H.264 NETWORK Embedded DVR

Mighty Mule

User’s Manual

Thank you for purchasing our product. Please read this user manual carefully to ensure that you can use the device correctly and safely.

CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER.
NO USER SERVICEABLE PARTS INSIDE.
PLEASE 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 equipment has been tested and found to comply with the limits for a Class "A" digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment can generate, use and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the users will be required to correct the interference at their own expense.

FCC Caution: To assure continued compliance, use only shielded interface cables when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This Class A digital apparatus meets all the requirements of the Canadian Interference Causing Equipment Regulations.

LIMITATION OF LIABILITY

- This users' 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 of any third party's rights.

- This publication may include technical inaccuracies or typos. 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 publications and/or related to the product, 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, included 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 in 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 organization, due to violation of privacy whereby the surveillance picture and/or saved data becomes public or is used for the purpose other than surveillance

SAFETY INSTRUCTIONS

- Read these instructions and keep them in a safe place for future reference.
- Please refer all work related to the installation of this product to qualified service personnel or system installers.
- Do not operate the appliance beyond its specified 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 0°C ~ +45°C (32°F ~ 113°F) and humidity below 85%.
- The input power source for this appliance is between 90 ~ 264 VAC, 47 ~ 63 Hz.
- Install the unit away from heat sources such as radiators, heat registers and stoves. Installation of the unit near consumer electronics devices, such as stereo receiver/amplifiers and televisions, is permitted as long as the air surrounding the terminal does not exceed the above mentioned 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 power 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

CONTENT

1. Product Introduction 5
- Summary 5
- Main Functions 5
- Front panel buttons descriptions 6
- Rear panel diagram 7
- Remote controls 9

2. Basic function operation 10
- On/off Switching navigation 10
  - Start 10
- Login 10
- Main menu setup guide 11
- Configuration management 12
  - Basic configuration 13
  - ive configuration 14
  - Record configuration 16
  - Schedule configuration 19
  - Alarm configuration 20
  - Network configuration 26
  - User management 28
  - P.T.Z configuration 30
  - Advance configuration 33
- Data retrieval 33
  - Time search 34
  - Event search 34
- Backup 35
- Check information 35
- Disk management 36
- Upgrade 36
- Logoff 36
- System shut down 36

3.IE Side Operating Instruction 37
- IE Setting 37
- The remote live preview interface 38
  - Server parameters configuration 41
  - Remote playback 46

4.Network setting 47
- physical connection 47
- DVR setting 47
  - etwork parameter 47
- 4.2.3 port setting and Virtual Servers 49
- check to the IP 50

5.How to apply DDNS 52

6.Email setting 56
DVR setting 56
PC Seting 56
7.Ptz Setting 62
physics connection 62
DVR Setting 62
8.FAQ 64

1. Product Introduction

Summary

This device is a digital monitoring and recording product specially designed for the security field. It uses a standalone processor and a proprietary Linux operating system.

The device combines the latest technologies in the IT field, such as video and audio compression/decompression, large capacity HDD record, TCP/IP network etc... The operating system code is embedded in the FLASH chip, which makes the operating system more stable. This device has both features of digital video and audio recording (DVR) and digital video and audio server (DVS). It can work locally and independently but also monitor via network connection. With the use of professional network video surveillance platform (network) software, it can fully reflect its strong networking and remote monitoring capability.

It can be used for security protection in the fields of banking, telecommunications, Power industry, justice, traffic, residential, factory, warehouse, water conservancy facilities as well as other areas and departments.

Main Functions

Real-time Monitoring

Monitoring can be done via analogue display or through a network connection via TCP protocol.

Storage Function

The DVR uses a proprietary format to save data which cannot be tampered with and will be secure.

Compression Method

It supports multi-channel audio and video signal. Each channel of audio and video signal is compressed in real time by independent hardware. Sound and image keep stabilizing synchronization.

Backup Function

It backups through USB port (such as the common U disk, mobile hard disk, SATA Combo etc.).The client computer can download and backup the files on the hard disk via the internet

Video Playback Function

Each channel can realize an independent and real-time recording, while retrieval, reverse play, network monitoring, video search and download etc. can realize simultaneously. Multiple playback modes: slow forward, fast forward, reverse play and frame-by-frame play.

When playing back the video, the exact time of the event can be displayed.

Network Operation Function

Through the internet, you can realize remote and real-time monitoring, remote video search and playback, and remote PTZ control.

Communication Port

With RS485 or RS422 port and PTZ control. It has a standard RJ-45 100mbps Ethernet port capable network remote control function

PTZ Control

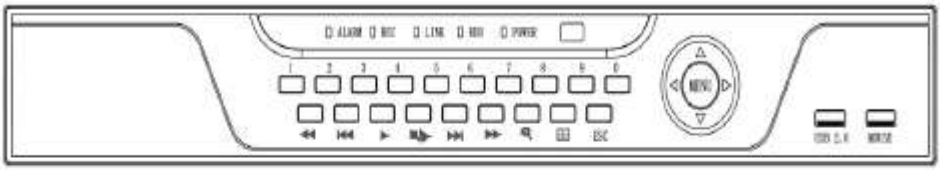
Supports PTZ decoding which communicates through RS485 or RS422. The DVR is compatible with multiple decoding protocols, facilitating the function of PTZ and dome camera control.

Intelligent Operation

The DVR can be operated by the mouse, remote control or front panel buttons.

1.3 Front panel buttons descriptions

Statement: the front panel interface, button layout and type, real product shall prevail. The front panel buttons description:



Buttons on Front Panel

1）**IR Sensor**: IR receiver for the remote control.

2）**LED Indicators**: Shows status of alarm, rec, power.

3）**Channel/Numbers/Playback**: Press buttons 0~9 to view the selected channel in full-screen; press buttons 0~9 to input passwords and user IDs; during playback, press the following:

4) ◀◀: Increase reverse playback speed 1X, 2X, 4X, 8X, 1/2, 1/4, 1/8

8) ■ ▮▶: Press to freeze playback to one frame, then press again to advance frame-by-frame

6) ▶: Press to start playback

7 ▶▮: Press to slow playback speed by 1/2, 1/4, 1/8

8) ▶▶: Press to increase forward playback speed 1X, 2X, 4X, 8X, 16X, 32X, 64X

9)**MENU/ OK**: Press to open/close the main menu.or confirm.

10)**Navigation:** Press the Navigation buttons to perform the following:

•: In menus, press to confirm selections; in PTZ mode, press to change the navigation buttons to control the connected PTZ camera (not included)

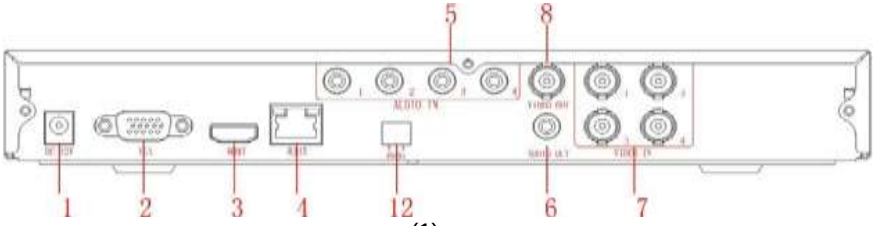
- ▲: Press to move cursor up; in PTZ mode, press to pan the camera up
- ▼: Press to move cursor down; in PTZ mode, press to pan the camera down
- ◀: Press to move cursor left; in PTZ mode, press to pan the camera left
- ▶: Press to move cursor right; in PTZ mode, press to pan the camera right

11）**USB**: Connect a USB flash drive to the top port for data backup and firmware upgrades connect a USB mouse to the bottom port.

Rear panel diagram

Statement; The rear panel interface button layout and type for the product may vary.

The rear panel buttons description



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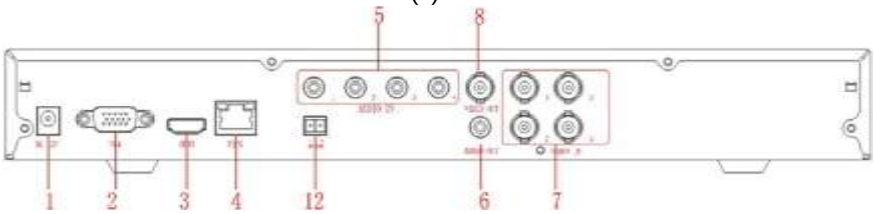

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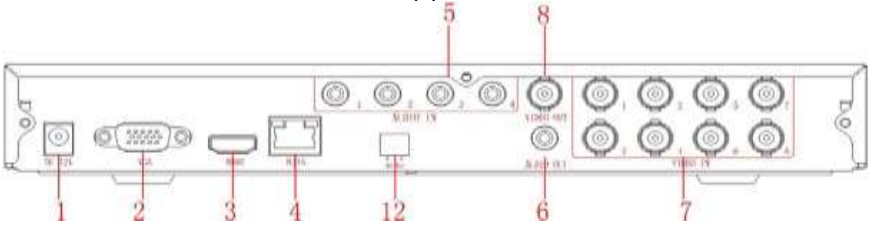

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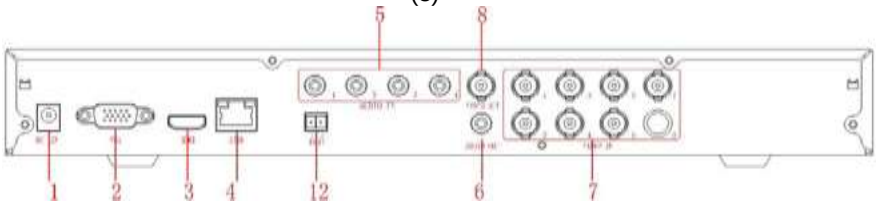

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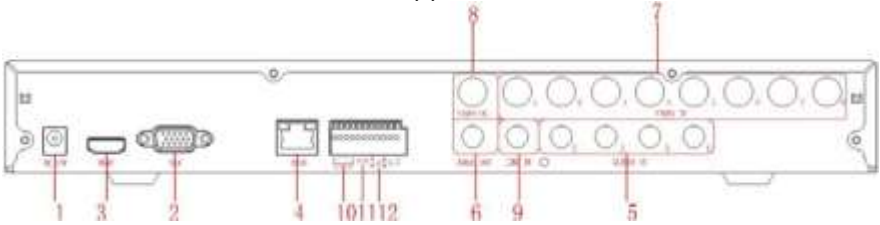

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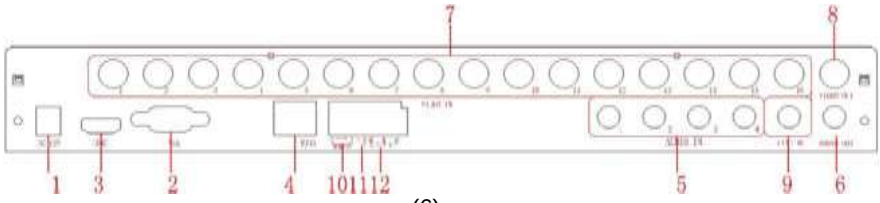

