>>High Definition

Network Video Recorder

(4 Channel) User's Manual

H.264 | Mouse USB | Network | Multi-screen | OSD

Please read the user manual carefully before operation.

CAUTION!
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER WHILE THE DEVICE IS CONNECTED TO A POWER SOURCE. THE DEVICE'S INTERNAL PARTS CANNOT BE SAFELY REPAIRED BY USERS. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING
TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

NOTE: This device has been tested and found to comply with the limits (what limits? You need to tell me) for Class A digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the device is operated in a commercial environment. This device generates, uses, and can transmit radio frequency energy, and, if not installed and used in accordance with the instructions in the user manual, may cause harmful interference with radio communications.

FCC Caution: To ensure continued compliance, use only shielded interface cables when connecting this device to computers or peripheral devices. Any changes or modifications (COMMENT: changes or modifications to what? not expressly approved by provider could void the user's authority to operate this device.)

This Class A digital device meets all the requirements of the FCC Regulations.

LIMITATION OF LIABILITY

- This user manual is supplied “as is”, with no warranties, be it expressed or implied, including, but not limited to the implied warranties of merchantability, suitability for any exact purpose, or non-infringement on any third party’s rights.
- This publication may include technical inaccuracies or typographical errors. The manufacturer holds the right to introduce any changes to the information contained herein for any purpose, including, but not limited to improvements of the product and publications related to it, at any time, without prior notice.

DISCLAIMER OF WARRANTY

The supplier shall not be liable to any party or any person, except for replacement or reasonable maintenance of this product, for the cases including, but not limited to the following:

- Any damage or loss, including, but not limited to: direct/indirect, consequential, special, exemplary use arising out of or related to the product;
- Inappropriate use or negligence of the user during operation of the product, resulting in personal injury or any damage;
- Unauthorized disassembly, repair, or modification of the product by the user;
- Any problems or consequential inconvenience, loss, or damage caused by connecting this product to devices of the third parties;
- Any claim or action for damages brought by any photogenic subject, be it a person or an organization, due to invasion of privacy whereby the surveillance picture and/or saved data becomes public or is used for purposes other than surveillance.

SAFETY INSTRUCTIONS

Read these instructions and keep them in a safe place for future reference.

- Please refer all servicing related to the installation of this product to qualified service personnel or system installers.
- Do not operate the device under conditions outside its recommended temperature, humidity or power source ratings.
- Place the unit on a flat surface not prone to vibration or impact.
- Use the appliance at temperatures between 0oC- 45oC (32oF -113oF) and humidity below 85%.
- The input power source for this appliance should be between 90-230V AC, 47-63 Hz.

- Install the unit away from heat sources such as radiators, heat registers, and stoves. Installation of the unit near consumer electronics, such as stereo receivers/amplifiers and televisions, is permitted as long as the air surrounding the terminal does not exceed the aforementioned temperature range.

- **Handle hard disk drives with care.**
  It is possible to damage hard drives if they are moved while their motors are still running. To allow the hard drive to spin down and park its heads, wait at least 10 seconds after disconnecting it from a power source before moving the unit.
  To avoid shock and vibration damage to the internal hard drive, do not move the unit while it is plugged in.
  Protect hard disk drives from static electricity.
  Do not stack hard disk drives or keep them upright.
  Do not use an electric or magnetic screwdriver to repair hard disk drives.

- Do not impede the flow of air through the vents or place the unit in an enclosed area where the cooling vents are blocked.

- Protect the power cord from being stepped on or pinched, particularly at plugs and the points where they connect to the device.

- Do not drop metallic parts through slots, as this could permanently damage the device. If a metallic object falls through the slots, turn the power Disable immediately and contact qualified service personnel for service.

- Handle the device with care. Do not drop or shake it, as this may damage the device.

- Do not expose the device to moisture or try to operate it in wet areas. Do not install the unit in an area where condensation occurs. Do not operate with wet hands. Take immediate action if the appliance becomes wet. Turn the power Disable and refer servicing to qualified service personnel, as moisture may damage the appliance and cause electric shock.

- Do not use strong or abrasive detergents when cleaning the body of the device. If dirt is difficult to remove, use a mild detergent and wipe gently.

- Do not overload outlets and extension cords, as this increases the risk of fire and electric shock.

- Make a note of your settings and save them in a place where you can easily find them. This will help if it becomes necessary to change the system configuration, or if an unexpected failure or problem occurs.

- Distributing, copying, disassembling, reverse compiling, reverse engineering, and exporting the software provided with this product in violation of export laws, is expressly prohibited.

CARING FOR THE ENVIRONMENT BY RECYCLING

When this symbol appears on a product, do not dispose of it with residential or commercial waste.

Recycling Electrical Equipment

Do not dispose of this product with residential or commercial waste. Some countries and regions, such as the European Union, have established systems for collecting and recycling electrical and electronic waste items. Contact your local authorities for information about practices established for your region

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1. Your NVR at a Glance

Product Overview

Model	4 CH
Video Format	PAL/NTSC
Video Decoding	H.264 Baseline Decoding
Video Input / Output	4CH Network Input; 1CH CVBS+1CH VGA+1CH HDMI output
VGA/HDMI Output	VGA: Up to 1280*1024, HDMI: Up to 1920*1080
Audio Format	G.711
Audio Input / Output	4CH Network Input; 1CH RCA Output
Network Protocol	ONVIF/PPPOE/DHCP/DNS/DDNS/NTP/RTSP protocol
Double Stream	Every channel supports main and sub stream
Display Resolution	720P
Playback Resolution	720P
Recording Frame Rate	PAL: 25Fps/CH; NTSC: 30Fps/CH
Recording Playback	4CH real time playback
Recording Modes	Power-on Auto Record / Manual / Schedule / I/O Alarm / Motion
Sensor In / Out	4CH Input / 1CH Output
Network Interface	RJ 45 10/100Mbps Ethernet
PTZ Control	PTZ Control for remote PTZ IP cameras
HDD Interface	SATA Interface support 2TB, HDD*1
Network Functions	Live Monitoring, Playback, Configuration, Backup, Mobile Phone Surveillance
USB 2.0 Interface	Mouse / Portable Mobile HDD/ Flash Drive/ DVD Writer/ Firmware Upgrade
Playback Options	Normal, Fast Forward, Slow Forward, Rewind, Single Step
Video Backup	AVI or h.264 from NVR
Power Adapter	DC 12V Adapter
Power Consumption	10-15W
Operating Temperature	-10 ¥+40 ¥
Dimensions*	315(W) x 224 (D) x 51 (H) mm

***Details may vary with different models**

Congratulations on purchasing a state-of-the-art Network Video Recorder (NVR). This NVR Disablers the industry's best triplex functionality with video/audio recording, playback, and network capability, which can all be run simultaneously, streamlining the use of CCTV systems and boosting the security level of the home, business, or social venue where it is installed. Users can access live or recorded feed from standard or PTZ IP cameras directly at the location of the NVR installation, or anywhere in the world using web-browsers or a mobile phone*. The video may be stored at a remote location for safety.

(*Some limitations apply to Web- and phone-based features; please see the related sections for more detailed information.)

Users are advised to become familiar with the NVR's parts and accessories, as well as how to use the device as described in this instruction manual. For any questions that this guide does not answer, please contact a local vendor or a certified specialist.

In this manual, "-ch" and "CH" are used as abbreviations for "channel", so, for example, "4-ch" means "4-channel" (i.e. a 4-channel NVR model), and "8-ch" means "8-channel", and "16-ch" means "16-channel".

Note: Please don't connect the USB flash drives to the NVR before turning on the NVR or during restarting the NVR.

2. Contents of the Package

- Network Video Record (NVR)
- User manual
- Installation CD
- Remote control
- Power cord
- Mouse (varies by model)
- Hard disk drive (varies by model) (if you would like to use your own hard disk drive(HDD), please see **Appendix 2** for a list of compatible HDDs)

2.1 Getting Started Checklist

Before setting up this NVR, check to make sure the answer to all of the following questions is "yes":

a) Are the power and the Ethernet cables plugged in? Please see Section **3.5.1 Basic Connections** for more information.

b) Has the HDD been properly installed and formatted? Please see Sections **3.5.2 Installing Hard Disk Drives** and **5.4.2 HDD Manage** for more information.

3. Hardware

3.1 Front Panel (Please take actual machine model as quasi)

The appearance of the front panel varies slightly with each different NVR model. The illustrations of front panels in the following images are examples for reference.

This subsection will explain the functions of each of the buttons and other components on the front panel of the NVR.

- **buttons**

  Using these buttons, you can choose to display video on your monitor either as a full-screen view of each of the cameras individually (channels 1-4, depending on the model), or all channels simultaneously ( ).

- , , , , **buttons**

  Use the arrow buttons to select menu items. Press the "Enter ( )" key to enter the menu and sub-menus. Press the " " key or " " key to confirm your choice.

- **Power LED, HDD LED**
  LED lights indicate the NVR's connection to the power supply, recording status.

- **Menu ( ):** Press this button to access the toolbar, hide the toolbar and exit from the menu or sub-menus.

- **Rewind (◄◄):** Press this button to rewind the video during playback.

- **Play/Pause ( ):** Pressing this button opens the video search function and the playback menu. When the playback mode is activated, press this button to play/pause playback.

- **Stop (■):** Press this button to stop playback.

- **Fast Forward (►►):** Press this button to fast forward the video during playback.

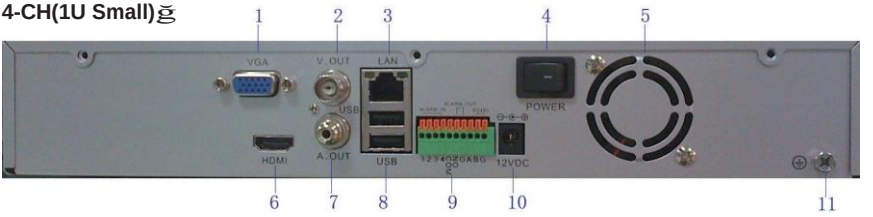
- **REC (●):** If schedule recording or continuous recording didn't start, use this button to start or stop manual recording.

- **IR Window ( ):** Infrared sensor for remote control.

- **USB Connector:** Use these USB ports to connect backup devices (i.e. flash drives, USB DVD recorders, etc.) or a mouse to the NVR.

3.2 Back Panel (The following are diagrams of ALL of the available NVR models; not all models have the same layout or features. For reference, find the diagram of the model you have purchased.)

4-CH(1U Small)



1. VGA Connector
For connecting the NVR to a VGA/LCD monitor.

2. Video Output Connector
Video output for connecting the NVR to a monitor or TV, BNC (1Vp-p, 75Ω).

3. Ethernet Connector
RJ-45 10/100 Base-T Ethernet network

4. Power Switch

5. Cooling Fan

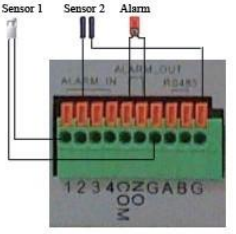
6. HDMI: High-definition multimedia interface (HDMI) port.

7. Audio Output Connector
Single-channel audio output connector for connecting speakers.

8. USB connectors
Use these USB ports to connect the mouse and backup devices (flash drives, USB DVD recorders) to the NVR.
Note: On some models, the USB port is on the side panel or on the front panel.

9. Alarm Input Connectors (4ch-: ALARM IN CHANNELS 1-4)
For connecting to external sensor devices
Each alarm has one input pin on the terminal block of the rear panel.
Connect the positive (+) output pins of the device to the input slots (“Alarm In”) on the NVR t erminal block (4-ch: 1 – 4).
Connect the ground (-) output pins of the device to the NVR ground slots (G). Multiple devices can be connected to one ground slot.

4-ch



Port functions:
Pin 1-G: Sensor 1 input; Pin 2-G: Sensor 2 input;
Pin 3-G: Sensor 3 input; Pin 4-G: Sensor 4 input;
Pin NO-COM: Alarm Output (N.O);
Alarm Output Connectors (pin NO-COM)
For connecting the NVR to external alarm devices

10. Power Input Socket (12V DC)

11. Ground

3.3 Remote Control

Pressing the "enter" key on the remote control or the front panel of the N VR has the same function as left-clicking a computer mouse. The functions of the buttons on the remote control are identical to the functions the buttons with the same markings on the front panel of the NVR.

Stop (■): Press this button to stop playback.

Play/Pause ( ): Pressing this button opens the video search function and the playback menu. When the playback mode is activated, press this button to play/pause playback.

(◀ ▶ ▲ ▼): Move selected item in menu. Press the "▲" key or "▼" key to confirm your choice.

Menu (MENU/ESC): Press this button to access the toolbar, hide the toolbar, enter or exit from the menu, and enter or exit sub-menus.

Lock ( ): Press this button to log out of the system.

Numerical Buttons: Using these buttons, you can choose to display video on your monitor either as a full-screen view of each of the cameras individually (Channels 1 through 9), or you can press the "10+" button in combination with other buttons to select channels between Channels 10-16. For example, if you want to display Channel 12 in full-screen mode, press button " 10+" and button "2", then Channel 12 will be displayed full screen.

Rewind (◄◄): Press this button to rewind the video during playback.

Fast Forward (►►): Press this button to fast forward the video during playback

ENTER: This button is used as the "enter" key in most circumstances (i.e. for selecting items from a menu).

Spot View ( ): Press this button to enable auto sequencing, and press any other button to interrupt sequencing.

Mute ON/Mute Disable ( ): Press this button to turn the sound on or disable.

Quad ( ): Press this button to switch display modes. There available modes are: 4-CH mode, 6-CH mode, 8-CH mode, 9-CH mode. The display modes can be adjusted according to preference.

REC (●): If schedule recording or continuous recording didn't start, Press this button to start or stop manual recording.

3.4 Mouse Control

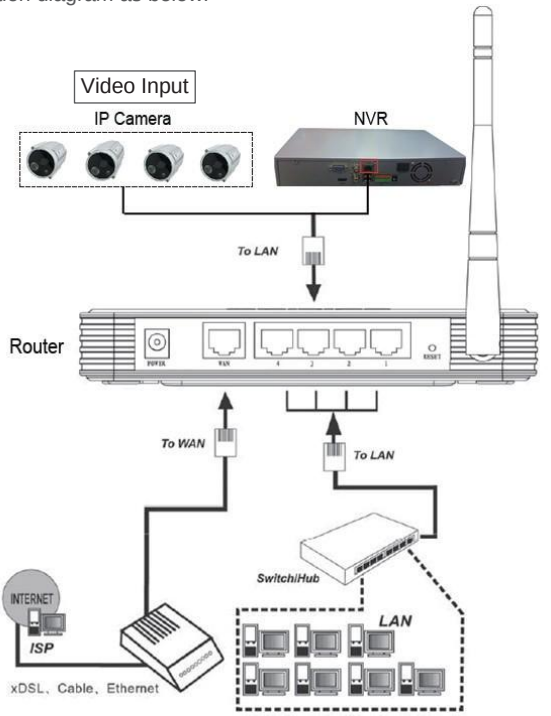
As well as the remote control and the buttons on the NVR itself, you can use a mouse to operate the NVR. The mouse operates just like a mouse on a typical computer. To start, connect the mouse to the USB port in the back panel of the NVR; note that you can hot-plug the mouse.

Right-clicking	In live view, right-clicking will either display or hide the toolbar.
	From the main menu or a sub-menu, right-clicking will exit the current menu.
	In video playback, right-clicking will display the playback control bar if it has been hidden.
Left-clicking	In menu unlock mode, left-clicking on the “Main Menu” icon in the tool bar will open the main menu.
	After entering the main menu, left-clicking will open sub-menus.
	By left-clicking, you can select values in edit boxes or pull-down menus. The system supports the input of Chinese characters, and other special symbols numbers, and letters.
	On the playback interface, left-clicking can control the fast-forward function, the rewind function, the slow-motion function, frame-by-frame playback function, the normal play function, and can stop any of these processes or be used to exit from a mode or menu.
	Left-clicking can be used to access the color control bar and the volume control bar.
	From the main menu, sub-menus, or playback view, left-clicking “x” will exit the current menu.
	Left-clicking can also be used to select menu items.
Double-clicking left mouse key	In live view, double-clicking will maximize the screen. In video playback, double-clicking will maximize the selected channel to full screen if the playback control bar displayed on the screen.
Mouse drag	In the motion detection setting interface, you can left-clicking and then drag the frame to set the motion detection area.

3.5 Hardware Installation

It is recommended that the installations described below be carried out by qualified personnel.
Users need to connect the IP cameras and NVR to the same LAN through Ethernet cables.

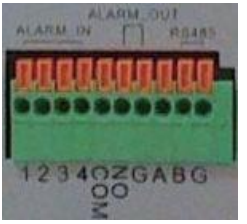
Network connection diagram as below:



3.5.1 Basic Connections

- **Monitor**
  Connect the main output connector to a monitor or a TV screen. Use a BNC-to-RCA converter, if needed, to work with the Audio/Video RCA cable.
- **Power**
  Use the 12V DC adapter supplied for connecting your NVR device to the power source.
- **Alarm Input / Output**
  Connect the Alarm In 1-4 to N. O. (Normally Open) or N.C. (Normally Closed) alarm connectors to one ground connection. Connect the Alarm Out to the corresponding connections and ground accordingly.
  For detailed description please see Section **5.3.4-IV I/O Alarm**

4ch

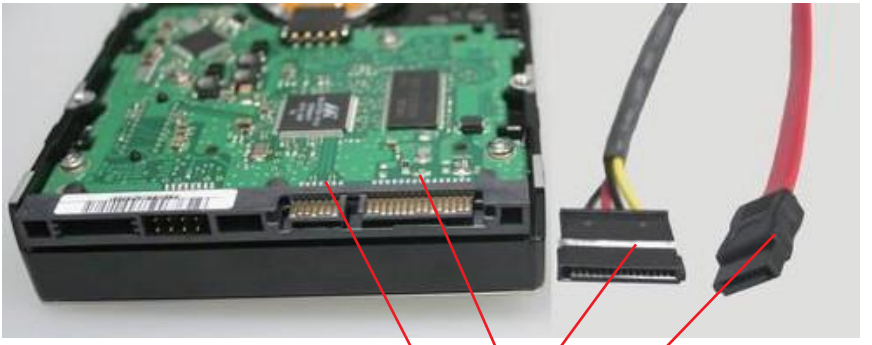


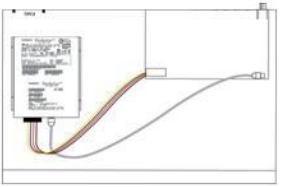
- **Ethernet**
  For connecting remote IP cameras to the NVR on LAN, connect a standard RJ-45 twisted-pair Ethernet cable to the Ethernet port.
- **USB**
  Use this port for connecting the mouse, USB flash drives, USB portable HDDs. The USB mouse can be hot plugged.

NOTE: The device only supports the FAT32 file system on USB devices.

3.5.2 Installing Hard Disk Drives (HDDs)

Before you can record onto your HDD, it must be formatted by the NVR system because standard PC formatting is not compatible with the NVR. It can be done through the "System Maintenance" tab of the main menu in the toolbar. Refer to Section 5.4.2 HDD Manage for a detailed description of this process. Depending on the size of your HDD, the formatting process can take up to several minutes.





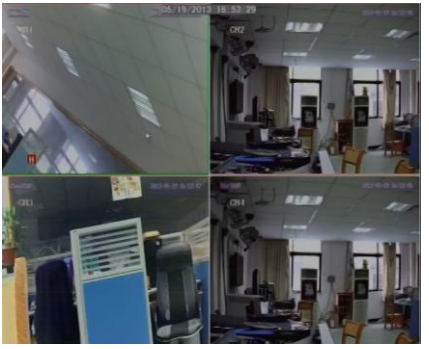
The HDD should be installed inside the NVR. Connect the HDD in according to the instructions, screwing the HDD into the HDD brackets or NVR base. All necessary cables are included with the NVR. If using a hard drive from another manufacturer, use instructions that came with the hard drive for specific details on proper wiring and installation. Connect the power cable to the appropriate socket, and connect the data cables to their corresponding ports.
For a list of HDDs tested and approved for compatibility with NVRs, see **Appendix 2**.

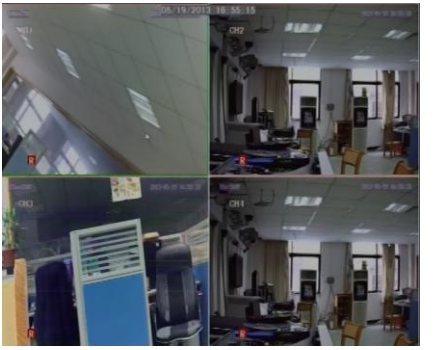
4. Getting Started and the Main Screen

Turn on the NVR and wait for the system program to load. If any of the following conditions are true.

- User has not yet installed a hard disk drive into the device.
- The NVR cannot read the HDD.
- If a new HDD has been installed in the NVR but has not yet been formatted.
- There is not enough space on the HDD to record, it will display an icon (H) in the video preview interface. The HDD must be formatted in the NVR before use.

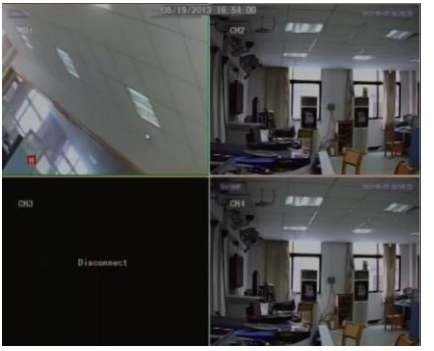
To format the HDD, first, from the main menu, select “System Maintenance”. Then select “HDD manage” and lastly, select “format”. If the HDD is already installed, the default setting is for the NVR to start recording and a record icon (R) on the screen will indicate that it is functioning normally.





4.1 The Main Screen

The standard layout is four windows evenly distributed over the screen. If users haven’t added any IP camera to the NVR, the screen of the channel view will be black. And if the remote IPC connected to the NVR has been disconnected, a message “Disconnect” will be shown on the current channel view. From the main screen, you can access menu options and switch among channel views, displaying either all channel feeds simultaneously or displaying a full-screen view of a single selected channel.



4.1.1 Displaying a Single Channel

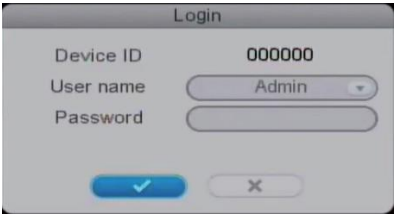
In the multiple-screen view, you can make a particular window active by left-clicking on it twice with a mouse, or navigating to it using directional buttons (◀, ▶, ▲, ▼). If an audio output device is connected to this channel, you can monitor both audio and video feeds.

To display a full-screen view of a single channel, press the corresponding numerical or positional buttons( ) on the remote control (the channel number is displayed in the top left corner of each window); alternatively, you can do so by left double-clicking on the desired window.

