



***DSL-300G+***  
***ADSL Modem***  
***User's Guide***

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(Sep 2002)

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651L300G+015

## **Wichtige Sicherheitshinweise**

1. Bitte lesen Sie sich diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den spätern Gebrauch auf.
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  - b – Flüssigkeit ist in das Gerät eingedrungen.
  - c – Das Gerät war Feuchtigkeit ausgesetzt.
  - d – Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
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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 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 instructs the reader to install the DSL-300G+ ADSL Modem and use it to connect a single computer to the Internet.

If you are using a computer with a functioning Ethernet port, you can use the Quick Installation Guide to quickly establish your ADSL connection and access the Internet.

## Guide Overview

**Chapter 1 Introduction** – A description of the Modem and its key features including Front and Rear panel diagrams. A packing list is included at the end of the chapter.

**Chapter 2 Hardware Installation** – A description of alternatives for connecting the Modem to a single computer or to an Ethernet Local Area Network (LAN).

**Chapter 3 First Time Set Up** – A step-by-step guide for configuring the Modem to communicate with a computer and establish the ADSL connection.

**Chapter 4 Using the Web Manager** – An illustrated description of the various management functions used for configuring and monitoring the Modem. Management software is web-based and can be accessed using a standard web browser.

**Appendix A Technical Specifications** – A list of hardware and software specifications including standards and protocols compliance.

## 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.

## 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 (also called micro-filter or splitter) can be installed for each telephone that shares the line with the ADSL line. Micro-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.

## Requirements for Installation

You will need a computer that meets the minimum requirements listed below to set up and use the Modem. In addition, it will be necessary to configure the device using information provided by your ADSL service provider or ISP. This information is used to establish the parameters of the ADSL connection and identify the Modem on the service provider's network.

## Operating System Requirements

The DSL-300G+ 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.

## 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 Microsoft Internet Explorer® version 5.0, Netscape Navigator® version 4.7, or later versions. The web browser must have Javascript enabled. Make sure Javascript has not been disabled system wide by other software (such as virus protection or web user security packages).

## Ethernet Adapter (NIC)

Any computer using the Modem for Internet access, must have an Ethernet NIC (Network Interface Card) installed or a working Ethernet port. Most recently produced notebook computers are equipped with an Ethernet port. The system must have TCP/IP Protocol installed and enabled. If you have an Ethernet port installed, you probably already have TCP/IP enabled.

The Modem is equipped with a DHCP server to automatically assign an IP address to computer using it. The computer must first be configured to receive this IP address from the Modem. Instruction for configuring Windows operating systems to become a "DHCP client" is provided in the section titled *First Time Set Up*.

If you are using the Modem as a simple bridge (RFC 1483), additional software may be needed for the computer or server connected to the Modem (on the LAN side). Your ADSL service provider or ISP will give you more information.

## Connection Type

There are different methods available to make the connection from your computer (through the Modem) to the Internet (through your ADSL service). In order to properly configure the Modem, it is necessary to know what connection type is used to provide your ADSL connection.

The Modem supports the following connection types:

- ◆ PPP over ATM (RFC 2364) used by default
- ◆ PPP over Ethernet (RFC 2516)
- ◆ IP over ATM (RFC 1577)
- ◆ Ethernet over ATM (RFC 1483)

## Account Information (User Name and Password)

A User Name and Password used to identify your account on the service provider's network. For PPPoE and PPPoA connections, the account information is stored in the Modem's memory. If your connection uses Ethernet over ATM (RFC 1483) it is likely that you will also need a user name and password. For RFC 1483 connections however, the account information is actually stored on your computer along with connection software you must install on your system.

ACCOUNT INFORMATION
User Name:
Password:

## Bridged Ethernet Connections (RFC 1483)

All connections to the Internet require a unique global IP address. For bridged connections, the global IP settings must reside in your computer. Your ADSL service provider or ISP may have given you a CD with software that you must install on computer. Ask you service provider for more information.



## 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.

Global IP Settings for IPoA Connections
IP Address:
Netmask:
Gateway:
DNS:

## Additional Settings

If your ISP or ADSL service provider has instructed to change the **VPI/VCI** settings, there is a special menu, the *System Settings* menu in the management software used to change this. Some accounts using PPPoE may be instructed to change the **AC Name**. The AC Name is changed in the same menu. See the section titled *Using the Web Manager* for instructions on changing these settings.



## **Introduction**

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

### **ADSL Technology**

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-300G+ 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-300G+ 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-300G+ ADSL Ethernet Modem utilizes the latest ADSL enhancements to provide a reliable Internet portal suitable for most small to medium sized offices. DSL-300G+ advantages include:

- Quick and easy installation with a user friendly web-based GUI for configuration and management
- Built-in DHCP server
- High data transfer rates; up to 8 Mbps downstream and up to 640 Kbps upstream
- DSLAM interoperability; the auto-detect function automatically selects the correct connection type during the initialization process
- MIB Support; built-in MIBs allow some SNMP management functions
- Bridged Ethernet over ATM support; the DSL-300G+ supports RFC 2684 (also RFC 1483)
- Firmware can be upgraded using TFTP

## Front Panel

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

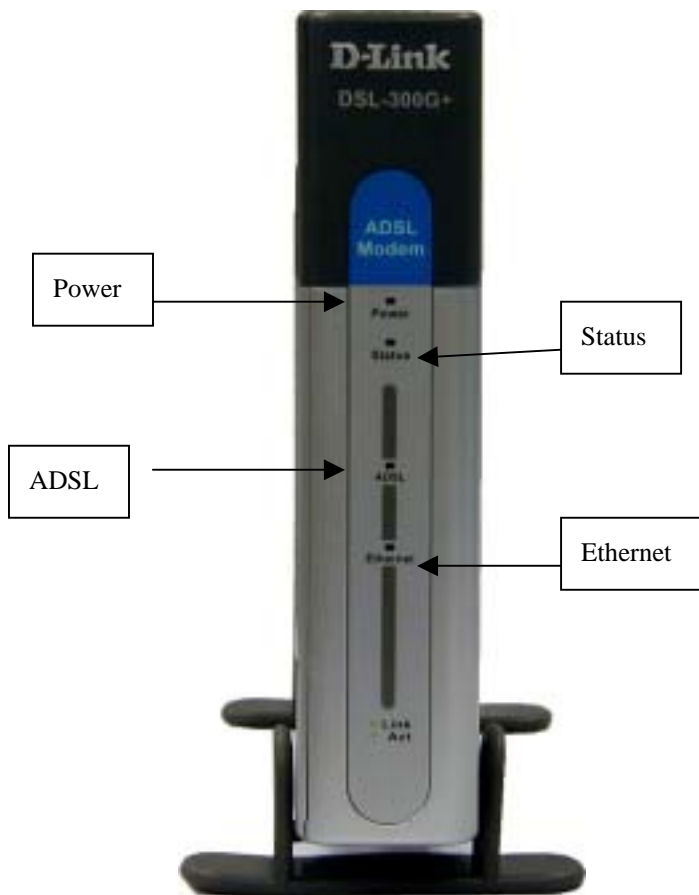


Figure 1. Front Panel Display

## LED Indicators

<b>Power</b>	Steady green light indicates the unit is powered on.
<b>Status</b>	Lights steady green during power on self-test. Once the connection status has been settled, the light will blink green indicating normal operation.
<b>ADSL: Link</b>	Steady green light indicates a valid ADSL connection. This will light after the ADSL negotiation process has been settled.
<b>ADSL: Act</b>	Blinking green light indicates activity on the WAN interface (ADSL port).
<b>Ethernet: Link</b>	Steady green indicates an Ethernet connection.
<b>Ethernet: Act</b>	Blinking green indicates an activity on the Ethernet port.

