
vTel DSL

Installation and Network Configuration Guide

This handbook contains instructions for:

- Installing your Best Data DSL800R Modem
- Identifying the network readiness of your computer
- Setting your network specifications
- Tips on troubleshooting problems

Welcome to VTel's First-In-Vermont DSL Service.

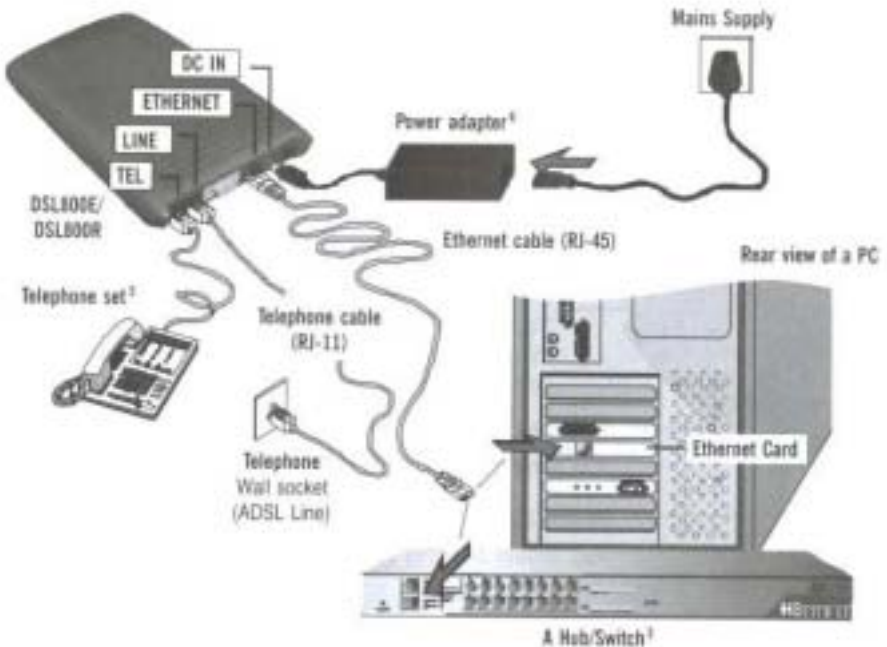
We are pleased to provide this configuration guide to assist in setting up your computer for VTel DSL service.

If you have comments or problems, please call toll free at 802-885-9000.

Now that you have your DSL800R Modem, it is necessary to make some minor configuration changes to your computer to connect to the VTel DSL network. This manual will identify these changes and explain how to implement them.

Connecting the DSL800R Modem

For a single PC connection, ensure that you are using the **Cross-Over** CAT-5 UTP Ethernet cable (that comes with your package) to connect your DSL800R to the Ethernet card on a PC.

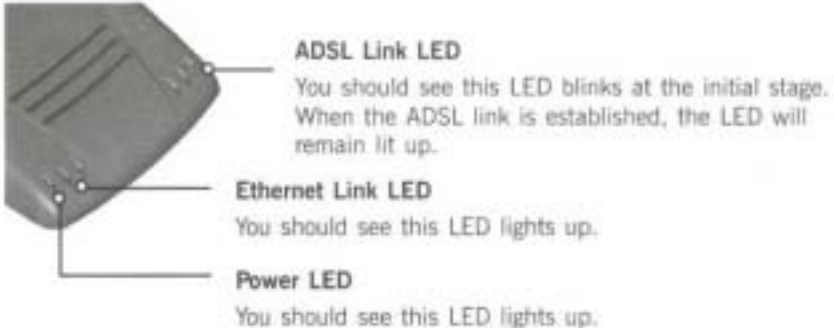


For a multiple PC connection, if you are connecting to the **MDI Port** on your Hub/Switch, please use the **Cross-Over** CAT-5 UTP Ethernet cable (that comes with your package). If you are connecting to the **MDIX Port** on your HUB/Switch, please use a **Straight** CAT-5 UTP Ethernet cable (not supplied).

Verifying your connections

This is to verify the connections you have carried out on the DSL800R. Verifications are based on the activity of the corresponding LED(s).

- Power on the DSL800R using the switch located on the back of the DSL modem.



- If these three LED(s) do not light up, check that:
 - The DSL800R is plugged in and the power switch is in the '1' position.
 - The connection is carried out as described in the "Connecting the DSL800R DSL Modem" diagram.
- If you have connected a telephone to the DSL800R, pick up the handset of the telephone. You should hear normal dial-tone.
 - If you do not hear the normal dial-tone of a telephone, check that your telephone cable connection is connected properly. If your connection is correct, it may be due to a faulty phone cable that you are using. Replace the phone cable.
- Upon successful verifications, proceed to the next step on Software Configuration of the DSL800R DSL Modem.

