



4-Channel Network Video Recorder

NVR-401

User's Manual

Version 2.0

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

To assure continued compliance. (example 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 the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Energy Saving Note of the Device

This power required device does not support Stand by mode operation.

For energy saving, please remove the DC-plug or push the hardware Power Switch to OFF position to disconnect the device from the power circuit.

Without remove the DC-plug or switch off the device, the device will still consuming power from the power circuit. In the view of Saving the Energy and reduce the unnecessary power consuming, it is strongly suggested to switch off or remove the DC-plug for the device if this device is not intended to be active.

Revision

User's Manual for PLANET 4-ch Network Video Recorder

Model: NVR-401v2

Rev: 1.0 (November 2010)

Part No. EM-NVR401v2

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1. Product Description

The Network Video Recorder is designed for use within a surveillance system, and performs recordings and playbacks pictures from network cameras in the system. It is a recording device using a hard disk drive to record camera pictures instead of using video tapes so that pictures recorded by repeated overwriting will not experience deterioration of the recorded picture quality. Up to 4 cameras can be connected via a network and it is possible to record their camera pictures. It is possible to perform the settings or operate the NVR using a web browser installed on a PC connected to a network, or remote controller. Recorded video can be played back from remote site by a PC. The NVR is compatible with most major brand cameras and its ability to automatically search and find the available cameras on the network can greatly reduce the user effort when expanding the system.

1.1 Product Features

- Simultaneous Record and Live Video Streams
- Manual or Schedule Recording of 4 IP Cameras simultaneously.
- Supports M-JPEG / MPEG-4 / H.264 compression
- Web-Based Easy Configuration
- Video resolution up to HD (1920 * 1080)
- Supports Real Time Clock (RTC)
- Gigabit Ethernet port
- Two-way Audio function
- Video recycle function makes the video keep recording in 7/24
- E-map interface in web
- Smart IP camera search
- Export record video file to AVI format
- Compliant with major brands. Axis, Panasonic, Sony, Planet, Canon and more
- Support mobile phone remote view with WinCE 6.1, Android, Symbian S60, iPhone, Blackberry 4.6
- Multiple Languages support

1.2 System Requirements

The following are minimum system requirements for the system to operate Network Video Recorder (NVR):

Operating System

Windows® XP Professional (32 bit), Windows® Server 2003 (32 bit), Windows Vista or Windows 7

Browser

Microsoft Internet Explorer 7 or above

CPU

Minimum Intel® Core2 Duo E6300 2.8GHz or higher (Core2 Quad is recommended)

RAM

Minimum 1 GB of RAM, 2GB or above is recommended

Network

Minimum 10/100 Ethernet (Gigabit Ethernet is recommended)

Video Graphics Adapter

PCI-Express Standalone, 128MB Ram, minimum 1024x768, 16 bit colors. (256MB is recommended, we highly recommend to work above the 1024 x 768 resolution to get the full experience of the software)

- . **Make sure your display DPI setting is set to default at 96DPI**
- . **To set DPI value, right-click on desktop, choose “Settings” tab >> “Advanced” >> “General”**

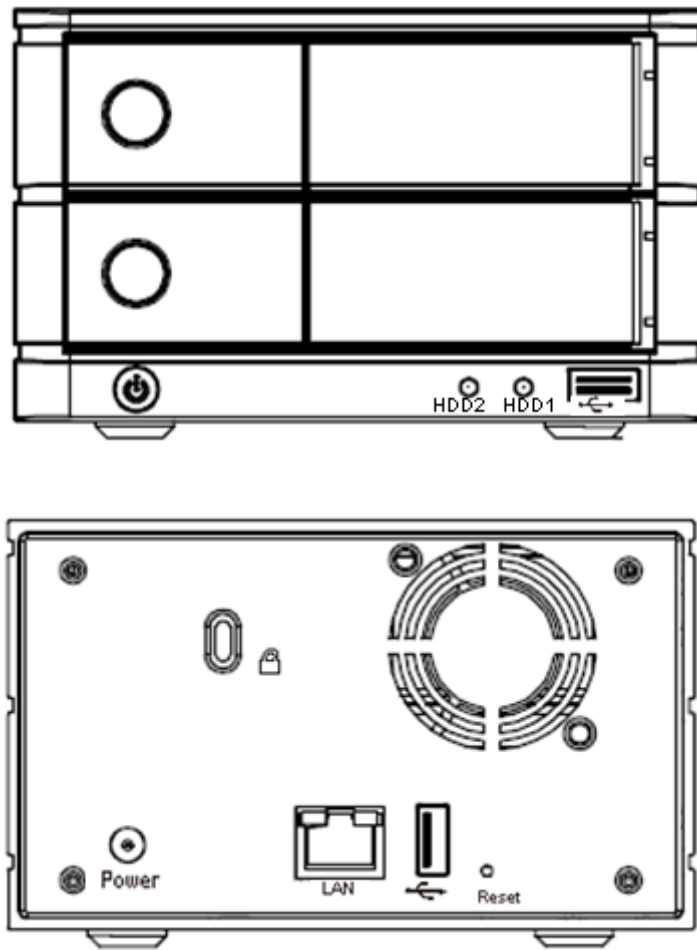
1.3 Packet Content

- 1 x NVR
- 1 x Power Cord
- 1 x Power Adapter
- 1 x RJ-45 Cable
- 1 x CD-ROM
- 1 x Quick Installation Guide
- 8 x HDD Screw

1.4 Specification

Product	NVR-401
General	
OS	Embedded Linux
Ethernet	1 x RJ-45, 10/100/1000 Base-TX
USB Interface	2 x USB2.0 for backup device and firmware upgrade
Storage Device	2 x 3.5" SATA hard disk Max. Capacity: 3TB (1.5TB per HDD)
Button	Power, Reset
LED Display	1 x Power 2 x HDD
Video Input	4 channel IP cameras
Recording Mode	Manual, Schedule, Event
E-Map	Web Browser
Network Service	TCP/IP, DHCP, DNS, HTTP, FTP, NTP, SMTP
Network File Protocol	Microsoft Networks (CIFS/SMB), Internet (HTTP), FTP
Management	Web-based administration Network Time Protocol Multiple users account E-mail notification System log Firmware upgrade
User Interface	Web browser
Power	DC12V, 4A, Max. 50/60Hz
Operating Temperature	5~40 Degree C
Storage Temperature	-20~70 Degree C
Humidity	5%~90% (non-condition)
Weight	1.23 kg
Dimension (L x W x H)	220 x 126 x 78.2mm

1.5 Front / Rear Panel



1.6 LEDs Definition

LEDs	Color	Description
Power	Blue	On: Power on. Off: Power off.
HDD	Green	Blinking: HDD is accessing. Off: HDD is no action.

1.7 Buttons

Button	Description
Power	Press to start or shut down.
Reset	Press to reset NVR to factory default.

1.8 Connectors

Connector	Description
USB	Connect your USB flash disk for firmware upgrade.
DC Connector	Connect the bundled power adapter.
Ethernet	Supports 10/100/1000Base-T interface.

2. Install Hard Disk

1. Push the silver button to release the HDD tray.



2. Pull out the HDD tray.



3. Place the HDD on the tray and secure the HDD with the screws at the bottom (as illustrate).



4. Push the tray back in the unit and press down the black bar to secure the tray.
5. Connect the bundled power adapter to the power connector on the rear panel.
6. Press the power button to power on.

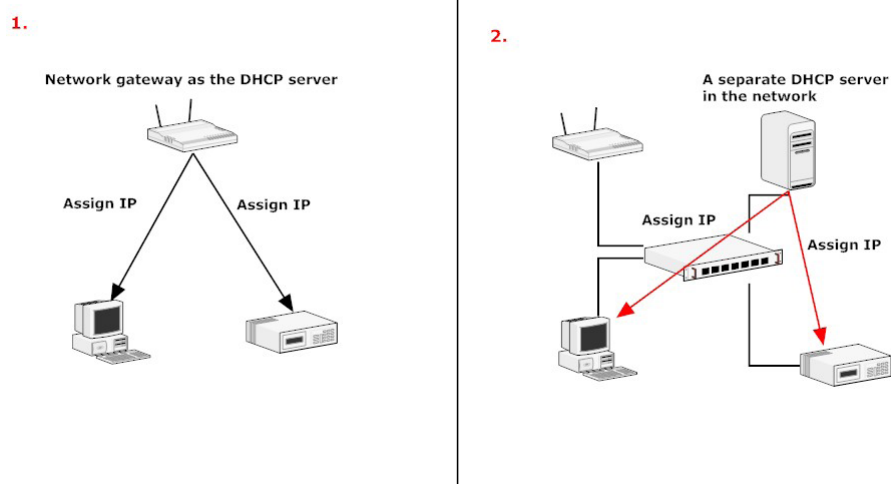
3. Connect to the NVR

There are various ways you can connect to the NVR and below are the suggested methods for different network setup:

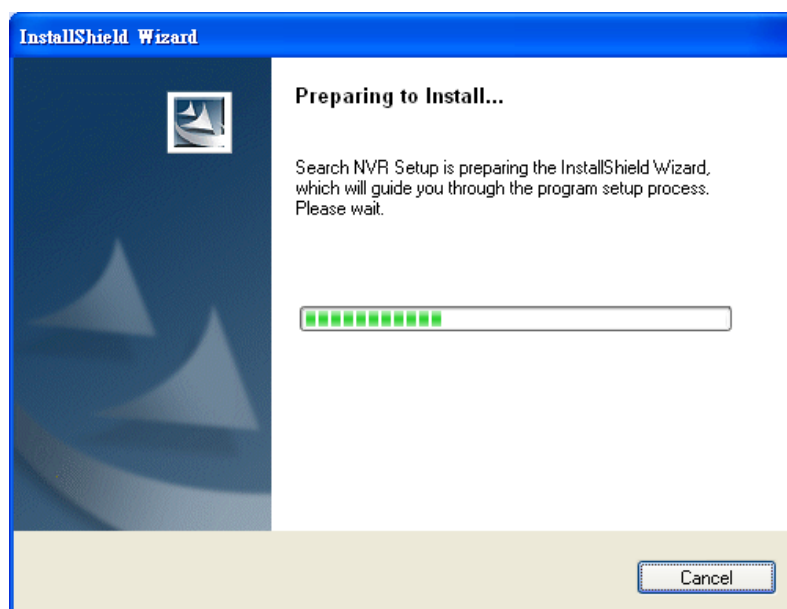
- ◆ The NVR is placed in a network with a DHCP server: Connect to the NVR by using “**Device Search**” Utility.
- ◆ The NVR is placed in a network without DHCP server (or you are connecting to it directly): **Access NVR with its default IP (192.168.0.20)**.

3.1 Use Device Search Utility

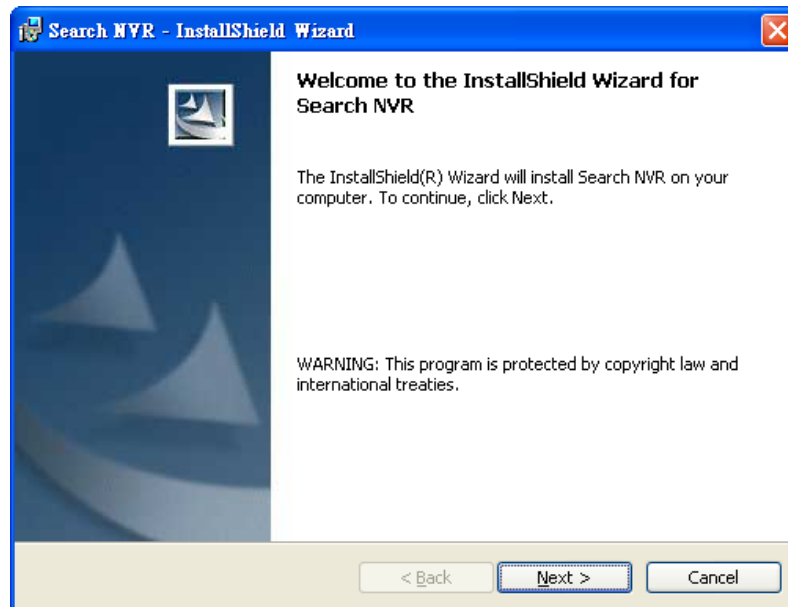
If the NVR is placed in a corporate network or a local area network where a DHCP server is already presented, please install the “Device Search” utility from the bundled CD disk.



