802.11b Wireless CardBus PC Card

User Manual

Doc. No.:

REGULATORY STATEMENTS

FCC Certification

The United States Federal Communication Commission (FCC) and the Canadian Department of Communications have established certain rules governing the use of electronic equipment.

Part15, Class B

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

1) This device may not cause harmful interface, and

2) This device must accept any interface received, including interface that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This 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 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 distance between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

CAUTION:

1) To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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FEDERAL COMMUNICATIONS COMMISSION
INTERFERENCE 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 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:

-- 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.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and
(2) This device must accept any interference received, including interference that may cause undesired operation.

INTRODUCTION

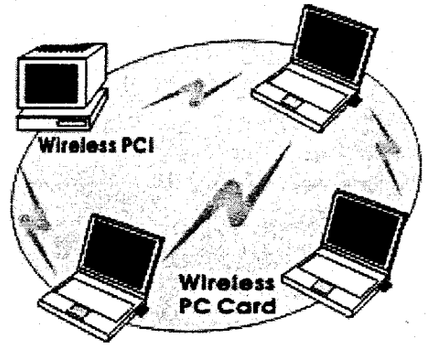
Wireless LAN Card is a high-speed 11 Megabits per second (Mbps) Ethernet wireless network adapter that plugs into any CardBus enabled PC. Once connected with other networked PC's, it allows you to share hard disk drives, DVD drives, CD drives, printers, and the likes. It also provides shared access to a modem for Internet access. Based on radio frequency (RF) technology, a wireless LAN transmits and receives data over the air, along with the guarantee to provide privacy and noninterference by the use of separate radio frequency.

Wireless LAN Card allows you to take full advantage of your PC's mobility with access to real-time information and online services anytime and anywhere. Plus, with the network installation simplicity and flexibility, you can eliminate the need to pull cable through walls and ceilings and allow the network to go where wires cannot go. Exploring WWW and augmenting networks can never be done more easily.

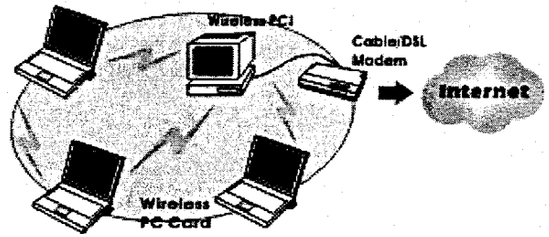
Wireless Network Options

The Peer-to-Peer Network

This network installation lets you set a small wireless workgroup easily and quickly. Equipped with wireless PC Cards or wireless PCI, you can share files and printers between each PC and laptop.

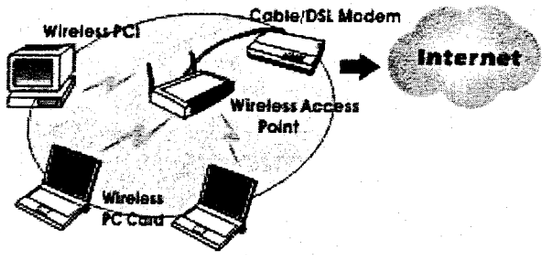


Or you can use one computer as an Internet Server to connect to a wired global network and share files and information with other PCs via a wireless LAN.



The Access Point Network

The network installation allows you to share files, printers, and Internet access much more conveniently. With wireless PC Cards, you can connect wireless LAN to a wired global network via an **Access Point**.



LED Indicators

Act/Link: Green

Blink – Transmitting/receiving wireless data.

Power: Green

Glow – linking to an Access Point or Peer-to-Peer mode.

INSTALLATION

Install the Device

1. Locate the CardBus slot of your system.
2. Align the Wireless PC Card in the CardBus slot. Push evenly and slowly until it is seated.

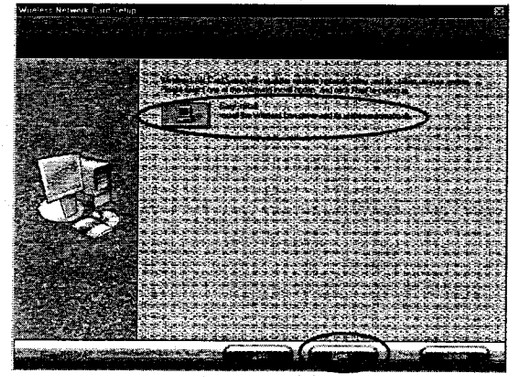
Install the Driver

1. Load the device driver CD-ROM onto your CD-ROM drive.

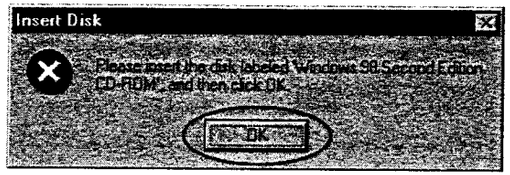
2. Open the CD-ROM drive. Click the setup icon .

In Windows 98

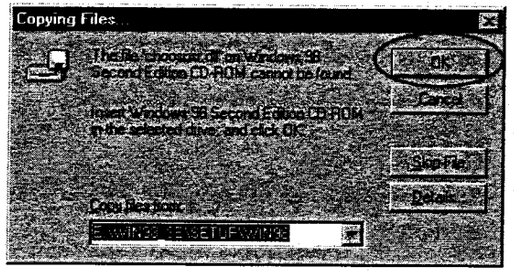
1. Click **Next** or **Easy Install** to install the driver and utility automatically.



