Quick Start

ADSL X5 Modem, Gateway, Router, Firewall, and 4-Port Switch

This Quick Start contains instructions for Windows PC users. The User's Guide on the CD also includes installation instructions for Macintosh and Linux users, along with detailed information about advanced features. The CD also contains a Glossary of technical terms and Customer Support information.

About the ADSL X5

With four LAN ports (labeled **1**, **2**, **3**, **4**), the X5 lets you easily connect up to four computers with Ethernet ports.

If one of your computers does not have an Ethernet port (or if you have five computers you want to connect), the X5 also has a **USB** port to support a single USB connection.

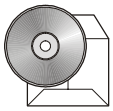
Note:
If your computers have Ethernet ports, we recommend you use them to connect to the modem. Only use the X5 modem's **USB** port if one of your computers does not have an Ethernet port or if you have used all of the modem's LAN ports.

If you want to connect more than five computers to the Web, you can plug a network device (such as a wireless access point, hub, router, or switch) into one of the LAN ports to expand the maximum number of Internet connections to 253.

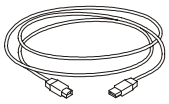
Package Contents

Your package contains the items shown below:

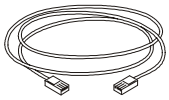
Zoom ADSL X5 Modem



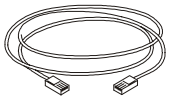
Software CD-ROM



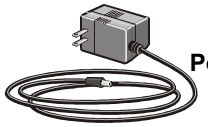
USB Cable



Ethernet Cable



Phone Cord



Power Cube

The CD contains the installation software, documentation, warranty, and Customer Support information.

If anything is missing or damaged, please contact Zoom Customer Support or whoever sold you the modem.

In addition, the package may include:

- Phone-jack adapter to adapt the phone cord to a particular phone jack (certain countries only)
- ADSL line filter(s) (certain models only)

Before You Begin

Before you begin installing the X5 modem using this Quick Start, you must have the following available to you:

- **ADSL service enabled on your telephone line.** To do this, you need to sign up with an ADSL service provider. Once this service is enabled, you should have an ADSL-enabled telephone wall jack to plug the X5 modem into. (Your service provider may refer to "ADSL service" as "DSL service.")
- **One or more Windows 98/Me/2000/XP computers that you want to connect to the Internet.** You can connect up to four computers that have Ethernet ports to the X5 modem.

  We recommend that you connect all of your computers using Ethernet ports. If any of your computers do not have an Ethernet port, you can purchase a Network Interface Card (NIC) to add one. Alternately, you can connect one of your computers using its USB port.

  Note:
  This document provides instructions for configuring Windows computers only. If you have a Macintosh or a Linux computer, please refer to the User's Guide on the CD.

- **[Optional] Network device:** You can connect a network device (such as a wireless access point, router, hub, or switch) to the X5 modem. If you plan to connect a network device, be aware that you must first connect at least one of your Windows computers directly to the X5. This will be the computer on which you will install the software and from which you will configure the modem (as explained later in this Quick Start).

  Note:
  Because network devices can be set up in many ways, this Quick Start provides general instructions about connecting a network device to the X5. For information about setting up your network device, see that device's documentation.

- **Additional Ethernet cables.** These are only required if you plan to connect more than one computer/network device with an Ethernet port to the X5. (The X5 comes with one Ethernet cable and one USB cable.)

Quick Start Instructions

Installing the X5 involves four steps: **Installing the Software**, **Installing the Hardware**, **Establishing Communication**, and **Connecting Additional Computers to the Internet**.

Step 1: Installing the Software

Regardless of how many computers you plan to connect to the X5, you only have to install the software on one of them.

This computer on which you install the software will also be the first computer you physically connect to the X5. It will also be the computer from which you configure the modem. (The hardware connection and the modem configuration process are explained later in this Quick Start.)

Determining which computer to install the software on depends on how the computers will be connected to the X5:

- **If all of your computers will be connected using their Ethernet ports:** You can install the software on any one of these computers.
- **If one of the computers will be connected using its USB port and the rest using their Ethernet ports:** You must install the software on the computer with the USB port. Because the back panel of the X5 modem has one **USB** port and four LAN (Ethernet) ports, only one computer can be connected using a USB port. Note, however, that we recommend you connect your computers using Ethernet ports, if possible.

- **If you will be connecting a network device (such as a wireless access point, router, hub, or switch):** You must install the software on a computer that will be directly connected to the X5—preferably using the computer's Ethernet port. This means that if you have a network device, you should choose a computer to connect to the modem (the actual physical connection will be made later in this Quick Start) and install the software on it. For most users, this will probably be the computer that is closest to the ADSL-enabled phone jack. If you were already planning to connect multiple computers directly to the X5 (in addition to a network device), review the previous two bullets to determine which computer to install the software on.

You MUST install the software BEFORE installing the hardware.

Important!
If you need to use the X5 modem's USB option, you must remove any existing USB modem drivers on your computer before installing this software. On the desktop, click the **Start** button, and then—depending on your computer—either click **Control Panel**, or click **Settings** and then **Control Panel**. In the **Control Panel**, double-click **Add/Remove Programs**. On the **Add/Remove Program Properties** dialog box, select the USB modem you are removing on the **Install/Uninstall** tab, click **Remove**, and then click **OK**.

