D-Link®
Building Networks for People

Manual

Version 1.02

DCS-950G

Wireless Internet Camera

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Package Contents

- D-Link SECURICAM Network DCS-950G Internet Camera
- Cat5 Ethernet Cable
- 802.11G Antenna
- Power Adapter (5.0V, 2.5A)
- Camera Stand with Mounting Bracket and Screws
- CD-ROM with Software and Manual
- Quick Installation Guide

Note: Using a power supply with a different voltage than the one included with your product will cause damage and void the warranty for this product.

If any of the above items are missing, please contact your reseller.

Minimum System Requirements

- Local Area Network: 10Base-T Ethernet or 100Base-TX Fast Ethernet
- Wireless Local Area Network: 802.11g Wireless Router or Access Point
- Recommended: PC or Notebook to access the Internet Camera
- PC with
  - 1.3GHz Processor
  - 128MB Memory
  - Windows® XP/2000/Me
  - Internet Explorer v6
- Multiple Camera Operation Requires Computer with
  - 2.4GHz Processor
  - 512MB Memory
  - 32MB Video Card
  - Windows® XP/2000/Me
  - Internet Explorer v6

Introduction

Congratulations on your purchase of the DCS-950G Internet Camera! The DCS-950G is a versatile and unique solution for your small office or home. Unlike a PC Camera, the DCS-950G is a stand-alone system with a built-in CPU and Web server that transmits high quality video images for monitoring. The DCS-950G can be accessed remotely, and controlled from any PC/Notebook over the Intranet or Internet via a Web browser. The simple installation procedure and intuitive web-based interface offer easy integration with your Ethernet/Fast Ethernet or 802.11g wireless network. The DCS-950G also comes with remote monitoring capability for a complete and cost-effective home security solution.

Features and Benefits

- Simple to Use**:** The DCS-950G is a stand-alone system with a built-in CPU, requiring no special hardware or software such as PC frame grabber cards. The DCS-950G supports ActiveX mode for Internet Explorer. All that is required is a computer with Internet Explorer 6.0 or above.
- Supports a Variety of Platforms: Supporting TCP/IP networking, HTTP, and other Internet related protocols. It can also be integrated easily into other Internet/ Intranet applications because of its standards-based features.
- Remote Snapshot Images and Recording: Using the Snapshot and recording features, you can save snapshots and record video and audio directly from the Web browser to a local hard drive without installing any software, making it convenient to instantly capture any moment from a remote location.
- Record Directly to a NAS: The DCS-950G allows you to record directly to a local network area storage device without the use of a dedicated PC for storing recorded video.
- Low Light Recording: The DCS-950G's 0.5 lux light sensitivity allows you to capture video in rooms with minimal lighting, making it ideal for use at night time.
- 802.11g Wireless or Ethernet/Fast Ethernet Support: The DCS-950G offers both 802.11g wireless and Ethernet/Fast Ethernet connectivity, making the DCS-950G easy to integrate into your existing network environment. The DCS-950G works with a 10Mbps Ethernet based network or 100Mbps Fast Ethernet based network for traditional wired environments and works with 802.11g routers or access points for added flexibility. The Site Survey feature also allows you to view and connect to nearby wireless networks.
- Web Configuration: Using a standard Web browser, Administrators can configure and manage the Internet Camera directly from its own Web page via the Intranet or Internet. This means you can access your DCS-950G at anytime from anywhere in the world!
- Remote Monitoring Utility: The IPView Lite application adds enhanced features and functionality for the Internet Camera and allows administrators to configure and access the Internet Camera from a remote site via Intranet or Internet. Other features include image monitoring, recording images to a hard drive, viewing up to 4 cameras on one screen, and taking snapshots.
- Broad Range of Applications: With today's high-speed Internet services, the Internet Camera can provide the ideal solution for live video images over the Intranet and Internet for remote monitoring. The Internet Camera allows remote access from a Web browser for live image viewing and allows the administrator to manage and control the Internet Camera at anytime, from anywhere in the world. Many applications exist, including industrial and public monitoring of homes, offices, banks, hospitals, child-care centers, and amusement parks.

Hardware Overview

Connections

Reset Button

Reset will be initiated when the reset button is pressed once and Power LED begins to flash.

Factory Reset will be initiated when the reset button is pressed continuously for ten seconds. Release the reset button and the Power LED will begin to flash indicating that the DCS-950G's settings are reverting back to the factory settings. The IP address will also return to the default setting of 192.168.0.20.

802.11g Antenna

The DCS-950G features an 802.11g wireless antenna for 802.11g wireless connectivity to your existing wireless network. The DCS-950G can be used in conjunction with an 802.11g compliant access point or router.

DC Power Connector

The DC power input connector is labeled **DC 5V** with a single jack socket to supply power to the DCS-950G.

Ethernet Cable Connector

The DCS-950G features an RJ-45 connector for connections to 10Base-T Ethernet cabling or 100Base-TX Fast Ethernet cabling (which should be Category 5 UTP cable). The port supports the NWay protocol, allowing the DCS-950G to automatically detect or negotiate the transmission speed of the network. The port also supports MDI/X, which allows the use of either straight through or cross-over cables.

LEDs

Power LED

The Power LED is positioned on the right side of the DCS-950G lens. Steady orange confirms that the DCS-950G is powered **ON**.

Link LED

The Link LED is positioned on the right side of the DCS-950G's lens. It is located below the Power LED. Steady green confirms a good connection to the LAN. Depending on the data traffic, the LED will begin to flash to indicate that the DCS-950G is receiving/transceiving from/to the LAN network.

Hardware Installation

Attach the Antenna

Locate the antenna included with your DCS-950G and attach it to the antenna connector located on the back of the DCS-950G.

Attach the External Power Supply

Attach the external power supply to the DC power input connector located on the rear panel of the DCS-950G and connect it to your local power supply. *Note:* Power source is confirmed when the orange LED Power Indicator located to the right of the lens on the DCS-950G is illuminated.

Connect the Ethernet Cable

Connect the included Ethernet cable to the network cable connector located on the back panel of the DCS-950G and attach it to the network. Network Connectivity is confirmed when the green LED Indicator on the DCS-950G located below the Power LED is illuminated.

Attach the Mounting Bracket

If you would like to mount the camera on a wall, locate the necessary screws and continue with securing the bracket to the wall. To attach the mounting bracket to the Camera, simply attach the Camera's base to the bracket (see illustration below).

Security

To ensure the highest security and prevent unauthorized usage of the DCS-950G, the Administrator has the exclusive privilege to authorize all users. The DCS-950G supports multi-level password protection/access that can be restricted by the Administrator for defined users who have a **User Name** and **User Password**.

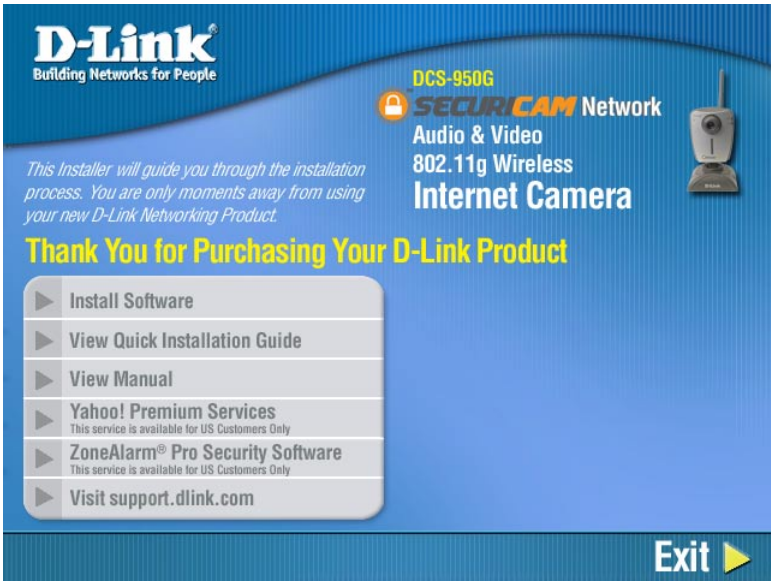
The Administrator can release a public **User Name** and **Password** so that when remote users access the DCS-950G they will be allowed to view the images transmitted by the DCS-950G.

Note: When the DCS-950G is used for the first time, it is highly recommended that the Administrator set the **Admin ID** and **Admin Password** to constrain user access to the DCS-950G since the Default settings for the **Admin ID** and **Admin Password** are both "admin." Once the ID and Password are defined, only the Administrator has access to the management of the DCS-950G. This procedure should be done as soon as possible.

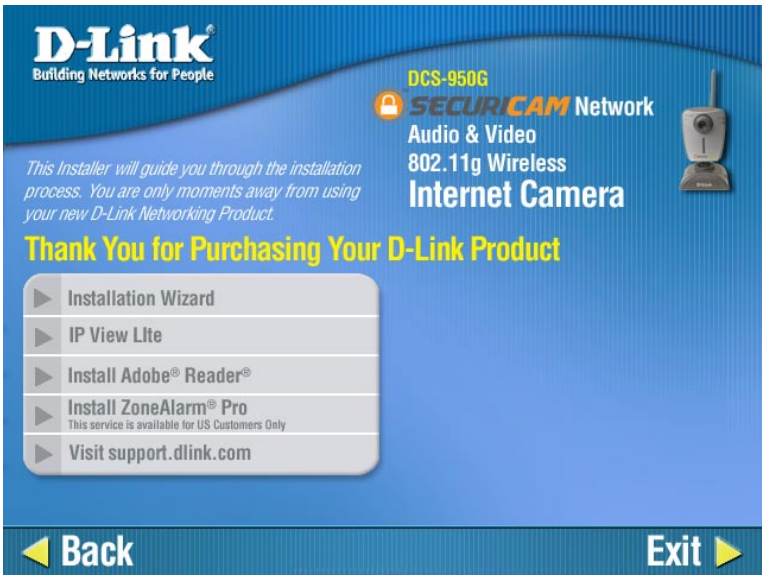
Using the Setup Wizard

Follow the simple steps below to run the Setup Wizard to guide you quickly through the installation process.

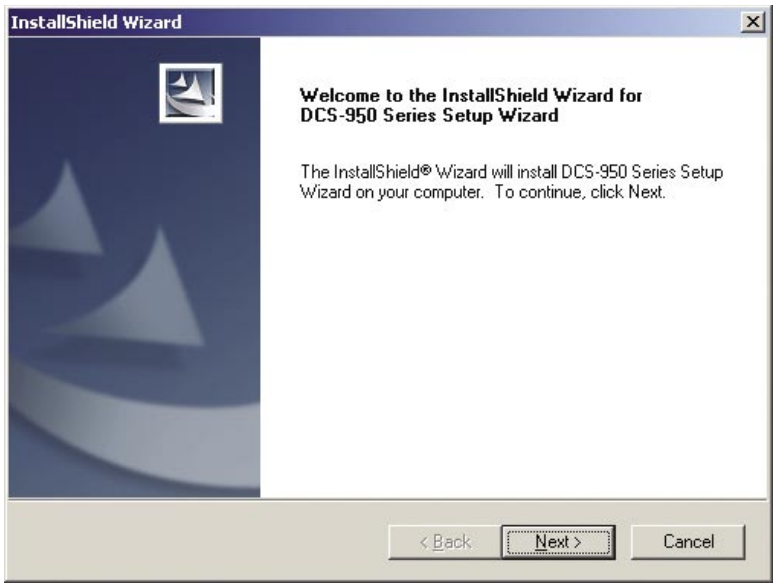
Insert the **D-Link DCS-950G** CD into your CD-ROM drive. Click **Install Software**.



Click **Installation Wizard**.

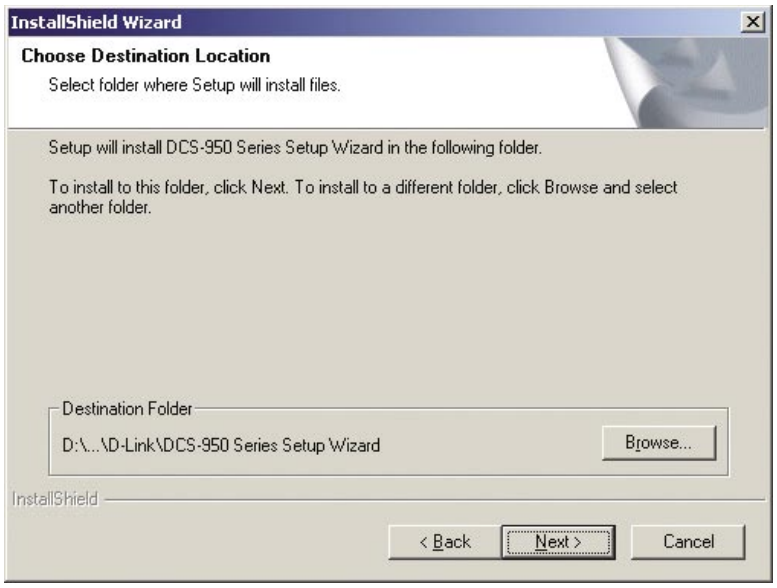


Click **Next**.

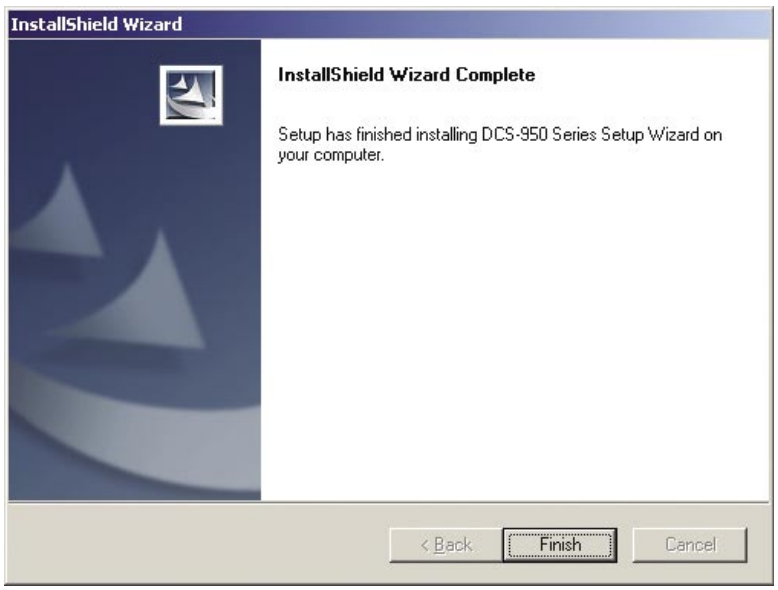


Click **Yes**.

Click **Next**.



Click **Finish**.

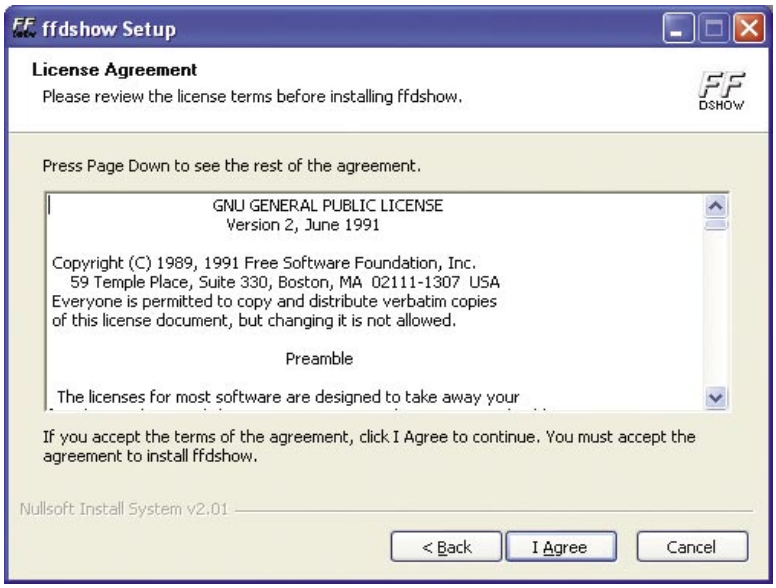


Now you should install **ffdshow**, this will install the proper codec that will allow you to playback recorded video taken by the DCS-950G.

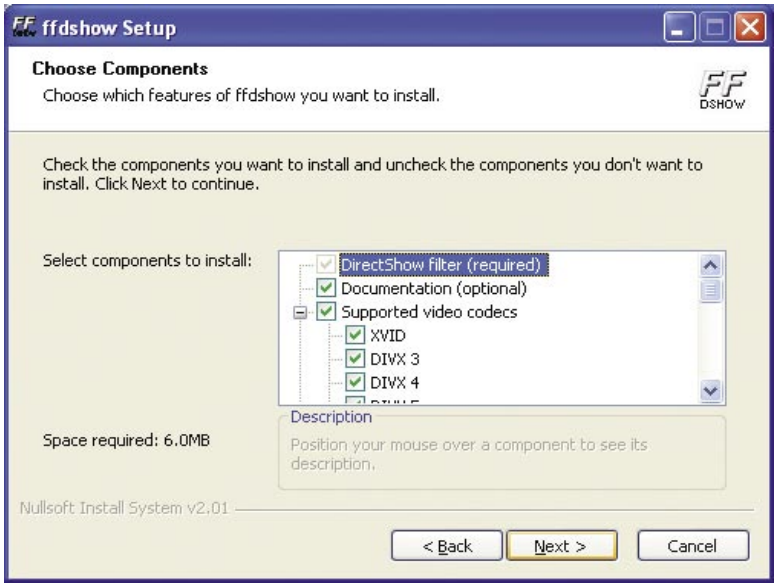
Select a language and click **OK**.

Click **Next**.

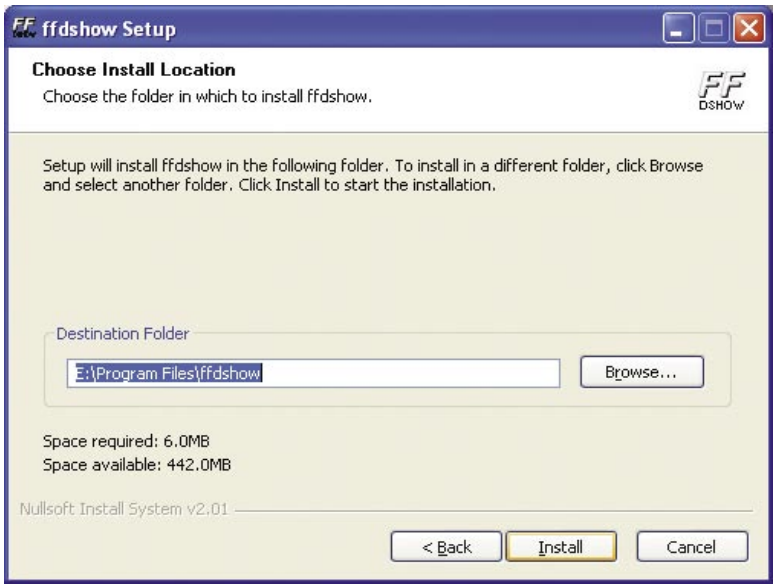
Click **I Agree**.



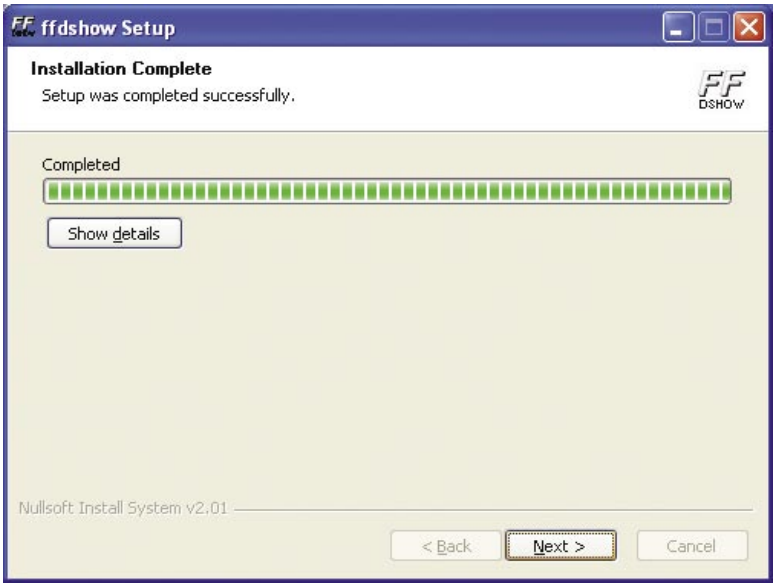
Click **Next**.



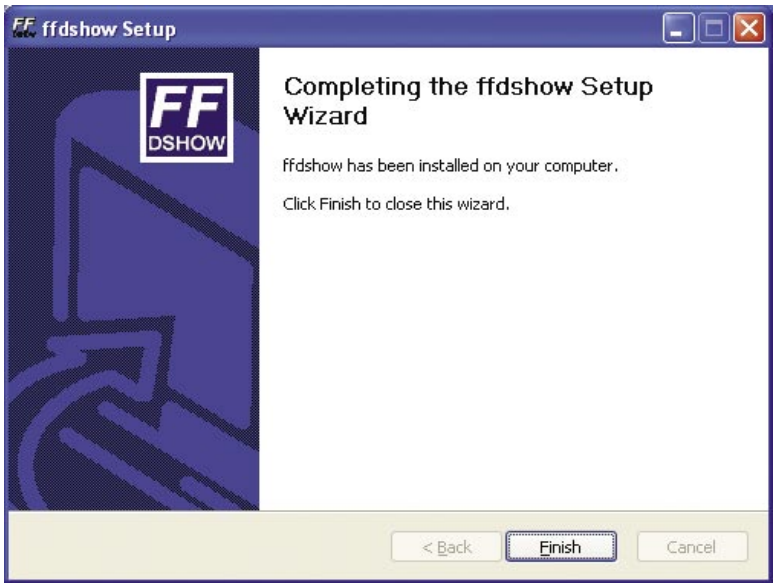
Click **Install**.



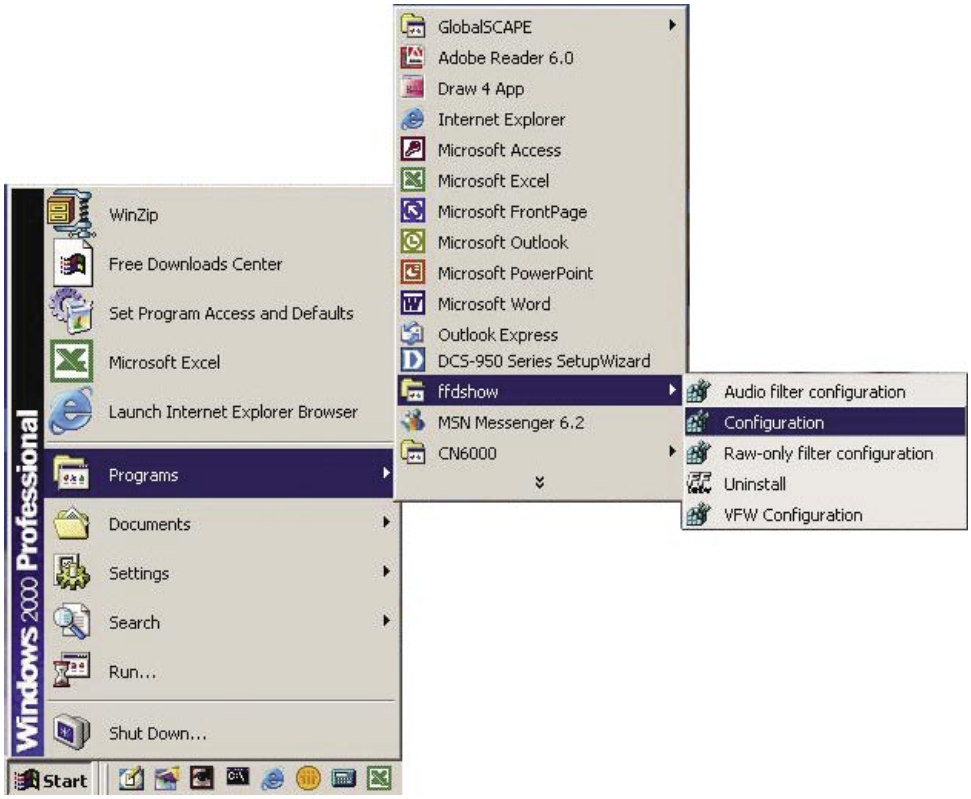
Click **Next**.



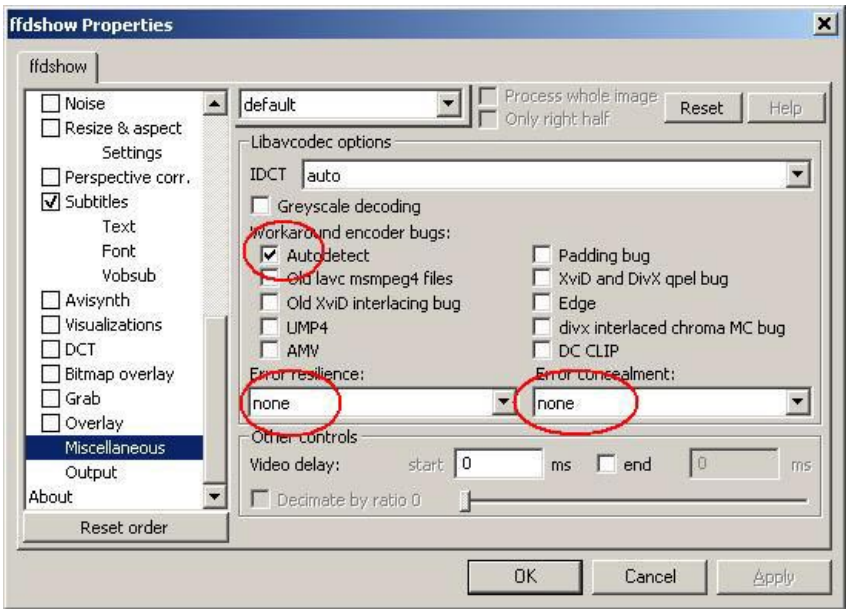
Click **Finish**.



Before using **ffdshow**, you must configure it's properties. From your computer, please click on **Start**->**Programs**->**ffdshow->Configuration.**



At the **ffdshow properties** window, scroll to the bottom and click **Miscellaneous.** Be sure that **Autodetect** is checked and that **Error resilience** and **Error concealment** are set to "**none**".



Click **OK** and close the window.

To run the Setup Wizard, click on **Start**->**Programs**->**DCS-950 Series Setup Wizard**. Your camera's default IP Address will be displayed on the screen. Click **Wizard** to begin.

By default, the **Admin ID** and **Password** are "admin" (lower case). Enter this in both fields. To change the Admin Password, select the **Change** box and enter a **New Password**. Click **Next**.

The **IP Address**, **Subnet Mask** of your camera, **Gateway**, and **DNS** addresses must correspond with your network settings for you to access the camera. If you are unsure of what these settings should be, please check with your network administrator. Click **Next**.

