# Compact 4 Channel H.264 Network DVR User Guide

### **Publication History**

Version	Date	Description
1.0	27 July 2010	Initial Release
1.1	16 August 2010	Add new function for Limitable Recording Days, Calendar Search, PC Viewer and Web Viewer
1.2	3 September 2010	The main changes in the Force Record and PC Viewer interface and operation.
1.3	30 November 2010	<ul> <li>Typographical revisions to initial document</li> <li>Updated user interface illustrations</li> <li>Added function descriptions for Motion Setup</li> <li>Added Menu Dynamic Effects</li> <li>Added PVF Player section</li> <li>Display resolution for PC Viewer</li> <li>File backup with PVF Player</li> </ul>
1.4	12 January 2011	<ul><li>Added new features</li><li>Content revisions</li></ul>

#### **Warnings and Safety Precautions**

#### **FCC STATEMENT**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### CE



This product is marked with the CE symbol and indicates compliance with all applicable directives.

#### WEEE DIRECTIVE & PRODUCT DISPOSAL



At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

#### **IMPORTANT GUIDELINES**

- User Manual After unpacking this product, read the owner's manual carefully, and follow all the operating procedures and other instructions.
- Power Source This product should be operated only from the type of power source indicated on the label. If unsure of the type of power supply available in your home, office, or the area where you intend to use the product, consult product dealer or local power company.
- Ventilation Slots and openings in the cabinet are provided for ventilation.
   They ensure reliable operation of the product and protect it from overheating.
   These openings must not be blocked or covered. The product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the instructions have been adhered to.
- **Heat –** The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products that produce heat. The general operating temperature should be 5°C ~45°C.
- Water and Moisture Do not use this product near water. Do not exceed the humidity specifications for the product as detailed in this manual.
- **Cleaning** Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth.
- Power Cord Protection Power-supply cords should not be routed so that
  they are likely to be walked on or pinched by items placed against them, paying
  particular attention to cords at plugs, receptacles, and the point where they exit
  the product.
- Overloading Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electrical shock.
- **Lightning** For added protection for this product during storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.
- Accessories Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may be irreparably damaged if it falls off and may cause serious personal injury.
- Burden Do not place a heavy object on top of or step on the product. The
  object may be irreparably damaged if it falls off and may cause serious
  personal injury.
- **Damage Requiring Service** Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
  - » When the power-supply cord or plug is damaged.
  - » If liquid has been spilled, or objects have fallen into the unit.
  - » If the unit has been exposed to rain or water.

- » If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
- » If the unit has been dropped or the enclosure has been damaged.
- When the unit exhibits a distinct change in performance this indicates a need for service.
- **Servicing** Do not attempt to service this product. Opening or removing covers may expose the user to dangerous voltage or other hazards. Refer all servicing to qualified personnel.
- Safety Check Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

#### **CAUTION**



#### CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE

PERSONNEL.

#### **Explanation of Graphical Symbols**



This symbol is intended to alert the user to the presence of insinuated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

USERS OF THE SYSTEM ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND STATUTES CONCERNING THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNALS. PANACOM SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS SYSTEM IN VIOLATION OF CURRENT LAWS AND STATUTES.

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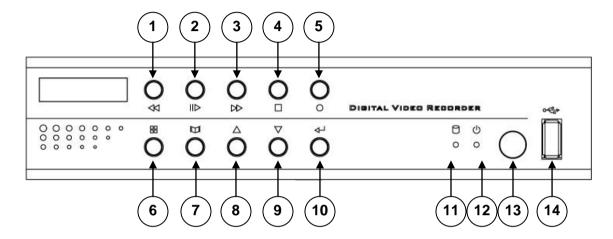
# Chapter

## **Overview**

#### 1.1 Front Panel Control

The 4-channel H.264 network DVR is designed in two versions: with keypad and without keypad.

#### With Keypad



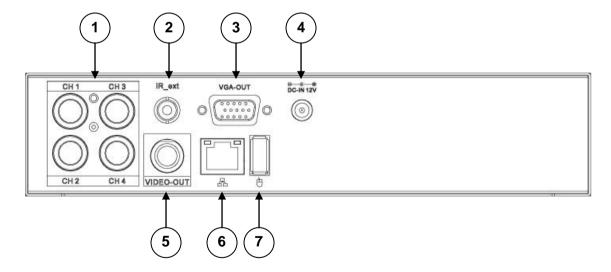
#### Without Keypad



No	Button / Name	Function	
1	<b>◄</b> REW	Rewind through video	
2	II▶ PLAY	Resume video playback	
3	<b>▶▶</b> FF	Fast forward through video	
4	■ STOP	Stop playback	
5	● REC	Start or stop recording/backup	
6	■■ MODE	Select screen display mode	
7	□ MENU	Enter the menu or go back to the previous menu	
8	▲UP	Moves up through list or changes selected values	
9	<b>▼</b> DOWN	Moves down through list or changes selected values	
10	←SELECT/ENTER	Changes values in the menu	
11	Hard disk active (red)	Indicates hard drive is in use	
12	Power LED (green)	Indicates DVR is powered on	
13	IR Receiver (red)	Remote control signal receiver	
14	USB	Connects the USB 2.0 device (Support the pen drive and card reader) for firmware upgrading or video backup	

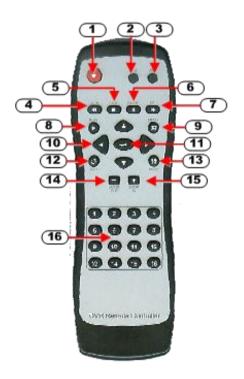
#### 1.2 Rear Panel Connector

The rear panel of the DVR contains virtually all of the connectors you will be using. The diagrams below outline the location and description of each connector:



No	o Name / Labeled Function	
1	CH1~CH4	The BNC connector for video input
2	IR_ext	IR extender connector (optional)
3	VGA-OUT	The VGA output (DB-9) port for the LCD monitor
4	DC IN 12V	DC power port for the power adaptor
5	VIDEO-OUT	Video output port for the security monitor
6	LAN	The RJ45 port for the network cable
7	MOUSE	The mouse port for USB mouse

#### **1.3 Remote Control**



No	Button / Name	Function in DVR Mode
1	• REC	Start or stop recording / backup.
2	● DVR	Switch to DVR mode
3	● PTZ	Switch to PTZ mode
4	<b>◀</b> ◀ REW	Rewind through video
5	■ STOP	Stop playback or backup
6	II PAUSE	Pause recording of playback
7	<b>▶▶</b> FF	Fast forward through video
8	► PLAY	Start video playback
9	□ MENU	Enter a menu or exit
10	▲(UP) ▼(DOWN) ◀(LEFT) ►(RIGHT)	Move through lists or change the settings of choices
11	← (Enter/Select)	Change and confirm values
12	<b>U</b> AUTO	Start automatic screen view rotation
13	<b>MODE</b>	Changes to split-screen mode
14	- ZOOM OUT	(Not available in DVR mode)
15	+ ZOOM IN	(Not available in DVR mode)
16	1,2,16 (Channels)	Selects the channel to view in full screen

Chapter 2

### Installation

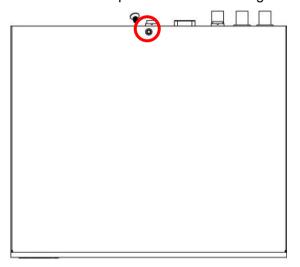
WARNING Be sure there is no power connection before starting installation!

#### 2.1 Hard Disk Installation

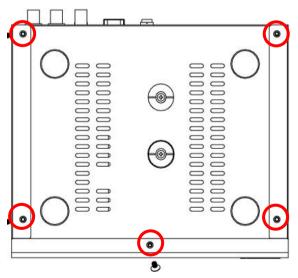
The same hard drive installation method is used for either version of the DVR. The DVR contains one internal hard drive side-bracket and is used for installing a SATA hard drive.

#### Install the hard drive by following steps:

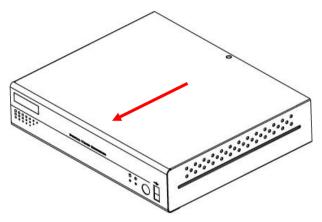
Step 1 Unscrew one screw at the top side of DVR housing.



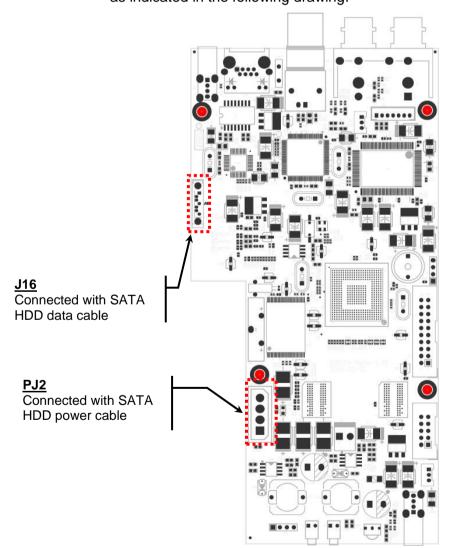
**Step 2** Unscrew the five screws on the bottom side of the DVR housing.



**Step 3** Slide the top cover forward (as indicated by the arrow in the illustration) to remove.

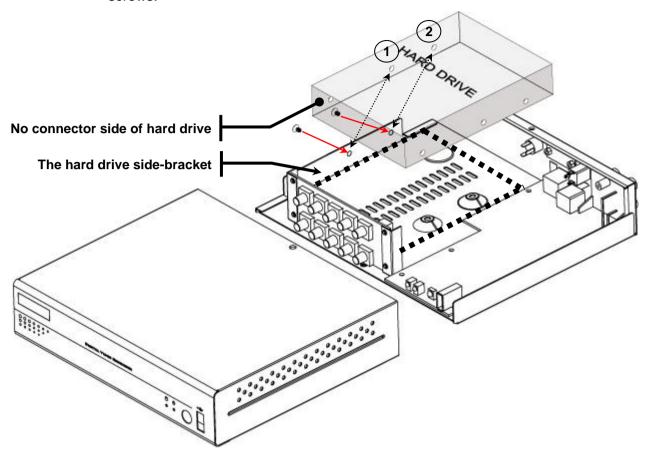


Step 4 Attach the SATA HDD data cable into the Hard Drive data slot (Location: J16) as indicated in the following drawing.
Attach the SATA HDD power cable into the HDD power slot (Location: PJ2) as indicated in the following drawing.

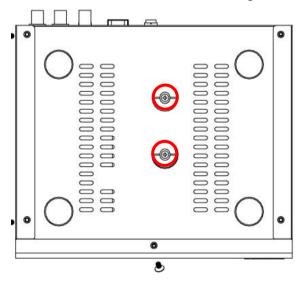


**Step 5** Put the SATA hard drive into the housing marked by the dotted line. Make sure the holes for the screws ① and ② on the hard disk are aligned

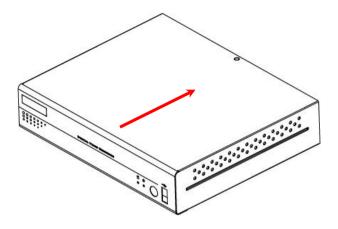
with the holes for the screws of the side bracket (please use the following drawing for reference). Secure the hard drive to the side bracket using two screws.



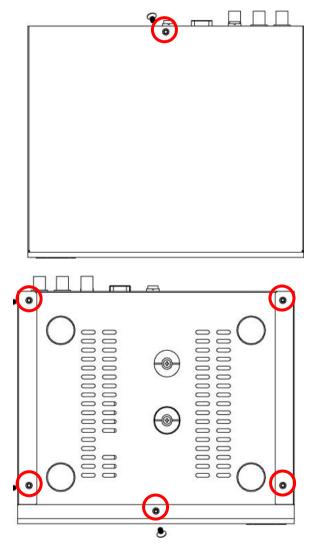
**Step 6** Fasten two more screws to bottom side of DVR to secure the hard drive (The placement screws are indicated in the following drawing).



**Step 7** Push the cover down and slide back (as indicated by the arrow in the illustration) into place.



**Step 8** Fasten one screw on the top housing and four screws on the bottom housing to secure.



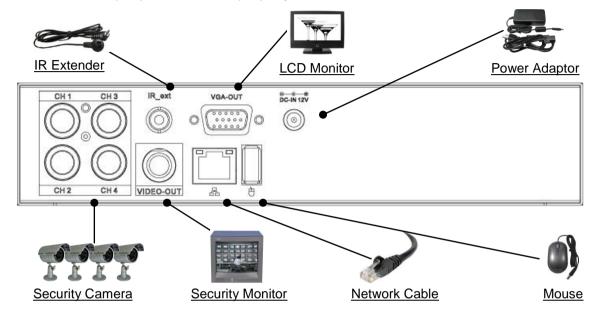
#### 2.2 Video Format Detection

The DVR can automatically detect the video format (either NTSC or PAL) after the cameras have been properly installed and the DVR has been powered on.

Please refer the section "Hardware Setup" to setup the NTSC/PAL auto detection.

