IEEE 802.11b WLAN PC Card

User's Guide

Version:1.01

FCC Class B Radio Frequency Interference Statement

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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/television technician for help.

Notice 1:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 1:

Shielded interface cables, if any, must be used in order to comply with the emission limits.

Notice 3:

This device complies with part 15 of the FCC Rules. The 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.

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1 Introduction

Thank you for purchasing our IEEE802.11b WLAN PCMCIA Card. It will be interoperable among IEEE 802.11b standard compliant products from other manufacturers and allows you to build a wireless LAN. Besides, you can use your PC to connect with an access point wirelessly to share the wired network resource:

- Share your Internet access by using just *one* connection
- Share printers and other peripheral devices
- Share data and image files between networked PCs
- Play multi-player games

IEEE802.11b WLAN can transmit and receive data over the air, minimizing the need for wired connections, at a speed of up to eleven megabit per second. With IEEE802.11b WLAN you can locate your PC wherever you want without wires and cables.

IEEE802.11b WLAN provide LAN users with an access to real-time information anywhere in their organization. The mobility provides productivity and service, which are not available under wired networks.

The IEEE802.11b WLAN configuration is easy to change from peer-to-peer networks, suitable for a small number of users, to full infrastructure networks of thousands of users that allow roaming around a broad area.

Please read this manual to get familiar with the IEEE802.11b WLAN. This manual contains detailed instructions in operation of this product. Please keep this manual for future reference.

Kit Contents

The IEEE802.11b WLAN PC Card kit includes the following items:

- A PCMCIA Card
- A CD including: IEEE802.11b WLAN Utility & Driver software, Acrobat Reader3.0 and user manual PDF file.
- The User's Guide (this document)

2 Installation

2.1 Overview

In this chapter we will cover how to install the IEEE802.11b WLAN PCMCIA Adapter/Card.

To establish your wireless network connection, the following steps should be executed.

1. Install the software using the installation CD

2. Install the wireless LAN card.

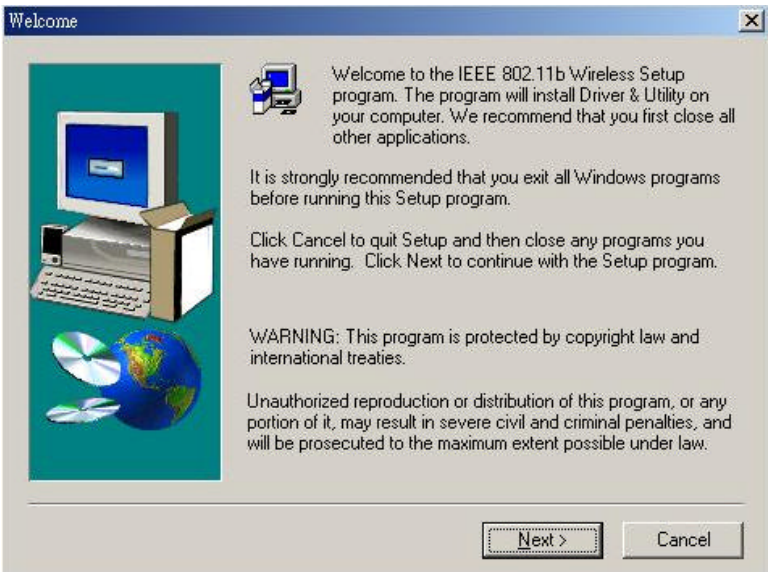
3. Install the required network protocols to communicate with your network. Most likely, you will need the TCP/IP protocol.

The product is designed to operate in Windows 98, Windows ME, and Windows 2000. And the installation procedure is about the same. Please follow up the installation wizard that provided by your system to install the software. The example here is based on Window 98SE.

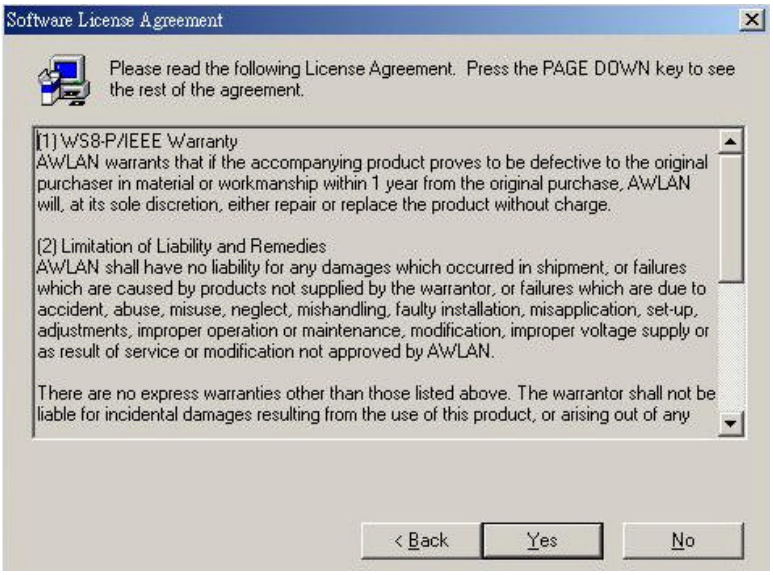
2.2 Install the IEEE802.11b WLAN Utility/Driver

Please install the IEEE802.11b WLAN Utility/Driver first before inserting the IEEE802.11b WLAN PCMCIA Card.

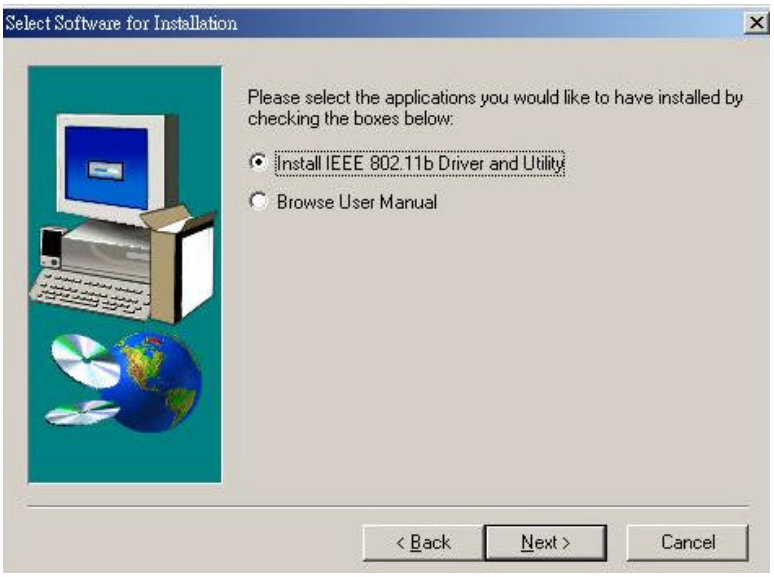
1. Insert the IEEE802.11b WLAN installation CD into your CD-ROM drive. The setup program will then automatically start.
2. The setup program will start and the setup screen will appear on your monitor. Select “Next” to go to the next screen.