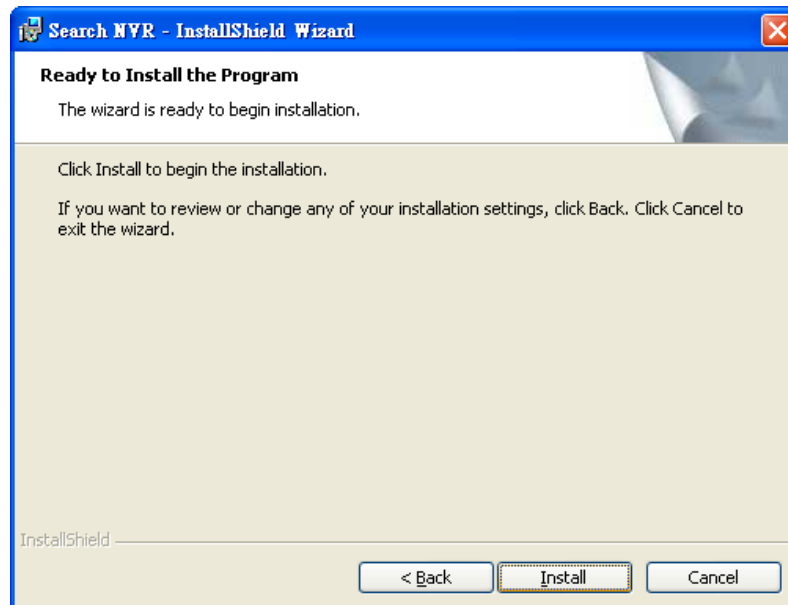
To begin, launch the “Device Search” utility from the CD and proceed with the installation.



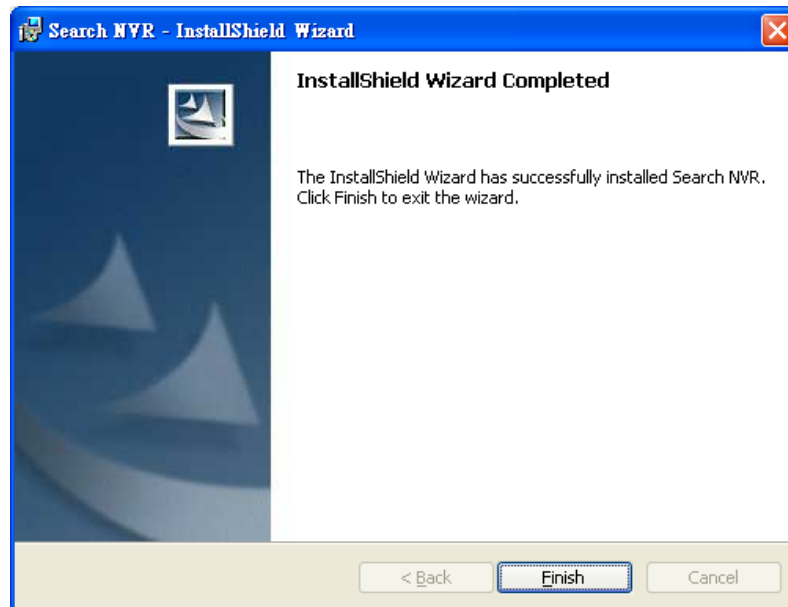
Please click "Next" to continue.



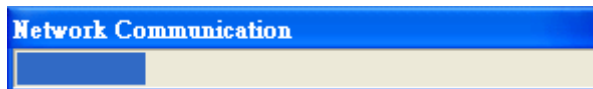
Please click "Install" to start the installation.



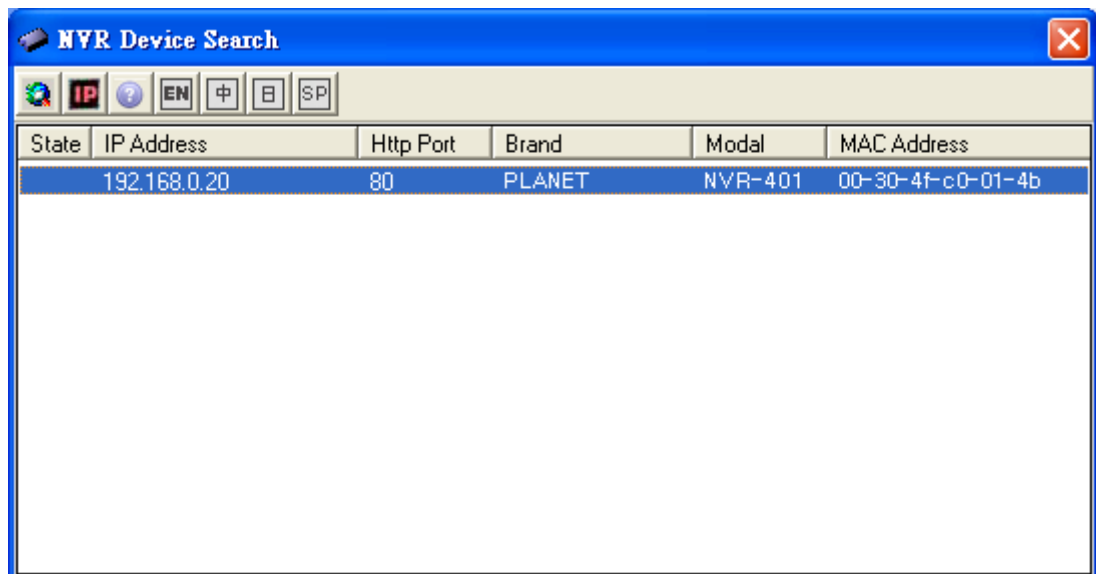
Once the installation is complete, please check the “Finish”.



Please go to Start => Programs => NVR => Search NVR to run the search tool. Then you will see the utility start search the network.



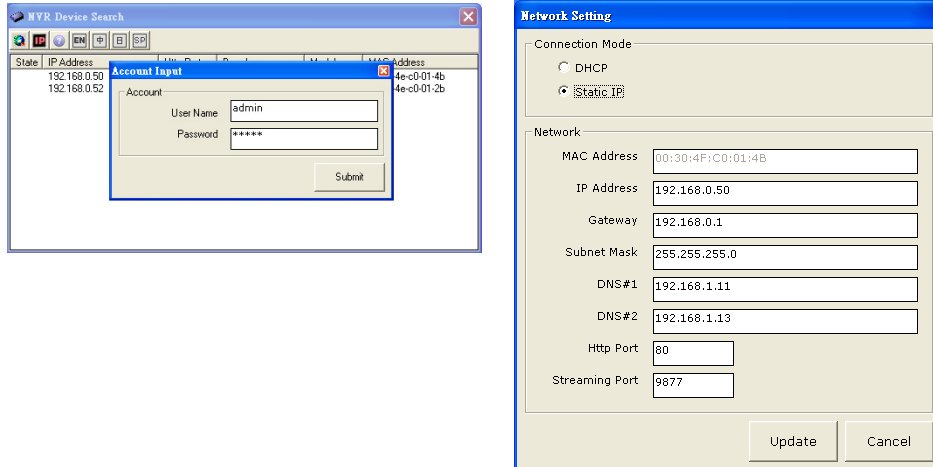
The NVR should be located and its IP address should be displayed: Double-click on it and the program should automatically access the NVR's web .administration page from your default browser.



You may change NVR's IP address by click on the button highlighted below.



You will be prompted for the NVR's login information before proceeding to change device's IP address.



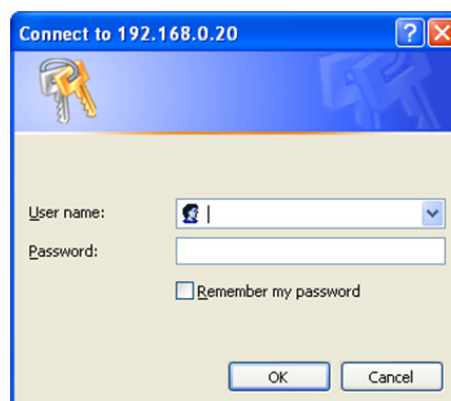
You may click on the button highlighted below to perform search again. Or double-click on any of the search results to access NVR's web administration page.



Perform search again

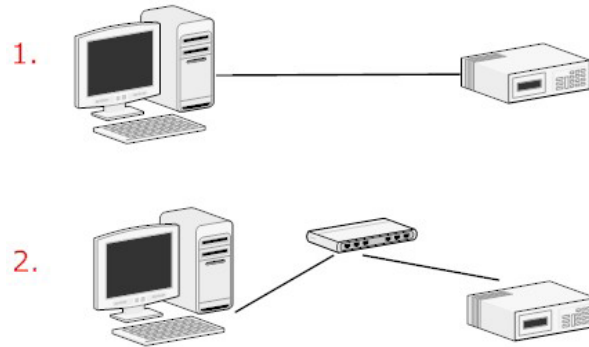
Access NVR's web administration page

You should be prompted for the NVR's username and password. Enter its default username "**admin**" and password "**admin**" and then click "OK" to enter the system.

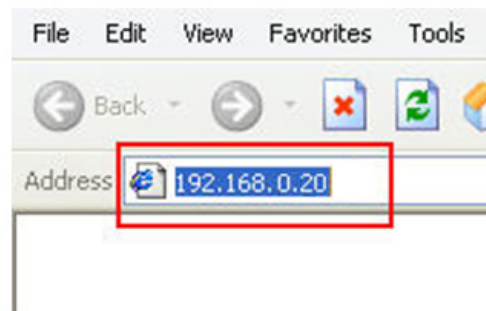


3.2 Access NVR with its default IP address

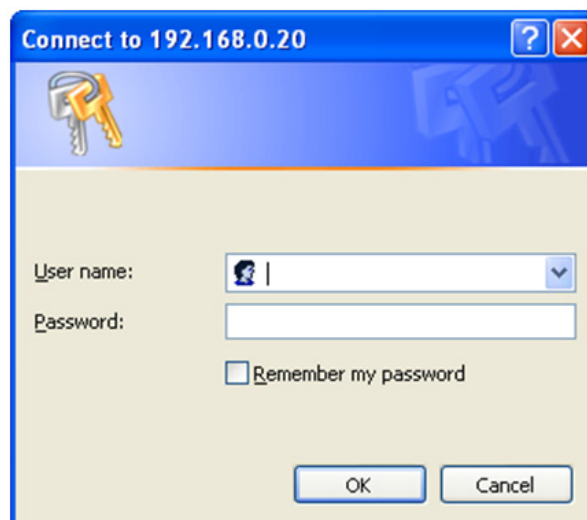
The NVR comes with a pre-configured static IP address “**192.168.0.20**”. However, it is only used when there is no DHCP server presented in the network. Connect the NVR and PC to your switch or hub, or connect the PC directly to the NVR using a crossover CAT.5 Ethernet cable.



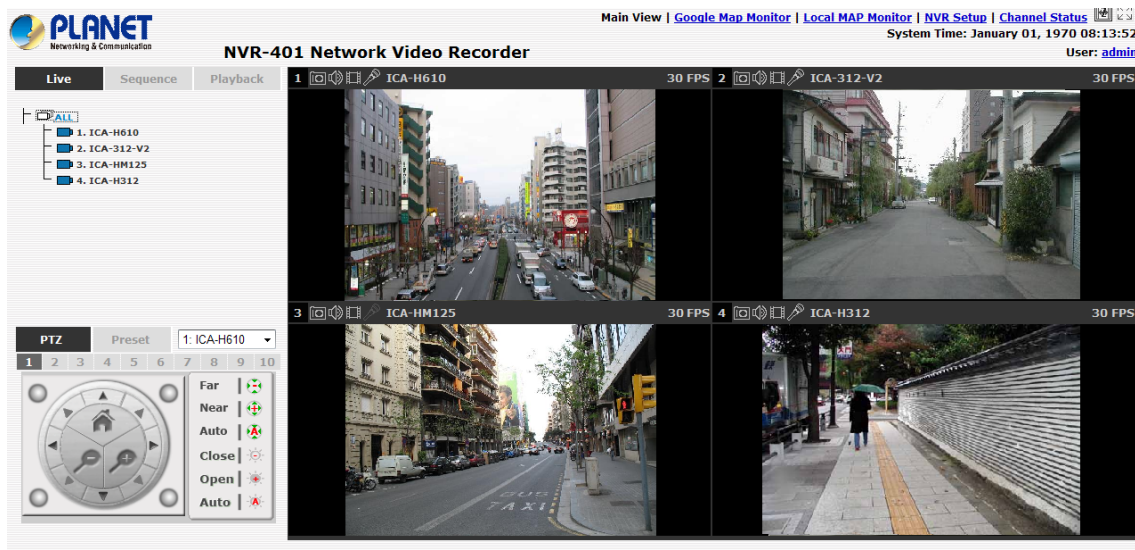
The PC that is connected directly to the NVR (or within the same local area network) should receive an IP from it. Simply access the NVR from your web browser with NVR default IP address.



You should be prompted for the user name and password. Enter its default username “**admin**” and password “**admin**” and then click” OK” to enter the system.



4. Live View

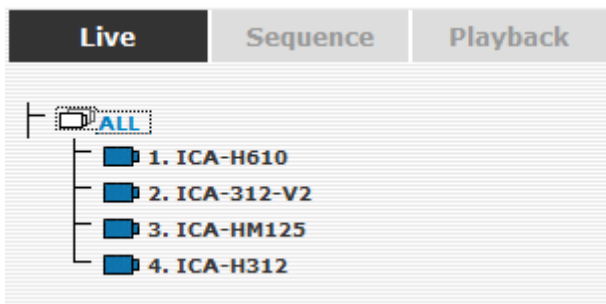


The NVR-401 comes with a 4-video split window view with one video displays on a larger window. Select a channel from the drop-down menu to display its video on the larger split window. You can also double-click on any of the smaller one to display its video to the larger window.