#### 2.3 Connection Guide

Connect all peripheral devices properly before turn on the DVR.



#### **Connect the Security Camera**

Connect the security cameras to the video inputs labeled as "CH1" to "CH4" on the DVR. This connection provides the DVR with the surveillance video input.

#### **Connect the Security Monitor**

Connect the security monitor to the video output labeled as "VIDEO-OUT" on the DVR. The connection provides a video transmission path from the DVR to the security monitor.

#### **Connect the Network Cable**

Connect the network cable to the LAN port labeled as "Ha" on the DVR. This connects the DVR to the network.

#### Connect the USB mouse

Connect the USB mouse to the mouse port labeled as "D" on the DVR. This port only supports a USB mouse and not other devices.

#### **Connect the IR Extender (Optional)**

Connect the IR extender cable to the port labeled as "IR\_ext" on the DVR. The cable is an optional device which serves as an IR controller extension.

#### **Connect the LCD Monitor**

Connect the LCD monitor to the VGA output labeled as "VGA-OUT" on the DVR. The DVR will transmit the video signal to the LCD monitor through this connection.

#### **Connect the Power Adaptor**

Connect the Power Adaptor to the DC jack labeled as "DC-IN 12V" on the DVR. Connect the power adaptor after all devices have been properly installed.

# Chapter 3

# **Getting Started**

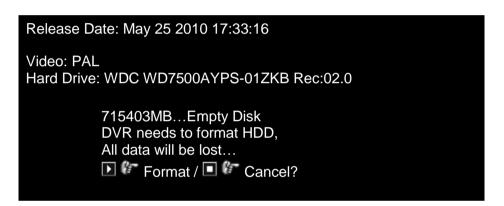
#### 3.1 Turning on the DVR

The DVR is ready for running after all peripherals have been properly installed. Connect the power adaptor to turn the DVR on. The DVR may take a few second to startup.

When the hard drive is detected by the system, it will ask whether or not you would like to format it. Refer to the conditions stated below to determine which course of action to take.

#### Format the hard drive when:

» It is the initial installation of the hard drive (1<sup>st</sup> time to install the HDD in the DVR).



#### Do not format the hard drive when:

» The hard drive has already been formatted by the DVR and not formatted by other devices.

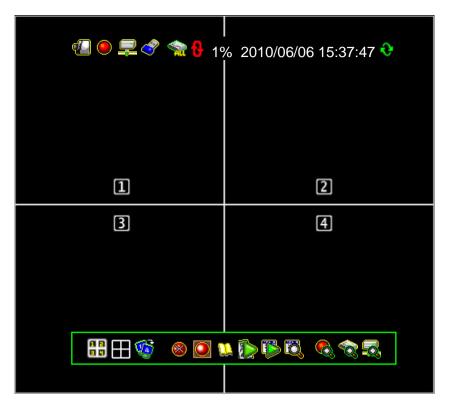
#### NOTE

If the hard drive has already been used by the DVR, the start screen will typically show the firmware version installed, the release date of the said firmware, and the video format for the DVR (i.e. PAL or NTSC) instead of asking for the HDD to be formatted.

The Home Screen is shown after the system is ready.

#### 3.2 Home Screen

The Home Screen is the starting point for many functions and applications. It allows you to setup, access, and control the surveillance video data. You may think of this screen as a vantage point to give you instant access to video information and DVR functions.



#### 3.2.1 State Bar Information

The State Bar displays the status and notification icons of the surveillance system.



Icon	Function	Icon	Function
<b>4</b>	Camera is working	q ×	No signal from camera
	Recording	$\bigotimes$	Stop recording
	Force Record Start		Network connected
<b>ॐ</b>	USB disk connected		Network disconnected
8	Hard drive overwrite enabled	<b>₹</b>	Hard drive status
•	Channel display rotation enabled		
XX%	Percentage of hard drive already used		
2010/06/03	Current date		
15:37:47	Current time		

#### 3.2.2 Control Bar Information

The Control Bar may be used to switch displays, open and setup channels and their related applications.



Icon	Function	Icon	Function
9 E	Load default channel display location		4-channel split view
8	Stop recording		Start recording
8	Stop force record		Start force record
	Auto channel rotation		Enter main menu
	Calendar Menu		Playback menu
	Hard drive information		Event search
Q	Network information		Recording information

#### NOTE

When start the "Force Record" mode. The DVR will record in "Time Record" mode and won't follow the recording arrangement in the "Record Schedule".

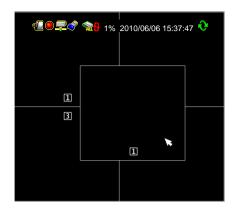
#### 3.2.3 Drag and Drop Channel Swap

The Drag and Drop Channel Swap is an innovative and timesaving feature that makes swapping the channel displays highly convenient. Conventionally, channel displays can only be swapped by interchanging BNC connectors. With Drag and Drop Channel Swap, you can switch channel display positions using your mouse.

#### **Drag and Drop Channel Reposition**



» Move the cursor onto the channelsquare you would like to shift.



» Press left-button of the mouse and drag the channel-square to the new position.



- » Release the mouse button to drop the channel-square into new position.
- System will keep the new channel display arrangement even if you reboot the DVR system.

#### **Load Default Location**

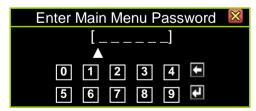
Press the icon "" to reset channel displays to their default locations.

#### 3.3 Main Menu

#### **Logging In for the First Time**

Press then enter the password to get into the main menu.

Default password is "123456".



Press to exit the password dialog.

#### **Main Menu Guideline**



Icon	Name	Function
	DVR Power Supply	To reboot or shutdown the DVR system
	Channel Setup	Set the channel display, record, channel name and video color adjustment.
	Record Setup	Set the record schedule, video performance and quality
T	Detector Setup	Set the motion and alarm mode.
	Authentication Setup	Set the login account, password and the authorization for each user.
	System Setup	Set the status icons display, languages, date/time, rotation time, button beep tone, input device speed, and other relevant system features.
	Hardware Setup	Configures error message checks, hard drive information, overwrite settings, network settings and screen settings.
	Utility/Tools	These are used to format USB devices, to update firmware, and to restore system settings.
	Exit Main Menu	Exit the main menu.

#### **DVR Power Supply Menu**

The  $\blacksquare$  icon opens into the following menu:



**System Reboot:** Restarts the DVR **System Shutdown:** Turns the DVR off

#### 3.4 Channel Setup

Press to enter the "Channel Setup". The screen will display the menu shown in the following illustration.



#### **Operation Icons**

Click on the contonexpand the menu and view its contents.

Click on the contents.

Click on the right button of your mouse to go back to the upper menu.

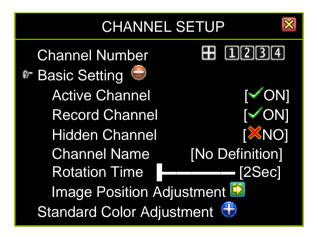
#### 3.4.1 Channel Number

The Channel Number is used to designate to which channel or channels the settings will apply.

Press the icon "I". The icon will turn orange and the settings will be applied to all channels.

Press the icons "①", "②, "③, "⑥, "⑥ to individually set each channel. The channel icon will turn green when selected and will turn to white when not selected.

#### 3.4.2 Basic Settings



#### 3.4.2.1 Active Channel

To set each channel or all channels are to record and to be displayed on the screen.

"ON" – Enables recording and on-screen display. The channel number icon turns to orange.

"OFF"- Disables recording and on-screen display. The channel number icon turns to gray.

#### 3.4.2.2 Record Channel

To set one or all channels are record or not. The channel will be displayed on screen even when it is not recording.

"ON" - Record.

"OFF" - Not Record.

#### 3.4.2.3 Hidden Channel

To set whether or not to display one or all channels on screen. The channel will continue to record regardless of it being hidden or not.

**"ON"** – Hide the channel on screen. The channel square turns to black and channel number icon turns to white.

"OFF"- Unhide the channel or channel is visible.

#### 3.4.2.4 Channel Name

Designate a name for each channel. The channel name is limited to 24 characters.

Press the icon [ Default Name] to select a channel name from the list defined by the system: Room, Hall, Door, Lift, Area, Floor, Entry, and Point.

Press the icon "11" to switch to big letters.

Press the icon "L" to enter the channel name. The channel name will appear on the channel square.

Or you can define the name by using buttons on IR remote:

 $\wedge$  /  $\vee$  ( $\uparrow$  /  $\downarrow$ ) – move up / down

(4/) ( 4/): move left / right to the character would like to select and press " $\downarrow$ " to select it.



#### 3.4.2.5 Rotation Time

Sets the period (with a range of 2 to 30sec) of full screen display for each channel.

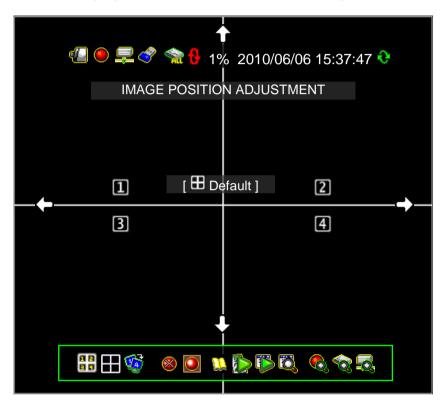
#### 3.4.2.6 Image Position Adjustment

Adjusts the position of display on the monitor.

Select the icon "I" to adjust the display position of all channels in 4-split view at once.

Select the icon "1", "2", "3", "4" to individually set the image position of each channel.

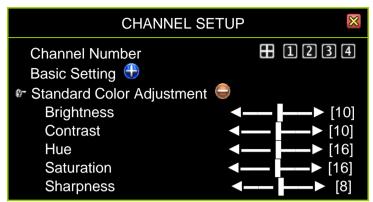
The following figure will show when enter the "Image Position Adjustment":



Press [ Default] to load or to restore to the default location.

#### 3.4.3 Standard Color Adjustment

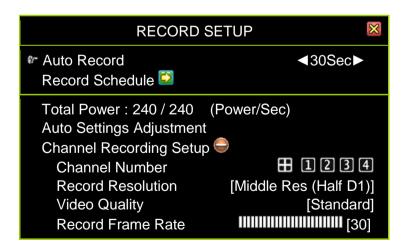
Adjusts the video color parameters for each channel or simultaneously for all channels.



- ✓ Brightness: Default is 10.
  - Press the button "◀ / ▶" to adjust the brightness from 1 to 20.
- ✓ Contrast: Default is 10.
  - Press the button "◀ / ▶" to adjust the contrast from 1 to 20.
- ✓ Hue: Default is 16
  - Press the button "◀ / ▶" to adjust the hue from 1 to 32.
- ✓ Saturation: Default is 16.
  - Press the button "◀ / ▶" to adjust the saturation from 1 to 32.
- ✓ Sharpness: Default is 8.
  - Press the button "◀ / ▶" to adjust the sharpness from 1 to 16.

#### 3.5 Record Setup

Click "Record Setup" on the Main Menu.



#### 3.5.1 Auto Record

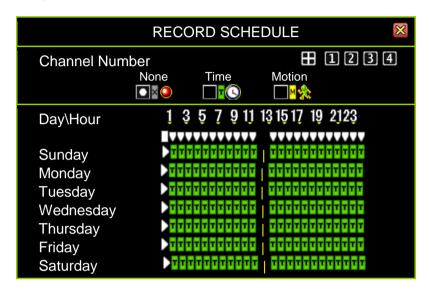
Auto Record is utilized to set the period (OFF, 10Sec, 20Sec, 30Sec, 40Sec, 50Sec or 60Sec) within which the DVR will automatically start recording. Default value is

"30Sec". This feature is particularly useful in automatically re-starting your DVR recording in case of an abnormal shut down.

The DVR will not re-start recording when set this function "OFF".

#### 3.5.2 Record Schedule

Record Schedule is a menu charting the recording schedule of a particular channel or all channels for the whole day (24 hours) and the entire week (7 days). Default setting is "Time Record".



#### 3.5.2.1 Channel Number

Select the icon "L" to set the recording schedule for all channels.

Select the icon "L", "L", "L", "L" to individually set the recording schedule of each channel.

#### 3.5.2.2 Recording Mode Select

"

"

"

To select the mode

There are three recording mode for your choice:

None: Indicates that the channel is set to not record during this duration

Time: Indicates that the channel is set to continuously record during this duration

Motion: Indicates that the channel is set to motion-triggered recording during this duration

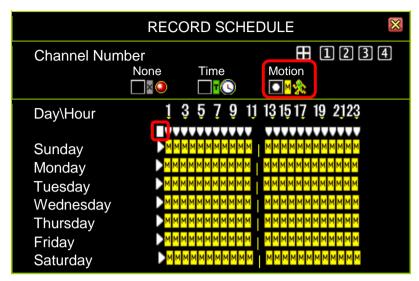
#### NOTE

When "Motion Mode" is set for the recording schedule. Remember to complete the "Motion Setup" at the main menu of "Detector Setup" - otherwise it will not be able to record during the period set on "Motion Mode".