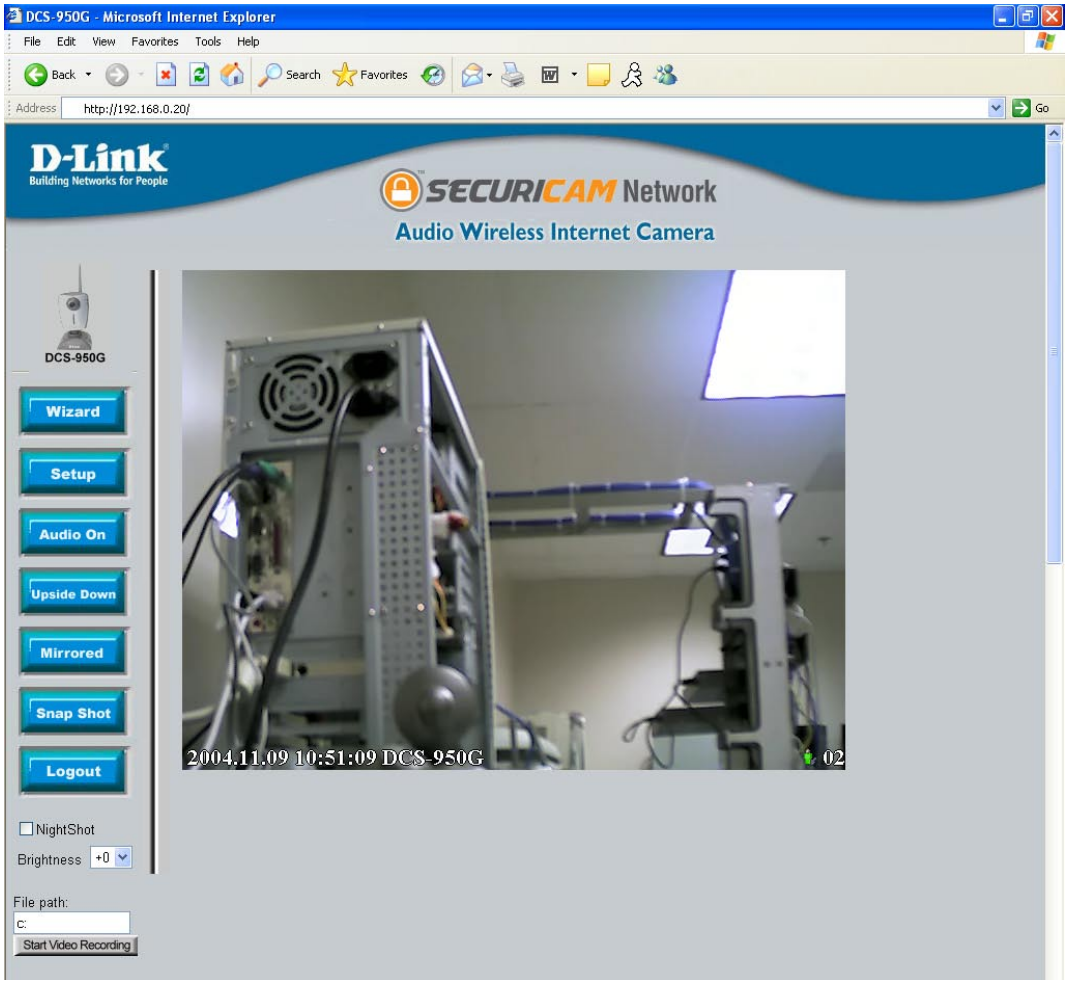
The Connection Mode depends on how your camera is connected to your network. Click Infrastructure for use with a router or Adhoc for a peer-to-peer connection. The Network Name, Wireless Channel, Security Mode, and Authentication type MUST correspond with your wireless network settings for the camera to work. Click **Next**.

Enter the Encryption Mode, Key Format, and Encryption Keys for your wireless network. Click **Next**.

If you need to make any changes, click **Back** to modify your camera settings. Otherwise, click **Restart** to save and apply your settings. This may take a few minutes

Your setup is now complete! Wait until the Link LED on the camera begins to flash. Click **Link** to launch your Web browser and view your images.

Your camera is now displayed in the Web browser.



Using the Configuration Menu

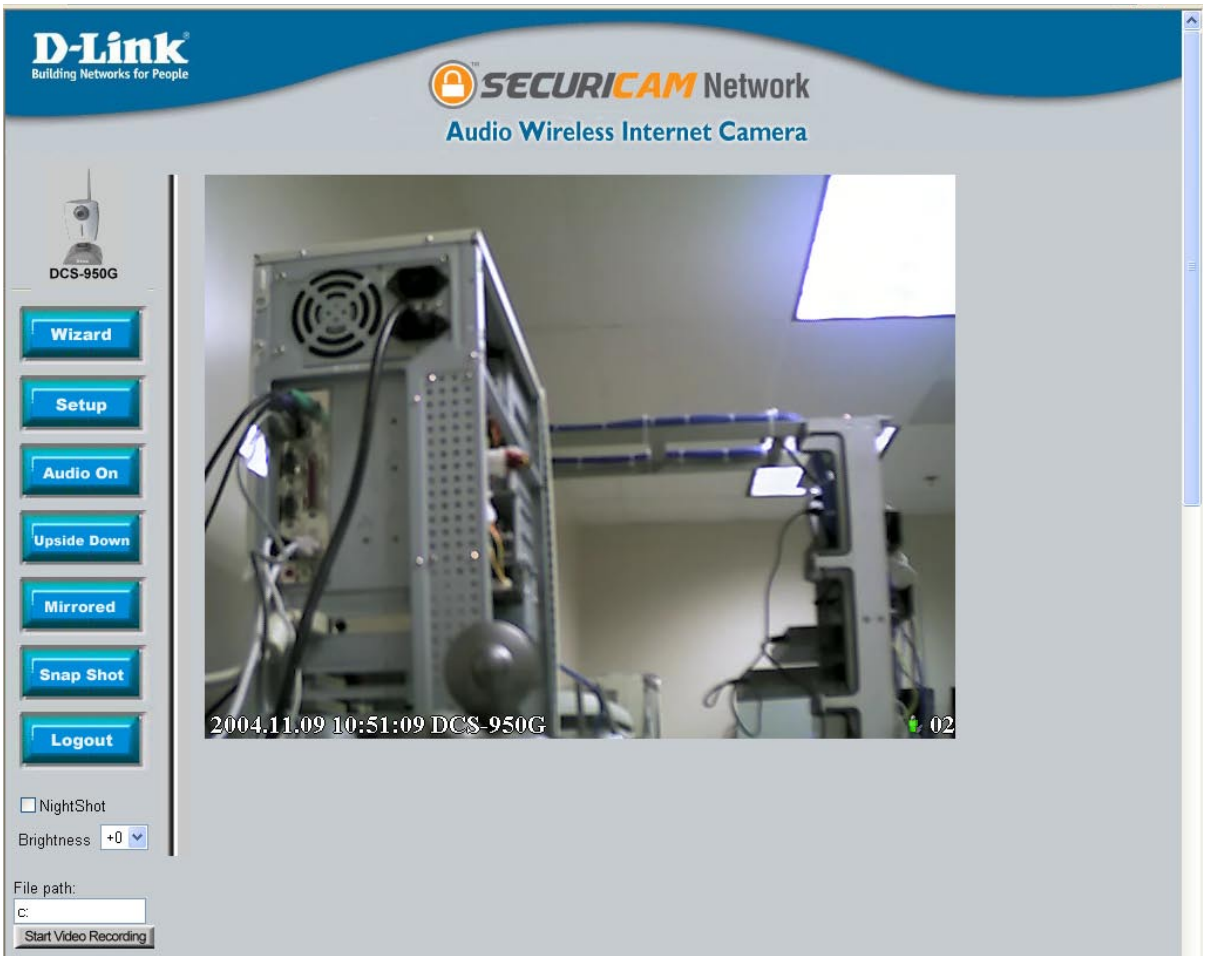
After completing the Setup Wizard, you are ready to use your camera. The Web configuration utility is designed to easily access and configure your DCS-950G. Clicking the "Link" button will open up the main configuration page.

If you would like to open the configuration page from a Web Browser, enter the IP address that you assigned to your DCS-950G.

Home Screen

When you click on "Link", the DCS-950G Home screen will appear. Use the following displayed options to set up and view your Internet Camera:

- Wizard
- Setup
- Audio On
- Upside Down
- Mirrored
- Snap Shot
- Log Out



Home Screen

Wizard: This page is used to set up the DCS-950G using the Wizard to walk you through setting up the camera for your network.

Setup: This will allow you to change the configuration settings of the DCS-950G.

Audio On: This will turn on the built-in microphone on the DCS-950G . By default the audio is turned off.

Upside Down: This will flip the image vertically. This feature can be used if you choose to mount the DCS-950G upside down on the ceiling.

Mirrored: This will flip the image horizontally in such a way that your left side will be on the left side of the screen and vice versa.

Snapshot: Click to capture a snapshot image. The image will pop up in a new window. This image can be saved to a local hard drive.

Logout:	Click to log out of the DCS-950G. If you would like to view or configure the camera, you will must log in again.
Nightshot:	Select this if the camera is operating under low light conditions. In this setting the DCS-950G will be able to view at 0.5 Lux.
Brightness:	There are 5 settings each for more brightness and less brightness from 0. After selecting your setting, please wait a few seconds for the camera to adjust accordingly.
On-line User Icon:	The DCS-950G will be able to detect simultaneous users connected to it and indicate the amount with a digital readout next to the green icon on the video window.
File Path:	The DCS-950G is able to record video from the Web Browser into a local hard drive of the PC that is viewing it. This path can be specified (for example, c:\dcs950G\myrecording).
Start Video Recording:	Clicking this button will start recording video and audio immediately to the file path specified above.

Configuration

Click on **Setup** from the Home screen to access the settings required for the DCS-950G.

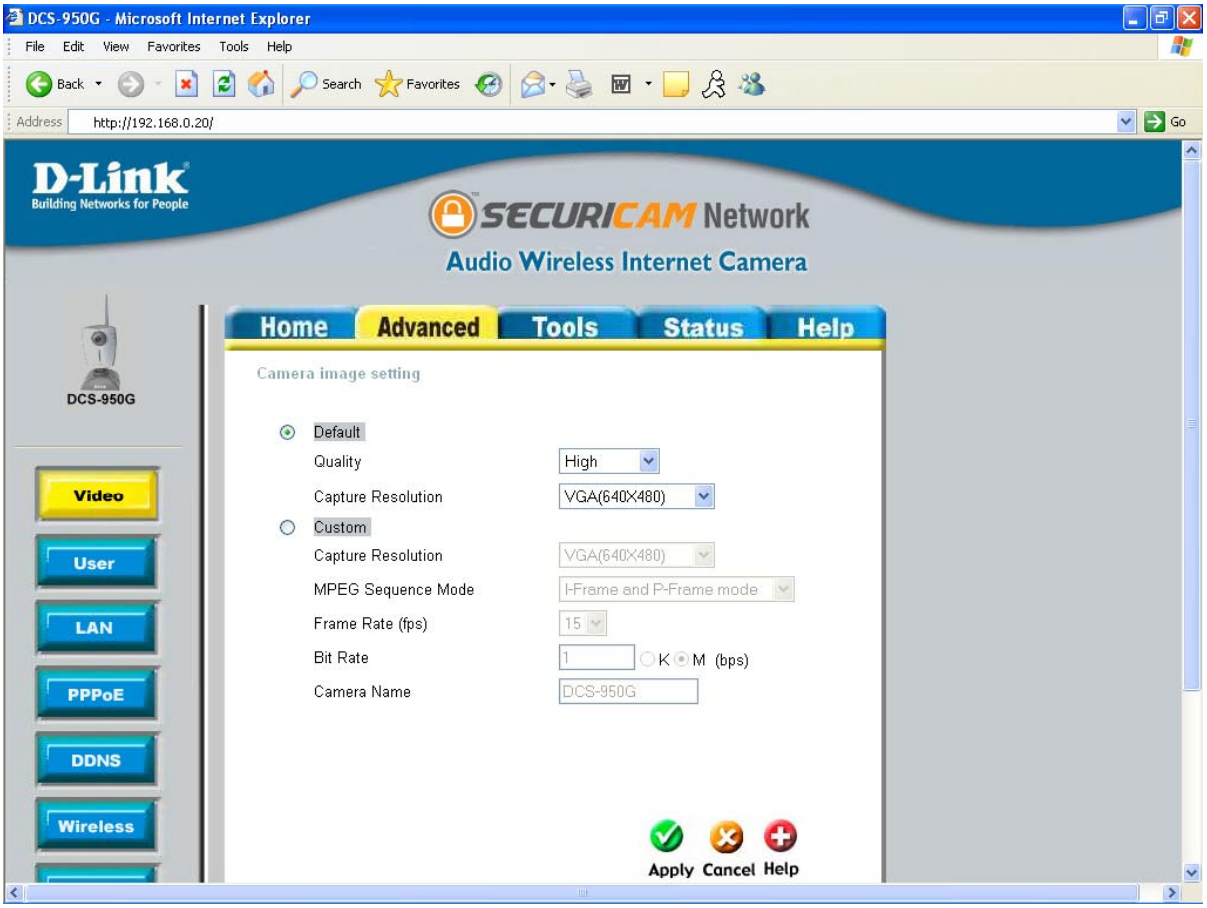
There will be several options in the Configuration page to choose from to setup your DCS-950G and they are as follows:

- **Advanced**
  - Video
  - User
  - LAN
  - PPPoE
  - DDNS
  - Wireless
  - Site Survey
- **Tools**
  - Admin
  - Time
  - System
  - Firmware
  - Recording
  - Trigger
- **Status**
  - Device Info
- **Help**

Advanced

The Advanced tab provides the following configuration options: Video, User, LAN, PPPoE, DDNS, Wireless, and Site Survey.

Video



Advanced > Video

Default Level

Quality: Select the viewing video quality. By default the quality is set to High.

Capture Resolution: This is the size of the video display. By default the capture resolution is set to VGA (640x480).

Custom Level

Capture Resolution: This is the size of the video display. By default the capture resolution is set to VGA (640x480).

MPEG Sequence Mode:

I-frame and P-frame mode and I-frame and BP-frames are selectable. This determines how many repeated P frames will appear after one I frame. A large "Key frame interval" can reduce the bit rate, but can cause image to be corrupted longer if there is packet loss while transmitting. The video quality may be poor due to the sending of maximum frame rate within the limited bandwidth when images are moving rapidly. Consequently, to ensure detailed video quality (quantization rate) regardless of the network, it will utilize more bandwidth to send the maximum frames when images change drastically.

Frame Rate:

This is the refresh frame rate. By default the frame rate is set to 15 frames per second (fps).

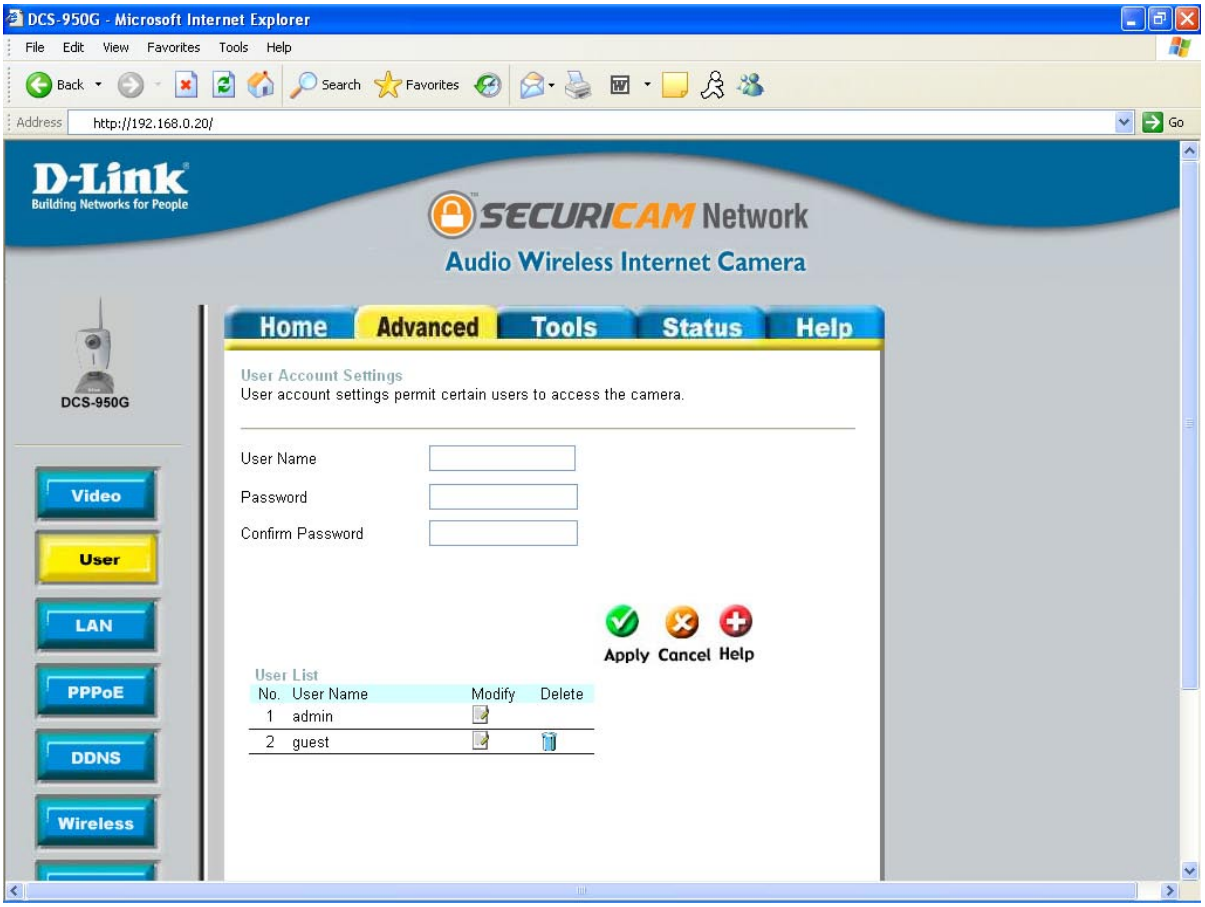
Bit Rate:

The higher the bit-rate the better the picture quality, but at the same time the file size will also be larger. For low bandwidth network a lower bit rate than 352k is advised

Camera Name:

The camera name will display as the title of the window within the Windows operating system. This name will also appear on the log-in screen (once a password has been set).

User



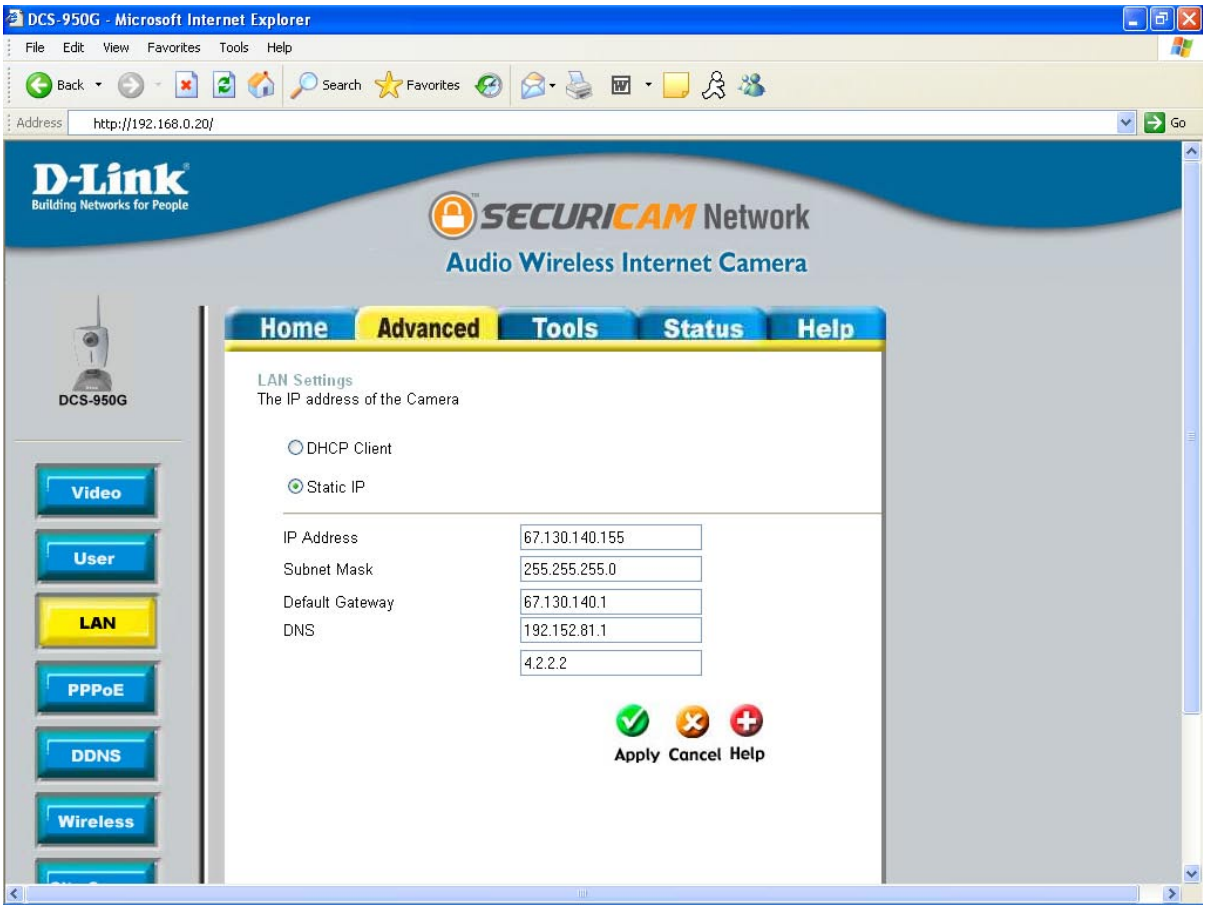
Advanced > User

User Name: Enter the user name in this field. A maximum of 32 user names are allowed, however each user name must be different. Each user name can be used as a group. For example, if the Username is **Guest** and the User Password is **Guest,** anyone can access the DCS-950G using this information. The maximum length for the User Name is 16 characters (Printable ASCII).

Password: Enter the user's password you want to assign to the specific Username. The maximum password length is 16 characters (Printable ASCII).

User List: The User List displays all the user names that have access to the DCS-950G. To delete a user, click on the corresponding trash can icon.

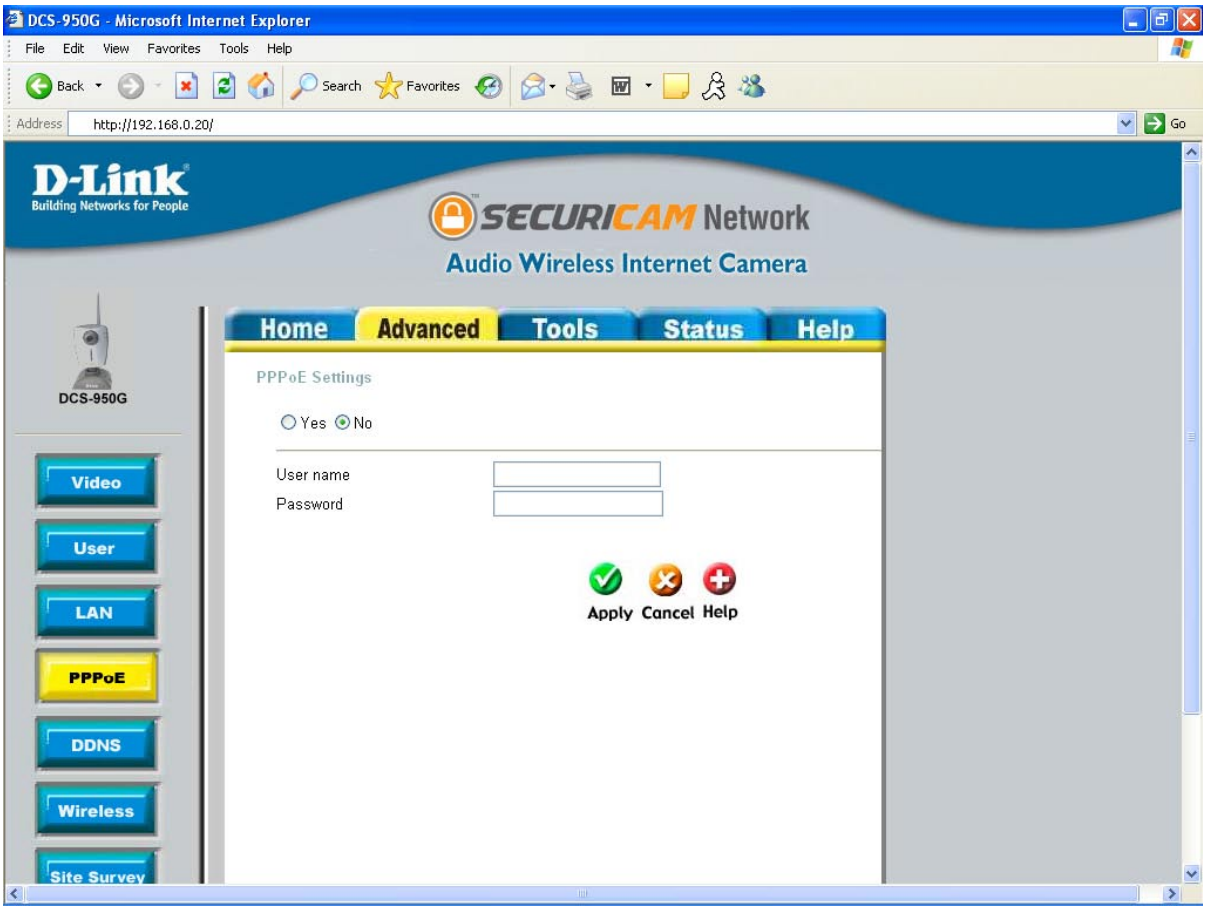
LAN



Advanced > LAN

LAN Settings: If you are using a LAN connection, select either Static IP or DHCP Client. If manually assigning a Static IP, enter your IP Address, IP Subnet Mask, Gateway IP Address, and DNS into the fields provided.

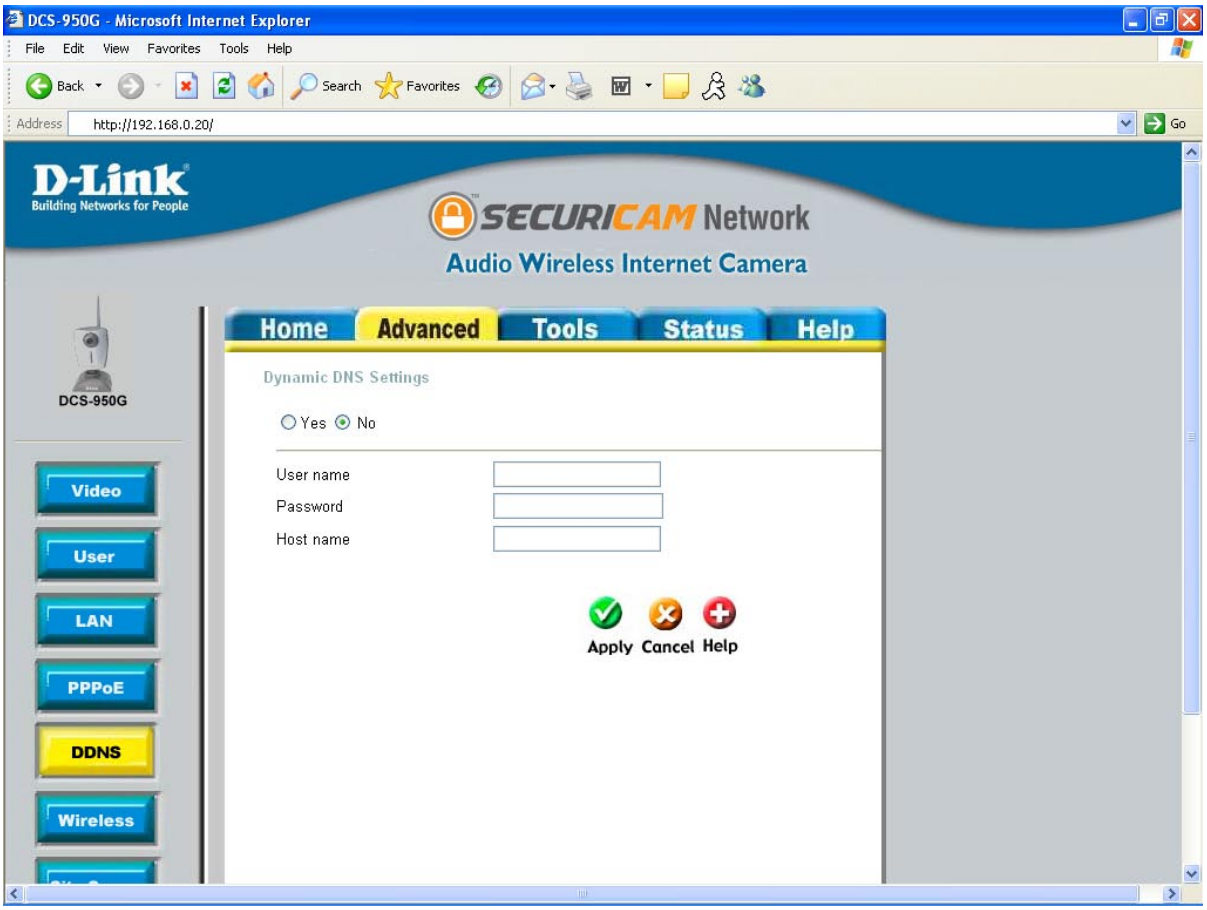
PPPoE



Advanced > PPPoE

PPPoE: If you are using a PPPoE connection, click the **Yes** button and enter the User Name and Password for your PPPoE account.

