



DSL-302G
ADSL Modem
User's Guide

Second Edition
April 2003

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FCC Warning

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.

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 communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning 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.

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About This User's Guide

This user's guide provides instructions on how to install the DSL-302G ADSL Modem and use it to connect a computer or Ethernet LAN to the Internet.

If you are using a computer with a functioning Ethernet port, the quickest and easiest way to set up the DSL-302G is to insert the Installation CD into the CD-ROM drive of your computer and follow the instructions provided in the Quick Installation Guide, or just click the "Install DSL-302G" link on the initial pop-up menu that appears shortly after inserting the CD and follow the instructions as they are presented. If the menu fails to appear, explore the CD and find the file "dsl302g.exe" and double-click it to launch the installation software.

Guide Overview

Introduction – Describes the DSL-302G ADSL Modem and its key features. Provides an introduction to ADSL. Lists standards to which the Modem complies. Contains a packing list.

Hardware Installation – Discusses how to connect the Modem to an Ethernet LAN.

First Time Set Up – Provides information on how to access the web-based manager through the Ethernet interface and configure the Modem to establish the ADSL connection without using the automatic installation software.

Web-based Configuration – Describes how to use the web-based manager to change Modem settings and configure additional virtual connections (PVCs).

Install the USB Driver – Provides a description of the USB driver installation procedure and describes how to change the IP settings for the IP interface of the USB connection.

Appendix A - Technical Specifications – Lists the technical specifications of the Modem, including standards compliance.

Appendix B - Ethernet Diagnostic Utility – An introduction to and description of the Ethernet Diagnostic Utility software included with the DSL-302G.

Appendix C - Low Pass Filters – Contains illustrated examples of how to use low pass filters.

Before You Start

Please read and make sure you understand all the prerequisites for proper installation of your new Modem. Have all the necessary information and equipment on hand before beginning the installation.

Installation Requirements

To install and use the Modem you need a computer equipped with an Ethernet port (such as an Ethernet NIC) and a web browser. You may also need to use information given to you by your ISP or ADSL service provider. This information is stored in the Modem's memory and used to establish the ADSL connection and confirm your identity. Read the next page for more details about these requirements.

Low Pass Filters

Since ADSL and telephone services share the same copper wiring to carry their respective signals, a filtering mechanism may be necessary to avoid mutual interference. A low pass filter device can be installed for each telephone that shares the line with the ADSL line. These filters are easy to install passive devices that connect to the ADSL device and/or telephone using standard telephone cable. Ask your service provider for more information about the use of low pass filters with your installation. Appendix B provides illustrated examples of how to install two common styles of low pass filters.

Operating System

The DSL-302G uses an HTML-based web interface for setup and management. The web configuration manager may be accessed using any operating system capable of running web browser software. Computer using the USB port to connect to the Modem must install additional software. The additional software will run on Windows operating systems.

Web Browser

Any common web browser can be used to configure the Modem using the web configuration management software. The program is designed to work best with more recently released browsers such as Microsoft Internet Explorer® version 5.0, Netscape Navigator® version 4.7, or later versions. The web browser must have JavaScript enabled. JavaScript is enabled by default on many browsers. Make sure JavaScript has not been disabled by other software (such as virus protection or web user security packages) that may be running on your computer.

Ethernet Port (NIC Adapter)

Any computer that uses the Modem must be able to connect to it through the Ethernet port on the Modem. This connection is an Ethernet connection and therefore requires that your computer be equipped with an Ethernet port as well. Most notebook computers are now sold with an Ethernet port already installed. Likewise, most fully assembled desktop computers come with an Ethernet NIC adapter as standard equipment. If your computer does not have an Ethernet port, you must install an Ethernet NIC adapter before you can use the Modem. If you must install an adapter, follow the installation instructions that come with the Ethernet NIC adapter.

USB Port

The Modem's USB Port can be used for Internet access and for Ethernet LAN functions. To use the USB port a software driver must be installed on the system using it. To install the USB driver insert the Installation CD into the CD-ROM drive of the computer that will use the USB connection and click the "Install DSL-302G" link in the window that pops up. The DSL-302G supports USB connection for computers running Windows 98SE, 2000, Me and XP.

Additional Software

It may be necessary to install software on your computer that enables the computer to access the Internet (through computers operated by your ISP or service provider). Additional software must be installed if you are using what is called a "bridged" connection. For a bridged connection, the information needed to make and maintain the Internet connection is stored on your computer, not in the Modem. This type of connection is similar to the arrangement used for analog dial-up modems, but the connection speed is much faster. Various terms are to describe a bridged ADSL connection including the term "RFC 1483 Bridge" which is used in this guide.

If your ADSL service is delivered through a PPP (Point to Point Protocol) connection, the information needed to establish and maintain the Internet connection is stored in the Modem. In this case, it is not necessary to install software on your computer.

Account Information (User Name and Password)

Most users will need to supply a user name and password used to access the service provider's network (and ultimately, the Internet). This information is stored either in the Modem's memory or on your computer depending on the type of ADSL connection you have.

ACCOUNT INFORMATION (PPP Connections Only)
User Name:
Password:

Additional PVC Settings

If you are using multiple virtual connections it will be necessary to provide additional VPI and VCI values for the device. These numbers define a unique route used on the ATM backbone of the WAN. Chapter 5 contains instruction on how to set up additional PVCs for accounts using more than one virtual connection.

About Bridged Ethernet Connections (RFC 1483)

Using this method, the DSL-302G acts as a transparent bridge, and is invisible to other devices on both the WAN (wide area network) and LAN (local area network) side of the bridge. It is "invisible" in the sense that it does not have an IP address associated with it. Every device connected to the WAN must have an IP address to be "seen" on the IP network. Devices that connect to the Internet have a "global" IP address that is unique and is used to identify the device so that it can send and receive data.

All connections to the Internet require a global IP address. It is therefore necessary to provide some means of acquiring global IP settings for your account. For bridged connections, the global IP settings must reside in a TCP/IP enabled device on the LAN side of the bridge, such as a computer, a server or a firewall device. The IP address can be assigned in a number of ways. Your network service provider will give you instructions about any additional connection software or NIC configuration that may be required.

About IPoA Connections (RFC 1577)

IP over ATM connections may require global IP settings for the device. Your service provider will give you IP settings information if needed. Some IPoA connections function like peer-to-peer connections and therefore do not require IP settings on the WAN interface.

Packing List

Open the shipping carton and carefully remove all items. In addition to this User's Guide, ascertain that you have:

1. One DSL-302G ADSL Ethernet Modem
2. One CD-ROM with this User's Guide, USB Device Driver and Ethernet Diagnostic Utility
3. One twisted-pair telephone cable used for ADSL connection
4. One straight-through Ethernet cable
5. One AC power adapter suitable for your electric service
6. One USB Cable

Introduction

This section provides a brief description of the Modem, its associated technologies and a list of Modem features.

What is ADSL?

Asymmetric Digital Subscriber Line (ADSL) is broadband access technology that provides high-speed digital data transmission and interactive multimedia applications for business and residential customers over ordinary telephone line.

ADSL greatly increases the signal carrying capacity of copper telephone lines without interfering with regular telephone services. For the ADSL user, this means faster downloads and more reliable connectivity. ADSL devices enable high-speed Internet access without any loss of quality or disruption of telephone services.

ADSL provides a dedicated service over a single telephone line operating at speeds of up to 8 Mbps downstream and up to 640 Kbps upstream. A secure point-to-point connection is established between the user and the central office of the service provider.

D-Link ADSL devices incorporate the recommendations of the ADSL Forum regarding framing, data format, and upper layer protocols.

Modem Description and Operation

The DSL-302G ADSL Modem is designed to provide a simple, cost-effective and secure ADSL Internet connection for your small to medium-sized private network. The ADSL connection technology enables many interactive multi-media applications such as video conferencing and collaborative computing.

The Modem is easy to install and use. The DSL-302G connects to an Ethernet LAN or single computer via a standard Ethernet interface. The ADSL connection is made using ordinary twisted-pair telephone line with standard RJ-11 connectors.

Modem Features

The DSL-302G ADSL Ethernet Modem utilizes the latest ADSL enhancements to provide a reliable Internet portal suitable for most small to medium sized offices. DSL-302G advantages include:

- Network Address Translation (NAT) allows simultaneous connection of two computers via USB and Ethernet ports
- Data rates up to 8 Mbps for downstream and 640 Kbps for upstream
- Friendly web-based graphical user interface for configuration and management
- Supports up to eight simultaneous virtual connections for a single ADSL account
- Supports T1.413 issue 2, G.dmt and G.lite standards
- Auto-handshake and rate adaptation for different ADSL flavors
- Widest range of DSLAM interoperability
- Supports bridged Ethernet over ATM (RFC 2684)
- Built-in MIBs for SNMP management
- Upgradeable firmware through TFTP

Front Panel & LED Indicators

Place the Modem in a location where the LED indicators can be easily viewed.



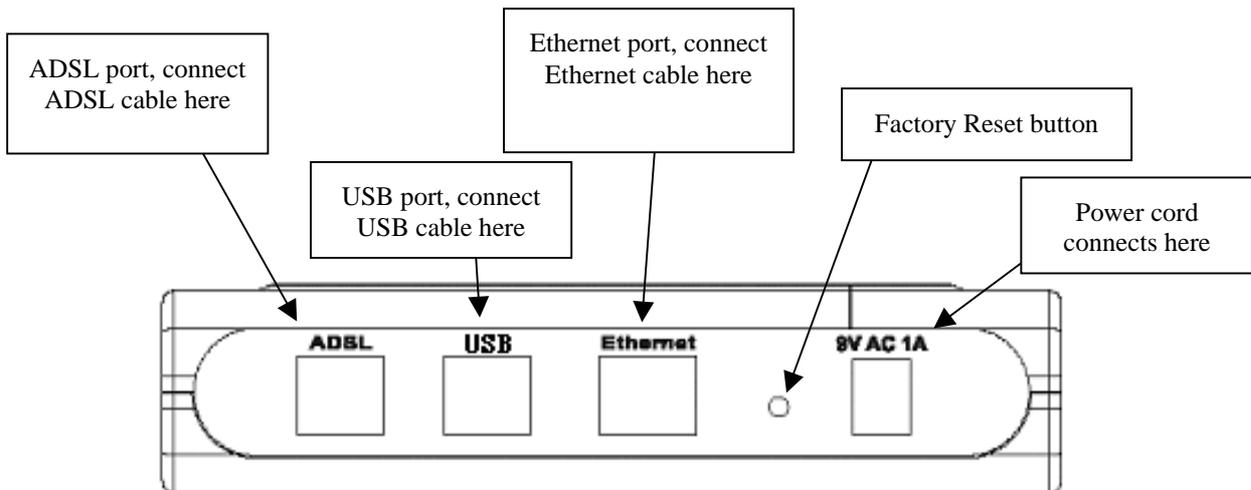
Front Panel Display with LED Indicators

The LED Indicators read as follows:

Power	Steady green light indicates the unit is powered on.
Status	Blinking green indicates normal operation.
ADSL: Link/Act	Steady green light indicates a valid ADSL connection. This will light after the ADSL negotiation process has been settled. Blinking green light indicates an active WAN session.
Ethernet: Link/ Act	Steady green light indicates a valid Ethernet connection. Blinking green indicates an active Ethernet session.
USB: Link/ Act	Steady green light indicates a valid USB connection. Blinking green indicates an active USB session.

Rear Panel

All cable connections to the Modem are made at the rear panel. The factory-reset button is located here as well.



Rear Panel Cable and Power Connections

Connecting the Modem

In this chapter you will learn about the various physical connections you will need to make in order to use the Modem.

When selecting the location for the Modem, allow ample room to access the connections on the rear panel. Allow some space above the Modem for ventilation to avoid problems with overheating. For convenience, try to place the Modem near your computer so you can monitor the LED indicators.



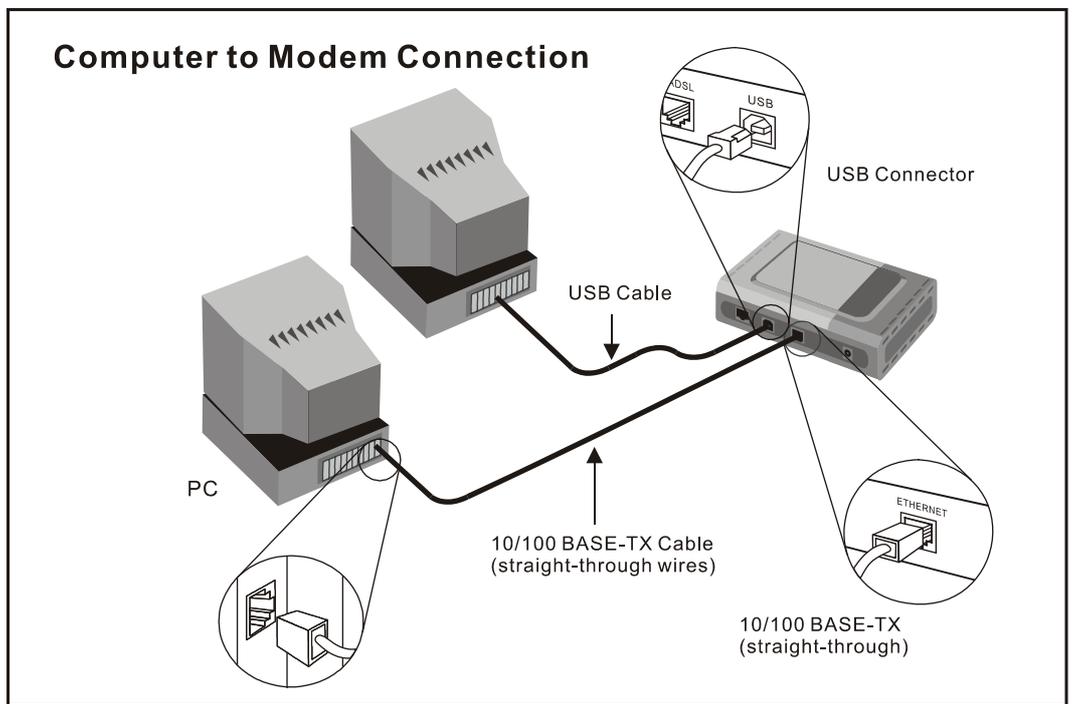
Note

The LED indicators can also be viewed on the desktop of your computer if you install the Ethernet Diagnostic Utility software shipped with the device.

Connect ADSL Line

Use the twisted-pair ADSL cable (standard telephone cable) included with the Modem to connect it to your telephone line. Simply plug one end of the cable into the ADSL port (RJ-11 receptacle) on the rear panel of the Modem and insert the other end into the wall jack.

Computer to Modem Connection



PC to Modem Connection

You can connect the Modem directly to a 10/100BASE-TX Ethernet adapter card (NIC) installed on a PC using the Ethernet cable provided as shown in this diagram.

Connect Ethernet LAN to Modem

The Modem may be connected to any 10/100BASE-TX Ethernet LAN. Any connection to an Ethernet concentrating device such as a switch or hub must operate at a speed of 10/100 Mbps only. When connecting the Modem to any Ethernet device that is capable of operating at speeds higher than 10Mbps, be sure that the device has auto-negotiation (NWay) enabled for the connecting port.

Use standard twisted-pair cable with RJ-45 connectors. The RJ-45 port on the Modem is a crossed port (MDI-X). Follow standard Ethernet guidelines when deciding what type of cable to use to make this connection. When connecting the Modem directly to a PC or server use a normal straight-through cable. You should use a crossed cable when connecting the Modem to a normal (MDI-X) port on a switch or hub. Use a normal straight-through cable when connecting it to an uplink (MDI-II) port on a hub or switch. The Ethernet Link LED indicator will indicate a valid connection.

The rules governing Ethernet cable lengths apply to the LAN to Modem connection. Be sure that the cable connecting the LAN to the Modem does not exceed 100 meters.

Power On Modem

To power on the device:

1. Insert the AC Power Adapter cord into the power receptacle located on the back of the Modem and plug the adapter into a nearby power source.
2. You should see the Power LED indicator light up and remain lit.



Using a power supply with a different voltage rating than the one included with the DSL-302G will cause damage and void the warranty for this product.

USB Connection

The USB port on the DSL-302G can be connected to a single computer. A software driver must first be installed on the computer to use the USB interface. The driver is installed using the automatic installation software found on the Installation CD. Installing this software will create a new network connection with an IP address of 10.1.1.2 on the computer. This is the IP address used to access the management software through the USB connection. See Chapter 5 for instructions on installing the the USB driver on a computer running a Windows operating system.

First Time Set Up

The easiest way to set up the DSL-302G ADSL Modem is to simply insert the Installation CD into the CD-ROM drive of a computer you intend to use with the device, launch the automatic installation software and follow the instructions as they are presented. If you do not have the Installation CD or if you want to configure the Modem through the Ethernet interface without using the auto-installation software read this section.

If you intend to use the USB interface you must first install the USB driver from the Installation CD. Read Chapter 5 for information on how to install the USB driver or use the automatic installation software on the Installation CD.

Installation Overview

The steps listed here are a summary of the procedure used to access the management software and configure the Modem without using the automatic installation software.

1. Connect the Modem and power it on as described in the previous section.
2. Change the IP settings of your computer so you can access the web-based configuration software through the Ethernet port. The factory default Ethernet LAN IP settings for the Modem are:
IP Address = **10.1.1.1** Subnet Mask = **255.0.0.0**
3. Configure the Modem using information given to you by your service provider. The Modem uses this information to establish the ADSL connection to the WAN.
4. Save the settings and restart the Modem.

Configuring IP Settings on Your Computer

In order to configure your system to receive IP settings from the Modem it must first have the TCP/IP protocol installed. If you have an Ethernet port on your computer, it probably already has TCP/IP protocol installed. If you are using Windows XP the TCP/IP is enabled by default for standard installations. Below is an illustrated example of how to configure a Windows XP system to automatically obtain IP settings from the Modem. Following this example is a step-by-step description of the procedures used on the other Windows operating systems to first check if the TCP/IP protocol has been installed, if it is not instructions are provided for installing it. Once the protocol has been installed you can configure the system to receive IP settings from the Modem.

For computers running non-Windows operating systems, follow the instructions for your OS that configure the system to receive an IP address from the Modem, that is, configure the system to be a DHCP client.



Note

If you are using this Modem to provide Internet access for more than one computer, you can use these instructions later to change the IP settings for the other computers. However you cannot use the same IP address since every computer must have its own IP address that is unique on the local network.

