Wireless PCI Adapter

User Manual

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

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.

2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna, (2) Increase the separation between the equipment and receiver, (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, (4) Consult the dealer or an experienced radio/TV technician for help.

Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

TABLE OF CONTENT

Introduction

The Wireless PCI Adapter solution overcomes the limitations of wired networks by providing fast, simple, mobile and reliable access. It is designed for desktop computers running Windows 98, 2000, NT V4.0 SP6, Millennium and XP.

Features

- 11 Mbps High-Speed Transfer Rate
- Interoperable with IEEE 802.11b(DSSS) 2.4GHz-compliant Equipment
- Plug-and Play Operation Provides Easy Setup
- Utilizes Intersil Prism 2.5 chip sets
- Advanced Power Management Features Conserve Valuable Notebook PC Battery Life
- Direct Sequence Spread Spectrum Compatible to Prevent Lost Connections
- Rugged Metal Design with Integrated Antenna
- Wired Equivalent Privacy (WEP) 64-bit or 128-bit data encryption
- Driver Supports Windows 98, Millennium, NT V4.0 SP6, 2000 and XP

# Connect the PCI Adapter to Your Desktop PC

Hardware Installation

- Shut down your desktop PC.
- With the PC Card's 68-pin connector facing the PCI Adapter's slot and the "Network PC Card" label facing up, slide the PC Card completely into the PCI Adapter.
- Open your PC case and locate an available PCI slot in the motherboard.
- Slide the PCI Adapter into the PCI slot. Make sure that all of its pins are touching the slot's contacts. You may have to apply a bit of pressure to slide the card all the way in. After the card is firmly in place, secure its fastening tab to your PC's chassis with a mounting screw. Then, close your PC.
- Power on your desktop PC.
- Insert the driver CD into your CD drive.
- The Hardware Installation is complete.

Driver Installation

Install Driver Under Windows 98

1. Windows 98 will automatically recognize a new **PCI Network Controller** device. Click the **Next** button to proceed.
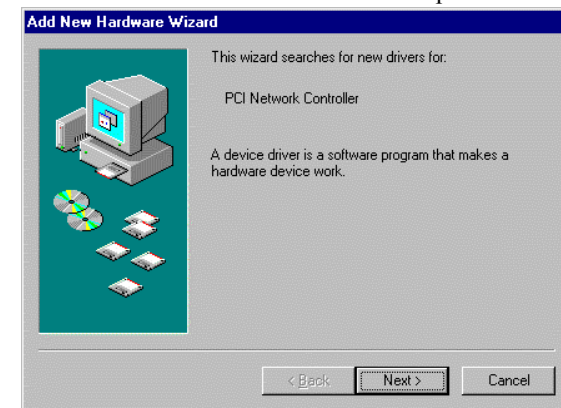
2. Windows will notify you that it is unable to locate the driver and will ask you to specify where the driver is located. Click the **Other Location** button to select the driver's location.

3. This will bring you to the **Select Other Location** screen. Click the **Browse** button to select the driver's location. At this point, Windows will ask you to browse for the driver's folder. Simply select the folder in which the driver is located.
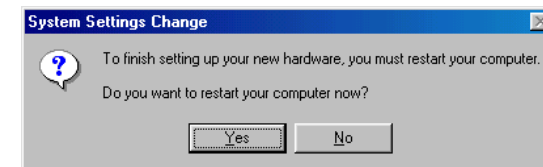

4. Windows is now ready to install the driver. Click the **Next** button to continue.

5. Windows has now completed installing the network. Click the **Finish** button to continue.

6. After installing the drivers, the **System Setting Change** screen will show you that installation is complete. Click the **Yes** button to finish.

7. Click right on **My computer** and select **properties**. Select **Device Manager** and click on the **Network adapters**. You will find the **LM-WA200 IEEE 802.11 PCI Card** if it is installed successfully. The PCI Adapter driver installation is finished.
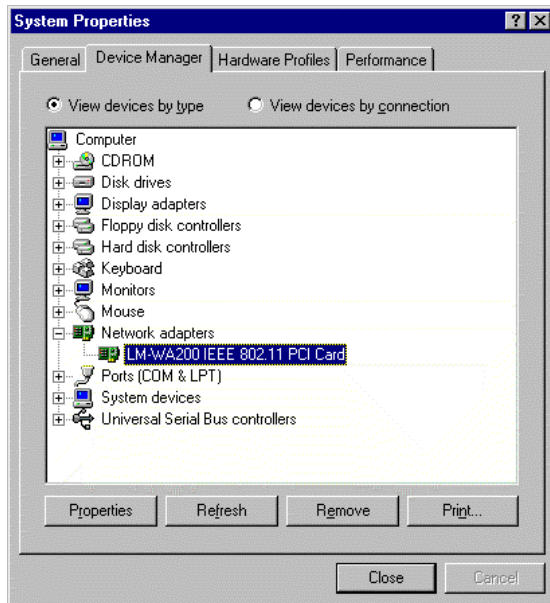
Install Driver Under Windows ME

1. Windows automatically recognizes a new PCI Adapter added. Select **Automatic search for a better driver [Recommended]** and click the **Next** button to proceed.
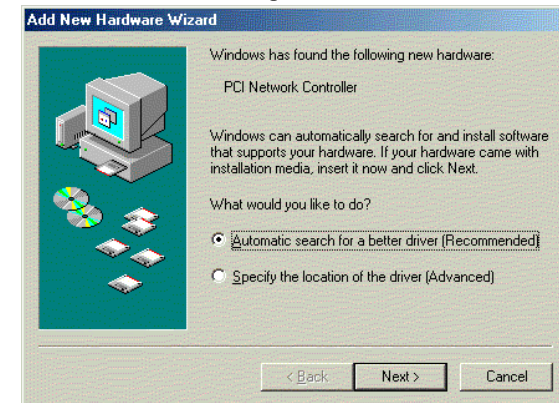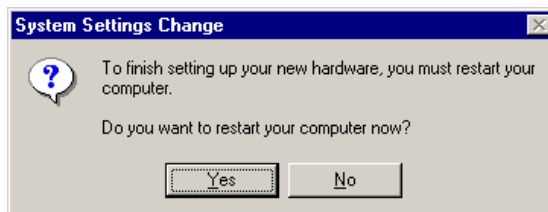