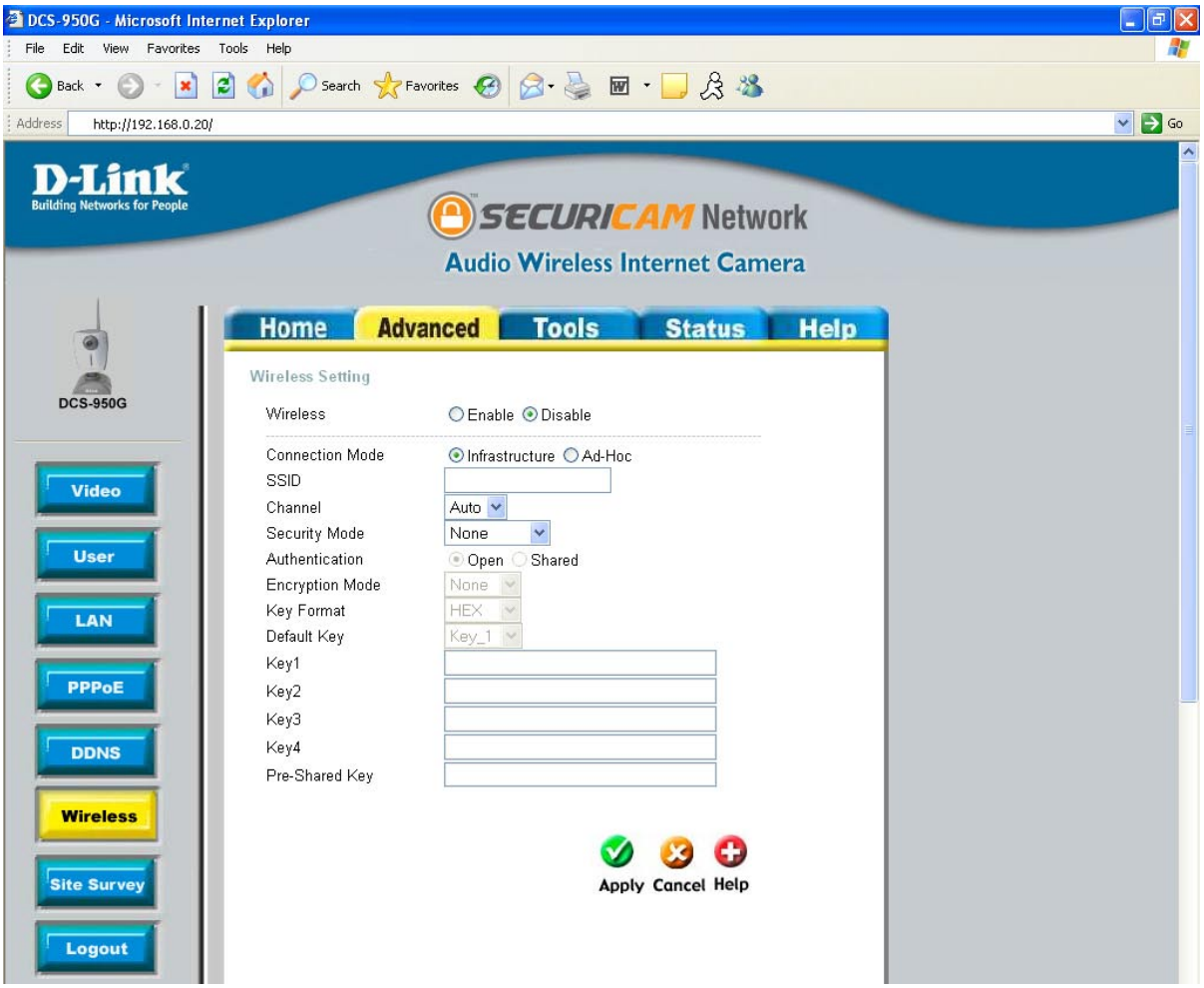
DDNS



Advanced > DDNS

DDNS: Dynamic DNS (Domain Name Service) is a method of keeping a domain name linked to a changing (dynamic) IP address. With most Cable and DSL connections, you are assigned a dynamic IP address and that address is used only for the duration of that specific connection. With the DCS-950G, you can set up your DDNS service and the DCS-950G will automatically update your DDNS server every time it receives a different IP address. Depending on the service, this update may take a few hours. If you are using a DDNS connection, click the **Yes** button and enter in your User Name, Password, and Domain Name.

Wireless



Advanced > Wireless

Wireless: Click to enable or disable your wireless settings.

Connection Mode: Select one of the two options:

Infrastructure - connecting the WLAN using an Access Point such as the DWL-2100AP or a DI-624 wireless router. (The **default** setting.)

Ad-Hoc – wireless mode used when connecting directly to a computer equipped with a wireless adapter in a peer-to-peer environment.

SSID: (Service Set Identifier) is a name that identifies a wireless network. Access Points and wireless clients attempting to connect to a specific WLAN (Wireless Local Area Network) must use the same SSID. The default setting is **NULL**.

Channel: The **default** wireless channel setting is channel 6. Select the channel that is the same as the other wireless devices on your network.

Security Mode: Select between None, WEP, or WPA_PSK. None means that no encryption will be set on the DCS-950G. WEP (Wired Equivalent Privacy) will set encryption from 64 to 128 bits. If the security mode is set to WPA-PSK (Wi-Fi Protected Access with pre-shared key), the pre-shared key field must be filled.

Authentication: Choose between Open or Shared Authentication. Open Authentication communicates the key across the network. Shared Authentication allows communication only with other devices with identical WEP settings.

Encryption Mode: In WEP mode, you can select between 64-bit, 128-bit, and TKIP mode. Both PSK and TKIP (Temporal Key Integrity Protocol) will support up to 256-bit encryption.

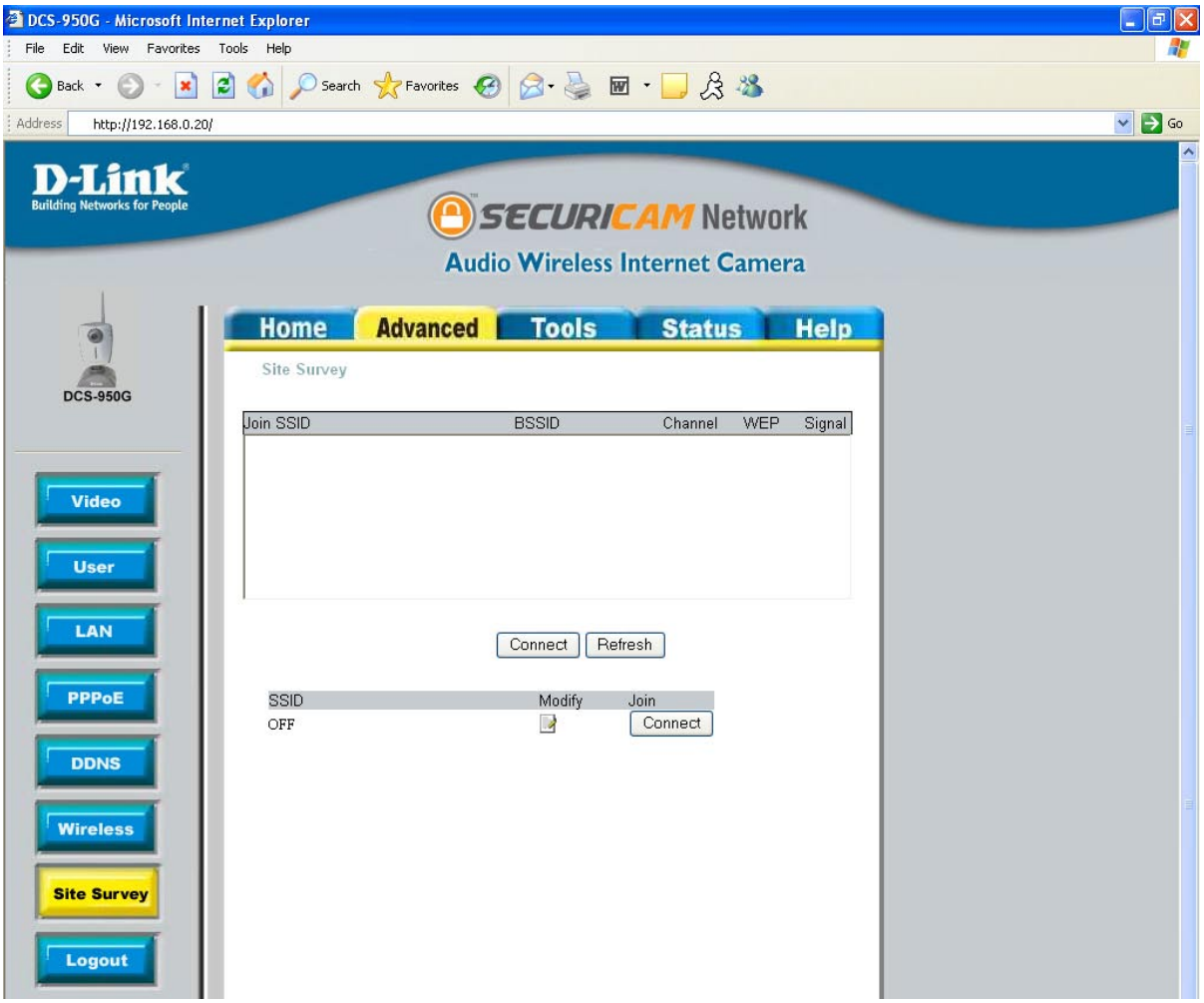
Key Format: Select an ASCII or hexadecimal key format.

Default Key: Select the key to use as the default.

Key 1-4: You can create up to 4 different security keys.

Pre-Shared Key: If encryption is enabled on the router or access point on your network, the camera must share the same encryption key to access the device.

Site Survey



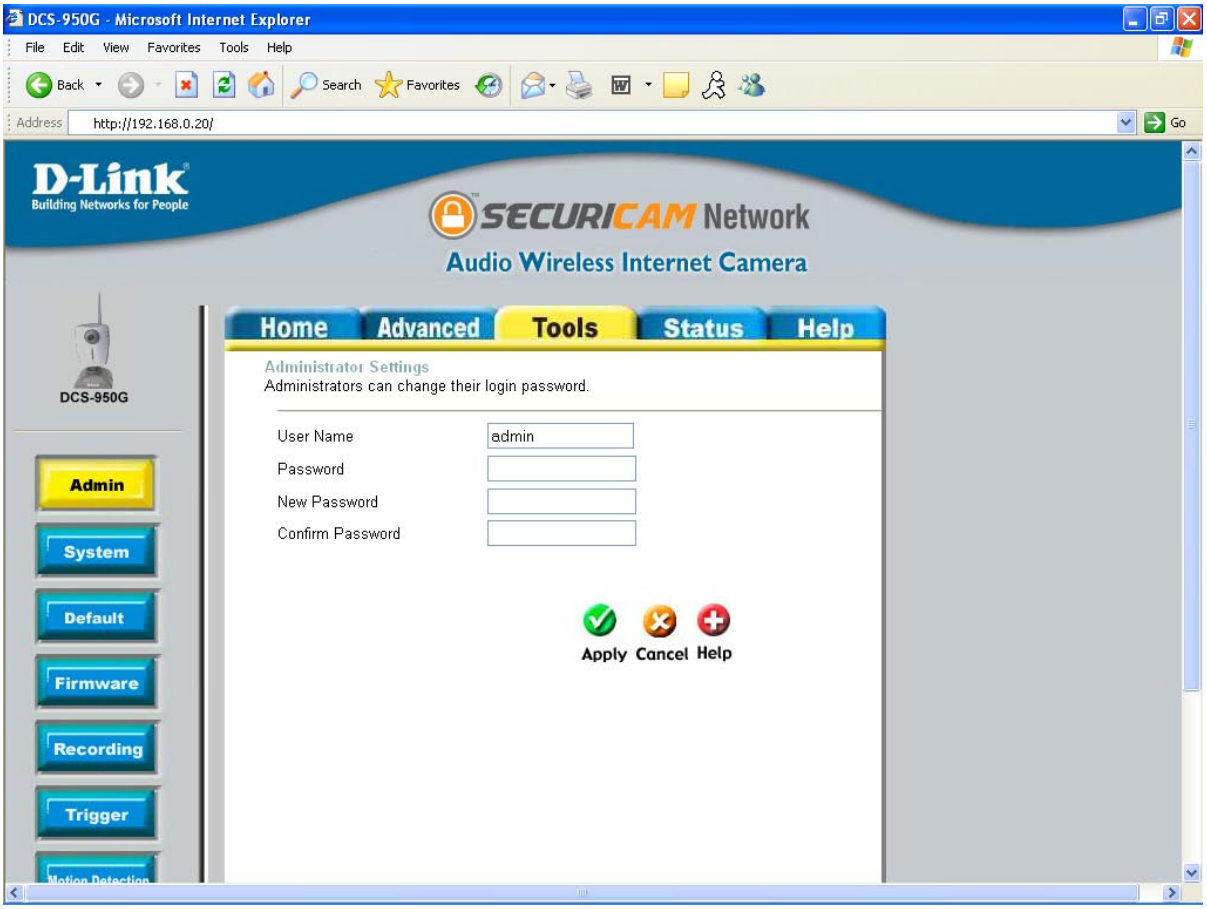
Advanced > Site Survey

Site Survey: This page will allow you to display all the wireless networks detected by the DCS-950G. You can select a network to connect to and refresh the list of available networks. You must enable your wireless settings in order to activate the Site Survey feature.

Tools

The Tools tab provides the following configuration options: Admin, System, Default, Firmware, Recording, Trigger, Motion Detection, and Port.

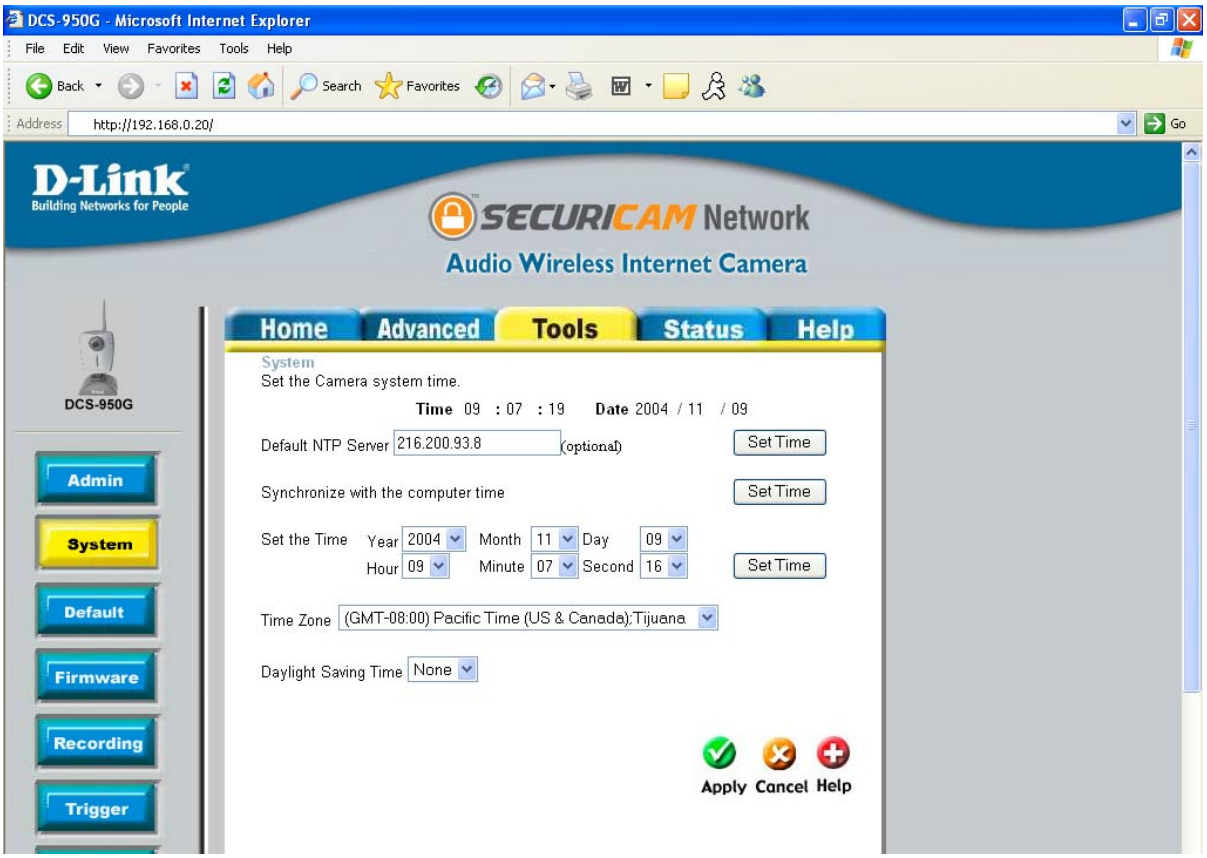
Admin



Tools > Admin

User Name:	Enter the administrator user name (admin).
Password:	Enter the current password.
New Password:	Enter the new administrator password with a maximum length of 8 (printable ASCII) characters.
Confirm Password:	Confirm the new password by entering it again.

System



Tools > System

Time: The current camera time.

Date: The current camera date.

Default NTP Server: Enter the IP address or domain name of the time server. Leaving the box blank will connect the camera to default time servers. This is optional. Press **Set Time** to set the time to the NTP server.

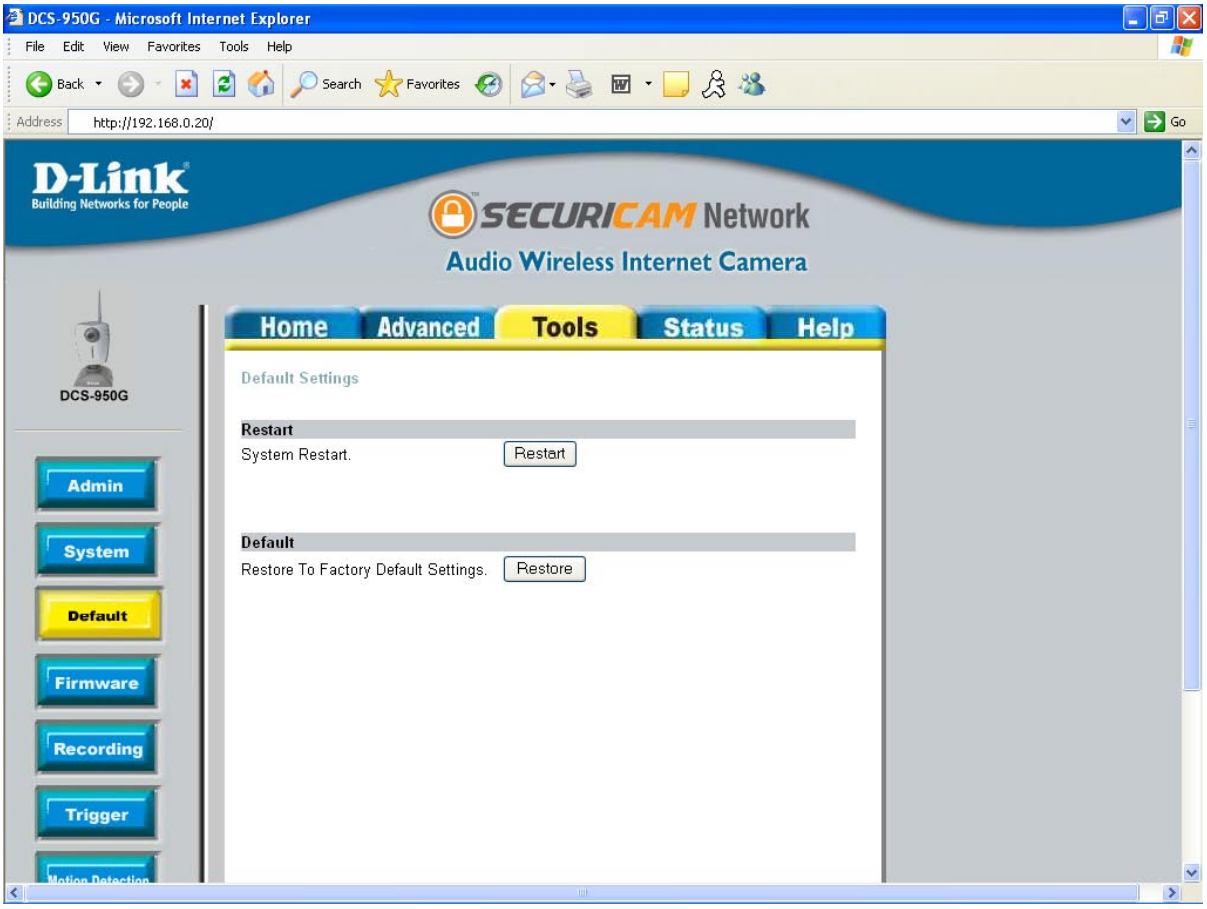
Synchronize with computer time: Synchronize the date and time of the camera with the local computer. Press **Set Time** to update the camera time with the PC's time.

Set the Time: Manually set the time by selecting the Year, Month, Day, Hour, Minute, and Second.

Time Zone: Used to adjust the hour of time servers for local settings.

Daylight Saving Time: Used to adjust for Daylight Saving Time if applicable in your region.

Default

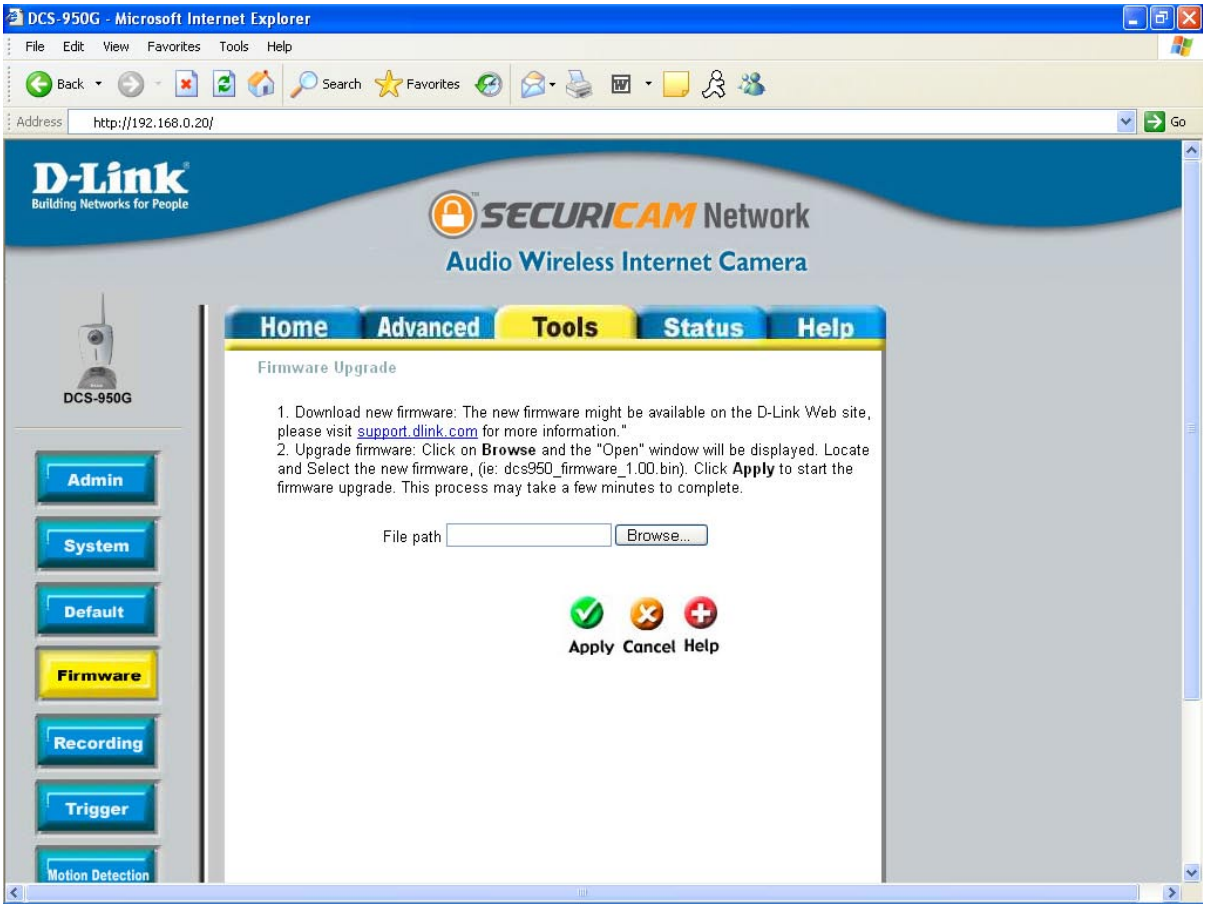


Tools > Default

Restart: Click the **Restart** button to restart the camera system.

Default: Click the **Restore** button to restore factory default settings. This means that any changes made will be lost and the system will be reset to the initial status when shipped from the factory.

Firmware



Tools > Firmware

You can upgrade the firmware by using this tool. First, check the D-Link support site for firmware updates at http://support.dlink.com. Make sure that the firmware you want to use is saved on the local hard drive of your computer. Click on **Browse** to search the local hard drive for the firmware that you downloaded from the D-Link Website to be used for the update. Upgrading the firmware will not change any of your system settings but it is recommended that you save your system settings before doing a firmware upgrade.

Browse: After you have downloaded the new firmware, click **Browse** to locate the firmware update on your hard drive. Click **Apply** to complete the firmware upgrade.

Recording

Tools > Recording

Upload Image to Network Share Folder: Clicking on the box will enable uploading of images to your network storage device.

Login Method: Select either Anonymous or Account. By selecting Anonymous, no user name or password is required. If you select Account from the drop down menu, you will need to know the Username and Password to access the shared folder.

User Name: Enter the user name required to access the storage device.

Password: Enter the password required to access the storage device.

