

Digital Video Surveillance System

User Manual

- ※ The picture might differ according to the specification and model.
- ※ Contents of this user manual are protected under copyrights and computer program laws.

DVR

1st Edition : 28 Oct 2013
2nd Edition : 3 Dec 2013
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Thank You !

Before operating the system, please read this User Manual and retain it for future reference.

WARNING

TO REDUCE FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

The installation should be made by a qualified service person
and conformed to all local codes.

Cautions

Read Before System Operation

Follow these details to prevent material damage or personal injury.

Signs of Caution and Warning



Warning: This sign indicates that the user could die or be seriously wounded if not used or installed properly.



Caution: This sign indicates that the user could be wounded or could expect property damage if not used or installed properly.



Warning: Do not expose the product to fog, rain or too much humid to decrease danger from electric shock or fire.

General Warning



Warning

1. Use the power cord, which is supplied or recommended by the supplier, or it may cause fire.
2. Do not disassemble or reassemble the product.
It may cause malfunction or fire.
3. Enquire to your vendor for repair.
It may cause electric shock or fire if the repair is not done properly.
4. Do not touch the product with wet hands.
It may cause malfunction or electric shock.
5. Product installation must be ensured to a professional for product installation, or it may cause malfunction, electric shock or fire.
6. Ground applies to video products equipped with a 3-wire grounding type plug having a third (grounding) pin.
This plug only fits into a grounding-type power outlet.
If grounding is not done, it may cause malfunction or electric shock.
7. Ground connection must not touch gas pipe, water pipe or telephone line.
If grounding is not done properly, it may cause electric shock.
8. Prevent metallic foreign substance from going inside the product.
It may cause malfunction or electric shock.
9. Do not spray insecticide or flammable spray while driving.
It may cause fire.
10. Place the system in a open place where air ventilation is guaranteed, or it may cause over-heating and seriously damage the system to be fired.
11. Prevent water from instilling inside electrical parts.
Clean with a dry towel or malfunction or electric shock could result.



Caution

1. Use the power cord, which is supplied or recommended by the supplier.
The internal fan rotates at high speed and may cause an accident.
2. Do not drop, give strong vibration, or shock to the product.
It may cause malfunction.
3. The air inhaler of the front panel and air outlet of the back panel must not be blocked during installation.
The internal temperature of the product would be greater than allowable and could cause malfunction or fire.
4. Do not touch the product or the power cord when there is thunder.
It may cause electric shock.
5. Do not install the product near or on top of heating source.
The internal temperature of the product would be greater than allowable and could cause malfunction or fire.
6. Do not install the product on inclined or unstable location or where vibration could be committed.
It may cause malfunction.

Cautions about the Power



Warning

1. Must use the outlet of the grounding to connect the power cord, or it may cause fire.
2. Do not connect on the middle of power cord or use extension cord.
It may generate heat or cause fire.
3. Do not touch the power cord with wet hands.
It may cause electric shock.
4. Keep power cord dry and protect from humidity.
It may generate heat or cause fire. The power cord is not waterproof.
5. Hold the body of the plug while removing the power plug.
Do not pull the power cord. Damage to the power cord may generate heat or cause fire.
6. Check the power plug regularly.
Humidity and moderation in smoking may cause fire.
7. Remove power cord from outlet when product is not used for a long time.
It may cause short-circuit or electric shock.



Caution

1. Do not turn off the power by removal of the power plug.
To turn off the power, click the power button from the front panel.
When the system stops abnormally, the power button might not work. Click power button for 5 full seconds to turn power off.
2. Do not cut off the power artificially, or give shock or vibration to unit while the hard disk is activating.
It may cause hard disk failure or loss of data.



Remarks

- ※ Pictures and buttons are subject to be changed or modified up to different models.
- ※ Function or configuration is subject to be changed or modified without prior notice for improvement of the product.

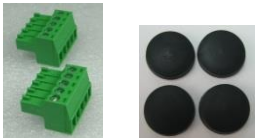
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1. Getting Started

1.1 Checking Supplied Items

Make sure that you have following items supplied with your DVR. If any of these items is missing or damaged, notify your vendor immediately. Keep the packing utilities for moving or storage purposes afterwards.

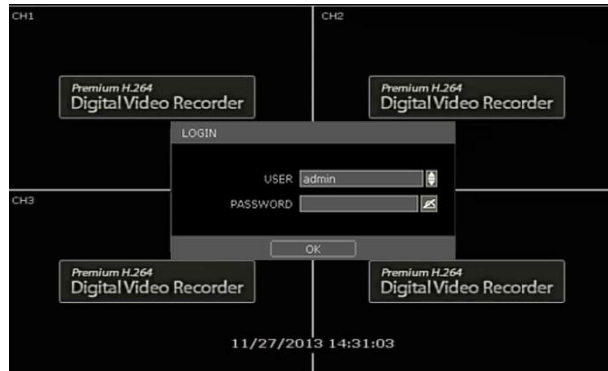
Items	Photo	Quantity
User Manual and Remote Software	 (*) Quick Manual and CD	1 Set
12V D/C Adaptor & Power Cable		1 Set
IR Remote Controller	 or (*) Type of controller may differ depending on the DVR model and can be replaced by USB Mouse.	1 Set
Terminal Block and Rubber Mount	 (*) Packed goods may differ depending on the DVR model	1 Pair (2 Pieces) 1 Set

1.2 System Startup

After connecting all peripheral devices, connect power cord to the DVR for system startup.

Input USER and PASSWORD for login after turning on the system. The factory default of user and password are "ADMIN" and "1234" respectively. Admin user is to fully control the entire DVR system.

If DVR is set as AUTO LOGIN, login process is not necessary.

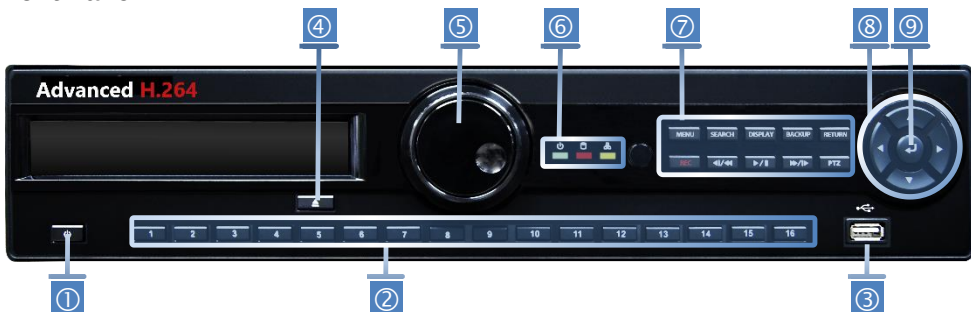


Caution It may take a few minutes to startup the system after turning on the power, in case the user sets the network configuration as DHCP mode but under the situation that there is no DHCP server in the network or the network is not connected.

Note 1) Do not forget the administrator's password that was set for the first time. In case the password is forgot, contact your local dealer for help.
2) Refer to the "Section 4.1.2 User" for AUTO LOGIN and AUTO LOGOFF.

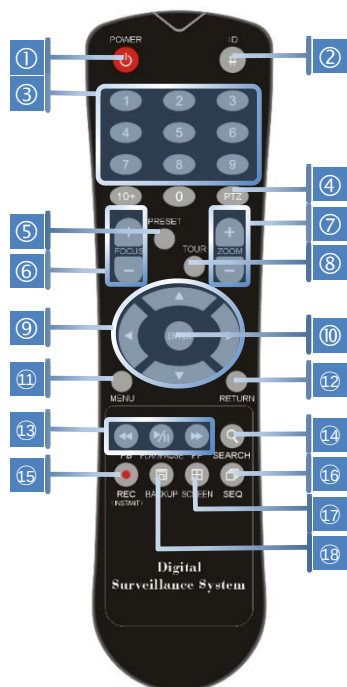
1.3 Button Explanation

1.3.1. Front Panel



- | | |
|--------------------|--|
| ① Power | : System ON/OFF |
| ② Numeric Button | : Select the desired channel or input password. |
| ③ USB Port | : For backup, upgrade and so on. |
| ④ DVD Eject Button | : Eject DVD trash. |
| ⑤ Jog/Shuttle Knob | : Image playback in various speed or frame by frame |
| ⑥ LED Indicator | : Indicates system status.(Power, Record and Network status) |
| ⑦ Function Button | : Menu, Search, Screen display mode, Backup, Return, Emergency Recording, Playback control, PTZ mode |
| ⑧ Direction Button | : Move to the desired menu position |
| ⑨ Enter Button | : Select value or setting |

1.3.2. IR Remote Controller



- ① Power : System ON/OFF
- ② DVR ID Selection
- ③ Numeric Button : Channel selection or Password input
- ④ PTZ Button
- ⑤ Preset Button : Select Preset on PTZ mode
- ⑥ Focus Button : Focus IN/OUT on PTZ mode
- ⑦ ZOOM Button : Zoom IN/OUT on PTZ mode
- ⑧ Preset Tour : Tour ON/OFF on PTZ mode
- ⑨ Direction Button
- ⑩ Enter Button
- ⑪ Menu Button
- ⑫ Return Button
- ⑬ Playback Button on Search mode
- ⑭ Search Button
- ⑮ Emergency Recording Button
- ⑯ Auto-Sequence Button on Live mode
- ⑰ Screen Mode Button
- ⑱ Backup Button

Note User can control multiple DVRs with one IR Remote Controller.
In order to control multiple DVRs, each DVR has different Remote ID.
(The initial ID is set as "0".)

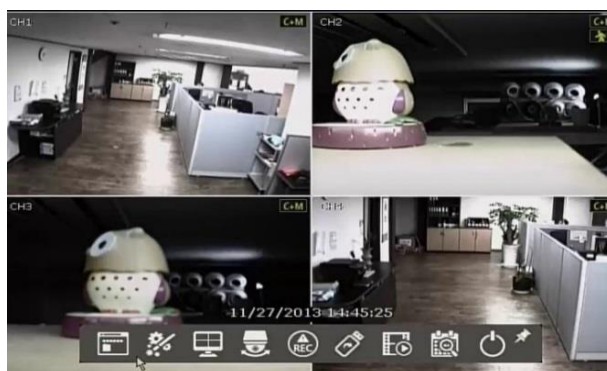
Note How to setup the ID # in IR Remote Controller

- 1) Keep pressing ID selection button for about 5 seconds.
- 2) Set the ID number by pressing numeric button on IR Remote Controller.
ID number is available from 000 up to 255.
- 3) You have to press numeric button as three-digit number format.
For example, press "000" for 0, "023" for 23, "234" for 234.

User must setup REMOTE ID to match with the ID setting of IR remote controller, if user wants to use it to control DVR.

1.3.3. Tool Bar on Live Mode

User can move the mouse pointer to the bottom of the monitor in live mode. Then menu bar will be instantly appeared as below picture.



Menu Button

Menu screen will pop up. User can make the overall setting for DVR. (Please refer to the “4. Setting” for details.)

Startup Wizard Button

Shows Startup Wizard screen. (Please refer to the “2. Startup Wizard” for details.)

Screen Display Mode Button

User can change screen display mode. It changes to 1, 4, 9, 16ch mode in turn.

PTZ Button

In order to control PTZ for the channel that is PTZ camera is applied, click this button after selecting full screen mode for the channel. In PTZ mode, user can move pan/tilt and zooming-in/out by moving the mouse pointer, called virtual joystick. (Please refer to the “Section 3.3 PTZ Operation” for details.)

Recording Button

It is useful to urgently start recording. In emergency recording, the system records all channels with full frame rate at the maximum resolution regardless of recording mode setting. To stop emergency recording, click the same icon again.

Backup Button

Can backup the recorded image to external device with this button. (Please refer to the “4.6 Backup” for details.)

Playback Button

It makes DVR playback the latest video clip, automatically. (Please refer to the “3.4 Playback Recorded Image” for details.)

Search Button

Search screen with various search modes are shown. User can search the recorded image, accordingly. (Please refer to the “3.6 Search Recorded Image” for details.)

Exit Button

User can exit with three different options, such as Log Off, Reboot and Shutdown.

Pin Button

It indicates that user can fix this menu bar, or disable fixing the menu bar by moving away the mouse cursor. If user fixes the menu bar, then this menu will not disappear even though user moves the mouse cursor away from that position. If user does not fix the menu bar, then the menu will be shown when user move the mouse cursor to the bottom area only.

1.3.4. Tool Bar on Playback Mode

On Playback mode, the following menu is shown on the screen.



Channel

It indicates the currently selected channel number.

Intelligent Search Bar

It shows the recording status for the selected channel from 00:00 to 24:00. User can check whether there is recorded data or not and the recording mode, at a glance. White-vertical line indicates the time which is currently playback. User can move the white-vertical line to the time that user wants to search. (Please refer to "Section 4.4.1 Schedule" for details on colors.)

Playback Control Button



: Playback speed control. (x32 / x16 / x8 / x4 / x2).



: Move backward by one frame



: Stop button



: Play button



: Move forward by one frame



: Playback speed control. (x2 / x4 / x8 / x16 / x32)



: Shows current playback speed

Screen Display Mode Button

User can change screen display mode. It changes to 1, 4, 9, 16ch mode in turn.

Backup Button

User can backup the recorded images to the external devices. (Please refer to "4.6 Backup" for the details.)

Playback Button

It displays the latest recorded images. (Please refer to "3.4 Playback Recorded Image" for the details.)

Exit Button

Close playback mode and move to live mode.

Pin Button

It indicates that user can fix this menu bar, or disable fixing the menu bar by moving away the

mouse cursor.

If user fixes the menu bar, then this menu will not disappear even though user moves the mouse cursor away from that position.

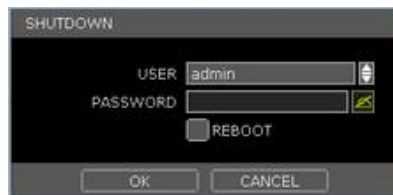
If user does not fix the menu bar, then the menu will be shown when user move the mouse cursor to the bottom area only.

1.4 System Shutdown

To turn off the power, Click exit button  the tool bar and then click [SHUTDOWN] in the pop-up screen as below. Do not pull off the power by pulling the power plug.



Input the password and click [OK] to shut down the system.



And then, click [YES] to confirm shutdown in the pop-up screen as below.



Note User can input password by virtual keyboard, IR remote-control or front numeric buttons (if available).

2. Startup Wizard

At the first startup, Startup Wizard screen will pop up, automatically.

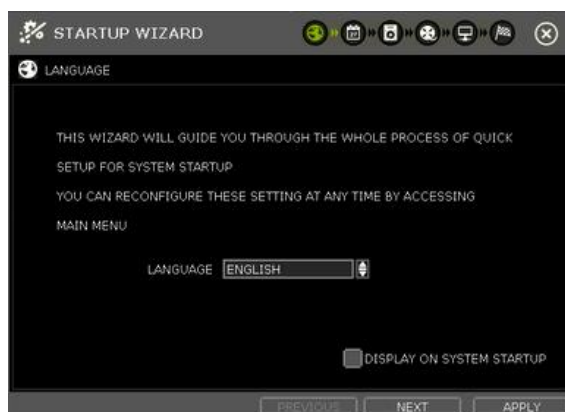
User can make primary setting by simply following the steps in the Startup Wizard.