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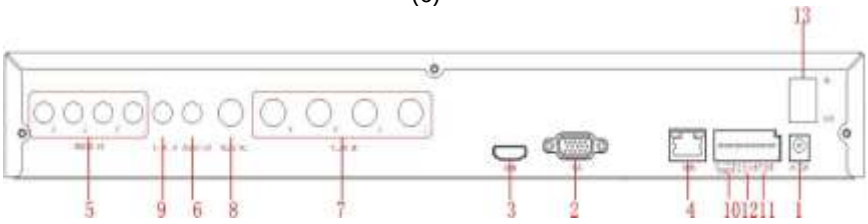

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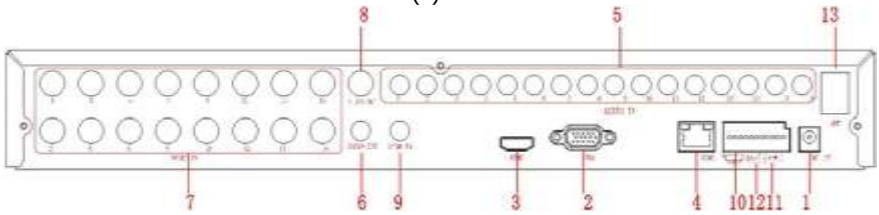


(8)

Connectors on Rear Panel：

Item	Physical connector	Connector description
1	Power input	Input DC12V（≥2A）direct current
2	VGA	For connecting VGA monitor
3	HDMI	For connecting HDMI monitor
4	Network	For connecting Ethernet
5	Audio Input	For connecting audio signal input
6	Audio Output	For connection audio output
7	Video input	For connecting analog video signal input (BNC)
8	Video output	video output for connecting TV or monitor (BNC)
9	Line In	For connecting Intercom equipment
10	Alarm Input	4 alarm input
11	Alarm Output	1 alarm output
12	RS 485 or RS422	RS 485 or RS422 for connecting PTZ
13	Power Switch	Power ON/OFF

1.5 Remote controls

The remote control is the secondary input device For navigating the system's interface.

To use the remote control:

1.**STANDBY**:Press to turn standby mode ON/OFF.

2. **LOGIN/LOCK**: If "Security" has been enabled in the Setup menu, press to open the user password login screen.

3. **Number/Channel buttons**: While in menus, press buttons 0~9 to enter values; during live viewing, press to view channels in full-screen.

4.**QUAD:** Press to switch between quad and split-screen displays.

5. **PTZ**: Press to open the PTZ control window.

6. Playback controls :

◄◄: Increase reverse playback speed 2X, 4X, 8X.

• ▶: Press to start playback.

• ►►: Press to increase forward playback speed 2X, 4X, 8X.

• ▶▶|: Press to slow playback speed by 1/2, 1/4, 1/8.

• ▶|: Press to to advance frame-by-frame.

• ‖: Press to freeze playback to one frame.

• ■: Press to stop playback.

7. SERACH: Press to stop playback

8. RECORD:Press to start manual recording, then press again to stop manual recording.

9. +/ - : In menus, press to adjust values.

10. **MENU**: Opens the main menu.

11. **EXIT**: Close menu windows

12. **EXTRA**: For the future use.

13. **Navigation/Enter**:

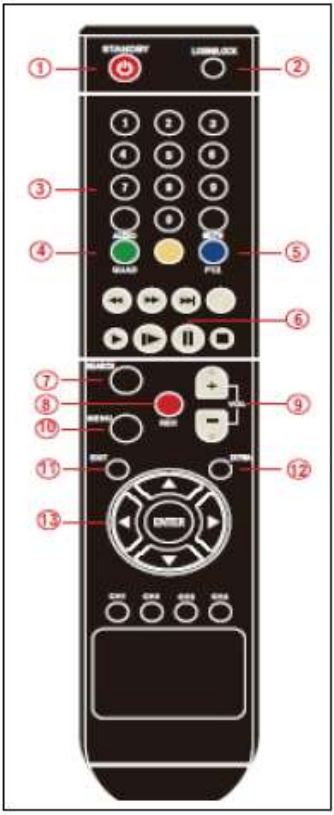
• ▲: Move cursor in menus up;

• ▶: Move cursor in menus right;

• ◄: Move cursor in menus left;

• ▼: Move cursor in menus down;

• Enter: In menus, press to confirm selections; during playback and preview, press to view system information



TIP: When using the remote control to enter password and camera titles, select the field using the navigation buttons, press ENTER, and then press the number buttons.

2. Basic function operation

On/off Switching navigation

Start

Before starting, please ensure all parts are connected securely! Power the DVR on. The equipment will start the boot process with the "Power" button showing red.

Power off

User can power off the device by using the remote controller and mouse.

By Remote Controller

Press power button, then shut down window will appear, click OK, the unit will power off after a few seconds.

Disconnect the power by keyboard and mouse

Step1: Enter into the Menu system (icon below), then select “System Shut Down” The “Shut down” window will appear.

Step2: Click OK, the unit will power off after a few seconds.

Step3: Disconnect the power.

Login

Once the DVR boots, the [POWER] indicator will show constant red. The default factory password is blank. After the DVR boots, press the [MENU] key on the front panel or right click the mouse. Choose “Login” interface as shown below:

Pic 2.2 user login

After the correct user name and password are input, you can enter the menu system to setup and configure the DVR for operation andLive preview interface:

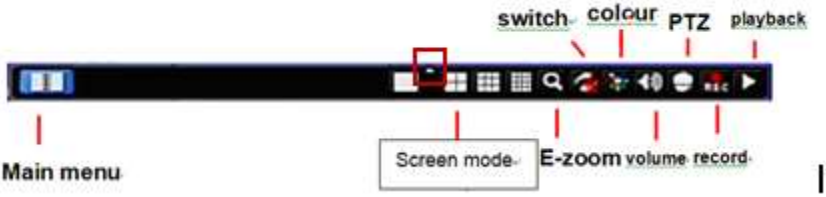
Icon					
Sign description	recording	Manual record	Motion detection state	Alarm state	Timing recording state

Live playback

Click the [Play] button to play back the recording enter fast record playback. (shown below) User can perform complete DVR operation by clicking the buttons on screen.

Main menu setup guide

Menu bar: Right click the mouse or press ESC button on the front panel. The control bar will display on the bottom of the screen, refer to pic 2-2



Pic 2.3(1) Menu bar

Click the icon near Screen mode. The single channel chosen will appear on the screen in live mode. You can also choose single channel full frame by double clicking the channel. You can go to 4, 9 or 16 view by clicking the appropriate grid on the menu.

In the case of 16 channel display, the user could choose 16 consecutive channels from 1-16 to show live video Click to save.

Click Main menu will show dialogue frame as Pic 2-4;

Pic 2.3.(3) Main function

Click “Config”，display SETUP windows as Pic 2-5:

Press MENU button on the front panel or the same button on remote control. Both will display the same window.

Configuration management

Configuration Management (Config) contains nine sub-menus: Basic configuration, Live on-site configuration, Record Video configuration, Recording Plan Schedule, Alarm configuration, Network configuration, User management, PTZ configuration and Advanced configuration.

Basic configuration

Click "Basic" configuration. The basic configuration contains two sub-menus: System and Date & time

1) System

In the "System" menu the user can setup the device name, device ID, video format, video output and language, Screensaver and so on. The definitions for every parameters display as below:

Device name: It will display on the client side browser or CMS to help the user recognize the device remotely.

Device ID: Corresponds with the remote control number

Video Format: Two modes: PAL and NTSC. User can select the video format according to that of the camera. N. America uses the NTSC format.

Password Check: Enable this option. User needs to input user name and password.

Show System Time: Choose display time in live view if checked.

Video Output: the resolution of live display interface, range from: VGA800*600, VGA1024*768, VGA1280*1024 and HDMI 1080P.

Language: Choose setup accordingly: Simplified Chinese ,Traditional Chinese, English,
Japanese,German,Russian,French,Portuguese,Turkish,spanish,Italian,Polish,Hungarian, Slovak, Vietnamese, Greek

Click the "Default" button, the system restore the default settings. Click the "Apply" button will save the above settings;

Click the "Exit" button to exit the current menu configuration. **If you change the menu, language and video output, the device will restart**

2) Date & Time

Set the “Date Format” as the date and time you want to appear on the capture. You can also manually adjust the system time.

Note: Click the "Default" button to restore system default settings; Click the "Apply" button to save the above settings;

Click the "Exit" button to exit the current page.

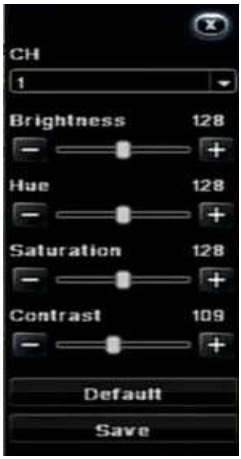
Live configuration

Live: Live configuration includes two sub-menus: Live and Mask

Live configuration

Note: Click Camera Name to use a soft keyboard. User can choose specific names for each channel

Place a check in “Show Name” box to display camera channel/name and click “Setup” button to display the window as below：



Live-color adjustment

In this interface, user can adjust brightness, hue, saturation and contrast in live view. Click the "Default" button to reset default settings, click "OK" button to save the setting.

The user can setup all channels with same parameters the by checking the "All" box and setting up accordingly.

Mask

Privacy mask. User can setup private mask area on the live image picture,

To set up mask area: Click "Setup" button, enter into live view. With the left mouse button, click and drag mouse to set mask area. Refer to below picture. Click Apply button to save the setting.

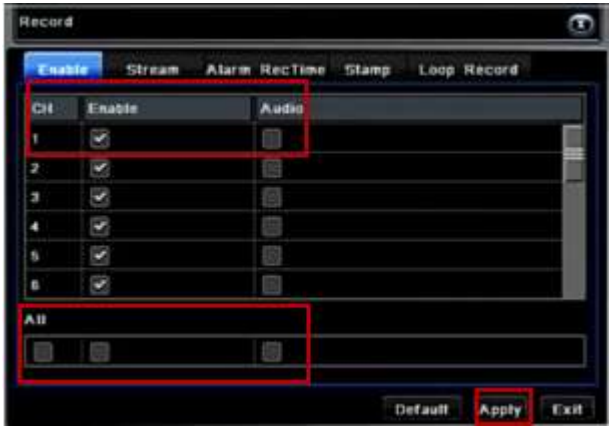
Delete mask area: Select a certain mask area to delete, Left click the mouse to delete that mask area. Click Apply button to save the setting.

Live image mask area

Record configuration

Left click “Record” and enter window：

Record configuration includes four sub menus: Start, Record bit rate, Character overlay recycle record.



Start

To enable record, left click the channel box you want to record video and/or audio on. User can setup all channels with same parameters, left click “All” then apply accordingly.

Click “Default” button to resort default setting; click “Apply” button to save the setting. Click “Exit” button to exit current interface.