In order to return to the multi-screen view, either double-clicks on the screen again or press the single-/multiple-view button either on the remote control or the front panel of the NVR.

You can choose to display the toolbar, or to hide it by right-clicking on the screen.

4.1.2 Login NVR



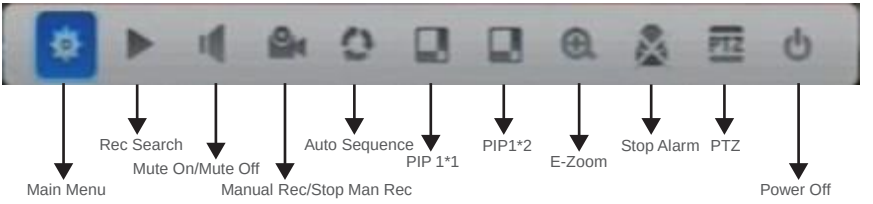
In live view, press the " " button twice or double-click the right key of the mouse to display the tool bar. The login window will appear if the password is enabled.

You can log in from the "Login" window as shown in the adjacent figure. Select a user name and password via numeric keyboard. You can access the main menu by pressing " " if the password is enabled.

Note:
The default password for Admin is "admin". For your convenience and system safety, you can change password of Admin and add another username.

4.1.3 Tool Bar (Please take actual machine model as quasi)

After logging in system, single-click the right-hand mouse button, and it will display the following toolbar.



The functions of the buttons in the toolbar are as follows:

Main Menu: System configuration.

Rec Search: Search and playback of recorded files.

/ Mute On/Mute Off

/ MANUAL Rec/STOP Manual Rec: Click the button " " on the tool bar or the button "●" on the front panel to start manual recording. Click the button " " on the tool bar or the button "●" on the front panel to stop manual recording.

Note: If schedule recording or continuous recording started, the manual recording won't be processed until the schedule recording or continuous recording stopped.

Auto Sequence: Click "Auto Sequence" on the toolbar to enable auto- sequencing; if the option "System- Basic- Sequence" is set as "In Order", this will display the channels with images in sequence: channel 1-channel 2-channel 3-channel 4-channel 1……; if the option "System—Basic—Sequence" is set as "Inverted", this will display the channel with images in sequence: channel 4- channel 3- channel 2- channel 1-channel 4…… . Channels without images will not be displayed. To interrupt auto sequencing, press any button or click the mouse while in auto-sequence mode.

PIP 1*1: This feature displays the video from one channel in a small inset window, while another channel is displayed in full-screen view.

PIP 1*2: PIP 1*2: This feature displays two channels in small, inset windows, while another channel is displayed in full-screen view.

EZOOM: First user must select one channel on live view, and enlarge the current channel view to full screen. Then click "EZOOM" to enter zoom mode, and then left-click and drag the cursor to select the area to be magnified. Right-click to exit zoom mode.

Stop Alarm: Click this button will cancel alarm notifacation if alarm has been triggered.

PTZ: Opens the PTZ control menu.-(optional)

—— **Shut Down**

—— **Restart:**Use this function to restart the device. ***Please don't connect the USB flash drives to the NVR during restarting the NVR.***

—— **Logout:** If the password is enabled, clicking "Logout" will log the user out of the system and lock the NVR such that pressing keys or icons will have no effect on NVR activity until a user enters the password to disable the keylock.

See the following subsections for a detailed description of each of these functionalities.

4.2 Tool Bar Menu Options

4.2.1 System Configuration

After pressing this button, a screen for configuring all system settings will appear. From this screen, IPC (Remote Device Management), video playback, files backup, maintenance and information can be adjusted. Refer to Section 5. NVR Settings for a detailed description of these settings.

Note:

1. Users need to click the " " button to save parameters in the current window.
2. A special feature of this NVR is that an explanation of each menu item will be displayed automatically when the cursor is moved over it.

4.2.2 Manual Recording

There are five ways of recording live video/audio feed from your IP cameras: **manual recording, scheduled recording, motion detection alarm recording, I/O alarm recording** and **continuous recording.**

If schedule recording or continuous recording started, the manual recording won't be processed until the schedule recording or continuous recording stopped.

For a detailed description of motion detection alarm recording and I/O alarm recording, see **Section 5.3.4-III Motion** and **Section 5.3.4-IV I/O Alarm.**

For a detailed description of scheduled recording, see **Section 5.3.3 Record.**

In order to manually record a video/audio feed, if the system doesn't start recording, users can select the " " button from the "Tools" menu. Alternatively, users can press the "REC" button on the remote control or the front panel of the NVR. Pressing " " or "REC" again will stop the recording process.

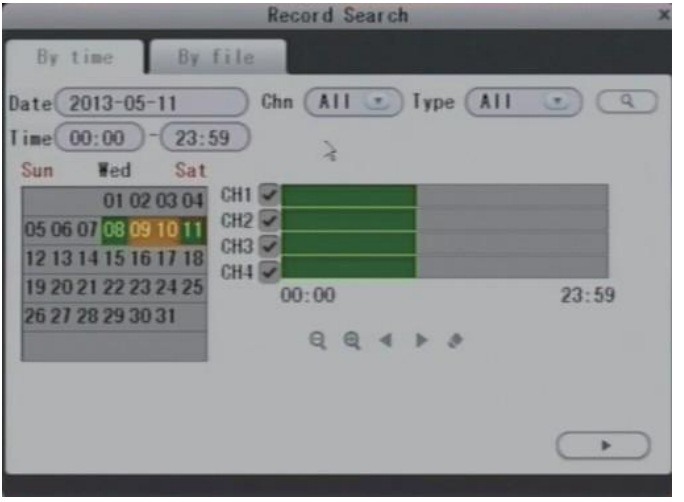
4.2.3 Video Playback

To start video playback, first move the cursor to " " (the icon will be highlighted when selected) and left-click it to enter the settings menu; alternatively, press the "**►/II**" button to enter the settings menu. And left-clicking the "**x**" button will exit the current window, or move the cursor to the ""x" button and press the "Enter" button to exit.

There are two methods of searching for recordings: by time and by file. For a 4-ch NVR, up to 4 channels can be selected for playback, and it will real-time playback as a full-screen mode for each channel with 720P or 960P decode.

I. Playback by Time

In order to playback a certain video feed from a particular camera, you first need to indicate what time and which camera you wish to receive this information from.



Adjust the date and time to match the recording you are searching for. First, select “By time”, and next, input the time in the next field, and click “ ”. If you are using the remote or front panel, press “Enter” to input numbers directly to set the date and time, you can modify the time with the help of the ◀, ▶, ▲and ▼buttons. Press **[Enter]** to confirm your selection. After selecting the day, please click “ ” to search for the recordings from that day.

The calendar on the above figure will show all the recordings in a given month. A green background on the calendar indicates normal recording, a red background indicates I/O alarm recording, an orange background indicates motion detection alarm recording, and a gray background indicates that there was no recording. Click any date in this frame to search by the recording status of that day, and the search results will be shown in the date frame.

Select the start and end time on the time line positioned against the available channels (you can choose which channel to view by selecting the checkbox next to each channel, “ ” indicates that the channel will be selected). The start and end times of the recording you wish to view are indicated by two vertical lines on the time line. When you are using the remote and try to go to the desired line using directional buttons. If you would like to fine-tune the required time, you can use the buttons to zoom in / zoom out of the time line. Alternatively, you can move along the time line using and buttons. Time values will be shown above the time line. Press “Enter” button once to confirm the time line, and press “Enter” button once again to cancel the time line.

Using mouse: left-click once to setup the start time, the subsequent left-click will indicate the end time, and left-click again will cancel the marked time.

Using front panel: you can navigate between fields using and buttons and modify the time with the help of the ▲ and ▼ buttons. When moves to the channel, press **[Enter]** to confirm or cancel your channel selection. If you would like to fine-tune the required time, you can use the buttons to zoom in / zoom out of the time line. Using and buttons to switch pages when it zooms out too large.

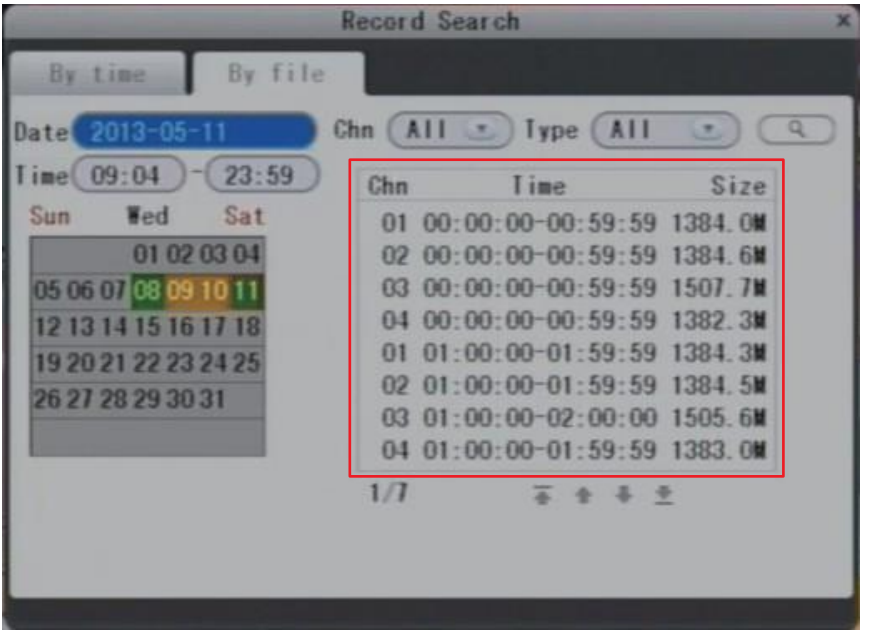
After searching, using and buttons to move the time, and press **[Enter]** button to choose start time line. Press **[Enter]** again to popup the second time line as the end time line. Also can use and buttons to move the time line. Then press **[Enter]** to confirm the time. And press **[Enter]** to cancel the time.

The available recordings will be represented by differently colored bars on the time line depending on the type of the recording (**Green:** common recording, **Orange:** motion detection triggered recording, **Red:** I/O alarm triggered recording, Gray: no recording).

To play the selection, press the Play button (or navigate to it and press **[Enter]** on the remote control or the front panel): the selected channels will playback in the standard view windows in their respective positions on the monitor screen.

II. Playback by file

Input the date and time, click “ ” and the recording status on that date will be displayed. The calendar on the following figure will show all the recordings in a given month. A green background on the calendar indicates normal recording; a red background indicates alarm recording, and a gray background indicates that there was no recording. Click any date in this frame to search by the recording files of that day, and the search results will be shown in the file frame.



On the file list, "**Channel**" shows which channel the file was recorded under, "**Time**" shows the recording time, and "**Size**" is the size of this file (listed in MB). An orange list indicates this recording file is a motion detection recording file, a red list indicates this recording file is an alarm recording file, and a black list indicates this file is a normal recording file.

Move the cursor up or down to select the files, left-click to enter the playback menu. It will play the video from a single channel in full-screen view. When the selected files finish, the screen will return to the file list menu.

Using " " button to enter into the first page, using " " button to previous, using " " button to the next page, and using " " button to the last page.

Note:

1. After moving the cursor up or down and selecting the files, left-click to enter the playback menu. It will play the video from a single channel in full-screen view.

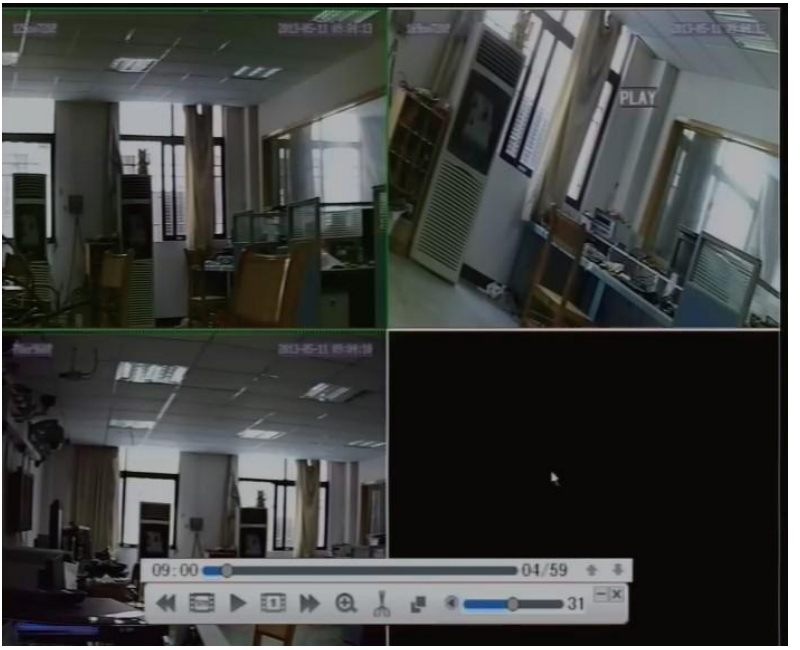
2. If the "Main Menu—configuration—Video—Record Time" section is set as "Open" for the current channel, it will show the date/time that the video was recorded when playing back recorded file; if it is marked as "Close", it will not display the time.

3. When the selected files finish, the screen will return to the file list menu.

III. Playback Control

In playback mode, users can view the playback control panel as well as the date and time of the file being played.

During playback, drag the process slider to switch the file playback progress; press “ ” to play the video in slow-motion; press “ ” to fast forward; press “ ” to rewind; press “ ” to pause and run frame-by-frame playback; press “ ” to minimize the window; press “ ”to exit from playback and return to the former menu.



The following are the functions of and options for the items in the playback control panel:

Click it to the previous file.

Click it to the next file.

Fast rewind: the available speeds are 2x, 4x, 8x, 16x and 32x.

Slow forward: the available speeds are 1/2x, 1/4x, 1/8x, 1/16x and 1/32x.

Play

Pause / Frame Put (Frame-by-frame view)

Fast forward: the available speeds are 2x, 4x, 8x, 16x and 32x.

E-zoom: While the video is playing normally (the speed is 1x), first enlarge the channel to full screen user wants to enter zoom mode. Then click “ ” icon to enter zoom mode, and then left-click and drag the cursor to select the area to be magnified. Right-click to return tothe normal mode.

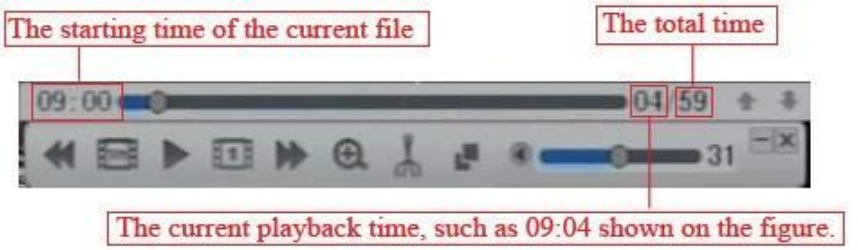
Video editing

Backup

31 Volume control

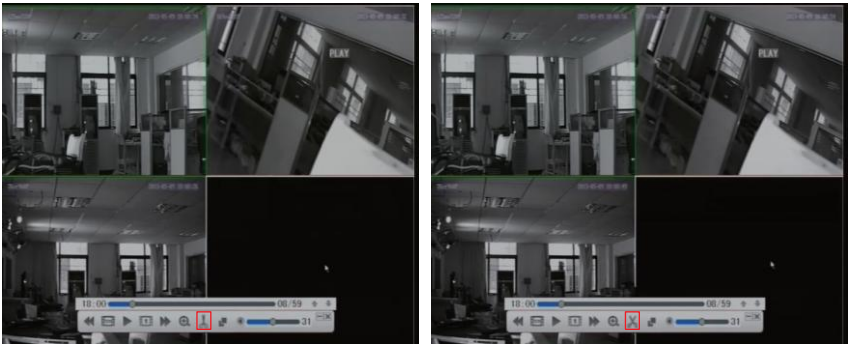
Minimize the control panel.

Exit from playback and return to the former menu.

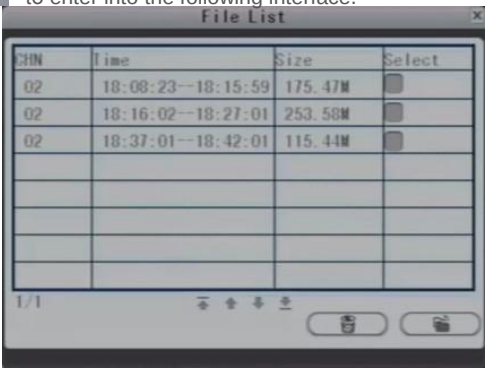


4.2.4 Video editing

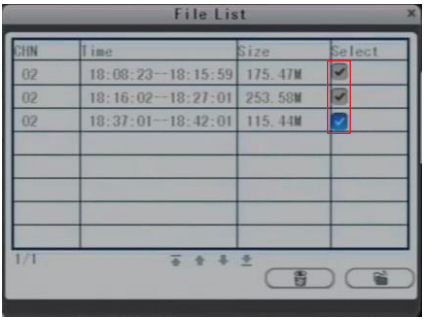
To playback first, and in playback mode user can edit a section of the video through the button “ ”.

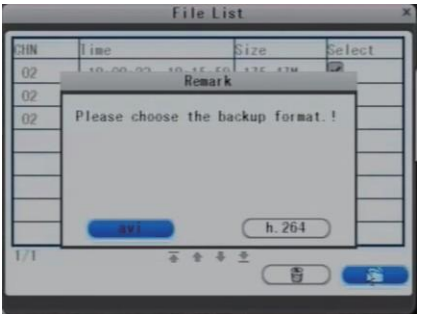


During playback, user can choose the channel that he wanted to edit and the color of the selected channel’s frame will change to green. Then click the button “ ” in the playback control panel when user wanted to begin to edit the video, then the button will change to “ ”, and during editing, the button “ ” is disabled. When user wanted to end the editing, click the button “ ” again, and it will change to “ ”. Then insert the USB device and click the button “ ” to enter into the following interface.



On the file list, select the files, and click the button “ ” to enter the next window. Choose the file format (“avi” or “h.264”), and click the button “ avi or “ h.264 ”, and then the file will be saved into your USB device.





Note:

1. User can edit 32 pieces of recorders at most, and the button “ ” will change to “ ” go beyond the limit.
2. On the file list, click the buttons “ ”, “ ”, “ ” and “ ” to navigate pages, click the button “ ” to clean up the list. Click the button “ ” to exit from the window.
3. In addition, if user exited from the playback mode and the file list of the video editing will be cleaned away automatically.

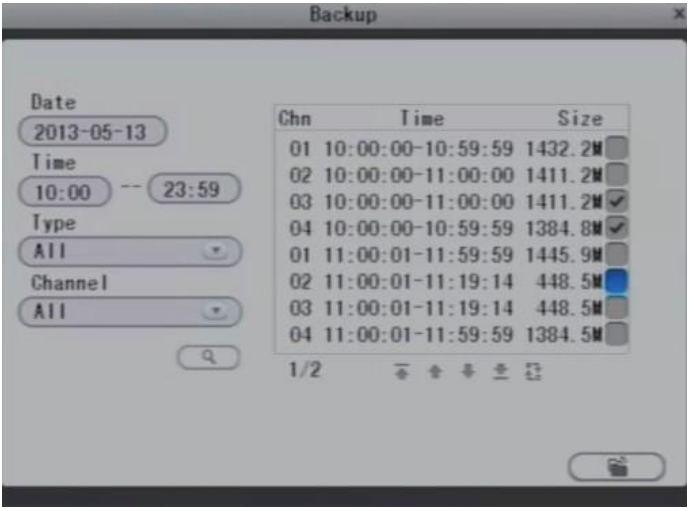
4.2.5 Video Backup

“Setup”—“Backup”(the tab will be highlighted when selected) and press “Enter” to enter the “Backup” menu.

User can back up for recordings through the method as follows. User can use USB devices for backup by inserting a USB device into the USB 2.0 port before backing up files. The NVR also supports USB OTG (USB On-the-Go).

Note: In standard English, a “U-DISK” would be called a “USB storage device” (the term “U-DISK” referred to in this manual and the software for this NVR is a direct translation of the Chinese word for “USB drive”).

Enter “Backup” menu, adjust the date, time, type and channel to search for (as shown in the following figure).



[Date]: Adjust the date users want to search.

[Time]: Adjust the start time and the end time user wanted to search.

[Type]: The option indicates the type that user will search for. And options include “All”, “Normal”, “MD” and “I/O Alarm”. For example, if selecting “Normal”, only the normal recording videos will be searched for, and so on.

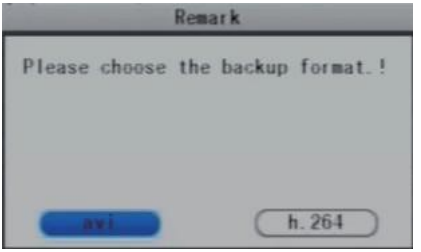
[Channel]: Select the channels user wanted to search. User can select only one channel or all the channels.

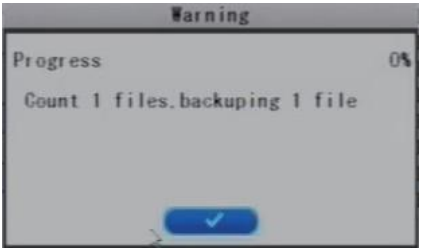
Move the cursor to “ ” and press “Enter” button. Or click “ ” button. The search files will be shown in the file frame (on the above).

On the file list, “Chn” shows which channel the file was recorded under, “Time” shows the recording time, and “Size” is the size of this file (listed in MB).

From the file listing menu, recording files can be selected using the direction keys. Press “Enter” to confirm a selection. A checkmark (√) will appear at the end of the filename after the selection has been made (pressing “Enter” again will cancel the selection, and the “√” will disappear). Once the files have been selected, they can be exported by selecting “Backup”.

Click “ ”, “ ”, “ ” and “ ” to navigate pages, click “ ” to reverse, and click “ ” to enter the next window to choose the format for backup. And “AVI” or “H.264” can be selected. Move the cursor to “AVI” or “H.264”, and press “Enter” key or left-click to backup.