2. At this point, Windows will ask for the cw10.sys file. Browse the driver of the CD-ROM.

3. Windows will notify that installing has been completed. Click the **Finish** button to continue.

4. Windows will now ask you to restart your computer. Click the **Yes** button to restart.

5. To verify the driver installation, Move cursor on "**My computer**" icon and click the right button of the mouse. Select the **propertie**s. The System Properties windows shows. Click the **Network adapters** on the Device Manager folder. **LM-WA200 IEEE 802.11 PCI Card** will be found if the driver installation is successful.
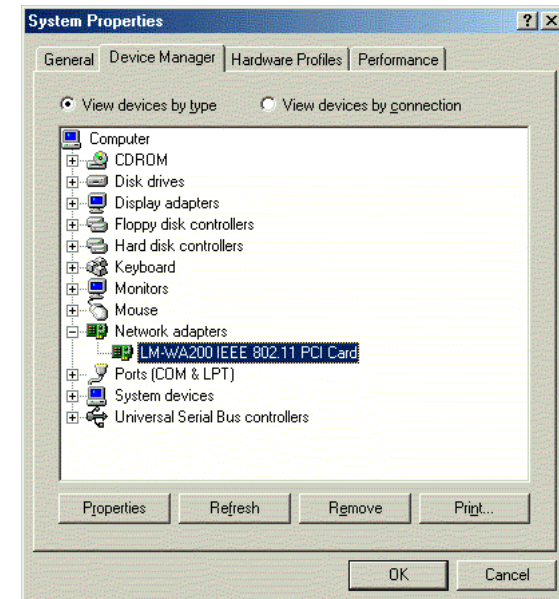
Install Driver Under Windows 2000

1. Windows 2000 will automatically recognize the PCI Adapter, once it is connected to the PC, and prompt you to install the necessary driver. Click the **Next** button to proceed.
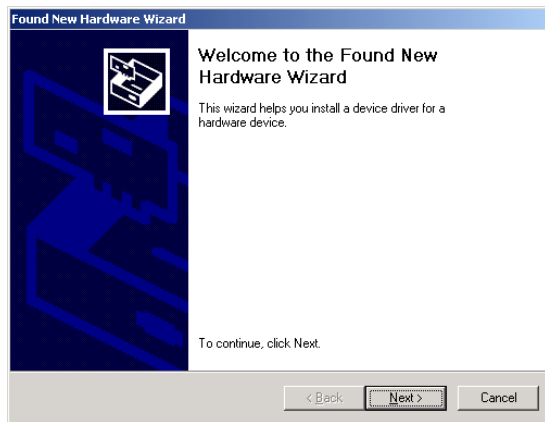
2. Select **Search for a suitable drive** and click the **Next** button. This will search for the Windows 2000 driver.
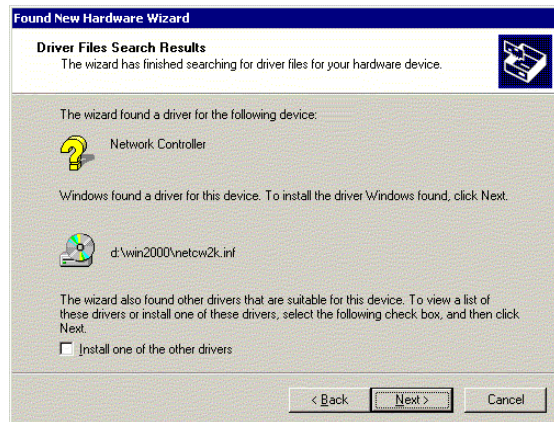
3. Select **Specify a location** and click the **Next** button.
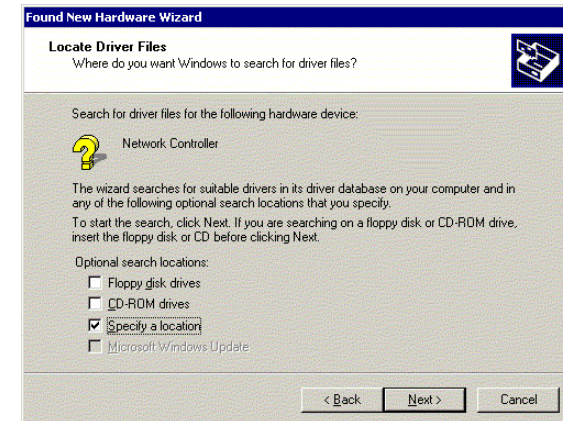
4. Click the **Browse** button and select the folder in which the driver is located. Click the **OK** button.