## Rear Panel

All cable connections to the Modem are made at the rear panel, including the Console port connection. The Console port is intended for use by a qualified telecommunications technician. Please do not attempt to configure the device through the Console connection.

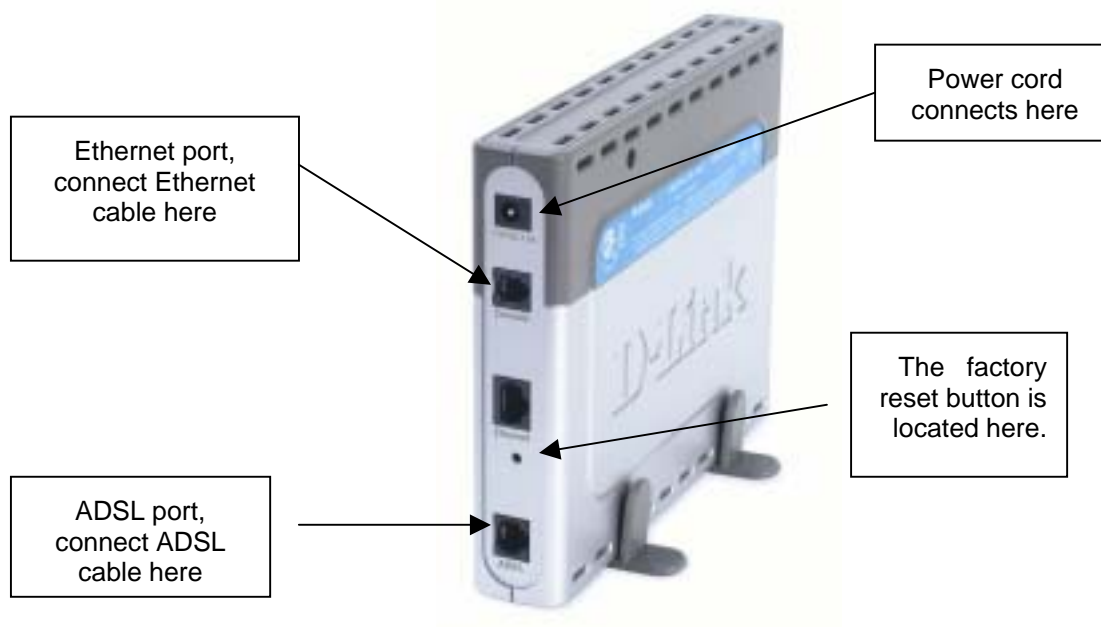


Figure 2. Rear Panel Connections

## 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-300G+ ADSL Modem
2. One User's Guide
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

## Hardware Installation

In this chapter you will learn about the various 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. For convenience, try to place the Modem near your computer so you can monitor the LED indicators. Allow some space above the Modem for ventilation to avoid problems with overheating.

### 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.

### Connecting One Computer to the Modem

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.

### Connecting a Local Ethernet Network to the 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. A valid connection will be indicated by the Ethernet Link LED indicator.

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 right side panel 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.



## First Time Set Up

This chapter will show you how to configure the Modem in order to establish the ADSL connection and ultimately a connection to the Internet. Any management software features that are directly concerned with establishing an Internet connection using ADSL are explained in the following chapter, *Using the Web Configuration Manager*.

Make sure your computer's Ethernet port is connected directly to the Modem as described in the previous chapter. If your computer has more than one Ethernet port, it is recommended that you disable the ports that are not connected to the Modem before configuring the device in order to avoid any potential for IP settings conflicts with other equipment.

It may be necessary to change the IP settings on your system in order to access the management software used for Modem configuration. The Modem uses Dynamic Host Configuration Protocol (DHCP) to automatically assign an IP address to your computer. Your computer (more precisely your Ethernet port's IP interface) must be configured to receive IP settings from the Modem. This means that your system must first be configured to become a DHCP client. Once your computer's IP settings are configured to connect to the Modem, you can configure the Modem to suit the requirements of your ADSL service. Some users will not need to configure the device and will simply use the factory default settings for the Internet connection. Even in this case though, it is necessary that your computer be configured as a DHCP client.

**Note:** There is a difference between a "local" IP address and a "global" or "universal" IP address. You must configure your computer to receive its local IP settings from the Modem. To access the web-based configuration software, you use the local IP address of the Modem. The global IP address is used to identify your account on the larger network and ultimately on the Internet. For ADSL connections that use PPPoE, PPPoA or IPoA connection types, this global IP address information is stored on the Modem and has no effect on the IP address of your computer. For RFC 1483 Bridge connections, additionally software may need to be installed on your computer. In this case, once the Modem has been configured to act as a bridge, the global IP address information will actually be stored on your computer. When the Modem acts as a bridge it is said to be invisible, that is, the Modem itself does not have an IP address.

## Configuring Your Computer for DHCP

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. 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 to allow the system to receive an IP address from the Modem, that is, configure the system to be a DHCP client.