Press the icon "\overline{1}" to set the whole week (7 days) and the whole day (24 hours) to the same mode

The following example shows that the entire week (all 7 days) and the whole day (all 24 hours) are set to the "**Motion**" recording mode.

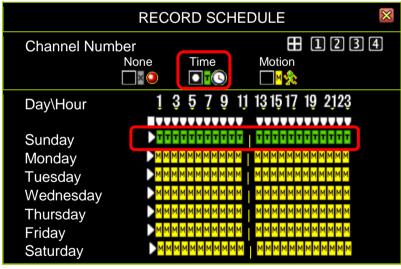
Select "Motion" recording mode, press the icon "\[ \begin{align\*} \text{and press ""} \] ".



Press the icon "I" (located after the name of each day) to set every hour of an entire day to operate in the same mode.

The following example shows that on Sunday, the whole day is set to the "**Time**" recording mode.

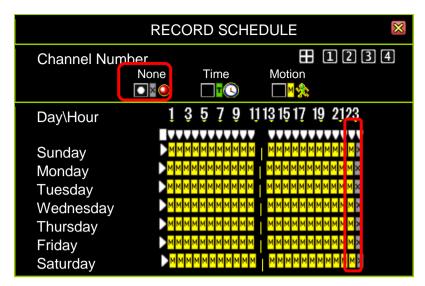
Select "Time" recording mode, press the icon "\overline{1}" and press ""\verline{1}".



Press the icon "\overline{\sigma}" to set the same mode for a specified time every day.

The following example shows that from 23:00 to 24:00 (11:00pm to 12:00mn) everyday there is no recording (set to "**None**" recording mode).

Select "None" recording mode, press the icon "□" and press "".□".

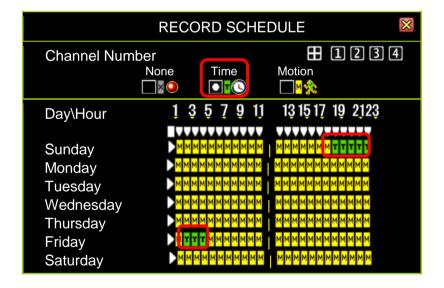


You can also specifically set the recording mode for a particular time and day.

The following example shows that on Sunday, from 19:00 to 24:00 (7:00pm to 12:00mn), and on Friday, from 2:00 to 4:00 (2:00am to 4:00am), are set to the "**Time**" recording mode.

Select the recording mode first. Move the cursor and click the icon "\overline{\mathbb{U}}", "\overline{\mathbb{U}}" to change mode on the timetable.

Select "**Time**" recording mode, move the cursor and click the period of icons "\textsup" change to "\textsup" and press "\textsup".



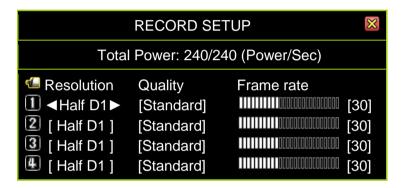
## 3.5.3 Total Power

#### Total Power: 240/240 (Power / Sec)

It shows the number of recording power that has been allocated and the total number of recording power.



To distribute the recording power into four channels by click the total power (as upper red border).



#### Video Resolution, Quality and Frame Rate Setting for each Channel

#### Resolution:

Press the button "◀ / ▶" to adjust the resolution from CIF, Half D1 and D1 for individual channel.

#### Quality:

Press the button "◀ / ▶" to adjust the resolution from Lowest, Low, Standard, High and Highest for individual channel.

#### Frame rate:

Press the button "◀ / ▶" to adjust the frame rate from 0 to 30 for individual channel. There is equal to not recording when setup the frame rate to 0.

# 3.5.4 Auto Settings Adjustment

This function can automatically allocate the recording power under the selected record resolution.

When all the channels are set at the same resolution, the "**Auto Settings Adjustment**" can automatically allocate the frame rate to every channel.

When the setting applies to a specific channel or to specific channels with a particular resolution, video quality or frame rate the "**Auto Settings Adjustment**" feature automatically allocates the remaining frame rate among the other channels.

## 3.5.5 Channel Recording Setup

The Channel Recording Setup is used to adjust the resolution, quality, frame rate and performance gains of recording.

#### 3.5.5.1 Channel Number

Select the icon "\bu" to adjust the settings of all channels at one time. Select the icon "\bu", "\bu", "\bu", "\bu" to adjust the setting of each channel.

#### 3.5.5.2 Recording Resolution

Select the recording resolution for each or all channels as:

- » D1: 704\*480 / 60fps (NTSC); 704\*576 / 50fps (PAL)
- » Half D1: 704\*240 / 120fps (NTSC); 704\*288 (PAL) (Default)
- » CIF: 352\*240 / 120fps (NTSC); 352\*288 (PAL)

## 3.5.5.3 Video Quality

Video image quality settings can be Highest, High, Standard, Low, and Lowest. Default is Standard.

Higher video quality provides a much clearer image for playback but can utilize a much larger hard drive space with a larger file size.

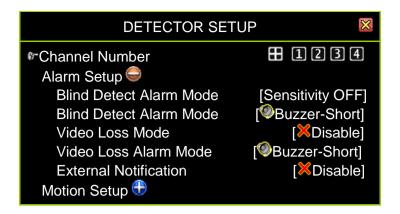
#### 3.5.5.4 Record Frame Rate

The recording frame rate for each or all channels may be set from  $0\sim30$  fps. If the frame rate is set to 0 it means that it will not be recording.



# 3.6 Detector Setup

Detector Setup configures the alarm and motion mode for each or all channels.



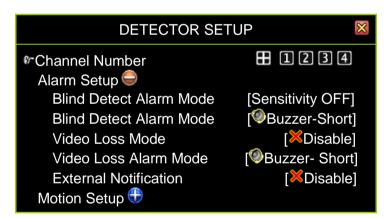
## 3.6.1 Channel Number

To sets the detection mode by each or all channels.

Select the icon "\bu", "\bu", "\bu", "\bu", "\bu", "\bu" to setup for the each channel.

## 3.6.2 Alarm Setup

Alarm Setup is accessed to configure the alarm mode of each channel, individually, or for all channels, simultaneously.



#### 3.6.2.1 Blind Detect Mode

This mode will be triggered when there is no video input (in total darkness) whether the security camera is purposefully being covered or there is a direct exposure to intense light. This detects if there is a deliberate attempt to hide the view of the camera. The light intensity settings will have no effect when using the IR cameras.

Choose any of the following settings to adjust the sensitivity of blind detection:

- "Sensitivity OFF": No sensitivity
- "Sensitivity Low": Low sensitive level
- "Sensitivity Normal": Normal sensitive level
- "Sensitivity High": High sensitivity level
- "Sensitivity Highest": Highest sensitive level

#### 3.6.2.2 Blind Detect Alarm Mode

Select the alarm mode when the Blind Detect Mode is triggered.

"Mute": No beep whatever loss of light or not.

"Buzzer-Short": Slow beeping sound from buzzer on main board.

" Buzzer-Long": Fast beeping sound from buzzer on main board.

#### 3.6.2.3 Video Loss Mode

The Video Loss Mode is for detecting the loss of the camera video input.

#### 3.6.2.4 Video Loss Alarm Mode

Select the alarm mode when the Video Loss Mode is triggered.

"Mute": No beep whatever video loss or not.

" Buzzer-Short": Slow beeping sound from buzzer on main board.

" Buzzer-Long": Fast beeping sound from buzzer on main board.

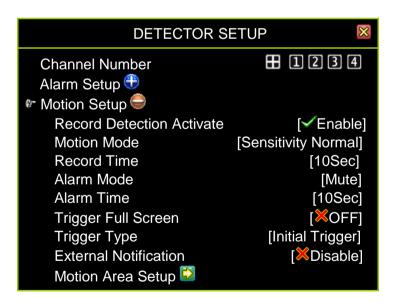
#### 3.6.2.5 External Notification

This parameter is set for external notification for light detect, blind detect, or video loss (depending on the settings)

✓ Enable: Activates external notification for an alarm-triggering event 
☑Disable: Deactivates external notification for an alarm-triggering event

## 3.6.3 Motion Setup

Motion Setup is accessed to configure the motion mode for each channel or all channels.



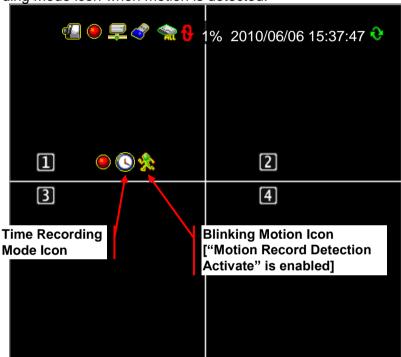
#### **NOTE**

Remember to setup the motion mode period on "Record Schedule" at the main menu of "Record Setup" after completing "Motion Setup". Otherwise, the system will be recording in the default schedule recording mode.

#### 3.6.3.1 Record Detection Activate

This feature activates the motion setup (allowing you to detect unusual movements) and enables the system to log motion-triggered events even when your DVR setting is in "Time Recording" mode.

✓ **Enable**: Activates motion-triggered detection even when DVR is in a different recording mode. When enabled, a blinking motion icon will be found alongside the Time Recording mode icon when motion is detected.



**☑Disable**: Deactivates motion-triggered detection even when DVR is in a different recording mode

#### NOTE

Remember to specify the area you would like monitor using the "Motion Area Setup" screen. Click on a particular channel you would like to set and then click on Motion Area Setup to define the particular area you would like to monitor.

#### 3.6.3.2 Motion Mode

Choose any of the following settings to adjust the motion sensitivity parameter:

"Sensitive OFF": No sensitivity

"Sensitive Low": Low sensitive level

"Sensitive Normal": Normal sensitive level

"Sensitive High": High sensitive level

"Sensitive Highest": The highest sensitive level

#### 3.6.3.3 Record Time

Set the recording time when the Motion Mode is triggered.

The recording time as 5sec, 10sec, 15sec, 20sec, 25sec, 30sec, 45sec, 60sec, 90sec, 120sec, 150sec or 180sec.

#### 3.6.3.4 Alarm Mode

Select the alarm mode when Motion Mode is triggered.

- "Mute": No beep whatever motion is detected or not.
- "Buzzer-Short": Slow beeping sound from buzzer on main board.
- " Buzzer-Long": Fast beeping sound from buzzer on main board.

#### 3.6.3.5 Alarm Time

The Alarm Time is the duration of the beep and may be set to: "Nonstop" (no stop), 5sec, 10sec, 15sec, 20sec, 25sec, 30sec, 35sec, 40sec, 45sec, 50sec, 55sec or 60sec.

## 3.6.3.6 Trigger Full Screen

Trigger Full Screen is the duration of the of full-screen display when a channel is triggered. This may be set to a period between 1 to 30 seconds.

"SOFF": It will not display on full screen when the channel has been triggered. Also, the trigger area will turn to "red-color"

## 3.6.3.7 Trigger Type

There are two trigger types: Initial Trigger and Continuous Trigger.

#### **Initial Trigger**

When channel has been triggered, the triggering event will be displayed on full screen for the duration of the period set in **Trigger Full Screen**. During that period, this channel will ignore any other triggering events.

#### **Continuous Trigger:**

When channel has been triggered, the triggering event will be displayed on full screen for the duration of the period set in **Trigger Full Screen**. The channel is, however, still actively monitoring during that period. Should there be a new triggering event, this channel will display the more recent event and restart the display period.

#### 3.6.3.8 External Notification

This parameter is set for external notification for motion detection.

✓ Enable: Activates external notification for motion detection

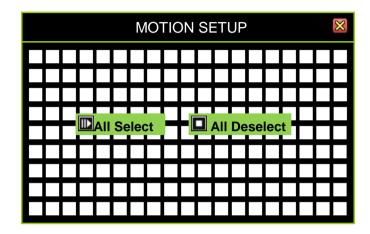
**Disable**: Deactivates external notification for motion detection

## 3.6.3.9 Motion Area Setup

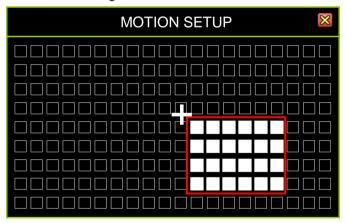
The Motion Setup allows the user to block multi areas on screen for every single channel as motion detection area.

Select a channel to set.

- All Select: Highlights the entire view displayed on the screen (as seen by the camera)
- All Deselect: Removes the selection from the entire view displayed on the screen (as seen by the camera)



Or use the mouse or the  $\blacktriangle(\uparrow)$ ,  $\blacktriangledown(\downarrow)$ ,  $\blacktriangleleft(\blacktriangleleft)$ ,  $\blacktriangleright(\blacktriangleright)$  buttons to move the area. After positioning, press " $\square$ " or click right button of the mouse to save it.



