User Guide

NETWORK EVERYWHERE®

Wireless

Wireless

USB Adapter

Model NWU11B

INDUSTRY CANADA (CANADA)
This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
The use of this device in a system operating either partially or completely outdoors may require the user to obtain a license for the system according to the Canadian regulations.

Network Everywhere guarantees that every Wireless USB Adapter will be free from physical defects in material and workmanship for one year from the date of purchase, when used within the limits set forth in the Specifications section of this User Guide. If the product proves defective during this warranty period, call Network Everywhere Technical Support in order to obtain a Return Authorization number. BE SURE TO HAVE YOUR PROOF OF PURCHASE ON HAND WHEN CALLING. When returning a product, mark the Return Authorization number clearly on the outside of the package and include a copy of your original proof of purchase. RETURN REQUESTS CANNOT BE PROCESSED WITHOUT PROOF OF PURCHASE. All customers located outside of the United States of America and Canada shall be held responsible for shipping and handling charges.

IN NO EVENT SHALL NETWORK EVERYWHERE'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, ITS ACCOMPANYING SOFTWARE, OR ITS DOCUMENTATION. NETWORK EVERYWHERE OFFERS NO REFUNDS FOR ITS PRODUCTS. Network Everywhere makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. Network Everywhere reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity. Please direct all inquiries to:

Network Everywhere P.O. Box 18558, Irvine, CA 92623.

FCC STATEMENT
This Wireless USB Adapter has been tested and complies with the specifications 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 according to 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 is found 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 or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

FCC Caution: Any changes or modifications nor expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

FCC RF Radiation Exposure Statement
This device and its antenna(s) must operate with a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users must be provided with specific operations for satisfying RF exposure compliance.

UG-NWU11B-103002NC JL

Table of Contents

Chapter 1: Introduction

The Wireless USB Adapter

Connect your USB-equipped desktop or notebook computer to a wireless network with the Network Everywhere Wireless USB Adapter. Save the trouble of opening up the case of your desktop computer. To install, simply plug the Wireless USB Adapter into any available USB port. It gets its power through the USB connection, so no power cord is necessary. The included Setup Wizard walks you through configuring the Adapter to your wireless network settings, step by step.

The Wireless USB Adapter lets you put your computer almost anywhere in the building, without the cost and hassle of running cables. Now you don't have to drill holes in your walls and climb through the attic or cellar to get connected to the network. Once you're connected, you can keep in touch with your e-mail, access the Internet, use instant messaging to chat with friends, and share files and other resources such as printers and network storage with other computers on the network.

The Network Everywhere Wireless USB Adapter is fully compliant with the 802.11b wireless network standard, transferring data at up to 11Mbps in the 2.4GHz radio band. And your wireless communications are protected by up to 128-bit encryption, so your data stays secure.

So don't hassle with running cables through your house—get connected the easy way with the Network Everywhere Wireless USB Adapter.

Features

- Up to 11Mbps High-Speed Data Transfer Rate with Automatic Fallback
- Plug-and-Play Operation Provides Easy Setup
- 802.11b, DSSS, 2.4GHz Compliant
- Compatible with Microsoft Windows 98SE, Me, 2000, and XP
- Supports up to 128-bit WEP Encryption Security
- 1-Year Limited Warranty

Chapter 2: Planning Your Wireless Network

Network Topology

A wireless local area network (WLAN) is exactly like a regular local area network (LAN), except that each computer in the WLAN uses a wireless device to connect to the network. Computers in a WLAN share the same frequency channel and SSID, which is an identification name for wireless devices.

Ad-Hoc versus Infrastructure Mode

Unlike wired networks, wireless networks have two different modes in which they may be set up: **infrastructure** and **ad-hoc**. An infrastructure configuration is a WLAN and wired LAN communicating to each other through an access point. An ad-hoc configuration is wireless-equipped computers communicating directly with each other. Choosing between these two modes depends on whether or not the wireless network needs to share data or peripherals with a wired network or not.

