

# VMAX480



## H.264 Digital Video Recorder

**User's Manual**  
VER. 1.00

Future of Digital Video Recording at Hand

# Safety Information

*The safety information is provided for the wellness of the equipment and for the safety of the operator.*

*Please review and observe all instructions and warnings in this manual.*

**Note:** *Keep this manual handy every time you operate this equipment. Also, check with your dealer for further assistance and for the latest revision of this manual. Your dealer might provide you with a digital version of this manual. We also ask to keep the original box and packing materials in case of return and for long-term storage of the DVR unit.*

## Preparations before installation

To protect your DVR from damage and to optimize performance, be sure to keep the DVR away from dust, humidity, and areas with high voltage equipment such as a refrigerator.

Do not install or place equipment in areas where the air vents can be obstructed, such as in tight enclosures or small utility closet. Keeping the unit in a temperature-controlled room with ample regulated power is highly recommended. Do not overload the wall outlet, as this can result in the risk of fire or electric shock.

Uninterruptible power devices such as UPS power surge protectors are recommended, and the DVR units must at least be connected with UL, CUL, or CSA approved power surge protector. Avoid direct sun light and avoid heat.

## FCC Information



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

Operation of this equipment in a residential area is likely to cause harmful interference, in which the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment under FCC rules.

## UL Information

- For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
- If the battery is placed elsewhere in the equipment, there shall be a marking close to the battery or statement in the servicing instructions.

**CAUTION** RISK OF EXPLOSION IF AN INCORRECT BATTERY TYPE IS USED.  
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTION.  
THIS EQUIPMENT IS FOR INDOOR USE, AND ALL THE COMMUNICATION WIRING IS LIMITED TO INDOORS.

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# Chapter 1

# DVR USER MANUAL




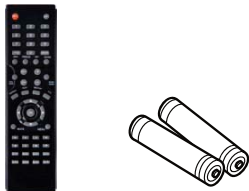

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# 1 GETTING STARTED

## 1.1 Checking Supplied Items

Make sure that you have the following items supplied with your DVR. If any of these items are missing or damaged, notify your vendor immediately. Do not dispose of the packing utilities in case of moving or storage purposes.

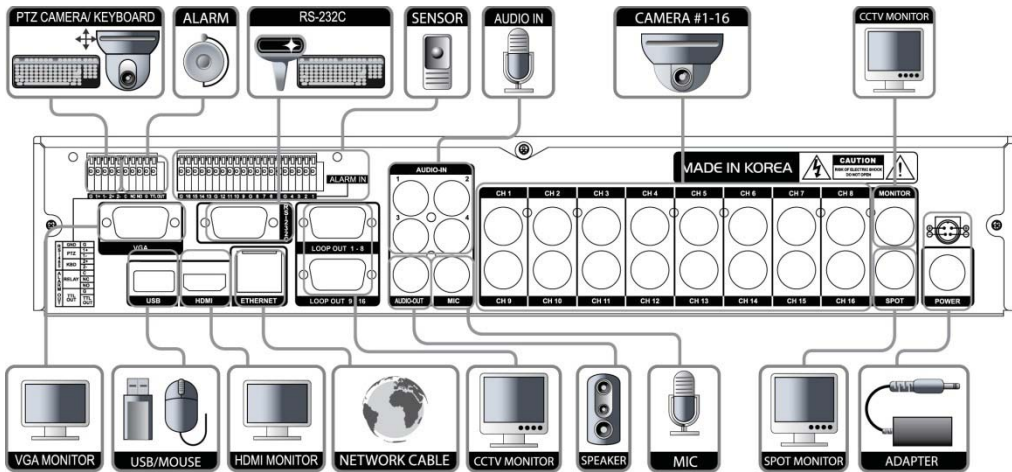
Items	Photo	Quantity
User Manual (DVR & Software)  Quick Start Guide	 Two images showing the front covers of the 'User Manual' and 'Quick Start Guide' for the MAX400 DVR.	1 1
CD (Manual & Software) and Rubber Mount	 A blue CD-ROM and a set of four black circular rubber mounts.	1 1 Set (4 Pieces)
12V DC Adaptor and Power Cable	 A black 12V DC power adaptor and a black power cable.	1 1
IR Remote Controller And Batteries	 A black IR remote controller and two AA batteries.	1 2
USB Mouse	 A black wired USB mouse.	1

## 1.2 System Application Overview

This section describes how to connect peripheral devices to the DVR according to your application.

Install the DVR on a flat surface. If required, attach a rubber mount for installation. If a 19-inch rack is used with 1.5U Height case, it is recommend to install the system on a shelf and use 2.5~3U (1U=1.75 inch space for proper ventilation).

**NOTE** Place the DVR into the rack require tow people to hold the DVR in place.  
Install the DVR in a location with good ventilation to prevent overheating.



**WARNING !** ※ When connecting the power supply to the DVR , it is strongly recommended to use a UPS (Uninterruptible Power Supply)

## 1.3 System Startup and Shutdown

### 1.3.1 System Startup

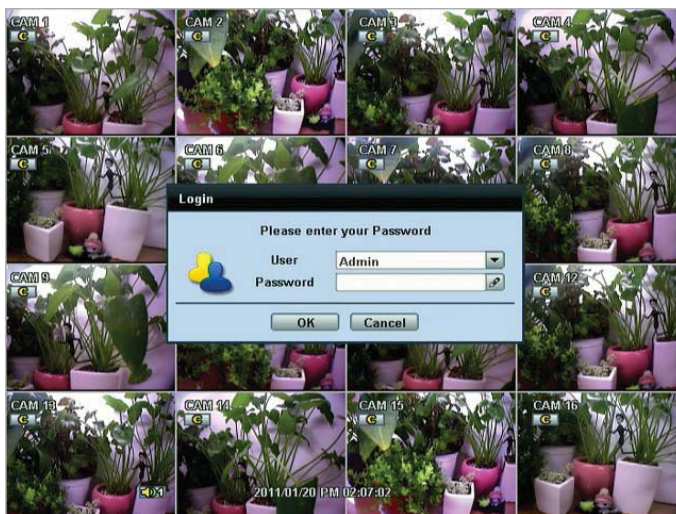
After connecting peripheral devices such as cameras, monitors, and a mouse to the DVR, connect the 12vDC 6.6Amps power supply to the power jack on the rear panel of the DVR.

The boot-up screen will display as shown below. Please wait until the boot-up process completes.



When boot-up process completes, [LOGIN] Window will appear. Select the user name and enter the password.

Default Login is "admin" and the password box is blank a then press [OK] or Enter button



**NOTE** When changing the administrator (admin) password please make a note of it in safe place.  
If you forgot your password contact your distributor, proof of purchase is required.

**NOTE** A mouse is included. In case you need to replace it, it is highly recommended to choose a well-known brand, such as DELL, MICROSOFT, LOGITECH, or SAMSUNG.

## 1.4 Front Panel

Dimensions of 8 & 16 channels DVR Case 11.80" W x 2.16" H x 12.46" D

Front panel allows the user to operate the DVR without having to use the IR remote or a mouse.



**NOTE I- Backup (Instant Backup)**

In playback mode, the user can press the [I-BACKUP] button on the frontal keypad to configure both Start and End time. Once the times are set, click the [START] button to start the backup process.

No.	Buttons	Functions
1	Menu / Exit	Toggles On or Off Menu Setup Display
2	Fast-Reverse Button	Search recorded video in the reverse mode up to 32x
3	Play / Pause Button	Press to start playback in forward mode; press again to Pause the playback video
4	Fast-Forward Button	Search recorded video in the fast-forward mode up to 32x
5	Search / Instant Play	Search recorded video or Press and Hold for instant playback of last video recorded.
6	B-Mark Call Monitor (Press and Hold)	Bookmark recorded video Display a camera Full Screen on the Spot Monitor
7	PTZ I-Backup (Press and Hold)	Control a configured PTZ camera Start "Instant Backup" to a USB flash drive
8	Mode Freeze (Press and Hold)	Change the cameras display Mode 1-8 or 1-16 Pause a live video display
9	USB Port	USB Port (Ver. 2.0) for Mouse Operation, Backup Device or Firmware Update
10	LED Indicator	Indicate System Status Power, Record, HDD, and Remote connection
11	Instant Record	Start Emergency Recording
12	Enter Button	Select Value or Setting
13	Directional Arrows	Menu Setup Navigation / Change Display Mode / PTZ control

### 1.4.1 Directional Arrows:

- 1) Live Display & Playback Mode  
Change channel number by using Left & Right Arrow buttons.  
Change display mode by using up & down Arrow buttons.
- 2) Menu Setup  
Use to select function at the menu setup display.
- 3) PTZ control (When PTZ button is pressed)
- 4) Zoom & Focus Mode (when PTZ button is pressed again)  
Zoom in & Out by using Up & Down Arrow buttons.  
Focus In & Out by using Left & Right Arrow buttons.
- 5) Call Monitor Mode (When call monitor is selected)  
change the camera display in the full screen mode of spot monitor by using the Up & Down Arrow buttons.

### 1.4.2 ENTER Button

Select value or settings.

### 1.4.3 Menu /EXIT Button

Toggles On or Off the Menu Setup

### 1.4.4 MODE (Press Once) / FREEZE (Press and Hold) Button

Change camera display mode 1-8 or 1-16 and

Press and hold to Pause live video display.

### 1.4.5 PTZ (Press Once) / I-BACKUP (Press and Hold) Button

[PTZ] (Press Once): Press once to change to Pan & Tilt Mode. Use the [Directional Arrows] button to control Pan & Tilt function. Press [PTZ] button again to change to Zoom & Focus Mode. Use the [Directional Arrows] button to adjust Zoom & Focus.

I-BACK UP (Press and Hold): To start Instant Backup Mode to a USB flash drive

### 1.4.6 INSTANT REC (Press Once) Button

INSTANT REC (Press Once): To start Emergency Recording Mode

### 1.4.7 B-MARK (Press Once) / CALL MON (Press and Hold) Button

B-MARK (Press Once): For bookmark recorded video

Press and Hold to activate the Call Monitor function:

Used to display a full screen video of a selected spot out channel. During Call Monitor Mode, click [CLOSE] button at the bottom of the numeric panel to return to the previously programmed spot out mode.

## **1.4.8 SEARCH (Press Once) / INSTANT PLAY (Press and Hold) Button**

SEARCH (Press Once): To search for recorded videos by date and time

INSTANT PLAY (Press and Hold): To start Instant Reverse Playback

Refer to [OPERATION > SEARCH RECORDING IMAGE] for a detailed image searching method.

## **1.4.9 IR Sensor Window (Remote Control Receiver)**

To receive input signal from the IR Remote Control



## 1.5 Rear Panel

Dimensions of 8 & 16 channels DVR Case 11.80" W x 2.16" H x 12.46" D



No.	Name	Description
1	Video-In	Camera inputs (Supports NTSC/PAL)
2	Audio-In	Audio Input Device (with Amplifier)
3	Audio-Out	Audio Output Device (with Amplifier)
4	Video-Out	Main Composite Monitor Output
5	Spot-Out	Spot Composite Monitor Output
6	RS-232 Port	RS-232 Input Device (POS)
7	USB Port	USB Port (Ver 2.0) for Mouse Operation, Backup Device, or Firmware Update
8	VGA Port	VGA Monitor
9	LAN Port	100Mbps RJ45 Ethernet Connection Terminal
10	Power Input	Power Connection for 12 vDC at 6.67Amps Power Supply
11	Sensor Input	Sensor Input
12	Alarm Output	Alarm Output
13	RS-485 Port	PTZ Dome Camera or External Keyboard Controller connection
14	Loop Out	Loop Out Port
15	MIC-In	MIC input device
16	HDMI Port	HDMI Output

**NOTE** Carefully check whether the specifications of the peripheral devices match the DVR's specifications.

### 1.5.1 Video-In

To connect the camera input to the corresponding channel marked on rear panel

**NOTE** Camera input voltage level is 1Vp-p±10%.

### 1.5.2 Audio-In

To connect audio input

### 1.5.3 Audio-Out

To connect audio output

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**NOTE** Use of audio output with an amplifier is recommended!

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### 1.5.4 Video-Out

To connect Main composite monitor

### 1.5.5 Spot-Out

To connect composite Spot Monitor

### 1.5.6 RS-232 Port

RS-232 Input Device (POS)

### 1.5.7 USB Port (Version 2.0)

- 1) To backup recorded video, using a USB flash drive (USB Memory Stick or USB HDD)
- 2) To upgrade the firmware
- 3) To connect a mouse for system navigation

### 1.5.8 VGA-Port

To connect a VGA Monitor

### 1.5.9 LAN Port

To connect RJ-45 jack for Ethernet connection

Consult network administrator or the internet service provider for proper network setting.

### 1.5.10 Power Input

After connecting peripheral devices such as cameras, monitors, and a mouse to the DVR, connect the 12VDC power supply to the power jack on the rear panel of the DVR.

### 1.5.11 Sensor Terminal Block

Connect sensors.

### 1.5.12 Alarm Terminal Block

Connect various alarm devices controlled by relay output.

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**NOTE** Support both N/O (Normal Open) and N/C (Normal Close) type of sensors. If connected sensor is not functioning, ensure wiring is correct. The connection method may differ according to the type of PTZ controller. Enquire to your vendor for guidance.

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### 1.5.13 RS-485 Terminal Block

Connect RS-485 cable for the control of PTZ camera or external keyboard controller.

### **1.5.14 Loop Out**

Loop Out Port

### **1.5.15 MIC-In**

To connect MIC input device

### **1.5.16 HDMI Port**

To connect HDMI device

## 1.6 IR Remote Controller

The IR remote control allows the use to operate the DVR without having to use the mouse or the front panel buttons.

To use IR Remote Controller, the ID of the IR Remote Controller must be same as the ID of the DVR.

Default ID # for DVR and IR Remote Controller is "1".

If you have more than one DVR, you can use one IR remote to control each DVR by setting a unique ID for each DVR.



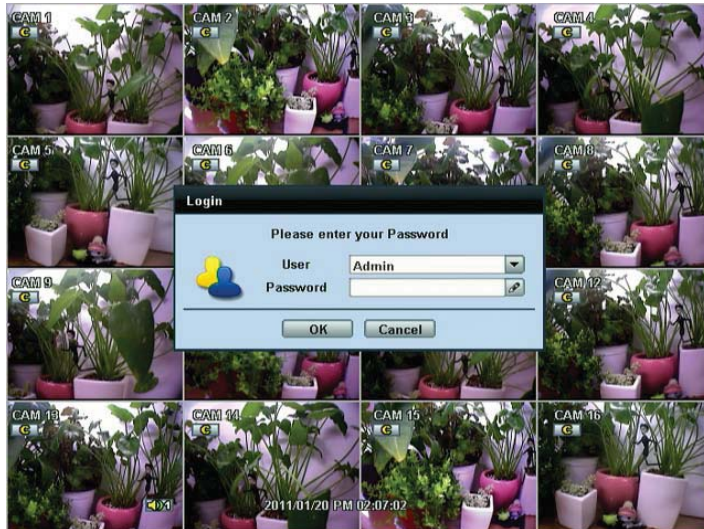
No.	Functions
1	Instant (Emergency) Recording Button
2	Numeric Button
3	Auto-Sequence Button on Live Display Mode
4	Freeze Button
5	Call Monitor Button
6	Channel Selection Button
7	Instant (Emergency) Playback Button
8	Search Button
9	OK (Select) Button
10	Audio Mute Button
11	Playback Button on Search Mode (Fast Backward/Playback/Stop/Fast Forward)
12	Exit Button
13	Display Mode Button
14	Zoom Button
15	PIP Mode Button
16	Bookmark Button
17	Zoom In & Out Button
18	Backup Button
19	PTZ Button
20	Direction Button (Up/Down/Right/Left)
21	Menu Button
22	ID Select Button (DVR1 ~ DVR8)

## 2 OPERATION

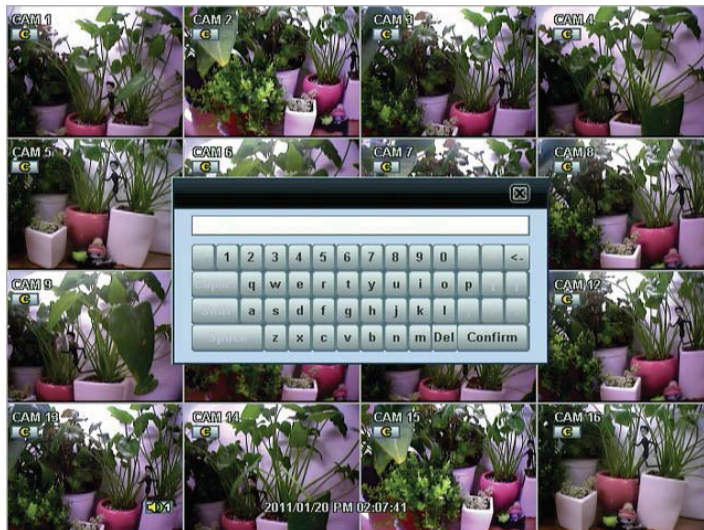
### 2.1 User Login

The DVR has various configurations. The administrator can set the system password and can prevent the User(s) from making unauthorized changes to the configurations or recorded video

Default Login is "admin" and the password box is blank a then press [OK] or Enter button



Using the virtual keyboard to enter the password if required



#### NOTE

- 1) [LOGIN] window will display on the monitor, until user logs in with the correct [User] and [Password].
- 2) If the system is set as [Auto Log-In], DVR does not require login. Refer to 4.1.2 User for details.

## 2.2 Live Display Mode

### 2.2.1 Channel Selection

After the cameras are connected, the real-time display mode is controlled through an easy button operation.

The images can be seen on real-time by 1, 4, and PIP screen. Press the Up & down Arrow buttons on the front panel or IR remote controller to change the display screen sequentially.



[1 Channel]



[4 Channel]



[9 Channel]



[16 Channel]



[PIP Mode]

To select a channel by mouse, place the cursor on the desired channel and click the left mouse button. To return to previous screen mode, click the left mouse button again.

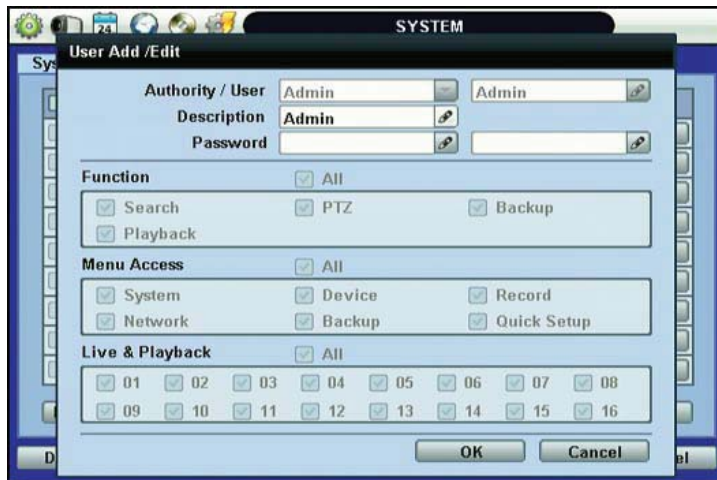
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**NOTE** To select a channel using the mouse, the user is required to perform a slow and clear click of the left mouse button.

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


Administrator user can set different level of authorization for each user. If a certain user is not allowed to view a certain live and playback channel, then no image appears on the display screen. Refer to 4.1.2 User for details on how to setup.



When a camera is disconnected, an alarm sound will be activated depending on the system settings.



## 2.2.2 Icons Description

Icon Shown on Upper Right Corner		Icon Shown on Bottom Right Corner	
	Continuous Recording		PTZ Camera
	Motion Detection Recording		No HDD, Smart Alarm & HDD Failure
	Sensor Activating Recording		Using PTZ
	Continuous+ Motion Recording		Showing sequence mode
	Continuous + Sensor Activating Recording		Showing digital zoom mode
	Motion Detection + Sensor Activating Recording		
	Continuous + Motion Recording + Sensor Activating Recording		
	Emergency Recording		
	Audio Channel		



## 2.2.3 Toolbar

Move the mouse cursor to the bottom of the screen monitor during live mode and the menu bar will appear instantly, as shown below.



Instant Emergency Recording, which is useful to start recording when the user notices an unusual activity. In emergency recording, the system follows the [Panic Record] settings. The default settings for panic record is 30(25)fps @ CIF Resolution for all channels. If you want to change the panic record settings for each channel, please go to [RECORD → Panic Record].



To activated PTZ control, user can adjust the pan/tilt/zoom by moving the mouse pointer, like a virtual joystick.



Click the button to playback the most recent video clip automatically.



Display of the HDD usage. If it shows 60%, 60% of the HDD space has been used for recording.

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**NOTE** If you do not see any colored icon on the top right corner of the live screen mode; then, it means that the system is not recording any image. In this case, you need to check the [Recording Schedule] or [Camera] of the main setup menu.

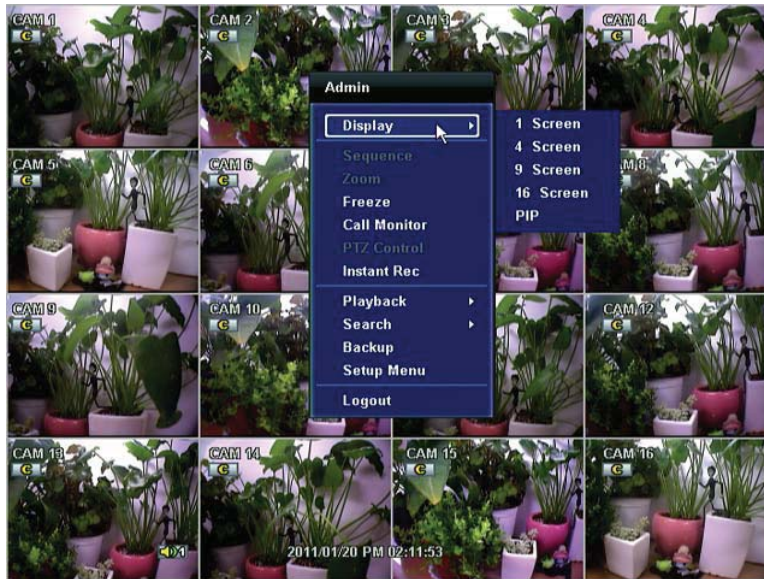
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Or the Display can turned OFF in the display system setup

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## 2.2.4 Pop-up Menu

Place the mouse cursor anywhere on the screen and click the right button of the mouse to display the popup menu as shown below.



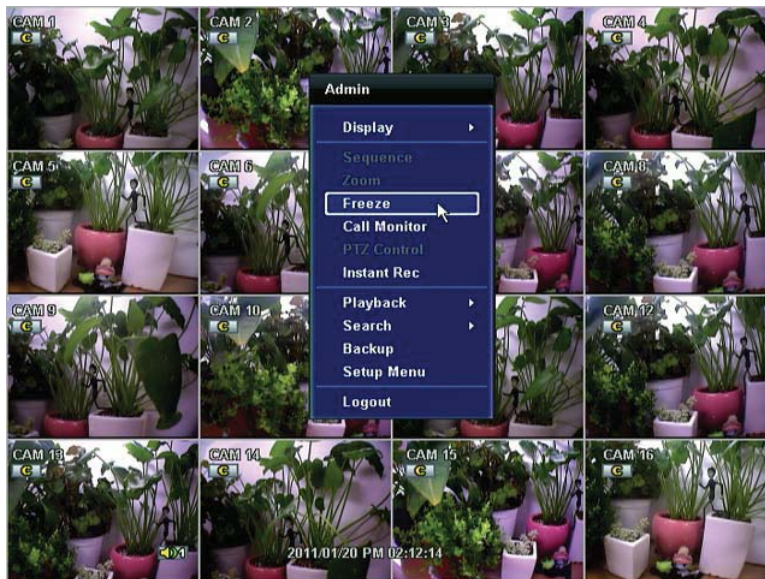
When [SEQUENCE] is selected, **SEQ** icon is shown on the bottom right corner of the screen, and the display screen will be changed sequentially.

When [ZOOM] is selected, digital zoom function is activated, and **ZOOM** icon is shown on the bottom right corner of the screen. The [ZOOM] function is only available on full screen mode. In the zoom popup mini-screen, the user can use the mouse to drag a yellow box to the desired area of the camera to zoom. To return to Live display mode, click [ZOOM] again.



## 2.3 Freeze Mode

Press [FREEZE] button on the front panel; or click the right button on the mouse when viewing a live image and select the [FREEZE] option on the pop-up menu. In the Freeze mode, the image pauses; the date/ time information does not; and the system clock continues running. Press [FREEZE] to pause the live view. To resume the live view, press [FREEZE] again, or click the right button on the mouse and select the [FREEZE] option.