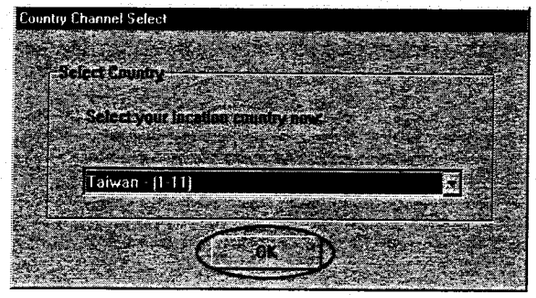
2. If you are asked to insert **Windows 98** CD-ROM, please do so. Click **OK**.



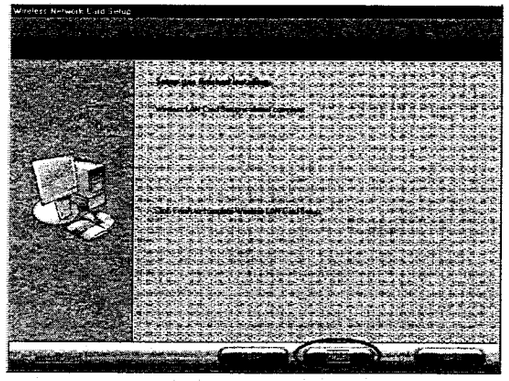
3. Select the correct drive and click **OK**.



4. Choose the region you are in and click **OK** as shown as below.

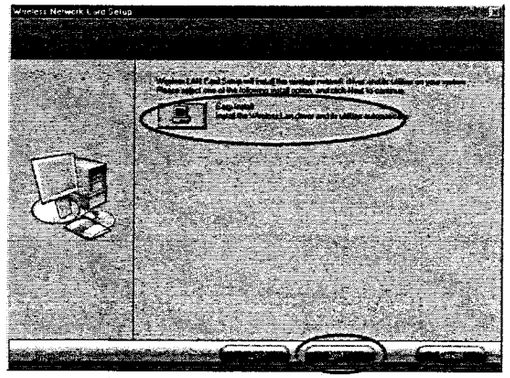


5. Click **Finish** to complete the installation.

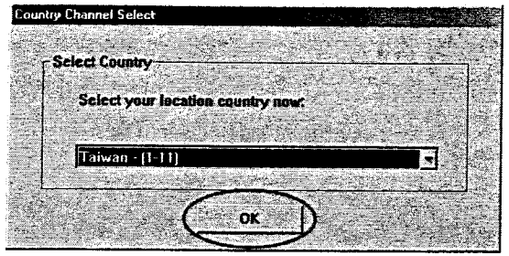


In Windows ME

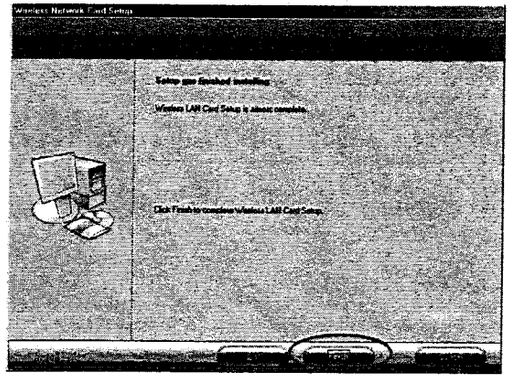
1. Click **Next** or **Easy Install** to install the driver and utility automatically.



2. Choose the region you are in and click **OK** as shown as below.

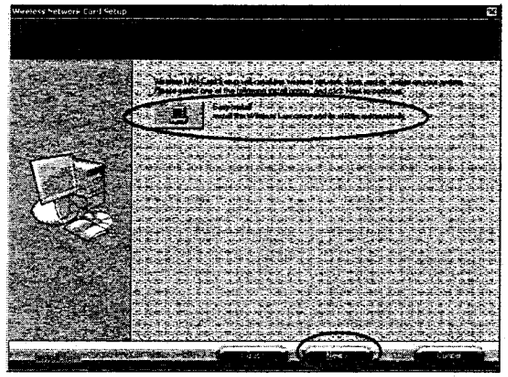


3. Click **Finish** to complete the installation.

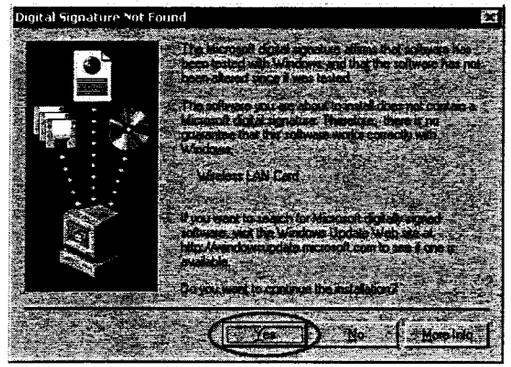


In Windows 2000

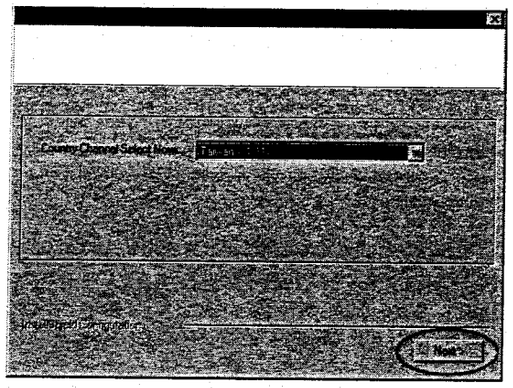
1. Click **Next** or **Easy Install** to install the driver and utility automatically.