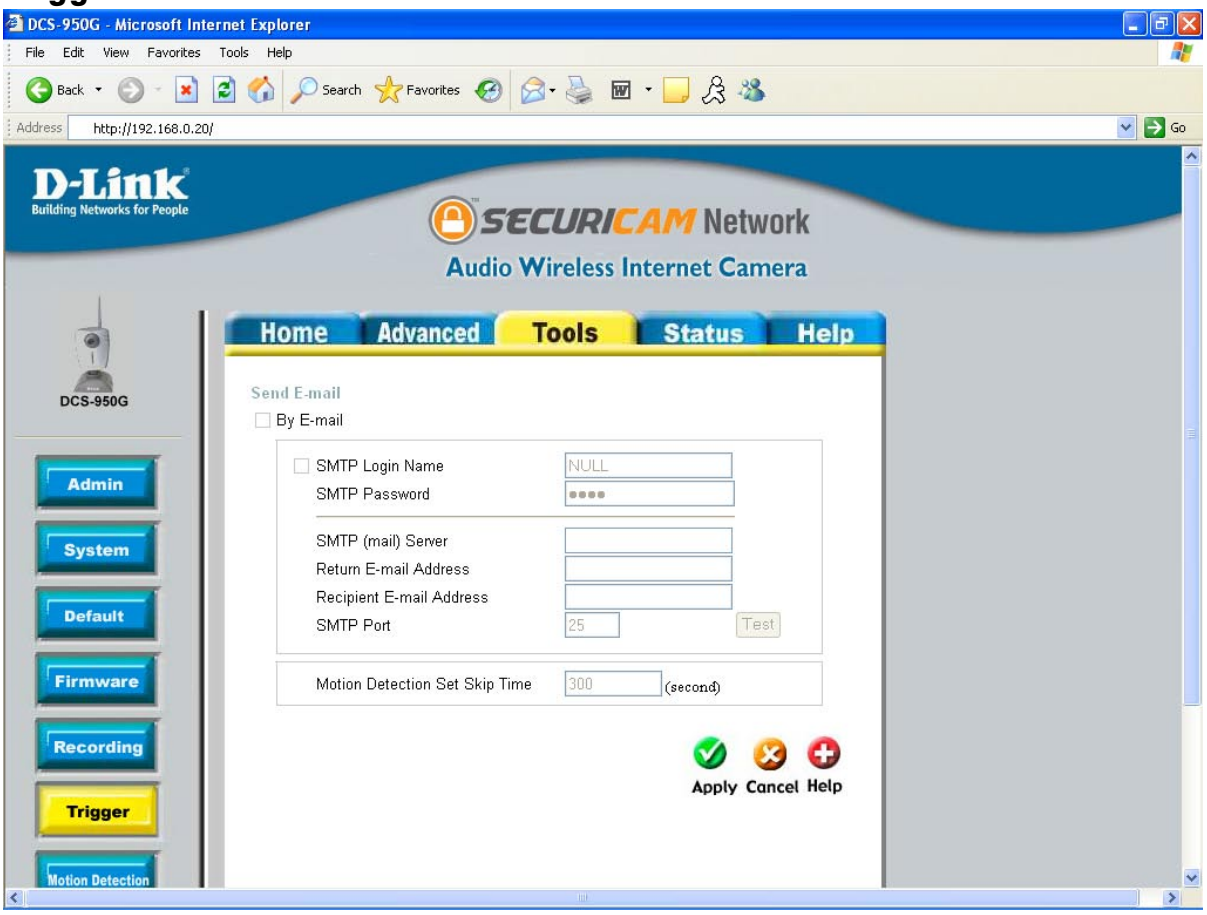
Path: Enter the path that points to the shared folder i.e. \\DNS-G121\share.

Always: Select to record all the time.

Schedule: Select to record according to a schedule.

Smart Recording: Allows you to only save files in which movement is detected. After the set **Save Time**, only one frame will be recorded when no movement is detected. Click **Skip Empty File** if you do not want to save the single frame files when no motion is

Trigger



Tools > Trigger

SMTP Login Name: The user name used to log into your e-mail account (e.g. jdoe or jdoe@yourisp.com depending on your ISP).

SMTP Password: The password used to log into your e-mail account. (The password will appear as dots instead of entered characters.)

SMTP (Mail) Server: The domain name or IP address of external mail server.

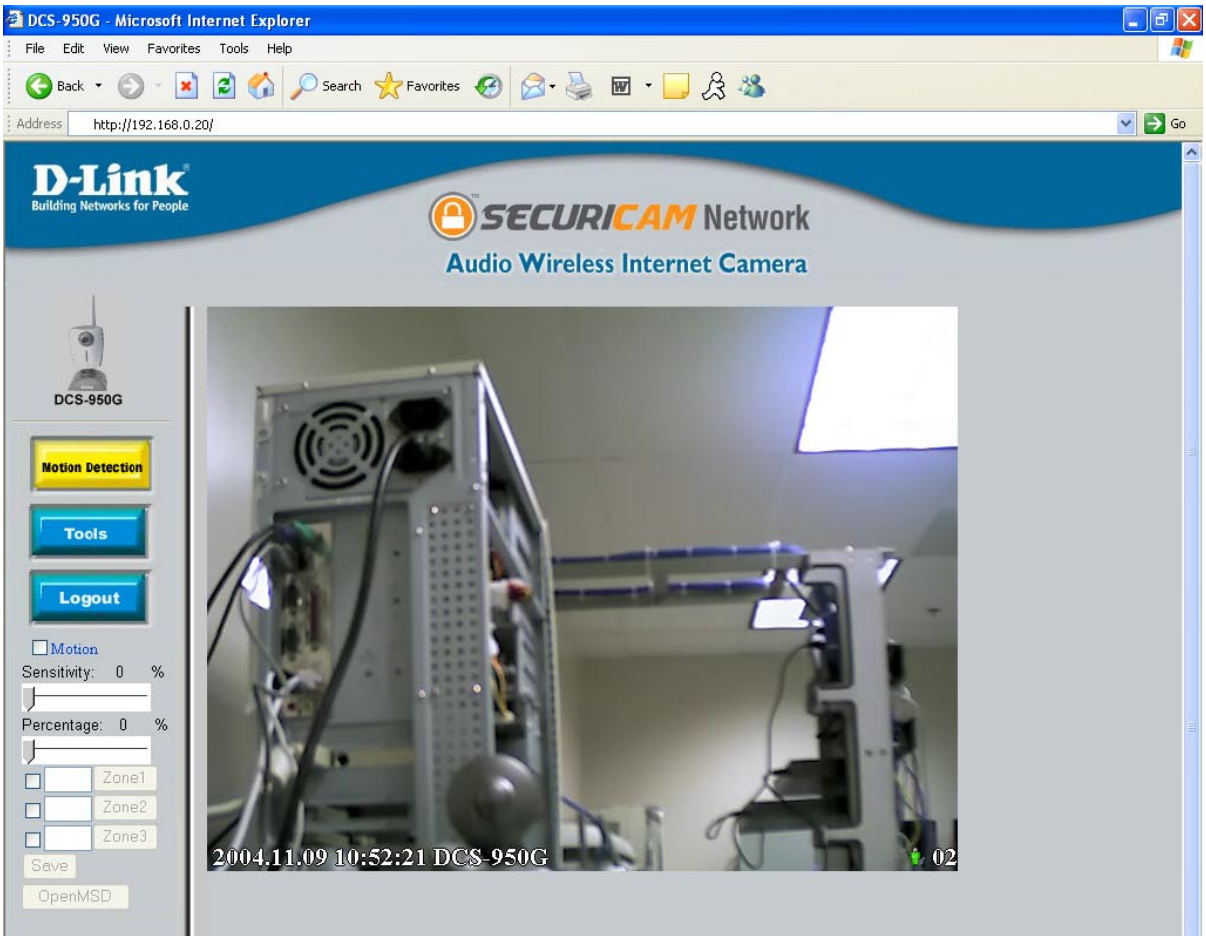
Return E-mail address: The return e-mail address to use if the snapshot or system log e-mail fails to send. (This address should be within the SMTP server's domain for authentication purposes.)

Recipient E-mail address: The e-mail address of recipients for snapshots or a system log file.

SMTP Port: This is the port number for your SMTP server, the default is 25. If you use ports other than 25 you can change it here.

Motion Detection Skip Time: Increasing the time set here will avoid false alarms. This option allows you to set the amount of time between motion detection events before the next recording will start.

Motion Detection



Tools > Motion Detection

Motion: Click on the **Motion** button to enable motion detection.

Sensitivity: Sets the measurable difference between two sequential images that would indicate motion.

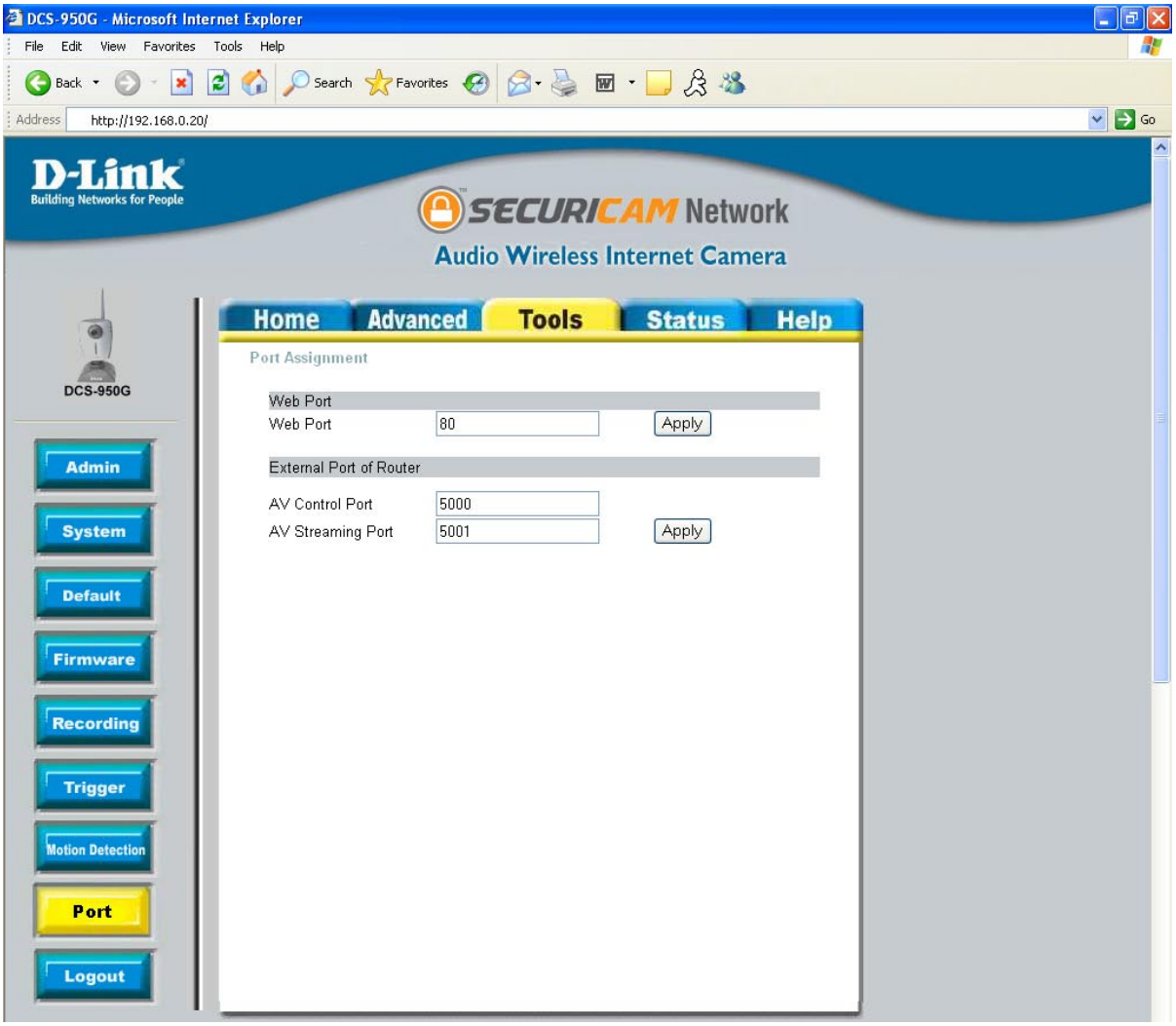
Percentage: Sets the amount of motion in the window being monitored that is required to initiate a motion detected alert. If this is set to 100%, motion is detected within the whole window to trigger a snapshot. Note: Setting a higher sensitivity and a lower percentage makes any motion more easily detected.

Zone 1-3: Click to open the corresponding motion window. To assign a name to the window, enter the desired name in the entry field next to the zone button.

Save: Saves the related settings of that window.

Open MSD: Click to open the Motion Screen Display. The MSD window allows you to monitor the amount of motion detected in each motion window. The graphic bars will increase or decrease depending on the image variation. A blue bar means the image variation is under the monitoring level, and no motion detection alert is triggered. A red bar means the image variation is over the monitoring level and a motion detected alert is triggered.

Port



Tools > Port

Web Port: This is the port that allows the user to connect to the camera's user interface. By default the port is set to 80. You may change the port number if using multiple cameras.

Note: You MUST also set up your router/gateway for Port Mapping; this will enable remote viewing of your camera via the Internet. Please refer to your router's instruction manual on how to open up ports. For additional help on configuring your camera to work with your router, please refer to the next section on setting up your camera for use with a router. For installing multiple cameras, ONE port per camera must be opened on your router, the Web server (HTTP) port.

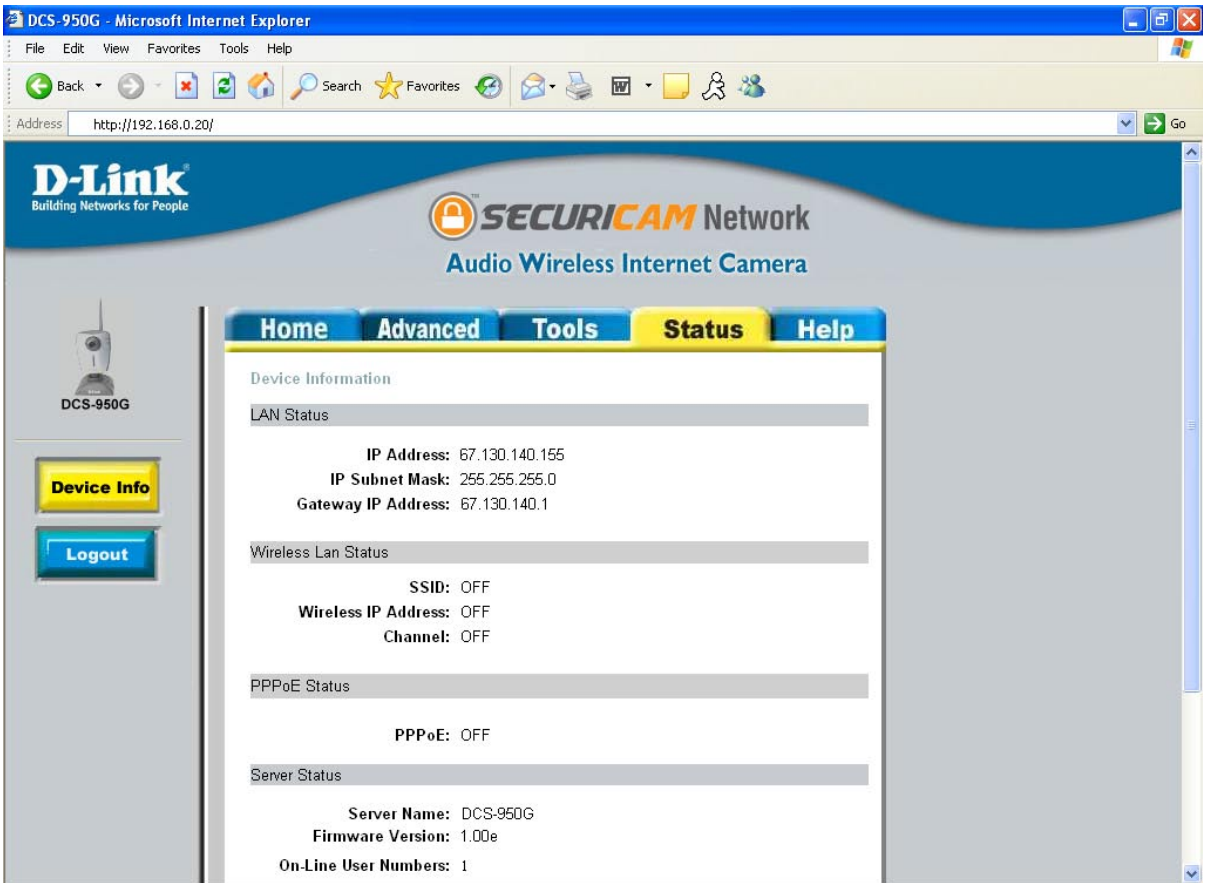
AV Control Port: This is the port that allows the user to connect to synchronize the camera's audio and video. By default the port is set to 5000. You may change the port number if using multiple cameras.

AV Streaming Port: This is the port used to stream video. By default the port is set to 5001. You may change the port number if using multiple cameras.

Status

The Status tab provides the following configuration option: Device Info.

Device Info



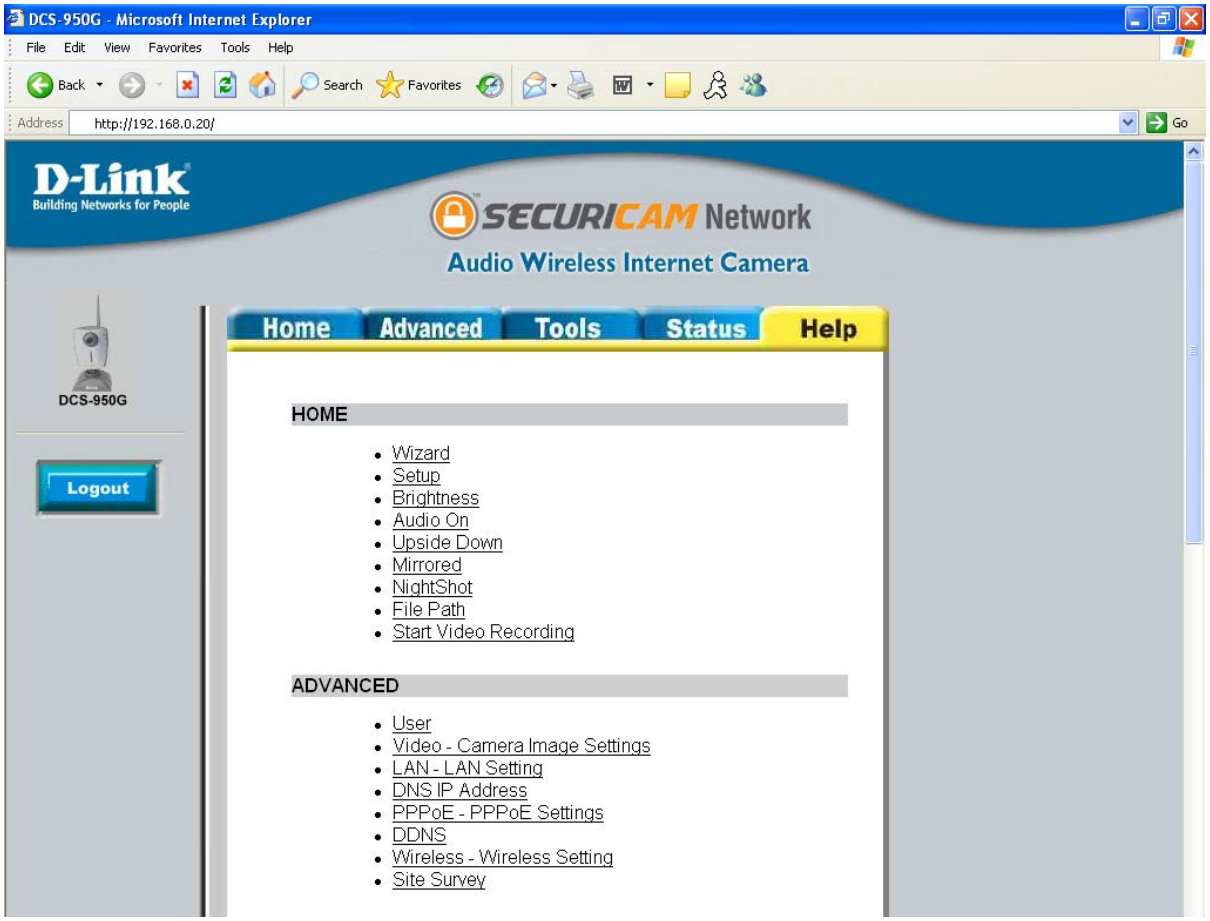
Status > Device Info

The Device Info screen lists the following important settings that are currently set for the DCS-950G.

- IP Address
- IP Subnet Mask
- Gateway IP Address
- SSID
- Wireless IP Address
- Channel
- PPPoE
- Server Name
- Firmware Version
- On-Line User Numbers

Help

Click on the Help tab to access descriptions of the particular function you need help with. The help screen is organized in the order of the tabs and then each menu item under that tab.



Help

Installing the DCS-950G Behind a Router

Single Camera Installation

If you are installing a single camera on your network the installation is an easy 4–step procedure:

1) Identify Your Camera on the Network
2) Assign a Local IP Address for Your Camera
3) Determine Your Router's WAN IP Address (Enable Remote Viewing)
4) Open Virtual Server Ports for Your Router (Enable Remote Viewing)

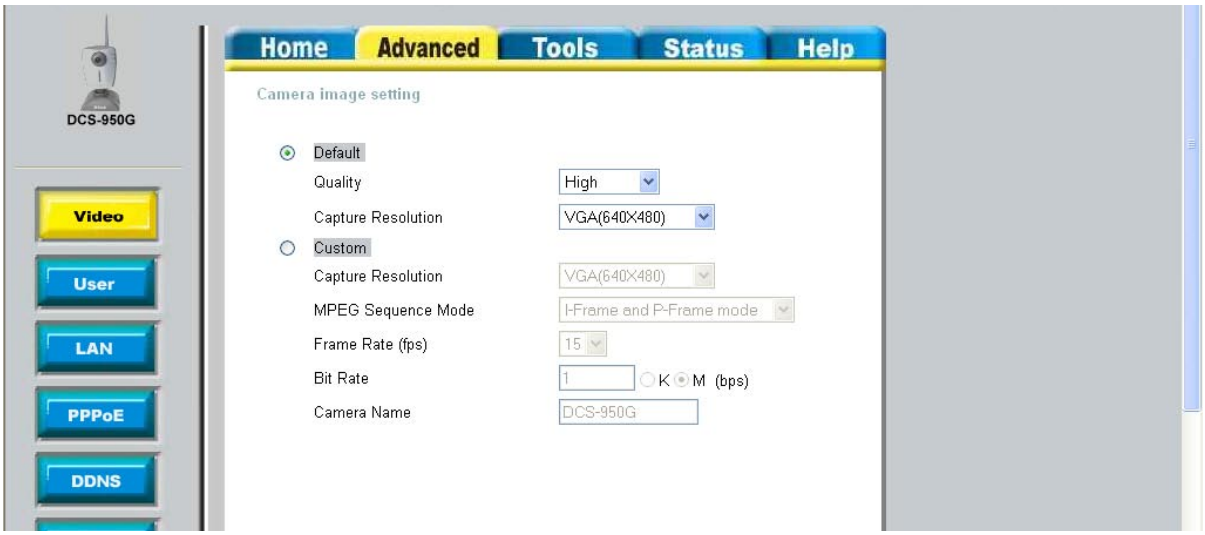
Multiple Camera Installation

If you are installing multiple cameras on your network, the installation is an easy 5-step procedure:

1) Identify Your Camera on the Network
2) Assign a Local IP Address for Your Camera
3) Open a Second Port on the Camera
4) Determine Your Router's WAN IP Address (Enable Remote Viewing)
5) Open Virtual Server Ports for Your Router (Enable Remote Viewing)

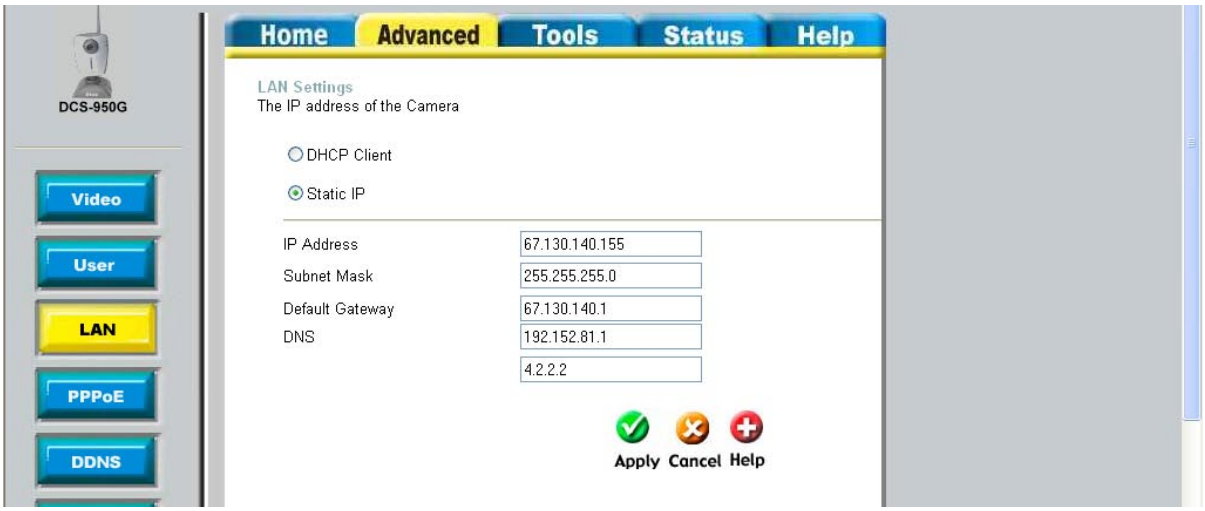
1) Identify Your Camera on the Network

Once you are logged into the camera via a Web browser on your network PC, click on the **Advanced** Tab, and select **Video**. Enter a unique **Camera Name**. These settings are important if you are installing several cameras on your network.



2) Assign a Local IP Address for Your Camera

A Local IP Address is required to configure your camera and to view your camera within your local (home) network. You may use the default camera IP Address of 192.168.0.20. If you wish to use a different IP Address, be sure that the camera settings correspond to your network settings. The Default Gateway will be the IP Address of your router's Local IP Address (i.e.192.168.0.1 if you are using a D-Link router)



Assigning and Opening the HTTP Port on the DCS-950G

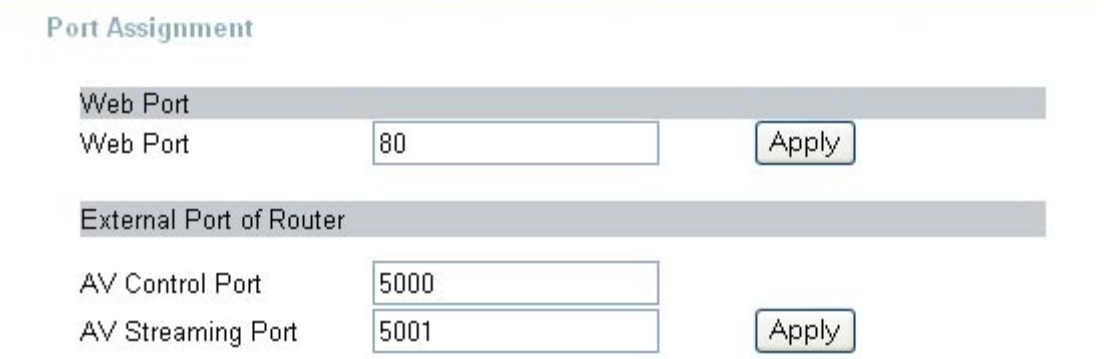
(For Installing Multiple Cameras)

Opening ports will allow users to view the camera via the Internet. The ports that are opened must be unique for each camera in order to successfully view the images remotely.