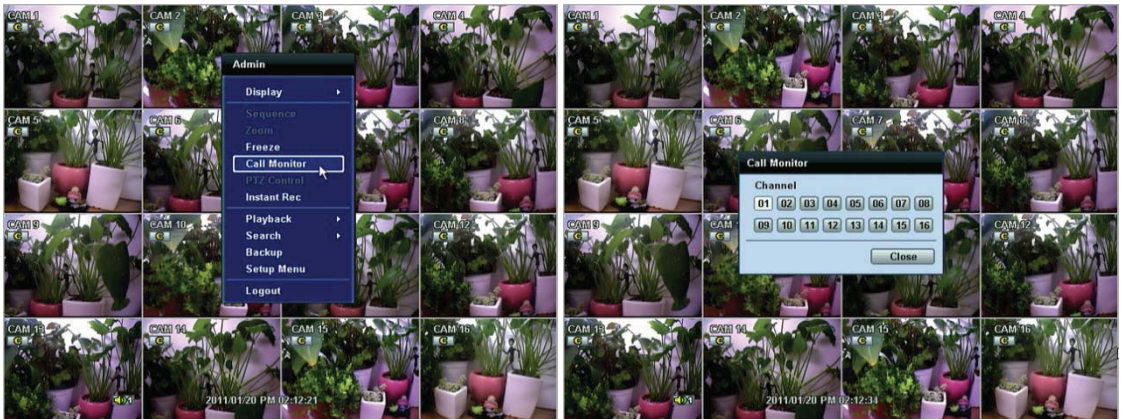


## 2.4 Call Monitor Operation

Press the [CALL MON] button on the front panel, or click the right button on the mouse and select the [CALL MONITOR] option in order to enter Call Monitor Control mode. The numeric panel will pop up at the center of the screen.


Click the specific channel button on the numeric panel to display full screen mode out of assigned spot out channels.

- Press the [CLOSE] button on the bottom of the numeric panel to go back to the previously programmed Spot Monitor mode.





## 2.5 PTZ Operation

User can go to PTZ mode by clicking right button of mouse and selecting [PTZ CONTROL] in the pop-up menu as shown below or by selecting the  button on the menu bar located on the bottom of the main screen.



In PTZ mode, user can control PTZ operation with USB mouse.

While pressing the left button of mouse, user can drag the mouse pointer to up/down or left/right to move pan/tilt position of the camera. If user moves the mouse pointer far away from the center position of the main screen, the PTZ camera moves at faster speed. The user can also zoom in/out by rolling the wheel of mouse up or down.



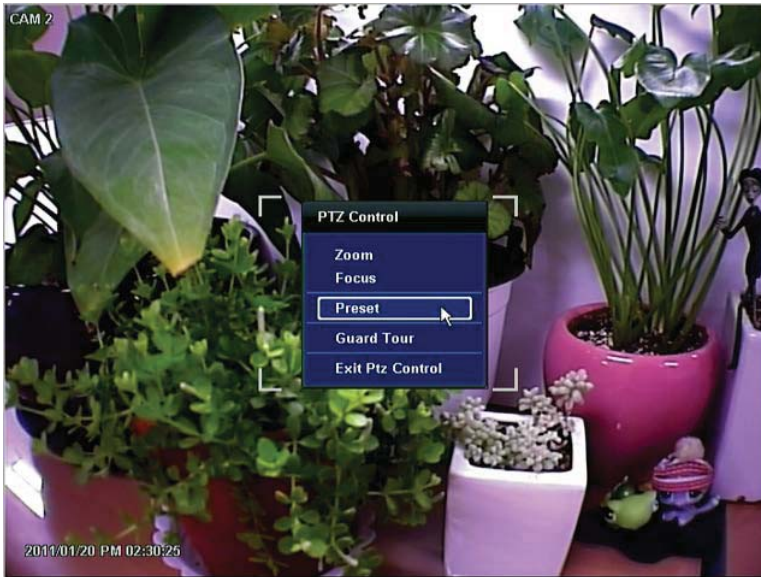

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**NOTE** Full PTZ functions are available by using USB mouse, IR remote control, or keyboard controller.

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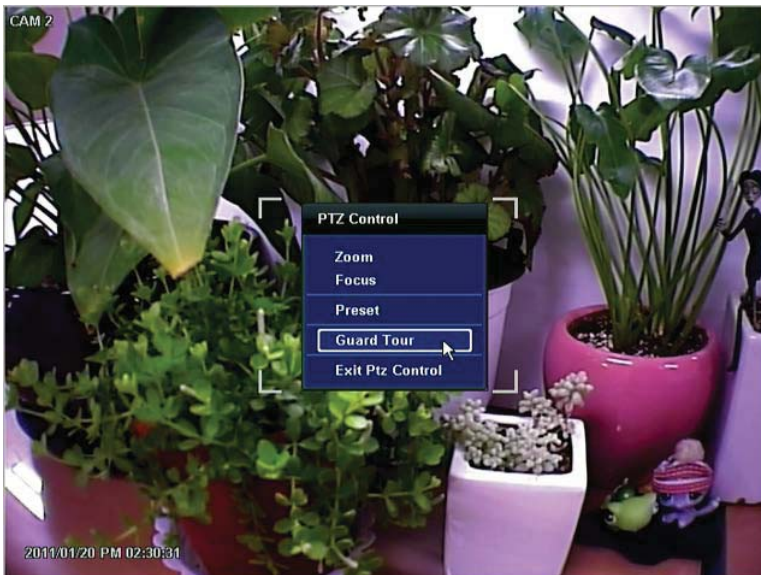
For focus control in PTZ screen mode, the user can right-click using the mouse to get the pop-up menu as shown below. Default mode is to [ZOOM]. The user can select [FOCUS] to switch the wheel function of mouse from zoom in/out to focus. This will change the default behavior of the mouse wheel.

The user can also select the [PRESET], [GUARD TOUR], or [EXIT PTZ CONTROL].



**NOTE** User will see numeric pad to select Preset number. The preset is defined by setting a PTZ protocol in the setting menu. The maximum number of preset is 255, but the max supported by the PTZ may be less.

User can automatically switch PTZ camera positions to the defined preset settings by using [GUARD TOUR] function. The connected PTZ camera must support touring functions. [GUARD TOUR] on the pop-up menu is only enabled when the PTZ camera channel is changed to full screen. Please make sure that PTZ camera setting is correct; otherwise, [GUARD TOUR] is shown as disabled.




**CAUTION** Depending on PTZ camera, some preset positions might be skipped if, for example, the PTZ camera cannot move mechanically or control focus within the interval time required by the DVR. In this case, it is recommended to increase the interval setting to a value that allows cameras to finish its Pan & Tilt.



## 2.6 Instant Playback of Recorded Video

To play a recorded image, press the [PLAY] button from the Front Panel or IR Remote Controller.

It is easy to use the USB mouse to playback recording files. The recorded files can be played backwards or forwards. Press the [REWIND] and [FAST FORWARD] buttons, and the playback speed can be controlled in steps of 2, 4, 8, 16, 32 times the real-time when playing backwards or forwards.

User can click the  button to play the latest video clip automatically.



In playback screen, user can utilize various playback modes, make an instant manual backup (archive), go to calendar search mode, change channel, and change screen modes. By clicking the left mouse button in the colored-time bar, the user can jump to a different time in the recording. In addition, user can move the vertical search bar by dragging the bar back and forth and releasing it to search the desired time in detail.



[Playback Screen]

## 2.7 Clean Button During Playback

De-interlacing feature is required for smooth playback of video that is recorded in D1 (720x480/576) resolution.

In playback mode, user can press [CLEAN] icon at the menu bar located in the bottom of the main screen. After clicking [CLEAN] icon, a blue circle forms around the icon, which means de-interlacing has been activated. After changing to de-interlacing mode, press the pause and step forward icon. User can get a better image as shown below. Click [CLEAN] icon again to inactivate this function.



[De-Interlace Image]



[Interlace Image]

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**NOTE** The De-interlacing feature by pressing the [CLEAN] icon can be activated only during a full screen mode.

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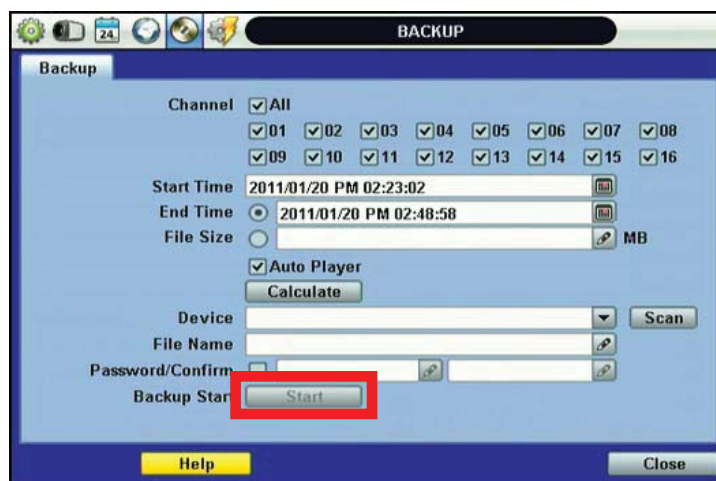
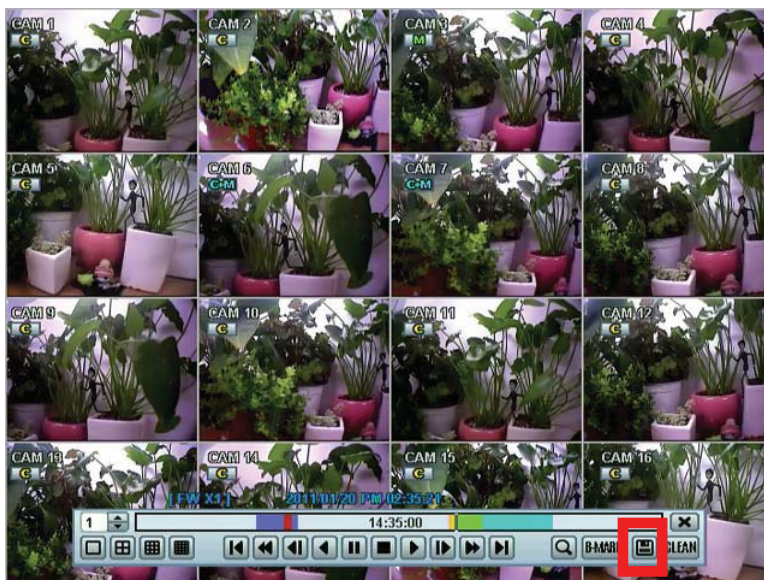


## 2.8 I-Backup (Quick Backup During Playback)

Press [floppy Icon] and Connect an appropriate USB flash drive and press [SCAN] button to get the system to recognize the device before archiving. Necessary file size will be shown before burning.

Users can check the [AUTO PLAYER] box to include the viewer file. This function allows the user to play the video clip without having to install the software on the computer. Otherwise, the file backup format will be in the Manufacturer's Proprietary Format (PSF). ACS (Advance Client Software) Backup Player is required.

Once the backup completed press [OK] or [Enter]



**NOTE** The [HELP] button will help you understand how to setup several important settings. For example, if you need help on how to use the Backup function, click [HELP] button at the right bottom of the [BACKUP] menu.

## 2.9 Search Recording Image

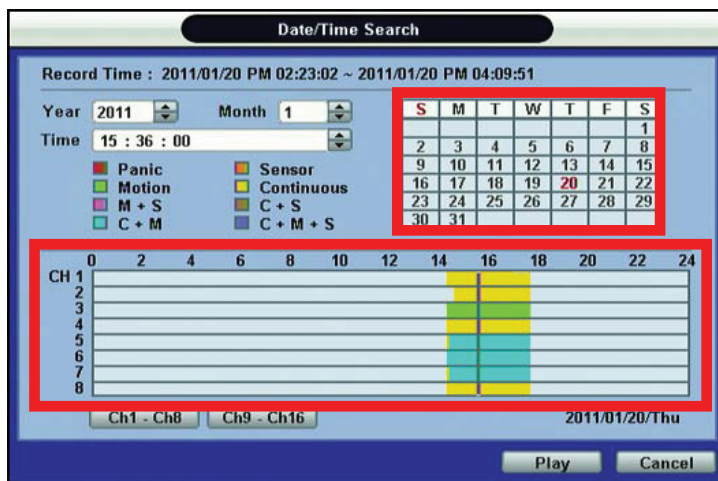
### 2.9.1 Date/Time Search

Select [Date/Time] in Setup Menu to search for a certain file within the recorded video data.



The calendar displays dates with recorded video data in RED color. Click one of the desired dates in Red. Then, the recorded data for the selected date will appear.

Once the recorded video data of the selected date appears, user can adjust the vertical search line to the time that user wants to search by dragging the mouse. As the vertical line is moving back and forth, user can see that the clock is changing simultaneously. Move the vertical line to the time you wish to play. Click [PLAY] button to play the selected video data.



The colors of the time bar are different, depending on the recording mode.

<b>NO Color</b>	<p><i>No Recording</i></p> <p>The DVR does not record, even though user sets a MODE of recording in [RECORD SETUP] tab.</p>
<b>RED Color</b>	<p><i>Panic Recording</i></p>
<b>YELLOW Color</b>	<p><i>Continuous Recording</i></p> <p>The DVR records all the time for the set camera(s).</p>
<b>GREEN Color</b>	<p><i>Motion Detection Recording</i></p> <p>The DVR only records when it detects motion.</p> <p>Users can also set motion record configuration in the [MOTION ALARM] tab.</p> <p>If user sets the [MOTION ALARM] tab to [OFF] and sets the [SCHEDULE] tab to [MOTION], the system will record when motion is detected but not activated.</p>
<b>ORANGE Color</b>	<p><i>Sensor Activated Recording</i></p> <p>The system records when a sensor is triggered only during the dwell time as set in [SENSOR] of the [DEVICE] menu.</p> <p>If user sets [SENSOR] tab to [OFF] and sets [SCHEDULE] tab to [SENSOR], the system will not record even though a sensor is triggered.</p>
<b>SKY BLUE Color</b>	<p><i>C + M (Continuous + Motion Detection) Recording</i></p> <p>The DVR records continuously but will switch to the motion configuration specified in the [MOTION ALARM] tab of the [DEVICE] menu, if motion is detected within the motion area. The system will also send a Motion Event Message to the Advanced Client Software over the network.</p> <p>If user sets [MOTION ALARM] tab to [OFF] and sets [C + M] in the [SCHEDULE] tab, the system will always record as Continuous Recording even though the DVR detects a motion within the motion area.</p>
<b>DARK ORANGE Color</b>	<p><i>C + S (Continuous + Sensor Activated) Recording</i></p> <p>The DVR records continuously but will switch to the sensor configuration defined in the [SENSOR] tab of the [DEVICE] menu, if a sensor is triggered during dwell time. The system will also send a Sensor Event Message to the Advanced Client Software over the network.</p> <p>If user sets [SENSOR] tab to [OFF] and sets [C + S] in the [SCHEDULE] tab, the system will record as Continuous Recording even though a sensor is triggered.</p>
<b>PINK Color</b>	<p><i>M + S (Motion Detection + Sensor Activated) Recording</i></p> <p>The DVR records when motion is detected or when a sensor is triggered according to the [DEVICE] menu settings.</p> <p>If user sets the [MOTION] and [SENSOR] tab of the [DEVICE] menu to [OFF], the DVR will neither record nor notify the Advanced Client Software or Central Management System.</p>
<b>PURPLE Color</b>	<p><i>C + M + S (Continuous + Motion Detection + Sensor Activated) Recording</i></p> <p>The system records continuously but will switch to the motion configuration when motion is detected or the sensor configuration when a sensor is triggered.</p>

**CAUTION Dark Blue Color**

A Dark Blue Color in the -Search Bar during playback mode indicates data recorded during DST (Daylight Savings Time).

## 2.9.2 First Data

Go to the first screen of the recorded videos. This is the oldest recorded video.

## 2.9.3 Last Data

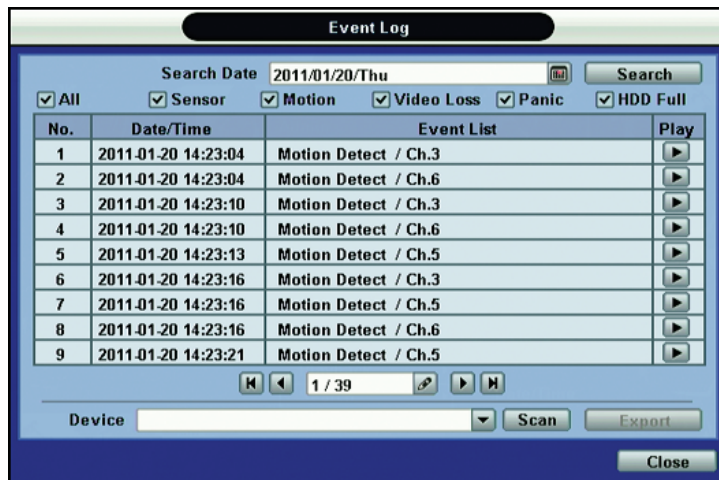
Go to the last screen of the recorded video. This is the most recent recorded video.

## 2.9.4 Event Log

The Event Log Search finds particular events, quickly and easily.

Click  button to playback the selected event data.

Copy the event list to a USB memory device in text file format. Insert the USB Memory Stick into the USB Port. Press [SCAN] button to detect the USB stick and then press [EXPORT] to copy the log information to the media.



To see a particular event, click the arrow buttons on the Front Panel or Remote Controller to the desired time range.

The following are the categories indicated on the Event Viewer.

1. Alarm by Sensor
2. Alarm by Motion
3. Alarm by Video Loss
4. Alarm by HDD Full

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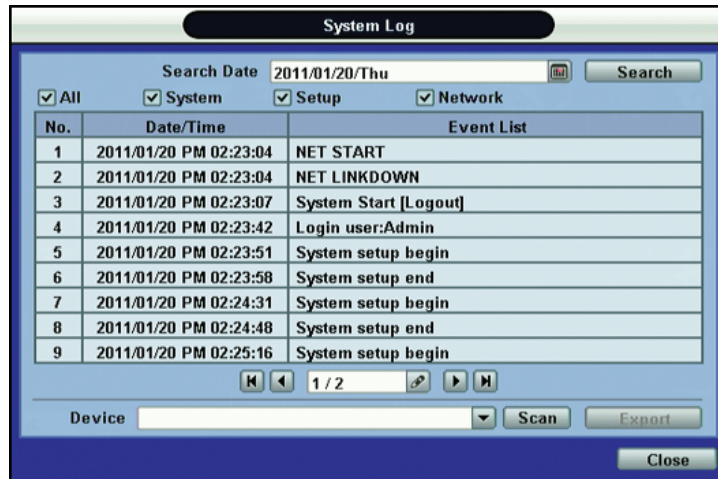
**NOTE** If the Alarm does not activate even after the alarm input setting has been made, check the alarm connection port of the DVR rear panel.

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## 2.9.5 System Log

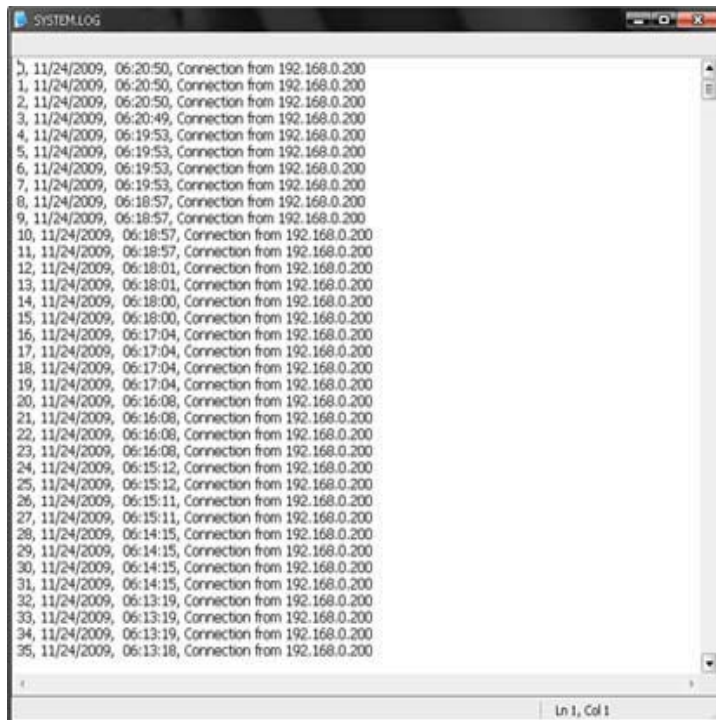
The System Log Search finds particular system log information, quickly and easily.

User can copy this event list to USB memory device in text file format.



Once export is completed, the user can find a folder titled with the exported date created in the USB thumb drive.

There is [system.log] file stored in the folder.






The following are the categories indicated on the system log viewer.

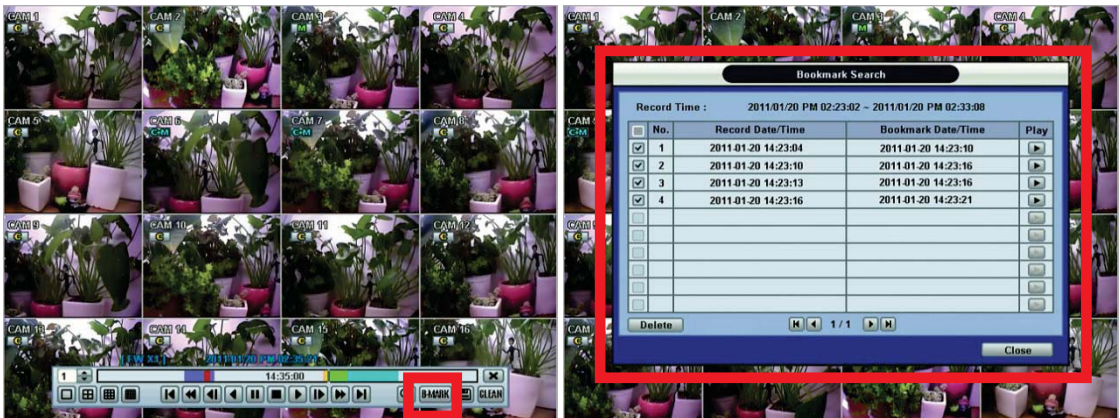
1. Log by System
2. Log by Setup
3. Log by Network

**NOTE** Each page of the [System Log] and [Event Log] Window displays 20 logs. User can view the next set of logs on another page by clicking the arrow icons.



## 2.9.6 Bookmark

Go to the bookmark list to search the recorded video data in the bookmark list. Users can make their own bookmark list simply by clicking **B-MARK** button during playback. When you do bookmark search, you can easily playback the bookmarked video by clicking  button located right next to the list.



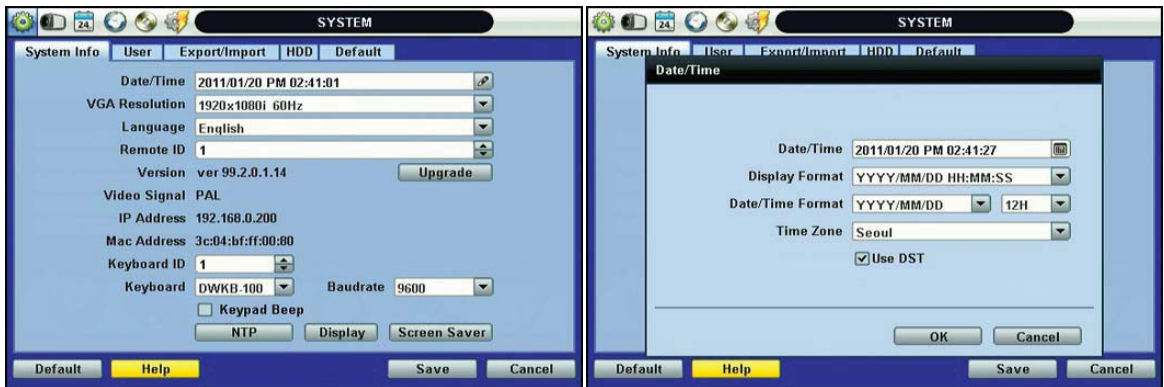
**NOTE** User can press [SEARCH] button on the front panel to get the [BOOKMARK SEARCH] pop-up menu as shown above. Use the front panel key buttons to control this menu.

## 2.10 DST Setting and Screen Saver

DST starts at 2:00 local time on 2<sup>nd</sup> Sunday of March, and ends at 2:00 DST on 1<sup>st</sup> Sunday of November.

During DST (Daylight Saving Time), the DVR time clock adjusts to the regional time zone. The clock will shift by one hour after the DST settings start and will delay by one hour after DST finishes.

To make DST setting on the DVR, go to the menu [SYSTEM > SYSTEM INFO] and click [DATE/TIME]. User can setup DST "Begin & End" time after checking [USE DST] box.



When you return to search mode, you can clearly see there is no data in all channels for one hour, since the clock jumps from 2:00 to 3:00.

The clock jumps backward to 1:00 standard time on 1<sup>st</sup> Sunday of November.

When DST finishes, there will be an hour of overlapped video. A Blue color indicates the overlapped video in the Search Bar during playback mode.



