

9 Channels Linux-Based Standalone Network Video Recorder

NVR609LX

User's Manual

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Firmware Version: V1.0.25

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1. Introduction

Key Feature

- H.264 decompression format support.
- Real-time Display and Playback.
- Support 1080P (1920x1080) Camera for each channel.
- Audio Streaming/ Audio recording.
- Graphic User Interface.
- Support time-point backup function under network remote control mode. User can select any time period to process backup from remote side.
- Support time-search and event-search function under network remote control mode.
- Up to four online clients for independent remote control; individual live-time, play-back and time-search function available.
- Support Static/ DHCP IP and PPPoE, DDNS.
- Powerful mobile surveillance function, support JAVA, Blackberry, iPhone and Windows mobile.
- Support log function.

2. Product Specifications

Video	
Mode	Multiplex
Record & Display Channel	Max. 9 CH
Support IP Camera Compression Mode	H.264, MJPEG
Support IP Camera Resolution	Up to 1920 x 1080
Record & Display Frame Rate	Up to 30FPS @ NTSC per channel
Split Screen	1, 4, 9
Video Output	Switchable: VGA output (D-Sub connector) / HDMI output
Audio	
Audio Input	1 Microphone in (3.5mm phone jack)
Audio Output	1 Earphone out (3.5mm phone jack)
Audio Streaming	Real-time audio

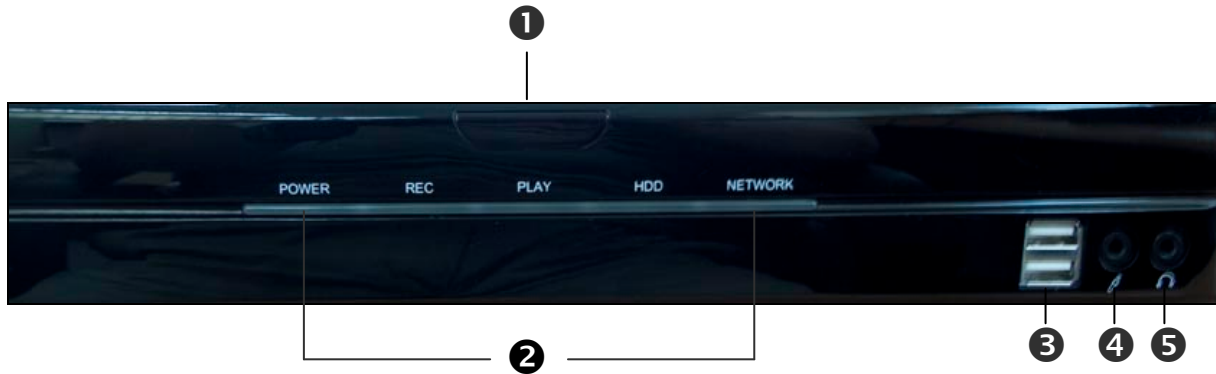
Audio Recording	Yes
Recording	
Recording Format	H.264
Recording Video Resolution	Depends on the streaming from IP camera, up to 1920x1080
Recording Frame Rate	Depends on the streaming from IP camera, up to 30FPS @ NTSC per channel
Recording Mode	Manual / Schedule / Event
Playback and Search	
Playback Speed	Fast Forward: X2, X4, X8, X16, X32, X64 Fast Rewind: X8 Frame by Frame Playback Pause
Time Search	Yes
Event Search	Yes
OSD and Control Interface	
On Screen Display and Setup	Graphic User Interface on locally display
Mouse Control	Yes
IR Remote Controller	Yes
Web Interface	Remote access via IE browser, up to 4 clients simultaneously
Storage and Backup Device	
Internal HDD	SATA HDD x 2, for recording
External USB Device	USB Stick/HDD/ Burner, for backup
Network	
Ethernet	100/1000 Base-T
Network Protocol	HTTP, TCP/IP, RTP/RTSP, 3GPP, SMTP, FTP, PPPoE, DHCP (Server & Client), DDNS, NTP, UPnP
E-Mail	Yes
FTP	Yes
Alarm System	
Alarm Input	8
Relay Output	2 (N.O & N.C)
Motion Detection	Yes
Video Loss Detection	Yes
Alarm Recording	Yes
Pre-alarm Recording	Yes
Buzzer Warning	Yes
Other Functions	

PTZ Control	Yes
Digital Zoom	Yes
Privacy Mask	Yes
Password Protection	Yes
Firmware Upgrade	Upgraded from USB, or from remote IE browser
Web browsing requirement	
OS	Windows 2000, XP, Vista, Windows 7
Web Browser	Microsoft IE V7.0 (32-bit) or above
Suggested Hardware	Intel Core 2 Duo 1.66GHz, RAM: 1GB Graphic card: 128MB onboard RAM

* Specifications are subject to change without notice

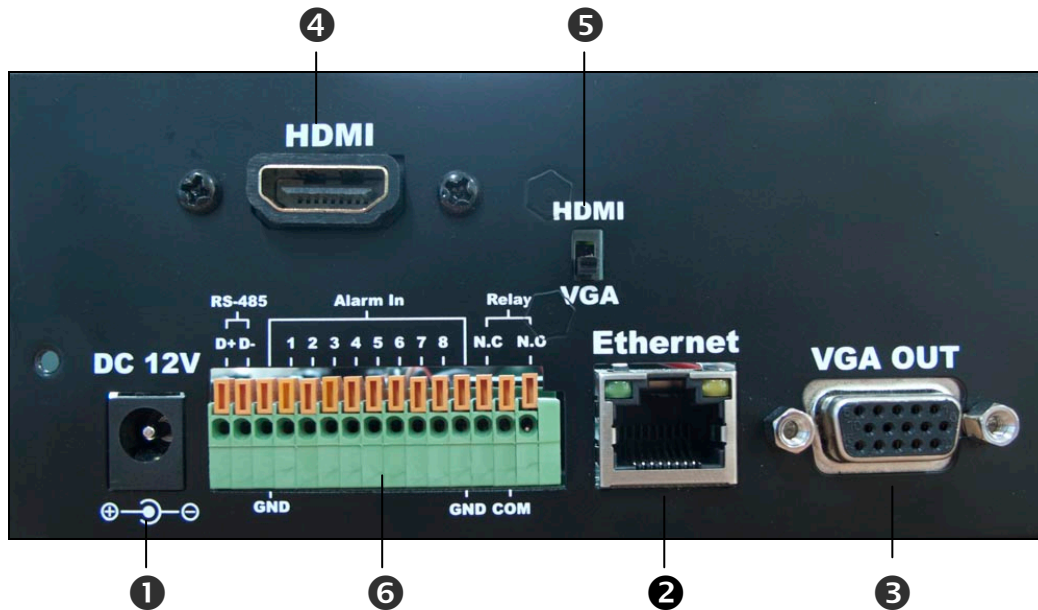
3. Hardware Overview

Front Panel



❶ IR Sensor:	To receive the control signal from IR remote controller.
❷ LEDs:	Status indicator of Power, Record, Play, Hard disk and Network.
❸ USB Ports:	To connect mouse or USB device.
❹ MIC In:	The 3.5mm phone jack allows connect to a passive-type of microphone, the voice will be transferred to the IP camera.
❺ Audio Out:	The 3.5mm phone jack allows connect to earphone or an amplified speaker, you can hear the voice of the NVR.

Rear Panel



① Power Connector:	To connect the included power adapter.
② Network Connector:	RJ-45 connector, Gigabit Ethernet port.
③ VGA Output:	Connect to LCD monitor for locally display (D-Sub connector).
④ HDMI Output:	Connect to LCD monitor for locally display (HDMI connector).
⑤ HDMI/VGA Switch:	The switch to determine which display port (HDMI or VGA) to output the image.
⑥ Terminal Block:	The terminal block provides the following functionalities: <ul style="list-style-type: none"> ● 8 Sets of Digital Input ● 2 Sets of Relay Output ● RS-485

I/O Connections

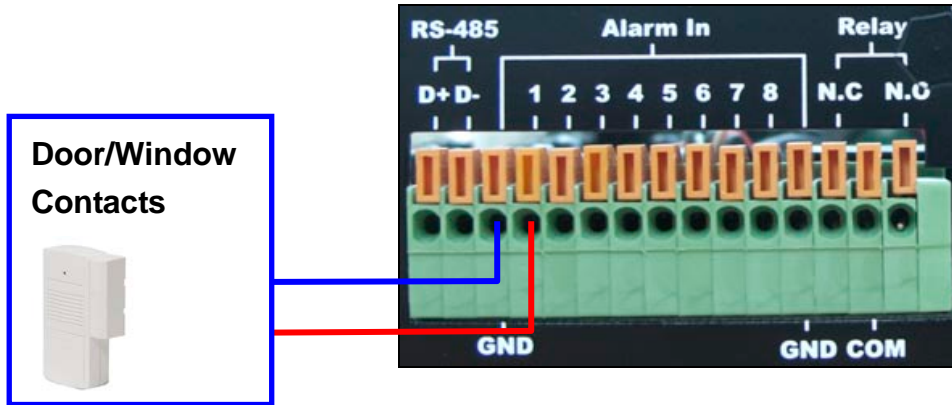
I/O terminal connector:

- 8 sets of Digital Input (Alarm In + GND) – The digital inputs for connecting devices that can toggle between an open and closed circuit, such as PIRs, door/window contacts, glass break detectors, etc. When a signal is received the status changes and the input becomes active.
- 2 sets of Relay Output (N.O. + COM or N.C. + COM) –The output to Relay switch of the alarm device such as LEDs, Sirens, etc.

Digital Input (Alarm Input)

GND (Ground): Initial status is LOW.

Alarm: Max. 50mA, 12VDC.

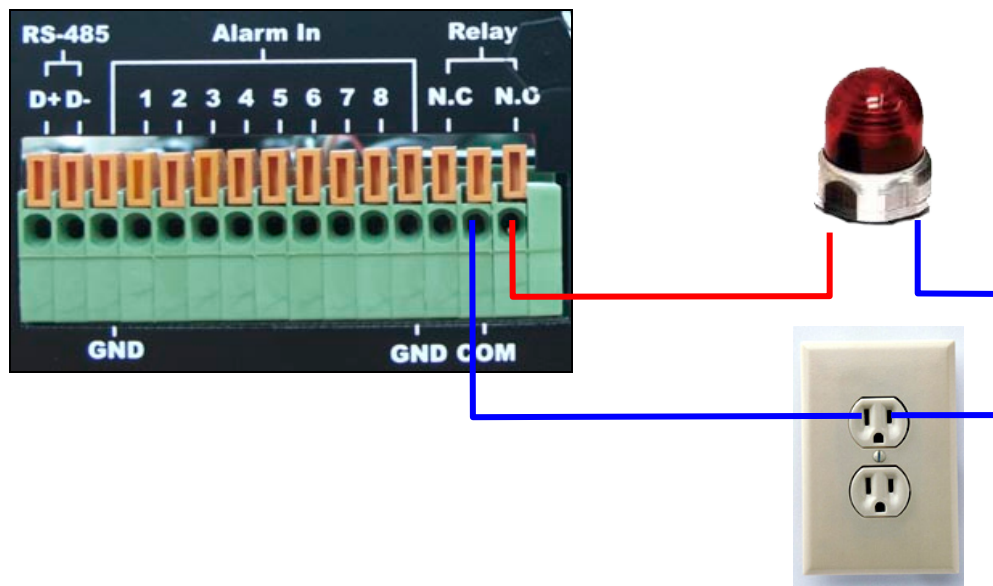


Relay output

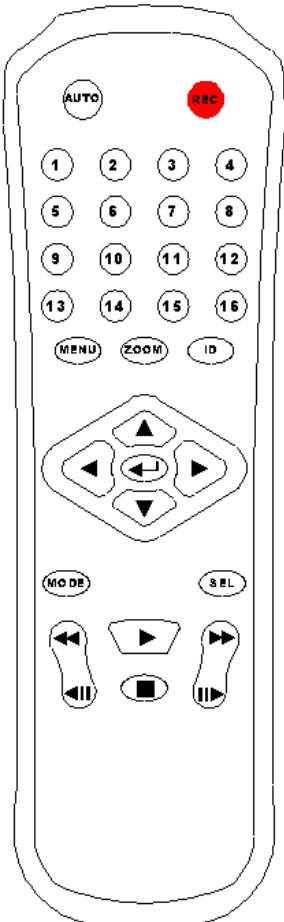
COM: Common pin.

N.O. (Normally Open): Max. 1A / 24VDC or 0.5A / 125VAC.

N.C. (Normally Close): Max. 1A / 24VDC or 0.5A / 125VAC.