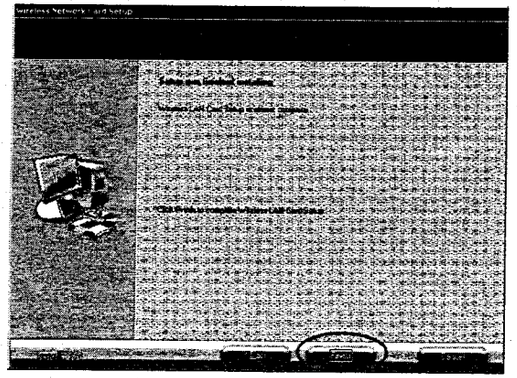
2. In **Digital Signature Not Found** window, click **Yes** to continue.



3. Choose the region you are in and click **Next** as shown as below.

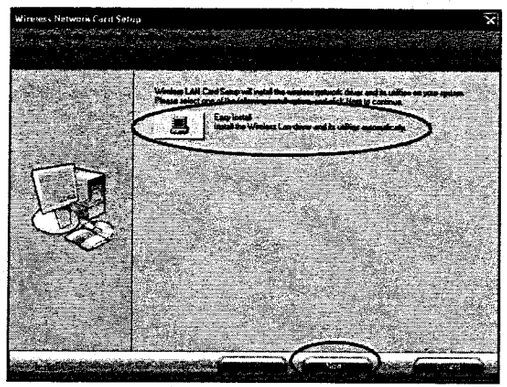


4. Click **Finish** to complete the installation.

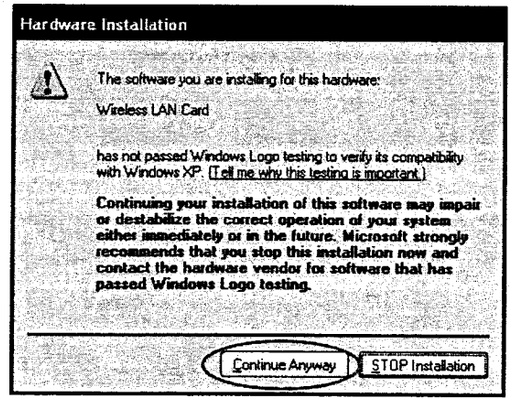


In Windows XP

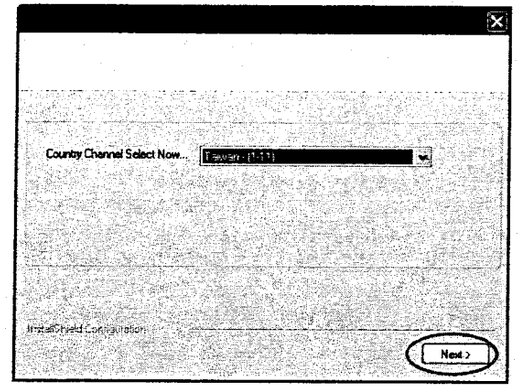
1. Click **Next** or **Easy Install** to install the driver and utility automatically.



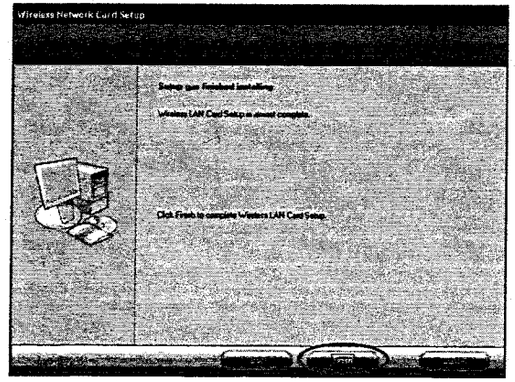
2. Click **Continue Anyway** to proceed. Windows will copy all the necessary files to your system.



3. Choose the region you are in and click **NEXT** as shown as below.

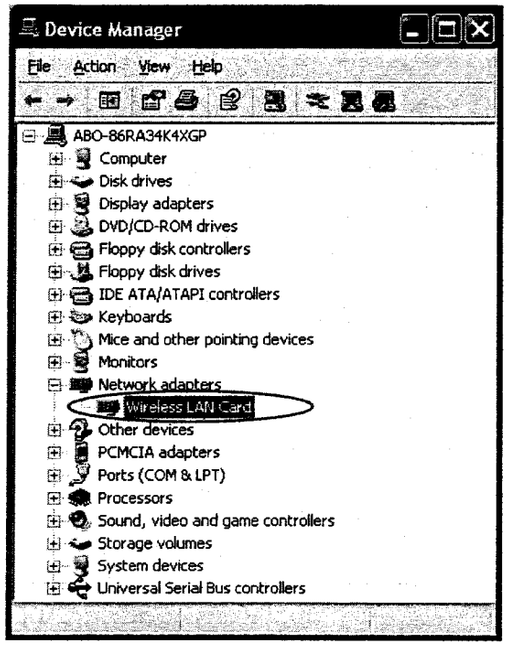


4. Click **Finish** to complete the installation.



Verify

To verify if the device exists in your computer and is enabled, go to **Start → Settings → Control Panel → System (→ Hardware) → Device Manager**. Expand the **Network adapters** category. If the **Wireless LAN Card** is listed here, it means that your device is properly installed and enabled.

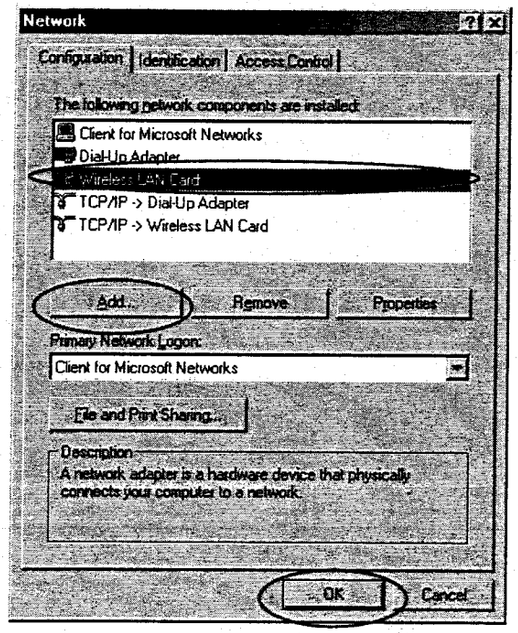


NETWORK CONNECTION

Once the driver has been installed, you must make some changes to your network settings.

