

# WebSTAR® Model DPW700 PCMCIA Wireless LAN Card and WebSTAR® Model DPW730 USB Wireless Adapter User's Guide

## Introduction

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Are you tired of tripping over or fumbling with countless computer wires? The solution is here! Welcome to the exciting world of high-speed wireless networking between all the computers in your home or office. The WebSTAR® PCMCIA Wireless Local Area Network (LAN) card and the WebSTAR USB Wireless Adapter are wireless LAN adapters that allow your computer to connect to a wireless network and to share resources, such as files or printers, without being bound to the network wires.

This user's guide contains procedures for installing, configuring, operating, and troubleshooting either your PCMCIA wireless LAN card or your USB wireless adapter for high-speed wireless networking for your home or office. These wireless LAN card/adapters also allow you to connect your computer to other wireless LAN card/adapters equipped computers within range.



This guide refers to the PCMCIA wireless LAN card and the USB wireless adapter as the “wireless LAN card/adapters,” unless otherwise specified.

## Benefits and Features

Your wireless LAN card/adapters offers the following outstanding benefits and features:

- Allows you to share files and folders with other devices in your home such as PCs, PDAs, and printers without first copying the files onto a CD or diskette
- Allows you to move your laptop computer to various locations in your home or office while remaining connected to the network
- Helps protect your equipment and system files from unauthorized access by hackers who might want to access your private information
- Allows network users to participate in the latest multiplayer games through your wireless network
- Allows network users to quickly share digital photos or music files
- Allows you to connect to other wireless networks within range when traveling on business or pleasure

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## What's In the Carton?

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When you receive your WebSTAR PCMCIA Wireless LAN Card or your WebSTAR USB Wireless Adapter, you should check the equipment and accessories to verify that each item is in the carton and that each item is undamaged. The carton contains the following items:



One WebSTAR PCMCIA Wireless LAN Card



OR One WebSTAR USB Wireless Adapter



One CD-ROM containing the user's guide, the quick installation guide, and the USB drivers

If any of these items are missing or damaged, please contact SciCare™ Broadband Services at 1-800-722-2009 for assistance.

Additional cables and other equipment needed for wired or wireless networking must be purchased separately. Contact your cable service provider to inquire about the additional equipment and cables you may need.

## Wireless LAN Basics

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This section provides descriptions of key wireless LAN terminology and concepts used in this guide to help you better understand how the wireless LAN card/adapters function to create a wireless network.

### Local Area Network (LAN)

A network consists of two or more devices connected together to share files and other peripheral devices such as printers. A local area network is a network that exists in a relatively limited area, such as a home or small office.

A wireless network allows you to interact with other computers and devices without having to run cables normally associated with networks. This allows you to move your computer around while staying connected to your network.

To create a wireless network, you must install and use a wireless LAN card/adaptor in one of the following wireless network setups:

- An **Infrastructure** wireless network allows you to connect to an existing access point to obtain access to an existing wired LAN. An access point is a device, such as a wireless-equipped cable modem, that seamlessly connects wired and wireless networks. For more information, refer to **Infrastructure Network**, next in this section.
- An **Ad Hoc** wireless network allows you to connect directly to one or more wireless LAN card/adaptor equipped computers. For more information, refer to **Ad Hoc Network**, later in this section.

### Infrastructure Network

An Infrastructure network uses an existing access point (or several existing access points) as a gateway. The Infrastructure network links the wireless network to a wired LAN. As a result, portable workstations or desktops on your wireless network have access to all of the features of your wired LAN including e-mail, Internet access, network printers, and file servers.

### Ad Hoc Network

An Ad Hoc network offers peer-to-peer (computer-to-computer) wireless connections between workstations. This connection allows communication between computers within range that also have a compatible wireless PC card installed. A wireless Ad Hoc network can also access a wired LAN's TCP/IP service (such as e-mail and the Internet) by using a TCP/IP software router on an Ethernet-equipped laptop computer.

### Roaming

You can install multiple access points to extend the wireless service coverage area for seamless wireless access. Within an extended service area, all access points and wireless clients (cards or adapters) must have the same Service Set Identity (SSID). An SSID is a group name, such as *WebSTAR*, that is shared by the access points and wireless clients in a wireless network. Roaming among different access points is controlled automatically to maintain the wireless connectivity at all times.

## System Requirements

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This section describes the minimum hardware and software requirements for PCs.

### Minimum System Requirements for PCs

To use the wireless LAN card/adaptor, your computer must meet the following minimum software and hardware requirements:

- Windows 98/98SE/ME/2000/or XP operating system
- 32 MB of RAM (additional memory strongly recommended)
- Standard PCMCIA slot or USB port
- UL listed computers
- TCP/IP protocol properly installed and configured

### Wireless LAN Card Status LEDs

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This section provides a description of the wireless LAN card/adaptor status LEDs.

The two LEDs on the wireless LAN card/adaptors indicate connection status and data transfer operational status as described in the following table.

LED	Color	State	Description
Power	Green	On	Indicates that the wireless LAN card/adaptor is plugged into the PCMCIA slot or USB port of your computer
Activity	Green	Blinking	Indicates the data exchange rate. The faster the LED blinks, the higher the data exchange rate

### USB Wireless Adapter Antenna

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This section provides a description of the built-in antenna on the USB wireless adapter.



**CAUTION:**

**Avoid damage to the antenna. Do not rotate the antenna more than 180 degrees, otherwise permanent damage may occur.**

The USB wireless adapter comes with a powerful built-in antenna. You can rotate the antenna from zero degrees to 180 degrees to adjust its range and the connection quality.

## Before You Begin



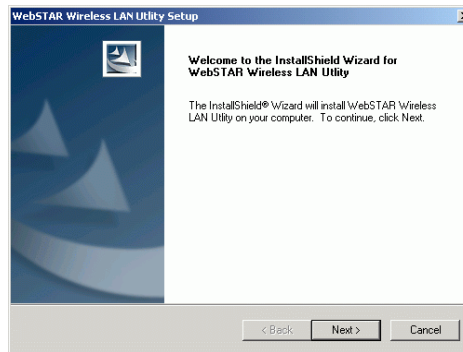
Do *not* connect the wireless LAN card/adaptor to your computer before you install the software. If you connect the wireless LAN card/adaptor to your computer before you install the software, the Windows Plug and Play (PnP) function will detect the PCMCIA/USB device and open a dialog box requesting its driver. Click **Cancel** to quit the wizard, unplug the wireless LAN card/adaptor, and then install the software. You must install the software first to prepare your computer to receive the wireless LAN card/adaptor and to facilitate proper installation of the wireless LAN card/adaptor.

## Installing the Software and Hardware

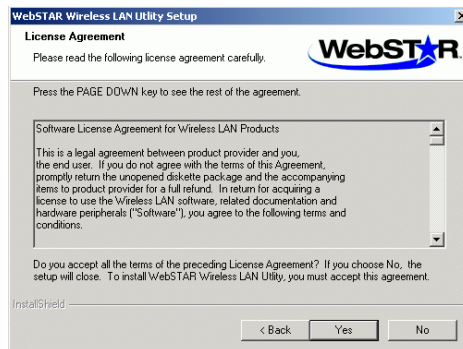
This section provides procedures for installing the wireless LAN card/adaptor software and hardware.

### To install the wireless LAN card/adaptor software and hardware

1. Close all Windows programs that are running.
2. Choose one of the following two options to install the software:
  - Insert the provided **Software Utility CD** into your CD-ROM drive and select **Utility&Driver**. Click **Next** when the **Welcome** window opens.
  - Run **Setup.exe** from the **D:\Utility&Driver** folder of the **Software Utility CD** where **D** is the CD-ROM drive letter. Click **Next** when the **Welcome** window opens.



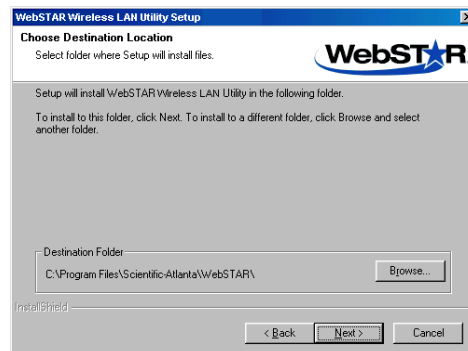
3. If you accept the License Agreement, click **Yes** when the **License Agreement** window opens.



