
Nemon Callback icon will be displayed on the bottom right of Window once the program starts. Callback message will be displayed and notified as shown above.

Click Nemon Callback icon to display main window of Callback as shown below.



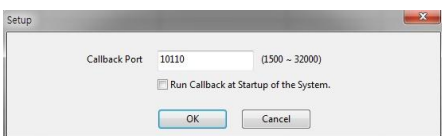
Select a log from the list and click Live or Playback icon image to connect related DVR.

**Clear:** Clear all the logs listed on Nemon Callback window.



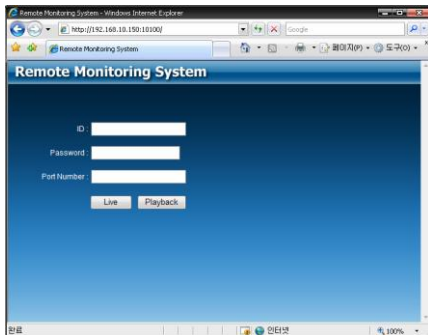
**Log:** Click Log button to display log search window as shown below.

Up to 100,000 logs can be saved. 1,000 log lists will be displayed per search. Click more buttons to display next 1,000 logs. Click Export button to save searched logs in either txt or csv format.



**Setup:** Click Setup button to set a port for Callback. Check Run Callback at Startup of the System box to start Callback program automatically with Window. (Default Port: UDP 10110)

## Appendix A. Remote Access Using I.E.



DVR can be accessed remotely using Internet Explore. Execute internet explorer program and enter DVR address (e.g. IP) to get connected.

Remote Log In page appears once connected to DVR. Enter ID, PW and Port information, and select Live or Playback mode to display desired remote control option.

Please install Active X when Internet Explore displays Active X installation message.



Remote Monitoring



Remote Playback

Please refer to the remote program 'Nemon' manual if further instructions on the control option are needed.

**Note:** Web is supported only on Internet Explorer 7.0 or above.

### A-1. Web Connection



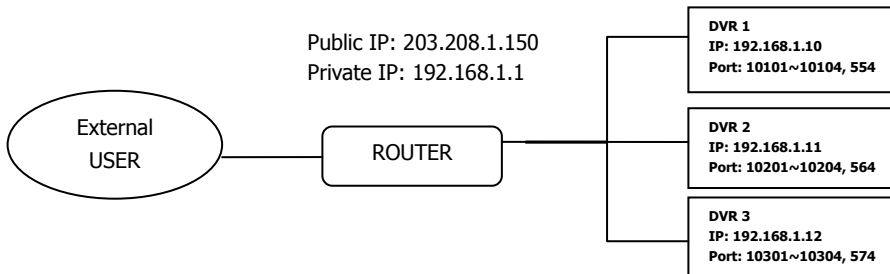
Typing to "http://dfe321.dvr-ddns.com" into address of internet explorer when try to connecting to dvr1 by internet explorer. And then input to user id, password and "10101" of network port number. And click to **Live** or **Playback**.

**Note:** if used the other port number (ex, <http://dfe321.dvr-ddns.com:11000/>).

## Appendix B. How to set DDNS using router

(Except using public IP or connect with ADSL directly)

Make it easy to understand through the example as below. Please refer the Diagram and follow this instruction. For example, if you connect 3 DVRs through local Network.



### B-1. Basic Instruction

For Example DVR's DDNS setting without create an account from "DVR-DDNS".

NETWORK - Address

Address Port

Type : Static IP

IP Address : 192.168.1.10

Subnet Mask : 255.255.255.0

Gateway : 192.168.1.1

DNS Server : 168.126.63.1

ID :

Password :

OK Cancel

Select Static IP option and enter following options accordingly. The system should be allocated with individual IP address.

NETWORK - Address

Address Port

Network Port : 10101

Web Port : 80

RTSP Port : 556

☐ Use UPnP

	Port
Live	10101
Playback	10102
Setup	10103

OK Cancel

Make sure the ports for DVR are all set accordingly or set network ports according to DVR port settings.