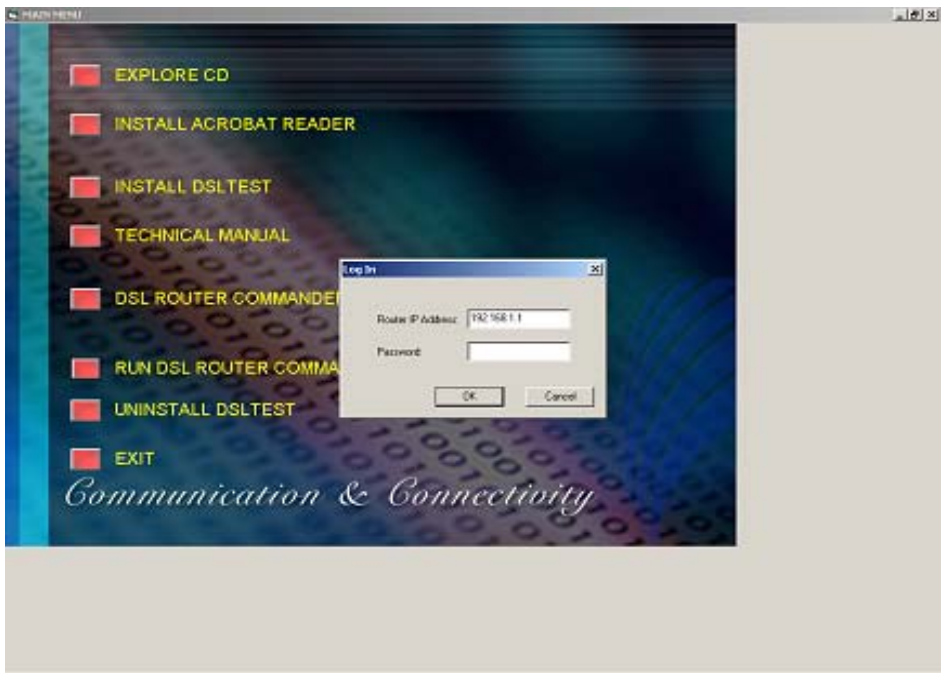
Software Configuration of the DSL800R Modem.

Make sure you have completed the hardware setup for the DSL800R and your Ethernet card before attempting this step.

- Insert the DSL800R CD into your computer. A window (shown below) should pop up after a few seconds. If this window does not open automatically, you will need to manually launch it. To do this, follow the steps below:
 1. Double-Click on the *My Computer* icon on your desktop.
 2. Locate your CD-ROM drive and double-click the icon to open it.
 3. Find the file named '*Menu.exe*' and execute it by double-clicking on the icon.



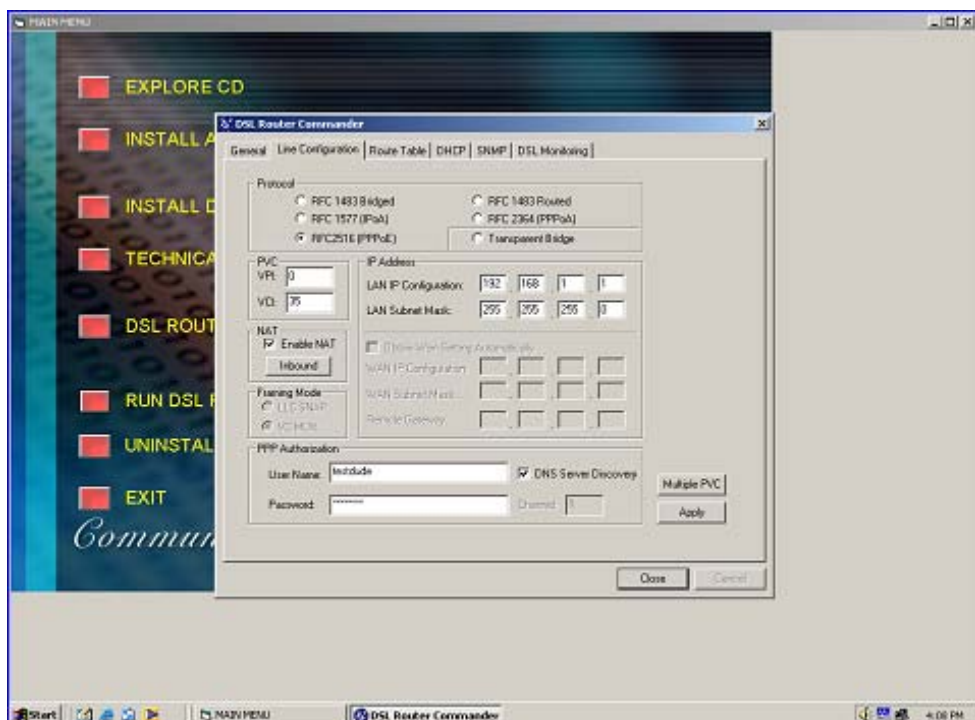
- Once the menu has been loaded and is displayed on your screen, click on the red box labeled **RUN DSL ROUTER COMMANDER**.
- A window entitled *Log In* should be displayed. Make sure the Router IP Address is set to **192.168.1.1** and the Password should be set to **stm**.
- Click the **[OK]** button.



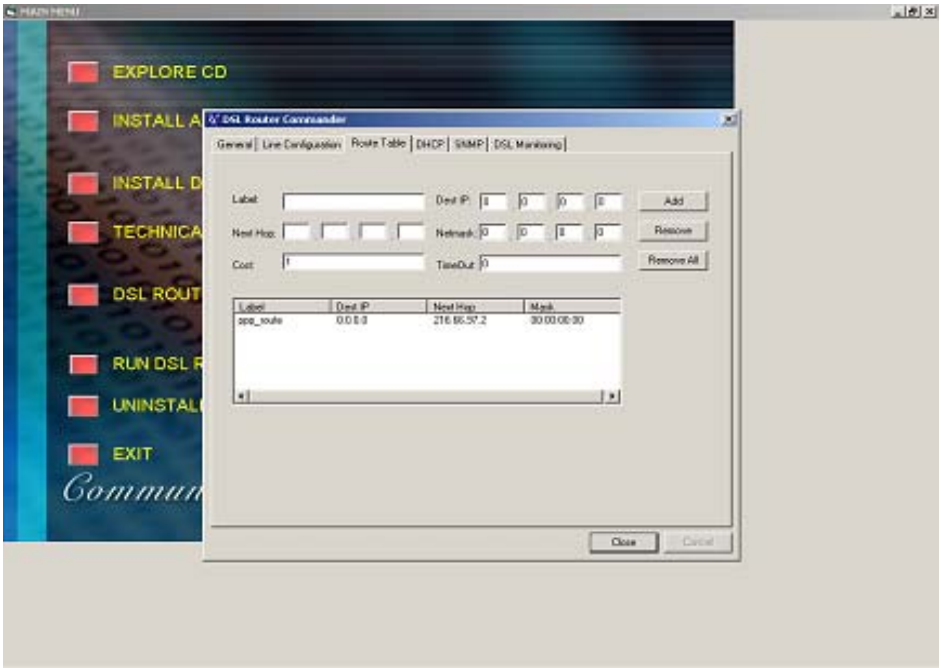
- Now the DSL Router Commander window should open. Along the top of the window are several tabs. Click on the tab labeled **Line Configuration**.