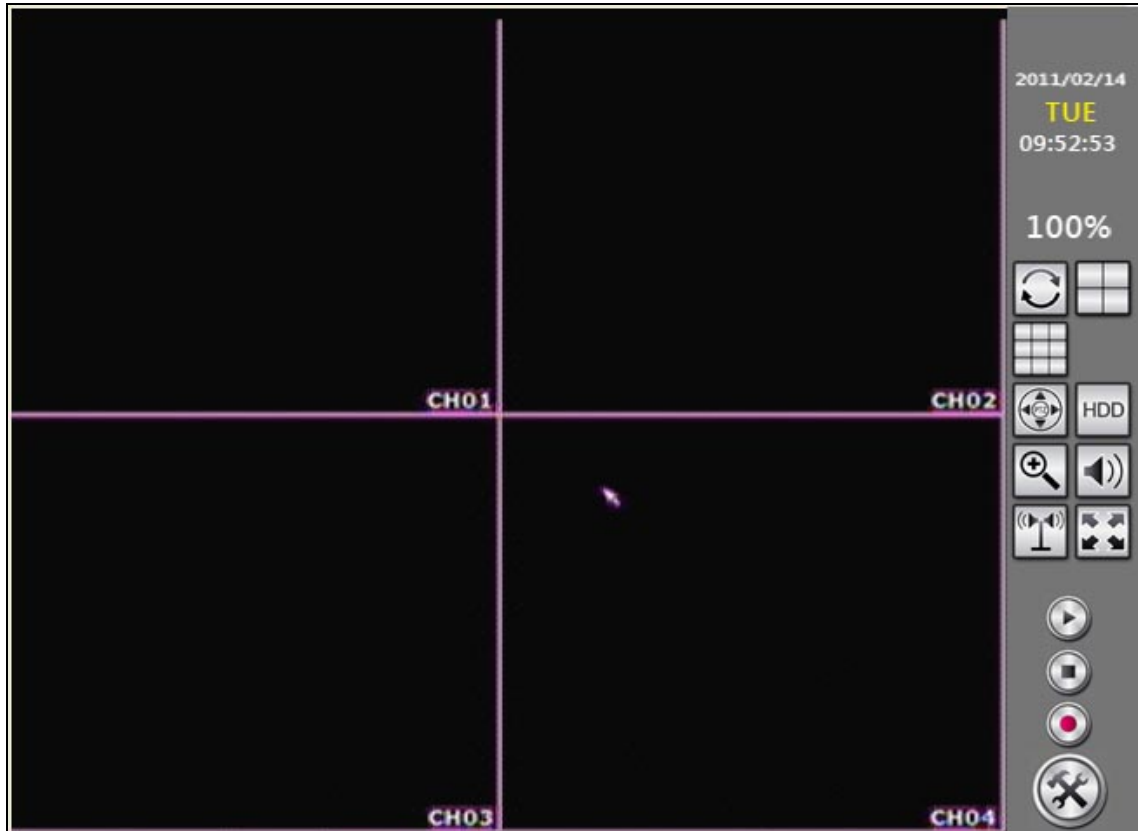








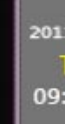
IR Remote Controller















	AUTO	Press this button to perform “Auto Switch” function, the channel will be displayed sequentially.
	REC	Press this button to start recording and press again to stop.
	1 ~ 9	Select channel 1 ~ 9 with full screen.
	MENU	Enter or exit the Main Menu.
	▲	Move upward to select the icon, or increase the number of setting.
	▶	Move rightward to select the icon, or increase the number of setting.
	▼	Move downward to select the icon, or decrease the number of setting.
	◀	Move leftward to select the icon, or decrease the number of setting.
	↵	Enter selected items.
	MODE	Press this button to change the split-screen mode.
	SEL	Press this button to perform PTZ functions.
	⏮	Fast rewind playback.
	⏪	Picture by picture backward playback.
	⏩	Picture by picture forward playback.
	⏭	Fast forward playback.
	▶	Play back recorded video.
	■	Stop the playback.

4. Local Operation

Live-View



View Single Channel	Click on the video of channel to view the single channel. Click again will back to multiple-split screen.
Turn On/Off Audio	There is an icon on the video indicates "Audio is ON" -  , or "Audio is OFF" -  . Click on this icon to turn on/off the audio of channel.
Chatting to Channel	There is an icon on the video indicates "Chatting is ON" -  , or "Chatting is OFF" -  . Click on this icon to turn on/off the chatting function of channel.
	Click this button to perform "Auto Switch" function, the channel will be displayed sequentially. Click again to stop.
	Click this button to display channels with 4-split screen.
	Click this button to display channels with 9-split screen.

	<p>Click the button to pop-up the PTZ control panel. Click this button again to disable this function.</p> <p>Note: This function is only available for the PTZ camera or video server.</p>
	<p>Click this button to display the information of hard disk drive.</p>
	<p>In single channel mode, click this button and then use mouse to draw a range to zoom-in or zoom-out the video. Click this button again to disable this function.</p>
	<p>Click this button to turn the audio on or off, and adjust the volume level. The icon on the video indicates “Audio is ON” - , or “Audio is OFF” - .</p>
	<p>Click this button to turn on or off the audio broadcast. You can talk to all channels when this function is ON. The icon on the video indicates “Audio broadcast is ON” - , or “Audio broadcast is OFF” - .</p>
	<p>Click this button to display in full screen mode. Click on screen again will back to normal mode.</p>
	<p>Click this button to enter the Playback Setup menu.</p>
	<p>Click this button to stop the manual recording.</p>
	<p>Click this button to start the manual recording.</p>
	<p>Click this button to enter the Setup menu.</p>

Configuration

In Live-view mode, click  button to enter the Setup menu.

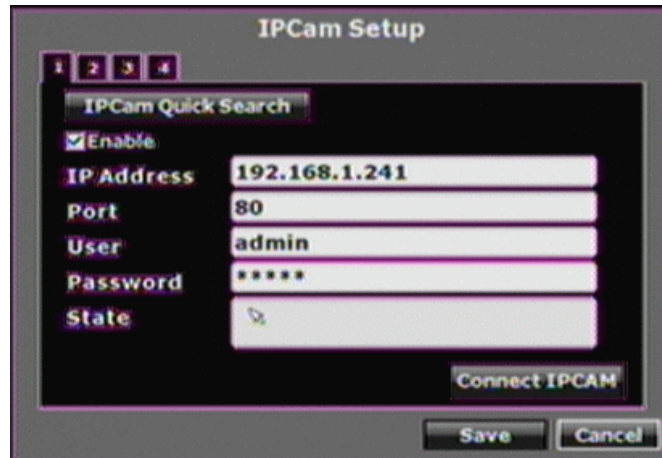


Camera Setup

CAMERA



IPCam Setup



1~9: Click and select the channel to setup.

Enable: Click the checkbox to decide performing the connection or not.

IP Address: Use the virtual keypad to input the IP address of the IP camera or video server.

Port: Use the virtual keypad to input the HTTP port number of the IP camera or video server.

User: Use the virtual keypad to input the administrator's login user name of the IP camera or video server.

Password: Use the virtual keypad to input the administrator's login password of the IP camera or video server.

State: After click **[Connect IPCAM]** button, the connection status of the IP camera or video server will reveal among this column.

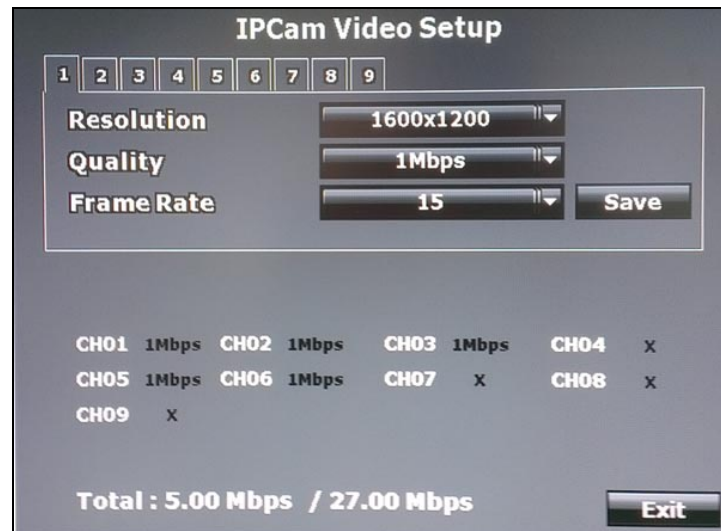
[Connect IPCAM] button: After input the above information, click this button to connect to the IP camera or video server.

[IPCam Quick Search]: Click this button to perform the "Search IP camera" function.



Click [**Search Device**] button, NVR will search the IP camera or video server which IP address is setup as the same domain as NVR's IP address. Moreover, click the found device from the list can import the device information to the channel automatically without any manual key-in step.

IPCam Video Setup



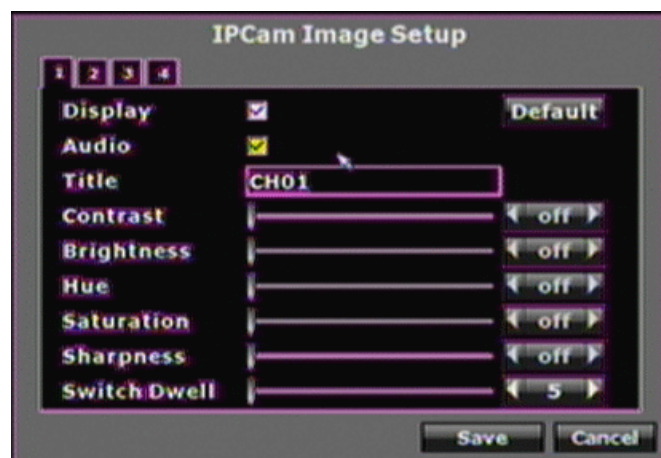
1~9: Click and select the channel to setup.

Resolution: Click pull-down list to change the resolution of connecting device.

Quality: Click pull-down list to change the image quality of connecting device.

Frame Rate: Click pull-down list to change the frame rate of connecting device.

IPCam Image Setup



1~9: Click and select the channel to setup.

Display: Enable or disable the camera display on the screen or not.

Title: Setup the title of connecting device.

Contrast: Click ◀ or ▶ to change the Contrast level.

Brightness: Click ◀ or ▶ to change the Brightness level.

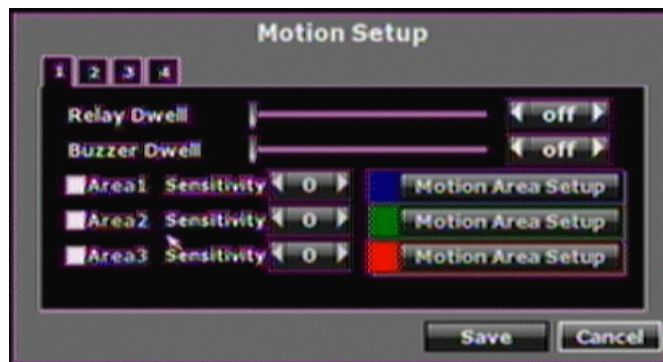
Hue: Click ◀ or ▶ to change the Hue level.

Saturation: Click ◀ or ▶ to change the Saturation level.

Sharpness: Click ◀ or ▶ to change the Sharpness level.

Switch Dwell: Click ◀ or ▶ to change the time (in second) while performing “Auto Switch” function.

Motion Setup



1~9: Click and select the channel to setup.

Relay Dwell: Click ◀ or ▶ to change the relay time or disable relay function.

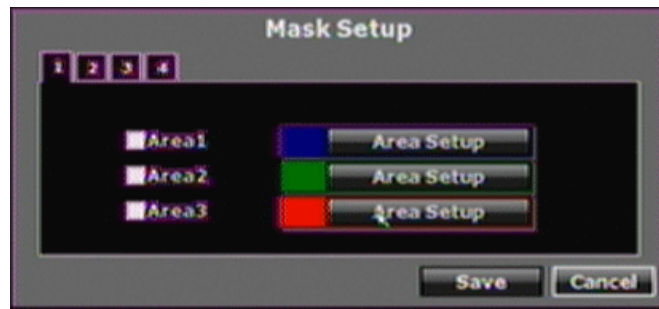
Buzzer Dwell: Click ◀ or ▶ to change the buzzer time or disable buzzer function.

Area1 Sensitivity: Click the checkbox to enable or disable the detection of this area. Click ◀ or ▶ to change the sensitivity of detection. Click **[Motion Area Setup]** to draw the area for detect, the motion area is drawn in blue.

Area2 Sensitivity: Click the checkbox to enable or disable the detection of this area. Click ◀ or ▶ to change the sensitivity of detection. Click **[Motion Area Setup]** to draw the area for detect, the motion area is drawn in green.

Area3 Sensitivity: Click the checkbox to enable or disable the detection of this area. Click ◀ or ▶ to change the sensitivity of detection. Click **[Motion Area Setup]** to draw the area for detect, the motion area is drawn in red.

Mask Setup



1~9: Click and select the channel to setup.

Area1: Click the checkbox to enable or disable the mask area. Click [**Area Setup**] to draw the area for mask, the mask area is drawn in blue.

Area2: Click the checkbox to enable or disable the mask area. Click [**Area Setup**] to draw the area for mask, the mask area is drawn in green.

Area3: Click the checkbox to enable or disable the mask area. Click [**Area Setup**] to draw the area for mask, the mask area is drawn in red.

IPCam Audio Setup

Enable or disable the audio function of each channel.

Record Setup

RECORD



Pre-Alarm Record Time: Click ◀ or ▶ to change the recording time of pre-alarm. The available value is from 0~30 seconds.

Post-Alarm Record Time: Click ◀ or ▶ to change the recording time of post-alarm. The available value is from 5~99 seconds.