Video parameters instruction

Parameter	Meaning
start	Every channel record switch
audio	Start use the channel record audio

Record bit rate

Record bit rate

Setup Resolution, Rate (FPS=Frames Per Sec), Encode, Quality and Max Bitrate. User can setup all channels with the same parameters. Left click "All", then click Apply. Click "Default" button to reset default settings. Click "Apply" button to save the setting. Click the "Exit" button to exit current interface.

Record Stream Parameters

Parameter	Meaning
Fps	Range from 1-30（NTSC）1-25(PAL)
Resolution	Support 960H、D1、CIF
Quality	The higher the value is, the clearer the recorded image is. Six options：Lowest, Lower, Low, Medium, Higher, Highest
Coding	Support CBR and VBR
Max stream	Select range： 16Kb、32Kb、64 Kb、128 Kb、256 Kb、512Kb、640kb、758kb、1024kb、1536kb、2048Kb、3072kb、4096kb

Stamp: User can have the Channel Name and/or Time Stamp appear on the recording. Left click in the box on the channel line accordingly. User can set up all channels by left clicking the "All" box and apply accordingly.

Record
Enable
Stream
Alarm
RecTime
Stamp
Loop Record
CH
CH Name
Time Stamp
Position
1
2
3
4
5
6
Setup
All
Default
Apply
Exit

To set up position of the Channel Name and Time Stamp, left click the Setting button, and then use the mouse cursor to drag the camera name and time stamp to desired position. See below.

Before the change

After the change

User can also setup all channels with same parameters by using the “All” box.
Left click “Default” button to set back to factory default; click “Apply” button to save the setting; Click “Exit” button to exit current interface

Loop Record

Left click “Loop Record” to enable the loop record function. It will start an overwrite when the hard drive is full (ie: If configuration allows 10 days of recording, on day 11, day 1 is overwritten – On day 12, day 2 is overwritten) If disabled, it will stop recording when HDD is full. **Note: Disk space usage is determined by Resolution, Frame Rate and Quality. The higher the setting, the more disk space is used shortening review time**
Click “Default” button to resort back to default setting; click “Apply” button to save the setting; Click “Exit” button to exit.

Schedule configuration

Schedule configuration includes 3 sub menus: Timer, Motion & Sensor.

Schedule

Vertical column represents seven days of the week from Monday to Sunday. The horizontal row represents 24 hours of a day from 00:00 to 24:00. Left click the grid to do apply setup accordingly. Blue represents checked date & time. Gray represents unchecked date & time.

Schedule

Copy: User can apply the schedule setting of certain channel to other or all channels. Select channel and click “Copy” button. Click “Default” button to reset back to factory default; Click “Apply” to save the setting; Click “Exit” to exit current interface.

Motion

Motion

Vertical column represents seven days of the week from Monday to Sunday. The horizontal row represents 24 hours of a day from 00:00 to 24:00. Left click the grid to do apply setup accordingly. Blue represents checked date & time. Gray represents unchecked date & time.

Sensor

Sensor

The setup procedure for Alarm is the same as the procedure for Schedule.

Note: Default setting Sensor is full-activated. That is, the color of schedule setting interface is blue.

Alarm configuration

Alarm configuration includes 4 sub menus: Sensor, Motion, Video loss and Alarm out.

Sensor

Sensor includes two sub menus: basic, alarm

1) Basic

Sensor - Basic

Enable sensor alarm and set the alarm type according to trigger alarm type. Two options: High level and Low level.

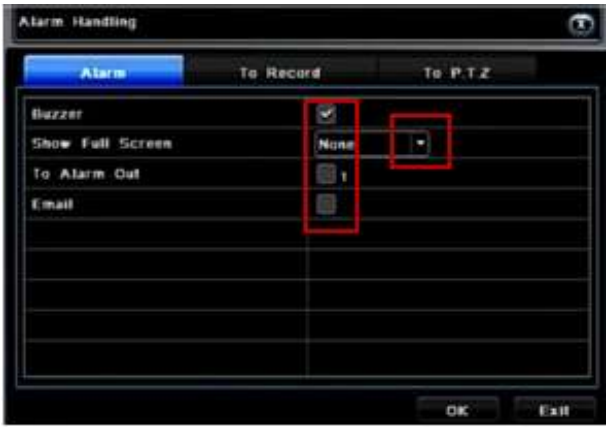
User can setup all channels with same parameters with the mouse. Left click “All” and set up accordingly.

Left click “Default” button to set to factory default settings; Left click “Apply” to save the setting; click “Exit” to exit current interface.

2) Alarm Handling

Alarm handling - Alarm configuration-sensor

Select hold time and click setting the button. A dialog box will open as below：



Alarm handling -alarm configuration

Alarm configuration: You can set the Alarm to notify by:

1. Audible Alarm
2. Trigger Alarm
3. E-mail Alarm

Alarm handling -alarm configuration

Record: Left click the box corresponding with the camera(s) you want to record .Left click "OK" to save the above settings, click "Exit" to exit .

Alarm linkage: Set alarm type and linkage type. C lick "OK" to save above settings when the corresponding channel alarm input, PTZ start a preset point, cruise lines and trajectories. Click "Exit" to exit the current interface.

Alarm handling - Alarm linkage

User can setup all channels with same parameters by left clicking “All.” Set up accordingly.

Click “Default” button to resort default setting; click “Apply” button to save the setting; click “Exit” button to exit current interface.

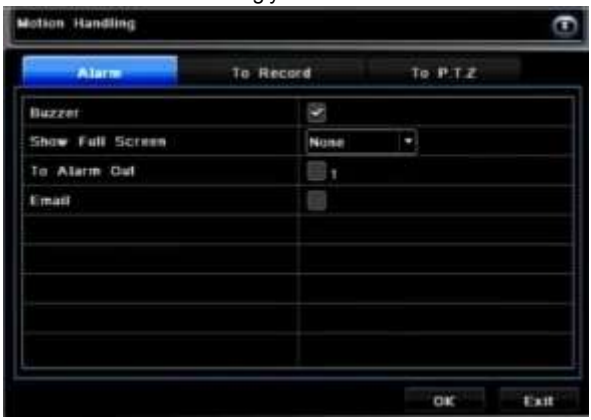
Motion

Motion includes one sub menu: Motion

1)Motion

Motion

Left click “Enable” for channel(s) you want to record on motion. Set “Delay” to specify length of time DVR will record after motion is no longer detected. Set up “Motion Handling” and “Motion Area” accordingly. See below.



Alarm handling

Motion Area Setup: You can adjust sensitivity, choose your motion area and screen out constant motion. Default is entire view set to detect motion. To screen out constant motion, disable grid in that area of view by left clicking mouse cursor and removing grid.

Motion detection - Regional Settings

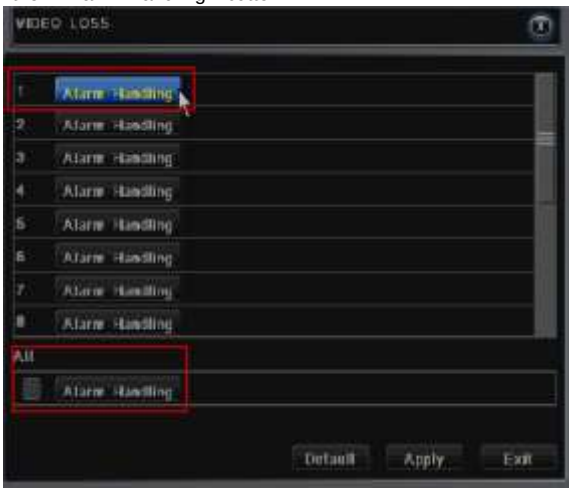
At area Setting page, users can drag the slider to adjust the sensitivity value (1-5), the default setting = 4, 1 represents lowest value, 5 represents highest value. Adjust each according to the environment. Left click icon to set entire camera view for the detection area: Click icon to clear detection region: Left click icon to save setting: Left click button to exit.

User can setup all channels with same parameters by left clicking "All." Set up accordingly.

Click "Default" button to resort back to default setting; Click "Apply" button to save the setting; click "Exit" button to exit.

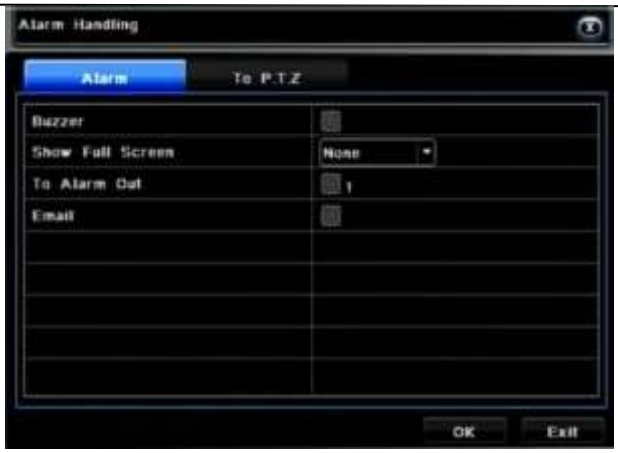
Video loss

Click the "Alarm Handling" button.



Video loss

The Alarm Handling Screen will appear. Setup accordingly.



Alarm Handling

User can also setup all channels with the same parameters. .Click the “Apply” button to save the setting. Click “Exit” button to exit current page.

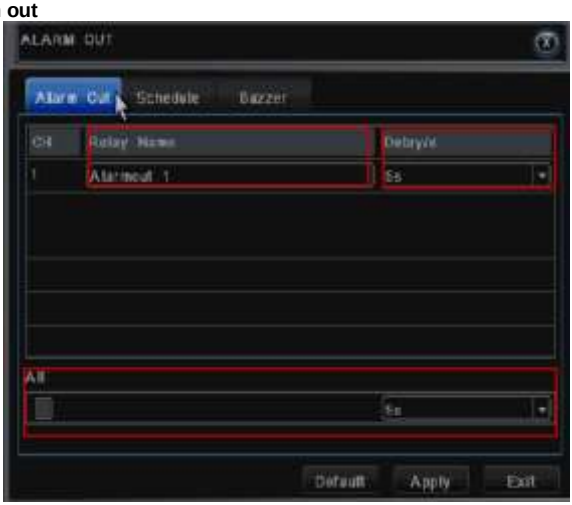
Click “Default” button to reset to factory default.

Email: When a video loss occurs, the system will automatically send e-mail to the user specified mailbox.

Alarm out

Alarm out includes 3 sub menus: Alarm Out, Schedule and Buzzer.