In Windows 98/ME

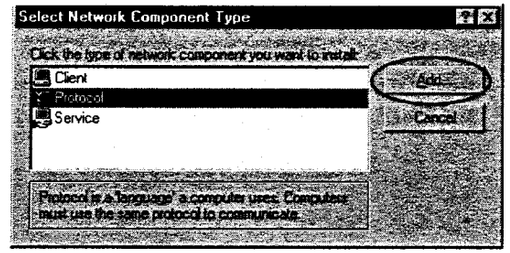
1. Go to **Start → Settings → Control Panel → Network**.
2. Make sure that the following components are installed.



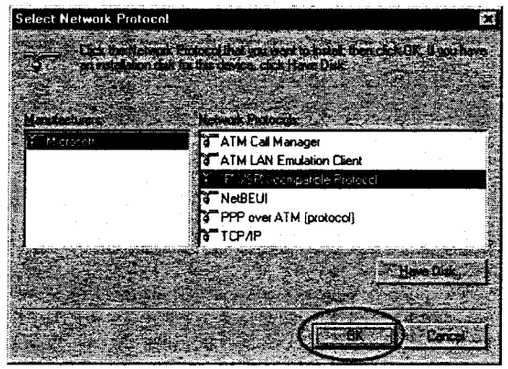
- **Wireless LAN Card**
- **IPX/SPX-compatible Protocol**
- **NetBEUI**
- **TCP/IP**

If any components are missing, click on the **Add** button to add them in. All the protocols and clients required and listed above are provided by Microsoft.

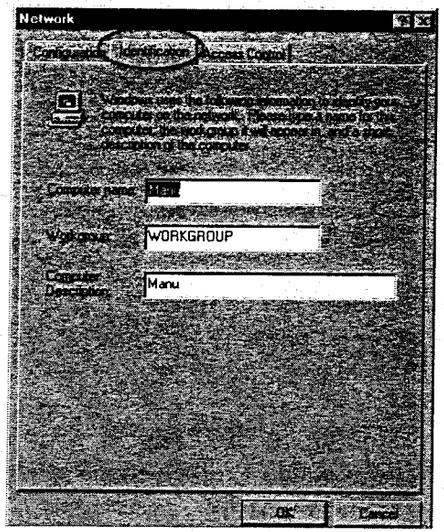
3. After clicking **Add**, highlight the component you need, click **Add**.



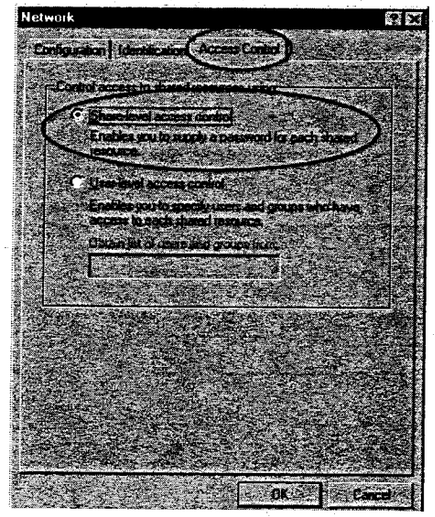
4. Highlight **Microsoft**, and then double click on the item you want to add. Click **OK**.



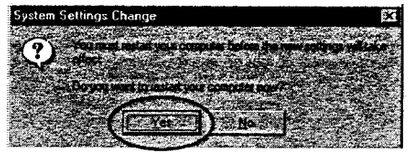
5. For making your computer visible on the network, enable the **File and Print Sharing**.
6. Click the **Identification** tab. Make up a name that is unique from the other computers' names on the network. Type the name of your workgroup, which should be the same used by all of the other PCs on the network.



7. Click the **Access Control** tab. Make sure that "**Share-level access control**" is selected. If connecting to a Netware server, share level can be set to "**User-level access control.**"



8. When finished, restart your computer to activate the new device.



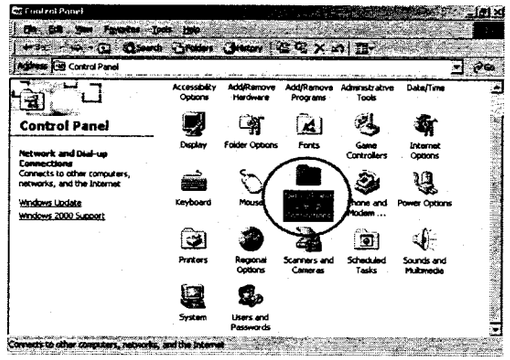
9. Once the computer has restarted and Windows has booted up, a **Logon** window will appear and require you to enter a username and password. Make up a username and password and click **OK**. Do not click the **Cancel** button, or you won't be able to log onto the network.
10. Double-click the **Network Neighborhood** icon on the windows desktop, and you should see the names of the other PCs on the network.