Record Mode: Click pull-down list to change the recording mode. There are 3 modes: Manual, Schedule and Alarm trigger.

Alarm Setup

ALARM



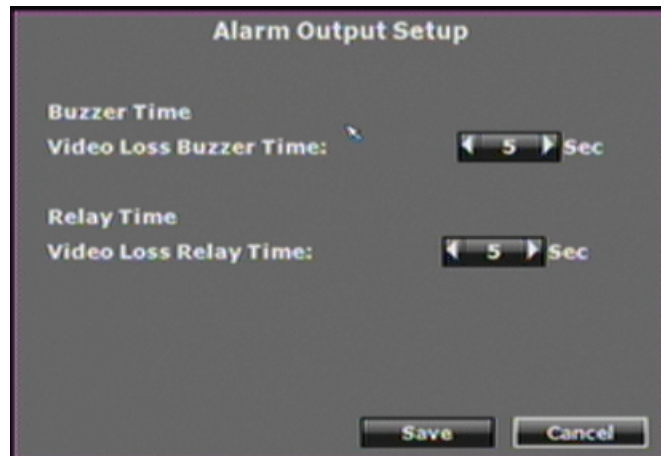
Alarm Trigger Setup



Alarm Auto Switch: Click the pull-down list to change the display mode when an alarm is triggered. When the alarm is triggered, the screen will switch to full screen, split screen or disable.

Video Loss Detection: Click the pull-down list to enable or disable the “Video Loss” as an alarm. When the video loss is detected, the alarm will trigger.

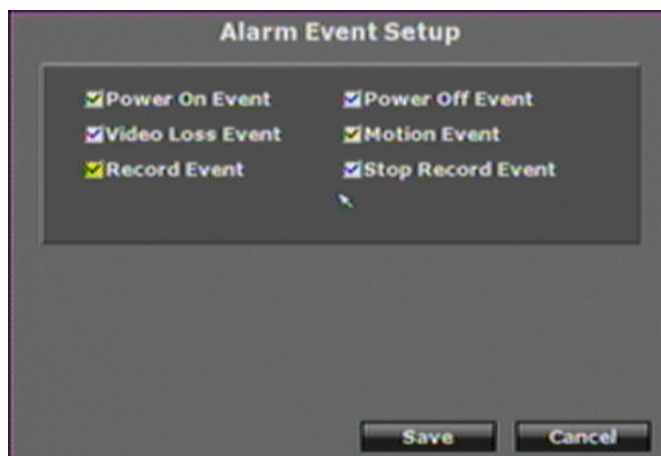
Alarm Output Setup



Video Loss Buzzer Time: Click ◀ or ▶ to change the buzzer time when video loss is detected. The available value is from 5~99 seconds.

Video Loss Relay Time: Click ◀ or ▶ to change the relay time when video loss is detected. The available value is from 5~99 seconds.

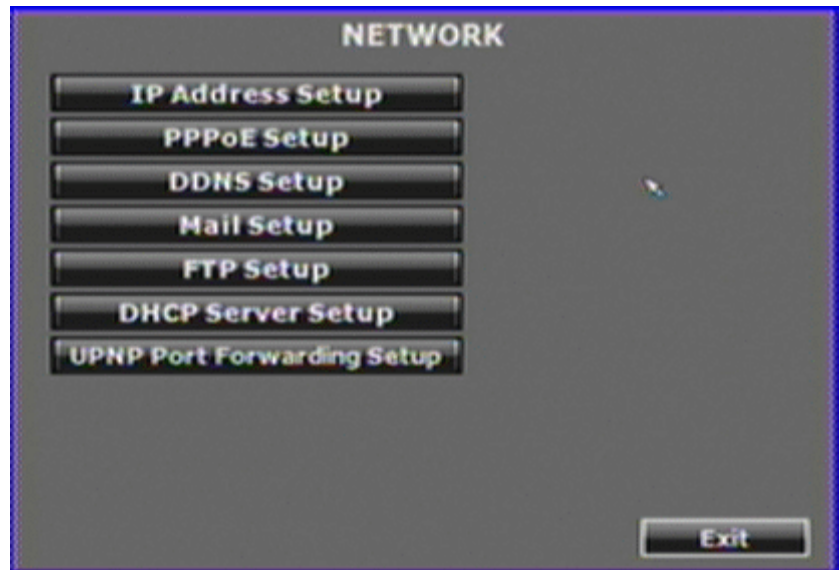
Alarm Event Setup



There are six sort of events can be selected. When the selected items are happened and triggered, the alarm will be activated.

Network Setup

NETWORK



IP Address Setup

IP Address Setup	
IP Mode	StaticIP
IP Address	192.168.1.220
NetMask	255.255.255.0
Gateway	192.168.1.254
DNS1	168.95.1.1
DNS2	168.95.192.1
WebPage Port	80

IP Mode: Click the pull-down list to change the IP mode to Static IP or DHCP.

IP Address: Use the virtual keypad to input the IP address of NVR.

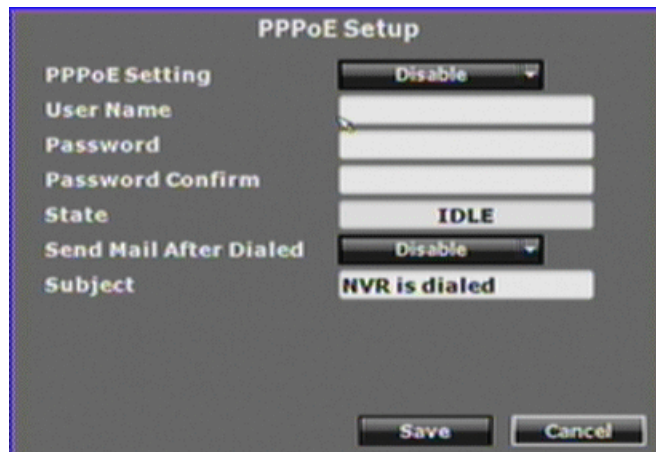
NetMask: Use the virtual keypad to input the subnet mask of the network.

Gateway: Use the virtual keypad to input the IP address of default gateway.

DNS1/ DNS2: Use the virtual keypad to input the IP address of DNS (Domain Name Server).

WebPage Port: Use the virtual keypad to input the HTTP port of NVR.

PPPoE Setup



PPPoE Setting: Click the pull-down list to enable or disable the PPPoE connection.

User Name: Use the virtual keypad to input the user name (ADSL account) which provided from local ISP.

Password: Use the virtual keypad to input the ADSL password which provided from local ISP.

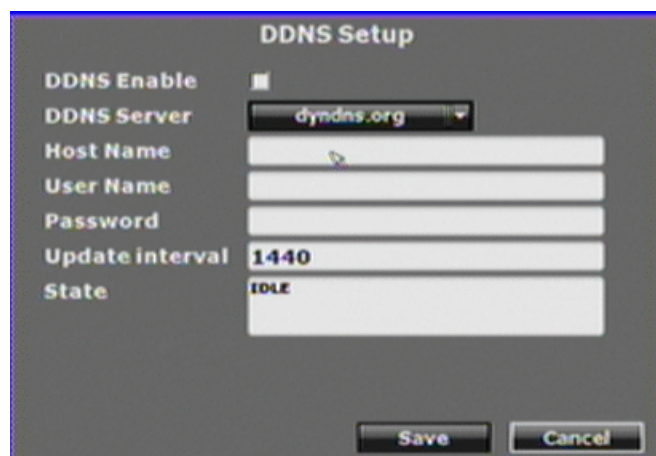
Password Confirm: Use the virtual keypad to input the password again to confirm.

State: Present the current status of PPPoE connection.

Send Mail After Dialed: Click the pull-down list to enable or disable this function. This device will send a mail with the Subject to a specific mail account when dialed successfully.

Subject: Use the virtual keypad to input the subject of the Email will be sent.

DDNS Setup



DDNS Enable: Click the checkbox to enable or disable the DDNS function.

DDNS Server: Click the pull-down list to select DDNS provider.

Host Name: Use the virtual keypad to input the registered host name (domain name) from the DDNS provider.

User Name: Use the virtual keypad to input the login user name from the DDNS provider.

Password: Use the virtual keypad to input the login password from the DDNS provider.

Update Interval: Use the virtual keypad to input a period of time to update IP address.

State: This field will display the message to indicate the status of DDNS service. The message will be:

Updating: Information update.

Idle: Stop service.

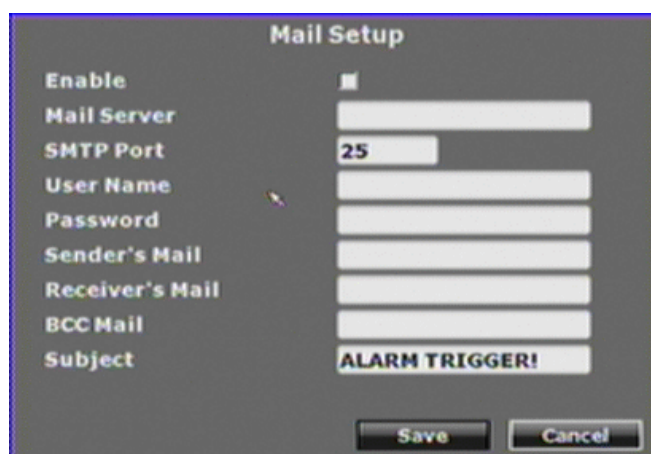
DDNS registered successfully, now log by `http://<hostname (username)>.<provider>.com`: DDNS registration successful, can now link to the NVR with this URL address.

Update Failed, the name is already registered: The hostname or username has already been used. Please change it.

Update Failed, the name is already registered.

Update Failed, please check your internet connection.

Mail Setup



The image shows a 'Mail Setup' configuration window with the following fields and controls:

- Enable:** A checkbox that is currently checked.
- Mail Server:** An empty text input field.
- SMTP Port:** A text input field containing the number '25'.
- User Name:** An empty text input field.
- Password:** An empty text input field.
- Sender's Mail:** An empty text input field.
- Receiver's Mail:** An empty text input field.
- BCC Mail:** An empty text input field.
- Subject:** A text input field containing the text 'ALARM TRIGGER!'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom right.

Enable: Click the checkbox to select which event should send mail when it is triggered.

Mail Server: Use the virtual keypad to input the IP address or URL of the send-mail server.

SMTP Port: Use the virtual keypad to input the port of the mail service. Default is 25.

User Name: Use the virtual keypad to input the user name of the sender to login mail server and send the mail.

Password: Use the virtual keypad to input the password of the sender to login mail server and send the mail.

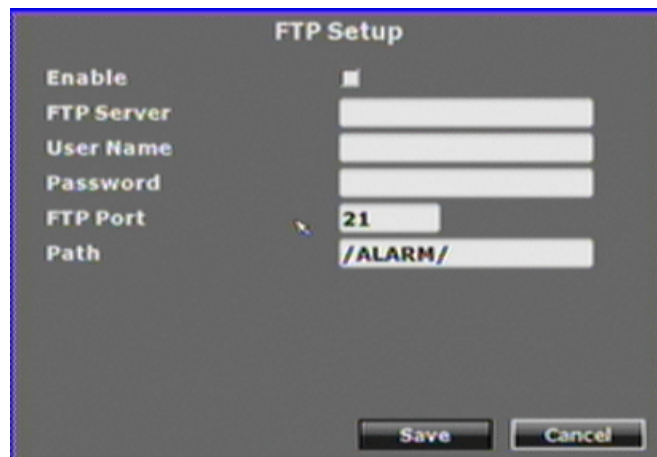
Sender's Mail: Use the virtual keypad to input the sender's mail address.

Receiver's Mail: Use the virtual keypad to input the receiver's mail address.

BCC Mail: Use the virtual keypad to input the mail address to receive the mail also.

Subject: Use the virtual keypad to input the subject of the Email will be sent.

FTP Setup



Enable: Click the checkbox to select which event should send message to FTP server when it is triggered.

FTP Server: Use the virtual keypad to input the IP address or URL of the FTP server.

User Name: Use the virtual keypad to input the user name to login FTP server.

Password: Use the virtual keypad to input the password to login FTP server.

FTP Port: Use the virtual keypad to input the port of the FTP service. Default is 21.

Path: Use the virtual keypad to input the file path on FTP server to save the sent file.

DHCP Server Setup



The screenshot shows a 'DHCP Server Setup' dialog box with the following fields and controls:

Field	Value
Enable	<input type="checkbox"/>
Start IP Address	192.168.1.20
End IP Address	192.168.1.100
Lease Time	10 Day

Buttons: Save, Cancel

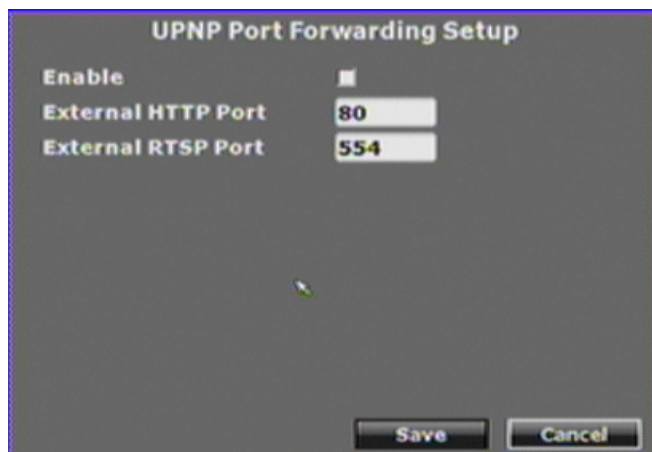
Enable: Click the checkbox to enable or disable DHCP Server function. When the function is activated, the NVR can be treated as the DHCP server. The NVR will assign or distribute one of the IP address which is according to the setup IP address range (start and end IP Address.) to the connecting IP camera or video server (these devices must enable DHCP function as well).