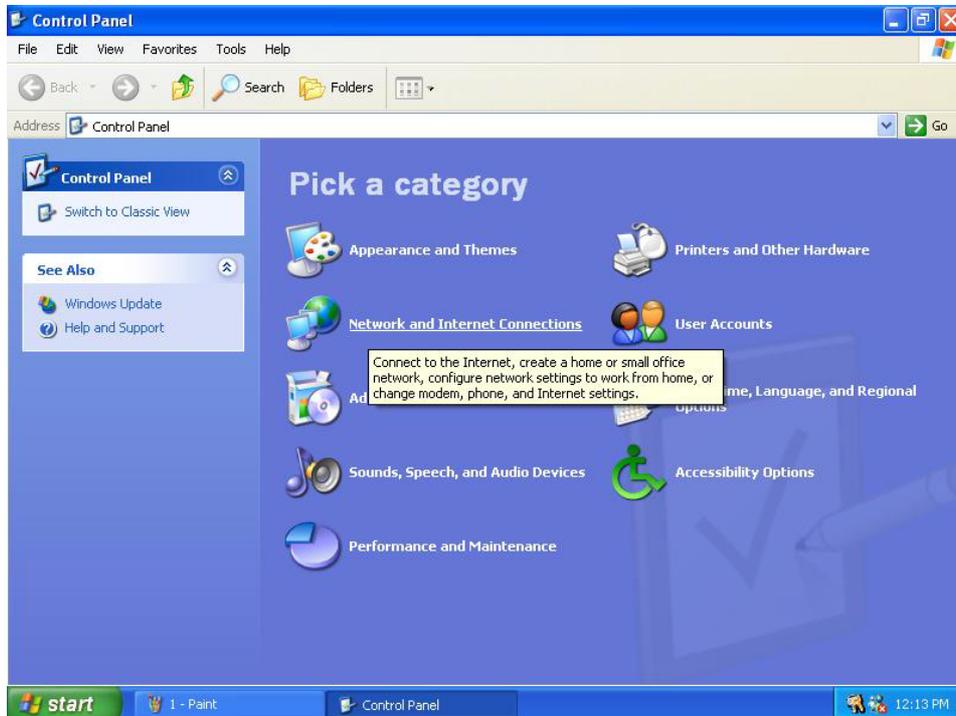
Configure Windows XP for DHCP

Use the following steps to configure a computer running Windows XP to be a DHCP client.

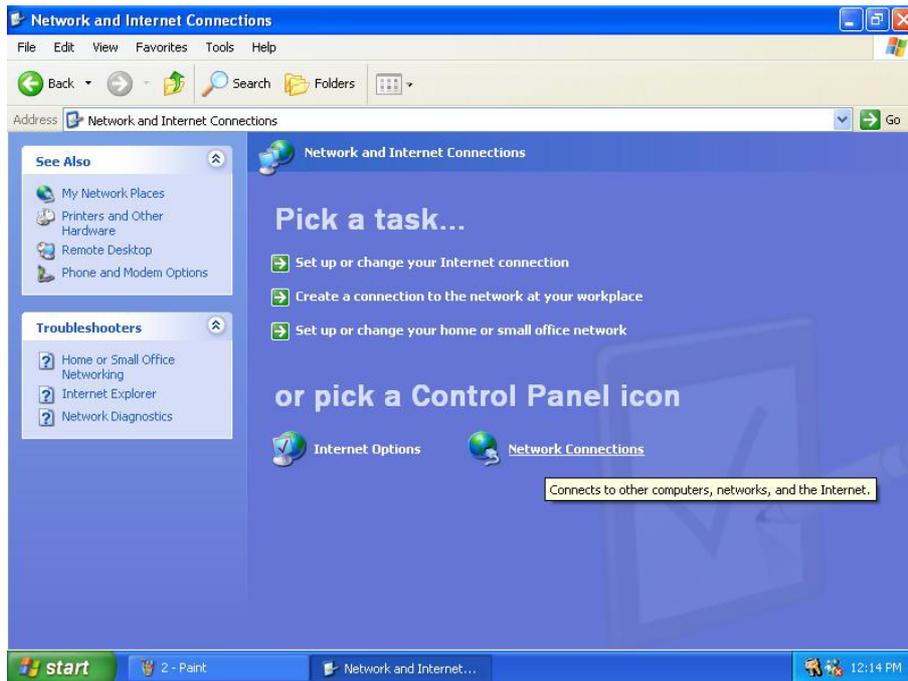
1. From the **Start** menu on your desktop, go to click on **Control Panel**.



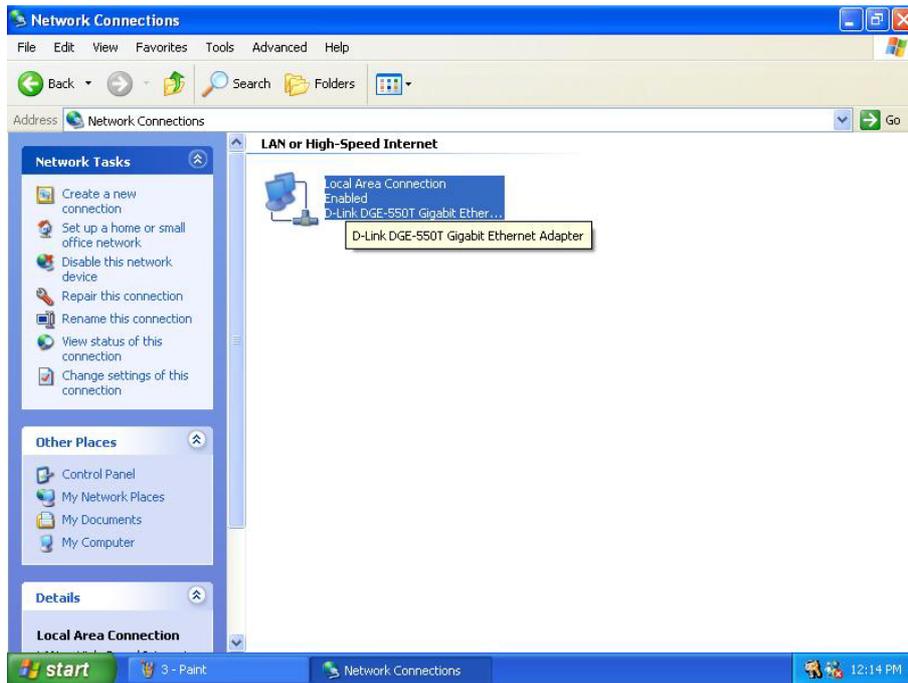
2. In the Control Panel folder, click on **Network and Internet Connections**.



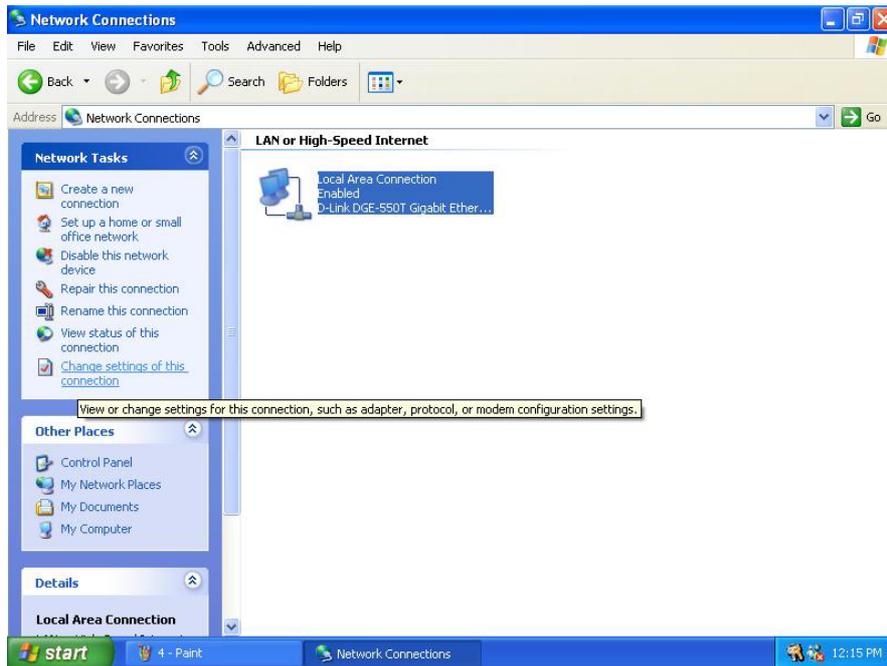
3. In the Network and Internet Connections folder, click on **Network Connections**.



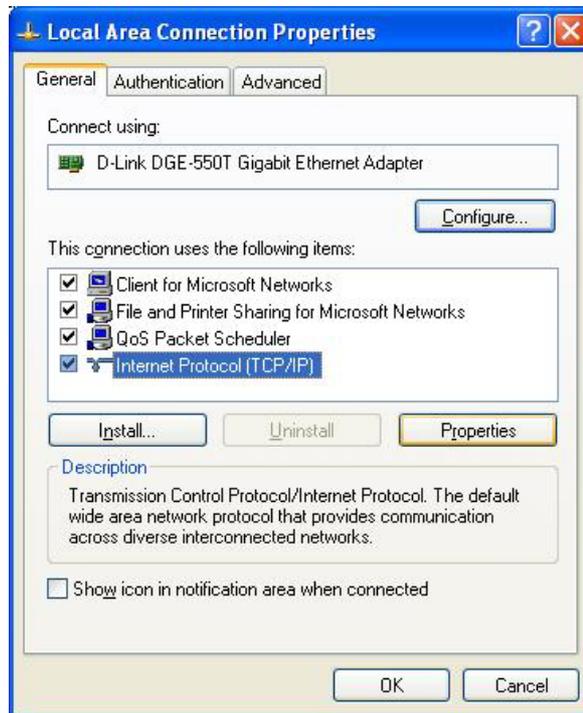
4. In the Network Connections folder, highlight the **Local Area Connection** icon by clicking on it once. A new option is revealed under Network Tabs in the left side panel.



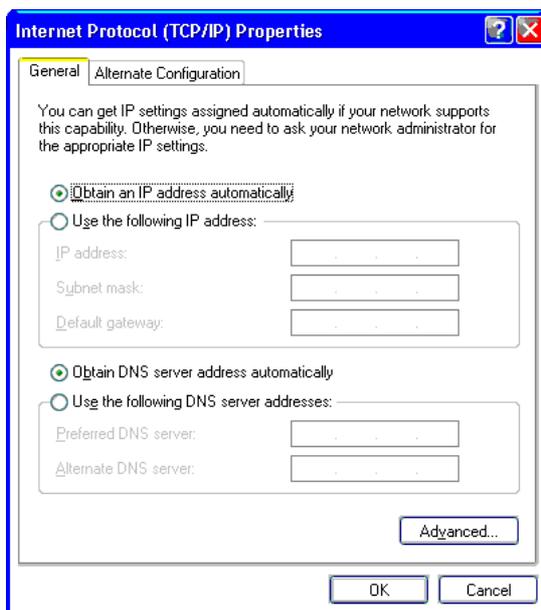
5. Click on **Change settings of the connection** under Network Tabs.



6. In the **General** Tab of the **Local Area Connection Properties** menu, highlight **Internet Protocol (TCP/IP)** under “This connection uses the following items:” by clicking on it once. Click on the **Properties** button.



7. Select "Obtain an IP address automatically" by clicking once in the circle. Click the **OK** button.



Your computer is now ready to use the Modem's DHCP server.

Windows 2000

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the Start button, point to **Settings**, and then click **Control Panel**.
2. Double-click the Network and Dial-up Connections icon.
3. In the Network and Dial-up Connections window, right-click the Local Area Connection icon, and then select **Properties**.
4. The Local Area Connection Properties dialog box displays with a list of currently installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled, skip ahead to *Configure Windows 2000 for DHCP*.
5. If Internet Protocol (TCP/IP) does not display as an installed component, click **Install**.
6. In the Select Network Component Type dialog box, select **Protocol**, and then click **Add**.
7. Select **Internet Protocol (TCP/IP)** in the Network Protocols list, and then click **OK**.
8. You may be prompted to install files from your Windows 2000 installation CD or other media. Follow the instructions to install the files.
9. If prompted, click **OK** to restart your computer with the new settings.

Configure Windows 2000 for DHCP

1. In the Control Panel, double-click the Network and Dial-up Connections icon.
2. In Network and Dial-up Connections window, right-click the Local Area Connection icon, and then select **Properties**.
3. In the Local Area Connection Properties dialog box, select **Internet Protocol (TCP/IP)**, and then click **Properties**.
4. In the Internet Protocol (TCP/IP) Properties dialog box, click the button labeled **Obtain an IP address automatically**.
5. Double-click **OK** to confirm and save your changes, and then close the Control Panel.

Your computer is now ready to use the Modem's DHCP server.

Windows ME

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the Start button, point to **Settings**, and then click **Control Panel**.
2. Double-click the Network and Dial-up Connections icon.
3. In the Network and Dial-up Connections window, right-click the Network icon, and then select **Properties**.
4. The Network Properties dialog box displays with a list of currently installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled. Skip ahead to *Configure Windows ME for DHCP*.
5. If Internet Protocol (TCP/IP) does not display as an installed component, click **Add**.
6. In the Select Network Component Type dialog box, select **Protocol**, and then click **Add**.
7. Select **Microsoft** in the Manufacturers box.
8. Select **Internet Protocol (TCP/IP)** in the Network Protocols list, and then click **OK**.
9. You may be prompted to install files from your Windows Me installation CD or other media. Follow the instructions to install the files.
10. If prompted, click **OK** to restart your computer with the new settings.

Configure Windows ME for DHCP

1. In the Control Panel, double-click the Network and Dial-up Connections icon.
2. In Network and Dial-up Connections window, right-click the Network icon, and then select **Properties**.
3. In the Network Properties dialog box, select **TCP/IP**, and then click **Properties**.
4. In the TCP/IP Settings dialog box, click the **Obtain an IP address automatically** option.
5. Double-click **OK** twice to confirm and save your changes, and then close the Control Panel.

Your computer is now ready to use the Modem's DHCP server.

Windows 95, 98

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the Start button, point to **Settings**, and then click **Control Panel**. Double-click the Network icon.
2. The Network dialog box displays with a list of currently installed network components. If the list includes TCP/IP, and then the protocol has already been enabled, skip to *Configure IP Information Windows 95, 98*.
3. If TCP/IP does not display as an installed component, click **Add**. The Select Network Component Type dialog box displays.
4. Select **Protocol**, and then click **Add**. The Select Network Protocol dialog box displays.
5. Click on **Microsoft** in the Manufacturers list box, and then click **TCP/IP** in the Network Protocols list box.
6. Click **OK** to return to the Network dialog box, and then click **OK** again. You may be prompted to install files from your Windows 95/98 installation CD. Follow the instructions to install the files.
7. Click **OK** to restart the PC and complete the TCP/IP installation.

Configure Windows 95, 98 for DHCP

1. Open the Control Panel window, and then click the Network icon.
2. Select the network component labeled TCP/IP, and then click **Properties**.
3. If you have multiple TCP/IP listings, select the listing associated with your network card or adapter.
4. In the TCP/IP Properties dialog box, click the IP Address tab.
5. Click the **Obtain an IP address automatically** option.
6. Double-click **OK** to confirm and save your changes. You will be prompted to restart Windows.
7. Click **Yes**.

When it has restarted your computer is ready to use the Modem's DHCP server.

Windows NT 4.0 workstations:

First, check for the IP protocol and, if necessary, install it:

1. In the Windows NT task bar, click the Start button, point to **Settings**, and then click **Control Panel**.
2. In the Control Panel window, double click the Network icon.
3. In the Network dialog box, click the Protocols tab.
4. The Protocols tab displays a list of currently installed network protocols. If the list includes TCP/IP, then the protocol has already been enabled. Skip to "Configure IP Information"
5. If TCP/IP does not display as an installed component, click **Add**.
6. In the Select Network Protocol dialog box, select **TCP/IP**, and then click **OK**. You may be prompted to install files from your Windows NT installation CD or other media. Follow the instructions to install the files.
7. After all files are installed, a window displays to inform you that a TCP/IP service called DHCP can be set up to dynamically assign IP information.
8. Click **Yes** to continue, and then click **OK** if prompted to restart your computer.

Configure Windows NT 4.0 for DHCP

1. Open the Control Panel window, and then double-click the Network icon.
2. In the Network dialog box, click the Protocols tab.
3. In the Protocols tab, select **TCP/IP**, and then click **Properties**.
4. In the Microsoft TCP/IP Properties dialog box, click the **Obtain an IP address automatically** option.
5. Click **OK** twice to confirm and save your changes, and then close the Control Panel.

Your computer is now ready to use the Modem's DHCP server.

Access the Web Configuration Manager

Once the computer has IP settings that allow it to access the web-based configuration software, you can change the settings to enable the Modem to connect to the Internet.

If the browser software on the computer you are using is configured to use a proxy server for Internet access, it is necessary to first disable the proxy connection.



Note

Be sure that the web browser on your computer is not configured to use a proxy server in the Internet settings. In Windows Internet Explorer, you can check if a proxy server is enabled using the following procedure:

- 1. In Windows, click on the START button, go to Settings and choose Control Panel.*
- 2. In the Control Panel window, double-click on the Internet Options icon.*
- 3. Click the Connections tab and click on the LAN Settings button.*
- 4. Verify that the "Use proxy server" option is NOT checked. If it is checked, click in the checked box to deselect the option and click OK.*

Alternatively you can access this Internet Options menu using the Tools pull down menu in Internet Explorer.

To use the web-based management software, launch your web browser software and use the LAN IP address of the Modem to access the management software. The default LAN IP address of the Modem is used in the Address bar of your web browser window. Type in **http://** followed by the default IP address, **10.1.1.1** in the address bar of the browser. The URL in the address bar should read: **http://10.1.1.1**

A new window appears prompting you for a user name and password needed to gain access the web configuration manager.