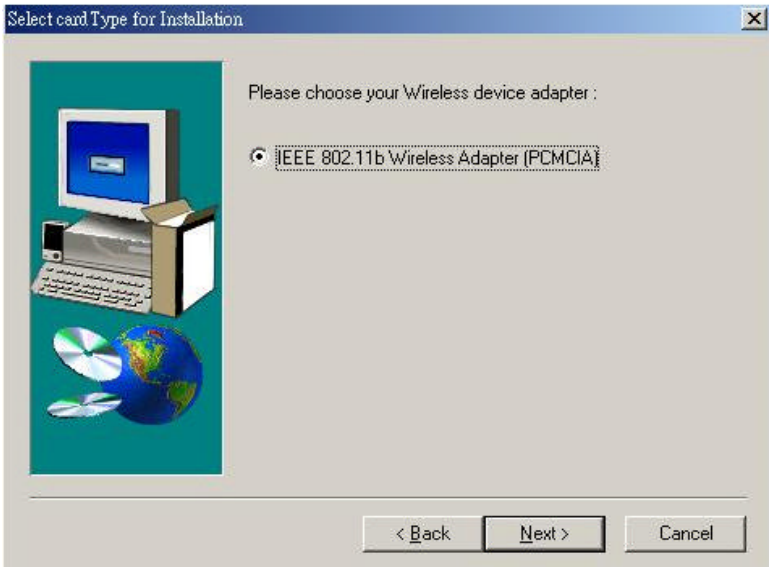
3. Please carefully read the “Software License Agreement.” If you accept the contract, click“Yes” to move to the next screen. If not, click “No” to exit.



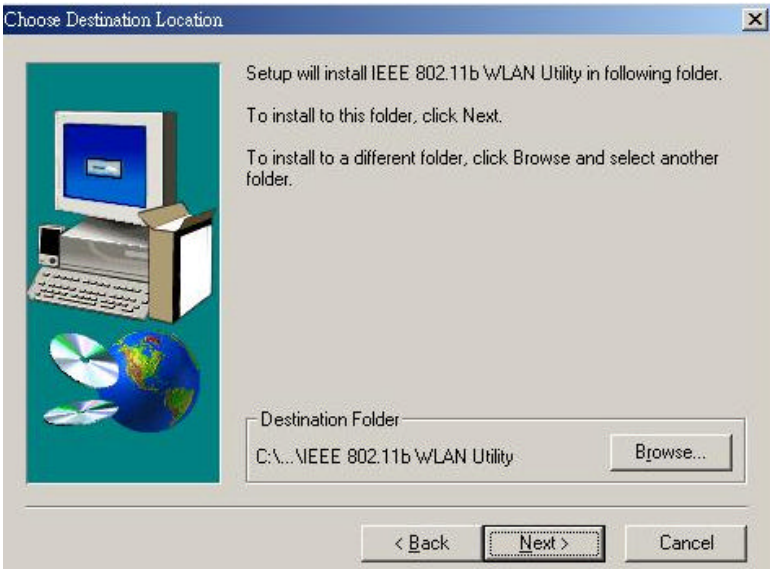
4. Please select the applications you would like to install, and click “Next”. If you select “Browse User Manual” system will prompt a message to suggest you installing Acrobat Reader.



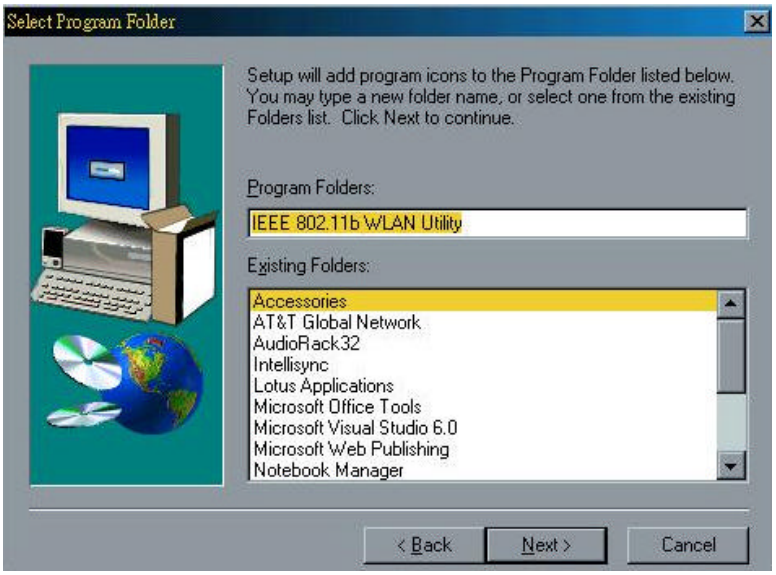
5. Please choose your wireless device adapter, and click “Next”.



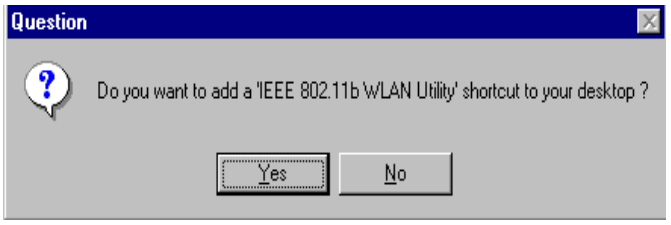
6. The default destination folder is displayed in the setup dialog box. To change the default folder you can click “Browse” to set the destination folder. Click “Next” to go to the next screen.



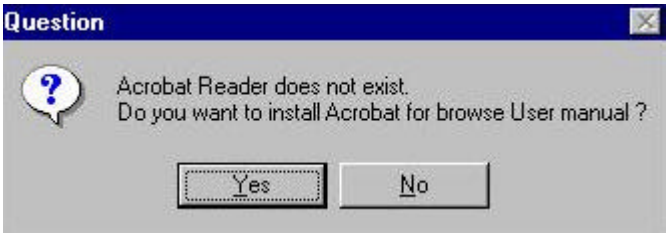
7. Select the Program Folder for IEEE802.11b WLAN Utility and click “Next”.