User can open the Startup Wizard screen at any time by clicking Startup Wizard  button in the tool bar

2.1 Language

User can select the language according to the country or user's preference.

DVR supports various languages. If you cannot find your preferred language, please contact your dealer in your area accordingly.



Note If “DISPLAY ON SYSTEM STARTUP” is selected, Startup Wizard will pop up every time the system is started.

2.2 Date/Time

User can make various settings such as time zone selection, DST (Daylight Saving Time) and time sync mode



TIME SYNC MODE

There are three types of time sync mode.

- **Server Mode**
The operating DVR is set as a Time Sync Server, which can synchronize the time clock of another DVR(s) connected over the same network environment.
- **Client Mode**
The operating DVR is set as one of the client DVR(s). Input the IP No of designated DVR or Remote Software P/C (CMS) as a Time Sync Server in “SYNC SERVER”, then DVR time clock is synchronized with Time Sync Server by interval time set in “TIME SYNC CYCLE”.
- **NTP Mode**
NTP server is one of standard time servers available on Internet and it is recommended to use “pool.ntp.org”. If you want to activate this mode, you have to correctly set the TIME ZONE of your local area and then click button [SYNC NOW].

2.3 HDD FORMAT



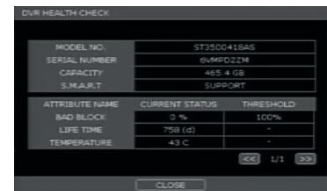
HDD FULL (①)

User can select “Overwrite” or “Stop recording” when HDD becomes full.

- Overwrite : DVR deletes the oldest data and record new data.
- Stop recording : DVR stops recording.

HDD CHECK (②)

Click [CHECK] button () of each HDD to open the window of DVR HEALTH CHECK. User can see full information of each HDD such as model name, serial no, capacity, bad sector ratio, life time (used time) and temperature.



HDD FORMAT (③)

When the new HDD is installed or there seems to be a problem on the HDD, user needs to format the HDD.

If system resources are occupied such as network connection during format process, format may be failed. In this case, it is recommended to reboot the system to release system resources and then try to format again.

User can select HDD to format by ticking the check box.



Note 1) It may take a few minutes to format HDD.

If it takes a long time, please check the status of HDD.

2) When the format is done, all data in the HDD will be deleted.

3) The system always reserves some space in each built-in HDD to effectively utilize archiving memory.

2.4 Record

User can make simple recording setting for all channels.

It is to help user make easy configuration for recording resolution, recording speed, recording mode, recording quality and recording periods based on the capacity of HDD installed. Setting in this menu applied to “Menu > Record> Camera” menu (4.4.1 Camera).



RECORDING SETTING(①)

If user selects this, new setting is applied to the camera. If not, new setting is not applied to the camera.

COMPRESSION MODE SETTING (②)

User can select [VBR] or [CBR].

In case of [VBR] mode, once the “INPUT DESIRED DAYS” is set, recording factors (resolution, frame & quality) are set to be suitable for the condition, automatically. User can adjust those settings separately (③), and then the expected recording period is shown (④) in consideration of the installed HDD capacity.

In case of [CBR] mode, user can set recording resolution, frame & mode (③). Then, the image quality is follows the CBR mode. And the expected recording period is shown (④).

Note 1) VBR (Variable Bit Rate)

It focuses on the image quality rather than data size. So, in case of complicated & high frequency motion image, data size is getting bigger and the recording period is getting shorter. In this mode, user can change each camera's quality by selecting one of the following options.
: Low / Standard / High / Highest

2) CBR (Constant Bit Rate)

It focuses on keeping constant data size regardless of the image quality. It can be helpful for maintaining recorded data as requested period but, in case of complicated & high frequency motion image, the image quality is getting worse accordingly.

In this mode, user can change all camera's quality by selecting one of the following options.
: 128K~896KBPS / 1M~3MBPS / Low / Standard / High / Highest / Ex. Highest

Caution Recordable period (DAYS TO RECORD) in this menu is just for reference and may vary depending on the actual site situation.

DUAL STREAM (⑤)

User can set image resolution, frame rate and quality for transmission, separately from those for recording. (Please refer to the [DUAL STREAM] of menu “4.4.1. CAMERA”)

2.5 Network

DVR can be connected to network or internet through either fixed IP or dynamic IP by proper setting of DVR and router.



NETWORK TYPE

Select either STATIC IP or DHCP for dynamic IP.

If DHCP is selected, click “IP DETECT” button to receive the updated IP address information, then you can see the completion rate on “Progress Bar”

IP ADDRESS

In case of STATIC IP, user can set IP address for the DVR with  button.

In case of DHCP, it shows IP address which is set by DHCP.

SUBNET MASK

Subnet Mask address classifies the subnet that the system belongs to. For more information, please consult your network administrator or your internet provider.

GATEWAY

This is the IP address of the network router or gateway server. It is required when the user wants to connect through external router. For more information, please consult your network administrator or your internet provider

DNS SERVER

Enter the IP address of the Domain Name Server. You should input the DNS Server information in order to use DDNS, E-mail notify and NTP Server. If it is hard to know the correct information, user can input “8.8.8.8”. For more information, please consult your network administrator or your internet provider.

TCP/IP PORT

Input the port number to use when connecting locally or remotely. It is for use with Remote Software P/C (CMS) and Mobile Device (MMS).

WEB PORT

Input the port number to use when connecting from the Web Browser.

BANDWIDTH LIMIT

Depending on the setting made by user, the system can control the data volume transmitted over network ranging from 25 kbps up to 1Gbps. This function is effective especially under narrow bandwidth network condition or when user wants to limit “network bandwidth occupied by video transmission” to a certain level.

UPnP (Universal Plug and Play)

UPnP supports “auto port forward function (NAT TRAVERSAL)” even if the user does not set port forward in the router. It may not be supported in some routers and some network conditions.

Input necessary information based on your network environment.

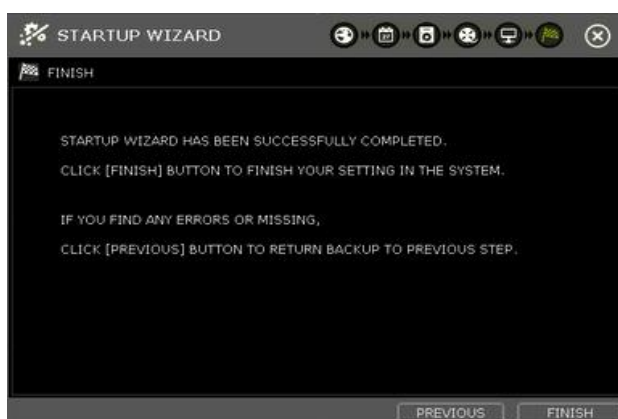
- NETWORK TYPE : Select STATIC IP (in case of fixed IP)
- IP ADDRESS : Assign a local IP # to DVR (ex, 192.168.0.164)
- SUBNET MASK : Input subnet mask of your LAN (ex, 255.255.255.0)
- GATEWAY : Input gateway of your LAN (ex, 192.168.0.1)
- DNS SERVER : Input IP # of your DNS server
You must input this IP # for internet connection. Please contact your ISP to get this IP#. You can input “8.8.8.8” in case you do not know this IP#.
- TCP/IP PORT : Default is 9010.
If your ISP blocks the port # 9010, you need to input another valid port number. (ex, 9020)
- WEB PORT : Default is 80
If your ISP blocks the port # 80, you need to input another valid web port number. (ex, 8080)
- BANDWIDTH LIMIT : Default is 100 Mbps.
Select bandwidth limit you want to set in consideration of network condition.

Note The maximum number of simultaneous connection is 15 users.

Note For the other network settings, such as DDNS, Notification, Mobile Push & P2P Cloud, please refer to the “4.5 Network”.

2.6 Finish

When the setting is finished, click “FINISH” button to close Startup Wizard.



3. Operation

3.1 User Log-in

Check the power connection.

Input USER and PASSWORD for login after turning on the system. The factory default of user and password are "ADMIN" and "1234" respectively. Admin user is to fully control the entire DVR system.



- Note**
- 1) LOGIN window will be permanently displayed in monitor as above picture until user logs in with the right ID and password.
 - 2) If DVR is set as AUTO LOGIN, login process is not necessary.
(Please refer to the "4.1.2 User" for details)

3.2 Live Display Mode

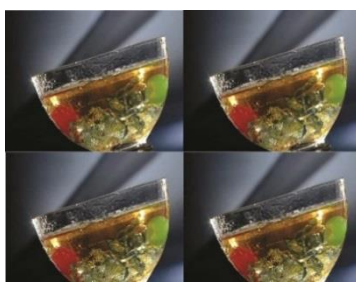
3.2.1. Channel Selection

Real-time live image can be seen by easy button operation after power-on.

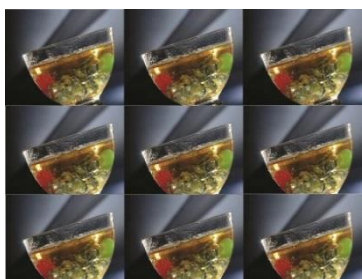
The images can be seen on real-time by 1, 4, 9 and 16 screen. Whenever the up/down arrow button on the front panel or IR remote controller is pressed and whenever the screen display mode button () on the tool bar is clicked, the screen will be sequentially changed.



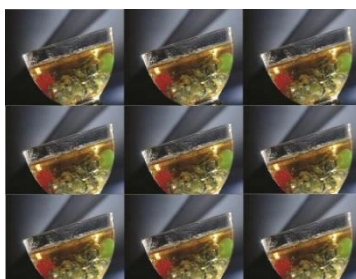
[1 Ch]



[4 Ch]



[9 Ch]



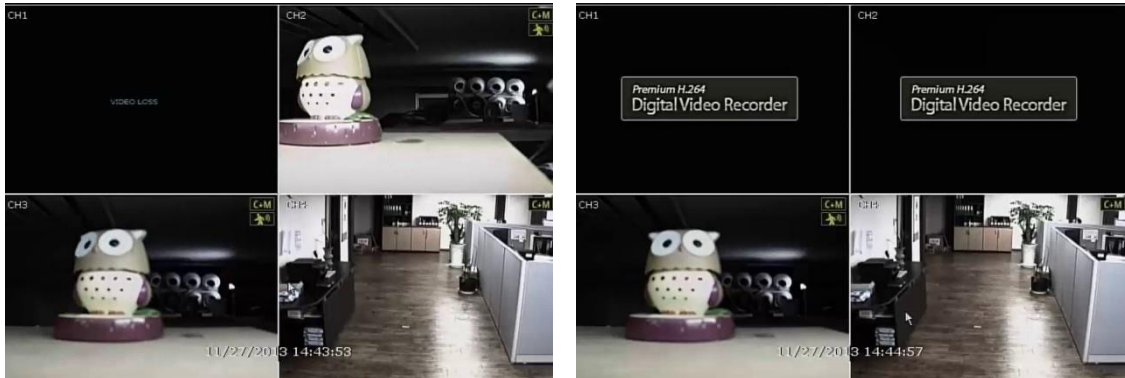
[16 Ch]

To select channel by mouse, double click of the left mouse button. To return to previous screen mode after selecting certain full channel, double click of the left mouse button.

- Note** To properly select channel by mouse, user should double click the left mouse button deliberately.
Some screen mode may not be available.

"VIDEO LOSS" is shown on the display screen when no camera is connected or camera is disconnected on a certain channel. When camera is disconnected, warning sound shall be generated depending on the system setting.

And, admin user can set different level of authorization for each user. If a certain user is not authorized to view a certain live and playback channel, then no image is shown on the display screen as below.



3.2.2. Icons

In real time live mode, icons or messages will be indicated on the screen to notify the system mode or status. Below are the icon categories, which are indicated on the monitor.

Icon to be shown at right-upper corner on each channel screen		Icon to be shown at right-bottom corner on full screen	
	Continuous Recording		No HDD.
	Motion Detection Recording		Using Emergency Recording
	Sensor Activating Recording		Using PTZ
	Continuous + Motion Alarm Recording		Warning for exceeding temperature
	Continuous + Sensor Activating Recording		Showing sequence mode
	Motion Detection + Sensor Activating Recording		Showing digital zoom mode
	Emergency Recording		
	Sensor Activated		
	Motion Detected		
	Audio Channel		
	PTZ Camera		
	POS		

Note If you cannot find any recording icon in the right up corner of the live screen mode, then it means that the system does not record any image. In this case, you need to check recording schedule or camera of the main setup menu.

3.2.3. Pop-up Menu

User can click the right button of the mouse to pop up sub-menu as below. If user want to control a specific channel, put the mouse cursor on that channel and then click the right button.



DISPLAY

User can change screen display mode.

SEQUENCE

When "SEQUENCE" is selected, **SEQ** icon is shown on the right-bottom corner of the screen and display screen will be sequentially changed.

ZOOM(Digital-ZOOM)

- It is activated in 1 screen display mode, only. When "ZOOM" is selected, **ZOOM** icon is shown on the right-bottom corner of the screen and digital zoom control is available. (It is different from the zoom by PTZ.)
- User can zoom-in by mouse dragging on the desired area and also user can control zoom-in & zoom-out by mouse wheel control. Once the image is zoomed-in, user can move that area by mouse dragging or exit by mouse click.
- To exit from the zoom mode, click the right button of the mouse and select "ZOOM EXIT" in the menu.

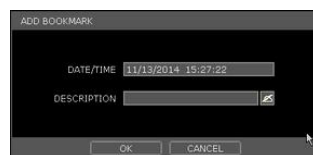
FREEZE

It makes live image paused. But system clock (date/time information) continues running. Select "FREEZE" again to resume the live view.

ADD BOOK MARK

User can add bookmark with description on the currently displayed image. When the menu, which is shown on the left, is opened, user can put

description with  button.



SEARCH

User can search recorded image with various ways, such as, Calendar, Date/Time, First Data, Last Data, System Log, Event Log, POS & Bookmark. (Please refer to "3.6. Search Recorded Image" for details.)

PTZ

It goes to PTZ mode. (Please refer to "3.3 PTZ Control" for detail.)

RECORDING INFO

User can check the recording status of the DVR, such as Recording Period, Daily Recording Size(Average), Recording Days and Remaining Recording Days.

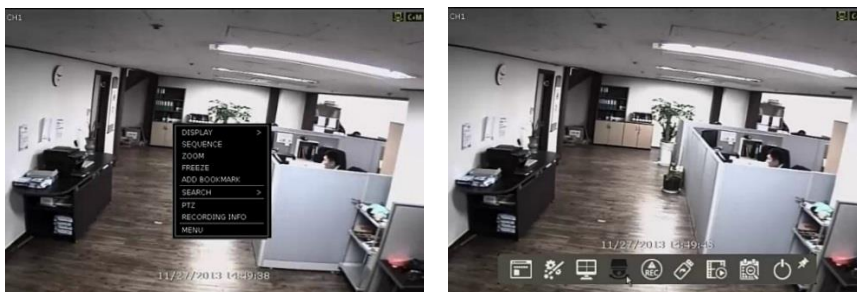


MENU

User can open main menu setup screen.