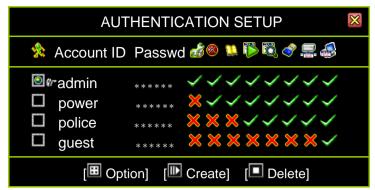
## **CAUTION**

There will be no response in Motion Mode when the Motion Area Setup has not been completed.

# 3.7 Authentication Setup

Authentication Setup manages the authorization for accounts, passwords, and permissions.

#### Click the following icons for authority management



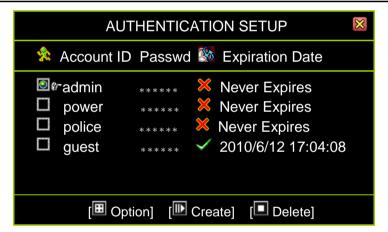
Click the icons for setting:

- "Indicates a disabled account "Indicates an active account "Indicates an active account "Indicates an active account Indicates access to function Indicates In
- "D" Creates a new account "D" Deletes an account

Account ID: Enter characters as the account ID

Passwd (Password): By entering six characters or numbers as password

Click "[ Option] for expiration date setup



Click the icons for setting:

"

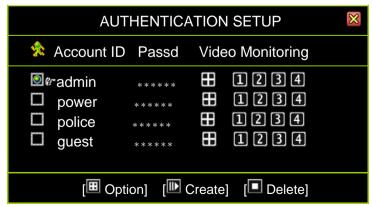
Never Expire 

"

"

Sets the expire date

Click "[ Option] for channel monitoring setup



Click the icons for setting:

"Enable the account to monitor all channels. The icon turns orange when enabled.

"L" "L" "L" "L" "L": Enable the account to monitor the specific channels. The icon turns green when enabled.

Disabled accounts are indicated by white icons.

NOTE Disable all accounts means that access is available to all users

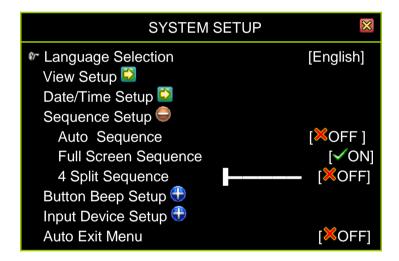
without a password.

**NOTE** Disable all users to access the specific function means that all

users can access only specific functions.

# 3.8 System Setup

System Setup sets the Language, Viewing, Date/Time, Sequence, Button Beep, Input Device, and other relevant parameters.



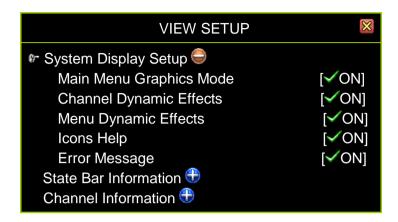
## 3.8.1 Language Selection

Language Selection is used to select the language for the on-screen display (OSD) Menu.



## 3.8.2 View Setup

View Setup is for choosing whether to display certain illustrations and DVR information or not.



#### 3.8.2.1 Main Menu Graphics Mode

Sets the main menu displayed by graphic icons or text mode.





## 3.8.2.2 Channel Dynamic Effects

Enables or disables the channel moving effects during channel dynamic drag and drop.

## 3.8.2.3 Menu Dynamic Effects

This pertains to the setting for the sub-menu to scroll in (when the icon is clicked) or scroll out (when the icon is clicked). If enabled, the sub-menu would roll out smoothly and if disabled, the sub-menu would have a more abrupt appearance on the screen.

## 3.8.2.4 Icon Help

Enables or disables the help icon text description to appear when the mouse hovers over the icons.

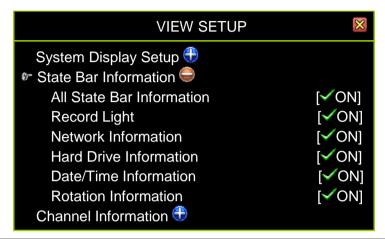


## 3.8.2.5 Error Message

Enables or disables system to show the log when an error occurs.

#### 3.8.2.6 State Bar Information

Determines how system status information is set and shown.





#### 3.8.2.7 Channel Information

Enable or disable the channel information icons is set and shown on the home screen.

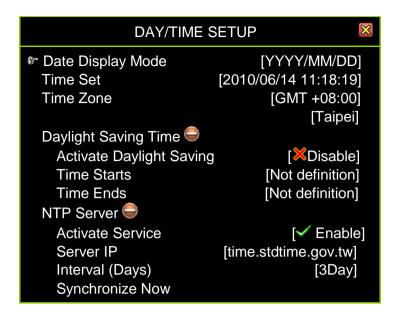




- 1,2,3,4: The Channel Number Icon
  Recording Light: Video Loss
- Not Flashing)
- : Detection Mode (Flashing when the motion is triggered)

# 3.8.3 Date/Time Setup

Date/Time Setup Menu sets relevant information on date and time.



## 3.8.3.1 Date Display Mode

Date Display Mode is used to choose a date format for the state information. The allowable formats are YYYY/MM/DD, DD/MM/YYYY, and MM/DD/YYYY.

#### 3.8.3.2 Time Set

"Time Set" is for adjusting the date and time.



A / Y (↑ / ↓): Up / Down – Change the number
 4/ N ( ↑ / ▶ ): Move left/right to the character that needs to be changed
 □ : Exit after confirmed setting

#### 3.8.3.3 Time Zone

"Time Zone" is for adjusting time zone and location.

## 3.8.3.4 Daylight Saving Time

"Daylight Saving Time" is for adjusting the DST settings (for countries where it is applicable).

## 3.8.3.4.1 Activate Daylight Saving

"Activate Daylight Saving" enables or disables the daylight saving mode.

#### 3.8.3.4.2 Time Starts

"Time Starts" indicates the start date of daylight saving time. The user can set the month, week number, day, and hour.



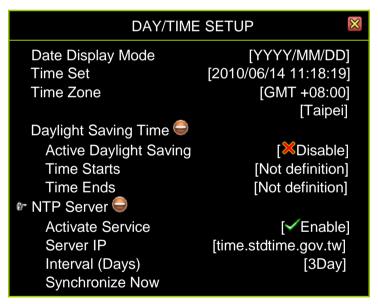
#### 3.8.3.4.3 Time Ends

"Time Ends" indicates the end date of daylight saving time. The user can set the month, week number, day, and hour.



#### 3.8.3.5 NTP Server

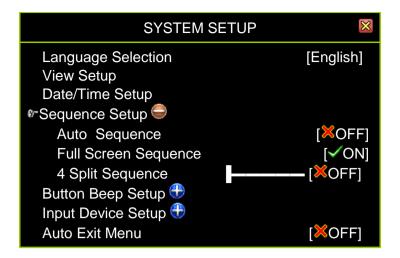
NTP Server allows for the synchronization of the day/ time settings with the NTP server through internet.



- ✓ Activate Service:
  - "VEnable" Enable Synchronization
  - " Disable" Disable Synchronization
- ✓ **Server IP:** The IP address of NTP server (Maximum in 24 characters)
- ✓ Interval (Days): The frequency (number of days) of when the server is synchronized.
- ✓ Synchronize Now: Start synchronizing with NTP server now

# 3.8.4 Sequence Setup

The Sequence Setup Menu is for setting the channel rotation sequence period.



#### **Auto Sequence**

Enables automatic activation of sequence viewing within 10 sec, 20 sec, 30 sec, 40 sec, 50 sec or 60 sec. Default setting is OFF.

#### **Full Screen Sequence**

Enables or disables the full screen rotation period.

#### **4 Split Sequence**

Enables or disables the 4 split display rotation period.

## 3.8.4.1 Operating Auto Sequence

Auto Sequence activates the sequence settings within a given time if the Auto Rotation icon has not been pressed. This is an explanation of setting the display sequence.

If Auto Sequence is ON and all the other sequence settings (i.e. full screen, 4 split, etc.) are OFF, the screen displays will remain static. The (Auto Rotation) icon will not appear on the Control Bar.

If Auto Sequence and Full Screen Sequence are both ON, the display will enter the single channel view within the time set on Auto Sequence.

If Auto Sequence is OFF and Full Screen Sequence is ON, the display will enter the single channel view only when the (Auto Rotation) icon is clicked.

If Auto Sequence and any one of the Split Sequences are both ON, the display will enter the specified view within the time set for Auto Sequence.

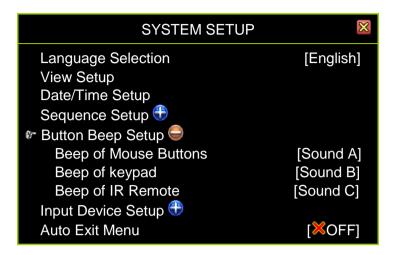
If Auto Sequence is OFF and any one of the Split Sequences is ON, the display will enter the single channel view within the time set on the Split Sequence.

#### NOTE

A quick way to determine if the display is in sequence mode is by checking if the (Channel Rotation indicator) icon appears on the State bar.

## 3.8.5 Button Beep Setup

The Button Beep Setup configures the system button beep for the mouse, keypad, and IR remote by the sound type of either "Mute", "Sound A", "Sound B", "Sound C".

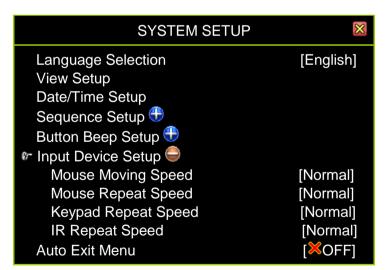


NOTE

Keypad Beep is available for models equipped with keypad.

## 3.8.6 Input Device Setup

Input Device Setup is used to set the speed of the following input devices: mouse, keypad and IR Remote.



- ✓ Mouse Moving Speed: Slow, Normal, Fast
- ✓ Mouse Repeat Speed: **MOFF**, Slow, Normal, Fast
- ✓ **Keypad Repeat Speed: Soft**, Slow, Normal, Fast
- ✓ IR Repeat Speed: Soff, Slow, Normal, Fast

#### NOTE

Keypad repeat speed is available for models equipped with keypad.

#### 3.8.7 Auto Exit Menu

The Auto Exit Menu configures the menu to automatically exit after a specified period.

Set Auto Exit Menu to "OFF" for manual exit. Otherwise, the menu will exit after 10, 20, 30, 40, 50 or 60 seconds, depending on the set time.

# 3.9 Hardware Setup

Hardware Setup is the menu for configuring hardware parameters including error message, hard drive, network and screen display.

Click the "Hardware Setup" on the Main Menu.



# 3.9.1 Query Error Message

The Query Error Message window shows the all error messages.



[ View Time]: Sort error messages by time of occurrence.

[ Clear Message]: Clear all error logs.

## 3.9.2 Hard Drive Setup

The Hard Drive Setup menu displays hard disk information and allows the user to enable the HDD overwriting.



#### 3.9.2.1 Overwrite enable

**YES]:** The hard drive automatically writes over the oldest video on the hard drive when it runs out of space for recording.

[XNO]: Recording will stop when the hard drive is full.

## 3.9.2.2 Max. Recording Days

This function enables to specify the days of recording data which is retained in the hard drive. It will be required to format the hard drive once you change the limited days. Those expired recording data will be not found during event search.

Once you have selected the number of days, click on "Format Hard Drive".

You can set the maximum recording days as from 1 to 30 or "None" not to limit.

#### **NOTE**

If you decide to move or re-assign your DVR to a different system with a different ruling on how long you can keep your videos, you have to reformat your hard drive to change the Max. Recording Days.

#### 3.9.2.3 First Hard Disk

- Model: Automatically displays the hard drive model number
- HDD Size: Automatically displays the hard drive size
- Max. Days Size: Displays the days of recording data will be retain in the hard drive
- Record Start Time: Displays the day and time when the hard drive starts storing recorded data
- Record End Time: Displays the day and time of the last recording on the hard drive
- **Standard Record Size:** The total hard drive capacity in megabyte (MB) and the ratio of using space.
- Standard Number of event: Total number of record events / total capacity of events and the ratio of using space.

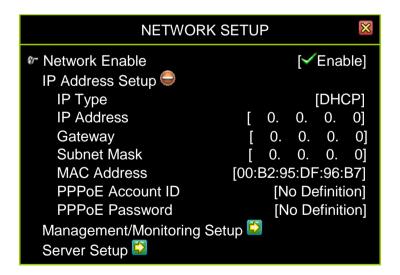
#### 3.9.2.4 Format Hard Drive

You cannot format the hard drive when the system is running in recording mode. When you attempt to do so, the following warning message will appear on the screen.

System is Recording Hard Disk Format is Prohibited.

## 3.9.3 Network Setup

Network Setup is for adjusting network configurations.



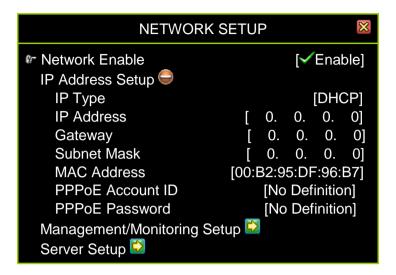
#### 3.9.3.1 Network Enable

" Enable": Network may be used

"
Disable": Network may not be used

#### 3.9.3.2 IP Address Setup

The IP address acts as a locator or an identification number to enable a device on a TCP/IP network to locate other devices and interact with them. Certain parameters need to be set through IP Address Setup to ensure proper network communication.