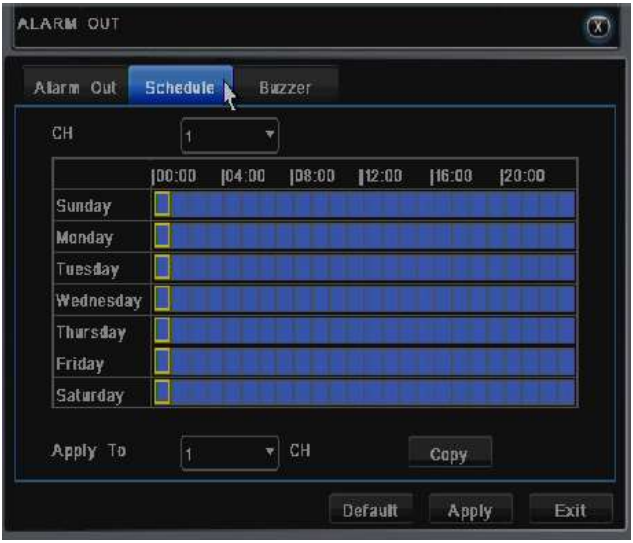
1) Alarm out



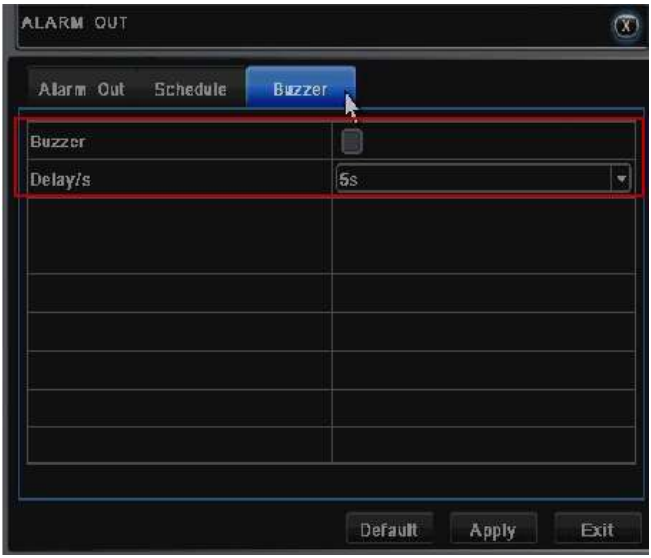
In this interface, set relay alarm out name, select hold time which means the interval time between the two adjacent alarms

User can setup all channels with the same parameters. Tick off "All" to do relevant setup. Click "Default" button to reset to factory default settings: Click "Apply" button to save the setting; click "Exit" button to exit page.

2) Schedule



3) Buzzer



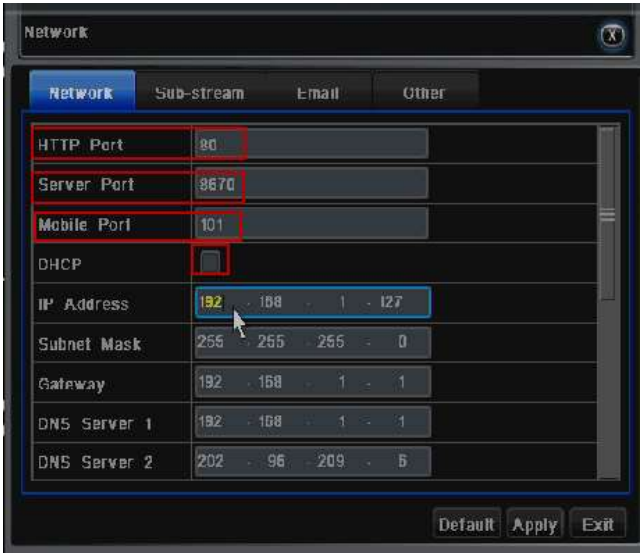
Buzzer

To activate buzzer, left click the buzzer box. Adjust buzzer duration by dropdown menu below box.

Network configuration

Network configuration includes four sub-menus: Network, Sub Stream, Email and Other settings.

Network



Network configuration

HTTP Port: The default value is 80. If user changes port designation, user needs to add a ":" (colon) to the IP address when typing the IP address in IE address blank. (ie: set the HTTP port to 82, IP address: http://192.168.0.25 , user needs to input that address: http://192.168.0.25:82 into the MS Internet Explorer browser bar)

Server port: Data communication port number. After selecting the "Obtain an IP address automatically" by placing a check in the DHCP box, the device will receive, from the router, an IP address, subnet mask, gateway IP and DNS server.

Enable PPPoE to directly connect the DVR to internet via ADSL and then input the user name and password.

Click "Default" button to reset to factory default settings. Click the "Apply" button to save the setting. Click "Exit" button to exit page.

Network Sub Stream

Select Resolution, FPS (Frames per Second), E-Mail and Other. Change values by using the drop down menus. User can also setup all channels with same parameters by using the “All” button at the bottom left of page. L e f t c lick “Apply” button to save the settings; Left click “Exit” button to exit current page.

Sub Stream Network Configuration

Parameter	Meaning
FPS	Range from 1-30（NTSC）1-25(PAL)
Resolution	Support CIF、QCIF
Quality	The higher the value is, the clearer the recorded image is. Six options：Lowest, Lower, Low, Medium, Higher, Highest.
Coding	Support CBR and VBR
Max stream	Select range： 16Kb、32Kb、64 Kb、128 Kb、256 Kb、512Kb、640kb、758kb、1024kb、1536kb、2048Kb、3072kb、4096kb

E-mail

Email

SMTP Server/Port: The name and port number of the SMTP server user receives e-mail from.

Send Address

Password: **S**ender's email address/password.

Receive address: Receiver's email address. Here user can add at least three e-mail addresses to receive E-Mail notifications

Click Test button to test the validity of the mail notification.

Click "Default" button to reset to factory default settings. Left click "Apply" button to save settings. Left click "Exit" button to exit current page.

Other settings

Other settings

Enable DDNS server by checking the box: User needs to choose the DDNS Server by the drop down menu. Input user name & password to the DDNS account. Input the url/host domain you registered with the DDNS account. (ie: Name of website you chose through DDNS account) Click TEST to test the configuration. Left click "Default"

button to reset to factory default settings. Click “Apply” button to save the settings. Click “Exit” button to exit current page.

Note: The user must use the domain name/url received from the DDNS account, User must first create an account with a DDNS company (See dropdown) then apply for a domain name from the DDNS service. After the application is successful, the user could enter the domain name to access the server in using Microsoft Internet Explorer.

User management

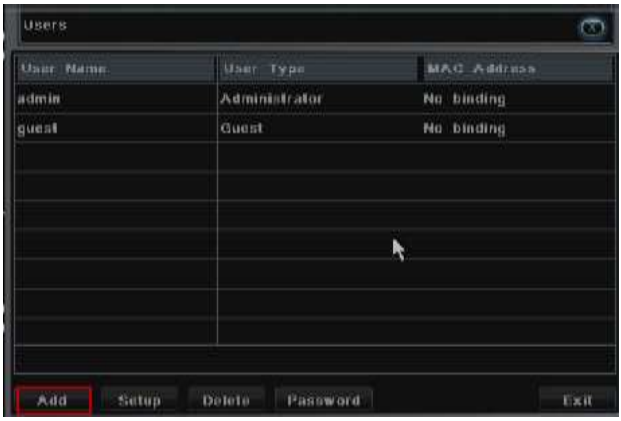
Enter “Users” User management by clicking the “Users” icon from Setup as seen below.

User Management

Left click “Add” to add user(s).

General: Fill in User Name, Password, Confirm Password and User Type. You can either add an incoming MAC address or use the “Non-Binding option. Choose accordingly.

Click OK to save settings.

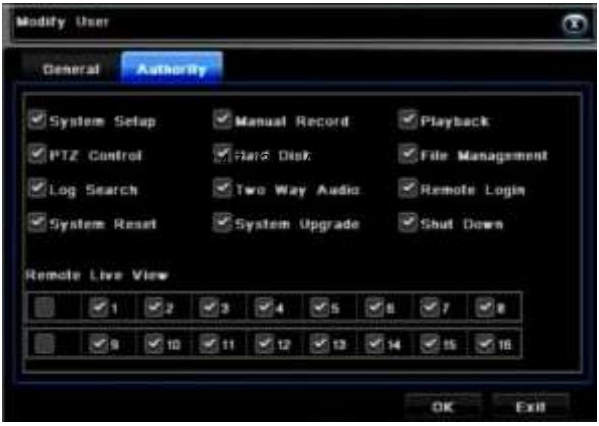


General

.

Authority: In the "Authority" interface, assign the operational rights for that user. In the user management interface, click Setup button to modify user name, user type and binding PC MAC address. Select the user that user wants to delete in the user list box and then click "Delete" button to delete this user. Click Change password button to modify the password and then click "Exit" button to exit the current interface

.



P.T.Z configuration

P.T.Z configuration includes two sub-menus: serial port and advance

Serial Port

Pic 2.4.8.1 Serial port

Place a check mark on the corresponding channel for the PTZ. Choose the physical address, Baud Rate, and communication Protocol matching that of the PTZ camera. (See PTZ documentation to verify camera settings..

User can setup all channels with same serial port parameters, by placing a check in the “All” box at the bottom. Set PTZ parameters accordingly. Left click “Apply” button to save the setting; Left click “Exit” button to exit current interface.

Definitions and descriptions of serial port:

Parameter	Meaning
Address	The address of the PTZ device
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from:, PELCOP, PELCOP1, PELCOP5, PELCOD, PELCOD1, HY, PHILIPS, SAMSUNG SHARP,SONY, SAMSUNG, PANASMIC , Control, etc…

Advanced configuration

Pic 2.4.8.2（1） Advanced

On the Advance page, after clicking preset “Setup” button, a dialog box will pop-up as below：

Pic 2.4.8.2(2) Preset point setting

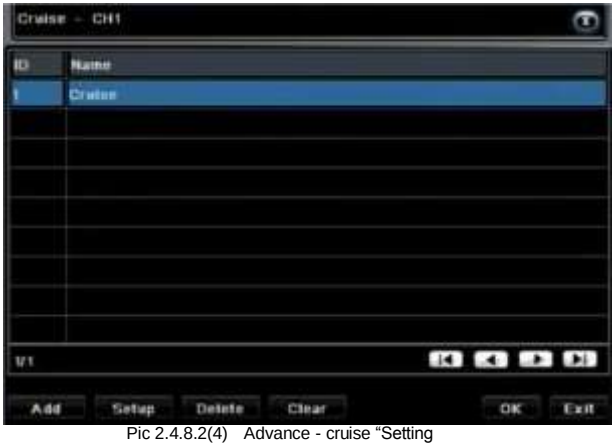
In the preset set interface, click Setting button to see a window as below：

Pic 2.4.8.2(3) Preset setting

User can control the P.T.Z up, up left, down, right down, left , left down, right and up right and stop rotating. User can adjust the rotation speed of the PTZ, focus and zoom. Left click “Save” button to save the settings，click icon to hide the tool bar,right-key can remerge it；click icon to exit the current page

On the preset page, click ”OK” button to save the setting; click ”Exit” button to exit current page.

On the Advance page, left click cruise “Setting” button, a dialog box will pop-up as below：



Pic 2.4.8.2(4) Advance - cruise "Setting

Click Add button to add cruise line (max 32 cruise lines can be added); select a cruise line and click Setup button, to see the window below.:

Pic 2.4.8.2（5） Cruise set - preset point setting

Left click Add icon to set the speed and time of preset point; select a preset Point and click Delete icon to delete that preset point. Click Modify icon to modify the setting of a preset point ; User can click those icons to adjust the position of preset point. Top、Up、 Down and Bottom。Click Preview button to preview the cruise line and then click "OK" button to save the setting. Next, click "Exit" button to exit current interface

Select a preset point in the cruise line list box and click Delete button to delete that cruise line; click "Clear all" button to clear all cruise line from the list box; click "OK" button to save the setting; click "Exit" button to exit current interface.