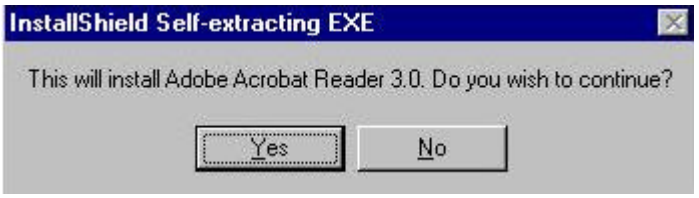
8. You will be asked if you want to add a IEEE802.11b WLAN Utility shortcut to your desktop. Click “Yes”.



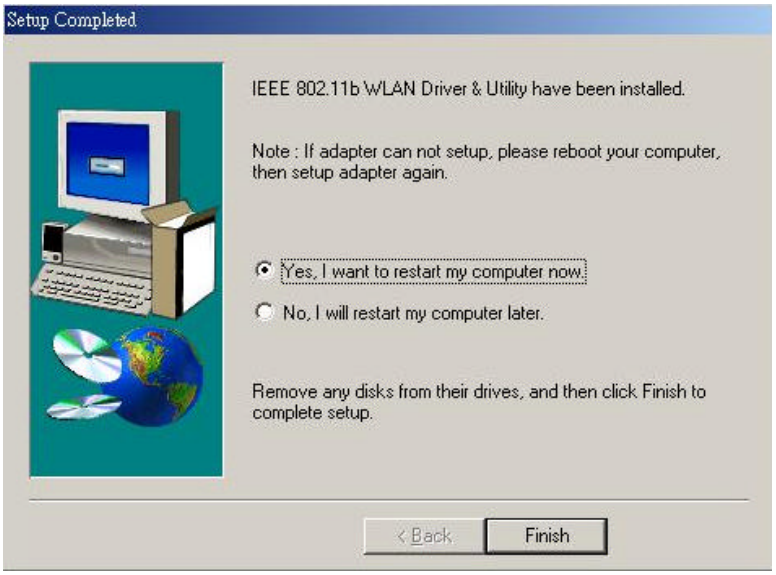
9. The user manual is published in Portable Document Format (PDF) , we suggest you install Acrobat Reader to read it. If Acrobat Reader doesn't exist in your system, a “Question” dialog box will prompt as follows. Select “Yes” to install Acrobat for browsing user manual .



10. If you are sure to install Acrobat, click ”Yes” and then system will guide you to enter the Acrobat Reader 3.0 setup program. Follow the setup procedure to complete the Acrobat Reader 3.0 installation.

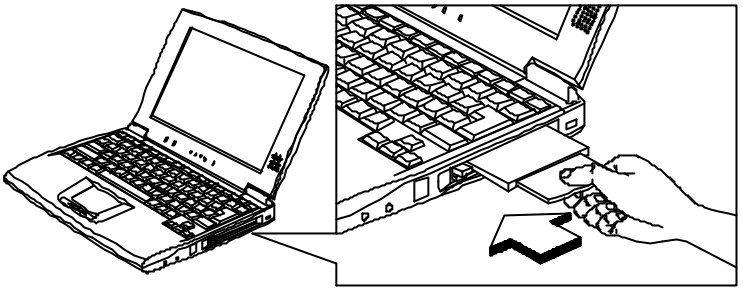


11. The Driver and Help files will be copied to the system. Wait for the setup program to finish the IEEE802.11b WLAN installation. Then select “Yes” and click “Finish” to complete the installation. It’s recommended to close other applications before rebooting your system.



12. To install the PCMCIA card, please refer to the chapter 2.3. “Install the PCMCIA card.”

2.3Install the PCMCIA card



The IEEE802.11b WLAN driver and utilities are included on the accompanying installation CD. Please follow the installation procedures in Section 2.2. (Your PCMCIA card will not work properly if the driver and utilities are not installed correctly.)

Make sure that there is an empty PCMCIA slot for IEEE802.11b WLAN PC card. ***Install the IEEE802.11b WLAN Utility/Driver first before inserting the PCMCIA card****.*

1. Insert the PCMCIA Card and then the system will automatically start.

If you're asked to insert a "Windows 98 CD-ROM" during the installation, insert your "Windows 98 CD-ROM" and click "Yes". Once the setup task is completed, the "Microsoft Internet Explorer" should start up. Please close it.

2. When the IEEE802.11b WLAN PCMCIA Card setup task is finished, a new icon will appear in your icon tray. Now the PCMCIA Card should be inserted completely. To start up the utility, please refer to the chapter 2.4 "Utility Start up Configuration".

2.4 Utility Startup Configuration

IEEE802.11b WLAN PCMCIA Adapter/Card has its own management software. Users can control all functions provided by the application named IEEE802.11b Utility. The Utility icon will appear in the working bar. The definition of the color of the Utility icon is as follows:

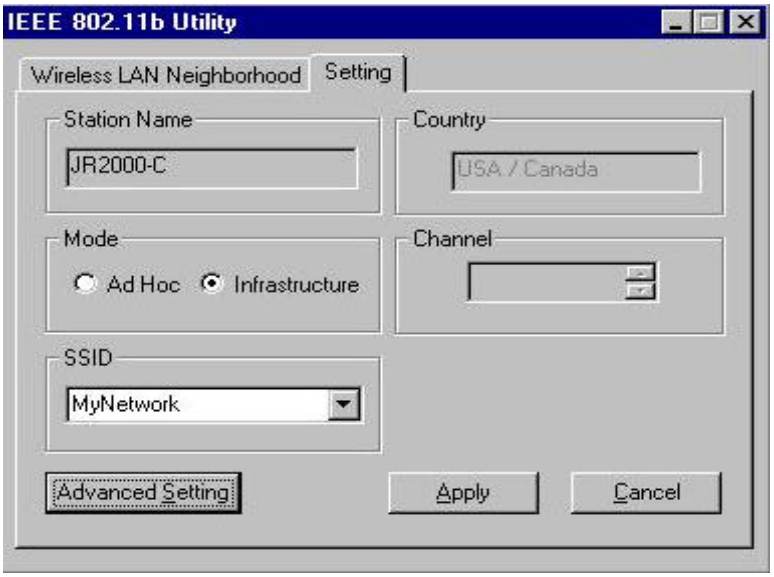
connected low quality disconnected

Double click the icon and the IEEE802.11b Utility will be opened.