3.3 PTZ Operation

In order to operate PTZ, the channel which is connected by PTZ should be in full screen mode. User can get into PTZ mode by right-clicking the mouse button and selecting "PTZ" in the pop-up menu as below, or select PTZ icon  in the menu bar. When it is in the PTZ mode,  icon is shown on the right-button corner of the screen.



PTZ Control

In PTZ mode, user can control PTZ operation with USB mouse. While pressing the left button of mouse, user can drag the mouse cursor to up/down or left/rightward to move pan/tilt position of the camera. If user moves the mouse cursor to further extend from the center position of the main screen, the PTZ camera moves at faster speed. On the contrary, if the mouse cursor is getting closer to the center, the PTZ camera moves slower.



Note Full PTZ functions are available by using USB mouse, IR remote control, or keyboard controller.



ZOOM/FOCUS

User can also move zoom-in/out by rolling the wheel of mouse to up or downward. If user changes the mode into "Focus" in the pop-up menu, focus can be controlled by rolling the wheel of mouse.

PRESET

When the preset menu pops-up, select the preset number and click "Enter" button to move to the corresponding preset position.

Maximum Preset number is 255 (It can be restricted by the number that PTZ camera supports).



GUARD TOUR

User can automatically switch PTZ camera position according to the sequence of preset setting by using GUARD TOUR function, though the connected PTZ camera does not support it. "GUARD TOUR" on the pop-up menu can be enabled after changing to full screen for the channel that the PTZ camera is connected to. Please make sure that PTZ camera setting is correct, otherwise, "GUARD TOUR" is shown as disabled. (Please refer to "4.2.3 PTZ" for setting.)

Caution User can set interval for each preset position.

Depends on PTZ camera, some preset positions might be skipped in the case that the PTZ camera cannot mechanically move or control focus within the interval time set by DVR. In this case, it is recommended to make setting of interval time a little longer.

3.4 Playback Recorded Images

To playback recorded image, press Play button from the Front Panel, IR Remote Controller or playback icon (📺) in the menu bar. When it goes to playback mode, it automatically playback the latest recording image.

It is easy to use USB mouse or the Front Panel's Jog/Shuttle to playback recording files. Turn the Jog and the recorded files can be seen backwards or forwards. Turn the Shuttle and the playback speed can be controlled 2, 4, 8, 16, 32 times while playback backwards or forwards.

Note Jog/Shuttle in the front panel will not be available depending on the DVR model.



Date/Time(①)

It shows date & time of the image that is being displayed, currently.

Tool Bar(②)

It contains various functions such as playback control, recorded data check, screen mode and so on. (Please refer to "1.3.4. Tool Bar on Playback Mode" for detail.)

Pop-up Menu(③)

- ◆ Display : Change display mode (1, 4, 9, 16 screen mode)
- ◆ Backup : Backup recorded data
- ◆ Search : Search recorded data by various conditions
(Please refer to "3.6 Search Recorded Image" for detail.)
- ◆ Add Bookmark: Add bookmark to the current image and make it easier to be searched
- ◆ Live Mode : Go to Live mode

Exit Playback Mode(④)

In order to exit from the playback mode, click Exit icon (🔙) in the menu bar.

3.5 Quick Backup during Playback

User can easily archive video while he/she watches video playback.

In playback mode, user can press "ENTER" button in the front panel to set archive "start" time. After pressing this "ENTER" button, user will see "Quick backup starts" in right bottom of the playback monitor.



Press "ENTER" button to set "start" and "end" time during video playback.

Button type may be different depending on the DVR case

Once "Quick backup starts" message is shown(①), user can keep playing back video until user wants to finish archiving, and then press the same "ENTER" button again to set backup "end" time. Then, backup menu window will be popped up and user can select the backup media like CD/DVD or USB thumb drive, and execute archiving.

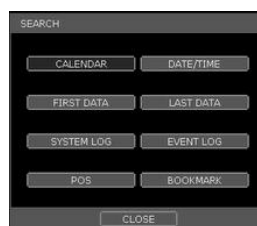


Note [HELP] button can help you understand how to setup several important settings. For example, if you need help about how to set Backup, click [HELP] button at the right bottom of the menu).

3.6 Search Recorded Image

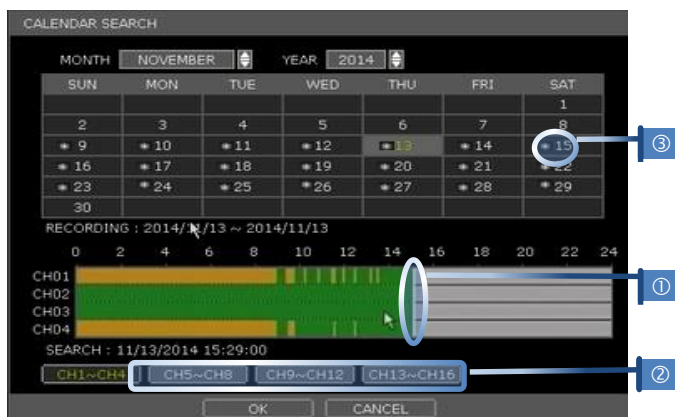
User can search recorded image with various conditions.

- Note** There are several ways to get into the search menu.
- ① In Playback mode, Pop-up menu → Search menu.
 - ② In Live mode, Tool bar → Search button
 - ③ [SEARCH] button in front panel



3.6.1. Calendar Search

The user can select date and time to search for a certain file within the recorded image.



User can move the white-vertical line (①) to the time that user wants to search.

The colors of the time bar are different by each recording mode. Please refer to “4.4.2” for details on colors. Time bars in color shows by 4channel group. To check another channel group, select group button on the bottom of the window (②).

“*” mark in date as above picture (③) means that there is a video data recorded.

3.6.2. Search Date/Time

Enter the desired date and time to playback the recorded image.

Use the arrow button or mouse to move to each day/month/year and time category for selecting second / minute / hour / month / year.



3.6.3. First Data

Go to the first screen of the recorded image. This is the oldest image recorded.

3.6.4. Last Data

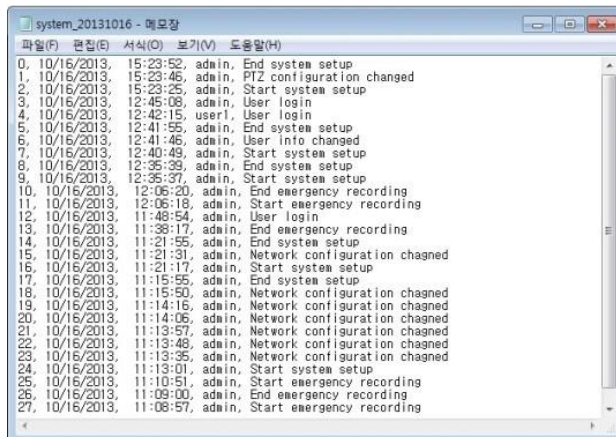
Go to the last screen of the recorded image. This is the latest image recorded.

3.6.5. System Log

The system log search is used to find particular system log information, quickly and easily.



- ① Select date to search.
- ② Select log type to search. User can search one by one or all at once.
- ③ Click [SEARCH] button to show list with time and event.
- ④ Click [EXPORT] button to copy the list to external device such as USB memory stick as “.txt” file.
- ⑤ Once export is completed, user can find a date folder created in USB memory stick. There is “system.log” file stored in the date folder.



3.6.6. Event Log

The Event log search is used to find particular event, quickly and easily.



- ① Select date to search.
- ② Select log type to search. User can search one by one or all at once.
- ③ Click [SEARCH] button to show list with time and event.
- ④ Click [EXPORT] button to copy the list to external device such as USB memory stick as “.txt” file.

Note In case the Alarm does not activate even though the alarm input setting had been done, check the alarm connection port of the product's rear panel.

Note 20 numbers of log record will be shown on one page of the [System Log] and [Event Log] window. User can click the arrow button (◀ ▶) to search the log records on another page.

3.6.7. POS

Input the search information (channel #, date, time & keyword) and then click [SEARCH] button to get the list. If no keyword is input, system will display all data during designated time period. Click [PLAY] button to display the searched video image and POS data as well.

SEARCH POS DATA

CH DATE

TIME ~

KEYWORD

NO	TIME	DATA
1	17:04:35	WES C OIL 48Z 1.78
2	17:04:35	CLASSIC COKE .99
3	17:04:36	MUSTARD 641 1.38
4	17:04:36	200.69
5	17:04:37	CILANTRO .39
6	17:04:37	SALAPENOS .39
7	17:04:38	44LB @.89/LB
8	17:04:38	
9	17:04:38	
10	17:04:39	SUBTOTAL 8.65

1/1

3.6.8. BOOKMARK

Bookmark data can be checked, modified and deleted. Select one of them in the list and click [PLAY] button to display the correspondent video image.

SEARCH BOOKMARK

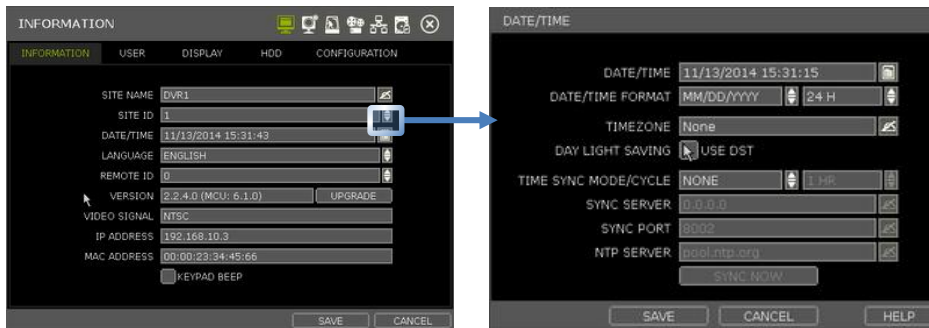
NO	TIME	DESCRIPTION
1	11/27/2013 04:24:04	check1
2	11/27/2013 08:54:00	event2
3	11/27/2013 13:06:00	event2

3.7 DST Setting and Image Playback

During DST (Daylight Saving Time) period, DVR time clock has to be adjusted according to regional time zone. That is, DVR time clock will be shifted by one hour after DST setting while DVR will restore the time clock to normal after DST finishes.

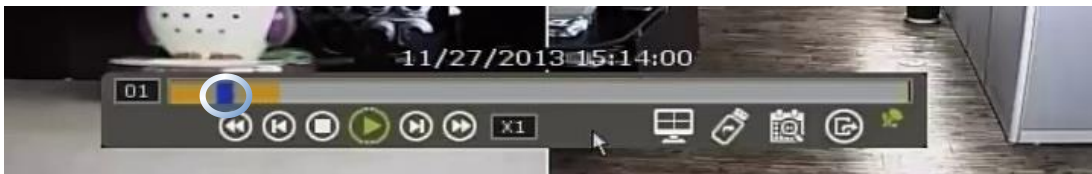
3.7.1. DST Setting

To make DST setting on the DVR, go to the menu of SYSTEM > INFORMATION and click “DATE/TIME”  to open date & time setting window as below. User can select “USE DST” to apply DST time change.



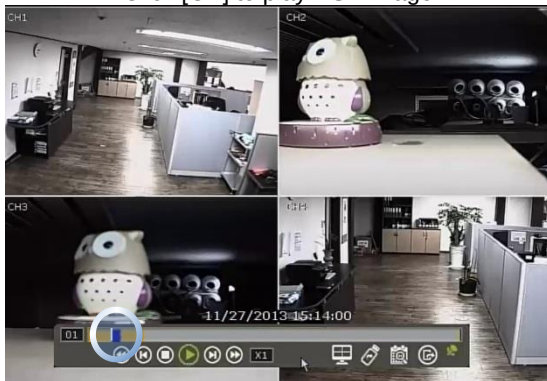
3.7.2. DST Image Playback

There is an hour overlapped data when DST finishes. Such period of hour will be indicated in Blue color in Intelli-Search Bar on playback mode.



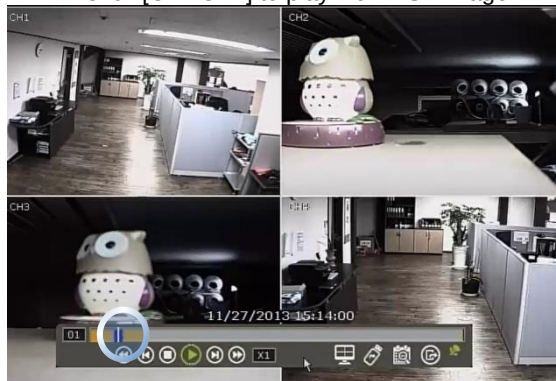
When user click on such overlapped period, a message of “Data Selection” will pop up, then user can select whether to play DST data or Non-DST data.

Click [OK] to play DST image



["DST" image is displayed]

Click [CANCEL] to play Non-DST image.



["Non-DST" image is displayed]

4. Setting

General setting structure consists of “System”, “Device”, “Event”, “Record”, “Network” and “Backup” as below.



Main Classification	Sub Classification
SYSTEM	INFORMATION
	USER
	DISPLAY
	HDD
	CONFIGURATION
DEVICE	CAMERA
	AUDIO
	PTZ
	POS
	KEYBOARD
EVENT	SENSOR
	MOTION ALARM
	EVENT ALARM
RECORD	CAMERA
	SCHEDULE
	QUICK SETUP
NETWORK	NETWORK
	DDNS
	NOTIFICATION
	MOBILE PUSH
	P2P CLOUD
BACKUP	BACKUP

User can find the menu icon  in the menu bar or menu button in the pop-up menu by right clicking the mouse button.

User can move mouse cursor from “System” through “Backup” to instantly look around the sub-menus in the menu screen.

4.1 System

4.1.1. Information

SITE NAME

User can designate the site name by using virtual keyboard as below.



SITE ID

User must setup SITE ID to match with the ID setting of keyboard controller, if user wants to use it to control DVR.

User also needs to select the correct model of keyboard controller and BUAD RATE setting in “MENU > DEVICE > KEYBOARD” menu (Please refer to “4.2.5 Keyboard” for detail).

DATE/TIME

User can make various settings such as time zone selection, DST (Daylight Saving Time) and time sync mode.

There are three types of time sync mode.

- Server Mode

The Operation DVR is set as a Time Sync Server, which can synchronize the time clock of another DVR(s) connected over the same network environment.

- ♦ Client Mode

The operating DVR is set as one of the client DVR(s). Input the IP address of designated DVR or Remote Software P/C (CMS) as a Time Sync Server in "SYNC SERVER", then DVR time clock is synchronized with Time Sync Server by interval time set in "TIME SYNC CYCLE".

- ♦ NTP Mode

NTP server is one of standard time servers available on Internet and it is recommended to use "pool.ntp.org". If you want to activate this mode, you have to correctly set the TIME_ZONE of your local area and then click SYNC NOW.