5. Windows will now search for the driver. After Windows acknowledges finding the driver, click the **Next** button.


6. The Digital Signature Not Found screen is a notification by Windows 2000. However, this does not mean that there is a problem. Click the **Yes** button to continue.
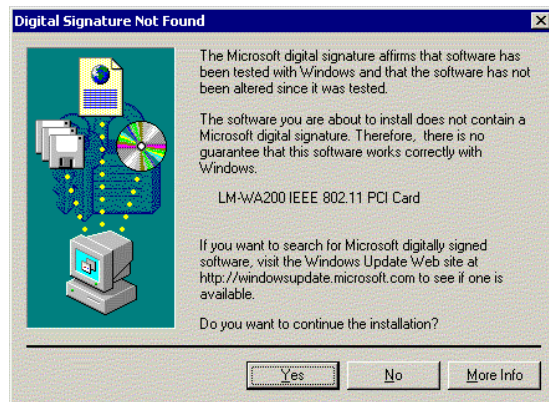
7. Windows will now install the driver files. Click the **Finish** button when completed.
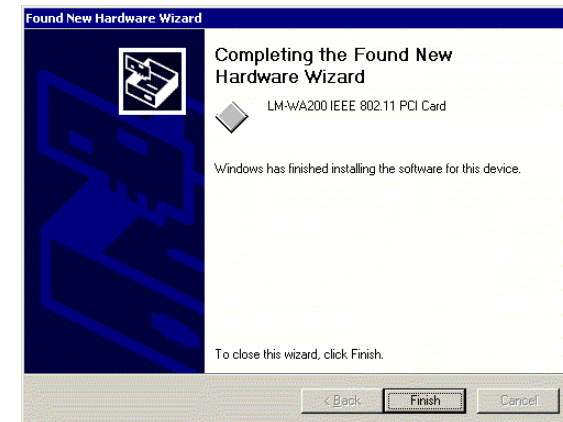
8. Click right on **My computer** and select **properties**. Select **Hardware** and select **Device Manager** and click on the **Network adapters**. You will find the **LM-WA200 IEEE 802.11 PCI Card** if it is installed successfully. The PCI Adapter driver installation is finished.
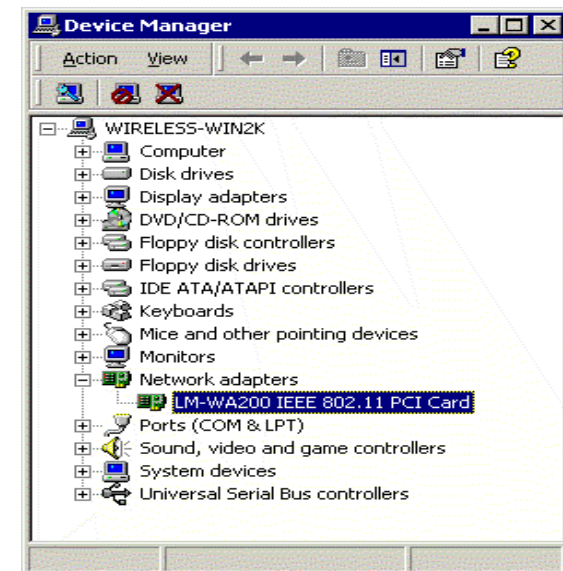
Install Driver Under Windows NT

Windows NT will setup the PCI Adapter differently depending upon whether you've previously installed network hardware or not. Please follow the instructions appropriate for you.

### If You Have Never Installed Network Hardware:

1. Windows NT is not a Plug-and-Play Operating System and will not automatically identify the PCI adapter. To begin setup, select **Settings** from the **Start** Menu and bring up the **Control Panel**. Then double-click on the **Network** icon.

2. Windows will notify you that Networking is not installed. Click the **Yes** button to continue.
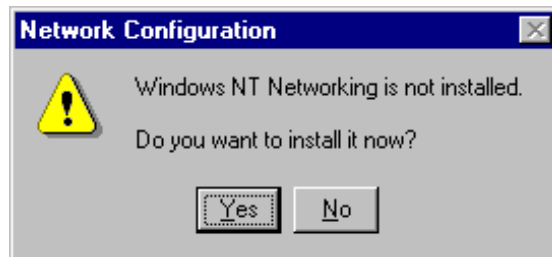
3. Installation will begin and you will reach the screen shown below. Select the box that reads **Wired to the network** since you are adding network hardware. Then, click the **Next** button to continue.

4. The next screen will not show any Network Adapters installed on your system, which signifies that no network hardware has been previously installed. Click the **Select from list** button to continue.
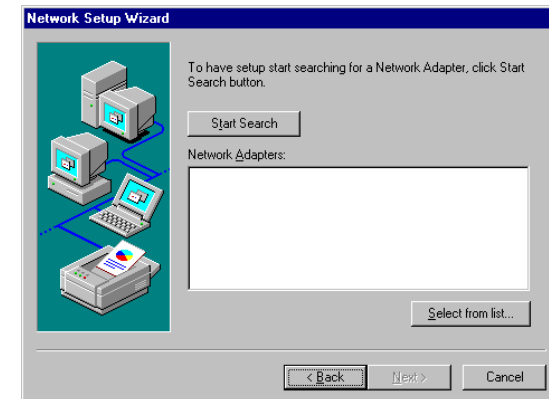
5. A list of adapters will appear on the next screen. You will not want to select one of these, however, as your installation CD has all of the appropriate drivers. Click the **Have Disk** button to continue.
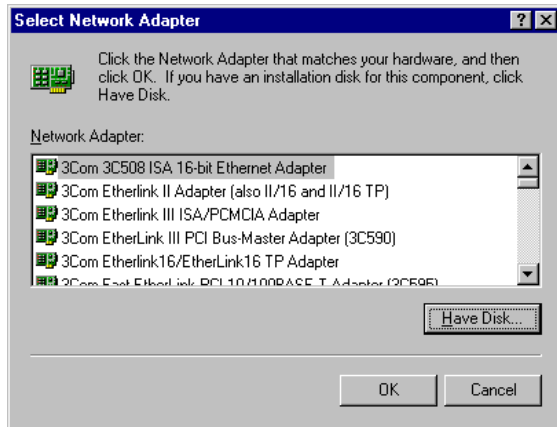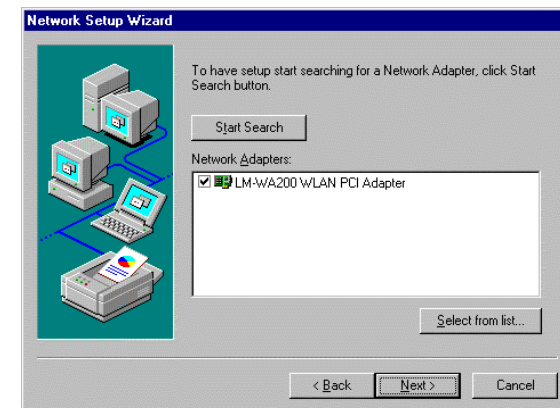

6. On the Insert Disk screen, type "G:\Winnt40" in the field provided. Then, click the **OK** button to continue.
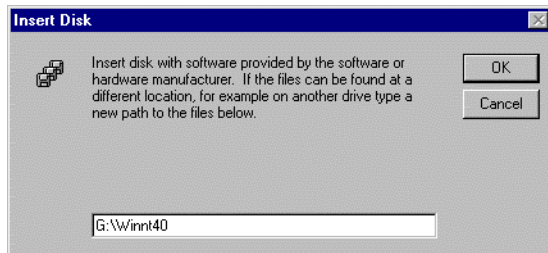

7. The select OEM Option screen will show the **LM-WA200 WLAN PCI Adapter**. Click the **OK** button to continue.
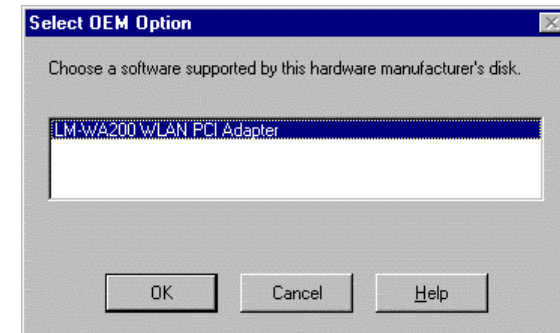

8. On the next screen, make sure there is a check mark in the box beside **LM-WA200 WLAN PCI Adapter**, then click the **Next** button to continue.