- Fill out this page with the following information – do not change any settings that are not listed below:
 - Protocol: **RFC2516 (PPPoE)**.
 - VPI: **0 (zero)**
 - VCI: **35**
 - Check the box next to **Enable NAT**.
 - Where you see the Username and Password field enter your ISP-Assigned Username/Password.
 - Check the box next to **DNS Server Discovery**.
 - Click the **[Apply]** button.



- Once you have finished the *Line Configuration* tab, click on the tab next to it (*Route Table*). If your configuration/setup is successful you should see a route labeled *ppp_route* listed in the large box, in the center of the window. Compare your screen to the one below, they should be similar but not exactly the same.



You are now ready to use your connection! Click close and enjoy.

The remainder of this manual provides general Ethernet & TCP/IP settings information.

What is Ethernet?

Ethernet is a networking technology used to hook multiple machines together. There are three kinds of Ethernet wiring and connectors, Thick Ethernet (Fig. A), Thin Ethernet (Fig. B), and 10BaseT Ethernet (Fig. C). You may encounter the term 100BaseT or 10/100BaseT in documentation or referring to cards, but it is simply a faster version of 10BaseT and the cards and connectors are compatible. Your DSL modem uses, 10BaseT, which is the most common type and often comes built-in on many new computers. 10BaseT uses wires similar to telephones (just a little thicker) and the plugs, called RJ-45 connectors are wide versions of the plastic plugs found on telephones wires. The other two types of Ethernet wiring utilize coaxial cable, like cable TV wiring. Thin Ethernet has a snap in, or twist on connector and thick Ethernet has a 15 pin plug akin to a monitor connector. If your network card is configured for either thick or thin Ethernet there are adapters called MAUs available at electronic stores (such as Radio Shack) that will convert them to 10BaseT.

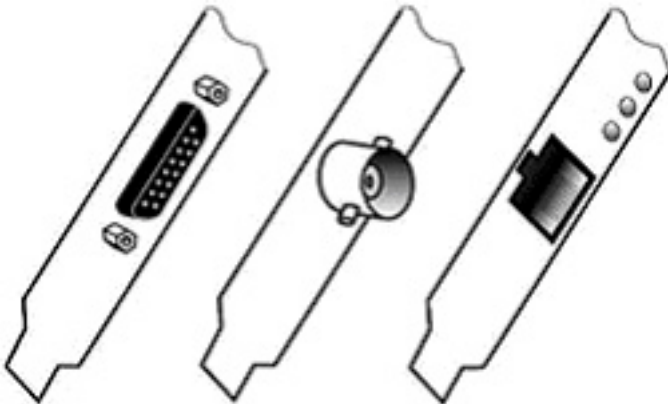


Fig. A (thick)

Fig. B (thin)

Fig. C (10BaseT)

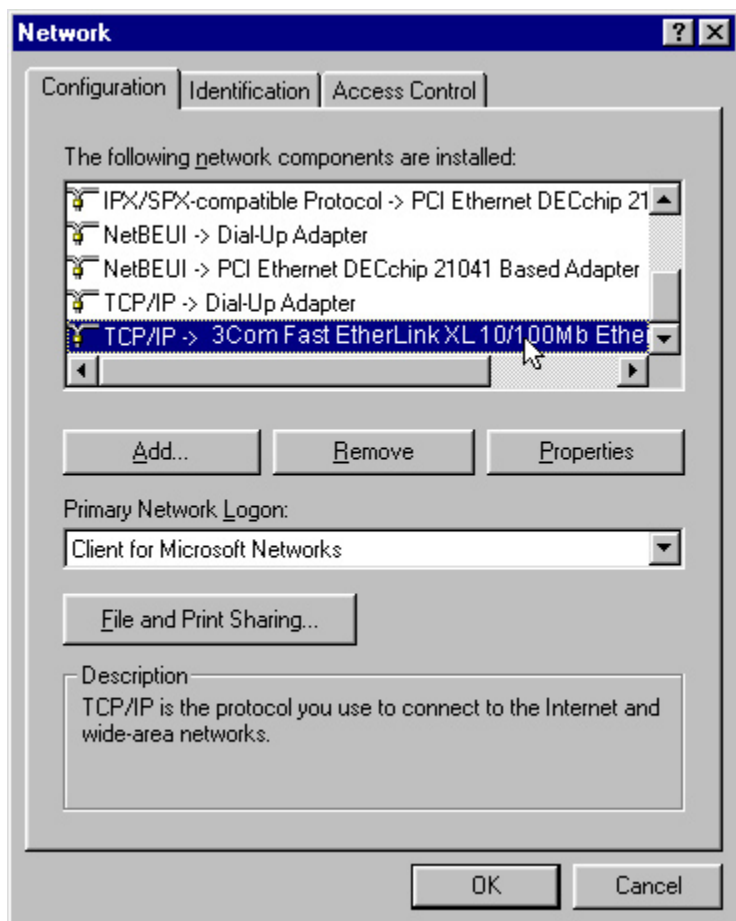
<-This is the type you need.