And user can set "DST (Please refer to "3.7 DST Time Setting), 'Time Zone' and 'Date/Time Format'.

Note "HELP" button can help you understand how to setup several important settings.

For example, if you need help about how to set Date/TIME, click "HELP" button at the right bottom of the menu.

LANGUAGE

User can select the language according to the country or user's preference.

DVR supports various languages. If you cannot find your preferred language, please contact your dealer in your area accordingly.

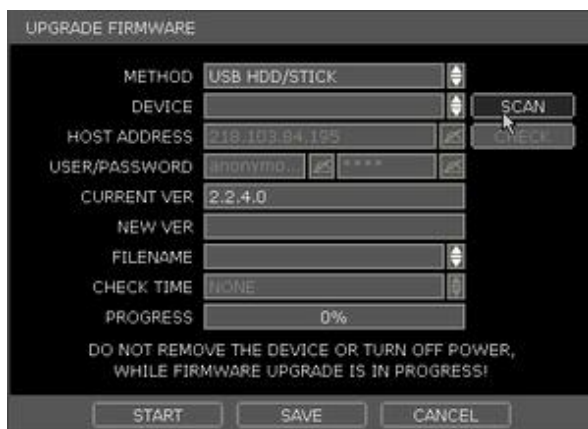
REMOTE ID

User must setup REMOTE ID to match with the ID setting of IR remote controller, if user wants to use it to control DVR.

VERSION

User can check version of system.

User can easily upgrade the system firmware via DVD/CD/USB Memory Stick/FTP server.



Caution **Do not click CANCEL button during firmware upgrade. It may cause serious damage on the system !!!**

The setting value might be changed to that of factory default in case that there are a lot of changes between new firmware and existing firmware in functions, etc.

Therefore, it is recommended to check the setting value and operating condition of the DVR after firmware upgrade.

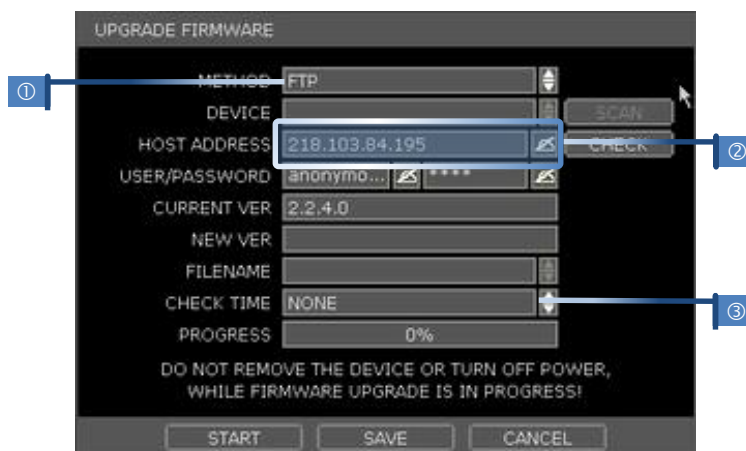
Procedure How to upgrade system firmware by using USB memory stick

- 1) Put USB thumb-drive which was formatted by FAT/FAT32 in any USB port of DVR that shall be compatible with USB 2.0 version
-

- 2) Once the system detects the thumb-drive, user can see a brand or model name in "DEVICE" after pressing [SCAN] button.
 - 3) Select DVR name and version to be applied, and then click [OK] to confirm.
- (*) It is not allowed to use the partitioned USB memory.**

[Automatic firmware upgrade through "PUSH ALERT"]

- ① Select METHOD as "FTP"
- ② Default FTP information operated by manufacturer (Host address, username and password) is shown as below. User must have prior consultation with the manufacturer if he wants to operate his own FTP server.
- ③ Enter your convenient time at CHECK TIME and then click [SAVE] button.



- ④ The system will regularly check whether the latest version of firmware is available at FTP server and generates alert message if the latest version is found.
- ⑤ Click [OK] button to proceed automatic firmware upgrade. After completed, the system will reboot.

VIDEO SIGNAL

Check the right video signal (NTSC or PAL) according to the country. **This setting should be matched with the [NTSC/PAL Selection Switch] located on the rear panel.** Video images might be heavily shaking and blinking in probably black & white if NTSC/PAL is not properly set.

IP ADDRESS

It shows IP Address of the DVR. It can be set at 'MENU>NETWORK>NETWORK'.

MAC ADDRESS

It is the unique identity number for each system.

KEY PAD BEEP

User can turn on or off the beeping sound of key pad.

4.1.2. USER

The ADMIN user (default password is 1234) has got the full authority for system setting, and can change the system password or add/delete user list and assign different permission level to each user.

Note Maximum number of users including administrator is 16.

User Management

Admin user can control authorization for each function. This authorization is applied the same when the user connect to the DVR from the remote software.

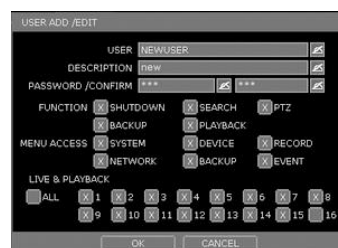


① Add User

To add new user, click [ADD] button to open the new window. In this window, admin user can set new user's ID, description, password and select functions/menu access to allow to the new user.

In Live & Playback, only the selected channels are allowed to monitor by the user.

To change the setting, select user and click [Edit] button. And then do the same setting as above.

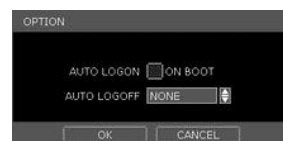


② Delete User

Select user in the list and click [Delete] button.

③ Option

- If user select Auto Logon "On Boot", DVR doesn't request ID and password when it turns on.
- If "Auto Logoff" is set, and no operation is applied during the set time, DVR becomes log off status. Then, user has to login again to operate the DVR.



Example : How to set a user with "Live Monitoring Only"

- 1) Add a new user name, description and password.
- 2) Disable all options in [FUNCTION] and [MENU ACCESS].
- 3) In [LIVE & PLAYBACK], select channel(s) for live monitoring, and click [OK].
- 4) Click [SAVE].
- 5) To verify this limited function, log-off through Exit icon  and login as the user set above. User can receive the live images. However, when user clicks playback button or select any other function, warning message of "No Permission for this function." will pop up.

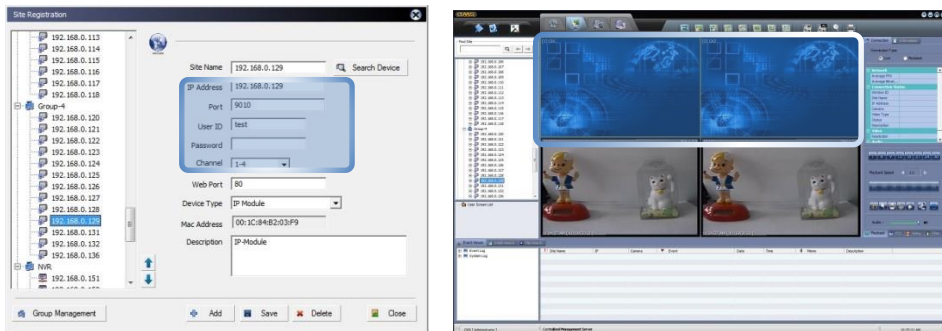


Setting Authorized Level at Remote Software (CMS)

Level of authority for the user is linked up between DVR and Remote Software. If a user has been restricted for certain permissions in DVR operation such as "Live and Playback of each channel, Search, PTZ Control and Backup", then those restrictions will also be applied for same user when operating Remote Software : How to set a User with "limited access of camera channels"

Example : How to set a user with "limited access of camera channels"

- 1) Open Site Registration, and add new site.
- 2) Input User ID and Password (which has already been registered in DVR, with limited access of certain camera channels).
- 3) Connect the site at Monitoring Window, then the limited accessible camera channels will not be shown.



Note User ID in Site Registration of Remote Software

- 1) The authority of a certain User ID at Site Registration is governed by the permission level set in DVR.
- 2) Such User ID should be pre-registered in DVR with designated permission level.
If user has been registered in Remote Software only (not in DVR), then such user cannot be connected to the DVR via Remote Software.

4.1.3. DISPLAY

User can set sequence dwell time, VGA resolution, OSD display, spot-out dwell time and spot-out channel & dwell time as below picture.



SEQUENCE

Set dwell time for sequential channel display..

VGA RESOLUTION

The system supports three kinds of video resolutions for HDMI and VGA : 800x600, 1024x768,

1280x1024 and 1920x1080. User needs to set the proper resolution in accordance with the monitor resolution.

OSD

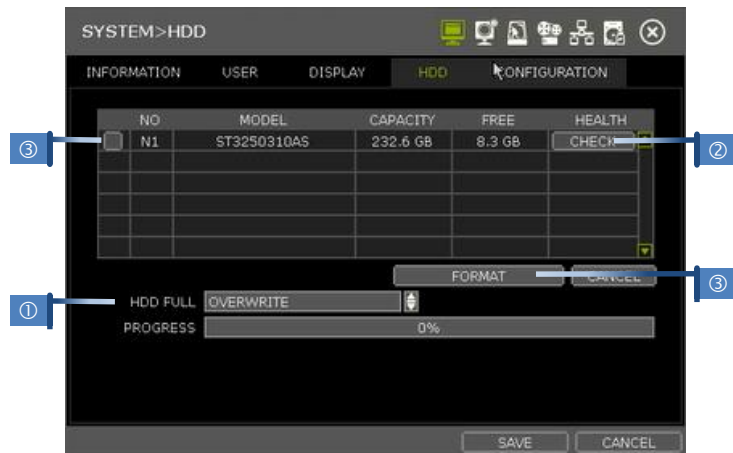
Select OSD caption to be displayed.

SPOT OUT

Select channel to be displayed on spot monitor and set dwell time.



4.1.4. HDD



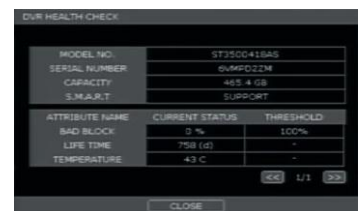
HDD FULL (①)

User can select "Overwrite" or "Stop recording" when HDD becomes full.

- Overwrite : DVR deletes the oldest data and record new data.
- Stop recording : DVR stops recording.

HDD CHECK (②)

Click [CHECK] button (CHECK) of each HDD to open the window of DVR HEALTH CHECK. User can see full information of each HDD such as model name, serial no, capacity, bad sector ratio, life time (used time) and temperature.



HDD FORMAT (③)

When the new HDD is installed or there seems to be a problem on the HDD, user needs to format the HDD.

If system resources are occupied such as network connection during format process, format may be failed. In this case, it is recommended to reboot the system to release system resources and then try to format again.

User can select HDD to format by ticking the check box.

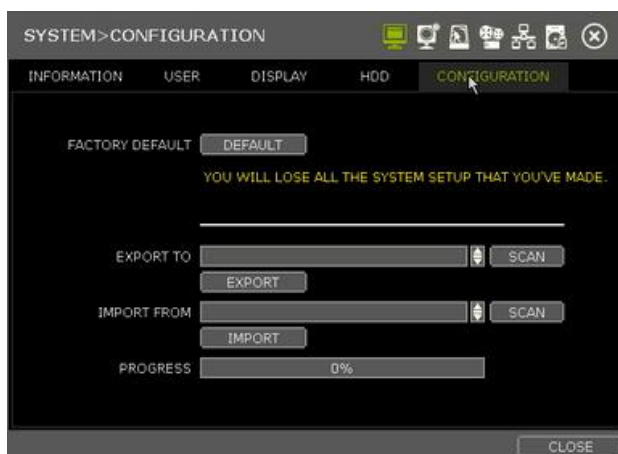


- Note**
- 1) It may take a few minutes to format HDD.
If it takes a long time, please check the status of HDD.
 - 2) When the format is done, all data in the HDD will be deleted.
 - 3) The system always reserves some space in each built-in HDD to effectively utilize archiving memory.

Caution **WARNING MESSAGE**

To achieve high-level system stability, warning message of high temperature will be popped up when temperature inside the system exceeds optimum range. This problem may be driven from mal-function of ventilation fans. In this case, user shall inspect if the cooling fan is properly working, or ambient temperature around the system is properly kept.

4.1.5. CONFIGURATION



FACTORY DEFAULT

With authorized password, user can make the system back to factory default configuration. Once the factory default is done, all the configurations made by user will be deleted and the system setting will be originated by factory default. However, recorded video data are protected.

EXPORT/IMPORT

Copy and paste the system configurations in this menu.

- Export : Copy the settings of this system to USB memory devices.
- Import : Call up the settings of other system from CD/DVD/USB memory devices.

During import process, make sure that the F/W version of the sourced DVR has to be same as the one of target DVR which user wants to import settings to.

4.2 DEVICE

4.2.1. CAMERA

User can set each camera's title, motion area and color adjust.



STATUS

Status of each camera is shown automatically when the camera is connected.

TITLE

In order to distinguish the channel from the others, user can designate the channel name. The name is applied to both DVR and remote monitoring software.

COVERT

If a channel is set as COVERT, no other users except administrator can see the image in live & playback mode. It is applied to both DVR and remote monitoring software.

ADJUST

Set channel image like brightness, contrast, color and so on. Click [SET] in the 'ADJUST' section to get into set screen.



User can change another channel by selecting camera number.

[Apply All] makes all channels have the same value.

Click [EXIT] to exit.

4.2.2. AUDIO

User can select audio input and output during live display, and match the audio input to a designated channel. Number of audio channel may differ depending on DVR model. User can hear audio sound under both live display and playback mode depending on the system setting.

Select "USE 2-WAY AUDIO" to make voice communication between DVR and remote side.



4.2.3. PTZ

Full control of PTZ camera is available in this menu. For details, please refer to "3.3 PTZ Operation".

Check the below items for proper P/T/Z operation.

- Check if the protocol of the connected PTZ camera is correct.
- Check if the communication setting including baud rate of the connected PTZ camera is in accordance with the assigned value for that P/T/Z protocol.
- Check if the address of the connected PTZ camera is correct.
- Check if wiring to P/T/Z controllers is correct.

Procedure How to setup PTZ camera with Pelco-D protocol (example)

- 1) Make sure of serial communication with the PTZ camera through RS-485 port.
- 2) Select "Pelco-D" in the protocol list, and set address.
- 3) Click "Save" button to confirm this configuration.



PROTOCOL

Select the proper protocol of the connected PTZ camera.

BAUD RATE

Select the baud rate level from 2,400bps up to 57,600bps.

ADDRESS

Set the P/T/Z driver address of the connected camera. It should be the same as that of the PTZ.

CONTROL(* The functions are depends on the PTZ model.)

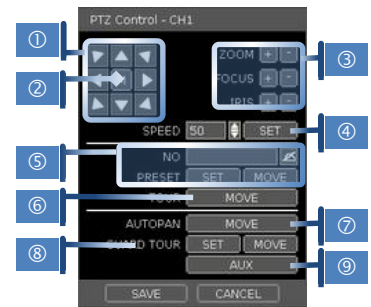
When the [SET] button is clicked, OSD menu of the PTZ camera will be shown on the monitor. User can set the PTZ such as speed, preset, tour, auto pan and so on.