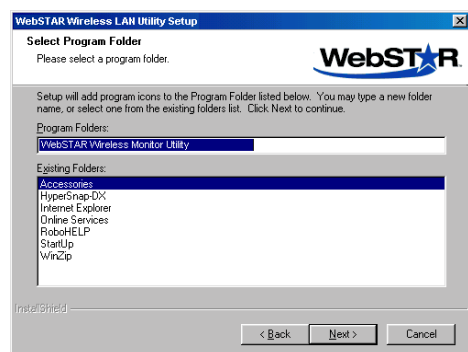
4. Choose one of the following options in the **WebSTAR Wireless LAN Utility Setup** window.
  - Select **Typical** and click **Next** for quick installation. Then, go to step 11.
  - Select **Custom** and click **Next** for custom installation (to select the parameters that you would like to use). Then, go to step 5.



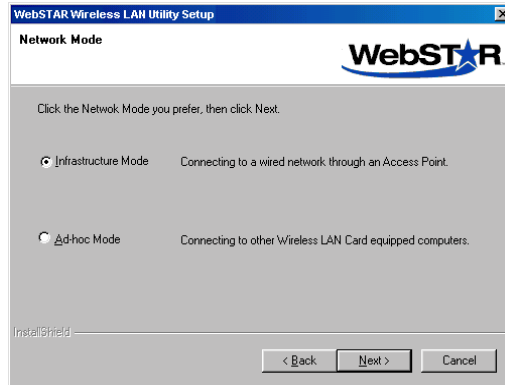
5. Choose one of the following options in the **WebSTAR Wireless LAN Utility Setup** window.
  - Click **Next** to install the software to the default destination folder.
  - Click **Browse** to select another folder if you want to install the software to a different folder, and click **Next**.



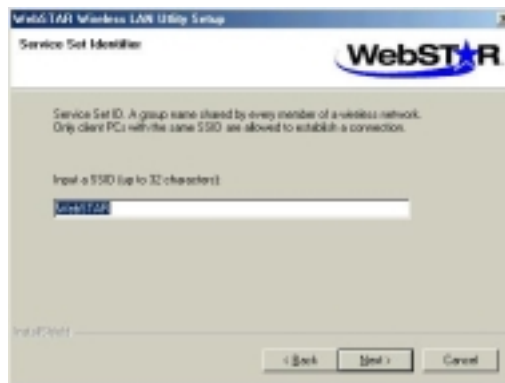
6. If required, you may type a new folder name for the program icons to be added to the Program Folder. Then, click **Next** to continue.



7. Select the network type you prefer and then click **Next**. For a description of each network mode, refer to **Wireless LAN Basics**, earlier in this guide.



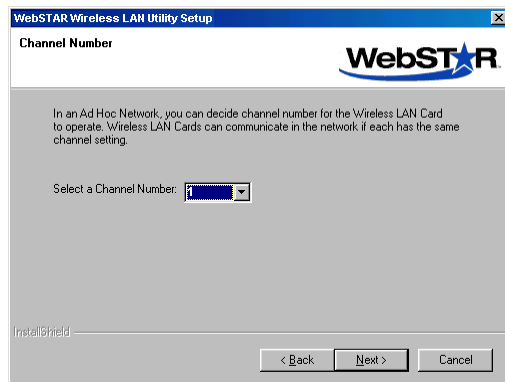
8. Type the SSID of the wireless network you wish to connect to and then click **Next**.



9. Specify a channel number for the wireless LAN card/adapter if you are using Ad Hoc mode network operation.

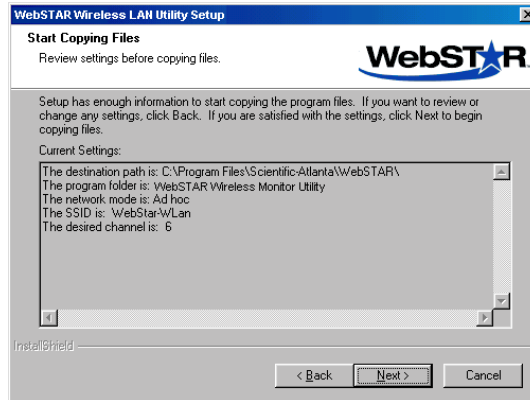


This step is for Ad Hoc network type only.

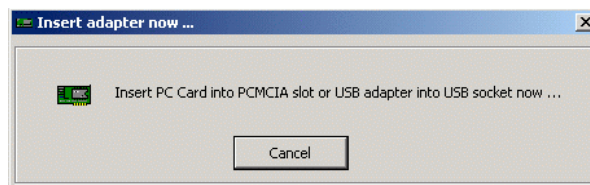




10. Are the settings correct?
  - If **yes**, click **Next**.
  - If **no**, click **Back** to modify your settings. Click **Next** when you have finished modifying your settings.

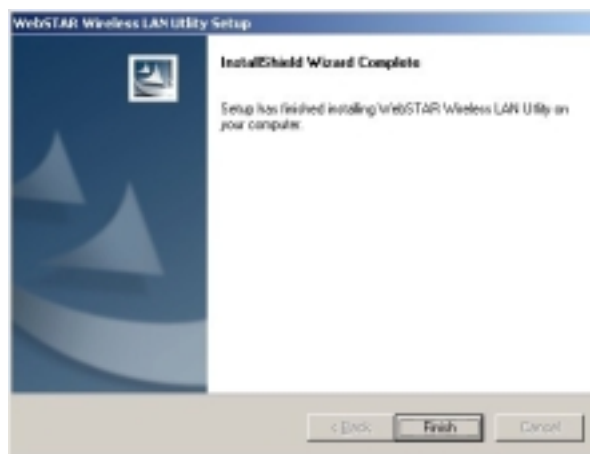


11. The **Insert adapter now...** dialog box opens. Follow the instruction displayed in the **Insert adapter now...** dialog box to install the wireless LAN card/adapter.



The **Power** LED on the wireless LAN card/adapter lights when you connect the wireless LAN card/adapter to your computer.

12. Click **Finish**.



13. For Windows 98, click **Yes** when prompted, to restart your computer. After your computer restarts, your devices are ready for use. For Windows 98SE, ME, 2000, or XP, go the specific instructions for your operating system in **Install the Windows Drivers**, next in this guide.

## Install the Windows Drivers

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You must install the correct drivers for your version of Windows. Installing the Windows drivers is different for each version of windows. This section contains instructions for installing Windows drivers.

### Installing the Windows Drivers

Follow the instructions in this section to install the drivers for your specific windows version.

#### For Windows 98SE and Windows ME

Windows will detect your new device (USB or PCMCIA) and request the driver.



Complete these steps to install the Windows 98SE and Windows ME drivers.

1. Click **Next** in the **Add New Hardware Wizard** window.
2. Select **Search for the best driver for your device** in the **Add New Hardware Wizard** window, and then click **Next**.
3. Select **Specify a location** and click **Browse** to locate the INF file. This file is usually located in either the C:\Windows\INF or the C:\Winnt\INF directory.
4. When Windows finds the driver, click **Next**.
5. Click **Finish**.

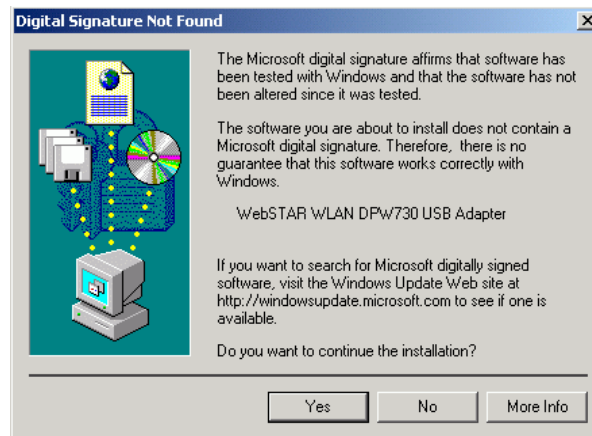


If the system prompts you to do so, you need to insert your Windows 98SE or Windows ME installation CD and then follow the on-screen instructions to complete the driver installation.