The “Live View” page provides the following functions:

- ◆ Retrieve camera’s video stream
- ◆ Retrieve camera’s status
- ◆ Perform Live Sequence Viewing
- ◆ PTZ Control
- ◆ Perform PTZ Preset Sequence viewing
- ◆ Perform manual recording
- ◆ Take snapshot
- ◆ Receive audio of a video stream
- ◆ Send audio
- ◆ Control “Buzzer”
- ◆ Change web UI display language

4.1 Retrieve camera's video stream






The camera list is expanded and displayed on the Live View page.

- ◆ Click “All” to display videos in the 4-video mode.
- ◆ Click on any camera to display video in single-view mode.

4.2 Retrieve camera's status

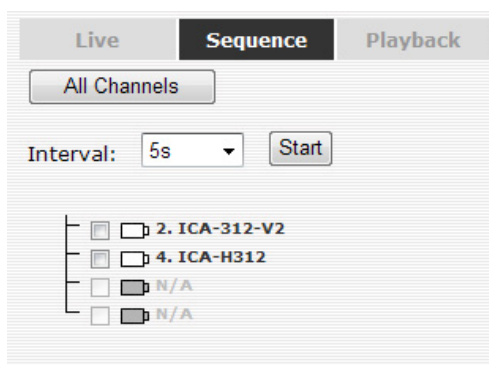
The camera list can show each camera's current status. Each status is represented with different colors and their meanings are explained on the left.

-  Camera is connected
-  Camera is NOT connected
-  Camera is current performing recording


4.3 Perform Sequence Viewing

Sequence view is a function that allows you to view multiple video streams from certain cameras in sequence automatically with having to select them one by one.

To perform sequence view, select “Sequence” from the upper-left hand corner. Then select one or more camera(s) or camera group(s) for sequence viewing



Then select dwell interval from the drop-down menu

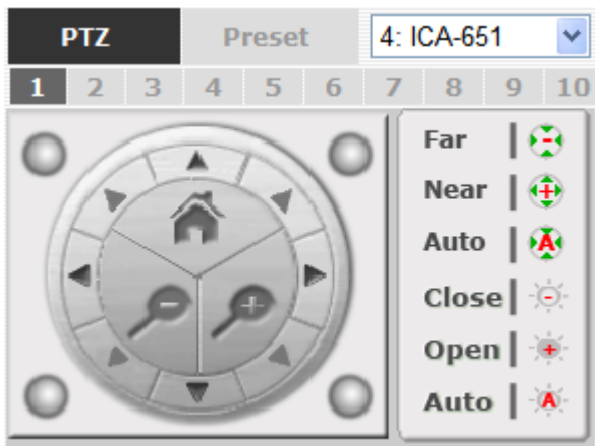
Interval: 

Finally click “Start” to start sequence viewing

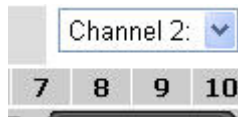
Or simply select the desired channels and press “Start” to start sequence view.

4.4 PTZ Control

PTZ control provides functions to pan, tilt, and zoom a PTZ camera as well as the ability to adjust camera focus and iris.



Camera(s) that are currently being selected for live viewing will be listed in the PTZ drop-down menu. Simply select a camera then use the PTZ control panel to control the camera.



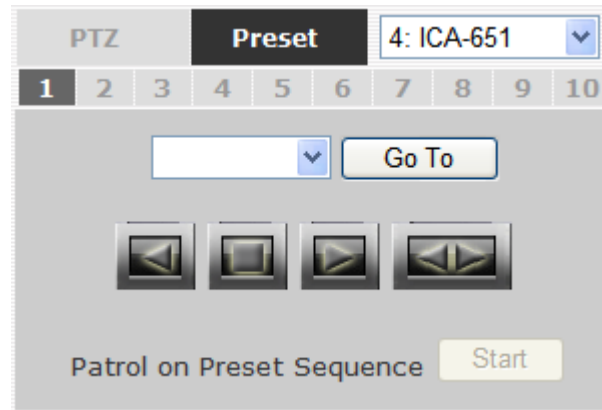
The bar shown below allows you to control the pan/tilt speed.



4.5 Perform PTZ Preset Viewing

There are three functions provided in the “Preset” section:

- ◆ Perform preset point viewing of a particular camera.
- ◆ Auto pan a particular camera.
- ◆ Perform preset point sequence viewing.

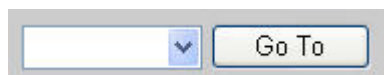


Preset Point Viewing

Start by selecting a PTZ camera from the drop-down list:



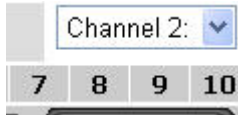
Its available PTZ preset points will be listed in the drop-down list shown below:



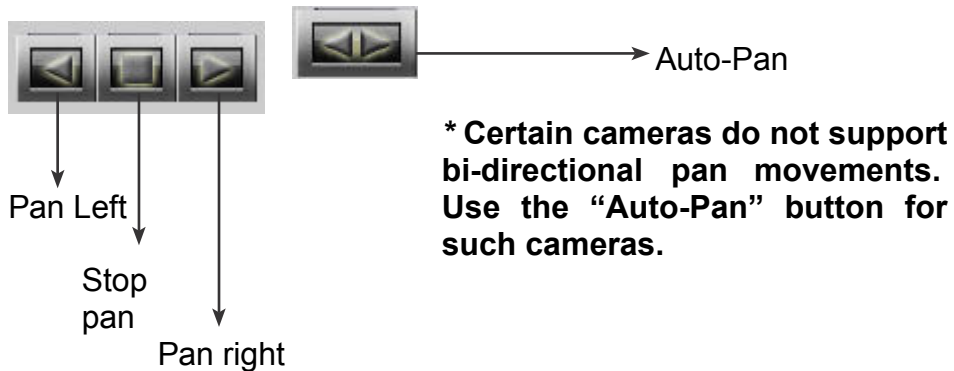
Select a preset position from the drop-down list and click “Go to” to move the live view to that position.

Auto Pan Viewing

Start by selecting a PTZ camera from the drop-down list:



Use the Auto-Pan control buttons to pan right, left and stop auto pan.

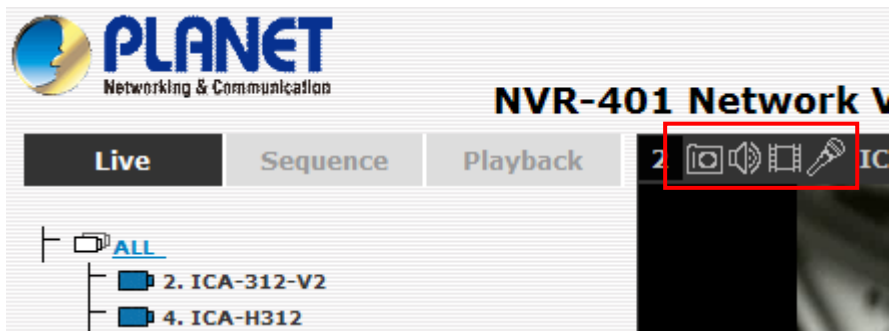






Preset Point Sequence Viewing

This function allows you to view multiple preset point's videos of a camera without having to select them one by one. Once you have defined the prefer preset points in "**Camera Configuration**" => "**PTZ Preset Sequence**" under the "**Setup**" menu, click "Start" here and the recorder will begin to display videos from those preset points in sequence automatically until you click "Stop".



4.6 Live Video Control Buttons

Each live video window comes with control buttons with functions described below:




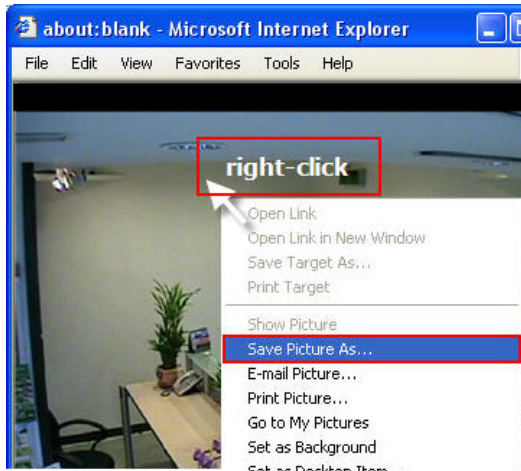
-  Take a snapshot of a live video.
-  Turn on/off audio of a live video.
-  Start/stop recording of a live video (manual recording).
-  Audio post function.



-  Full screen view of a live video
-  Display video in its original ratio

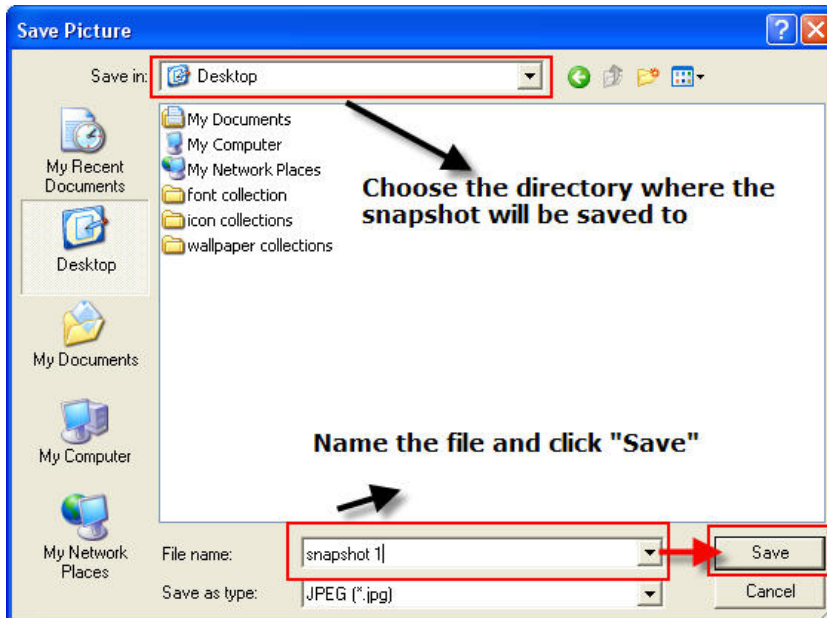
Take a snapshot of a live video

To take a snapshot of a live video, click the  button and the snapshot of the video will be displayed in a pop up window shown like below.




Right-click anywhere on the image and select “Save Image as” from the pull-down menu.


In the pop up dialog, name the image file and choose which directory the image will be saved to and click “Save”.




Full Screen View of a Live Video

To view a video in full screen, click the  button. To exit full screen video, double-click anywhere on the video.

Turn On/Off Audio of a Live Video


You can retrieve audio from a particular camera. Simply click the  button to do so.


The button will show in different color once the audio is turned on.  Click on it again to turn off audio.



You may only turn on audio once channel at a time

Start/Stop Recording of a Live Video

You can manually start or stop recording of a live video by using the  button.

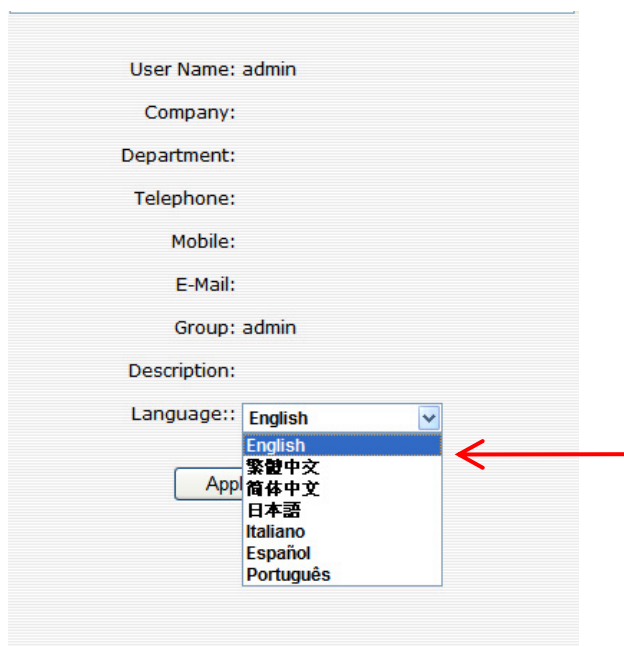
The button will show in different color once the recording is started manually.  Click on it again to stop recording.