In rare instances and generally on older cards you may see a combination of two of the types. As long as one of the types is 10BaseT then it will work for what we need.

The 1 Meg Modem uses 10BaseT Ethernet to connect to your computer. The Ethernet wire supplied will plug into the back of the modem and into the RJ-45 connector on your computer or the computer's network card.

Finding Ethernet on an IBM Compatible PC

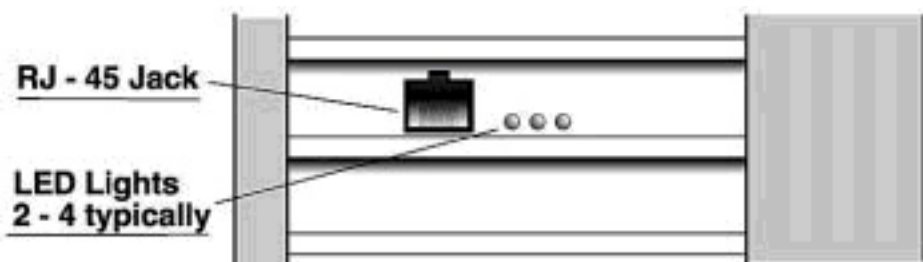
Some computers come from the factory with Ethernet installed. It will be mentioned in the documentation or technical specification list that came with the computer. Built in Ethernet could be identified physically by a RJ-45 connector on the back of the machine or on a network card. It can also be determined through the network control panel as an entry in the list such as either: TCP/IP -> Intel Based Ethernet (which indicates an Ethernet connector on the motherboard), or TCP/IP -> xxx Ethernet NIC (which indicates an installed network card) where xxx represents a manufacturer's name and the model number of the card. The example below shows that there is a 3Com Fast Etherlink network card installed in the machine.



Finding Ethernet on an IBM Compatible PC

The illustration below shows the rear view of a typical PC. There is an area where there are several slots in a row with metal covers on them. This illustration shows an Ethernet card installed in one of the slots. Your PC may have other cards such as a video card or a modem card in one or several of the slots. Look carefully to identify the plugs and lights shown.

Note: The orientation depicted is of a tower, or vertical computer, if you have a desktop unit turn the picture sideways.



PC Laptops

Some laptops come with built-in Ethernet, and if so, will have a RJ-45 jack somewhere on the back or side of the computer. Many laptops do not come Ethernet ready and the most common way to outfit them is to use a PCMCIA card, sometimes called a PC Card like the one shown below. These cards fit into slots on the sides of the laptop and have pop-out RJ-45 connectors.



Finding Ethernet on a Macintosh Computer

To quickly determine if your Macintosh is Ethernet equipped, open the TCP/IP Control Panel, under the Apple Menu, slide down to Control Panels and then to the right to the submenu to find TCP/IP. Click on the pulldown menu at the top of the window and see if Ethernet is an option. If it is it will say Ethernet Built-In, or if a card is installed, Ethernet Slot x. If Ethernet is not in the list your machine is not currently Ethernet ready. You will need to purchase and install a network card, see “Generic Ethernet Cards” following this section.



If your machine indicates Ethernet capability you will still need to check what type of connector it is equipped with. The illustrations below show the two different types of built-in Ethernet on a typical Macintosh computer identified by this symbol $\langle \bullet \bullet \bullet \rangle$. Fig. A shows an AAUI port that requires an adapter such as an Asant• FriendlyNet to provide a RJ-45 jack (they come in all flavors of Ethernet so be sure to specify 10BaseT). Fig. B shows a machine with built-in 10BaseT utilizing a RJ-45 jack. Note: Some models come equipped with both types of connectors, if so, use the built-in RJ-45.

Fig. A

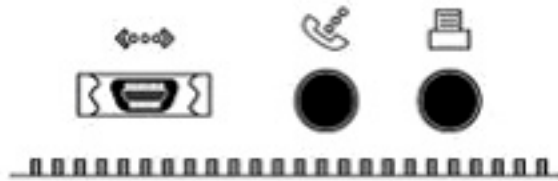


Fig. B



Macintosh Laptops

Some Macintosh laptops come with built-in Ethernet and have either a RJ-45 jack or an AAUI port like the one pictured in Fig.A. However many models use a PC Card (PCM/CIA), like the one pictured earlier in the PC section of this manual.

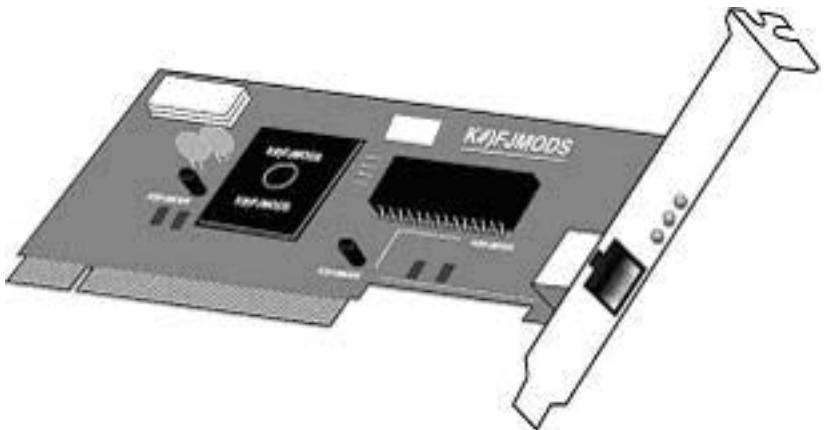
Generic Ethernet Cards

There are several types of Ethernet cards available. The type you will need depends on the make, model and age of your machine.