9. The Next screen will show a list of network protocols. While the TCP/IP Protocol is already selected by default, you should check with your network administrator before installing any network protocols. Click the **Next** button to continue.
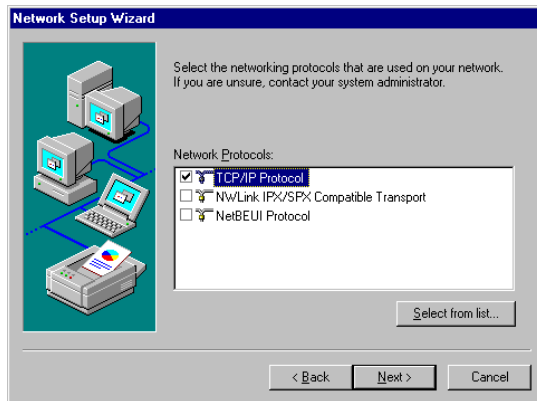

10. On the screen showing Network Services, the selections are automatically made. Click the **Next** button to continue.
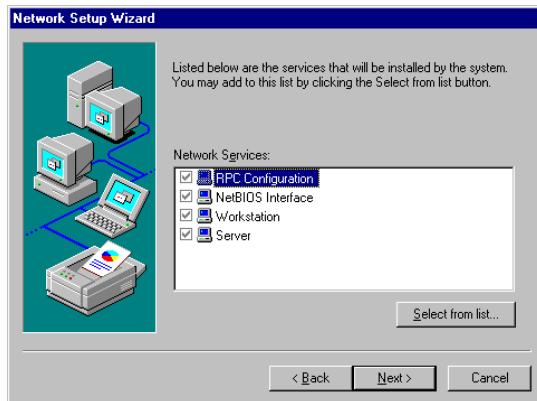
11. At this point, Windows will be ready to start installing Networking Components. Click the **Next** button to continue.
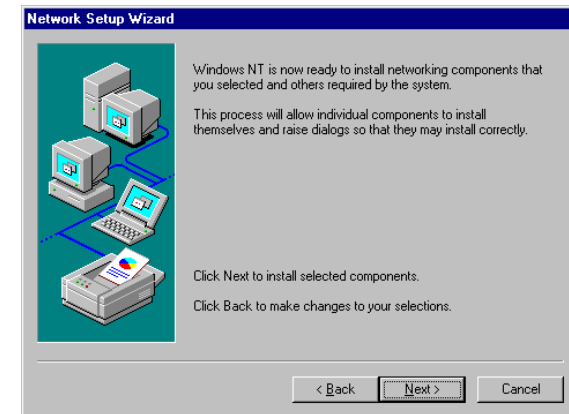

12. Windows may request further files at this point. Insert the Windows NT CD into your CD-Rom drive. Type "G:\i386" in the field provided and click the **Continue** button.
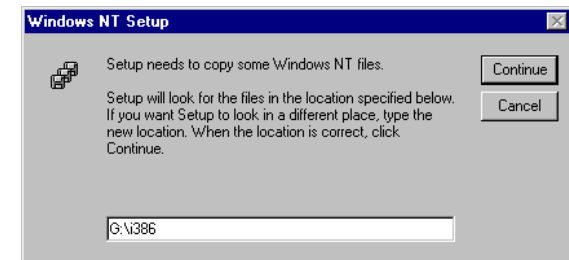
13. If files are still requested, insert your Driver CD into your CD-Rom drive and type "G:\Winnt40". Then, click the **Continue** button.
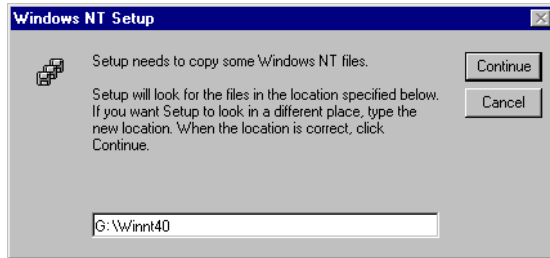

14. At this point, Windows NT will begin installing the network components you previously selected. You may be asked if you would like to configure the protocols with a DHCP server on your network. If this screen comes up, check with your Network Administrator before clicking the **Yes** or **No** button to continue.
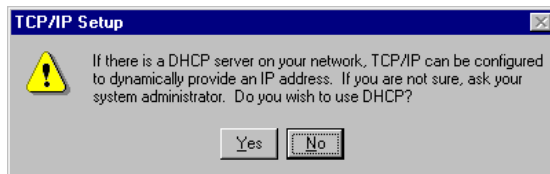
15. Windows will bring you to the **Microsoft TCP/IP Properties** screen. Setting the fields on this screen and then click the **OK** button.
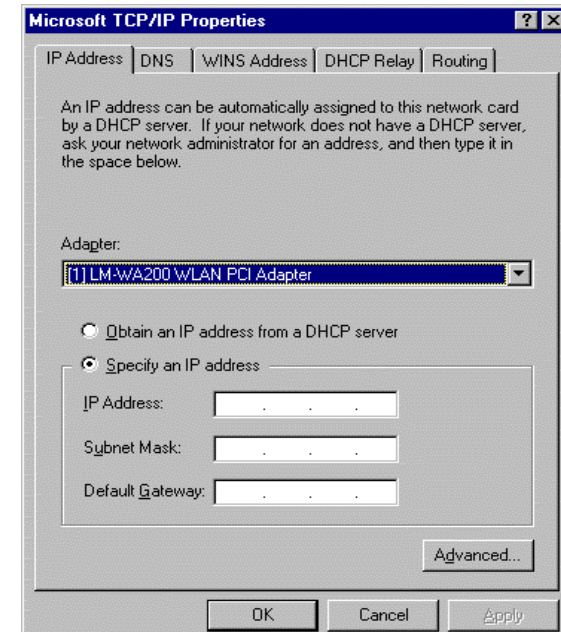
16. Now, the network components will finish installing. You may then see a screen similar to that shown here asking you if you'd like to disable any network bindings. Be sure to check with your network administrator before making **ANY** changes and then click the **Next** button to continue.
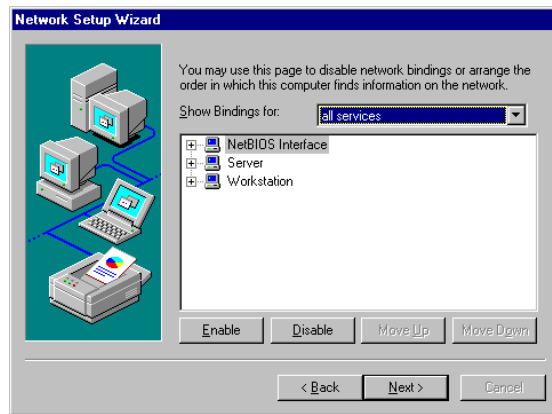