NETWORK - DDNS

☒ Use DDNS

DDNS Server : dvr-ddns.com

Hostname : 0E030F25.dvr-ddns.com

☐ User Authentication

ID :

Password :

Update

OK Cancel

DDNS offers a basic host name by MAC address. Example)

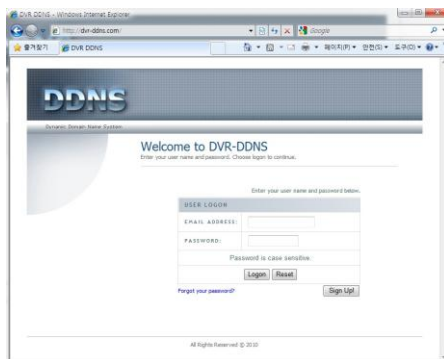
MAC Address: AA:BB:CC:DD:EE:FF

Hostname: CCDDDEEFF.dvr-ddns.com

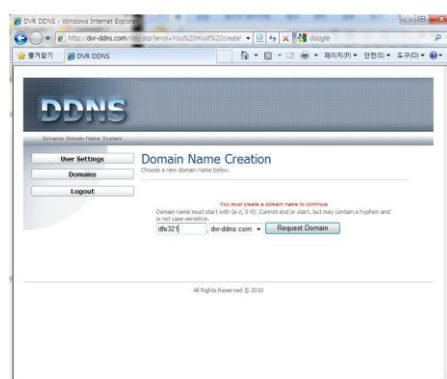
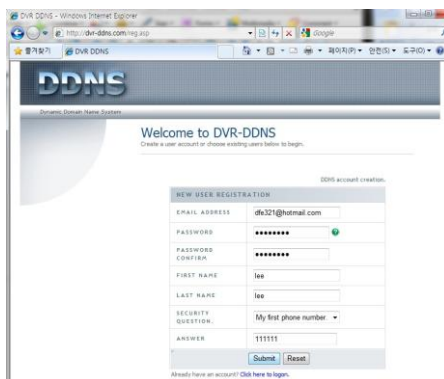
Make sure uncheck the box on the User Authentication, and then click the Update button for ensure the hostname is available.

**Note:** if do you want to change a hostname to special, you can replace a hostname to it. To make the hostname get back to your MAC address, you must to type a hostname to your MAC address, follow the "Setup->System->Information->MAC Address".

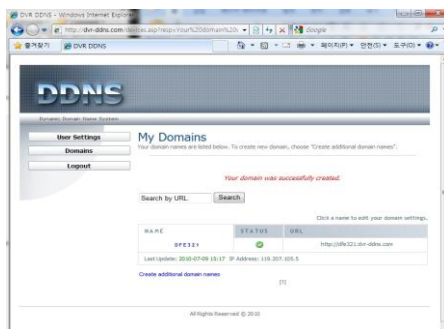
## B-2. Custom Instruction



- Go to <http://www.dvr-ddns.com/>
- Click 'Sign up!' to make the Account.

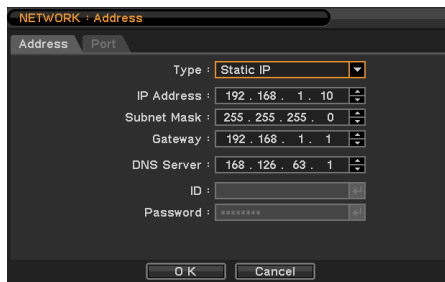


- Fill out the registration information as below.
- Click 'Submit' to make the account.
- Enter your domain name and click 'Request Domain' to create the domain name.

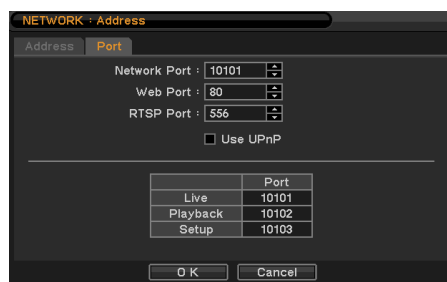


- You can see the registered domain name "dvr1.dvr-ddns.com"
- You can create 3 domain names for one account.
- Click "Create additional domain names" to make another domain name.