Older PC's use cards that fit an ISA slot, sometimes known as an EISA slot. Newer machines almost all have PCI slots, and use PCI Ethernet cards. The documentation that came with your computer will include information on the types of slots available.

Older Macintosh computers will have one of several types of slots. These slots have names such as Comm, Direct or NuBus. Newer Macintoshes use PCI cards identical to those in newer PC's. Consult your documentation to identify which type of card you need prior to ordering a new one. If you order by phone the sales person should be able to help identify the proper card if you can supply the make and model of the computer.

The illustration below shows a typical PCI Ethernet card. It should come with an installation disk containing the proper drivers (software) required to use the card. Install them according to the supplied instructions.



Setting your Network Preferences

The instructions below are for computers equipped with Windows 95 or Windows 98.

Macintosh instructions are immediately following.

Click on the Start button on the lower left corner of your screen.

Slide up to Settings, to the right to Control Panel and click.

Double click on the Network icon in the Control Panel window.

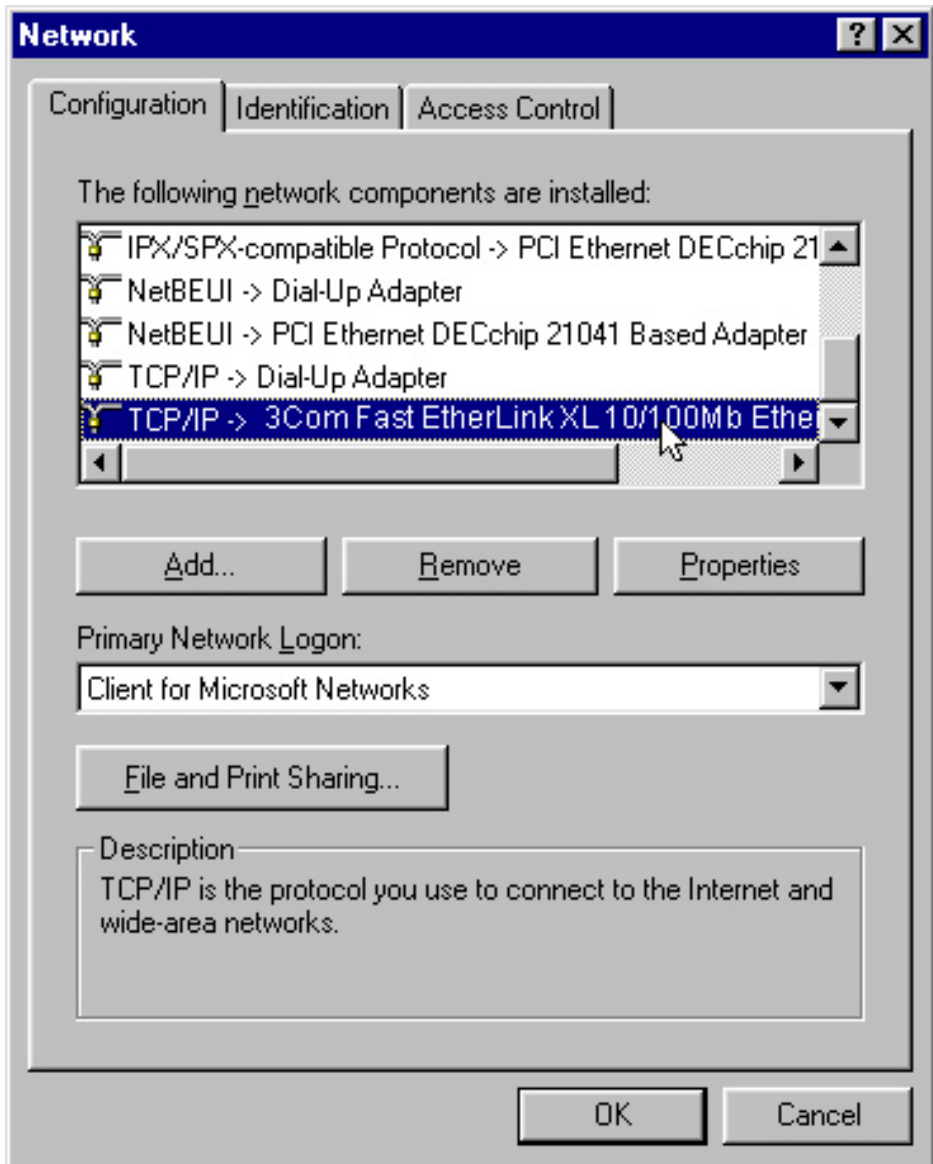
You will see a window like the one to the right. You should have several entries for the Ethernet Card you have installed in your machine. The one you need starts with TCP/IP.

If there are no entries that say TCP->Ethernet NIC and you know for sure that a card is installed, you may have to reinstall the Ethernet Drivers and restart the machine.

Click on the TCP/IP settings for your Ethernet Card to select it. Click on the Properties Button and proceed to the next page.