Note:

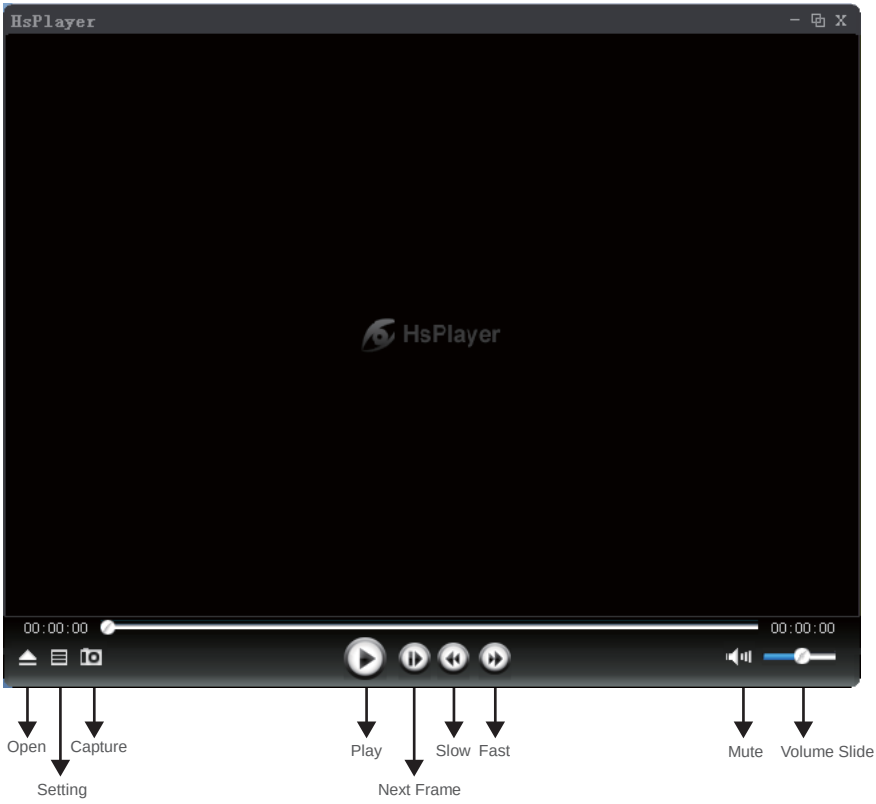
1. If the backup device being used does not have enough free space to save the file, a “No space in thumb drive” warning will appear.
2. The USB device can be removed immediately after the backup is complete.
3. If the system cannot recognize the connected devices, or if none are connected, a “No thumb drive!” warning message will appear.
4. If a USB drive is used to back up file, and the file format is AVI, the file can be played using Windows Media Player or “Hsplayer.exe”. If the file format is H.264, or if the file has been saved onto a DVD recorder and the file format is H.264, it can be played on home computers using “Hsplayer.exe.”
5. If a mass storage device or a USB DVD recorder is used to back up file, user had better connect it over the USB port on the back panel.

With the current models, external media as USB flash drives, portable USB HDDs, and USB DVD recorders can be connected to NVRs.

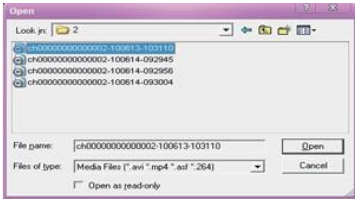
The system only supports the FAT32 file system for USB flash drives and HDDs

4.2.6 Playing Backed Up Videos on Home Computers

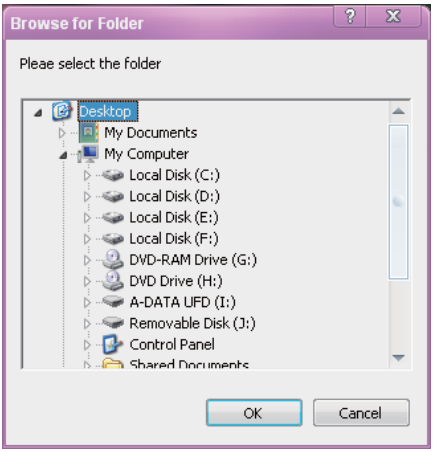
1) Copy the program “Hsplayer.exe” from the installation CD to the computer to be used. Double-click the “ HsPlayer.exe ” icon to run the program.



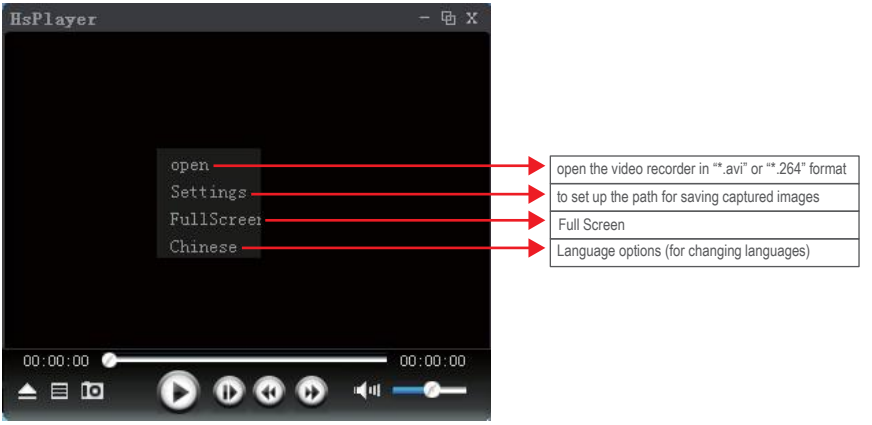
2) Click “ ” toopen the video recorder in “*.avi” or “*.264” format. Select a file and click” Open”to play the file.



3) Click “ ” to capture a still picture. Then, click “ ” to enter the “Settings” menu to set up the path for saving captured images. Click “Browser” to change the path for captured images. For example, select the folder “Desktop” and click “OK” to save the path.



4ĎRight-click to open the shortcut menu window.



Note: Files backed up on USB drives that those file formats are “AVI” can be played using Windows Media Player directly. Files backed up onto DVD recorders can be played using “Hsplayer.exe.”

4.2.7 PTZ Control

Chapter **5.3.7 PTZ** will explain how to set up PTZ parameters; this section will discuss how to operate the PTZ control. The PTZ control is to control the remote IP camera connected to the NVR through network protocol. User needs to make sure the remote IP camera connected to the NVR has PTZ function.

A. Connection

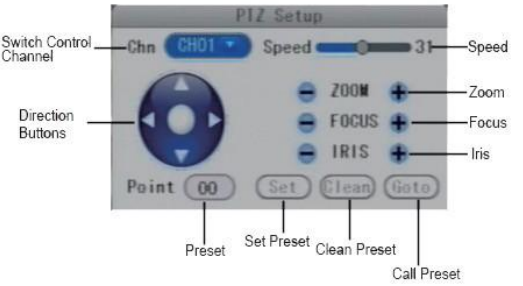
Make sure the remote IP camera and the NVR have been connected to the same LAN, and IP camera has been connected to the NVR.

B. Preparation

1) Set the control address of the speed dome camera and select the relevant control protocol.
2) Switch the current frame to the corresponding display channel.

C. Operation

Right-click to enter the toolbar menu under the real-time monitoring frame, and choose "PTZ" to enter the control frame.



In the PTZ control frame, switch "Chn" to the channel that connected to the remote PTZ IP camera.

"PTZ Direction Control" From the PTZ control frame, move the mouse to the upper, lower, left and right locations of the current frame, and this time, left-click and hold the mouse. Enter the control area of the corresponding location.

"SPEED" Regulate the rotating step length of the PTZ by using the slide bar. This function is mainly for the controlling the speed. The larger the value, the faster the rotational speed will be, with possible values ranging from 0-63 (with a speed value of "0", the camera will not rotate).

"IRIS -, IRIS +" This regulates the diaphragm.

"FOCUS -, FOCUS +" This brings objects into clear focus.

"ZOOM -, ZOOM +" Pressing this causes the lens to zoom in and out. Magnification can be changed by using the mouse wheel under the current frame.

"Point" Adjust the direction and angle of the camera, input the corresponding preset point numbers, and then click "Set" to preset the point numbers of the menu. Click "Clean" to clean the point numbers.

Input the preset point number, and click "Goto", to automatically switch the IP camera to the corresponding location of the preset point.

The functions of these menu options may vary depending on the make and model of the PTZ camera being used. For a detailed explanation of the available options, refer to the user manual included with the PTZ camera.

4.3 Channel Status Display

The following status icons will appear in the upper right corner of each channel frame.

M This indicates that the channel has detected motion while in motion-detection mode.

I This indicates that the channel has detected that something has set enable the sensor alarm while in alarm mode.

R This indicates that the channel is running in recording mode.

C This indicates that the channel has detected video cover while in video cover alarm mode.

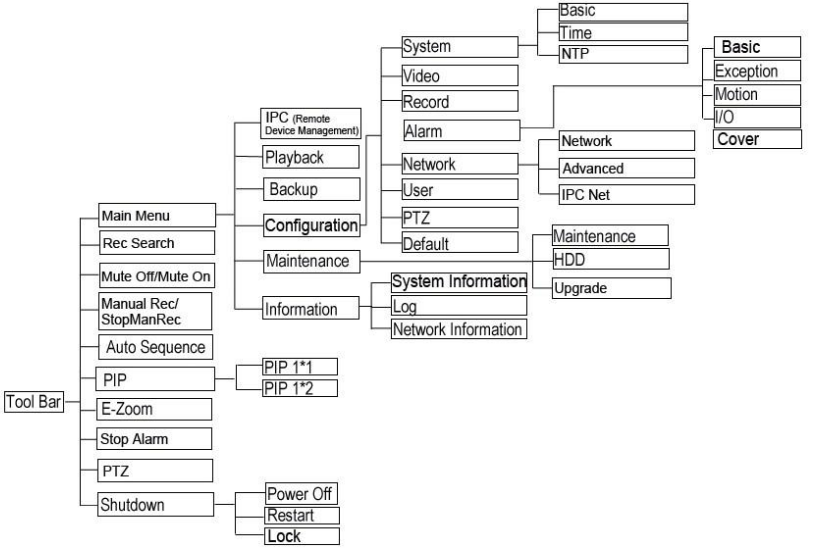
F This indicates that there is not enough space on the HDD to record or the HDD must be formatted.

H This indicates that the HDD installed on the NVR has been lost or there is no HDD connected to the NVR.

W This indicates that the HDD can't store the video data.

Disconnect This indicates that the remote IPC connected to the NVR has been disconnected.

5. NVR Settings



5.1.1 Menu Options

In order to modify/adjust the system configuration, it is necessary to enter the “Setup” menu; to do this, click the “Main Menu” icon ( ) in the “Tools” menu.

After clicking the “Main Menu” icon, a dialog box with settings for all of the systems and options available for the NVR will appear. The settings are divided into six subsections: “**IPC**”, “**Playback**”, “**Backup**”, “**Configuration**”, “**Maintenance**” and “**Information**”. The following are detailed descriptions of these settings.

5.2 IPC (Remote Device Management)

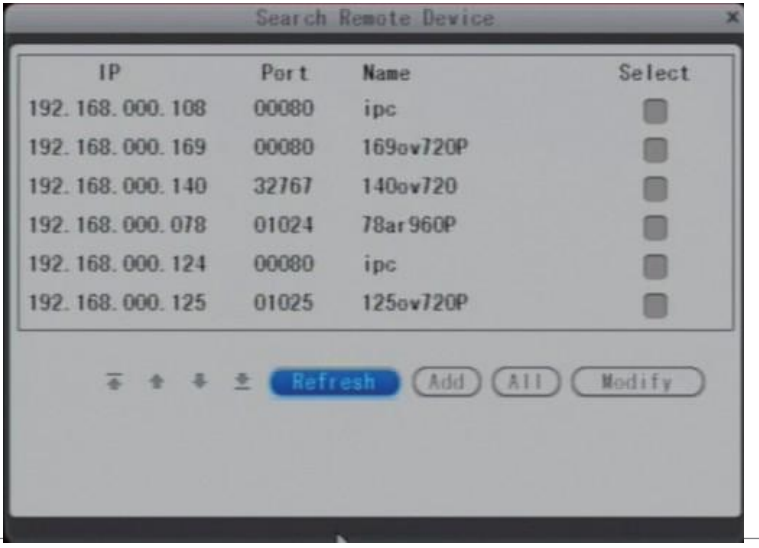
When users use NVR, how to make video input image display on the NVR? First users need to add IP cameras to the NVR, and users can add IP cameras according to the following methods.

Before adding IP cameras, users need to make sure that those IP cameras and NVR are both connected to the same network segment on the same LAN. Turn on the NVR, it will automatically search for the IP cameras on the same LAN, and if the IPC and the NVR are in the same network segment, the IPC will be automatically connected to the NVR. And the IPC video image will display in live view of the NVR. Up to four different IP cameras with the resolution of 720P or 960P can be connected simultaneously to the same NVR.

If IP cameras can’t be connected to the NVR automatically after NVR starting, users need to enter into the “IPC-Remote Device Management” to add online IP cameras manually.

“Main Menu” — “IPC” (the tab will be highlighted when selected) and press “Enter”to enter the “Remote Device Management” menu.

Click “ Search ” button and online IPC devices on the same LAN will be shown on the list of “search Remote Device” interface. Click “ ”, “ ”, “ ” and “ ” to navigate pages, click “ Refresh ” to search again. User can select one device or multiple devices but no more than four devices (“ ” indicates the device has been selected), click “ Add ” to add devices. If users add devices success, the image of the device will appear on the live view.

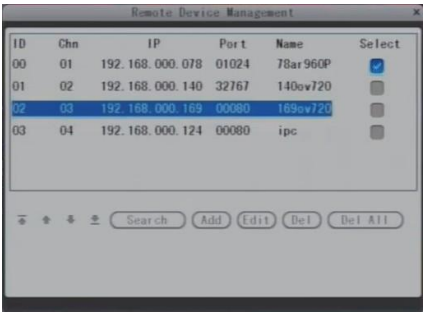


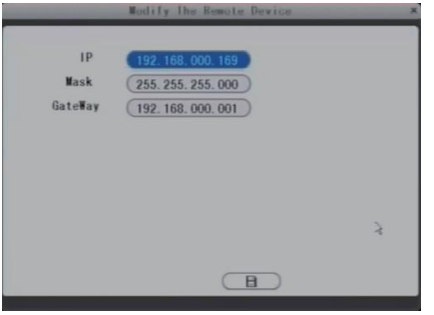
After adding devices user can right-click to return to the menu “Search Remote Device” interface to view added devices. On the list, “ID” is the serial number, “Chn” shows the channel number on the NVR(01 means channel 1), “IP” shows the IP address of the IPC connected to the current channel, “Port” is the port of the IPC connected to the current channel, and “Name” is the name of the IPC connected to the current channel.

On the interface user can edit parameters of the added device, select one and click “ Edit ” to enter “Modify the Remote Device” to modify the IP address, mask or gateway of the current device. Click “ 🖫 ” to save.

On the menu “Remote Device Management” interface user can delete the added devices.

User can only delete a single device or all devices, choose one and click “ Del ” to remove the current device, and click “ Del All ” to remove all the added devices.





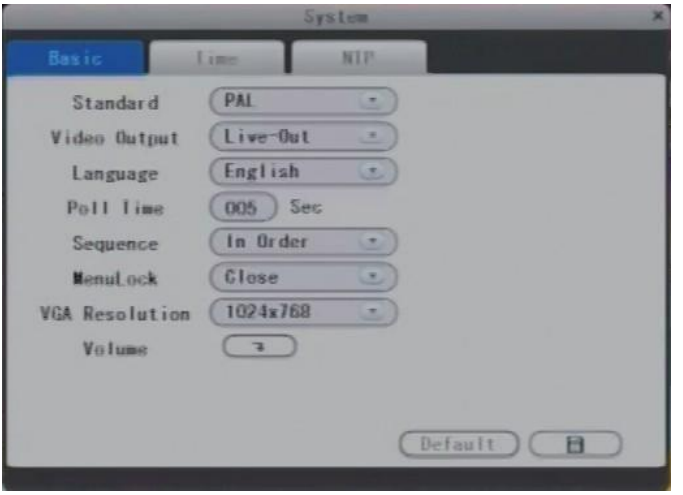
5.3 Configuration

“Main Menu”—“Configuration” (the tab will be highlighted when selected) and press “Enter” to enter the “Configuration” menu.
Setup management includes: “System”, “Video”, “Record”, “Alarm”, “Network”, “User”, “PTZ” and “Default”.

5.3.1 System

"Main Menu" — "Configuration" —"System" (the tab will be highlighted when selected) and press "Enter" to enter the "System" menu.
System setup includes: "Basic configure", "Time", "Time" and "NTP".

I. System—Basic Configure
Basic configure includes: "Standard", "Video Output", "Language", "Poll Time", "Sequence", "Menu Lock", "VGA Resolution" and "Volume".



[Standard]: From this field, select the system output type that is consistent with IP camera connected to the NVR, i.e. PAL or NTSC.
Note: The device will restart if the system output type is changed.

[Video Output]: This field shows live output.

[Language]: Use this field to change the language of the NVR menu text and the on-screen display.
Note: The device will automatically restart when system language is modified.

[Poll time (Sec)]: This refers to the sequencing time when auto-sequence is enabled. Values can be set from 1-300 seconds.

[Sequence]: Use this field to change the auto-sequence mode. Options include "In Order" and "Inverted". If it's set as "In Order", this will display the channels with images in sequence on live view during auto-sequence mode: channel 1-channel 2-channel 3-channel 4-channel 1……; if it's set as "Inverted", this will display the channel with images in sequence on live view during auto-sequence mode: channel 4- channel 3- channel 2- channel 1-channel 4…… .

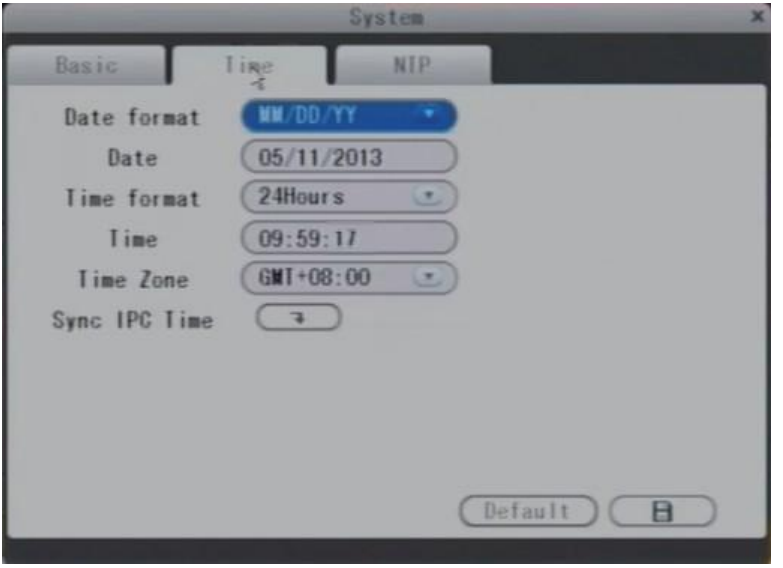
[Menu Lock]: Menu time-out function, options include: Close, 1min, 2min, 3min, 4min and 5min. If the option is set as "Close", the system won't be logout until users log out the system manually. If the option is set as "1min", the system will logout automatically after one minute if users don't operate the NVR during this time period.

[VGA Resolution]: The options are 800*600, 1024x768, 1280*720, 1280*960, 1280*1024, 1440*900 and 1920*1080. Users can adjust the VGA resolution to make the video output be displayed on the CVBS monitor, VGA monitor and HDMI monitor simultaneously. ***Note: The device will automatically restart when the VGA resolution is modified.***

[Volume]: Press "◄" or "►" or click the vertical line on the slide bar and drag the cursor to the left or to the right to adjust the volume, and click " " to exit.

Note: It is necessary to click " " to save the changes after modifying parameters.

II. System—Time



[Date Format]: Press "Enter" to switch the date format, include YY/MM/DD, MM/DD/YY and DD/MM/YY.

[Date]: Set the date using the numerical keypad.

[Time Format]: Press "Enter" to switch the time format from a 12-hour clock to a 24-hour clock and vice versa.

[Time]: Set the system time using the numerical keypad.

[Time Zone]: Use this filed to adjust time zone according to the current time zone.

[Sync IPC Time]: Click " " to make the IPC's time connected to the NVR synchronize with the NVR's.

Note: It is necessary to click " " to save the changes after modifying the time and date.

III. System—NTP(Network time synchronization)

To enter the “NTP” menu, when “Open” is selected in this field, network time sync is enabled. User can set the NTP Server host, the server port and Update interval, then click “ ” to save the setting.

If user clicks “ Run ”, the system time will proofread the time with the network server that you setup at once.

5.3.2 Video

“Main Menu” — “Configuration” — “Video” (the tab will be highlighted when selected) and press “Enter” to enter the “Video” menu.

[Channel]: Use this field to select a channel to set up, or to modify its settings.

[Name]: Users can modify the local name of the NVR for each channel. Note that the name of the camera for each channel must not exceed eight Romanized letters or four Chinese characters.

[Position]: Naming the location (the local channel name of the NVR) is optional. By pressing "Enter" users can switch between "U-L(Upper-left", "D-L(Down-left)", "U-R(Upper-right)", "D-R(Down-right)" and "Close".

[IPC Name]: Users can modify the IPC name connected to the NVR.

[Position]: Naming the location (the IPC name connected to the NVR) is optional. By pressing "Enter" users can switch between "U-L(Upper-left", "D-L(Down-left)", "U-R(Upper-right)", "D-R(Down-right)" and "Close".

[Color Setup]

Click " " to enter the "Color Set" menu. From this menu, the video color attributes can be adjusted for the best image quality. By default, the values are set at 32, as this is the median value. Make adjustments to the chroma, brightness, contrast, and/or saturation as appropriate depending on the actual conditions at the location where the IP camera connected to the NVR is installed.

Press "►" or "◄" or click the vertical bar on the slide bar and drag the cursor to the left or right along the slide bar to set color attributes. Once the color attributes have been set, press " " to save the settings.

[Live]: When this field is set to "Open", the selected channel can be viewed in live view mode; when "Close" has been selected, it cannot.

[Live Time]: When this field is set to "Open", the system time of the NVR will be shown on the live view. When "Close" has been selected, it can't.

[Record Time]: From this field, users can decide which information will be recorded onto the video as the OSD (On-Screen Display) string. When this field is set to "Open", the system time of the current channel (the IPC connected to the NVR) will be recorded onto the video as the OSD string.

5.3.3 Record

"Main Menu"—"Configuration"—"Record" (the tab will be highlighted when selected) and press "Enter" to enter the "Record" menu to adjust parameters. And some parameters on this menu interface are the remote IPC's connected to the NVR, such as "Bit rate, Resolution and Frame rate".

Users can modify these parameters (Record, Bit rate, Frame rate) of each channel independently.

User can modify these parameters (Audio, Mode, Pack time and Auto overwrite) of all channels synchronously.

[Channel]: After clicking the "Channel" tab, users can modify the settings of the IP camera connected to the selected channel. Alternatively, users can make the same change (or set of changes) to the settings of all of the cameras at once. To apply the change(s) to all available channels, first select "All" from the "Channel" field by pressing the arrow buttons; for example, the options include CH1, CH2, CH3, CH4 and ALL with 4-CH NVRs. Then make the desired changes and save them before exiting the menu.

[Record]: "Open" indicates that the channel is enabled for recording.

[Bit Rate]: Use this field to adjust the recording bit rate of the current channel. It' also to adjust the bit rate of the remote IPC connected to the selected channel on the NVR. The recording bit rate of each channel can be adjusted independently.