6. Click **Yes** in the **System Settings Change** window to restart your computer. The computer restarts. The drivers are now installed on your PC and your devices are ready for use. You have completed the installation. Your next step is to verify the installation. Go to **Verify the Installation** next in this guide.

### For Windows 2000

If the **Digital Signature Not Found** window opens, click **Yes** to continue with the installation. Follow the on-screen instructions to complete the installation for the Windows 2000 drivers. When you complete the installation, your devices are ready to use. Your next step is to verify the installation. Go to **Verify the Installation** next in this guide.



### For Windows XP

After the system locates your new hardware, the **Found New Hardware Wizard** window opens. Select **Install the software automatically**, and then click **Next**. Follow the on-screen instructions to complete the installation for the Windows XP drivers. When you complete the installation, your devices are ready to use.





If the **Hardware Installation** window opens displaying a Windows Logo compatibility message, click **Continue Anyway** to proceed with the installation. Follow the on-screen instructions to complete the installation for the Windows XP drivers. When you complete the installation, your devices are ready to use. Your next step is to verify the installation. Go to **Verify the Installation** next in this guide.



## Verify the Installation

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After you install the drivers, you should verify the installation. Complete these steps to verify the driver installation.

1. Verify that the wireless LAN card/adapter is connected to your computer.
2. Click **Start** in the lower left corner of your Windows desktop.
3. Select **Programs**, choose **WebSTAR Wireless Monitor Utility**, and then click **WebSTAR Wireless Monitor Utility**. You should be able to see the **WebSTAR Wireless Monitor Utility** icon in the lower right corner of the Windows taskbar.
4. Go to **Access the WebSTAR Wireless Monitor Utility**, next in this guide to configure or fine-tune your wireless LAN card/adapter settings.

## Access the WebSTAR Wireless Monitor Utility

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The wireless LAN card/adaptor uses the WebSTAR Wireless Monitor Utility for both configuring and monitoring the settings on the wireless LAN card/adaptor. You can launch the utility automatically by double-clicking the icon located on the Windows taskbar in the lower right corner of the Windows desktop. This section provides instructions for accessing the WebSTAR Wireless Monitor Utility.

### Accessing the WebSTAR Wireless Monitor Utility



If the Utility icon does not appear on your Windows taskbar, complete these steps to start the WebSTAR Wireless Monitor Utility manually.

#### To access the utility when the icon does not appear on the Windows System Tray

1. Click **Start** in the lower left corner of your Windows desktop.
2. Select **Programs**, choose **WebSTAR Wireless Monitor Utility**, and then click **WebSTAR Wireless Monitor Utility**. You should be able to see the WebSTAR Wireless Monitor Utility icon in the lower right corner of the Windows desktop on the System Tray.

#### To access the utility using the icon on the Windows System Tray

Double-click the icon located on the System Tray in the lower right corner of the Windows desktop to access the WebSTAR Wireless Monitor Utility.



Depending upon the network mode you selected when you installed the software, the Utility icon color is green or yellow. Green indicates that your wireless LAN card/adaptor is operating in Infrastructure mode. Yellow indicates that your wireless LAN card/adaptor is operating in Ad Hoc mode.

#### To access the utility in Infrastructure mode

In Infrastructure mode, if the icon is marked with a red X, this indicates that the wireless LAN card/adaptor has not established a connection to an access point. The following illustrations show examples of how the Utility icon appears when the wireless connection is either established or not established when operating in Infrastructure mode.



Infrastructure mode wireless connection is established



Infrastructure mode wireless connection is not established

### To access the utility in Ad Hoc mode

In Ad Hoc mode, the icon always appears similar to the following illustration except when the card is resetting and initializing. When the card is resetting and initializing, the icon is marked with a red X. The following illustrations show examples of how the Utility icon appears when the wireless connection is either established or not established when operating in Ad Hoc mode.



Ad Hoc mode wireless connection is established



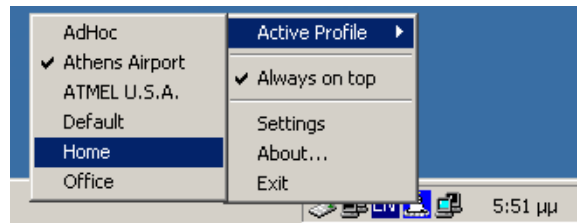
Ad Hoc mode wireless connection is not established

### To access the Context menu

The context menu displays the current active network profile and allows you to access the WebSTAR Wireless Monitor Utility window. Right-click the **WebSTAR Wireless Monitor Utility** icon to display the context menu. Select **Active Profile** to display the current active network profile. Double-click **Settings** to access the WebSTAR Wireless Monitor Utility window.



The following example of the context menu is for illustration purposes only. The Context menu on your system may be similar to this example.



## Configure and Monitor the Wireless LAN Card/Adapter for Windows 98/98SE/ME/2000

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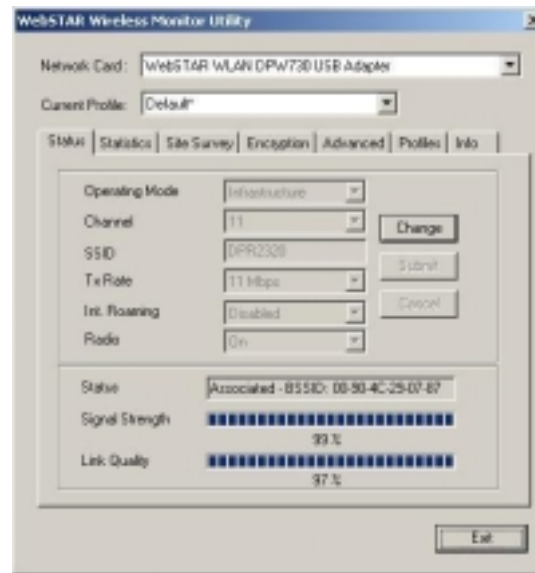
After you install the hardware and software, you can use the WebSTAR Wireless Monitor Utility to monitor and configure your wireless LAN card/adapter. This section provides procedures for configuring and monitoring your wireless LAN card/adapter for Windows 98/98SE/ME/2000 operating systems. For Windows XP, refer to **Configure and Monitor the Wireless LAN Card/Adapter for Windows XP**, later in this guide.

### Configuring and Monitoring the Wireless LAN Card/Adapter

Double-click the wireless icon on the desktop taskbar or click **Settings** from the context menu to access the WebSTAR Wireless Monitor Utility. The WebSTAR Wireless Monitor Utility window appears displaying seven tabs: **Status**, **Statistics**, **Site Survey**, **Encryption**, **Advanced**, **Profiles** and **Info**.

This section provides descriptions of the configuring or monitoring options available on each tabbed page, along with detailed descriptions of other options available on each tabbed page.

**Example:** The following illustration is an example of the default **WebSTAR Wireless Monitor Utility** window.



## Scan the Wireless Network for Available Access Points

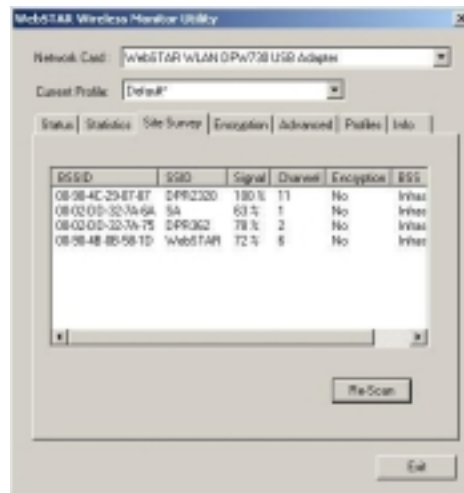
Use the **Site Survey** tabbed page to scan the wireless network and search for available access points and wireless stations (Ad Hoc mode) that are within the range of the card. Available stations display in the window with the following information:



Click **Re-Scan** to update the page.