Start IP Address: Use the virtual keypad to input the start IP Address of DHCP server.

End IP Address: Use the virtual keypad to input the end IP Address of DHCP server.

Lease Time: Click ◀ or ▶ to change the lease time of DHCP server.

UPNP Port Forwarding Setup



The screenshot shows a 'UPNP Port Forwarding Setup' dialog box with the following fields and controls:

Field	Value
Enable	<input type="checkbox"/>
External HTTP Port	80
External RTSP Port	554

Buttons: Save, Cancel

Enable: Click the checkbox to enable or disable the “UPnP Port Forwarding” function. This function provides an easy way to configure the NAT (Network Address Translation) in router. If the router equips “UPnP Port Forwarding” function too, the NVR will ask the router to open the “External HTTP Port” and “External RTSP Port” for the NVR automatically. Therefore, you don’t need to configure the Port Forwarding

manually.

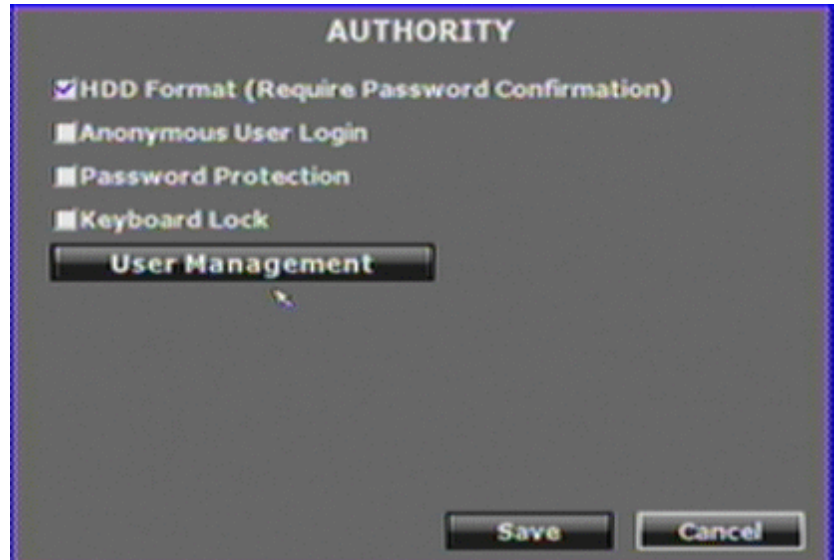
Note: Not all routers equip “UPnP Port Forwarding” function.

External HTTP Port: Use the virtual keypad to input the External HTTP Port.

External RTSP Port: Use the virtual keypad to input the External RTSP Port.

Authority Setup

AUTHORITY



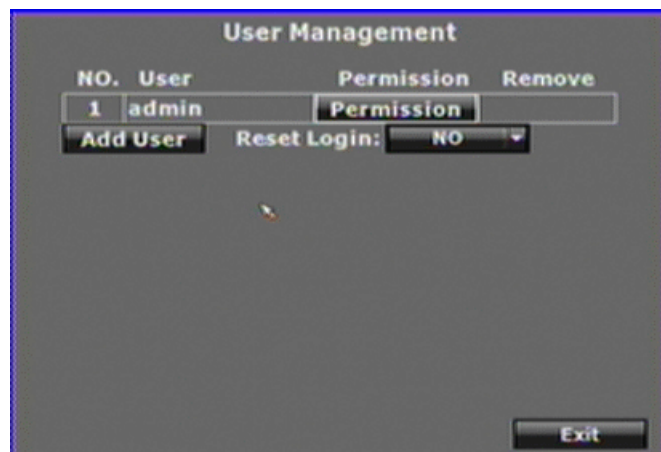
HDD Format: Click the checkbox to enable or disable the authority of HDD Format function. If enable this function, the user has to input password while performing HDD format.

Anonymous User Login: Click the checkbox to enable or disable the authority of anonymous user login. If enable this function, the user does not have to input the username/ password and can view the Live-view via IE browser.

Password Protection: Click the checkbox to enable or disable the authority of password protection.

Keyboard Lock: Click the checkbox to enable or disable the operation of control bar which is on the right side of Live-view screen. The control bar cannot work when keyboard lock is activated.

User Management



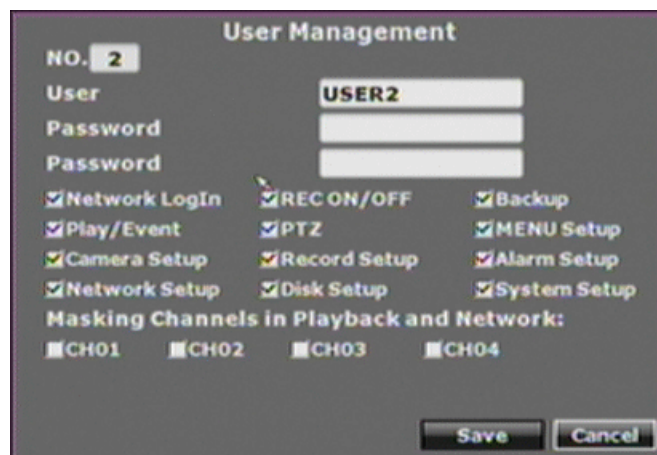
Among this page, user can setup the user management permission and the user authority management.

Permission: Click this button will open the following page to modify and alter the user authority.



The image shows a 'User Management' dialog box for user 'NO. 1'. The user name is 'admin'. There are two password fields, both containing six asterisks. A grid of permissions is shown with checkboxes: Network LogIn, Play/Event, Camera Setup, Network Setup, REC ON/OFF, PTZ, Record Setup, Disk Setup, Backup, MENU Setup, Alarm Setup, and System Setup. All these checkboxes are checked. Below the permissions is a section for 'Masking Channels in Playback and Network:' with four checkboxes labeled CH01, CH02, CH03, and CH04, all of which are unchecked. At the bottom right are 'Save' and 'Cancel' buttons.

Add User: Click this button will open the following page to distribute the authority and the permission for the new user.



The image shows a 'User Management' dialog box for user 'NO. 2'. The user name is 'USER2'. There are two empty password fields. The same grid of permissions is shown as in the previous image, with all checkboxes checked. The 'Masking Channels in Playback and Network:' section has four unchecked checkboxes labeled CH01, CH02, CH03, and CH04. At the bottom right are 'Save' and 'Cancel' buttons.

Disk Management



Overwrite Mode: Click the pull-down list to enable or disable overwrite function.

Hard Disk Full Warning: Click the pull-down list to change value with non-overwrite mode. When the ratio of remain space is below the value, it will enable audible alarm (If Audible alarm of Buzzer of Alarm Setup is ON).

Auto Deletion: Click the pull-down list to enable or disable auto deletion function.

Reserve Day: Click ◀ or ▶ to setup the reserve day. While enable auto deletion function, the data will be removed when reserve day is exceed the setting. The value can be setup between 1~30 days.

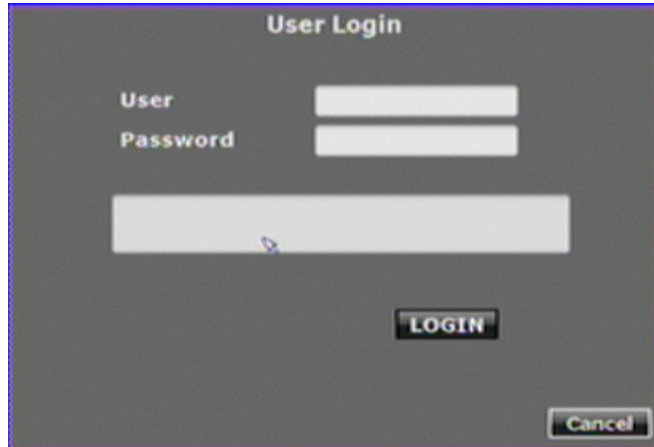
Storage Information

Click this button will open the following page to present the information of storage device.



Format HDD

Click this button will open the following page, input the user name and password and then format the HDD.

A screenshot of a "User Login" dialog box. The dialog has a dark gray background and a light gray border. At the top, the title "User Login" is centered. Below the title, there are two input fields: one labeled "User" and one labeled "Password". Below these two fields is a larger, empty input field. At the bottom center of the dialog is a "LOGIN" button, and at the bottom right corner is a "Cancel" button.

User Login

User

Password

LOGIN

Cancel

System Setup

SYSTEM



The screenshot shows the SYSTEM configuration menu with the following fields and buttons:

NVR Name	NVR-04
NVR ID	◀ 0 ▶
Language	English
Date Format	YYYY-MM-DD
Version	L0126-V1.0.06
Software Update	Configure Setup
Time Setup	Daylight Saving Time
Status Display Setup	Monitor Adjust
Save Cancel	

NVR Name: Use the virtual keypad to input and assign the name to NVR.

NVR ID: Click ◀ or ▶ to assign the ID for NVR.

Language: Click the pull-down list to change the NVR language.

Date Format: Click the pull-down list to change the date format. There are DD/MM/YYYY, YYYY/MM/DD and MM/DD/YYYY three modes.

Version: The firmware version of the NVR.

Software Update

Click this button will open the following page, user can perform firmware update.

The screenshot shows the Software Update page with the following elements:

Status	
Progress	
Upgrade Firmware	
Exit	

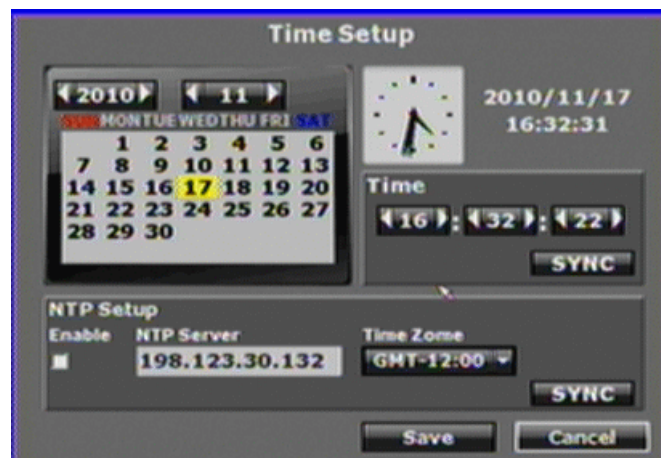
Configure Setup

Click this button will open the following page. Click the checkbox to select which item can be setup by user. User can also load the setting to factory default, load the configure from USB and backup configure to USB.



Time Setup

Click this button will open the following page.



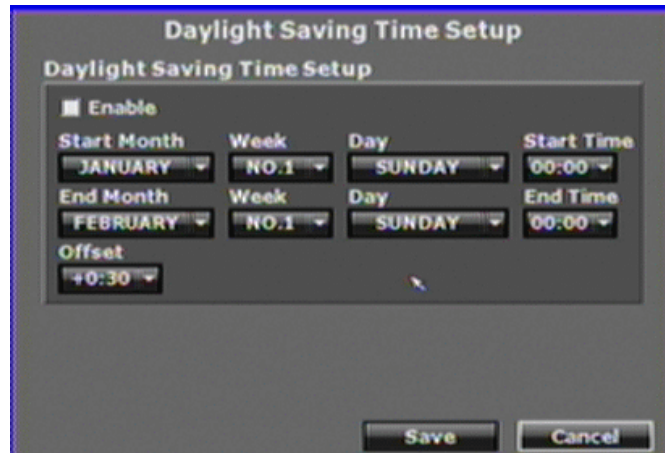
[SYNC] button in “Time” block: Click this button can adjust and synchronize the time of NVR as the system time of PC.

[SYNC] button in “NTP Setup” block: After enable the checkbox and then click this button, the time of NVR will synchronize to the NTP Server.

Year/ Month/ Time: Click ◀ or ▶ to manually adjust the time of NVR.

Daylight Saving Time Setup

Click this button will open the following page.



After enable the daylight saving time function, the user can use the pull-down list to select the start time and the end time to perform daylight saving time.

Status Display Setup

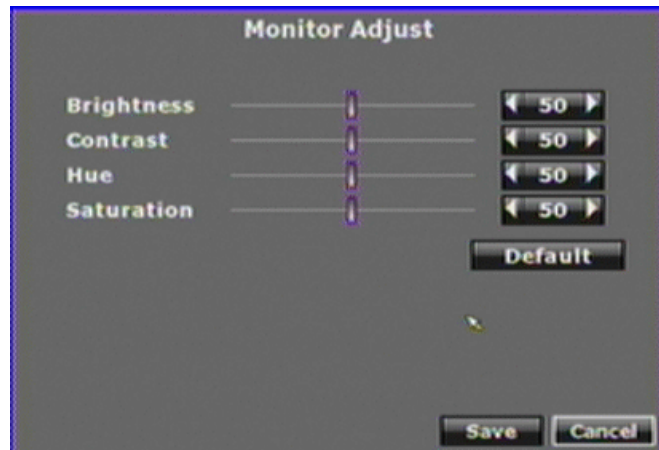
Click this button will open the following page.