[Resolution]: This indicates the resolution of the remote IPC connected to the current channel on the NVR for recording.

[Frame rate]: In this window, users can choose the recording frame rate (frames per second) for the current channel. It's also to adjust the frame rate of the remote IPC connected to the selected channel on the NVR. The higher the recording frame rate, the more natural the movement seen in playback mode will seem. Select a recording frame rate depending on

the how carefully the activity in the video needs to be monitored. It is possible to adjust each channel frame rate independently.

For the PAL video output format, the system's default resolution is D1, and the syste m's default frame rate is 25 frames per second with each channel; this means the system will record 100 frames per second with all channels running (if there are four channels that are all recording). Users can set the frame rate from 1 to 25 frames per second for each channel. The maximum value of total frames recorded per second with all channels is 100 frames with 720P/960P resolution for 4-ch NVRs.

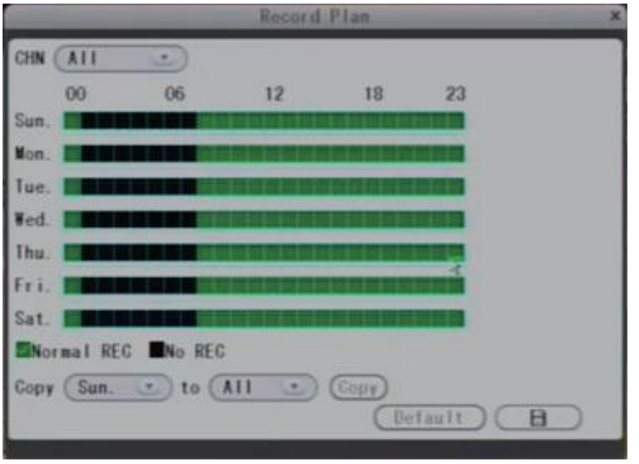
For the NTSC video output format, the system's default resolution is D1 and the system's default frame rate is 30 frames per second for each channel, which means the system will record 120 frames per second with all channels running (if there are four channels that are all recording). Users can set the frame rate from 1 to 30 frames per second for each channel. The maximum value of total frames recorded per second with all channels is 120 frames with 720P/960P resolution for 4-ch NVRs.

[Audio]: "Open" indicates that the audio recording for all channels is enabled; "Close" indicates that audio recording is disabled.

[Mode]: There are two recording modes: "Schedule record" and "Always record".

[Always record]: In this mode, if the remote IPC was connected to the NVR, the NVR will automatically begin recording when it is turned on.

[Schedule record]: This setup function allows users to create a schedule for recording tasks throughout the week, so that only certain selected events are actually recorded on the HDD. For example, users can set up the system to record non-stop only during the business hours, and to run alarm-triggered recording at lunch time (which means no recording will take place unless an alarm-triggering event happens), and to run motion-detection recording with certain hours made more secure with combined alarm-triggered and motion-detection recording. Additionally, the recording schedule can include specific no-record time slots for when users are usually in the Disables (or other location where the camera is installed) alone at very early hours of weekday mornings. The schedule can be easily customized to the user's needs.



[Channel]: Users can select all channels or a single channel.

There are two modes for recording on this menu interface: “Normal REC” and “No REC”. Different colors are used to identify the different recording modes: green refers to “normal record” and gray refers to “no record”.

To set up weekly schedules, click on the box of the recording status to be used (Normal or No record) and then click on each box in the schedule timeline that this recording status is to be applied to. See the “Record Plan” screenshot in the preceding figure. Each gray block represents one hour on a 24-hour clock, i.e. the first block(next to each day of the week) represents the hour from midnight-01:00 AM and the last block (below the “23” on the right hand side of the screen) represents the hour from 11:00 PM-midnight. After setting up the record schedule, click the “ ” button at the bottom of the screen to save it. Alternatively, left-click and drag the frames of the boxes in the schedule timeline where you want to.

Another way to set up schedules is to create a schedule for one day of the week, and then use the “**Copy**” and “**To**” dropdown menus and copy button settings to apply the setting from one day to another day or a series of up to all seven days of the week. To do this, first create a schedule for one day. Then, from the “FROM” dropdown menu, select the first day of the week that the schedule should apply to. Next, from the “TO” dropdown menu, select the last day of the week that the schedule should apply to, and click “ ”copy button. For example, to set a schedule where the NVR uses normal recording from 2:00 AM until 1:00 PM, and no recording from 1:00 PM until 5:00 PM on Tuesdays, Wednesdays, Thursdays, and Fridays, the process would be as follows:

1. Click the green box at the bottom of the screen to select “Normal REC”. Then, in the row of gray boxes next to the “TUE.” box, click all of boxes from the third box from the left to the box under the “12” at the top of the timeline(the box directly under the “12” should be selected) in order to select the hours between 2:00 AM and 1:00 PM.

2. Click the gray box at the bottom of the screen to select “No REC”. Then click all of the boxes in the same row from the box immediately to the right of the box under the “12” at the top of the timeline to the third box from the right to select the hours from 1:00 PM-5:00 PM.

3. The preceding steps set a schedule for Tuesday, which can now be copied to Wednesday, Thursday, and Friday. To copy it, from the “FROM” field, first select “Tues.”

4. In the “To” field, select “Fri.” and then click “ ” copy button.

5. To save this schedule, click the “ ” button at the bottom of the screen. Regardless of whether the schedule is set for each day individually or by copying one schedule to multiple days of the week, it is necessary activate it by clicking the “ ” button. Without clicking the “ ” the schedule will not take effect. Scroll to “ ” and press “**Enter**” to save new settings.

[Pack Time]: There are four options: 15 minutes, 30 minutes, 45 minutes, and 60 minutes. It will pack as the mode selected when alarm recording is disabled.

[Auto Overwrite]: Options Include “Disable, Auto, 1 Hour, 3 Hours, 1 Day, 2 Days, 7 Days, 30 Days, and 90 Days”. If a user chooses “Disable”, the recording stops when the hard disk drive is full. Once the hard disk drive is full, it will not record again until “overwrite” is enabled. If a user chooses “Auto”, recording continues and overwrites previous recording when the hard disk drive is full. If a user chooses “2 Days”, recording on the hard disk will continue for no more than two days. After two days, the recording will be automatically o verwritten. The “7 Days”, “30 Days” and “90 Days” options are similar to the “2 Days” option, except that instead of recording for two days before the automatic overwrite takes place, recording will continue for 7 days, 30 days, and 90 days, respectively before being overwritten.

5.3.4 Alarm

"Main Menu"—Configuration"—"Alarm"(the tab will be highlighted when selected) and press "Enter" to enter the "Alarm" menu.

I. Alarm—Basic Setup

User can modify parameters of all channels synchronously. Options include "Output", "Duration", "Buzzer", "Pre Rec" and "Alarm FullScreen".

[Output]: This function sets the output time for an alarm when an alarm is triggered. The options are: "Close", "5Sec", "10Sec", "30Sec" and "60Sec". When the "Disable" option is chosen, the alarm will not be triggered by any activity.

[Duration]: This function sets the duration of the recording time after alarm recording is activated.
The options are "30Sec", "1 min", "2 min" and "5 min".

[Buzzer]: This function sets the length of time that the buzzer will sound when the alarm is triggered. Options include: "Close", "5 Sec.", "10 Sec.", "30 Sec." and "60Sec." If the "Close" setting is selected, the buzzer will not be triggered by any activity.

[Pre Rec]: This sets the duration of the recording time before the alarm is activated. The options for prerecording time are: "Open" and "Close".

[Alarm FullScreen]: This sets the duration of the alarm full screen. Options include: "Close", "5Sec","10Sec", "30Sec" and "60Sec". If users select some one activated, the channel video would be enlarged to full screen when the alarm was triggered.
Click " "to save the setup after modifing parameters.

II. Alarm—Exception

To access the “Exception Alarm” page and a dialog window where the buzzer and I/O output for HDD Remainder, HDD Loss, Network, Video Cover and SD loss can be set will appear.

[HDD remainder]: The buzzer alarm and I/O output alarm can be set when there is little space left on the HDD for new recordings. Options include: “Close”, “1G”, “5G”, “,10G”, “1 hour”, “5 hours”, “10 hours” and “20 hours.”

[HDD Loss]: When the “ ” setting has been selected for HDD Loss, the relevant alarm will be triggered if there is no HDD connected to the NVR and a “H” icon will be displayed in the lower left corner of channel 1 while in live view mode.

[Network]: When the “ ” setting has been selected for network disconnected, it indicates that if the remote IPC connected to the NVR has been disconnected the relevant alarm will be triggered, and a message “Disconnect” will be displayed of the current channel while in live view.

[VIDEO Cover]: When “ ” setting has been selected for video cover, the relevant alarm will be triggered when the video of the remote IPC connected to the NVR has been covered.

[SD Loss]: When “ ” setting has been selected for SD Loss, the relevant alarm will be triggered if the SD card inserted to the remote IPC connected to the NVR has been lost.

Click “ ” to save the setup after modifing parameters.
Note: If the **buzzer** mentioned in Section the **Alarm—Basic Setup** mentioned in Section **5.2.4** are in the “Close” setting, they will not be triggered by any kind of activity.

III. Motion

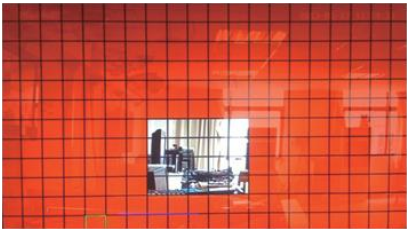
The parameters on the motion setup interface are about for remote IPC’s connected to the NVR. To access the “Motion Detection” menu and the dialog window where Sensitivity, MD Area, Enable Switch, Buzzer, Alarm Output, Pre record, Record and Email settings can be set will appear.

[Channel]: In this field, select the channel to be set up.

[Switch]: Each channel has a corresponding channel switch. “ ” indicates that the motion detection alarm of the selected channel is enabled.

[Sensitivity]: Each channel has a specific sensitivity setting; there are four levels: higher, high, normal and low, with “higher” being the highest level of sensitivity; press “Enter” to adjust the level.

[MD Area]: Sometimes, it is necessary to have some regions in the IP camera’s coverage area enabled with the motion detection feature, while other regions in the same coverage area do not require this functionality. This may be handy when, for example, the IP camera covers the road and an adjoining area. While it would be useful to have the motion detection enabled on the area near the entrance to a building, it would most likely not be helpful to see it triggered every time a car or truck passes by on the nearby road. Each channel has a specific regional motion detecting setting.



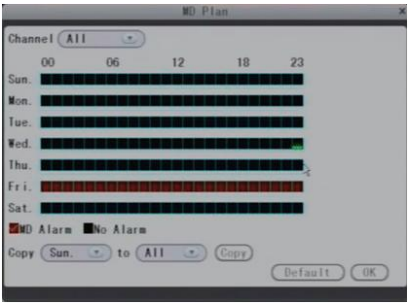
To enter the “Area Setting” menu, move the cursor to “ ” and then press “Enter.” When viewing the selected channel’s coverage area using the MD Area option, the red area is where motion detection is activated, and transparent block is the area where motion detection is not activated.

Press the direction keys on the remote control to move the cursor along the small pane: the position of cursor is indicated by a green frame. Press “Enter” to select or cancel motion detection in this small pane. When the setup is finished, press “ ” or right click to return to the “motion detection alarm” menu and click “ ” to save the settings.

Note:

Mouse operation: Left-click and drag the frame to set up the region for motion detection.

[MD Plan]: It's necessary to set up motion detection schedule for motion detection alarm. Click on the " " button to bring up the **MD Plan** window.



This window allows the user to enable/disable motion detection alarm on a daily basis. The table represents days of the week from Sunday to Saturday located vertically, and hours of the day from 0 to 24 on the horizontal line. Below the week grid you can see the legend for the color encoding: Black stands for the time when alarm is disabled, and Red denotes enabled motion detection alarm.
To mark the time cells, you can left click on them individually or click and drag to highlight the required time span. If you choose your color code and click the day of the week, the complete 24 hour time span for that day will be highlighted in the selected color.

To save the changes click "**OK**".

[Output]: " " indicates that an alarm will be activated if it has been triggered by motion.

[Buzzer]: " " indicates that the buzzer will sound if it has been triggered by motion.

[Remote Record]: " " indicates that the selected channel (the remote IPC connected to the NVR) will record on to the SD card if it has been triggered by motion.

[Email]: " " indicates that an email about the selected channel will be sent to the pre-registered email address if an alarm has been triggered by motion.

[Pre REC]: " " indicates that the relevant channel will prerecord if it has been triggered by motion.

[Record channel]: " " indicates that the selected channel will record if it has been triggered by motion.

Click " " to save the settings.

IV. I/O Alarm

To access the "I/O Alarm" menu, a dialog window where the I/O Alarm Status, Alarm Output, Record, Buzzer, Prerecord and Email settings can be set will then appear.

If the option "Select" is set to "Local", the parameters about "Channel"a"I/O" and "Plan" on this menu window are for NVR's. If the option "Select" is set to "Remote", the parameters about "Channel"a"I/O" and "Plan" are for remote IPC's connected to the NVR.

[Select]: First users need to choose I/O alarm type, include local and remote, local is for the NVR and remote is for the remote IPC connected to the NVR.

[CHANNEL]: From this field, select the channel to be set up.

[I/O Alarm Status]: Each channel corresponds to an I/O status (see the following status explanations), which means that when an alarm is triggered, it will activate the corresponding channel to start alarm recording.

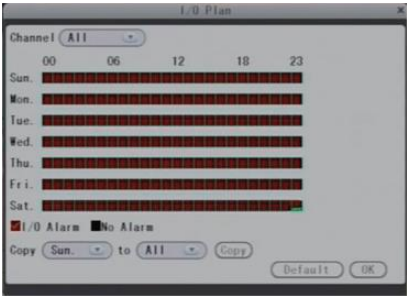
I/O status types:

NO: "Normally open": It means that in its normal state, the sensor is kept under constant low voltage. If the output voltage changes from low to high, then the alarm will be triggered.

NC: "Normally closed" (also referred to as "normally connected"): The normal state of the sensor is under constant high voltage. If the output voltage changes from high to low, then the alarm will be triggered.

Close: Set the I/O to "Close", if external sensor alarms are not in use.

[I/O Plan]: It's necessary to set up I/O alarm schedule for I/O alarm. Click on the " " button to bring up the I/O Plan window.



This window allows the user to enable/disable I/O alarm on a daily basis. The table represents days of the week from Sunday to Saturday located vertically, and hours of the day from 0 to 24 on the horizontal line. Below the week grid you can see the legend for the color encoding: Black stands for the time when alarm is disabled, and Red denotes enabled I/O alarm.

To mark the time cells, you can left click on them individually or click and drag to highlight the required time span. If you choose your color code and click the day of the week, the complete 24 hour time span for that day will be highlighted in the selected color.

To save the changes click "OK".

[Output]: " " indicates that an alarm will sound if it had been triggered by sensor.

[Prerecord]: " " indicates that the relevant channel will prerecord if it has been triggered by activity detected by the sensor.

[Buzzer]: " " indicates that the buzzer will sound if it has been triggered by activity detected by the sensor.

[Email]: " " indicates that an email about the relevant channel will be sent to the pre-registered email address if it has been triggered by activity detected by the sensor.

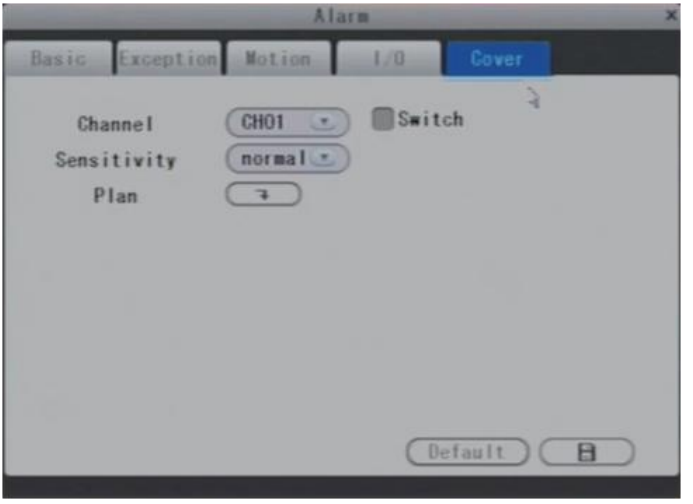
[Record channel]: " " indicates that the relevant channel will record if it has been triggered by activity detected by the sensor.

Click " " to save the settings.

Note: If the "close" setting is selected for any of the preceding options, the relevant alarms and notifications will not take place, regardless of activity near the sensor.

V. Cover Alarm

The parameters on the cover setup interface are about for remote IPC's connected to the NVR. To access the "Cover" menu and the dialog window where Sensitivity, Enable Switch and Plan settings can be set will appear.



[Channel]: In this field, select the channel to be set up.

[Switch]: Each channel has a corresponding channel switch. " " indicates that the motion detection alarm of the selected channel is enabled.

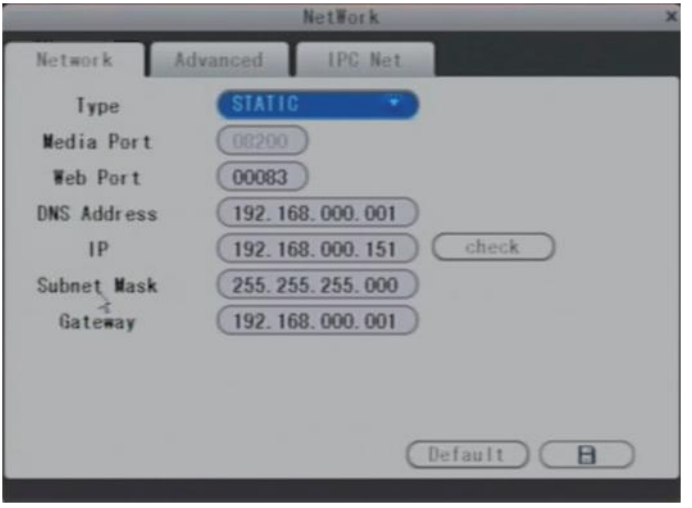
[Sensitivity]: Each channel has a specific sensitivity setting; there are four levels: higher, high, normal and low, with "higher" being the highest level of sensitivity; press "Enter" to adjust the level.

[Video Cover Plan]: It's necessary to set up video cover alarm schedule for cover alarm. Click on the " " button to bring up the **Video Cover Plan** window.

This window allows the user to enable/disable video cover alarm on a daily basis. The table represents days of the week from Sunday to Saturday located vertically, and hours of the day from 0 to 24 on the horizontal line. Below the week grid you can see the legend for the color encoding: Black stands for the time when alarm is disabled, and Red denotes enabled video cover alarm.
To mark the time cells, you can left click on them individually or click and drag to highlight the required time span. If you choose your color code and click the day of the week, the complete 24 hour time span for that day will be highlighted in the selected color.
To save the changes click “ OK ”.

5.3.5 Network

“Main Menu”—“Configuration”—“Network” (the tab will be highlighted when selected) and press “Enter” to enter the “Network” menu. Options include “Network”, “Advanced” and “IPC Net”.



I. Network—Network Setting

[Type]: There are three options: “Static”, “DHCP” and “PPPOE”.

After selecting an Internet connection setting - such as static, DHCP or PPPOE – and allocating a port, users can access the NVR remotely via the Internet.

1) If static allocation has been selected, it is necessary to set up an IP address, a subnet mask, a gateway, and a Web port.

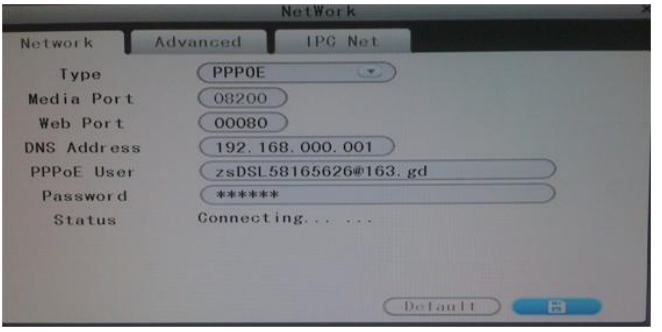
[DNS Address]: After pressing “Enter”, input numbers for the subnet mask in this field.

[IP]: After pressing “Enter”, enter the IP address in this field. Click “

[Subnet Mask]: After pressing “Enter”, input numbers for the subnet mask.

[Gateway]: After pressing “Enter”, enter numbers for the default gateway.

2) If PPPOE has been selected, it is necessary to enter the PPPOE username and password provided by the ISP



[PPPOE user]: Enter the username provided by the ISP.

[Password]: Enter the password provided by the ISP.

Click “ ” and the device will save the username and password, and set PPPOE as the default network type. The IP address will be automatically configured as a dynamic IP address in the Wide Area Network (WAN).

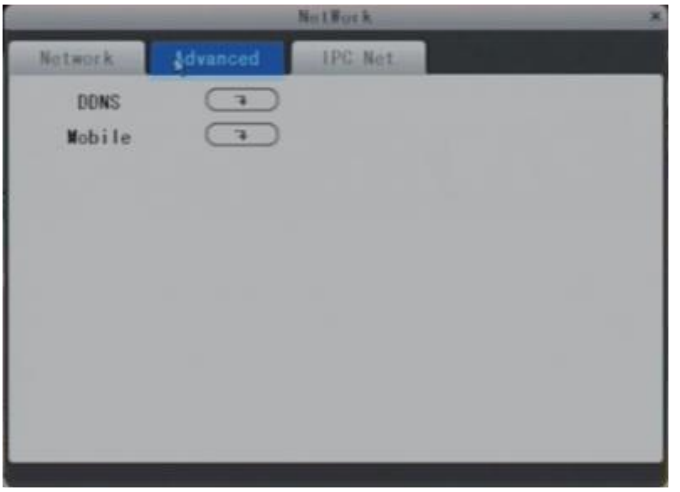
3) If DHCP is selected, the server will allocate a NVR IP address automatically.
NOTE: Save the IP address when selecting DHCP and the NVR will automatically connect with the server. It will allocate an IP address when the connection is stable, and this address will be displayed on the interface.

[Media Port]: Port for the private protocol of the NVR and computer; the value is set as 8200, and it can’t be modified.

[Web Port]: Sets up a Web browser port via HTTP. The default port number is “80”, but the specific number is model-dependent. If Administrator changes the Web port, to, for example, “8088”, the port number should be added after the IP address, i.e. http://192.168.15.145:8088 should be entered as the IP address of the Web browser.

II. Network—Advanced

In advanced menu, user can set up DDNS and Mobile.



A. DDNS
Click on the “ ” button to bring up the DDNS window. “Open” indicates DDNS is enabled.

[Server]: There are three options: “3322” and “dyndns”.
[Host Name]: In this field, enter the name of the host server.
[User Name]: In this field, enter the username.
[Password]: In this field, enter the password.