1 Turn on your computer (if it is not on already).

2 Insert the supplied CD into the CD-ROM drive of your computer. The CD should start automatically and the **Language Selection** screen should appear. (If the CD does not start automatically, on the desktop, click the **Start** button, click **Run**, and then type **D:\setup.exe**, where **D** is the letter of your CD-ROM drive.)

3 Select your language. The **Main Menu** screen opens.

4 Click **Installation Wizard**.

5 Click **ADSL X5 Modem** to start the software installation, then click **Next** when prompted.

6 When the installation is complete, click **Finish**, then click **Exit**.

7 Close any applications that may be open, then remove the CD from the CD-ROM drive.

8 Shut down the computer.

Congratulations! You have installed the software. Now, continue with the next section, **Installing the Hardware**.

Step 2: Installing the Hardware

Be sure that you have already installed the software BEFORE beginning this section.

1 Shut down your computer (if it is not shut down already). This is the computer on which you just installed the software.

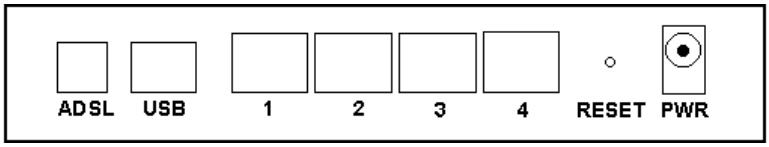
2 Connect the modem to either the computer's Ethernet port or USB port. You should only be connecting to the USB port if your computer does not have an Ethernet port or if you plan to connect five computers directly to the X5 modem.

- **If you are using an Ethernet port:** Plug one end of the Ethernet cable into one of the X5 modem's LAN ports (**1**, **2**, **3**, or **4**) and plug the other end into your computer's Ethernet port.

> **Important!**
> Do not connect additional computers or a network device (such as a wireless access point, router, hub, or switch) to the other LAN ports at this time. These instructions will let you know when to connect them.

- **If you are using a USB port:** Plug one end of the USB cable into the modem's **USB** port and the other end into your computer's USB port.

The connection is made to the back panel of the modem.



3 Plug the included power cube into a power strip or wall outlet and then into the modem's power (**PWR**) jack.

> **Important!**
> Only use the power cube shipped with the X5. Other power cubes may damage your hardware.

The **PWR** light on the front panel of the modem should become steady on, and the **ADSL** light should blink once. If the **PWR** light does not turn on, make sure there is power at the wall outlet or power strip where you plugged in the power cube.

4 Turn the computer on. If you are using the USB port, you may see a **Found New Hardware** box indicating the progression of the installation. Typically no user action is necessary. If you are using Windows XP, you may be required to click **Next**.

Depending on your operating system, you may also see a **Hardware Installation** box or a **Digital Signature Not Found** box. You can safely ignore these messages and click **Yes** or **Continue Anyway**. If prompted, click **Finish** and/or **Yes** to restart your computer to finish setting up your new hardware.

5 Plug one end of the supplied phone cord into the modem's **ADSL** jack and the other into the ADSL wall jack. The **ADSL** light should blink and then become steady on. If it does not, refer to **Troubleshooting Tips** on page 24.

6 Phone filters are not absolutely required, but we **HIGHLY RECOMMEND that you install a filter on EVERY phone and fax that is sharing the ADSL phone line.** (Do not plug a filter between the phone wall jack and the X5.) Phone filters block the ADSL frequencies so that someone making a normal phone call will not hear modem noise on the line. They also keep phone conversations from interfering with ADSL performance.

You may have received ADSL phone filters with your X5. If you did not, or if you need more filters, they are available at most retail stores that carry consumer electronics.

Plug each phone or fax cord into the filter's **PHONE** end and plug the filter's **LINE** end into the wall jack.

Congratulations! You have installed the hardware. Now, continue with the next section, **Establishing Communication**.

Step 3: Establishing Communication

You must set up the X5 so that it can communicate with your Internet service provider. To do this, you must use the **Zoom Configuration Manager**.

1 Log in to the **Zoom Configuration Manager** from the computer on which you installed the X5 software:

a On your desktop, double-click the **Zoom** icon.

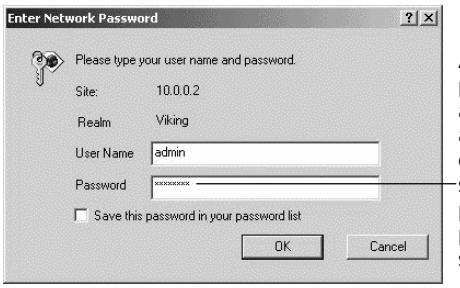
This icon should have been placed there automatically when you installed the software earlier. (If the **Zoom** icon is not there: Open your Web browser and, in its address bar, type **http://10.0.0.2** if you are using the Ethernet port or **http://10.0.0.3** if you are using the USB port, then press the **Enter** key on your keyboard.)