Click the checkbox to enable or disable the item. The selected item will be displayed on Live-view screen.

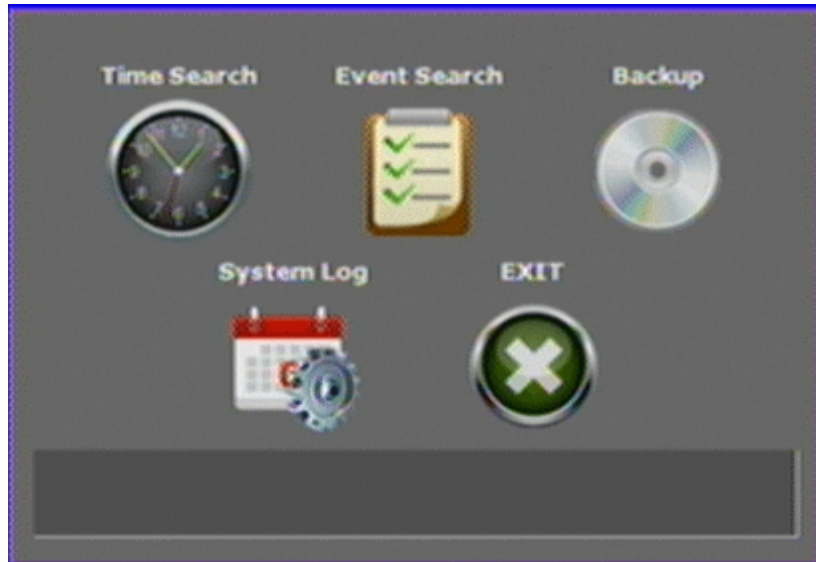
Monitor Adjust

Click this button will open the following page. Click ◀ or ▶ to adjust the monitor related setting, and select the monitor resolution of the VGA output.



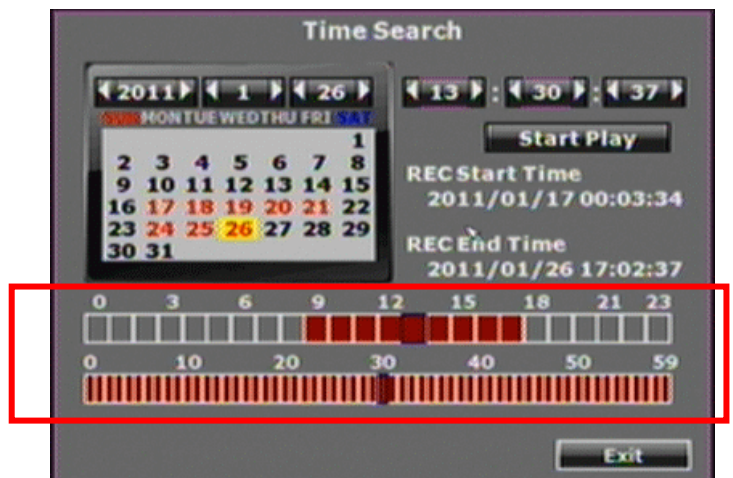
NVR Playback

In Live-view mode, click  button to enter the Playback Setup menu.



Time Search

Time Search



Select the date from the calendar and then observe the table on bottom. If this day contains the recorded data, the boxes in table will become to red. Click on the box to start the playback.

Event Search

Event Search



NO.	Time	CH	Type	HDD
001	2011/01/26 17:02:28	01	MOTION	HDD1
002	2011/01/26 17:02:28	02	MOTION	HDD1
003	2011/01/26 17:02:18	01	MOTION	HDD1
004	2011/01/26 17:02:18	02	MOTION	HDD1
005	2011/01/26 17:02:08	01	MOTION	HDD1
006	2011/01/26 17:02:08	02	MOTION	HDD1
007	2011/01/26 17:02:00	----	PWR OFF	HDD1
008	2011/01/26 17:01:58	02	MOTION	HDD1
009	2011/01/26 17:01:58	01	MOTION	HDD1
010	2011/01/26 17:01:43	02	MOTION	HDD1

Event Filter Page 1 Exit

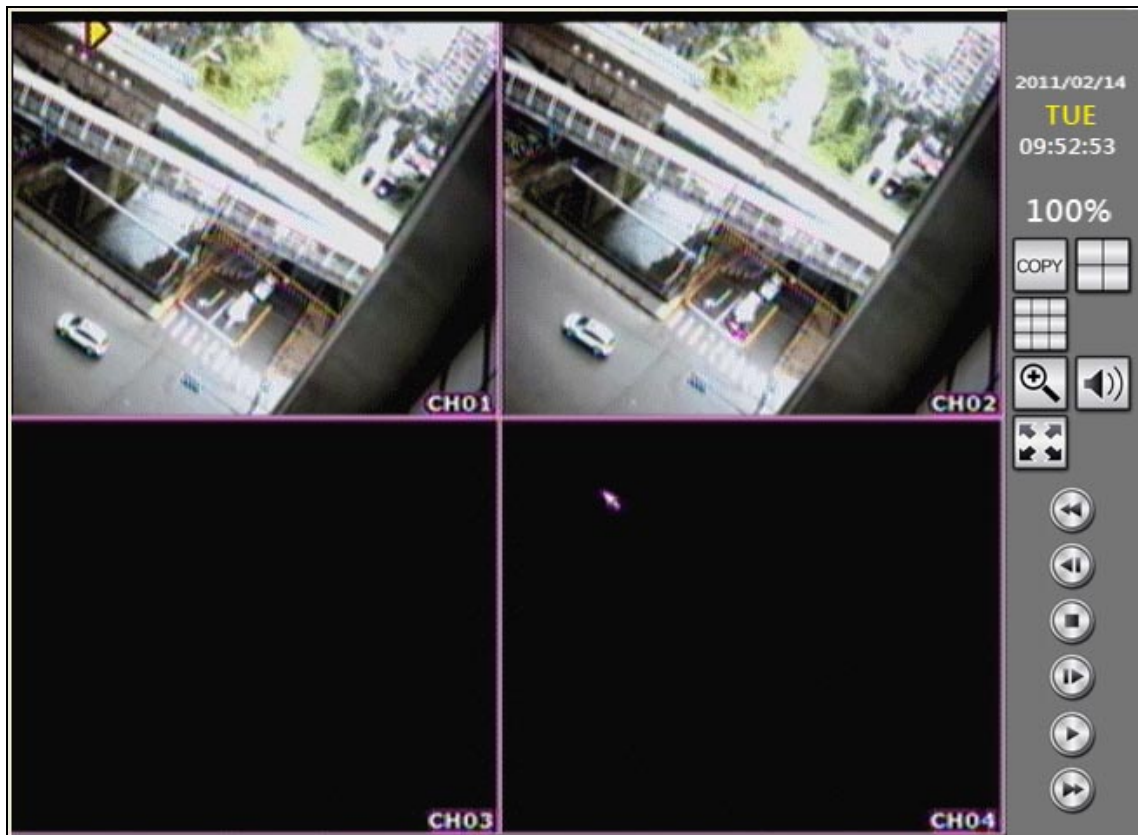
Click the event log item shown on the list to start the playback.








Moreover, user can click **[Event Filter]** button to show the following page, select the specific event option to filter the event that shown on the list.




<input checked="" type="checkbox"/> Power On	<input checked="" type="checkbox"/> Power Off		
<input checked="" type="checkbox"/> Video Loss	<input checked="" type="checkbox"/> Motion		
<input checked="" type="checkbox"/> Record	<input checked="" type="checkbox"/> Stop Record		
<input checked="" type="checkbox"/> CH01	<input checked="" type="checkbox"/> CH02	<input checked="" type="checkbox"/> CH03	<input checked="" type="checkbox"/> CH04
<input checked="" type="checkbox"/> HDD 1			

Save Cancel

Playback



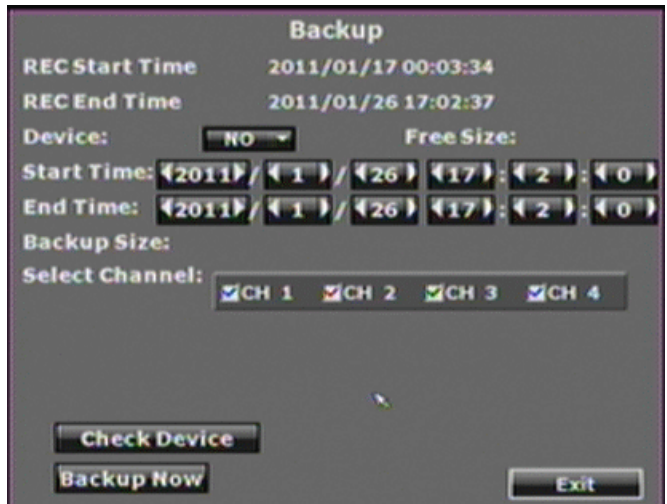
Click on Video	Click on the video of channel to view the single channel. Click again will back to multiple-split screen.
Turn On/Off Audio	There is an icon on the video indicates “Audio is ON” -  , or “Audio is OFF” -  . Click on this icon to turn on/off the audio of channel.
	Click this button to backup the playing recorded video (.264 video backup) and click this button again to finish the backup. For performing the single image backup (.Y42 single image backup), click  to pause the playback and then click this button to backup the necessary image.
	Click this button to display channels with 4-split screen.
	Click this button to display channels with 9-split screen.
	Click this button and then use mouse to draw a range to zoom-in or zoom-out the video. Click this button again to disable this function.

	Click this button to turn the audio on or off.
	Click this button to display in full screen mode. Click on screen again will back to normal mode.
	Click the button to control the playback.

Backup

The Playback Setup menu also provides the backup function.

Backup

The screenshot shows the 'Backup' configuration window with the following fields and controls:

- REC Start Time:** 2011/01/17 00:03:34
- REC End Time:** 2011/01/26 17:02:37
- Device:** NO (pull-down menu)
- Free Size:** (displayed next to Device)
- Start Time:** 2011 / 1 / 26 17 : 2 : 0 (digit spinners)
- End Time:** 2011 / 1 / 26 17 : 2 : 0 (digit spinners)
- Backup Size:** (displayed below End Time)
- Select Channel:** CH 1, CH 2, CH 3, CH 4 (checkboxes, all checked)
- Buttons:** Check Device, Backup Now, Exit

Device: Click the pull-down list to select the connected USB storage.

Start Time/ End Time: Click ◀ or ▶ to change the start and end time for backup.

Select Channel: Click the checkbox to select the channel for backup.

After setup the above settings, click **[Backup Now]** button to start the backup.

System Log

System Log



NO.	Time	Event
161	2011/01/20 15:37:42	Remote login by admin
162	2011/01/20 15:37:01	Remote login by admin
163	2011/01/20 15:34:33	Remote login by admin
164	2011/01/20 15:34:03	Remote login by admin
165	2011/01/20 15:32:50	Remote login by admin
166	2011/01/20 15:12:58	Remote login by
167	2011/01/20 15:12:54	Remote login by
168	2011/01/20 15:12:44	Remote login by
169	2011/01/20 15:11:55	Remote login by
170	2011/01/20 15:11:52	Remote login by

Page 17

Log Filter Exit

System log reserves all of the system record. The maximum log quantity is 2000.

To perform the further log filter action, click **[Log Filter]** button to show the following page. Select the specific event option to filter the log that shown on the list.

Log Filter	
<input checked="" type="checkbox"/> Console Login	<input checked="" type="checkbox"/> Remote Login
<input checked="" type="checkbox"/> Add user	<input checked="" type="checkbox"/> Remove user
<input checked="" type="checkbox"/> Hard Disk Format	<input checked="" type="checkbox"/> Hard Disk Full Warning
<input checked="" type="checkbox"/> Load Default	<input checked="" type="checkbox"/> Load configure from USB
<input checked="" type="checkbox"/> PPPoE IP	<input checked="" type="checkbox"/> DHCP IP

Save Cancel

5. Remote Access

The NVR has built-in web server, user can link to the NVR via IE browser, and the Live-view, playback, backup and configure the NVR remotely.