If the computers on the wireless network need to be accessed by a wired network or need to share a peripheral, such as a printer, with the wired network computers, the wireless network should be set up in **infrastructure** mode. (See Figure 2-1.) The basis of infrastructure mode centers around an *access point*, which serves as the main point of communications in a wireless network. Access points transmit data to PCs equipped with wireless network cards, which can *roam* within a certain radial range of the access point. Multiple access points can be arranged to work in succession to extend the roaming range, and can be set up to communicate with your Ethernet (wired) hardware as well.

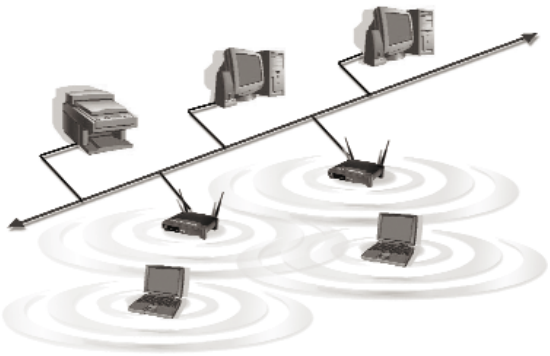

Figure 2-1

If the wireless network is relatively small and needs to share resources only with the other computers on the wireless network, then the **ad-hoc** mode can be used. (See Figure 2-2.) Ad-hoc mode allows computers equipped with wireless transmitters and receivers to communicate directly with each other, eliminating the need for an access point. The drawback of this mode is that, in Ad-Hoc mode, wireless-equipped computers are not able to communicate with computers on a wired network. And, of course, communication between the wireless-equipped computers is limited by the distance and interference directly between them.

Figure 2-2

Chapter 3: About USB

Overview

USB, which is short for **Universal Serial Bus**, is a technology designed to make it easier to connect devices to computers. First developed in 1996 by a group of computer industry leaders that included Compaq, Digital, IBM, Intel, Microsoft, NEC, and Northern Telecom, USB is one of the most widely used technologies for users who want to add peripherals to their computers.

USB is unique because it is Plug-and-Play, which allows a computer to instantly recognize when a device like a keyboard, mouse, or scanner has been connected to it. Once the device has been recognized, it's ready to go—no special setup is required. Similarly, USB supports hot-swapping, the insertion or removal of devices while the computer is turned on. You can swap one device for another without having to power down your system or install any special software—it really is that easy.

The USB 1.1 standard supports two speed modes, 1.5 and up to 12Mbps.

USB Icon

The USB icon marks a USB port on a PC or device.

Figure 3-1

USB Cabling

There are two kinds of USB connectors, Type A and Type B. Type A is a rectangular connector, and Type B is a square connector.

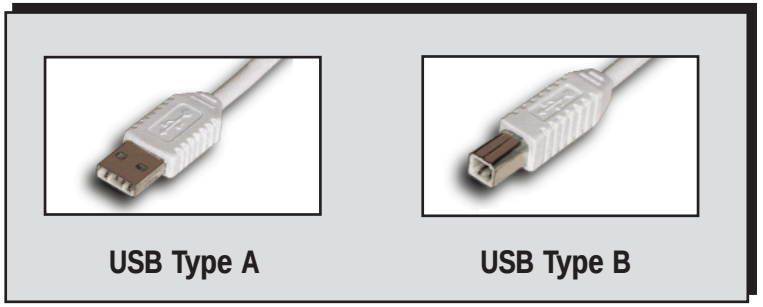

Figure 3-2

The USB cable that comes with the Adapter has a Type A connector on one end and a Type B connector on the other end. The Type A connector plugs into the PC's USB port, and the Type B connector plugs into the Adapter.

Figure 3-3 shows two USB ports as they might appear on your computer. Note the two USB icons marking the ports.