> **Note:**
> Even though you are not yet configured to browse the Internet, your Web browser can access the Web interface of the X5 modem.

b On the **Enter Network Password** dialog box, type the following user name and password in the appropriate boxes, then click **OK**. You must enter them using lowercase letters.

User Name: **admin**

Password: **zoomadsl**



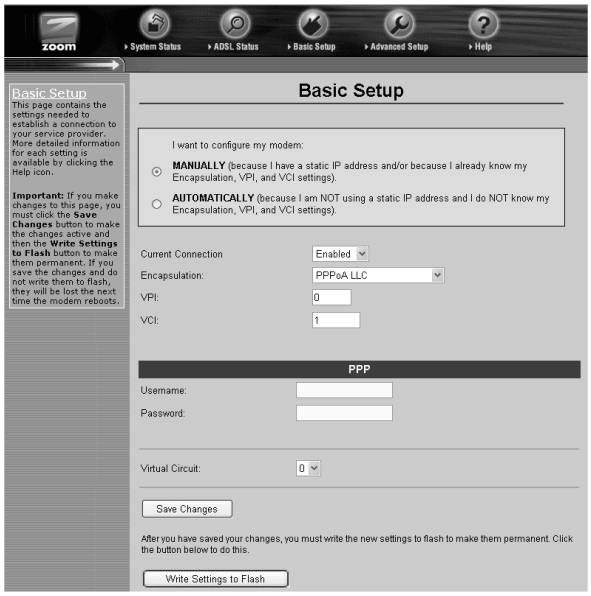
As you type your password, it will appear as bullets or asterisks (depending on your operating system). This is to protect your password from being seen by others.

If you are not prompted for a **User Name** and **Password**, do the following in this order: Recheck all connections; restart the modem and computer; and reset the modem by inserting a paper clip into the **Reset** pinhole in the center of the modem's back panel and holding it for five seconds.

Tip:
If you want to choose your own password, you can do so later. For instruction on how to do this, see the User's Guide (located in PDF format on the CD).

The **User Name** and **Password** you enter here do not serve the same purpose as any name and password that your Internet service provider may have given you.

2 The **Zoom Configuration Manager** opens and displays its **Basic Setup** page.



Use this Web page to configure the modem so it can connect with your Internet service provider. You can configure the X5 manually or you can have the modem automatically configure itself. Depending on your situation, do the following:

- Select **MANUALLY** if one or both of the following are true:
  - You already have the **VPI, VCI**, and **Encapsulation** settings from your Internet service provider.
  - You have a static IP address that you plan use with the X5. (Only those whose Internet service provider instructs them to use a static IP address and advanced users with special configuration needs will require static IP addressing.)

  To continue configuring the modem manually, skip the rest of the steps in this section and follow the instructions on page 15 (if you are NOT using a static IP address) or on page 18 (if you have a static IP address).

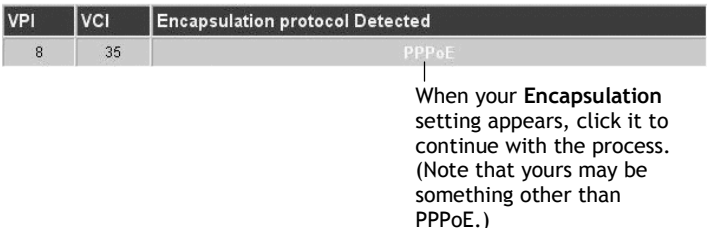
- Select **AUTOMATICALLY** if neither of the special circumstances mentioned above fits your situation. When this option is selected, the screen changes to show automatic configuration options. Do the following:

  a Select the **Enable** option button, then click **Save Changes**.

  b The page changes to the **Autodetect** page and a **Start** button appears. Click the **Start** button to begin the automatic configuration. A message appears to let you know that the current configuration, if any, will be lost when the X5 configures itself. Click **OK** to dismiss this message.

  c Wait while the X5 modem searches for the correct **VPI**, **VCI**, and **Encapsulation** settings and connects with your Internet service provider. This may take a few minutes because the modem must try various combinations until it finds the settings that match your service provider's.

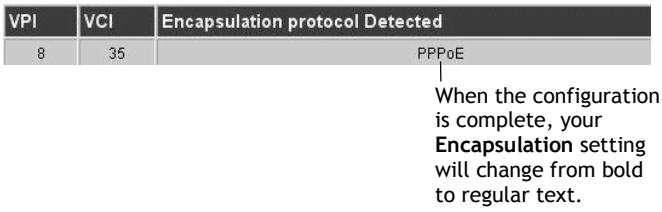
3 Once the modem detects your settings, your **VPI**, **VCI**, and **Encapsulation** settings will appear in the table on the **Autodetect** page. Click the **Encapsulation** setting to continue with the process.



Note:
If your **Encapsulation** setting is not found (that is, if "**No Encapsulation Protocol Detected**" remains on the screen), select the **Disable** option button, click **Save Changes**, then click the **Basic Setup** icon at the top of the screen and try to manually configure the modem, as explained in **Configuring the X5 Manually** on page 15.