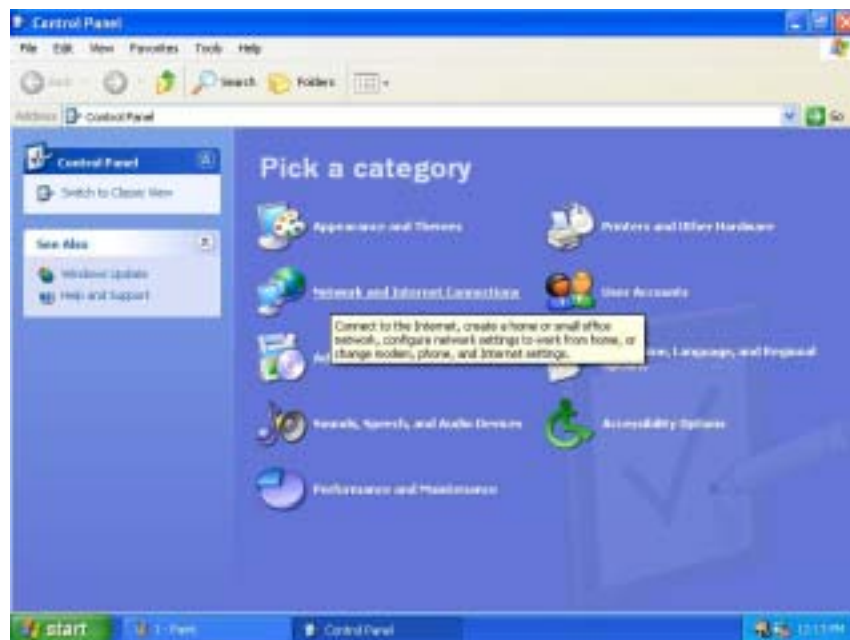
## Configure Windows XP for DHCP

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

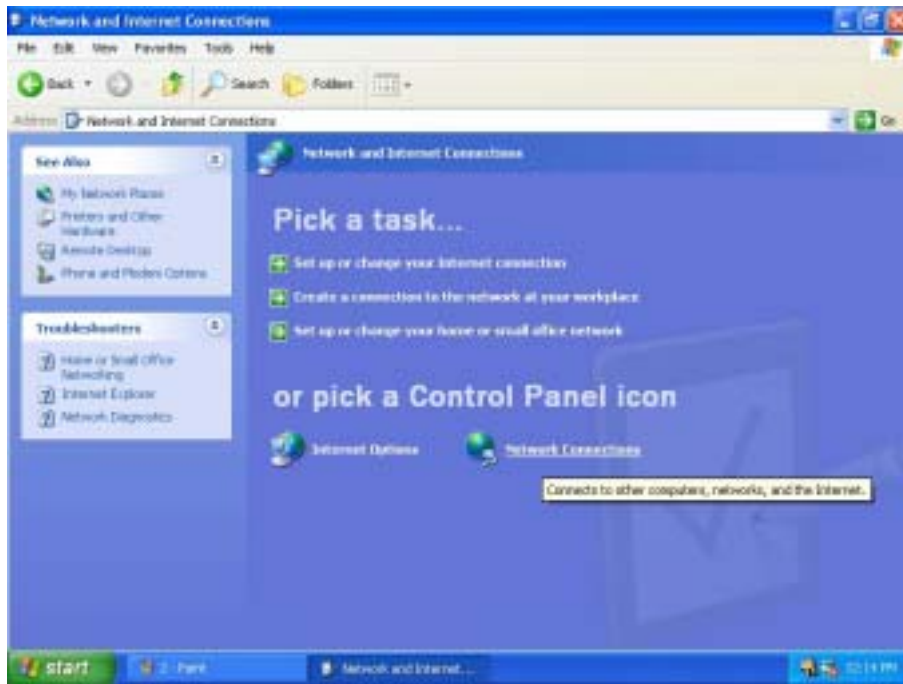
1. From the **Start** menu on your desktop, go to click on **Control Panel**.



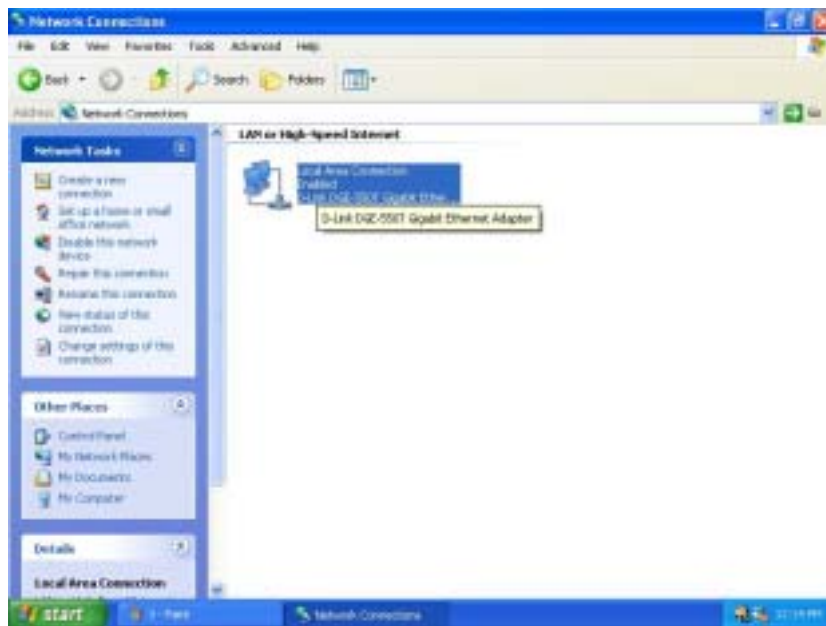
2. In the Control Panel folder, click on **Network and Internet Connections**.



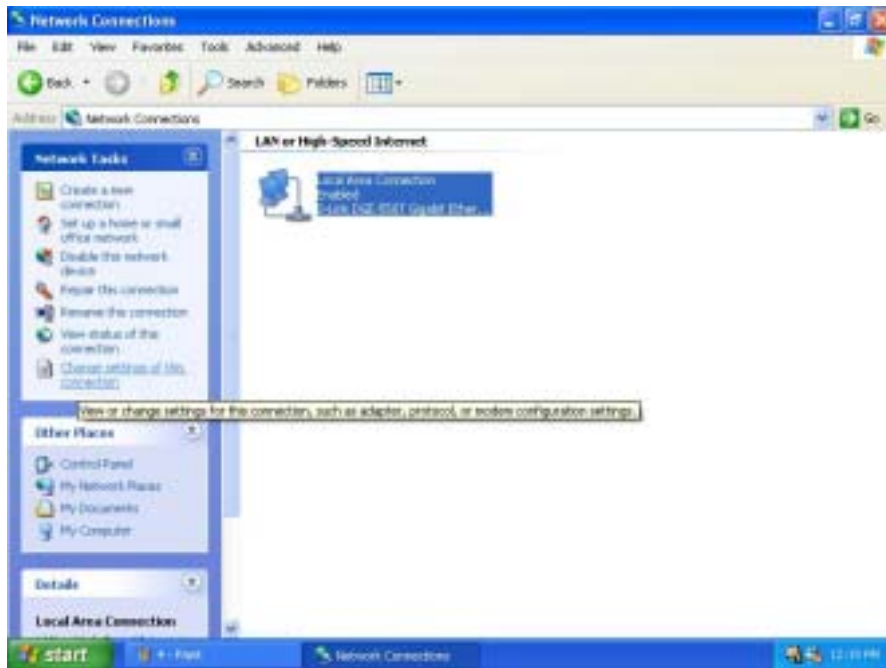
3. In the Network and Internet Connections folder, click on **Network Connections**.