2.4.1. Setting

This page is aimed at the basic setting of IEEE802.11b WLAN. You can set the configuration by changing the following items and click “Apply”.

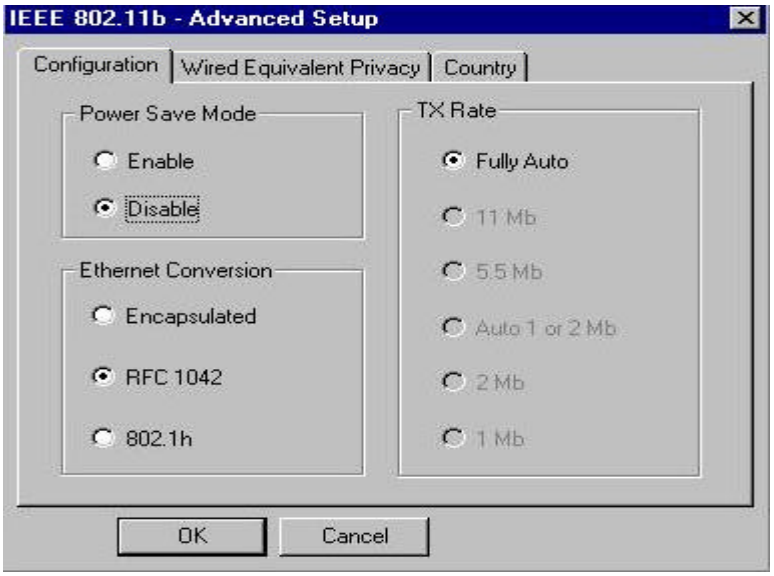
- Station name : The login name of your computer.
- Mode : If you want to connect with an access point, choose “Infrastructure”. If you have more stations and just want to set them as local network, choose ”AdHoc”.
- SSID :It is the group name that will be shared by every member of your wireless network .You will only be able to connect with an access point, which has the same SSID.
- Channel : It shows radio channel numbers used for networking. The Channel can be changed only under the AdHoc Mode. If the Mode is Infra- structure, this parameter will not be active. Infrastructure Client nodes will always go to the same channel as their AP.



- Click “Advanced Setting “ and then the following advanced setting about your IEEE802.11b WLAN will be displayed.

Configuration

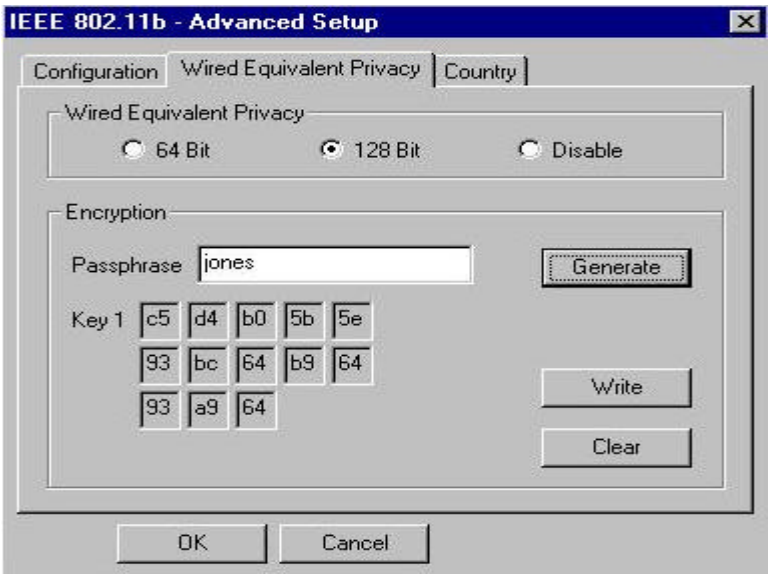
- It displays the configuration items that you can change under the AdHoc mode: Power Saving Mode, Ethernet Conversion and Data Transmission Rate. If the mode is Infrastructure, The Tx Rate will be fixed in “Fully Auto” and users can’t change it.



Wired Equivalent Privacy

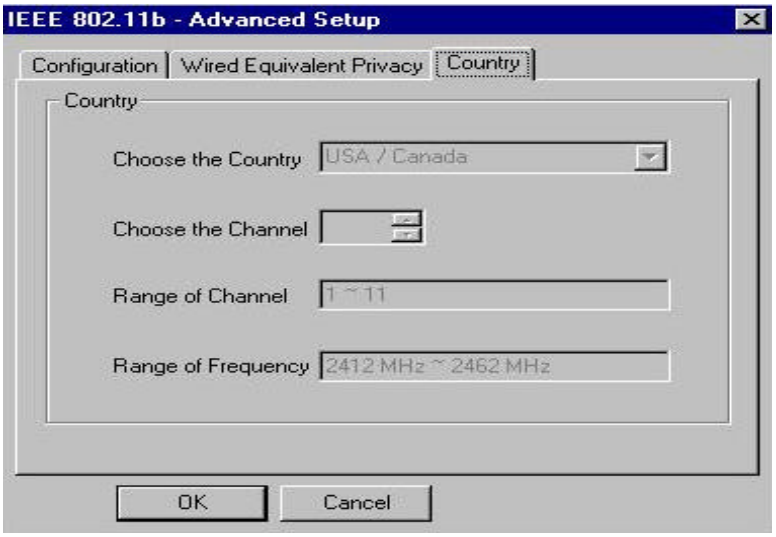
- If you would like to enable WEP, the system will prompt a message to suggest that you contact with your network administrator.

- You may desire an additional measure of security on your wireless network, which can be achieved by using the Wired Equivalent Privacy (WEP). Follow the steps behind to set your WEP: (1) Choose WEP type (64 or 128 bit) (2) Enter Passphrase (3) Click Generate (4) Choose one key (5) Click Write and then press OK. WEP encrypts each frame transmitted from the radio, using one of the keys entered from this panel.



Country

- Every country has different legal frequency range. Please choose proper country setting. Under the infrastructure mode, the setting value will be determined by the Access Point and can't be set by users.