## B-2-1. DVR Configuration



Select Static IP option and enter following options accordingly. The system should be allocated with individual IP address.



Make sure the ports for DVR are all set accordingly or set network ports according to DVR port settings.

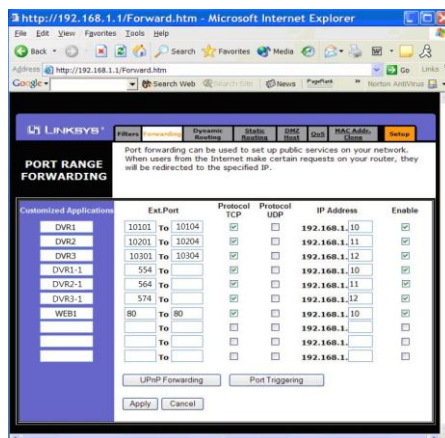
DDNS can be used once the system is registered on DDNS server. ID and PW are required for the registered server authentication.

## B-3. Router Configuration

- Insert the gateway address on the explorer to connect the homepage for the Router.
- Go to "Port Forwarding" Menu. (The picture below is for particular Router.)

### - Default Used Port

1. **TCP 80:** Web Server
2. **TCP 554:** RTSP(Android OS Phone)
3. **TCP 10101 ~ 10104:** Network Live, Playback, Setup & iPhone
4. **UDP 10110:** Nemon Callback
5. **TCP 10120:** Nemon Transcoder for Blackberry phone.



- Please insert the IP address and Port number for DVR in the Port Forward menu.
- The Port number which you insert at this point makes it possible to distinguish each of DVRs. Specify the WEB port number to access the DVR with Internet Explorer. Default port number is 80.

---

## Appendix C. How to set using iPhone

### Caution

- iPhone H.264 streaming supported only with iPhone OS 4.0 over.
- Please download "iMon2" software from Apple's App or iTunes to your iPhone for free.
- Should be upgrade DVR's firmware to v1.4.6 over.

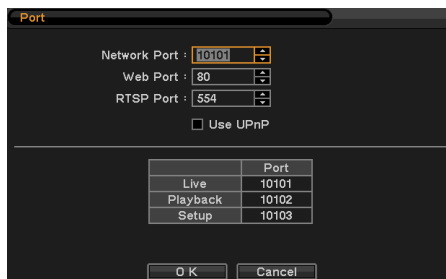
### Description

- iMon2 allows you to access and live monitor your DVRs in real H.264 video streaming over the network.

### Key Features

1. Live H.264 Video Monitoring over WiFi and 3G.
2. Playback with Time search and Event search.
3. Event Check.
4. Alarm Output Control.
5. Local DVR Remote Setup.

#### C-1. DVR Setup

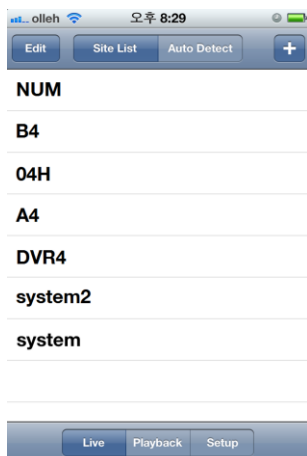


Network > Address > Port

Should be avoiding repeating the same port number in a Port.

#### C-2. iPhone's Configuration

App Name: iMon2 (Download from App Store in the iTunes).



**+**: Set required information for remote connection and add sites in the connection list.

**Edit**: Edits registered site information.

**Site List**: Show up registered site names.

**Auto Detect**: The Auto Detection menu shows the DVRs detected on the same local network.

**Live**: Click the image to enter the live mode.

**Playback**: Click the image to enter the playback mode

**Setup**: To change set up to selected a remote DVR

### C-2-1. Add a Site

Set required information for remote connection. When **Add** is selected, the screen is shown as following.