3) Open the HTTP Port

The **HTTP Port** option is used when multiple cameras are being installed behind a single public IP address and will be accessed remotely OR for using a port other than the default port for image viewing. For each additional camera that is installed, you must assign the appropriate Web server port for each camera to enable remote viewing.

By default, port **80** (Web server port) is open. If these ports are available for use, you DO NOT have to open a second port and can proceed to the next section. If port 80 is *not* available (for example, if you are already using port 80 to run a Web server or your ISP blocks access on port 80*) you MUST open a second port and designate a new Web server port (800, 801, 802,…etc) and new AV Control and Streaming ports (5002, 5003,...etc). IMPORTANT: Be sure to take note of these settings since these same settings will be used to configure your router.



***IMPORTANT NOTE**: Some ISPs block traffic on commonly used ports like port 80 to disallow consumers from putting a server on their network. Be sure to check with your ISP so that you can open the appropriate ports accordingly. If your ISP does not pass traffic on port 80, you will need to change the Web server port the camera uses from 80 to something else, like 800. If you are behind a residential gateway, you will need to open a corresponding port on your gateway as well. Not all gateways are the same, please refer to your gateway's user's manual for specific instructions on how to forward ports.

Router Setup and Installation

The following steps generally apply to any router that you have on your network. The D-Link DI-624 is used as an example to clarify the configuration process. Your WAN Ip Address information will be listed on following window.

Determine Your Router's WAN IP Address

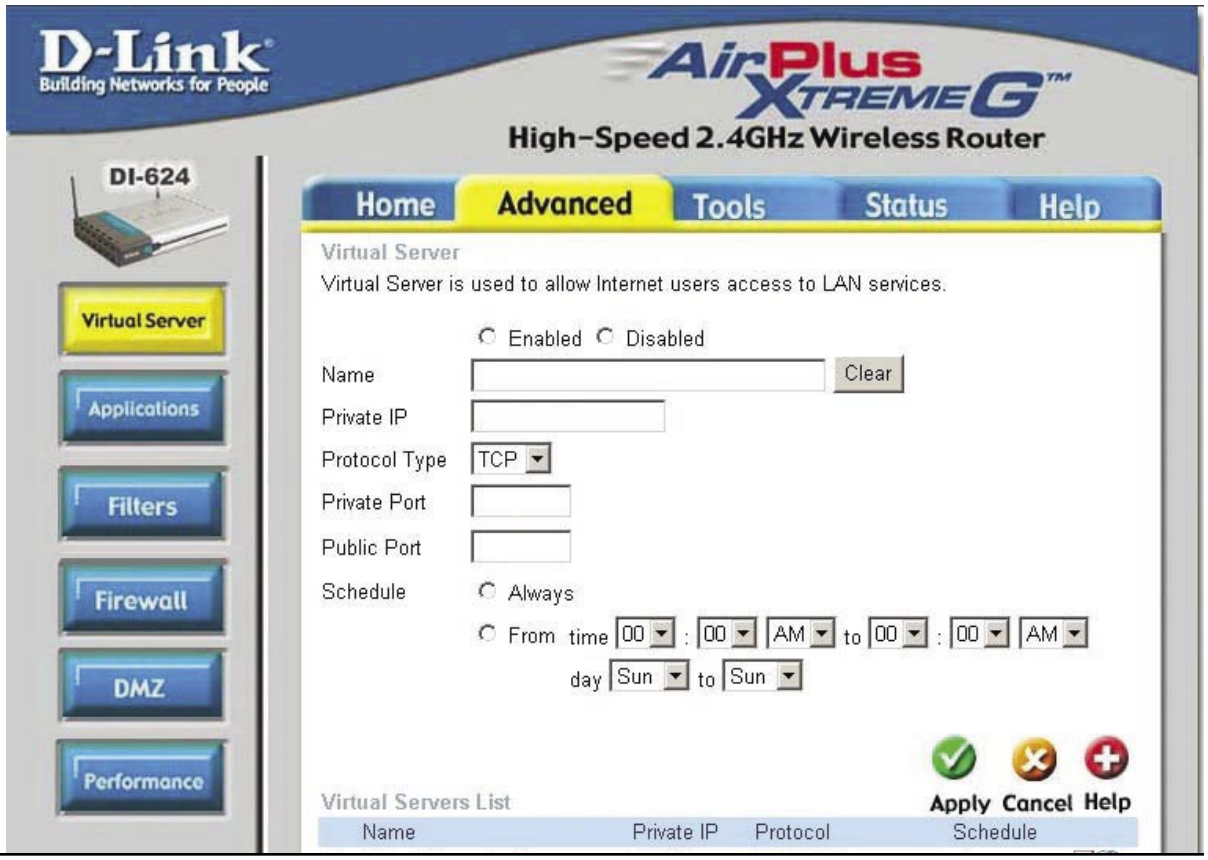
Note: Because a dynamic WAN IP address can change from time to time depending on your ISP, you may want to obtain a Static IP address from your ISP. A Static IP address is a fixed IP address that will not change over time and will be more convenient for you to use to access your camera from a remote location. You can use DDNS to obtain an IP address, please refer to page 34 for more information.

Assigning and Opening Virtual Server Ports

4) Open Virtual Server Ports To Enable Remote Image Viewing

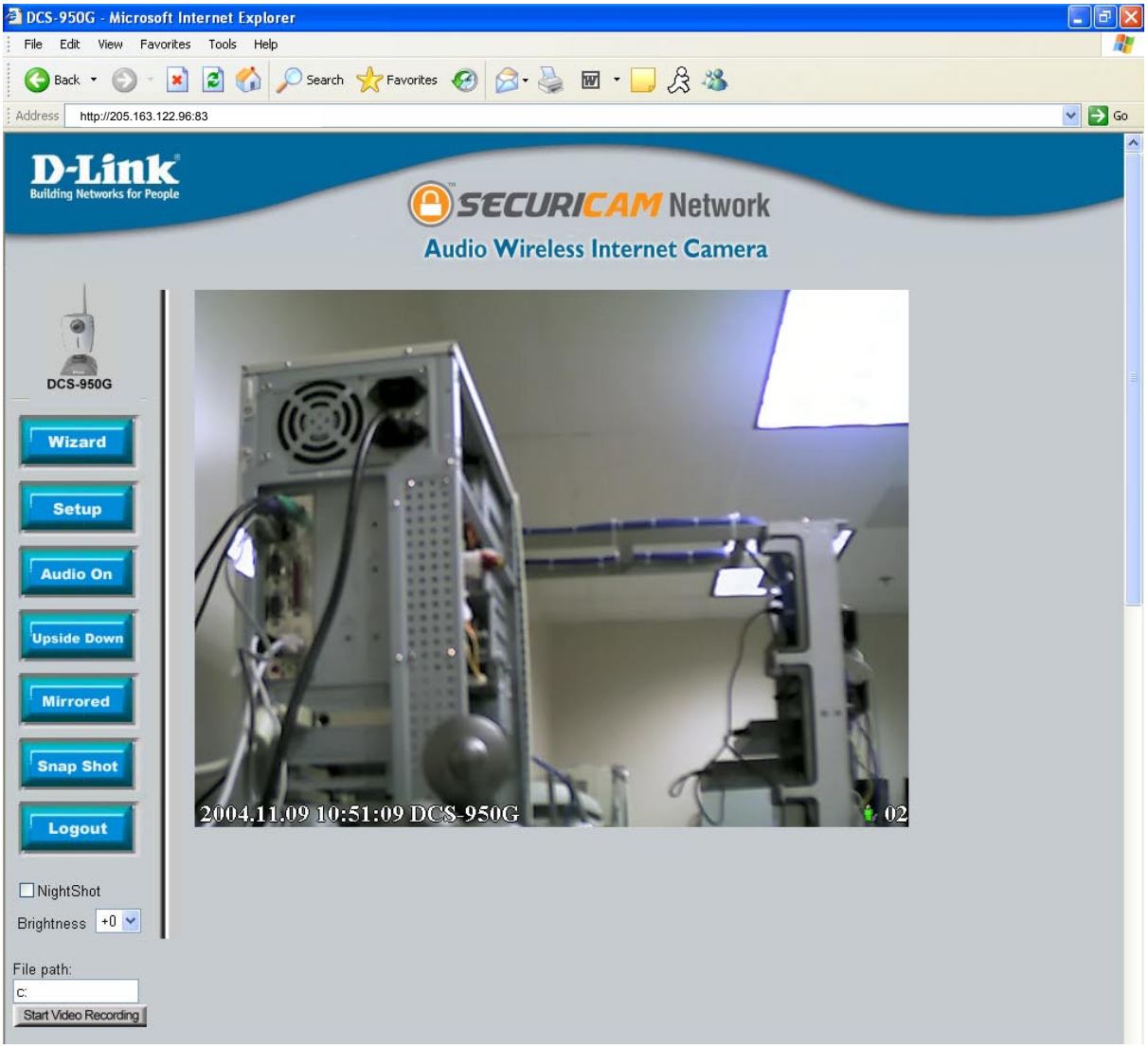
The Virtual Server Ports of your router must be opened for remote access to your camera. This is also referred to as port forwarding. Please proceed as follows:

- Select **Enabled** to enable virtual server settings.
- Select a camera name.
- Enter your camera's Local IP Address in the **Private IP** field.
- Select **TCP** under **Protocol Type**.
- If you are using the default camera port settings, enter 80 in to the **Public** and **Private** Port section.
- **Schedule** should be set to **Always** so that the camera images can be accessed at any time.
- In the **Virtual Servers List**, a check mark appearing before the camera name will indicate that the ports are enabled.
- Click **Apply** to save your settings. Note: If you are installing multiple cameras, be sure to open ONE Web port per additional camera installed: port 81, 82, etc. for Web server. The AV Control Port and AV Streaming Port also need to be opened. These ports are 5000 and 5001. Each camera will also require different Control and Streaming ports (5002, 5003,...etc.)



Viewing Your Camera

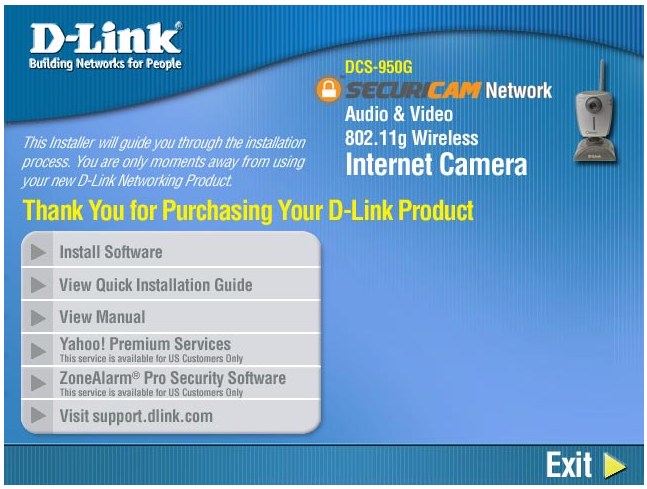
After all settings have been entered correctly, a user inside or outside your network will have access to the camera through a standard Web browser. To access from the Internet, simply type in the IP Address of the **router** given to you by your ISP, a colon, and the port number that you gave your camera. (Ex. http://205.163.122.96:83). To access from a computer on your local (home) network, simply enter the local IP Address of your camera (i.e. 192.168.0.35). If using a port other than port 80, you must enter the IP address followed by a colon and the assigned port number.



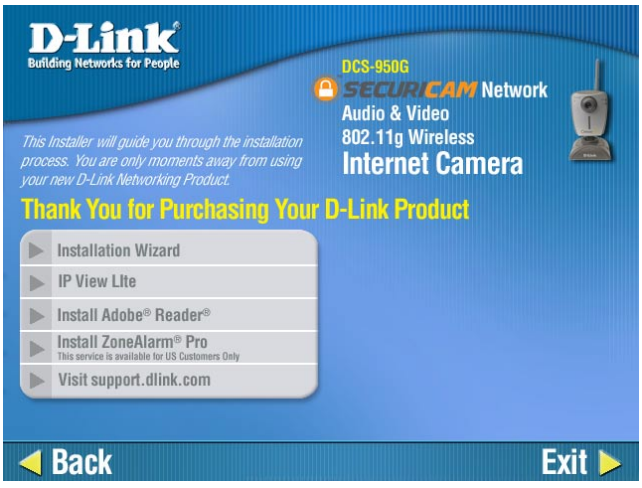
IPView Lite Application Installation

IPView Lite software is included for administrators to manage up to 4 DCS-950Gs remotely, record to hard drive, and configure advanced settings for the DCS-950G. IPView Lite is a complete software management tool for the DCS-950G and includes all configurable settings available in the Web configuration utility**.** Insert the CD-ROM into the CD-ROM drive. A menu screen will appear as shown on below.

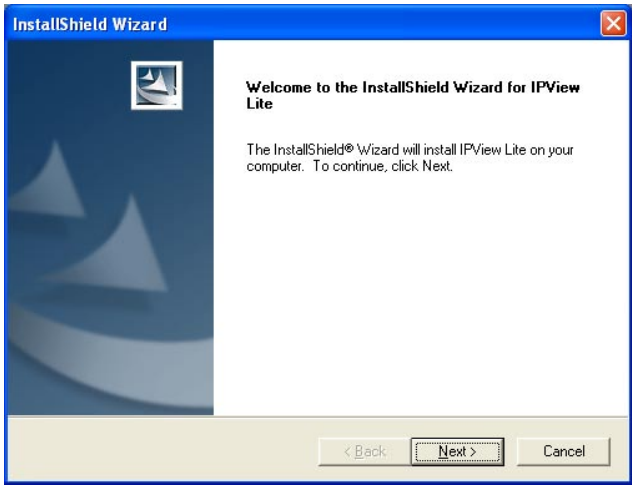
Click **Install Software**.



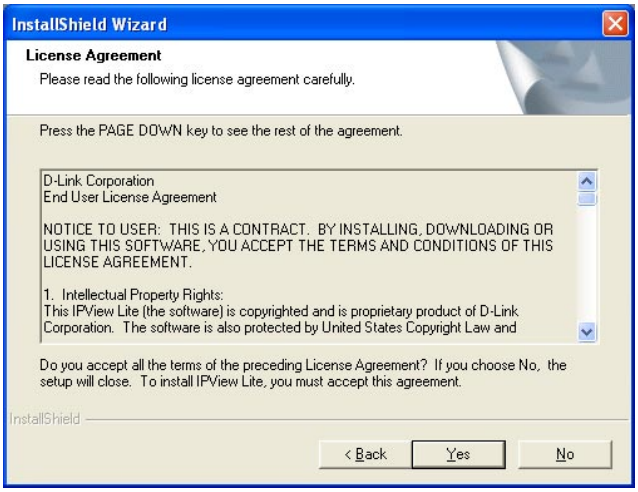
Click **Install IPView Lite**.



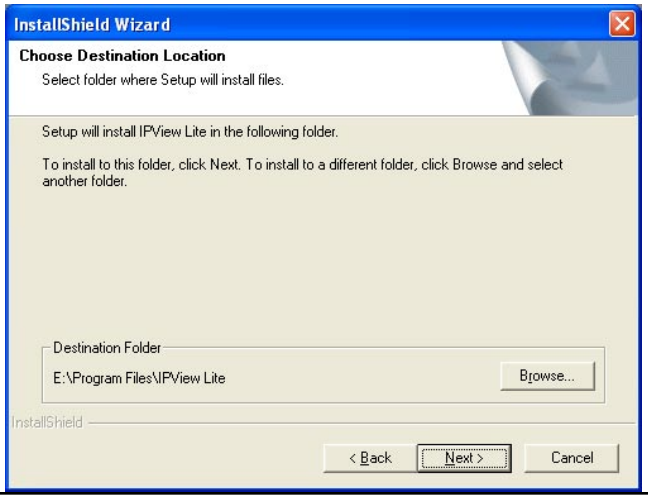
Click **Next**.



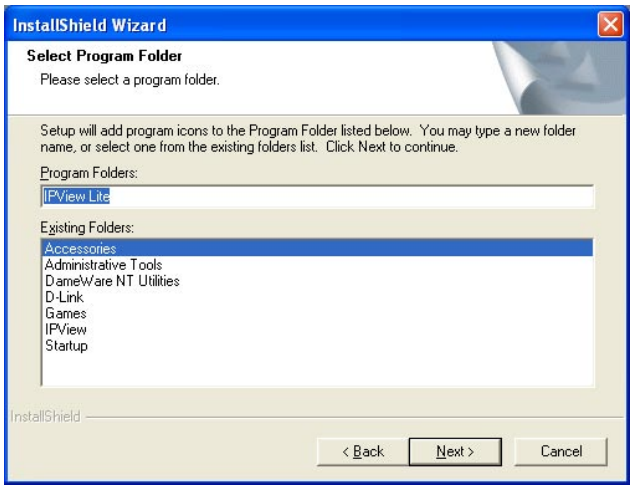
Click **Yes**.



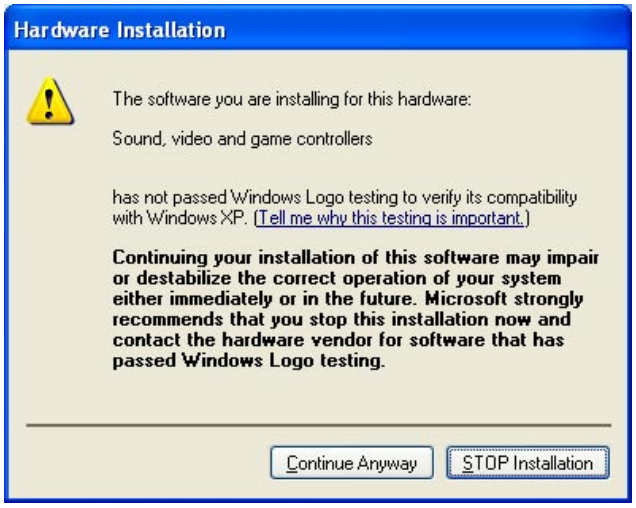
Click **Next**.



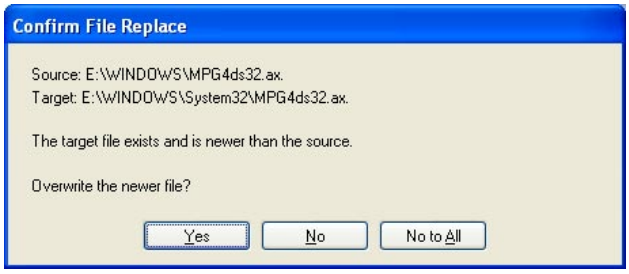
Click **Next**.



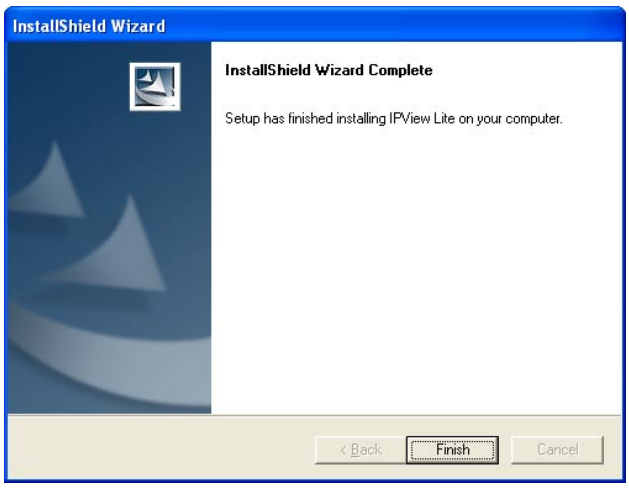
If your sound card or video card has not passed Windows Logo testing, this window will appear. Click **Continue Anyway**.



If there are previously installed target files that are newer than the source files, do NOT overwrite them. Click **No**.

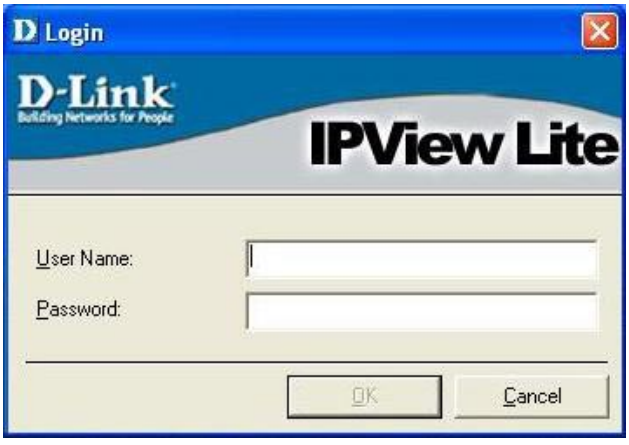


Click **Finish**.

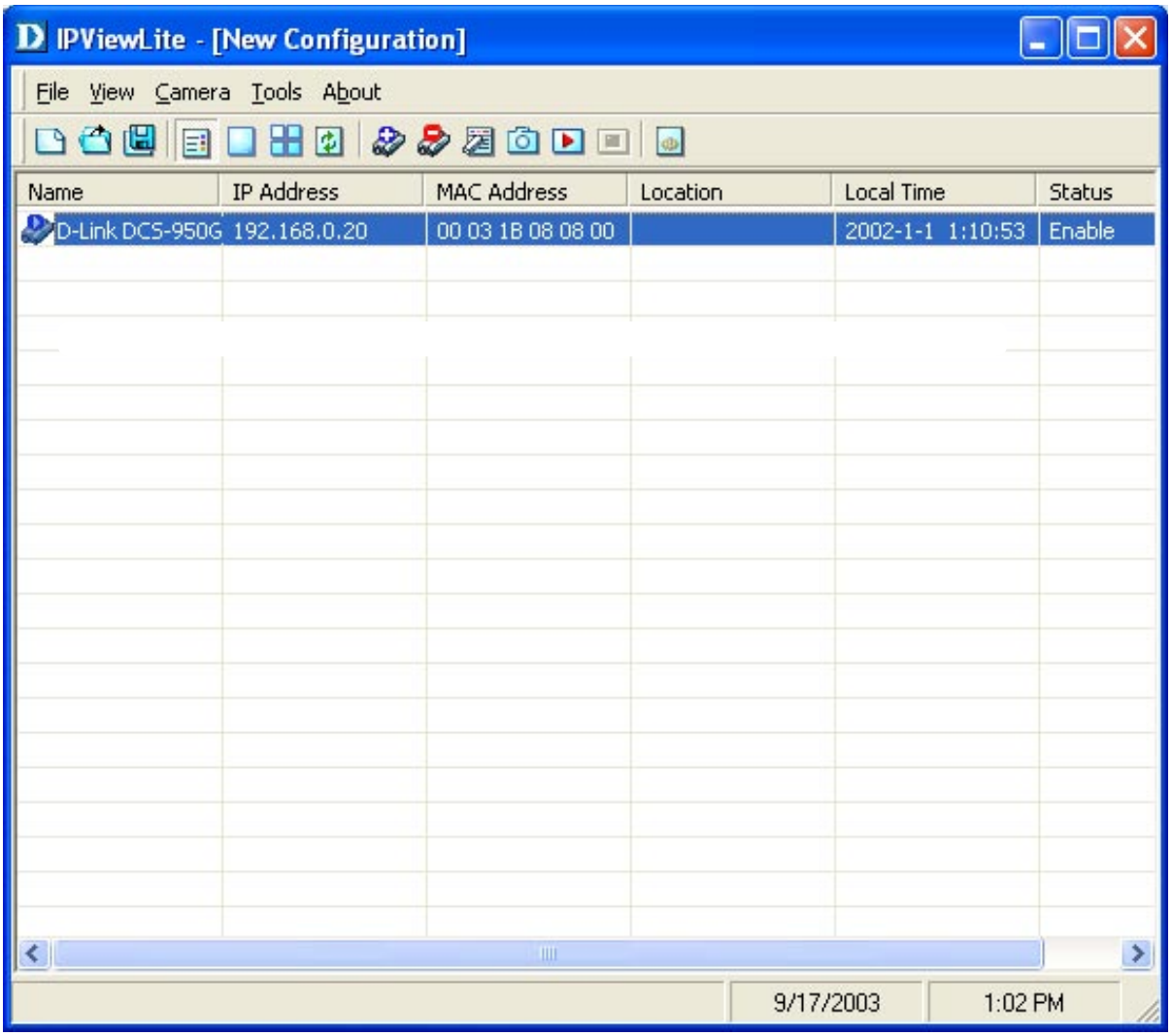


After successfully installing the IPView Lite, the application program for the DCS-950G is automatically installed to \Programs\IPViewLite Directory.

To start running the IPView Lite click on Windows **Start > Programs > IPViewLite > IPViewLite**. Enter the default User Name: **admin** into the respective field and click on **OK** to log into the application.



Once logged in, the IPView Lite application is executed and the IPView Lite interface will appear in the default List View format:



IPView Lite

This section describes the operation of the IPView Lite application User Interface with detailed procedures for using the application.

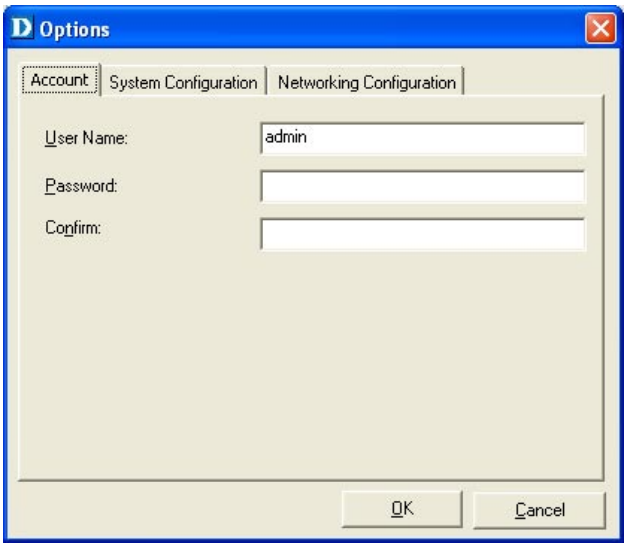
IPView Lite allows you to manage your cameras by enabling you to search, configure and preview all the DCS-950Gs from one location. It is designed with a user-friendly interface for ease of control and navigation.

How to Change the Password

When IPView Lite is used for the first time, it is highly recommended that the Administrator change the **User Name** and **Password** for security purposes. Once the **User Name** and **Password** are defined, only the Administrator has access to the management of **IPView** Lite applications. This procedure should be done as soon as possible to prevent unauthorized usage of the IPView Lite application.

To change the administrator **User Name** and **Password,** select **Tools > Options**. The **Options** dialog box will appear (see below).

Enter a **User Name** and enter the **Password** twice. Once all the new details are entered click **OK**.



How to Add a Camera

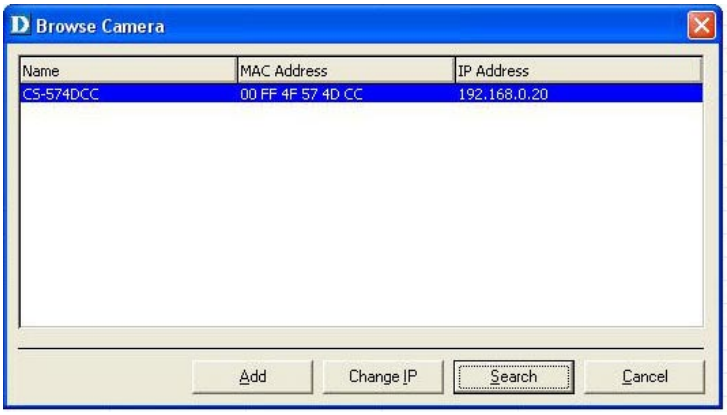
To add a new camera select **Camera** > **Add** from the IPView Lite. An **Add Camera** dialog box will appear. (See below.)