17. At this point, Windows NT will let you know that it is ready to start the network. If you'd like to stop the procedure, click the **Back** button. To continue, click the **Next** button.
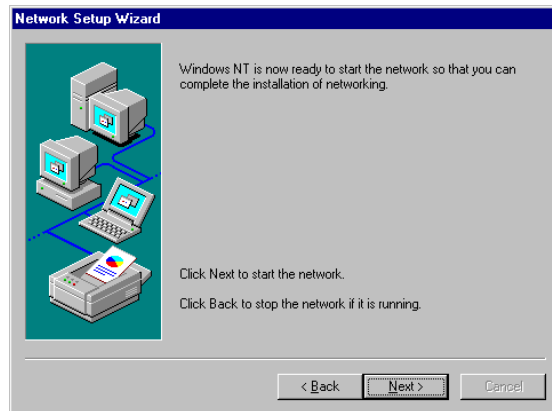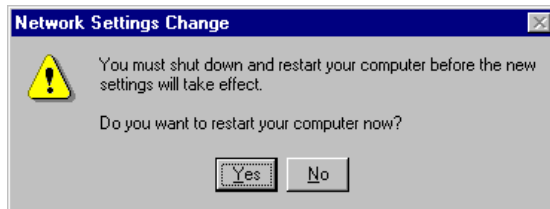

18. At this point, Windows NT will ask for the Workgroup. If you'd like to stop the procedure, click the **Back** button. To continue, click the **Next** button.

19. Windows NT has now completed installing the network. Click the **Finish** button to continue.
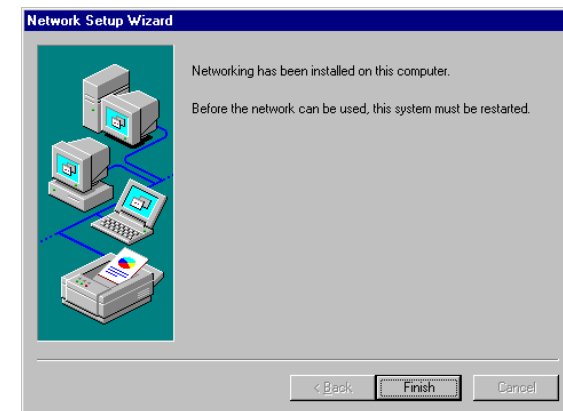
20. Windows will now ask you to restart your computer. Click the **Yes** button to restart.

### If you Have Installed Network Hardware Before:

1. Windows NT is not a Plug-and-Play Operating System and will not automatically recognize the PCI Adapter. To begin setup, select **Setting** from the **Start** Menu and Bring up the **Control Panel**. Then double-click on the **Network** icon.