4 Depending on your **Encapsulation** setting, the following will happen when you click it:

- **If your Encapsulation setting begins with PPP:** You will be prompted for your **Login Name** and **Password**. Your Internet service provider should have given you a User ID or Username (usually your email address or the characters preceding the @ sign in your email address) and a Password. Enter this information in the applicable boxes, then click **Save Changes**. A screen appears to let you know that the process was a success. Click **Close** to return to the **Autodetect** page and notice that the **Encapsulation** setting has changed from bold to regular text. (These are NOT the same **User Name** and **Password** you that you used earlier to open the **Zoom Configuration Manager**.)



> **Tip:**
> If you do not know your **Login Name** and **Password**, contact your service provider and tell them that you misplaced the information.

- **If your Encapsulation setting begins with something other than PPP:** The **EOA Interface—Add** page will open. Click **Save Changes** on this page (without changing any settings on it). A screen appears to let you know that the process was a success. Click **Close** to return to the **Autodetect** page and notice that the **Encapsulation** setting has changed from bold to regular text.

5 On the **Autodetect** page, click **Write Settings to Flash**.

6 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

If you connect successfully, you are ready to browse the Web from this computer!

Congratulations! You have established communication and your computer is now connected to the Internet. If you want to connect more computers or a network device to the X5, continue with **Connecting Additional Computers to the Internet** on page 21. Otherwise, you are done with this Quick Start. Enjoy your X5!

Important!
If you did not connect, see **Troubleshooting Tips** on page 24.

Configuring the X5 Manually

Some users may need to configure the X5's IP settings manually, instead of having the modem automatically configure itself.

Typically, you would manually configure your modem if:

- You already have the **VPI**, **VCI**, and **Encapsulation** settings from your Internet service provider.
- You have a static IP address that you plan to use with the X5. If this is the case, skip this section and continue with **Using Static IP Addressing** on page 18.
- The auto configuration process was unable to find your settings.

Manually configuring the modem requires that you log in to the **Zoom Configuration Manager** and enter information on its **Basic Setup** page. (If you need help logging in, see page 9.)

1 On the **Basic Setup** page, ensure that the **MANUAL** option button is selected.

2 Do the following, depending on whether you know your **VPI**, **VCI**, and **Encapsulation** settings:

- If your Internet service provider gave you the settings, continue with step 3 below.
- If you do not know the settings, refer to the **ADSL Internet Settings Tables** beginning on page 31. Find your service provider on the list and make note of its settings. If there is more than listing for your service provider, the most common one is labeled (1), the next (2), and so on.

> **Tip:**
> If you are in the United States and your service provider is not on the list, use the settings for **Service Provider Not Shown** at the bottom of the table.

3 Select **Enabled** from the **Current Connection** drop-down list. (That is, click the arrowhead  at the far right of the box to view the items in the list, then select **Enabled**.)

4 Select your service provider's Encapsulation setting from the **Encapsulation** drop-down list. Depending on your selection, do the following:

- **If your Encapsulation setting begins with PPP:** Enter your **Username** and **Password** in the boxes provided. Your Internet service provider should have given you a User ID or User Name (usually your email address or the characters preceding the @ sign in your email address) and a Password. (These are NOT the same **User Name** and **Password** you that you used earlier to open the **Zoom Configuration Manager**.)

  Tip:
  If you do not know your **Username** and **Password**, contact your service provider and tell them that you misplaced the information.

- **If your Encapsulation setting begins with 1483 Bridged or 1483 Routed:** The **Username** and **Password** boxes will automatically disappear from the page because you do not need to enter this information. Continue with step 5.

  Important!
  If you plan to use a static IP address, you must manually configure the X5 from the **WAN Configuration** page and not the **Basic Setup** page. For more information, see **Using Static IP Addressing** on page 18. Typically, you must make arrangements with (and pay) your Internet service provider for a static IP address.

5 In the **VPI** and **VCI** boxes, enter the settings for your service provider.

6 Click **Save Changes** and then **Write Settings to Flash**. Once the process is complete, the X5's **ADSL** light should remain on steady (this should take about 15 seconds). If it does not, refer to **Troubleshooting Tips** on page 24.

7 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

If you connect successfully, you are ready to browse the Web from this computer!

Congratulations! You have established communication and your computer is now connected to the Internet. If you want to connect more computers or a network device to the X5, continue with **Connecting Additional Computers to the Internet** on page 21. Otherwise, you are done with this Quick Start. Enjoy your X5!

If You Did Not Connect

If you did not connect and you are using settings provided by your service provider, repeat steps 3–7 and make sure that you enter the information correctly (especially your **Username** and **Password**, if your **Encapsulation** begins with PPP). If you still cannot connect, look up your provider in the **ADSL Internet Settings Tables** on page 31 and try the setting(s) shown, if different.

If you did not connect and were using settings from the **ADSL Internet Settings Tables**, return to the tables and find the next most frequently used settings—those labeled (2) if you just entered (1), or (3) if you just entered (2), and repeat steps 3–7.