Enter the IP Address of the camera in the specified field and click **Add**. If the IP Address is entered incorrectly or if you have a bad network connection, a dialog box will appear to notify you of the error. To add cameras in IPView Lite, check that you have your network configured correctly. To add a remote camera, you need to have Internet access.

If you are unsure of the IP Address of the camera, you can click on **Browse to search for cameras on your local area network**. The **Browse Camera** dialog box will appear with a blank screen. (See below.)

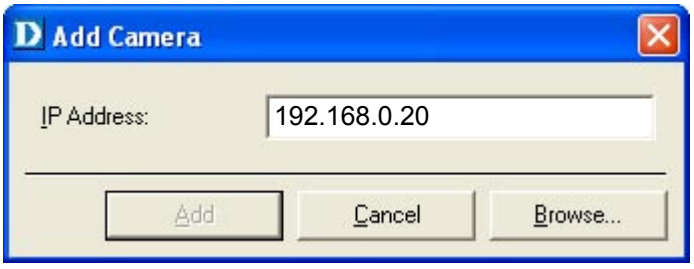
Note: Only cameras on your local area network can be located using Browse in IPView Lite. If you want to add a camera via the Internet, you must enter in a physical IP Address. Remember that if your camera is behind a router, you will need to enter your router's WAN IP followed by a colon, then the port number that is assigned to your camera, i.e. 68.2.34.156:800, where 68.2.34.156 is your router's WAN IP and :800 is the port that your camera is using. For more detailed information, please refer to the section titled "Installing the DCS-950G Behind a Router Configuration" on page 48.

Click on **Search**. IPView Lite will detect and search for all the available cameras that are installed on the local area network.



Highlight the camera you wish to add and click on **Add**. The **Add Camera** dialog box will appear once again with the IP Address entered. Click on **Add**. The camera will automatically be added into the IPView Lite list view.

Alternatively, you can double-click on the camera you wish to add and the **Add Camera** dialog box will appear once again with the IP Address entered. Click on **Add,** and the camera will automatically be added into the IPView Lite list view.

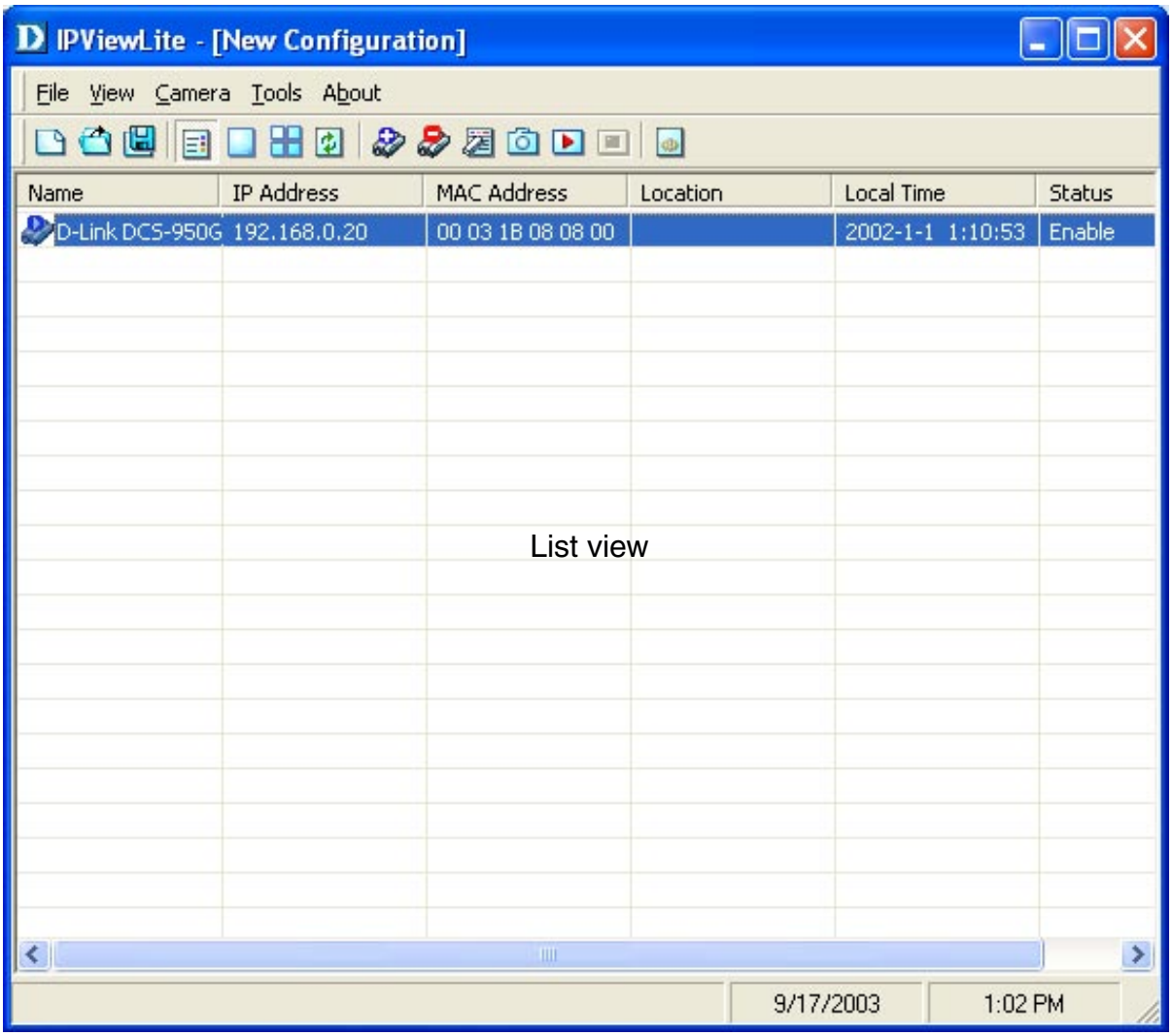


If the **Login Camera** dialog box appears, make sure to enter the correct **Username** and **Password**. Click **OK**. The camera will be added into IPView Lite, in list format. If the **Username** and **Password** are entered incorrectly, the camera will not be added into IPView Lite.

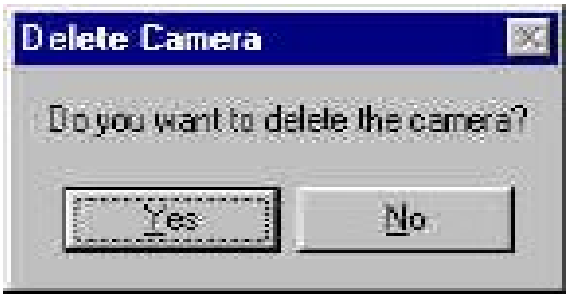
The Login Camera dialog box will appear regardless of password settings on the camera. If you have not created a password yet, leave both fields blank and press enter.

How to Delete a Camera

To delete a camera you must highlight the camera you wish to delete from the IPView Lite list view format. From the menu bar select **Camera** > **Delete**. A **Delete Camera** dialog box will appear. Click **Yes** to delete the camera, or click **No** if you do not wish to delete the camera.

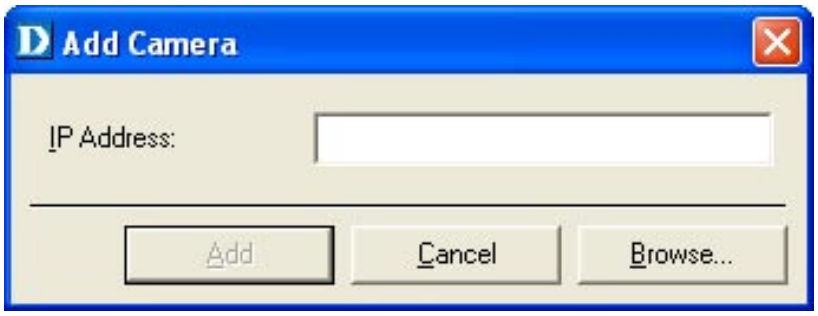


Click **Yes**.

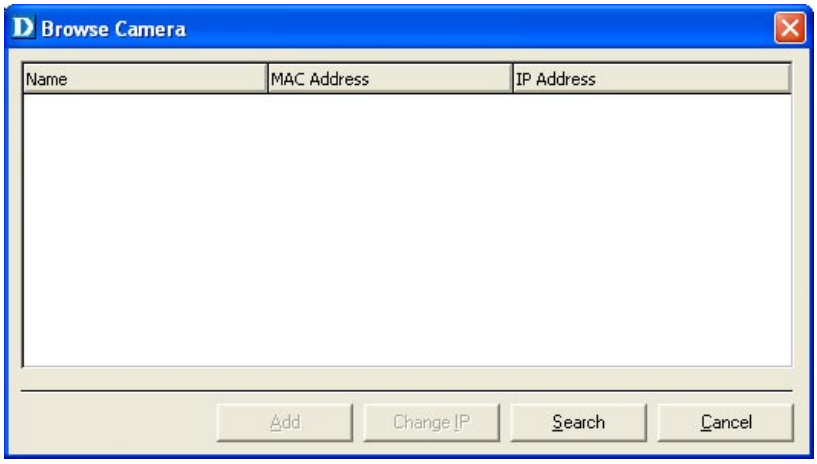


How to Change the IP Address

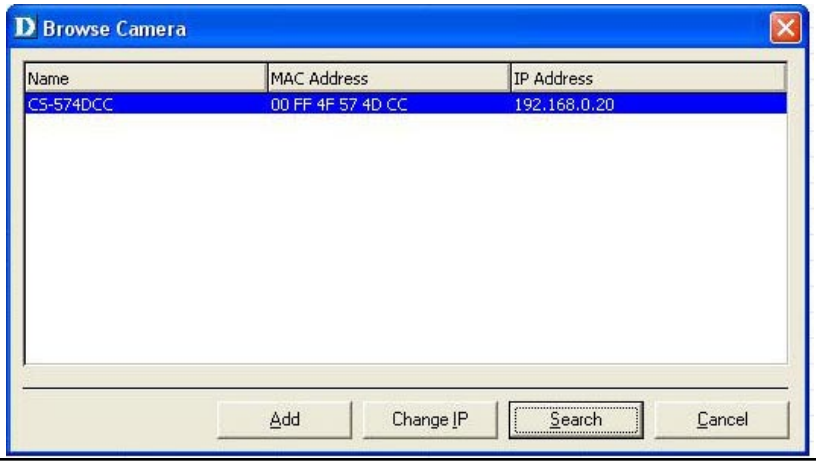
To change an IP Address for a camera, select **Camera** > **Add.** An **Add Camera** dialog box will appear (see below).



Click on **Browse**. The **Browse Camera** dialog box will appear with a blank screen (see below).



Click **Search**. IPView Lite will detect and search for all available cameras installed on the local area network (example below.)



Highlight the camera you wish to change and click **Change IP**. If you have already changed the administrator user ID and password, you will be prompted to enter your admin ID and password before IPView Lite will allow you to change the IP Address for the DCS-950G.

Enter the new **IP Address**, the **Subnet Mask**, and the **Default gateway** into the respective fields and click **OK**. IPView Lite will apply the new IP Address to the camera.

How to Format the Camera View

From the menu bar select **View** > **4 Cameras**. (See below.)

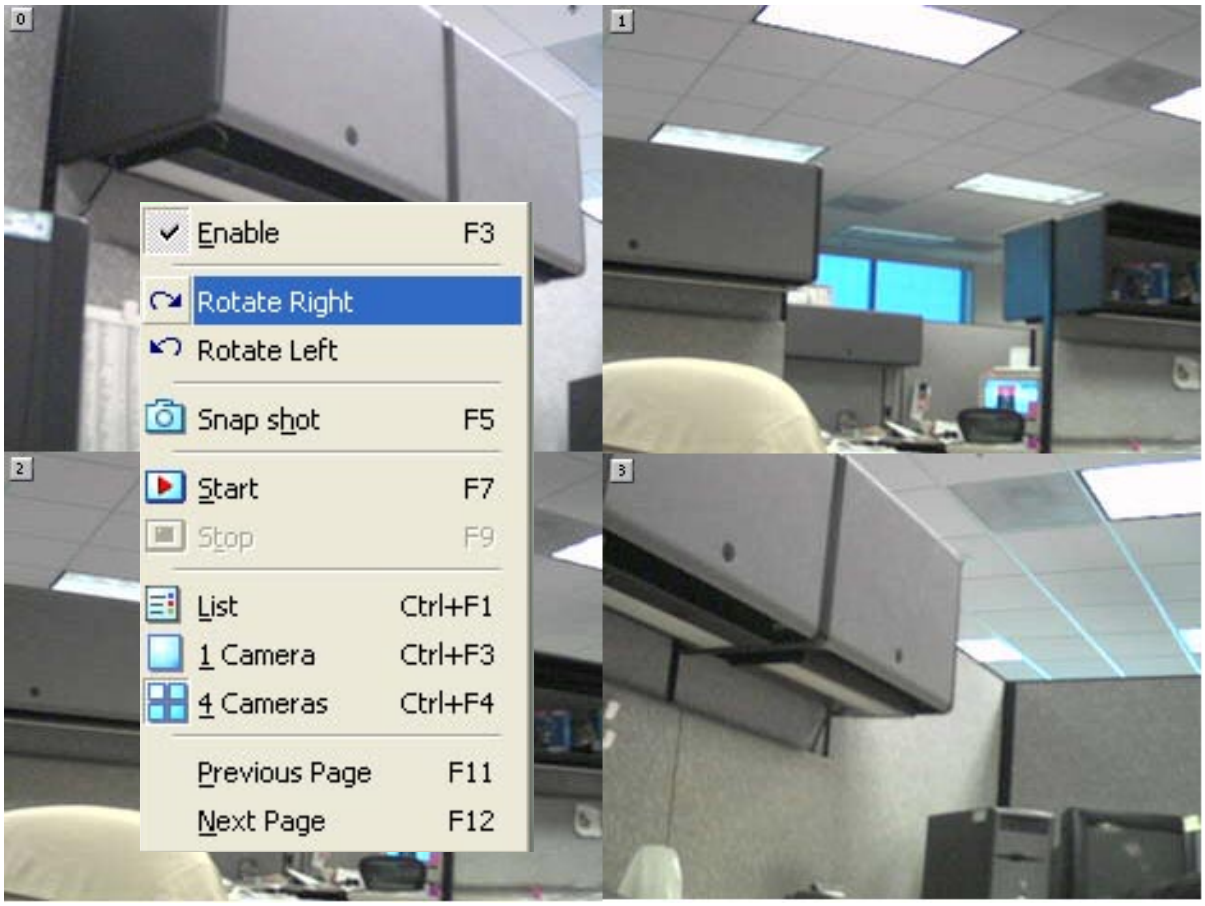
The icon on the upper left corner of the screen will appear with the camera number that is being displayed.

To return to the IPView Lite list view , click on the icon located on the upper left corner of the screen and a case sensitive menu will appear. Select **List** and the viewing image will return to the list view format.

A maximum of 4 cameras can be viewed simultaneously with IPView Lite.

How to Rotate the Video View

In **View Mode** format, click on the icon located on the upper left corner of the screen and a pop-up menu will appear.



Once you click **Rotate Right** or **Rotate Left** in the menu, the video will rotate 90 degrees to the right or left.

How to take a Snap-Shot with the Camera

To take a snap shot with the camera, you must highlight the camera you wish to use from the IPView Lite list view format. From the menu bar select **Camera > Snap shot**. A **Save Image** dialog box will appear for you to save the snap shot picture.

Alternatively, select from the viewing mode either 1 or 4 cameras. Click on the icon located on the upper left corner of the screen. A case sensitive menu will appear. Select the **Snap shot** icon. A **Save Image** dialog box will appear for you to save the snap shot picture.

How to Start Recording

To start recording with a camera you must highlight the camera you want to use from the list view format. From the menu bar select **Camera** > **Start**. An AVI file will appear in your IPView Lite folder to save the recorded videos.

Alternatively, in the viewing mode (using either 1 or 4 cameras), right-click on the icon located on the upper left corner of the screen. A case sensitive menu will appear. Select the **Start** icon. An AVI file will appear in your IPView Lite folder to save the recorded videos.

Note: You must stop recording before changing any camera settings.

How to Stop Recording

To stop recording with a camera, you must highlight the camera you wish to stop from the list view format. From the menu bar select **Camera** > **Stop**. The recording function will be stopped.

The other alternative is to click the icon located on the upper left corner of the screen under the viewing mode of either 1 or 4 cameras; a case-sensitive menu will appear. Select **Stop**. The recording will now cease.

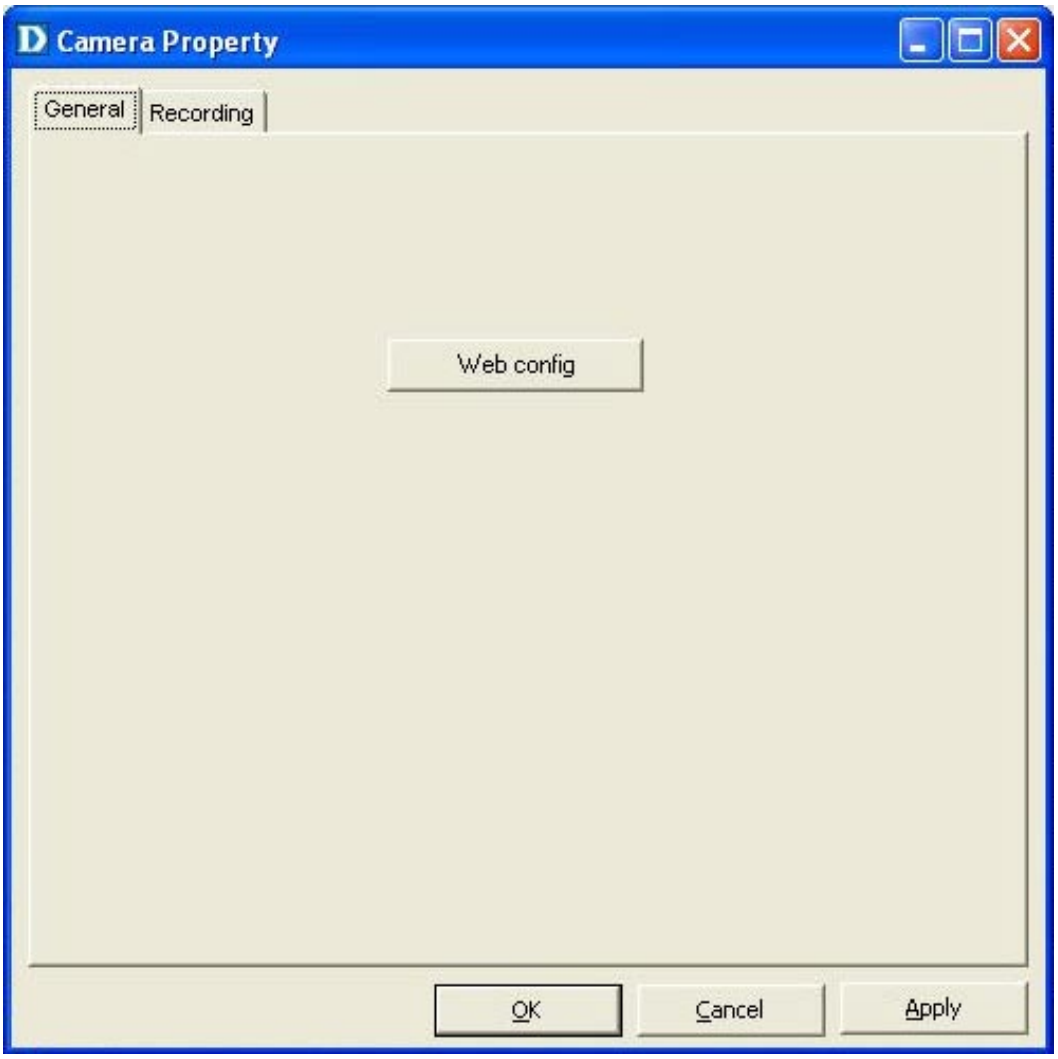
Camera Property Settings

Once you have completed the initial configuration of the DCS-950G using the Web-based interface, you can review or change your configuration using either the Web-based configuration utility or the Property Settings in the DCS-950G IPView Lite.

To access the Property Settings menu, select **Camera** > **Property** from the main menu or double-click on the camera link from within the list view. The **Camera Property** box will appear which allows for Web Configuration settings and upgrading firmware. Select the desired options from the tab selections to configure the camera.

General

Click the **Web config** button on the **General** tab to launch the Web configuration menu in a Web browser.

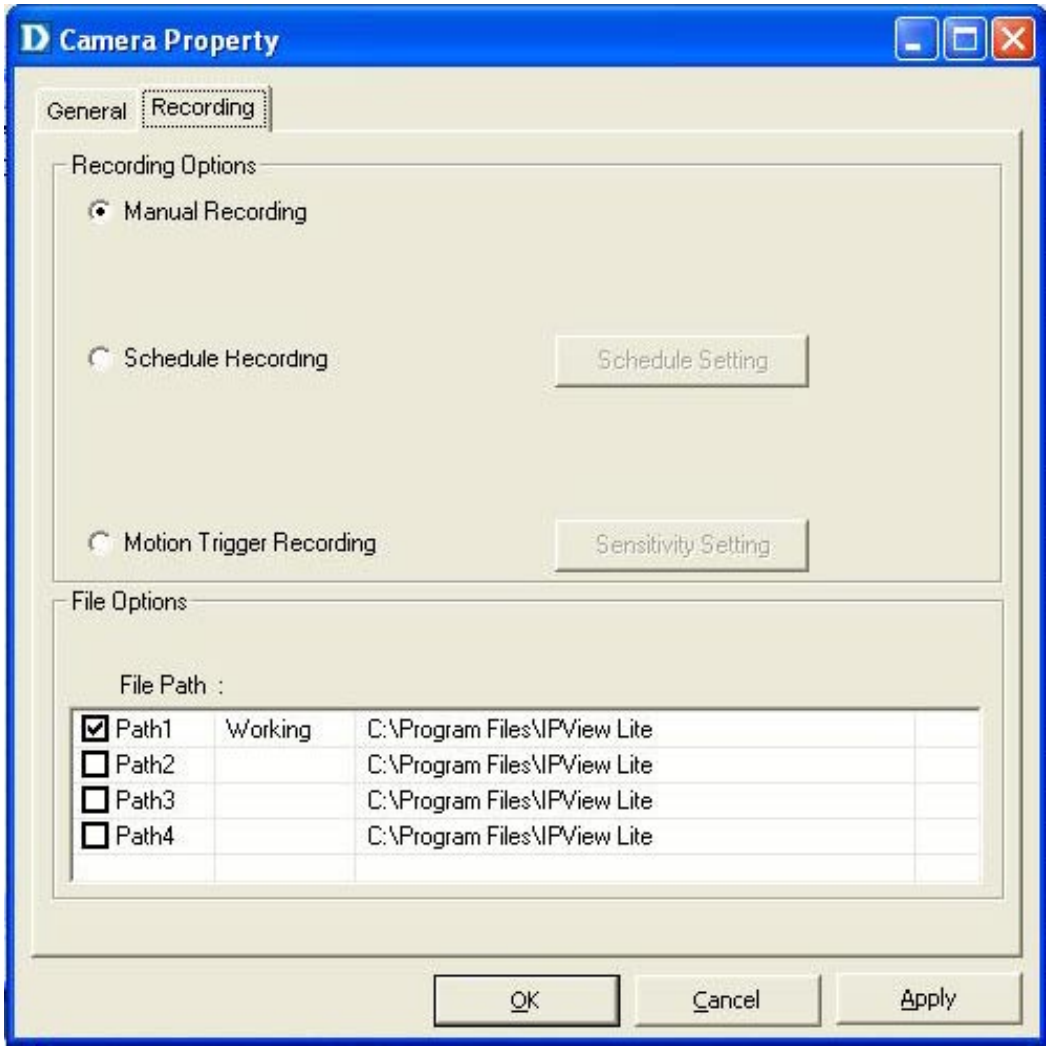


Recording

The **Recording** tab provides options for manual recording, schedule recording, or motion trigger recording.

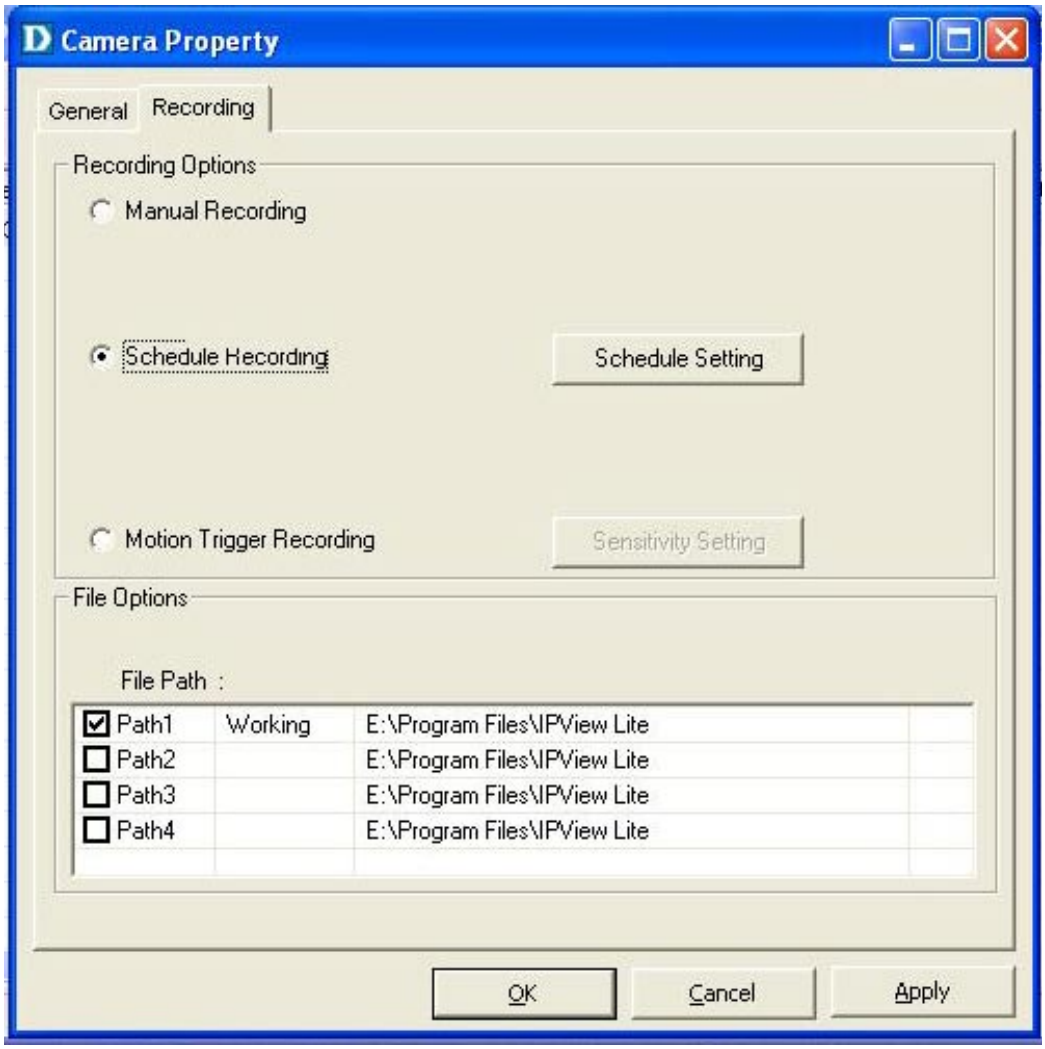
Manual Recording

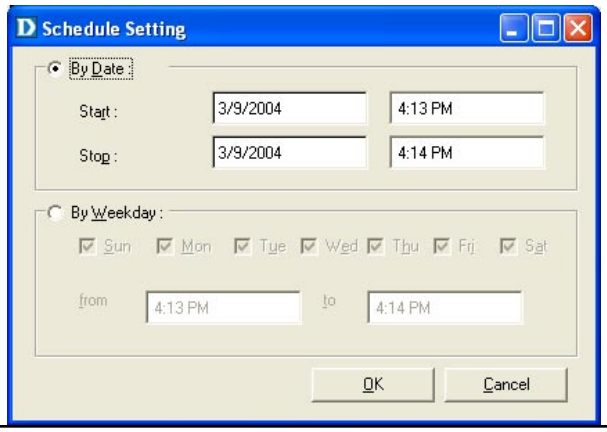
If the **Manual Recording** option is chosen, you must manually start recording in the List view of the DCS-950G in the Menu Bar or by clicking on the Record Icon.