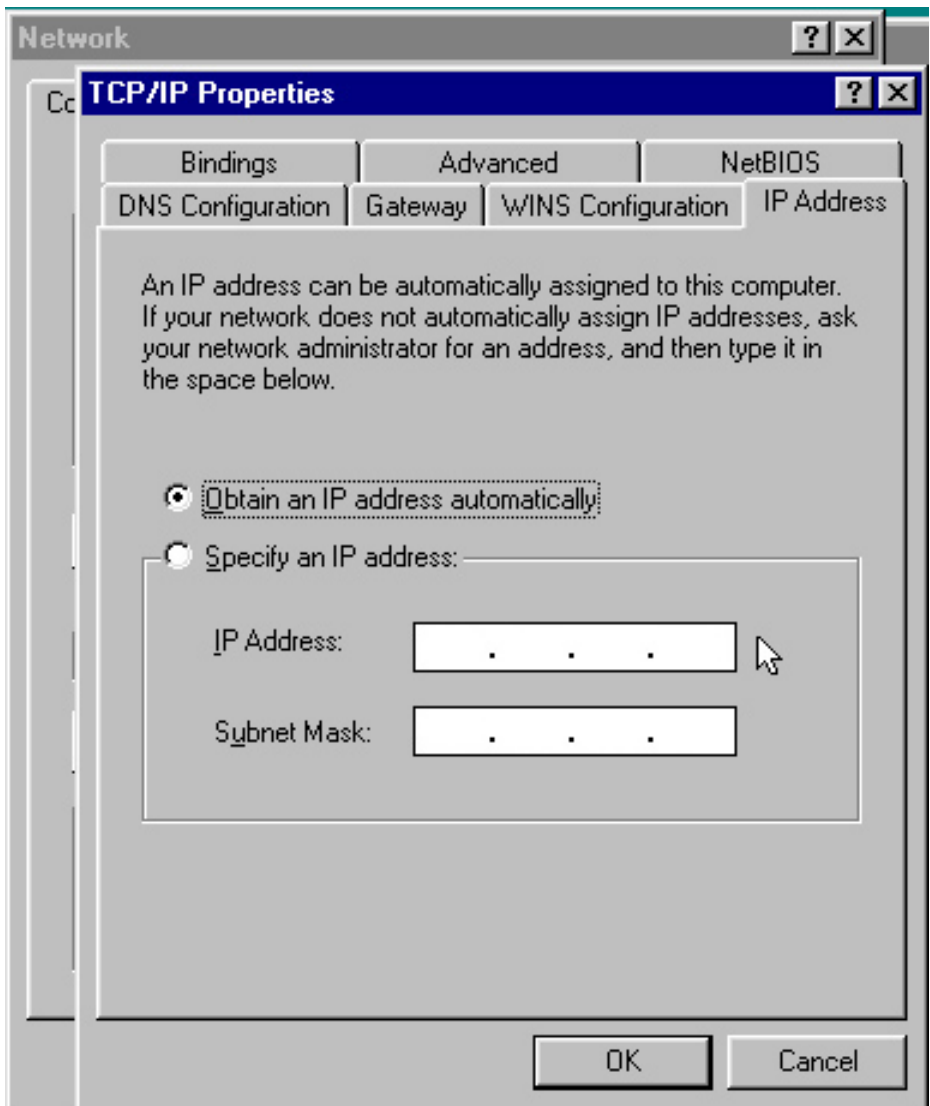
TCP/IP Settings for your PC Ethernet Card

The illustration below shows the TCP/IP Ethernet Card settings selected in the list (in this case the 3Com Etherlink Card).



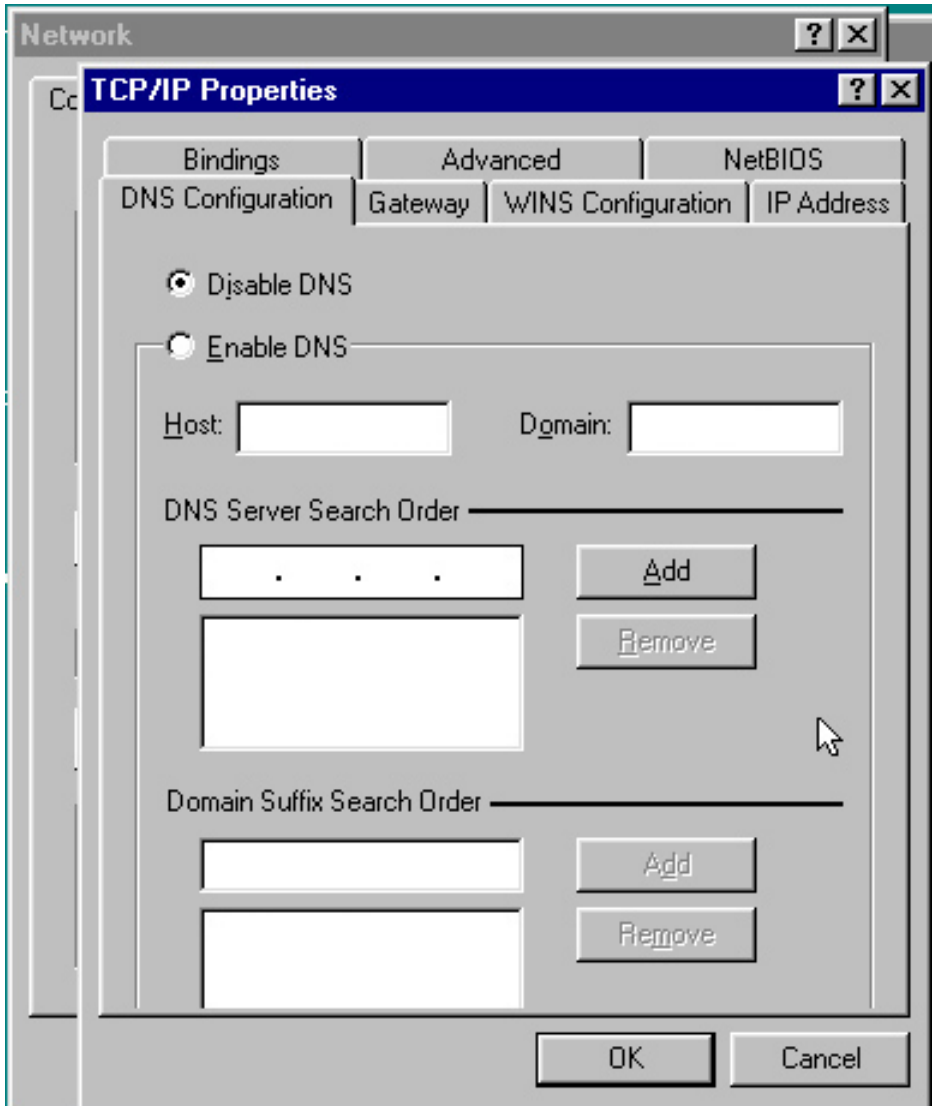
TCP/IP Settings for your PC Ethernet Card