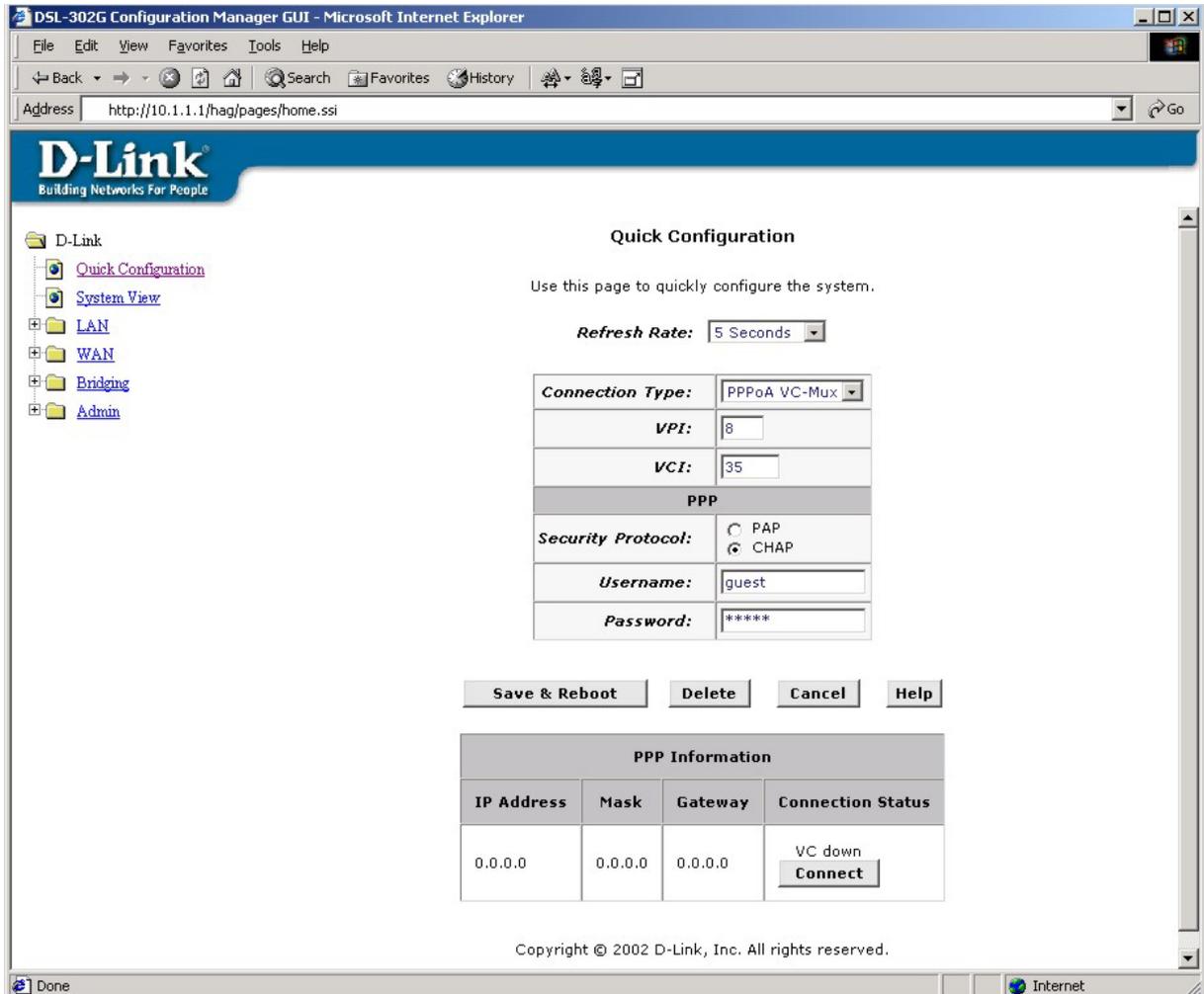
Use the default user name: **admin** and password: **admin** for first time set up. You can change the password once you have established the ADSL connection. The user name and password allows any computer on the same subnet as the Modem to access the web configuration manger. This password can also be used to Telnet to the device through the Ethernet or the Internet interfaces. To change this password, see the next chapter.



Note

Do not confuse the user name and password used to access the web-based manager with the ADSL account user name and password needed for PPP connections to access the ADSL or network service provider's network.

The first web page you will see when you successfully login is the Quick Configuration page. This page can be used to establish the ADSL connection.



Web-based Manager – First Time Log On

Use the Quick Configuration menu to change the Modem's configuration settings as instructed by your ISP. You will then need to save or the settings to the flash memory and reboot the Modem.



IMPORTANT

If you are using IPoA or a bridged Ethernet connection (RFC 1483) you cannot use the Quick Configuration menu to establish the connection. Please read the next chapter for instructions for using IPoA and bridged Ethernet connections.

Configure the Internet Connection (ADSL Service Connection)

All the settings necessary to establish the connection to your service provider's network and ultimately to the Internet can be configured in the Quick Configuration menu. Make sure you know what connection type is used for your ADSL service. Follow the steps below to establish the Internet connection:

1. Refresh Rate: Select "No Refresh" while doing the quick configuration.

Refresh Rate:

2. Default connection Type is *PPPoA VC-Mux* for most users. If necessary, change the Connection Type as specified by the service provider. Select *PPPoA LLC*, *PPPoA VC-Mux*, *PPPoE VC-Mux*, *PPPoE LLC*, from the pulldown menu.

Connection Type:	PPPoA VC-Mux
VPI:	PPPoA VC-Mux
VCI:	PPPoA LLC
	PPPoE VC-Mux
	PPPoE LLC
PPP	

3. If necessary, change the VPI/VCI values. Many users will use the default values VPI: 8 and VCI: 35.
4. Type in the Username or account number used to access the service provider's network.
5. Type in the Password for your account used to access the service provider's network.

Quick Configuration

Use this page to quickly configure the system.

Refresh Rate:

Connection Type:	PPPoA VC-Mux
VPI:	8
VCI:	35
PPP	
Security Protocol:	<input type="radio"/> PAP <input checked="" type="radio"/> CHAP
Username:	guest
Password:	*****

PPP Information			
IP Address	Mask	Gateway	Connection Status
0.0.0.0	0.0.0.0	0.0.0.0	VC down <input type="button" value="Connect"/>

Quick Configuration

Save & Reboot

When you have defined the Quick Configuration settings, click the Save & Reboot button to save the settings in temporary and reboot the system. The Modem will negotiate the ADSL connection automatically upon rebooting. This will normally take a few seconds. When the ADSL connection has been successfully established, the ADSL Link LED indicator will light steady green. If the ADSL Link indicator does not light after a minute or so access the web configuration manager and double check the settings.

Web-based Configuration

This chapter describes how to use the embedded web-based management software to configure the Modem for additional PVC connection profiles, to change the LAN IP address, to change the global WAN IP address and to perform other management functions.

Manager Interface Layout

The management software used for the Modem initially presents the Quick Configuration menu shown below when you first log in. On the left side you see folders and hyperlinks. The folders contain hyperlinks used to access configuration and management menus. The LAN folder is used for assigning LAN IP settings to the Ethernet and USB interfaces. The WAN folder is used to configure settings that allow the Modem to operate on the service provider's network. If you have a bridged Ethernet or IPoA connection, find the EOA and IPOA hyperlinks in the WAN folder to configure the settings for these connection types. The Bridging folder contains information regarding the virtual circuits and protocols. If you are using the Modem for multiple virtual connections, this menu is used to configure these additional virtual connections. The last folder, Admin, is used for administration and diagnostics procedures.

Quick Configuration

Use this page to quickly configure the system.

Refresh Rate: 5 Seconds

Connection Type:	PPPoA VC-Mux
VPI:	8
VCI:	35
PPP	
Security Protocol:	<input type="radio"/> PAP <input checked="" type="radio"/> CHAP
Username:	guest
Password:	*****

Save & Reboot Delete Cancel Help

PPP Information			
IP Address	Mask	Gateway	Connection Status
0.0.0.0	0.0.0.0	0.0.0.0	VC down Connect

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Modem Web-based Quick Configuration Manager GUI

Commonly Used Buttons

The following buttons are used throughout the web management application.

	Stores in <i>temporary</i> system memory any changes you have made on the current page.
	Redisplays the current page with updated statistics or settings.
	On pages that display accumulated statistics, this button resets the statistics to their initial values.
	Launches the online help for the current topic in a separate browser window. Help is available from the main topic pages.

Common Buttons Used in Configuration Manager

Quick Configuration

The Quick Configuration displays the settings you are most likely to need to change when you first set up the Modem. These settings are explained briefly below:

Refresh Rate	Select the time interval from the drop-down menu. The screen will be updated (refreshed) at this interval. If you do not want the page to automatically refresh, choose <i>No Refresh</i> .
Connection Type	Select <i>PPPoA LLC</i> , <i>PPPoA VC-Mux</i> , <i>PPPoE VC-Mux</i> , <i>PPPoE LLC</i> , from the pull-down menu.
VPI and VCI	These settings determine the unique data path your modem uses to communicate with your ISP. Do not change these unless you have been instructed to do so by your ISP. See ATM VC Configuration for more information on these settings.
Username and Password	Enter the username and password you use to log in to your ISP. Note: <i>this is not the same as the user name and password you used to log in to Web Configuration Manager.</i>

System View

The System View read-only table on the displays a summary of various system settings and functions as described in the table below. Red colored text headings in this display are hyperlinked to a relevant menu.

System View

Use this page to get the summary on the existing configuration of your device.

Refresh Rate: No Refresh ▾

Device		DSL					
Model:	DSL-302G	Operational Status: Startup Handshake					
S/W Version:	R2.01M.B12.AU (021206a/W78.1.7)	DSL Version: W78.1.7					
		Standard: G.dmt					
Mode:	Bridging	Up		Down			
Up Time:	0:31:7	Speed	Latency	Speed	Latency		
Time:	Thu Jan 01 02:27:32 1970	0 Kbps	-	0 Kbps	-		
Time Zone:	GMT						
Daylight Saving Time:	OFF						
Name:	-						
Domain Name:	-						
WAN Interfaces							
Interface	Encapsulation	IP Address	Mask	Gateway	Lower Interface	VPI/VCI	Status
ppp-0	PPPoA	0.0.0.0	0.0.0.0	0.0.0.0	aal5-0	8/35	VC down Connect

Modify
Refresh
Help

System View Display

Device	Displays the basic information about the device hardware and software versions, the system uptime, and the operating mode.
DSL	Displays the operational status and performance statistics for the DSL line.
WAN Interface	Displays the names and settings for the device WAN interfaces that communicate with your ISP via DSL, such as a PPP, EOA, or IPoA interface. <i>Most users will use a single connection labeled ppp-0.</i> Multiple software-defined interfaces may be configured to use the DSL connection. Click on the interface names to view the configuration menus for these interfaces. Each interface should display a lower interface name such as aal-5. Click on the lower interface name to view or change the ATM VC settings that this interface uses.

To change the system time, click the **Modify** button (see next page).

System Time

Synchronize to local PC time

1. Click **Modify** button on the **System View** (HOME menu) page to open the **System Parameters** configuration.
2. Click **Sync. with PC Time** button to synchronize the system time to local PC time.
3. Click **Submit**. A page displays to confirm your change.

System - Modify	
System Parameters	
Date:	Jan 01 1970
Time:	00 : 12 : 32
Time Zone:	GMT +0000 Greenwich Mean
Daylight Saving Time:	<input type="radio"/> ON <input checked="" type="radio"/> OFF
Name:	<input type="text"/>
Domain Name:	<input type="text"/>
<input type="button" value="Submit"/> <input type="button" value="Sync. with PC Time"/> <input type="button" value="Help"/>	
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System Parameters

4. Click **Close** to return to the System View page.
5. Click the Admin tab, and then click **Commit & Reboot** in the task bar.
6. Click **Commit** to save your changes to permanent memory.

Change LAN IP Settings

The LAN IP address identifies the LAN port (eth-0) as a node on your network; that is, its LAN IP address must be in the same subnet as the computers on your LAN.

You can change the default LAN IP address and Net Mask to suit the IP address arrangement you want to set up for your LAN. Click the LAN hyperlink view the LAN Configuration menu

D-Link Building Networks For People																			
<ul style="list-style-type: none"> D-Link Quick Configur System View LAN LAN Config DHCP Mode WAN Bridging Admin 	<h3>LAN Configuration</h3> <p>Use this page to set the LAN configuration, which determines how your device is identified on the network.</p> <table border="1"> <thead> <tr> <th colspan="2">LAN Configuration</th> </tr> </thead> <tbody> <tr> <td>System Mode:</td> <td>Bridging</td> </tr> <tr> <td>LAN IP Address:</td> <td>10 1 1 1</td> </tr> <tr> <td>LAN Network Mask:</td> <td>255 0 0 0</td> </tr> <tr> <td>IGMP:</td> <td><input type="radio"/> Enable <input checked="" type="radio"/> Disable</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">USB Configuration</th> </tr> </thead> <tbody> <tr> <td>USB IP Address:</td> <td>10 1 1 2</td> </tr> <tr> <td>USB Network Mask:</td> <td>255 0 0 0</td> </tr> <tr> <td>IGMP:</td> <td><input type="radio"/> Enable <input checked="" type="radio"/> Disable</td> </tr> </tbody> </table> <p> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> <input type="button" value="Refresh"/> <input type="button" value="Help"/> </p> <p>Copyright © 2002 D-Link, Inc. All rights reserved.</p>	LAN Configuration		System Mode:	Bridging	LAN IP Address:	10 1 1 1	LAN Network Mask:	255 0 0 0	IGMP:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable	USB Configuration		USB IP Address:	10 1 1 2	USB Network Mask:	255 0 0 0	IGMP:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
LAN Configuration																			
System Mode:	Bridging																		
LAN IP Address:	10 1 1 1																		
LAN Network Mask:	255 0 0 0																		
IGMP:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable																		
USB Configuration																			
USB IP Address:	10 1 1 2																		
USB Network Mask:	255 0 0 0																		
IGMP:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable																		

LAN Configuration

To change the Modem Ethernet IP address, click the Refresh button and type in the new settings as described below.

System Mode	Read-only, lists the current mode of operation for the device.
LAN IP Address	The IP address your computers use to identify the device's LAN port. Note that the public IP address assigned to you by your ISP is not your LAN IP address. The public IP address identifies the WAN (ADSL) port on your Modem to the Internet. Type in the IP address for the Ethernet LAN interface. Default = 10.1.1.1
LAN Network Mask	The LAN Network mask identifies which parts of the LAN IP Address refer to your network as a whole and which parts refer specifically to nodes on the network. Type in the Subnet Mask for the Ethernet LAN IP interface. Default = 255.0.0.0
USB IP Address	The IP address your computers use to identify the device's USB port. Note that the public IP address assigned to you by your ISP is not your USB IP address. The public IP address identifies the WAN (ADSL) port on your Modem to the Internet. Type in the IP address for the USB interface. Default = 10.1.1.2
USB Network Mask	The USB Network mask identifies which parts of the USB IP Address refer to your network as a whole and which parts refer specifically to nodes on the network. Type in the Subnet Mask for the USB interface. Default = 255.0.0.0

Click the Submit button to save the settings in temporary memory. If you are changing the IP address you will need to login again to access the web manager. If you are getting IP settings from DHCP, the new IP settings will be applied after you submit, commit and reboot. You must **Commit & Reboot** the device to save your changes to permanent memory.

DHCP Modes

DHCP services can be employed in one of three different ways; it can provide DHCP services, it can receive DHCP services or it can relay DHCP service. By default the device is configured to act as a DHCP server on the Ethernet LAN. In this case it will supply IP settings to hosts that are configured to receive IP settings from a DHCP server.

The device may also be configured to relay IP settings from your ISP's DHCP server. In this case, you will want to configure the client hosts on your LAN to automatically obtain IP settings.

Finally the Modem can perform no DHCP function at all. In this case, it will need to be either manually assigned IP settings or receive them from a DHCP server on your LAN or from the ISP (see previous section).

Dynamic Host Configuration Protocol (DHCP) Configuration

Use this page to set and configure the Dynamic Host Configuration Protocol mode for your device. With DHCP, IP addresses for your LAN are administered and distributed as needed by this device or an ISP device. See help for a detailed explanation of DHCP.

DHCP Mode: DHCP Server ▼

Submit
Cancel
Help

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DHCP Mode Configuration

Choose one the options below from the **DHCP Mode:** drop-down menu.

<i>DHCP Server</i>	This is the default mode for the Modem. In this mode it provides DHCP services to properly configured hosts on the Ethernet LAN.
<i>DHCP Relay</i>	In this mode the Modem is an intermediary device or relay agent between a DHCP server owned by the ISP and host systems on your LAN.
<i>none</i>	In this mode the device does deliver or relay any DHCP services. If you choose this option and are operating in Modem mode you will need to supply IP settings to the device manually (see previous section).

Click the Submit button to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click the Commit button to save your changes to permanent memory.

DHCP Server

In order to use more than one DHCP server, it will be necessary to define one or two sets of parameters for each IP address pool. First use the DHCP Server menu to define new DHCP server IP address pool settings. All additional DHCP servers must be added using the DHCP Server menu.

To modify an existing DHCP Pool setting, click the pencil icon (✎) for that set. When you choose to add a new set, a new menu appears (see Additional DHCP Server). To delete an existing DHCP Pool setting, click the trashcan (🗑) for that set. To check the detailed DHCP server setting information, click (🔍) for that set.

Dynamic Host Configuration Protocol (DHCP) Server Configuration

Use this page if you are using the device as a DHCP server. This page lists the IP address pools available to computers on your LAN. The device distributes numbers in the pool to devices on your network as they request Internet access.

Start IP Address	End IP Address	Domain Name	Gateway Address	Status	Action(s)
10.1.1.3	10.1.1.34	-	0.0.0.0	Enabled	✎ 🗑 🔍

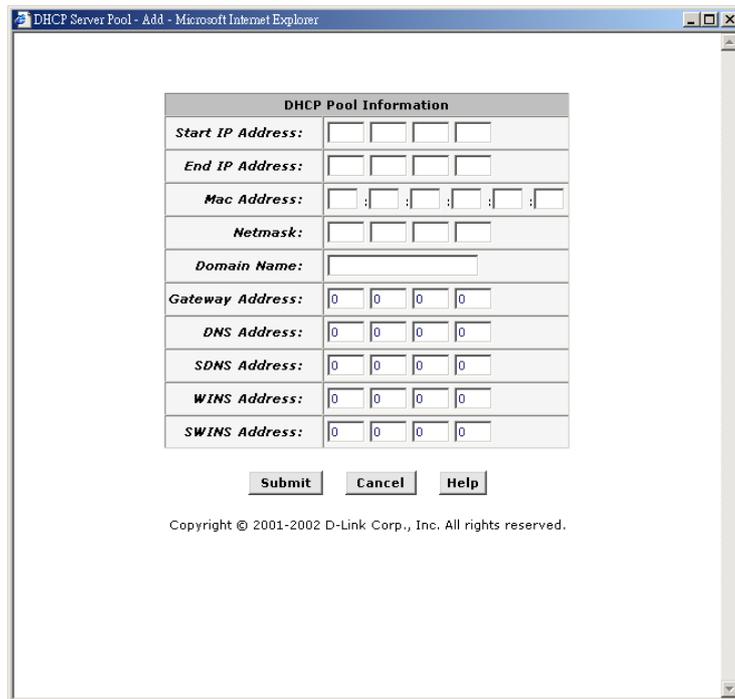
Add
Address Table
Help

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DHCP Server Configuration Menu

Additional DHCP Server

Click Add , the DHCP Server Pool – Add page displays as below.