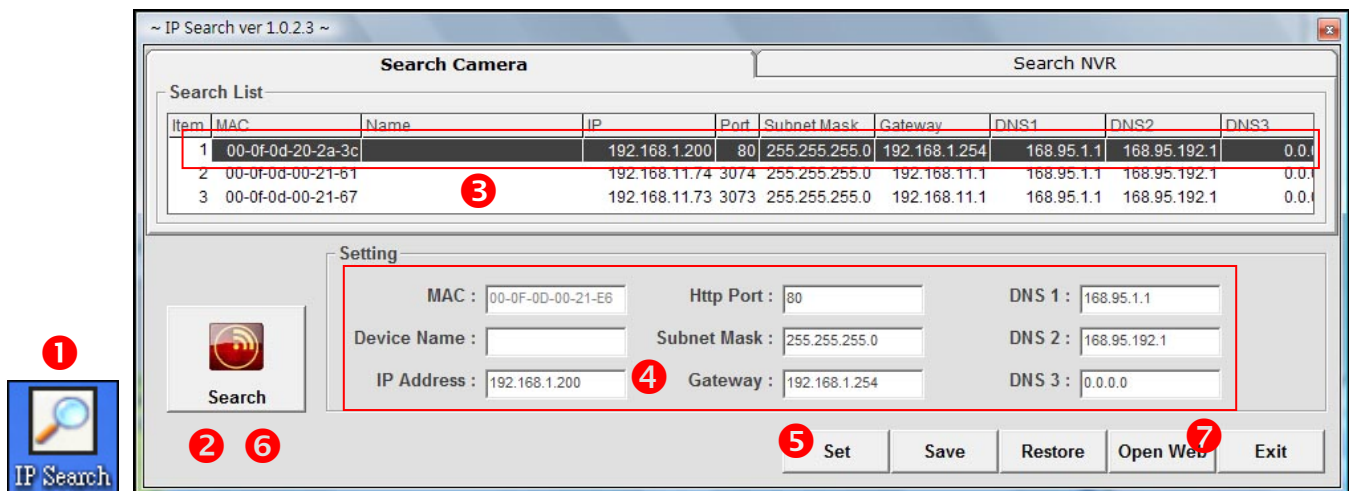
Please follow the next pages to configure and do the remote access.

Search and Setup IP Address for NVR

IP Search is a utility that provides an easier, more efficient way to configure the IP address and network settings of the NVR and network camera in Local Network (LAN). It even provides a convenient way to set the network settings for multiple devices simultaneously.

The software can be installed from the attached software CD.

1. Once IP Search has been successfully installed on the computer, double click the “IP Search” icon on the desktop.



2. IP Search searches all the network devices which connect to the intranet and lists on the window. Click [**Search**] button to search again.
3. From the list, select the device with the MAC Address that corresponds to the device that is to be configured.
4. Click and select one of the network devices, the network configuration of this device will show on the bottom, filling in the IP Address, Subnet Mask, Gateway and the others.
5. Click [**Set**] button to complete the configuration settings and save into the device.
6. Wait for 1 minute to let the device update the settings, and then click [**Search**] button

again to re-search the network devices.

7. Click and select the network device listed on the window and click **[Open Web]** button. It will open an IE browser and connect to this device directly.

Live-View

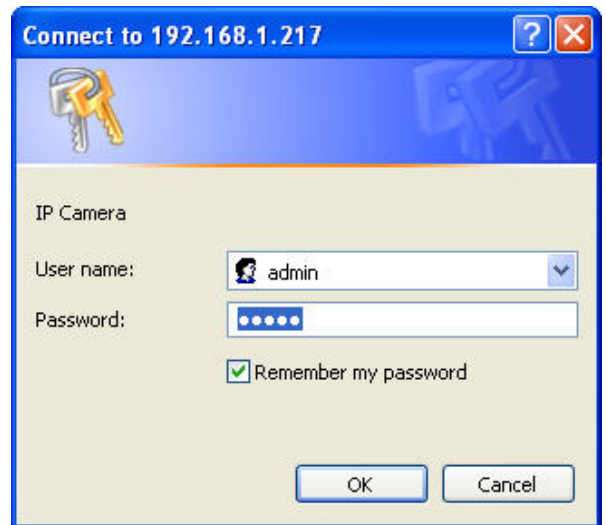
Start the IE browser, type the IP address of the NVR in the address field:

http://<IP of NVR>

If the “HTTP Port” has been changed from “80”, type the URL as:

http://<IP of NVR>:<HTTP Port>

After link to the camera, it will show a dialogue box. Key-in the user name and password to log-in and open the web page of camera. The default user name and password are “**admin**” and “**admin**”.



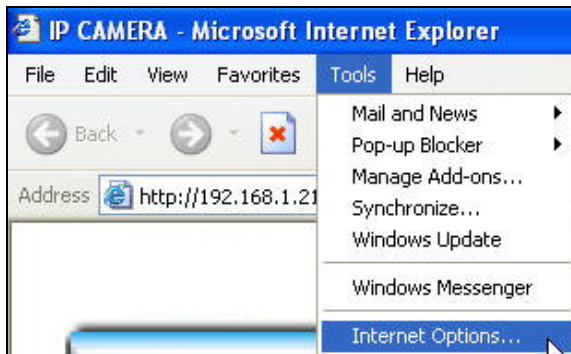
For the first time to view the camera video via IE, it will ask you to install the ActiveX component.



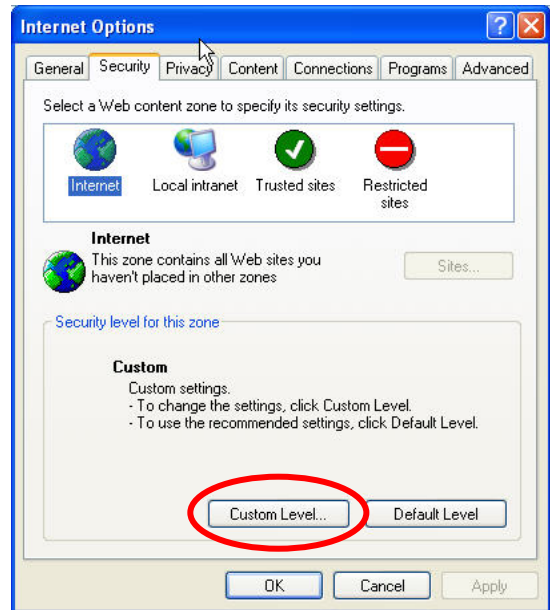
If the installation failed, please check the security setting for the IE browser.

1. In IE, click on **[Tools]** → **[Internet Options...]**
2. Click on **[Security]** Tab → **[Custom Level...]**
3. In Security Settings, under **[Download unsigned ActiveX controls]**, select “Enable” or “Prompt”.
4. In Security Settings, under **[Initialize and script ActiveX controls not marked as safe]**, select “Enable” or “Prompt”.
5. When pop-up window with warning message, click **[Yes]** to save the settings.

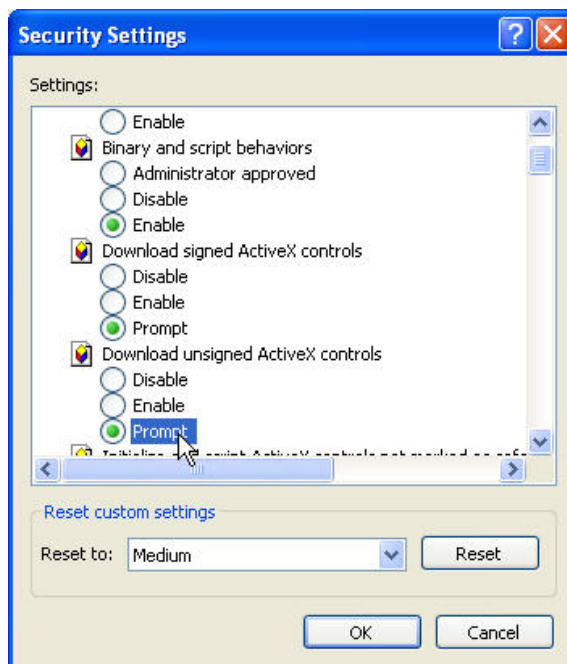
1



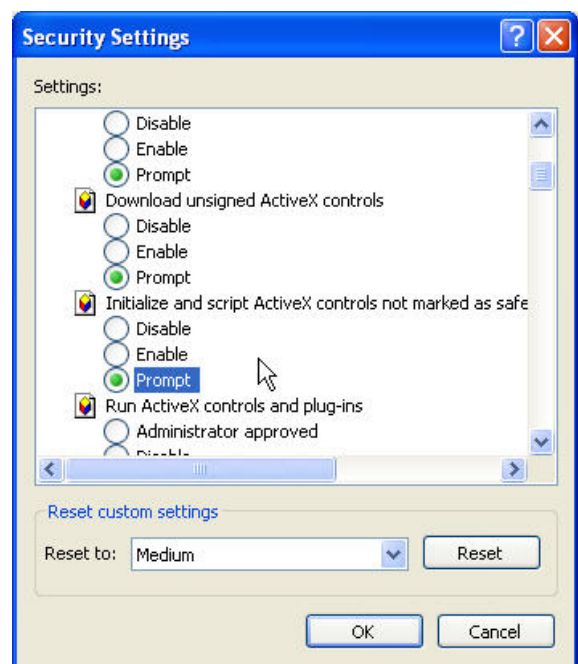
2



3

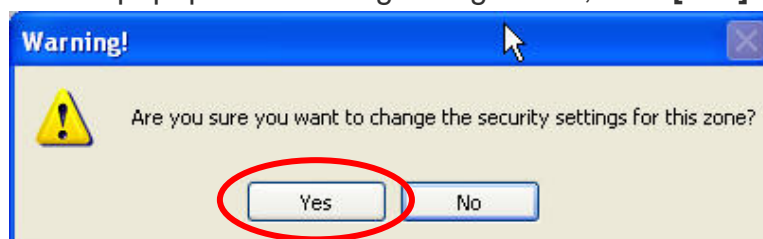


4



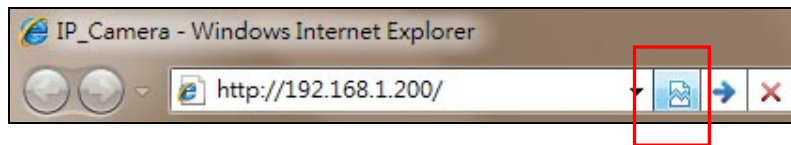
5

When popup the following dialogue box, click [Yes].



The web page of the NVR shows as following.

If you are using IE 8.0 or above, please click “Compatibility View” icon to make this web page works properly:



- ① **Configuration** : Go into the configuration page to set the parameters if necessary.
- ② **Online Visitor** : Shows how many users connect to this NVR. The maximum connecting user is 4.
- ③ **Status Bar** : Shows system date/time and the status.
- ④ **Advanced Options** : Right-click on the video, a window will be pop-up and list some advanced options, the options are:

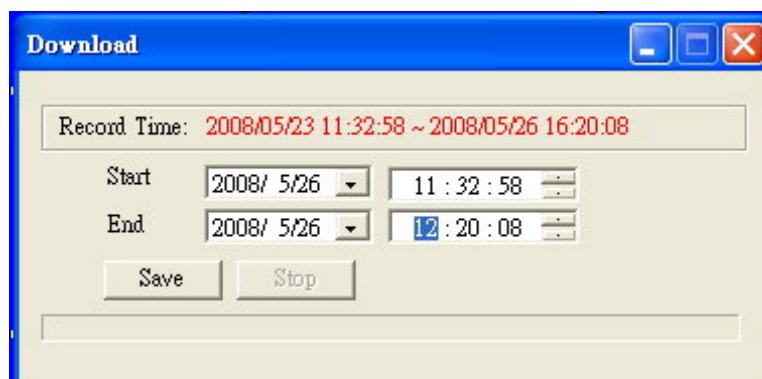
<u>Snapshot CHx :</u>	Click this option to take the snapshot and save it into the local PC. It will ask you where to save the file.
<u>Performance :</u>	Click this option and then select the speed to display the video.
<u>Use Overlay :</u>	After enable this option, the video will be displayed by using the hardware accelerator of display card. This will reduce the CPU loading and enhance the performance. Note: some display cards have incompatible issue with Overlay function. If the video is abnormal, please disable this option.
<u>Play Audio :</u>	Click this option to play the audio of this channel. Click again to turn off it.

⑤ **Playback Control :** Click these buttons will perform the Playback functions.

⑥ **Function Buttons :** Click these buttons will perform the following functions.



Time-Point Backup : Click this button to download and backup the recorded video from NVR.







Select the start and end time and then click [**Save**] button. It will ask you where to save the file.

Note: the backup video can only be played by "A6Viewer.exe", you can download this software in "Configuration" Page.








Record : Click this button to manually record the video into the local PC. It will ask you where to save the video. Click on [**Stop**] button will stop the recording.

Note: the recorded video can only be played by "A6Viewer.exe", you can download this software in "Configuration" Page.

	<p>Full Screen : Click this button to view the video in full screen mode. Click this button again, or press the Esc key on keyboard, it will back to normal mode.</p>
	<p>9-Split : Display all 9 channels simultaneously.</p>
	<p>4-Split : Display 4 channels simultaneously.</p>
	<p>Single Channel : Display single channel one by one. You can also double-click the channel to enlarge it.</p>

⑦ **PTZ Control :** Click these buttons will perform the following functions.

Pan/Tilt Control	Pan / Tilt the camera:	Click the direction buttons.
	Move camera back to the home position:	Click  button.
Speed	Adjust the speed of the camera movement:	Select the speed from the pull-down list, higher value is faster.
Zoom	Adjust the zoom ratio:	Click  or  button to zoom-in or zoom-out the camera.
Auto Pan	Perform the Auto Pan function:	Click  to start “Auto Pan”, or click  to stop “Auto Pan”.
Preset Point	Set / Change Preset Point:	Select the preset point from the pull-down list, move the camera to the position as your wish, and then click [Save] button to set the preset.
	Go to Preset Point:	Select the preset from pull-down list and then click [Go] , camera will go to the position.