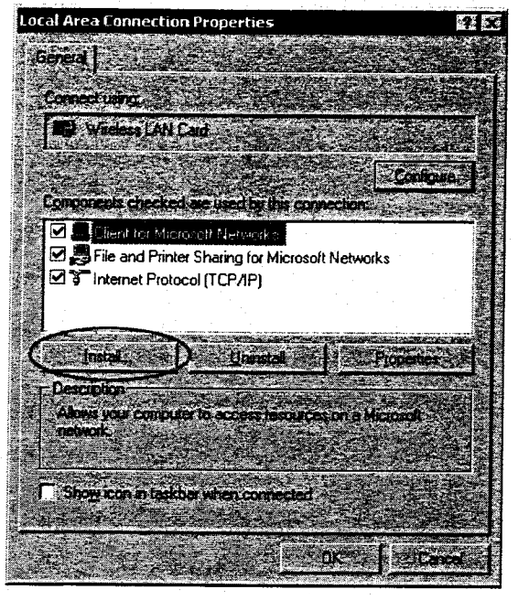
In Windows 2000/XP

1. (In **Windows 2000**)

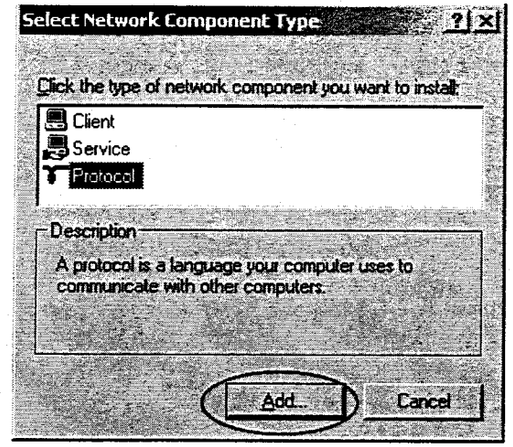
   Go to **Start→ Settings → Control Panel → Network and Dial-up Connections → Local Area Connection → Properties.**

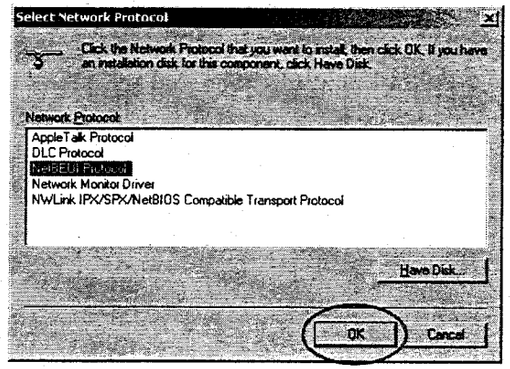
   (In **Windows XP**)
   Go to **Start → Control Panel → Network Connections → Wireless LAN Card → Properties.**





2. Make sure that you have all the following components installed.
   - **Client for Microsoft Networks**
   - **File and Printer Sharing for Microsoft Networks**
   - **Internet Protocol (TCP/IP)**
3. If any components are missing, click on the **Install...** button to select the **Client/Service/Protocol** required. After selecting the component you need, click **Add...** to add it in.





4. For making your computer visible on the network, make sure you have installed **File and Printer Sharing for Microsoft Networks**.
5. When finished, you must restart your computer to complete the installation.

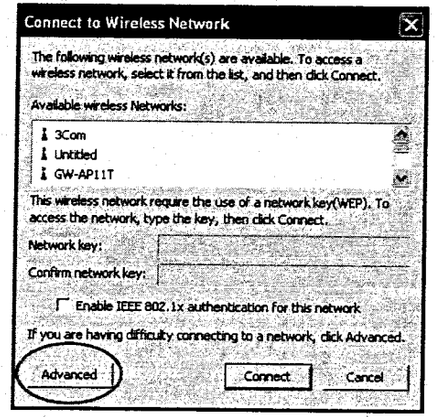
CONFIGURATION

After successful installation of the Wireless PC Card's Driver and Utility, a **Utility Shortcut** icon will appear on the desktop.

Accessing the Configuration Utility

Double-click on to open the Configuration Utility.

Click **Advanced** to enter the Configuration Window.



All settings are categorized into 6 Tabs:

Profile Tab

Link Status Tab

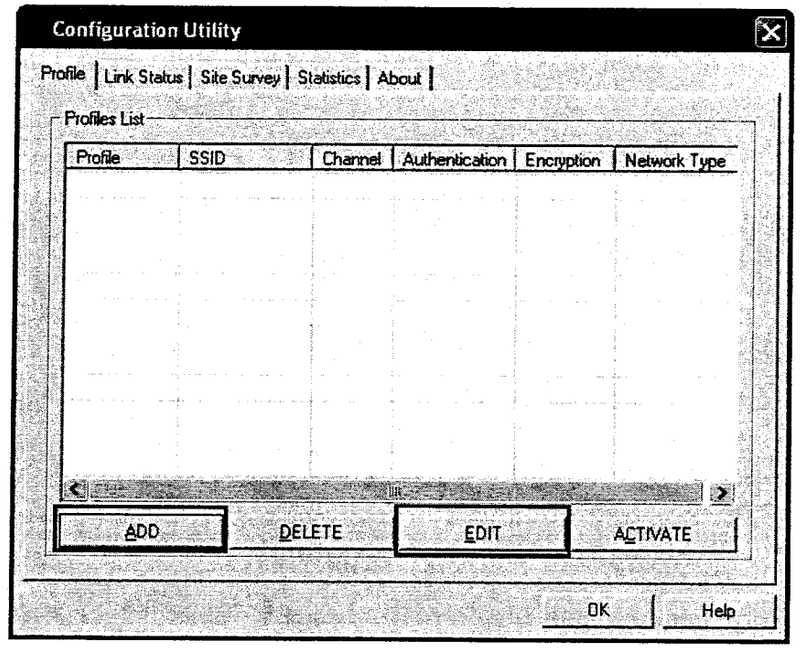
Site Survey Tab

Statistics Tab

About Tab

Profiles Tab

The **Profiles** tab lists all the profiles in setting, allows user to set the most frequently used AP based on requirement.