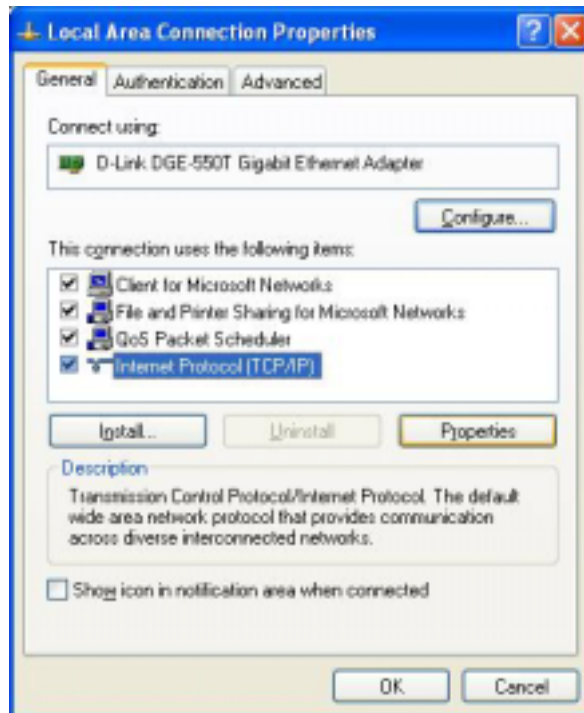
4. In the Network Connections folder, highlight the **Local Area Connection** icon by clicking on it once. A new option is revealed under Network Tasks in the left side panel.



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.

## Access the Web-based Configuration Manager

With your computer configured to receive its IP settings from the Modem, it can now access the web-based (HTML-based) configuration management software.

**Note:** Be sure that the web browser on the 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.

To use the web-based management software, launch a suitable web browser and direct it to the IP address of the Router. Type in **http://** followed by the default IP address, **192.168.0.1** in the address bar of the browser. The URL in the address bar should read: **http://192.168.0.1**. Press the Enter key or if you are using Internet Explorer click the "Go" button to the right of the URL field. A web page such as that seen below should appear.



Figure 3. Account Configuration Menu – First Time Set Up

## Configure the Internet Connection

Now that you have accessed the web-based manager, you can configure the device for connection to the Internet. For PPPoE and PPPoA connections, you will need to enter a User Name and Password used by your ISP or ADSL service provider for authentication purposes. This information is stored in the Modem's memory and you will not need to enter this again. If you are using PPPoE on the Modem for your Internet connection and you have not been instructed to change any connection settings for the Modem, then all you need to do is to enter the authentication information (user name and password).

If your ADSL service is using a "Bridged Ethernet" (RFC 1483) connection, your ISP or ADSL service provider will supply special software to install on your computer. This software will also require a user name and password for your account. In this case, the user name and password are stored in your computer's memory.

The default connection method used by the Modem is PPPoE. If you are using a PPPoA, IPoA, or Bridged Ethernet (RFC 1483) connection, you need to change the connection method. If you are using a connection type other than PPPoE, skip ahead to the section titled, *Changing the Connection Type*. Once the connection type has been changed, read the section corresponding to your ADSL service connection type to configure your Internet connection.

## PPPoE Connections

In the **Account Configuration** window, follow these steps to establish the Internet connection using PPPoE:

1. In the **User Name** entry field, type the user name used to identify your account.
2. In the **Password** entry field, type the password used to authenticate your account
3. DO NOT change the **Authentication** method unless your ADSL service provider or ISP has instructed you to change it. By default, the **pap** protocol is selected. If you are told to change this, select **chap** from the pull-down menu.
4. Leave the **Connect on Demand** option **enabled** in the pull-down menu. This simply means that the Modem will begin the connection process when it restarts.
5. Leave **Idle Time** set to the 0. This tells the Modem to maintain the "always on" connection, even when you are not using the Internet.
6. Click **OK**.
7. A new message appears:



8. Click **OK**. The information you have just entered will be saved to the Modem's flash memory.

**Note:** If you have been instructed to change the VPI/VCI settings or to enter the AC Name information, skip ahead to the System Settings section in the next chapter.



- The Modem is now ready to begin the process that establishes a connection to the Internet. This is known as the “negotiation” process since the Modem must first contact other computers on the network to verify your account information and negotiate the connection. Click on the **Connect** button to begin the negotiation. It will take a few seconds for verification and connection processes to be completed. Notice that the **Connection Status** field displays a message informing you that the Modem is now “Connecting...”; when the connection is established, this field displays the message “Connected”. When you see this message, you are connected to the Internet.

## Changing the Connection Type

By default, the Modem is configured to use the PPPoE connection method for the connection to the Internet. If your ADSL service uses PPPoA, IPoA or “RFC 1483 Bridge” connection types you must first change the connection type and restart the Modem before you can establish a connection. Follow the instruction below for the type of connection you want to use.

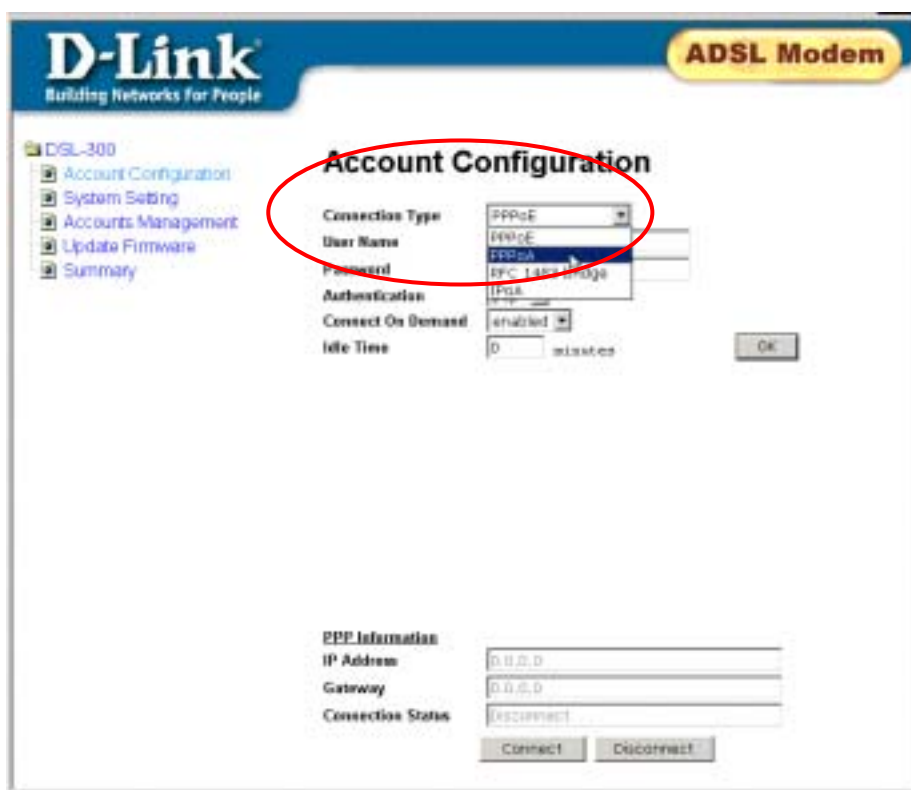


Figure 4. Changing Connection Type

At the top of the **Account Configuration** menu you will see a pull-down menu labeled **Connection Type**. Use this to select the connection type used for your ADSL service.