Using Static IP Addressing

If your Internet service provider's **Encapsulation** setting is either **1483 Bridged** or **1483 Routed**, the X5 can be set for either a Dynamic Host Configuration Protocol (DHCP) address (also known as a dynamic IP address) or for a static IP address.

Because most Internet service providers use DHCP, the X5 is set for dynamic IP addressing by default.

There is typically an extra charge for a static IP address, and you usually have to make a special request to get one.

Important!
If you do not know what static IP addressing is or why you would use it, you most likely do not need to change the default setting. Only advanced users who specifically want to use static IP addressing and/or those users whose IP provider specifically instructed them to use static IP addressing should change this setting.

1. Click the **Advanced Setup** icon at the top of any page in the **Zoom Configuration Manager** to open the **Advanced Setup** page.

2. Click the **WAN Configuration** button, located in the **Configuration** group.

3 Enter the appropriate information on the **WAN Configuration** page. Use the table below as a guide.

For this setting…	Do this…
Current Connection	Select **Enabled** from the drop-down list. (That is, click the arrowhead  at the far right of the box to view the items in the list, then select **Enabled**.)
Encapsulation	Select your service provider's Encapsulation setting from the drop-down list.
VPI and **VCI**	Enter the VPI and VCI settings for your service provider. (If you do not know these settings, refer to the **ADSL Internet Settings Tables** starting on page 31.)
Bridge and **IGMP**	Ensure that **Disabled** is selected from both drop-down lists.
IP Address and **Subnet Mask**	Enter the values assigned to you by your service provider for each.
Use DHCP	Ensure that the **Disabled** option button is selected.
Default Route	Ensure that **Enabled** is selected from the drop-down list.
Gateway IP Address	Enter the value assigned to you by your service provider.
Use DNS	Ensure that the **Disabled** option button is selected.
Primary DNS Server	Enter the value assigned to you by your service provider.
Secondary DNS Server	If your service provider gave you a second DNS server address, enter it.

4 Click **Save Changes** on the **WAN Configuration** page.

5 You are redirected automatically to the **Basic Setup** page. Click **Write Settings to Flash**.

6 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

If you connect successfully, you are ready to browse the Web from this computer!

Congratulations! You have established communication using your static IP address and your computer is now connected to the Internet. If you want to connect more computers or a network device to the X5, continue with the next section, **Connecting Additional Computers to the Internet**. Otherwise, you are done with this Quick Start. Enjoy your X5!

Important!
If you did not connect, see **Troubleshooting Tips** on page 24.

Step 4: Connecting Additional Computers to the Internet

The X5 supports the direct connection of up to five Windows computers—four with Ethernet ports and one with a USB port.

If you want to connect more than five computers to the Web, you can plug a network device (such as a wireless access point, router, hub, or switch) into one of the LAN ports to expand the number of Internet connections to 253.

Note:
Depending on how many computers/network devices you plan to connect, you may need to purchase additional Ethernet cables. The X5 comes with one Ethernet cable and one USB cable. (Because the X5 supports only one USB connection, additional USB cables are not needed.)

Once your initial computer has been successfully connected to the Web, you can now connect the other computers and/or a network device.

- To connect additional computers directly to the X5, see the next section.
- To connect a network device to the X5, see page 23.

To Connect Additional Computers

1 Shut down the computer you want to add to the X5. (This is important because the computer must locate the correct IP address for the modem. This is done when the computer is turned back on in step 3 below.)

2 Plug one end of an Ethernet cable into one of the modem's LAN ports (**1**, **2**, **3**, or **4**) and plug the other end into your computer's Ethernet port.

> **Note:**
> At this point, you should not be connecting any of your additional computers using the X5 modem's **USB** port. If you planned to use the **USB** port, it would already be connected to the computer on which you installed the software, as explained earlier in this Quick Start.

3 Turn on the computer.

4 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

5 Repeat steps 1–4 for each computer you want to add.

Congratulations! You have completed all you need to do to get your additional computers on the Internet. You are done with this Quick Start. Enjoy your X5!

To Connect a Network Device

This section provides general instructions for connecting a network device (such as a wireless access point, router, hub, or switch) to the X5. For information about setting up your network device, please refer to the documentation that came with that device.

1 Plug one end of an Ethernet cable into one of the modem's LAN ports (**1**, **2**, **3**, **4**) and the other end into the network device's Ethernet port. (For a hub or a switch, this is typically called an Uplink or Expansion port. For a router or wireless access point, this is typically called a WAN port.)

2 Set up your network. Refer to the documentation provided with your particular network device for instructions on how to do this.

3 Once your network is set up, reboot any computer that is part of the network. For example, if you are connecting a wireless access point, reboot any computer that will use the wireless network.

4 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) on each computer using your network and try to connect to a familiar Web address.

Congratulations! You have connected your network device to the Internet. You are done with this Quick Start. Enjoy your X5!

Troubleshooting Tips

The following are some problems you may experience and some possible solutions to remedy the situation.

Problem

My X5's **ADSL** light is solidly lit, but I cannot connect to the Internet.