#### **IP Type**

There are two options for IP type: Static IP address and Dynamic IP address (DHCP and PPPoE).

- **Static IP Address:** User must manually define a static IP address. Contact the network administrator for this information.
- **DHCP:** System gets the IP address from the router or DHCP server. Contact the network administrator for this information.
- PPPoE: The Point-to-Point Protocol over Ethernet (PPPoE) is used mainly with DSL services where individual users connect to the DSL modem over Ethernet and in plain Metro Ethernet networks.
   Please input the PPPoE Account ID and Password provided by the ISP. (Note: Account ID maximum in 24 characters; Password maximum in 16 characters)
- GATEWAY: Define gateway IP address. Contact the network administrator for this information.
- **SUBNET MASK:** A sub network, or subnet, is a logically visible, distinctly addressed part of a single Internet Protocol network. Contact the network administrator for this information.
- MAC Address: MAC address is a unique identifier assigned to most network adapters or network interface cards (NICs) by the manufacturer for identification. It has been set at dedicated address even reset the DVR.

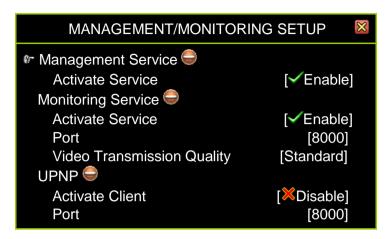
## **NOTE**

You must plan on the network structure if the MIS or Network Administrator manages the network.

Consult with the MIS or Network Administrator for the IP address segment and port-forwarding rule for the DVR network setup.

## 3.9.3.3 Management / Monitoring Setup

The Management/Monitoring Setup menu addresses the management and monitoring service for remote DVR control and viewing from the internet (i.e. Internet Explorer) browser and PC Viewer.



#### **Management Service**

 Activate Service: Enables or disables the management service for allowing remote control from IE or PC Viewer.

#### **Monitoring Service**

- Activate Service: Enables or disables the monitoring service for allowing remote viewing from IE or PC Viewer.
- **Port:** The default port number is "8000" for DVR video transmission. The range of port numbers is from 2048 to 32767. This can also be used as the web port.
- **Video Transmission Quality:** Select the remote video transmission quality from Lowest, Low, Standard, High, and Highest.

#### **UPNP**

UPnP allows devices to automatically establish functional connections with other devices when connected to a network.

- Activate Client: Enables or disables the UPnP connection of the DVR
- Port: Specifies the streaming port for UPnP. This is typically an unused port.

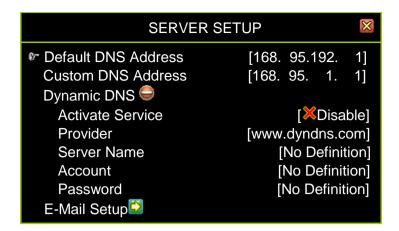
#### **NOTE**

You must plan on the network structure if the MIS or Network Administrator manages the network.

You should consult with the MIS or Network Administrator for the IP address segment and port-forwarding rule for the DVR network setup.

## 3.9.3.4 Server Setup

Configure the DNS server.



#### **Default DNS Address**

The Domain Name System (DNS) translates hostnames to IP addresses (default setting). If there is no DNS address setting or fail, DVR will go for Default DNS Address.

#### **Custom DNS Address**

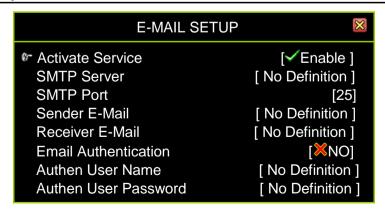
The Domain Name system (DNS) translate hostnames to IP addresses (customer setting).

#### **Dynamic DNS**

Dynamic DNS is a system that allows the domain name data held in a name server to be updated in real time. Please refer to the chapter "DynDNS Service Overview".

- "Service Active": Enable the Dynamic DNS service.
- "Provider": The web site / IP Address of Dynamic DNS provider
- "Server Name": Define a name of Dynamic DNS (Maximum in 35 characters)
- "Account": The account name of Dynamic DNS (Maximum in 27 characters)
- "Password": Password for Dynamic DNS Please refer to DynDNS Service (Maximum in 27 characters)

#### E-Mail Setup

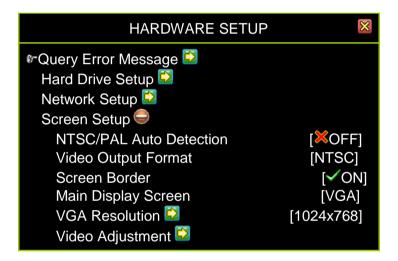


Configure the electronic mail server.

- Activate Service: Enable or disable the email feature of the DVR
- SMTP Server: Specify the name of the mail server
- **SMTP Port:** Specify the port number used by the mail server. The default value is 25.
- Sender E-Mail: Specify the email address of the sender
- Receiver E-mail: Specify the email address of the recipient
- **Email Authentication:** Activate or deactivate the email account authentication. This is for identifying and verifying if a sender has been authorized.
- Authen User Name: Specify the user name for email authentication
- Authen User Password: Specify the password for email authentication

## 3.9.4 Screen Setup

Adjusts the video format and resolution of the display device.



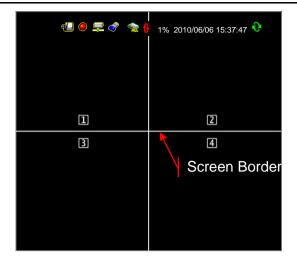
#### **NTSC/PAL Auto Detection**

The system will automatically detect the video format NTSC/PAL from the video source, i.e. security cameras.

#### **Video Output Format**

The selection of video output format NTSC or PAL is available while the "NTSC/PAL Auto Detection" function is disabled.

#### Screen Border



"✓ON": To show the border

"SOFF": Not to show the screen border.

#### **Main Display Screen**

Provides options to connect the main display screen to either a BNC or VGA port (Labeled as "VIDEO-OUT").

#### **VGA** Resolution

Sets the resolution as 640x480, 800x600, 1024x768 or 1280x1024.

#### **NOTE**

The default setting for VGA resolution on the DVR is 800x600. Some monitors that may be connected to the VGA port may not support this resolution and this may result to unclear images on the display. You can adjust the setting to a higher value to ensure clarity of the video.

#### **Video Adjustment**

Adjusts the position of main display on the monitor when connect the main display screen to BNC port (Labeled as "VIDEO-OUT").

The following figure will show when enter the "Video Adjustment":



Adjust the image position by using the mouse left-click button to follow the direction change of cursor icon ♠ up / ➡ down / ➡ right/ ← left.

Press [■ Default] to load the default location.

# 3.10 Utility/Tools

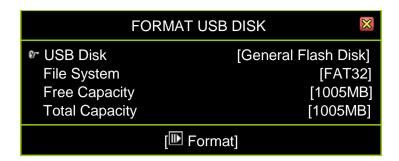
These tools help you to format the USB dongle, to update firmware, to export event logs and to load or restore the environment configuration.

Click the "Utility/Tools" on the Main Menu.



## 3.10.1 Format USB Disk

The system supports USB pen drives and USB card readers with the FAT32 device file format. Please format the drive (using the file format function) if it is not in FAT32 otherwise an error will occur during backup. The file format function helps you format USB device to improve its compatibility with the DVR for storing video data into your USB device.

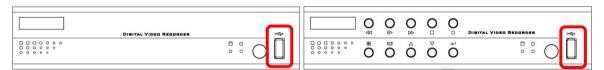


# 3.10.2 Firmware Update

The firmware is updated by using a USB pen drive that contains the latest firmware file.

Attach the external USB disk into the USB port on DVR front panel.

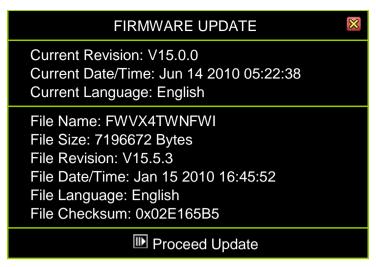




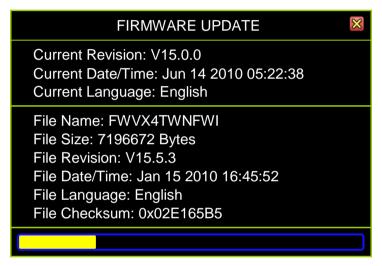
Once the USB device is connected to the port, the DVR will take a few seconds to search for the firmware.

If there is a mistake or missing file on the drive, it will show: <u>File not found or Disk</u> <u>Error</u> on the bottom line. Please check USB disk or file. Re-attach disk to the port.

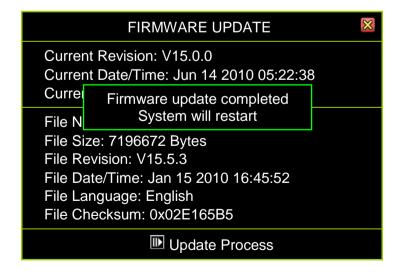
Once the firmware has been found, its file name, revision number, revision date and time, file language and checksum are displayed. Click this button on begin the upgrade.



When DVR is updating the firmware, a status bar will appear at the bottom.

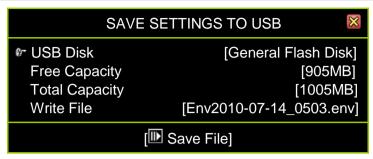


After firmware update is completed, <u>Firmware update completed</u>. <u>System will restart</u> is displayed, and then the system restarts.



## 3.10.3 Environmental Setting

## Save Settings to USB

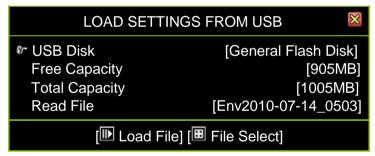


This tool can help you duplicate the system environment configuration and store it on the USB device. You can use this to swiftly deploy your other DVR systems which will be using the same configuration.

It will show the following message after file is duplicated successfully.



#### **Load Settings from USB**



This tool can help you load the system environment configuration from the USB device.

Click [ File select] to select the file you would like to load.



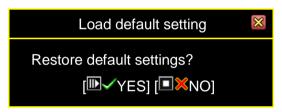
Click [Load File] to load the selected file from USB device. It will show the following message:



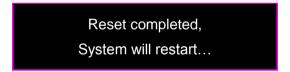
#### **Restore Default Setting**

This command resets the system to its default settings.





Select "YES" to load the default setting. After which, the system will reboot.



## 3.11 Exit Main Menu

Provides options to save or discard changes before exiting.



Click on the icon if you access this from the Main Menu in Graphics Mode. If you have made changes, you will be asked whether or not you would like to save those changes.



Otherwise, in the regular Main Menu mode, you are presented with the following window:

## 3.11.1 Exit & Save Changes

The Exit Main Menu window provides options to save or discard changes before exiting.

All changes are saved before exiting from the menu.



## 3.11.2 Exit & Discard Changes

All changes are ignored (The changes will not be saved and will take no effect.) before exiting from the menu. Confirm with "Yes" or go back to the menu by choosing "No".



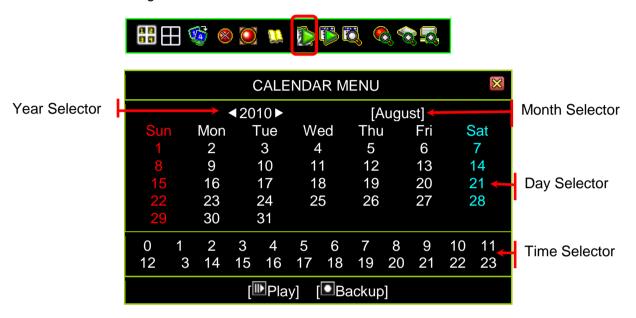


# Playback and Data Backup

## 4.1 Calendar Menu

The Calendar Menu is a play back feature that allows you to access recorded videos by selecting the date and time when the video was captured.

Press the Calendar Menu loon the Control Bar to enter the Calendar Menu in the live viewing window.



#### Choosing the year of the video to play back

The Year Selector will start blinking when your mouse is hovering over it. Click on the year or the arrows beside the year  $(\square \text{ or } \square)$  to choose.

#### Choosing the month of the video to play back

The Month Selector will start blinking when your mouse is hovering over it. Click on the month or the arrows beside the month ( $\square$  or  $\square$ ) to choose.

#### Choosing the day of the video to play back

The dates with recorded videos will be in a vivid white color for weekdays, red for Sundays, and cyan for Saturdays on the Day Selector. A specific day will start blinking when your mouse is hovering over it. Click on the day you would like to review. A circle will appear around the selected number and the number will be enclosed with brackets.

#### Choosing the time of the video to play back

Once you've chosen the date, the hours with recorded videos will be in a vivid green color on the Time Selector. A specific time will start blinking when your mouse is hovering over it. Click on the hour you would like to review. A circle will appear around the selected number.