DHCP Server – Add Parameters

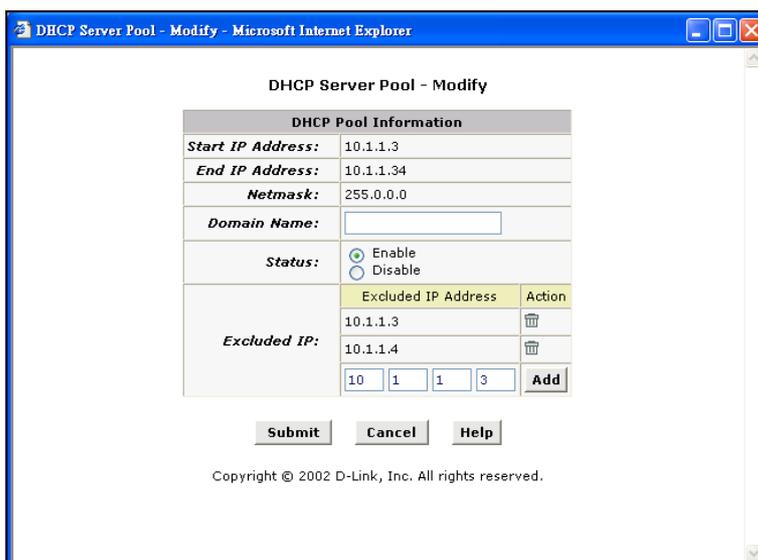
To Add DHCP server parameters define the following:

Start IP Address	Type in the base address for the IP pool of unassigned IP addresses.
End IP Address	Type in the last address of the contiguous IP address range to be used by the Modem for DHCP function.
Mac Address	A MAC address is the series ID unique for each device on a network. Use this field only if you want to assign a specific IP address to the computer that uses this MAC address. If you type a MAC address here, you must have specified the same IP address in both the Start IP Address and End IP Address fields.
NetMask	Type in a subnet mask IP address.
Domain Name	Enter a domain name for the network group or leave blank.
Gateway Address	Type in the Default Gateway IP Address that will be assigned to and used by the DHCP clients.
DNS Address	Enter any Internet DNS server IP address available through the WAN connection or use the DNS settings supplied by your service provider.
SDNS Address	Enter a backup DNS IP address or leave blank.
WINS Address	Some LANs may require using WINS servers, enter the IP address of the WINS server or leave blank.
SWINS Address	Enter a back-up WINS server IP address or leave blank.

Click the Submit button to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click the Commit button to save your changes to permanent memory.

Modify DHCP Server

To modify the pool, click . The DHCP Server Pool – Modify page displays as below.



DHCP Server – Modify Parameters

To modify DHCP server parameters define the following:

Domain Name	Enter a domain name for the network group or leave blank.
Status	Enable/disable the pool. By default, a pool is enabled when you create it.
Excluded IP	If you have IP addresses that are designated for fixed use with specific devices, or for some other reason you do not want to make them available to your network, you can exclude them from the pool.

Click the Submit button to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click the Commit button to save your changes to permanent memory.

View current DHCP address assignments

When the Modem acts as a DHCP server, it keeps a record of any address currently leased to your computers. To view a table of all current IP address assignments, display the DHCP Server Configuration page, and then click **Address Table**. A page displays similar to that shown as below.



DHCP Server Address Table

To view each leased address parameters define the following:

IP Address	The address that has been leased from the pool.
-------------------	---

Netmask	The network mask associated with the leased address.
Mac Address	The unique hardware ID of the computer to which the IP address has been assigned.
Pool Start	The start IP which identify this pool from which the leased address was assigned.
Address Type	<i>Static or Dynamic.</i> <i>Static</i> indicates that the IP number has been assigned permanently to the specific hardware device. <i>Dynamic</i> indicates that the number has been leased temporarily for a specified length of time.
Time Remaining	The amount of time left for the device to use the assigned address.

DHCP Relay

Some ISPs perform the DHCP server function for their customers' home/small office networks. In this case, you can configure the Modem as a DHCP relay agent. When a computer on your network requests Internet access, the Modem contacts your ISP to obtain an IP address (and other information), and then forwards that information to the computer. Follow these instructions to configure DHCP relay.

First of all, you must configure your PCs to accept DHCP information assigned by a DHCP server. Open the Windows Control Panel and display the computer's Networking properties. Configure the TCP/IP properties to "Obtain an IP address automatically". For detailed instructions, see the section of "Configure the Host PC as a DHCP Client"

Next, you specify the IP address of the DHCP server and select the interfaces on your network that will be using the relay service in DHCP Relay configuration menu as below.

Dynamic Host Configuration Protocol (DHCP) Relay Configuration

As a DHCP relay agent, when a computer request Internet access, the device requests an IP address from your ISP, and then relays the addresses back to the computers. This table lists each interface on the device that relays data from your ISP. Typically, the LAN port is listed.

DHCP Server Address:

Interfaces Running DHCP Relay	Action
ppp-0	
eth-0 <input type="button" value="v"/>	<input type="button" value="Add"/>

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DHCP Relay Configuration Menu

WAN Configuration Options

If you are using the Modem with two or more virtual connections (VC) one way to configure the additional connections is by using the WAN folder menus. You can use the ATM VC configuration menu to first create the additional VC. You may then need to create or modify a WAN interface using the PPP or IPoA configuration menus.

DSL Status

The DSL Status page displays current information on the DSL line configuration parameters and performance statistics as following.

DSL Status

This page displays DSL Status Information

Refresh Rate:

Counters	Local		Remote	
	Intrlvd	Fast	Intrlvd	Fast
FEC:	0	0	0	0
CRC:	0	0	0	0
NCD:	0	0	0	0
OCF:	0	0	-	-
HEC:	0	0	0	0
SEF:	0	0	0	0
LOS:	0	0	0	0

DSL Status

Operational Status: ● Startup Handshake

Last Failed Status: 0x0

Startup Progress: 0xA0

Failures	Local	Remote
NCD:	0	0
SEF:	0	0
LOS:	0	0
LCD:	0	0

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DSL Status Table

Refresh Rate	Set the rate of automatically refresh the screen
Loop Stop	Click <input type="button" value="Loop Stop"/> to end the DSL connection. Click <input type="button" value="Loop Start"/> to restart the DSL connection.
Clear	Reset all counters to zero
DSL Param	Display data about the configuration of the DSL line
Stats	Display DSL line performance statistics
Refresh	Redisplay the page with newly accumulated values

DSL Param

The DSL Parameters and Status table displays settings pre-configured by the product manufacturer or your ISP.

The Config Data table lists various types of error and defects measurements found on the DSL line. You cannot modify this data.

DSL Parameter						
DSL Parameters and Status						
Vendor ID:	00B5GSPN					
Revision Number:	T93.3.23					
Local Tx Power:	0.0 dB	Config Data		Up		Down
Remote Tx Power:	0.0 dB	ASO(kbps):	-	-	0	0
Local Line Atten.:	0.5 dB	ASI(kbps):	-	-	0	0
Remote Line Atten.:	0.5 dB	LSO(kbps):	0	0	-	-
Local SNR Margin:	0.0 dB	LSI(kbps):	0	0	-	-
Remote SNR Margin:	0.0 dB	RValue:	0	0	0	0
Self Test:	Passed	SValue:	0		0	
DSLAM DSL Standard:	T1.413	DValue:	0		0	
Trellis Coding:	Disable					
Framing Structure:	Framing-0					

Close Refresh Help

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DSL Parameters and Status

DSL Statistics

This page displays DSL line performance statistics as below.

No. of 15 Min. Valid Data Intervals: 0
No. of 15 Min. Invalid Data Intervals: 0

Current 15-Min Interval Statistics	
Elapsed Time(MM:SS):	0:0
Errored Seconds:	0
Severely Errored Seconds:	0
Unavailable Seconds:	0

Current Day Statistics	
Elapsed Time(HH:MM:SS):	0:0:0
Errored Seconds:	0
Severely Errored Seconds:	0
Unavailable Seconds:	0

Previous Day Statistics	
Monitored Time(HH:MM:SS):	0:0:0
Errored Seconds:	0
Severely Errored Seconds:	0
Unavailable Seconds:	0

Detailed Interval Statistic (Past 24 hrs)					
1-4	5-8	9-12	13-16	17-20	21-24

Close Refresh Help

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DSL Line Performance Statistics

The DSL Statistics page reports error data relating to the last 15-minute interval, the current day, and the previous day. At the bottom of the page, the Detailed Interval Statistic table displays links you can click on to display detailed data for each 15-minute interval in the past 24 hours. For example, when you click on 1-4, data displays for the 16 intervals (15-minutes each) that make up the previous 4 hours.

15-Min Interval No.	Errored Seconds	Severely Errored Seconds	Unavailable Seconds	Valid Data
1	0	0	0	No
2	0	0	0	No
3	0	0	0	No
4	0	0	0	No
5	0	0	0	No
6	0	0	0	No
7	0	0	0	No
8	0	0	0	No
9	0	0	0	No
10	0	0	0	No
11	0	0	0	No
12	0	0	0	No
13	0	0	0	No
14	0	0	0	No
15	0	0	0	No
16	0	0	0	No

Detailed Interval Statistic (Past 24 hrs)
[1-4](#) [5-8](#) [9-12](#) [13-16](#) [17-20](#) [21-24](#)

[Close](#) [Refresh](#) [Help](#)

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DSL Interval Statistics

PPP Configuration

PPP is configured as a group of software settings associated with the ADSL port. Although the device has only one physical ADSL port, the Modem can be defined with more than one group of PPP settings. Each group of settings is called a PPP interface and is given a name, such as *ppp-0*, *ppp-1*, etc.

To modify an existing PPP configuration, click the pencil icon (✎) for that set. When you choose to add a new set, a new menu appears. To delete an existing PPP configuration, click the trashcan (🗑) for that set. To check the detail PPP configuration information, click (🔍) for that set.

Point to Point Protocol (PPP) Configuration

This page is used to Configure and View PPP interfaces.

Inactivity TimeOut(mins) for startondata PPP Interfaces:

Ignore WAN to LAN traffic while monitoring inactivity:

Interface	VC	Interface Sec Type	Protocol	WAN IP	Gateway IP	Default Route	Use DHCP	Use DNS	Oper. Status	Action
ppp-0	aal5-1	Public	PPPoE	0.0.0.0	0.0.0.0	Enable	Disable	Enable	Link Down	

[Submit](#) [Add](#) [Refresh](#) [Help](#)

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Figure 23. PPP Configuration

You can configure the following settings on the PPP Configuration page:

Inactivity TimeOut(mins): - The time in minutes that must elapse before a PPP connection times-out due to inactivity.

Ignore WAN to LAN traffic while monitoring activity: - When enabled, data traffic traveling in the incoming direction -- from the WAN port to the LAN port -- will not count as activity on the WAN port; i.e., it will not prevent the connection from being terminated if it has been otherwise inactive for the specified time.

To configure a new PPP interface click the Add button. A new menu appears.

PPP Interface - Add

The PPP Configuration table displays the following fields:

PPP Interface	The PPP interface you are configuring.
ATM VC	The Virtual Circuit over which this PPP data is sent. The VC identifies the physical path the data takes to reach your ISP.
Interface Sec Type	The type of Firewall protections that are in effect on the interface. A <i>public</i> interface connects to the Internet (PPP interfaces are typically public). Packets received on a public interface are subject to the most restrictive set of firewall protections defined in the software. A <i>private</i> interface connects to your LAN, such as the Ethernet interface. Packets received on a private interface are subject to a less restrictive set of protections, because they originate within the network. The term <i>DMZ</i> (de-militarized zone), in Internet networking terms, refers to computers that are available for both public and in-network accesses (such as a company's public Web server).
Protocol	The type of PPP protocol used. Your ISP may use PPP-over-Ethernet (PPoE) or PPP-over-ATM (PPoA).
Service Name	This feature is available with PPOE interfaces but not with PPOA interfaces. The name of the ISP service you are using with this PPP connection. ISPs may offer different types of services (for example, for online gaming or business communications), each requiring a different login and other connection properties.
Use DHCP	When set to <i>Enable</i> , the device will acquire additional IP information from the ISP's DHCP server. The PPP connection itself acquires the device's IP address, mask, DNS address, and default gateway address.

Use DNS	When set to <i>Enable</i> , the DNS address learned through the PPP connection will be distributed to clients of the device's DHCP server. This option is useful only when the Modem is configured to act as a DHCP Server for your LAN. When set to <i>Disable</i> , LAN hosts will use the DNS address(es) pre-configured in the DHCP pool.
Default Route	Indicates whether the Modem should use the IP address assigned to this connection as its default route.
Security Protocol	Protocol used to confirm the identity of the subscriber.
Login Name	The name you use to log in to your ISP each time this PPP connection is established.
Login Password	The password you use to log in to your ISP each time this PPP connection is established.

Click the Submit button to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click the Commit button to save your changes to permanent memory.

EOA Configuration

Ethernet-over-ATM (EOA) is a commonly used protocol for data transfer between Ethernet LANs and wide area networks that use the ATM protocol. Telecommunications industry networks often use the ATM in the within the their primary infrastructure or backbone. Network service providers that sell DSL services often use the EOA protocol for data transfer with their customers' DSL Modems.

EOA is implemented to create a bridged connection between a DSL Modem and the ISP. In a bridged connection, data is shared between the ISP's network and their customer's as if the networks were on the same physical LAN. Bridged connections do not use the IP protocol. EOA can also be configured to provide a routed connection with the ISP, which uses the IP protocol to exchange data.

This section describes how to configure an Ethernet-over-ATM interface on the Modem, if one is needed to communicate with your ISP.

Before creating an EOA interface or modifying the default settings, contact your ISP to determine which type of protocol they use.

 <p>IMPORTANT</p>	<p><i>Your ISP may use a protocol other than EOA for communication with the Modem, such as the point-to-point protocol (PPP). One type of PPP, named PPP over Ethernet (PPPoE), actually works "on top" of the EOA protocol. The other type, PP over ATM (PPPoA), does not. However, if your ISP uses either type of PPP, you do not need to separately create an EOA interface. If your service provider has given you PPP software for installation on your computer, follow the instructions given to you by your ISP and do not change the EOA settings.</i></p>
---	---

To view your current EOA configuration, log into the Configuration Manager, click the EoA button in the Bridging folder, the EOA Configuration page appears:

RFC1483/Ethernet over ATM(EoA) Config

This Page is used to View, Add, Modify and Delete EOA Interfaces.

Interface	Interface Sec Type	Lower Interface	Config IP Address	Netmask	Use DHCP	Default Route	Gateway Address	Status	Action
eea-0	Public	aal5-1	0.0.0.0	0.0.0.0	Disable	Disable	0.0.0.0		

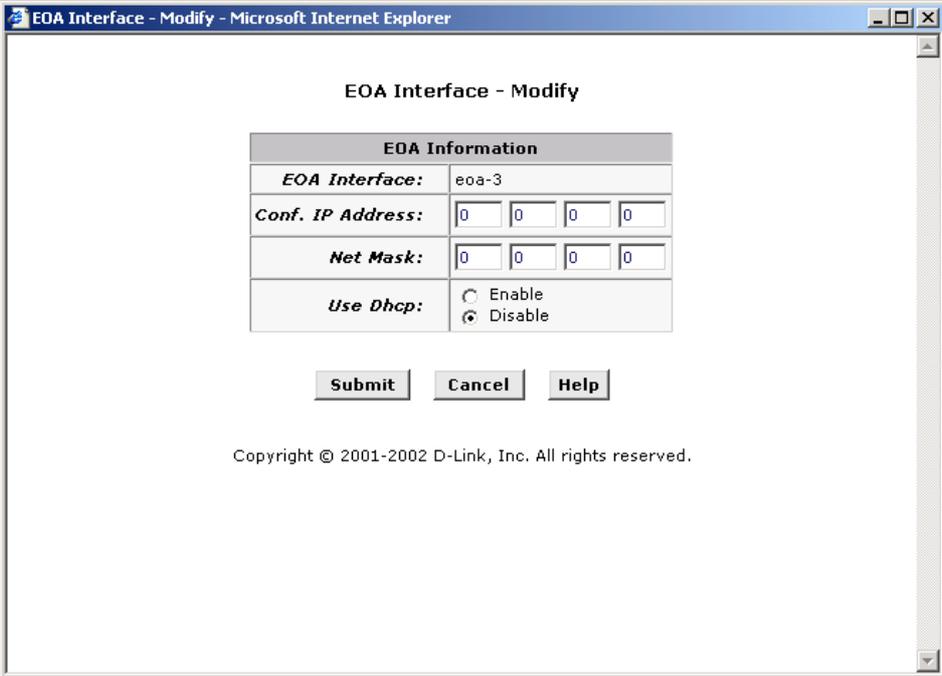
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EOA Configuration

The EoA Configuration table displays the following fields:

EoA Interface	The EoA interface you are configuring.
Conf. IP Address	The IP address you want to assign to the interface.
Netmask	The netmask you want to assign to the interface.
Use DHCP	When set to <i>Enable</i> , the device will acquire additional IP information from the ISP's DHCP server. The PPP connection itself acquires the device's IP address, mask, DNS address, and default gateway address.

To define EOA settings for a new virtual connection, click the Add button. To modify an existing EOA setting, click the pencil icon () for that set. When you choose to add a new set or modify an existing set, a new menu appears (see below). To delete an existing AAL5 setting, click the trashcan () for that set.



EOA Interface – Modify

To Add or Modify AAL5 Parameters define the following:

EOA Interface	This is used (by the Modem) to identify the EOA interface. If you are adding a new EOA interface, choose the EOA set you want to define from the pull-down menu (Add menu only).
Conf. IP Address:	The IP address assigned to the interface. If the interface will be used as a simple bridge to your ISP, then you do not need to specify IP information. If you enable DHCP for this interface, then the Configured IP address will serve only as a request to the DHCP server. The actual address that is assigned by the ISP may differ if this address is not available. Some ISPs use static IP settings that are manually assigned to each account. If your service provider instructs you to configure a Static IP Address, type in the global IP Address for this EOA interface.
Net Mask:	If you are assigned a Static IP Address and Net Mask, type in the Net Mask for this EOA interface.
Use DHCP:	When checked, this setting instructs the device to accept IP information assigned dynamically by your ISP's DHCP server. If the interface will be used for bridging with your ISP, leave this checkbox unselected. Select Enable or Disable for DHCP service.

Click the Submit button to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click the Commit button to save your changes to permanent memory.

IPoA Configuration

The IPoA table contains a row for each EOA interface currently defined on the device. The table may initially contain no entries.