<b>BSSID</b>	Displays the Basic Service Set ID which is actually the MAC address of the access point or wireless LAN card/adapter
<b>SSID</b>	Displays the current Service Set ID of the access point or wireless station
<b>Signal</b>	Displays the signal strength ratio. The higher the ratio, the more powerful the signal received by your wireless LAN card/adapter. This indicator helps you identify the quality network operation
<b>Ch (Channel)</b>	The operating radio channel number
<b>WEP</b>	Displays if encryption is enabled or disabled on the access point or wireless station
<b>Type</b>	Indicates whether the operating mode is Infrastructure (access point) or Ad Hoc (wireless station)
<b>Re-Scan</b>	Allows you to update the list

**Example:** The following illustration is an example of the site survey information that displays on the **Site Survey** tabbed page of the **WebSTAR Wireless Monitor Utility** window.



To connect to a desired site using the Site Survey Utility

Double-click on a selection in the **BSSID** field to connect to any of the access points or Ad Hoc stations listed. The utility returns to the **Status** window and displays the parameters of the newly established connection.



## Viewing and Modifying the Current Settings on the Wireless LAN Card/Adapter

Use the **Status** tabbed page to view or modify the settings on the wireless LAN card/adapter. Even though you might have configured the settings during the driver and utility installation, it is possible that you want to modify your operating mode between Infrastructure mode and Ad Hoc mode or to fine-tune other settings.

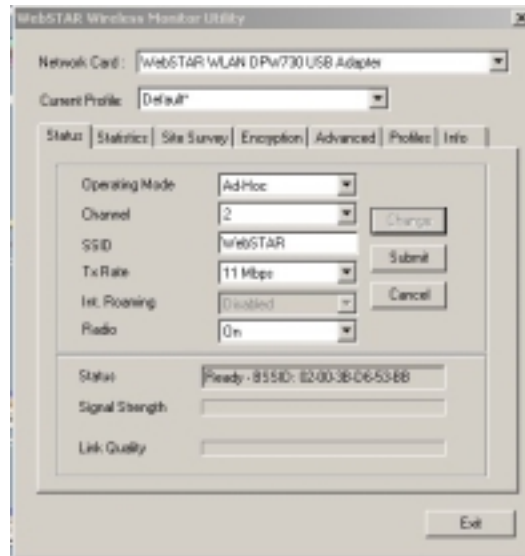
You can connect your computer to a network in one of two methods. This section describes each of the two methods.

- Ad Hoc—Connecting to other wireless LAN card/adapter-equipped computers forming a wireless network
- Infrastructure—Connecting to a wired or wireless network through an access point

To view or modify the current settings on the wireless LAN card/adapter (Ad Hoc mode)

1. Double-click the **Wireless LAN Card Monitor** icon located on the Windows taskbar to display the **WebSTAR Wireless Monitor Utility** dialog box. Make sure you select the desired profile from the **Current Profile** list.
2. Click the **Status** tab and then click **Change** to make the setting items configurable.
3. Select **Ad-Hoc** from the **Operating Mode** list.
4. Select the channel number that you want to use from the **Channel** list.
5. Type the SSID of the wireless LAN group in the **SSID** field. A network name is **mandatory** for Ad Hoc mode. All wireless clients must use the same SSID in order to communicate.
6. Select the transmit rate to use from the **Tx Rate** list. If you select **Auto**, the wireless adapter adjusts its data rate from 11 Mbps to 5.5 Mbps, to 2 Mbps, or to 1 Mbps as the signal strength warrants.
7. Select **On** from the **Radio** list to enable the radio signal.
8. Click **Submit**.
9. Click **Exit** to minimize the Utility window.

**Example:** The following illustration is an example of an Ad Hoc operating mode configuration.



To view or modify the current settings on the wireless LAN card/adapter (Infrastructure mode)

1. Double-click the **Wireless LAN Card Monitor** icon located on the Windows taskbar to display the **WebSTAR Wireless Monitor Utility** dialog box. Make sure to select the desired profile from the **Current Profile** list.
2. Click the **Status** tab and then click **Change** to make the setting items configurable.
3. Select **Infrastructure** from the **Operating Mode** list.
4. Type SSID name of the access point in the **SSID** field. The wireless client must use the same SSID as the access point in order to communicate with other computers using the access point.

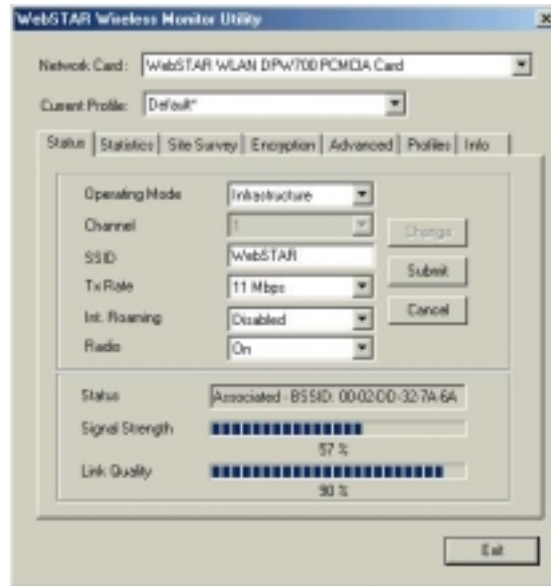


Note that under Infrastructure mode, if the **SSID** field is left blank or filled in with the special SSID name "**any**," your wireless LAN card/adapter will connect to the first compatible and "open" access point with the best signal strength within the connection range. This setting allows your wireless LAN card/adapter to scan across networks with different SSIDs.

5. Select the transmit rate to use from the **Tx Rate** list. If you select **Auto**, the wireless adapter adjusts its data rate from 11 Mbps to 5.5 Mbps, to 2 Mbps, or to 1 Mbps as the signal strength warrants.
6. Select whether to enable the roaming feature from the **Int. Roaming** list. For more information on the Roaming feature, see **Roaming** in the **Wireless LAN Basics** section, earlier in this guide.
7. Select **On** from the **Radio** list to enable the radio signal.
8. Click **Submit**. If the connection is successful, you should be able to find your computer on the **Network Neighborhood** in Windows Explorer.

9. Click **Exit** to minimize the Utility window.
10. Your next step is to verify link quality. Go to **To verify link quality**, next in this section.

**Example:** The following illustration is an example of an Infrastructure operating mode configuration.

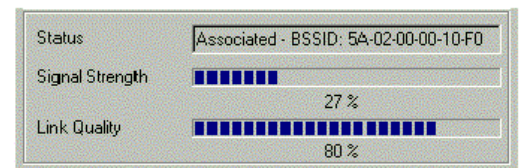


**To verify link quality (Infrastructure Mode only)**

Double-click the **Wireless LAN Monitor Utility** icon on the Windows taskbar to display the **Wireless LAN Monitor Utility** dialog box and to verify the link quality of the connection when operating in Infrastructure mode. Then, click the **Status** tab. The following connection status indicators display in the lower portion of the dialog box:

- **Status**—Displays the access point with which your wireless LAN card/adapter is associated. If no access point is connected, current status indicators, such as scanning or authenticating are displayed.
- **Signal Strength**—Displays as a percentage using active progress indicators that change as the network radio signal fluctuates.
- **Link Quality**—Displays Link Quality as a percentage that is rated according to the following list:

Link Quality	Range (%)
Poor	0-29%
Fair	30%-59%
Good	60%-89%
Excellent	90%-100%



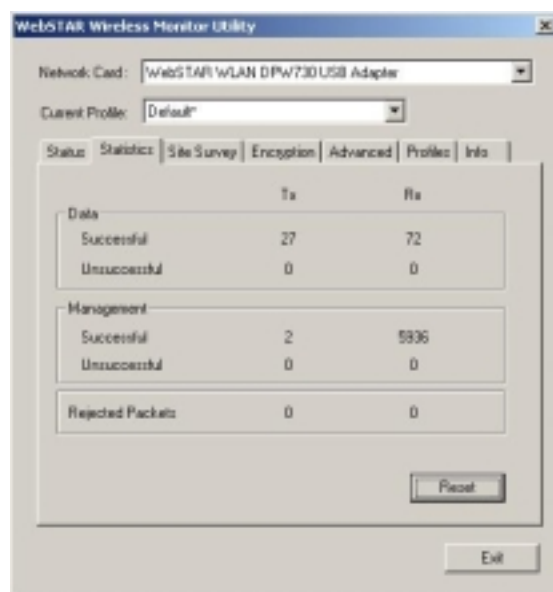
## View Available Data Transmission Statistics

Use the **Statistics** tabbed page to view the following available statistical information:

- **Data Packets** successfully or unsuccessfully transmitted (Tx) and received (Rx)
- **Management Packets** successfully or unsuccessfully transmitted (Tx) and received (Rx)
- **Rejected Packets**

Click **Clear** to renew the statistics.