Audio post

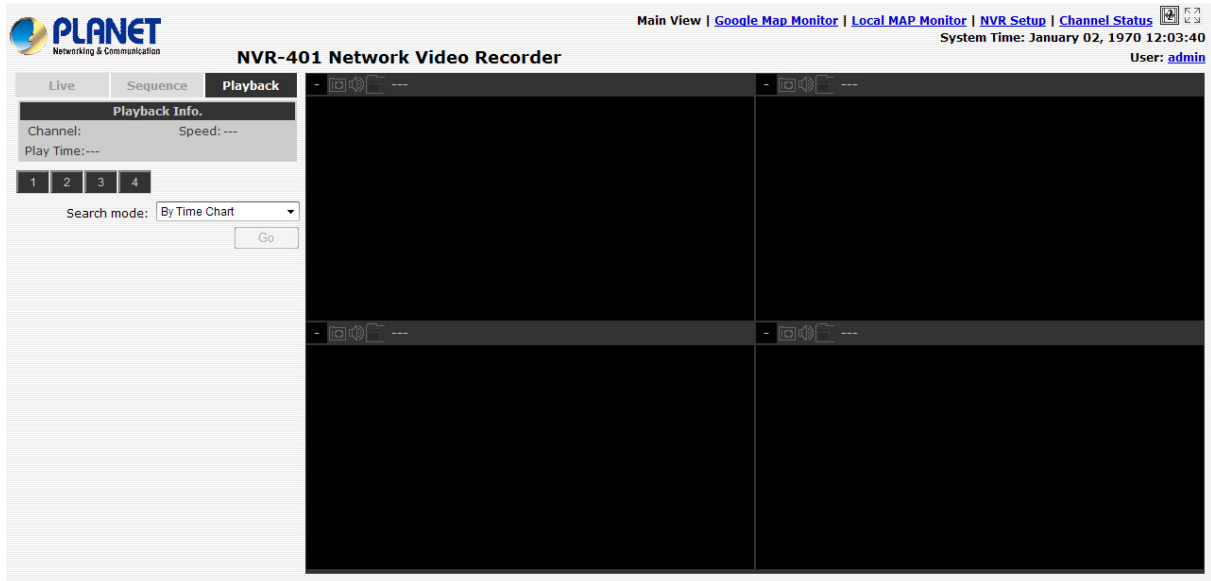
This function allows user to speak from a PC through a microphone and the audio can be played at the camera side if it has a speaker connected to it.

4.7 Change Web UI Display Language

You can change the web UI display language from the current login username link located at the upper-right hand corner. Click on the link opens up a new window which displays detail information about the user as well as a drop-down menu which lets you change the display language.



5. Playback



Playback is a function that allows you to play one or more videos that were previously recorded by a chosen recording method or due to an event trigger. The NVR offers synchronized playback from up to 4 channels and various types of search methods are provided to help you find the footage you need quickly.

You can turn on or off the audio of a recorded video at your choice if audio was also recorded during the recording of the video.

Playback video can be viewed in full screen and snapshots can be taken and saved during a video playback.

5.1 Methods to Search Playback Videos

The NVR offers three methods to quickly help users find videos that were previously recorded:

- ◆ Search by time: Specify a time range and search videos recorded within that range.
- ◆ Search by event: Find videos that were recorded due to event triggers.
- ◆ Play by start time: Enter a specific time a video was recorded to start playing back the video.

Search by time chart

- ◆ Start by selecting which channel(s) you would like to perform a search on:

- ◆ Click on any blue cell box should direct you to the hour/channel table if there were multiple videos recorded during that date:

CH1	Ch2	CH3	CH4	
				1
				2
				3
				4
				5
				6
				7
				8
				9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20
				21
				22
				23
				24

* Videos from other cameras that are recorded on the same date will also be displayed.

* Move the mouse cursor on a particular cell box without clicking gives you a preview of the playback video in a small thumbnail.

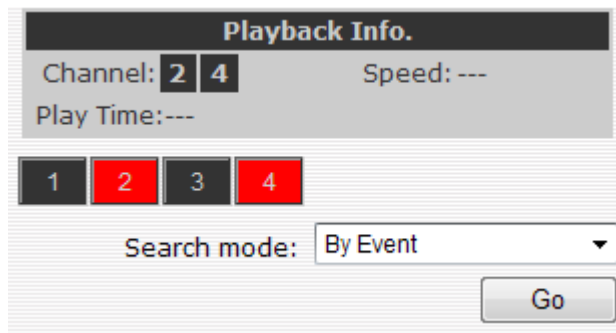
- ◆ Click on the cell box again will start playing back the videos if you have reached the end of search results:



- ◆ Videos found from other cameras that were recorded at the same time will also be played.

Search by event

- ◆ Start by selecting which channel(s) you would like to perform a search on.



Selected channels will be marked in red.

- ◆ Select “Search by event” from the “Search Method” drop-down list and click “Go” to start the search.
- ◆ Results will then be listed like what is shown below (displays the oldest record top down). Click on a particular result to start the playback.



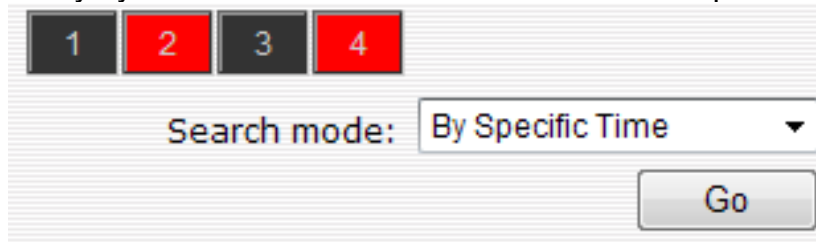
* You can click “Next Search” to display the next 15 results.

- ◆ You may also specify a new start time to search and display results from then on. You can restrict the number of results to be displayed at once (max. 30) and perform the search again.

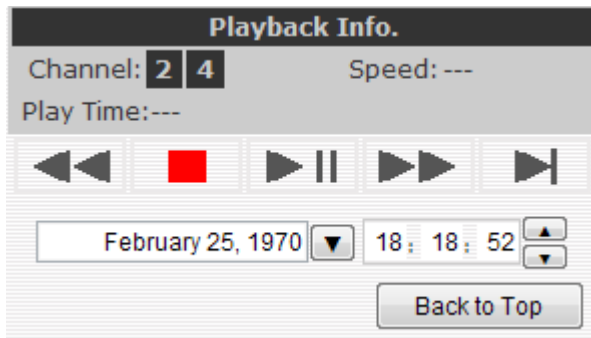


Play by specific time

If you know when a recording was taken place, you may choose the “Play by start time” from the “Search Method” drop-down list.



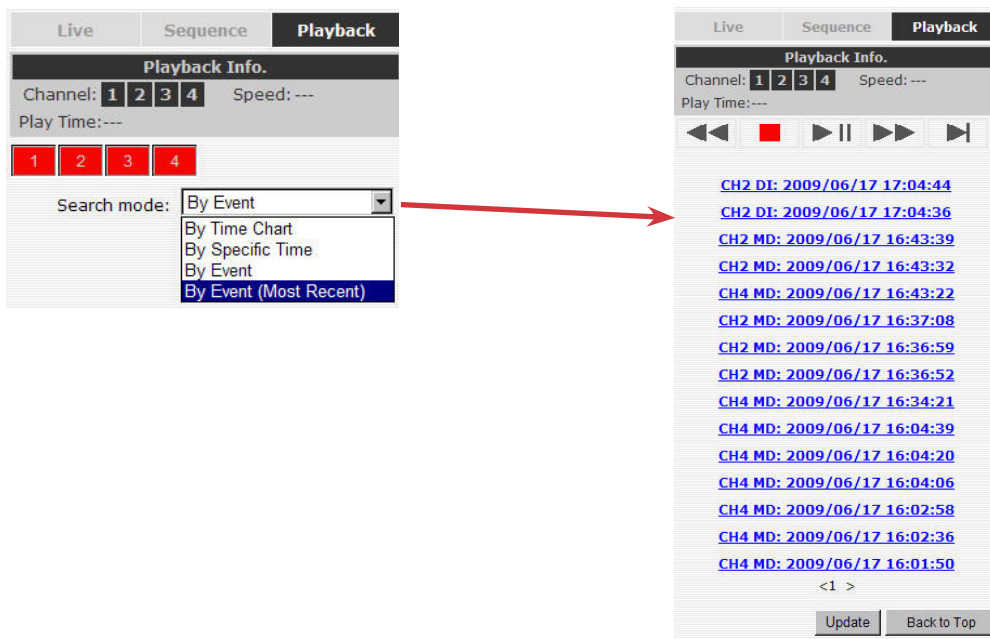
Then you will be prompted to enter a specific time and date for the recorded video.



Use the  button to select month, date, and year.

Search by event (Most Recent)

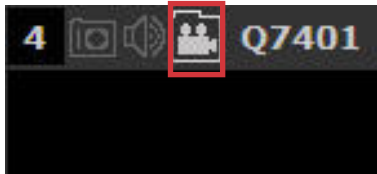
This function quickly displays the most recent event recordings from the selected channels, displaying the most recent result top down. You may click “Update” to update the list to display the most recent result.



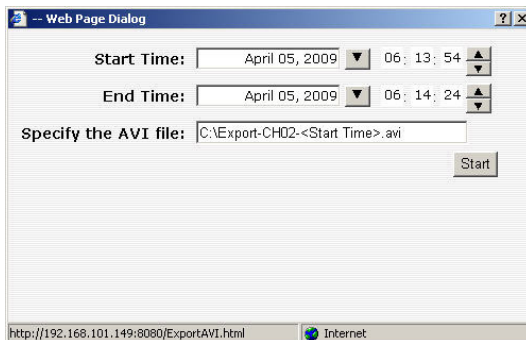
5.2 Export Playback Videos to AVI Files


User can export the recorded playback videos stored on NVR-401 to a local computer and save them in AVI file format. The files can then be played on the PC by a 3rd party media player such as VLC player or Windows Media player.

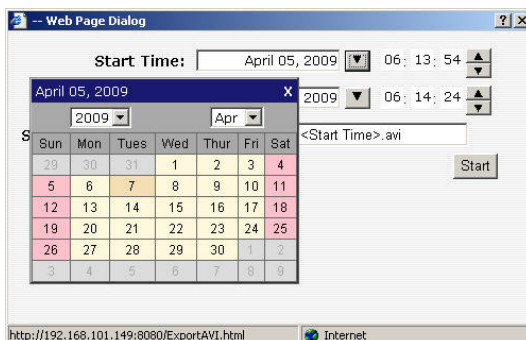
Once you locate the recorded videos with steps described in the previous section, hit the “Export AVI” button on a video window of the video you wish to export.



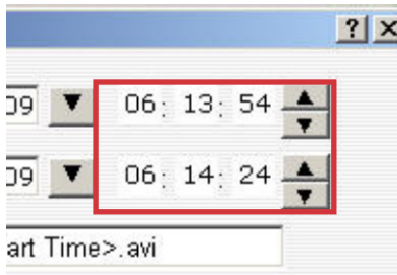
A new dialog will pop up and allows you to specify the time frame (or length) of the video you wish to export.



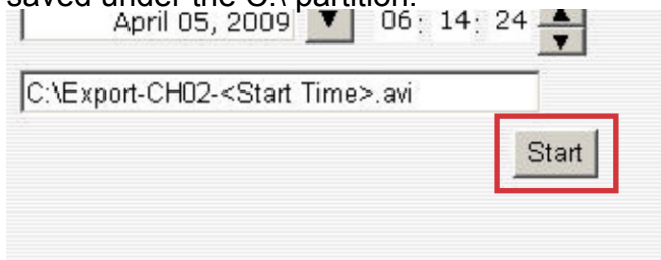
Click the  button to pull down the calendar to help you specify the month, date and the year



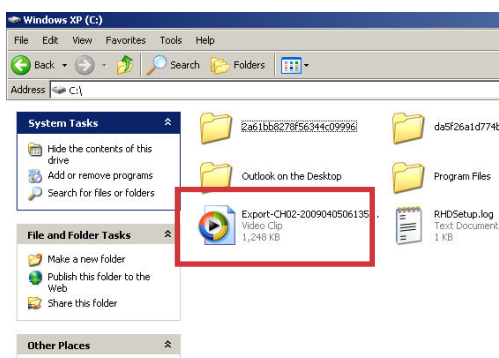
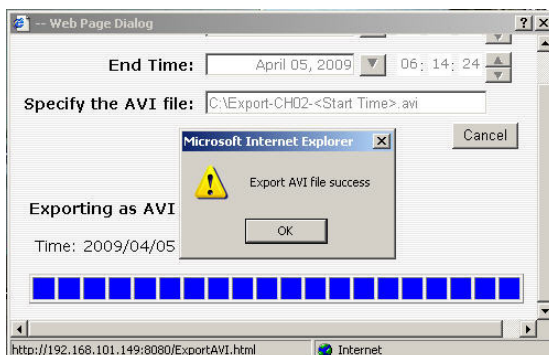
Specify the starting and ending hours of the video by entering numbers in the text boxes.



Hit the “Start” button to start exporting. The file will be automatically named and saved under the C:\ partition.