When user clicks on the overlapped video data, a message titled [Recorded Video Selection] will pop up. The user can then select whether to play DST Data or Non-DST Data. Click [OK] to play DST image. Click [CANCEL] to play Non-DST image.



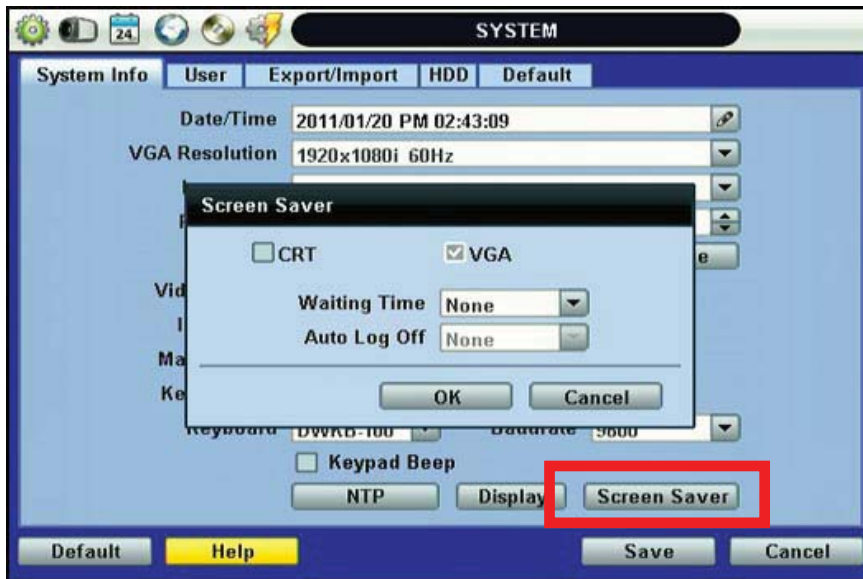
[DST Image]



[Non-DST Image]



To set a screensaver on the DVR, go to the menu [SYSTEM > SYSTEM INFO] and click [SCREEN SAVER] to get the Screen Save window as shown below. Users can select [CRT] and/or [VGA] by checking the boxes. Users can set the WAITING TIME for when the monitor will automatically turn off.



**NOTE** WAITING TIME: Users can select the [WAITING TIME] from NONE,1,2,3,4,5,6,7,8,9,10,20,30,40,50, and up to 60 MIN. The screen saver will not work when either WAITING TIME is set to "NONE" or both SPOT and VGA checkbox are unchecked. Screen saver may not work, during system upgrade, HDD format, or data backup process. The system continues to record while the monitor is turned off. When it comes to the [AUTO LOGOFF] setting, refer to the USER setting.

### 3 SETTING

General setting structure consists of System, Device, Record, Network, Backup, and Quick Setup as shown below.



[SYSTEM]

[DEVICE]



[RECORD]

[NETWORK]



[BACKUP]

[QUICK SETUP]

Main Menu	Sub Menu
<b>SYSTEM</b>	SYSTEM INFO
	USER
	EXPORT/IMPORT
	HDD
	FACTORY DEFAULT
<b>DEVICE</b>	CAMERA
	AUDIO
	SENSOR
	MOTION ALARM
	EXTRA ALARM
	PTZ
<b>RECORD</b>	RECORD SETUP
	PANIC RECORD
	SCHEDULE
	HOLIDAY
<b>NETWORK</b>	NETWORK
	DDNS
	NOTIFICATION
<b>BACKUP</b>	MANUAL BACKUP
<b>QUICK SETUP</b>	QUICK SETUP

## 3.1 System

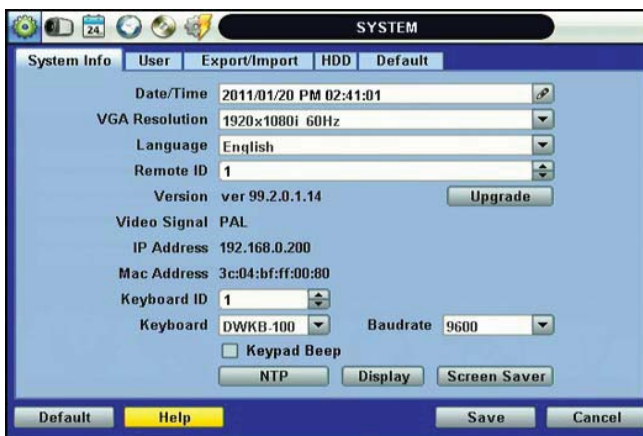
The Menu button is selected by clicking [TOOL] on the menu bar or clicking the right mouse button.

Users can move mouse pointer from [SYSTEM] to [QUICK SETUP] to instantly look around the sub-menus on the menu screen. Using the left mouse button, the user can select a desired category for editing.



### 3.1.1 System Info

[Date/Time] / [VGA Resolution] / [Language] / [IR Remote Id] / [firmware Upgrade] / [Video Signal format] / [IP Address] / [Mac Address] / [Keyboard controller Id] / [Keyboard Type] / [Baud rate] / [Keyboard Beep option] / [NTP] (Network Time Protocol) / [Display] / [Screen Saver] / [Default]

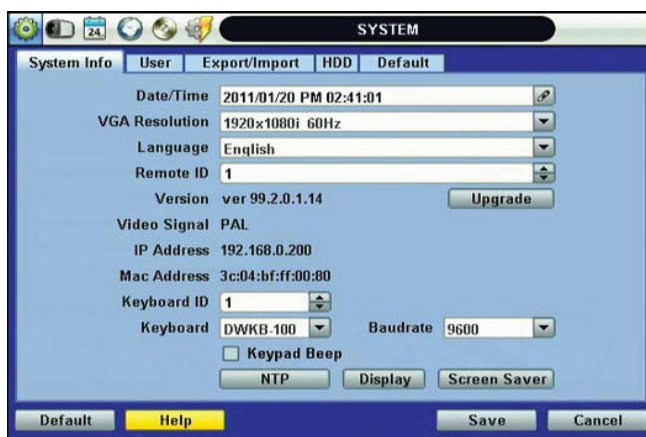


**NOTE**

There are two types of TIME SYNC MODE.  
 1) Server Mode  
 The operating DVR is set as a Time Sync Server, which can synchronize the time clock of another DVR(s) connected to the same network environment.  
 2) Client Mode  
 The operating DVR is set as one of the client DVR(s). Input the IP Number of designated DVR, Advanced Client Software (ACS), or Central Management System (CMS), as a Time Sync Server in [SYNC SERVER]; and then its time clock is synchronized with Time Sync Server by the setup time in [SYNC CYCLE].

Mac address is a unique network identification number for each system.

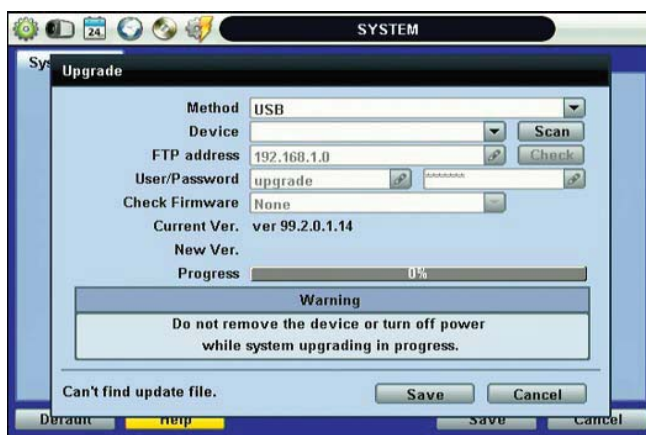
NTSC/PAL is automatic; make sure the cameras are connected to the DVR before turning the power on of the DVR.



*Remote ID:* The Remote ID should match the ID of the IR Remote Controller in order for the remote to function.

*Keyboard ID:* The Keyboard ID should match the selected DVR on the keyboard. In addition, the baud rate and Keyboard should match the selected keyboard controller.

*Upgrade:* Users can easily upgrade the DVR via DVD, CD, USB, or FTP Server.



#### PROCEDURE **How to upgrade system firmware by using USB memory stick**

- 1) Insert the USB thumb-drive formatted by FAT32 in any USB port of DVR (compatible with USB 2.0).
- 2) Press the [SCAN] button and the brand or model name of the USB will display on the [DEVICE] field.
- 3) Click [OK] to confirm.

#### **How to upgrade system firmware by using FTP server**

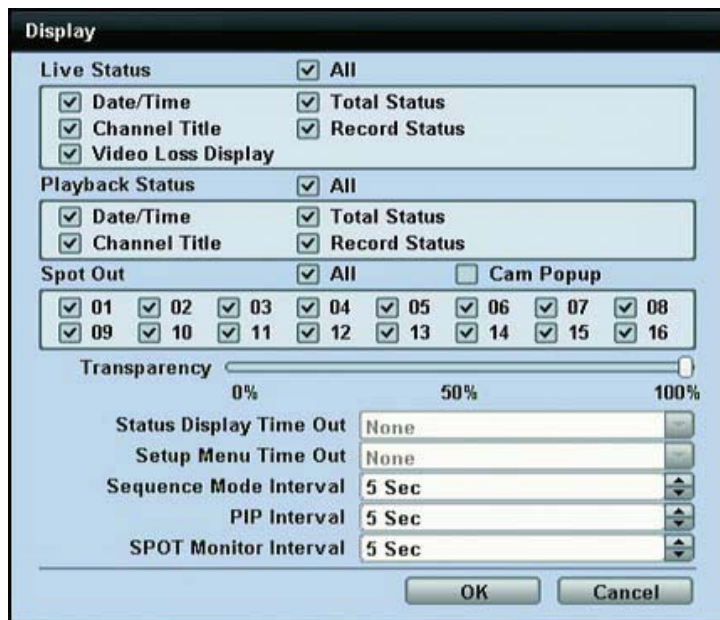
- 1) Select FTP in the drop-down list and type the given FTP server IP address in the [HOST ADDRESS] field. There is no default username and password. The FTP server address is subject to change without prior notice.
- 2) Click [CHECK] button. DVR will detect the latest Firmware version from the FTP server. If there is a new firmware, DVR will ask if you want to upgrade it or not.
- 3) Click [OK] to confirm it and then click [START] to start upgrading.



**CAUTION** It is recommended to format the HDD after finishing the firmware upgrade because the data recorded by previous firmware may cause malfunction of DVR due to the difference in format.  
It is possible to send the system firmware back to factory default. This may be useful if some of the functions do not work properly after a firmware upgrade. It is highly recommended to check all functions and menus after a firmware upgrade for proper layout and performance.

Click the [DISPLAY] button to set Status Display Time Out, Setup Menu Time Out, Sequence Mode Interval, PIP Interval, Spot Monitor Interval, and Transparency.

[TRANSPARENCY] is the transparency level of the menu screen. 0% means no transparency at all.



You may hide or unhide Live or Playback Status Display by checking the box.

**NOTE** DVRs support the following video resolutions: 800x600, 1024x768, 1280x1024, 1280x720, and more.  
User must set the proper resolution according to the monitor resolution.



### 3.1.2 User

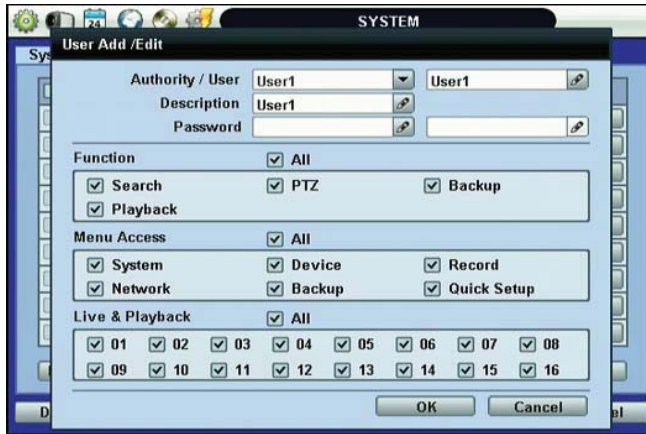
"Admin" with no factory default password is always the main user of the DVR. Admin should change the password of the DVR for extra security.

Admin can add new users with different permission levels in areas of Function, Menu Access, and Live & Playback.

[FUNCTION] consists of Search, PTZ, Backup, and Playback.

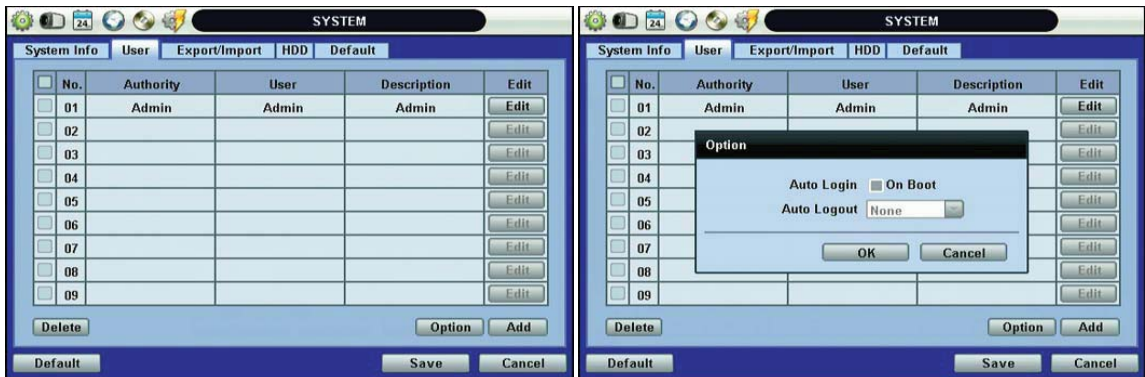
[MENU ACCESS] consists of System, Device, Record, Network, Backup, and Quick Setup.

[LIVE & PLAYBACK] consists of the different camera channels.



**NOTE** Each DVR can have up to 9 users, including the Administrator.

The DVR can be set so user does not lock or require login.



If user checks [ON BOOT], DVR will not ask for an ID and Password input when the system reboots.

If user sets a time for [AUTO LOGOUT], the DVR will automatically go to the live display mode. To control the DVR again, user has to input the ID and Password.

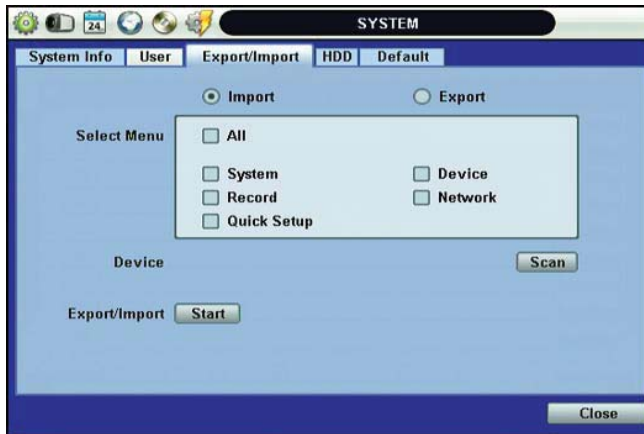
### 3.1.3 Export/Import

Users can copy and paste the system configuration values in this menu.

[EXPORT] enables user to copy the settings for the DVR to any USB memory devices.

[IMPORT] enables user to recall the settings saved from other systems using CD/DVD/USB memory devices. During the import process, make sure that the firmware version of source DVR is the same as the destination DVR.

Select [EXPORT] or [IMPORT] option. Select which system configuration values to export/import. Click [SCAN] to find a device connected to the system and click [START] to begin the process.



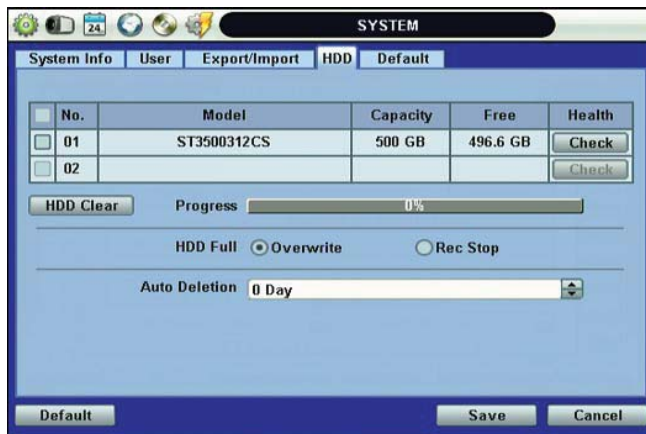
### 3.1.4 HDD

[HDD] tab displays the HDD information. SATA HDD is used for the VMAX480.

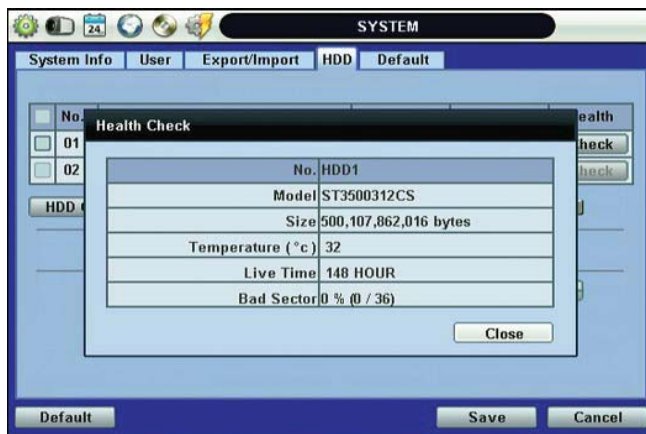
*HDD Full:* When HDD is full, the DVR can overwrite old data or stop recording. Check [OVERWRITE] or [REC STOP].

*HDD Clear:* This button is used to format a new HDD or an existing HDD. Check the box next to the DVR you wish to format and click [HDD Clear] button.

The maximum number of built-in HDD units varies across DVR models.\*



Health: Click the [CHECK] button below Health to view the [Health Check] window. [Health Check] displays the model, size, temperature, and lifetime of the HDD.



If system resources are busy with task, such as making a network connection or performing video playback during the format process, the format may fail. If the format fails, reboot the system resources and then try to format again.

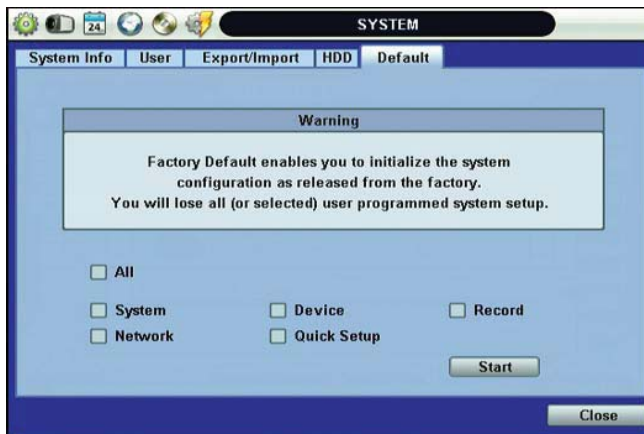


[Format Completed]

- NOTE**
- 1) Formatting may take around 2 minutes for 250GB, 3 minutes for 500GB, or 4 minutes for 750GB.
  - 2) The system always reserves a maximum of 5GB of space in each built-in HDD to utilize the memory for archiving effectively.

### 3.1.5 Factory Default

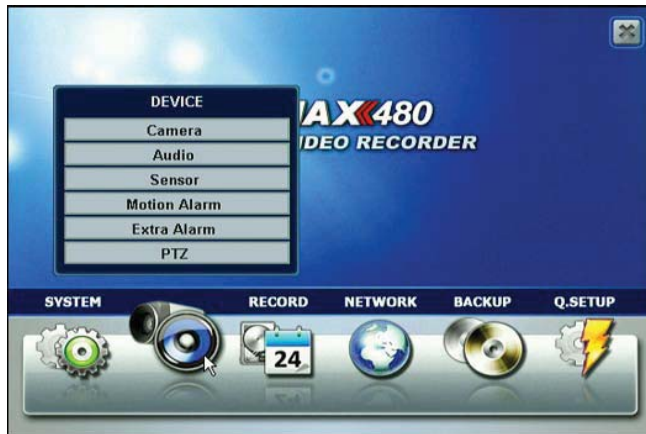
With an authorized password, users can get the system back to factory default configuration.



- NOTE**
- Once the user clicks the [START] button and enters the admin password, all the configuration values made by the user will be deleted. The system settings will be sent to factory defaults, but the recorded video data will not be erased.

## 3.2 Device

The [DEVICE] button consists of the following submenus: Camera, Audio, Sensor, Motion Alarm, Extra Alarm, and PTZ.

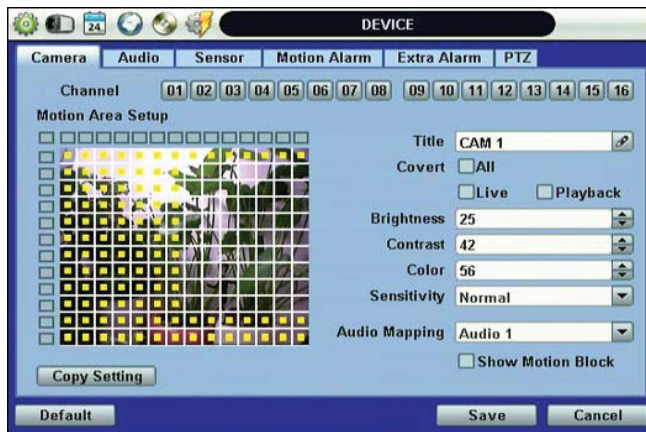


### 3.2.1 Camera

The [CAMERA] tab enables user to change camera settings. Users can change Title, Covert, Brightness, Contrast, Color, Sensitivity, Audio Mapping, and Motion Area Setting for each camera.

Covert: This function, also called "hidden camera," hides camera display and playback as if there were no camera recording. Covert applies to both Live and Playback View.

The default motion area setup is the entire camera area.





### 3.2.2 Audio

Users can select the audio input and output during live display and match the audio input to a designated channel. (Please refer to Section 4.3.1 Camera Record for more details.

User can raise or drop the volume by using the volume control panel.

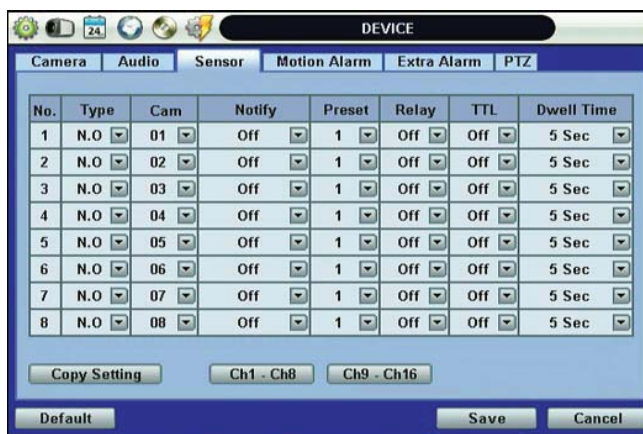


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**NOTE** User can listen to the audio on both live display and playback mode depending on the setting. In addition, user can listen to the audio for both live display and playback mode through the network using Advanced Client Software (ACS), Central Management System (CMS), and/or Internet Explorer web browser.

---

### 3.2.3 Sensor



- Type: Select from [OFF], [N.O], and [N.C].
- Cam: Select the associated camera.
- Notify: Click the down arrow button below Notify to select how to be alerted when a sensor is activated or a motion is triggered. The system can generate a buzzer sound and/or popup the screen of the camera in alarm.

**CAUTION** Relay contact can handle up to 24V/1A of other devices. If connected to a circuit that is Over 24V/1A, the system may experience problems.

- Preset: User can select which camera to move to a specific preset position, when a sensor is triggered. User should setup the preset position. Look at PTZ Menu 4.2.6 for details. Multi-preset can be set with a single PTZ camera, so users can cover a multi-preset zone with a single PTZ camera.
- Relay: Turn on or turn off the Relay Output.
- TTL: Turn on or turn off the TTL.
- Dwell Time: Set the time of recording when a sensor is activated. During the Dwell Time, cameras will record according to the frame and alarm (relay) output set. The recording stops, and alarm output turns off when the dwell time elapses.

---

**NOTE** [SENSOR] here means the alarm connected to the DVR, which is triggered by physical sensor input.

---

**NOTE** If the sensor does not operate properly, check the setting of the sensor type (N/O or N/C). The alarm might not function if the actual connecting sensor type and the sensor type in the system setting are inconsistent.