IP over ATM (IPoA) Configuration									
This Page is used to View, Add and Delete IPoA Interfaces.									
Interface	Interface Sec Type	RFC 1577	Lower Interface	Peer IP Address	Confg IP Address	Netmask	Gateway Address	Status	Action
No IPoA Interface!									
<input type="button" value="Add"/> <input type="button" value="Map"/> <input type="button" value="Refresh"/> <input type="button" value="Help"/>									

IPoA Configuration

The IPoA Configuration table displays the following fields:

IPoA Interface	The IPoA interface you are configuring.
RFC 1577	Specifies whether the IPoA protocol to be used complies with the IETF specification named "RFC 1577 - Classical IP and ARP over ATM" (contact your ISP if unsure).
Peer IP Address	The IP address of the remote computer you will be connecting to via the WAN interface.
Conf. IP Address	The IP address you want to assign to the interface.
Netmask	The netmask you want to assign to the interface.
Gateway IP Address	The external IP address that the Modem communicates with via the IPoA interface to gain access to the Internet. This is typically an ISP server.

To configure a new IPoA interface click the Add button. A new menu appears. Enter information needed for the IPoA connection following the steps below.

Add IPoA Interface

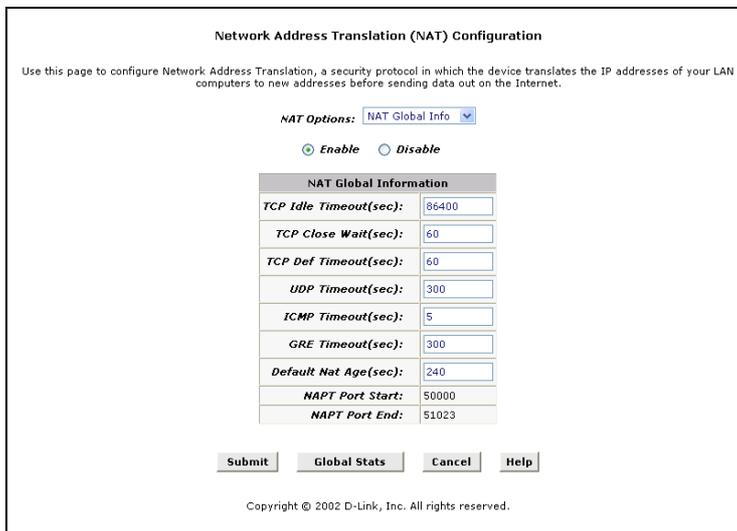
Follow these instructions to add an IPoA interface:

1. Select the next available interface name from the IPoA Interface drop-down list.
2. From the Interface Sec Type drop-down list, select the level of firewall security for the interface: Public, Private, or DMZ.
3. In the Configured IP Address and Net Mask boxes, type the address and mask that you want to assign to the IPoA interface.
4. In the RFC 1577 Click the Yes radio button if the interface complies with the IETF specification RFC 1577 and click the Add button.
5. If you enable the DHCP option (in step 6 below), then the IP address you enter here will serve as a requested address; the remote computer may assign another address if necessary.
6. If the remote your ISP provides a DHCP server, you can click the Enable radio button in the Use DHCP field to have the IP address dynamically assigned from the server.
7. If you want to enable the IP Unnumber function, you can click the Enable radio button.
8. If you want the IPoA interface to serve as the default route for your LAN, click the Enable radio button in the Default Route field.
9. In the Gateway IP Address field, enter the address of the Internet computer to contact to gain initial access to the Internet.
10. Click the Submit button. A confirmation page will display to confirm your changes.
11. Click the Close to return to the IPoA page and view the new interface in the table.
12. Display the Admin tab, and click **Commit & Reboot** in the task bar.
13. Click the Commit button to save your changes to permanent memory.

NAT

Network Address Translation is a method for disguising the private IP addresses you use on your LAN as the public IP address you use on the Internet. You define NAT rules that specify exactly how and when to translate between public and private IP addresses.

NAT is enabled by default. You can enable or disable NAT by selecting the *Enable* or *Disable* option in the configuration menu and submitting the settings.



NAT Configuration

Information displayed in the NAT Configuration is summarized below:

<p>TCP Idle Timeout(sec) TCP Close Wait(sec) TCP Def Timeout(sec)</p>	<p>When two computers communicate via the Internet, a TCP-based communication session is created between them to control the exchange of data packets. The TCP session can be viewed as being in one of three states, depending on the types of packets being transferred: the establishing state, where the connection is being set up, the active state, where the connection is being used to transfer data, and the closing state, in which the connection is being shut down. When a NAT rule is in effect on a TCP session in the active state, the session will timeout if no packets are received for the time specified in <i>TCP Idle Timeout</i>. When in the closing state, the session will timeout if no packets are received for the time specified in <i>TCP Close Wait</i>. When in the establishing state, the session will timeout if no packets are received for the time specified in <i>TCP Def Timeout</i>.</p>
<p>UDP Timeout(sec)</p>	<p>Same as TCP Idle Timeout, but for UDP-based communication sessions.</p>
<p>ICMP Timeout(sec)</p>	<p>Same as TCP Idle Timeout, but for ICMP-based communication sessions.</p>
<p>GRE Timeout(sec)</p>	<p>Same as TCP Idle Timeout, but for GRE-based communication sessions.</p>
<p>Default Nat Age(sec)</p>	<p>Same as TCP Idle Timeout, but for GRE-based communication sessions.</p>
<p>NAPT Port Start/End</p>	<p>When an NAPT rule is defined, the source ports will be translated to sequential numbers in this range.</p>

NAT Rule Entry

To view the NAT Rule setting menu or the NAT Translations entries, select the option from the **NAT Options:** drop-down menu. To configure NAT Rules, select the *NAT Rule Entry* option and click the Add button. A new window is displayed:

Add NAT Rule

From the **Rule Flavor** drop-down list, select *Basic*, *Filter*, *NAPT*, *BIMAP*, *RDR* or *PASS*. The page redisplay with only the fields that are appropriate for the chosen NAT flavor.

Enter information appropriate to the NAT flavor. The information in the various menus is summarized in the table below.

Rule ID	The Rule ID determines the order in which rules are invoked (the lowest numbered rule is invoked first, and so on). In some cases, two or more rules may be defined to act on the same set of IP addresses. Be sure to assign the Rule ID so that the higher priority rules are invoked before lower-priority rules. It is recommended that you select rule IDs as multiples of 5 or 10 so that, in the future, you can insert a rule between two existing rules. Once a data packet matches a rule, the data is acted upon according to that rule and is not subjected to higher-numbered rules.
IF Name	Typically, NAT rules are used for communication between your LAN and the Internet. Because the device uses the WAN interface (which may be named <i>ppp-0</i> , <i>eoan-0</i> , or <i>ipoa-0</i>) to connect your LAN to your ISP, it is the usual IF Name selection.
Protocol	This selection specifies which type of Internet communication will be subject to this translation rule. You can select ALL if the rule applies to all data. Or, select TCP, UDP, ICMP, or a number from 1-255 that represents the IANA-specified protocol number.
Local Address From	Type the starting IP of the range of private address you want to be translated. You can specify that data from all LAN addresses should be translated by typing 0 (zero) in each From field and 255 in each To field. Or, type the same address in both fields if the rule only applies to one LAN computer.
Local Address To	Type the ending IP of the range of private address you want to be translated.
Global Address From	Type the public IP address assigned to you by your ISP.
Global Address To	If you have multiple WAN interfaces, in both the Global Address From and Global Address To fields, type the IP address of the interface to which this rule applies. This rule will not be enforced for data that arrives on other PPP interfaces. If you have multiple WAN interfaces and want the rule to be enforced on a range of them, type the starting and ending IP addresses of the range. You can specify a single value by entering that value in both the From and To fields.

Destination Address (or addresses)*	Specify a range of destination addresses if you want this rule to apply only to outbound traffic to addresses in that range. If you enter only the network ID portion of the destination address, then the rule will apply to outbound traffic to all computers on network. You can specify a single value by entering that value in both the From and To fields.
Destination Port (or ports)*	Specify a range of destination ports if you want this rule to apply to any outbound traffic to the types of servers identified by that port number. For example, if you do not specify a destination address, but specify a Destination Port From/To of 21, then this translation will occur on all accesses by your LAN to all external FTP servers (that is, when one of your LAN computers communicates with an external FTP server, the source IP address in the packet headers is changed to the public address, replacing the initiator's private IP address). Common port numbers include: 21-FTP (file transfer protocol) server 25-SMTP (simple mail transfer protocol) server 80-HTTP (World Wide Web) server.

* Specify both a destination address (or range) and a destination port (or range) if you want this translation rule to apply to accesses to the specified server type at the specified IP address or network.

Bridge Configuration

The Modem can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN. This section describes how to configure the Modem to operate as a bridge.

 <p>IMPORTANT</p>	<p><i>Before changing the bridge configuration, check with your ISP to determine the type of connection used to exchange data with their client's DSL Modems (such as Ethernet bridging).</i></p>
---	---

A bridge is a device used to connect two or more networks. A bridge device is able to learn the unique manufacturer-assigned hardware identifier (MAC Address) of each computer or device on either or both networks to which it is connected. It learns that some of the MAC addresses represent computers attached via one of the device's interfaces and other MACs represent computers connected via other interfaces. For example, the MAC addresses of your home computers are learned through (or associated with) the Ethernet port, and the MACs of your ISP's computers are attached via the WAN (DSL) port. It stores the MAC addresses and the interface associated with each MAC in its *bridge forwarding table*.

When the bridge receives a data packet, it compares its destination MAC to the entries in the bridge forwarding table. When the packet's destination MAC address matches one of the entries, it forwards the packet through the interface that connects to the corresponding network. The bridge does not send the data directly to the receiving computer, but broadcasts it to the receiving network, making it available to any node on that network. On the receiving network, the packet is delivered in a form recognized by the network protocol (Ethernet for the LAN side of the Modem) and delivered to its destination.

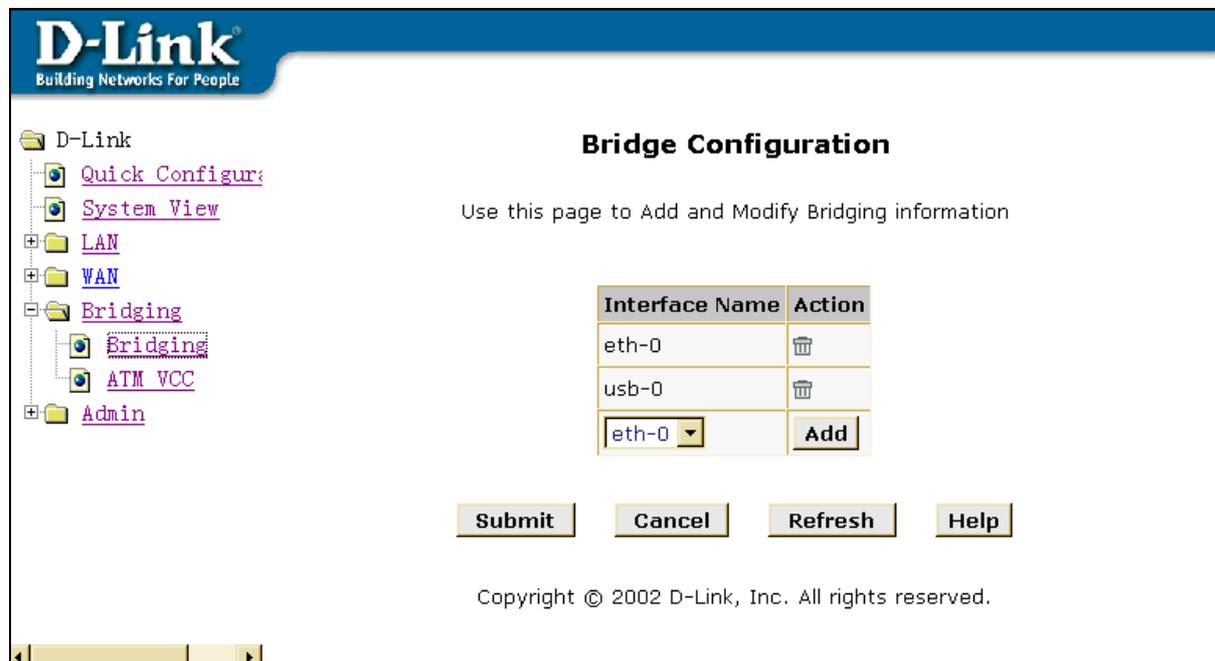
When the bridge does not recognize a packet's destination MAC address, it broadcasts the packet through all of its interfaces – to both networks.

You may need to use the device as a bridge if:

- Your ISP uses protocols that require bridging with your LAN. The device can be configured to appear as a bridge when communicating with your ISP, while continuing to provide Modem functionality for your LAN.
- Your LAN may include computers that communicate using "layer-3" protocols other than the Internet Protocol. These include IPX® and AppleTalk®. In this case, the device can be configured to act as a bridge for packets that use these protocols while continuing to serve as a Modem for IP data.

Bridging Configuration

To add or change bridge configuration settings, log into the Configuration Manager and click on the Bridging button in the Bridging folder.



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Bridge Configuration

Use this page to Add and Modify Bridging information

Interface Name	Action
eth-0	
usb-0	
eth-0	<input type="button" value="Add"/>

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Bridge Configuration Menu

To define Bridge settings for a new virtual connection, click the Add button. To delete an existing setting, click the trashcan () for that set.

To enable bridging, you simply specify the device interfaces on which you want to bridge data, and then enable bridging mode by clicking the **Enable** option.

Click the Submit button to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click the Commit button to save your changes to permanent memory.



If you enable bridging on an interface that has already been assigned an IP address, then it is considered IP-enabled and will route (rather than bridge) IP packets received on the interface. The interface will bridge non-IP data it receives, however.

*You can determine whether the Ethernet (eth-0) and USB (usb-0) interfaces have been assigned IP addresses by displaying the IP Address Table (display the **Routing** tab, then click **IP Addr**). These interfaces will display in the table only if they have been assigned IP addresses.*

*You can check whether the eoa-0 interface has been assigned an IP address by displaying the EOA configuration table (display the **WAN** tab, and then click **EOA**). If the Config IP Address field is empty and the Use DHCP field contains the word Disable, then no IP address has been assigned.*

ATM VC Configuration

When computers access the Internet using the Modem, data is exchanged with your network service provider or ISP through a complex network of telephone switches, Internet Modems, servers, and other specialized hardware. These various devices communicate using a common language, or protocol, called *Asynchronous Transfer Mode* (ATM). On the Wide Area Network (WAN) that connects you to your ISP, the ATM protocol performs functions like those that the Ethernet protocol performs on your LAN.

This section describes how to configure the ATM *virtual channel connection* (VCC). The VC properties define the path the Modem uses to communicate with your ISP over the ATM network.

To view your current configuration, log into the Configuration Manager, and then click the ATM VCC button in the Bridging folder. The ATM VCC Configuration page displays, as shown below:

ATM VC Configuration

This page is used to view and configure ATM VCs

Interface	Mode	VPI	VCI	Mux Type	Max Proto per AAL5	Action(s)
aal5-1	PVC	0	35	LLC	3	

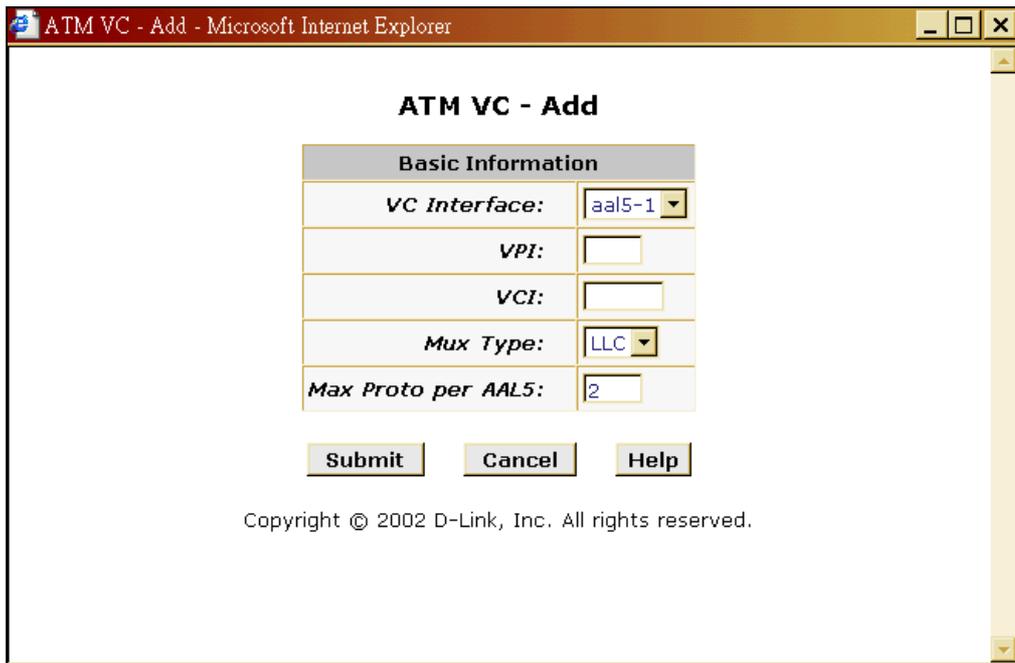
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ATM VC Configuration Menu

Additional Virtual Connections

In order to use more than one PVC setting, it will be necessary to define one or two set of parameters for each virtual connection. First use the ATM VC Configuration menu to define new AAL5 settings. All additional PVCs must be added using the ATM VC menu. For connections that do not use PPPoE or PPPoA, it will also be necessary to use the EOA Configuration menu to establish Ethernet over ATM settings for the PVC adding in the ATM VC menu.

To define AAL5 settings for a new virtual connection, click the Add button. To modify an existing AAL5 setting, click the pencil icon () for that set. When you choose to add a new set or modify an existing set, a new menu appears (see below). To delete an existing AAL5 setting, click the trashcan () for that set.



ATM VCC – Add (or Modify) Parameters

The ATM VC add (or modify) parameters defines as following :

VC Interface	The name of the lower-level interface on which this VC operates. The low-level interface names are pre-configured in the software and identify the type of traffic that can be supported, such as data or voice. Internet data services typically use an AAL5-type interface.
VPI	This setting (together with the VCI and Mux Type) identifies a unique ATM data path for communication between the Modem and service provider.
VCI	If you are adding a new VCC Interface or changing the existing VCI value, type in the new VCI value.
Mux Type	Select VC-Mux or LLC from pull-down menu.
MAX Proto per AAL5	This setting indicates the number of higher-level interfaces that the VC can support (the higher level interfaces can be PPP, EoA, or IPoA interfaces). The Modem supports up to eight however you must make arrangements your service provider for this additional service.

Add or Modify PVC

1. Choose the AAL5 set you want to define from the pull-down menu (Add menu only).
2. Select PVC from the pull-down menu.
3. Type in the new VPI and VCI values for a new VC Interface or changing the existing values.
4. Select VC-Mux or LLC from pull-down menu.
5. Type the number of MAX Proto per AAL5. The default value of VC-Mux mode is 1 and LLC is 2.
6. Click **Submit**. A page displays to confirm your change.
7. Click **Close** to return to the System View page.