## Change Connection Type to PPPoA

To change the connection type to PPPoA and connect to the Internet, follow these steps:

1. In the **Account Configuration** window, select **PPPoA** from the **Connection Type** pull-down menu. The web page display will change to present this menu:

The screenshot shows the 'Account Configuration' page for a D-Link ADSL Modem. The page has a blue header with the D-Link logo and 'ADSL Modem' in a yellow box. A left-hand navigation menu lists 'DSL-300' and its sub-items: 'Account Configuration', 'System Setting', 'Accounts Management', 'Update Firmware', and 'Summary'. The main content area is titled 'Account Configuration' and contains several form fields: 'Connection Type' (a dropdown menu showing 'PPPoA'), 'Encapsulation' (a dropdown menu showing 'LLC'), 'User Name' (a text input field with 'user name' as a placeholder), 'Password' (a text input field with asterisks), 'AC Name' (a text input field), 'Authentication' (a dropdown menu showing 'pap'), 'Connect On Demand' (a dropdown menu showing 'Enabled'), and 'Idle Time' (a text input field with '0' and a 'minutes' label). Below these fields are 'PPP Information' fields: 'IP Address' (a text input field with '0.0.0.0'), 'Gateway' (a text input field with '0.0.0.0'), and 'Connection Status' (a dropdown menu showing 'Disconnect'). At the bottom of the form are 'Connect' and 'Disconnect' buttons.

Figure 5. PPPoA Account Configuration – Initial Set Up

2. DO NOT change the **Encapsulation** setting unless your ADSL service provider or ISP has instructed you to change it. By default, the **LLC** is selected. If you are told to change this, select **VC Mux** from the pull-down menu.
3. In the **User Name** entry field, type the user name used to identify your account.
4. In the **Password** entry field, type the password used to authenticate your account
5. DO NOT change the **Authentication** method unless your ADSL service provider or ISP has instructed you to change it. By default, the **pap** protocol is selected. If you are told to change this, select **chap** from the pull-down menu.
6. Leave the **Connect on Demand** option **enabled** in the pull-down menu. This simply means that the Modem will begin the connection process when it restarts.
7. Leave **Idle Time** set to the 0. This tells the Modem to maintain the “always on” connection, even when you are not using the Internet.
8. Click on the **OK** button.

9. A new message appears:



10. Click on the **OK** button. The information you have just entered will be saved to the Modem's flash memory.

**Note:** If you have been instructed to change the VPI/VCI settings, skip ahead to the *System Settings* section in the next chapter.

11. The Modem is now ready to begin the process that establishes a connection to the Internet. This is known as the "negotiation" process since the Modem must first contact other computers on the network to verify your account information and negotiate the connection. Click on the **Connect** button to begin the negotiation. It will take a few seconds for verification and connection processes to be completed. Notice that the **Connection Status** field displays a message informing you that the Modem is now "Connecting..."; when the connection is established, this field displays the message "Connected". When you see this message, you are connected to the Internet.

## Change Connection Type to IPoA

To change the connection type to IPoA and connect to the Internet, follow these steps:

1. In the **Account Configuration** window, select **IPoA** from the **Connection Type** pull-down menu. The web page display will change to present this menu:

The screenshot shows the 'Account Configuration' web page for a D-Link DSL-300 ADSL Modem. The page has a blue header with the D-Link logo and 'Building Networks For People'. A yellow badge in the top right corner says 'ADSL Modem'. On the left, there is a navigation menu with options: Account Configuration, System Setting, Accounts Management, Update Firmware, and Summary. The main content area is titled 'Account Configuration' and contains the following settings:

- Connection Type: IPoA (selected in a pull-down menu)
- Encapsulation: LLC (selected in a pull-down menu)
- IP Address: Four input boxes for digits 0-9, separated by dots.
- Netmask: Four input boxes for digits 0-9, separated by dots.
- Gateway: Four input boxes for digits 0-9, separated by dots.
- DNS: Four input boxes for digits 0-9, separated by dots.

An 'OK' button is located at the bottom center of the form.

**Figure 6. IPoA Account Configuration – Initial Set Up**

2. DO NOT change the **Encapsulation** setting unless your ADSL service provider or ISP has instructed you to change it. By default, the **LLC** is selected. If you are told to change this, select **VC Mux** from the pull-down menu.
3. Type in the global IP settings for your account. The global IP settings are used to identify your account on the Internet. Your ISP or ADSL service provider should give you an **IP Address** and **Netmask**. Enter these numbers in the spaces provided. IP settings are written using dotted decimal notation, that is, an IP setting (such as an IP address) is written as a set of four numbers of up to three digits each separated by a period (also called “dot” or decimal point). Remember, these IP addresses are your “global” or “universal” IP settings. This has no effect on the IP address of your computer. The IP address of your computer as well as the IP address you used to connect to the Modem are both “local” IP addresses.
4. Additional IP settings must be entered so the Modem can be used to access the Internet and find web pages. These are the **Gateway** IP address and the **DNS** IP address. Enter these IP settings in the spaces provided.
5. Click the **OK** button. A message prompt appears informing you that it will take about a minute to save the information and restart the Modem. Click **Yes** to restart the Modem.

**Note:** If you have been instructed to change the VPI/VCI settings, skip ahead to the *System Settings* section in the next chapter.

6. After restarting, the Modem will be connected and ready for use unless you also need to change the VPI/VCI settings or enter a new AC Name. For instructions on changing these settings read the section titled *System Setting*.

## Change Connection Type to RFC 1483 Bridge

For ADSL accounts using the RFC 1483 so-called “Bridged Ethernet” connection type, the IP information needed to use the Internet will be located in the computer using the Modem. In this case, you probably have a CD with software for your computer. Follow the instructions from your ISP or ADSL service provider regarding connection software and configure the Modem before or after this installation as instructed.

If you need to configure the VPI/VCI settings, you can do this after changing the connection type. Instructions for changing these settings are in the section titled *System Setting* below.