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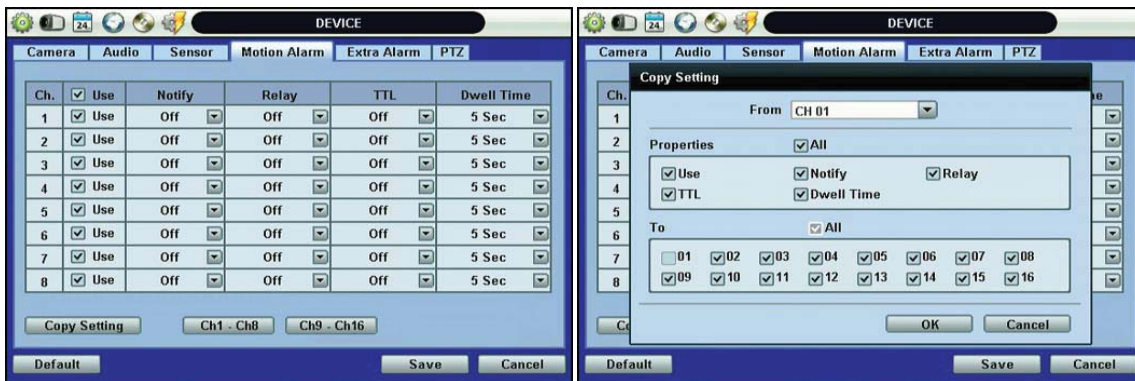
**NOTE** [CAMERA POP-UP] means that multi-screen live video mode will be switched automatically to single channel mode, when an alarm is triggered. This single channel video will be the channel triggered by alarm.

---

### 3.2.4 Motion Alarm

[MOTION ALARM] records only when DVR S/W triggers motion detection within the defined motion area.

If user sets Intensive to [ON], the DVR records at the maximum recording speed upon motion detection. Video will record for the selected post-alarm dwell time, and pre-alarm video will record for the specified time. The selected sensor-out channel sends an alarm signal.

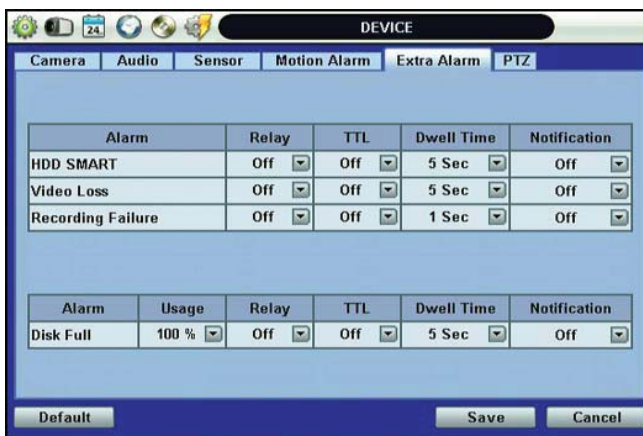


- Copy Settings: Upon pressing [COPY SETTINGS] button, the [COPY SETTINGS] window will appear. Use this function to copy the settings of a single camera to the other cameras. Select the camera to copy from, the properties you would like to copy and the sensor numbers to apply the settings to. Click [OK] button.

**NOTE** [Motion Alarm] here means alarm triggered by motion detection set by motion menu of DVR.

### 3.2.5 Extra Alarm

SMART is an alarm signal triggered when the HDD is about to be out of operation. SMART Alarm is created by the HDD and is captured by the DVR. If the HDD does not create this alarm, then the DVR cannot capture and output the signal.



Users can set the percentage for HDD Usage. When Usage is set to 50%, DVR will notify the user with a camera popup or a beep sound when the HDD is 50% full.

## 3.2.6 PTZ

Full control of PTZ cameras is available in this menu.

Please refer to Section 3.3 PTZ Operation for details.



- PTZ Menu (Depending on the model of PTZ camera): If selected, the OSD menu of PTZ camera is imported and shown on the DVR monitor allowing the user to control the full PTZ settings.
- Preset: 1 to 255 Presets are supported.
- Protocol: Select the proper protocol of the connected PTZ camera.
- Address: Set the PTZ driver address of the connected camera.
- Baudrate: Select baud rate level from 1,200bps up to 115,200bps.
- Check the below items for proper PTZ operation.
  - 1 Check if the protocol of the connected PTZ camera is correct.
  - 2 Check if the communication settings, including the baud rate, of the connected PTZ camera are in accordance with the assigned value for that PTZ protocol.
  - 3 Check if the address of the connected PTZ camera is correct.
  - 4 Check if the wiring to the PTZ controllers are correct.

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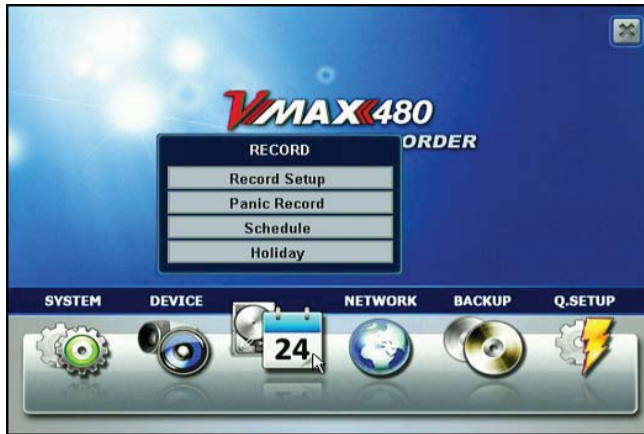
### PROCEDURE How to Setup PTZ Camera with Pelco-D Protocol (example)

- 1 Make sure the serial communication with the PTZ camera is through the RS-485 port.
  - 2 Select [PELCO-D] at the protocol list, and set the address.
  - 3 Select Baud Rate to be the same as the PTZ camera.
  - 4 Click the [SAVE] button to confirm this configuration.
-

### 3.3 Record

Configure various record settings such as Continuous, Event, and Panic for each individual camera channel in the Record Setup Menu. Network Stream settings are configured independently from the record settings in this menu as well. Therefore, the user can optimize the bandwidth used by configuring the resolution, FPS, and image quality separately.

There are four sub menus in the RECORD menu—Record Setup, Panic Record, Schedule, and Holiday.

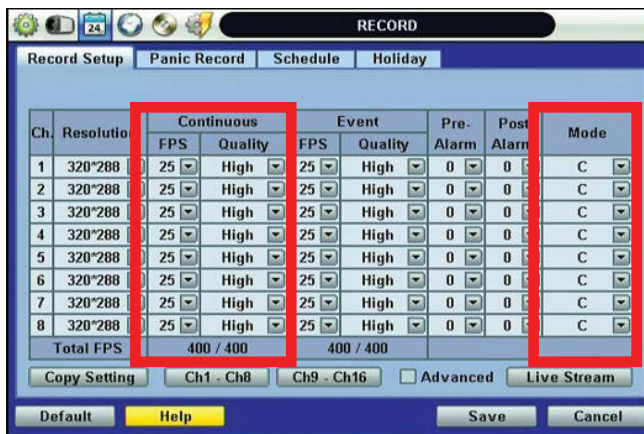


#### 3.3.1 Record Setup

Configure record settings such as Resolution, FPS, Quality, Pre/Post Alarm, and Record Type for Normal Recording (Continuous) and Event Recording (Alarm or Motion). Configure for each channel or use the [COPY SETTINGS] button to apply the same settings to all cameras.

First, select the Record [Mode] for the camera channel.

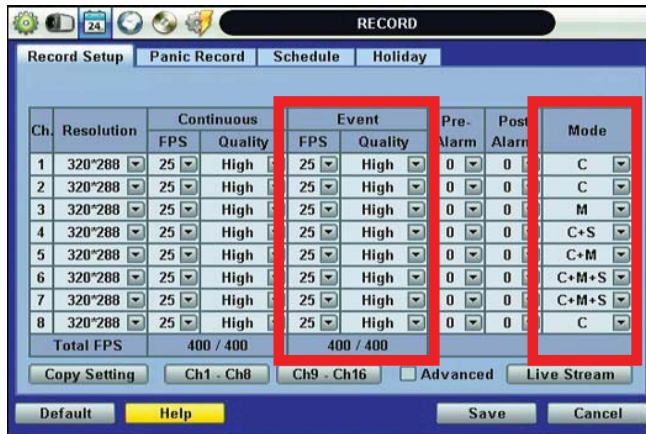
Record Mode "C" (Continuous) disables Event Recording, and the DVR uses the settings for Continuous Recording.



[Continuous Record Setting]



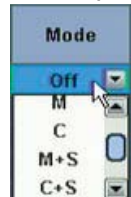
Record Mode "M" (Motion Detection) or "S" (Sensor/Alarm) uses the Event Recording Settings only.



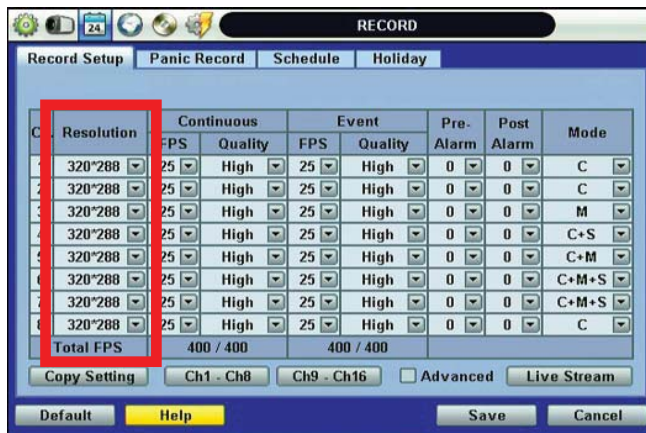
[Event Record Setting]

Record Mode "C+M" (Continuous + Motion), "C+S" (Continuous + Sensor), or "C+M+S" (Continuous + Motion + Sensor) simultaneously engages both Continuous and Event Recording Settings. DVR records with continuous record settings, but when there is an event (Motion, Sensor, Alarm), the DVR records with the Event Record Settings.

Select "Off" as the Mode to disable a specific camera from recording.

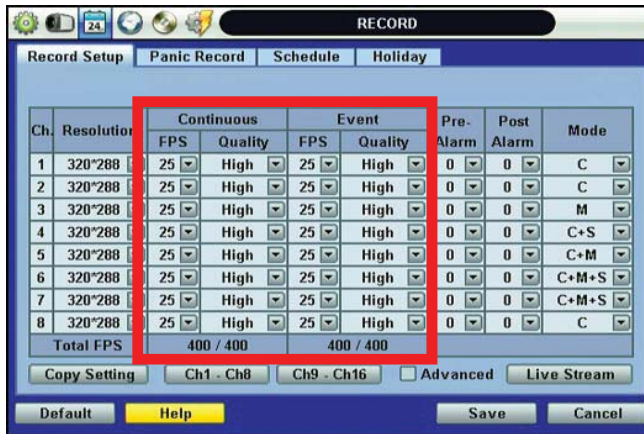


Select the record Resolution for each camera channel. The Resolution is applied to both Continuous and Event Record Settings.



[Resolution Setup]

[Resolution] is the required number of horizontal and vertical pixels in a frame (horizontal pixels x vertical pixels). Select from the options: 352x240/288, 720x240/288, and 720x480/576. Default is 352x240/288. Picture quality gets better, as the resolution increases.



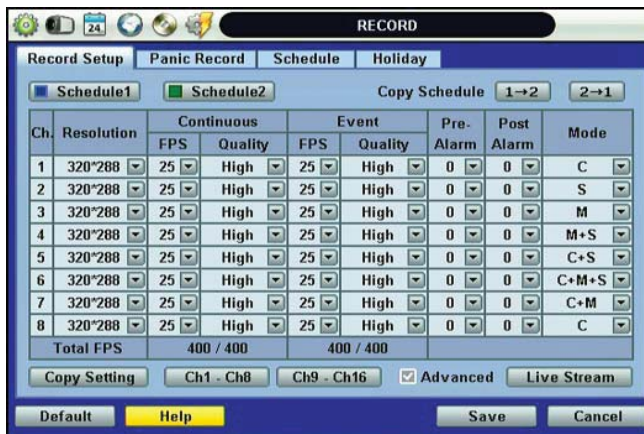
[FPS and Quality Setup]

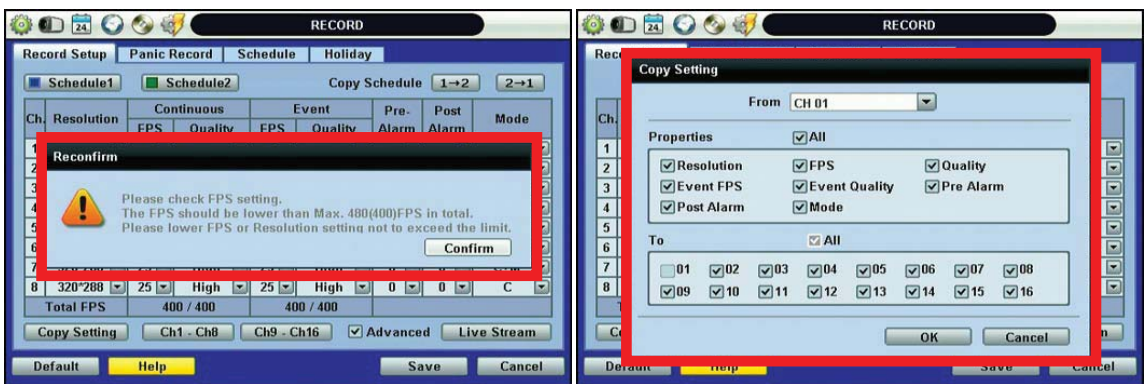
Select the FPS (Frames Per Second) for each camera channel. The system automatically calculates [Remaining FPS] that users can use.

Quality influences the "byte size per image." When Quality is [Low], both image quality and size is lower. When Quality is [High], both image quality and size is higher. Consider the necessary recording period, the importance of each camera image, and the quality of the analog signal when setting the recording quality.

Check the [Advanced] box for a more detailed record setup for each camera channel. When the box is checked, [SCHEDULE 1] and [SCHEDULE 2] buttons appears.

The buttons are simply for two [Record Setup] pages. This enables user to set a combination of two schedules.





**NOTE** The maximum number of FPS is 480(400)FPS for the DVR. If the recording setting exceeds the limit while users setup the Resolution and FPS, the popup message "Please check FPS setting." will appear. Please setup the resolution and FPS again based on the "Remaining FPS".

**NOTE COPY SETTINGS**  
Upon pressing [COPY SETTINGS] button, [COPY SETTINGS] window will appear. In this window, select the camera the user wants to copy from. Select or deselect the properties—Resolution, FPS, Quality, Pre Alarm, Post Alarm, and Type—to copy. Select the camera channels to apply the settings to.

**NOTE** The storage capacity for the same image can be different depending on the resolution. 720x240/288 (2CIF) is twice the size of 352x240/288 (CIF) and takes twice the amount of storage capacity. When high resolution is selected for the same period, the high resolution takes up more storage, and its storage period can be shorter on the same hard disk capacity.

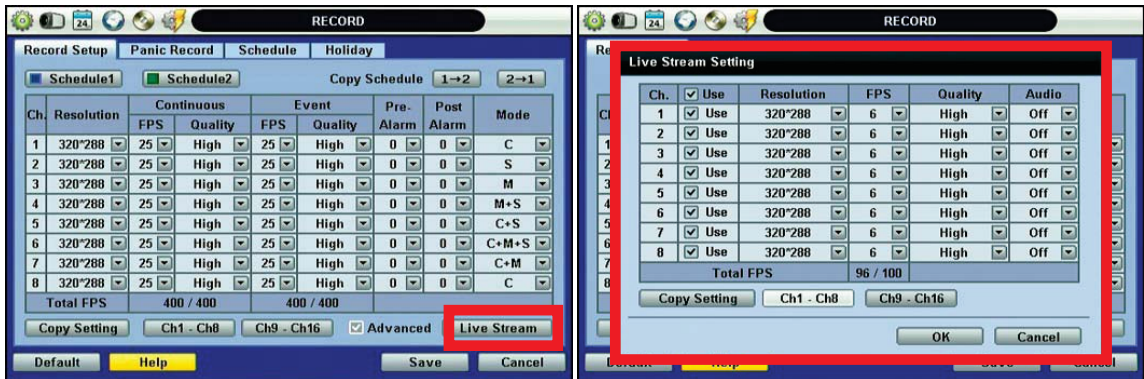
**NOTE** For the same resolution, frame per byte size will vary according to various reasons, such as the recorded picture quality setting, movement, complexity of the image, and noise. Therefore, the total recording period will differ greatly according to the specific image conditions.

- 352x240/288 : Standard Quality Standard 1~5KB
- 720x240/288 : Standard Quality Standard 5~10KB
- 720x480/576 : Standard Quality Standard 10~20KB

Quality by 40(low), 60(standard), 80(high), and 100(highest) makes frame size different by around 30% in each level.


Configure the Network Stream Settings independently from the Record Settings.

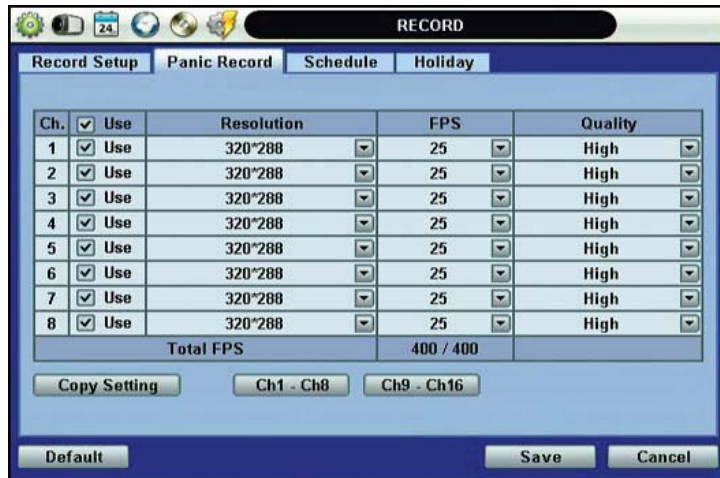
Click [LIVE STREAM] button. [LIVE STREAM] window will now appear, as shown below.



[LIVE STREAM] enables users to optimize data transmitted over the network by configuring the Resolution, FPS, and Quality without affecting the Record Settings.

Users also have the option to configure Panic Record settings. The Panic Record Setting is intended to be used under emergency situations.

To use Panic Record, press the [INSTANT RECORD] button on the frontal keypad or click the  button from the control panel in live mode. For this record type, it is recommended to use maximum resolution, FPS, and quality.

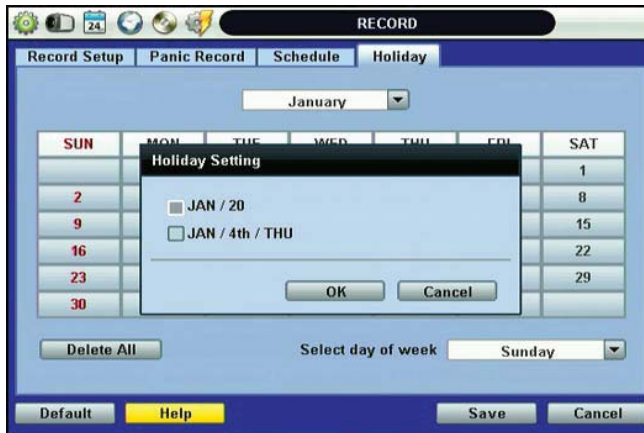
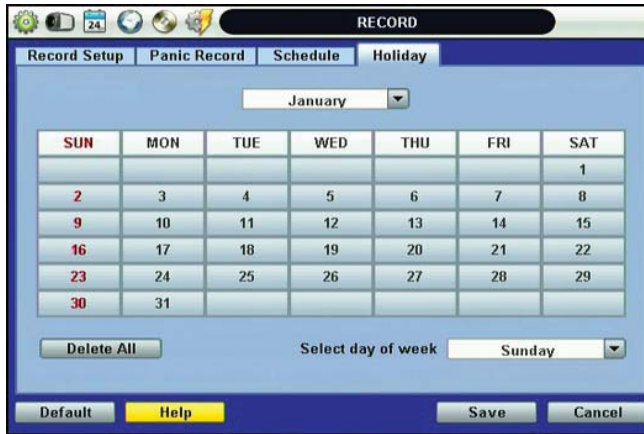






### 3.3.3 Holiday

Click [HOLIDAY] tab to assign holidays. Assign a unique schedule for holidays in the [SCHEDULE] tab.

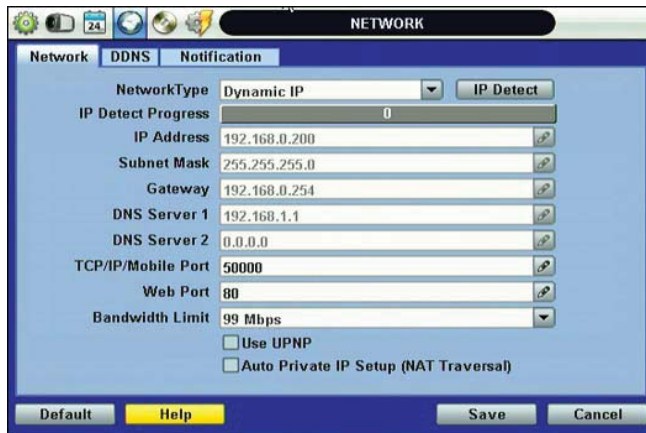


## 3.4 Network

### 3.4.1 Network

The DVR has a built-in web server.

- Network Type: Select network type. Select LAN for fixed (Static) IP or DHCP for dynamic IP. If you select DHCP, click [IP DETECT] button to detect the network information.
- Subnet Mask: Clarifies the subnet that the system belongs to. Standard address is [255.255.255.0]. For more information, please consult your network administrator or your internet service provider.
- Gateway: The IP address of the network router or gateway server. The gateway is required in order to connect through the external router from the remote. For more information, please consult your network administrator or your internet provider.



- DNS Server: There are two DNS Server settings, one for the Preferred DNS and one for the Alternative DNS. To use the internet, enter the IP address of the Domain Name Server (DNS) Server. This is provided by your internet service provider.
- [TCP-IP/Mobile Port] "Default is 9010" when connecting locally or remotely using Pc; Mac; or Mobile 3G or higher.
- Web Port: "Default is 80" when connecting using the Web Browser.

---

**NOTE** [TCP/IP Port/Mobile Port], and [Web Port] should all be different from each other.

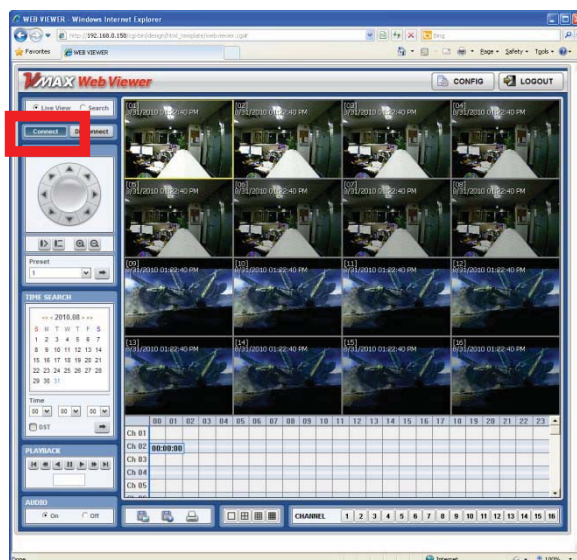
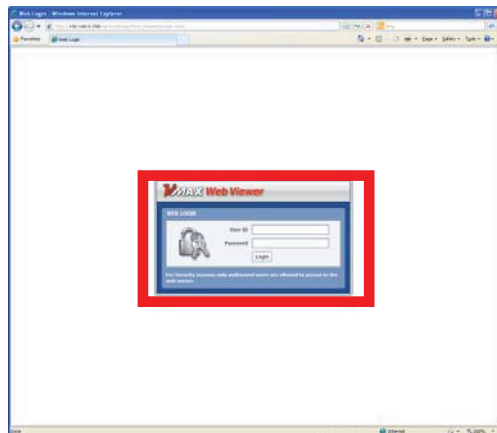
---

- UPnP (Universal Plug and Play): UPnP stands for Universal Plug and Play, which indicates a universal protocol for widespread plug-and-play devices to ease the network implementation. When the PC and DVR has the UPnP installed, the PC automatically begins to recognize the DVR in the same local area network. This way PC can directly connect to the DVR by clicking on the icon representing the DVR in [My Network Places] folder. The first five characters of the detected DVR filename is the firmware version.



Double click on the desired icon. The icon will open an internet explorer browser that connects to the DVR as shown below. Please type in your User ID and Password and click [LOGIN] button. To connect to the DVR, click [CONNECT] button.

Default Login is **"admin"** and the password box blank.



- Auto Private IP Setup (NAT Traversal): The UPnP NAT Traversal function will help to setup the DVR to connect to the internet via a router.

When a PC connects to a DVR that is not in the same local area network, a real IPO Address and corresponding Port Number is required. However, if the DVR is behind a router, the PC and DVR will communicate through the router. To view images from the DVR on your PC, the router will need to setup Port Mapping (Port Forwarding).

When UPnP NAT Traversal Function is enabled, the DVR will set the router automatically. To do this, check the [AUTO IP (NAT TRAVERSAL)] box in the [UPnP] Menu.

---

**NOTE** The system transfers video images at real-time over the network even during no record.  
For example, user can monitor live video even when motion has not occurred during motion detection mode.