Click on the *IP Address* Tab in the upper portion of the window. Click on the “Obtain an IP address automatically” button.



TCP/IP Settings for your PC Ethernet Card

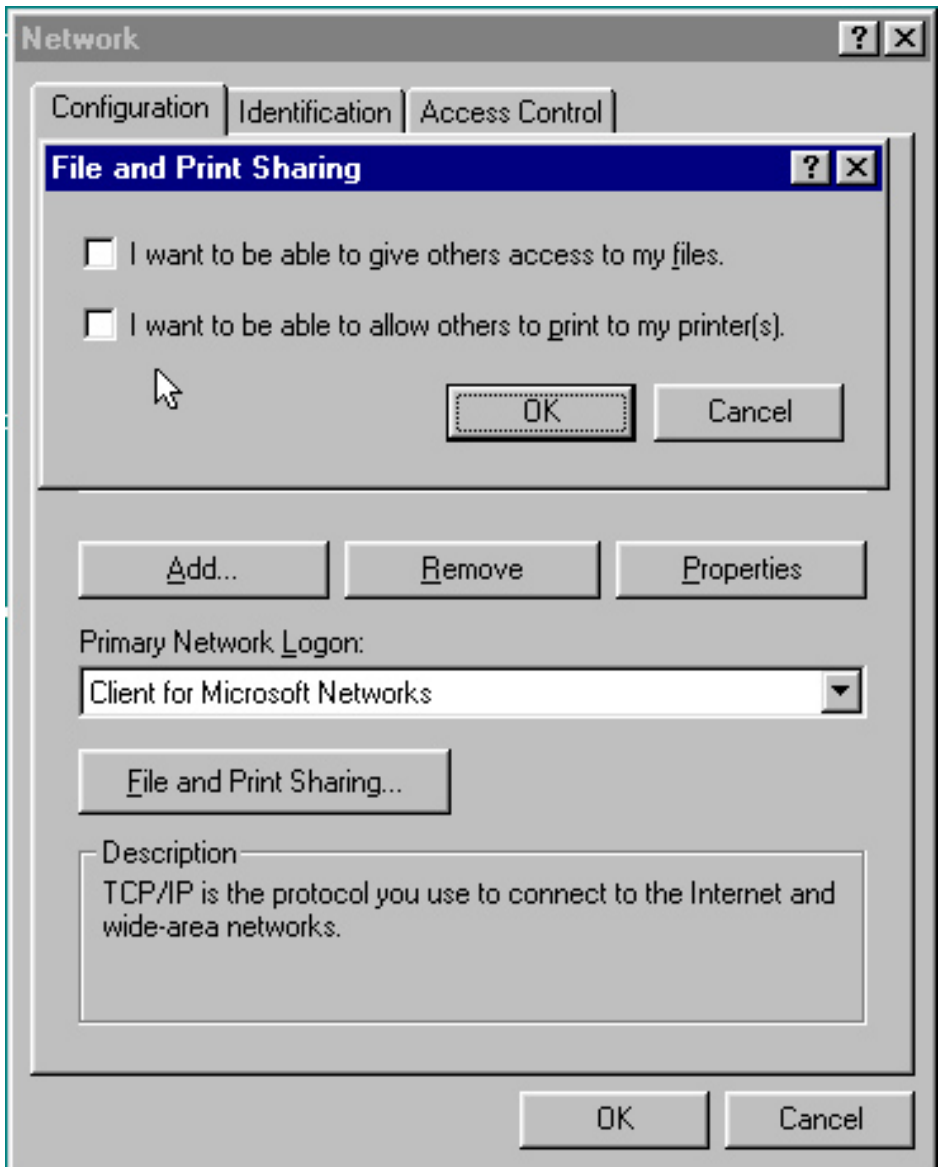
Click on the *DNS Configuration* Tab. Click on the “Disable DNS” button. Click the “OK” button which will bring you back to the main Network Control Panel window.



File and Print Sharing Settings

Click on the *File and Print Sharing* button in the lower section of the Network Control Panel window. Make sure that both of the check boxes are blank and select OK. Click OK to close the Network Control Panel to save the settings.