To change the connection type to RFC 1483 Bridge and connect to the Internet, follow these steps:

1. In the **Account Configuration** window, select **RFC 1483 Bridge** from the **Connection Type** pull-down menu. The web page display will change to present this menu:



**Figure 7. RFC 1483 Bridge Account Configuration**

2. Click the **OK** button. A message prompt appears informing you that it will take about a minute to save the information and restart the Modem. Click “Yes” to restart the Modem.

**Note:** If you have been instructed to change the VPI/VCI settings, skip ahead to the *System Settings* section in the next chapter.

3. After restarting, the Modem is ready for use.

## Using the Web Manager

If you are setting up the Modem for the first time you may want to read the previous chapter, *First Time Set Up*. This chapter describes functions and features of the Modem's configuration manager that are not described in the previous chapter.

### Web-based Configuration Manager GUI

When you first access the web-based configuration manager, you will see a graphical user interface (GUI) that presents user-defined variables such as a User Name and Password if you using PPPoE or PPPoA for your ADSL service. This is also where you can change the Connection Type used by the Modem to establish the ADSL connection and ultimately the connection to the Internet. If you are going to up date or upgrade the Modem's firmware, do this before making any other changes. To upgrade firmware, click the Update Firmware hyperlink to go to the Update menu.

The hyperlinks on the left side of the GUI are labeled according to their function. The Account Configuration menu is the first menu you will see when you access the configuration manager, regardless of what type of connection the Modem is configured to use. The menus linked to these hyperlinks are described in the remaining sections of this chapter.

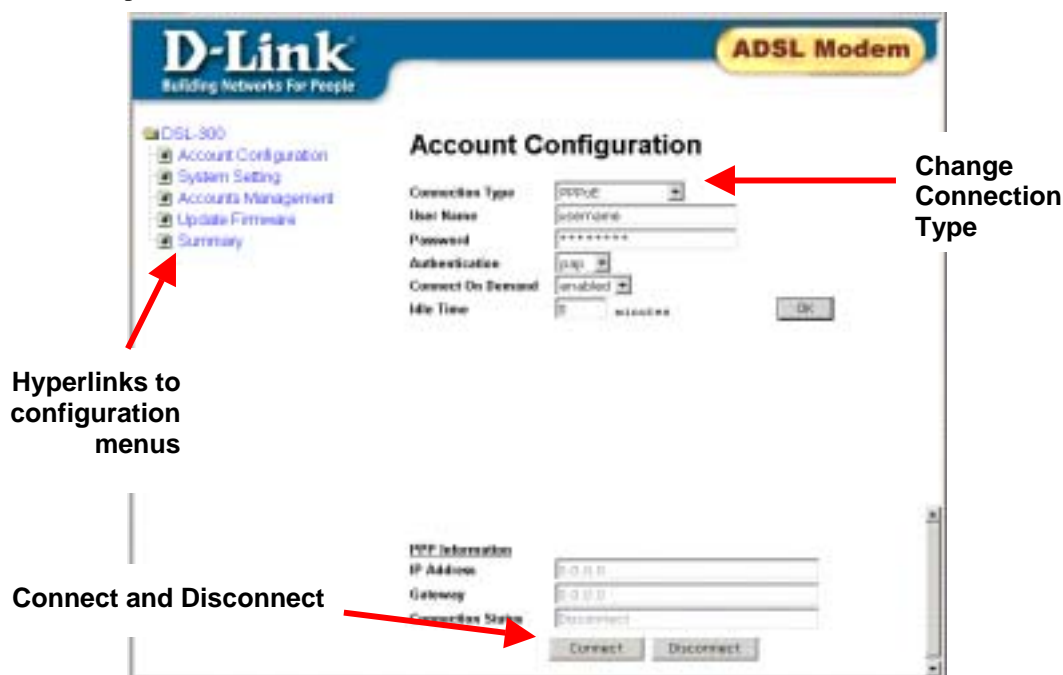


Figure 8 Configuration Manager

### Disconnect ADSL Connection

At any time you may terminate the ADSL connection by clicking on the Disconnect button at the bottom of the Account Configuration menu.

If the ADSL connection has been terminated click the Connect button to reconnect. If the connection can not be established after a few tries, there may be a problem with your ADSL service.

## System Setting (VPI/VCI Settings)

**IMPORTANT!** DO NOT change any of the settings in the System Setting menus unless you have been instructed by your ISP or ADSL service provider to change the VPI, VCI or AC Name information.

If you have been told to change the VPI or VCI settings or if you have been given an AC Name, use the System Setting menu to enter the new information.

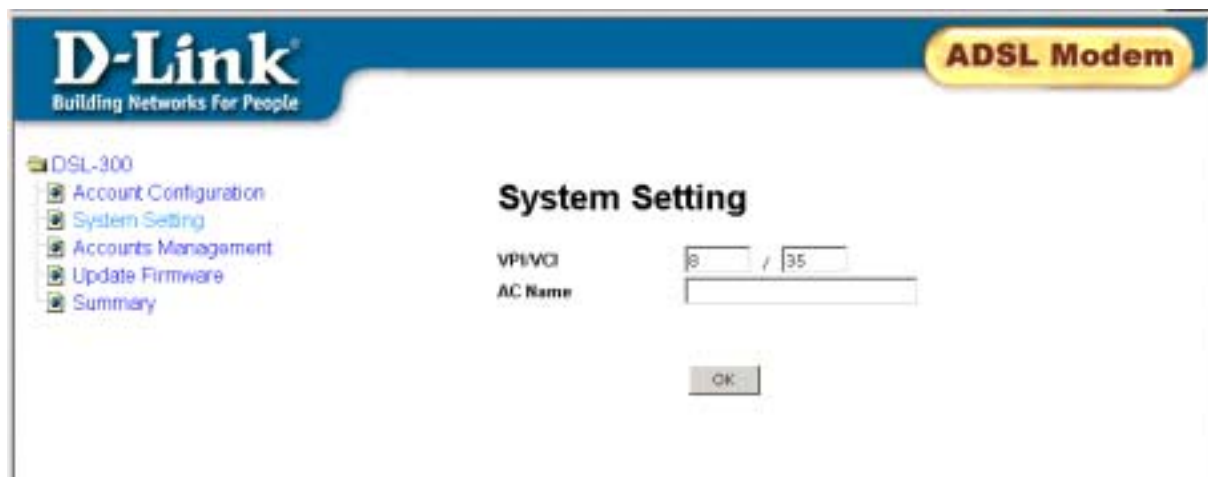


Figure 9. System Setting Menu (PPPoE)

**VPI/VCI** To change the VPI/VCI values, type in the numbers given to you by your ISP or ADSL service provider in the VPI/VCI spaces provided. The first (left hand) space is for the VPI value. The second (right hand) space is for the VCI value. These numbers are used to define a path on the ATM network used by your ISP or ADSL service provider.