You will be notified once the process is completed successfully



The exported AVI file will be saved under the C partition.

* ffdshow is required in order to play the exported AVI file with Windows Media Player. You can get it at “<http://sourceforge.net/projects/ffd-show-tryout!>” to download the “ffdshow_beta6_rev2527_20081219.exe”.

6. System Setup

6.1 System Configurations

The “System Configurations” page provides users options to setup the device quickly and properly. After properly configuring all settings in all the sub-pages, users should expect a fully working network video recorder that is ready to manage cameras on the network. We will start by configuring its network settings to make sure it works correctly in your network. Next, we will help you adjust the system time so videos will be recorder with correct timestamp. To better secure the system for unwanted disturbance, we will guide you on setting up user’s account and privileges to prevent settings gets altered by users other than the system administrator. Lastly, we will tell you what you should expect after installing a hard disk and how to prepare the hard disk for the video recording.

6.1.1 Network Settings

The screenshot shows the web interface for the NVR-401 Network Video Recorder. At the top right, there are navigation links: [Main View](#), [Google Map Monitor](#), [Local MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). Below these, it displays the system time: February 26, 2010 10:49:39 and the user: admin.

The left sidebar contains the 'NVR Setup' menu with the following items: System Configuration (expanded), Network Setup (expanded), Time and Date, Users Account, Group Privilege, and Disk Setup. Under 'System Configuration', 'Channel Configuration', 'Event Configuration', 'Recording Configuration', and 'System Options' are listed with expand/collapse icons.

The main content area is titled 'Network Setting' and contains the following fields and options:

- Connection Type: Static IP (selected)
- IP Address: 192 . 168 . 0 . 100
- Subnet Mask: 255 . 255 . 255 . 0
- Gateway: 192 . 168 . 0 . 2
- DNS 1: 192 . 168 . 11 . 11
- DNS 2: 192 . 168 . 11 . 13
- HTTP Port: 80
- Streaming Port: 9877
- UPnP Port Forwarding: External Port: 6000 [Test] [Force Change]

A red note states: "Please enter at least one valid DNS server if you plan to use services (such as NTP server) with their domain names".

The 'Optional Setting' section includes a 'Device Name' text input field.

The 'DHCP Server' section includes:

- DHCP Server: ON OFF
- DHCP Server Status: OFF
- Max. DHCP Client: 30 (Max. 30 clients)
- [Apply] button

The 'Current DHCP Clients' section features a table with the following columns: IP Address, Name (if any), MAC Address, and Time when IP obtained.


You need to adjust settings in this page for the device to work properly in your network. It is critical that settings here are configured correctly based on your network configurations so that the recorder can be administered through the local area network and cameras can be connected from it.

By default, the recorder is set to obtain IP address from DHCP server, it should be sufficient in most network environments, and most likely you should not need to alter anything in this page. To locate the recorder, simply use the IP Utility with steps described in page 13.

If you wish to set the recorder to use a static IP address in your local area network,

1. Choose “Static IP” from the “Connection Type” drop-down menu
2. Enter the IP address, subnet mask, default gateway address and DNS server address for the recorder

3. Enable “DHCP Server” under “DHCP Server” if you wish to use the recorder

as a DHCP server, or leave it disabled if there is already a DHCP server in the network .

4. Click Apply for the settings to take effect.

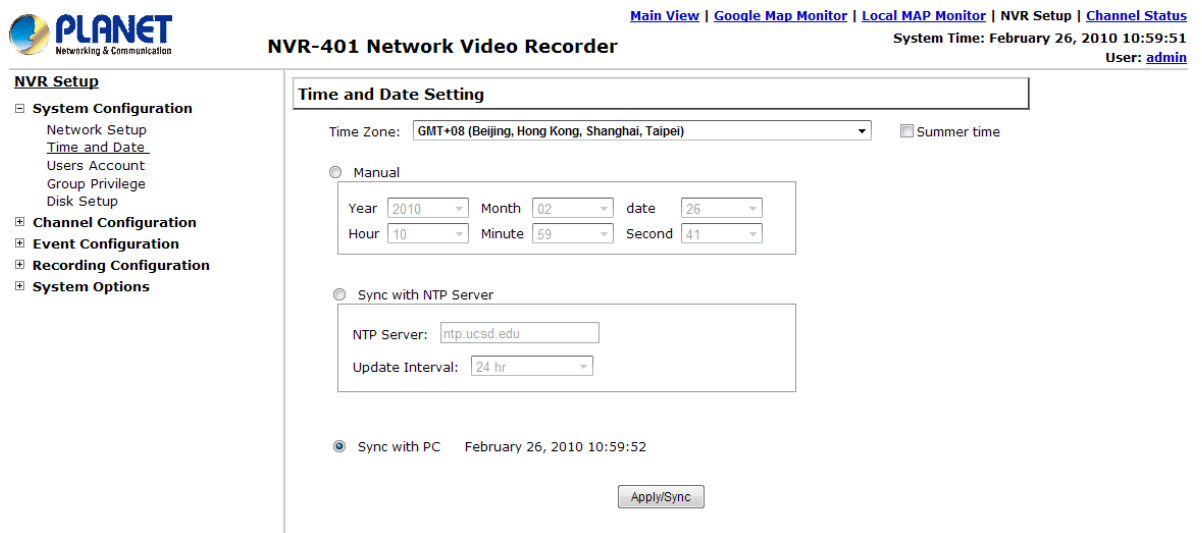


The recorder can detect the presence of a DHCP server upon startup. It sets itself to use static IP address if there is no DHCP server currently presented in the network. Its DHCP server function is also turned on at the same time to assign IP addresses to cameras that are later connected to the network. You can manually turn off the DHCP server function if you wish to use a separate DHCP server.



Change the recorder's IP address would require the recorder to restart. Restart the device under "system Options" >> "Maintenance" for the settings to take effect.

6.1.2 Time and Date



The screenshot shows the web interface for the NVR-401 Network Video Recorder. The page title is "NVR-401 Network Video Recorder". In the top right corner, there are links for "Main View", "Google Map Monitor", "Local MAP Monitor", "NVR Setup", and "Channel Status". Below these links, it displays "System Time: February 26, 2010 10:59:51" and "User: admin". On the left side, there is a navigation menu under "NVR Setup" with options: "System Configuration", "Channel Configuration", "Event Configuration", "Recording Configuration", and "System Options". The "System Configuration" option is expanded, showing sub-options: "Network Setup", "Time and Date", "Users Account", "Group Privilege", and "Disk Setup". The "Time and Date" option is selected. The main content area is titled "Time and Date Setting". It features a "Time Zone:" dropdown menu set to "GMT+08 (Beijing, Hong Kong, Shanghai, Taipei)" and a "Summer time" checkbox. There are two radio button options: "Manual" (selected) and "Sync with NTP Server". The "Manual" option has a form with fields for Year (2010), Month (02), date (26), Hour (10), Minute (59), and Second (41). The "Sync with NTP Server" option has a form with "NTP Server:" (ntp.ucsd.edu) and "Update Interval:" (24 hr). At the bottom, there is a radio button for "Sync with PC" which is selected, showing the current time as "February 26, 2010 10:59:52". An "Apply/Sync" button is located at the bottom right of the form.

Set the time and date by selecting the time zone according to your location. It is imperative that you set the recorder's time correctly to avoid the following errors:

- ◆ Incorrect display time for playback videos.
- ◆ Inconsistent display time of event logs and when they actually occur.

After selecting the time zone, choose an option below to set the recorder time.

- **Manual** - Use the drop-down list and configure the time manually.
- **Sync with NTP server** - enter the hostname or IP address of a valid NTP server and set how often the recorder should synchronize the time with the recorder by using the "Update interval" drop-down menu.
- **Sync with PC** - Check this option to synchronize the recorder time with the PC that you are currently using to access the recorder.

6.1.3 User Account

The recorder can be accessed by multiple users simultaneously. You can add, remove, and edit users by using options provided in this page to keep user information organized. Each recorder comes with a built-in “admin” account with password “admin”. It’s highly recommended to change the password upon your initial login.

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[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: February 26, 2010 11:01:40
User: [admin](#)

NVR-401 Network Video Recorder

NVR Setup

- System Configuration
 - Network Setup
 - Time and Date
 - Users Account**
 - Group Privilege
 - Disk Setup
- Channel Configuration
- Event Configuration
- Recording Configuration
- System Options

User Account Setting

User Name	Group	Description
admin	admin	This is the admin account

Add User

User Name: Only A-Z, a-z, 0-9 and _.@ are allowed

Password:

Confirm Password:

Company: (Optional)

Department: (Optional)

Telephone: (Optional)

Mobile: (Optional)

E-Mail: (Optional)

Group:

Language: English

Description: (Optional)

To change the password of the “admin” account:

1. Click and highlight the “admin” account in the account list and click “Edit”.
2. Its information should be displayed in “User Account Information”.
3. Enter a new password in the “Password” field and enter it again in “Confirm Password”.

Username | Group | Description

admin	admin	This is the admin account
-------	-------	---------------------------

User Account Information

Username: admin

Password: *****

Confirm Password:

Company: (optional)

Department: (optional)

To add a new user:

- ◆ Enter a username and password in “User Account Information”. All other fields are optional for your own reference.
- ◆ Select a group from the “Group” drop-down menu to assign the new user to a particular group.
- ◆ Enter a short description for the account if you wish.
- ◆ Click “Apply” to finish configuration.

6.1.4 Group Privilege

Group Privilege is where you can create multiple customized access policies for situations if you need the recorder to be accessed by users other than the administrator. You can do so by creating a group, and then remove access privileges for certain configuration pages or cameras. Users that are created and assigned to this group will have limited access instead of full administration rights.

The screenshot shows the NVR-401 Network Video Recorder web interface. At the top, there are navigation links: [Main View](#), [Google Map Monitor](#), [Local MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is February 26, 2010 11:03:15, and the user is [admin](#). The left sidebar shows the navigation menu: **NVR Setup** (System Configuration, Channel Configuration, Event Configuration, Recording Configuration, System Options), Network Setup, Time and Date, Users Account, **Group Privilege**, and Disk Setup. The main content area is titled "Group Privilege Setting" and contains the following fields and controls:

- Group:
- Account Type:
- Live: CH1 CH2 CH3 CH4, each with an Audio checkbox below it.
- Playback: CH1 CH2 CH3 CH4, each with an Audio checkbox below it.
- Allow use of PTZ: CH1 CH2 CH3 CH4
- System Configuration: System Configuration Channel Configuration Event Configuration Recording Configuration System Options
-

The recorder comes with seven built-in groups and five built-in privilege profiles, except the “admin” and the “guest” accounts; the other five groups are fully customizable or you can simply assign a group with one of the default privilege profiles. You can, however, assign more than one users to the “admin” account if you wish to do so. The guest account comes with a “view-only” privilege in the “Live View” page, and users in this group do not have the power to make any changes in the “Live View” page or have access to pages other than the “Live View” page.

To create a group, select a group from the “Group” drop-down.

This close-up shows the "Group" dropdown menu with "Group 1" selected and the "Change Group Name" button. Below it, the "Privilege Type" dropdown menu is set to "Operator".

You can change the group name by clicking the “Change Group Name” button. A text box will be displayed for you to enter the new group.

This close-up shows the "Change Group Name" button highlighted with a red box. To its right, a text input field is visible, ready for the user to enter a new group name. The "Group" dropdown still shows "Group 1" and "Privilege Type" is "Operator".

Choose what type of privilege you would like this group to have from the “Privilege Type” drop-down menu.

This close-up shows the "Privilege Type" dropdown menu with "Operator" selected and highlighted with a red box. The "Group" dropdown above it shows "Group 1" and the "Change" button.

Its access privilege will then be displayed. You can alter its settings by allowing or denying access to other cameras using the checkboxes instead of accepting the defaults.

Group Privilege Setting

Group:

Account Type:

Live:

CH1 CH2 CH3 CH4
 └─ Audio └─ Audio └─ Audio └─ Audio

Playback:

CH1 CH2 CH3 CH4
 └─ Audio └─ Audio └─ Audio └─ Audio

Allow use of PTZ:

CH1 CH2 CH3 CH4

6.1.5 Disk Setup

Once you install a hard disk to the recorder, you would need to initialize it so that it can be ready for recording. You can obtain basic information about the disk you installed in this page.

To initialize it, simply click the “Format” button.


Setup


- [-] **System Configuration**
 - Network Setup
 - Time and Date
 - Users Account
 - Group Privilege
 - Disk Setup
- [+] **Channel Configuration**
- [+] **Event Configuration**
- [+] **Recording Configuration**
- [+] **System Options**

Hard Disk Setting

Disk ID	Disk Type	Capacity	Disk Status	Format
1	Internal	445GB	Online	<input type="button" value="Format"/>
2	Internal	142GB	Online	<input type="button" value="Format"/>

You can also connect external USB thumb drive to the recorder for firmware upgrade.

 For instructions to install a hard disk to the recorder, refer to page 10.