In the advance interface, click track "Setting" button to pop up a dialog box as below :

Pic 2.4.8.2（6） Track setting

User can control the dome rotates up, up left, down, right down, left, left down, right and up right and stop rotating. adjust the rotate speed and the value of zoom, focus and iris of the dome；click Start Record button to record the move track of PTZ and click this button again can stop record；click Start track button to play recorded track and click this button again can stop play . The user can drag the slider to adjust the rate of P.T.Z movement.

Click icon to hide the tool bar, right-key can remerge it; click icon to exit the current interface.

In the Advance interface, click “Default” button to resort default setting; click “Apply” button to save the setting; click “Exit” button to exit current interface.

Advance configuration

Advanced settings include 3 sub-menus: Factory settings, Import / Export and Maintain.

Factory settings: All settings back to factory settings.

Import / Export: Users can export data files to be backed up on removable storage devices, you can also import the specified data file from a removable storage device to for DVR.

Exit: Exit current interface.

Advance configuration

Returned to the main menu, enter the data retrieval interface.

Data retrieval

From the Main Menu, enter “Data Search.”

Data Search includes 2 sub-menus: Time Search, Event Search.Search By Time

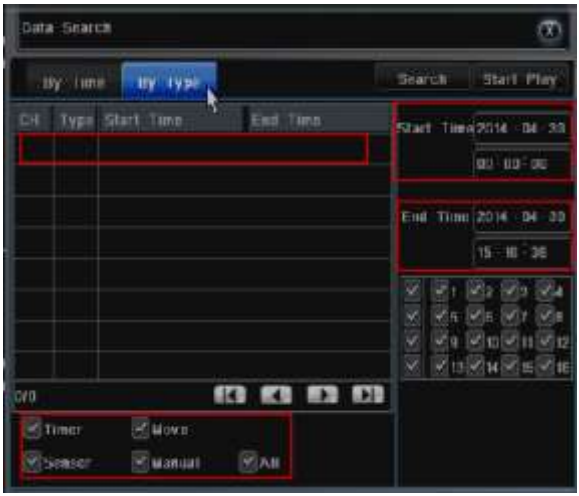
Time search

Step 1：Select the channel, the calendar date , the start time and end time

Step 2：Click“Play” button, playback will start from the set time bucket; click the corresponding button on the screen to start concrete operations.

Search By Type

Step1：Click the “By Type” tab.



Event search

Step2：After clicking Search button, the searched event information will be displayed in the event list box, double check a certain record file to playback.

Step3：Select the Start Date & Time and End Date & Time. Click type of search by checking box(s) Motion, Sensor or All according to search type.

Data Backup

This unit supports backup by USB device. User also can make backup by IE browser via internet.

Step1: Enter into backup configuration interface, as below pic：

Data backup

Step2: Set the Start & End, Date & Time. Select Channel(s) and click Search button to display the files found in the data backup list box.

Step3: Choose data file(s) by left clicking file(s). Left click “All” to select all data files, click “Backup” button to begin backup process.

Step 4: On the backup information page, user can choose Storage Media and file type. (IFV or AVI) Left Click “Start” to begin.

Information

Through this **option**, the user can check System information, System Log and Network information.

System Information:

Enter menu ->view information ->system information，in the interface user can view the equipment and version information and relevant information

Log information: Enter menu ->View system information ->Log information. Users can set the start & end time of log you want to view. Select the type of log you want to view and click the search button. The log information will be displayed in the log list box.

Note: Users can export data files to be backed up on removable storage devices.

Network information: Enter menu ->View information -> Network configuration. Users can view the network information.

Hard Disk

Enter menu → Hard Disk. The user can view disk storage state. User can also choose to format the disk.

If you purchased the DVR with a hard drive, it is already formatted and ready to record. If you are installing your own hard drive, once installed, the drive will need formatting. Click "Format" tab and allow format.

Note: all recorded files in the hard disk will be lost after formatted.

Upgrade

Once newer firmware is available, the user can upgrade the DVR's firmware..

Upgrade Procedure：Copy the upgrade software from the vendor onto the USB storage device and then connect to the USB port. Enter the Upgrade tab. Click the "Refresh" tab. Select that software and click Upgrade button to start upgrading. The system will automatically restart after the upgrade process，

Please wait for a while when the system is rebooted. Please don't cut off power during upgrading. Reboot the system after the upgrade completes for new firmware to take effect.

Note: If the upgraded software does not appear on the USB drive, usually the USB device is not compatible.

Logoff

Enter Menu → **Logoff.** Click the Log off icon. The system will exit the current user login. If user wants to log in again, click main menu icon to enter into user name and password to re-login.

System shut down

Click the "System Shut Down" icon. The system will power off.

3.IE Side Operating Instruction

Viewing Using Internet Explorer:

Set for IE： The 1st time you call the DVR up by its IP address, the browser will need to download the active-x controls for the DVR. In most cases you will need to place the IP address in the "Safe Site" zone of the browser. See instructions below.

Open Internet Explorer. Go to: Tools ->Internet Options -> Security Tab.

Then go to Trusted Sites -> Sites Tab… Add IP address to the website box by clicking the Add tab. You may need to uncheck the "Require Server Verification" box. Once IP is added, click "Close." This will take you back to the Internet Options page. Click Apply.

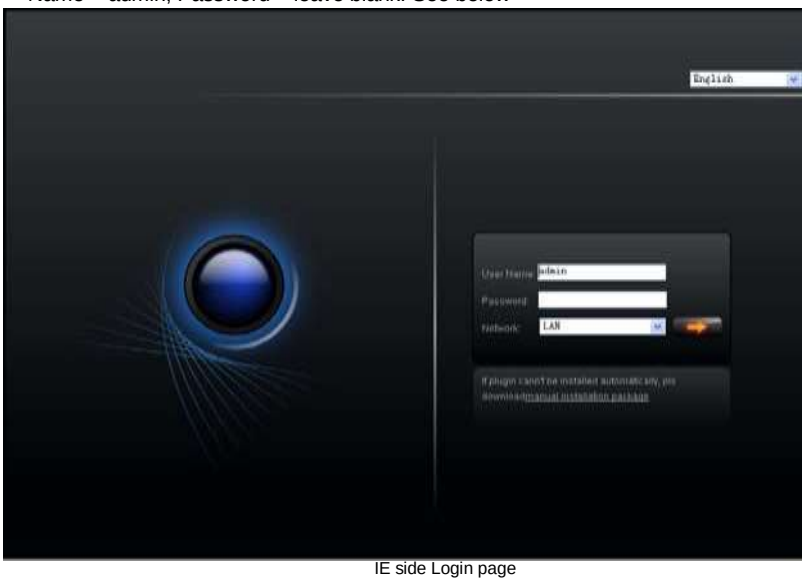
Depending on your browser security settings, you may need to slide the security level to “Low” then Apply to allow the file(s) to download properly. For security purposes, move slide rule back to original settings after file download.

You may also use the “Custom Level” tab and manually allow the active-x files to download. Click the “Custom Level” tab and set following files buttons to “Enable.”

ACTIVE-X

IE Access： Open IE on a computer. Type the IP address of the DVR in the address bar.(ie: http://192.168.1.21) Input the Username and Password and login.

The user name and logon password will be the same as the with host side. (User Name = admin, Password = leave blank. See below

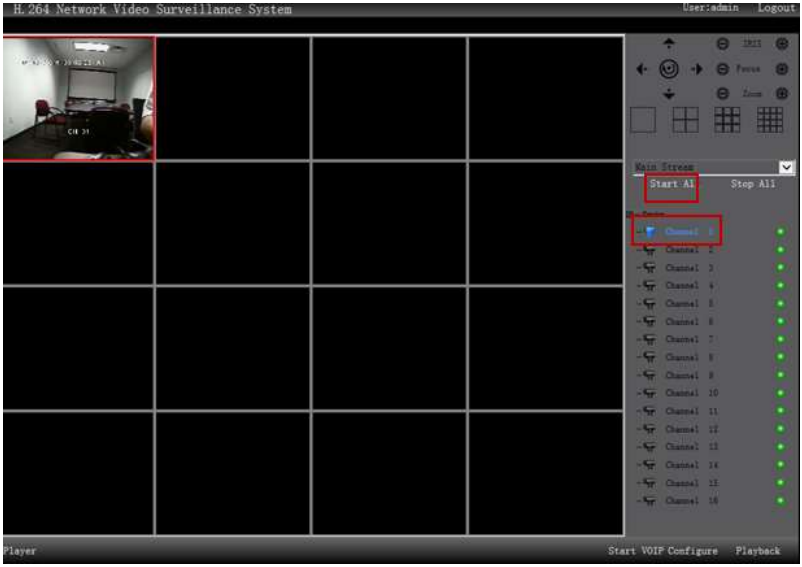


IE side Login page

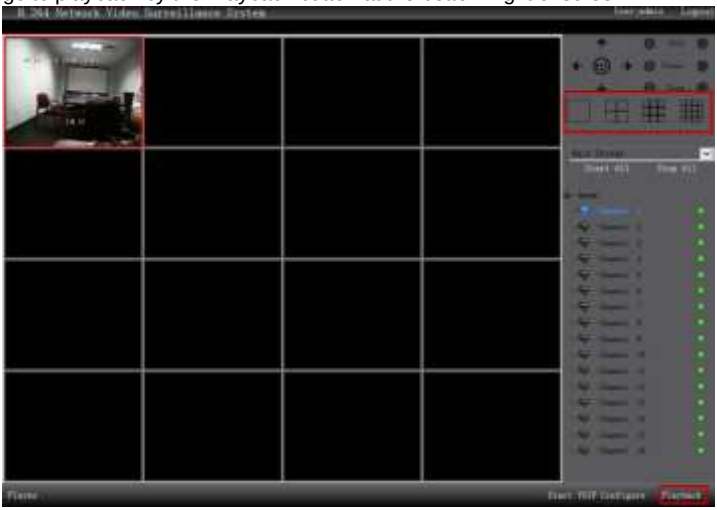
The IE Live View Page

Once logged in properly, the following page will appear. Click Start All to open live view from all cameras.

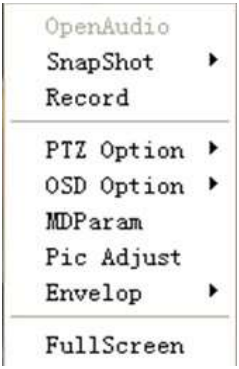
To open a single camera, left click the Channel# desired.



User can go to a single view by clicking on the grid examples above main stream. User can go to playback by the Playback button at the bottom right of screen.