**Name:** Enter the name of site.

**Address:** Input the site's IP address (IP or DDNS address).

**Port:** Input the site's Network Live Port, based port is 10101. (it is not to iPhone Port number).

**Auto Login:** On/Off.

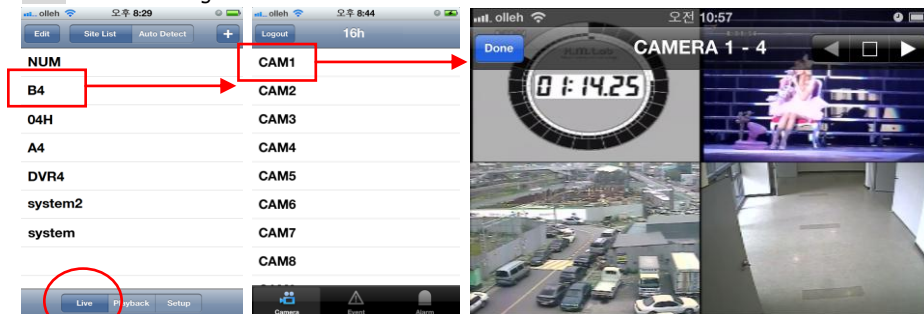
**User Name:** Programmed an ID from DVR.

**Password:** Programmed a Password from DVR.

Touch the **Done** to save information and complete the registration.

### C-2-2. Connect to DVR

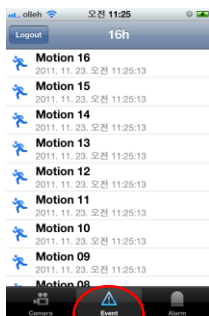
**Live:** Click the image to enter the live mode.



**Camera:** Show up the camera list and display selected camera.

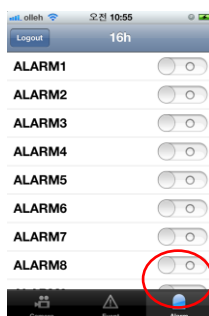
Touch the location or Highlight it on the display to connect the sites and then camera number.





## Event

Event will be receiving an event from DVR and can be monitoring to the events.



## Alarm

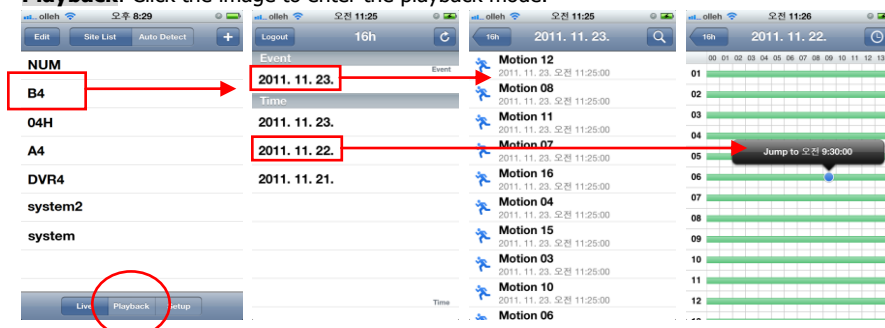
User can activate a remote alarm on DVR Status options.



## Setup

The remote setup can be done through iMon2 app  
Setup menu will appear as show below once it is connected.

**Playback:** Click the image to enter the playback mode.



**Event Search:** Event Search provides easy search by event list recorded.

Select an event from the list for playback.

**Time Search:** Select Jump to Time to search recorded data by time/channel.

---

## Appendix D. How to set using Android Phone

### Caution

- Android's phone supported H.264 streaming via 3G or Wi-Fi Network.
- Please download "iMon2" software from Android market to your phone for free.
- Should be upgrade DVR's firmware to v1.6.0 over.