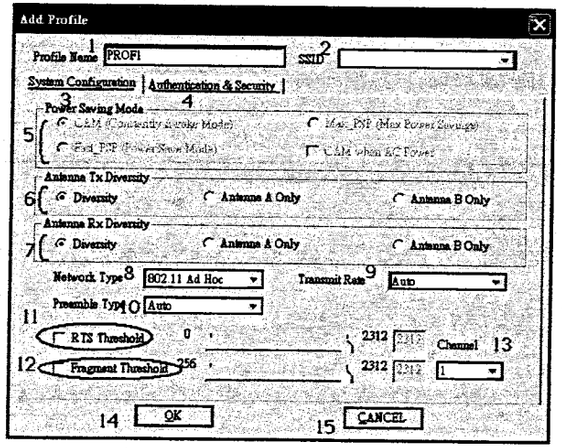
Item	Description
ADD	To add the selected item to Profiles. ▪ Click **OK** to save the new profile. ▪ Click **Cancel** to ignore adding the profile.
DELETE	Click **Delete** to delete the selected profile.
EDIT	Click **Edit** to modify a profile setting.

Item	Description
ACTIVATE	To set the profile for automatic connection. For example: if to automatically connect to SSID=Netgear, choose the second profile (titled: PROF2) and then press ACTIVE. The icon ☑ confirms the successful setting as shown below:

Profile	SSID	Channel	Authentication	Encryption	Network Type
PROF1	MSHOME	Auto	Open System	Not Use	Infrastructure
☑ PROF2	Netgear	Auto	Open System	Not Use	Infrastructure
PROF3	My_Adhoc	5	Open System	Not Use	Ad Hoc
PROF4	NDTESTAP2	Auto	Open System	WEP	Infrastructure
PROF5	WEP_ADHOC	8	Open System	WEP	Ad Hoc

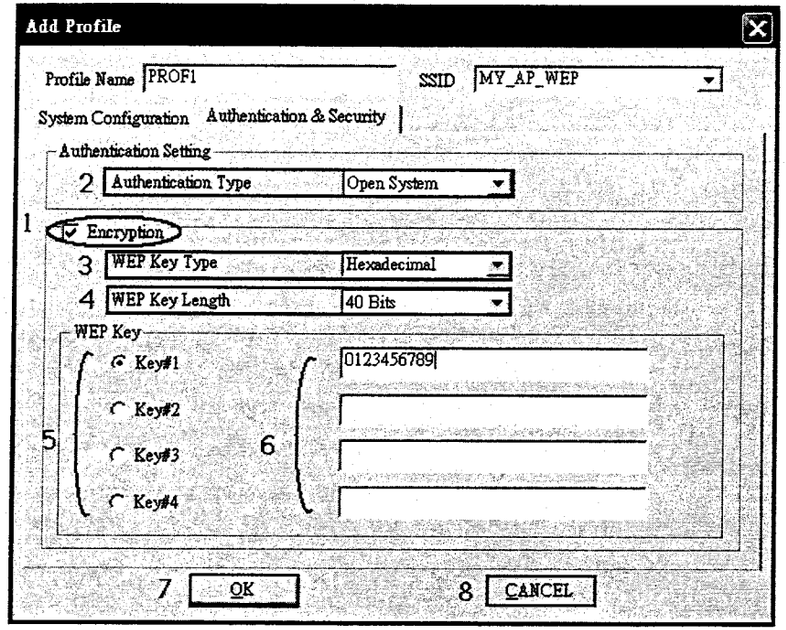
I. Add & Edit Profile setting:

When pressing **ADD** or **EDIT**, or **ADD TO PROFILE** under Site Survey page, the following figure would appear for user to make the required setting:



Item	Description
Profile Name	Name of setting
SSID	To input the AP name.
System Configuration	The main page of profile setting
Authentication & Security	WEP setting
Power Saving Mode	It is the only function based on infrastructure.
Antenna Tx Diversity/ Antenna Rx Diversity	Transmitting antenna setting / Receiving antenna setting
Network Type	Infrastructure / 802.11 Ad Hoc
Transmit Rate	Auto / 1 Mbps / 5.5 Mbps / 11 Mbps
Preamble Type	Long / Short / Auto
RTS Threshold	Default Value 2312
Fragment Threshold	Default Value 2312
Channel	Channel setting
OK	To save setting.
CANCEL	To cancel the setting.

II. Authentication & Security Setting:



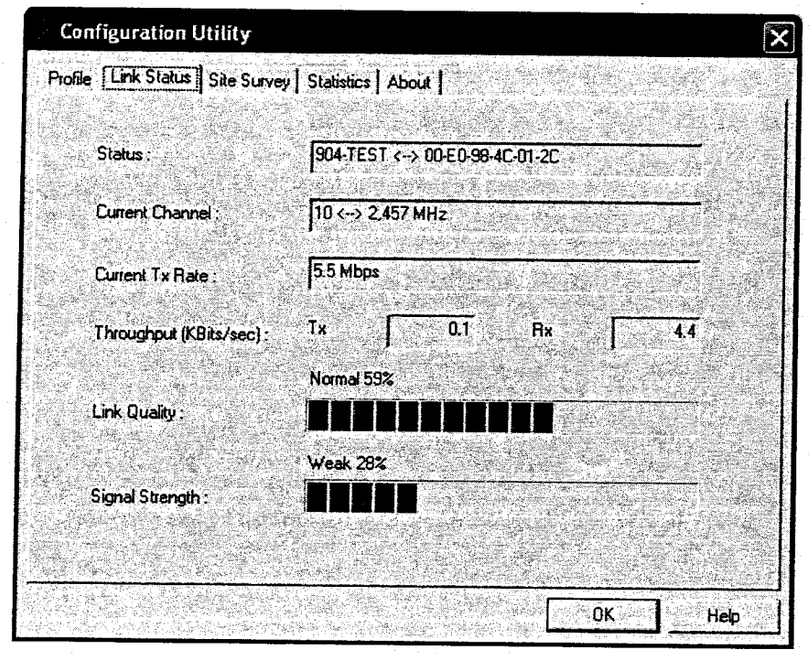
Item	Description
Encryption	This setting must be selected whether to initiate WEP function or not.
Authentication Type	Open System / Shared Key
WEP Key Type	Hexadecimal / Ascii
WEP Key Length	40 Bits / 104 Bits
Key ID selection	Key#1~Key#4