- ① Direction buttons : move camera up/down & left/right.
- ② M (depends on PTZ model) : It shows PTZ camera's OSD menu on the DVR monitor. While the menu is on the DVR monitor, user can set PTZ menu with direction button (①).
- ③ ZOOM/FOCUS/IRIS : Control IN(+)/OUT(-) for each functions.
- ④ Speed : Change PTZ speed(0~100) and apply it by clicking [SET] button.
- ⑤ Preset

- ◆ Set : Control PTZ position with direction button(①) and lens control button(③). And put the number with  button and finish it with [SET] button. (The system supports preset the number of preset from 1 to 255.
But it can be restricted by the number that PTZ camera supports.)

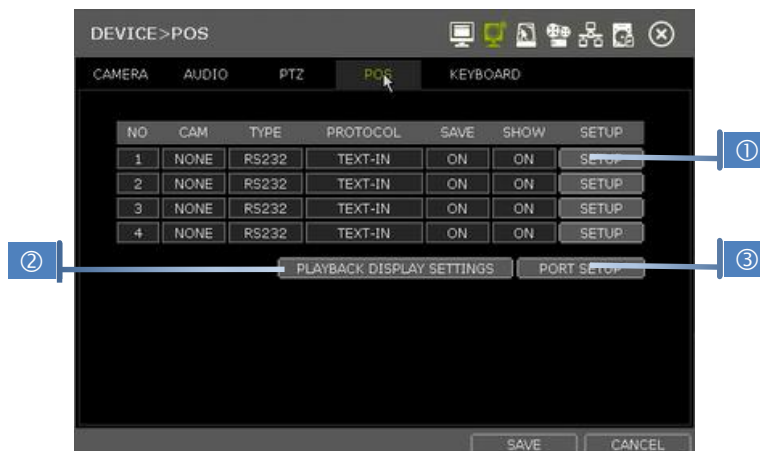
- ◆ Move : Put the number with  button and click [Move] button to move the camera to the preset position of that preset number.

- ⑥ TOUR : Camera moves the preset position in order. It keeps moving until turning off.
- ⑦ AUTOPAN : Camera moves 360 ° in one direction. It keeps turning until turning off.
- ⑧ GUARDTOUR : User can select some presets to have PTZ camera move to those positions with the set order and interval. Camera keeps moving until turn off the function.
- ◆ Set : Set the Interval(Sec) and select the preset position and add to Sequence by clicking  button. It shows like "P1(5)" and means Preset No and Interval.
- ◆ Delete : To delete preset position, select preset in Sequence and click  button.
- ⑨ AUX: User can control other devices, such as wiper & light, which are connected to PTZ camera.



4.2.4. POS

POS equipment can be connected to DVR through RS-232 port or LAN.



NO

Port Number of Serial Mux. ex) NO1 = COM1, NO4 = COM4.

CAM

Camera to link to POS device

TYPE

Connection type between DVR and POS device

PROTOCOL

Communication protocol between DVR and POS device.

SAVE

Save the POS data or not

SHOW

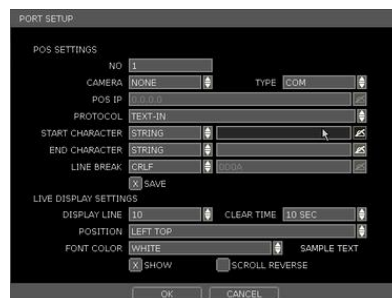
Display the POS data or not

SETUP (①)

Go to the setup screen.

- POS SETTINGS

- ◆ NO : ID# of POS device
- ◆ CAMERA : Select the camera to link with POS device
- ◆ TYPE : Select COM (RS-232) or TCP/IP (LAN)
- ◆ POS IP : Input IP of POS device when it is connected through network
- ◆ PROTOCOL : Communication protocol between DVR and POS device
 - ① TEXT-IN: Receive ASCII character
 - ② SDVR-POS: Manufacturer's own protocol
 - ❖ Please contact your POS dealer for details.
- ◆ START CHARACTER: Input the assigned character to start display and save. If there is no input, the system will display and save all data without classification per transaction.
- ◆ END CHARACTER: Input the assigned character to terminate display and save. It must have **START CHARACTER** to work correctly.
- ◆ LINE BREAK: Set the line change character. (It should be 16 digits HEX Value.)
 - ① [CRLF] / [CR] / [LF]: The character that is generally used in ASCII-type POS. (Please contact POS manufacturer for the detail.)
 - ② [Custom]: It can be used except the above general character. Only number (0~9) and alphabet (A ~ F) can be used and even numbers should be input.
ex) Hexadecimal: 0x0D 0x0A → 0D0A
- ◆ SAVE : Save POS data.



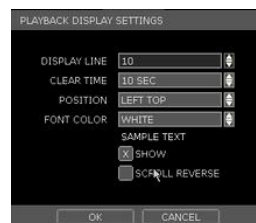
- LIVE DISPLAY SETTINGS

- ◆ DISPLAY LINE : Set the number of line to be displayed on the screen.
- ◆ CLEAR TIME : Set the time period to be displayed on the screen. The data will be deleted if no more data is input after the setting time here. If it is set as "0", the data will not be deleted (If there is Start Character and the character is input, current data will be deleted regardless of the Clear Time setting)
- ◆ POSITION : Designate the display position of POS data.
- ◆ FONT COLOR : Select the font color which will be displayed on the screen. It will be displayed with the color that is shown on "SAMPLE TEXT"
- ◆ SHOW : Select to display POS data in the live mode.
- ◆ SCROOLL REVERSE: Select to change the direction of scrolling. If it is selected, you can scroll from the bottom to top, that is, the latest data is displayed on the top.

PLAYBACK DISPLAY SETTINGS (②)

Open setup screen for playback mode

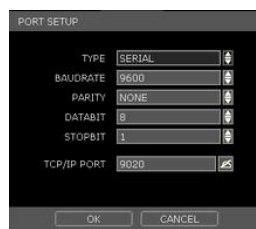
- ◆ DISPLAY LINE : Set the number of line to be displayed on the screen.
- ◆ CLEAR TIME : Set the time period to be displayed on the screen.
The data will be deleted if no more data is input after the setting time here. If it is set as "0", the data will not be deleted. (If there is Start Character and the character is input, current data will be deleted regardless of the Clear Time setting.)
- ◆ POSITION : Designate the display position of POS data.
- ◆ FONT COLOR : Select the font color which will be displayed on the screen. It will be displayed with the color that is shown on "SAMPLE TEXT".
- ◆ SHOW : Select to display POS data in the playback mode.
- ◆ SCROOLL REVERSE : Select to change the direction of scrolling. If it is selected, you can scroll from the bottom to top, that is, the latest data is displayed on the top.



PORT SETUP (③)

Open setup screen for communication port

- ◆ TYPE : Setup the type of communication port.
 - SERIAL : It is for 1-to-1 connection between DVR and POS device without Serial Mux.
 - MUX : It is for 1-to-Multi connection between DVR and POS device
- ◆ BAUDRATE : Set BAUDRATE according to the connected POS device.
- ◆ PARITY : Set PARITY according to the connected POS device.
- ◆ DATABIT : Set DATABIT according to the connected POS device.
- ◆ STOPBIT : Set STOPBIT according to the connected POS device.
- ◆ TCP/IP PORT : Set the TCP/IP Port number.



4.2.5. KEYBOARD

When the external keyboard controller is in use, select the right model and corresponding baud rate.



4.3 Event

4.3.1. SENSOR

User can install multiple sensors on the system to get the pre & post alarm recording and intensive recording function as well.

NO	ON/OFF	CAM	OUT	INTENSIVE	PRESET	DWELL	PRE-ALARM	TYPE
1	ON	1	1	OFF	0	3 SEC	NONE	N/O
2	ON	2	2	OFF	0	3 SEC	NONE	N/O
3	ON	3	3	OFF	0	3 SEC	NONE	N/O
4	ON	4	4	OFF	0	3 SEC	NONE	N/O
5	ON	5	1	OFF	0	3 SEC	NONE	N/O
6	ON	6	2	OFF	0	3 SEC	NONE	N/O
7	ON	7	3	OFF	0	3 SEC	NONE	N/O
8	ON	8	4	OFF	0	3 SEC	NONE	N/O

CH1~CH8 CH9~CH16 NOTIFY

SAVE CANCEL

ON/OFF

Turn on or turn off the sensor

CAM

Select the associated camera.

OUT

Select the associated alarm output.

Caution Relay contact can stand up to 24V/1A. In case that it is connected to the external circuit which is over 24V/1A, it can cause a problem on the system.

INTENSIVE RECODING

When alarm is triggered, recording mode is changed to continuous recording mode during the selected dwell time. And if there is remaining frame which is not assigned to (Please refer to the "4.4.1 CAMERA" for detail), it records up to 30fps.

PRESET

User can select the camera to move to preset position when the sensor is triggered. (User should setup preset position in "3.3 PTZ Operation" menu in advance.)

DWELL (Post Alarm)

Set the recoding period from the start of sensor output activation. During this period, the corresponding camera will record according to the Record setting. The recording stops and alarm output is turned off when the setting period is elapsed.

PRE-ALARM

Set recording period in seconds just before perceiving sensor input up to 5 seconds of time length.

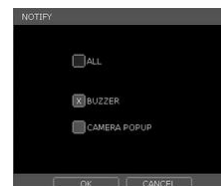
The system records in certain seconds of time prior to the time that alarm is activated, so that user can search video even before alarm is triggered. The pre-alarm recording mode is always "continuous" at the recording speed that user sets in "Camera" of "Record" menu.

TYPE

Select the sensor type between N/O(Normal Open) and N/C(Normal Close), connecting to alarm input terminals. Circuit of N/O type is usually open, and the activation of the sensor occurs at the time of close, and N/C type works the reverse way.

NOTIFY

User can select how to be alerted upon sensor is activated or motion is triggered by pressing “NOTIFY” button. The system will generate buzzer sound in the selection of buzzer and/or make pop-up screen of the camera in the selection of camera pop-up.



Note Check the setting of the sensor type (N/O or N/C). It is recommended to use “Dry Contact Type” while “Wet Contact Type” may cause the damage to the system.
The alarm might not function if the used sensor type and the system setting are inconsistent.

Note “Camera pop-up” means that multi-screen live video mode will be switched to single channel mode automatically upon alarm triggered. This single channel video is the channel triggered by alarm.

4.3.2. MOTION ALARM

Motion alarm is to start the recording when motion is detected by installed camera based on the area setting. The system will trigger alarm signal via the selected sensor-out channel.



ON/OFF

Turn on or turn off the sensor

CAM

Select the associated camera.

OUT

Select the associated alarm output.

Caution Relay contact can stand up to 24V/1A. In case that it is connected to the external circuit which is over 24V/1A, it can cause a problem on the system.

INTENSIVE(RECORDING)

When alarm is triggered, recording mode is changed to continuous recording mode during the selected dwell time. And if there is remaining frame which is not assigned to(Please refer to the “4.4.1 CAMERA” for detail), it records up to 30fps.

DWELL (Post Alarm)

Set the recoding period from the start of sensor output activation. During this period, the corresponding camera will record according to the Record setting. The recording stops and alarm output is turned off when the setting period is elapsed.

PRE-ALARM

Set recording period in seconds just before perceiving sensor input up to 5 seconds of time length.

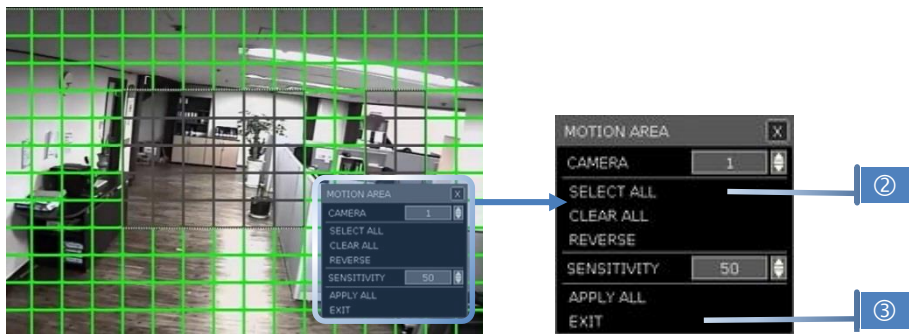
The system records in certain seconds of time prior to the time that alarm is activated, so that user can search video even before alarm is triggered. The pre-alarm recording mode is always “continuous” at the recording speed that user sets in “Camera” of “Record” menu.

MOTION AREA

User can select motion detection area and sensitivity.

The area can be selected by clicking block or drag of the mouse. Motion detection area is shown with green border line and unselected area is shown with grey border line.

Click [SET] in the ‘MOTION AREA’ section to set area.



Select the area with mouse dragging and click [EXIT] menu(③) and then click [SAVE] button(①) to save the change.

If user wants to set all channels with the same condition, click [SELECT ALL] button(②) and click [SAVE] button(①) to save the change.

User can change another channel by selecting camera number.

Note Motion detection area and sensitivity should be set, properly, in consideration of the actual motion happened in the site.

4.3.3. Extra Alarm

There are several alarm functions available on the system such as SMART, VIDEO LOSS, RECORDING FAILURE and DISK FULL.



S.M.A.R.T.

It is to trigger alarm signal when HDD might be about to be out of operation. Please refer to the “Section 4.1.4 HDD” to check the HDD status.

VIDEO LOSS

It is to trigger alarm signal when the camera signal is disconnected.

RECORDING FAILURE

It is to trigger alarm signal when the system doesn't record image due to the error in HDD or system and so on.

DISK FULL

It is to trigger alarm signal when the HDD is occupied with a certain percentage of its capacity. If user set HDD FULL as STOP RECORDING in HDD menu and the HDD is occupied with the certain percentage set here, DVR stops recording and alarm trigger.

Note Extra alarm will be remained in the event log only when it is set as “ON”.

Note S.M.A.R.T(Self-Monitoring Analysis and Reporting Technology) is the technology that is developed by HDD manufacturers. In some cases, S.M.A.R.T may not detect the abnormal operation of the HDD. It is recommended to do HDD health check in the HDD menu regularly.

4.4 RECORD

4.4.1. CAMERA

User can make recording setting for each channel separately.



ON/OFF

It is to switch “recording” on and off in each channel. If recording is not required on the selected channels, even when the camera signal is input, set the recording of the corresponding channel as [OFF]. Then, recording of the channel stops without pulling camera BNC cable off. [ON] or [OFF] can be selected. The default is [ON].

RESOLUTION

Image resolution for recording can be set. Select one setting from 352×240/288, 720×240/288, 720×480/576 & 960×480/576. As the resolution number increases, the picture quality becomes higher. For example, 352×240 is VHS level and when high quality camera is used, 960×480/576 shows DVD level picture quality. When the picture quality gets higher, the recording file size becomes bigger and the recording period will be shorter. Thus, selecting appropriate resolution according to the situation is important.

