7. Click Re-Scan button to start Wireless LAN Utility. (Refer to Configuring the PCMCIA Wireless LAN Card.)

IEEE802.11b WLAN Card Utility
Link Info Configuration Site Survey Encryption Advanced About
State Scanning
Current Channel Re-Scan
Current Transfer Rate Mbps
Current Service Set Identifier
Throughput (Bytes/Second)
Link Quality:
Signal Strength:

Use Wireless LAN Utility In Windows 95, 98, 2000, NT 4.0 and ME



Wireless LAN Utility icon

lcon	Meaning
	Green: indicates a connection is linked to a wireless network.
	Red: indicates that the wireless LAN card is looking for an available access point.

Double-click the icon to open the Wireless LAN Utility. (Refer to Configuring the PCMCIA Wireless LAN Card.)

Configuring the PCMCIA Wireless LAN Card

1. This screen shows you the status of your current connection. Click **Re-Scan** to search for wireless connection (the adapter will search for the connection automatically when it is activated).

IEEE802.11b WLAN Card Utility
Link Info Configuration Site Survey Encryption Advanced About
State Connected - BSSID = 00-02-DD-30-18-A8
Current Channel 11 Re-Scan
Current Transfer Rate 11 Mbps
Current Service Set Identifier WLAN
Throughput (Bytes/Second) Transmitted
Link Quality: Excellent (100%)
Signal Strength: Excellent (100%)
OK Cancel Help

2. Select the "Configuration" tab. The profile setting allows you to save configurations in different profiles for different working environments. The default profile will contain the initial configuration setting when you install the Card. Under the Operating Mode drop-box, you may choose either Infrastructure or Ad-Hoc. The Infrastructure mode allows a wireless adapter to communicate with a wired network employing an Access Point, while the Ad-Hoc mode allows wireless-to-wireless, peer-to-peer communication. If you choose Infrastructure, the SSID should have the same name as the Access Point. If you choose Ad-Hoc, all clients should share the same SSID name. You may also select which Transfer Rate you wish to use: 1, 2, 5.5, 11Mbps or Auto Rate. Under Power Saving Mode, you can select Enabled to allow your adapter to go to sleep mode while the adapter never go to sleep mode. Click Apply to save the settings.

EEE802.11b WLAN Card Utility
Link Info Configuration Site Survey Encryption Advanced About
Profile
default Hemove Lifeate Activate
Configuration
Operating Mode Infrastructure
Service Set Identifier any (SSID)
Transfer Rate Auto Rate
Channel 6
Power Saving Mode Disabled 💌
Restore Defaults Undo Changes Apply Changes
OK Cancel Help

3. Select the "Site Survey" tab. The list on the adjacent screen shows you available Access Points and their features. Click on the desired Access Point, then click Connect to connect or Search to search for more Access Points. Click OK when you are finished.

EE802.11b W	LAN Card Util	lity			2
Link Info Cor	nfiguration Site	e Survey E	ncryption	Advanced	About
The list con update the Access Poi the specifie	tains available / list, click 'Searc nt from the list, a d Access Point.	Access Point h' button. Yo and click 'Cor	s and their f u can selec nnect' butto	eatures. To t a desired n to conne	o ct to
SSID	BSSID)	Signal	Channel	WEP
WLAN default	00-02 00-10	-DD-30-18-A) -91-AB-CD-2	3 100% 5 80%	11 6	No No
<u>.</u>	Search		Connect		Þ
		<u> </u>	Cance	 	Help

4. Click on the "Encryption" tab. Under the drop-box, you can choose to have WEP encryption Disabled, 64-Bit, or 128-Bit. Wired Equivalent Privacy (WEP) is an encryption scheme used to protect wireless data communication. The Disabled setting prevents the sharing of data with other computers on the WEP network. For data sharing to be enabled, select the level of encryption desired, either 64 or 128-bit.

Your encryption settings must m computer will be unable to comm	atch those of your network, or your nunicate.
Encryption (WEP)	Disabled 🗾
WEP Key Entry	Disabled 64 Bits
C Create with Passphrase	128 Bits
Passphrase	
🕫 Manual Entry 🛛 🗖	ASCII
Key 1 Key 1	XXXXXXX
Key 2 (**********************	XXXXXXX
Кеу З 🛛	******
Key 4 🔤	******
Default Tx Key 📘 💌	
Bestore Defaults	In Changes Apply Changes

5. Select the "Advanced" tab. You can choose the fragmentation threshold to define the maximum data frame size your adapter will transmit. When the packet error rate is high, you may set the threshold value to transmit shorter frames. You may select RTS/CTS threshold to define when will your adapter send out RTS/CTS frames to reserve bandwidth for transmission. By using the RTS/CTS function, you may request bandwidth from AP to allow you have better chance to send out your data. For the Security, it's only applicable while WEP is enabled. For the Authentication Type, the current supported algorithms are Open System, Shared Key, and Auto. The algorithm will be invoked when associated to Access Point. To associate to the desired Access Point you must set the same algorithm as the one of the desired Access Point. When select Auto mode, the driver can auto detect the Authentication Type of the Access Point you are going to associate. You can also select Preamble Type which is for framing synchronization. The possible setting are long and Short. The setting must be the same as the setting of the Access Point you are going to associate.