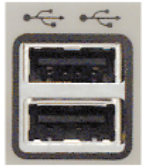

Figure 3-3

Chapter 4: Getting to Know the Wireless USB Adapter

The Adapter's Port and LEDs

Figure 4-1

The USB Port

USB Port The **USB Port** connects to the included USB cable.

The LED Indicators

Link *Green*. The **Link** LED flashes when the Adapter has an active connection.

Power *Green*. The **Power** LED lights up when the Adapter is powered on.

Chapter 5: Software Installation and Configuration for Windows 98SE, Me, and 2000

Overview

The Wireless USB Adapter Setup Wizard will guide you through the installation procedure for Windows 98SE, Me, and 2000. The Setup Wizard will install the WLAN Monitor and driver, as well as configure the Adapter.

Note to Windows XP users: Do NOT run the Wireless USB Adapter Setup Wizard. Proceed directly to "Chapter 6: Hardware Installation."

Note to Windows 98SE, Me, and 2000 users: You must run the Setup Wizard to install the software before installing the hardware.

Insert the **Setup Wizard CD-ROM** into your CD-ROM drive. The Setup Wizard should run automatically, and Figure 5-1 should appear. If it does not, click the **Start** button and choose **Run**. In the field that appears, enter **D:\setup.exe** (if "D" is the letter of your CD-ROM drive).

Figure 5-1

Setup Wizard Instructions for Windows 98SE, Me, and 2000

1. To install the Adapter, click the **Install** button on the *Welcome* screen. Click the **User Guide** button to open the PDF file of this User Guide. Click the **Exit** button to exit the Setup Wizard.

Figure 5-2

2. After reading the License Agreement, click the **Next** button if you agree, or click the **Cancel** button to end the installation.

Figure 5-3

3. The Setup Wizard will ask you to choose a wireless mode. Click the **Infrastructure Mode** radio button if you want your wireless computers to communicate with computers on your wired network using a wireless access point. Click the **Ad-Hoc Mode** radio button if you want multiple wireless computers to communicate directly with each other. Do not use the Ad-Hoc mode if you want your wireless computers to communicate with computers on your wired network.

   In the *SSID* field, enter the **SSID** of your wireless network. The SSID must be identical for all devices in the network. The default setting is **wireless** (all lowercase). Click the **Next** button.

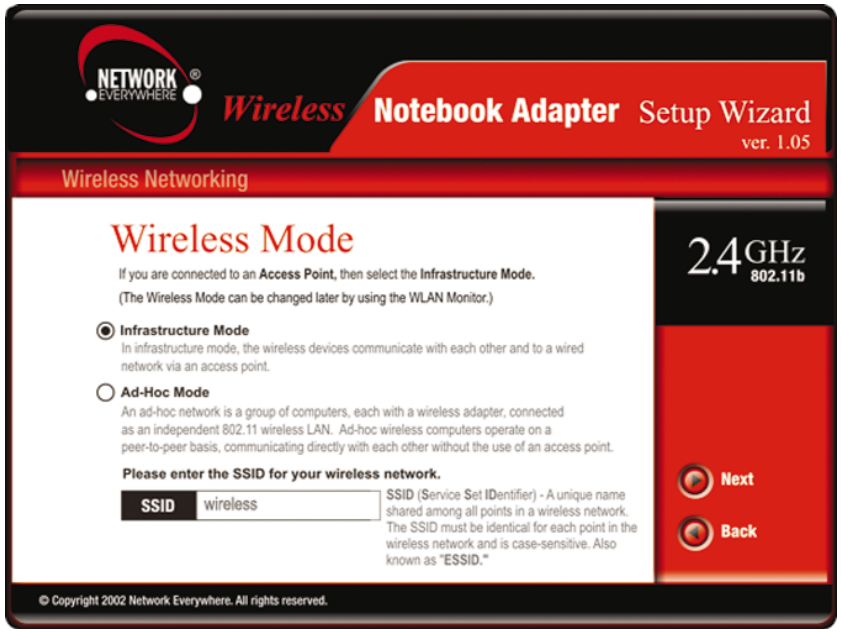

Figure 5-4

4. If you chose Infrastructure Mode, go to ***Step 5*** now. If you chose Ad-Hoc Mode, select the correct operating channel for your network. The channel you choose should match the channel set on the other devices in your wireless network. Click the **Next** button, and go to ***Step 5***. Click the **Back** button to change any settings.