Note The storage capacity for the same image will be different. Image per byte is ratio to the image dimensions (horizontal x vertical), thus 720×240/288(2CIF) is twice the size of 352×240/288(1CIF) and 720×480/576(D1) takes about 4 times the storage capacity. Therefore when high resolution is selected for the same period, the storage capacity taken up will be larger and the storage period will be shorter on the same Hard disk capacity.

FPS

It means “Frame” consisting even and odd fields per second.
The system automatically calculates “Remaining FPS” (③).

QUALITY and Setting of Encoding Mode (②)

The setting value of “Quality” directly influences the byte size per image. For example, the byte size decreases as quality goes lower. In this case, blocking (mosaic) phenomena tends to appear, which is resulted by high compression. In contrast, blocking phenomena disappears as quality goes higher. In this case, the required storage space per image increases, which leads to shortening of total recording period. Therefore, give consideration to the necessary recording period, importance of each camera image, and quality of analog signal when setting the recording quality.

Note 1) VBR (Variable Bit Rate)

It focuses on the image quality rather than data size. So, in case of complicated & high

frequency motion image, data size is getting bigger and the recording period is getting shorter. In this mode, user can change each camera's quality by selecting one of the following options.

: Low / Standard / High / Highest

2) CBR (Constant Bit Rate)

It focuses on keeping constant data size regardless of the image quality. It can be helpful for maintaining recorded data as requested period but, in case of complicated & high frequency motion image, the image quality is getting worse accordingly.

In this mode, user can change all camera's quality by selecting one of the following options.

: 128K~896KBPS / 1M~3MBPS / Low / Standard / High / Highest / Ex. Highest

AUDIO

Select the associated audio channel.

AUTO DEL (Auto Delete)

It means that the system will delete video whatever is recorded longer than the number of days set by "Auto Del" in accordance with privacy regulation in certain country.

Note "Auto Del" does not guarantee the number of recording days that user set. For example, even though user sets 10days in "Auto Del", if HDD space is not enough, then the system cannot record up to 10days. This feature is not to keep video data for a certain number of days set by user.

If user sets 10days in "Auto Del" on August 20 for the system that has, for example, 30days of video data, then the system will keep video from August 11 to August 20 for 10days. All other video recorded before August 11 will be deleted by the system. On August 21, the system will keep video from August 12 to August 21 for 10days.

USE DUAL STREAM (①)

DVR can simultaneously generate two independent video streams (one for local recording and the other for network transmission) for user to effectively manage recording image quality and network traffic. The frame rate and resolution for each stream can be independently set. For example, user can make recording setup as "30fps at 960H resolution" while the network setup as "just 1 fps at CIF resolution".

Select [USE DUAL STREAM](①) in order to use this function.

CAM	RESOLUTION	FPS	QUALITY	AUDIO
1	480X240	30	STANDARD	OFF
2	480X240	30	STANDARD	OFF
3	480X240	30	STANDARD	OFF
4	480X240	30	STANDARD	OFF
5	480X240	30	STANDARD	OFF
6	480X240	30	STANDARD	OFF
7	480X240	30	STANDARD	OFF
8	480X240	30	STANDARD	OFF

STREAM LIMIT: 10% % of STANDARD QUALITY

CH1~CH8 CH9~CH16 REMAINING FPS 0

OK CANCEL

RESOLUTION

Select the resolution to be transmitted. The higher resolution requires the bigger network bandwidth due to its data size.

FPS

Select the frame rate to be transmitted. It is not related to the record setting.

QUALITY

Select the image quality to be transmitted. It is not related to the record setting.

The higher quality requires the bigger network bandwidth due to its data size.

AUDIO

Select On or Off to transmit audio or not.

STREAM LIMIT

It allows user to reduce the image quality for transmission by percentage of the standard quality. The lower percentage requires the smaller network bandwidth but the image quality will be lower. On the contrary, the higher percentage requires the bigger network bandwidth but the image quality will be better. The highest image quality (100%) is same to the standard image quality of record setting.

Note According to the setup of Resolution and FPS, system automatically calculates “Remaining FPS” for dual stream.

Note Dual stream function is applied to network transmission of the live image monitoring, only. In case of VOD(Playback) at the remote software, it is not related to dual stream and the network transmission follows record setting of the DVR.

Note “HELP” button will help you understand how to setup several important settings. For example, if you need help about how to set Camera, click “HELP” button

4.4.2. SCHEDULE

Set recording schedule for each camera. First, select the camera to set schedule, or “All”. Recording can be set by each hour from 00 through 23 a day.



NO COLOR (Off)

“Off” means no recording.

Even though user set recording frames and on in “CAMERA”, the system will not record anything if user sets “OFF” in SCHEDULE.

YELLOW COLOR (Continuous Recording)

Record all the time as set by “CAMERA”.

GREEN COLOR (Motion-Detection Recording)

In case of a specific model that has “Instant recording” button in front panel, the system will instantly start recording all the channels with full frame rate at the maximum resolution regardless of recording mode setting. **E-REC** is shown in live mode and red-colored bar is shown in the time search bar of playback mode for the video recorded by instant recording.

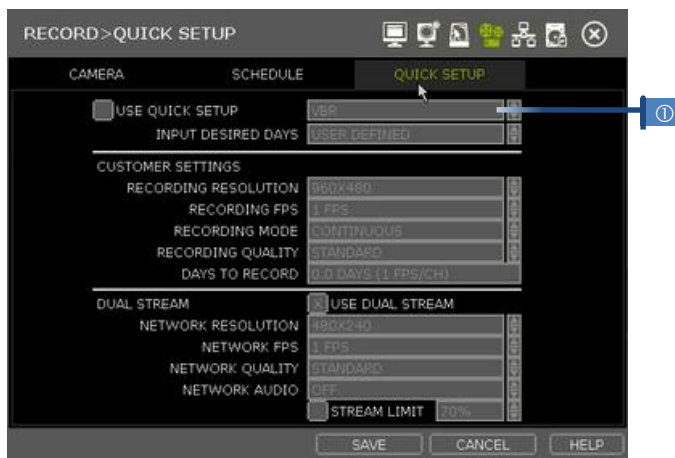
4.4.3. QUICK SETUP

Quick Setup is to help user make easy configuration for recording resolution, recording speed, recording mode, recording quality and recording periods based on the capacity of HDD installed.

The setting made by QUICK SETUP will get the first priority to apply on the system whatever user sets configurations in other menu.

USE QUICK SETUP

Once user ticks in the check-box of [USE QUICK SETUP] and set encoding mode(①, Refer to the menu “4.4.1 CAMERA”) and designate the [Input Desired (Recording) Days], the settings for recording resolution, fps and quality will be optimally adjusted to get the similar recording period set in the box of INPUT DESIRED DAYS. Furthermore, user can adjust the settings at CUSTOMER SETTINGS by manual input finally to get the “Recordable Period” at DAYS TO RECORD based on the capacity of HDD installed.



Caution Recordable period calculated by QUICK SETUP is just for reference and may vary depending on the actual site situation

4.5 NETWORK

DVR can be connected to network or internet through either fixed IP or dynamic IP by proper setting of DVR and router.

4.5.1. NETWORK

NETWORK TYPE

Select either STATIC IP or DHCP for dynamic IP.

If DHCP is selected, click “IP DETECT” button to receive the updated IP address information, then you can see the completion rate on “Progress Bar”

IP ADDRESS

In case of STATIC IP, user can input IP address by clicking  button.

In case of DHCP, it shows system IP address.

SUBNET MASK

Subnet Mask address classifies the subnet that the system belongs to. For more information, please consult your network administrator or your internet provider.

GATEWAY

This is the IP address of the network router or gateway server. It is required when the user wants to connect through external router. For more information, please consult your network administrator or your internet provider

DNS SERVER

Enter the IP address of the Domain Name Server. You should input the DNS Server information in order to use DDNS, E-mail notify and NTP Server. If it is hard to know the correct information, user can input “8.8.8.8”. For more information, please consult your network administrator or your internet provider.

TCP/IP PORT

Input the port number to use when connecting locally or remotely. It is for use with Remote Software P/C (CMS) and Mobile Device (MobileViewrPro).

WEB PORT

Input the port number to use when connecting from the Web Browser.

BANDWIDTH LIMIT

Depending on the setting made by user, the system can control the data volume transmitted over network ranging from 25 kbps up to 1Gbps. This function is effective especially under narrow bandwidth network

condition or when user wants to limit “network bandwidth occupied by video transmission” to a certain level.

UPnP (Universal Plug and Play)

UPnP supports “auto port forward function (NAT TRAVERSAL)” even if the user does not set port forward in the router. It may not be supported in some routers and some network conditions.

Input necessary information based on your network environment.

- NETWORK TYPE : Select STATIC IP (in case of fixed IP)
- IP ADDRESS : Assign a local IP # to DVR (ex, 192.168.0.164)
- SUBNET MASK : Input subnet mask of your LAN (ex, 255.255.255.0)
- GATEWAY : Input gateway of your LAN (ex, 192.168.0.1)
- DNS SERVER : Input IP # of your DNS server
You must input this IP # for internet connection. Please contact your ISP to get this IP#. You can input “8.8.8.8” in case you do not know this IP#.
- TCP/IP PORT : Default is 9010.
If your ISP blocks the port # 9010, you need to input another valid port number. (ex, 9020)
- WEB PORT : Default is 80
If your ISP blocks the port # 80, you need to input another valid web port number. (ex, 8080)
- BANDWIDTH LIMIT : Default is 100 Mbps.
Select bandwidth limit you want to set in consideration of network condition.

Note The maximum number of simultaneous connection is 15 users.

4.5.2. DDNS

User can use either a public DDNS server or the DDNS server operated by DVR maker (dynlink.net) to connect through dynamic IP.

DDNS SERVER

User has to tick on “Use DDNS” check box. The default is [DYNLINK.NET] and user can select [DYNDNS.COM] by using drop-down list. “dynlink.net” is the fixed domain name of DDNS server operated by DVR maker while “dyndns.com” is one of public DDNS servers.

The screenshot shows the 'NETWORK > DDNS' configuration window. It includes a tabbed interface with 'DDNS' selected. The 'USE DDNS' checkbox is checked. The 'DDNS SERVER' dropdown is set to 'DYNLINK.NET'. The 'TCP/IP PORT' is set to '80'. There are input fields for 'DOMAIN NAME', 'USER', 'PASSWORD', and 'PASSWORD /CONFIRM'. Below these are checkboxes for 'USE DEVICE IP MAPPING' and 'USE EXTERNAL IP'. The 'MAC ADDRESS' is shown as '00:00:23:34:45:66'. At the bottom right, there is a 'HELP' button highlighted with a blue border.

Note “HELP” button will help you understand how to setup several important settings. For example, if you need help about how to set DDNS, click “HELP” button at the right bottom of the menu)

Input necessary information based on your network environment. And then click [SAVE] button.

- Enable Use DDNS box
- DDNS SERVER : Select DYNLINK.NET
- TCP/IP PORT : Default is 80.
- DOMAIN NAME : Assign domain name for your DVR (ex, DVROFFICE). If the same domain name is assigned, the message will pop up when you click [SAVE]

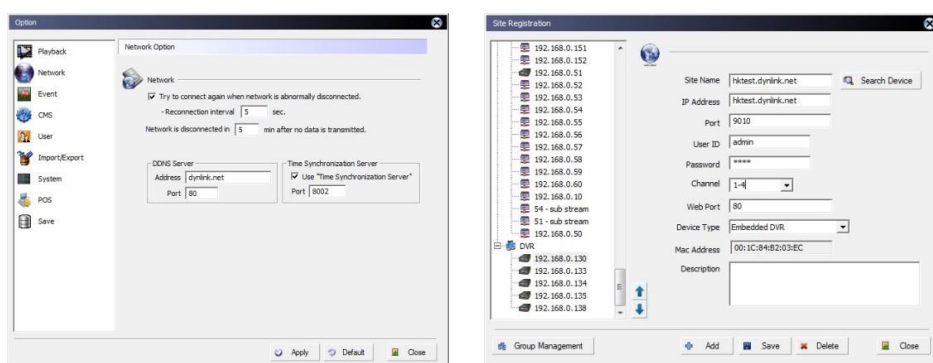
IP MAPPING and EXTERNAL IP

In case of using IP Mapping and Port Forwarding (e.g. using router for internet connection), then please enable both of [Use Device IP Mapping] and [Use External IP].

SETTING AT REMOTE S/W (CMS)

In the menu of [Option > Setting], input DDNS Address and Port number.

Address of DDNS SERVER is "dynlink.net" and Port is "80", which shall be same as the DDNS setting of DVR.



In the menu of [Site Registration], click ADD button register the DVR with DDNS domain name.

It is very important to put "Mac address + dynlink.net" or "Domain Name + dynlink.net" in IP Address (or URL) as below.

- Ex.) 1. If Mac address is "00:1C:84:01:00:02" → input as "001c84010002.dynlink.net"
 2. If domain name is "DVROFFICE" → input as "dvroffice.dynlink.net"

SETTING AT M/S IE

User can type mac address + dynlink.net.

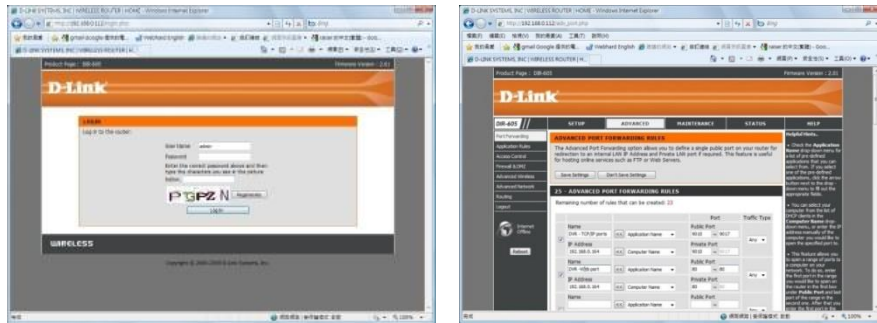
In case of using sub domain name, user can type domain name + dynlink.net

- Ex) 1. If Mac address is "00:1C:84:01:00:02" → input as "http://001c84010002.dynlink.net"
 2. If domain name is "DVROFFICE" → input as "http:// DVROFFICE.dynlink.net"

ROUTER SETTING (PORT FORWARDING)

If you want to use router for network connection, you are required to do Port Forwarding in your router (both static IP and dynamic IP). The procedure described below is just one of the examples for your reference and the captured figures may differ depending on the model of the router. Please refer to the manual of your router for details.

- 1) Login to your router through M/S IE browser.
- 2) Go to the menu of [ADVANCED > Port Forwarding].



3) Do necessary Port Forwarding as below. (TCP Port & Web Port)

- For TCP/IP Port of DVR

If you use 9010 for TCP/IP Port (mentioned as above), then you have to forward Port # 9010 to DVR local LAN IP.