 To obtain detail information about the disk, go to “System Options” >> “Disk Status”.

6.2 Channel Configurations

6.2.1 Add a Camera

The NVR provides two options for adding a new camera. Users have the option to let the recorder automatically find the cameras or it is possible to enter camera's information and add it manually.



[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

System Time: January 03, 2010 04:27:12

User: [admin](#)

NVR-401 Network Video Recorder

NVR Setup

- System Configuration
- Channel Configuration
 - Channel Setting
 - OSD Setting
 - PTZ Setting
 - E-Map Setting
- Event Configuration
- Recording Configuration
- System Options

Channel Setting

Channel	Channel Name	Group	IP Address	Format	Resolution
1	ICA-HM230	Group1	192.168.0.23	MPEG4	qvga
2	ICA-H312	Group1	192.168.0.119	H.264	cif
3	ICA-HM135	Group1	192.168.0.113	MPEG4	qvga
4	ICA-651	Group1	192.168.0.65	MPEG4	CIF

Remove

Edit

Click here to search camera:

* You may skip this step and add a new camera manually by entering camera's setting in the "Camera Information" section

Edit Channel Setting:

Channel ID: 1
Channel Name:
Group:
IP Address:
User Name:
Password:
HTTP Port:

Once you change the camera's IP, User Name, Password or HTTP Port, click "Detect" to retrieve the camera's settings

Additional Camera Information

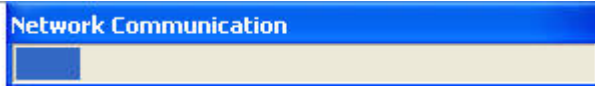
Video Port:
Format:
Resolution:
Frame Rate:
Bitrate Mode:
Quality:
Record: Continuous
Record Audio: Record audio

Automatic Search:

1. Click the "Search" button to perform the camera search. You should be prompted to install Active Control component in order for the search to function properly. Go ahead and click "Install"



2. After that, the search should begin and its status should be displayed.



3. Found cameras should be listed and simply select a camera from the list and press "Configure".

Click here to search camera:

* You may skip this step and add a new camera manually by entering camera's setting in the "Camera Information" section

Brand	Model	IP Address	HTTP Port	Installed
PLANET	ICA-510	192.168.0.49	80	
PLANET	ICA-601	192.168.0.61	80	
PLANET	ICA-230	192.168.0.230	80	
PLANET	ICA-H651	192.168.0.231	80	

*Select a camera from search result and click "Configure" to configure setting below.

4. Its corresponding information should be displayed in the "Camera Information" section. Enter its username and password and select the channel ID and name the camera.

Add New Channel:

Channel ID:

Channel Name:

Group:

IP Address:

User Name:

Password:

HTTP Port:

Once you fill out above information, click "Detect" to retrieve camera setting

5. Click on "Detect" to establish connection between the recorder and the camera. If connection establishes successfully, camera's detailed information should be polled and displayed as below.

Additional Camera Information

Video Port:

Format:

Resolution:


Frame Rate:

Bitrate Mode:

Quality:


Record: Continuous

Record Audio: Record audio



6. Adjust its video format, frame rate, resolution or bitrate...etc if you wish. You can also click on the "Preview" to preview the live video of the camera.

Click "Add" to finish adding the camera.

 If cameras are marked with “*” in the search result, it means those cameras are already configured and connected to NVR.

Click here to search camera:

* You may skip this step and add a new camera manually by entering camera's setting in the "Camera Information" section

Brand	Model	IP Address	HTTP Port	Installed
PLANET	ICA-510	192.168.0.49	80	*
PLANET	ICA-601	192.168.0.61	80	
PLANET	ICA-230	192.168.0.230	80	
PLANET	ICA-H651	192.168.0.231	80	

*Select a camera from search result and click "Configure" to configure setting below.

Add a camera manually

Simply follow the instruction described above but instead of using the “Search” function, enter the camera’s IP address and credential in the “Camera Information” manually, then follow step 5 and 6 described above.

Add New Channel:

2. Channel ID:

Channel Name:

Group:

IP Address: **1.**

User Name:

Password:

HTTP Port:

Once you fill out above information, click "Detect" to retrieve camera setting

Enter manually

6.2.2 OSD Settings

The OSD (On Screen Display) allows users to add informational text message and embed it onto the video. By default, this function is turned off. To add texts to one or more videos.

1. Select a camera you would like to add text to and choose “Display OSD”.



OSD Settings

Camera: Camera 1

Do Not Display OSD

Display OSD

2. Choose one or more display options if you would also like the recorder to automatically embed the system time or the frame rate for you. Or simply choose to display a custom message of your own.



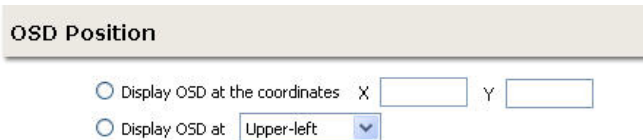
Text Display Options

Show Time

Show FPS

Show Text (Max. 32 char.)

3. Next, define where the text will be displayed by either entering an X/Y coordinate or use the system pre-defined position from the drop-down menu.



OSD Position

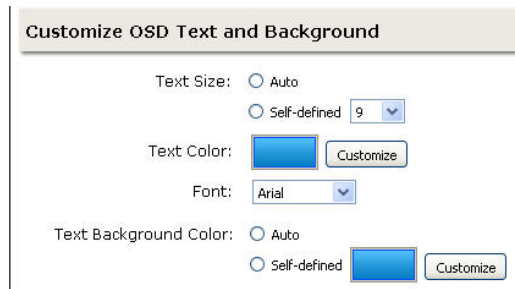
Display OSD at the coordinates X Y

Display OSD at: Upper-left

4. Click on the “Preview” button to see the preview of your setting and click “Apply” to save the configuration.



The texts can be further adjusted with changes to different size, color or font so they can be more visible on the video.



Customize OSD Text and Background

Text Size: Auto Self-defined 9

Text Color: Customize

Font: Arial

Text Background Color: Auto Self-defined Customize

6.2.3 PTZ Preset Settings

The recorder supports PTZ cameras and can set multiple preset points or retrieve and manage preset points that are set in the camera. This is helpful if you need to monitor multiple spots in one area from a particular camera.

Setup

- System Configuration
- Channel Configuration
 - Channel Setting
 - OSD Setting
 - PTZ Setting
 - PTZ Preset**
 - PTZ Sequence
 - E-MAP Monitor
- Event Configuration
- Recording Configuration
- System Options

PTZ Preset

Channel: 4. Q7401

Set as Home	Position No	Position Name	Description
-------------	-------------	---------------	-------------

Add Edit Remove Sync with Camera

Position No: 1

Position Name: preset 1

PTZ Speed: 1

Zoom: Zoom In Zoom Out

Focus: Near Auto Far

Description:

Pan Tilt

1. To set up PTZ preset points, select a camera from the “Camera” drop-down menu and click “Add”.

PTZ Preset

Channel: 4. Q7401

Set as Home	Position No	Position Name	Description
-------------	-------------	---------------	-------------

Add Edit Remove Sync with Camera

2. Select a position number for the preset point from the “Position Number” drop-down menu and fill in a name in the “Position Name” field for easier identification.

Position No: 1

Position Name: preset 1

3. Use the PTZ control provided in the configuration page to set the preset point and set the position as the “HOME” position if you wish.

4. Click “Apply” to save the configuration.

6.2.4 PTZ Preset Sequence

Once you have multiple preset points defined for a camera, it is convenient for monitoring to set up the sequencing viewing among those preset point and let the recorder automatically switch between them for you.

The screenshot shows the web interface for the NVR-401 Network Video Recorder. At the top left is the PLANET logo. The top right contains navigation links: [Main View](#), [Google Map Monitor](#), [Local MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). Below these are the system time: "System Time: January 03, 2010 04:27:12" and the user: "User: admin". The main title is "NVR-401 Network Video Recorder". On the left is a sidebar menu under "NVR Setup" with categories: System Configuration, Channel Configuration (expanded), Event Configuration, Recording Configuration, and System Options. Under Channel Configuration, the following items are listed: Channel Setting, OSD Setting, PTZ Setting (expanded), PTZ Preset, PTZ Sequence (selected), E-Map Setting, and E-Map Setting. The main content area is titled "PTZ Sequence" and contains a "Channel:" dropdown menu. Below it are two empty boxes labeled "Preset Positions:" and "Preset Sequence:". At the bottom left is a "Dwell Time:" dropdown menu. At the bottom right are "Apply" and "Cancel" buttons.

To configure preset sequence for a camera,” select a camera from the “Camera” drop-down menu.

The available preset points should be listed in “Camera Presets” section.

Pick the ones you like for sequence viewing and press the “->” button to move them to the “Adjust Position” section, then use the up and down buttons to adjust their sequences.

Finally, select a dwell time from the drop-down menu and click “Apply” to save the configuration.

6.2.5 Local Map Setting

E-Map monitor is a function that alerts users whenever there is an event triggered (e.g. motion detected) from a camera with a geographical perspective. With this function, users can quickly identify which camera has detected an unusual event and where this event is happening. This function works by incorporating the event detection function as well as the recording function, which, as a result, helps users take all the necessary actions when an unusual event occurs.

The screenshot shows the NVR-401 Network Video Recorder interface. On the left is a navigation menu under 'NVR Setup' with categories: System Configuration, Channel Configuration (including Local Map Setting), Event Configuration, Recording Configuration, and System Options. The main area features an 'Upload Image:' field with 'Browse' and 'Upload' buttons. Below this is a map area with several camera icons and labels: ICA-H312, ICA-312-V2, ICA-HM135, and ICA-HM125. An 'Apply' button is at the bottom right. The top right corner shows 'System Time: February 26, 2010 11:50:20' and 'User: admin'. Navigation links include 'Main View | Google Map Monitor | Local MAP Monitor | NVR Setup | Channel Status'.

To replace the map, click “Browse” button to locate the new map image file from the local PC and then click “Upload”.

This screenshot shows the same NVR-401 Network Video Recorder interface as the previous one, but with a file selection dialog box open. The dialog box is titled 'Choose file' and shows the contents of the 'My Computer' drive. The 'Browse' button in the NVR interface is highlighted with a red box. The system time is 'September 25, 2009 14:12:37' and the user is 'admin'. The navigation menu and main content area are the same as in the previous screenshot.

Then click and drag the camera icon to move the camera to define its location.

PLANET Networking & Communication

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

NVR-401 Network Video Recorder System Time: February 26, 2010 11:50:20 User: [admin](#)

NVR Setup

- System Configuration
- Channel Configuration
 - Channel Setting
 - OSD Setting
 - PTZ Setting
 - E-Map Setting
 - Local Map Setting**
 - Google Map Setting
- Event Configuration
- Recording Configuration
- System Options

Upload Image:

ICA-H312

ICA-HM230

ICA-HM135

ICA-651

Access the “Local MAP Monitor” page from the upper-right hand corner menu.

[Main View](#) | [Google Map Monitor](#) | **Local MAP Monitor** | [NVR Setup](#) | [Channel Status](#)

System Time: February 26, 2010 13:10:23 User: [admin](#)

When the NVR receives an event triggered from any of the cameras, their videos will be displayed on the E-Map and you can double-click on the video to enlarge it.

PLANET Networking & Communication

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

NVR-401 Network Video Recorder System Time: January 03, 2010 04:27:12 User: [admin](#)

ICA-HM230

ICA-H312

ICA-HM135

ICA-651

6.2.6 Google Map Setting

Google Map monitor is an E-Map function that works like Local MAP. The difference is this function allow user to get the map from Internet Google map service. So you don't have to provide a map to the NVR-401. In default, you will see the world map.

The screenshot shows the 'NVR-401 Network Video Recorder' web interface. At the top, there are navigation links: 'Main View | Google Map Monitor | Local MAP Monitor | NVR Setup | Channel Status'. The system time is 'February 26, 2010 11:51:50' and the user is 'admin'. The left sidebar shows the 'NVR Setup' menu with 'Google Map Setting' selected. The main area features a world map with a camera icon in the Atlantic Ocean. Above the map is a 'Channel' dropdown set to '1. ICA-H312' and an 'Address or places of interest' search bar with a 'Search' button. Map controls like zoom and pan are visible on the left. At the bottom of the map area is an 'Apply' button.