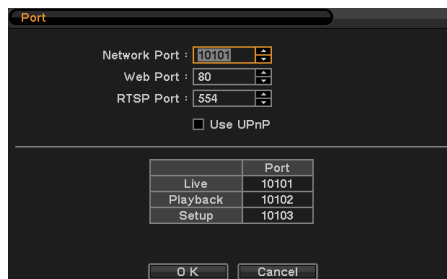
### Description

- iMon2 allows you to access and live monitor your DVRs in real H.264 video streaming over the network via 3G or Wi-Fi network.

### Key Features

1. Live H.264 Video Monitoring over WiFi and 3G.
2. Remote Playback with Time search and Event search.
3. Event Check.
4. Alarm Output Control.
5. Local DVR Remote Setup.

#### D-1. DVR Setup



Network > Address > Port

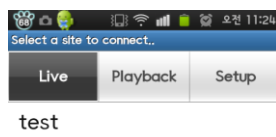
**RTSP Port:** 554

: Should be avoiding repeating the same port number in a Port.

This "554" port is based on Samsung's Galaxy S.

#### D-2. Android' Phone Configuration

App Name: iMon2 (Download from Android market).



**Add:** Set required information for remote connection and add sites in the connection list.

**Edit:** Edits information of selected site.

**Delete:** When users want to delete selected site category in the connection list screen.

**Import:** Browse the saved site list from flash memory of phone. (/iMon2/Sites.db)

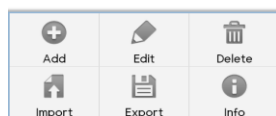
**Export:** Save site list to flash memory of phone. (/iMon2/Sites.db)

**Info:** Show iMon2 information being used.

**Live:** Click the image to enter the live mode.

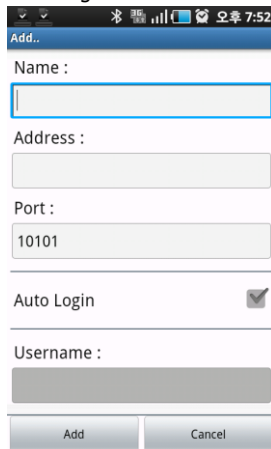
**Playback:** Click the image to enter the playback mode

**Setup:** To change set up to selected a remote DVR



### D-2-1. Add a Site

Set required information for remote connection. When **Add** is selected, the screen is shown as following.



**Name:** Enter the name of site.

**Address:** Input the site's IP address (IP or DDNS address).

**Port:** Input the site's Network Live Port, based port is 10101.  
(It is not to RTSP Port number).

**Auto Login:** On/Off.

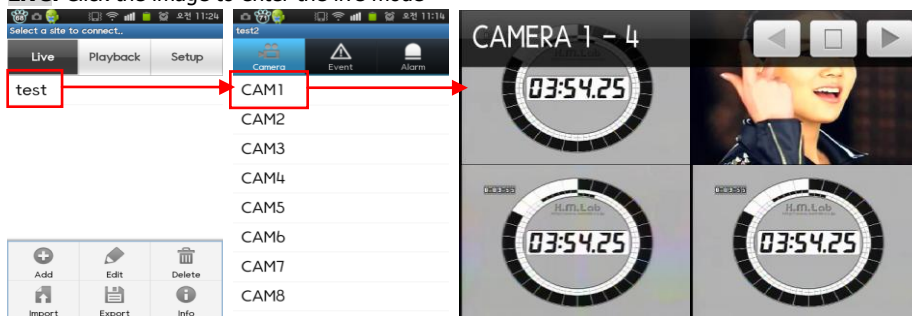
**User Name:** Programmed an ID from DVR.

**Password:** Programmed a Password from DVR.

Touch the **Add** to save information and complete the registration.