2. To add the Network PCI Adapter, click the **Adapters** tab and then click the **Add** button to continue.
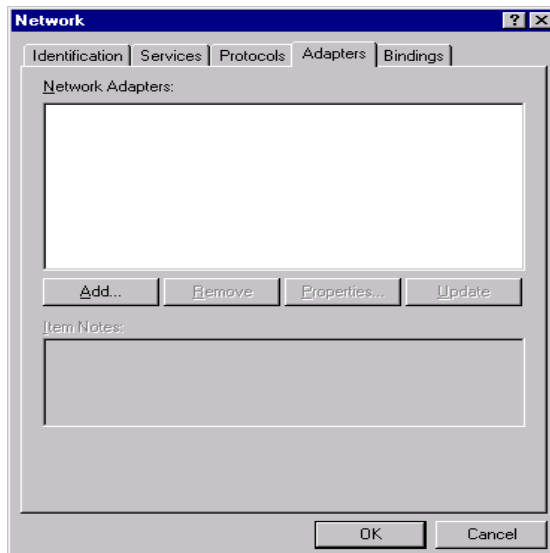
3. A list of adapters will appear on the next screen. You will not want to select one of these, however, as your installation CD has all of the appropriate drivers. Click the **Have Disk** button to continue.
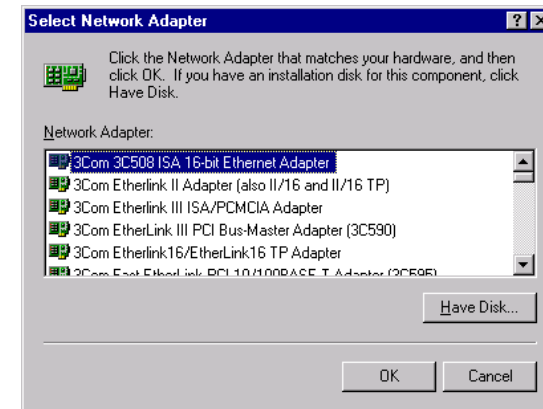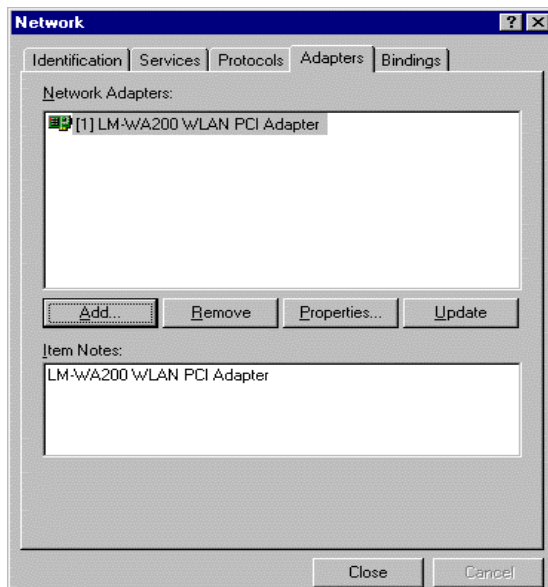
4. On the Insert Disk screen, type "**G:\Winnt40**" in the field provided. Then click the **OK** button to continue.
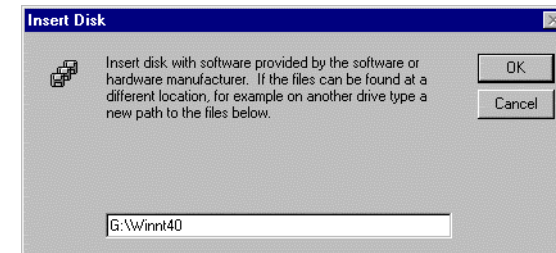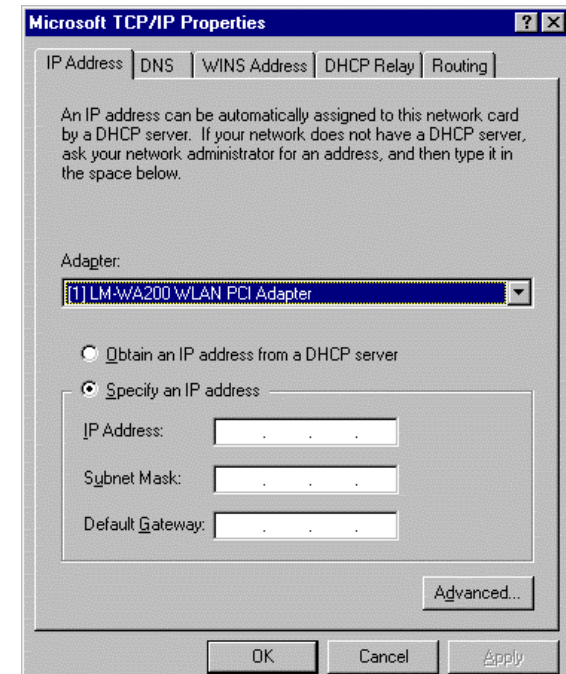
5. The select OEM Option screen will show the **LM-WA200 WLAN 802.11 PCI Adapter**. Click the **OK** button to continue.
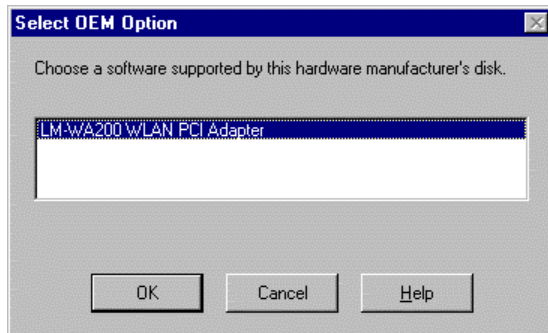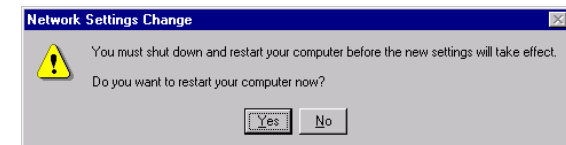

6. The PCI Adapter has now been installed. You will see it added onto this screen. Click the **Close** button to continue.

7. Windows will bring you to the **TCP/IP Properties** screen. Set the fields on this screen and then click the **OK** button.
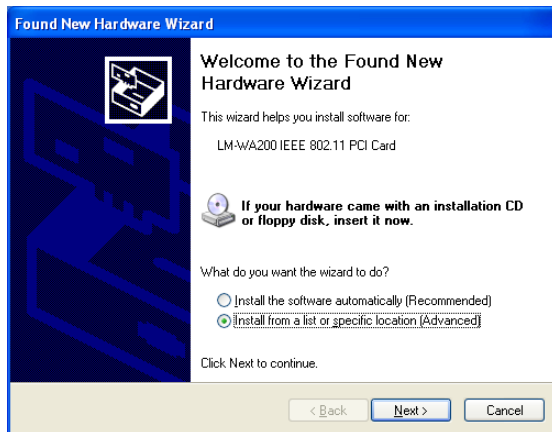

8. Windows will ask you to restart your computer. Click the **Yes** button to restart.

Install Driver Under Windows XP

1. Connect the Wireless PC card into your Notebook PC. Windows XP will automatically recognize a new **LM-WA200 IEEE 802.11 PCI Card**. Select **Install from a list or specific location [Advanced]** and click the **Next** button to proceed.

2. At this point, Windows will ask for the driver location. Make sure **Include this location in the search** is selected and browse the path of the driver.
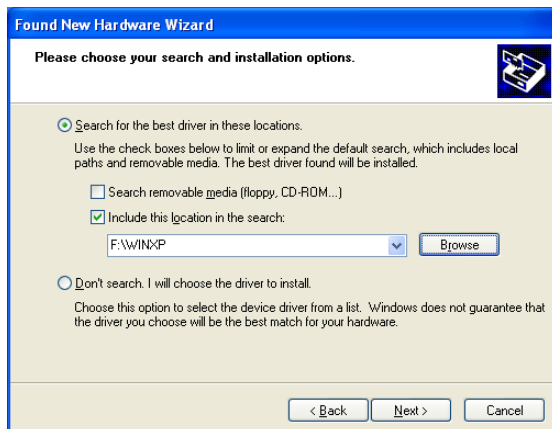
3. Windows will notify you that it has not passed Windows Logo testing to verify its compatibility with Whistler. Click the **Continue Anyway** button to continue.