#### **Example of time-search video selection with Calendar Menu**



In the example above, the date selected is July 26, 2010 (Monday) and the time is 17:00. The illustration also shows that recorded videos of that day are available from 09:00 to 18:00.

[Play]: Starts to play the event that has been selected.

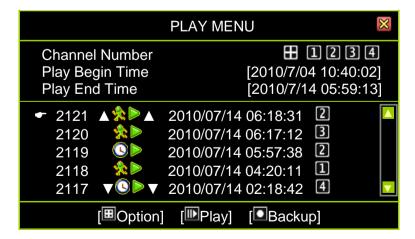
[DBackup]: Creates a backup file for the event that has been selected

#### NOTE

Play back and backup for the Calendar Menu is similar to the operation available in the Play Menu. Please refer to the section on the Video Playback Control Bar.

# 4.2 Play Menu

Press "▶" (or "II▶") button or icon to enter Play menu.



- Channel Number: select the channel to playback
- Play Begin Time: specify the beginning of the playback

• Play End Time: specify the end time of the playback

The information below it shows the available recorded events.

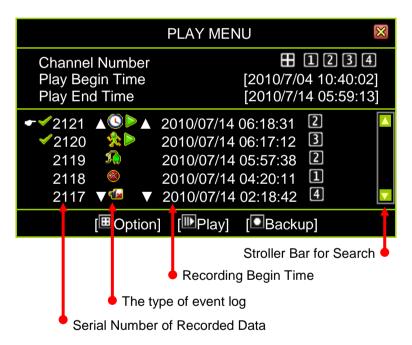
To click [**Option**] to switching the window as follows:



[**Play**]: Start playing the recorded data. After the data has been played, it will show "✓"

[Dackup]: To back-up the recorded data. Please refer to the "Backup" section

Commands and Recorded Data status:



- S/N of Recorded Data: Series Number of recorded data provide by system
- Recording Status:
  - 【】/ ☐: Shows the begin or end of recording data in the hard drive
  - Shows the recording mode
  - The data can be played (This icon doesn't show if no video recording is available.)

  - Power ON/OFF event occur.

- Recording Time: The date / time of recorded data
- Searching: The vertical scroll bar for search the recorded data by mouse

#### **Video Playback Control Bar**

You will see the control bar during video playback.

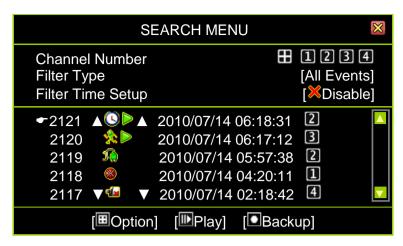


PIP View	Displays real-time video and playback video simultaneously in PIP (picture in picture) view.
4 Split View	Displays playback video in 4-split view.
■ Previous Segment	Plays back the recorded video by one hour
	Plays backward faster
Stop	Stops the video playback
Pause	Pauses the video playback
Play	Starts the video playback
Fast Forward	Plays forward faster
Next Segment	Plays forward the recorded video by one hour
Calendar Menu	Goes back to Calendar Menu
Play Menu	Goes back to Play Menu
Event Search	Goes to Search Menu
Play Bar	Shifts the bar to select the playback time from the recorded video data you would like to review.

# 4.3 Event Search

Press "♠" (or "♠") button or icon to enter Event Search Menu.

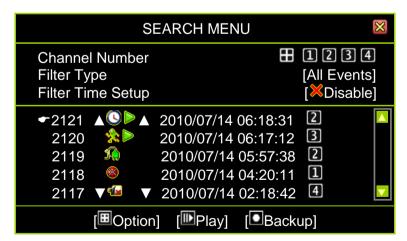




- Channel Number: Specifies the channels to search
- **Filter Type:** Filters events by type "General Event", "Record Event", "Hardware Event", "Warning Event", and "All Events"
- Filter Time Setup:



- Active Filter Time: Enables/disables filter time of event
- Filter Begin Time: Specifies the beginning time of event filter
- Filter End Time: Specifies the end time of event filter
- Time Reset Range: Resets the event search time period according to all effective events as recorded



[ Play]: Starts to play the event that has been selected

[DBackup]: Creates a backup file for the event that has been selected

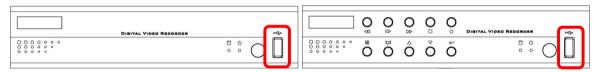
**[EOption]**: Switches the top frame of the Search Menu into an event content display. The display depends on the type of event being referenced.



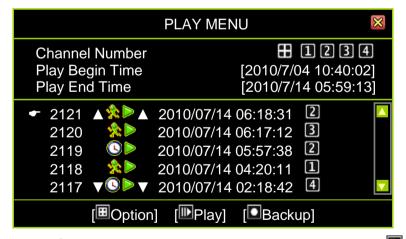
- Event Name: Shows the name of the selected event
- Trigger Channel: Shows the triggered channel
- Record End Time: Shows the recording end time

# 4.4 Data Backup

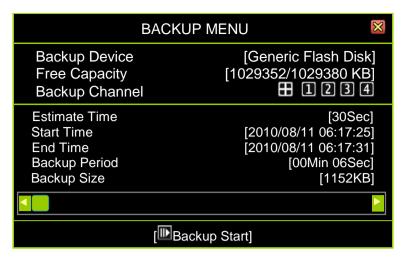
The DVR supports data backup by USB 2.0 device (Support the pen drive and card reader) on the front panel.



Press the "▶" (or "II▶") button to enter the "Play Menu".



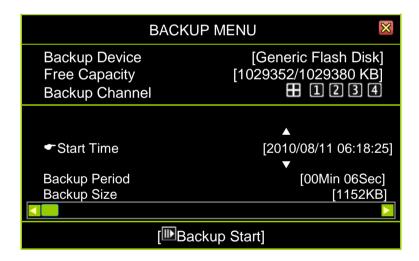
Use the " $\blacktriangle \lor (\uparrow / \lor)$ " buttons to select which data to backup. Press [ Backup Start] to enter the "Backup Menu".

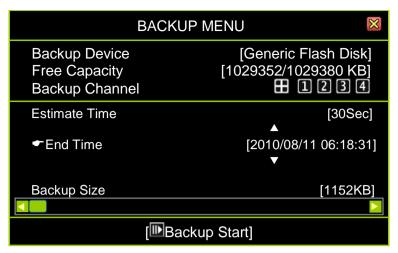


Disk information is shown on the top portion of the screen and recorded data information is shown in the bottom portion.

- Backup Device: shows the backup device where data will be stored for backup.
- Free Capacity: shows the amount of free space on the backup device.
- Backup channel: selects single or multi channels you would like to backup.

You can change the period of recorded data for backup by setting the "Start Time" and "End Time".





You can also use the scroll bar to adjust the length of the video you would like to store in a file as backup.



The "Start Time" and "End Time" of the selected video record data will be shown. The "Free Capacity", "Estimate Time", "Backup Period" and "Backup Size" change automatically when the start and end times are altered.

Press [ Backup Start]. It will start to backup data into USB 2.0 device.

#### NOTE

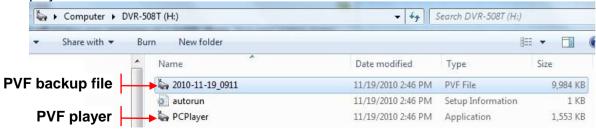
Each PVF file should not exceed 4GB. Carefully monitor the "Backup Size" as you set the Start Time and End Time.

A PVF video file (An example for the backup made above would look like: "12010-08-11\_1754.pvf.") and a PVF player will be stored into the USB device. You can review this video file using the **PC Player** or on the **PC Viewer** software.

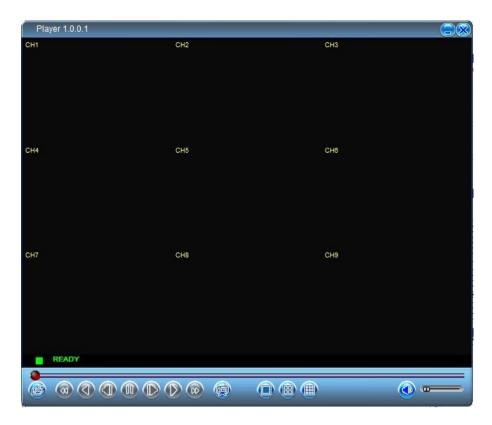
Please refer to the chapter on the <u>PC Viewer</u> for information about the said application.

# 4.5 PC Player

A **PC Player** is stored along with the PVF file when a backup is created and stored into a USB pen drive. In the example shown, the PVF file has an accompanying player.



The primary window for the player appears as follows:



The following table shows the function of each button:

Icon	Name	Function
	Open	Browse and open for a PVF file to view
	Fast Rewind	Plays backward 8 times or 16 times faster
	Play Reverse	Plays backward at the normal rate of motion
	Previous Frame	Plays back the recorded video by one frame (image)
	Pause	Pauses the video while it is being played back
	Next Frame	Plays forward the recorded video by one frame (image)
	Play	Plays the video in the normal rate of motion
(BD)	Fast Forward	Plays forward 8 times or 16 times faster
	Still Capture	Captures a still picture of the current frame and saves it.
	Split 1	Displays a single channel being played back. Use left mouse button to go through each channel.
	Split 4	Displays 4 channels being played back simultaneously
	Split 9	Displays 9 channels being played back simultaneously
	Mute On/Off	Removes/activates the sound from the player

The Scroll Bar allows you to navigate through the length of the video by simply dragging it across.

The Volume Control Bar allows you to control the volume of the sound coming from the player.

### **NOTE**

9-Split View is available only for DVRs with more than 8 channels.

Chapter 5

# System Information

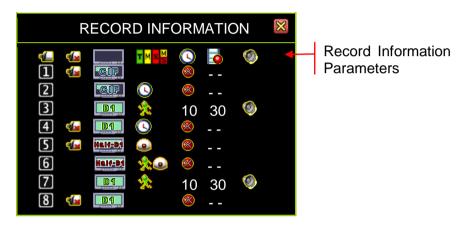
### 5.1 Record Information

The "Record Information" menu displays the current states of the DVR system.

On your Control Bar, locate and click on the aicon.



The Record Information will appear as follows:



#### **Record Information Parameters (topmost bar)**

: Channel Number

. Recording Resolution

: Recording Mode

id: Latest Recording Frame Rate

🤷 : Video Loss

**!** Recording Mode

: Buzzer Alarm

#### Possible corresponding values for the parameters

**12345678**: Channel Number

: CIF Recording Resolution

D1 Recording Resolution

: Motion Record Mode

10: Record Time Count Down

: Buzzer Alarm Mode

: Video Loss

Half D1 Recording Resolution

: Not Recording

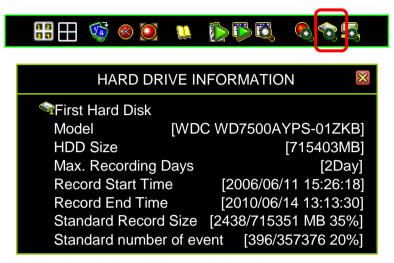
: Time Record Mode

30: Frame Rate in Use

#### 5.2 Hard Drive Information

The Hard Drive Setup menu displays the hard drive status.

On your Control Bar, locate and click on the icon.



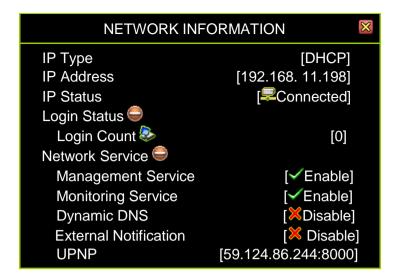
- **Model:** Displays the hard drive model number.
- HDD Size: Displays the hard drive size.
- Max. Recording Days: Displays the days of recording data will be retain in the hard drive.
- Record Start Time: Displays the day and time when the hard drive starts storing recorded data
- Record End Time: Displays the day and time of the last recording on the hard drive
- **Standard Record Size:** Displays the total hard drive capacity in megabyte (MB) and the ratio of using space.
- **Standard Number of event**: Displays the number of record events / total capacity of events and the ratio of using space.

# 5.3 Network Information

Displays the current state of network connection.

On your Control Bar, locate and click on the aicon.





#### **Network Information**

- » "IP Type" shows the network connection type.
- » "IP Address" shows the current IP address.
- "IP Status" shows the network is connected or not connected.
- » "Login Count" shows how many connections from remote site.
- » "Management Service" shows enable or disable the management service for allowing remote control from IE or PC Viewer
- » "Monitoring Service" shows enable or disable the management service for allowing remote viewing from IE or PC Viewer
- » "Dynamic DNS" shows enable or disable the Dynamic DNS service.
- "External Notification" shows if you have activated any external notification parameters.
- » "UPNP" displays the status of the UPNP on the DVR.