---



---

**NOTE** If there is no physical network connection, it may take a few minutes for the system to start working, since the network configuration in DHCP mode and the DHCP connection cannot be made.

---

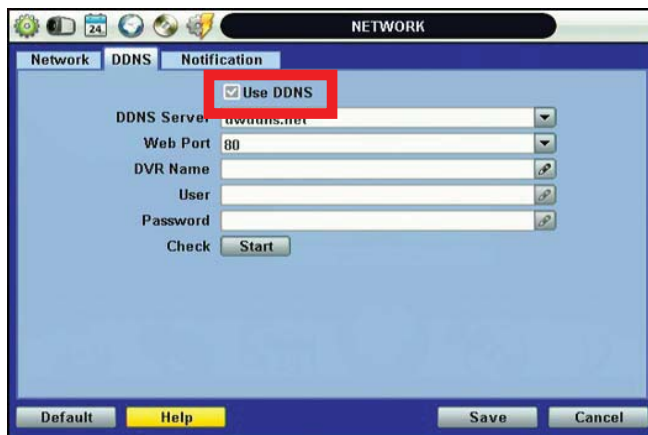


---

**NOTE** The maximum number of simultaneous connection is 10 users for each DVR using PC or Mac and 5 users using Mobile devices.

---

### 3.4.2 DDNS



To use DDNS check [USE DDNS] box and input the following information.

[DDNS Server] is **dwddns.Net** or **dyndns.com**. ([dwddns.Net] is recommended)

[TCP/IP Port] Default is "80"

[DVR Name] can be the business name or location and press Start to make sure the DVR Name is available.

To connect using the web browser type <http://dvrname.dwddns.net>

[ID] and Password is required when using dyndns.com

---

**NOTE** To use DDNS make sure the DNS 1 and 2 IP address is correct.  
The standard DDNS domain name is [dwddns.net], and users can switch to [dyndns.com] in the drop-down list.

---



### **-Technical Tips-**

1. If your DW-VMAX is connected behind the router be sure to login to your router to open TCP/IP:port,Mobile:Port;Web: port and forward them to the DVR IP address
2. If the [DNS SERVER] IP address is using an internal IP(Example:192.168.0.2 or 10.10.10.2),
3. DDNS registration information might be blocked, due to Router setting error or network security reasons in DHCP setting. Therefore, using a public DNS is recommended instead of using an internal IP.
4. You may ask your internet service provider to get DNS server IP address. –OR-
5. Pick and use one of the following DNS server list. <http://www.dnsserverlist.org> –OR-
6. Just try one of following Public DNS Server IP:  
168.126.63.1 / 168.126.63.2 / 203.248.2 / 164.124.101.2
7. Go to NETWORK → DDNS → TCP/IP Port.
8. You can use one of two ports '80' or '8245'. (Default is 80)

---

**NOTE** It is recommended to reboot the system after setting. Enter your DVR NAME and click 'CHECK' button to check out if the DVR name is duplicated or available.

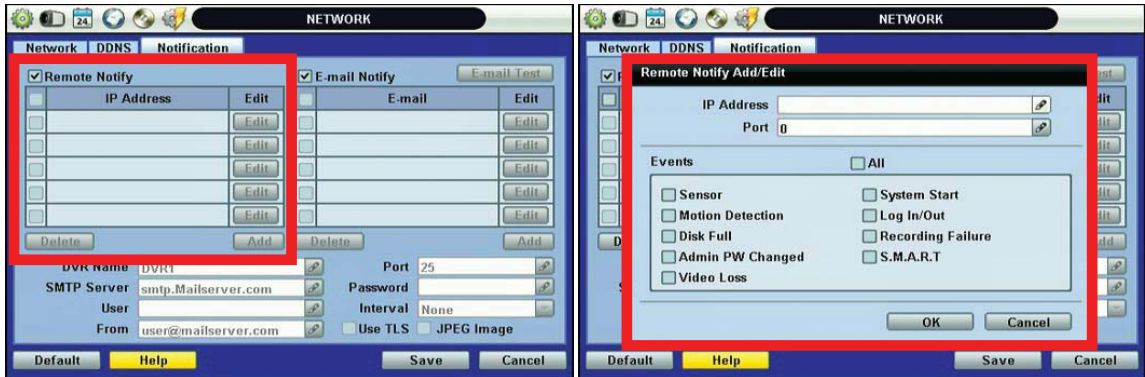
---



### 3.4.3 Notification

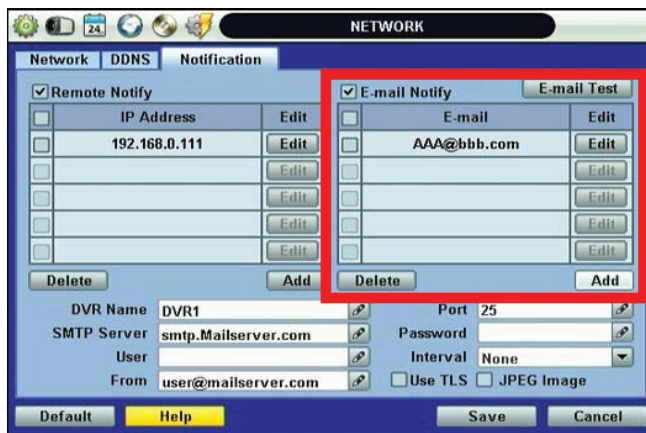
- Remote Notify: The system can notify an alarm message to the IP address of ACS (Advanced Client Software) over the network.

Choose from a selection of different kinds of alarms by pressing [ADD] button. Sensor, Motion Detection, Disk Full, Admin PW Changed, Video Loss, and Power On/Off. generate alarms



- E-Mail Notify: The system can send notification to an Email address, Advanced Client Software, or Central Management Software over the network.

Choose from a selection of different kinds of alarms by pressing [ADD] button. Sensor, Motion Detection, Disk Full, Admin PW Changed, Video Loss, and Power On/Off. Can generate alarms by checking [USE TLS], users can use a public email address such as Yahoo, Google, Hotmail accounts. Type DVR name in the [DVR Name] box. The DVR Name will appear in the email so that users can recognize which DVR sent the e-mail.



**NOTE** Configuration's first priority is always given to [RECORD SETUP] of the [RECORD] menu. Thus, [RECORD SETUP] needs to be set, for the system to send alarm message or email notifications.

If user sets "Continuous" for [SCHEDULE] of the [RECORD] menu and checks the [ALL] box in [NOTIFICATION], the system will not send alarm messages. [SCHEDULE] has to be set as "C+M", "M+S", or "C+M+S", for [NOTIFICATION] to work properly.

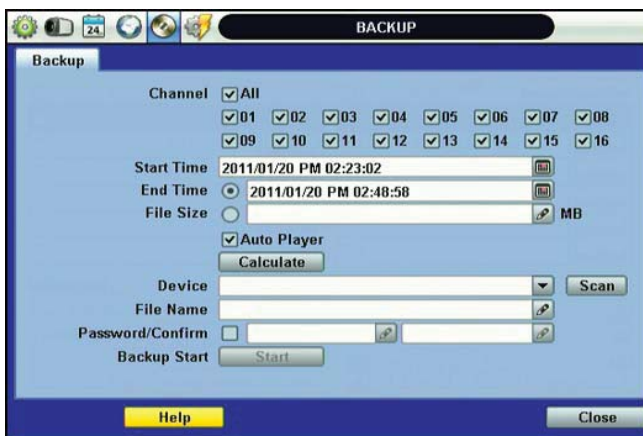
## 3.5 Backup

### 3.5.1 Manual Backup

Users can archive a video clip recorded for a certain period on a selected channel or channels as shown below.

Connect an appropriate USB flash drive and press [SCAN] button to get the system to recognize the device before archiving. Necessary file size will be shown before burning.

Users can check the [AUTO PLAYER] box to include the viewer file. This function allows the user to play the video clip without having to install the software on the computer. Otherwise, the file backup format will be in the Manufacturer's Proprietary Format (PSF). ACS (Advance Client Software) Backup Player is required.



---

**NOTE** For proper backup, backup device shall be a well-known major formatted by FAT/FAT32.

---

**CAUTION** DVD-R/+R is supported, but DVD-RW/+RW are generally not supported. Check the compatible media list provided by ODD driver manufacturer.

---

**NOTE** Click the [CALCULATE] button to learn the backup file size before executing backup.

---

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**NOTE** Easily backup video with [QUICK BACKUP] during video playback. Refer to section 3.5 for details.

---

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**NOTE** Rename the backup file name and set a password before starting backup process for security purposes. User will need to input the password to playback the file.

---

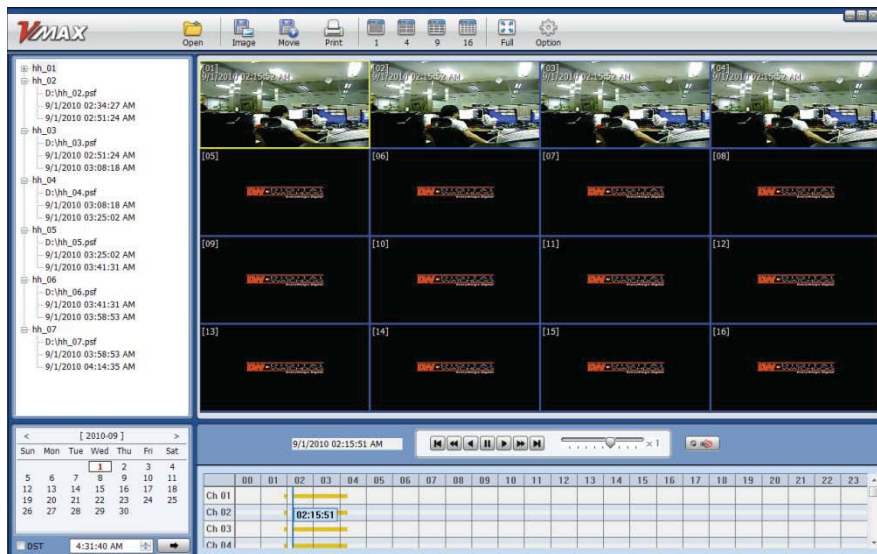
### 3.5.2 ACS (Advance Client Software)Backup Player

If [AUTO PLAYER] is checked, there will be a single file after archiving.

Double-click the backup file to open the video data file. If the backup file does not have Auto Player, double-click [BackupPlayer.exe] file in the folder titled with the date to open the video data file in PSF format.

To play video, user can drag the PSF file and drop it in an empty screen of Backup Player as shown in the picture below. Alternatively, click the [OPEN] button located on the top of the Backup Player.

If the user inserts USB memory stick or CD media that has the Video data file, the Backup Player will automatically begin playing the files, starting with the first data file located in the device.



Use the icons located on top of the player window to capture and print an image, zoom out, make an AF file format, open a file, or change the number of displays on the screen.

---

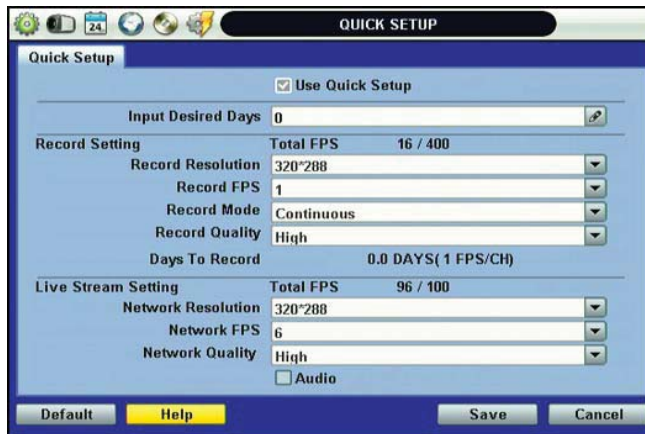
**NOTE** User can play the backup video clips with Advanced Client Software or Central Management System.

---

## 3.6 Quick Setup

[QUICK SETUP] enables easy setup for recording resolution, recording speed by frame, recording mode, and recording periods.

The system will follow the configurations for [QUICK SETUP] regardless of configurations set in other menus. Do not check [USE QUICK SETUP], if you want to use full system configuration defined in other menus.



**NOTE** Deactivate [QUICK SETUP] to use the configuration from the other menus.

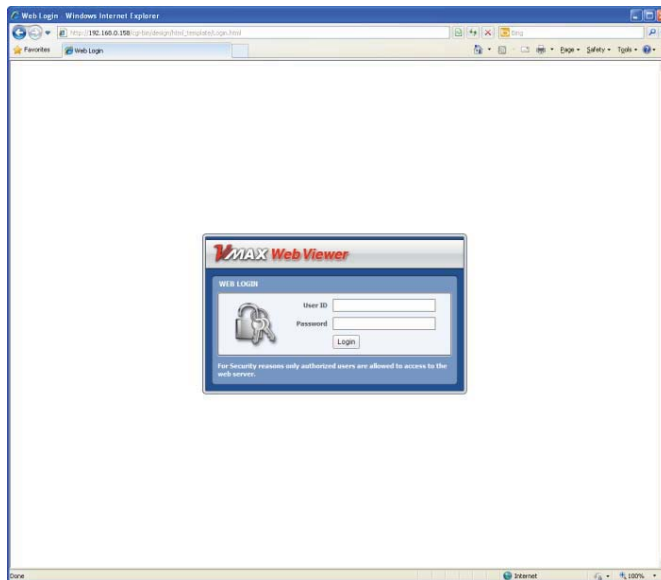
## 4 WEB SURVEILLANCE

The DVR has a built-in web server.

With an ordinary web-browser over the network, users can stay connected to the system for monitoring, playback, or remote configuration without an Advanced Client Software (ACS).

### 4.1 Web Login

Indicate the Web Port in the Router; then, input the correct IP address into the web browser. Download Active-X file if needed. The login page will be visible after you download Active-X. Default User ID is "admin", and there is no default password.

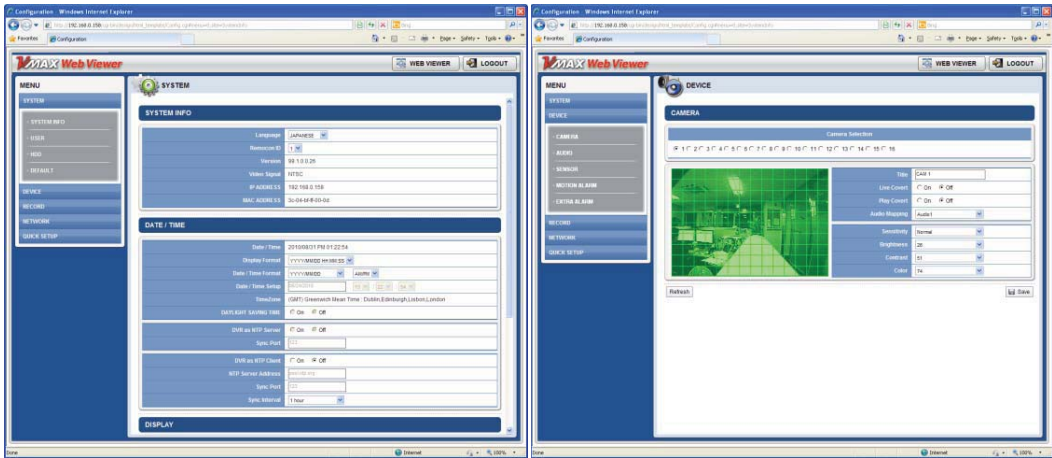


### 4.2 Web Configuration

Main Menu	Sub Menu
SYSTEM	SYSTEM INFO
	USER
	HDD
	DEFAULT
	CAMERA
DEVICE	AUDIO
	SENSOR
	MOTION ALARM
	EXTRA ALARM
	RECORD SETUP
RECORD	PANIC SETUP
	SCHEDULE
	NETWORK
NETWORK	DDNS
	NOTIFICATION
	QUICK SETUP

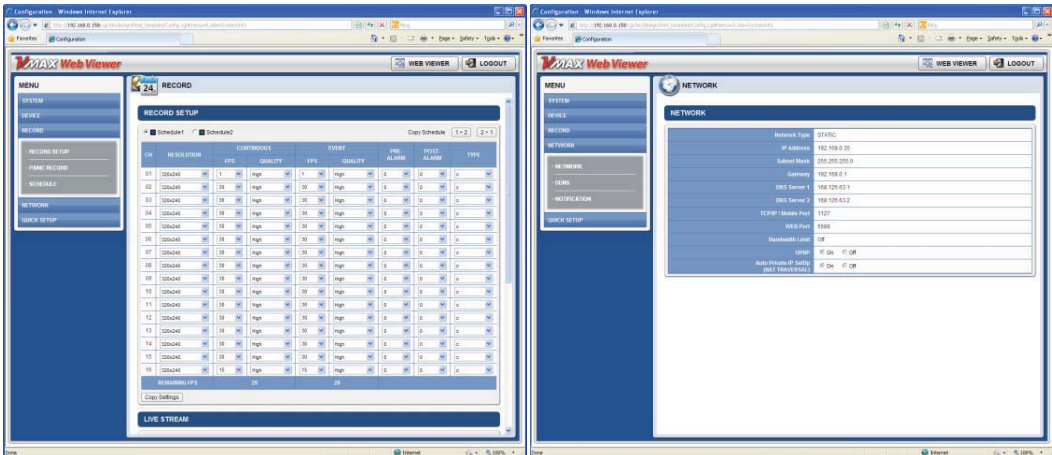


After logging in with the correct User ID and password, user can make various configuration changes in the Web Configuration window seen below. The Web Configuration Menu is only available to the administrator (admin) account.



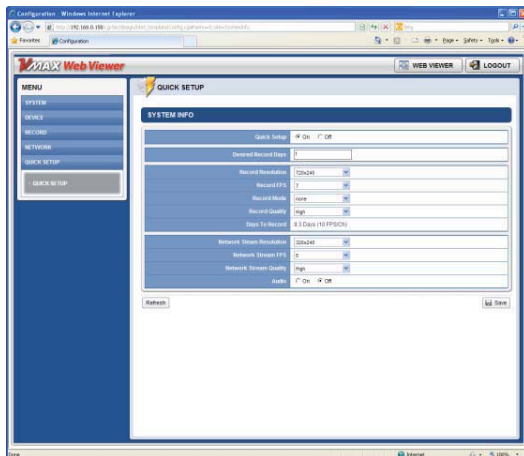
[SYSTEM]

[DEVICE]



[RECORD]

[NETWORK]



[QUICK SETUP]

---

**NOTE** This DVR has its own built-in web server.  
This Web CGI Screen is supported directly from the built-in web server of the DVR, regardless of Internet connection.

---

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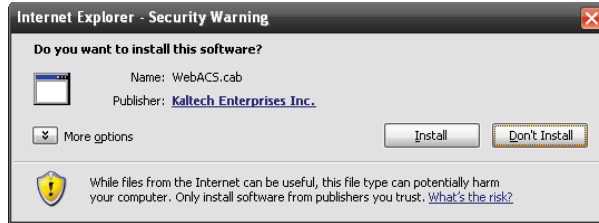
**NOTE** [SYSTEM REBOOT] enables you to reboot the system without any changes to the setup.  
When the network is disconnected due to abnormal operation of the system, user can use this function and try to reconnect. However, the IP number assigned to the system can change due to the DHCP mode..

---

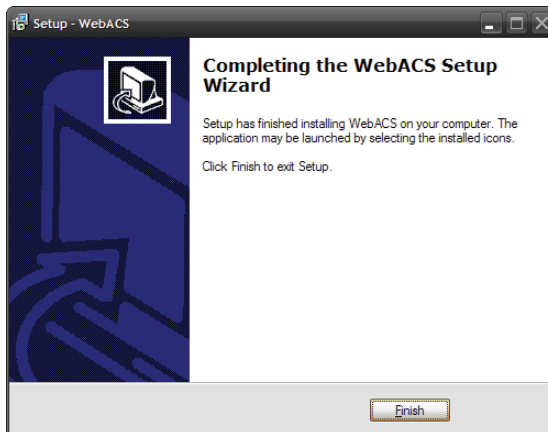
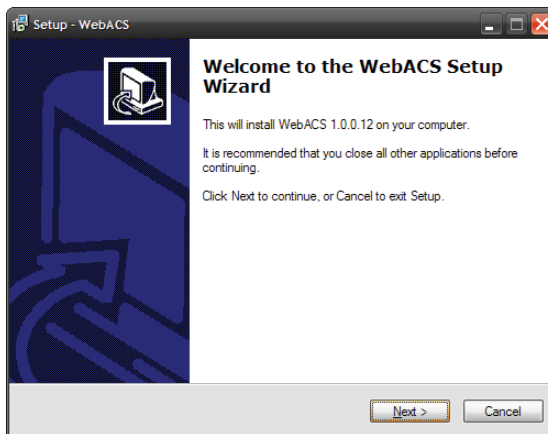
## 4.3 Web Monitoring

The Active-X file from the DVR has to be installed to the workstation PC to monitor live video.

Click [INSTALL] button.



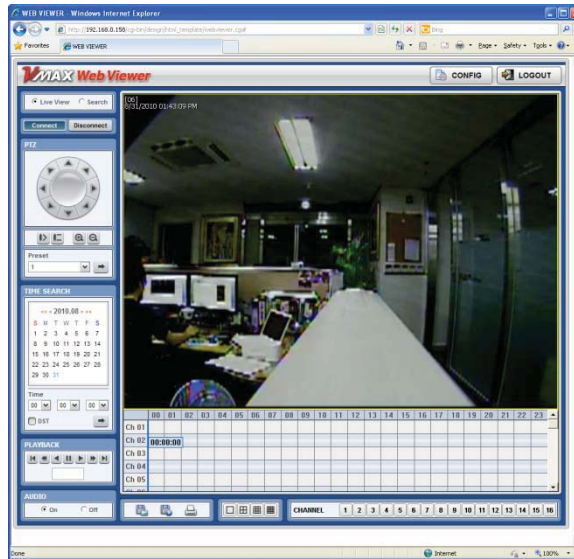
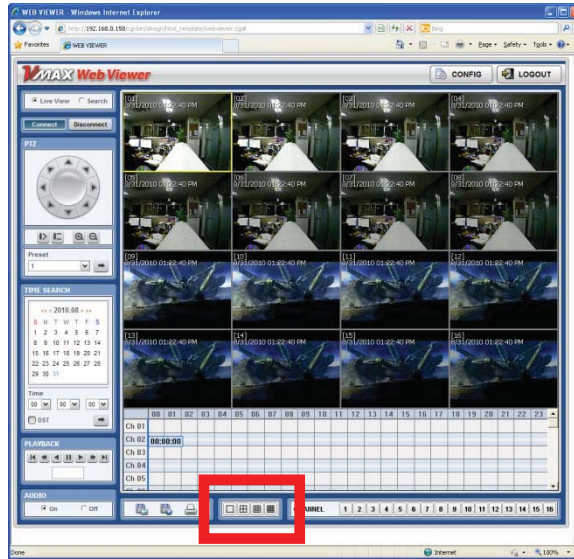
Click [NEXT] button to continue setup. When setup is complete, click [FINISH] button.



Click [CONNECT] button located on the top left corner to connect to the DVR.



Monitor live video in 1, 4, 9, or 16 screen modes. To view a single channel in full-screen, position the mouse cursor on the live video screen you wish to maximize and double-click on the left mouse button.




**NOTE** The image resolution of the live view in the web browser is transferred from the DVR.  
 (Live image over the web browser depends on the [LIVE STREAM] Value on record mode of DVR.)  
 Refer to 4.3.1 Record Setup for details.

**NOTE** If IE Web Browser does not properly display live image due to network traffic jam or narrow bandwidth, close and re-open the IE Web Browser.

## 4.4 Web Playback

Remotely playback the DVR images by marking the [SEARCH] box on the top left corner of the Web Browser. Click [CONNECT] button to connect to the DVR.



- Time Search: Select the date and time on Time Search, located at the center left of the window. Click  button.
- Playback: Play/Pause is toggled, and playback speed is displayed on the white box.
- DST: Check [DST] box to play overlapped videos during DST (Daylight Saving Time) period. Refer to 3.7 DST Setting and Image Playback for details.
- Search Bar: Move the blue vertical line to the time that user wants to search. The colors of the time bar are different according to the type of recording mode. Refer to 4.3.2 for details on the different modes and colors.