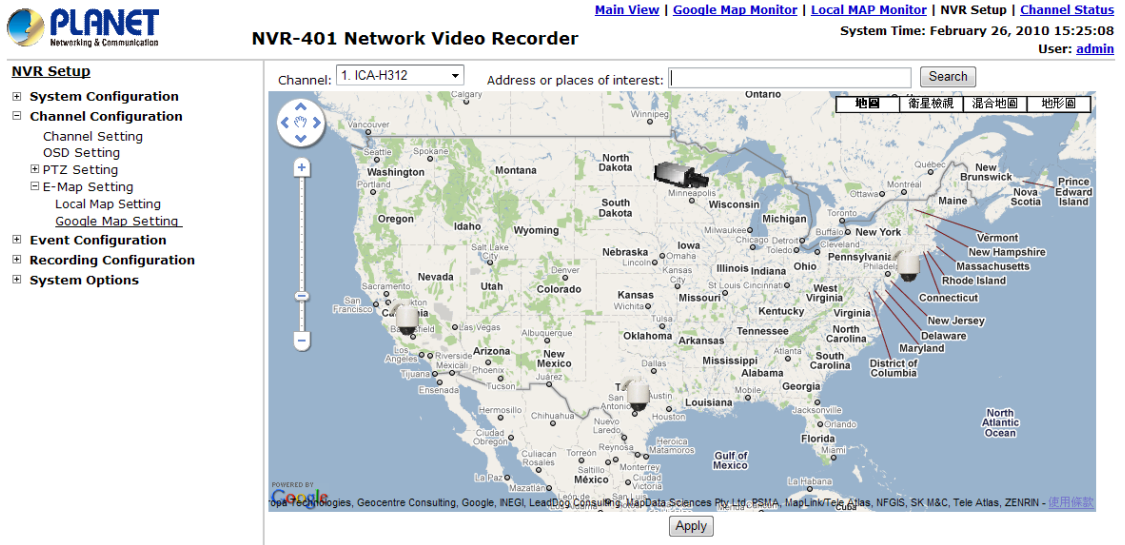
Before using and configure Google map function, you have to make sure the PC and NVR are connecting to Internet. Then you can configure this function and the NVR will properly work with this service. If Internet is not exist, you will see the error message to prompt you that it is fail to connect to Google Map server.

The screenshot shows the same web interface as above, but with a red error message displayed: 'Failed to connect to Google Map server, please make sure the device is connected to the Internet'. The navigation links and system information are the same.

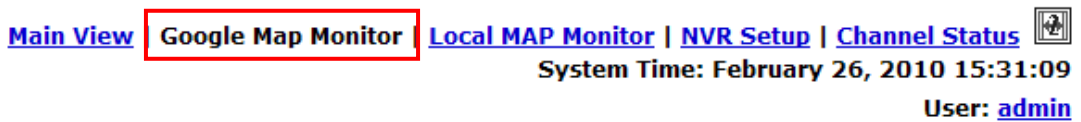
Please select which camera you want to locate to the map. Then search the map. Please enter the address in to the field and click "Search" button to locate the selected IP camera to this address. When the configuration finished, please press "Apply" saving the settings.

This screenshot is a close-up of the search area in the Google Map Monitor interface. It shows the 'Channel' dropdown set to '1. ICA-H312', the 'Address or places of interest' text input field, and the 'Search' button, which is highlighted with a red rectangular box.

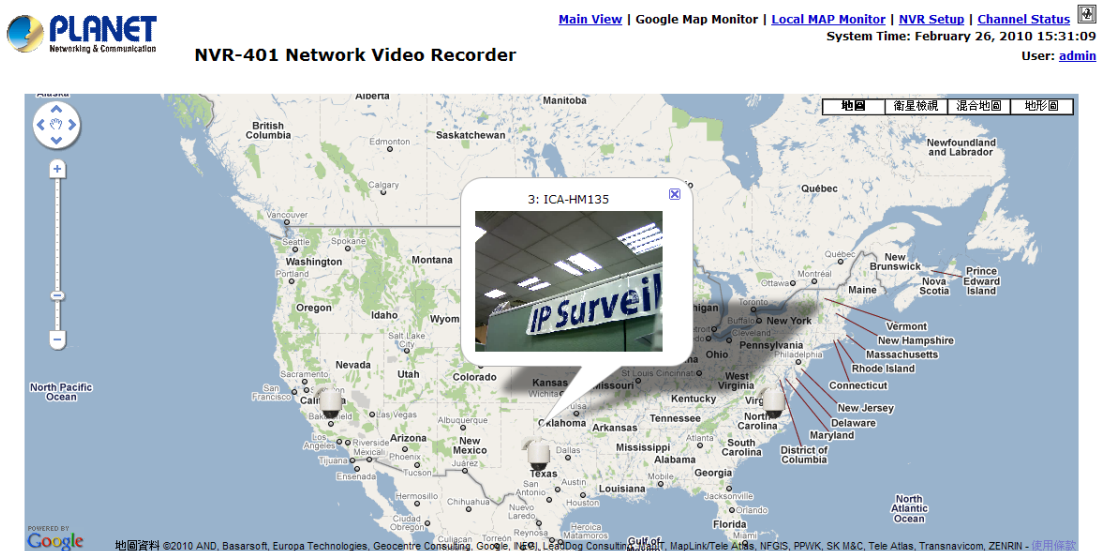
Besides located by search address. You can also roll the central roller of your mouse to zoom-in/zoom-out the map to find out the address manually. Then click and drag the camera icon to move the camera to define its location. When the configuration finished, please press “Apply” saving the settings.



Access the “Google MAP Monitor” page from the upper-right hand corner menu.



When the NVR receives an event triggered from any of the cameras, their videos will be displayed on the E-Map and you can double-click on the video to enlarge it.



6.3 Event Configurations

The “Event Configurations” section allows users to define conditions that constitute an event, its corresponding trigger action and when it will be triggered. Such setting can reduce the management overhead and notify the administrator only when it’s necessary.

6.3.1 General Settings

The general settings section can help you quickly configure when an event is triggered, how often events are triggered and the corresponding actions when events are triggered.

The screenshot displays the web interface for the NVR-401 Network Video Recorder. The top navigation bar includes links for Main View, Google Map Monitor, Local MAP Monitor, NVR Setup, and Channel Status. The system time is February 26, 2010 15:43:01, and the user is admin. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration (selected), Recording Configuration, and System Options. Under Event Configuration, the General Setting sub-menu is active. The main content area is titled 'General Setting' and contains three sections: 'Event Trigger Duration' with radio buttons for 'Always' (selected) and 'Only during...' (with checkboxes for Sun-Sat and time pickers for Start and End Time); 'Event Trigger Interval' with an input field for 'Interval' set to 5 seconds; and 'Trigger Actions' with a subject line, a 'Send Message' checkbox and text area, an 'FTP File Name' field with a template, a 'Send Image' checkbox, a frame count dropdown set to 1, and a 'File Name' field. 'Apply' and 'Cancel' buttons are at the bottom right.

Start the event configuration by defining the general settings:

Define when an event will be triggered.

- ◆ Choose “Always” or “Only during...” under “Event Trigger Duration”.
- ◆ For the “Only during...” option, choose the days by using the check-box and then define the time range in those days in the “Start Time” and “End Time” fields that you would like the event trigger function to be enabled.

How often an event is triggered

- ◆ Set a time interval under “Event Trigger Interval” to define how often events are triggered.

Trigger action

Now that you have the event trigger duration and interval defined, choose what action to be taken during an event trigger:

- ◆ You can choose to have the recorder send out the first few frames of the video recorder upon an event is triggered.
- ◆ You can also choose to have the recorder send out a warning message in e-mail or in txt file format and upload it to a destined FTP server.

6.3.2 DI Settings

This function allows users to manage camera's digital input port right from the recorder. You can setup the recorder to receive triggers from a particular camera's input port.

The screenshot shows the NVR-401 Network Video Recorder web interface. At the top, there is a navigation bar with links: [Main View](#), [Google Map Monitor](#), [Local MAP Monitor](#), [NVR Setup](#), and [Channel Status](#). The system time is displayed as February 26, 2010 15:45:07, and the user is identified as admin. The left sidebar contains a menu for NVR Setup, including System Configuration, Channel Configuration, Event Configuration (with sub-items: General Setting, DI Setting, Event Servers, Event Trigger), Recording Configuration, and System Options. The main content area is titled "DI Setting" and contains a table for configuring digital input triggers. The table has columns for Channel (CH 1-4), Port, and Condition. CH 1 is configured with Port 1 and Condition Open. CH 2, CH 3, and CH 4 are currently empty. Below the table are "Apply" and "Cancel" buttons.

	Trigger Event When	
	IP Camera	
	Port	Condition
CH 1	1	Open
CH 2		
CH 3		
CH 4	-----	-----

1. For cameras that come with physical digital input port, their port will be listed in the far left drop-down menu.
2. Pick the desired channel for DI mapping, and then select the camera's input port from the drop-down menu.
3. Select the trigger condition from the "Condition" drop-down menu.
4. Finally, define the trigger duration.

The recorder does not control camera's input port in a way to let you pair recorder itself with a camera's input port for event receiving.

The recorder only acts as a medium for pairing up input ports between cameras and the recorder.

Only connected cameras will be displayed in the list.

Some cameras only allow one trigger source be configured at a time, e.g.: if the camera has the motion detection function turned on, its digital input will be disabled and vice versa. Under such circumstance, if you set to use camera's digital input port as the event trigger source, you will not be able to select motion detection as the trigger source for this camera under "Event Configurations" >> "Event Trigger" setup page.

6.3.3 Event Servers

Event servers are to be used with event trigger actions. In case of unusual motion detected by the camera or a disk failure, the recorder can send notification with the acceptable format (image/txt) to a destined event server according to the configuration.

Configuring an FTP server

The screenshot shows the NVR-401 Network Video Recorder web interface. The top navigation bar includes links for Main View, Google Map Monitor, Local MAP Monitor, NVR Setup, and Channel Status. The system time is February 26, 2010 15:45:58, and the user is admin. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The main content area is titled 'FTP Servers Setting' and features a table with columns for Name, Network Address, Port, Passive Mode, and Enabled. Below the table are sections for adding a new FTP server, including fields for Name, Network Address (with a note to enter host name or IP address), Port (pre-filled with 21), Login Information (User Name and Password), Passive Mode (checkbox for Use Passive Mode), and a Test button with a note to click 'Test' to test the connection. An Add button is located at the bottom.

To add an FTP server,

1. Start by giving a name to the server that you are adding to the recorder.
2. Enter the hostname or the IP address of the FTP server.
3. Enter the communication port of the FTP server (usually port 21).


This close-up shows the 'FTP Server' configuration section. It includes three input fields: 'Name', 'Network Address' (with a note '* Enter host name or IP address'), and 'Port'.

4. Enter the username and password of the FTP server if it's required.
5. Check "Use Passive Mode" if it's required or leave it unchecked to use active mode.

This close-up shows the 'Login Information' section with 'Username' and 'Password' input fields, and the 'Passive Mode' section with a checkbox for 'Use Passive Mode'.

6. Click "Test" to verify if all information is entered correctly and the connection to the FTP server can be established successfully.
7. Click "Apply" for the settings to take effect.

This close-up shows the 'Test' button (highlighted with a red box), the 'Apply' button (highlighted with a red box), and the 'Cancel' button. A note next to the Test button says '* Click "Test" to test the connection to the FTP server'.

 If you wish to edit/remove/enable/disable an FTP server, click to highlight one from the profile list and choose the corresponding action button.

Name	Network Address	Upload Path	Port	Passive Mode
FTP 1	192.168.101.100	event	21	No

Configuring an SMTP server

PLANET
Networking & Communication

[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)

NVR-401 Network Video Recorder System Time: February 26, 2010 15:46:38 User: admin

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - D1 Setting
 - Event Servers
 - FTP Servers
 - SMTP Servers
 - Event Trigger
- Recording Configuration
- System Options

SMTP Servers Setting

SMTP Server 1

Network Address: *Enter host name or IP address

Port:

Sender's Name:

Sender's E-mail:

Enable Authentication:

User Name:

Password:

Test

Send Test Email To:

SMTP Server 2

Network Address: *Enter host name or IP address

Port:

Sender's Name:

Sender's E-mail:

Enable Authentication:

User Name:

Password:

Test

Send Test Email To:

1. Enter the hostname or the IP address of the SMTP server.
2. Enter the port of the SMTP server.
3. Specify the sender's name in the "Sender's name" field.
4. Enter the sender's e-mail address.
5. Check "Enable Authentication" and enter the username and password of the SMTP server and it requires authentication.
6. Click "Apply" to save the configuration.

6.3.4 Event Triggers

We have finished defining how an event will be triggered and which servers will be receiving notifications in the previous two sections, now we can finish up the event configuration by setting.

- ◆ Which channels will have event trigger function enabled.
- ◆ What is considered to be an event.
- ◆ Where the warnings will be sent to and how they will be sent.

NVR-401 Network Video Recorder
NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
 - General Setting
 - DI Setting
 - Event Servers
 - Event Trigger
- Recording Configuration
- System Options

Event Handling Setting
When Channel is triggered by

	1	2	3	4
I/O Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motion Detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Please make sure you have properly enabled and configured motion detection region in the camera's web configuration UI before enabling motion detection in the NVR. The NVR only supports single region detection, and only the first region will be used even if you set multiple motion detection regions in the camera.