B. Mobile
Click on the “ ” button to bring up the Mobile Setup window.

[User]: The user name set for entering in the mobile phone software monitoring the NVR remotely. Default for administrator is "Admin".

[Password]: The password set for entering in the mobile phone software monitoring the NVR remotely. Default for administrator is "888888".

[Server port]: Mobile monitoring port. In this field, enter the relevant mobile port. The range for server ports is between "1024" and "65535". The default is "15961".

[Quality]: The image quality of all the IPC connected to the NVR for remote access viewing via mobile phone. And there are five options: "Very High", "High", "Normal", "Low" and "Very Low". The better the image quality is, the bigger the bit rate and the frame rate of the IPC are. Please choose the suitable quality according to your bandwidth.

Click " " to save parameters.

Note: Make sure to connect the NVR to the Internet before setting the NVR port number, and make sure the server port is not equal to network menus.

III. Network—IPC Net

In "IPC Net" menu, users can modify the parameters of the remote IPC connected to the NVR.

[Channel]: In this field, select the channel to be set up.

[Type]: In this field, select the network type for the remote IPC connected to the NVR. There are two options: “Static” and “DHCP”.

[Web Port]: Sets up a Web browser port via HTTP to connect the remote IPC. The default port number is “80”, and the range of the http port is 80 or from 1024 to 32767. If Administrator changes the http port, for example, “1024”, the port number should be added after the IP address, i.e. http://192.168.0.136:1024 should be entered as the IP address of the Web browser.

After selecting an Internet connection setting - such as static or DHCP - and allocating a port, users can access the IPC remotely via the Internet.

1) If static allocation has been selected, it is necessary to set up an IP address, a subnet mask, a gateway, and a Web port. And the IP address, a subnet mask, a gateway and a DNS address must to be set up as the same network segment as the NVR.

[DNS Address]: After pressing “Enter”, input numbers for the subnet mask in this field.

[IP]: After pressing “Enter”, enter the IP address in this field.

[Subnet Mask]: After pressing “Enter”, input numbers for the subnet mask.

[Gateway]: After pressing “Enter”, enter numbers for the default gateway.

2) If DHCP is selected, the server will allocate an IP camera IP address automatically.

NOTE: Save the IP address when selecting DHCP and the IPC will automatically connect with the server. It will allocate an IP address when the connection is stable, and this address will be displayed on the interface.

Click “ ” to save parameters.

5.3.6 User

“Main Setup”—“Configuration”—“User”(the tab will be highlighted when selected) and press “Enter” to enter the “User” menu. In this field, a password for accessing the NVR system can be set or changed.

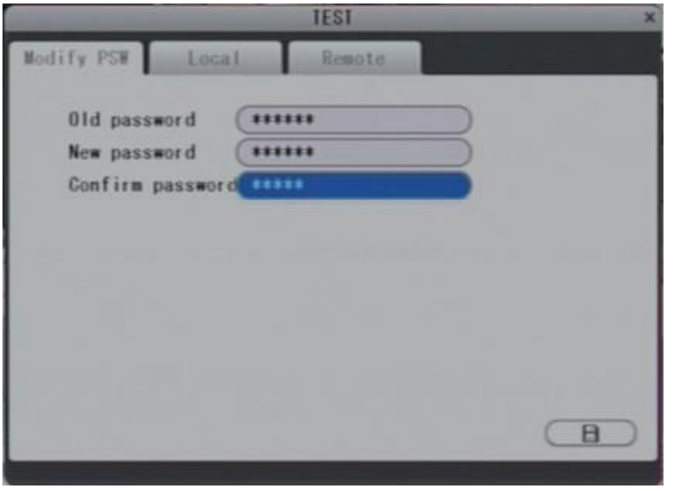
“ **Login with password**” indicates the password is enabled, and user must input the correct password to login the system.
After the password verification is set up (marked “ ”) the Administrator can set up to seven user passwords, as well as an Administrator password. If the password function is enabled, it will be necessary to enter the password before logging in.
Note: Once the password has been enabled, it is necessary to log in to the system as “ Admin” in order to manage users; The Administrator’s username (“Admin”) cannot be modified.
The default password for ***Admin*** is “***888888***”.

" **Preview authority**" indicates that if the system administrator logout the system, all the users can't view all the channels unless they login the system.
The following settings can only be set by the system administrator (who will be referred to throughout this manual as "the Administrator"; the username for the system administrator is "Admin").

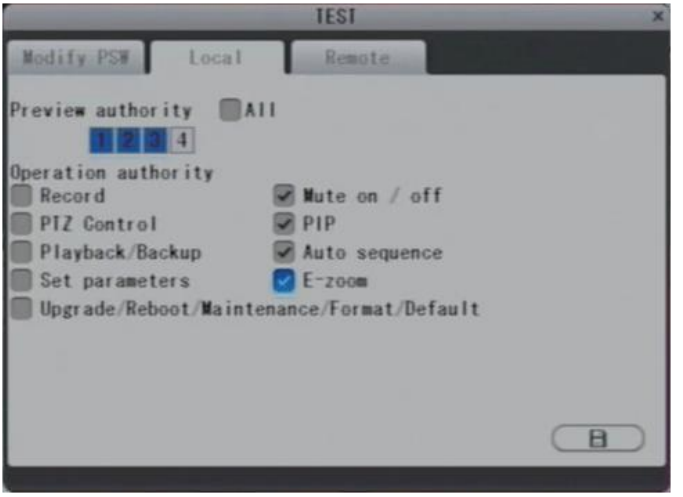
[Add Users]: Click " " to add new users. In this window, enter the new user's name and password in the corresponding fields, and then to confirm the password, enter it a second time in the "Confirm Password" field. The length of the password must not exceed 6 digits. And user can add seven users at most. Click " OK " to save.

[Delete Users]: From this window (see the following figure), the Administrator can delete users (the color of the user has been selected will be blue) by selecting the user of the user account to be deleted. And click “ — ” to enter the window to confirm.

[Modify Password]: Select a user to enter the interface to modify user’s password. From this window, the Administrator can change the system’s password. For security reasons, before a new password can be set, it is necessary to enter the original password.



[Local Permission]: This allows the Administrator to give each user its permission to access a unique set of NVR functions. That is, the Administrator can give a user access to one, some, or all of the following functions: Record, PTZ control, Playback/Backup, Set parameter, E-zoom, Mute/Mute off, PIP, Auto sequence, and Update/Reboot/Maintenance/Format/Default, and the set of functions that one user is allowed to access may include functions that are different from the set of functions that another user is allowed to access (see the below figure).



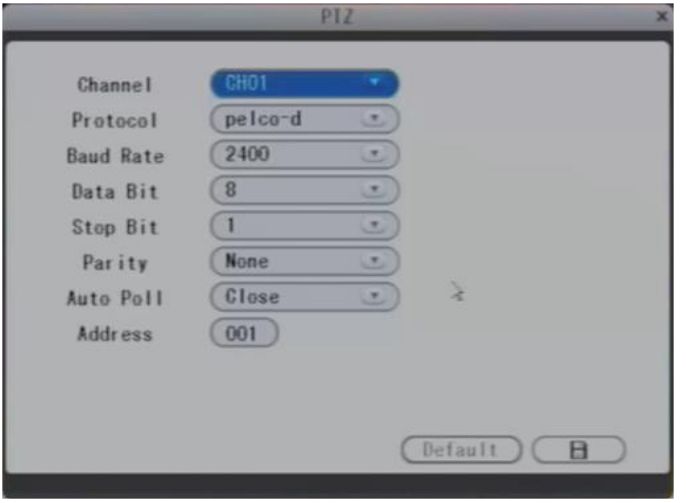
[Preview authority]: Another very important function for the Administrator is “Live View Authority”, which allows the Administrator to set different viewing permissions for different users (see the preceding figure). The yellow indicates the authority is enabled, and the gray indicates that the authority is disabled. The Administrator can decide which channel(s) each user is allowed to view. The Administrator has permission to view all channels, and this permission cannot be modified.

[Remote Permission]: This is a very important function for remote operation of the NVR. The Administrator can use this function to set each user’s remote access permissions, such as access to PTZ control, Record/Snapshot, Playback/Download, Set Parameters and Mute On/Off Disable from a computer that is not on the local network (see the following figure).

" " indicates that authority is enabled, " " indicates that authority is disabled. Click " " to save.

5.3.7 PTZ

"Main Menu"—"Configuration"—"PTZ"(the tab will be highlighted when selected) and press "Enter" to access the "PTZ" setting interface. The PTZ parameters are about the remote IPC connected to the NVR, it's not about the NVR's. A unique set of PTZ parameters can be set for each channel. In this menu, users can select values for each of the fields by pressing the arrow buttons at each end of the field. The changes will take effect after clicking the " " button.



[Channel]: This is the channel that the remote IPC with PTZ function is connected to the NVR.

[Protocol]: From this field, select the PTZ device protocol. It must be consistent with the protocol of the actual PTZ IP cameras installed. There are two available options: PELCO-D and PELCO-P.

[Baud Rate]: Select the PTZ device baud rate. It must be consistent with the baud rate of the actual PTZ cameras installed. This system supports four options: 1200, 2400, 4800 and 9600.

[Data bit]: The options for the PTZ Data Bit are "5", "6", "7" and "8". The default setting is "8".

[Stop Bit]: The PTZ Stop Bit options are "1" and "2". The default setting is "1."

[Parity]: The PTZ parity options are: "None", "Odd", "Even", "Mark" and "Space". The default setting is "None."

[Auto Poll]: "Open" indicates that runs the patrol scanning of the PTZ IP camera after starting.

[Address]: In this field, select the PTZ device ID. It must be consistent with the ID of the actual PTZ IP cameras connected to the NVR. Choose any number from 1 to 255.Click " " to save changes.

Note that the abovementioned channel setting must match the settings of the PTZ IP camera.

Note: When making changes to PTZ camera functionality / settings, make sure that these changes are being made to actual PTZ IP cameras by selecting the correct number in the previous field (Camera Channel).

5.3.8 Default

"Main Menu" —"Configuration"—"Default"(the tab will be highlighted when selected) and press "Enter" to restore all the settings to the original factory settings.

Prompt: The IP address, port, resolution of VGA and language can't be resumed.

5.4 System Maintenance

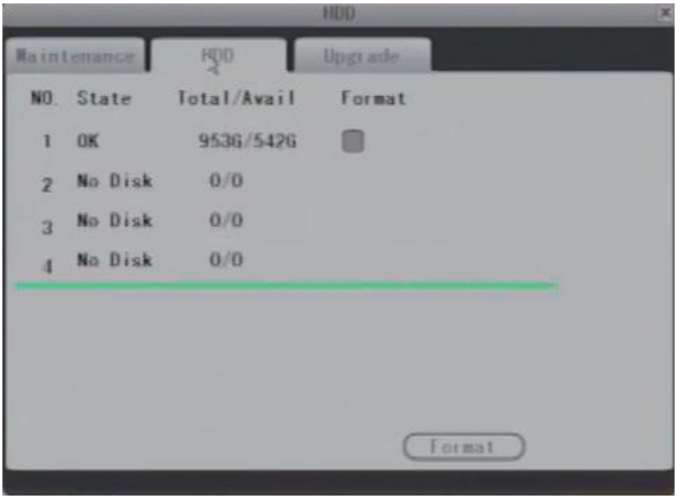
"Main Menu"—"Configuration"—"Maintenance" (the tab will be highlighted when selected) and press "Enter" to enter the "System Maintenance" menu. Options include "Maintenance", "System Upgrade" and "HDD Management".

5.4.1 Maintenance

To enter the “System Maintenance” menu, select “Maintenance”. “Open” indicates that the option of “maintenance” is enabled; users can set a specific time for the NVR to restart. The system will restart automatically according to the parameter(s) chosen.

5.4.2 HDD Manage

To enter the “System Maintenance”, select “HDD Manage” (see adjacent figure).



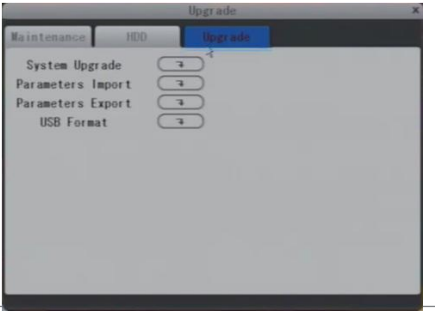
[Total/Avail]: This field indicates amount of space available and the amount of unused space available on the hard disk drive.

[State]: There are two available statuses: “OK” and “No Disk.” If the HDD cannot operate normally (including when the status is “unformatted” or “no HDD”), there will be a “ H ” icon displayed on video live view. If a new HDD is used with the NVR for the first time, please format the HDD.

[Format HDD]: Move the cursor to select the device to be formatted, “ ” indicates the option of “format” is enabled, and click “ Format ” to begin formatting.

5.4.3 Upgrade

To enter the “System Maintenance” menu, select “Upgrade”. Options include “System upgrade”, “Parameters Import”,“Parameters Export” and “USB format”.



I. System Upgrade

Create a new root directory called “nvrupgrade” on a USB flash drive, copy the update file to it, and then insert it into USB port of the NVR. Press “ ” to upgrade the firmware and it will display the process of the system upgrade.

The system upgrade will require at least two minutes; during this time, do not remove the USB drive or turn the NVR disable. After completing the upgrade, the NVR will restart.

During system upgrading, the screen will show as follows.

II. Parameters Import

It is necessary to export parameter to a USB drive before importing any parameter from the USB drive; otherwise, it will not be possible to successfully import the parameter.

III. Parameters Export

User can export important parameters to a USB drive to save. And import the same parameters to other NVRs.

IV. USB format

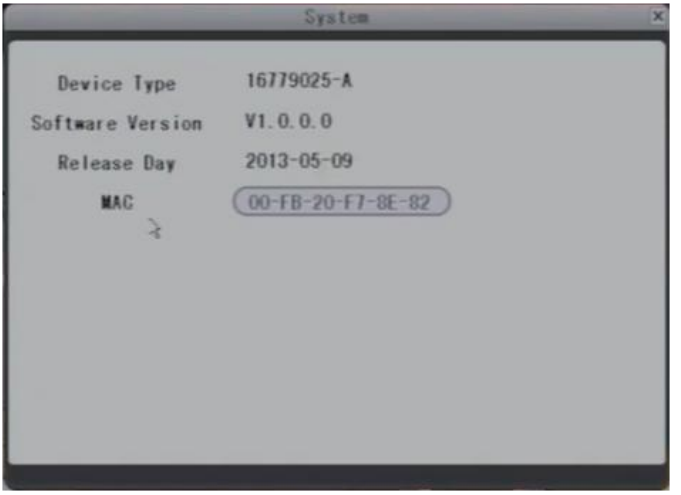
This enables users to format the USB device connected to the NVR.

5.5 Information

“Main Menu”—“Configuration”—“Information”(the tab will be highlighted when selected) and press “Enter” to enter the “System Information” menu. Options include “System”, “Log” and “Network Information”.

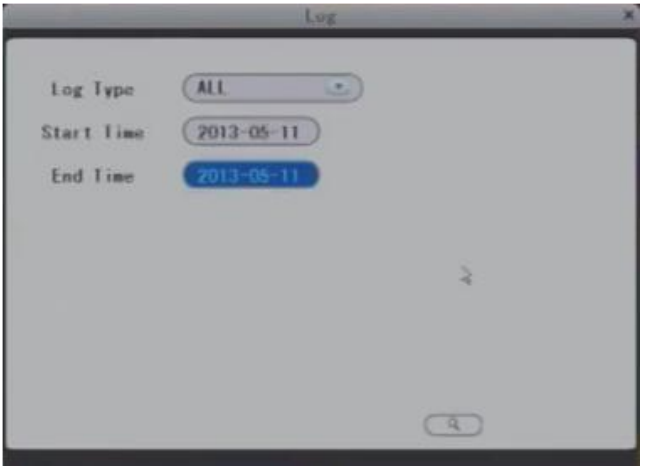
5.5.1 Device Information

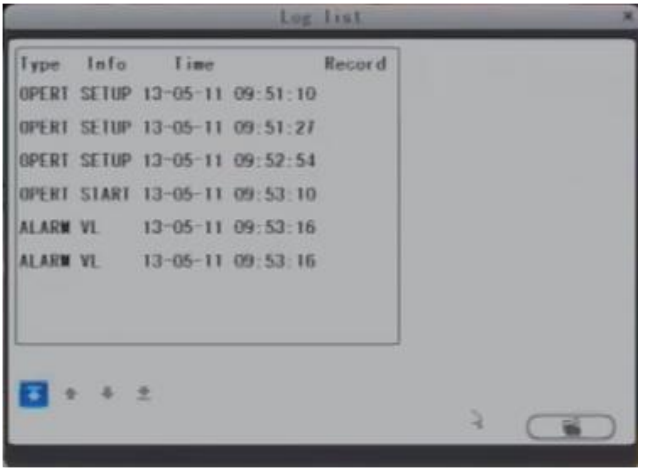
"Main Menu"—"Configuration"—"Information"—"System" (the tab will be highlighted when selected) and press "Enter"to enter the "System Information" menu. The information included accessible through this interface includes: the device type, the software version, the release day and the MAC address (for example, 4-CH, as shown in the following figure).



5.5.2 Log Information

"Main Menu"—"Configuration"—"Information"— "Log" (the tab will be highlighted when selected) and press "Enter"to enter the "Log Information" menu (as shown in the following figure).





At the top of the “Log” page are the following filters to facilitate locating the desired file(s):

[Log Type]: Choose from the following options: “All”, “Operation”, “Video Loss”, “MD” and “I/O Alarm”.

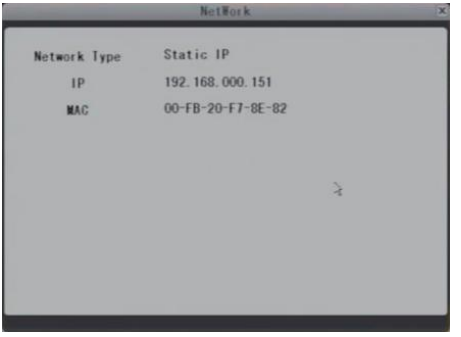
[Start Time]: Set the starting time of the log being searched for.

[End Time]: Set the ending time of the log being searched for.

Click the “ Search” button after setting the log time and type. And the selected log will be displayed in the log list. Click “ ”, “ ”, “ ” and “ ” to navigate pages, and click “ ” to save the log list to a USB drive.

5.5.3 Network Information

“Main Menu”—“Configuration”— “Information” — “Network Information” (the tab will be highlighted when selected) and press “Enter”to enter the “Network Information” menu (as shown in the following figures).
The information included accessible through this interface includes network type, IP address and MAC address.



6. Web Browser Operation

6.1 Feature

Install the software through the Internet browser of OS to conveniently operate the network from a remote location. This NVR supports C/S, B/S, and access in LAN and WAN. It also supports IP and domain name visiting.

IMPORTANT! SOFTWARE RECOMMENDATIONS:

To ensure reliable remote viewing of NVR footage, it is highly recommended that users have either Windows XP, Windows 7 or Windows Vista installed on their computers, and that they use either Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Mozilla Firefox, or Google Chrome as their Internet browser. (In the appendix, there is an explanation of how to access the NVR using Firefox or Google Chrome.)

6.2 Network Security Setting

Prior to setting up remote access, set the network security level by following the following instructions:

(1) Open the Internet Explorer browser and click the “Tools” tab located in the bar at the top of the browser; from the dropdown menu, select “Internet Options”.

(2) Click the “Security” tab in the dialogue box.

(3) Click “Custom level” (at the bottom of the dialogue box) to set the security level.

Set the appropriate settings for the ActiveX controls and plug-ins. Find the following controls in the “Security Settings” box and select the “Enable” option for each of them. This is an extremely important step.

√ Automatic prompting for ActiveX controls
√ Binary and script behaviors
√ Initialize and script ActiveX controls not marked as safe for scripting
√ Download signed ActiveX controls
√ Download unsigned ActiveX controls
√ Run ActiveX controls and plug-ins
√ Script ActiveX controls safe for scripting

Prompt: Before setting up remote access, turn Disable the firewall and any anti-virus software currently running on the computer.

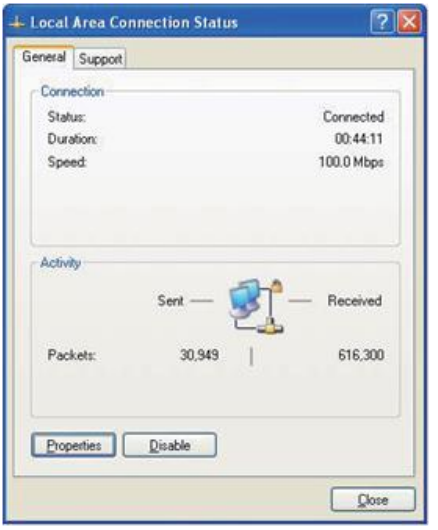
6.3 Connection Settings

Remote access to the hard disk drive is carried out over the Internet. In the local area network, the IP address of the client-side computer must be in the same network segment that the IP address of the hard disk drive. In the wide area network, the only requirement is that the two sides can visit the public network and connect to the Internet through the IP address or the dynamic domain name. The following will mainly focus on connecting and setting up the local area network.

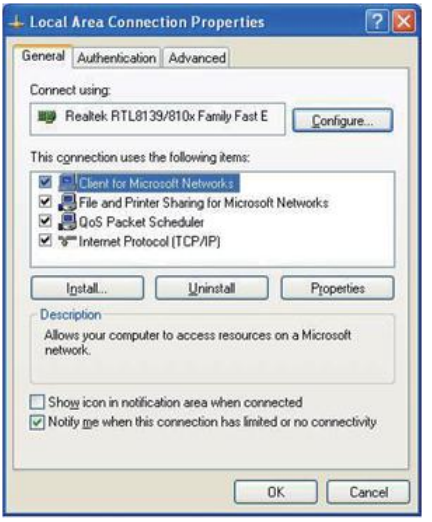
Step 1: Right-click on “Network Neighborhood” and click “Properties” in the menu to open the “Network Connections” menu. Alternatively, if the operating system being used does not have a “Network Neighborhood” icon, enter the Control Panel found in the “Start” menu; then, click “Network and Internet”, and select “Network and Sharing Center.” On the

"Network and Sharing Center" page, there should be a "Network" section; in that section, there should be a "View Status" link next to a listing that reads "Connection: Local Area Connection." Click the "View Status" link. A small "Local Area Connection Status" window will appear; at the bottom of this screen, click "Properties", and if prompted to give permission to continue, click "Yes."