Scheduled Recording

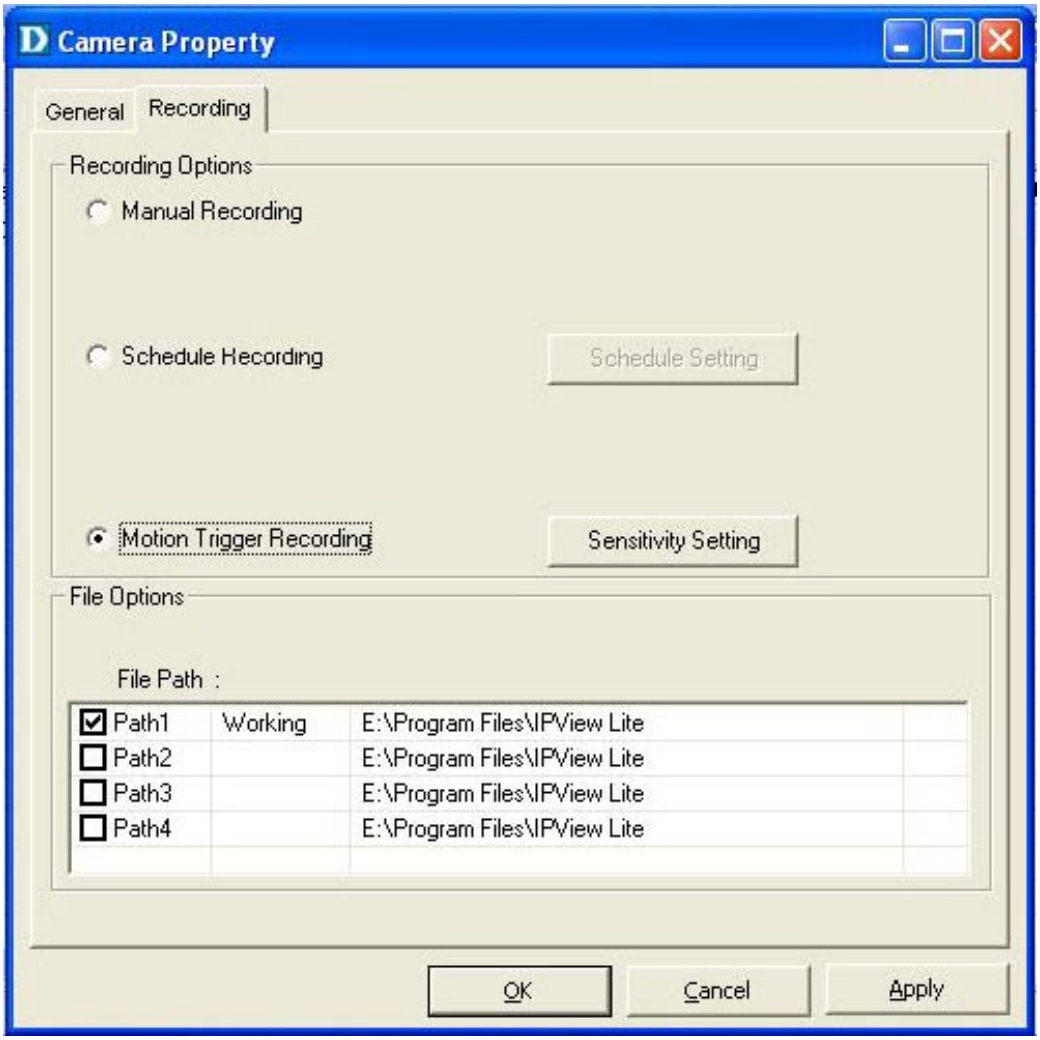
Select **Schedule Recording** to record based on specific times and dates. Click **Schedule Setting** to set the time and date for recording your files. Select **By Date** and enter in the dates, **Start**, and **Stop** Times. The camera will start to record according to the specified date and time period entered. Select **By Weekday** to indicate specific days to record and the time period.

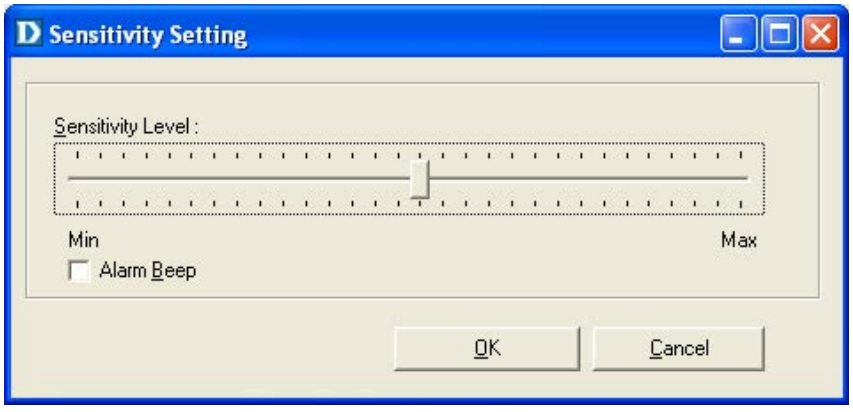




Motion Trigger Recording

Checking **Motion Trigger Recording** enables the DCS-950G to record based on motion. When this option is selected and the camera detects motion within the range of the viewing window, recording will be triggered. Recording will continue until no motion is detected. Click on **Sensitivity Setting** to set the sensitivity levels for the DCS-950G.

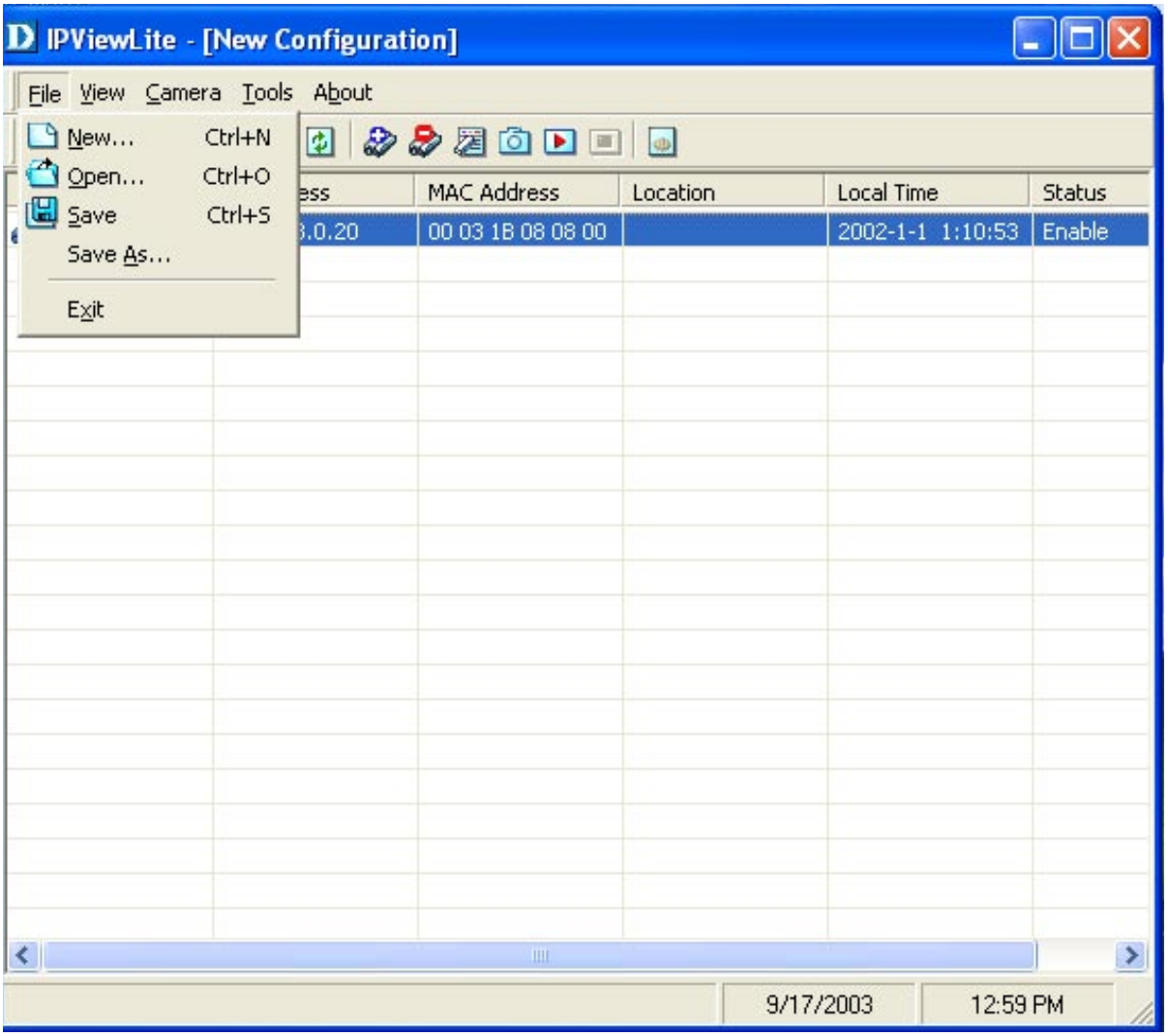




Menu Bar

The menu bar makes it easier to navigate IPView Lite. All Management functions can be accessed from the menu bar.

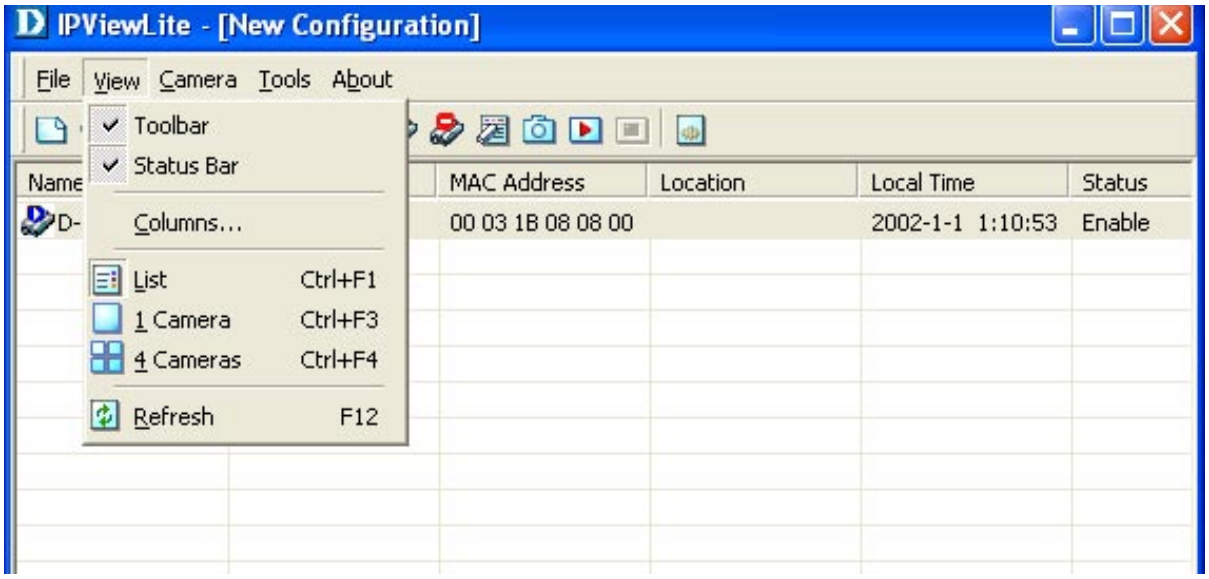
File



New :	Opens a new camera list. Cameras must then be added to the list for configuration.
Open:	Opens saved camera lists.
Save/Save As:	Saves your current list of cameras and configurations.
Exit:	Exits the IPView Lite Application.

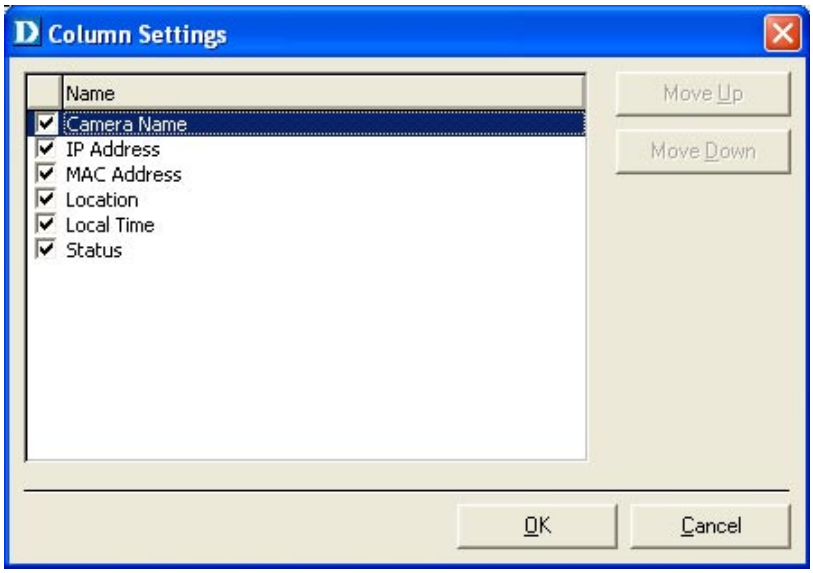
View

View on the menu bar provides users with management capabilities for **Columns, List, Camera** and **Refresh**. You can view the **Camera** in **1 Camera or 4 Camera** mode. The **View** menu bar is pictured below.



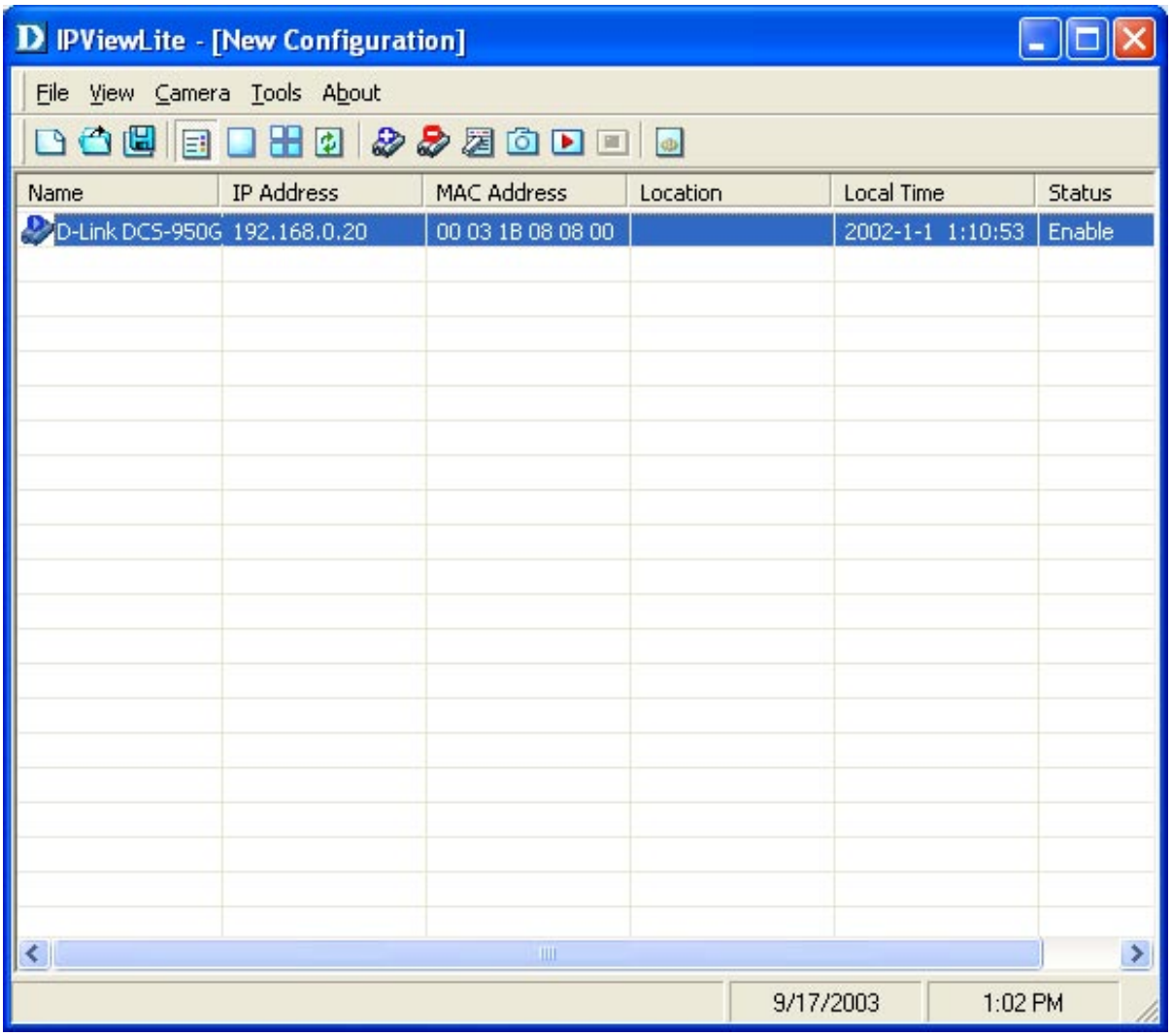
Columns

When **Columns** is launched, a dialog box will appear displaying the **Column Settings.** Select the columns that you wish to appear in the *List View* as illustrated below.



List View

You can view the format in **List** view. The **List** viewing format allows easy management and control of each camera. All the cameras and their properties, such as the camera name, IP Address, user name, and location, will be displayed in the list view.



Note:

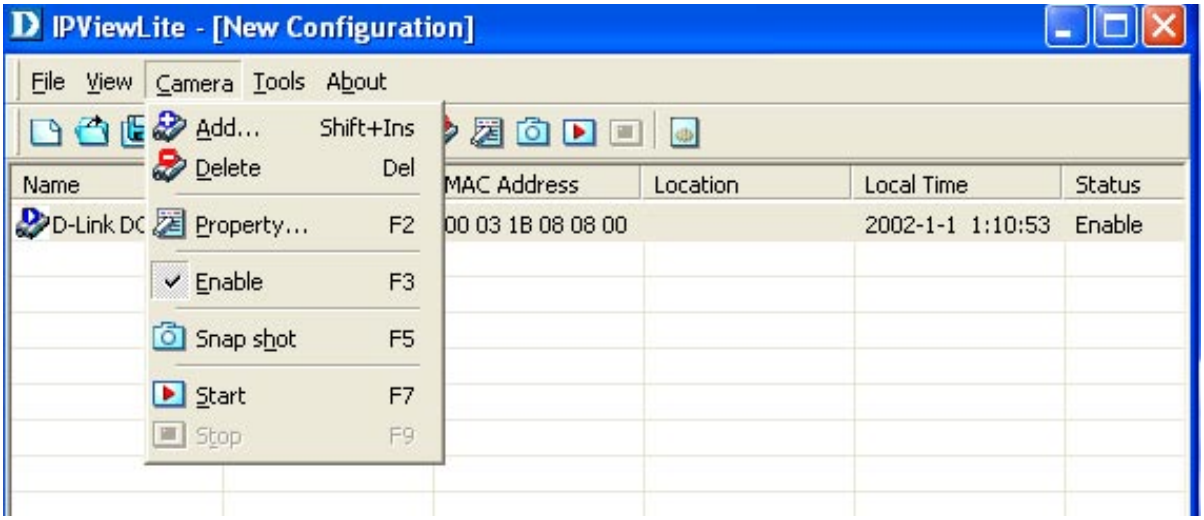
Right click on any camera to bring up a menu of actions you can apply to the selected camera.

Double-clicking on the desired camera will bring up the **Property** dialog box.

You can click the **Refresh** icon to update the camera list view.

Camera

Camera on the menu bar provides options to manage the camera. **Add** up to 4 additional Cameras for viewing. The **Camera** menu also allows you to **Delete** a camera, manage the **Property**, **Enable** real-time video capture, or take a **Snap shot** image.

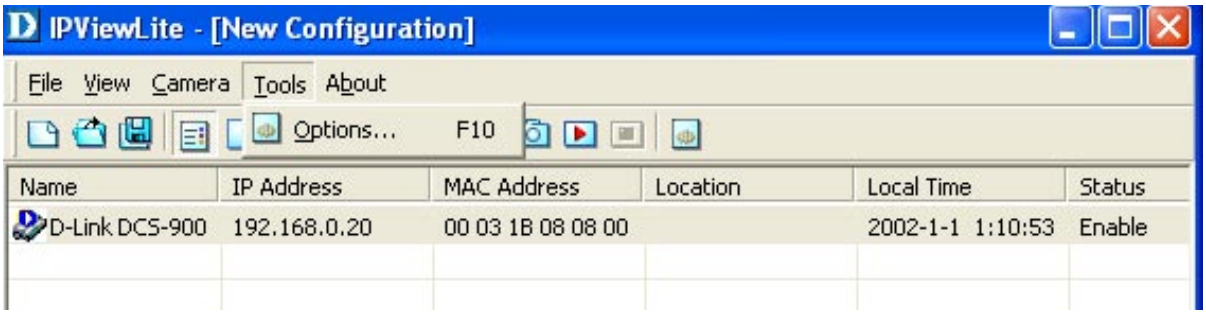


Enable Function

By default, the video image is enabled. There will be a **check** next to the **Enable** command to show that the Enable function is working. To disable the real-time image select **Camera > Enable** and the real-time video image will stop and shutdown.

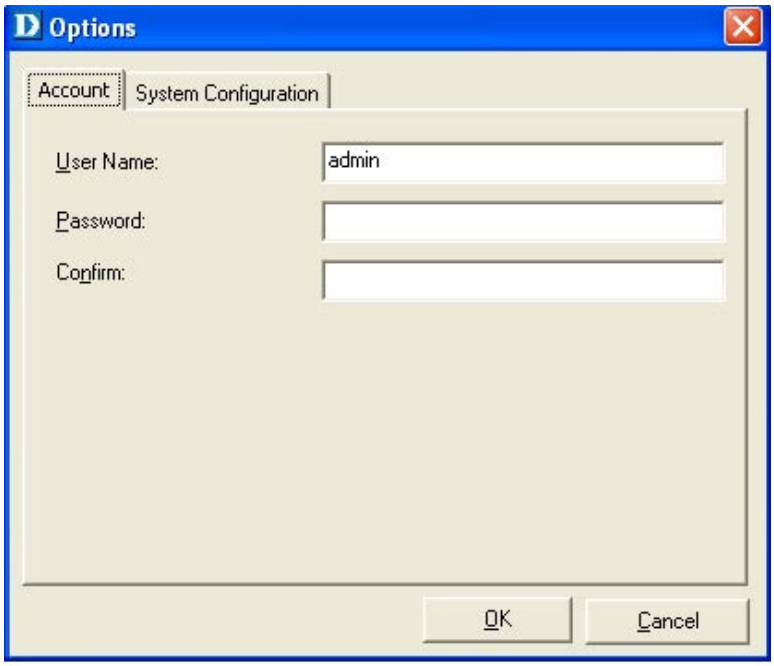
Tools

Tools on the menu bar allows you to change account information and system configuration. From the menu bar, select **Tools > Options**.



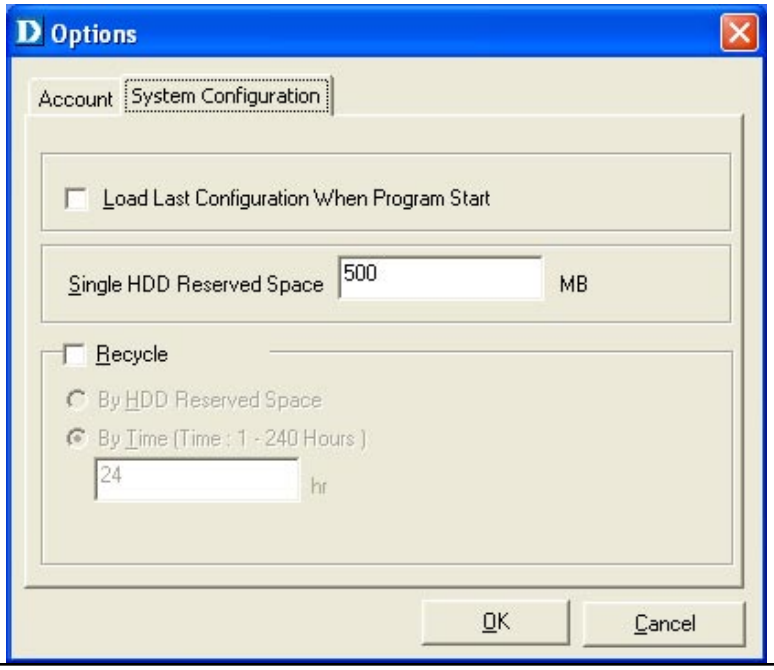
Account

The account menu is for administrators to change user name and password.



System Configuration

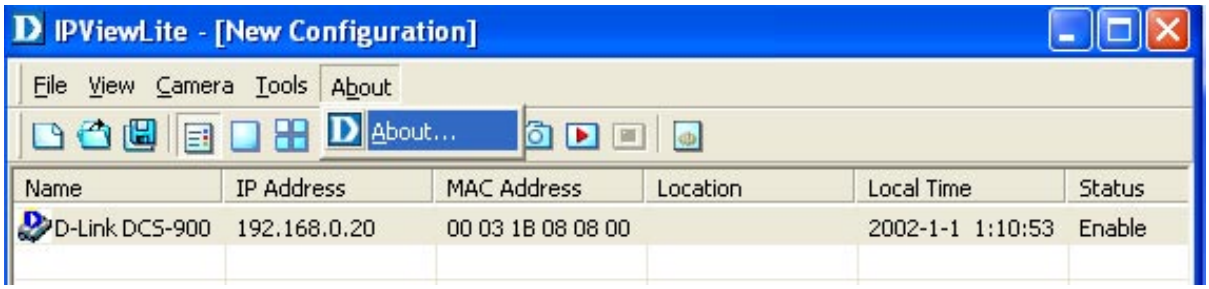
This menu allows you to set overwrite options to overwrite old recorded files with new recorded files. Check the **Load Last Configuration When Program Starts** to load all your configured settings each time you run IPView Lite. It is highly recommended that you select this option to save your camera settings in IPView Lite.



In order to allow old video files to be overwritten and replaced by new recorded files, place a check mark in the **Recycle** Box and click on **By HDD Reserved Space** or **By Time**. The **Single HDD Reserved Space** field refers to the amount of space left on your drive before overwrite takes place. For instance if you enter 1000 MB, and your total hard drive space is 3000 MB, as soon as your drive reaches 2000 MB capacity, your files will be overwritten. You can specify between 300MB to 10GB hard drive reserve space. Click on **By Time** to overwrite old files with new files once the time frame that you specify (1-240 hours) has been reached. Note: Selecting the **Recycle** option will disable the Recording File Path Settings in the Recording menu.