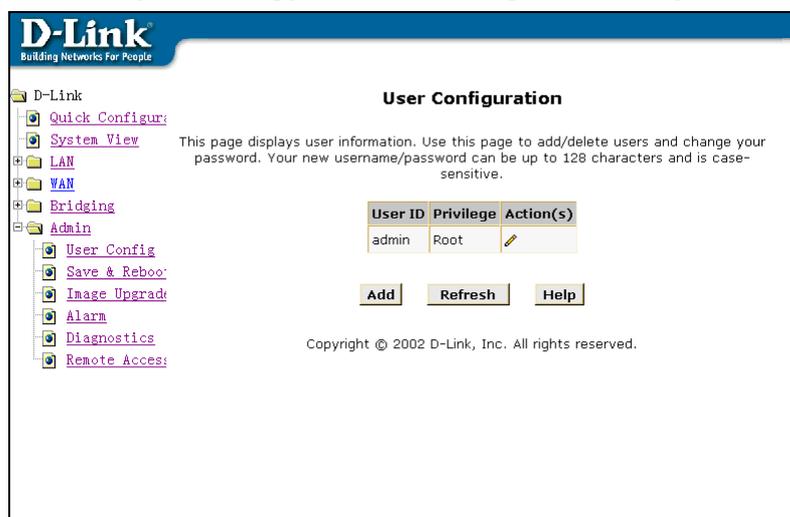
8. Click the Admin tab, and then click **Commit & Reboot** in the task bar.
9. Click **Commit** to save your changes to permanent memory.

Add or Modify SVC

1. Choose the AAL5 set you want to define from the pull-down menu (Add menu only).
2. Select SVC from the pull-down menu.
3. Select E.164 or ATM as ATM Address Type from the pull-down menu.
4. Type the ATM Address in this column. The ATM Address's length of E.164 is equal to 15 and of ATM is equal to 40.
5. Click **Submit**. A page displays to confirm your change.
6. Click **Close** to return to the System View page.
7. Click the Admin tab, and then click **Commit & Reboot** in the task bar.
8. Click **Commit** to save your changes to permanent memory.

Administration Folder

The Administration folder (labeled Admin) in the web manager contains links to menus used for system maintenance functions including firmware upgrade and username/password configuration.



Changing the Manager Password

The first time you log into the Web Configuration Manager, use the default user ID and password (*admin* and *admin*). The system allows only one user ID and password. Only the password can be changed. Access the User Configuration menu in the Admin folder.

User Configuration

This page displays user information. Use this page to add/delete users and change your password. Your new username/password can be up to 128 characters and is case-sensitive.

User ID	Privilege	Action(s)
admin	Root	

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Change User Password

To change user name and password used for management privileges, log into the Configuration Manager, click on the Add button and change these settings in a new window:

User Config - Add

New User Information	
User ID:	<input type="text"/>
Privilege:	<input type="radio"/> Root <input checked="" type="radio"/> User
Password:	<input type="text"/>
Confirm Password:	<input type="text"/>

User Configuration – Add Menu

User ID:	This lists the current User ID (user name).
Old Password:	Type in the password used with the current User ID.
New Password:	Type in the new password.
Confirm New:	Type in the new password a second time for confirmation.

Click to save the settings in temporary memory. When you are done making changes to the configuration settings, open the **Commit & Reboot** menu and click to save your changes to permanent memory.

Save & Reboot

Whenever you use the Web Configuration Manager to change system settings, the changes are initially placed in temporary storage (called random access memory or RAM). Your changes are made effective when you submit them, but will be lost if the device is reset or turned off.

To save your changes for future use, you can use the commit function. This function saves your changes from RAM to permanent storage (called flash memory).



When you Submit changes, they are activated immediately, but they are only saved until the device is reset or turned off. You must Commit the changes to

Note saves them permanently.

Use the Commit & Reboot menu to commit changes to permanent storage.

After you have submitted all the configuration changes you want to make for this session, click on the Commit & Reboot button in the Admin folder to view the Commit & Reboot page.

Commit & Reboot

Use this page to commit changes to system memory and reboot your system with different configurations.

Reboot Mode:

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Commit and Reboot

To save current configuration settings as they have been submitted click .

(Disregard the selection in the Reboot Mode drop-down list; it does not affect the commit process.)

The changes are now saved to permanent storage (flash memory), and the previous settings are copied to backup storage so that they can be recalled if your new settings do not work properly (see the rebooting instructions below).

Reboot the Modem

To reboot the device using the Configuration Manger, display the Commit & Reboot page, select the appropriate reboot mode from the drop-down menu, and then click .



IMPORTANT

Do not reboot the device using the Reset button on the back panel of the Modem to activate new changes. This button resets the device settings to the manufacturer's default values. Any custom settings will be lost.

Reboot Options

Select the reboot option from the pull-down menu. The options are a described here:

Reboot	A simple reboot. This will put into effect any configuration changes that have been successfully committed to flash memory.

Image Upgrade

You can use the image upgrade feature to upload a new software image, or a specific part of the image, to the memory on the ADSL/Ethernet Modem. When the filenames have been entered, click the Upload button to commence loading the firmware file. If the upload is successful, a message informs you that it was successfully loaded and asks you to reboot the device. Go to the Reboot menu and perform a simple reboot. If the firmware does not load, an error message informs you to try the upload again. Check the filenames and attempt to upload again. If the file still will not load, reboot the device and try again.

Image Upgrade

This page is used to upload a new image to the system.

Current Firmware Version:	R2.01.B6(021018g/T93.3.23)
Upgrade File:	<input style="width: 90%;" type="text"/> <input type="button" value="浏览..."/>

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Image (Firmware) Upgrade

Upgrade File:	Type in the full path and file name of the firmware file to be uploaded. Alternatively you may click the Browse button to search for the file on your system.
----------------------	---

Alarms

The Configuration Manager can be used to view alarms that occur in the system. Alarms, also called traps, are caused by a variety of system events, including connection attempts, resets, and configuration changes.

Although you will not typically need to view this information, it may be helpful in working with your ISP to troubleshoot problems you encounter with the device. (Despite their name, not all alarms indicate problems in the functioning of the system.)

To display the Alarm page, log into the Configuration Manager, click the Alarm button in the Admin folder.

Alarm

The alarms shown in the table have been recorded in response to system events. See Help for a list of events that cause alarms.

Refresh Rate:

Alarms/Traps Information
Thu Jan 01 00:00:06 1970 : STATUS ALARM : System Up

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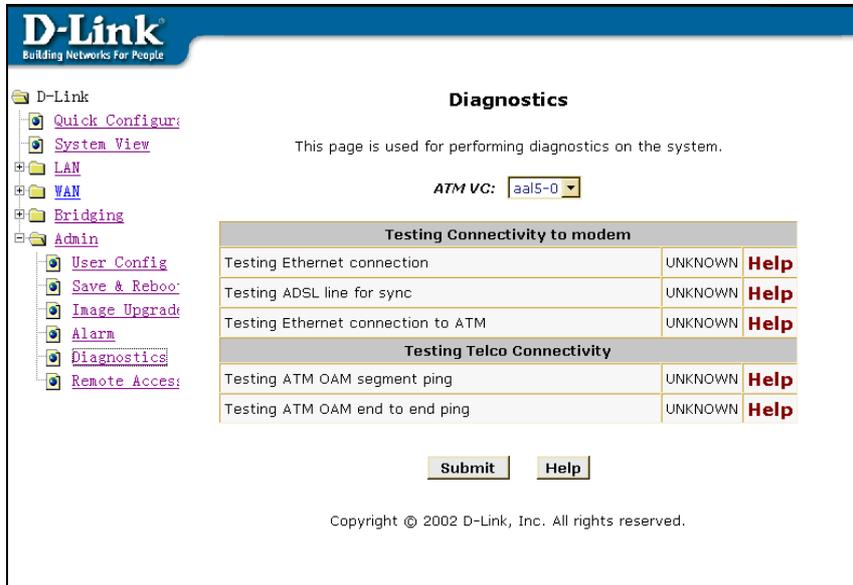
Alarm/Trap Information Page

Listed under Alarm/Trap Information are the time and date of each recorded alarm event, the type of alarm, and a brief statement indicating its cause.

To remove all entries from the list, click . To save the system logs into your computer, click . New entries will begin accumulating and will display when you click .

Diagnostics

The diagnostics feature executes a series of test of your system software and hardware connections. Use this feature when working with your ISP to troubleshoot problems.



Diagnostics Window

Select the Virtual Circuit and click **Submit**. A message will appear informing you if the loop test succeeded or failed.

The diagnostics utility will run a series of test to check whether the device's connections are up and working. This takes only a few seconds. The program reports whether the test passed or failed. A test may be skipped if the program determines that no suitable interface is configured on which to run the test.

Install the USB Driver

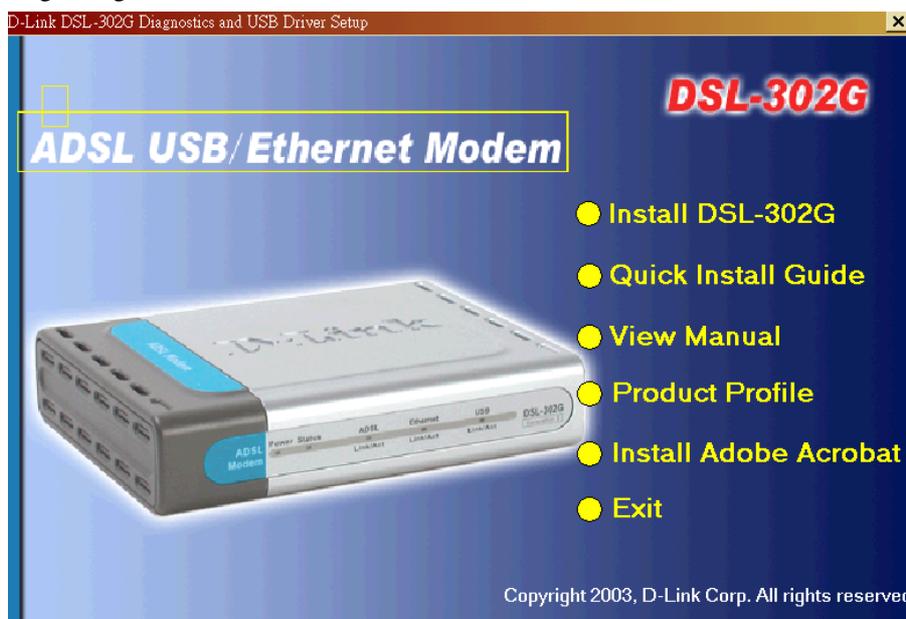
The Setup program shipped with the Modem contains the USB software and optional Ethernet Diagnostic Utility software. Do not connect the USB port until you are instructed to do so. Follow the instructions below to install the USB driver and/or the Ethernet diagnostics software.



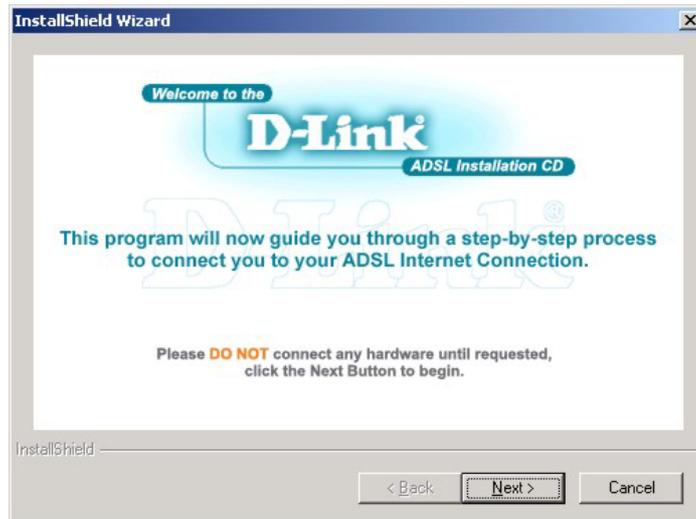
Note

Installing the Ethernet Diagnostics will change the IP settings of the Ethernet interface so it will obtain IP settings from the built-in DHCP server. It is not necessary to install the Ethernet Diagnostic Utility, so if you simply wish to install the USB driver be sure to deselect the Ethernet Diagnostic option (see Step 6 below).

1. Insert the DSL-302G CD-ROM into the CD-ROM drive. Within a few seconds you should see the following dialog box:



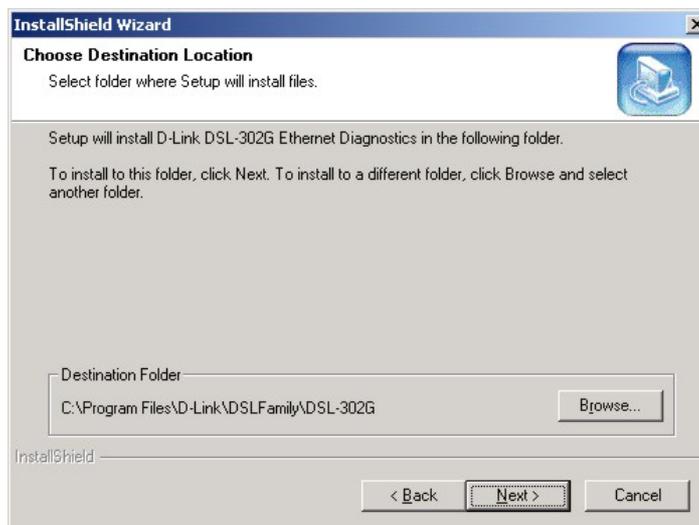
2. Click the **Install DSL-302G** link to launch the installation software. If you do not see the auto-run dialog box pictured above, explore the CD and double-click the setup application file **autorun.exe**.



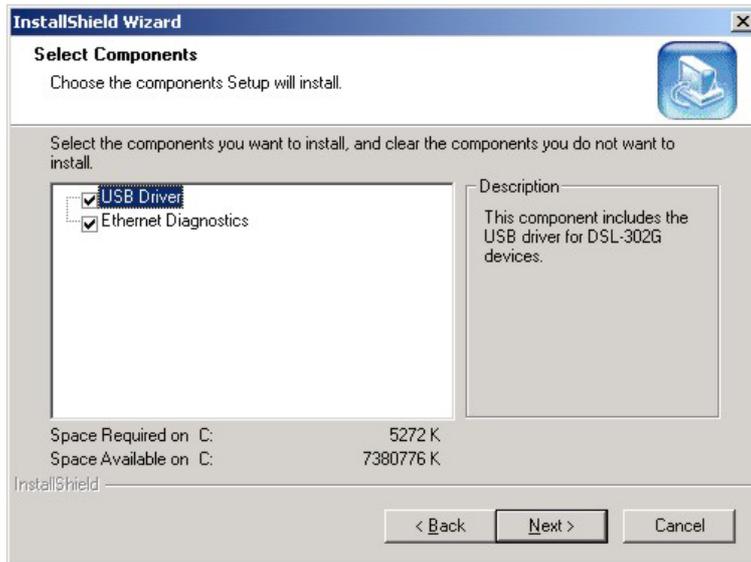
3. Click the **Next** button in the Welcome dialog box.



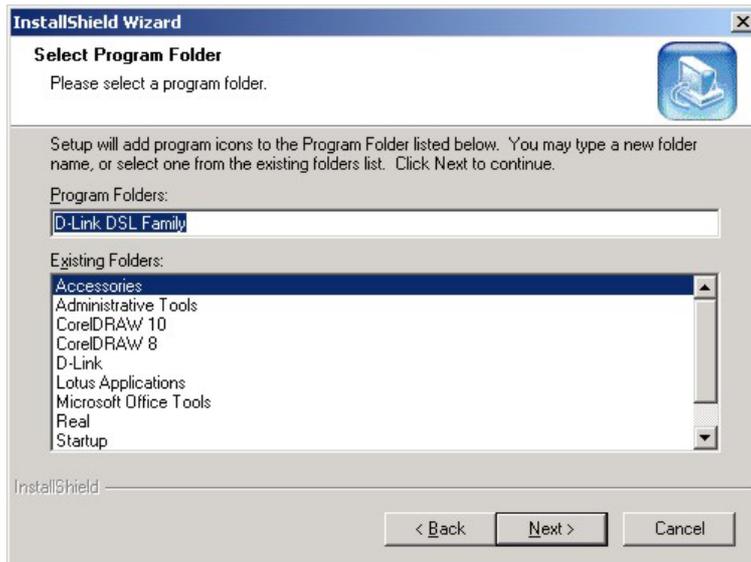
4. Type in name and company information.



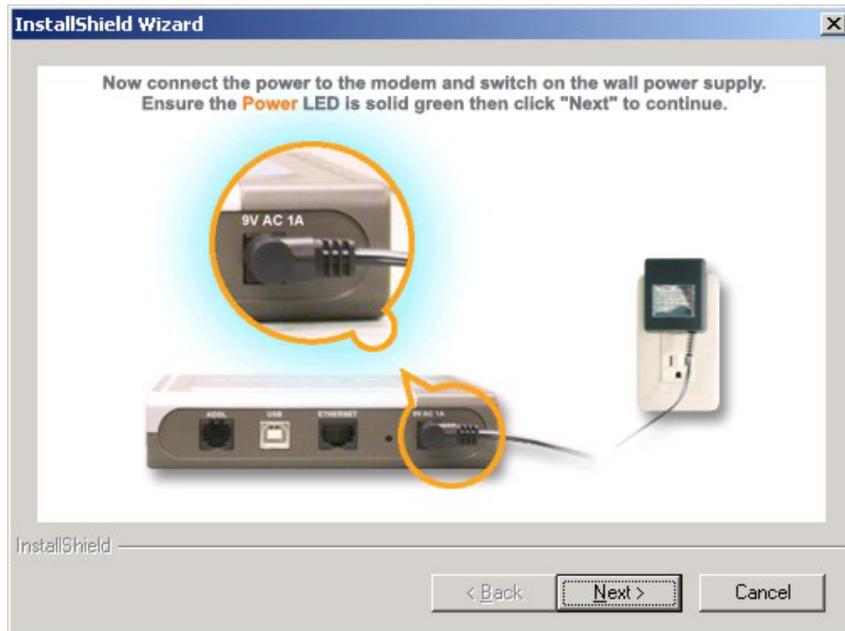
5. Click **Next** to use the folder displayed or **Browse** to choose a different location.