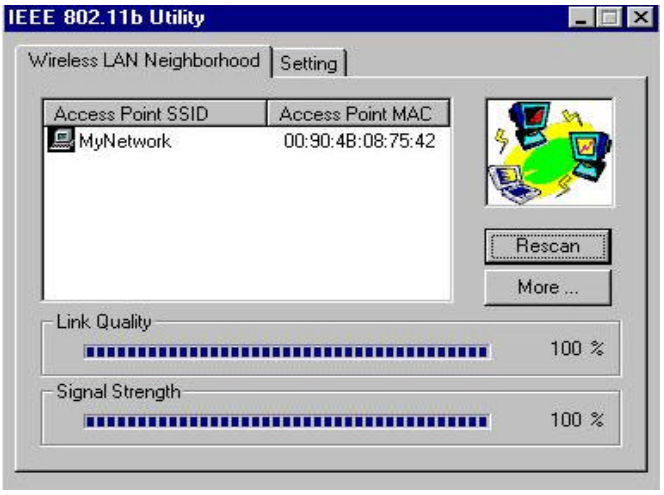


2.4.2. Wireless LAN Neighborhood

- The Access Point SSID and Access Point MAC will appear in the screen if you choose the Infrastructure Mode, your station SSID will appear if you choose the AdHoc Mode. (Please refer to the 2.4.1 Setting to set your network mode.) The status of the Link Quality and Signal Strength will be showed under the Wireless LAN Neighborhood.

- Double click the Access Point SSID (under the Infrastructure Mode) or your station SSID (under the AdHoc Mode) to access to the Network Neighborhood folder to find other on-line computers.

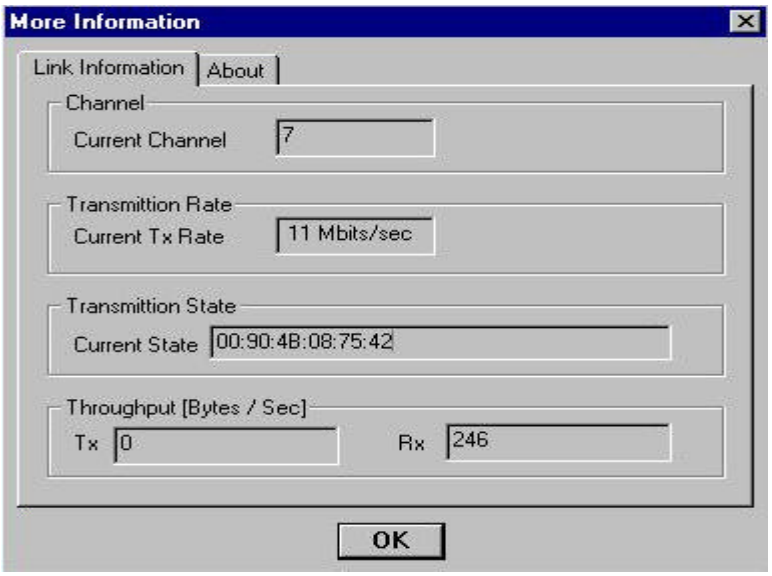
- Click "Rescan" if you don't find any other station.



- Clicking "More" will spread the following information about your network:

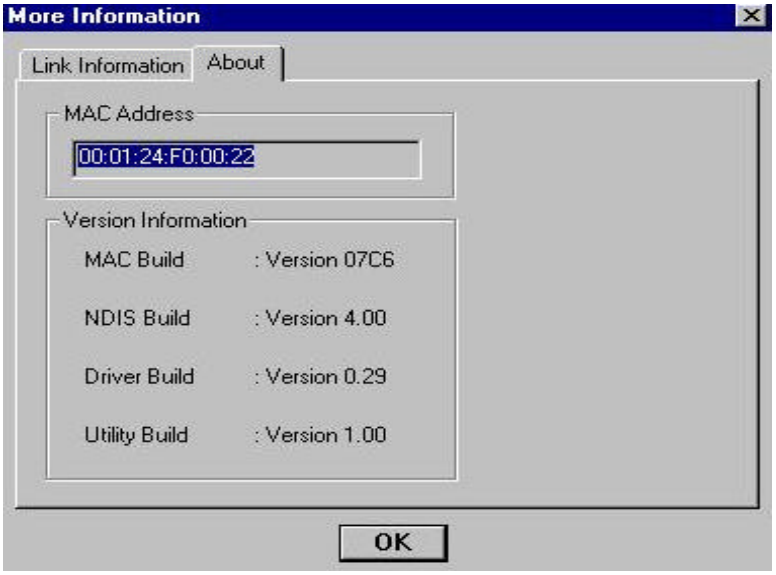
Link Information

- The link information, including the Current Channel, Transmission Rate, Transmission State and Tx/ Rx Throughput, is revealed here.



About

- From this dialog box, you can get the details such as the MAC address and the version information of each S/W.

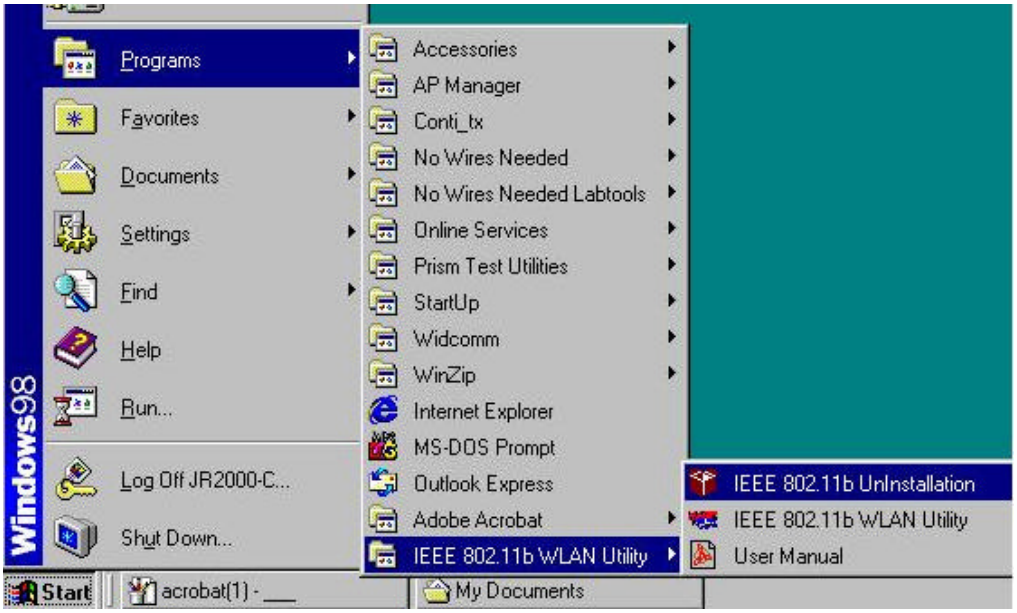


2.5 Uninstall the IEEE802.11b WLAN Utility / Driver

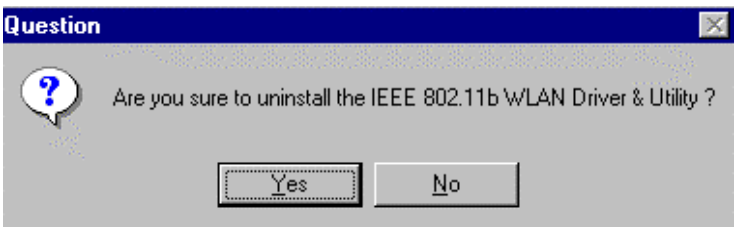
1. First you should remove the IEEE802.11b WLAN PC card.