## Chapter 2

# ACS CLIENT SOFTWARE USER MANUAL



# 5 ACS (ADVANCE CLIENT SOFTWARE) USER GUIDE

## 5.1 Recommended PC Requirements

---

### Recommended PC Requirements

OS	Windows XP, Vista, 7
CPU	Pentium Dual Core 1.8GHz or higher
VGA	1024*768, 256MB Supporting DirectX
RAM	1GB
HDD	20MB for installation, 10GB for Remote Backup

### Minimum PC Requirement

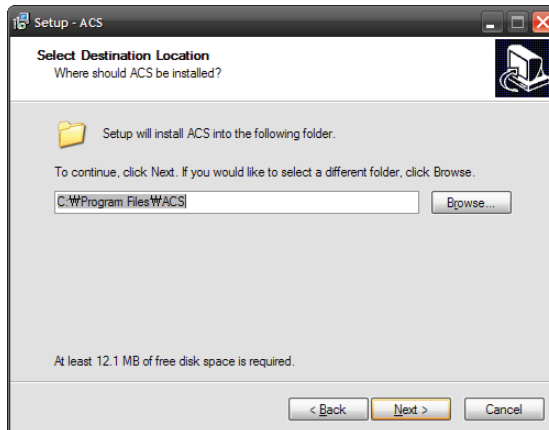
OS	Windows XP, Vista
CPU	Pentium 4, 2GHz
VGA	1024*768, 64MB 24Bit Color Graphic Card
RAM	1GB
HDD	20MB Free Space

## 5.2 Install

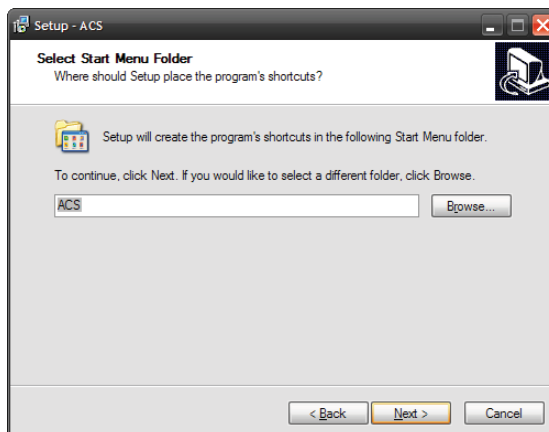
Run [Advanced Client Software Setup.exe] on CD. Then, a Setup Window will appear as below.



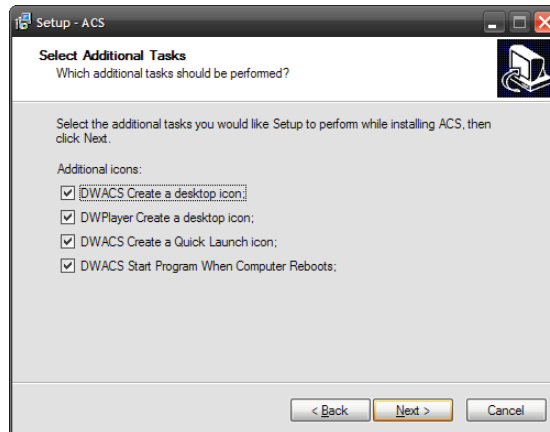
Press [BROWSE...] button if you want to install the program into a different directory. Click [NEXT] button.



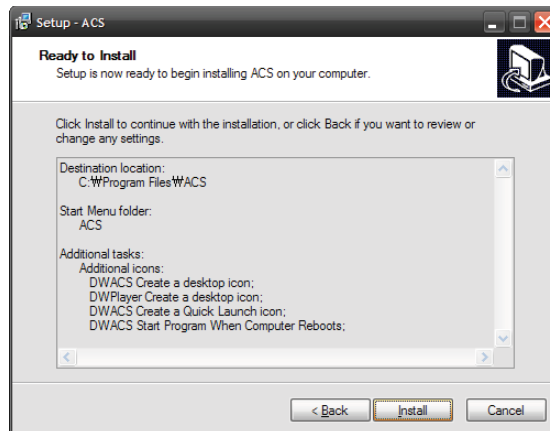
Press [BROWSE...] button if you want to place the shortcuts into a different folder. Click [NEXT] button.



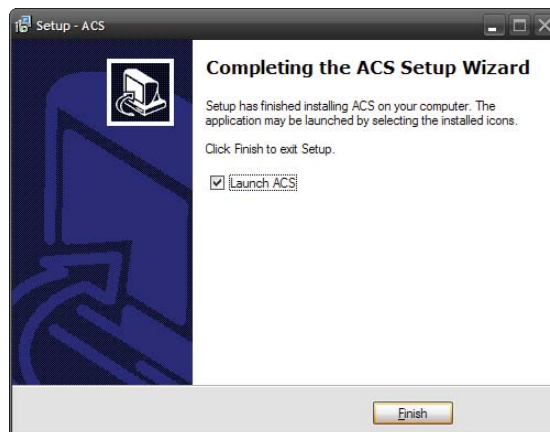
Press the [NEXT] button to move to the next screen. To create a desktop icon, check [CREATE A DESKTOP ICON] box.



Press the [INSTALL] button to move to the next screen and begin installation.

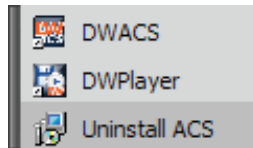


When the installation is complete, the following message appears.

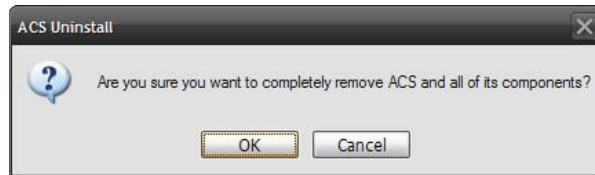


## 5.3 Uninstall

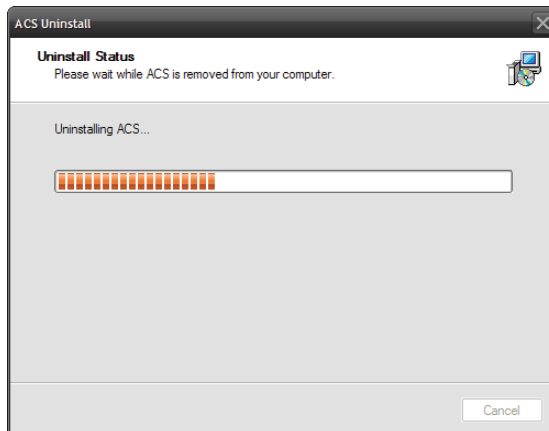
To uninstall ACS, press [Uninstall ACS] from Start Menu.



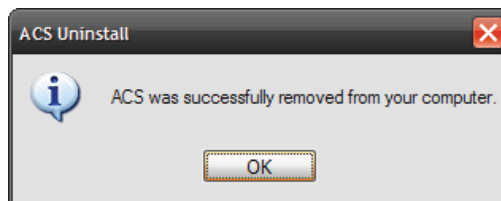
Account Manager will appear in Windows7 or Windows Vista.



Press [YES] to begin uninstalling. The window below appears.




When the un-installation is complete, the following message appears.





## 5.4 Basic Operation

Click on  icon on Desktop or click on [ACS] link in the start menu.

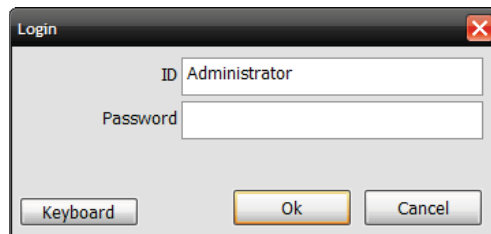


### 5.4.1 Login

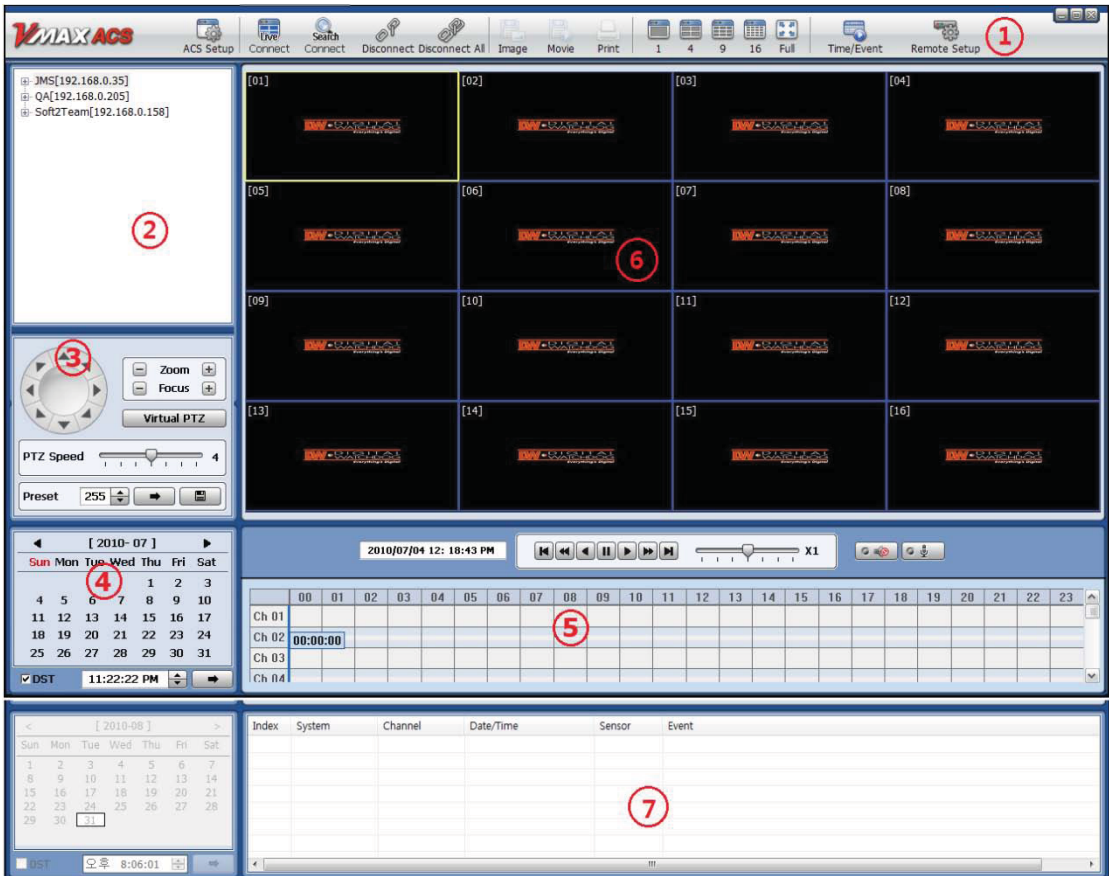
Administrator is the highest level of authority for the operation of ACS (Advanced Client Software).

#### Default ID and Password for Administrator

- User ID: administrator
- Password box is blank

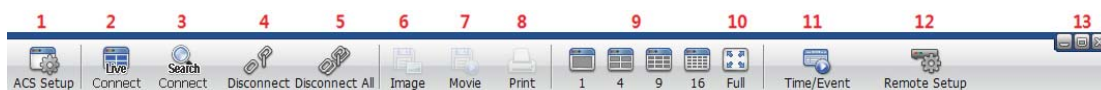


### 5.4.2 Screen Layout



No.	Item	Description
1	ACS Toolbar	ACS Setting, Live Mode, Search, Disconnect, Image Save, Video Save, Screen Mode Remote Setup
2	Sites (DVRs) List Panel	Registered and configured DVR Site list
3	PTZ Panel	PTZ Camera Control in Live Mode
4	Calendar Panel	Search by Time and Date
5	Search Panel	Search mode displays the Recorded Information. Control the speed of Playback and Audio.
6	Display Panel	Transmitted camera images display.
7	Event List Panel	Event List Panel Update

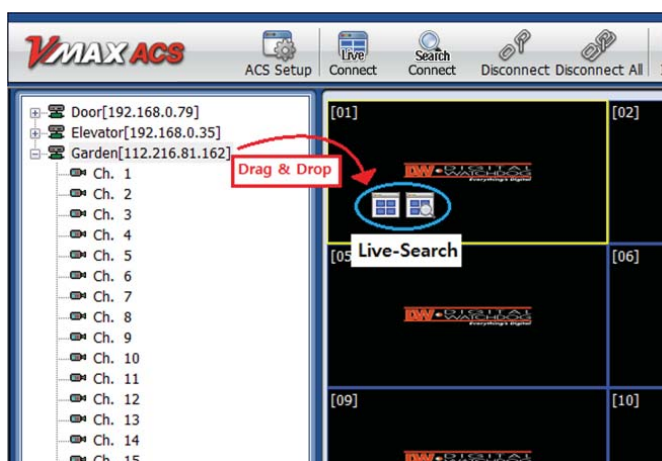
### 5.4.3 Tool Bar



No.	Icon	Description
1	ACS Setup	Option Setup for ACS (Advanced Client Software)
2	Live	Connect and Display Live channels from selected DVR
3	Search	Connect and Display Recorded channels from selected DVR
4	Disconnect	Disconnect a Selected Channel
5	Disconnect All	Disconnect All Channels
6	Image	Save the Selected Image
7	Movie	Save the Selected Video in ASF format.
8	Print	Print Still image
9	Split	Channel Display Mode 1 – 4 – 9 - 16
10	Full	Full-Screen Mode (Will hide the tool bar)
11	Time/Event	Toggle Between Search Panel and Event List Panel
12	Remote Setup	DVR Remote configuration
13	Window Control	Minimize, Maximize, & Exit ACS (Advanced Client Software)

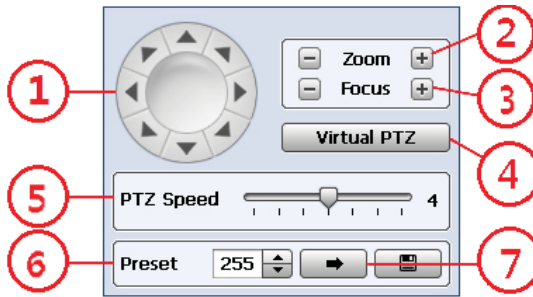
### 5.4.4 Site List Panel

The Site List Panel of registered DVR. To make a connection select the DVR site and **Drag & Drop** the site or camera to the camera display panel, select Live or Search mode.



### 5.4.5 PTZ Control Panel

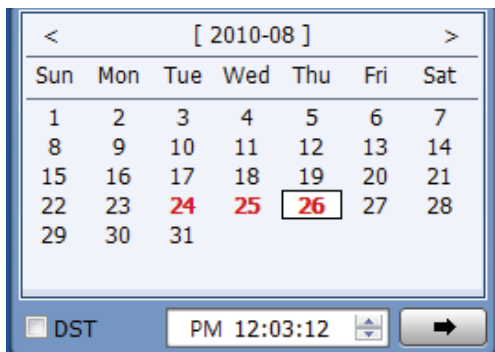
PTZ Camera Control in Live Mode



No.	Button	Description
1	Directional Arrows	Move PTZ Cameras in 8 directions.
2	ZOOM	Zoom In (+) & Zoom Out (-)
3	FOCUS	Focus In (+) & Focus Out (-)
4	Virtual PTZ	Click button to use mouse to control PTZ cameras.
5	PTZ Speed	PTZ moving speed can be operated by the control bar.
6	PRESET	Select Preset
7		Go to the Preset location.

### 5.4.6 Calendar Panel

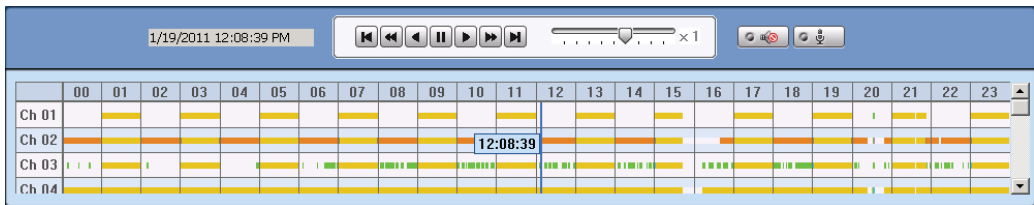
Calendar Panel is only available in search mode.







- The date is emphasized in red if record data exist.
- Should be pressed to start playback from the selected time.
- If DST is enabled, the earlier of the overlapped video will play first.

### 5.4.7 Search Panel

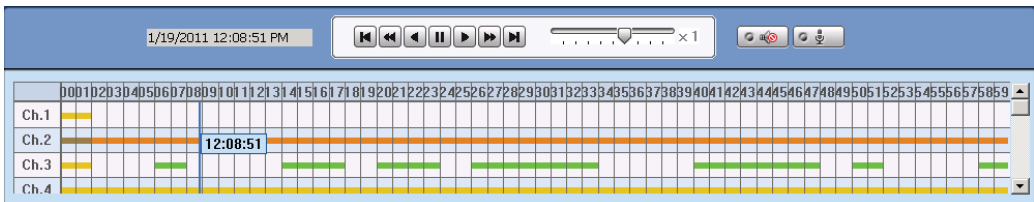
Search Panel is only available in search mode.



- The Search Panel shows the recorded data for each channel. Record Mode is distinguished by color.








No Record	White
Continuous (Yellow)	
Panic (Red)	
Alarm (Orange)	
Motion (Green)	

- In the Search Panel, click the time or move the vertical blue bar to the time you want to playback. For a more precise search, double-click the time that you want to jump into. Detailed search is available on a 2-Minute basis.



- Playback Control Panel



No.	Button	Description
1		Go to First
2		Forward Playback: Decrease the Speed / Reverse Playback : Increase the Speed
3		Reverse Playback
4		Pause
5		Forward Playback
6		Forward Playback: Increase the Speed / Reverse Playback: Decrease the Speed
7		Go to Last

- Audio Control



(Audio On/Off): Turn On or Off for Audio channel.



Two-way Audio : Two-Audio between ACS and DVR.

### 5.4.8 Display Channel

- Showing Live or Search Mode



- In Live Mode, the text "Live" will be displayed in white, and the screen will be bordered in blue.
- In Search Mode, the text "Search" will be displayed in red, and the screen will be bordered in red.
- The selected channel will be bordered in yellow.

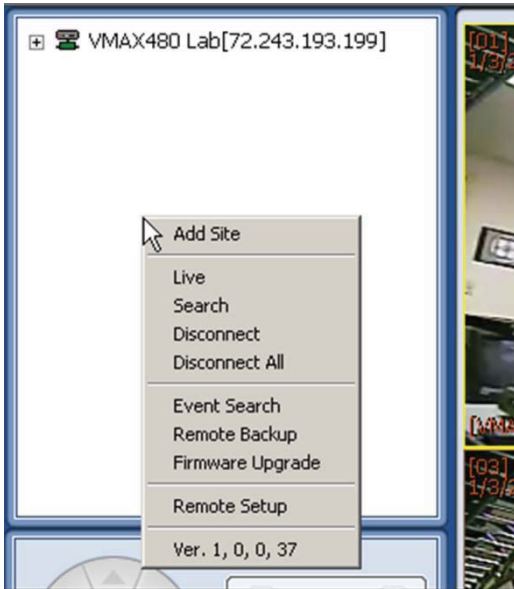
### 5.4.9 Event List Panel

Index	System	Channel	Date/Time	Sensor	Event
5	192.168.0.35	1	2010/08/31 (23:26:05)		MOTION DETECTION
4	192.168.0.35	3	2010/08/31 (23:26:05)		VIDEO LOSS
3	192.168.0.35	1	2010/08/31 (23:26:00)		MOTION DETECTION
2	192.168.0.35	1	2010/08/31 (23:26:00)		VIDEO LOSS
1	192.168.0.35	1	2010/08/31 (23:25:57)		VIDEO LOSS

- Lists the events from the DVR. Double-click the specific event to start playback.



## 5.5 Advanced Operation



Click the right button of the mouse to display the popup menu.

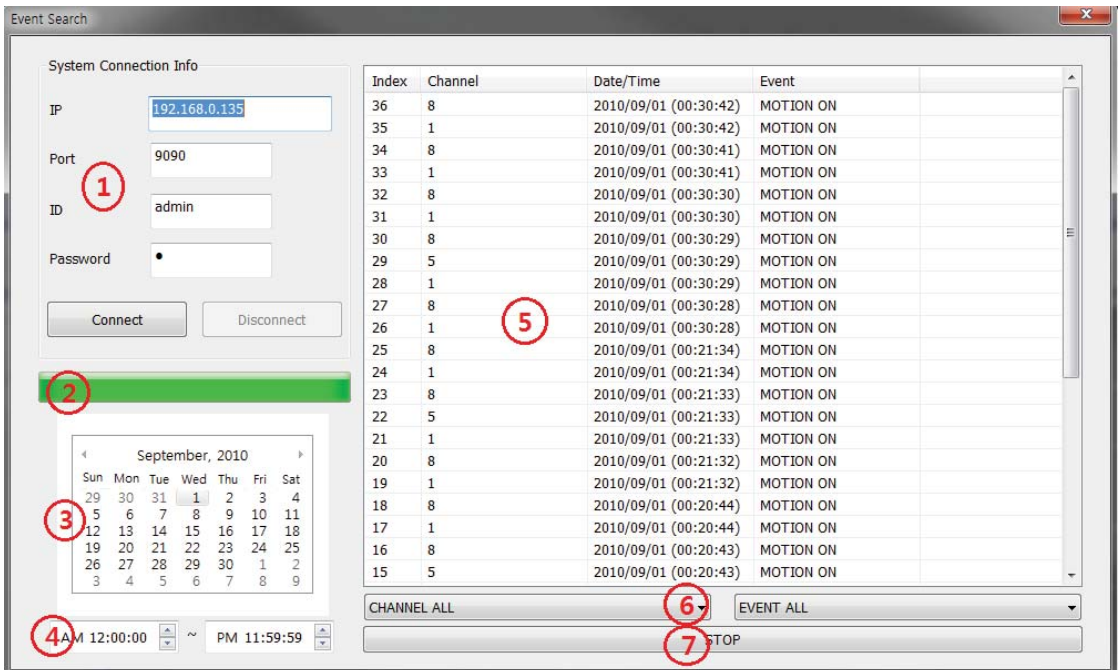
As shown to select:

- Add DVR Site
- Live
- Search
- Disconnect
- Disconnect All
- Event Search
- Remote Backup
- Firmware update
- Remote Setup for the DVR remote configuration

### 5.5.1 Event Search

Place the mouse cursor on the Site List Panel and click the right mouse button. A popup menu will appear.

Click [EVENT SEARCH].

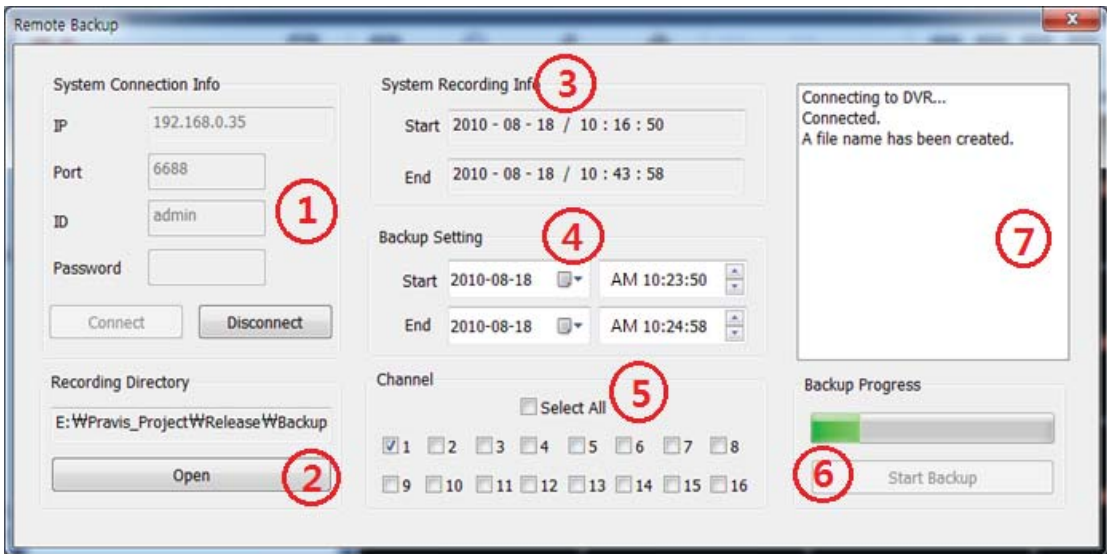


No.	Function	Description
1	Connection Info	Type in the DVR info to connect.
2	Progress Bar	Shows the progress.
3	Calendar Search	Dates with events will be displayed in bold font. Click the date to start Event Search.
4	Time Filter	Select the Time for Event Search.
5	Event List	Shows the list of events.
6	Time/Event Filter	Select a specific channel or event type to narrow search.
7	Stop	Stop Event Search.

## 5.5.2 Remote Backup

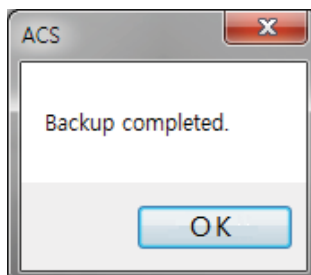
Place the mouse cursor on the Site List Panel and click the right mouse button. A popup menu will appear.

Click [REMOTE BACKUP].



No.	Function	Description
1	Connection Info	Type in the DVR info to connect.
2	Recording Directory	Select or change the backup directory.
3	Record Info	Display the first and last record.
4	Backup Setting	Backup time selection.
5	Channel	Select the channel for backup.
6	Progress	Showing the backup progress.
7	Status	Showing the operation status.