**AC Name (PPPoE only)** Some PPPoE connections may require only If you are given an AC Name for your account, type in the characters exactly as given to you by your ISP or ADSL service provider. This character string functions in way similar to a user name and is used to authenticate your account.

1. When you have entered the System Settings information click the **OK** button. The save changes message appears.



2. Click **OK** again to save the changes to flash memory.

## PPP Account Configuration

PPPoE and PPPoA accounts use different connection types, however the variables that are required for configuration are the same. These variables are summarized in the table below.

**Figure 10. PPPoE Account Configuration**

The PPP Account Configuration menu presents the following user defined parameters:

<b>Connection Type</b>	Use this drop-down menu to change connection type used for your ADSL service. PPPoE is the default connection type used for the Modem.
<b>User Name</b>	Type in the User Name used to identify your account.
<b>Password</b>	Type in the password used for authentication of your account.
<b>Authentication</b>	This is the protocol to log on your account. Choose chap (default) or pap from the drop-down menu as instructed by your ISP.
<b>Connect on Demand</b>	When this function is enabled the Modem begin to negotiate the ADSL connection as soon as it is restarted. If this function is disabled, it will be necessary to access this menu and hit the Connect button each time you want to establish the ADSL connection.
<b>Idle Time</b>	The default value of 0 will maintain a continuous ADSL connection. If you change this value, the Modem will discontinue the ADSL connection if the ADSL interface remains idle for the amount of time (in seconds) that you specify here. A disconnection requires the modem to be reconnected using the Connect button in order to reestablish the ADSL connection.

When you have entered or changed the Account Configuration information according to the instructions of your ISP or ADSL service provider, click the **OK** button. You will be prompted to continue making configuration changes to the Modem or to save the changes you just made and restart the Modem now. Select the appropriate option and click **OK**.

## PPP Information

PPP Information is read-only. The IP settings information listed here are the IP settings that identify your account and are used to route data traffic to and from the Modem.



## IPoA Account Configuration

IPoA connections require static global IP settings. Your ISP should supply this information. The global IP configuration settings are summarized in the table below.



**Figure 11. IPoA Account Configuration**

The IPoA Account Configuration menu presents the following user IP settings:

<b>Connection Type</b>	Use this drop-down menu to change connection type used for your ADSL service. PPPoE is the default connection type used for the Modem.
<b>Encapsulation</b>	Choose the capsulation method from the drop-down menu as instructed by your ISP.
<b>IP Address</b>	Type in the global IP address given to you by your ISP.
<b>Netmask</b>	Type in the Netmask used for you account (given to you by your ISP).
<b>Gateway</b>	Type in the Gateway IP address used to connect to IP addresses outside your group of IP addresses (given to you by your ISP)..
<b>DNS</b>	Type in the DNS server IP address given to you by your ISP. This is used to match web sire addresses to their actual global IP addresses.

When you have entered or changed the Account Configuration information according to the instructions of your ISP or ADSL service provider, click the **OK** button. You will be prompted to continue making configuration changes to the Modem or to save the changes you just made and restart the Modem now. Select the appropriate option and click **OK**.

## PPP Information

PPP Information is read-only. The IP settings information listed here are the IP settings that identify your account and are used to route data traffic to and from the Modem.

## Summary

Use the Summary screen to view information that can be useful for troubleshooting. Click the Refresh hyperlink to update the statistics in the Summary screen.

<b>Summary</b>	
<b>PPP Information</b>	
Connection Type	PPPoA
Encapsulation	LLC
Login User Name	user name
IP Address	0.0.0.0
Gateway	0.0.0.0
Connection Status	Disconnect
<b>PVC</b>	
VPI	8
VCI	35
<b>ADSL Line Status</b>	
Operation Path	Fast
Operation Mode	
Upstream	0 Kbits
Downstream	0 Kbits
<b>Current Firmware Version</b>	
Current Firmware Version	R2.05.b4t7
ADSL driver Version	1.3.5.03182002.0001
<a href="#">Refresh</a>	

Figure 12. Summary Statistics

For PPP connection types the following information is listed in the Summary screen:

<b>PPP Information</b>	
<b>Connection Type</b>	Connection type used for your account, PPPoA, PPPoE, RFC 1483 or IPoA
<b>Encapsulation</b>	Packet encapsulation method used LLC or VC Mux
<b>Login User Name</b>	User Name used to identify your account to the ISP
<b>IP Address</b>	Global IP address for your account
<b>Gateway</b>	Gateway IP address; allows for connection to entire network
<b>Connection Status</b>	This will display "Connected" when the Modem has a valid ADSL connection. If a connection attempt has failed an error message appears here.
<b>PVC</b>	
<b>VPI</b>	Virtual Path Identifier
<b>VCI</b>	Virtual Circuit Identifier

<b>ADSL Line Status</b>	
<b>Operation Path</b>	This describes the method used for data transfer on the network backbone. It should read either Fast or Interleave.
<b>Operation Mode</b>	The ADSL operation mode is detected automatically by the Modem. This tells you what mode is being used. It should read either G.dmt or G.lite.
<b>Upstream</b>	Data transfer speed from the Modem to the ISP's network and the Internet
<b>Downstream</b>	Data transfer speed from the ISP's network and the Internet to the Modem
<b>Current Firmware Version</b>	
<b>Current Firmware Version</b>	Firmware version running on Modem
<b>ADSL Driver Version</b>	ADSL driver used for connection

### Bridge Connection Summary Screen

If the Modem is configured to use a bridged connection the summary statistics listed are different from using the other connection types. The global IP address is not listed in the summary since this information is actually located on your computer. To view the IP address of your system, look at the Properties of the TCP/IP protocol installed on your system. For a bridged connection, these are your global IP settings. The connection software installed on your system may also have summary screen you can view.

Click the Refresh hyperlink to update the statistics in the Summary screen.

## Summary

**PPP Information**

**Connection Type**                      RFC 1483 bridge

**PVC**

**VPI**    8

**VCI**    35

**ADSL Line Status**

**Operation Path**                              Fast

**Operation Mode**

**Upstream**                                      0 Kbits

**Downstream**                                  0 Kbits

**Current Firmware Version**

**Current Firmware Version** R2.05.b4t7

**ADSL driver Version**                      1.3.5.03182002.0001

[Refresh](#)

Figure 13. Summary Statistics in Bridge Mode

## Update Firmware

Use the Update Firmware feature to load the latest firmware for the Modem. You can obtain the latest version of the DSL-300G+ firmware by logging onto the D-Link web site at [www.dlink.com](http://www.dlink.com). You can also link to the D-Link web site by clicking on the D-Link logo in the upper left corner of the browser window. Download the firmware file and save it to your computer in a location that is easy to find or easy to remember. You must have some sort of TFTP server software installed on your system to use this feature.