☒	Name DVR - data port	<< Application Name	Public Port 9010 ~ 9010	Any
	IP Address 192.168.0.164	<< Computer Name	Private Port 9010 ~ 9010	

❖ If you change DVR TCP/IP Port to 9020, then you have to open and do Port Forwarding for 9020.

- For Mobile Port of DVR

If you use 9011 for Web Port (mentioned as above), then you have to forward port #9011 to DVR local LAN IP.

☒	Name DVR - mobile port	<< Application Name	Public Port 9011 ~ 9011	Any
	IP Address 192.168.0.164	<< Computer Name	Private Port 9011 ~ 9011	

❖ If you change DVR TCP/IP Port to 9021, then you have to open and do Port Forwarding for 9021.

- For Web Port of DVR

If you use 80 for Web Port (mentioned as above), then you have to forward port #80 to DVR local LAN IP.

☒	Name DVR - web port	<< Application Name	Public Port 80 ~ 80	Any
	IP Address 192.168.0.164	<< Computer Name	Private Port 80 ~ 80	

❖ If you change DVR TCP/IP Port to 8080, then you have to open and do Port Forwarding for 8080.

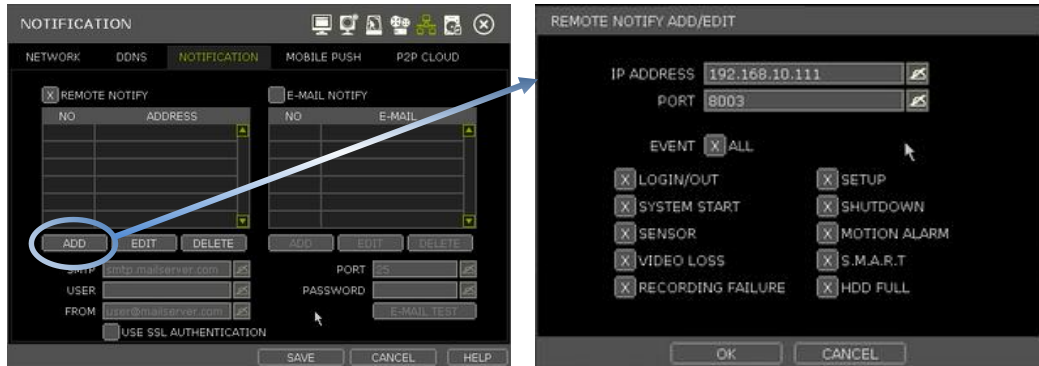
DVR needs several ports to be opened for remote image transmission, configuration, time synchronization and etc. Please refer to below port list to make sure that those ports are not blocked by firewall or other network setting.

Protocol	Port	Usage	Remark	Editable	Location
TCP	9010	DVR Data Port (for Remote S/W)	TCP Port	Yes	Network > Network
TCP	8002	DVR Time Sync Service	Need port forward at remote P/C network	Yes	System Info > Date/Time Setting
TCP	8003	Event Notify Socket	Need port forward at remote P/C network	Yes	Network > Notification
TCP	80	Web Service		Yes	Network > Network
TCP	80	DDNS Server		Select	Network > DDNS
TCP	123	NTP Server		Fixed	Network > Network

4.5.3. NOTIFICATION

REMOTE NOTIFY

The system can notify an alarm message to the IP address of Remote Software P/C over the network. Select REMOTE NOTIFY to use this function and set IP address & events.



ADD / EDIT / DELETE

User can use these to add/edit/delete IP address of Remote Software PC which will receive notification.

IP ADDRESS

Input the IP address of Remote Software PC which will receive events notification.

PORT

Input Port number which is set at the Remote Software PC. Default is 8003.

EVENT

Select events to be notified. When “ALL” is selected, all of the events will be notified.

Note Set remote pop-up in Remote S/W (CMS) upon alarm trigger in DVR.
In order for Remote Software user to receive an instant pop-up video over network from DVR, DVR user has to tick “SENSOR” or “MOTION ALARM” in above menu.
“SENSOR” means the alarm triggered by physical alarm, while “MOTION ALARM” means the alarm triggered by motion detection.

E-MAIL NOTIFY

The system can make a notification to the e-mail address.

Select E-MAIL NOTIFY to use this function and set e-mail address & events.



ADD / EDIT / DELETE

User can use these to add/edit/delete e-mail address which will receive e-mail notification.

E-MAIL

Input e-mail address which will receive events notification.

EVENT

Select events to be notified. When “ALL” is selected, all of the events will be notified.

SENDER Setting (SMTP)

Need to set sender to send e-mail notification.

- SMTP : Input SMTP server address.
- PORT : Input Port number that will be used for e-mail sending.
- USER : Input User in case the log-in is required to SMTP server.
- PASSWORD : Input Password in case the log-in is required to SMTP server.
- FROM : Input sender's e-mail address.
- E-MAIL TEST : USER can check if setting is done properly or not.
DVR sends e-mail and inform you of the result.
1) It may take long depending on the SMTP server's response time.
2) In some cases, SMTP server does not send e-mail if the e-mail is received.
- Use SSLAUTHENTICATION: In case the SMTP server requires SSL authentication (e.g. Gmail, Yahooemail, etc.), select this option.

Note Configuration first priority is always on “RECORD > SCHEDULE” menu. Thus, the system will not email alarm message upon motion alarm or sensor even though user ticks the check-box of above event selection, unless user sets the “RECORD > SCHEDULE” and “EVENT > MOTION/SENSOR” accordingly.
For example, If user sets just “Continuous” only in “RECORD > SCHEDULE” of “” and tick “All” check-box of “REMOTE NOTIFY”, then the system will not make email notification. In this case, user has to set “CONT + MOT”, “MOTION”, “SENSOR”, or “CON + SENS” in SCHEDULE, and set “EVENT > MOTION/SENSOR” to enable Email Notification properly.



Note “HELP” button will help you understand how to setup several important settings. For example, if you need help about how to set Notification, click “HELP” button at the right bottom of the menu)

4.5.4. Mobile Push

The system can make an event notification to the mobile device registered in the DVR. Select [USE MOBILE NOTIFY] to use this function and select event to notify.



- Note**
1. Mobile Push Notification function is available with iPhone, iPad & Android phone.
 2. Registration of Mobile Push Notification is available when it is applied at the mobile device.
 3. Deletion of the list will be available when you click "Delete" button in the DVR menu or when you select disable of the Push Notify function in the mobile device.
 4. Maximum number of mobile device to be registered is 50.

DELETE

When the mobile device is registered to the DVR correctly, it shows in the list.

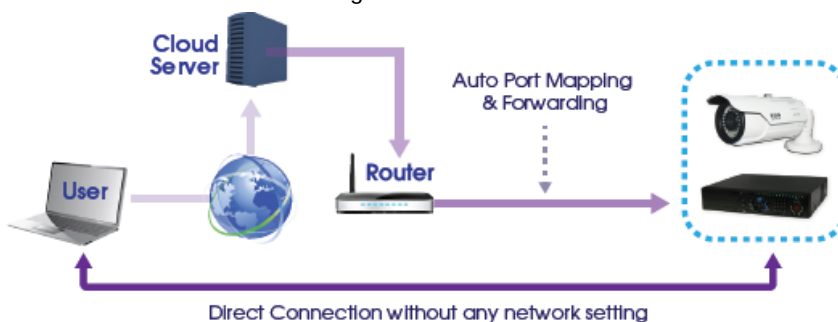
Device ID is a unique ID of the mobile device.

If you want to delete it, select the device and click [Delete] button. Then, push notification setup in the mobile device will be disabled.

- Note**
1. Push Notification function only works when the DVR & mobile device has network connection to internet.
 2. For the detail, please refer to MMS manual.

4.5.5. P2P Cloud

- Note** About ezP2P Cloud Service...
- ezP2P™ Cloud Service is a cloud-based video management system without any complicated network setting. Just login to ezP2P™ Cloud Server (www.ezp2p.com) with your own account and enjoy thumbnail preview and instant live monitoring.



REGISTRATION (in the ezP2P™ Cloud Server)

In order to use this function, user needs to register the User ID & password in the ezP2P™ Cloud Service site (www.ezp2p.com)



REGISTRATION (of the DVR to the ezP2P™ Cloud Server)

- ① Select [USE P2P CLOUD]
- ② Input E-MAIL & PASSWORD which were registered in the ezP2P™ Cloud Server site.



- ③ Click [Save] button to start communication with ezP2P Cloud Server.
- ④ Process is shown at (④). When it is finished, auto port forwarding result will be shown in the bottom of the menu(⑤).

CONNECTION (ezP2P™ Cloud Server)

Go to the ezP2P™ Cloud Service site (www.ezp2p.com) and login.

Then, the registered site list with snapshot image & detail information will be shown as below picture.



Caution P2P Cloud function may not be available, in case that;

- 1) Router doesn't support UPnP function or UPnP function is OFF.
- 2) Firewall is set in the network.
(Port no. 50,000 or higher should be opened.)
- 3) The network condition doesn't support it due to the other issues.
If P2P Cloud function is not supported, please consult your network administrator or your internet service provider.

Note ezLink™ is the function that user can easily connect to the DVR from the Web Browser which is in the same network.

Just with the Mac address of the DVR, user can see the instant live monitoring of the DVR.
([http://\[Mac Address\].ezp2p.net](http://[Mac Address].ezp2p.net))

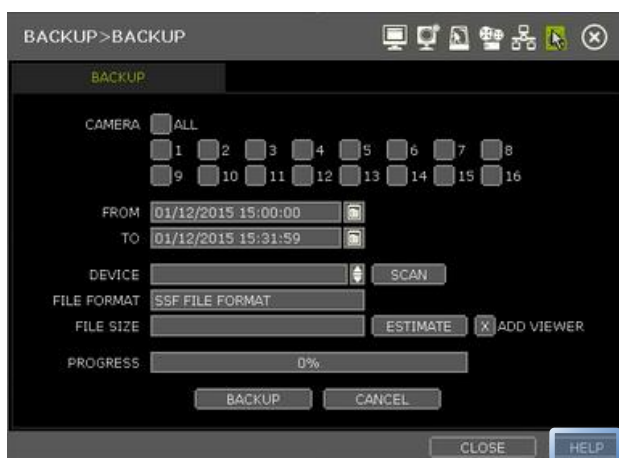
For example, if the Mac address is "00:1C:84:01:00:02", then user can input the address as "001c84010002.ezp2p.net".

4.6 BACKUP

4.6.1. Manual Backup

User can archive video clip recorded for certain period for a selected channel or channels as below picture. Connect an appropriate USB memory device like USB thumb drive, built-in CD or USB ODD burner and press [SCAN] button to get the system recognize it before actual archiving. Necessary file size will be shown before burning.

User can leave ticking in the check-box of [ADD VIEWER] to automatically put in an executable viewer file of EXE format in order to help user play the video clip without installing program in user's computer.



Note It is recommended to use built-in CD/DVD burner or well-known major brand of USB thumb drives formatted by FAT/FAT32 for proper backup.

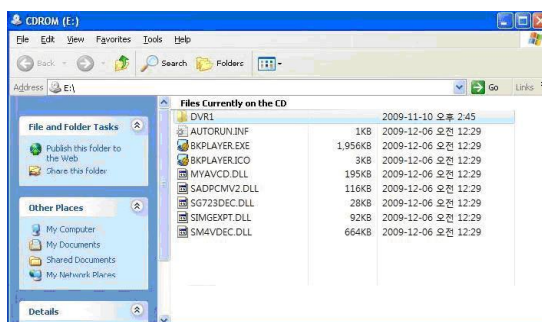
- 1) The system does not detect external HDD due to different format type.
- 2) It is not allowed to use the partitioned and/or password-encoded USB memory.

Note “HELP” button will help you understand how to setup several important settings. For example, if you need help about how to set Backup, click “HELP” button at the right bottom of the menu)

4.6.2. Backup Video Retrieve

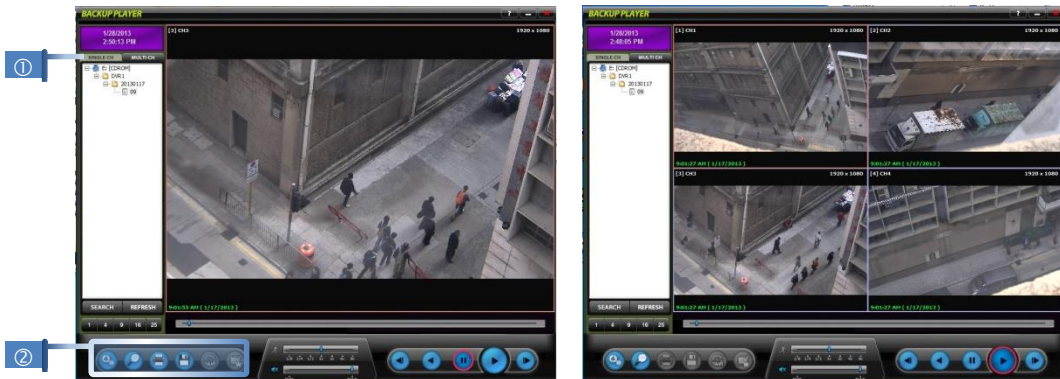
If [ADD VIEWER] is selected, when user backup, the backup image can be seen in the PC. Once the backup device (USB, CD/DVD..) is connected to the PC, user can see files as below picture.

For playing recorded data, double click “MultiBackupPlayer.exe” file and open the video data file (SSF format) in the folder of date. The folder is named by the date recorded.



To playback a single channel, click [SINGLE CH] tab(①) and select a SSF file to playback and move it to the channel by drag & drop.

To playback multiple channels, click [MULTI CH] tab(①) and 'Search' to open folder that keeps SSF file.



User can print out, capture a still image, and zoom-out, by using the icons(②) on the bottom-left of the player window.

Option MENU

Various settings for DirectDraw, Show Image info on snapshot, Show POS data and Use original screen ratio are available in OPTION window.

■ Use DirectDraw

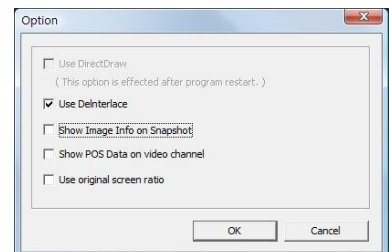
There are some PCs that do not support "Direct Draw". In this case, user can uncheck the DirectDraw check-box in the "Option" menu.

■ Show Image Info on Snapshot

Image information can be shown on snapshot.

■ Show POS Data on video channel

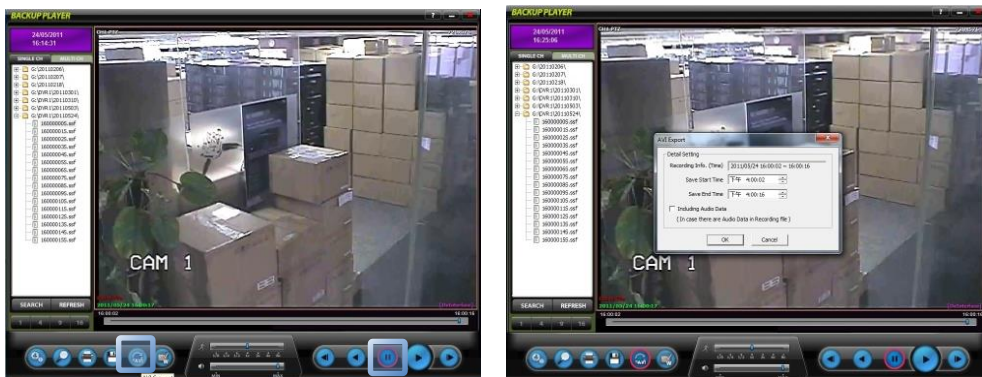
POS data can be shown on video channel.