Item	Description
WEP Key input	The difference of key length is based on WEP type and WEP length. For example, when selected Hexadecimal is as the WEP Key Type, only one *heximal figure can be accepted*. A reference chart is listed below:

No. of characters / WEP Type / Length	Ascii	Hexadecimal
40 Bits	5	10
104 Bits	13	26

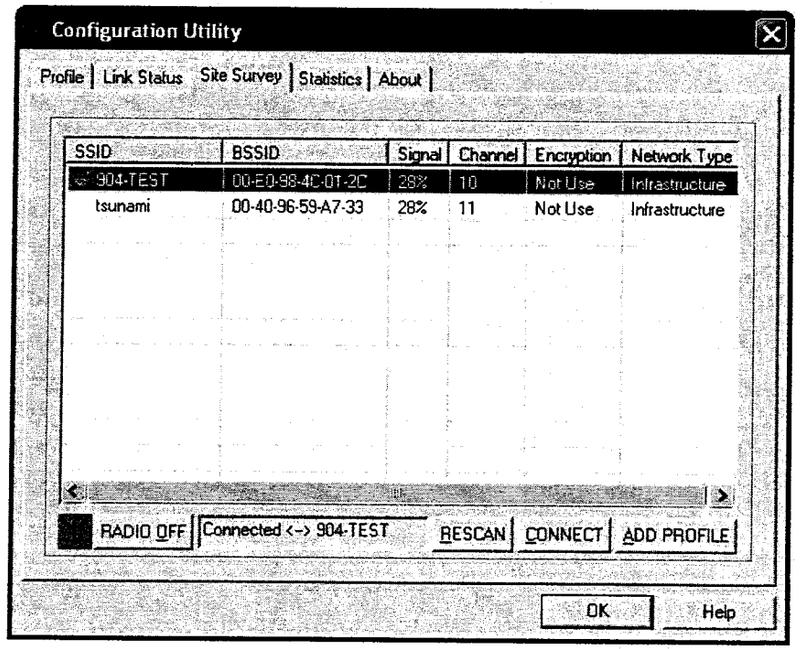
Link Status Tab

The **Link Status** Tab displays basic link information, including **Status, Current Channel, Current Tx Rate, Throughput, Link Quality** and **Signal Strength.**



Site Survey Tab

Click the tab to view the detail of the connectable AP, such as **SSID, BSSID, Signal, Channel, Encryption** (Not Use/WEP), **Network Type** (Infrastructure / Ad Hoc). After executing configuration, the system is automatically linked to the access point (AP) with the strongest detectable signal that is without WEP (Wired Equivalent Privacy). As shown below:

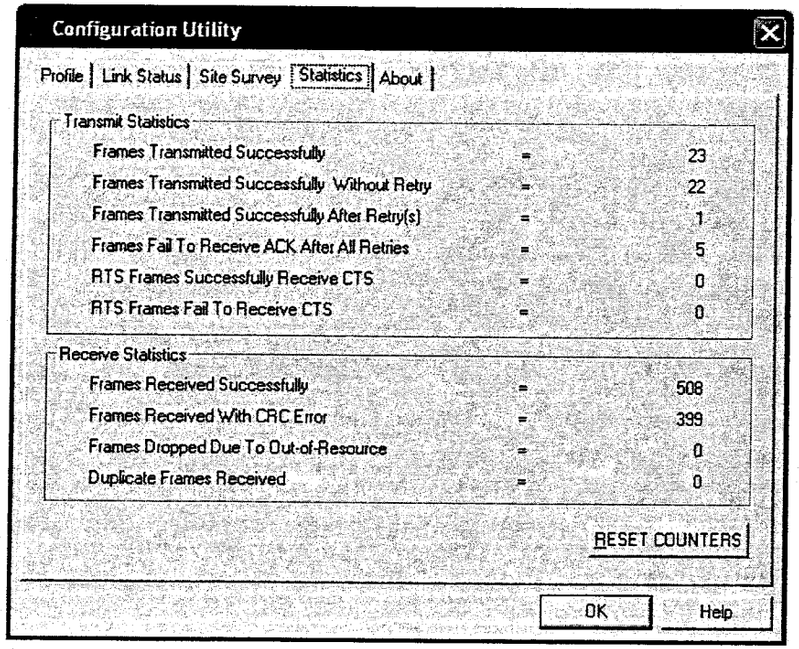


Note1: *The channel selection for each region is different. Default is set on USA. For users in Taiwan, please select USA channel.*

Note2: *When configuration is accomplished, an icon would appear at lower right corner (refer to following figure). A double click on the icon would allow user to perform configuration again.*