Figure 5-5

5. The Setup Wizard will ask you to review your settings before it starts to copy files. Click the **Next** button to save these settings, or click the **Back** button to change any settings.

Figure 5-6

6. For Windows 2000, you may be informed that a digital signature has not been found (see Figure 5-7). This is normal, and it has been verified that the Adapter does work with Windows 2000. Click the **Yes** button to continue.

   Windows will begin installing the driver files. If Windows asks you for the original Windows CD-ROM, insert the CD-ROM, and direct Windows to the proper location for the CD-ROM (e.g., **D:**\).

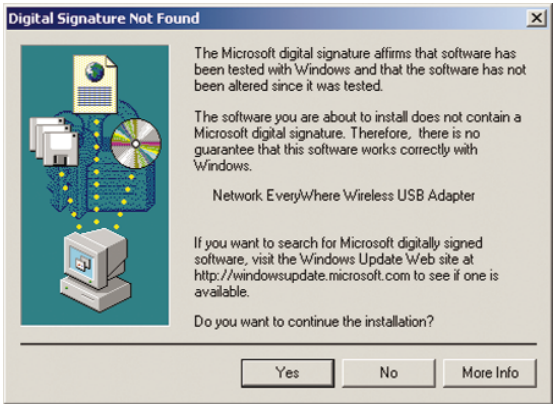

Figure 5-7

7. After the files have been successfully copied, the screen in Figure 5-8 will appear. Click the **Finish** button.

Figure 5-8

Proceed to "Chapter 6: Hardware Installation."

Chapter 6: Hardware Installation

Note to Windows 98SE, Me, and 2000 users: You must run the Setup Wizard to install the software before installing the hardware.

Note to Windows XP users: You must install the Adapter's hardware before installing the software.

1. Connect one end of the USB cable to the Adapter.

Figure 6-1

2. Connect the other end of the USB cable to the USB port on your computer. Because the Adapter gets its power from the PC's USB port, there is no external power supply for the Adapter. The Power LED should light up when the Adapter is plugged in and the PC is on.

3. Raise the antenna. Make sure the antenna is positioned straight up into the air, at a 90º angle to the ground.

If your PC is running Windows 98SE, Me, or 2000, proceed to the next section, "Hardware Detection for Windows 98SE, Me, and 2000."

If your PC is running Windows XP, proceed to the section, "Chapter 7: Driver Installation and Configuration for Windows XP."

Hardware Detection for Windows 98SE, Me, and 2000

After the Adapter has been physically connected to your computer, Windows will detect the new hardware. For Windows 2000, you may be informed that a digital signature has not been found (see Figure 6-2). This is normal, and it has been verified that the Adapter does work with Windows 2000. Click the **Yes** button to continue.

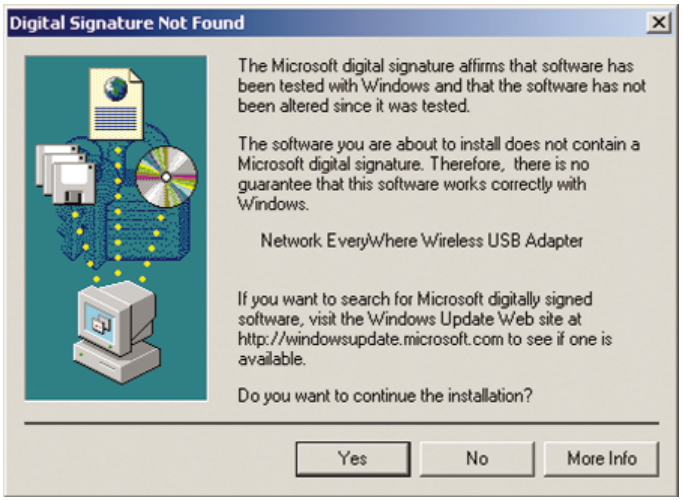

Figure 6-2

Windows will begin installing the driver files. If Windows asks you for the original Windows CD-ROM, insert the CD-ROM, and direct Windows to the proper location for the CD-ROM (e.g., **D:**\).