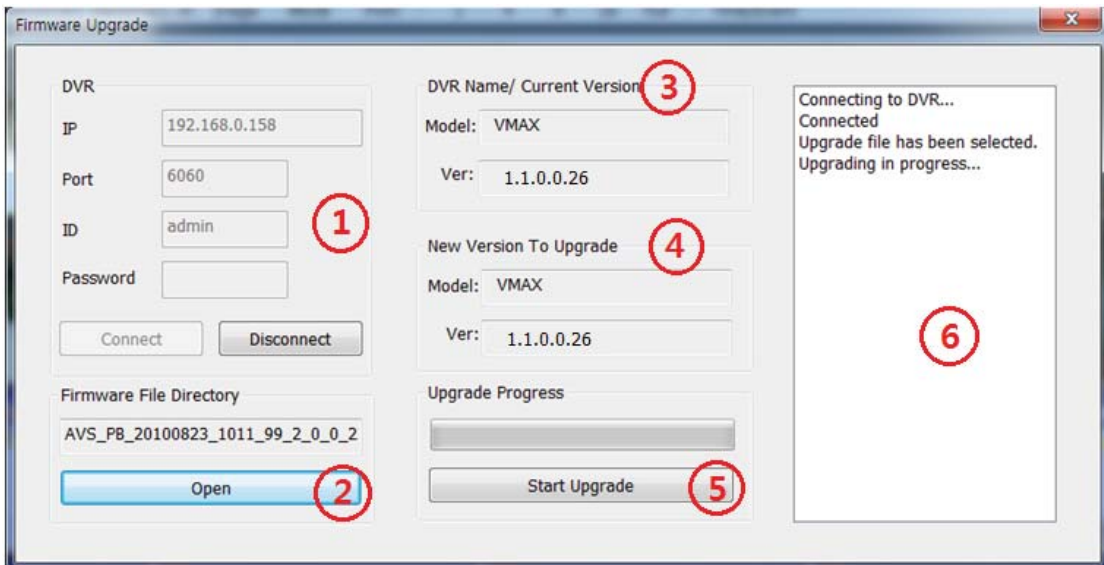
When the backup is complete, the popup below will appear.



### 5.5.3 Firmware Upgrade

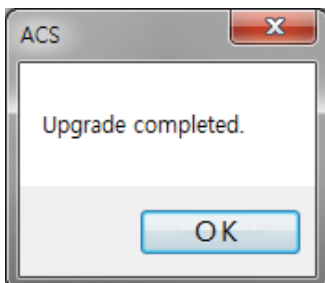
Place the mouse cursor on the Site List Panel and click the right mouse button. A popup menu will appear.

Click [FIRMWARE UPGRADE].



No.	Function	Description
1	Connection Info	Type in the DVR info to connect.
2	Firmware Directory	Select the new firmware to upgrade.
3	DVR Info	Display the DVR information and firmware version.
4	New Firmware Info	Display the new firmware information.
5	Start Upgrade	Start the upgrade.
6	Status	Showing the status of the operation.

When the upgrade is complete, the popup will appear.



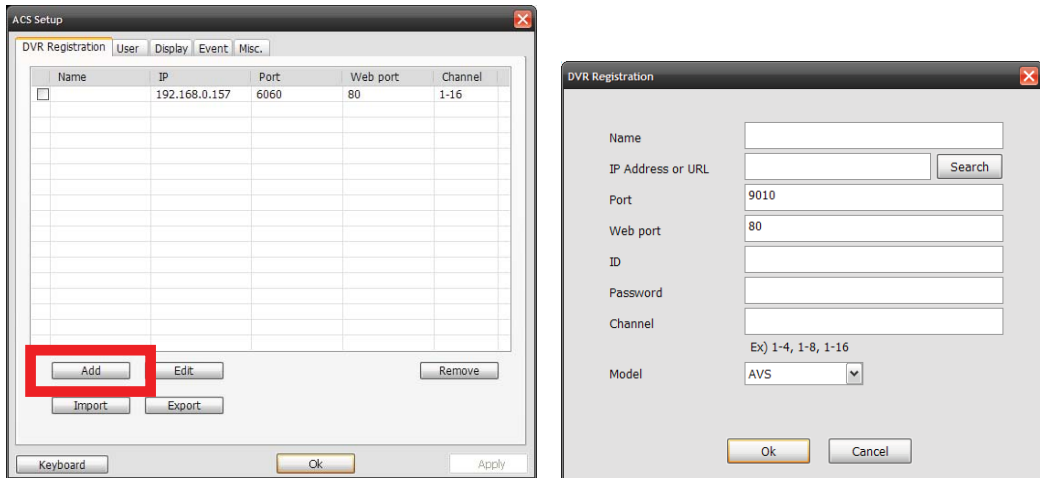
## 5.6 ACS Setup

This is for DVR Registration, User, Display, and Other Options.

### 5.6.1 DVR Registration

Place the mouse cursor on the Site List Panel and click the right mouse button. A popup menu will appear. Select DVR Registration

[ADD], [EDIT], or [REMOVE] DVR site information.

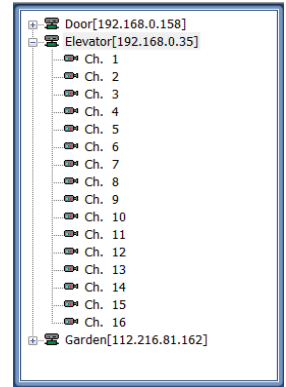


[Adding a New DVR Site]

	Function	Description
1	Name	Type Site name or DVR name
2	IP	Type Public IP Address or DDNS (DVR Name) of the DVR
3	Port	Type the TCP/IP Port Number. Default is 9010.
4	Web Port	Type Web Port Number. Default is 80.
5	ID	Type the DVR user Id (Default is admin)
6	Password	Type the DVR password (Password box is blank by default)
7	Channel	Type in the number of DVR Channels. For a 16Ch DVR, type "1-16".

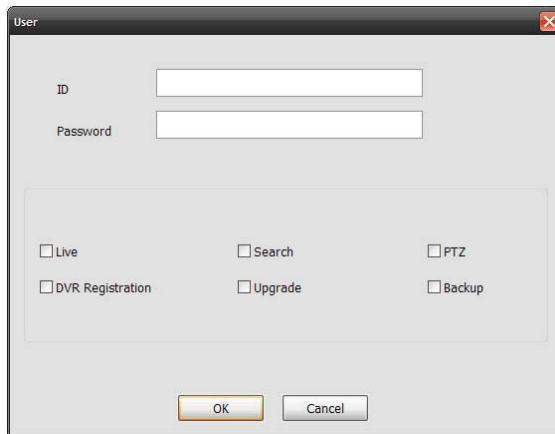
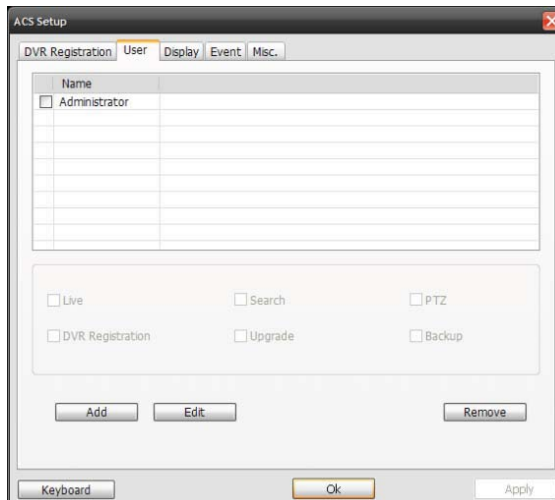
To modify and/or remove DVR information, click [Add] or [Remove] to amend DVR site information.

After clicking [OK], the new DVR information will appear on the DVR Site List Panel.



## 5.6.2 Add / Edit / Remove ACS (Advance Client Software) User

User authority can be changed by Administrator account.

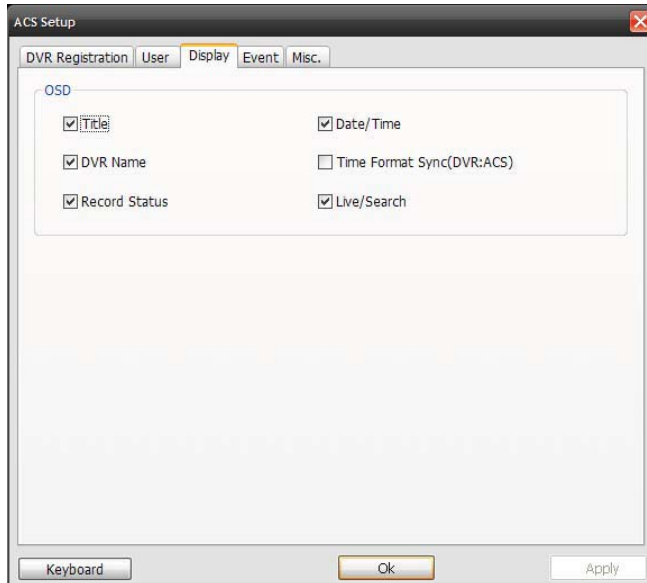


[User Authority Change]



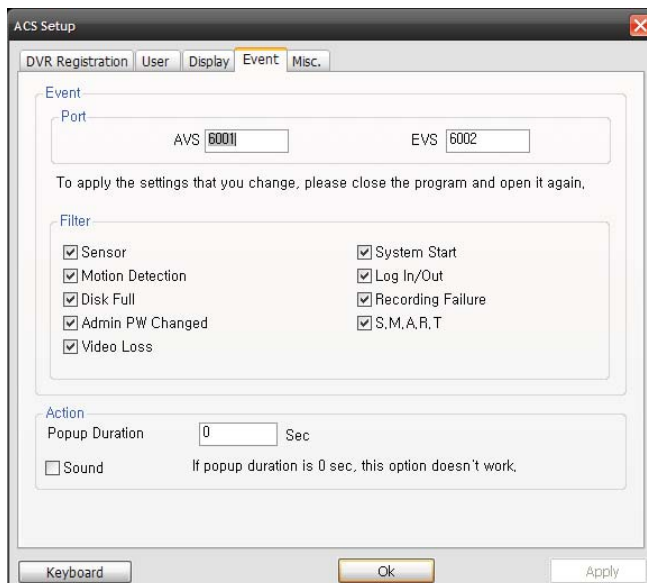
## 5.6.3 Display

Go here to setup [OSD].

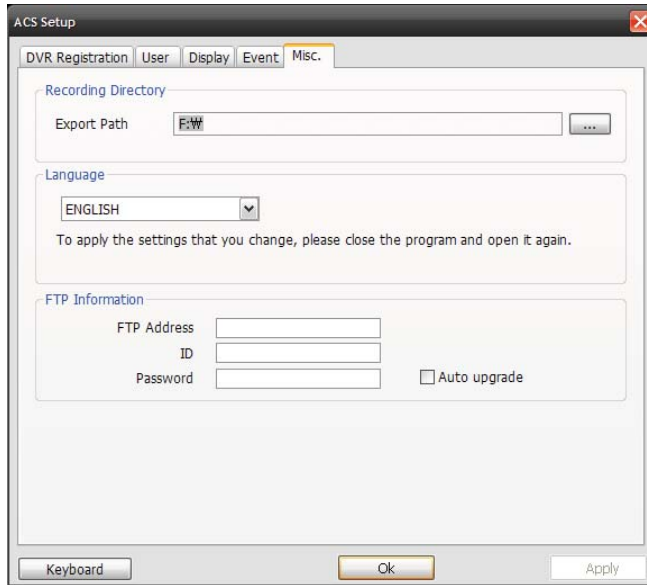


Time Format Sync (DVR:ACS): This option synchronizes the DVR time format with ACS.

## 5.6.4 Event



### 5.6.5 Misc.



	Function	Description
1	Recording Directory	Select or change the directory for where your still images and videos are saved.
2	Event	Type in the Event Port to receive the event list. 1025 ~ 60000 is recommended.
3	Language	Select the ACS language.



## Chapter 3

# MAC ACS CLIENT SOFTWARE USER MANUAL



# 6 MAC ACS USER GUIDE

## 6.1 Mac Requirements

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### Recommended Mac Requirements

OS	Mac OS X 10.6 (Snow Leopard)
CPU	Built-in Intel CPU MAC
VGA	Recommended More than 128MB
RAM	Recommended More than 1GB
HDD	20MB Free Space

### Minimum Mac Requirements

OS	Mac OS X 10.5 (Leopard)
CPU	Built-in Intel CPU MAC
VGA	64MB
RAM	512MB
HDD	20 MB Free Space

## 6.2 Install

Run [MAC ACS.pkg] on CD, and the below setup menu will appear.



Select the HDD where you wish to install the program. Press the [CONTINUE] button to move to the next screen.



Press the [INSTALL] button to move to the next screen.

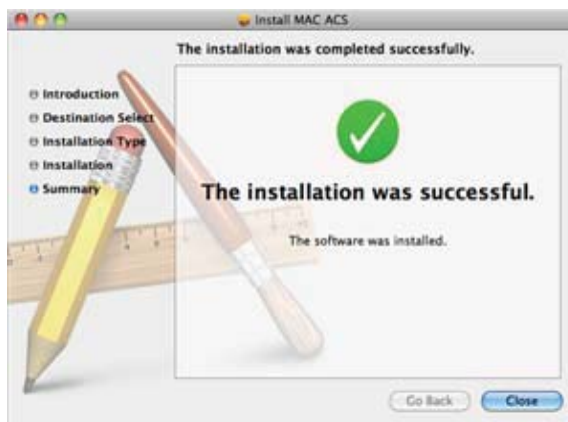




Type in the password and Click [OK] to begin installation.



When the installation is complete, the following message will appear. Click [CLOSE] to close the window.



## 6.3 Basic Operation

Click on [ACS] icon located in the Application Folder.

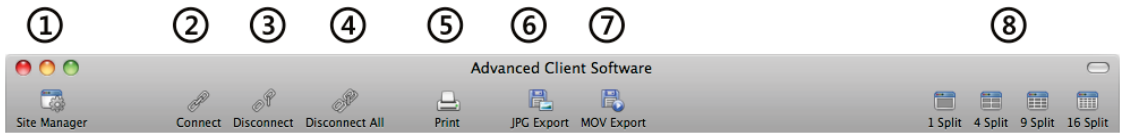


### 6.3.1 Screen Layout



No.	Item	Description
1	Main Toolbar	Site Manager, Connect, Disconnect, Disconnect All, Print, JPG Export MOV Export, Screen Display Mode
2	DVR List Panel	Registered DVR Site List; Connect by Drag & Drop
3	Live or Search Connect Panel	Click Live or Search Mode to connect to the sites.
4	PTZ Panel	PTZ Camera Control in Live mode
5	Calendar Panel	Search by Date and Time
6	Search Panel	Search mode displays recorded information. Control the speed of Playback and Audio.
7	Display Panel	Transmitted camera images are displayed (live and playback).

### 6.3.2 Main Toolbar



No.	Button	Description
1	Site Manager	Register or delete DVR Site
2	Connect	Connect to a selected DVR site, listed on the DVR list panel. Select Live or Search mode at Connect Mode Panel.
3	Disconnect	Disconnect a selected channel.
4	Disconnect All	Disconnect All Channels.
5	Print	Print out still image.
6	JPG Export	Save a selected image to the desktop in JPEG format.
7	MOV Export	Save a selected video clip to the desktop in MOV format.
8	Split	Channel Display Mode 1 – 4 – 9 - 16

### 6.3.3 Site List Panel

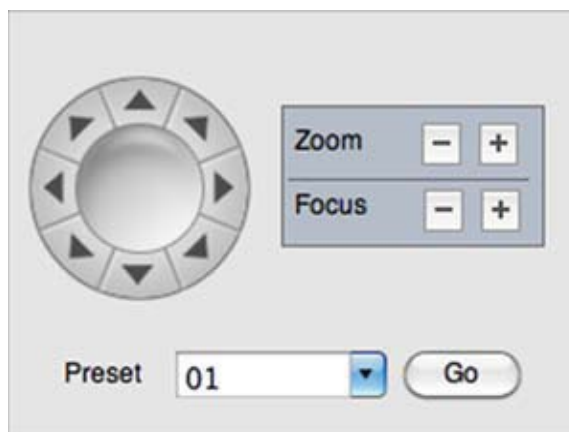



The Site List Panel shows the list of registered DVRs. To connect, select [Live] or [Search] mode in the Connection Mode Panel and Drag & Drop to the display screen.

16 different channels can be monitored. Even a mixture of different connection modes can be monitored.

## 6.3.4 PTZ Panel

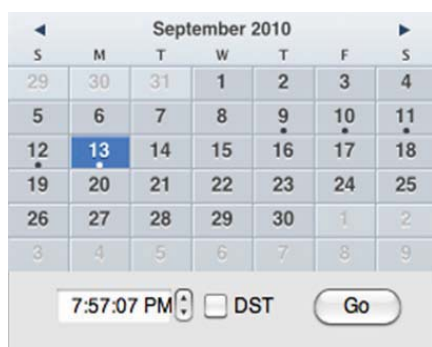
PTZ Camera Controls in Live Mode. PTZ Camera can be controlled if the channel is activated on PTZ operation.



No.	Button	Description
1	Navigation Keys	Move PTZ Cameras in 8 directions.
2	ZOOM	Zoom In (+) and Zoom Out (-)
3	FOCUS	Focus In (+) and Focus Out (-)
4	PRESET	Select the preset location.
5		Go to the preset location.

## 6.3.5 Calendar Panel

Calendar Panel is only available in Search Mode.







- Dates with recorded data will be highlighted in blue with a white dot located below the number.
- When you click the recorded date on search mode, the system will detect the date automatically.
- [GO] button should be pressed to start playback from the selected date and time.
- If [DST] is enabled, the earlier of the overlapped videos will play first.

### 6.3.6 Search Panel

Search Panel is only available in Search Mode.










- The Search Panel shows the recorded data for each channel.
- Record Mode is distinguished by color.

No Record	Background Color
Continuous (Yellow Color)	
Panic (Red Color)	
Alarm (Orange Color)	
Motion (Green Color)	

- In the Search Panel, click the time or move the vertical blue bar to the time you want to playback.
- Playback Control Panel




No	Button	Description
1		Go to First
2		Forward Playback : Decrease the Speed / Reverse Playback : Increase the Speed
3		Reverse Playback
4		Pause
5		Forward Playback
6		Forward Playback : Increase the Speed / Reverse Playback : Decrease the Speed
7		Go 10 Seconds before the Last Data



## 6.3.7 Site Manager

[ADD], [MODIFY], or [REMOVE] DVR site information.



Press  to register a DVR. The default value is registered



To modify, double-click on the item. For example, double-click [new site] to change the name.

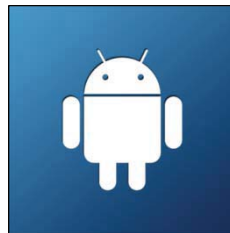
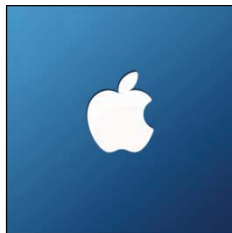


Press after modifications has been made.

No.	Function	Description
1	Name	Enter the location name or the DVR name of the site to be registered.
2	Address	Enter the IP address or DDNS (DVR Name) of the DVR
3	Port	Enter the port number of the site to be registered. Default is 9010.
4	User ID	Enter the ID of the DVR to be connected.
5	User Password	Enter the password of the DVR
6	channel	Fill in number of channels of the DVR. If the DVR is 1 channels, type in "1-4"; "1-8"; "1-16"
7	Model	Select model number of the DVR to be registered.

To delete the registered DVR information, select the DVR and click

Press after modifications has been made.



## Chapter 4

# **MOBILE PHONE SOFTWARE USER MANUAL**

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# 7 MOBILE PHONE SOFTWARE USER GUIDE

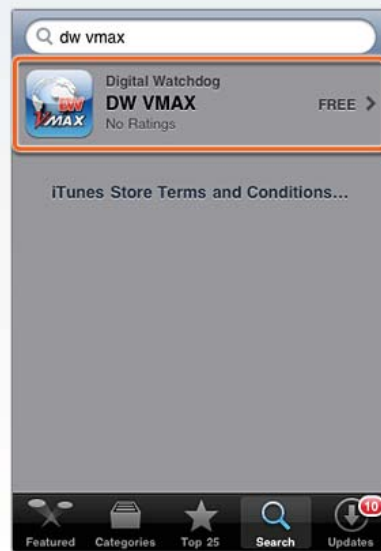
## 7.1 iPhone Application Software

### 1 Installation DW VMAX. 2 3

1 Click 'App Store' and click 'Search' to search the 'DW VMAX' application in the App Store.

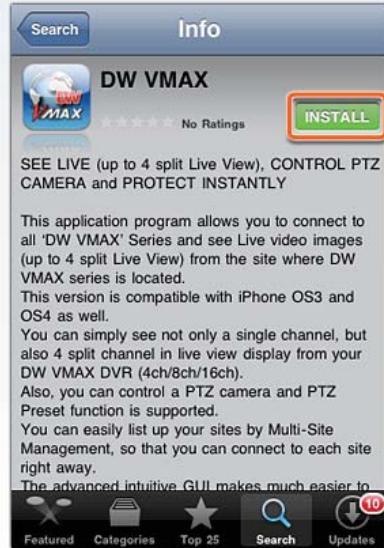
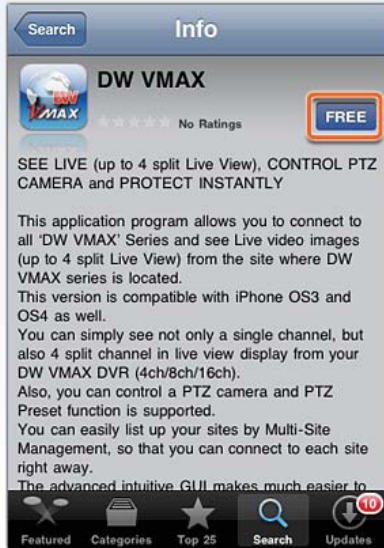


2 Type in 'DW VMAX' and click 'Search', then you will see the 'DW VMAX' application icon on the screen.

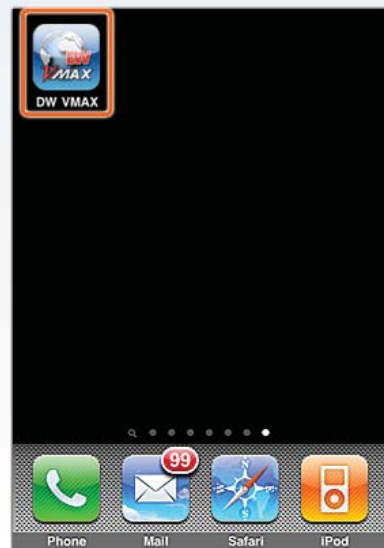


**1** Installation DW VMAX. **2** **3**

**3** Now you can see the detail information about the 'DW VMAX' application. Click 'FREE' button then it will change to 'INSTALL' button. Click 'INSTALL' button to proceed.

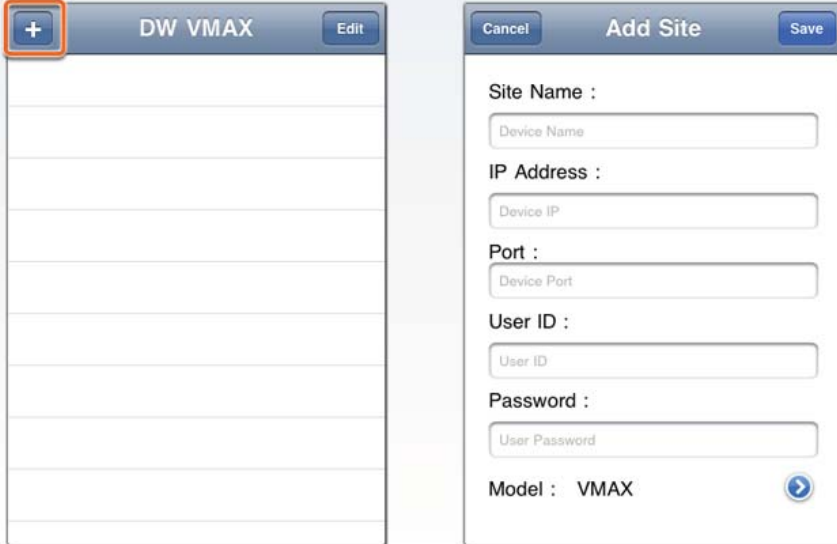


**4** Input your User ID and Password. Then, you will see the 'DW VMAX' icon on your iPhone.



**2 How to connect and view.**

**1** Press '+' button and select DVR Type: Vmax or Vmax480. Then, input the new site information that you would like to connect to. Press 'Save' button to save your settings.