Configuration

System



System Information

System Information	
Server Information	
Server Name:	<input type="text" value="NVR04"/>
MAC Address:	<input type="text" value="00:0f:0d:00:13:81"/>
NTP Time Setting	
Time Zone:	<input type="text" value="GMT-12:00"/>
NTP Server:	<input type="text" value="198.123.30.132"/>
<input type="button" value="Apply"/>	

Server Information

Server Name: You can type a name into this field to identify this device.

MAC Address: The MAC address of the Ethernet network card in the device.

NTP Time Setting

Time Zone: The time zone setting that has been setup in NVR. This setting cannot be configured remotely.

NTP Server: The IP address or URL of the NTP server.

*After set up, click **[Apply]** to save the settings.*

User Management

You can add, remove and manage the users in this page.



User Management

User Management			
Authority Setting			
HDD Format Password Check:	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable	
Anonymous User Login:	<input type="radio"/> Enable	<input checked="" type="radio"/> Disable	
Password Protection:	<input type="radio"/> Enable	<input checked="" type="radio"/> Disable	
<input type="button" value="Apply"/>			
User List			
User Name	Modify	Remove	<input type="button" value="Add User"/>
admin	Edit		
mickey	Edit	Remove	

HDD Format Password Check

Enable or disable whether check the password to do the HDD format process.

Anonymous User Login

To allow user visit this device without login. Select to enable or disable this function.

After set up, click **[Apply]** to save the settings.

Add User

To add a new user, click **[Add User]** button to open the pop-up window. Input the username, password and select the permission, and then click **[OK]** to add the user.

User List

This table lists the current users.

Edit: To change the username and password, click **[Edit]** and modify the user in the pop-up window.

Remove: To remove the user, click **[Remove]**.

User Setup	
Username:	<input type="text"/>
Password:	<input type="password"/>
Confirm:	<input type="password"/>
<input type="checkbox"/> Network Login	<input type="checkbox"/> Record ON/OFF
<input type="checkbox"/> Play/Event	<input type="checkbox"/> PTZ
<input type="checkbox"/> Backup	<input type="checkbox"/> Menu Setup
<input type="checkbox"/> Camera Setup	<input type="checkbox"/> Record Setup
<input type="checkbox"/> Alarm Setup	<input type="checkbox"/> Network Setup
<input type="checkbox"/> Disk Setup	<input type="checkbox"/> System Setup
Masking Channels in Playback and Network	
<input type="checkbox"/> CH01	<input type="checkbox"/> CH02
<input type="checkbox"/> CH03	<input type="checkbox"/> CH04
<input type="button" value="OK"/>	

System Upgrade

This page allows user to upgrade firmware and restore the factory default settings.



System Upgrade

System Upgrade	
Firmware Upgrade	
Current Firmware Version:	V1.0.21 L1122
New Firmware:	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upgrade"/>
Load Default	
Load Factory Default:	<input type="button" value="Load"/>
Load Setup from File:	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Load"/>
Backup Settings	
Backup Settings from NVR:	<input type="button" value="Download"/>

Firmware Upgrade

The firmware can be upgraded online.

To update the firmware, click **[Browse...]** to select the new firmware file, and then click **[Upgrade]** to the procedure.

Load Default

To load the factory defaults, click **[Load]** and then click **[Yes]** on the prompted window.

To load the settings from previous backup settings, click **[Browse...]** to select the setting file, click **[Load]** and then click **[Yes]** on the prompted window.

Backup Settings

To backup the settings from NVR, click **[Download]** and select the location to store the file.

Network Setting



Network Setting

IP Setting	
IP Assignment	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static IP	
IP Address:	192.168.11.211
Subnet Mask:	255.255.255.0
Gateway:	192.168.11.1
DNS 1:	168.95.1.1
DNS 2:	168.95.192.1
HTTP Port:	80
UPnP Port Forwarding	
<input checked="" type="checkbox"/> Enable	
External HTTP Port:	80
External RTSP Port:	554
<input type="button" value="Apply"/>	

IP Assignment

DHCP: If this device behinds a router and the router provides DHCP service, using DHCP, this device will get all network parameters from the router automatically.

Static: Assign IP address, subnet mask, gateway, and DNS manually.

HTTP Port: Set the port for HTTP connection. The default is “80”, change the port if you want to use router’s NAT (Network Address Translation) to make this device can be linked from Internet.

UPnP Port Forwarding

The “UPnP Port Forwarding” function provides an easy way to configure the NAT (Network Address Translation) in router. If the router equips “UPnP Port Forwarding” function too, this device will ask the router to open the “External HTTP Port” and “External RTSP Port” for this device automatically. Therefore, you don’t need to configure the Port Forwarding manually.

Note: Not all routers equip “UPnP Port Forwarding” function. The device will report whether this function is successful after click **[Apply]** button.

After set up, click **[Apply]** to save the settings.

PPPoE Setting

If this device connects to an ADSL modem directly and want to use PPPoE connection, set the parameters in this page.



PPPoE Setting

PPPoE Setting	
PPPoE Connection:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
User Name:	<input type="text" value="adsluser"/>
Password:	<input type="password" value="••••"/>
Send E-mail after Dialed:	<input checked="" type="checkbox"/> Enable
E-mail Subject:	<input type="text" value="NVR is dialed"/>
<input type="button" value="Apply"/>	

PPPoE Connection

Select **[Enable]** to use PPPoE. Type in user name and password for the ADSL connection.

Send E-mail After Dialed

If select **[Enable]**, when connect to the Internet via PPPoE, this device will send a mail with the Subject to a specific mail account, this mail contains the public IP address of the ADSL connection.

E-mail Subject

The subject of the E-mail will be sent.

*After set up, click **[Apply]** to save the settings.*

DDNS Setting

This device supports DDNS, set the parameters in this page.



DDNS Setting

Dynamic DNS Setting	
DDNS Setting	
<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Provider:	dyndns.org ▼
Host Name:	test.dyndns.org
User Name:	test
Password:	••••
Schedule Update:	1440 Minutes
Status	
<div style="border: 1px solid gray; padding: 5px; min-height: 30px;"> http://test.dyndns.org </div>	
<input type="button" value="Apply"/>	
Note: <ol style="list-style-type: none"> Schedule Update: Depends on the input time of Schedule Update, it will update DDNS's web site automatically. The time range is from 5 to 5000 minutes. *0: It will not update. dyndns.org & 3322.org: Update once per day is recommended (1440 minutes per day). If updated too frequently, it will be blocked. 	

DDNS Setting

There are several DDNS providers can be selected. Select the provider from the pull-down list, input Hostname, User name, Password and the Schedule Update time, and then click **[Apply]** to connect to the DDNS provider.

Status

This field will display the message to indicate the status of DDNS service.

Updating: Information update.

Idle: Stop service.

DDNS registered successfully, now log by `http://<hostname>(<username>)<provider>.com`: DDNS registration successful, can now link to the NVR with this URL address.

Update Failed, the name is already registered: The hostname or username has

already been used. Please change it.

Update Failed, the name is already registered.

Update Failed, please check your internet connection.

Mail / FTP Setting

To send out the event video to E-mail or FTP, please set up the configuration first.



Mail / FTP

Mail & FTP	
Mail Setting	
<input checked="" type="checkbox"/> Motion	<input checked="" type="checkbox"/> Alarm
Send Mail Server:	smtp.mailserver.com
Mail Port:	25
User Name:	test
Password:	••••
Sender's Mail:	sender@mailserver.com
Receiver's Mail:	receiver@mailserver.com
Bcc Mail:	boss@mailserver.com
Event Subject:	ALARM TRIGGER!
FTP Setting	
<input checked="" type="checkbox"/> Motion	<input checked="" type="checkbox"/> Alarm
FTP Server:	ftp.company.com
User Name:	ftptest
Password:	••••
FTP Port:	21
Store Path:	/ALARM/
<input type="button" value="Apply"/>	

Mail Setting

Motion / Alarm: Select which event should be informed by Email.

Send Mail Server: The IP address or URL of the send-mail server.

Mail Port: The port of the mail service. Default is 25.

User Name / Password: The user name and password of the sender to login mail server and send the mail.

Sender's Mail: The sender's mail address.

Receiver's Mail: The receiver's mail address.

BCC Mail: The mail address to receive the mail also.

FTP Setting

Motion / Alarm: Select which event should be informed to FTP.

FTP Server: The IP address or URL of the FTP server.

User Name / Password: The user name and password to log in the FTP server.

FTP Port: The port of the FTP service. Default is 21.

Store Path: The path to save the sent file.

*After set up, click **[Apply]** to save the settings.*

DHCP Server

DHCP Server Setup	
<input checked="" type="checkbox"/> Enable	
Start IP Address:	192.168.1.100
End IP Address:	192.168.1.199
Lease Time:	10 Days
<input type="button" value="Apply"/>	

Enable: Click the checkbox to enable or disable DHCP Server function. When the function is activated, the NVR can be treated as the DHCP server. The NVR will assign or distribute one of the IP address which is according to the setup IP address range (start and end IP Address.) to the connecting IP camera or video server (these devices must enable DHCP function as well).

Start IP Address: Input the start IP Address of DHCP server.

End IP Address: Input the end IP Address of DHCP server.


Lease Time: Input the lease time of DHCP server.

*After set up, click **[Save]** to upload and save the settings into NVR.*

NVR Setting

In this page you can configure all settings in the NVR.

NVR Setting

CHD2


CAMERA | RECORD | ALARM | DISK | SYSTEM | SAVE

CAMERA	<input style="width: 80%;" type="text" value="2"/>	<input type="button" value="◀"/> <input type="button" value="▶"/>	
IPCAM SETUP		<input type="button" value="SET"/>	
IPCAM VIDEO SETUP		<input type="button" value="SET"/>	
IPCAM IMAGE SETUP		<input type="button" value="SET"/>	
MOTION		<input type="button" value="SET"/>	
MASK SETUP		<input type="button" value="SET"/>	
IPCAM AUDIO SETUP		<input type="button" value="SET"/>	

Warning: Apply NVR setting will cause browser to freeze for seconds while upgrading.

After set up, click **[Save]** to upload and save the settings into NVR.

6. Backup and Playback

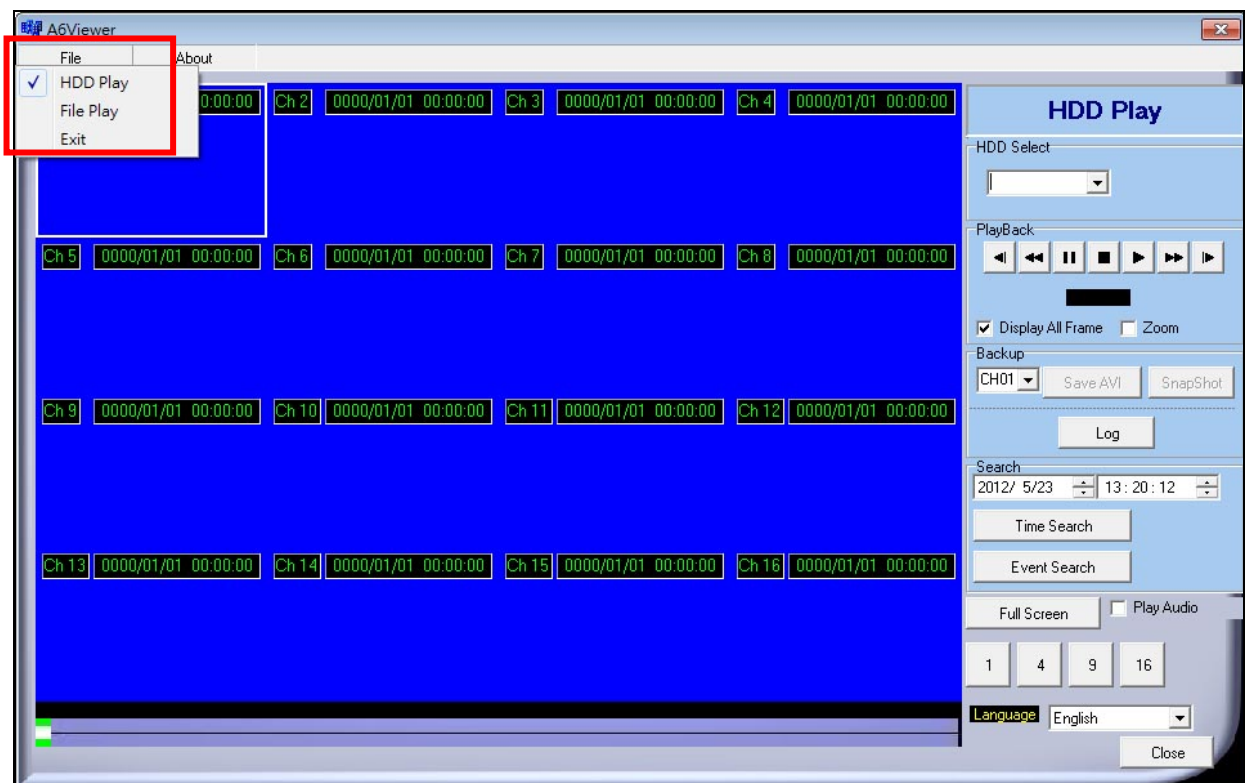
The NVR provides a software is named “A6Viewer.exe”, this software is running under Windows, it can play the following files:

- The recorded file in NVR’s HDD.
- The recorded file that is backup by using USB device.
- The recorded file that is backup by using IE web browser.
- The snapshot file that is taken in web page of NVR by using IE web browser.