Chapter 6

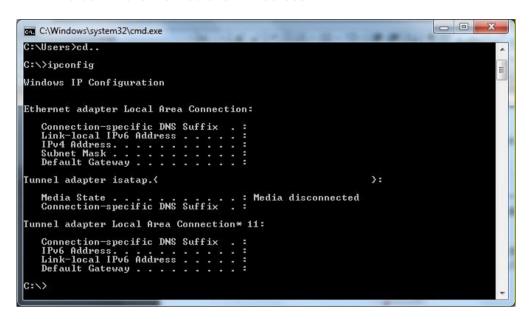
# Network Connectivity

# 6.1 PC Connection through LAN

The following is a general example that shows how to find the basic network information from the local area network (hub).

#### Step 1 Search Router IP Address

Enter "ipconfig" on DOS prompt and take note of the **Default Gateway** value. This is the Router's IP Address.



#### Step 2 Determine your DVR IP address

Generally the usable IP Address is from 192.168.11.2~192.168.11.253. The suggested IP Address available for assigned to other network devices is from 192.168.11.160 to 192.168.11.199.

#### Step 3 Find out the available IP address

Enter ping and the IP address you would like to test on the DOS prompt window.

When "Reply from *[IP address]*: bytes=32 time<10ms TTL=128" appears, as in the following illustration, that means this IP address is occupied by another network device.

If "Request timed out" appears, it means this IP address is not being used now and can be used for the DVR.

#### NOTE

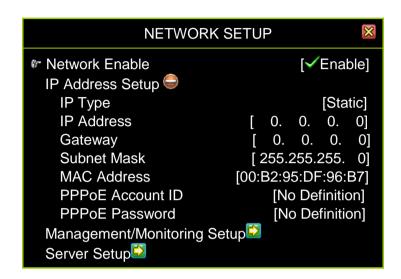
You must plan on the network structure if the MIS or Network Administrator manages the network.

You should consult with the MIS or Network Administrator for the IP address segment and port-forwarding rule for the DVR network setup.

#### Step 4 Setup DVR IP Address

When you find a usable IP address, go back to DVR **Network Setup** menu to enter IP address.

IP ADDRESS: Enter the DVR's address
 GATEWAY: Enter Router IP Address
 Subnet MASK: Typically, 255.255.255.0



# 6.2 DynDNS Service Overview

DynDNS is a service the maps internet domain names to IP address and works with dynamic IP address (assigned by ISP server).

NOTE

A router is needed as the interface between PC and DVR when DVR is under internal network environment.

# 6.2.1 Register with DynDNS

There are three suggested providers for DynDNS account:

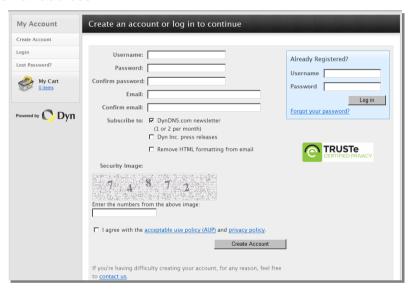
www.no-ip.com, www.changeip.com and www.dyndns.com

In the following example, we will use <a href="http://www.dyndns.com">http://www.dyndns.com</a> as the dynamic DNS provider.

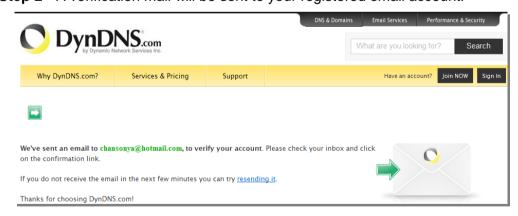


# 6.2.2 Create a DynDNS Account

**Step 1** Create a new account by filling out the spaces for Username, Password, and Email. Take note of your user name and password. Be sure to use a valid email address.



**Step 2** A verification mail will be sent to your registered email account.

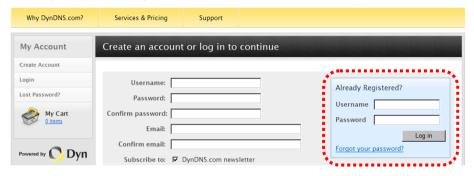


**Step 3** Verify your account within 48 hours of receiving the e-mail.

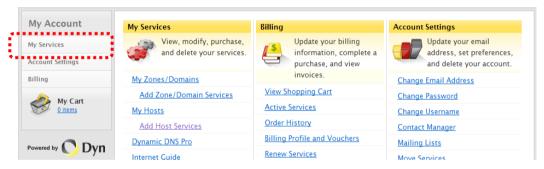


# 6.2.3 Login and Host Service

**Step 1** Log-in by entering the Username and Password of your account.



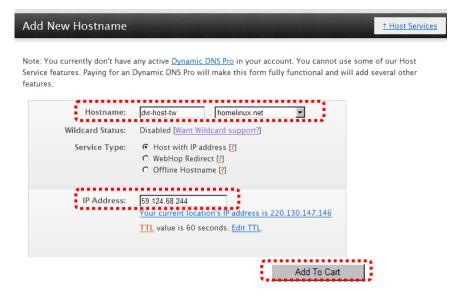
Step 2 Click on My Service to get a host name



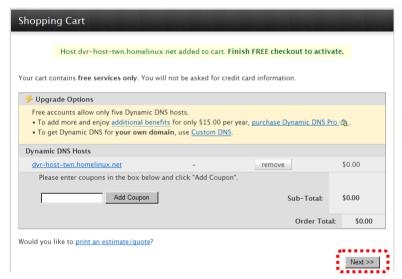
Step 3 Double click on Add New Hostname to create a new host address.



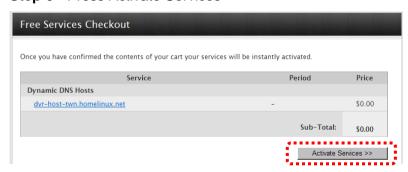
**Step 4** Specify the host name for the DVR. You will use this name later to configure the DynDNS settings on your DVR. Click on **Add to Cart**.



Step 5 Press Next to proceed.



Step 6 Press Activate Services



**Step 7** Now, the DYNDNS service is completed. Take note of the Username, Password and Hostname.



# 6.2.4 Setup Router

Most of the settings for the router are identical, here is the suggestion:

- Specify DYNDNS service provider: DnyDNS.org (dynamic)
- Specify DYNDNS IP by DYNDNS account (user name / password)
- Specify DVR IP as private IP setting
- Specify the streaming port. The default value is 8000.

# 6.2.5 Setup DynDNS Setting on DVR

After completing, the DynDNS account application, go to the DVR server setup menu and input the DynDNS information for network connection.





# **PC Viewer**

# 7.1 PC Viewer Operation

PC Viewer will help you review and play back the stored video data on the Windows platform computer.

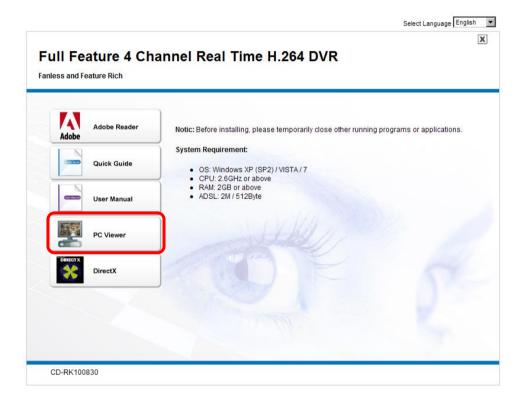
#### **NOTE**

The PC Viewer works best with a display resolution of above 800x600. Please set your PC monitor's resolution to a value higher than this.

#### 7.1.1 Installation

Please refer to the attached CD. Run "PC Viewer" to playback the DVR video data.

Windows OS platform requires that the application be run as the administrator user.



#### **NOTE**

It is suggested that you install the DirectX software. It provides a smoother display of the PC Viewer video on the computer.

#### 7.1.2 Overview

The PC Viewer supports remote viewing and control for a maximum 4 DVR connections.

Click on the PC desktop icon " PC Viewer" to execute the PC Viewer on the Windows-based computer. The primary window for application will appear as follows:



No.	Function		
1	Opens the DVR connection window		
2	Indicates the name of the DVR connections		
3	Selects the language for the PC Viewer		
4	Closes the PC Viewer application		

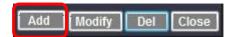
# 7.1.3 Connect PC Client to DVR

This section describes how to manage the DVR connection window.

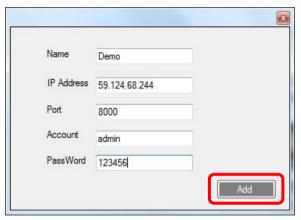
Step 1 Click the button to open the DVR connection window. From here, the user can **Add**, **Modify** or **Delete** a DVR connection.



Step 2 Press the "Add" button to create a DVR connection.



**Step 3** Type in the DVR name, DVR IP address, port number (Default port number is 8000), account name, and password.



**Step 4** Once you close the "Add" menu, the DVR list will show the new DVR connections.



Step 5 Tick on the box beside the DVR name. The check mark indicates that the DVR will be displayed on the PC Viewer. Click on the "Close" button to close

#### **NOTE**

To modify or delete a DVR from the list, click on the DVR name and allow for the blue highlight to appear. This highlight marks the DVR you have chosen to operate on.

# 7.1.4 Switching the Channel Displays

The PC Viewer can easily switch viewing between the digital recorders connected to it. As seen from the main screen, the display is divided into quadrants (four areas). Each quadrant is associated to one DVR.

This section briefly illustrates how to:

• switch display on the quadrant from multiple channels to a single channel

- switch display on the quadrant from a single channel to multiple channels
- switch display on the screen from multiple DVRs to one DVR
- switch display on the screen from one DVR to a single channel on that DVR

#### Display a single channel from one DVR on one quadrant

Double click on the channel you would like to display on the quadrant that it is in. The screen will appear as follows:



#### Display all channels from one DVR on one quadrant

Double click on the single channel on the quadrant to view multiple channels.

The screen will appear as follows:



#### Display all channels of one DVR connection in full view

Click on the DVR connection button on the right-hand side of the screen to display your selected DVR in full screen view.

The screen will appear as follows:



#### Display single channel from one DVR in full view

Double click the specific channel you would like to display in full view or click the "\bigcup" icon to switch the display.

The screen will appear as follows:



# 7.1.5 Pause Live Viewing

Click on the "III" icon to pause the current viewing.



# 7.1.6 Capture Still Image

Click on the icon to capture still image of the view that is currently displayed on the screen.

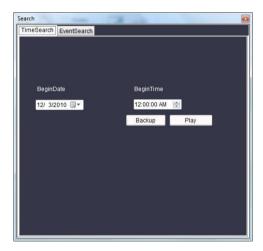


A BMP file is automatically saved into a specific location in your computer. A message similar to the following will indicate this:



# 7.1.7 Remote Playback

Click on the icon to display the remote playback interface on your PC Viewer. A selection window will allow you to select between **Time Search** or **Event Search**.





#### 7.1.7.1 Preview of the Control Bar

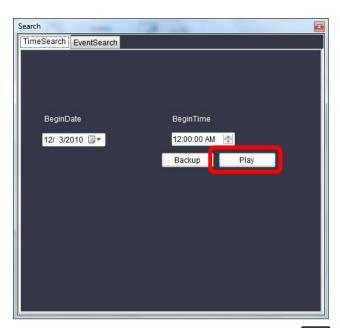


No.	Name	Function
1	Fast Backward 2x	Plays backward faster by twice the normal speed
2	Fast Backward 1x	Plays backward faster by 1x the normal speed
3	Playback	Starts the video playback
4	Fast Forward 1x	Plays forward faster by 1x the normal speed
5	Fast Forward 2x	Plays forward faster by twice the normal speed
6	Pause	Pauses the video playback
7	Stop	Stops the video playback
8	Time Bar	Adjust the playback time
9	Video Scroll Bar	Pans through a video as the button is moved
10	Volume	Volume switch

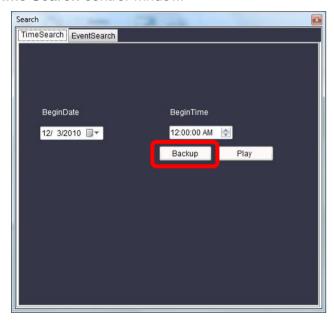
# 7.1.7.2 Playback by Time Search

**Time Search** allows you to select the start time of the recording you would like to review in playback.

**Step 1** Select the "Begin Date" and "Begin Time". Press the button "Play" to start video playback.



Step 2 While reviewing the video, you can click on the button to go back to the Time Search control window.

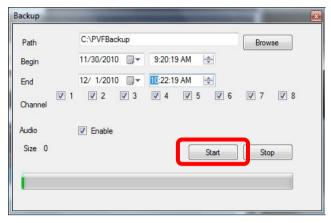


**Step 3** Press the "Backup" button to create a copy of the video. The succeeding menu will require you to set the following:

- Path: Click on the "Browse" button to specify the location where you would like to store the file.
- **Begin**: Select the start date and time for the video you would like to create a copy of.
- **End**: Select the end date and time for the video you would like to create a copy of.
- **Channel**: Select the channel or channels from which the backup video or videos will be taken from.
- Audio: Enables the inclusion of audio into the backup

• **Size**: The file size automatically adjusts according to the duration (start and end time) set by the user.