2. To exit the IEEE802.11b WLAN Utility, you should click the right bottom on the Utility icon in the working bar and select “Exit”.

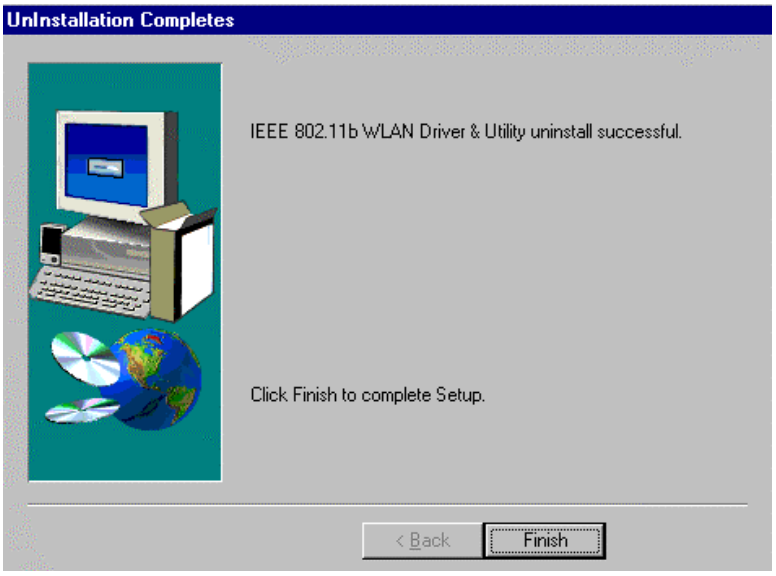
3. To uninstall the IEEE802.11b WLAN Utility and Driver, you can move to Start – Programs – IEEE802.11b WLAN Utility, and click “IEEE802.11b Un-installation”.



4. You will be asked if you want to uninstall the IEEE802.11b WLAN Utility and all of its components. Click “Yes” to start to uninstall or click “No” to exit.



5. Now the un-installation is completed. Please click “Finish”.



Additional Note for Windows 2000

The following items should be noted:

1. Please don’t remove your PC card unless the IEEE802.11b WLAN un-installation is completed.

2. Make sure to exit the IEEE802.11b WLAN Utility before uninstalling.

3. If you are sure to uninstall the IEEE802.11b WLAN Utility and Driver, the system will give you a prompt to remove the IEEE802.11b WLAN adapter from the “Device Manager” in order to complete the un-installation.

4. After the “Device Manager “ give you a prompt, move your cursor to “Network Adapters” and double click it. Select the “IEEE 802.11b Wireless LAN Adapter” and then right click it to remove the adapter.

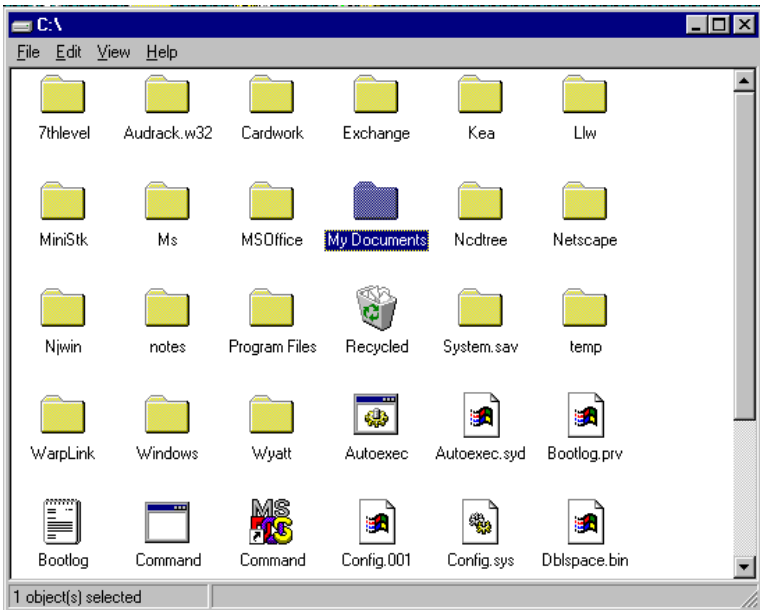
3 Application

To enable the sharing of the internet access, you should set your IEEE802.11b WLAN mode as “Infrastructure” and connect to the access point (please refer to the chapter 2.4.1 “Setting”). When the procedure is completed, an access point will appear on the Wireless LAN Neighborhood of IEEE802.11b WLAN Utility. Double click it to enter the Network Neighborhood folder. This folder contains the links to all computers in your workgroup on the entire network.

3.1File Sharing in Microsoft Windows 98

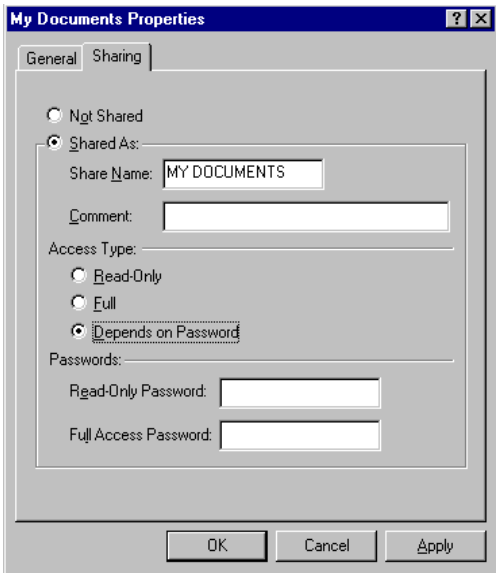
IEEE802.11b WLAN allows the sharing of files between computers that are logged onto the same wireless network. Let’s assume that you want your folder “My Documents” to be shared with other computers and the wireless network:

1. First, locate the folder “My Documents” and right click it.



2. Select “Sharing” from the available options.

3. Select “Shared As” to open your folder for file sharing. You can also select and define the level of access you want for your folder.