Solution

There are several issues that could cause this problem. Check these items:

- Ensure that you are using the correct **VPI**, **VCI** and **Encapsulation** settings.
- If your **Encapsulation** begins with **PPP**, ensure that you have typed your ADSL Username and Password correctly. (Note that this is NOT the username and password you used to log into the **Zoom Configuration Manag**er on page 9.)
  - If you had the modem automatically configure its settings, open the **Basic Setup** page, ensure that **MANUAL** is selected, then select **7** from the **Virtual Circuit** drop-down list. When the screen changes to show the automatic configuration settings, select **MANUAL** again, then enter the correct **Username** and **Password** in the boxes provided. Click **Save Settings** and **Write Settings to Flash**.
  - If you manually configured your modem, open the **Basic Setup** page, ensure that **MANUAL** is selected, then enter the correct **Username** and **Password** in the boxes provided. Click **Save Settings** and **Write Settings to Flash**.
- Verify that your service provider's ADSL connection is functioning properly. (Place a call to your service provider's customer support department to verify this.)

- Verify that the Web browser on the computer on which you installed the software is configured for a **network connection** (this might be called a "Local Area Network" or "broadband" connection). If you need help configuring your Web browser, refer to the User's Guide on the CD for more detailed instructions.

- Verify that your computer's TCP/IP properties are correct. Open the **Internet Protocol (TCP/IP) Properties** dialog box (depending on your computer, this may just be called **TCP/IP Properties**) and ensure the following is selected, depending on whether you are using dynamic (DHCP) or static IP addressing:

  - **If you are using DHCP (most users):** Ensure that **Obtain an IP address automatically** is selected and that either **Obtain a DNS server address automatically** or **Enable DNS** is selected. All fields should be blank.

  - **If you are using a static IP address:** Verify the following, depending on your computer:

    - **Windows 2000/XP:** Ensure that **Use the following IP address** and **Use the following DNS server addresses** are selected and that the correct **IP address**, **Subnet mask**, **Default gateway**, and **Preferred DNS server** values appear.

    - **Windows 98/Me:** Ensure that **Specify an IP address** is selected and that the correct **IP Address** and **Subnet Mask** values appear. On the **DNS Configuration** tab, ensure that **Enable DNS** is selected and that something appears in the **Host** box. (If not, enter any name, word, or combination of letters and numbers.) Ensure that the **DNS Server Search Order** box contains either **10.0.0.2** (if you are connecting the X5 though a LAN port) or **10.0.0.3** (if you are connecting the X5 through its USB port).

Note:
If you need help accessing your computer's TCP/IP settings, refer to the User's Guide on the CD for more detailed instructions.

Problem

My X5's **ADSL** light continually blinks and does not stay solidly lit.

Solution

There are several issues that could cause this problem. Check these items:

- Ensure that the phone cord is firmly plugged into the wall jack and the **ADSL** jack on the back of the X5.
- Verify that the jack the phone cord is connected to is enabled for ADSL service. Unless your service provider has enabled it, you cannot use a standard telephone jack for ADSL service.

Problem

The computer on which I installed the X5 software is connected to the Web, but one or more of the additional computers I have connected directly to the modem cannot access the Internet.

Solution

There are several issues that could cause this problem. Check these items:

- Try rebooting each computer. This will allow for the computers to release and renew their IP addresses.
- If only one of your added computers cannot access the Web, ensure that it is connected using its Ethernet port and one of the X5 modem's LAN ports. If it is using the **USB** port, it requires the X5 software be installed. Run the installation CD (as explained in **Installing the Software** on page 4), reboot the computer, then try to connect to a familiar Web address to ensure that the Internet connection is made.

Problem

The computer on which I installed the X5 software is connected to the Web, but the computers connected through my network device cannot access the Internet.

Solution

The problem is most likely with your network device (such as a wireless access point, router, hub, or switch). Check these items:

- Try rebooting each computer on your network. For example, if you are using a router, reboot each computer that is connected to the router. This will allow for the computers to release and renew their IP addresses.
- If you are using a wireless access point or a router, verify that the device is using Dynamic Host Configuration Protocol (DHCP). This is also known as dynamic IP addressing. Depending on your device, this may be controlled by an **Obtain an IP address automatically** option. If you need help, refer to the documentation that came with your network device or contact its manufacturer.
- Refer to the documentation provided with your network device or contact its manufacturer for assistance.

Universal Plug and Play

The X5 is enabled for Universal Plug and Play (UPnP™). This means that other devices plugged into your computer or network (for example, a gaming application, router, or stand-alone firewall) that use UPnP should automatically detect the X5 and make the needed configurations for them to work together. There is no setup for you to do.

If You Need Help

Zoom has many Technical Support services available to its customers. You can access these services in a variety of ways:

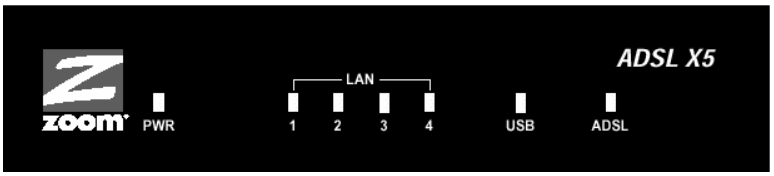
- Insert the CD, select your language, and then click the **Customer Support** link to view comprehensive support information, including how to reach our support experts. The CD also includes a User's Guide (available in many different languages) containing additional information about your new modem.
- Visit our Web site at **www.zoom.com** and select **Technical Support**. From here, you can send email to our technical support experts and/or do a smart search through our intelligent database by using **SmartFacts™**.