**Example:** The following illustration is an example of the information that displays on the **Statistics** tabbed page of the **WebSTAR Wireless Monitor Utility** window.



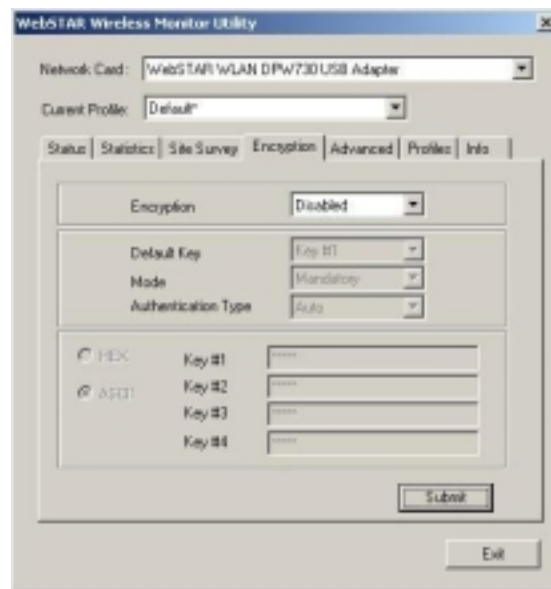
## Configure Encryption Settings

Use the **Encryption** tabbed page to configure your encryption settings. Encryption technology is used to enhance wireless security. Your encryption settings must match those used by the access points or wireless stations (Ad Hoc mode) in your network, or your computer will be unable to communicate with other devices through the network.

If you are *not* going to use encryption, go to the **Encryption** tabbed page and select **Disabled** from the **Encryption** drop-down menu. Complete these steps if you want to enable encryption.

1. Select the **Encryption** tab in the **WebSTAR Wireless Monitor Utility** window.

**Example:** The following illustration is an example of the encryption options that display on the **Encryption** tabbed page of the **WebSTAR Wireless Monitor Utility** window.



2. Select **64 Bit** or **128 Bit** in the **Encryption** drop-down menu as your encryption type.

3. Select one of the four keys in the **Default Key** drop-down menu to encrypt the data you are going to transmit. Note that the four keys, including the one selected as the **Default Key**, are used to decrypt the data you receive.
4. Select **Mandatory** or **Optional** in the **Mode** drop-down menu as required.
5. Select **Open System**, **Shared Key** or **Auto** in the **Authentication Type** drop-down menu. Your authentication type must be the same as those on the access point/wireless client (Ad Hoc mode) with which you want to associate.
6. Enter the values for the wired equivalent privacy (WEP) you want to use in the appropriate field. For flexibility, you can enter the wired equivalent privacy (WEP) keys in either **HEX** or **ASCII** format. Enable the preferred format and then enter the key values in the **Key #1** through **Key #4** fields. If you use HEX format, the utility converts two entered characters into its corresponding ASCII code and vice versa.



Note that when using HEX format, only numbers 0-9 and letters a-f are valid. We strongly recommend that you use lowercase characters since some access points only support WEP keys in lowercase

The following table shows the valid key length for each encryption type.

Key Length	HEX Format (0-9, a-f)	ASCII Format (0-9, a-z)
64 Bit	10 hexadecimal characters	5 ASCII characters
128 Bit	26 hexadecimal characters	13 ASCII characters

7. Click **Submit** for the new settings take effect. Then click **Exit** to minimize the Utility window.

## Change Advanced Configuration Settings

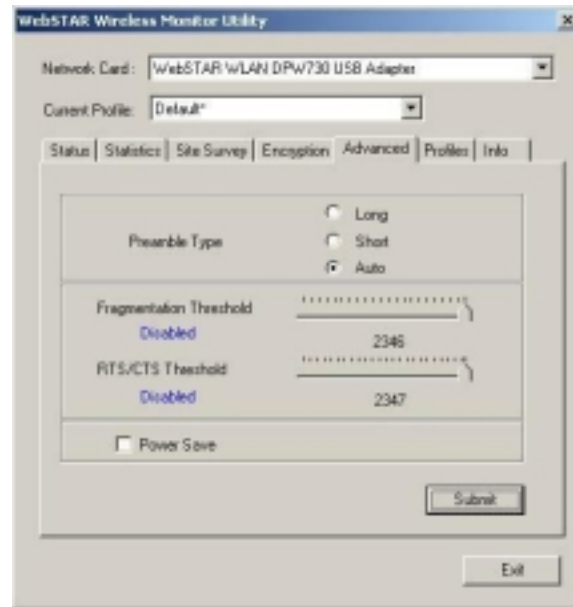


**CAUTION:**  
Do not modify these settings unless you are extremely knowledgeable of wireless networking. Incorrect settings cause degraded performance or prevent data communications between the wireless LAN card/adapter and the target wireless device.

Use the **Advanced** tabbed page to change the advanced configuration settings. These advanced configuration settings are defined and described in the following table.

<b>Preamble Type</b>	The preamble is part of the IEEE 802.11b physical layer specification. All 802.11b devices must support the Long preamble format, but may optionally support the Short preamble. Your wireless LAN card/adapter supports the Short preamble. The Short option allows the wireless LAN card/adapter to communicate with other 802.11b devices that also support Short preamble to boost the throughput. Make sure to use the appropriate preamble type according to your network traffic level.
<b>Fragmentation Threshold</b>	The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented and at what size. On an 802.11 wireless LAN, packets exceeding the fragmentation threshold are fragmented, i.e., split into, smaller units suitable for the circuit size. Packets smaller than the specified fragmentation threshold value are not fragmented. If you are uncertain about which values to use, do not change the default values.
<b>RTS/CTS Threshold</b>	When set (in bytes), the ready to send/clear to send (RTS/CTS) threshold specifies the packet size beyond which the wireless LAN card/adapter invokes the RTS/CTS mechanism. Packets that exceed the specified RTS threshold trigger the RTS/CTS mechanism. The network interface card (NIC) transmits smaller packets without using RTS/CTS. If you are uncertain about which values to use, do not change the default values.
<b>802.11 Power Save</b>	For uninterrupted data communication, you may leave this check box cleared to disable the power saving feature. Select this check box to enable power saving feature for your wireless LAN card/adapter.

**Example:** The following illustration is an example of the advanced options that display on the **Advanced** tabbed page of the **WebSTAR Wireless Monitor Utility** window.



#### To change the fragmentation or RTS/CTS thresholds

The default settings for the Fragmentation and RTS/CTS Threshold are **Disabled**. To change the **Fragmentation/RTS Threshold** parameters, move the slider with your mouse, or click on the slide bar and then use the right and left arrow keys of your keyboard to select an exact number. Then, click **Submit** to enable the new settings to take effect.



## Create Additional Profiles for Specific Wireless LAN Locations

Use the configuration settings on the **Profile** tabbed page to create additional profiles to reflect specific wireless LAN settings for each location to which you may travel. You can easily retrieve the required profile from the **Current Profile** drop-down list. Selecting a profile from the **Existing profiles** pane displays the corresponding parameters in the **Preview of:** pane.

### To create a new profile

To create a new profile, click **New** and then enter the name for the new profile. To customize the settings for a certain profile, you must select the profile from the **Current Profile** drop-down list, select the **Status** tab, and then click **Change** to change the settings.