Congratulations! The installation of the Wireless USB Adapter is complete. If you want to check the link information, search for available wireless networks, or make additional configuration changes, proceed to "Chapter 8: Using the WLAN Monitor for Windows 98SE, Me, and 2000."

Chapter 7: Driver Installation and Configuration for Windows XP

Overview

After connecting the Adapter to your computer, you will install the driver and configure the Adapter.

Note to Windows XP users: Do **NOT** run the Wireless USB Adapter Setup Wizard. If the Setup Wizard runs automatically after the Setup CD-ROM has been inserted, click the **Exit** tab.

Driver Installation for Windows XP

1. Windows XP will automatically detect the Adapter. Insert the Setup CD-ROM into your CD-ROM drive. Click the radio button next to **Install the software automatically (Recommended)**. Then click the **Next** button.

Figure 7-1

2. Windows will notify you that the driver has not passed Windows Logo testing. This is normal, and it has been verified that the Adapter does work with Windows XP. Click the **Continue Anyway** button.

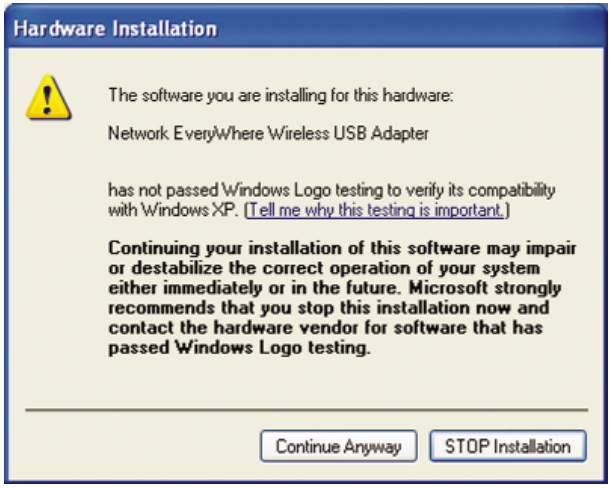

Figure 7-2

3. After Windows has finished installing the driver, click the **Finish** button.

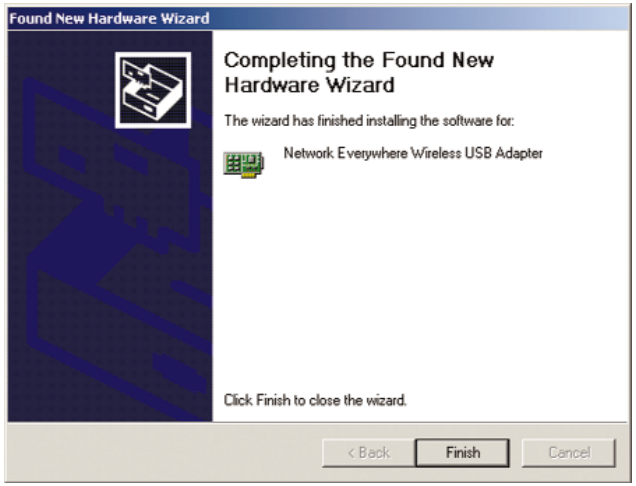

Figure 7-3

You have now completed the driver installation for the Wireless USB Adapter. To configure the Adapter, proceed to the next section, "Windows XP Wireless Zero Configuration."

Windows XP Wireless Zero Configuration

For Windows XP users: Windows XP has a built-in configuration tool. Use Windows XP Wireless Zero Configuration (in the system tray at the bottom of your screen) to configure the Adapter.