!!! WARNING !!! Enabling File and Print Sharing may allow anyone on the internet access to your computer files and printers!



Try it out!

Your computer needs to be restarted for the changes to take effect. When you click OK the machine should prompt you to restart. If it doesn't prompt you, then you should restart it manually. Upon restart your DSL internet connection should be live. Open your browser and see if you can successfully browse the Internet. If the browser tries to dial the phone to make a connection or presents an error message that says the host cannot be found, double check your settings and try again. If you still experience errors check the troubleshooting tips on page 16 of this manual. If problems persist contact VTel Internet technical support at 802-885-9002.

Setting your Macintosh Network Preferences

Click on the Apple in the left uppermost corner of your screen. Slide down to Control Panels and then over to the right so the submenu

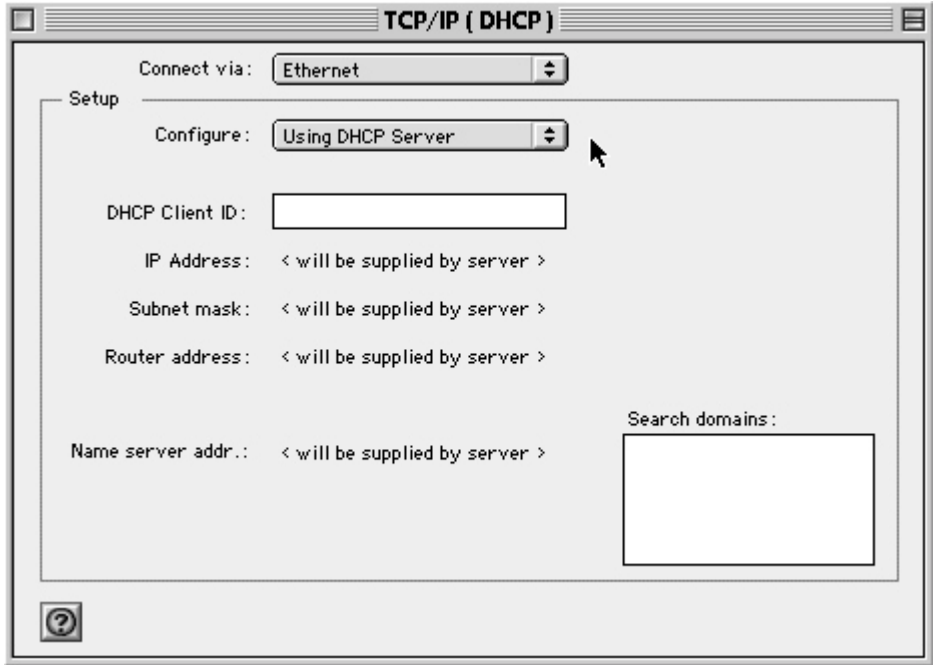


Setting your Macintosh Network Preferences

Click on the Connect via: pulldown menu and select Ethernet.

Select “Using DHCP Server” from the *Configure* pulldown. Leave the other boxes blank.

Click the close button in the upper left corner of the window and say Yes to save the changes.



Try it Out!

Your DSL internet connection should be live. Launch your browser and see if you can browse the Internet. If you get any errors like “host cannot be found” quit your browser, double check your settings and try again. If you still experience errors, check the troubleshooting tips on page 16 of this manual.

If problems persist contact VTel Internet technical support at 802-885-9002.

Tips and Troubleshooting

The three lights (Power, Ethernet Link, DSL Link) on my DSL modem are green but I still cannot access the Internet. Why?

Go back to the “Setting your Network Preferences” section on page 12 and repeat the set up procedure. If you are certain that your settings are correct and you still cannot connect call VTel Internet Technical Support at 802-885-9002.

Everytime I try to launch Internet Explorer or Outlook Express my computer tries to use my modem to dial the phone. Why?

There is a connection setting in Explorer or Outlook that tells the computer to dial the modem . To change it right click on the Explorer icon on your desktop. Select “Properties” and click on the *Connection* tab. Select “Never dial a connection” below the white box. If “Connect to the Internet using a local area network” is an option select that as well. Exit Explorer/Outlook and reopen it. It should not attempt to dial the phone. If it still tries, use the connection wizard to reset your connection preferences. Go to *Options* under the “Tools” menu in either Explorer or Outlook and click on the *Connections* tab. Click on the “Setup” button at the top of the window where it says “Use the Internet Connection Wizard to connect your computer to the Internet”. Proceed through the screens indicating that you want to connect via a local area network. If you have a mail account on your computer now, respond that you do not want to set up a new mail account, it should show you your current settings click “Accept” and finish the process. There is one last ditch effort if the situation persists. You can delete the “Dial Up Adapter” in the network

control panel. This will disable any modem connection from the computer completely. If this fails you may need to reinstall your operating system. Contact your computer support technician, if you do not have a computer support technician VTel may be able to recommend an area professional.

****** ATTENTION WINDOWS 98 USERS ******

Gateway, Compaq, HP and possibly other brands of computers with Windows 98 second edition preinstalled MAY have defective network software that prevents your computer from connecting via a Local Area Network. This type of connection is required for an ADSL connection. You will need to reinstall your system software from the original disk. BE AWARE that this is not a trivial operation, system installs from these disks usually set the system back to original condition, eliminating all your present applications, data and settings. Contact your Computer Support Technician to assist you, they may be able to perform the operation with a minimum of inconvenience. If you do not have a Computer Support Technician VTel may be able to recommend an area professional.