  Tip:
  From time to time, Zoom may release improved firmware. This is also available at **www.zoom.com** , along with upgrade instructions. We recommend that you check our Web site periodically for updates.

- Call our support office in the United States at **(561) 241-7170** or in the United Kingdom at **44 (0)1276 704440**.
- Some retailers of Zoom products provide support or can recommend a convenient support center.

Front and Back Panel Descriptions

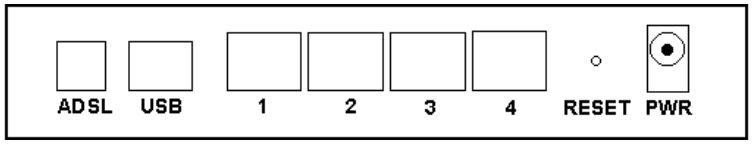
The front panel of the X5 looks like this:



The following table describes each light on the front panel.

Light	Description
PWR	Lights when the X5 is plugged into a power source.
LAN 1 **2** **3** **4**	Each lights when the corresponding LAN port of the X5 is plugged into the Ethernet port of a powered-up device. Blinks when data is sent.
USB	Lights when the **USB** port of the X5 is plugged into the USB port of a powered-up device. Blinks when data is sent.
ADSL	Blinks when the X5 is performing its startup sequence. Stays on solid when the unit has synched up with its ADSL connection. **Note:** If the light fails to switch from blinking to steady after a minute or two, check with your ADSL provider that the ADSL connection is activated, or refer to **Troubleshooting Tips** on page 24.

The back panel of the X5 looks like this:



The following table describes each item on the panel.

Port	Description
ADSL	Jack to connect the modem to the ADSL telephone wall jack.
USB	Port that can connect the modem to a USB port of a Windows computer.
1 **2** **3** **4**	LAN ports that can connect the unit to an access point, a network hub, or the Ethernet port of a computer. The X5 has four LAN ports.
RESET	Button to reset the modem to its system default settings (necessary if communication link is lost).
PWR	Port to connect the unit to the X5's power cube.

ADSL Internet Settings Tables

These tables are for customers whose service providers do not supply them with the ADSL settings to connect to the Internet. Many ADSL providers use different settings depending on the region in which they are operating, which is why there may be more than one setting for your service provider. We post updated tables on our Web site. If your country is not listed in the tables below, please consult **www.zoom.com**

Note to USA customers

If your ADSL service provider is not shown below, first use the settings for **Service Provider Not Shown** at the bottom of the table. If those settings do not work, use the settings for the company that provides local telephone service in your area. (Refer to page 15 for more detailed installation instructions on entering the settings.)

Table A: USA

Service Provider	VPI	VCI	Encapsulation
AllTel (1)	0	35	PPPoE LLC
AllTel (2)	0	35	1483 Bridged IP LLC
August.net (1)	0	35	1483 Bridged IP LLC
August.net (2)	8	35	1483 Bridged IP LLC
BellSouth	8	35	PPPoE LLC
CenturyTel (1)	8	35	PPPoE LLC
CenturyTel (2)	8	35	1483 Bridged IP LLC
Covad	0	35	PPPoE LLC
Earthlink (1)	0	35	PPPoE LLC
Earthlink (2)	8	35	PPPoE LLC
GWI	0	35	1483 Bridged IP LLC
Qwest (1)	0	32	PPPoA LLC
Qwest (2)	0	32	PPPoA VC-MUX
SBC (1)	0	35	PPPoE LLC
SBC (2)	0	35	1483 Bridged IP LLC
SBC (3)	8	35	1483 Bridged IP LLC
Sprint (1)	0	35	PPPoA LLC
Sprint (2)	8	35	PPPoE LLC
Verizon (1)	0	35	PPPoE LLC
Verizon (2)	0	35	1483 Bridged IP LLC
Service Provider Not Shown	0	35	PPPoE LLC