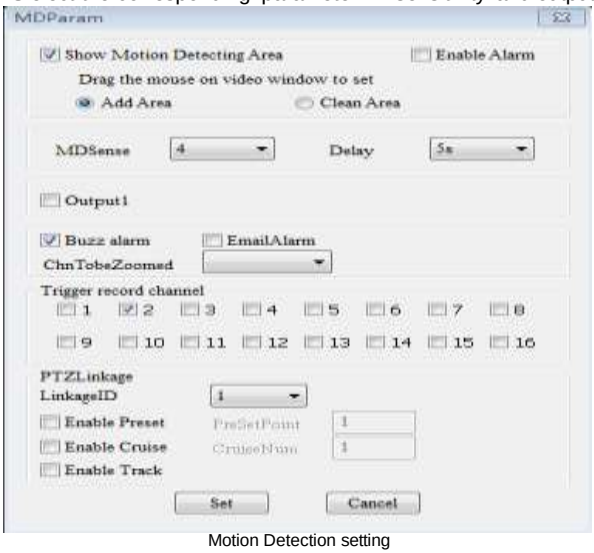
Advanced Settings Box: User can enter the “Advance Settings Box” by right clicking in the camera view cube. The following menu will appear.



pic 3.2.1(1) Advanced Settings box

Open/close A u d i o : Open or close the audio for that channel.
Snapshot: Capture the current video screen and save it as a picture.
Recording/ Stop Recording: Start/Stop the channel video's remote video and save it
PTZ Configuration: PTZ preset, cruise path, trajectory settings
OSD settings: Set the OSD layer channel, time display position, drag the mouse to save the position.

Motion Detection: Set the motion detection area：First"√"display motion detection area select "add area", Press and hold the left mouse button and drag, The white grid lines on the screen is the motion detection area；Select "clear area". On The white grid line area, press and hold the left mouse button and drag, The white grid line region on the screen disappears, the motion detection will be cancelled. S elect the corresponding parameter in sensitivity and output delay box.



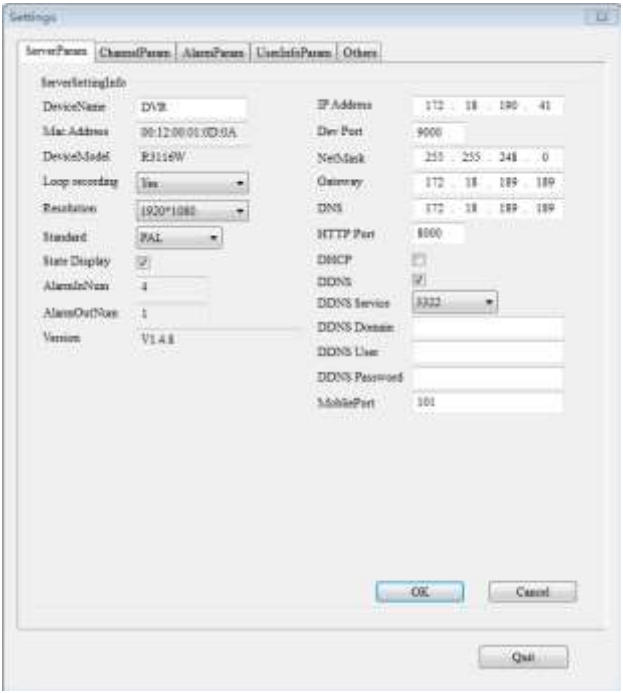
Motion Detection setting

Picture Adjustment: Set the image's brightness, contrast, hue, and saturation, click the left mouse button or drag to adjust. It will automatically save when you exit.

Picture adjustment

In the Settings page you will find 5 Parameter tabs: Server, Channel, Alarm, UserInfo and Others. Set parameters with the host side setting methods. Please refer to the host-side system configuration, system information, and the network operating instructions

Server Parameters



Server parameters configuration

Channel Parameters

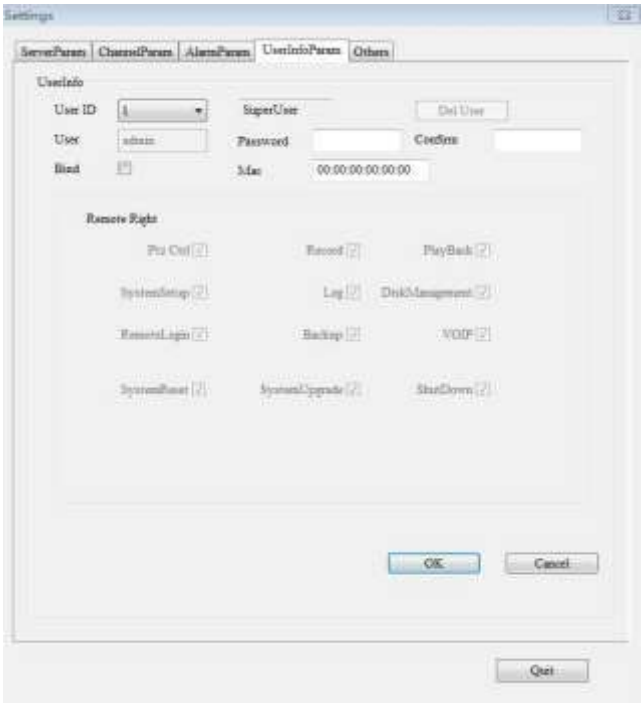
Channel parameters configuration

Alarm

Alarm parameters configuration

.

User Info



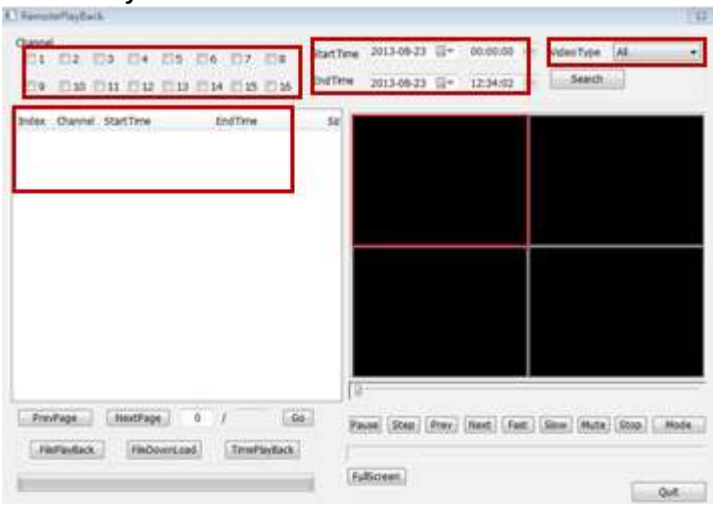
user configuration information

Other

Settings
ServerParam
ChannelParam
AlarmParam
UserInfoParam
Others
Other Config
Manual Recorder
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
AllStart
AllStop
Set
SystemTime
2013-08-23 09:30:2
Refresh
Set
HddInfomation
Index Capacity(GB) Free(GB)
1 498GB 0GB
ReBoot
LogQuery
Restore
Update
Formatting
Client Record and Snapshot File Saving Drectory
D:\NETDVR
Set
Quit

Other

3.2.3 Remote Playback



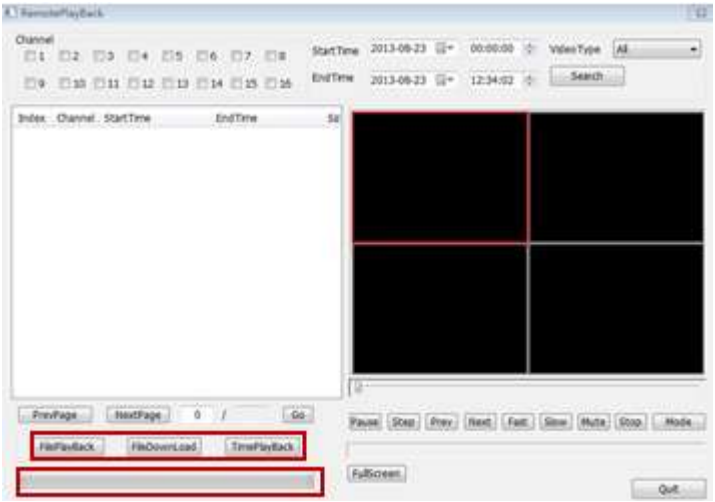
Remote playback

Select the video playback Channel number, Start & End Date/Time, Record Type. C l ick the Search button. The left border will show the list of search results.

F**ile Playback: S**elect the target file in the search list box. Double-click the file or highlight the file and click the "File Playback" button. The file will play in the playback view screen.

Time playback: Click on the "time playback button, the playback window will begin to play the video files for the set start time.

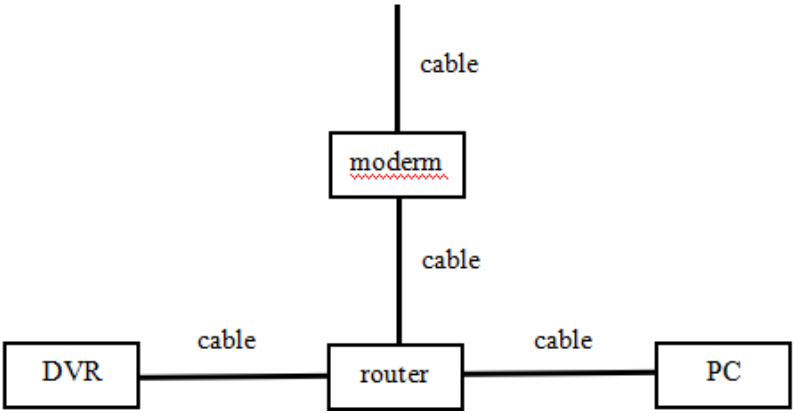
File download: In the search list box select the target file. C lick the "File Download" " button then choose the save path to start the download. The status of the download process will appear on the bottom left progress bar.



4.Network setting

There are 3 ways to connect to a network depending on your service provider subscription. DHCP ,PPPOE or S tatic IP. Below are instructions for setting up a PPPOE connection to the internet.

physical connection



DVR setting

N etwork

4.2.1 Network

Log in to your router. From the router status/ information page, verify you have a PPOE service. Fill in the section in red above with the information found in the router status/information page. (IP address, subnet mask, gateway & DNS)

[Home >> Status]

Public Network	
Connection Mode	PPPoE
Connection Status	Connected
IP Address	115.171.123.105
Subnet Mask	255.255.255.255
Gateway	115.169.64.69
DNS Server	219.141.136.10
MAC Address	00:E0:04:00:01:0B
Private Network	
IP Address	192.168.0.9
Subnet Mask	255.255.255.0
Mac Address	00:1D:0F:AE:BB:7F
Wireless LAN	
SSID	3G
Channel	Auto Channel 5(2432MHz)
Security	DISABLED
Time	
UP Time	0 Days 0 Hours 9 Minutes 43 Seconds
System Time	2009-05-24 19:36:07
Version	
Model Name	AP Router
Firmware Version	1.1.0

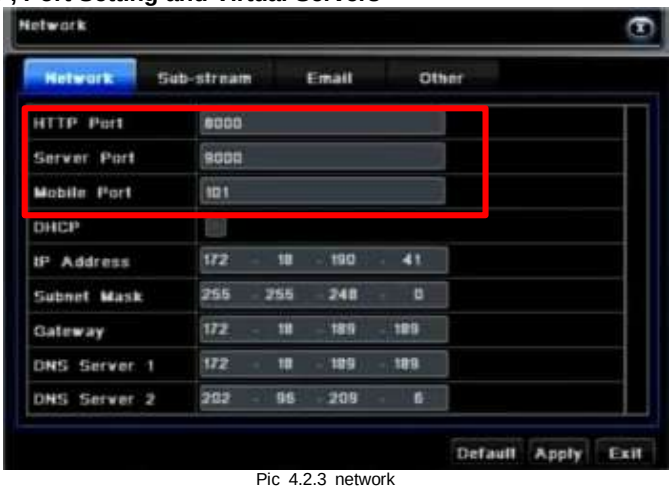
Router StatusPage

Note:1) The DVR's IP address can't be the same as the routers IP address. (ie: the router IP address is 192.168.0.9. In the DVR, you should fill in 192.168.0. # (use any # except 1, 9 and 255 Numbers).