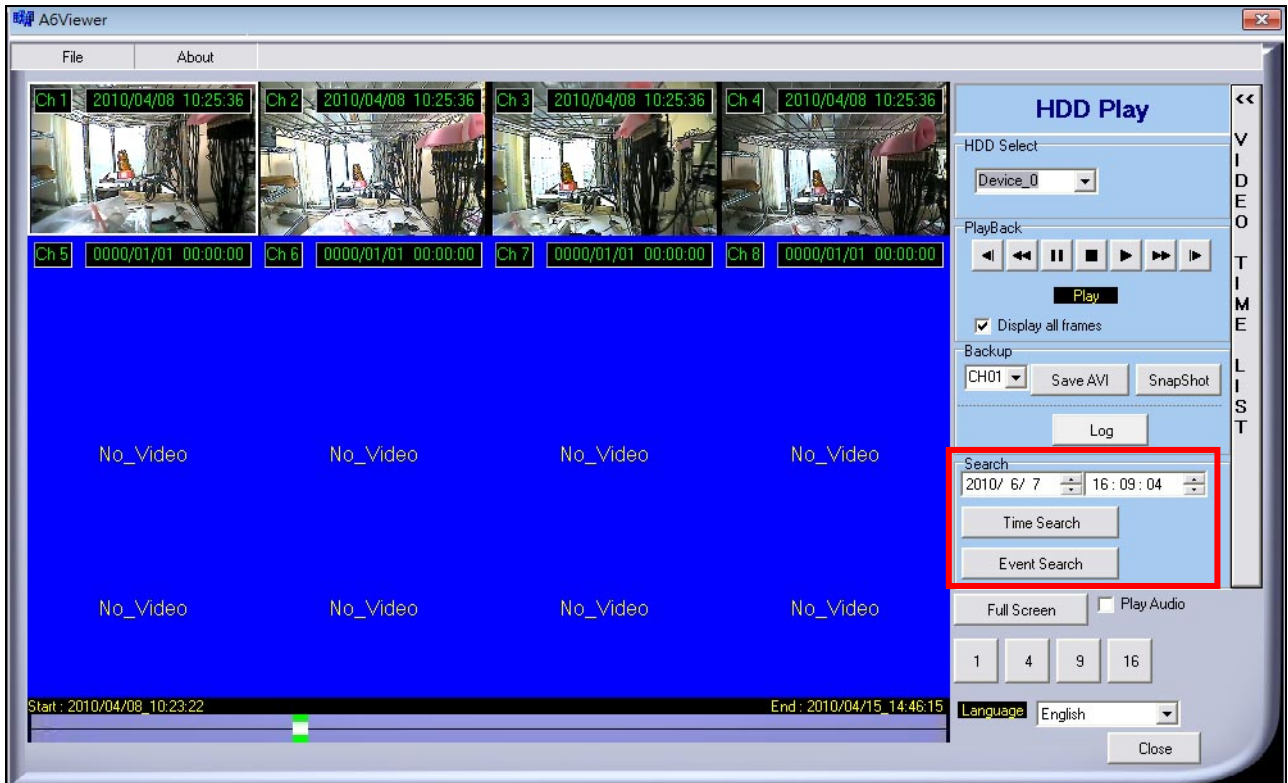
You can find the “A6Viewer.exe” in attached CD, or download it from the web page of NVR in “Configuration” → “Player”. Moreover, while perform the USB backup, this software will be included in the USB device automatically.

Play the Recorded File in NVR’s HDD

1. Remove the HDD from NVR, and then connect the HDD to PC.
2. Run “A6Viewer.exe”, click **[File]** and then select **[HDD Play]**.



3. Click the pull-down list under “HDD Select” to select the HDD.
4. Select the date and time, and then click **[Time Search]** or **[Event Search]** to begin the searching.

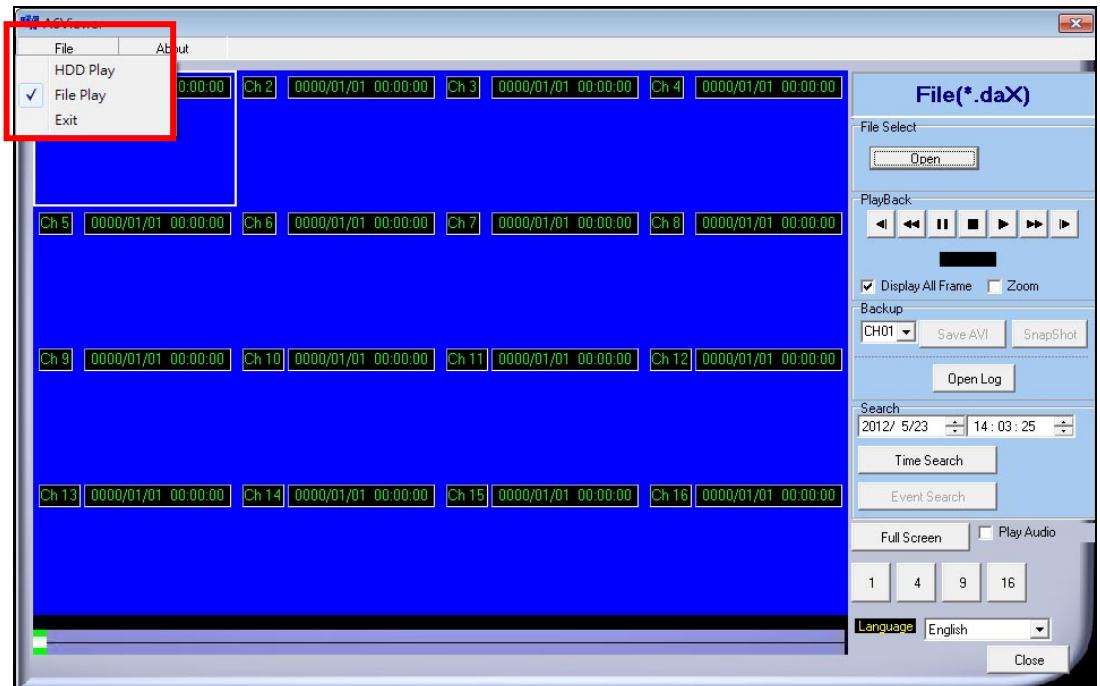


5. Click on the desired video to play it.
6. You can convert the video to AVI file during playback, just click **[Save AVI]** button, and then select the folder and filename to save it. Click **[Stop AVI]** will stop the conversion.

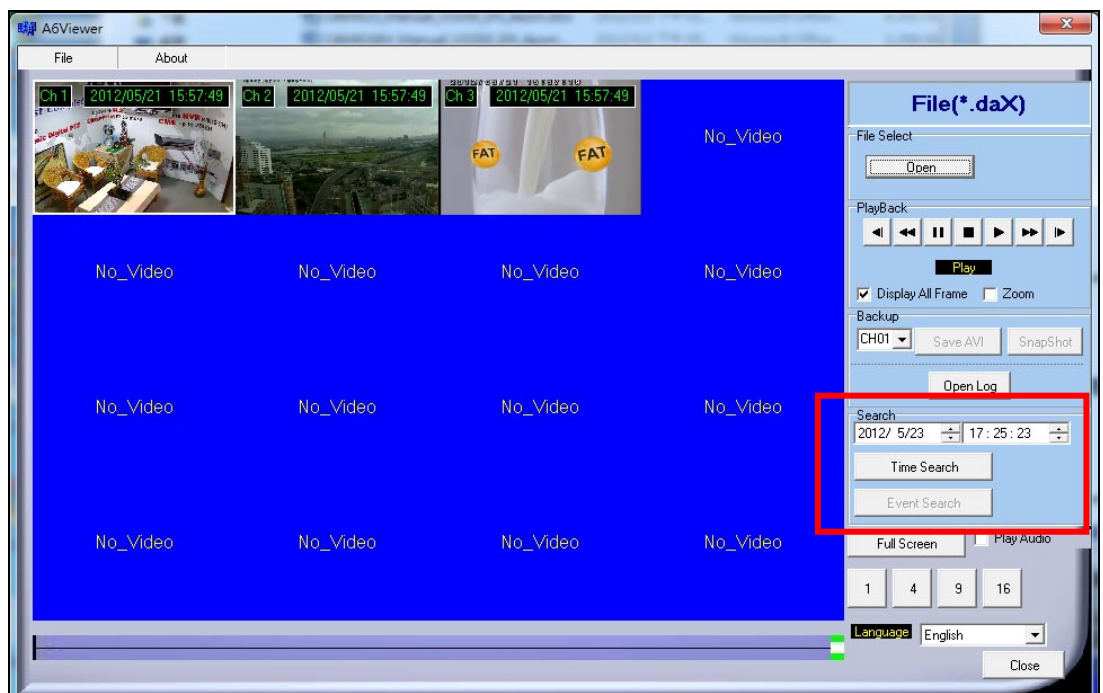
Play the Backup File

The “A6Viewer.exe” can also play the backup file in USB device and PC.

1. If you want to play the backup file in USB device, insert it to PC.
2. Run “A6Viewer.exe”, click **[File]** and then select **[File Play]**.



3. Click **[Open]** button under “File Select” to select the location contains the backup file.
4. Select the date and time, and then click **[Time Search]** or **[Event Search]** button.



5. Click on the desired video to play it.
6. You can convert the video to AVI file during playback, just click [**Save AVI**] button, and then select the folder and filename to save it. Click [**Stop AVI**] will stop the conversion.

Support List of Hard Disk Drive

Brand	Model	Capacity	Others
SEAGATE	ST380815AS	80 GB	7200 10
	ST3160815AS	160 GB	7200 10
	STM3250820AS	250 GB	7200 10
	ST3250310SV	250 GB	SV35.3
	ST3400620AS	400 GB	7200 10
	ST3500320SV	500 GB	SV35.3
	ST3500410SV	500 GB	SV35.5
	ST3500320AS	500 GB	7200 11
	ST3500418AS	500 GB	7200 12
	ST3500312CS	500 GB	Pipeline HD .2
	ST3750640AS	750 GB	7200 10
	ST3750330AS	750 GB	7200 11
	ST31000333AS	1 TB	7200 11
	ST31000340AS	1 TB	7200 11
	ST31000340NS	1 TB	Barracuda ES.2
	ST31000340SV	1 TB	SV35.3
	ST31000322CS	1 TB	Pipeline HD .2
	ST31000525SV	1 TB	SV35.5
	ST31000524AS	1 TB (SATA III)	7200 12
	ST1500DL003	1.5 TB (SATA III)	Barracuda LP
	ST31500341AS	1.5 TB	7200 11
	ST32000542AS	2 TB	Barracuda LP
WD	WD1600AAJS	160 GB	7200 CB
	WD2500AAKS	250 GB	7200 CB
	WD2500AVVS	250 GB	7200 GP
	WD3200AVVS-73L2B0	320 GB	7200 GP
	WD5000AACS	500 GB	7200 GP
	WD5000AVVS	500 GB	7200 GP
	WD5000AAKS	500 GB	7200 CB

	WD5002ABYS	500 GB	7200 RE
	WD5000AAKX	500 GB (SATA III)	Caviar Blue
	WD6400AAKS	640 GB	7200 BLUE
	WD6400AVVS	640 GB	7200 GP
	WD7500AACS	750 GB	7200 GP
	WD7500AVVS	750 GB	7200 GP
	WD10EACS	1 TB	7200 GP
	WD10EADS	1 TB	Caviar Green
	WD10EVDS	1 TB	Green Power
	WD10EVVS	1 TB	7200 GP
	WD10EARS	1 TB	Caviar Green
	WD10EALX	1 TB (SATA III)	Caviar Blue
	WD15EADS	1.5 TB	7200 GP
	WD15EARS	1.5 TB	7200 GP
	WD15EURS	1.5 TB	7200 GP
	WD5000AVDS-63U7B0	1.5 TB	7200 GP
	WD15EVDS	1.5 TB	7200 GP
	WD20EADS	2 TB	7200 GP
	WD20EVDS-63T3B0	2 TB	7200 GP
	WD20EARS	2 TB	Caviar Green
	WD20EURS	2 TB	7200 GP
	WD30EURS	3 TB	CE-GP
HITACHI	HDS721616PLA380	160 GB	7200
	HDT725025VLA380	250 GB	7200
	HDT725032VLA360	320 GB	7200
	HDP725050GLA360	500 GB	7200
	HCP725050GLA380	500GB	7200
	HDT721010SLA360	1 TB	7200
	HDS721010CLA332	1 TB	7200
	HDS722020ALA330	2 TB	7200