- If “Read-Only” is selected, the other users in the wireless network can only copy files from your folder. Copying files into your folder is not allowed.

- If “Full” is selected, the other users in the wireless network have full access into your folder. They can copy to and from your folder as well as modify files.

- You can also set the option to “Depends on Password” wherein the user in the wireless network can access to your folder through a set password. The set password will determine if the user can only read your folder or has full access to your folder.

4. Click “Apply” or “OK” to activate the options that you have set.

Now you can see the folder “My Documents” with a little hand under it. The folder is now open for file sharing.

Sharing files in the IEEE802.11b WLAN wireless network will be like sharing files on a wired LAN.

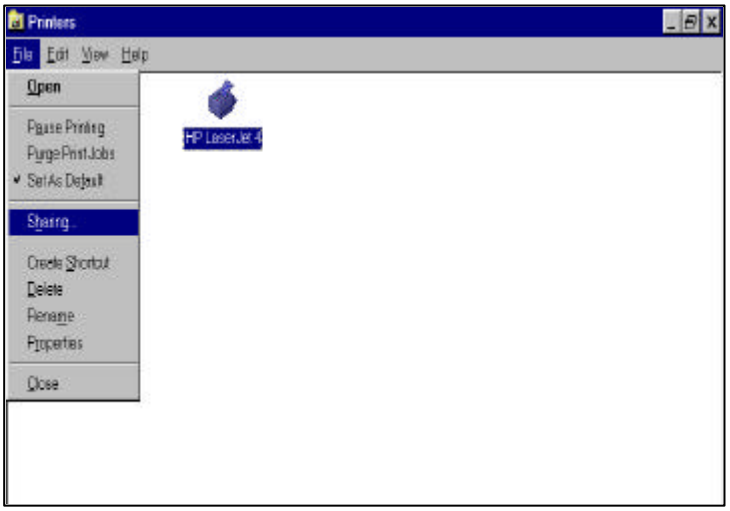
3.2Printer Sharing in Windows 98

In order for a printer to be shared across the network, it has to be set as the network printer. Follow the instructions below to set a printer as a network printer:

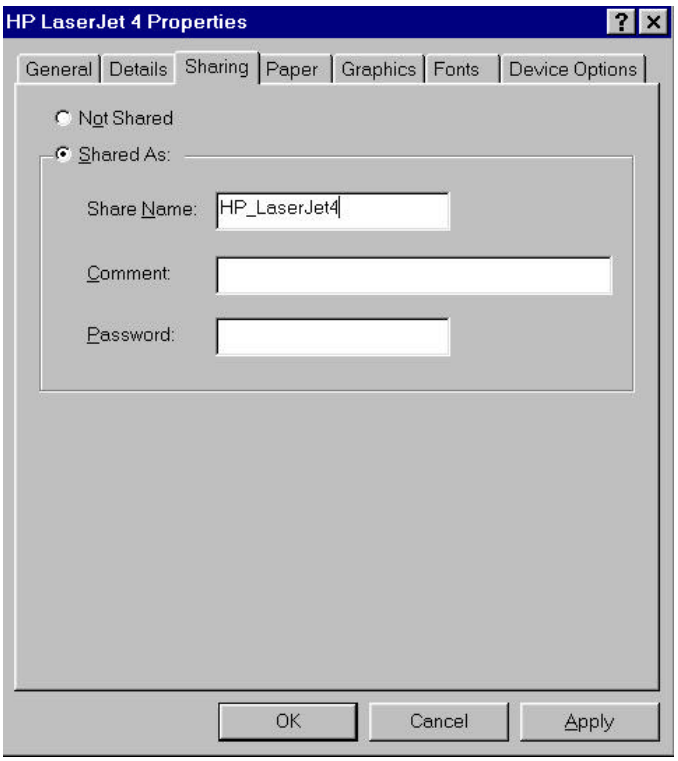
1. Click the “Start” button, point to the “Settings”, and then click “Printers”.

2. In the Printers window, click the printer you want to share.

3. Click “Sharing…..” on the “File” menu.



4. Click the Sharing tab, then click “Shared As”, and if necessary, enter a password.



3.3Using the shared folder

1. Double click the “Network Neighborhood” icon, and then double click the computer where the shared folder is located.

2. Double click the folder you want to connect to.

3. You may want to assign a drive letter for shared folder that you connect to.

4. In the “Network Neighborhood”, double click the computer where the shared folder is located.

5. Click the folder you want to connect, and click “File” menu, and then click “Map Network Drive”.

6. Select an available drive, and then click OK.

Note: If a password is required, the Windows will prompt you. Then you need to enter the password that had been assigned to this shared folder.

3.4Using the shared network printer

1. In the “Network Neighborhood”, locate and double click the computer where the printer you want to use is located.

2. Double click the printer icon in the window.

3. To set up the printer, follow the instructions on the screen.

Note:

1. After you have set up a network printer, you can use it as if it were attached to your computer.

2. If a password is required, the Windows will prompt you, and you need to enter the password that had been assigned to this shared printer.

Whenever printing a document through the network, be sure to select the printer that is set as the network printer.

4 Troubleshooting

If you encounter some problems installing the IEEE802.11b WLAN PC card or you want to confirm whether your card is installed properly or not, refer to below the procedure after you have installed the card.

4.1 Check the Various Properties of the Card

- Click the "Control Panel" and then the "PC Card". Check whether there is a PCMCIA card in one of the sockets or not.
- If you find a IEEE802.11b WLAN Adapter (PCMCIA) in one of the sockets, it means a card is detected.
- If you see a Question-mark (?) or Exclamation-mark (!) in yellow, the resources are conflicting.
- Right click "My Computer" and then select "Properties". Select the Device Manager and click the Network Adapter. You will find the IEEE802.11b WLAN PC Card if it is installed successfully.
- If you see the yellow sign, the resources are conflicting. Click "PCMCIA Card" and then "PCMCIA Card Service", you can see the status of the PCMCIA Card.
- If there are yellow signs either on the adapter or the PCMCIA card, please check the followings:
  1) Check if your Notebook supports 3.3V Card.
  2) Check if your Notebook has a free IRQ. If not, make an IRQ free by assigning the same IRQ to some devices.
  3) Check that you have inserted the right card and have installed the proper driver.