Enter the router's default gateway as the Gateway IP. Customers here may be in doubt, why the router displays the IP address, but to fill to the gateway here. Because, according to" external network cable + modem router + dvr" connection method, the router is equivalent to a switch.)

Fill in Subnet Mask and DNS according to the router information

DHCP, Port Setting and Virtual Servers



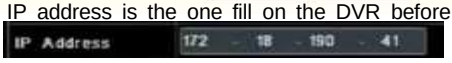
Pic 4.2.3 network

The HTTP port is used to access the browser; the SERVER port is used by clients to access the DVR; The mobile Port is used by mobile devices. If the HTTP port of 80 is used by your provider for another service we strongly advise you to change the HTTP port designation to an open port (ie: 8000, 8080, 81 etc).

You can set up virtual servers on the router. You will need to Forward or create Services for the following ports and their respective designations. HTTP, Server and Mobile.

We use server port 9000 for example.

IP address is the one fill on the DVR before



HTTP Port
8000
Server Port
9000
Mobile Port
101

Public IP Router

Public Network	
Connection Mode	PPPoE
Connection Status	Connected
IP Address	115.171.123.105
Subnet Mask	255.255.255.255
Gateway	115.168.84.69
DNS Server	219.141.136.10
MAC Address	00:E0:04:00:01:0B
Private Network	
IP Address	192.168.0.9
Subnet Mask	255.255.255.0
Mac Address	00:1D:0F:AE:BB:7F
Wireless LAN	
SSID	3G
Channel	Auto Channel 5(2432MHz)
Security	DISABLED
Time	
UP Time	0 Days 0 Hours 9 Minutes 43 Seconds
System Time	2009-05-24 19:36:07
Version	
Model Name	AP Router
Firmware Version	1.1.0

In the IE browser bar, input the IP address + HTTP port in the browser, as above IP address is 115.171.123.105,DVR's HTTP port is 8000, the input IP is http://115.171.123.105:8000 in IE browser

DDNS setting

Due to Dynamic IP address changes from your provider when you don't have a Static IP, you can set up a Dynamic DNS service to track the changes for you. (Examples of DDNS Providers = dyndns.org, no-ip, and Changeip).

To enable DDNS

Choose good DDNS service provider

The user name and password is the user name and password of the DDNS site you set up during the service registration.

Mobile

1) Verify the Mobile Port designation in the DVR. (Example below uses Mobile Port 17951: Default setting for Mobile Port = 101) 2) Install the mobile software TMEye from your phone provider market place.
3) Input the information below:
Name: Can be any name
Address: The Public/Remote IP of the router.
Port: Mobile Port designation in the DVR.
User ID: DVR username. Default = admin
Password: DVR password. Default = blank/nothing/null

The following picture is from an iPhone. Other cellphones are similar

mobile setting

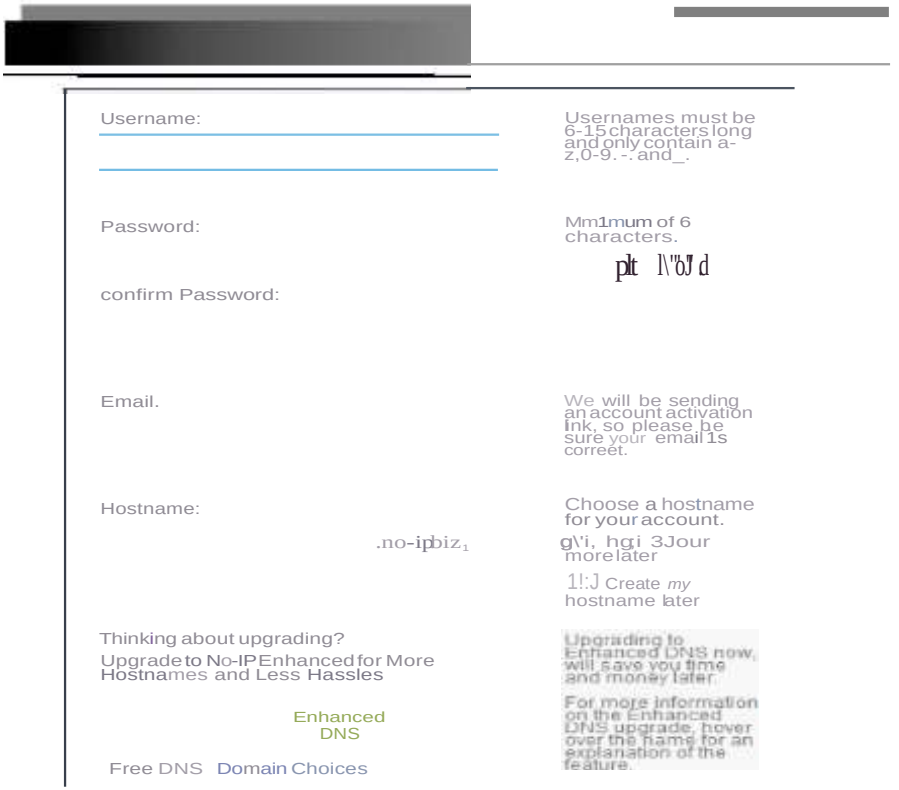
5.How to apply DDNS

We have no-ip as an example that demonstrates how to apply for a DDNS

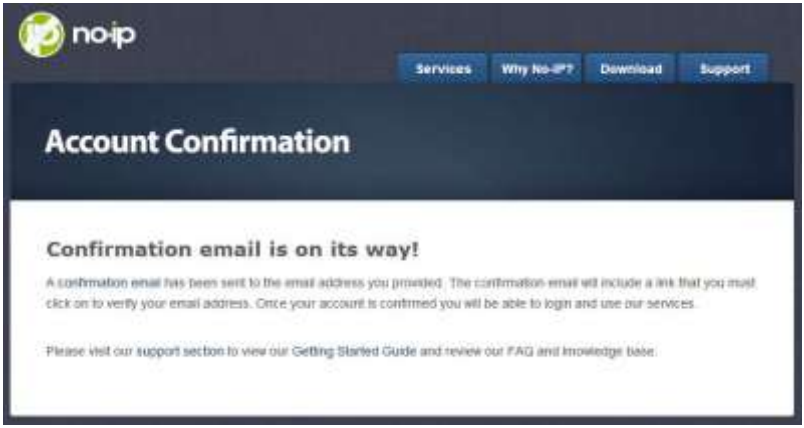
NO-IP

open http://www.noip.com/ via IE

Click Sign Up N to built an account


Username:
Usernames must be 6-15 characters long and only contain a-z,0-9. -. and _.
Password:
Mm1mum of 6 characters.
confirm Password:
Email.
We will be sending an account activation link, so please be sure your email 1s correet.
Hostname:
.no-ipbiz1
Choose a hostname for your account.
g\'i, hgi 3Jour more later
1!:J Create my hostname later
Thinking about upgrading?
Upgrade to No-IP Enhanced for More Hostnames and Less Hassles
Upgrading to Enhanced DNS now, will save you time and money later.
For more information on the Enhanced DNS upgrade, hover over the name for an explanation of the feature.
Enhanced DNS
Free DNS
Domain Choices
811+
Hostnames
25
No Ads
No 30 Day Account Confirmation
Phone Support
514.95ayear
$0
If you have chosen an Enhanced domain, but wish to sign up for a No-IP Free account, please choose the no-ip org domain option above
By submitting this form I agree to the terms of service and that I will only create one free account
Get Enhanc
Sign Up
I'll Send me newsletters & special offers

Click Sign Up and Confirmation



After that,login noip;

Click to show your Host.

You get an account from noip,write the informations to your DVR. It will work.

The user name and password is the user name and password login DDNS site The Host DDNS domain is applied

Email setting

Using this function on the premise that DVR is connected to the WAN

DVR setting

To setup email notification:

Under SMTP, enter the **SMTP** address of your email server. For example, **smtp.gmail.com**

Under SMTP PORT, enter the **SMTP port** of your email server.(SSL certified Mail port is 465. Some others use 25)

Under SEND EMAIL, enter the sender email address. 4) Under SEND PW, enter the **password** of your email account.

Under RECV EMAIL, enter the email address that will receive the email notification.

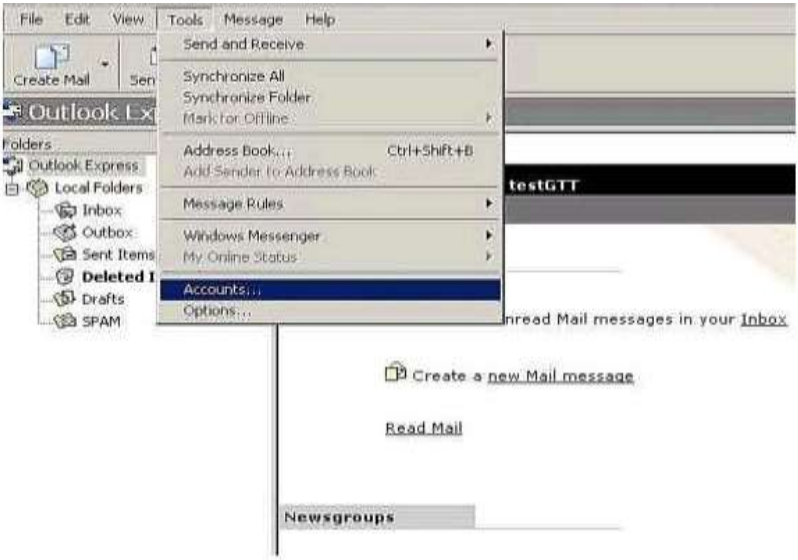
PC Setting

If you use the mail requires SSL authentication,you must set up Microsoft Outlook.the following methods introduce how to set up Microsoft Outlook.