4. Windows has now completed installing the network. Click the **Finish** button to continue.
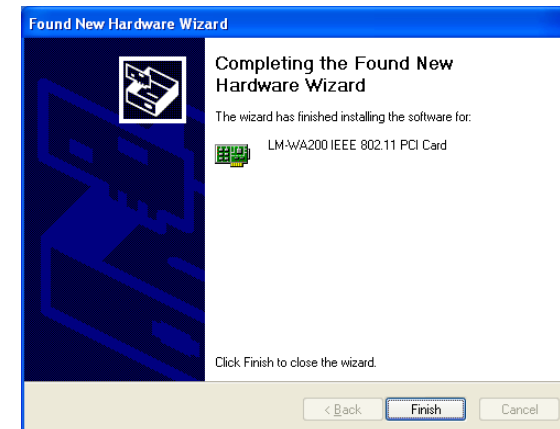
5. Click right on **My computer** and select **properties**. Select **Device Manager** and click on the **Network adapters**. You will find the **LM-WA200 IEEE 802.11 PCI Card** if it is installed successfully. The PC card adapter driver installation is finished.
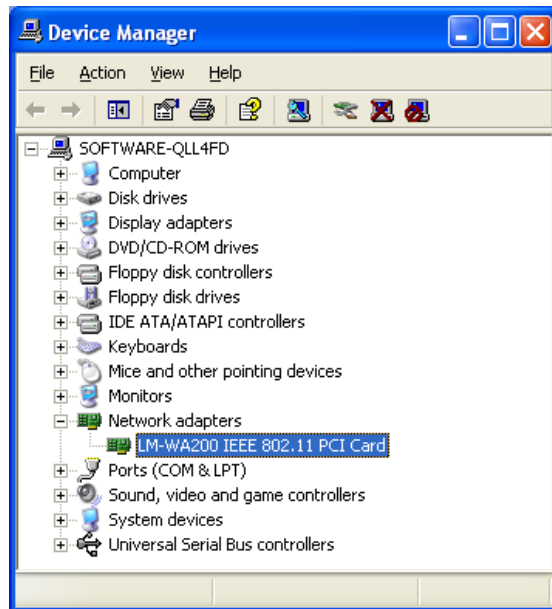
Configuration Utility

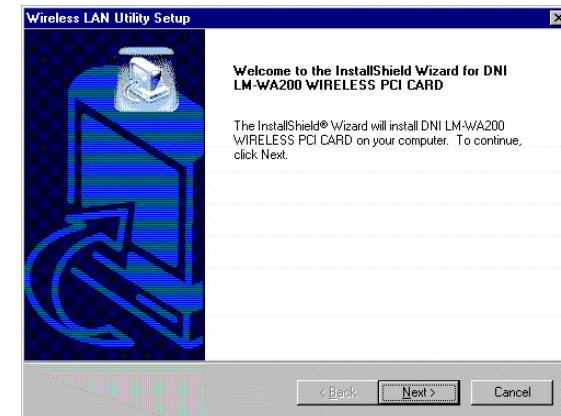The **Configuration Utility** is provided to allow you further customization of the PCI Adapter and your wireless network.

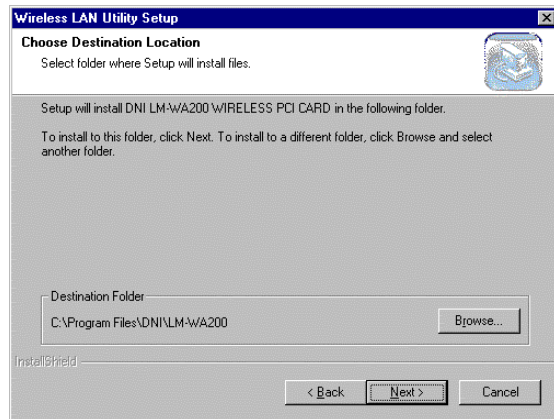## Install the Configuration Utility

1. Execute the Sepup.exe file of Utility. Windows will bring you to the InstallShield Wizard screen. Click the **Next** button to proceed.
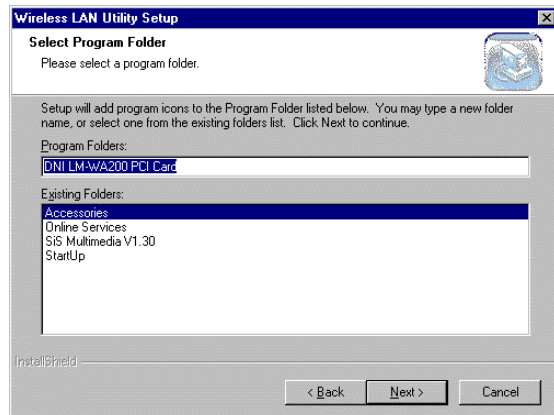

2. Windows will ask you for the Software License Agreement. Click the **Yes** button to continue.
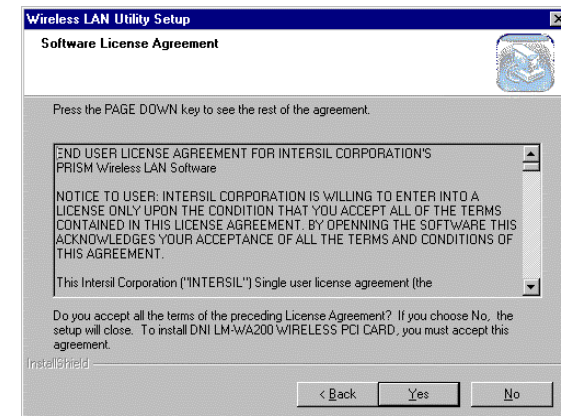
3. At this point, Windows will ask for the destination folder. Click the **Next** button to continue.