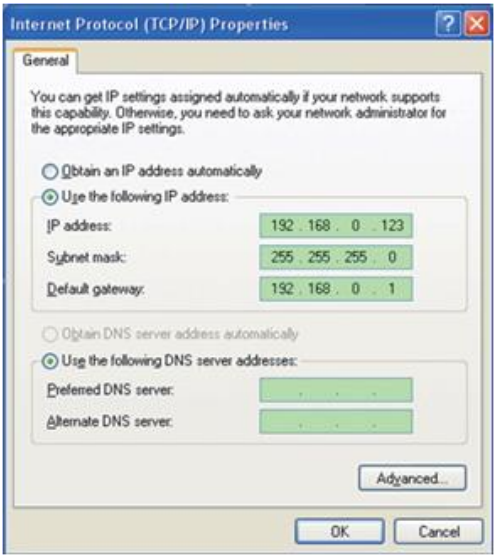
Step 2: Double-click to open "Local Area Connection" from the "Network Connections" menu.



Step 3: Click "Properties" in the lower-left corner of the window (see preceding figure).



Step 4: Double-click “Internet protocol (TCP/IP)” from the “This connection uses the following items” list in the center of the window (see preceding figure).



Step 5: Examine the IP address, subnet mask, and default gateway on the PC.

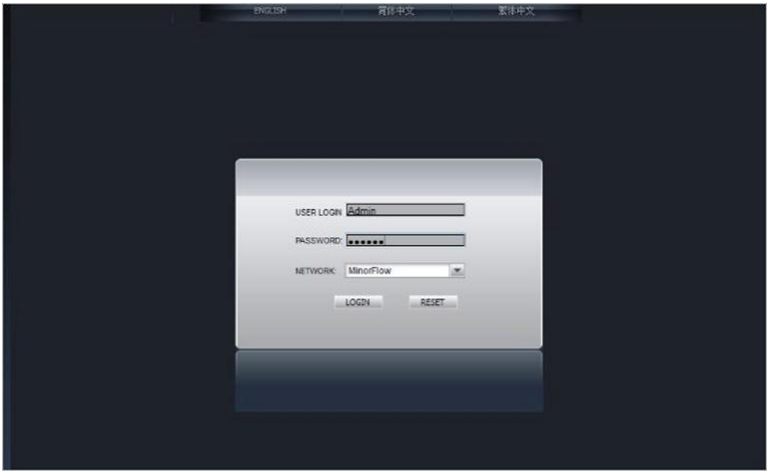
Step 6: Set the corresponding IP address, subnet mask, and default gateway on the NVR (for detailed instructions, refer to Section 5.3.5 Network Setup). If the subnet mask and default gateway on NVR are the same as those of the computer, then the IP address is most likely in the same network segment. However, they must not be exactly the same as the ones on the NVR, as this will cause IP address conflicts. Taking the preceding figure as an example, the IP address should be: 192.168.0.X, where X cannot be 40 or 1 (including other IP addresses currently being used), and cannot exceed 255, as the subnet mask is 255.255.255.0, and the gateway is 192.168.0.1.

6.4 Control Download and Installation

After the aforementioned settings have been adjusted and saved, open the Internet browser, enter **http://192.168.0.X** (192.168.0.X is the set IP address of the NVR) and confirm. If the http port of NVR setting has been changed (if it is not “80”), it will be necessary to add a “:” followed by a port number. For example, assuming that the current port number is “P”, enter “**http://192.168.0.X:P**”, to correct the problem.

After connecting to the internet, Internet Explorer (or other Internet browser being used) will automatically download the file to the computer as follows. Click “Install”.

The system will automatically enter the GUI as follows.



Select the English interface from the upper left side. Enter the correct password if a password has been enabled. The password is the same as the one set in NVR.

[USER LOGIN]: In this field, enter a username. The Administrator has all permissions, but other users have limited permissions. The Administrator can change each user’s remote permissions from the User Management menu.

[PASSWORD]: The password is as the same as the password for the NVR.

[NETWORK]: MAIN Flow or Minor Flow.

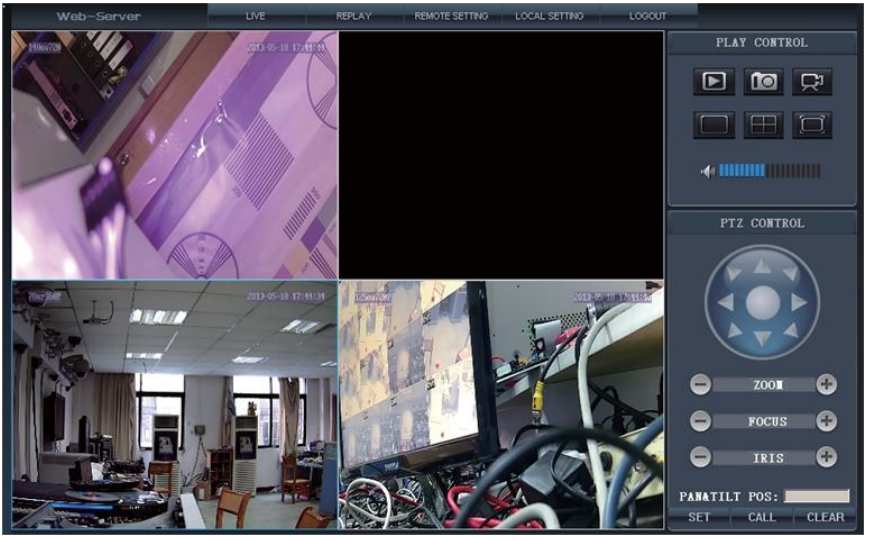
Note: If the device is connected to the WAN, the IP address should be a public IP address.

6.5 Operation Interface

Options in the main interface include “LIVE”, “REPLAY”, “REMOTE SETTING”, “LOCAL SETTING” and “LOGOUT.” Click any option to access it.

6.5.1 Live

Click “Live” to enter the interface as follows (in some cases, it will be necessary to click “ ” to open images from the NVR).



6.5.2 Controls

To use the controls, move the cursor over the icons, which will become highlighted when selected.

Connect all windows.

Capture images which can be saved in a local disk (the default system save path is “c:\NVR\BACKUP\”).

Quick-start to record video on all channels, and the upper-left corner of each channel has a normal recording video symbol “ R ” (the default system save path is “c:\NVR\BACKUP\”).

Click these icons to switch between the single-screen ( ), quad-split ( ) and full-screen ( ) options.

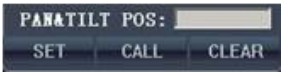
Click on the vertical bars to adjust the volume.

Click these buttons to control the PTZ IP camera to the corresponding location

Clicking " " or " " causes the lens to zoom in and out.

Clicking " " or " " brings objects into clear focus.

This regulates the diaphragm.



To set preset, call preset or clear preset.

6.5.3 Other Operations

1. Select one channel from the preview screen (the color of the selected channel's frame will change to blue), and double-click it for a full-screen display of the selected channel.
2. Click one channel from the preview screen, and then right-click it to open the shortcut menu.

Users can play, start, and stop this channel's recording using the shortcut menu.

3. Right-click the screen while in live view mode, and click "connect all" or "disconnect all" to quickly open or close all windows.

6.5.4 Replay

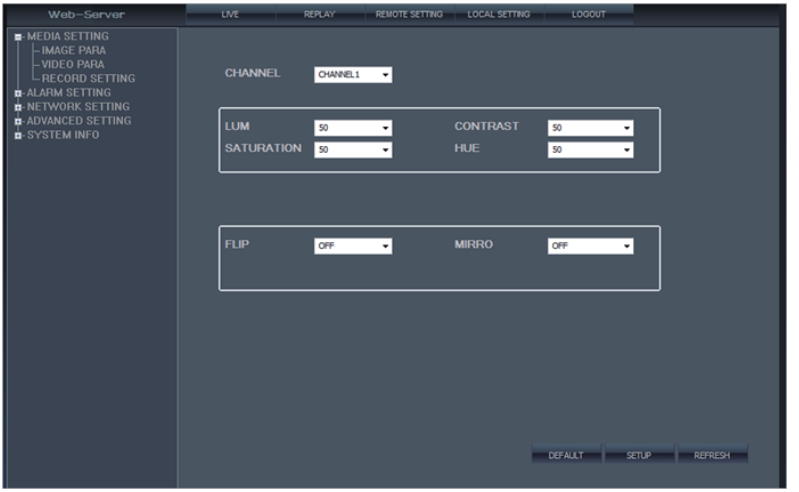
Click **"REPLAY"** to enter the playback interface.

6.5.5 Remote Settings

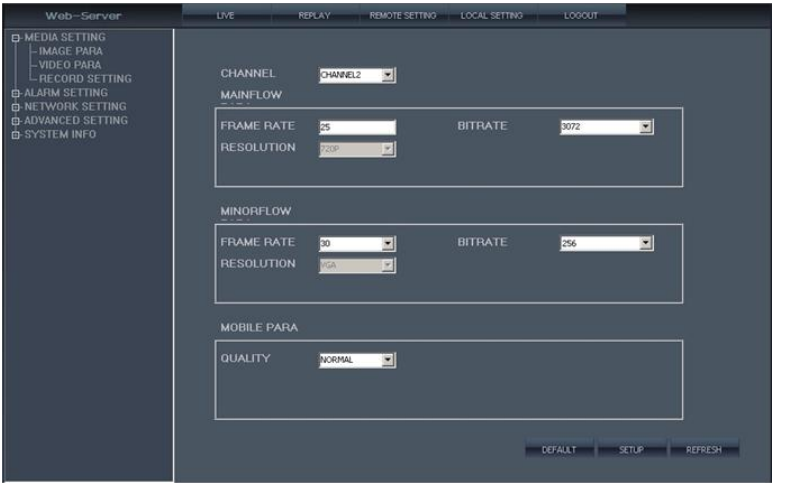
Click "Remote Setting" to enter the "Video Parameter" setup menu. This interface includes settings for Media Setting, Alarm Setting, Network Setting, advanced settings, and system information, which can all be modified remotely through an Internet browser once users have been provided the necessary accounts, passwords, and permission to access the setting(s) in question.

A. Media Settings

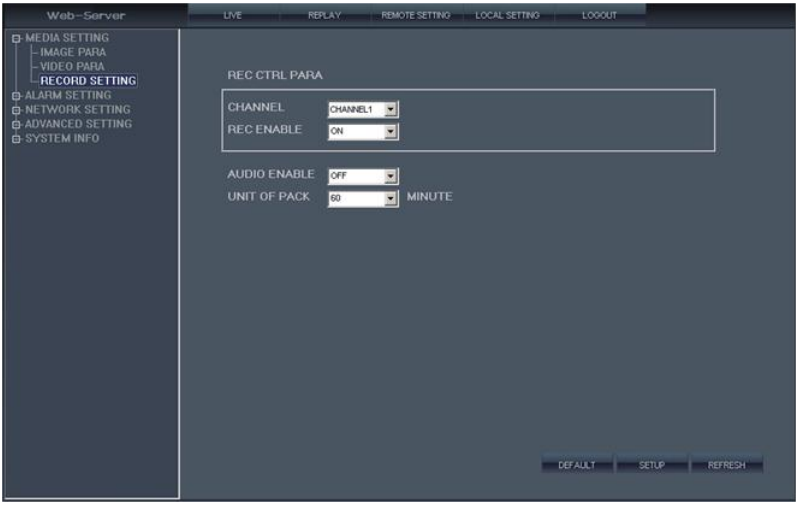
[Image PARA]: In the sidebar on the left, click “Media Setting”, then select “Image PARA” to enter the video parameter interface. From this page, users can adjust image parameters (LUM, Contrast, Saturation, Hue, Flip and Mirro) for each channel.



[Video PARA]: From the sidebar on the left, click “Media Setting”, then select “Video PARA” to enter the video parameter interface. From this page, users can adjust specific recording parameters, i.e. main flow (frame rate, bit rate and resolution), minor flow (frame rate, bit rate and resolution) and mobile parameter (quality).

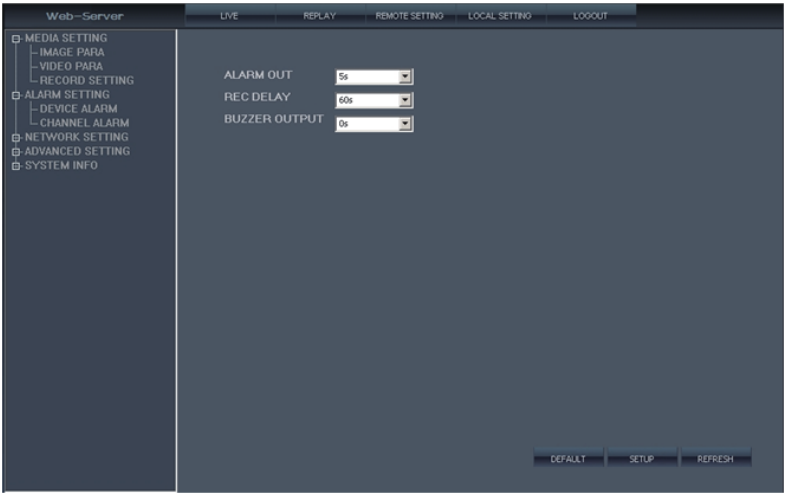


[Record Setting]: From the sidebar on the left, click “Media Setting”, then select “Record Setting” to enter the record setting parameter interface. From this page, users can enable or disable recording for each channel, adjust specific recording parameters, i.e. enabling/ disabling audio, and setting the pack time.

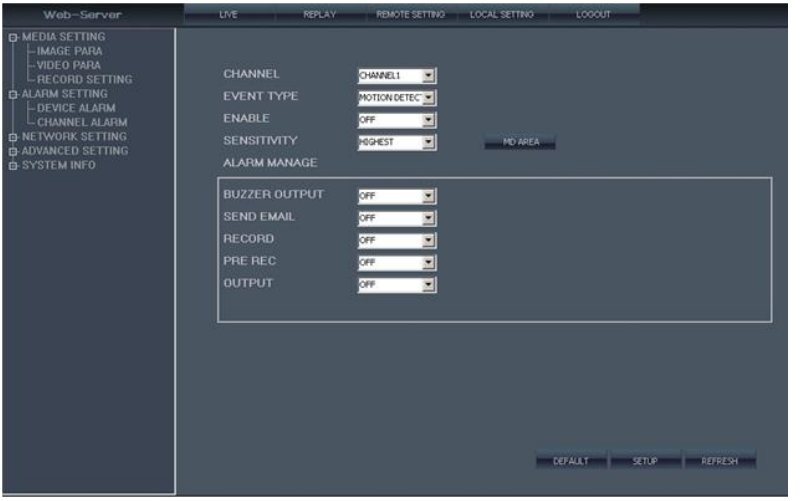


B. Alarm Settings

[Device Alarm Setting]: From the sidebar on the left, click “Alarm Setting”, then select “Device Alarm” to enter the device alarm setting parameter interface. From this interface, users can set alarm-out time, record delay time and buzzer output time.

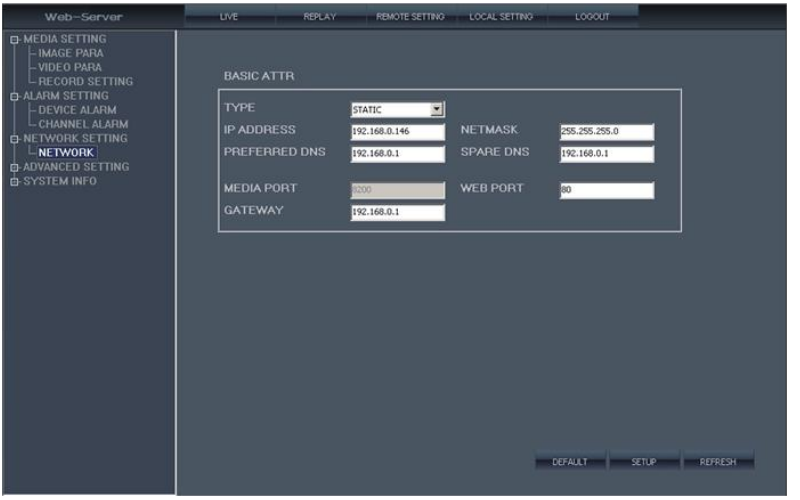


[Channel alarm settings]: From the sidebar on the left, click “Alarm Setting”, then select “Channel Alarm” to enter the “Channel Alarm” setup interface. From this interface, users can set I/O alarms for each channel, set motion-detection alarms, define motion-detection privacy masking areas, motion sensitivity, alarm-out time, buzzer time, prerecording time, and post-recording time.



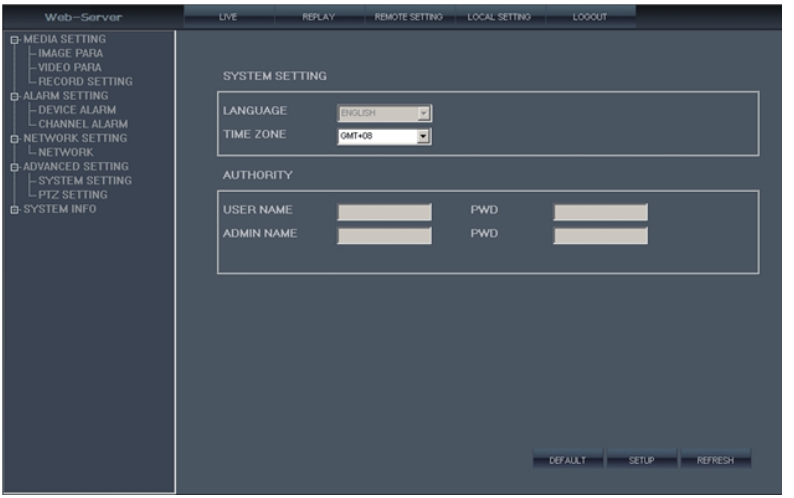
C. Network Settings

From the sidebar on the left, click “Network Setting”, and then select “Network Setting” to enter the network settings interface. The menu allows users to set up parameters, i.e. network type, IP address, net mask, gateway and DNS address.

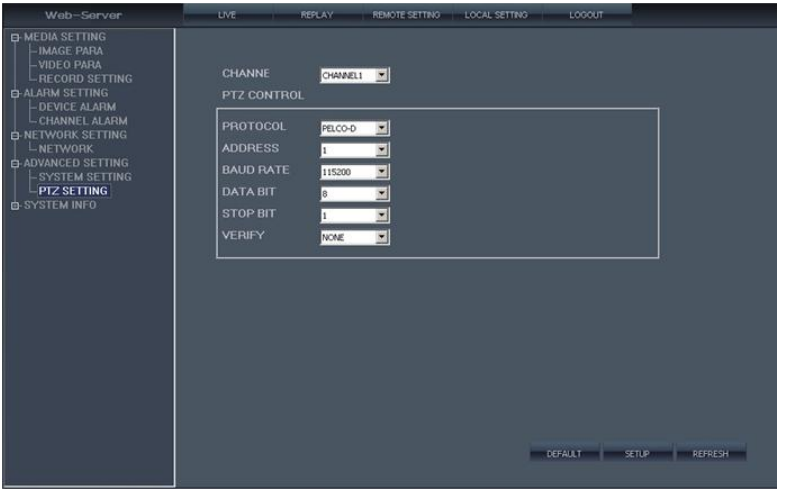


D. Advanced Settings

[System Setting]: From the sidebar on the left, click “Advanced Setting”, and then select “System Setting” to enter the system settings interface. Users can adjust some parameters on this interface, i.e. time zone, user name and user password.

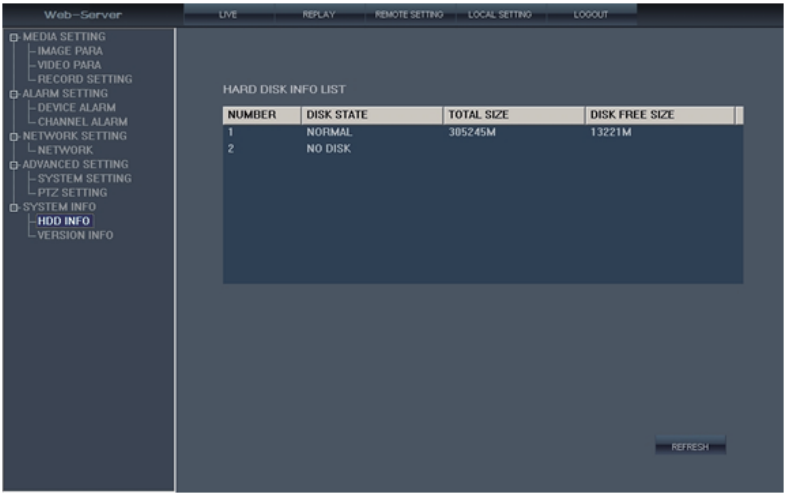


[PTZ Setting]: From the sidebar on the left, click “PTZ Setting” to access the PTZ settings i nterface. Users can set PTZ parameters remotely using the same methods used in the local NVR setup. All of the parameters can be adjusted by selecting values from their respective dropdown menus.

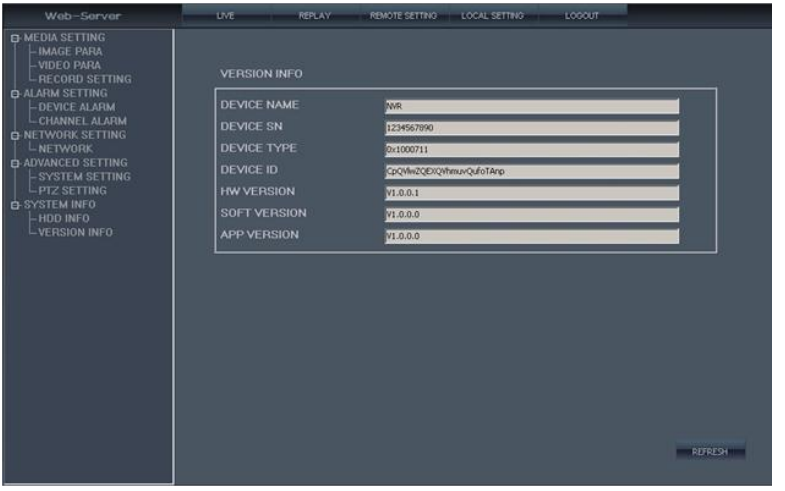


E. System Information

[HDD Information]: From the sidebar on the left, click “System Information”, and then select “HDD INFO” to enter the “HDD Information” interface. From this page, users can check the hard disk drive status, the total storage capacity of hard disk drive, and of the amount of free space left on the hard disk drive.

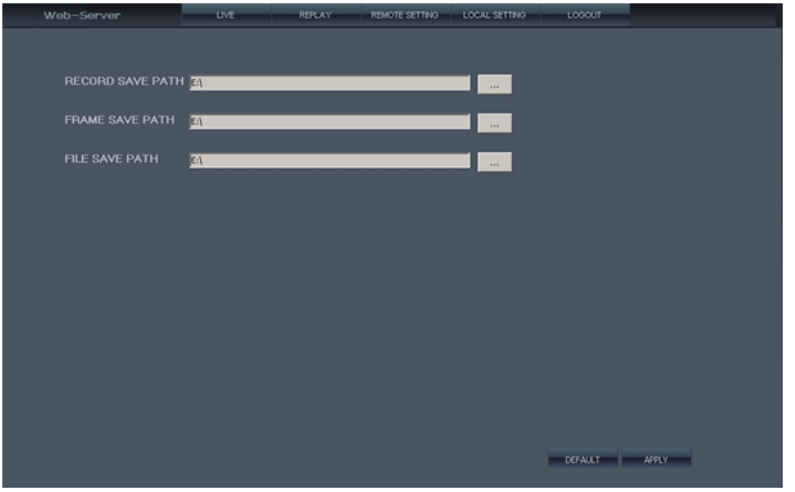


[Version Information]: From the sidebar on the left, click “System Information”, and then select “Version INFO” to enter the “Version Information” interface. Here, users can find out the device name, device type, hardware version and software version.