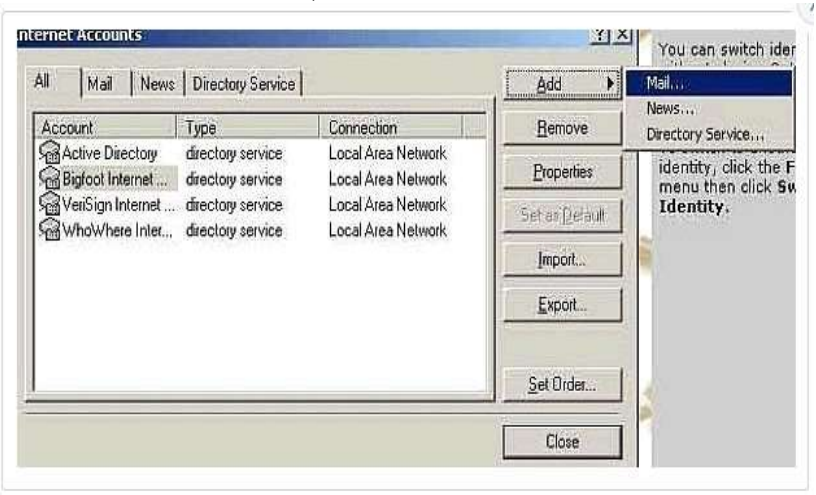
Gmail setting

Gmail is one of the few free email providers that lets you set up a POP account so that you can read and reply to messages offline, without being connected to the Internet. Read on to learn how you set up your POP3 Gmail account in Outlook Express. Open Outlook Express

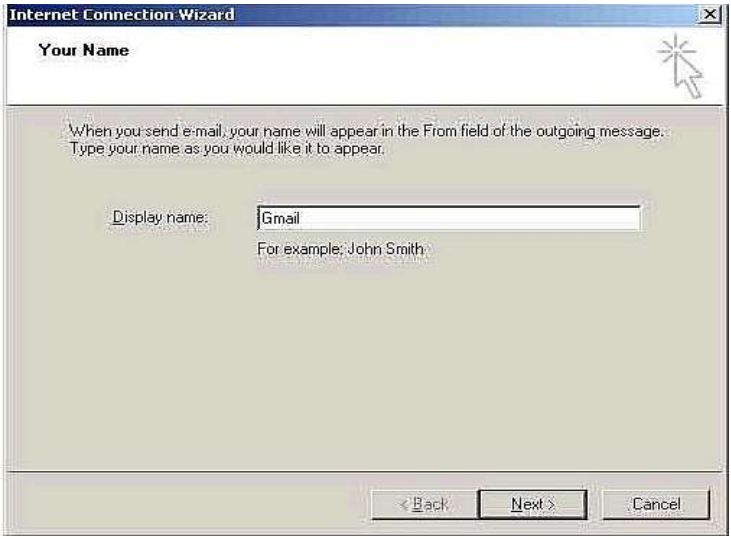
Launch Outlook Express. Click on "Tools" and then "Accounts."



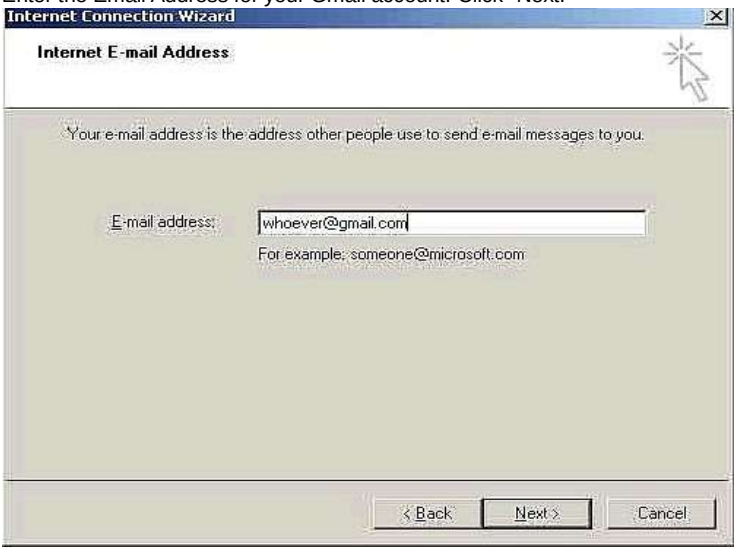
In the "Internet Accounts" box, click on "Add" and then "Mail."



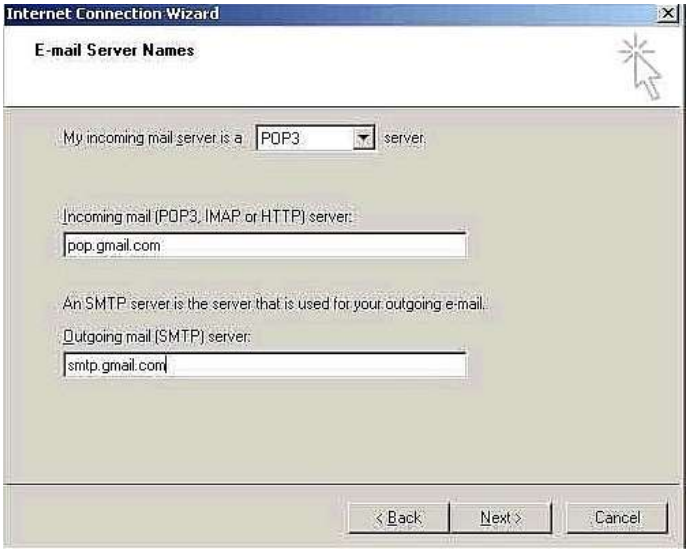
1.Enter the display name for **your account**. Click "Next."



Enter the Email Address for your Gmail account. Click "Next."

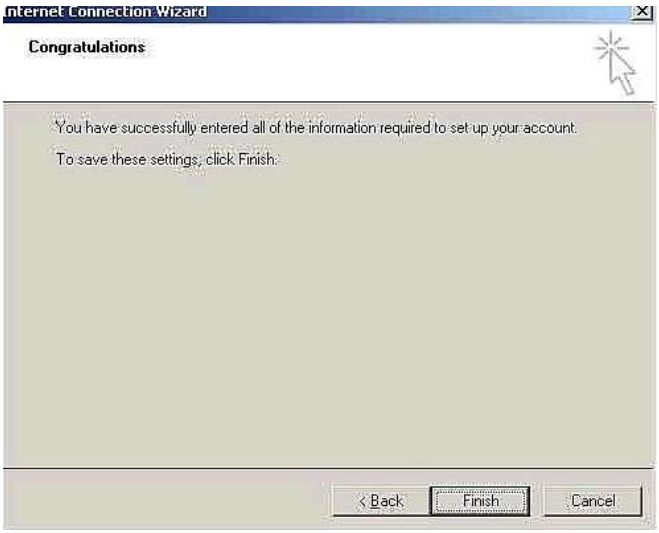


Enter the following information: Incoming Mail: pop.gmail.com Outgoing Mail: smtp.gmail.com Click "Next."



In Account Name, enter your full Gmail email address followed by the password for your account. Click "Next."

Click on "Finish."



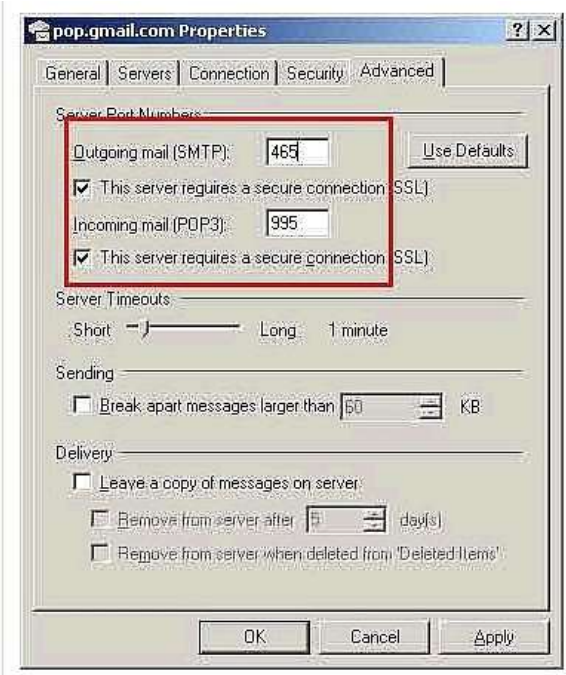
Now, you need to specify the Gmail server settings. Highlight the new Email account you have just created and click on "Properties."

Click on the "Servers" tab. Under "Outgoing Mail Server," check the box that says "My Server Requires Authentication."

Click on the "Advanced" tab. Check both boxes that say "This Server Requires a Secure SSL Connection." Enter the following information:

Outgoing Mail: 465

Incoming Mail: 995



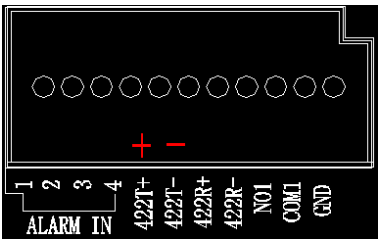
Click "OK" and "Exit." You should now be able to send and receive Gmail emails in Outlook Express.

PTZ Setting

Physical connection

To connect the PTZ to the DVR use the RS485 + and – from the camera to the 422T+ & - of the DVR.

(Connect 485A+ to the DVR 422T+. Connect 485B- to the DVR 422T-)



DVR Setting

Power the PTZ camera on. The On Screen Display of the PTZ will provide the information below during the PTZ self test. It will reveal the Protocol, Baud Rate and PTZ Device ID.

Enter into the PTZ interface, the corresponding info above.

After setting the relevant parameters, apply and exit.

Note: The above-mentioned two steps must be operated in the corresponding channels for each PTZ camera installed. See detailed setting parameters PTZ settings.

FAQ

If your problem is not listed below, please call our toll-free number for more support.

1.Question: DVR is not working after starting?

Answer:

Check the adaptor input

Check the on-off power line, is it well-connected?

Check the power on-off

Check the upgrade procedure

Check the main board of DVR

2.Question: DVR is rebooting automatically or stopped after starting the DVR for several minutes?

Answer:

Instability or low input voltage

Bad track hard drive or the line of hard drive is bad

On-off power supply is not enough

The hardware of DVR is defective

3.Question: No output of single channel, multi channel or all channel video?

Answer:

Please check the adaptor of camera whether to see if it is well-connected

Please check the cable for connecting video input/output in the back panel of DVR

Please insert the video source directly into the display device and check if they are causing the problem.

Check the brightness of the picture and bring it back to its original default setting

No video input signal or too weak

The hardware of DVR is defective

4.Question: DVR is having problem with real-time images, such as bad image color or serious brightness distortion

Answer:

If PAL and NTSC is not correctly selected on the BNC output, the images will be in black and white

DVR is not compatible with monitor

The video transmission distance is too far

The setting of DVR color, brightness and so on are wrong

5.Question: No audio sound when monitoring?

Answer:

Check sound box or speaker functions. Also check possible short circuit.

Audio source may be connected to the video channel. You can click to full-screen to check.

6.Question: No audio sound when playing back?

Answer:

Setting problem: open audio-video item

Check the audio to see if it is closed in playback interface

7.Question: System time is not correct?

Answer:

Wrong setting or user did not click "Edit" to confirm

Battery is not connected properly

8.Question: Motion detection is not working?

Answer:

The setting of motion detection area is not correct

Sensitivity is too low

10.Question: It displays "other members are setting....." while setting DVR by IE

Answer: It probably means someone else is setting the DVR. Please check the DVR configuration interface or exit DVR.