Table B: Countries Other Than The USA

Service Provider	VPI	VCI	Encapsulation
Australia-Telstra	8	35	PPPoA LLC
Argentina-Telecom	0	33	PPPoE LLC
Argentina-Telefonica	8	35	PPPoE LLC
Belgium-ADSL Office	8	35	1483 Routed IP LLC
Belgium-Turboline	8	35	PPPoA LLC
Bolivia	0	34	1483 Routed IP LLC
Brazil-Brasil Telcom	0	35	PPPoE LLC
Brazil-Telefonica	8	35	PPPoE LLC
Brazil-Telmar	0	33	PPPoE LLC
Brazil-South Region	1	32	PPPoE LLC
Colombia-EMCALI	0	33	PPPoA VC-MUX
Denmark-Cybercity, Tiscali	0	35	PPPoA VC-MUX
France (1)	8	35	PPPoE LLC
France (2)	8	67	PPPoA LLC
France (3)	8	35	PPPoA VC-MUX
Germany	1	32	PPPoE LLC
Hungary-Sci-Network	0	35	PPPoE LLC
Iceland-Islandssimi	0	35	PPPoA VC-MUX
Iceland-Siminn	8	48	PPPoA VC-MUX
Israel	8	48	PPPoA VC-MUX
Italy	8	35	PPPoA VC-MUX
Jamaica (1)	8	35	PPPoA VC-MUX
Jamaica (2)	0	35	PPPoA VC-MUX
Jamaica (3)	8	35	1483 Bridged IP LLC SNAP
Jamaica (4)	0	35	1483 Bridged IP LLC SNAP
Kazakhstan	0	33	PPPoA VC-MUX
Mexico	8	35	PPPoE LLC
Netherlands-BBNED	0	35	PPPoA VC-MUX
Netherlands-MX Stream	8	48	PPPoA VC-MUX
Portugal	0	35	PPPoE LLC
Saudi Arabia (1)	0	33	PPPoE LLC
Saudi Arabia (2)	0	35	PPPoE LLC
Saudi Arabia (3)	0	33	1483 Bridged IP LLC
Saudi Arabia (4)	0	33	1483 Routed IP LLC
Saudi Arabia (5)	0	35	1483 Bridged IP LLC
Saudi Arabia (6)	0	35	1483 Routed IP LLC

Table B (Continued): Countries Other Than The USA

Service Provider	VPI	VCI	Encapsulation
Spain-Albura, Tiscali	1	32	PPPoA VC-MUX
Spain-Colt Telecom, Ola Internet	0	35	PPPoA VC-MUX
Spain-EresMas, Retevision	8	35	PPPoA VC-MUX
Spain-Telefonica (1)	8	32	PPPoE LLC
Spain-Telefonica (2), Terra	8	32	1483 Routed IP LLC
Spain-Wanadoo (1)	8	35	PPPoA VC-MUX
Spain-Wanadoo (2)	8	32	PPPoE LLC
Spain-Wanadoo (3)	8	32	1483 Routed IP LLC
Sweden-Telenordia	8	35	PPPoE
Sweden-Telia	8	35	1483 Bridged IP LLC
Switzerland	8	35	PPPoE LLC
Turkey(1)	8	35	PPPoE LLC
Turkey(2)	8	35	PPPoA VC-MUX
UK	0	38	PPPoA VC-MUX
Venezuela-CANTV	0	33	1483 Routed IP LLC
Vietnam	0	35	PPPoE LLC

Regulatory Information

U.S. FCC Part 68 Statement

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. The unit bears a label on the back which contains among other information a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

This equipment uses the following standard jack types for network connection: RJ11C.

This equipment contains an FCC compliant modular jack. It is designed to be connected to the telephone network or premises wiring using compatible modular plugs and cabling which comply with the requirements of FCC Part 68 rules.

The Ringer Equivalence Number, or REN, is used to determine the number of devices which may be connected to the telephone line. An excessive REN may cause the equipment to not ring in response to an incoming call. In most areas, the sum of the RENs of all equipment on a line should not exceed five (5.0).

In the unlikely event that this equipment causes harm to the telephone network, the telephone company can temporarily disconnect your service. The telephone company will try to warn you in advance of any such disconnection, but if advance notice isn't practical, it may disconnect the service first and notify you as soon as possible afterwards. In the event such a disconnection is deemed necessary, you will be advised of your right to file a complaint with the FCC.

From time to time, the telephone company may make changes in its facilities, equipment, or operations which could affect the operation of this equipment. If this occurs, the telephone company is required to provide you with advance notice so you can make the modifications necessary to obtain uninterrupted service.

There are no user serviceable components within this equipment. See Warranty flyer for repair or warranty information.

It shall be unlawful for any person within the United States to use a computer or other electronic device to send any message via a telephone facsimile unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or of such business, other entity, or individual. The telephone number provided may not be a 900 number or any other number for which charges exceed local or long distance transmission charges. Telephone facsimile machines manufactured on and after December 20, 1992, must clearly mark such identifying information on each transmitted message. Facsimile modem boards manufactured on and after December 13, 1995, must comply with the requirements of this section.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. Contact your state public utility commission, public service commission, or corporation commission for more information.

U.S. FCC Part 15 Emissions Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 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.

Industry Canada Emissions Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Industry Canada CS03 Statement

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing the equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of concern. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

European Declaration of Conformity

The manufacturer declares under sole responsibility that this equipment is compliant to Directive 1999/5/EC (R&TTE Directive) via the following. This product is CE Marked.

Directive	Standard	Test Report
73/23/EEC-Low Voltage	EN 60950 : 2000 IEC 60950 : 3e éd. 1999	electrical safety
89/336/EEC-EMC	EN 55024 : 1998 EN 55022 : 1998	EMC-immunity EMC-emissions

Electrostatic Discharge Statement

The unit may require resetting after a severe electrostatic discharge event.

Note: If you do not use the supplied phone cord, use an equivalent of minimum AWG 26 line cord.

CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord.

Additional compliance information is located on the CD.