1. After installing the Adapter, the Windows XP Wireless Zero Configuration icon will appear in your computer's system tray (see Figure 7-4). Double-click the icon.

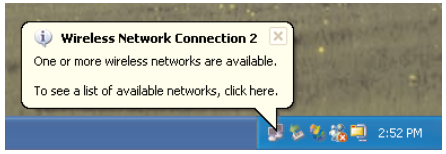

Figure 7-4

2. The screen that appears will show any available wireless network. Select a network, and then click the **Connect** button.

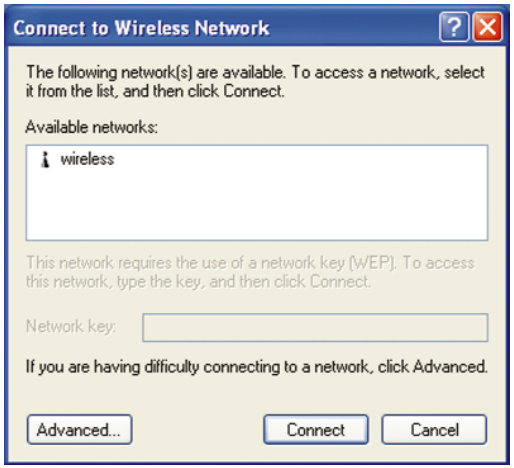

Figure 7-5

Note: These are the instructions and screenshots for Windows XP without Service Pack 1 installed. If you have already installed Service Pack 1, enter the keyword **wireless** in the Windows XP search engine for your wireless networking instructions.

3. If your access point has WEP encryption enabled, the screen in Figure 7-6 will appear. Enter the WEP key of your wireless network in the *Network key* field. Click the **Connect** button.

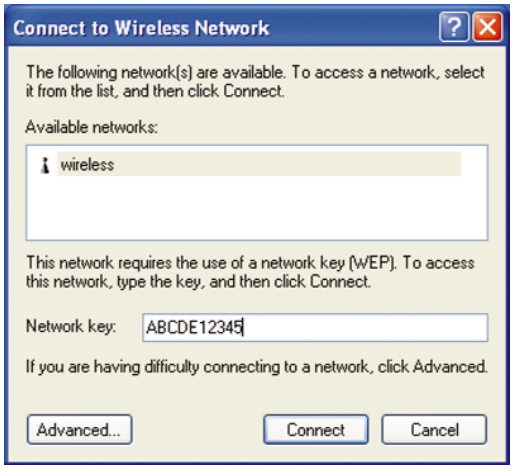

Figure 7-6

Note: Windows XP does not support the use of a passphrase. Enter the exact WEP key used by your access point.

To find the WEP encryption key settings of the other wireless devices in your network, such as an access point or wireless router, you may use any device's web-based utility to check the WEP encryption screen for the correct key entries. If you are using other manufacturers' access points, refer to their documentation for more information about WEP encryption.

4. The screen in Figure 7-7 will appear if your connection is active.

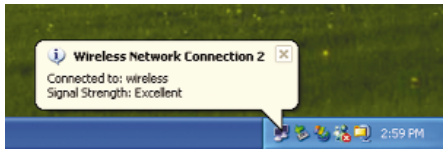

Figure 7-7

For more information about WEP, refer to your access point's documentation, or visit *www.networkeverywhere.com*.

For more information about wireless networking on a Windows XP computer, enter the keyword **wireless** in the Windows XP search engine.

Congratulations!
The installation of the Wireless USB Adapter is complete.

Chapter 8: Using the WLAN Monitor for Windows 98SE, Me, and 2000

Overview

Use the WLAN Monitor to check the link information, search for available wireless networks, or create profiles that hold different configuration settings.

Accessing the WLAN Monitor

After installing the Adapter, the Wireless USB Adapter WLAN Monitor icon will appear in your system tray. Double-click the icon (see Figure 8-1).