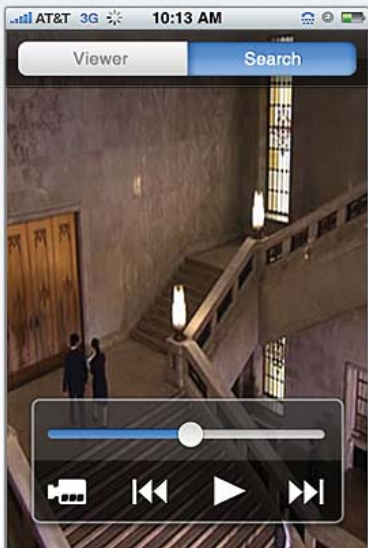
**2** Press 'OK' and 'Connect' button to connect. Then, you will see a single channel live view or four split channel live view of the connected site. Press a desired channel button (Ch1~Ch16) or four-split channel mode to view another set of channels.





**1 2 3 How to search and PTZ control.**

**1** A single channel search is also available. In order to search data of a channel, touch the screen of live view and touch 'Search' tab located on top of the screen. Click channel icon to view another channel in search mode.



**2** A single channel PTZ is simply controlled by using touch screen. First, select a channel, which is a PTZ control camera connected to, for one channel PTZ control in full screen mode.  
 To move PTZ camera, move your finger tip to the desired direction without losing contact on the screen surface.  
 In order to Zoom In, touch surface with two fingers and bring them closer together.  
 In order to zoom out, touch surface with two fingers and move them apart.  
 In order to move PTZ camera to a preset location, select 'PRESET' tab and select a preset channel no. to move.



PTZ



Zoom In



Zoom Out

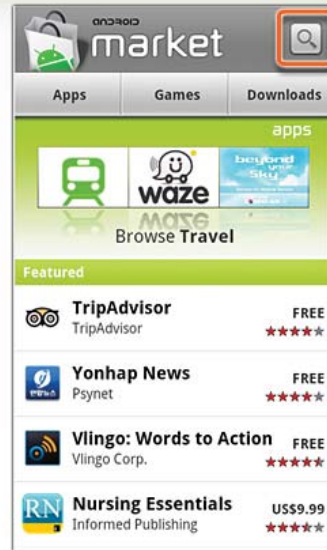
## 7.2 Android Application Software

### 1 How to install DW VMAX 2 3

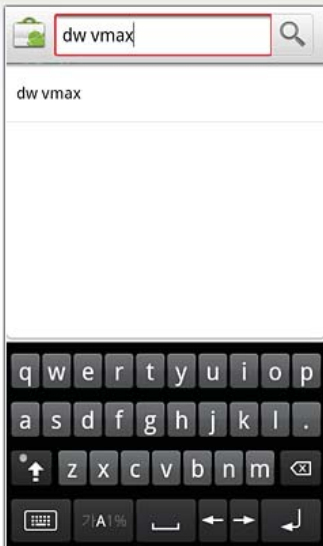
#### 1 Press 'Market' icon



#### 2 Press 'Search' icon



#### 3 Type in 'DW MAX' and click 'Search' icon.

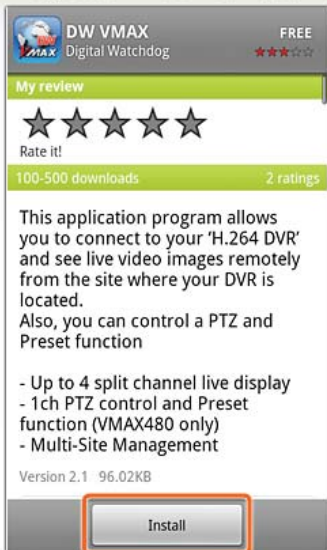


#### 4 Then, you will see the 'DWVMAX' application icon on the screen as shown below. Select the application.



### How to install DW VMAX 2 3

**5** You will see a detailed information about the 'DW VMAX' application. Press 'Install' button to install it.



**6** Then, click 'OK' to access the internet.



**7** Now, you can see the 'DW VMAX' icon on the application tab.

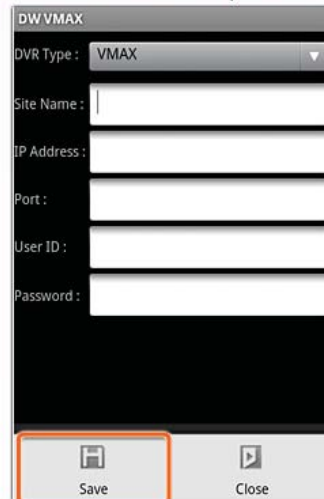


## 1 2 How to connect and view 3

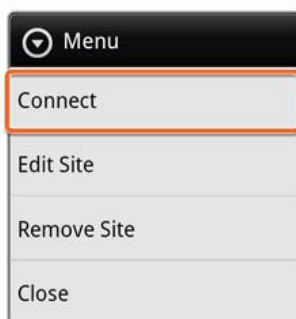
- 1** After running the application, press the 'Menu' button on your phone to bring up the 'Add Site' button. Then, press 'Add Site' button.  
\*Please view your phone manual, if you have trouble finding the 'Menu' button.



- 2** First, select DVR Type: VMAX or VMAX480. Input the new site information that you would like to connect to. Press 'Menu' button to bring 'Save' button and click 'Save' to save your settings.



- 3** Press and hold the desired site in the site list for the connection menu to appear. Press 'Connect' button to connect.



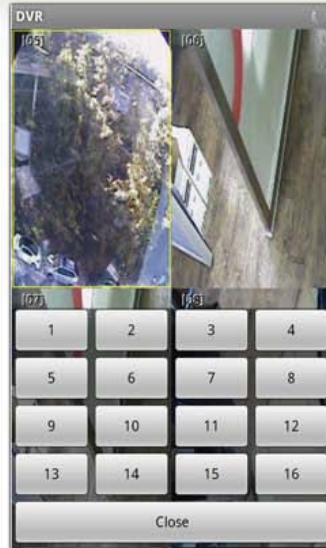
- 4** You will see a single channel live view or four split channel live view of the connected site. Press a desired channel button (Ch1~Ch16) or four-split channel mode to view another set of channels.





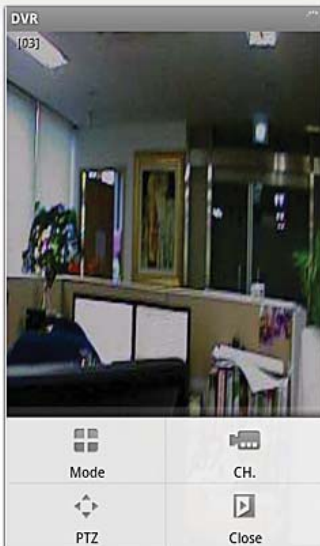
1 2 How to connect and view 3

5 Press a desired channel button (ch1~ch16) or four split channel mode to view another channels as shown below.

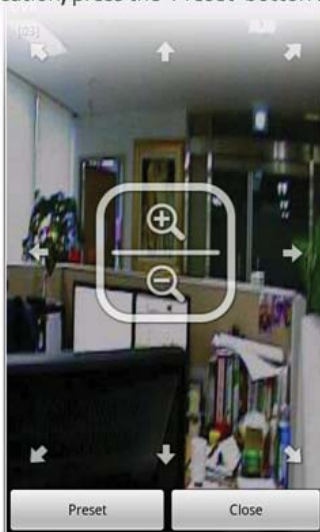


**1 2 3 How to control PTZ**

- 1** If the DVR Type is a VMAX480 model, you will be able to control a PTZ camera. To do so, select a PTZ channel in full screen mode.



- 2** To move PTZ camera, press the eight directional arrow buttons. To zoom in or zoom out, press the 'Zoom In/Zoom Out' icon located in the middle. To move PTZ camera to a preset location, press the 'Preset' button and type in the preset channel number.



## 7.3 Blackberry Application Software

### 1 Installation Mobile ACS. 2 3

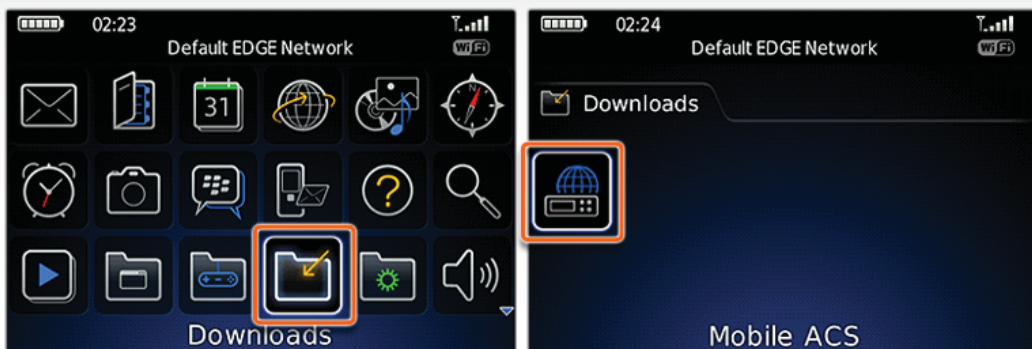
1 After you unzip the zip folder "StandardMobileACS.ZIP", then you will see two files in there. Copy these two files to "Downloads" folder in Blackberry.

- 1) MbileACS.alx
- 2) MobileACS.cod

**Note :**

- For more information about how to copy a file to Blackberry, please refer to the Blackberry manual about Blackberry Desktop Manager.

2 Please find 'Downloads' folder in your Blackberry and get into it.



### 1 2 How to manage connections (Before you start) 3

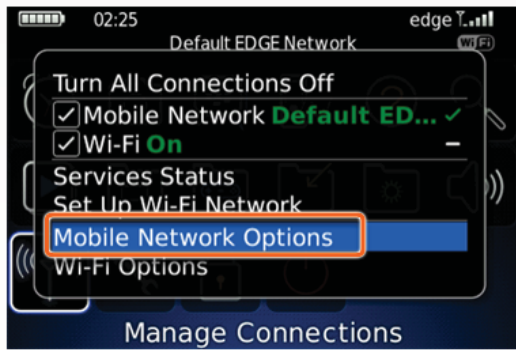
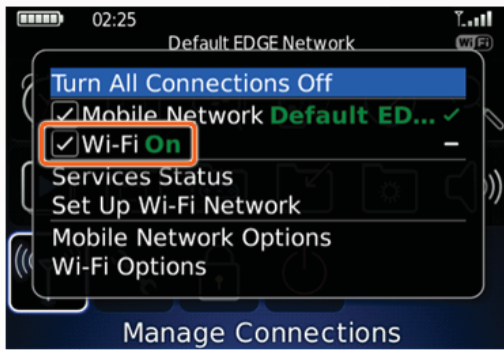
1 Go to 'Manage Connections' in the Blackberry main menu.



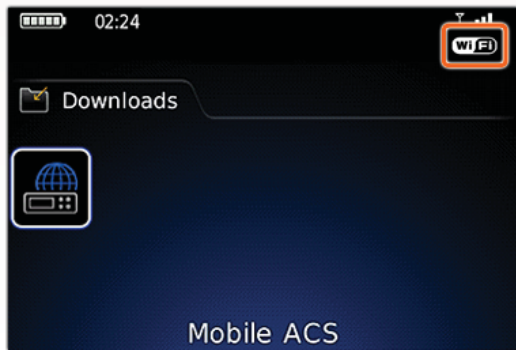


**2 How to manage connections (Before you start)**

**2** Have the 'Wi-Fi' check box is checked first. Then, please go to 'Mobile Network Options'.





**3** You will see the Services Status as shown below.  
 BlackBerry Internet Service Connection: Wi-Fi and Wi-Fi Network Information.  
 Also, you will see 'Wi-Fi' connection icon (Light On) on the upper right corner of the main menu.





1
2
3
How to connect (Get Started)

**1** 'Site' means the site name that you want to access and 'Ch' means the camera channel that you want to see. For the first time connection, the site name is 'NONE' because there is no added site yet.



**2** In order to add a site, push  button and select 'Add Site'.





**Note:**





- If there is no added site, it only shows you 'Add site' and 'Close' as shown on the left.
- If there is any added site, you will see 'Connect', 'Add Site', 'Modify Site', and 'Remove Site' in the menu as shown on the right.

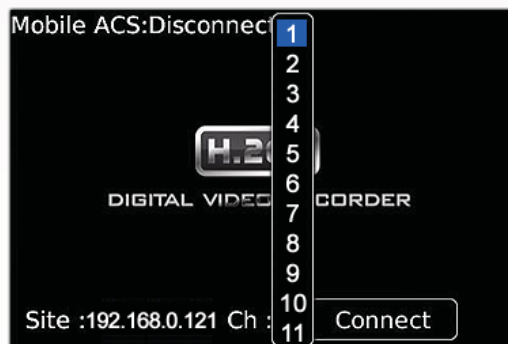
### 1 2 3 How to connect (Get Started)

- 3** Once you click 'Add Site', the network information window will show up. Then, please input your network information in the each section




**Note:**




- Site Name: The name of the site that you want to see. (You can name it as you want.)
- Address: The IP address of the site that you want to connect with.
- Port: The Mobile Port number of the site.
- User ID: The User ID of the DVR, which has been registered in the DVR already.
- Password: The User Password of the User ID of the DVR

- 4** Now it's time to connect to your DVR. Move track ball key  to select a site and channel number. Press track ball key  or Enter key  to connect. Plus, you may connect by pressing menu key  and select 'Connect' to connect.



1 2 3 **How to connect (Get Started)**

5 If you want to change the channel while you are connected, move the track ball key  and select the 'Ch' button. And then, press the track ball key  or press Enter key  to see the channel list. Choose another channel that you want to see.

6 Now you can see the channel of the site that you selected. Once you get connected, the 'Connect' button in the menu changes to 'Disconnect'. In order to disconnect, move the track ball key  to select 'Disconnect' button and press the track ball key  or press Enter key  to disconnect.



## 7.4 Using WAP+3G Connection

### 1 In case of using WAP, 3G Connection

**1** First, you need to check out '**WEB PORT**' of your DVR, because WAP Base Connection method is mainly based on the Mobile Web Service through the 'WEB PORT'. [Default setting is 80]

**2** Type your connection URL in the Internet Browser in your Blackberry.  
The URL type should be one of the following two URL types.

**http://Your\_IP\_Information/mobile/ [OR] http://Your\_IP\_Information/mobile/index.html**

i.e) **http://72.243.193.204/mobile/ [OR] http://72.243.193.204/mobile/index.html**

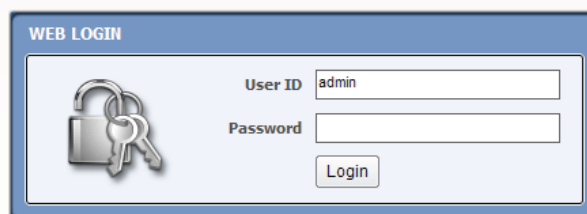
**Note:**

- You may need to input 'index.html' at the end of your URL depending on your Web Browser Property. Therefore, please try both URL types.

**3** If the 'WEB PORT' of your DVR is not '80', but other port number, for example, '8088', then you need to type '8088' at the end of the URL.

i.e) **http://72.243.193.204:8088/mobile/ [OR] http://72.243.193.204:8088/mobile/index.html**

**4** When the connection is successful, you can see the below windows.  
Please type in User ID and Password. The default setting is admin(User ID) and No password like below.



The screenshot shows a 'WEB LOGIN' window with a blue border. On the left is an icon of a padlock and keys. To the right are two input fields: 'User ID' containing the text 'admin' and an empty 'Password' field. Below the password field is a 'Login' button.

### 1 In case of using WAP, 3G Connection

**Note:**

- When connection established successfully, the JPEG image will be refreshing 1 image per about 5 seconds automatically.
- \* There is a refresh bar at the bottom of Blackberry screen.
  
- The image resolution is fixed to 320x240(NTSC) / 320x288(PAL) regardless of the recording resolution settings of your DVR.





# APPENDIX : RS-232 COMMANDS

The following RS-232 Commands are for advanced display control or entering into setup and playback mode. The composite, VGA, and HDMI ports will display the information related to these commands.



## Communication Specification

- RS-232 / RS-485
- Baud Rate: 2400bps ~ 57.6Kbps
- Start Bit: 1Bit
- Stop Bit: 1Bit
- Parity: None

Index	Function	Start	RS-485 Extension Code	Function	Extension Code	End	Description
1	1	0xA2	0x00	0x01	0x01	0xAF	Full Screen of Channel 1
2	2	0xA2	0x00	0x02	0x01	0xAF	Full Screen of Channel 2
3	3	0xA2	0x00	0x03	0x01	0xAF	Full Screen of Channel 3
4	4	0xA2	0x00	0x04	0x01	0xAF	Full Screen of Channel 4
5	5	0xA2	0x00	0x05	0x01	0xAF	Full Screen of Channel 5
6	6	0xA2	0x00	0x06	0x01	0xAF	Full Screen of Channel 6
7	7	0xA2	0x00	0x07	0x01	0xAF	Full Screen of Channel 7
8	8	0xA2	0x00	0x08	0x01	0xAF	Full Screen of Channel 8
9	9	0xA2	0x00	0x09	0x01	0xAF	Full Screen of Channel 9
10	10	0xA2	0x00	0x0A	0x01	0xAF	Full Screen of Channel 10
11	11	0xA2	0x00	0x0B	0x01	0xAF	Full Screen of Channel 11
12	12	0xA2	0x00	0x0C	0x01	0xAF	Full Screen of Channel 12
13	13	0xA2	0x00	0x0D	0x01	0xAF	Full Screen of Channel 13
14	14	0xA2	0x00	0x0E	0x01	0xAF	Full Screen of Channel 14
15	15	0xA2	0x00	0x0F	0x01	0xAF	Full Screen of Channel 15
16	16	0xA2	0x00	0x10	0x01	0xAF	Full Screen of Channel 16
17	MENU	0xA2	0x00	0x11	0x01	0xAF	Menu Setup
18	ESC	0xA2	0x00	0x12	0x01	0xAF	Exit Menu Setup
19		0xA2	0x00	0x1	0x01	0xAF	
20	MODE	0xA2	0x00	0x14	0x01	0xAF	Display Mode
21	SEQ	0xA2	0x00	0x15	0x01	0xAF	Auto-Sequence on Live Display Mode
22	FRZ	0xA2	0x00	0x16	0x01	0xAF	Freeze Button to Pause Live Button
23	PIP	0xA2	0x00	0x17	0x01	0xAF	PIP Mode
24	REC	0xA2	0x00	0x18	0x01	0xAF	Start Instant Emergency Record
25	ZOOM	0xA2	0x00	0x19	0x01	0xAF	Zoom in & Out Button + and -
26	CALL	0xA2	0x00	0x21	0x01	0xAF	Call Monitor Activation
27	BOOK	0xA2	0x00	0x22	0x01	0xAF	Function
28	SEARCH	0xA2	0x00	0x23	0x01	0xAF	Function
29	BACKUP	0xA2	0x00	0x24	0x01	0xAF	Function
30	PLAY	0xA2	0x00	0x25	0x01	0xAF	Function
31	PTZ	0xA2	FUNCTION	0x26	0x01	0xAF	Function
32	UP	0xA2	FUNCTION	0x27	0x01	0xAF	Direction Arrows Button

33	DOWN	0xA2	FUNCTION	0x28	0x01	0xAF	Direction Arrows Button
34	LEFT	0xA2	FUNCTION	0x29	0x01	0xAF	Direction Arrows Button
35	RIGHT	0xA2	FUNCTION	0x2A	0x01	0xAF	Direction Arrows Button
36	ENTER	0xA2	0x00	0x2B	0x01	0xAF	OK/SELECT Button
37	MUTE	0xA2	0x00	0x2C	0x01	0xAF	Function
38	FIRST	0xA2	0x00	0x31	0x01	0xAF	Function
39	BACK_PLAY	0xA2	0x00	0x32	0x01	0xAF	Function
40	FPLAY	0xA2	0x00	0x33	0x01	0xAF	Function
41	LAST	0xA2	0x00	0x34	0x01	0xAF	Function
42	FAST_REW	0xA2	0x00	0x35	0x01	0xAF	Function
43	FAST_FWD	0xA2	0x00	0x36	0x01	0xAF	Function
44	PAUSE	0xA2	0x00	0x37	0x01	0xAF	Function
45	STOP	0xA2	0x00	0x38	0x01	0xAF	Function
46	CH PLUS	0xA2	0x00	0x41	0x01	0xAF	Function
47	CH MINUS	0xA2	0x00	0x42	0x01	0xAF	Function
48	PLUS	0xA2	0x00	0x43	0x01	0xAF	Function
49	MINUS	0xA2	0x00	0x44	0x01	0xAF	Function
50	SPLIT 4CH	0xA2	0x00	0x45	0x01	0xAF	4 Channel Display Button
51	SPLIT 8CH	0xA2	0x00	0x46	0x01	0xAF	8 Channel Display Button
52	SPLIT 16CH	0xA2	0x00	0x47	0x01	0xAF	16 Channel Display Button

# APPENDIX : SPECIFICATION

MODEL		4CH Compact Case	8/16CH with DVD±RW
Photo			
Compression Algorithm		Video : H.264, Audio : G723.1	
HDD		1ea x SATA	2ea x SATA
		MAX. 2TB HDD	MAX. 4TB HDD (2TB X 2EA)
OS		Embedded Linux	
Video	Input	4CH	8/16CH
	Looping	N/A	Option: D-sub (by piggy tails)
Video Mode		NTSC / PAL Auto Detection	
Display Speed (NTSC/ PAL)		120/100 fps	8CH: 240/200 fps 16CH: 480/400 fps
Screen Split		1,4 & PIP	8CH: 1,4,9 & PIP 16CH: 1,4,9,16 & PIP
Video-Out	Monitor	2ea x Main Monitor (Composite & VGA); 1 x Spot Monitor (Composite)	2ea x Main Monitor (Composite, VGA, & HDMI); 1 x Spot Monitor (Composite)
Recording Speed (NTSC/PAL)	352x240/288 (CIF)	120/100 fps	8CH: 240/200 fps 16CH: 480/400 fps
	720x240/288 (2CIF)	120/100 fps	240/200 fps
	720x480/576 (4CIF)	120/100 fps	120/100 fps
Recording Resolution		NTSC : 352x240, 720x240, 720x480 / PAL : 352x288, 720x288, 720x576	
Recording Modes	Recording Profile	Two Recording Profiles	
	Event Recording	Normal Recording Setup & Event Recording Setup Separately	
	Recording Type	Continuous(C), Sensor(S), Motion(M), C+M, C+S, C+M+AS	
	Pre-/Post-Alarm	Pre & Post Alarm Recording / Pre-Alarm ( 5 Seconds)	
	Panic Recording	Panic Recording Setup Separately (FPS, Resolution, Quality)	

MODEL		4CH Compact Case	8/16CH with DVD±RW
Playback & Search	Speed	x1, x2, x4, x8, x16, x32	
	Function	1,4 Ch (Multi-Channel Playback)	8CH: 1, 4, 9 Ch 16CH: 1, 4,9 &16 Ch (Multi-Channel Playback)
		Time Bar Search, Calendar (Date & Time), Event Search, System Log Search	
Audio Input / Output		1ea Input / 1ea Output	4ea Input / 1ea Output
MIC Input		N/A	1ea MIC Input
Alarm Input / Relay Output		4ea / 1ea Relay	8/16ea / 1ea Relay / 1ea TTL
P/T/Z Control and Port		Virtual Joy-Stick Control on screen (by mouse)	Virtual Joy-Stick Control on screen (by mouse)
		RS-485 Port (1ea)	RS-485 Port (2ea)
LAN		10/100 Base-T Ethernet (RJ45) – Fixed IP, DHCP, DDNS, Auto IP, and UPnP Support	
Network		Dual Stream (Local Recording & Network Transmission)	
		Live Monitoring, Remote Playback, and File Backup (Triplex-on-Remote)	
		Remote & E-Mail Notification, Remote System Reboot by IE	
Mobile Device support		iPhone (4-Split Live View, 1 Search, 1 PTZ), Blackberry, Android, 3G Mobile	
		Mobile Notification on Alarm (iPhone)	
Remote PTZ Control		Pan/Tilt/Zoom/Focus/Iris	
Remote Management	Software	Client S/W, CMS(128CH), MAC Software	
	Web (IE)	Live Monitoring, Playback, & System Configuration	
Backup Device	Internal	N/A (No DVD available)	Built-In DVD (Option)
	External	Local Backup by USB Memory Stick (2ea), & Network Backup by CMS	
Advanced Functions		Multi-Language, System Upgrade by USB & Network (Client S/W, FTP), Help Menu on Major Functions, Call Monitor	
		Configuration Import & Export, AVI File Backup (Client S/W)	
		Warning Alarm for System Over-Temperature	
		Covert Setup for Live & Playback Respectively	
		Audio Volume Control	
		Multi-Preset on Alarm (1:Multi)	
System Operation		Front Button, IR Remote Controller (Included), USB Mouse (Included)	
Power		12V x 3.33A D/C	12V x 6.67A D/C
Storage Temperature and Humidity		-20~60 °C / 20~95% RH	
Operating Temperature and Humidity		5~40 °C / 20~80% RH	
Certification		CE & FCC & MIC & WEEE, RoHS	

**NOTE** The specifications are subject to change without notice.