About

Under **About** on the menu bar, click **About** for camera details such as software



IPView Lite Icon Description

Open a new file. The hot key is **Ctrl+N**.

Open an existing file. The hot key is **Ctrl+O**.

Save a file. The hot key is **Ctrl+S**.

List view format. The hot key is **Ctrl+F1**.

1 Camera view format. The hot key is **Ctrl+F3**.

4 Camera view format. The hot key is **Ctrl+F4**.

Refresh IPView Lite application. The hot key is **F12**.

Add a camera. The hot key is **Shift+Ins**.

Delete a camera. The hot key is **Del**.

Property setting to configure the camera. The hot key is **F2**.

Snap shot to capture a single still image. The hot key is **F5**.

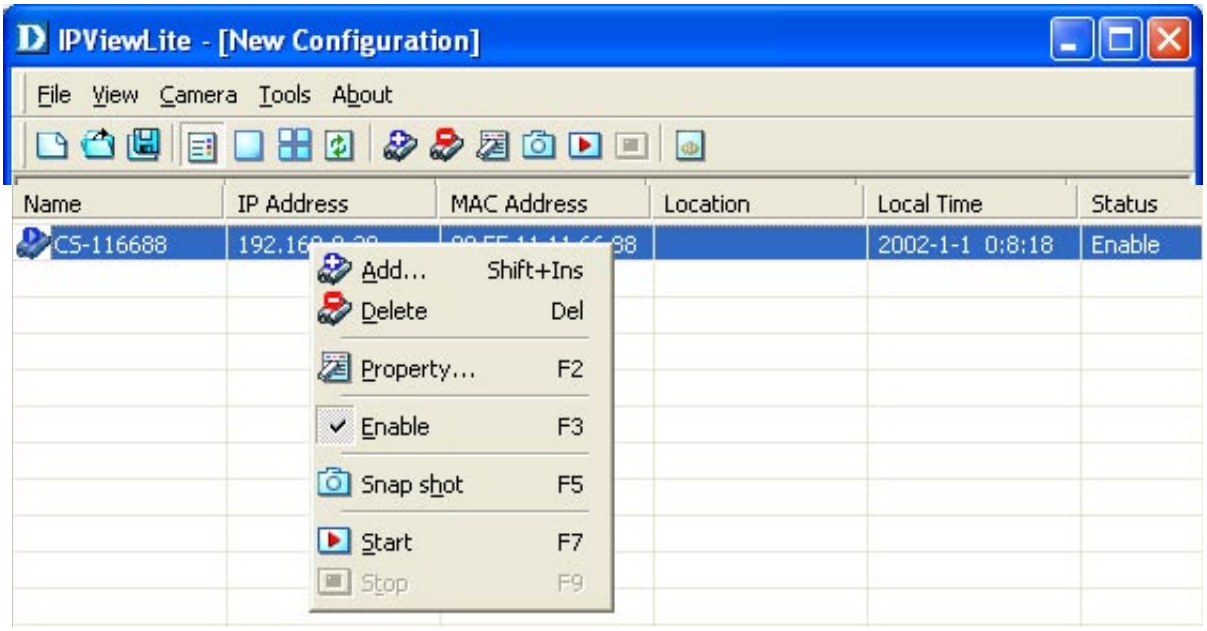
Start recording video image. The hot key is **F7**.

Stop recording the image. The hot key is **F9**.

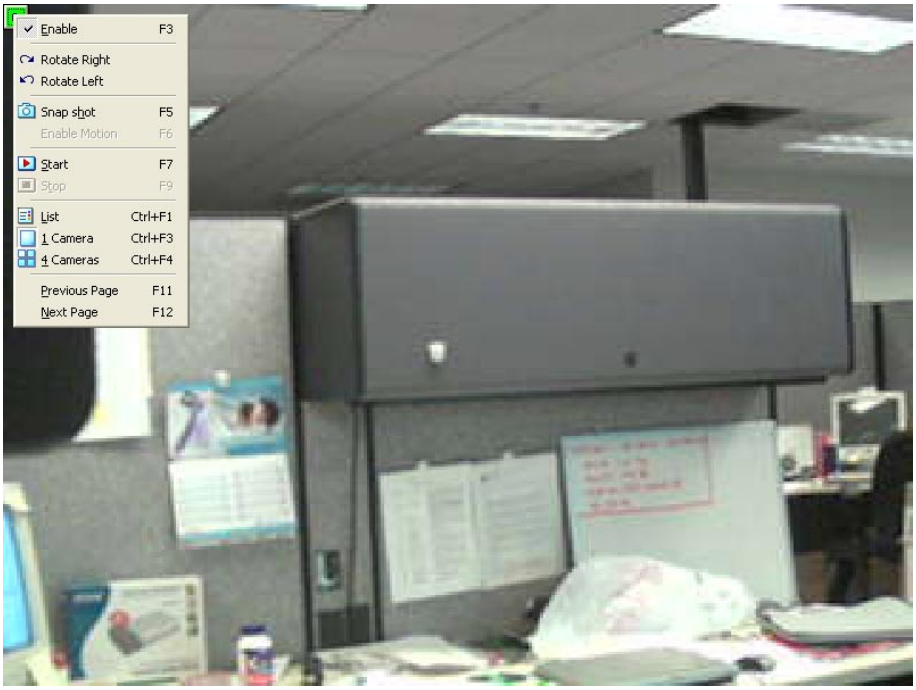
Option to modify the User Name and Password for IPView Lite. The hot key is **F10**.

Context Sensitive Menu

In **List View** format, highlight a camera and right-click to bring up a context sensitive menu for features such as **Add, Delete, Property, Enable,** and **Snap shot** and **Start/ Stop** recordings.



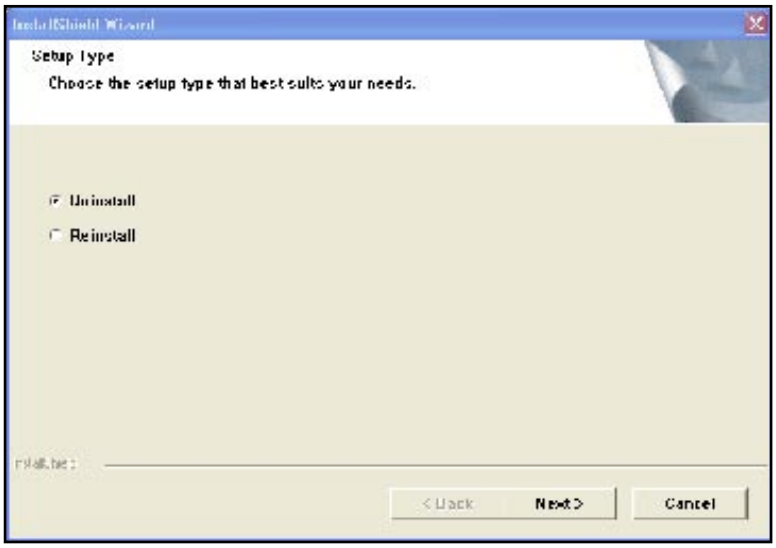
In **View** mode format click on the icon located on the upper left corner of the screen and a case sensitive menu will appear (see below).



These features will be available: **Enable, Rotate Right, Rotate Left, Snap Shot, Start, List, 1 Camera or 4 Cameras, Previous Page** and **Next Page**.

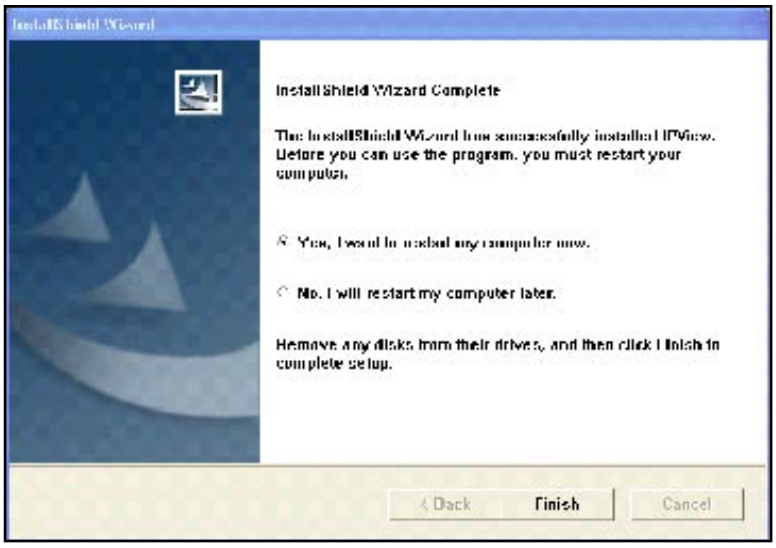
Uninstall IPView Application

Click on windows **Start Menu** > **Programs** > **IPView** > **Uninstall IPView**. A new prompt screen will be displayed like the one below confirming the removal. Choose the option that you want and click **Next** to continue the process or click on **Cancel** to reject the uninstall process.



After you click on **Next**, a **Confirm Uninstall** dialog box will appear. Click **OK** to continue the process.

The InstallShield Wizard prompt will appear. Click **Finish** to complete the uninstallation procedure.



Frequently Asked Questions

Internet Camera Features

1 What is an Internet Camera?

The Internet Camera is a standalone system connecting directly to an Ethernet or Fast Ethernet network and supported by the wireless transmission based on the IEEE 802.11g standard. It is different from the conventional PC Camera, the Internet Camera is an all-in-one system with built-in CPU and web-based solutions providing a low cost solution that can transmit high quality video images for monitoring. The Internet Camera can be managed remotely, accessed and controlled from any PC/Notebook over the Intranet or Internet via a Web browser.

2 What is the maximum number of users that can be allowed to access DCS-950G simultaneously?

The maximum number of users that can log onto the Internet Camera at the same time is 8. Please keep in mind the overall performance of the transmission speed will slow down when multiple users are logged on.

3 What algorithm is used to compress the digital image?

The Internet Camera utilizes MPEG-4 Simple Profile image compression technology to provide high quality images. MPEG-4 Simple Profile is a standard for image compression and can be applied to various web browser and application software without the need to install extra software.

4 Can I capture still images from the Internet Camera?

Yes you are able to capture still images with the snapshot function from the IPView Lite application supplied with the Internet Camera CD-ROM. You may also record snapshots using the snapshot feature on the Home page. When viewing this page, press the **"snapshot"** button on your Web browser to capture the image and save to your hard drive.

5 Can the Internet Camera be used outdoors?

The Internet Camera is not weatherproof. It needs to be equipped with a weatherproof case to be used outdoors and it is not recommended.

6 What network cabling is required for the Internet Camera?

The Internet Camera uses Category 5 UTP Twisted-pair cable allowing 10 Base-T and 100 Base-T networking.

7 Can the Internet Camera be setup as a PC-cam on the computer?

No, the Internet Camera is used only on Ethernet and Fast Ethernet network or supported by wireless transmission. The D-Link DSB-C110, DSB-C310 can be used as a PC Camera (Webcam).

8 Can the Internet Camera be connected on the network if it consists of only private IP Addresses?

Yes, the Internet Camera can be connected to a LAN with private IP Addresses.

9 Can the Internet Camera be installed if a firewall exists on the network?

If a firewall exists on the network, port 80 is open for ordinary data communication. You will need to do port forwarding by opening a port to the camera. Please refer to your firewall's product manual for detailed instructions.

10 Why can't I access the Internet Camera from a Web browser.

The possible cause might be the IP Address for the Internet Camera is already being used by another device. To correct the possible problem, you need to first disconnect the Internet Camera from the network. Then run the PING utility (follow the instructions in the section titled "PING Your IP Address:). If there is a reply, it indicates that there is another device on the network with the same IP address. You will need to run the Install Wizard again and change the IP address of the camera.

Other possible problems might be due to the network cable. Try replacing your network cable. Test the network interface of the product by connecting a local computer directly to the unit, utilizing a standard Crossover Cable, and run the PING utility. If the problem is not solved, the Internet Camera might be faulty.

Internet Camera Installation

11 Why does the Power LED not light up constantly?

The power supply used might be at fault. Confirm that you are using the provided power supply, which is DC 5V, for the Internet Camera and verify that the power supply is well connected.

12 Why does the LAN LED not light up properly?

There might be a problem with the network cable. To confirm that the cables are working, PING the address of a known device on the network. If the cabling is OK and your network is reachable, you should receive a reply similar to the following (…bytes = 32 time = 2 ms).

Another possible problem may be that the network device utilized by the Internet Camera is not functioning properly, such as hubs or switches. Confirm the power for the devices are well connected and functioning properly.

13 Why does the Internet Camera work locally but not externally?

This might be caused by the firewall protection. Check the Internet firewall with your system administrator. The firewall may need to have some settings changed in order for the Internet Camera to be accessible outside your local LAN. Refer to page 48 for more information about installing your camera behind a router.

Make sure that the Internet Camera isn't conflicting with any web server you may have running on your network.

The default router setting might be a possible reason. Check that the configuration of the router settings allow the Internet Camera to be accessed outside your local LAN.

14 Why does a series of broad vertical white lines appear through out the image?

It could be that the CMOS sensor (a square panel situated behind the lens that measures the light signals and changes it into a digital format so your computer can present it into an image that you are familiar with) has become overloaded when it has been exposed

to bright lights such as direct exposure to sunlight or halogen lights. Reposition the Internet Camera into a more shaded area immediately as prolonged exposure to bright lights will damage the CMOS sensor.

15 The focus on the Internet Camera is bad, how can I correct it?

Adjust the Internet Camera focus manually as described in the section titled "Adjusting the Camera Focus" on page 89.

16 Noisy images occur. How can I solve the problem?

The video images might be noisy if the Internet Camera is used in a very low light environment. To solve this issue you need more lighting, or click on the **Nightshot** button on the Home page.

17 The images are poor quality, how can I improve the image quality?

Make sure that your computers display properties are set to at least 6-bit color. Using 16 or 256 colors on your computer will produce dithering artifacts in the image, making the image look as if it is of poor quality.

The configuration on the Internet Camera image display is incorrect. Through the Web Configuration Video section of the web management you need to adjust the image related parameters for improved images such as: brightness, contrast, hue and light frequency. Please refer to the Web Configuration section for detailed information.

18 Why are no images available through the Web browser?

The ActiveX might be disabled. If you are viewing the images from Internet Explorer make sure ActiveX has been enabled in the Internet Options menu. You may also need to change the security settings on your browser to allow the ActiveX plug-in to be installed.

If you are using Internet Explorer with a version number of lower than 5, then you will need to upgrade your Web browser software in order to view the streaming video transmitted by the Internet Camera.

How to Ping Your IP Address

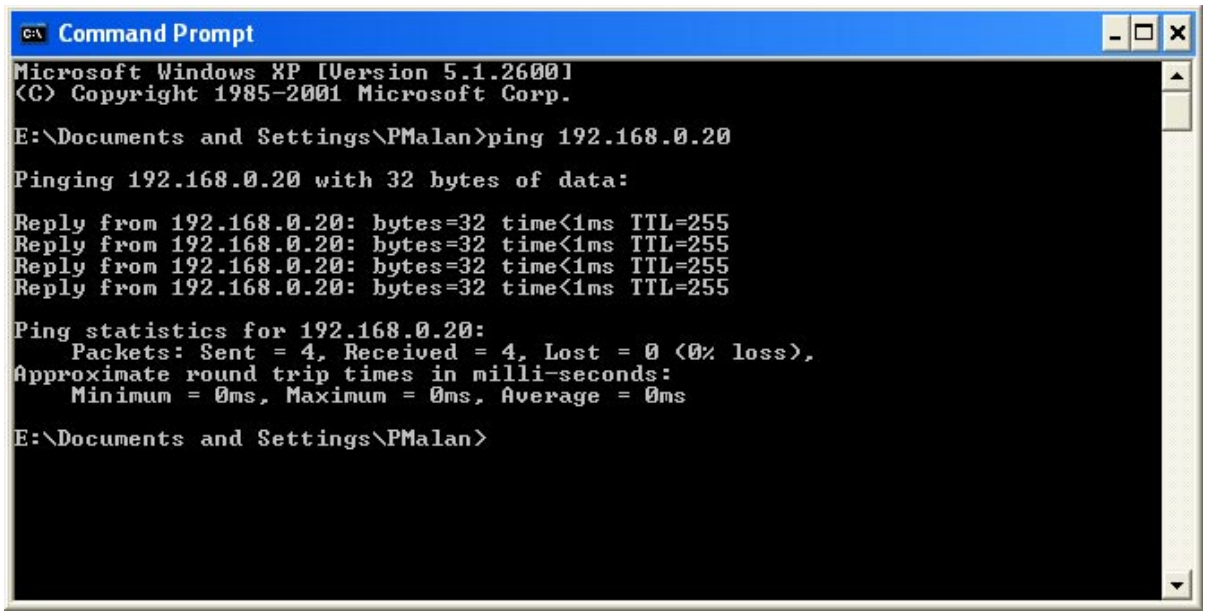
The PING (Packet Internet Groper) command can determine whether a specific IP Address is accessible by sending a packet to the specific address and waiting for a reply. It is a very useful tool to confirm if the IP Address conflicts with the Internet Camera over the network.

Follow the step-by-step procedure below to utilize the PING command.

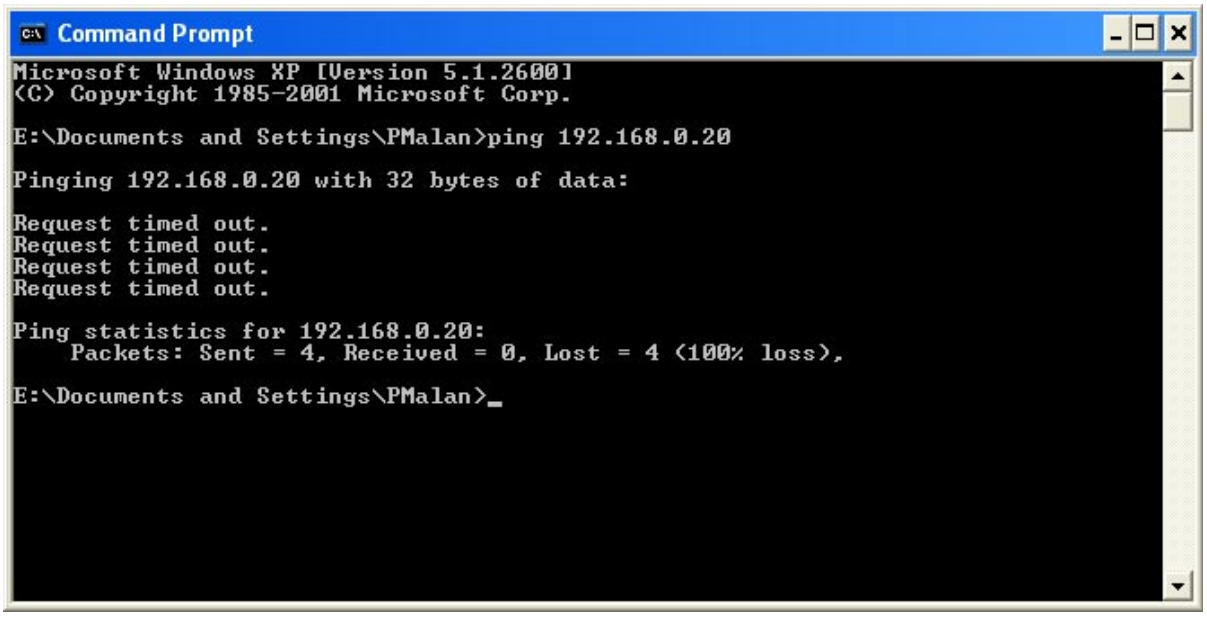
Start a DOS window Start>Program>Accessories>Command Prompt

Type ping x.x.x.x, where x.x.x.x is the IP Address of the Internet Camera.

A successful connection to the camera will be indicated by 4 reply statements (below).



If you fail to connect to your camera you will see the following:



Check to see if you have entered your camera's IP Address correctly or reassign your camera's IP Address.

Time Zone Table

GMT stands for Greenwich Mean Time, which is the global time that all time zones are measured from.

(GMT-12:00) International Date Line West
(GMT-11:00) Midway Island, Samoa
(GMT-10:00) Hawaii
(GMT-09:00) Alaska
(GMT-08:00) Pacific Time (US & Canada); Tijuana
(GMT-07:00) Arizona
(GMT-07:00) Chihuahua, La Paz, Mazatlan
(GMT-07:00) Mountain Time (US & Canada)
(GMT-06:00) Central America
(GMT-06:00) Central Time (US & Canada)
(GMT-06:00) Guadalajara, Mexico City, Monterrey
(GMT-06:00) Saskatchewan
(GMT-05:00) Bogota, Lima, Quito
(GMT-05:00) Eastern Time (US & Canada)
(GMT-05:00) Indiana (East)
(GMT-04:00) Atlantic Time (Canada)
(GMT-04:00) Caracas, La Paz
(GMT-04:00) Santiago
(GMT-03:30) Newfoundland
(GMT-03:00) Brasilia
(GMT-03:00) Buenos Aires, Georgetown
(GMT-03:00) Greenland
(GMT-02:00) Mid-Atlantic
(GMT-01:00) Azores
(GMT-01:00) Cape Verde Is.
(GMT) Casablanca, Monrovia
(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, Lo
(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, W
(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Pra
(GMT+01:00) Brussels, Copenhagen, Madrid, Paris
(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb
(GMT+01:00) West Central Africa
(GMT+02:00) Athens, Istanbul, Minsk
(GMT+02:00) Bucharest
(GMT+02:00) Cairo
(GMT+02:00) Harare, Pretoria
(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius

(GMT+03:30) Tehran
(GMT+04:00) Abu Dhabi, Muscat
(GMT+04:00) Baku, Tbilisi, Yerevan
(GMT+04:30) Kabul
(GMT+05:00) Ekaterinburg
(GMT+05:00) Islamabad, Karachi, Tashkent
(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
(GMT+05:45) Kathmandu
(GMT+06:00) Almaty, Novosibirsk
(GMT+06:00) Astana, Dhaka
(GMT+06:00) Sri Jayawardenepura
(GMT+06:30) Rangoon
(GMT+07:00) Bangkok, Hanoi, Jakarta
(GMT+07:00) Krasnoyarsk
(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
(GMT+08:00) Irkutsk, Ulaan Bataar
(GMT+08:00) Kuala Lumpur, Singapore
(GMT+08:00) Perth
(GMT+08:00) Taipei
(GMT+09:00) Osaka, Sapporo, Tokyo
(GMT+09:00) Seoul
(GMT+09:00) Yakutsk
(GMT+09:30) Adelaide
(GMT+09:30) Darwin
(GMT+10:00) Brisbane
(GMT+10:00) Canberra, Melbourne, Sydney
(GMT+10:00) Guam, Port Moresby
(GMT+10:00) Hobart
(GMT+10:00) Vladivostok
(GMT+11:00) Magadan, Solomon Is., New Caledonia
(GMT+12:00) Auckland, Wellington
(GMT+12:00) Fiji, Kamchatka, Marshall Is.
(GMT+13:00) Nuku'alofa

Adjusting the Camera Focus

To help you get the best image quality, keep in mind that while adjusting the DCS-950G focus you can preview the image quality from your Web browser.

Camera Lens

Adjust by turning clockwise or counter-clockwise.

Note: You can further adjust the Internet Camera's image quality through the Web Configuration under Advanced > Video. Please refer to the Web Configuration section for further details.

Warning:

Direct exposure to sunlight may cause permanent damage to the CMOS sensor. Therefore do not expose the Internet Camera's lens directly to sunlight.

The Internet Camera is designed for indoor usage and if your application requires prolonged exposure to sunlight, a sun visor is recommended to protect the Internet Camera.

Technical Specifications

Video specification	
Resolution:	640 x 480 pixel
Sensor:	1/4" color CMOS sensor
Gain control:	Automatic
Exposure:	Automatic
White Balance:	Automatic
Shutter:	Electronics 1/60 ~ 1/15000 sec
Minimum Illumination:	0.5lux@f1.8, 3000K color
Focal Length:	6.0 mm
Aperture:	F=1.8

Image (Video Setting)	
Image compression:	JPEG
Frame rate:	30fps@QSIF, SIF, VGA
Compression Rate selection:	5 level (Very Low, Low, Medium, High, Very High)
Frame rate setting:	1, 5, 7, 15, 20, auto (depends on the video format)
Video resolution:	160x120, 320x240, 640x480
Brightness control:	Range 1- 128
Contrast control:	Range 1- 128
Hue control:	Range 1- 128

System Hardware	
LAN Connector:	One RJ-45 port to connect to 10/100Mbps Ethernet, auto-sensed, auto MDI/X
LED Indicator:	Power LED (Orange)
	LAN Activity LED (Green)

Power Supply:	DC 5V/2.5A, switching type
Power Communication:	4.5 Watt (900mA x 5V)

Communication Support

Communication:	10/100Mbps Ethernet and Fast Ethernet only
	2.4 802.11G Wireless 54Mbps
Communication protocol:	HTTP, TCP/IP, UDP, ARP, ICMP, BOOTP, RARP, DHCP, PPPoE

Web Configuration Requirements:

- Internet Explorer 6.0 or above
- CPU: Pentium II, 266 MHz or above
- Memory Size: 32 MB (64 MB recommended)
- VGA card resolution: 800x600 or above
- ActiveX Control requires IE6.0 or above

PC Requirements for IPView Lite:

- Windows XP, Windows 2000, Windows Me, Windows 98SE
- Pentium III, 850 MHz CPU or above
- 128 MB (256 MB Recommended)

EMI & Safety:	FCC, CE, VCCI

Contacting Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product.

U.S. and Canadian customers can contact D-Link technical support through our web site, or by phone.

Tech Support for customers within the United States:

D-Link Technical Support over the Telephone:

(877) 453-5465

24 hours a day, seven days a week.

D-Link Technical Support over the Internet:

http://support.dlink.com

email:support@dlink.com

Tech Support for customers within Canada:

D-Link Technical Support over the Telephone:

(800) 361-5265

Monday to Friday 7:30am to 12:00am EST

D-Link Technical Support over the Internet:

http://support.dlink.ca

email:support@dlink.ca

When contacting technical support, please provide the following information:

- *Serial number of the unit*
- *Model number or product name*
- *Software type and version number*

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

· Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and

· Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty: D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

· Hardware (excluding power supplies and fans): One (1) year

· Power supplies and fans: One (1) year

· Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty: D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided

Non-Applicability of Warranty: The Limited Warranty provided hereunder for hardware and software of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim: The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same.

- The original product owner must obtain a Return Material Authorization ("RMA") number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA numbermust be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.

- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link.Products shall be fully insured by the customer. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

- Return Merchandise Ship-To Address

  USA: 17595 Mt. Herrmann, Fountain Valley, CA 92708

  Canada: 2180 Winston Park Drive, Oakville, ON, L6H 5W1

  (Visit http://www.dlink.ca for detailed warranty information within Canada)

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered: This limited warranty provided by D-Link does not cover: Products, if in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this Warranty.

Disclaimer of Other Warranties: EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability: TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law: This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This limited warranty provides specific legal rights and the product owner may also have other rights which vary from state to state.

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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.

FCC Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the 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 communication. 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:

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

For detailed warranty outside the United States, please contact corresponding local D-Link office.

FCC Caution:

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment; such modifications could void the user's authority to operate the equipment.

(1) The devices are restricted to indoor operations within the 5.15 to 5.25GHz range. (2) For this device to operate in the 5.15 to 5.25GHz range, the devices must use integral antennas.

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.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this equipment must be installed to provide a separation distance of at least eight inches (20 cm) from all persons.

This equipment must not be operated in conjunction with any other antenna.

Registration

Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

05/13/05