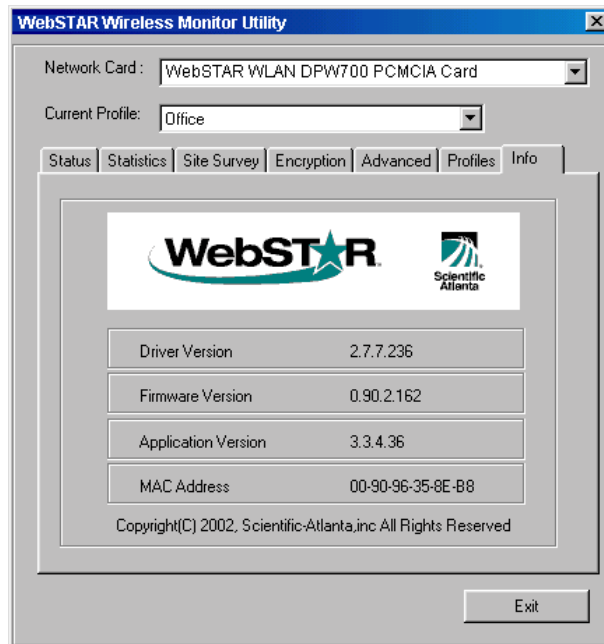
**Example:** The following illustration is an example of the various profile options that display on the **Profile** tabbed page of the **WebSTAR Wireless Monitor Utility** window.



## Display Basic Information About Your Network Devices

Use the **Info** tabbed page to display basic information about your devices, including the Driver, Firmware, Application Versions, along with the MAC address of your wireless LAN card/adapter. Click **Exit** to minimize the Utility window.

**Example:** The following illustration is an example of the device information options that displays on the **Info** tabbed page of the **WebSTAR Wireless Monitor Utility** window.



## Configure and Monitor the Wireless LAN Card/Adapter for Windows XP

Windows XP provides a built-in Wireless Zero Configuration Utility for wireless configuration and monitoring. Either you can choose to configure your wireless network using the WebSTAR Wireless Monitor Utility as described in preceding section, or you can use the Windows XP Wireless Zero Configuration Utility. To use the WebSTAR Wireless Monitor Utility, you must first disable the Windows XP Wireless Zero Configuration Utility.

This section only provides the essential instructions for using the Windows XP Wireless Zero Configuration Utility to establish and configure your wireless network. For more detailed information, refer to the Windows XP Help.

### Disabling the Windows XP Wireless Utility



The Windows XP Wireless Zero Configuration Utility is enabled by default. When the utility is active, it overrides the WebSTAR Wireless Monitor Utility. If you are going to use the WebSTAR Wireless Monitor Utility, you must disable Windows XP Wireless Zero Configuration Utility.

Complete these steps to disable the Windows XP Wireless Zero Configuration Utility.

1. Double-click the Windows XP wireless icon, select **Advanced** (or **Properties**), and then click the **Wireless Networks** tab.

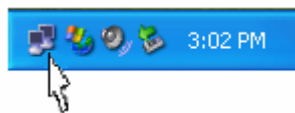


2. On the **Wireless Networks** tab, clear the **Use Windows to configure my wireless network settings** check box then click **OK**.



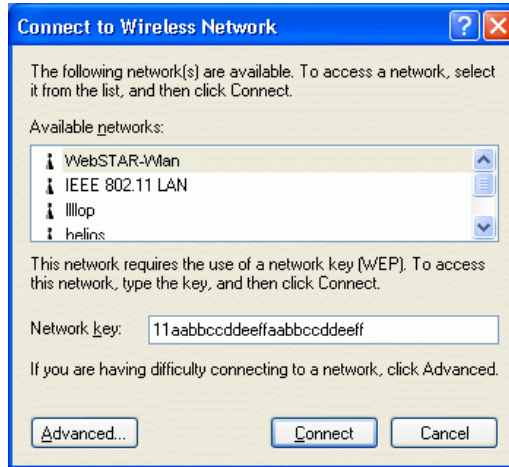
### Connecting to an Access Point or a Wireless LAN Card Using the Windows XP Zero Configuration Utility

Access the Windows XP Wireless Zero Configuration Utility using the network connection icon on the Windows taskbar. If your computer is *not* connected to any access point or wireless LAN card/adapter, the icon should appear as shown in the following example.




Complete these steps to connect to an existing access point or wireless LAN card/adapter (Ad Hoc mode).

1. Double-click the network connection icon on the taskbar.
2. When the **Connect to Wireless Network** window opens, you will see all the available access points or wireless LAN card/adapters (Ad Hoc mode) listed in the Available networks pane. Select the wireless network to which you want to connect.



3. If the target access point or wireless LAN card/adapter (Ad Hoc mode) has been set with a WEP key, you must enter the same WEP key in the **Network key** field. Otherwise, leave it blank.
4. Click **Connect** to join the target network and this window will close. When your wireless connection is established, the connection icon appears as shown in the following example:

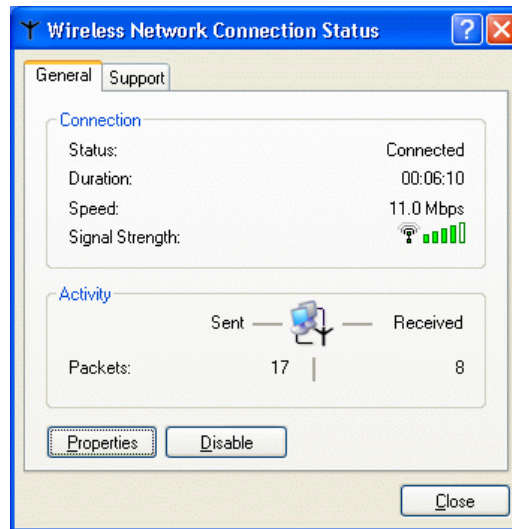


 If you cannot establish a wireless connection, double-click the **Connection** icon and then click **Properties**. Go to the **Authentication** tabbed page to verify that you used the correct authentication type for the wireless LAN card/adapter.

## Viewing Wireless Connection Status

After you successfully connect to the access point or wireless LAN card/adapter (Ad Hoc mode), double-click the icon in the taskbar again to open the **Wireless Network Connection Status** window. Use this window to view any general data of the wireless LAN card/adapter, such as Status, Duration, Speed, and Signal Strength.

**Example:** The following illustration is an example of the **Wireless Network Connection Status** window.



## Configuring Your Wireless Properties

To configure your wireless properties, open the **Wireless Network Connection Status** window as described in the preceding section, and then click **Properties**. This will open the **Wireless Network Connection Properties** window that allows you to configure additional settings on the wireless LAN card/adapter. This section provides descriptions for each tabbed page of the **Wireless Network Connection Properties** window to help you in configuring the additional settings of your wireless LAN card/adapter.

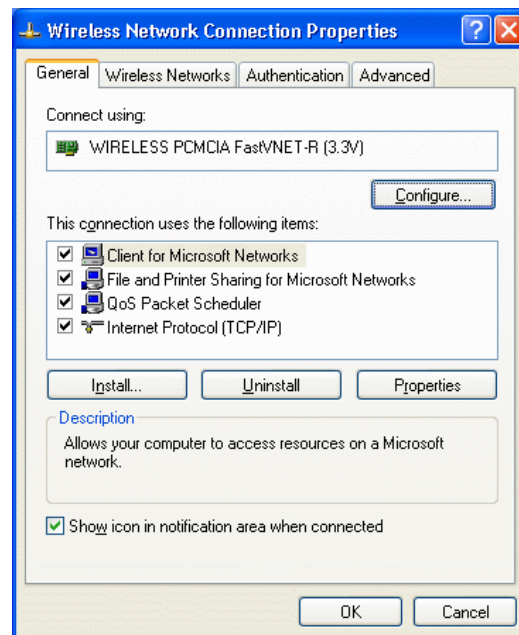
### To specify network methods

Use the **General** tabbed page to specify the network methods to be used with your wireless LAN card/adapter. The network policy depends on your wireless network. For TCP/IP protocol, you should configure the properties as instructed by your cable service provider.