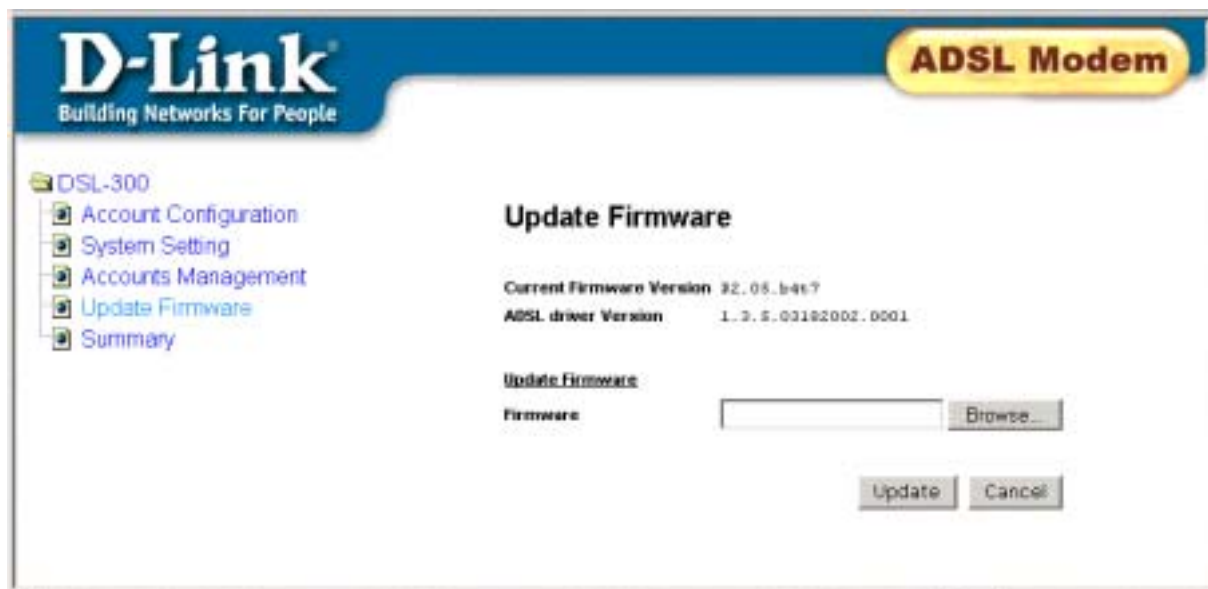


Figure 14. Update Firmware

### Update Firmware Screen

To upgrade firmware, follow these steps:

1. Launch a suitable TFTP server program on your system.
2. Type in the name and path of the file or click on the **Browse** button to search for the file.
3. Click the **OK** button to begin copying the file. The file will load and restart automatically.

## Accounts Management

As of the writing of this user's guide, the Modem supports ADSL connection for one computer that is directly connected to it. In a future firmware version, the Modem will allow for connection to an Ethernet LAN and provide an ADSL service connection as well as limited DHCP function for the LAN. The Accounts Management feature will be useful for future versions of the firmware. This menu will be able to control what computers have access to the Modem and thus to the ADSL/Internet connection.



Figure 15. Accounts Management



## Technical Specifications

General	
<b>Standards:</b>	ITU G.992.1 (G.dmt) ITU G.992.2 (G.lite) ITU G.994.1 (G.Hs) ANSI T1.413 (Issue 2)
<b>Protocol:</b>	TCP/IP
<b>Data Transfer Rate:</b>	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
<b>Media Interface Exchange:</b>	RJ-11 port ADSL telephone line connection RJ-45 port for 10/100BASET Ethernet connection

Physical and Environmental	
<b>DC inputs:</b>	Input: 100V ~ 240V AC, 1.0 A, 50~60Hz
<b>Power Adapter:</b>	Output: 7.5V DC, 1.5A
<b>Power Consumption:</b>	5 Watts (Max)
<b>Operating Temperature:</b>	0° to 40° C (32° - 109° F)
<b>Humidity:</b>	5 to 95% (non-condensing)
<b>Dimensions:</b>	190 mm x 117 mm x 31 mm
<b>Weight:</b>	360 gm
<b>EMI:</b>	CE Class B FCC Class B
<b>Safety:</b>	CSA International Mark

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INFO: 1-800-326-1688 URL: www.dlink.com  
E-MAIL: tech@dlink.com & support@dlink.com



## Registration Card

**Print, type or use block letters.**

Your name: Mr./Ms \_\_\_\_\_

Organization: \_\_\_\_\_ Dept. \_\_\_\_\_

Your title at organization: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Organization's full address: \_\_\_\_\_

Country: \_\_\_\_\_

Date of purchase (Month/Day/Year): \_\_\_\_\_

Product Model	Product Serial No.	* Product installed in type of computer (e.g., Compaq 486)	* Product installed in computer serial No.

(\* Applies to adapters only)

*Product was purchased from:*

Reseller's name: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reseller's full address: \_\_\_\_\_

**Answers to the following questions help us to support your product:**

**1. Where and how will the product primarily be used?**

Home  Office  Travel  Company Business  Home Business  Personal Use

**2. How many employees work at installation site?**

1 employee  2-9  10-49  50-99  100-499  500-999  1000 or more

**3. What network protocol(s) does your organization use ?**

XNS/IPX  TCP/IP  DECnet  Others \_\_\_\_\_

**4. What network operating system(s) does your organization use ?**

D-Link LANsmart  Novell NetWare  NetWare Lite  SCO Unix/Xenix  PC NFS  3Com 3+Open

Banyan Vines  DECnet Pathwork  Windows NT  Windows NTAS  Windows '95

Others \_\_\_\_\_

**5. What network management program does your organization use ?**

D-View  HP OpenView/Windows  HP OpenView/Unix  SunNet Manager  Novell NMS

NetView 6000  Others \_\_\_\_\_

**6. What network medium/media does your organization use ?**

Fiber-optics  Thick coax Ethernet  Thin coax Ethernet  10BASE-T UTP/STP

100BASE-TX  100BASE-T4  100VGAnyLAN  Others \_\_\_\_\_

**7. What applications are used on your network?**

Desktop publishing  Spreadsheet  Word processing  CAD/CAM

Database management  Accounting  Others \_\_\_\_\_

**8. What category best describes your company?**

Aerospace  Engineering  Education  Finance  Hospital  Legal  Insurance/Real Estate  Manufacturing

Retail/Chainstore/Wholesale  Government  Transportation/Utilities/Communication  VAR

System house/company  Other \_\_\_\_\_

**9. Would you recommend your D-Link product to a friend?**

Yes  No  Don't know yet

**10. Your comments on this product?** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PLEASE  
PLACE STAMP  
HERE

**TO:**

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