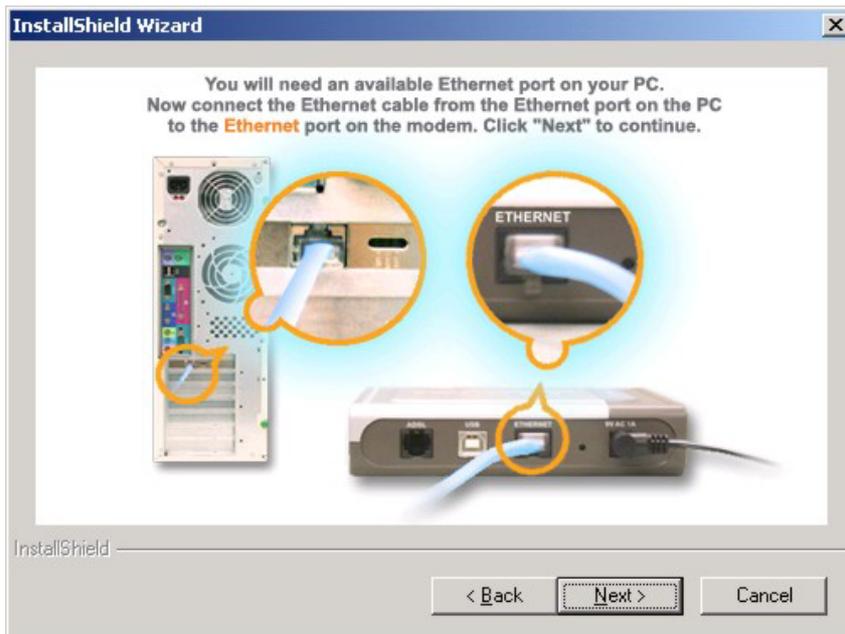
6. Select the software you want to install on your system. If you use the USB port, you must install the USB driver. The Ethernet Diagnostics software can be used to easily change the account user name and password used for your ISP account (PPP connection only).



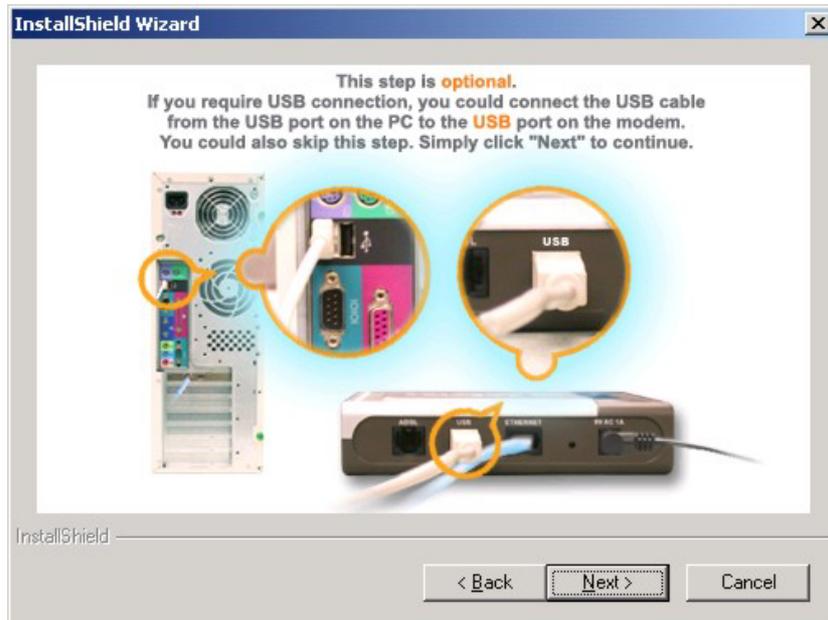
7. Click **Next** to use the folder listed or type in a different folder name.



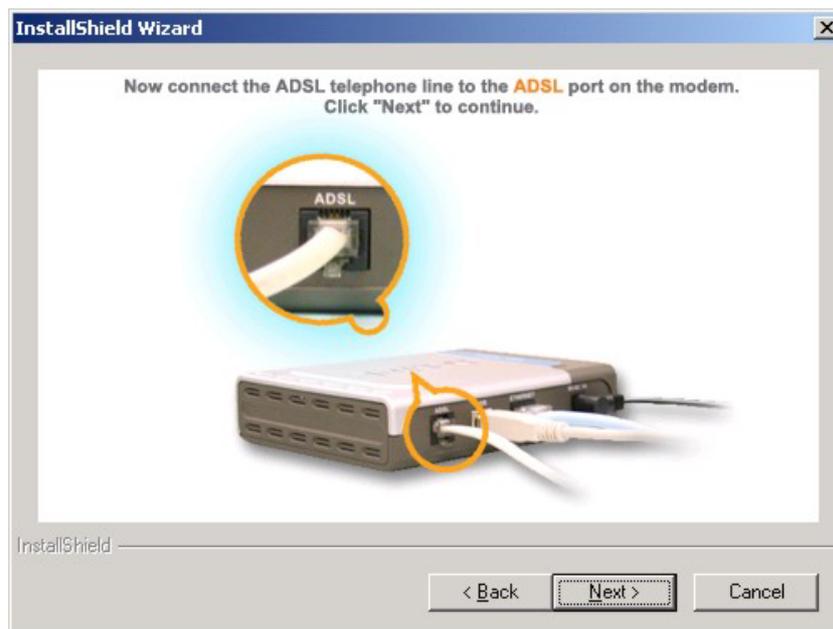
8. Connect the power cord as instructed if you have not done so. Click **Next**.



9. Connect the Ethernet cable if you have not done so. Click **Next**.



10. Connect the USB cable as illustrated.



11. Connect the ADSL cable if you have not done so.

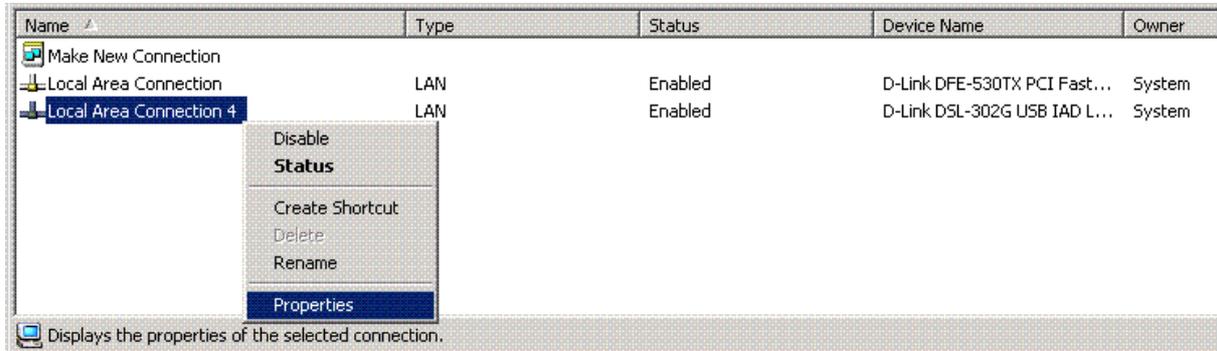


12. You can restart your computer now by clicking the **Finish** button. The computer will be able to connect to the Modem through the USB port after restarting.

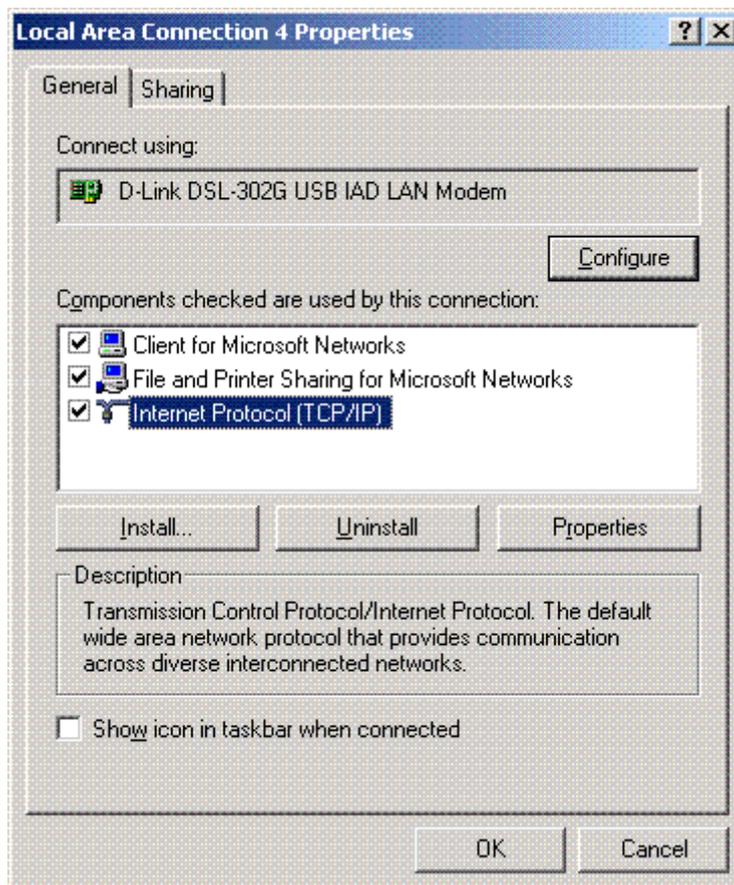
Configure IP Settings for the USB Port

Configure the IP settings for the USB port by following the procedure presented below:

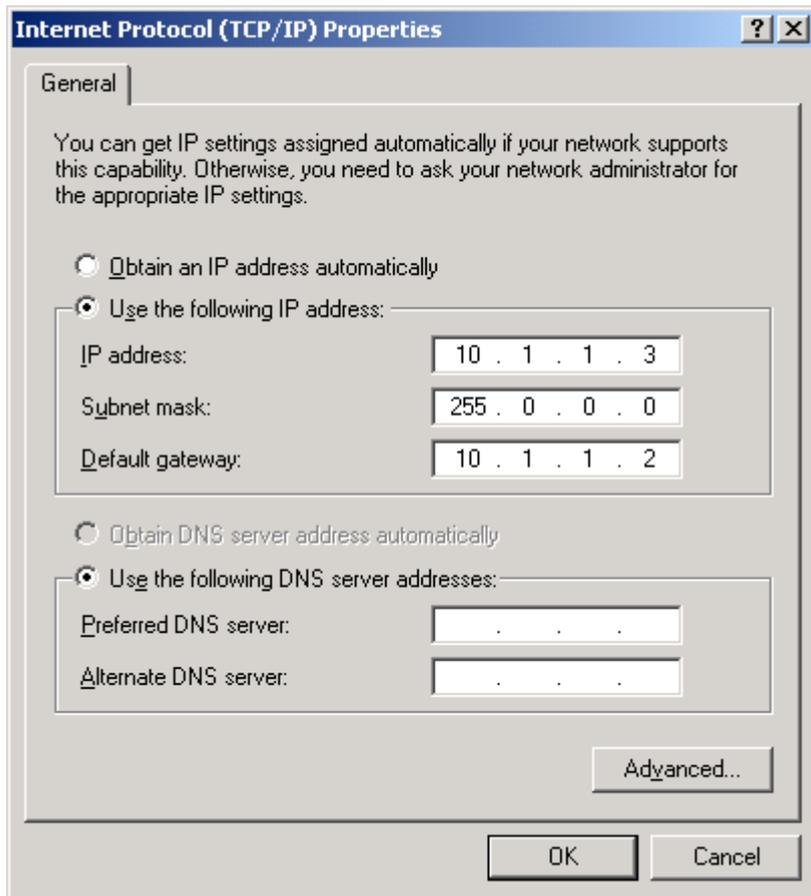
1. Choose **Settings > Network and Dial-up Connections** from the **Start** menu.
2. The Network and Dial-up Connections window is displayed.



3. Right-click on the Local Area connection icon representing the USB port in this window. Choose **Properties** from the menu displayed. The **Local Area Connection Properties** dialog box is displayed:



4. Click on the *Internet Protocol (TCP/IP)* item in the list box.
5. Click on the *Properties* button. The **Internet Protocol (TCP/IP) Properties** window is displayed:



6. Enter the details of the DSL-302G in the *Use the following IP address* group box:

IP address

Subnet mask

Default gateway

Use IP settings to fit your IP addressing scheme. You may use the Modem as a default gateway or use a Modem or gateway IP address on your LAN.



IMPORTANT

The IP address you use for the USB port must be unique on the Ethernet LAN. Make sure this address is not used by any other system. If the system connecting to the Modem via the USB port also has an Ethernet port, DO NOT use the same IP address as the Ethernet port.

7. Click on *OK*.

8. Click on *OK* again to close the remaining open dialog box.

Windows 98SE and Windows Me systems must be restarted to use these new network settings. Windows 2000 and XP systems can use the Modem without restarting. The Ethernet Client driver has now been configured. It is advisable to check that the Ethernet driver has been configured correctly by pinging the IP address of the DSL-302G from a *Command Prompt* window.



Technical Specifications

GENERAL		
STANDARDS:	ITU G.992.1 (G.dmt) ITU G.992.2 (G.lite)	ITU G.994.1 (G.hs) ANSI T1.413 Issue # 2
DATA TRANSFER RATE:	G.dmt full rate: Downstream up to 8 Mbps Upstream up to 640 Kbps G.lite: Downstream up to 1.5 Mbps Upstream up to 512 Kbps	
MEDIA INTERFACE EXCHANGE:	RJ-11 port ADSL telephone line connection RJ-45 port for 10/100 BASE-T Ethernet connection USB 1.1 Type B connector to host	

PHYSICAL AND ENVIRONMENTAL	
DC inputs:	120 VAC to 230 VAC 60Hz 24W
Power Adapter:	9 V AC 1.0A
Power Consumption:	9 Watts Max.
Operating Temperature:	0° to 40° C (32° to 104° F)
Humidity:	5 to 95% (non-condensing)
Dimensions:	142 mm x 117 mm x 31 mm
Weight:	360 gm
EMI:	FCC Class B, CE Class B
Safety:	CSA International Mark

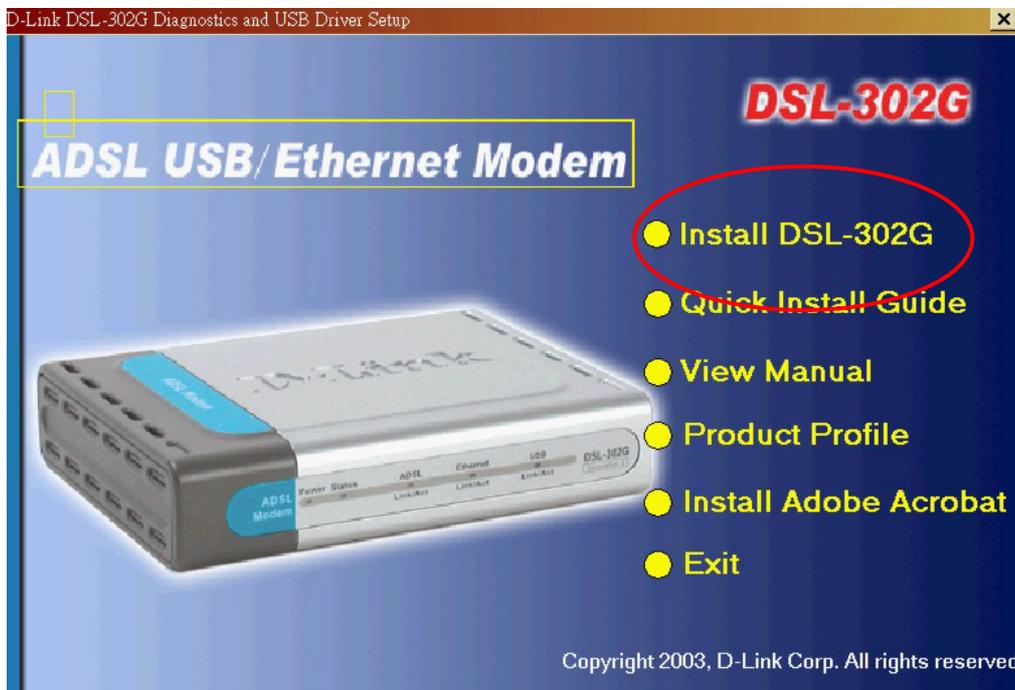


Ethernet Diagnostic Utility

The DSL-302G is shipped with optional Ethernet Diagnostic Utility software that can be installed on a computer running Windows. This can be used to monitor and troubleshoot the Modem. It can also be used to change the ADSL account user name and password used for PPPoE and PPPoA connection types.

Remember that installing the Ethernet Diagnostics will change the IP settings of the Ethernet interface so it will obtain IP settings from the built-in DHCP server. It is not necessary to install this software to use the Modem.

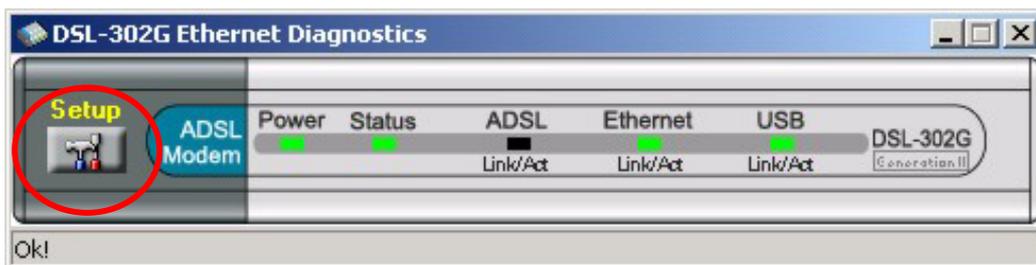
To install the software insert the Installation CD into the CD-ROM drive of your computer and click the Install DSL-302G link on the pop-up menu. Follow the instructions as they are presented. Be sure that the Ethernet Diagnostics option is selected in the Select Components dialog box (see page 45 for example screen).



When you have installed the software and restarted your computer a new icon should appear on your desktop:



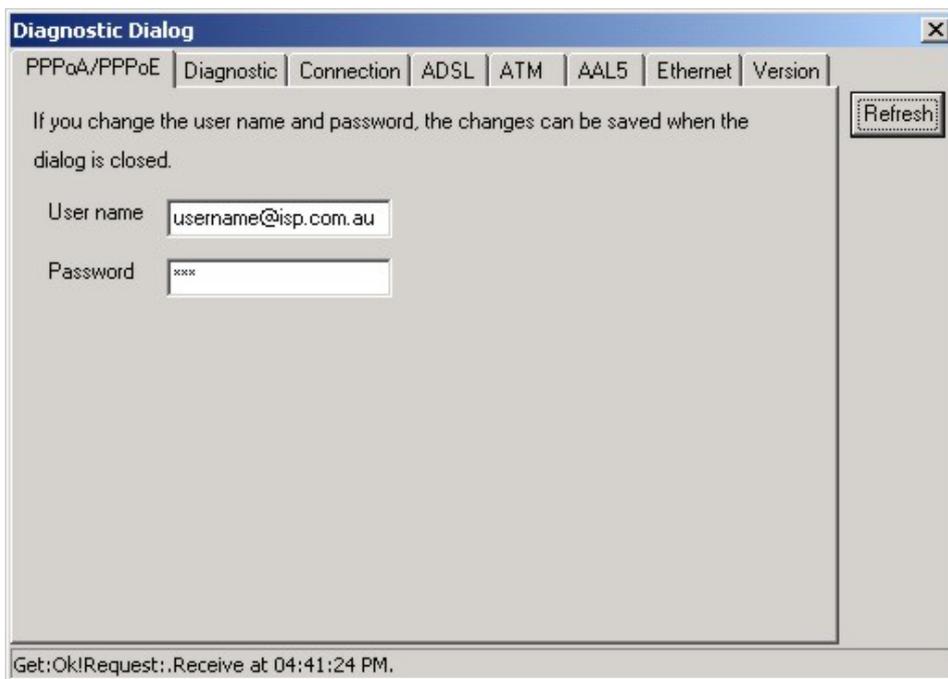
Double-click on the **DSL-302G Ethernet Diagnostics** icon. The Ethernet Diagnostics display appears on your desktop. This virtual front panel display can be used to monitor the Modem in near real time.