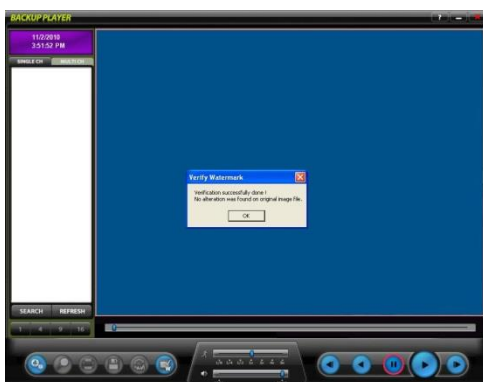
WATERMARK Verification on AVI File

Can convert this backup file from SSF format to AVI format, so that user can playback AVI file in ordinary Window Media program.

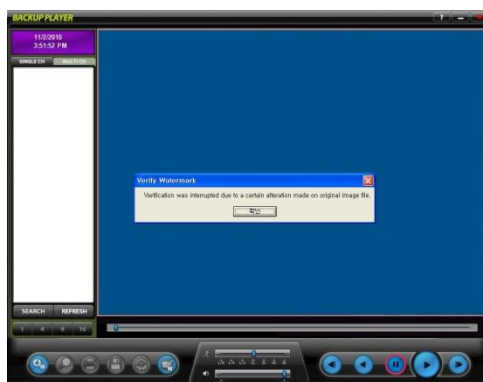
- 1) Playback the SSF file in Single CH mode, click [Pause] icon.
- 2) Then, click [AVI Convert] icon.
- 3) Define the start time and end time.



When playback AVI video clip in BackupPlayer, user can verify whether the AVI file has been altered or not by pressing [Watermark] button. ()



No alteration was found on original AVI video clip

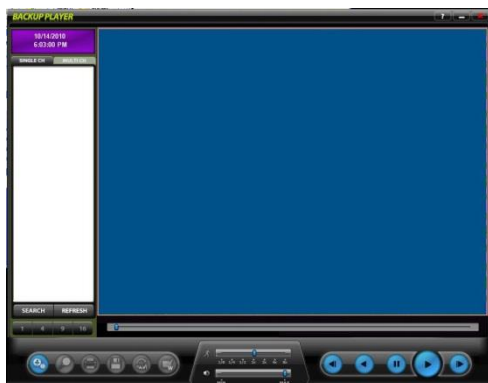


AVI video clip has been altered

Note

MultiBackup player supports two modes. ( , )

- 1) Single-Channel Mode
 - > It shows SSF files in a selected folder.
- 2) Multi-Channel Mode
 - > It show SSF files and folders in the PC.



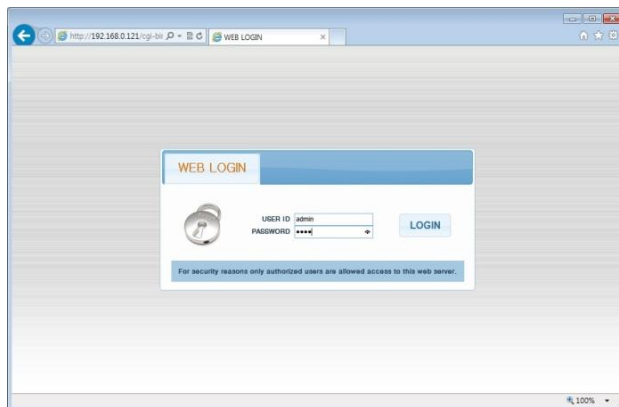
5. Web Surveillance through M/S IE

The system has built-in web server by itself.

Thus, user can be connected to the system by ordinary web-browser via network for live monitoring, playback or remote configuration without installing any additional software.

5.1 Web Login

User is required to put the right IP address in the web browser after getting the web port available by router. When login page shows up, input user ID and password. Default user ID and password are “admin” and “1234”. After login, download & install Active-X file.



Active-X Installation

1. If the P/C doesn't have Active-X installed, installation guide message is automatically shown as below to request to download the latest version of Active-X file.
2. Click installation guide message and install Active-X.



3. In order to download Active-X file without any problem, “Security Setting” of IE web browser has to be properly made. Select “Tools > Internet Options > Security > Internet > Custom Level” in IE menu and enable all Active-X controls and plug-in as below.

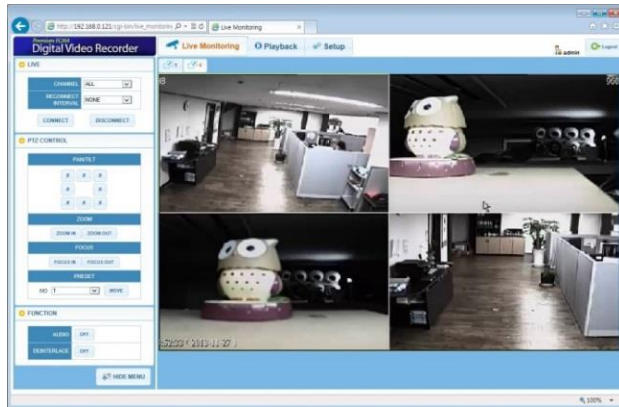


5.2 Web Monitoring

LIVE MONITORING window will be shown as default.

User can select other menus such as PLAYBACK and SETUP, or LOGOUT.

When user enters into live monitoring, you can directly see the image after install Active-X.



LIVE

User can select channel to connect and set interval for reconnection.

PTZ CONTROL

User can control Pan/Tilt, Zoom In/Out, Focus In/Out and Preset for the channel that is connected to PTZ camera.

Select channel to connect and set interval for reconnection.

FUNCTION

User can select On/Off for audio and de-interlace function.

HIDE MENU/SHOW MENU

If user doesn't want to show the menu in the left-side, it can be hidden by "HIDE MENU" button.

On the contrary, hidden menu can be shown by "SHOW MENU" button.

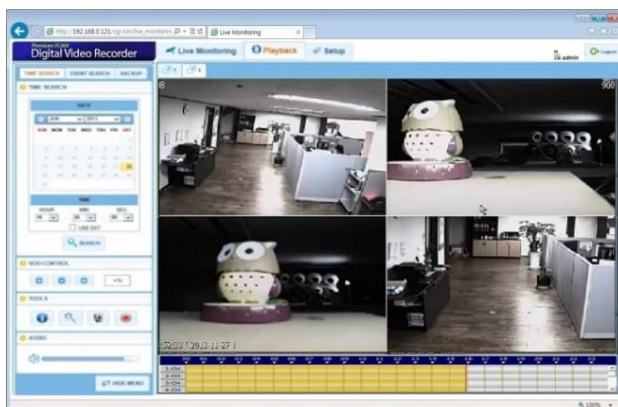
POP-UP MENU

When the right button of the mouse is clicked, various options such as Display Mode, Full Screen, Display POS, Original Screen Ratio, Digital Zoom and Archive are available.



5.3 Web Playback

User can remotely playback the DVR images by clicking “PLAYBACK” button in on the top of the window.



PLAYBACK TIME

Select the date and time and click “GO” button.

PLAYBACK ICON

Play/Pause is toggled and playback speed is shown on the right box.

PLAY DST

Check this box to play overlapped images during DST (Daylight Saving Time) period. For details, please refer to Section “3.7.DST Setting and Image Playback” menu.

INTELLI-SEARCH BAR

User can move the red-vertical line to the time that user wants to search.

The colors of the time bar are different by each recording mode. Please, refer to Section “4.3.2” for details on colors.

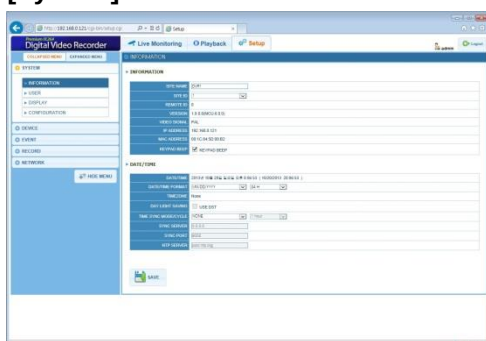
5.4 Setup

[Menu of Setup]

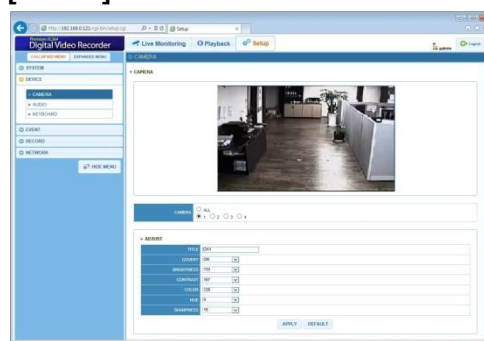
Main Classification	Sub Classification
SYSTEM	INFORMATION
	USER
	DISPLAY
	CONFIGURATION
DEVICE	CAMERA
	AUDIO
	KEYBOARD
EVENT	SENSOR
	MOTION ALARM
	EXTRA ALARM
RECORD	CAMERA
	SCHEDULE
	QUICK SETUP
NETWORK	NETWORK
	DDNS
	NOTIFICATION

After log in with the right ID and password, user can make various configuration in Web Setup window as below. This Web Setup is only available to “admin” account.

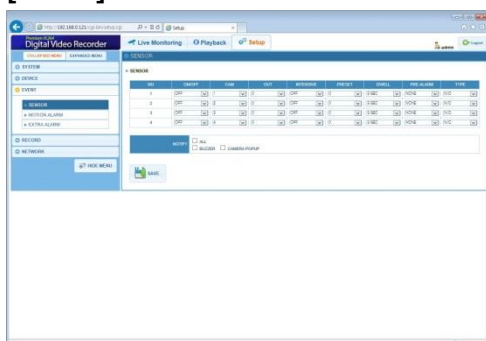
[System]



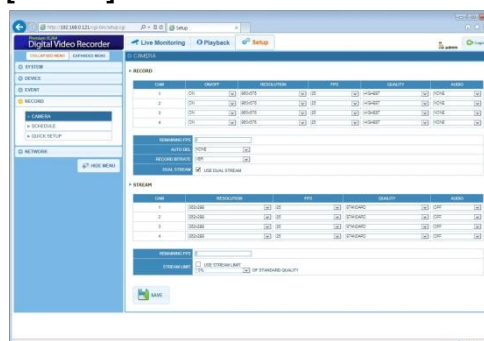
[Device]



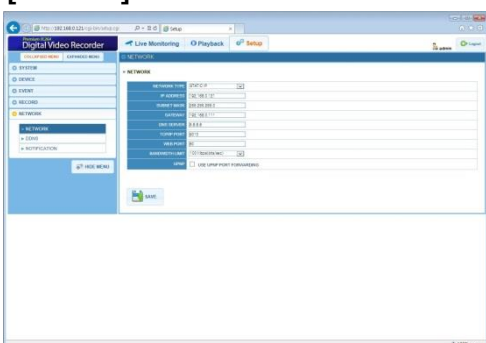
[Event]



[Record]



[Network]



Note This DVR system has its own built-in web server. Therefore, this web CGI screen is directly supported from the built-in web server of DVR regardless of Internet connection.

Note <System Reboot> enables user to reboot the system without any change of the setup. User can use this function when the network is disconnected due to abnormal operation of the system and try to reconnect. However, IP number assigned to the system may be changed in case of DHCP mode.

6. Q & A

1. DVR doesn't record images in sensor mode and/or motion mode.

- 1) It records images only when there is an event for the corresponding mode.
- 2) Please check if the setting is correctly done at the menu of [Event > Sensor], [Event > Motion Alarm], and [Record > Schedule].

2. There is a HDD installed but "No HDD" icon() is still shown on the screen.

- 1) Please check the cable connection of the HDD again.
- 2) If you can see the HDD list at [System > HDD] but the capacity indicates "0", it means that the HDD requires format.

3. There is nothing displayed on the HDMI / VGA monitor though electric power is supplied to DVR.

- 1) Please check if the power is supplied properly. When the power is supplied, you can hear the noise from FAN and HDD operation.
- 2) Please check the HDMI / VGA cable connection with the DVR. Remove all the cable connections, except for the monitor cable, and then apply power to the DVR again and check booting status.
- 3) Please check if the option [VGA] is selected at the rear panel of DVR.
- 4) In case that the display screen is stopped at logo screen, please contact your dealer or distributor.

4. How to make PPPoE connection (xDSL, cable and so on) ?

- 1) There is no function to log-in at the DVR.
- 2) Please use the router which supports PPPoE log-in.

5. Is it necessary to open the port when using DDNS (dynlink.net, dyndns.org) ?

Yes, it is.

DDNS is the function to let remote software acknowledge the changed address of the DVR (dynamic IP provided by ISP) or to allow connection to the DVR by domain (domain.dynlink.net) without memorizing IP.

6. Remote software connection to the DVR works fine but WEB connection doesn't work.

- 1) Some ISP blocks port number 80. Please try again after changing WEB port.
(8080 is recommended.)
- 2) Please check whether the port number 80 is opened or not.

7. Image is not shown after login at WEB monitoring

TCP Base port should be opened. Default of TCP base port is 9010.

8. Image on remote software is suddenly disappeared after displaying for a short time.

- 1) Some ISP restricts upload data/traffic volume. Please contact your ISP.
- 2) Upload traffic restriction can be easily checked with the following steps.
 - > Turn off the power of Modem & Router.
 - > After some time (1~5minutes), turn on the power of Modem first and then Router.
 - > After reconnection, if it is disconnected again after a shot time (in a similar period later), it means that the ISP restricts upload traffic.

9. Backup or firmware upgrade through USB memory stick cannot be made though it is detected by the DVR.

- 1) USB memory stick should be formatted by FAT or FAT 32.
- 2) It is not allowed to use the partitioned and/or password-encoded USB memory

10. No firmware upgrade by using CD.

- 1) DVR detects the files only when they are in root directory.
- 2) Files in sub folder cannot be detected.
- 3) It is recommended to upgrade firmware with USB memory stick.

11. Time sync through NTP server doesn't work.

NTP server requires DNS server address. Please check if DNS server address is correct at [Network] tab.

12. E-mail transmission doesn't work in using E-mail notify function.

- 1) E-mail notify function works based on SMTP service.
- 2) Please check if the sending mail address is correct and if the mail server supports
- 3) SMTP service.
- 4) In case using SMTP service which is based on TLS authentication (including SSL) such as Gmail and yahoo mail, please enable [Use SSL Authentication at [Notification] tab.
- 5) SMTP service is provided based on DNS. Please check if the DNS server address is correct at [Network] tab.