6.5.6 Local Settings

From the sidebar on the top, click “Local Setting” to enter the local settings interface. From this page, users can set up the save path for local settings; in the “Record Save Path” field, they can create a save path for recordings, in the “Frame Save Path” field, they can create a save path for video still images, and in the “File Save Path” they can create a save path for downloads. Clicking “ ... ” will set up the respective save path.



6.5.7 Logout

Click “Logout” to log out of the system.

7. Mobile Phone Support

This NVR can transmit live feed to your mobile phone, so that you can have ‘on the go’ access to your surveillance system from virtually anywhere. To view, you must install a mobile operating system specific program into your mobile. The mobile programs are located on the included CD, or downloaded via “APP Store” for an iPhone mobile, or downloaded via “Google Play” for an android mobile. In iTunes or Google Play, please search for “MobileEyeP2P”. Please see the instruction manual for your mobile to install the program. Currently, there are a limited number of phones that are supported: Google Android and Apple iPhone.

Note:

1. Prior to using this feature, you should apply for an Internet connection service for your mobile phone, such as 3G or 2.5G. Please contact your mobile service provider for details.

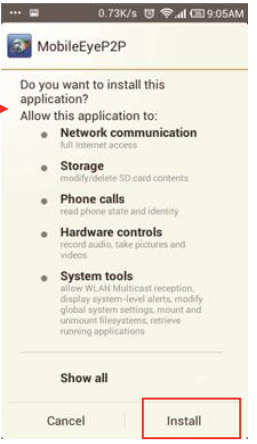
2. You can watch four live feed channels at a time with Google Android or iPhone Mobile.

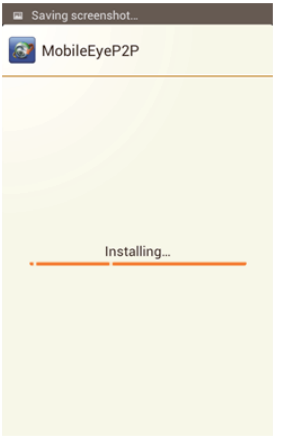
3. It is recommended that in "5.3.5-II Network-Advanced-Mobile Setup" section, the image quality of the NVR for remote access viewing via mobile phone. The better the image quality is, the bigger the bit rate and the frame rate of the NVR are. Please choose the suitable quality according to user's bandwidth.

7.1 Android Mobile

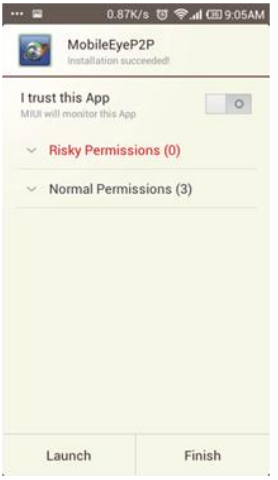
1ĎPlease go to the android software market " " to search for "**MobileEyeP2P**" and install it. Or from the installation CD, copy the setup software "**MobileEyeP2P.apk**" to user's Android phone or to SD card.

Open your "**File Manager**" in android phone and find the file "**MobileEyeP2P.apk**" in your android phone memory or SD card. Click "**MobileEyeP2P.apk**" to install the software as below.

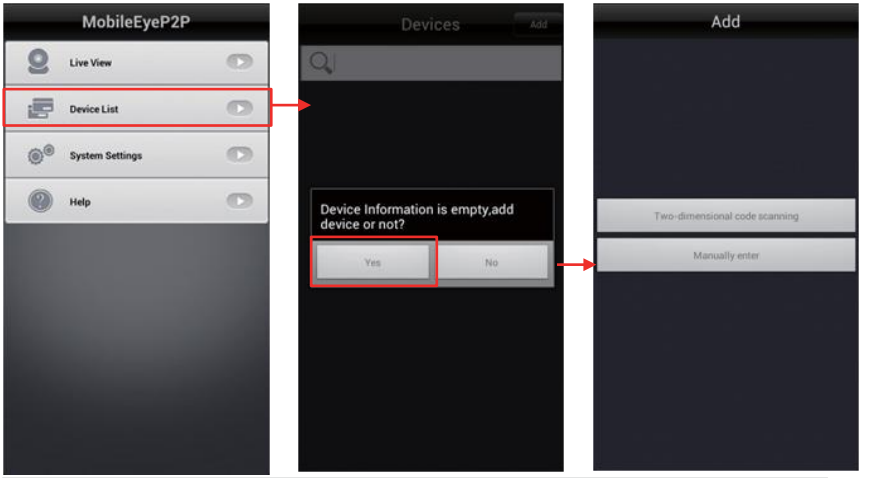


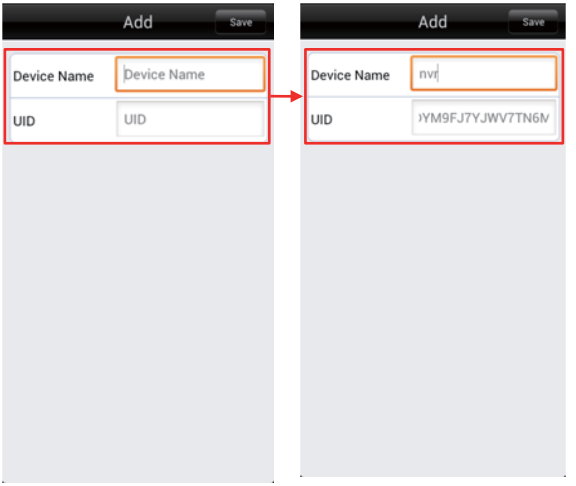


When the application has finished installing, the phone will display the following screen.

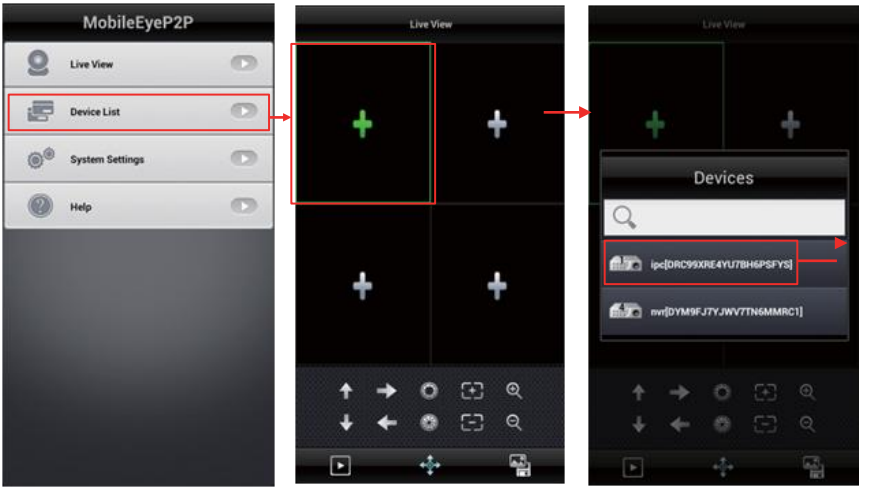


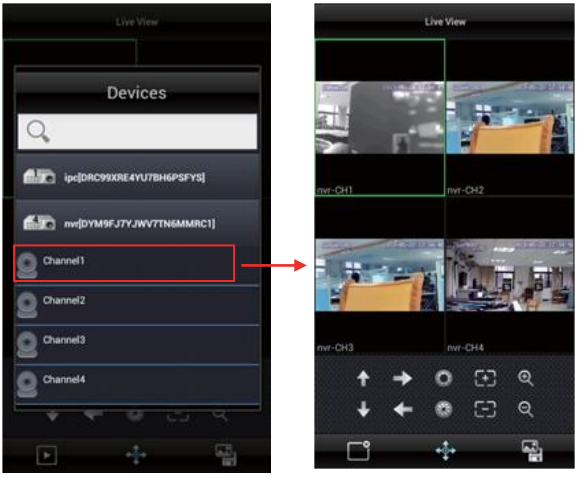
2ĎClick the “MobileEyeP2P ” icon to run the program, and click “ ” to enter “Devices” interface. If device information is empty, it will show a tooltip “Device Information if empty, add device or not”, touch “Yes” to enter next interface to add device; touch “No”, users need to click “ Add ” to enter the interface to add device. There two methods to add device: “Two-dimensional code scanning” and “Manually enter”. If users click “Two-dimensional code scanning” to the next interface, users can scan two-dimensional code attached to the machine through the mobile phone, and the device UID will be shown. If users click “Manually enter”, users need to input Device UID (UID is attached to the machine), and users can modify the device name for the NVR. Click the button “ Save ” to save parameters.





3) After adding the NVR successful, it will appear on the devices list. Click " " to enter the "Live View" interface. Move the green frame cursor to one of the quad screen, and click to select one of the channels in the Device list, it will connect immediately (shown as follows).





The function of the icons on the live view：

/ : Play/stop buttons.

: Click it to display PTZ control buttons “ ”.

: PTZ direction controls: up, down, right, left.

: PTZ lens controls: iris+/ iris-, focus+/ focus-, zoom in/zoom out.

: Click it to display “snapshot and record ” buttons.

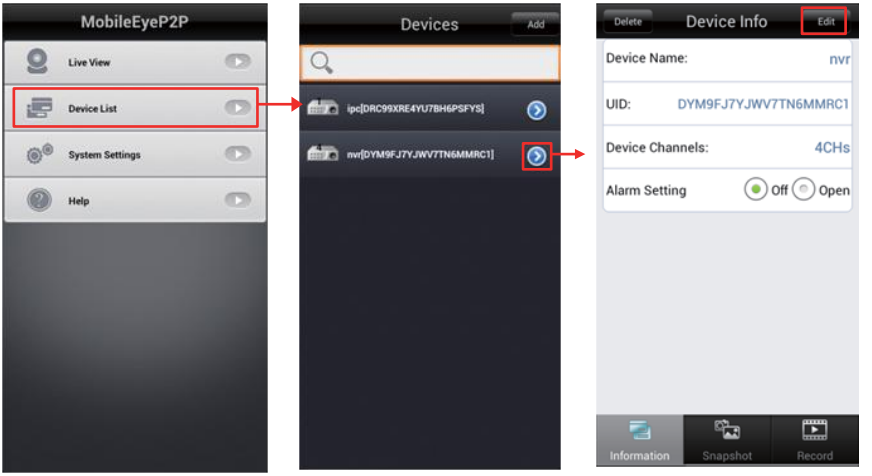
Capture: to capture a frame of the video stream as a still photo.

Record: Click it to start manual record video on the current channel, and the left bottom corner of the channel has a normal recording video symbol “REC”. And click it again to stop manual record.

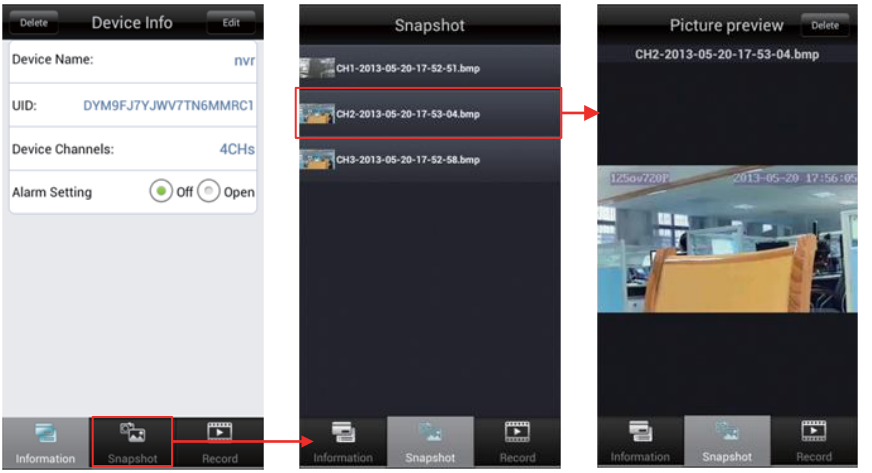
4) Double-click on the live view screen, it will enlarge the selected channel, and back to quad view if double-click again.

5) Click “ Device List ” to enter the interface of “Devices”, user can edit the parameters of one device, choose one device and click “ ” to the “Device Info” interface as below. Click “ Edit ” to adjust parameters. Click “ Delete ” to remove the information of the current device whether or not.

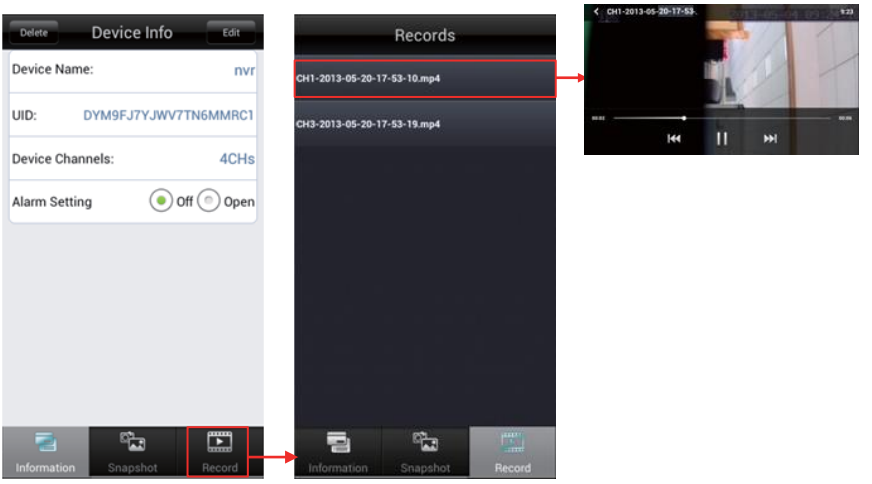
[Alarm Setting]: When select “Open”, it indicates that the alarm push function of the current channel is enabled. To enable alarm push function, users need to make sure the NVR is connected to the internet.



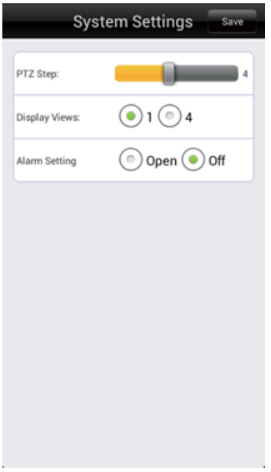
6) Click " " to enter the "Snapshot" interface to view the snapshots. Click one on the list to see the picture, and click " " to remove the current picture.



7) Click " " to enter the "Records" interface to view the record lists. Click one on the list to playback the record.



8) Click “ System Settings ” to enter the “System Settings” interface as follows.



[PTZ Step]: This function is mainly for the controlling of the speed. The larger the value is, the faster the rotational speed will be, with possible values ranging from 1~8.

[Display Views]: Select one and only one channel view will be shown on live view. Select four and quad channels view will be shown on live view.

[Alarm Setting]: When choose “Open”, it indicates that the alarm push function is enabled.

Note: When the option “Alarm Setting” on the “System Settings” interface and the option “Alarm Setting” on the “Device Info” interface are all set to “Open”, if motion detection alarm of the remote IPC connected to the NVR is enabled and the NVR is connected to the internet. When the motion detection alarm is triggered, the channel alarm information will be pushed to the phone. And users can click the alarm list to access to the video live view of the NVR directly.

9) Click “ Help ” to enter the “help” interface of this software information.

7.2 Apple iPhone

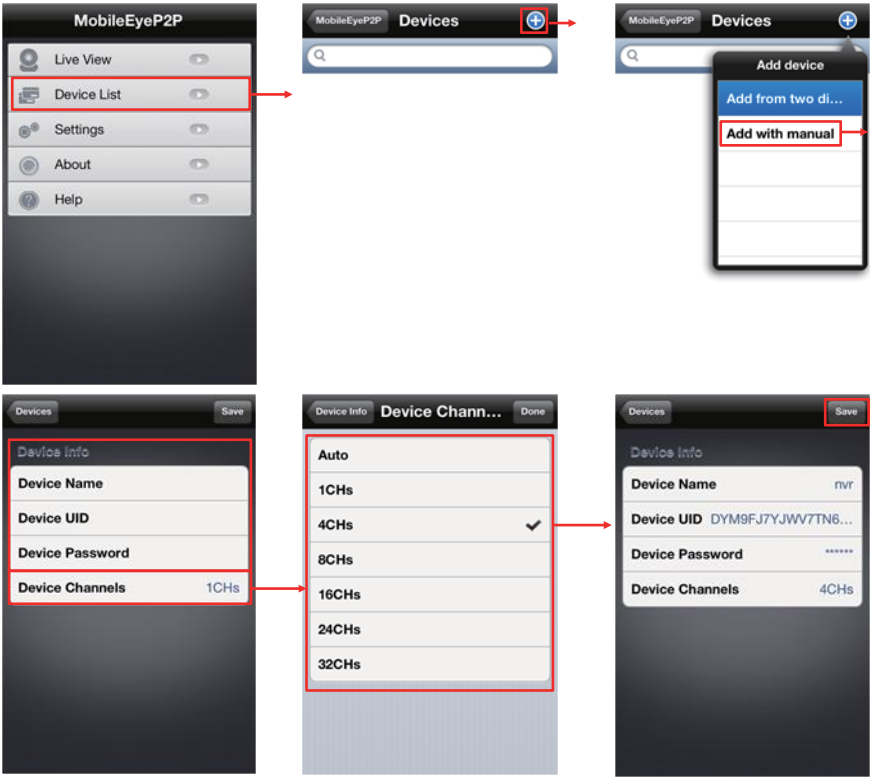
The Apple iPhone application, like all iPhone applications, needs to be downloaded directly from the iPhone App Store. Open iPhone APP store, search for “MobileEyeP2P”, it’s a free application.

1) “MobileEyeP2P” installation

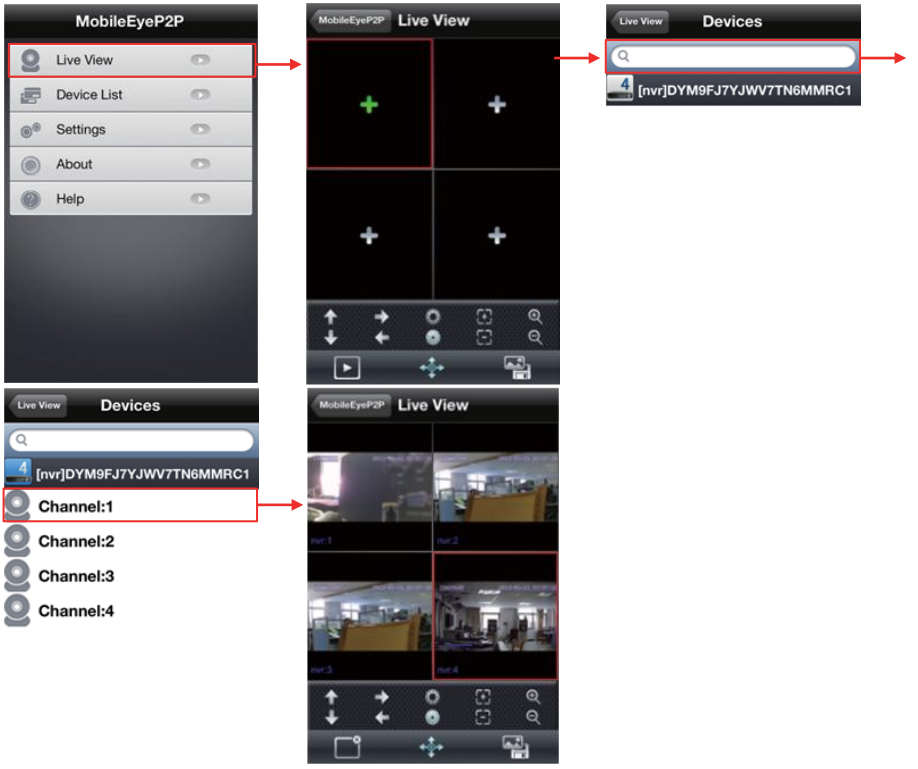
According to the following method, open the iPhone App store “ ”, touch “ ” and search for “MobileEyeP2P”. Install it on the mobile phone. After installing “MobileEyeP2P”, it will appear a “MobileEyeP2P” icon on the application software.

2) How to use “MobileEyeP2P”

æ Click the “MobileEyeP2P” icon to run the program. Click “ Device List ” to enter “Devices” interface, and click “ ” to add device. There two methods to add device: “Add from two di…” and “Add with manual”. If click “Add from two di…” to the next interface, users can scan two-dimensional code attached to the machine through the mobile phone, and the device UID will be shown. If click “Add with manual”, users need to input Device UID (UID is attached to the machine) and Device Password (the default password of administrator is 888888), users need to set up Device Channels (the number of the channels according to the device), and users can modify the device name of the NVR. Click the button “ Save ” to save parameters.



After add the NVR successful, it will appear on the devices list. Click " Live View " to enter the "Live View" interface. Move the red frame cursor to one of the quad screen, and click to select one of the channels in the Device list, it will connect immediately (shown as follows).



The function of the icons on the live view:

/ : Play/stop buttons.

: Click it to display PTZ control buttons " ".

: PTZ direction controls: up, down, right, left.

: PTZ lens controls: iris+/ iris-, focus+/ focus-, zoom in/zoom out.

: Click it to display "snapshot and record " buttons.

Capture: to capture a frame of the video stream as a still photo.

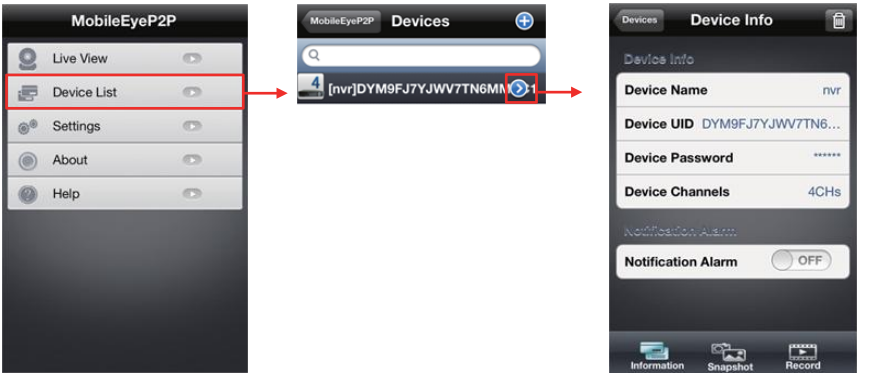
Record: Click it to start manual record video on the current channel, and the left bottom corner of the channel has a normal recording video symbol " ". And click it again to stop manual record.