For more information on configuring TCP/IP settings, refer to **Configure the TCP/IP Protocol**, later in this guide.

**Example:** The following illustration is an example of the information that displays on the **General** tabbed page of the **Wireless Network Connection Properties** window.



To view, configure, and add access points or wireless LAN card/adapters

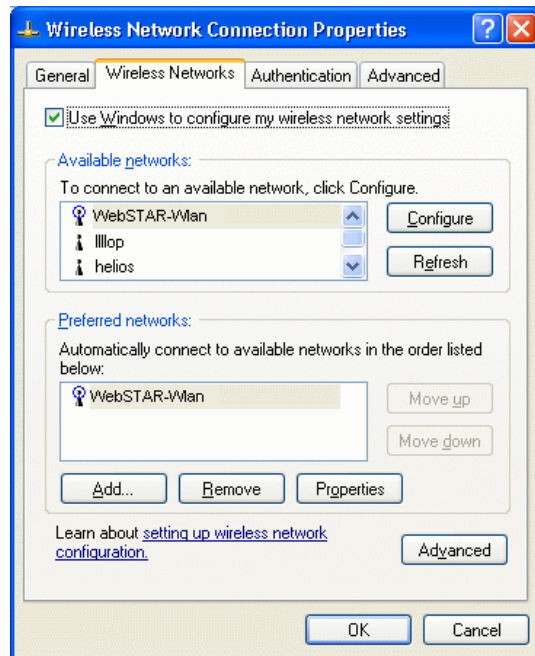
Use the **Wireless Networks** tabbed page to view all access points and wireless LAN card/adapters (Ad Hoc mode) available on the network or to add a wireless network. The **Wireless Networks** tabbed page has two sections. These sections are defined and described in the following table.

<b>Available networks</b>	This section allows you to view all the access points and wireless LAN card/adapters available and then allows you to connect to an available network. Click <b>Refresh</b> to update the list of access points and wireless LAN card/adapters (Ad Hoc mode).
<b>Preferred networks</b>	This section allows you to add a wireless network. Click <b>Add</b> to add more access points or wireless LAN card/adapters (Ad Hoc mode) to the preferred networks list.

**Example:** The following illustration is an example of the information that displays on the **Wireless Networks** tabbed page of the **Wireless Network Connection Properties** window.



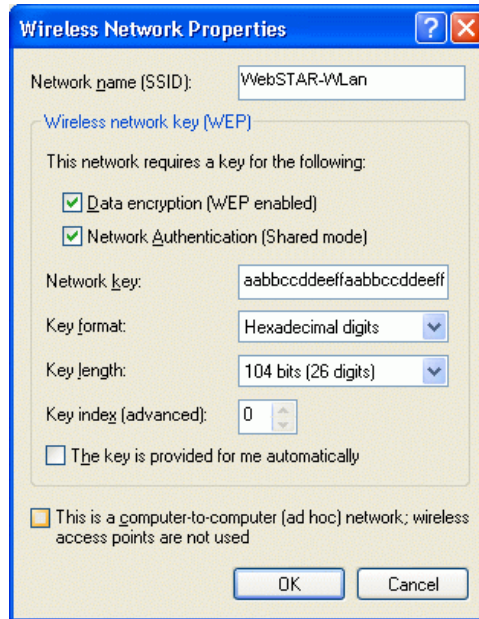
Click **Refresh** to update the list of access points and wireless LAN card/adapters (Ad Hoc mode).



### To add access points or wireless LAN card/adapters

Complete these steps to add access points or wireless LAN card/adapters to the Preferred networks list on the **Wireless Networks** tabbed page in the **Wireless Network Connection Properties** window.

1. Click **Add** in the Preferred networks section of the **Wireless Network Connection Properties** window. The Wireless Network Properties window opens.



2. Type your SSID in the Network name (SSID) field.
3. If needed, type your network WEP settings in the remaining fields.



After the access point or wireless LAN card/adapters (Ad Hoc mode) that you want to connect to has been set with a WEP key, you **must** type the same WEP key as the access point or the wireless LAN card/adapters.

4. After you add several profiles into the Preferred networks section, you can change the order in which the system makes connection attempts to the preferred networks list. Highlight the target wireless network, and then click **Move up** or **Move down** to move it to the desired position in the list.



### To access specific wireless networks

Use the **Advanced** window if you want to access specific wireless network types. Click **Advanced** in the **Wireless Networks** area of the **Wireless Network Connection Properties** window to open the Advanced window. In the **Advanced** window you can choose to connect to the following networks:

- Any available network (access point preferred)
- Access point (infrastructure) networks only
- Computer-to-computer (ad hoc) networks only



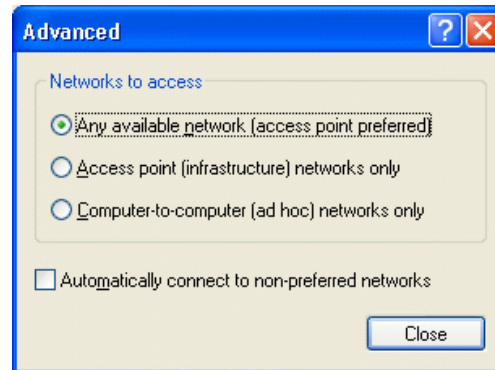
The default network type is **Any available network (access point preferred)**. In this network type, your device will connect to any access points or wireless LAN card/adapters (Ad Hoc mode) available in the air.



The access point always demands higher connection attempt priority.

After you complete the advanced setting, your wireless station will then connect to your desired network, and the connected network also displays in the **Available networks** list.

The following illustration is an example of the advanced settings that appear in the **Advanced** window of the **Wireless Networks** tabbed page.



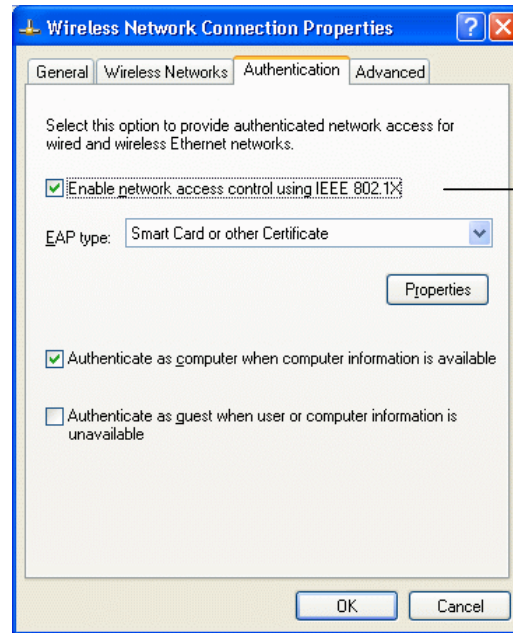
### To configure authentication settings

Use the **Authentication** tabbed page in the **Wireless Network Connection Properties** window to configure the authentication settings of your wireless LAN card/adapter.



The most important setting for the wireless LAN card/adapter is to *disable* the **Enable network access control using IEEE802.1X** option to ensure successful connection between the wireless LAN card/adapters and access points or other wireless LAN card/adapters (Ad Hoc mode). Otherwise, if you do not disable this option, you may encounter some problems during connection. For the other settings, we recommend you keep the default settings to minimize the problems during connection.

The following illustration is an example of the authentication settings that display on the **Authentication** tabbed page of the **Wireless Network Connection Properties** window.



Be sure to clear the **Enable network access control using IEEE802.1X** check box to ensure a successful connection.

## Update the Device Driver

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Periodically, you may need to upgrade the driver on your wireless LAN card/adaptor when a newer driver version becomes available. Check the Scientific-Atlanta Web site for information about the latest driver upgrades. This section provides procedures for downloading and installing driver updates.

### Updating Device Drivers

Complete these steps to update your device drivers.