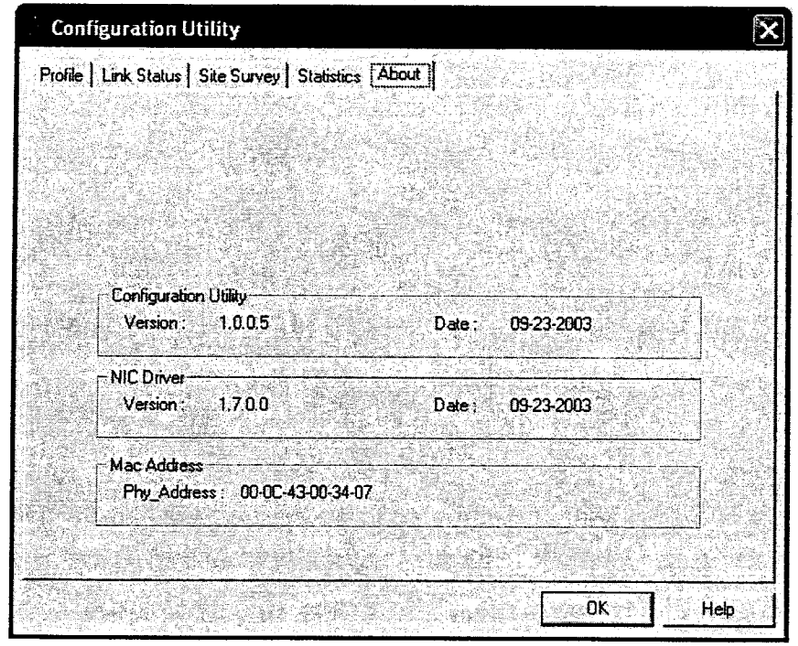
Statistics Tab

The **Statistics** tab displays the statistics result of the currently transmitted and receiving data. Press **RESET COUNTERS** button to renew this list of statistics.



About Tab

Click on the **About** tab to view basic version information about the **Configuration Utility Version, Driver Version** and **Wireless LAN card Mac Address.**

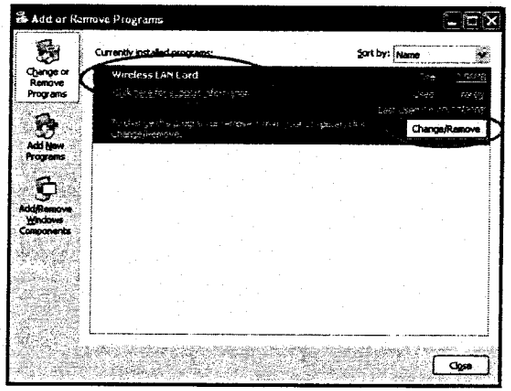


UNINSTALLATION

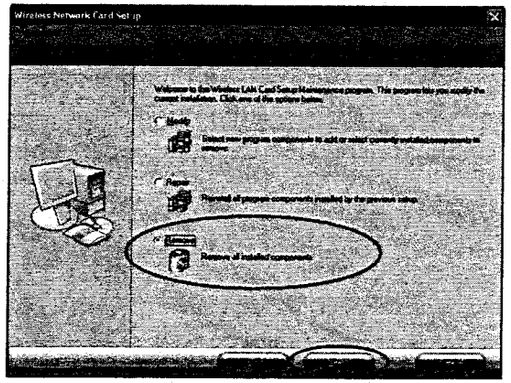
In case you need to uninstall the Utility or Driver, please refer to below sections.

Uninstall the Utility

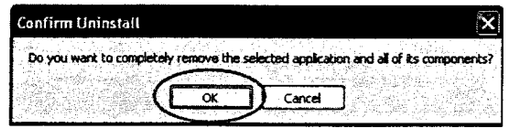
1. Go to **Start → (Settings →) Control Panel → Add or Remove Programs**.
2. Highlight **Wireless LAN Card**, Click **Change/Remove**.



3. Select **Remove** and the click **Next** to continue.

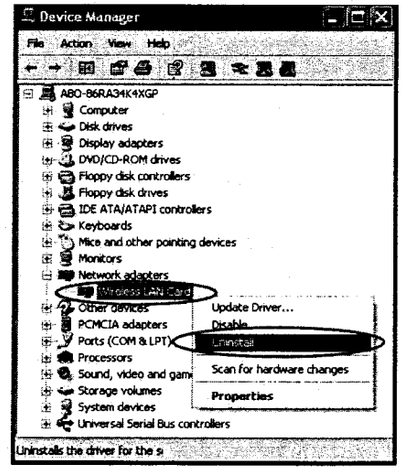


4. Click **OK** to continue.

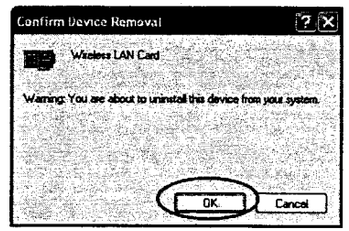


Uninstall the Driver

1. Right-click **My Computer → Properties → Hardware → Device Manager**.
2. Right-click **Wireless LAN Card** then click **Uninstall** (or **Remove**).



3. Click **OK**.



SPECIFICATIONS

Standards	IEEE 802.11b
Host Interface	32-bit CardBus
Antenna	Patch Antenna
LED Indicators	▪ POWER: Green ▪ ACT/LINK: Green
Frequency Range	2.412GHz-2.4835GHz
Physical Specifications	▪ Weight: 40 g ▪ Dimension: 119(L) x 54.70 (W) x 6.70(H) mm
Number of Selectable Channels	USA, Canada: 11 channels Europe: 13 channels
Modulation Technique	Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK)
Security	40/104 bits WEP
Spreading	11 chip Barker sequence
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
Power Requirement	Operating Voltage: 3.3V DC ▪ TX consumption: 320mA (Max) ▪ RX consumption: 120mA (Max)
Supported OS	Windows 98/ME/2000/XP
EMC Certification	FC, CE, BSMI, DGT