To access the Ethernet Diagnostic Utility click the **Setup** button. A login dialog box will ask you to enter your ADSL Account information (user name and password used for the PPP connection).



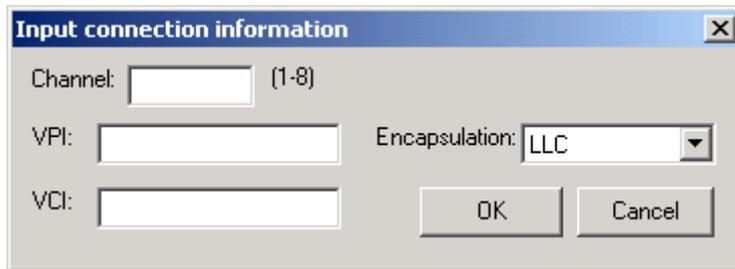
A successful login brings up a new dialog menu.



The first tab of the Diagnostic menu presented is the **PPPoA/PPPoE** tab. Here you can change your ADSL account user name and password. If you need to change this information just enter the new user name and password, the new information will be saved when the dialog box is closed.

The **Diagnostic** tab can be used to run a basic test for ADSL connectivity. The test is initiated automatically when the tab is displayed.

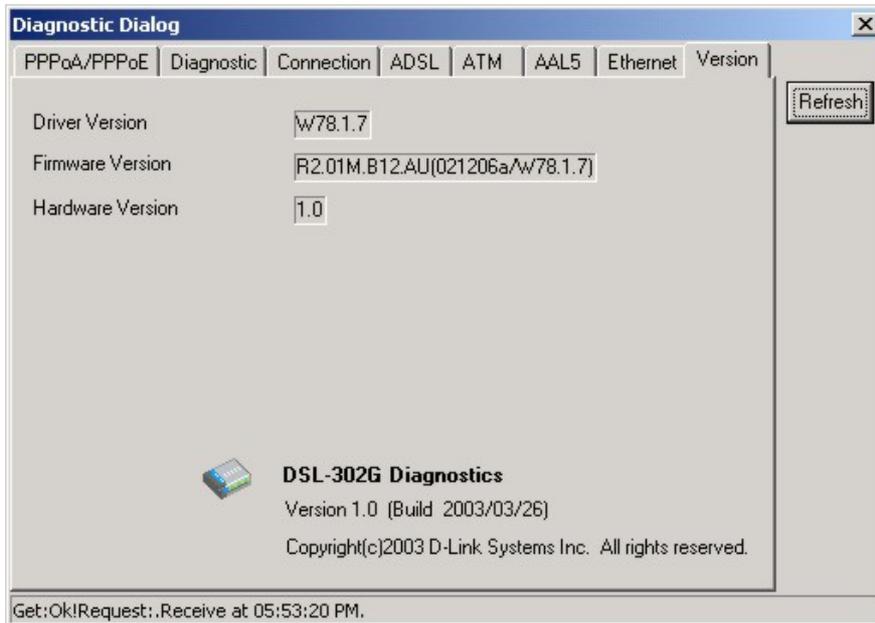
Contact your ADSL service representative for information on how to obtain additional virtual connections. To add and configure basic settings for another Channel (virtual connection), click the **Add** button.



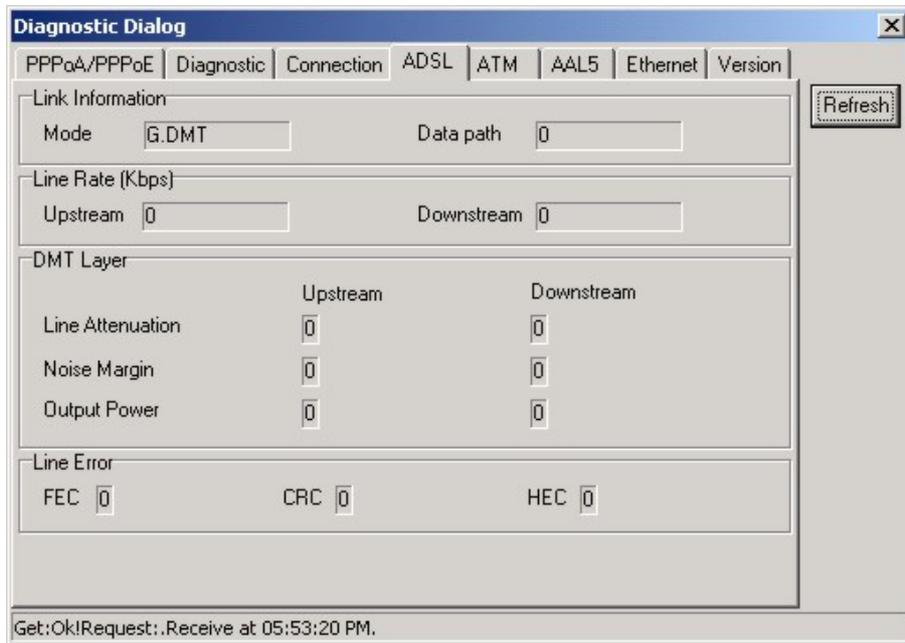
If you are updating an existing connection the Channel number will appear automatically and cannot be changed. If you are using a single connection the Channel will be number 1.

If you are adding a new virtual connection, type in a unique Channel number to identify the connection. Numbers 1 - 8 are valid identifiers used for the Channel value. Any new virtual connections must have a VPI/VCI combination that is unique to the device. Use the values assigned by your ADSL service provider. Select the Encapsulation method used for the connection and click the **OK** button to add the new Channel to the list. The remaining configuration for the new channel must be completed using the web-based management software. See **Additional Virtual Connections** on page 36 for more information.

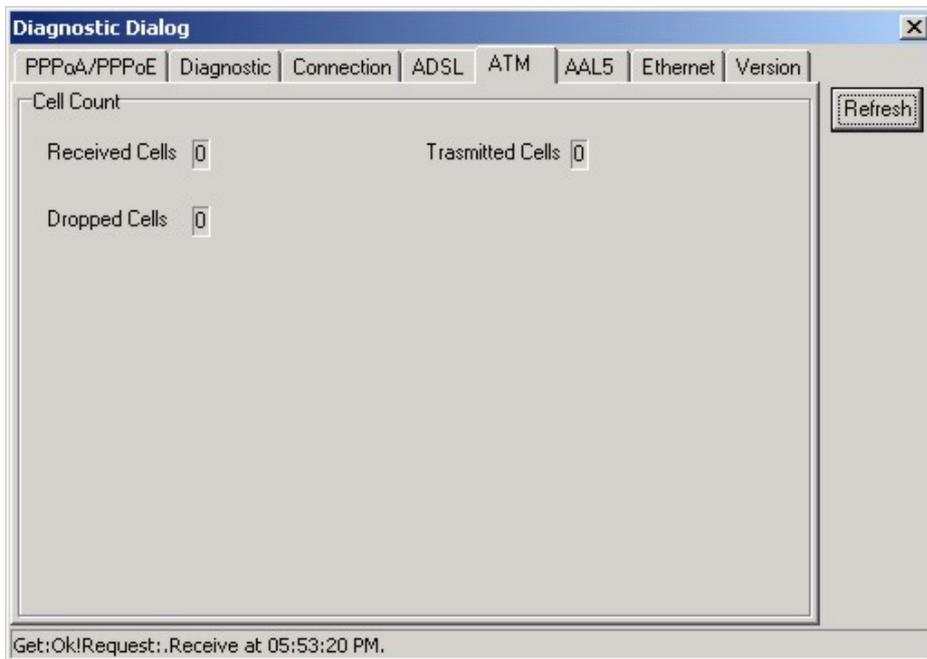
To check the firmware version, the USB driver version or the hardware version of the Modem you are currently using click the **Version** tab.



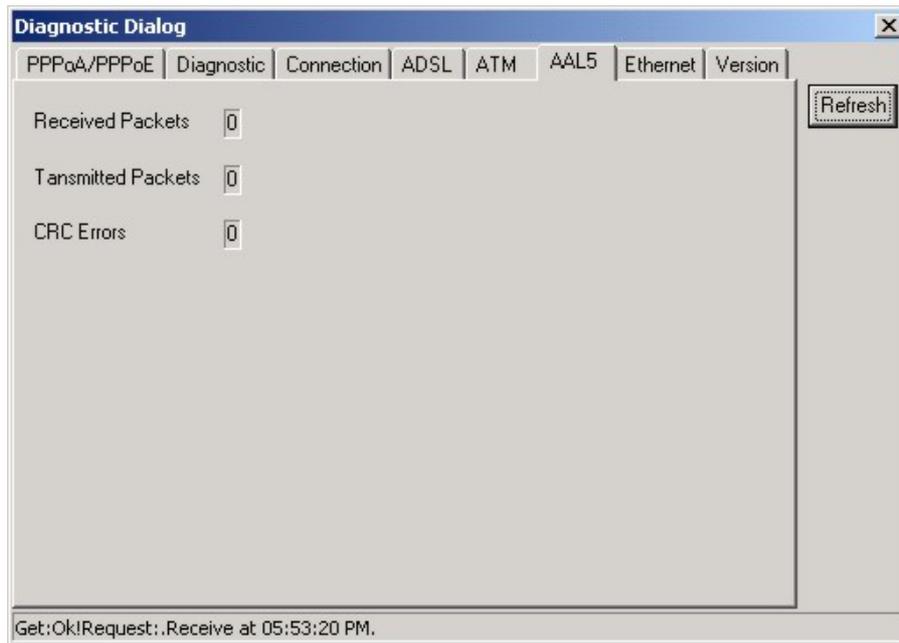
Basic performance information including the ADSL mode or “flavor” used by the device is listed in the **ADSL** menu tab.



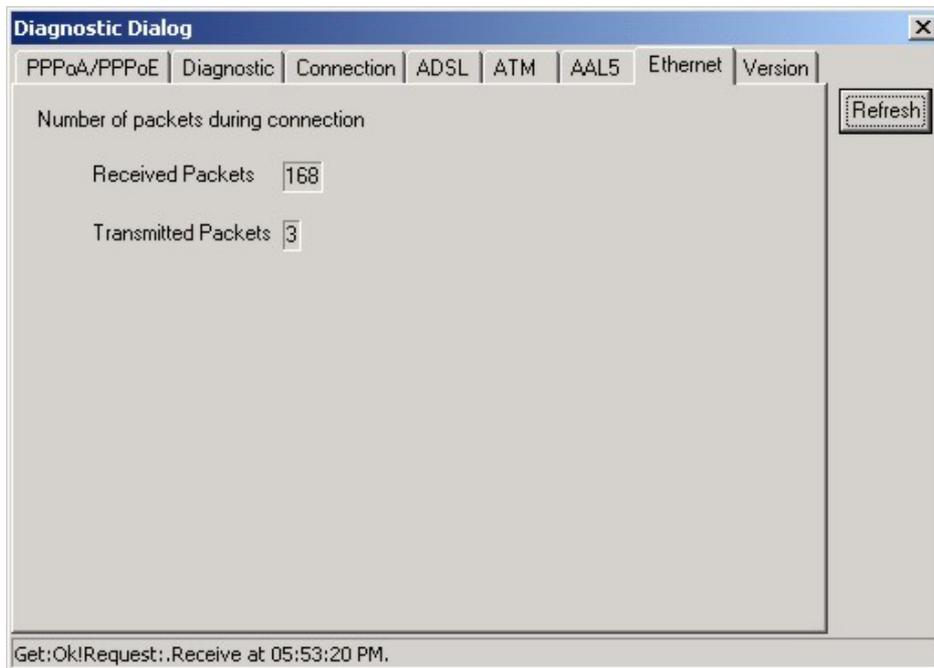
The **ATM** menu tab displays ATM cell data.



The **AAL5** menu tab displays still more performance data pertinent to AAL5 (ATM Adaptive Layer 5) transport.



The **Ethernet** menu tab displays data packet statistics for the Ethernet interface.





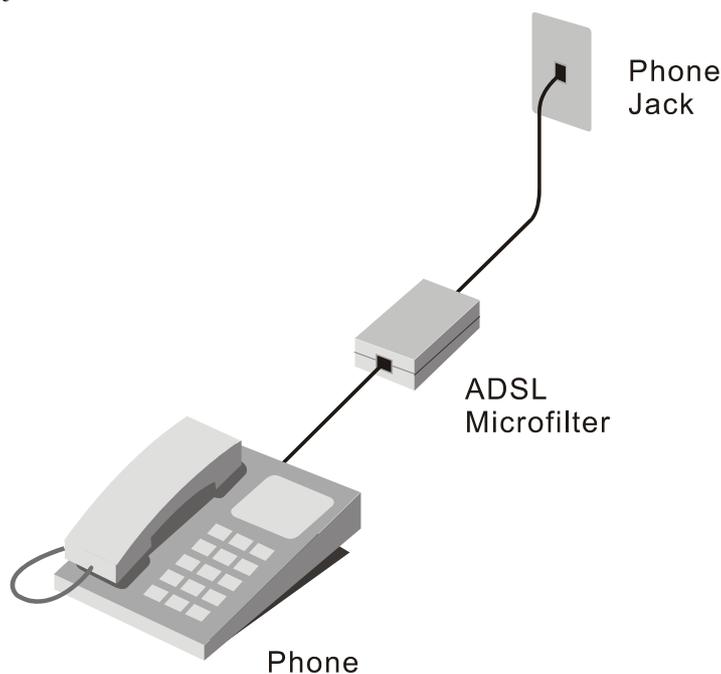
Low Pass Filters

Most ADSL clients will be required to install a simple device that prevents the ADSL line from interfering with regular telephone services. These devices are low pass filters and are variously referred to as in-line filters, micro-filters, line splitters or split line filters. They are easy to install and use standard telephone connectors and cable.

For some ADSL clients, a telecommunications technician will be sent to the client's premises to modify the telephone line, usually at the point where the telephone line enters the building. If a technician has divided or split your telephone line into two separate lines - one for regular telephone service and the other for ADSL - then you do not need to use any type of filter device. Follow the instructions given to you by your ADSL service provider, ISP or telephone company about where and how you should connect the Modem to the ADSL line.

In-Line Filters

Two common styles of low pass filters are shown in this section, the first is an in-line filter and is illustrated in Figure 16 below. In-line filters are easy-to-install, in-line devices, which attach to the telephone cable between the telephone and wall jack.



In-line Filter Installation



Note

Do not install an in-line filter between the Modem and the telephone jack. In-line filters are only intended for use with regular telephones, Fax machines and other regular telephone devices

Split Line Filter

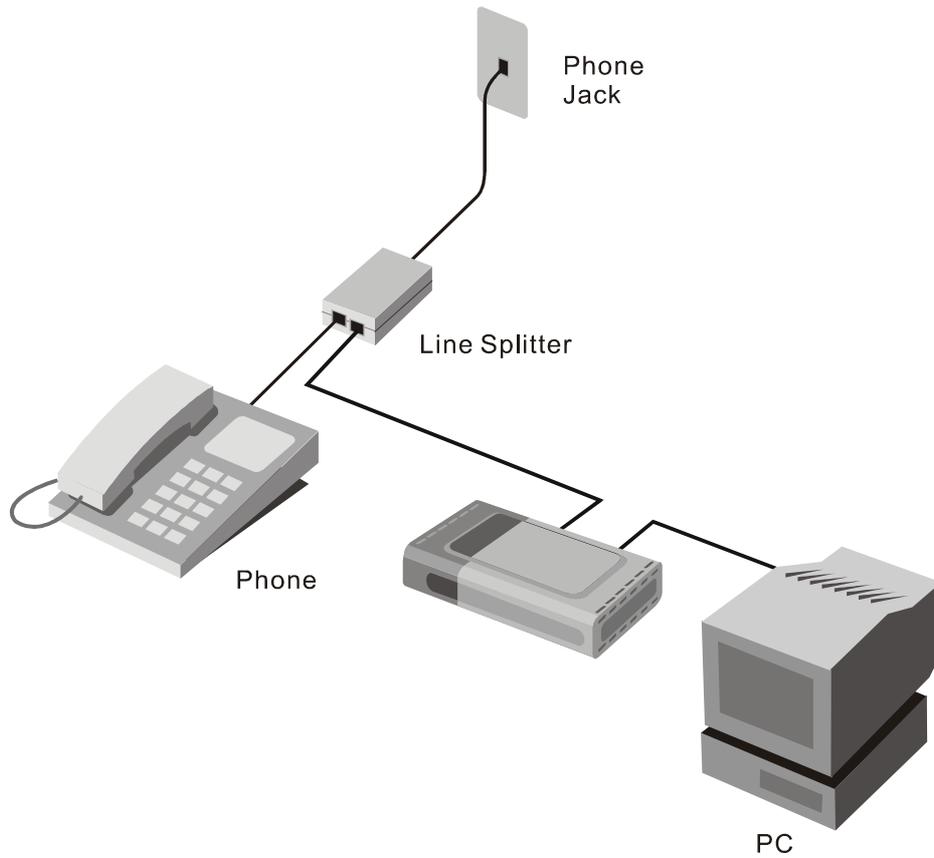
If you are instructed to use a split line style filter you must install the device between the Modem and the phone jack. Use standard telephone cable with standard RJ-11 connectors. The splitter has three RJ-11 ports used to connect to the wall jack, the Modem and if desired, a telephone or telephone device. The connection ports are typically labeled as follows:

Line - This port connects to the wall jack.

ADSL - This port connects to the Modem.

Phone - This port connects to a telephone or other telephone device.

The diagram below illustrates the proper use of the split line style filter.



Split Line Filter Installation

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URL: www.dlink.com.au E-MAIL: support@dlink.com.au & info@dlink.com.au
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2F, No. 119 Pao-Chung Rd, Hsin-Tien, Taipei, Taiwan
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TEL: 1-949-788-0805 FAX: 1-949-753-7033 BBS: 1-949-455-1779 & 1-949-455-9616
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