èSingle-click on the live view screen, it will enlarge the selected channel, and back to quad view if click again.

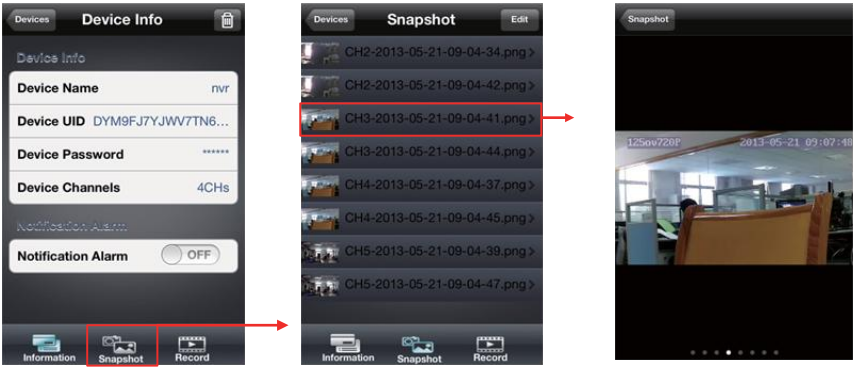
éClick " Device List " to enter the interface of "Devices", user can edit the parameters of one device, click " " to the next interface as below to adjust the parameters. Click " Devices " to previous. Click " " to remove the information of the current device.

[Notification Alarm]: When select "On", it indicates that the alarm push function of the current channel is enabled. To enable alarm push function, users need to make sure the NVR is connected to the internet.

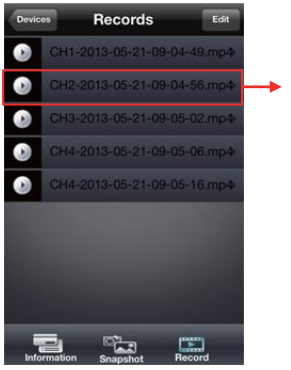
Note: When the option "Notification Alarm" on the "Device Info" interface is set to "On", and motion detection alarm of the remote IPC which is connected to the NVR is enabled. When the motion detection alarm is triggered, the NVR channel alarm information will be pushed to the phone. And users can click the alarm list to access to the video live view of the NVR directly.

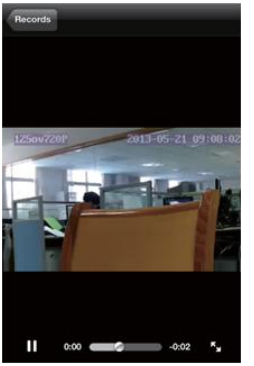


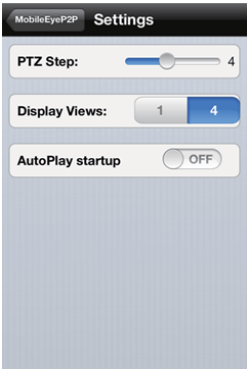
éClick " " to enter the "Snapshot" interface to view the snapshots. Click one on the list to see the picture. Click " Edit " to enter edit mode, users can select one to delete.



Click " Record " to enter the "Records" interface to view the record lists. Click one on the list to playback the record.







Click " Settings " to enter the "Settings" interface as follows.

[PTZ Step]: This function is mainly for the controlling of the speed. The larger the value, the faster the rotational speed will be, with possible values ranging from 1~8.

[Display Views]: Select one and only one channel view will be shown on live view. Select four and quad channels view will be shown on live view.

[AutoPlay startup]: If set "ON", it will be connected to remote devices automatically when enter into "Live View" interface.

Click " Help " to enter the "help" interface of this software information.

Troubleshooting

This basic troubleshooting guide will help to identify general malfunctions and Disabler instructions for quick resolution of these problems.

If the failure or malfunction cannot be resolved by following these instructions, please contact a qualified technician.

1. The NVR is not working after startup. What happened?

- Check the adapter input – are all of the input cables connected properly?
- Check the power cord; is it properly connected to the power source?
- Check the on/Disable switch – is it turned on?

- Check the upgrade procedure.
- Check the main board of the NVR – do all of the indicators indicate that the settings are correct?

2. What should be done if the NVR is rebooting automatically or has stopped midway through starting up?

Check for the following problems:

- Unstable or low input voltage.
- The connection to the hard disk drive is unstable or dysfunctional.
- The power supply is insufficient.
- Excessively high or low temperature, too much dust, or other physical factors that could affect the NVR's ability to operate.
- The motherboard is not well-connected with other boards.
- The hardware of the NVR is defective – take the device to a certified technician to have it examined.

3. What if there is no output of single-channel, multi-channel or all-channel video?

- Check the adapter of the camera to make sure it is securely connected.
- Check the cable for connecting video output in the back panel of NVR to make sure it is securely connected.
- The Ethernet cable couldn't be connected to the Ethernet port in the back panel of NVR -check it.
- Check the IP cameras and the NVR are all connected to the same LAN.
- Make sure the display settings have been configured correctly.
- The hardware of NVR could be defective – take the device to a certified technician to have it examined.

4. What if the NVR cannot record after startup and the interface is showing "H"?

- Make sure power adapter is a DC-12V.
- Make sure HDD has been properly formatted.
- Make sure the power and data connection cables of the HDD are connected and undamaged.
- The HDD could be defective – test it with another device to find out.
- The SATA port may be not working – have a qualified technician examine it to find out.

5. What if the system time is not correct?

- The wrong setting might be selected. Correct the time, and make sure to click "Apply" to confirm the changes.

- The battery may not be connected properly.
- The battery might be dead, in which case, change the battery.

6. After right-clicking “Stop recording” on the toolbar, the recording does not stop. How do I stop recording?

- The “Stop recording” function can only be executed by right-clicking during Manual recording.
- If you want to stop recording, please set the time is not recording.

7. What if the motion detection function is not working?

- The setting of motion detection area may not have been set correctly.
- Check the sensitivity of the motion detector. The sensitivity level may be too low.

8. What if the remote control does not work?

- The address of remote control may be incorrect.
- The distance from the remote control to the device may be too far or the angle may be too large.
- Check the remote control batteries have not been drained.
- Make sure that the remote control and the front panel of the NVR are not damaged.

9. Why I can’t log in to the WEB?

- Check to make sure that the computer has been connected to the Internet properly. Check if the “LINK” or “100M” LED is displayed normally on the panel; use ping xxx.xxx.xxx.xxx (NVR IP) to check if the Internet is linked properly.
- It is recommended that you use either Windows XP or Vista as the operating system, and Internet Explorer 6.0 or Internet Explorer7.0 as the Internet browser with this NVR.
- The ActiveX controls may have been blocked. Manually reinstall the ActiveX controls.
- The video card driver may be out of date; install DX8.1 and upgrade the video card driver.

Appendix 1. Setting up Internet Connections for Remote Access

This section will explain the ways to connect your NVR to the internet using static and dynamic IP addresses. To connect to the internet, you will need to use a modem and a router.

As a network device, your NVR should have its own address called an Internet Protocol (IP) address. This address can be used by other network devices (ie. computers) to access the NVR to remotely monitor the CCTV cameras and change settings. You can also get a static IP address from your internet service provider – this way, you will always have the same address at all times, though this method is rather expensive. If you have a static IP, enter your static IP in the NVR settings and the router will connect your NVR to the Internet.

You may alternatively choose to use a dynamic IP, which means that the IP address of your NVR may frequently change, but it will still be possible to find your NVR from remote computers, by using DDNS (Dynamic Domain Name System), which dynamically assigns IP addresses to the NVR. This functionality allows the NVR to automatically update its IP address to the DDNS Server each time its Dynamic IP address changes. Your NVR is equipped with the DDNS functionality and has a list of related domain names through which you can acquire an IP address. (See Section 5.3.5 for details.)

Set up an account with a DDNS service provider, and with the account information available, log in to the router and go to the DDNS page. Select the address of your service provider and type in the account password. After saving this information, the router will send IP updates to your DDNS account and the connection will always be forwarded to you current IP.

Appendix 2. NVR-Compatible Hard Disk Drives

The following is a list of Hard Disk Drives (HDDs) tested and found to be compatible with the NVR. Before using an HDD not found on this list, it is extremely important to test it for compatibility first.

Brand name	Model Number	Size/Capacity(GB)	Drive Type
WD	WD7500AAKS	750	SATA
WD	WD10EACS	1000	SATA
WD	WD10EARS	1000	SATA
WD	WD5000AADS	500	SATA
WD	WD20EVDS	2000	SATA
Seagate	ST31000341AS	1500	SATA
Seagate	ST31000524AS	2000	SATA
HITACHI	HDS721010CLA332	1000	SATA
Seagate	ST3500418AS	500	SATA
Seagate	ST31000340AS	1000	SATA
Seagate	ST31000528AS	1000	SATA
Seagate	ST2000VX000	2000	SATA
Seagate	ST2000DM001	2000	SATA
Seagate	ST2000DL003	2000	SATA
Seagate	ST3500312CS.	500	SATA
Seagate	ST1000VX000	1000	SATA
WD	WD10EURX	1000	SATA
Seagate	ST1000DM003	1000	SATA
Western Digital	WD10EADX-00TDHB0	1000	SATA
Western Digital	WD10EZEX-22RKKAO	1000	SATA
Western Digital	MD20EARX-00PASB0	2000	SATA
Western Digital	WD10EZEX-00RKKAO	2000	SATA

Appendix 3. NVR- Compatible Portable Wireless Mouse

The following is a list of wireless mouse tested and found to be compatible with the NVR. Before using a wireless mouse not found on this list, it is extremely important to test it for compatibility first.

- Loditech M215
- Loditech M235
- RAPOO 7100

Appendix 4. Accessing the NVR via Mozilla Firefox

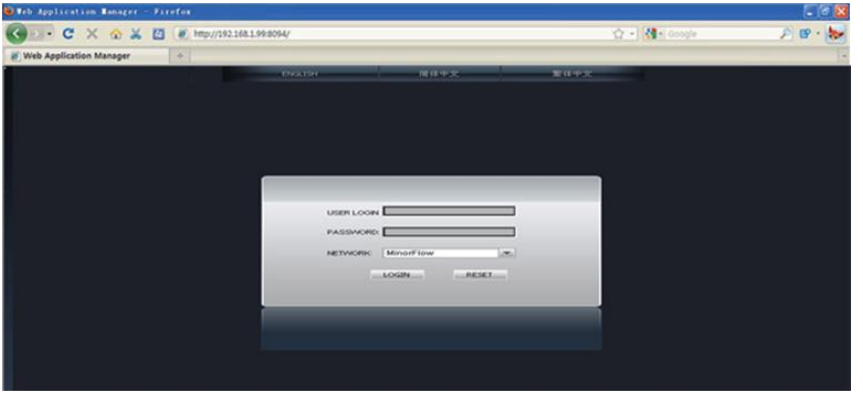
1. First, install Firefox on Windows(This document will use Firefox 3.6 as an example)

2. After installing Firefox, search for the “IE TAB” add-on for Firefox; this file is named “ie_tab_plus-1.95.20100930-fx+sm (IE Tab Plus (FF 3.6+).xpi”. **(This file can be downloaded from the Mozilla website)**

3. To install: Open Firefox, then click “Tools”, and select “Privacy” and a dialog box will appear. Then choose tab which is named “Get Accessory Discreteness”, and copy and paste “ie_tab_plus-1.95.20100930-fx+sm (IE Tab Plus (FF 3.6+).xpi” into the address field. A dialog box will prompt you to install or cancel the program; choose “Install immediately.” After installing the program, restart Firefox Browser.

4. Open Firefox and enter the NVR IP address in the address field.

5. Right-click at blank, select “Use IE TAB Plus to play this Page”, and choose “Switch browser engine”. The NVR can now be connected successfully.

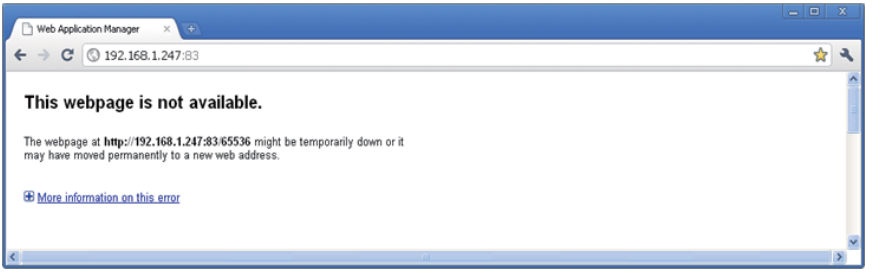


Appendix 5. Accessing the NVR via Google Chrome

1. First, install Google Chrome on Windows(this manual will use Chrome version 7.0.517. 36 as an example).

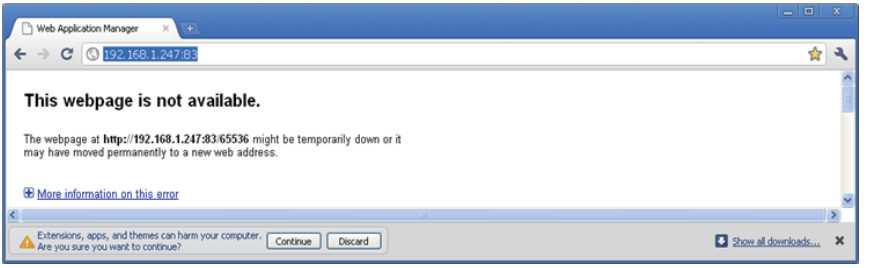
2. After installing Google Chrome, search for the “IE TAB” Chrome add-on; this file is named “extension_1_4_30_4.crx”. **(This file can be downloaded from the Chrome Web Store)**

3. Open Chrome, enter the IP address of the NVR into address bar, and the following screen will appear.

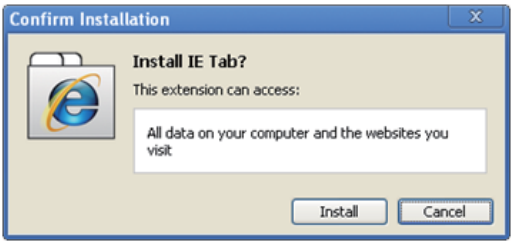


4. Drag the add-on into the browser interface and the following screen will appear.

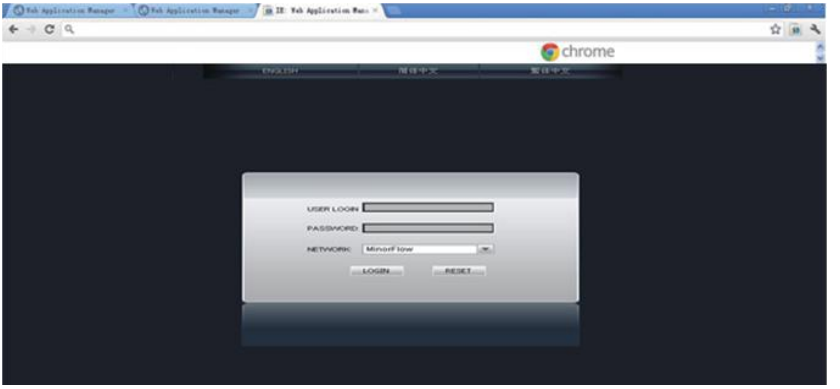
5. Select “Allow” to download multiple files and the following screen will appear.



6. Select “Continue” to continue installing extensions and the following screen will appear.

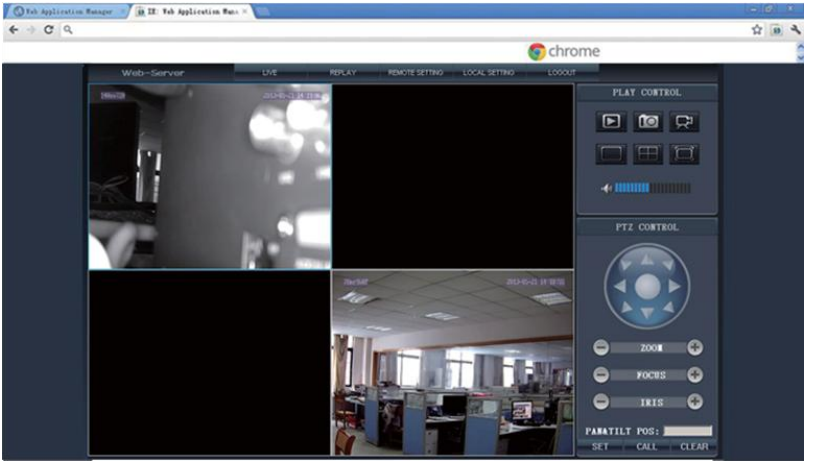


7. Click “Install’ and the following screen will appear.



Note: If the web page still does not open, press the “ ” icon on the right of the address field to display this page in an IE based-tab.

8. Fill in your correct user name and password to log in. and the following screen will appear.



Appendix 6. How to ensure reliable remote viewing of the NVR through IE browser on Win 7/Win 8 64bit OS

1. Run 32bit IE on Windows OS (64bit)

Note: On a 64-bit version of a Windows operating system, there are two versions of the Internet Explorer files:

- The 64-bit version is C:\ Program Files\ Internet Explorer \ iexplore.exe.
- The 32-bit version is C:\ Program Files(x86) \ Internet Explorer \ iexplore.exe.
- Please run the C:\ Program Files(x86) \ Internet Explorer \ iexplore.exe.

2. Run Internet Explorer as the Administrator

1) Open folder path C:\ Program Files(x86) \ Internet Explorer.
2) Right click the Internet Explorer icon and choose "Run as Administrator."
3) Click "Continue" in the User Account Control window to grant administrator access to Internet Explorer.

3. Download ActiveX control after type in IP address & Port

1) Open an Internet Explorer browser window to make changes to your current ActiveX controls. Click the “Tools” link located at the top of the menu bar. A drop down window will appear with several more options to choose from. Each option will let you change some of the default settings already programmed into Internet Explorer.

2) Click the “Internet Options” link located at the end of the list. When the pop-up window appears, select the “Security” tab to access the ActiveX controls. There are several zones with multiple security settings. Each zone has preset settings built into it. You can change the settings to fit your current needs. If for some reason you’re not satisfied with these changes, click the “Reset All Zones to Default Level” to change them back. To allow ActiveX controls to run, click the “Internet” zone. The icon that identifies this zone looks like Earth.

3) Change the security level for the “Internet” zone from the default “Medium-high” zone to “Medium." Slide the bar up and down between the different security zones. The “Medium” Internet zone will allow a lower security environment for your web browsing. To go even further with enabling the ActiveX controls, click the “Custom Level” button. Under the “Settings” menu, look for the “ActiveX Controls and Plug-ins” options. Normally, these settings are disabled to prevent a security risk to your computer system.

4) Allow the ActiveX controls to automatically run by changing the settings from “Disable” to “Enable.” This can be done by clicking the “Enable” button next to “Allow Previously Unused ActiveX Controls to Run without Prompt.” After making these changes to your Internet Explorer browser, you won’t be constantly prompted to enable the ActiveX controls. They’ll automatically be allowed without prompting you to manually do so. The changes made in these settings will not take full effect until you close and restart the Internet Explorer browser window.

4. Fix site display problems with Compatibility View

Sometimes a website you're visiting doesn't look like you expect it to. Images might not show up, menus might be out of place, and text boxes could be jumbled together. This can be caused by a compatibility problem between Internet Explorer and the site you're on. When a site is incompatible with Internet Explorer, you'll see the Compatibility View button in the Address bar. You can only turn on Compatibility View in Internet Explorer for the desktop.

A. To turn on Compatibility View

1) See if the Compatibility View button appears in the Address bar. (If you don't see the button, there's no need to turn on Compatibility View.)

2) Tap or click the Compatibility View button to display the site in Compatibility View.

Once you turn on Compatibility View, Internet Explorer will automatically show that site in Compatibility View each time you visit. You can turn it off by tapping or clicking the button again. Or, you can clear the entire list of sites using Compatibility View by deleting your browsing history.

B. To clear the list of Compatibility View sites

Not all website display problems are caused by browser incompatibility. Interrupted Internet connections, heavy traffic, or problems with the website can also affect how a page is displayed. If you're having other problems on a site, such as playing videos, read Video won't play in Internet Explorer.

The Compatibility List is frequently updated, and Internet Explorer automatically downloads these update. This list includes sites that might've been designed for older or other browsers, sites that use Adobe Flash Player, and other settings that help give you a better browsing experience. If you don't want these updates, you can turn off Compatibility List Updates at any time.

C. To turn off Compatibility List Updates

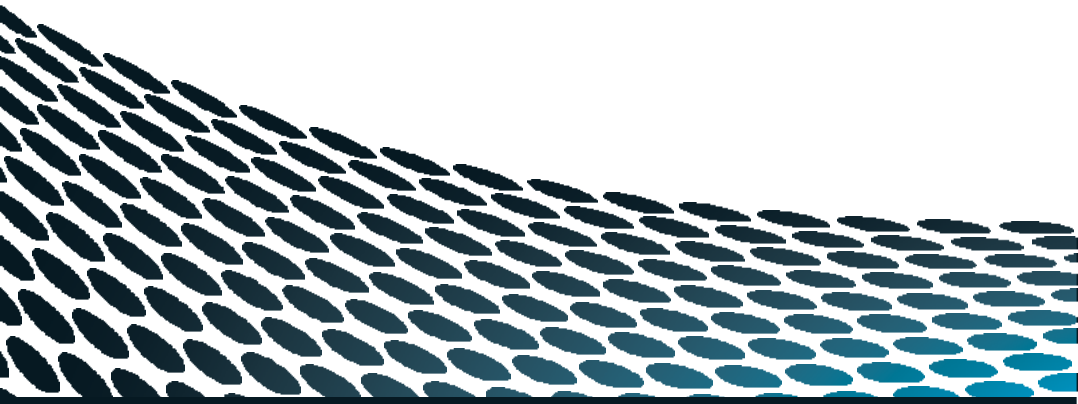
1) Open Internet Explorer in the desktop.
2) Press the Alt key to display the Menu bar (or press and hold the Address bar and then select Menu bar).
3) Tap or click Tools, and then tap or click Compatibility View settings.
4) Clear the Download updated compatibility lists from Microsoft check box, and then tap or click Close.

D. To change Compatibility View settings

1) Open Internet Explorer in the desktop.
2) Press the Alt key to display the Menu bar (or press and hold the Address bar and then select Menu bar).
3) Tap or click Tools, and then tap or click Compatibility View settings.

Statement

±±If there is any doubt or disputability regarding information in this manual, you can call our company for clarification.

±±This manual provides reference information for several types machines; contact our customer service department if you have any questions or encounter any difficulties using your device;

±±There maybe some differences between the descriptions provided here and the actual devices, as our products are constantly developing and upgrading. We apologize if this manual does not contain all of the latest updates.