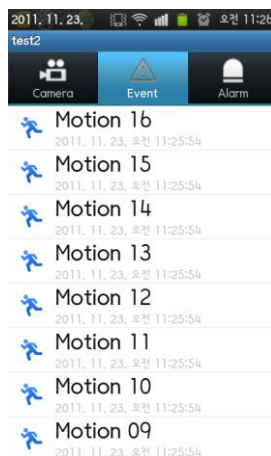
### D-2-2. Connect to DVR

**Live:** Click the image to enter the live mode



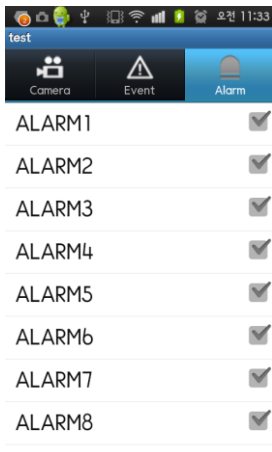
**Camera:** Show up the camera list and display selected camera.

Touch the location or Highlight it on the display to connect the sites and then camera number.



### Event

Event will be receiving an event from DVR and can be monitoring to the events.



## Alarm

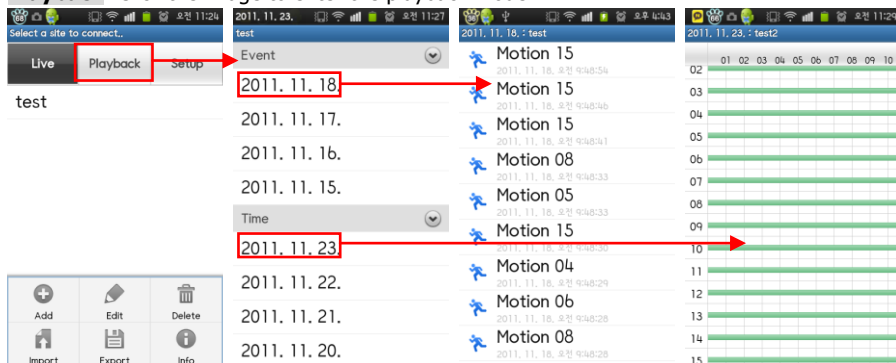
User can activate a remote alarm on DVR Status options.



## Setup

The remote setup can be done through iMon2 app Setup menu will appear as show below once it is connected.

**Playback:** Click the image to enter the playback mode.



**Event Search:** Event Search provides easy search by event list recorded.

Select an event from the list for playback.

**Time Search:** Select Jump to Time to search recorded data by time/channel.

---

## Appendix E. How to set using Blackberry

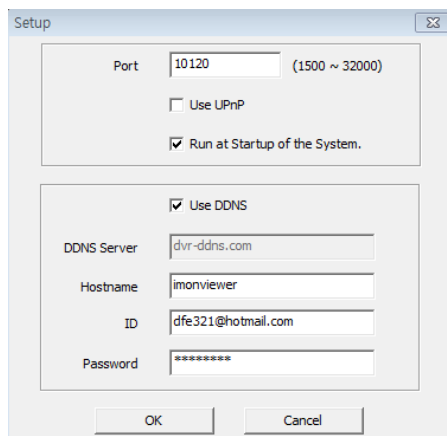
### E-1. Application Download

First, Download and unzip the Transcoder & Viewer application. You can find the files at CD or

<ftp://imon:imon@transcoder.dvr-ddns.com>

1. iMonViewer.zip (for Blackberry application)
2. NemonTranscoderSetup.zip (for PC application)

### E-2. NemonTranscoder installation for PC



'NemonTranscoder' needs to be installed on your PC is also online.

Open the 'NemonTranscoder' and it is displayed in system tray.

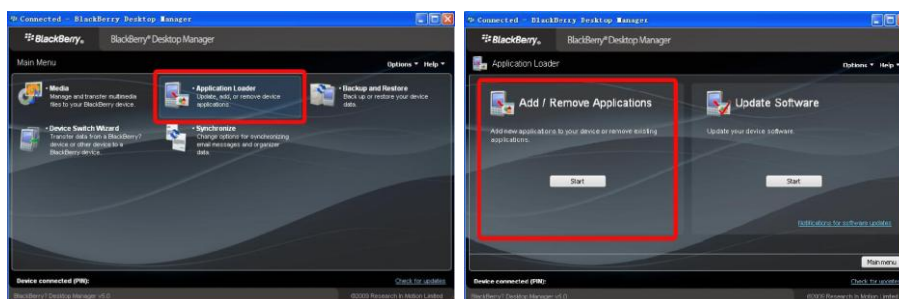
You should be avoiding repeat the same port number in a Port.