EE802.11b WLAN Card Utility		3
Link Info Configuration Site Su	rvey Encryption Advance	ed About
Transmit Threshold Control —		
Fragmentation Threshold	1 1 1 1 1 1 1 1 1	<u>-</u> 5
(Disabled)	2432	
RTS/CTS Threshold		<u>-</u> \
(Disabled)	2432	
Authentication Typ	e Auto 💌	
Preamble Type Long		
Restore Defaults Und	o Changes Apply Chang	ies

6. The "**About**" tab shows you copyright and version information about the driver, the configuration utility, and the firmware. Click **OK** to complete the configuration.

IEEE802.11b WLAN Card Utility	×
Link Info Configuration Site Survey Encryption Advanced About	
Copyright (c) 2002, All rights reserved. IEEE802.11b WLAN Card Utility	
Driver	
Version: 1.7.29.1032	
Configuration Utility Version: 2.97.3.2	
Firmware Versions: 1.03.04.00	
OK Cancel Help	

Chapter 5 – Installing Network Protocols

Protocols are necessary for computers to be recognized on your network. Windows 2000 users need to check their Windows User Guides for protocol installation.

Installing the Network Protocols for Windows 98 and Millennium

1. From the **Start** Menu, select **Settings** and bring up the **Control Pane**l. From the Control Panel, double-click on the **Network** icon.



Note: Before adding any network protocols, verify that the protocol is not already installed. Never install duplicate protocols.

2. Select IEEE802.11b WLAN PC Card v3.0 from the list and click the Add button.

Vetwork
Configuration Identification Access Control
The following network components are installed:
Client for Microsoft Networks Microsoft Family Logon Dial-Up Adapter EEE802.11b WLAN PC Card v3.0 Whether Card v3.0
Add R <u>e</u> move P <u>r</u> operties
Client for Microsoft Networks
Eile and Print Sharing
Description A network adapter is a hardware device that physically connects your computer to a network.
OK Cancel

3. Highlight **Protocol** and click the **Add** button.

L Client	- bbA
Adapter	
Protocol	Cancel
Service	
Protocol is a 'language' a computer uses. Computers	1

4. Select **Microsoft** from the list of "Manufacturers" and **TCP/IP** from the list of "Network" Protocols" and click the **OK** button to finish the installation.

Click the Netv an installation	vork Protocol that you want to install, then click OK. If you have disk for this device, click Have Disk.
Manufacturers:	Network Protocols:
🗿 Banyan 🍹 IBM	Microsoft 32-bit DLC Microsoft DLC
Microsoft	NetBEUI
	WAN support for ATM
	Have Disk
	OK Cancel

Appendix A – FAQ

1. What is IEEE 802.11 standard?

The IEEE 802.11 is a wireless LAN industry standard, and the objective of IEEE 802.11 is to make sure that different manufactures' wireless LAN devices can communicate to each other.

2. What is WEP?

As described in the IEEE 802.11 standard, WEP (Wired Equivalent Privacy) is a data privacy mechanism based on a 40 bit shared key algorithm.

3. Windows cannot recognize the PCMCIA Wireless LAN Card.

- Please make sure that the LAN Card is inserted into the PCMCIA slot of your notebook properly (check this when the notebook is powered off).
- Please check if PC Card support is installed. Double-click the PC Card icon on Control Panel. If PC Card support is not activated, you should activate it now.

4. In Infrastructure mode, my notebook cannot communicate with the others notebooks on the network.

- First, make sure that the SSID is same as the others notebook.
- Check if the WEP is enabled on the Access Point, if it is, set your Adapter's WEP the same as the Access Point.
- Also check the Access Point's Authentication Type and Preamble Type and match those settings.

5. In ad-hoc mode, my notebook cannot communicate with the others notebooks on the network.

- Make sure the SSID and the Channel number are the same as other wireless stations.
- > Check if WEP settings are the same in all wireless stations.
- Check the Network Properties, make sure proper protocol is installed and File and Printer Sharing is enabled.

Appendix B – Specifications

Standards:	IEEE 802.11b PCMCIA 2.1 and JEIDA 4.2 Standard
Channels:	11 Channels (US, Canada) 13 Channels (Europe) 14 Channels (Japan)
Antenna:	Built-in strip Antenna
Frequency:	2.4 to 2.4835GHz (Industrial Scientific Medical Band)
Data Rate:	up to 11Mbps
Operating Ranges:	Indoor (varies depends on the environment):
	Up to 30M @ 11Mbps Up to 80M @ 5.5Mbps Outdoor (varies depends on the environment): Up to 150M @ 11Mbps Up to 300M @ 5.5Mbps
Temperature:	Up to $30M \oplus 11Mbps$ Up to $80M \oplus 5.5Mbps$ Outdoor (varies depends on the environment): Up to $150M \oplus 11Mbps$ Up to $300M \oplus 5.5Mbps$ Operating: $0^{\circ} \sim 55^{\circ} C$ Storage: $-25^{\circ} \sim 70^{\circ} C$