When NVR is triggered by

- Recycled
- Disk Full
- Disk Fail
- When NVR Start Up
- When NVR Shutdown
- When NVR System Configuration Changed
- When Channel's Configuration Changed

Trigger Actions

- E-Mail:** E-Mail Addresses: *use "," to separate e-mails
- FTP** Upload Path:
- Move to particular preset points**

Select Channels to Enable Event Trigger and which type of event should be triggered.

- ◆ Use the check box to enable event trigger on the desired channels.

When Channel is triggered by

	1	2	3	4
I/O Input	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motion Detection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Please make sure you have properly enabled and configured motion detection region in the camera's web configuration UI before enabling motion detection in the NVR. The NVR only supports single region detection, and only the first region will be used even if you set multiple motion detection regions in the camera.

- ◆ Define which system events should trigger the recorder to send out notifications

When NVR is triggered by

- Recycled
- Disk Full
- Disk Fail
- When NVR Start Up
- When NVR Shutdown
- When NVR System Configuration Changed
- When Channel's Configuration Changed

- ◆ Define how the notifications will be sent and where they will be sent to.

Trigger Actions

- E-Mail:** E-Mail Addresses: *use "," to separate e-mails
- FTP** Upload Path:
- Move to particular preset points**

* Event trigger may not work for cameras that are placed outside of your local network or on the Internet until the UPnP Port Forwarding" is enabled in both the NVR and the router.

6.4 Recording Configurations

The “recording configurations” gives users the overall control of how and when a recording is performed and the quality of different types of recordings performed on each channels. It can help the recorder to operate with sufficient system resource by performing recording only when it’s necessary with adjustable recording frame rate.

6.4.1 General Settings

You can define the following in “General Settings”:

- ◆ Pre-Alarm/Post-Alarm recording length
- ◆ Recording frame rate
- ◆ Keep the record video with previous days
- ◆ Enable/disable different recording types on different cameras
- ◆ Enable/disable audio recording

The screenshot shows the NVR-401 Network Video Recorder web interface. The top navigation bar includes links for Main View, Google Map Monitor, Local MAP Monitor, NVR Setup, and Channel Status. The system time is February 26, 2010 15:50:01, and the user is admin. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration, Recording Configuration (selected), and System Options. Under Recording Configuration, General Setting is selected. The main content area displays the Recording General Settings page, which includes sections for Recording Buffer, Recording Frame Rate, Keep Video, Camera Recording Setting, and Record Audio. The Recording Buffer section has Pre-Alarm Buffer set to 0 seconds and Post-Alarm Buffer set to 5 seconds. The Recording Frame Rate section has a table with 4 columns and 4 rows (Continuous, Schedule, Event, Manual) and 4 dropdown menus per row. The Keep Video section has a checkbox for 'Keep the previous 0 days of recorded videos'. The Camera Recording Setting section has a table with 4 columns and 3 rows (Continuous, Schedule, Event) and checkboxes per cell. The Record Audio section has a table with 4 columns and 1 row (Record audio) and checkboxes per cell. There are Apply and Cancel buttons at the bottom right.

The “recording configurations” gives users the overall control of how and when a recording is performed and the quality of different types of recordings performed on each channels. It can help the recorder to operate with sufficient system resource by performing recording only when it’s necessary with adjustable recording frame rate.

Recording Buffer

Pre-alarm Buffer: sec

Post-alarm Buffer: sec

Recording frame rate allows you to set different frame rate for different types of recording instead of recording at one frame rate only. Use the drop-down menu and select one of the pre-defined frame rates for a particular recording type.

Recording Frame Rate

	1	2	3	4
Continuous	I Only ▾	I Only ▾	I Only ▾	I Only ▾
Schedule	I Only ▾	I Only ▾	I Only ▾	I Only ▾
Event	Full ▾	Full ▾	Full ▾	Full ▾
Manual	Full ▾	Full ▾	Full ▾	Full ▾

Keep video allows you to set the NVR keep the record video in previous days.

Keep Video

Keep the previous days of recorded videos

The section at the bottom allows you to turn on or off a particular recording type on any channels.

Camera Recording Setting

	1	2	3	4
Continuous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can check the box the enable NVR audio recording function.

Record Audio

	1	2	3	4
Record audio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

6.4.2 Schedule Recording

Here you can define the time range of the schedule recording for all channels.



NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
- Recording Configuration
 - General Setting
 - Schedule Recording Setting
- System Options

Schedule Recording Settings

Channel: 1_ICA-H312 ▾

Schedule Table	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																								
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								

Clear

Quick Configuration

Days: Sun Mon Tues Wed Thur Fri Sat All

Duration: All day During Start Time: 00 : 00 End Time: 00 : 00

Copy Schedule To Channel: ▾

To configure a schedule recording:

1. Use the “Camera” drop-down menu and select a camera first.

Camera: 

2. You can use the schedule table to set the time range. Click the cell boxes then move the cursor horizontally lets you set what hours to perform recording during a day. Click and move vertically lets you set what days to perform recording at a specific time.

Schedule Table																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																								
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								

* Each cell box represents 15 minutes of time. Click one or more boxes to omit consecutive recording.

3. You can also use the “Quick Configuration” to define recording time range instead of clicking cell box one by one on the time table. Simply check what days you would like to perform recording and specify the recording duration by either choosing “All Day” or enter a start and end time for specific recording duration.

Quick Configuration

Days:

Sun Mon Tues Wed Thur Fri Sat All

Duration:

All day

During Start Time: : End Time: :

4. Select the “Copy to” option if you would like to set the same recording schedule to other camera or all of the cameras.

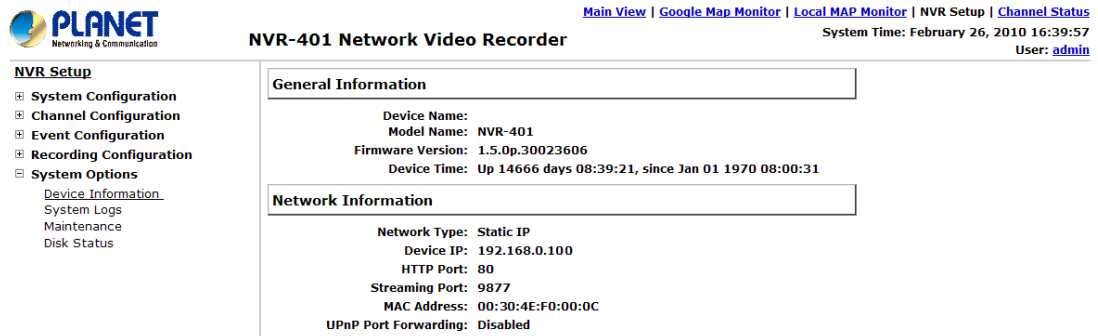
Copy Schedule To Channel:

6.5 System Options

System Options gives users a glance of the overall system status and allows users to perform maintenance tasks such as upgrading firmware, restore/backup device settings or reboot deviceetc.

6.5.1 Device Information

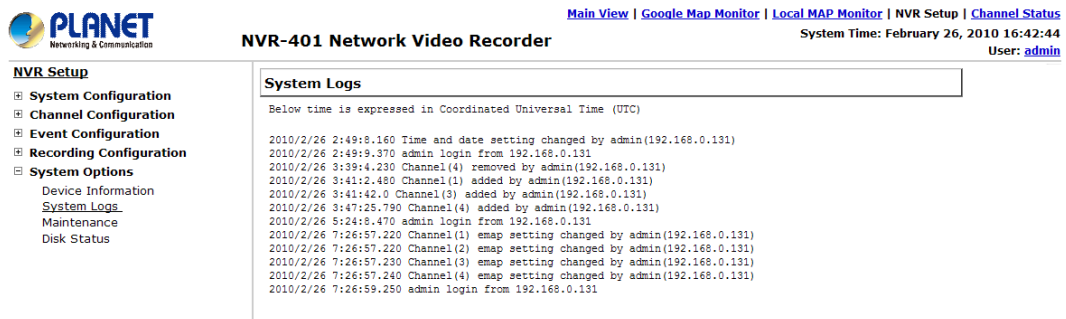
The “Device Information” provides the general information of the device such as firmware version and system time. It also provides information of the current network settings and status.



The screenshot shows the PLANET NVR-401 Network Video Recorder web interface. The top navigation bar includes links for Main View, Google Map Monitor, Local MAP Monitor, NVR Setup, and Channel Status. The system time is February 26, 2010 16:39:57, and the user is admin. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The System Options menu is expanded to show Device Information, System Logs, Maintenance, and Disk Status. The main content area displays the Device Information page, which is divided into two sections: General Information and Network Information. The General Information section shows the Device Name (NVR-401), Model Name (NVR-401), Firmware Version (1.5.0p.30023606), and Device Time (Up 14666 days 08:39:21, since Jan 01 1970 08:00:31). The Network Information section shows the Network Type (Static IP), Device IP (192.168.0.100), HTTP Port (80), Streaming Port (9877), MAC Address (00:30:4E:F0:00:0C), and UPnP Port Forwarding (Disabled).

6.5.2 Logs and Reports

“Logs and Reports” keeps a record of what’s been happening to the device and provides basic information for troubleshooting.



The screenshot shows the PLANET NVR-401 Network Video Recorder web interface. The top navigation bar includes links for Main View, Google Map Monitor, Local MAP Monitor, NVR Setup, and Channel Status. The system time is February 26, 2010 16:42:44, and the user is admin. The left sidebar shows the NVR Setup menu with options for System Configuration, Channel Configuration, Event Configuration, Recording Configuration, and System Options. The System Options menu is expanded to show Device Information, System Logs, Maintenance, and Disk Status. The main content area displays the System Logs page, which shows a list of system events. The logs are displayed in a table format with columns for time and event description. The events include time and date setting changes, admin logins, channel additions, and channel removals.

6.5.3 Maintenance

“Maintenance” provides functions for users to:

- ◆ Reboot the NVR when necessary.
- ◆ Reboot cameras directly from the NVR.
- ◆ Perform Firmware Upgrade.
- ◆ Backup the NVR’s settings to a local hard drive.
- ◆ Restore the NVR’s settings from a previously saved configuration file.
- ◆ Reset the NVR’s settings to their factory default values.

NVR-401 Network Video Recorder**NVR Setup**

- ☐ System Configuration
- ☐ Channel Configuration
- ☐ Event Configuration
- ☐ Recording Configuration
- ☐ System Options
 - Device Information
 - System Logs
 - Maintenance
 - Disk Status

Maintenance**Restart NVR**

Click "Restart" button to restart NVR

Restart Camera

Select a camera below to perform a restart

Upgrade NVR Firmware

Locate the new firmware and perform the upgrade (**Current Firmware Version: 1.5.0p.30023606**)

Specify the firmware file: and click

***** Note ***:** Please DO NOT power off the system during the firmware upgrade process. You will be notified once the upgrade process is complete

Backup NVR's Setting

Backup the configuration to a local hard disk

Restore NVR's Setting

Restore configuration from a previously saved configuration file

Specify the configuration file: and click

***** Note ***:** Please DO NOT power off the system during the restore process. You will be notified once the process completed.

Reset NVR to Factory Default

This will restore all configurations to their factory default values

When the DHCP server function is disabled, the default IP of the system is: 192.168.0.20

***** Note ***:** Please DO NOT power off the system during the reset process. You will be notified once the process is complete.

Replace NVR Web UI Logo

Locate the new logo and perform the updates:

Specify the logo file: and click

Reboot the NVR

Reboot NVR-401 after you upload a new firmware. You would need to manually reboot the system for the new firmware to take effect. Such process would prevent a recording from getting interrupted because the system would not automatically reboot itself after the new firmware is loaded onto the recorder.

Simply click "Restart" to begin the reboot process and confirm the action.

Restart NVR

Click "Restart" button to restart NVR

The restart process should be displayed and you should be prompted back to the "Maintenance" page after it is complete.

Reset the NVR to Factory Default

To reset the recorder back to its factory default, click “Default” button and begin the process.

Reset NVR to Factory Default

This will restore all configurations to their factory default values


When the DHCP server function is disabled, the default IP of the system is:192.168.0.20

*** **Note** ***: Please DO NOT power off the system during the reset process. You will be notified once the process is complete.

The process should be displayed and you should be prompted back to the “Maintenance” page after it is complete.

6.5.4 Disk Status

“Disk Status” gives you more detailed information of the hard drive that is currently installed in the NVR.



[Main View](#) | [Google Map Monitor](#) | [Local MAP Monitor](#) | [NVR Setup](#) | [Channel Status](#)
System Time: January 03, 2010 04:27:12
User: [admin](#)

NVR-401 Network Video Recorder

NVR Setup

- System Configuration
- Channel Configuration
- Event Configuration
- Recording Configuration
- System Options
 - Device Information
 - System Logs
 - Maintenance
 - Disk Status

Disk Status							
Disk ID	Status	Capacity	Remaining Disk Space	Remaining	Online Time	Recording Period	Est. Remaining Time
1	Online	891GB	25GB	2%	Sep 24 2009 16:16:52	Aug 19 2009 20:57:29 - Sep 24 2009 18:50:12	1 day(s) 1 hour (s)