DDNS can be used once the system is registered on DVR-DDNS server. ID and PW are required for the registered server authentication. (Refer to Appendix B.)

### E-3. iMonViewer installation for Blackberry

You will need to have Blackberry Desktop Manager installed on your computer. If you do not have the installation disk for the Blackberry Desktop Manager, then you can download it from

<http://na.blackberry.com/eng/services>



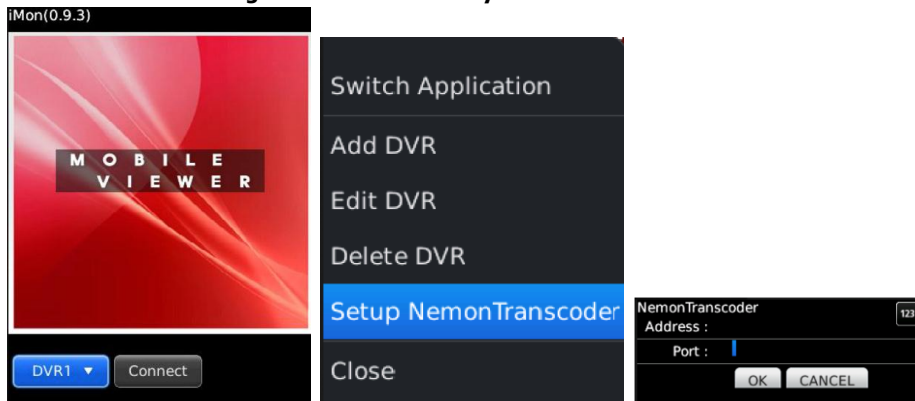
Connect your Blackberry to your PC with a USB cable then select the "Application Loader"


Click "Start" under "Add/Remove Applications"

And navigate to the folder as downloaded with 'imon.alx' in the 'iMonViewer.zip'

Blackberry Desktop Manager will perform synchronization and your Blackberry may restart upon rebooting, iMonViewer should appear on the applications screen of your device.

#### E-4. iMonViewer Configuration for Blackberry



Through the  in Blackberry phone, you can set the connection details of 'NemonTranscoder' which is operation in PC's Address & Port.

Ex) Address: imonviewer.dvr-ddns.com

Port: 10120

##### ADD DVR

**Name:** DVR site name which is displayed in Blackberry phone.

**Address:** IP or Domain address of DVR site

**Port:** Live Port of DVR site (Default: 10101)

**Password:** User password of DVR site

**Camera:** Camera No. from DVR site

##### Edit DVR

Change the details of DVR

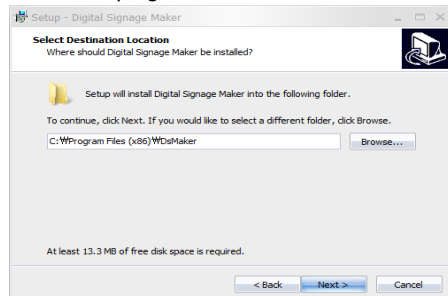
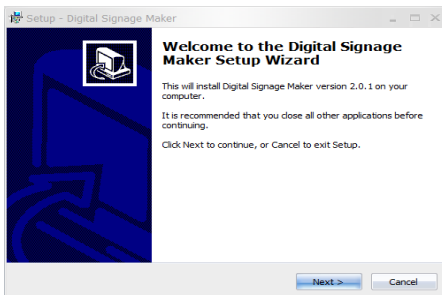
##### Delete DVR