4.2Microsoft Networking Checklist

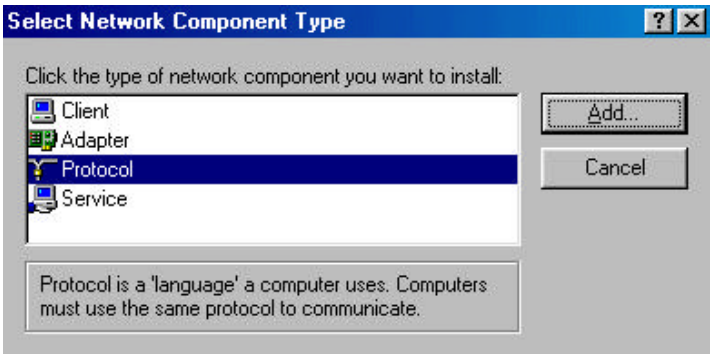
In order for the IEEE802.11b WLAN to run properly, some network items must be presented in the Microsoft "Network Neighborhood" setup. To check and activate the network setup, right click the "Network Neighborhood" with your mouse. The following items should be presented in the network setup:

1. IEEE802.11b Wireless LAN Adapter (PCMCIA)
2. IPX/SPX-compatible Protocol ->IEEE802.11b Wireless LAN Adapter(PCMCIA)
3. NetBEUI -> IEEE802.11b Wireless LAN Adapter (PCMCIA)
4. TCP/IP -> IEEE802.11b Wireless LAN Adapter (PCMCIA)
5. File and printer sharing for Microsoft Networks.

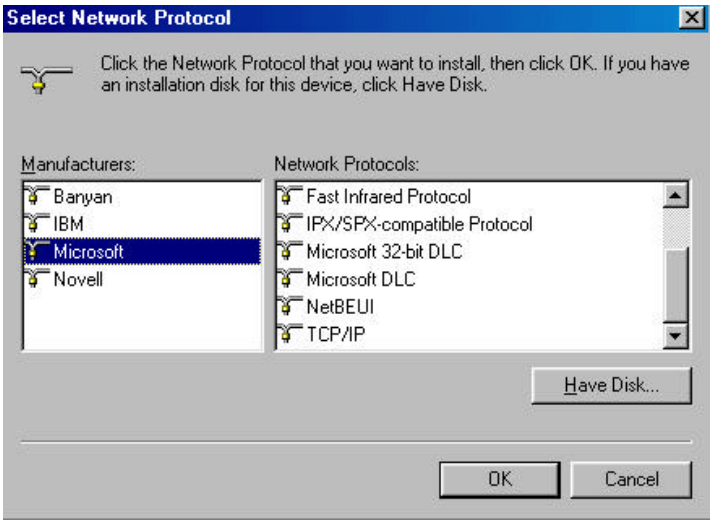
If any of these items are missing, please follow the instructions below to install them properly:

Set up the Network Protocols:

- Click “Add” and select “Protocol” on Network “Configuration”.



- Click “Add” and then choose the network protocol. Select Microsoft as the manufacturer and “NetBEUI”, “TCP/IP”, and “IPX/SPX-compatible” for the network protocols. Then click “OK;”



- Now your network protocol should be set. Please check if your network needs any special requirements to operate in your office environment.

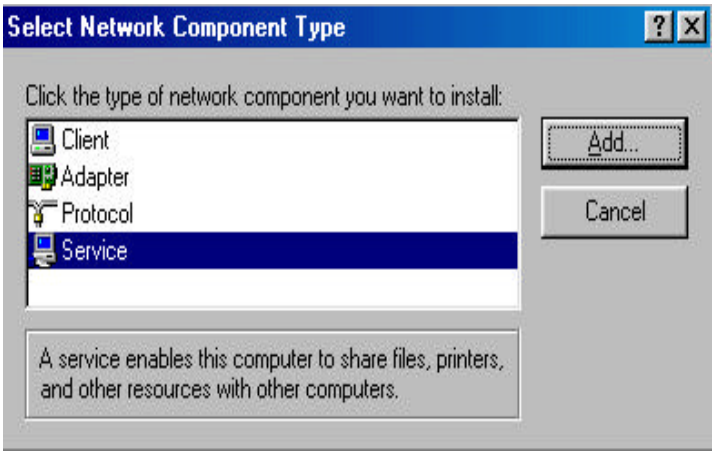
-

Additional Note for Windows 2000 to install packet protocol

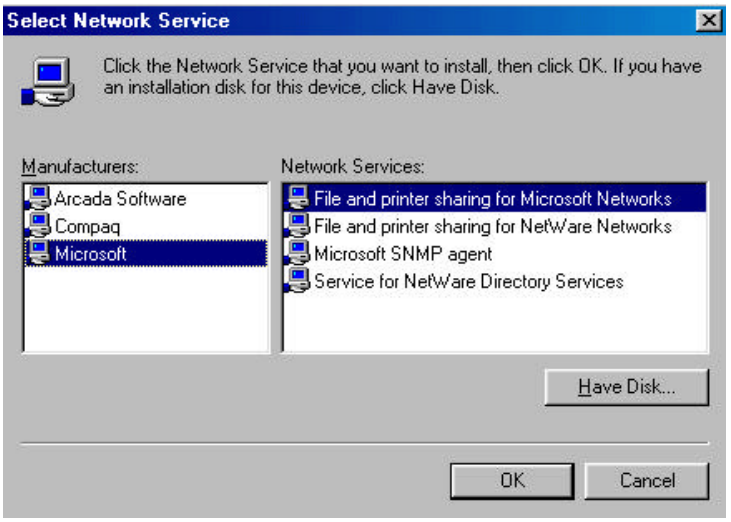
You should add Packet Protocol under Windows 2000.If the Packet Protocol doesn’t exist in your system, after clicking WLAN Utility, system will prompt a message to guide you to install Packet Protocol. Follow the procedure to complete this installation and reboot your system.

Network Service for Microsoft Networking:

- Click “Add” and select “Service”.



- Select “Microsoft” as the manufacturer and choose “File and printer sharing for Microsoft Networks” for network service;



- Click “OK” to set the network service.

Additional Note for Windows 98 earlier edition

If your system is running Windows 98 first edition, you may need to upgrade your system and IE from Microsoft web site. So your IEEE802.11b WLAN utility can operate properly.