Figure 8-1

The *Link Information* screen will appear (see Figure 8-2). From this screen, you can find out how strong the current wireless signal is and how good the connection's quality is. You can also click the *More Information* button to view additional status information about the current wireless connection. To search for available wireless networks, click the **Site Survey** tab. To perform configuration changes, click the **Profiles** tab.

Link Information

As shown in Figure 8-2, the *Link Information* screen displays signal strength and link quality information about the current connection and provides a button to click for additional status information.

Ad-Hoc Mode or **Infrastructure Mode** - The screen indicates whether the Adapter is currently working in ad-hoc or infrastructure mode.

Signal Strength - The Signal Strength bar indicates signal strength, from 0 to 100%.

Link Quality - The Link Quality bar indicates the quality of the wireless network connection, from 0 to 100%.

Figure 8-2

Click the **More Information** button to view more information about the wireless network connection (see Figure 8-3).

Click the **X** (Close) button in the upper right corner to exit the WLAN Monitor.

The *More Information* screen displays the Adapter's network settings and information about the current wireless network connection (see Figure 8-3).

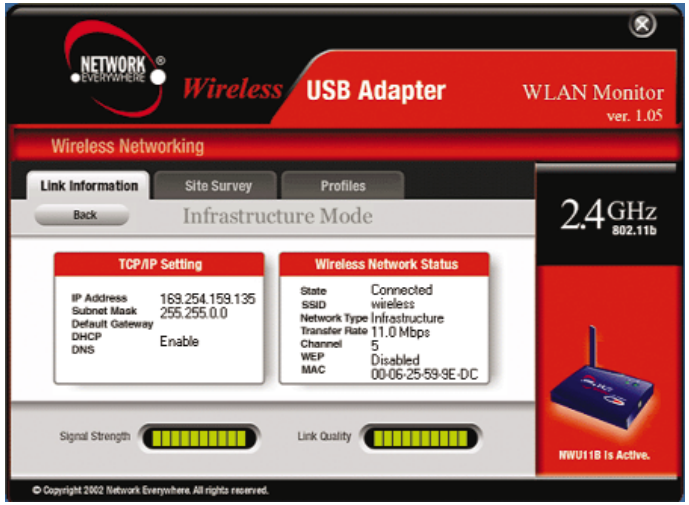

Figure 8-3

Ad-Hoc Mode or **Infrastructure Mode** - The screen indicates whether the Adapter is currently working in ad-hoc or infrastructure mode.

TCP/IP Setting
IP Address - The IP Address of the Adapter.
Subnet Mask - The Subnet Mask of the Adapter.
Default Gateway - The Default Gateway address of the Adapter.
DHCP - The status of the DHCP client.
DNS - The DNS address of the Adapter.

Wireless Network Status
State - The status of the wireless network connection.
SSID - The unique name of the wireless network.
Network Type - The mode of the wireless network currently in use.
Transfer Rate - The data transfer rate of the current connection.
Channel - The channel to which the wireless network devices are set.
WEP - The status of the WEP encryption security feature.
MAC - The MAC address of the wireless network's access point.

Signal Strength - The Signal Strength bar indicates signal strength, from 0 to 100%.

Link Quality - The Link Quality bar indicates the quality of the wireless network connection, from 0 to 100%.

Click the **Back** button to return to the initial *Link Information* screen. Click the **X** (Close) button in the upper right corner to exit the WLAN Monitor.

Site Survey

The *Site Survey* screen displays a list of infrastructure and ad-hoc networks available for connection.

Figure 8-4

SSID - The SSID or unique name of the wireless network.
Signal - The quality of the signal.

Site Information
Network Type - The mode of the wireless network currently in use.
Channel - The channel to which the wireless network devices are set.
WEP - The status of the WEP encryption security feature.
MAC - The MAC address of the wireless network's access point.
Surveyed at - The time at which the wireless network was scanned.

Refresh - Click the **Refresh** button to perform a new search for wireless devices.