Delete the DVR Site

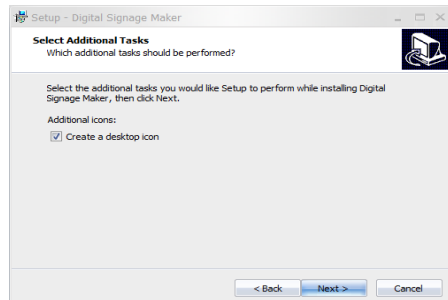
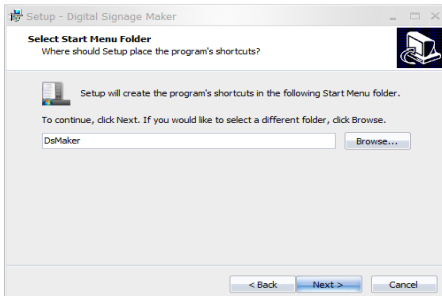
## Appendix F. How to set using Digital Signage

### E-1. Digital Signage installation

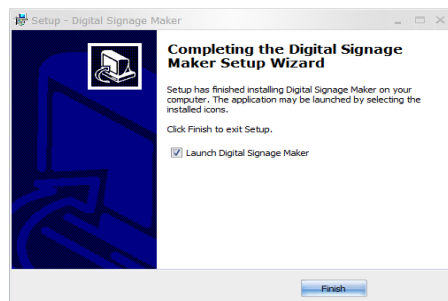
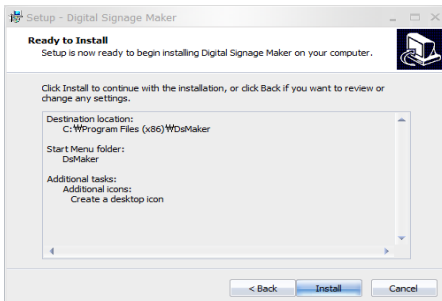
Digital signage program is required. Please open and run this program in the installation CD.



After selecting program folder and desired option, click **Next**.

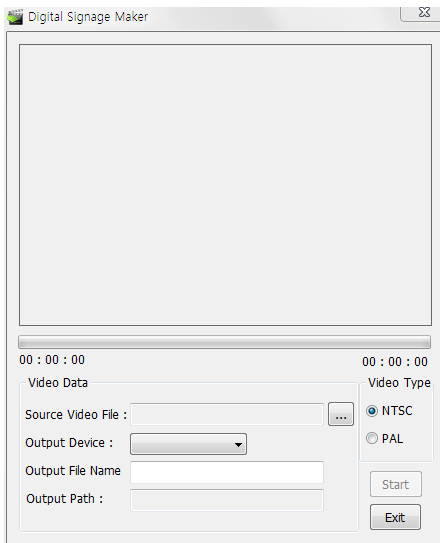


When the following dialog box appears, click **Next**.



Click **Finish** to complete installation procedure.

## E-1. Starting the Digital Signage



Double click on the program icon on PC to run the remote software.

Main screen of the remote software appears as shown below.

**Source Video File:** Selecting the source movie

**NTSC/PAL:** Selecting the Video type

**Output File Name:** Enter the file name

**Start:** converting start.

The file name should be 'filename\_0001' (e.g.) format. Create a folder by name of 'advertise' and same the files in that folder in USB flash memory. Files must be saved in the folder and the folder name should be 'advertise'. DVR will not recognize any other folder names.



Once it is done, connect USB flash memory to DVR and follow Digital Signage instructions (Import) to use Digital Signage features.

**Picture Interval (sec):** Select the type of data to be displayed under Digital Signage mode. Select either Video or Image data format. Select the interval time for image data.



**Schedule:** Schedule Digital Signage by time and date.

**Note:** When it displaying a image, it's back to main screen if it controlling mouse, remote control and front button.



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## COMPLIANCE NOTICE OF FCC:

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 USERS WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT THEIR OWN EXPENSE.

WARNING: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS OF DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

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## WEEE (Waste Electrical & Electronic Equipment)

**Correct Disposal of This Product** (Applicable in the European Union and other European countries with separate collection systems)



This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

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## ROHS Compliance