4. Windows will ask for program folder, click the **Next** button to proceed.

5. Windows will notify that installing has been completed. Click the **Finish** button to continue.
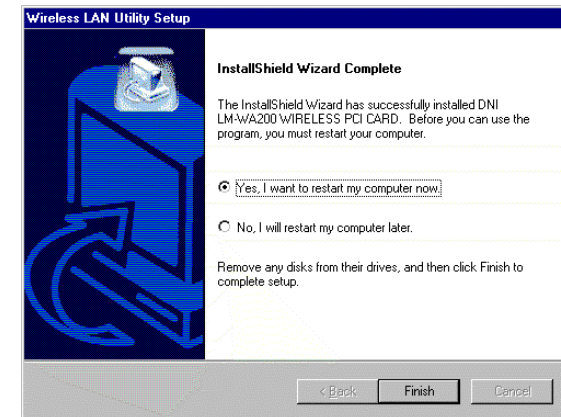
6. After installing the utility's software, installation will be complete. From the **Start** menu, select **DNI LM-WA200 PCI Card** and then click **Configuration Utility.** Windows will bring you to the **Wireless LAN Configuration Utility** screen. This Utility is divided into four parts: **Link Info, Configuration, Encryption, About.**

Configure the Configuration Utility

LINK INFO

The Link Info screen provides information about the current link between the PCI Adapter and the wireless Access Point.
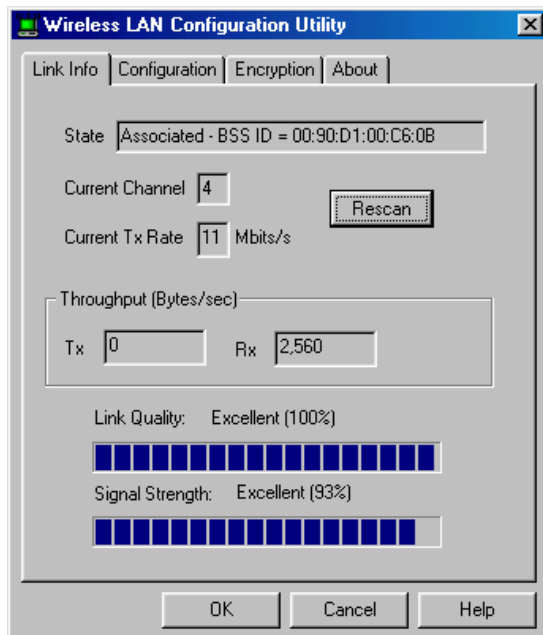
The **Current Channel** field shows to what channel the PCI Adapter is set.

The Current Tx Rate field shows the transfer rate in megabits per second.

The **Throughput** fields show the rate at which data is transferred and received in Bytes per second.

The **Link Quality and Signal Strength** fields will be displayed by the strength of the block when applicable.

CONFIGURATION

The Configuration screen allows you to customize the setting for the PCI Adapter and your wireless network.

The **Mode** setting determines the architecture of your wireless network. Select **Ad-Hoc** or **Infrastructure** Mode depending on your network type. The Ad-Hoc mode is used for a simple peer-to-peer network and allows the sharing of local resources only between PCI Adapters without needing a wireless Access Point. The **Infrastructure** mode allows a wireless network to be integrated into an existed, wired network through an Access Point. Infrastructure networks permit roaming between Access Points while maintaining a connection to all network resources and provide additional features, such as WEP security, power saving and extended range.

The acronym for **S**ervice **S**et **I**dentifier, **SSID** is the unique name shared among all points in a wireless network. The SSID must be identical for all points in the network. It is case sensitive and must not exceed 32 characters.

The **Tx Rate** field shows the current transfer rate for the PCI Adapter. To optimize performance and range, the Tx Rate should be set to **Fully automatic**, which will automatically adjust the transfer speed for best performance and longest range.

Power Saving Mode, or **PS Mode**, enables or disables the power saving features of your PCI Adapter. This setting can only be enabled or disabled in Infrastructure mode.

The **Channel** setting specifies the channel used in wireless communication and should be set to the same channel as the other points in the wireless network.
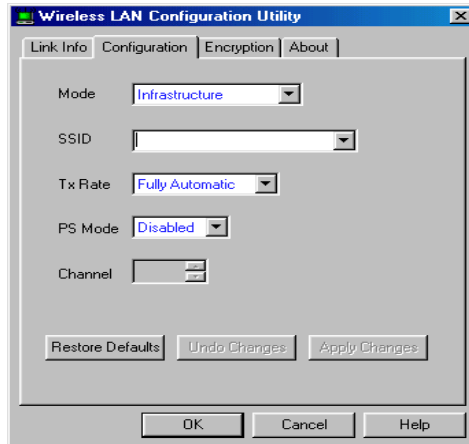
ENCRYPTION

The 64-bit or 128-bit WEP keys can be generated from a user-defined passphrase.

The **Passphrase** can be any text string with a maximum of 32 characters.

WEP must be enabled from the Configuration screen in order to set the 64-bit or 128-bit key. To generate an encryption key:

1. Type exactly the same case sensitive PassPhrase in the PassPhrase field.
2. Click the **Apply** button to create the encryption key. Te Passphrase generates four unique keys.
3. Make sure that the Default Key is the same for each point on the network.
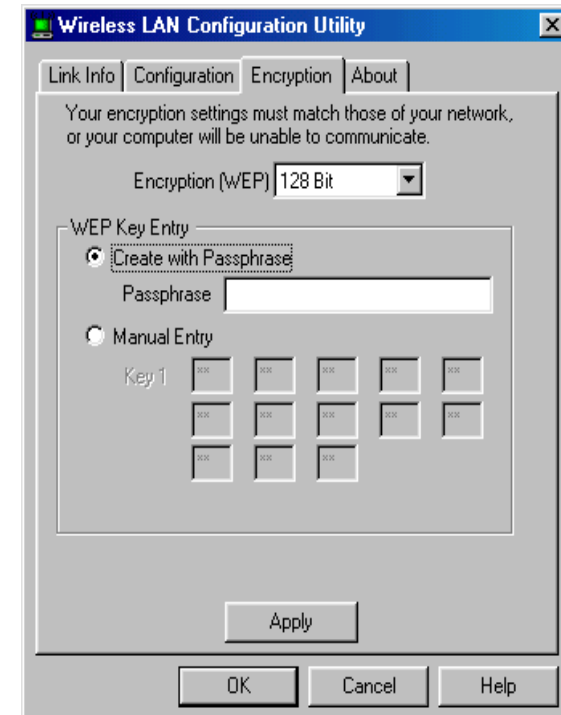
ABOUT

The **About** screen shows the release information for the Configuration Utility.