**Step 4** Press "Start" to begin the backup process.



#### 7.1.7.3 Playback by Event Search

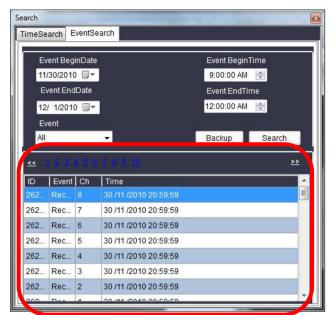
Event Search allows you to specify a time

**Step 1** In the **Event Search** menu, you will be asked to set the following:

- Event Begin Date: Select the start date for the video you would like to play back.
- Event Begin Time: Select the start time for the video you would like to play back.
- **Event End Date**: Select the end date for the video you would like to play back.
- **Event End Time**: Select the start time for the video you would like to play back.
- **Event**: Select the type of event you are searching for. The drop-down lists: Hardware, Normal, Warning, Record, All

**Step 2** Press the button "Search" to start video playback.



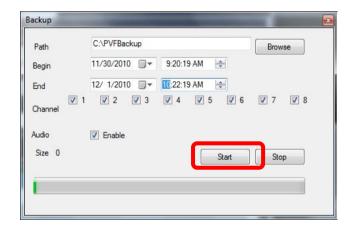


**Step 3** You will see the search result table similar to the following figure:

- **Step 4** Double-click on the video you would like to review. While in the playback screen, you may click on the icon to access the **Event Search** control window.
- **Step 5** Press the "Backup" button to create a copy of the video. The succeeding menu will require you to set the following:
  - Path: Click on the "Browse" button to specify the location where you would like to store the file.
  - **Begin**: Select the start date and time for the video you would like to create a copy of.
  - **End**: Select the end date and time for the video you would like to create a copy of.
  - **Channel**: Select the channel or channels from which the backup video or videos will be taken from.
  - Audio: Enables the inclusion of audio into the backup
  - **Size**: The file size automatically adjusts according to the duration (start and end time) set by the user.

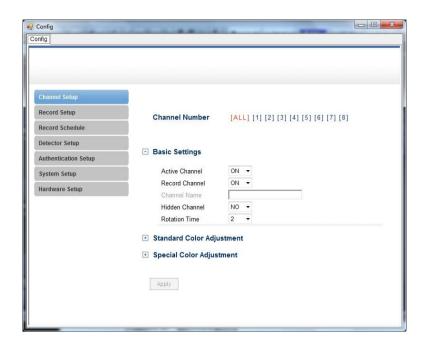


**Step 6** Press "Start" to begin the backup process.



# 7.1.8 Remote DVR Configuration

Click the icon to display the remote configuration interface on your PC Viewer.



#### Log-in to the Remote Configuration Interface

The authentication procedure for remote site access follows the DVR authentication process. Please login by using the designated user name and password. If you did not change any of these settings on your DVR, please use the default settings below.

Default User: admin Default Password: 123456

You can change the DVR configuration after successfully logging in.

The operation method of the remote configuration interface is consistent with the DVR interface. Please refer to the DVR operation sections on this manual.

# 7.1.9 PC Viewer Player

The PC Viewer can play stored PVF files with its built-in player.

Plug the USB device into USB port or transfer the file to a local disk on your personal computer from the USB storage. Click on the "Player" tab on the PC Viewer interface.

The PC Viewer can play stored PVF files with its built-in player.

Plug the USB device into USB port or transfer the file to a local disk on your personal computer from the USB storage. Click on the "Player" tab on the PC Viewer interface.



Click on "PlayFile" to locate the file you would like to view. Once the file is found, the PC Viewer Player will automatically display the stored video.



# **Remote Viewers**

The DVR may be accessed through various mobile applications. These mobile applications are discussed in this chapter. Briefly, these are the:

- DVR Viewer, an IE-based (Internet Explorer) application that allows for viewing, playback, and configuration over a wide area network
- SecuViewer, an application specifically for Apple<sup>®</sup> mobile digital devices.
- Mobile Web Viewer, an application for devices with a Symbian<sup>™</sup>, Android<sup>™</sup>, BlackBerry<sup>™</sup> or Mac<sup>™</sup> operating system.

#### 8.1 DVR Viewer

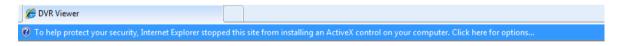
This section introduces the remote viewing and control through DVR Viewer. This function is supported only in the IE browser. You may encounter abnormal operations if you use other browsers.

Install the Active-X directly from the webpage (For initial installation). Refer to the following example to use the DVR Viewer:

**Step 1** Start up Internet Explorer and enter the DVR IP address to IE address bar. (Please refer to DVR Network Information of DVR IP Address.)



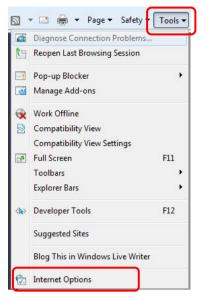
**Step 2** An alert message occurring "Install ActiveX control" on the tool bar. (Please refer directly to step 9 if ActiveX has already been installed)



**Step 3** Click on this alert message and select "Install ActiveX Control".



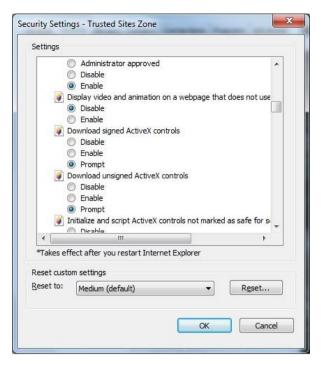
- **Step 4** If the message "Your security Settings do not allow web sites to use ActiveX controls installed on your computer." pops up when logging in, please follow following instruction.
- **Step 5** Select the IE browser "Tools" on the tool bar and select "Internet Options"



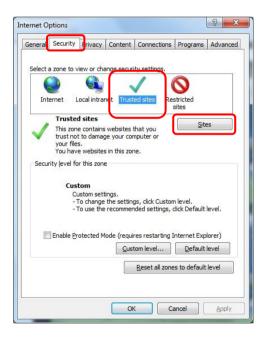
**Step 6** Select "Security" → "Custom level..."



Step 7 In the said menu, ActiveX controls are changed to a more relaxed setting. For instance, "Download signed ActiveX controls" and "Download unsigned ActiveX controls" are changed from "Disable" to "Prompt".

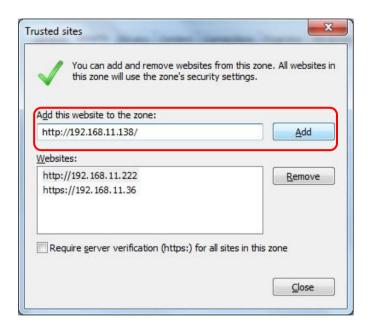


**Step 8** Return to the top "Security" menu. Select "Trusted Sites" → "Sites"



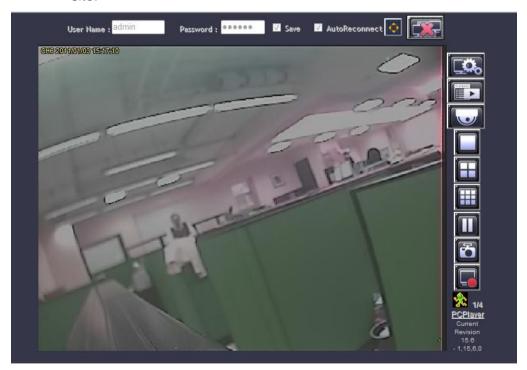
**Step 9** Enter the DVR address into the blanks shown in picture, and click "Add." (This address is only for demonstration. Please use the IP address linked to your on-site DVR.)

The newly added website will appear at the trusted web sites list. Press Close to leave the menu.



**Step 10** Go back to the internet browser (IE) window. Press the "Refresh" button or F5. You will enter the DVR Viewer login page.

Enter the designated user name and password. (Enter the default user name "admin" and password "123456" if you did not change the DVR Authentication settings.) Then press the "\*\* icon to connect to the DVR from the remote site.



# 8.1.1 Switching the Channel Displays

#### Display single channel in full view:

Double click the channel to display single channel in full view.

#### Display four channels in full view:

Double click the full view display to switch into four or eight channels display. This depends on the number of channels supported by your DVR.

NOTE

Multiple channel viewing depends on the number of channels available on the DVR.

### 8.1.2 DVR Viewer Operation

The top area of the DVR Viewer:

- A allows the user to enter the user name and password to access the DVR
- **B** allows the user to "Save" and to automatically reconnect to the current connection
- C provides the option to view the DVR channels in normal or full screen
- D provides a means to connect or disconnect from the DVR being viewed



The DVR Viewer interface on the right-hand side is consistent with PC Viewer. Please refer to the <u>PC Viewer</u> operation guide.

# 8.2 SecuViewer

**SecuViewer** is the free application available for the DVR user to connect to the DVR for remote monitoring through an Apple<sup>®</sup> mobile digital device (i.e. iPhone<sup>®</sup> or iPad<sup>®</sup>).

#### 8.2.1 Install SecuViewer

Follow these steps to install **SecuViewer** into your Apple<sup>®</sup> mobile digital device.

#### NOTE

It is advisable for you to update your device firmware before installing **SecuViewer**. This mitigates the possibility of incompatibility errors.



Search for the SecuViewer app on iPhone App Store  $^{TM}$ .



Enter "SecuViewer" to look for the SecuViewer app on the search page.



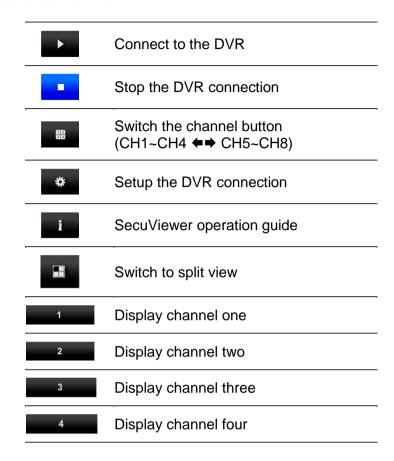
Tap on the icon **Free**. It will change to the icon **Install**. Tap on the **Install** icon to install SecuViewer.



You can see the SecuViewer icon on the iPhone main screen.

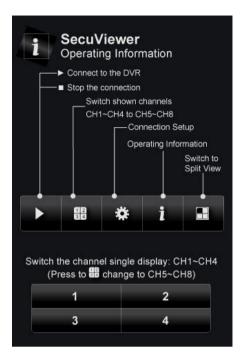
### 8.2.2 SecuViewer Interface Overview





# 8.2.3 Quick Operation Guide

The button opens into an operation information screen similar to the one shown here



# 8.2.4 Connect to the DVR



Select the SecuViewer icon on iPhone main screen to start the remote monitoring.



Select the "Setup" icon to setup the DVR connection.



Please setup all information to connect to the DVR:

- » Network IP Address: Enter the DVR IP Address. (Value shown here is only an example.)
- » Network Port: Enter the network port (default is 8000).
- » User Name: Enter the user name (default is admin).
- » Password: Enter the password (default is 123456).

When you are done with the setup, tap on "Ok".



Tap on the "Play" icon to connect to the DVR.

SecuViewer can display only one channel on the iPhone screen at a time. The default viewing channel is channel one. Tap on the corresponding channel numbers to view the other channels.

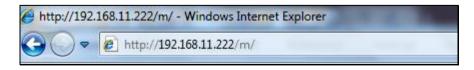
# 8.3 Mobile Web Viewer

H.264 DVRs support viewing through via a 3G or WiFi connection. This section illustrates the steps for accessing the DVR using mobile device with a  $Symbian^{TM}$ ,  $Android^{TM}$ ,  $BlackBerry^{TM}$  or  $Mac^{TM}$  operating system.

**Step 1** Follow the instructions for installing the DVR. Assign an IP address for the DVR.

Open the web browser (i.e. Internet Explorer). Type in the IP address or hostname of the DVR followed by an "m" and a "/". It would look like the following examples:

Example 1: The DVR's IP address is 192.168.11.222.



*Example 2*: The DVR's DDNS address is pana.dvrdns.org and its remote monitoring port is 8000.



**Step 2** A window requiring account information (i.e. user name and password) will appear. Enter the authorized ID and password. Press the "Login" button.

If the DVR does not require authorization, leave the fields blank and press the "Login" button.



- **Step 3** The first channel (CH1) of the DVR will appear on the screen of the mobile device. Select the channel to be viewed, the desired resolution, and the refresh time from the drop-down menus.
  - Channel Number: CH1~CH4 (4Ch DVR), CH1-CH8 (8Ch DVR), CH1~CH16 (16Ch DVR)
  - Resolution: QCIF (Quarter CIF), CIF, or H/D1 (Half D1). The default setting is CIF.
  - Refresh Time: 1sec, 2sec, 5sec, 10sec, or 30sec