1. Log on to the Web site [www.sciatl.com/webstar](http://www.sciatl.com/webstar) and verify that a device driver update is available for your wireless LAN card/adaptor.
2. Is an update available?
  - If **yes**, go to step 3.
  - If **no**, you do not need to continue with this procedure.
3. Uninstall the wireless LAN card/adaptor as described in the previous section. Follow the steps listed there to uninstall the software and then remove the wireless LAN card/adaptor.
4. Follow the on-screen instructions, or refer to **Install the Windows Drivers**, earlier in this guide, for detailed instructions on installing the updated drivers.

## Configure the TCP/IP Protocol

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If your computer does not have the TCP/IP protocol properly configured, you need to configure the TCP/IP protocol. To configure the TCP/IP protocol, you need to have an Ethernet network interface card (NIC) with TCP/IP communications protocol installed on your system. TCP/IP is a communications protocol used to access the Internet. This section contains instructions for configuring the TCP/IP protocol for the wireless LAN card/adapter.



The IP address policy depends on your wireless network. You should configure your TCP/IP protocol as instructed by your cable service provider.

### Configuring TCP/IP Protocol

Complete these steps to configure the TCP/IP protocol on your system.

1. Click **Start**, select **Settings**, and choose **Control Panel**.
2. Double-click the **Network** icon in the Control Panel window.
3. Select the **Configuration** tab in the Network dialog box.
4. In the network components list, select the TCP/IP protocol of your wireless LAN card/adapter, for example, **TCP/IP->IEEE 802.11b Wireless LAN PC Card**, and then click **Properties**.

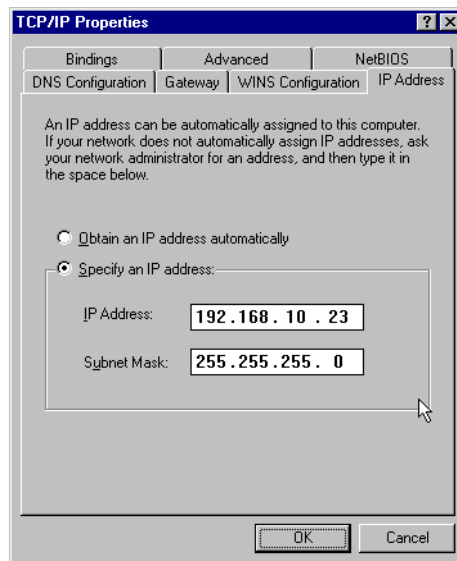


5. In the **TCP/IP Properties** window, click the **IP Address** tab, and then choose one of the following options in this section as required for your specific operating system.

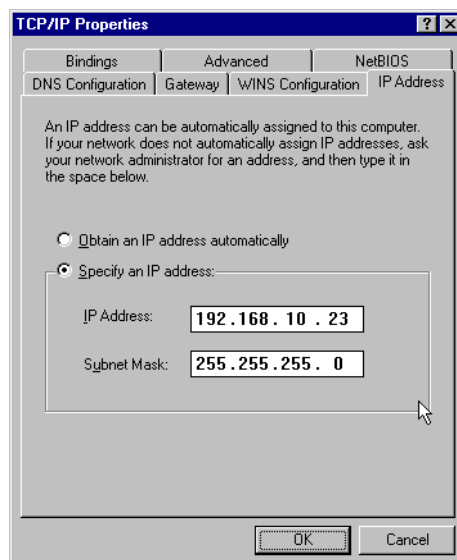
### To manually specify an IP address

Complete these steps if your network configuration requires you to manually specify an IP address on your computer.

1. In the **IP Address** box, type a valid four-component public or private IP address as required. If you use a private IP address, choose one of the following three blocks of IP addresses that are available for private networks:
  - 10.0.0.1 - 10.254.254.254
  - 172.16.0.1 - 172.31.254.254
  - 192.168.0.1 - 192.168.254.254



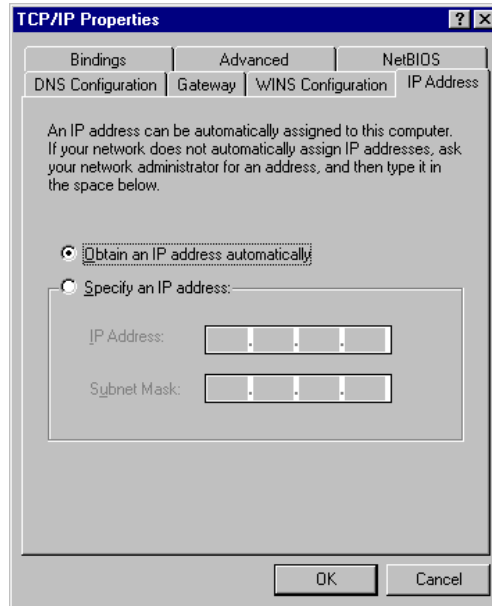
2. Type **255.255.255.0** in the **Subnet Mask** box.



### To receive an IP address automatically

Complete these steps if you want the network to assign an IP address to your computer automatically.

1. Select **Obtain an IP address automatically** in the **TCP/IP Properties** window.



2. Click **OK** to return to the **Network** dialog box, and then click **OK** in the **Network** dialog box to complete configuration. If your TCP/IP properties have been modified, you will be prompted to restart your computer. Click **Yes** to restart your computer for new settings to take effect.

## Uninstall the Wireless LAN Card/Adapter

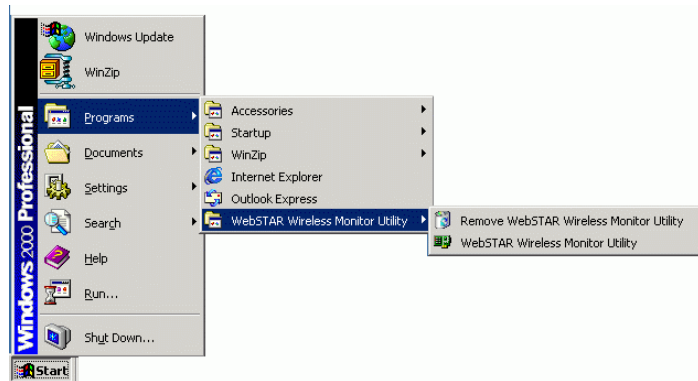
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Should you need to uninstall the wireless LAN card/adapter and the application software for any reason, you should first uninstall the associated software and then remove the hardware from your computer. This section provides procedures for uninstalling the software and for removing the hardware from your computer.

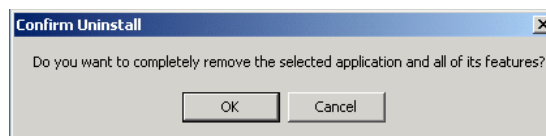
### Uninstalling the Wireless LAN Card Software

Complete these steps to uninstall the WebSTAR Wireless Monitor Utility software.

1. Close all programs that are currently running.
2. Click **Start** on the windows taskbar, and then choose **Programs**.

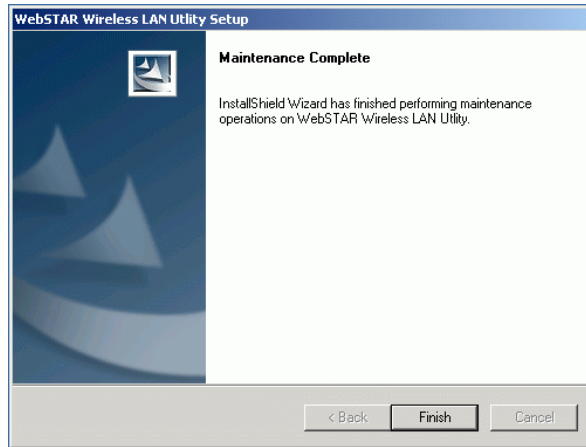



3. Select **WebSTAR Wireless Monitor Utility**, and then click **Remove WebSTAR Wireless Monitor Utility**. The following confirmation window opens.



4. Click **OK** to proceed with the uninstall procedure.

5. Click **Finish** to complete the uninstall procedure. Then go to **Disconnecting the Wireless LAN Card** or **Disconnecting Your PCMCIA Card**, next in this section.



 **CAUTION:**  
**Avoid damage to your computer. If you are using Windows 98 or Windows ME, right-click the WebSTAR Wireless Monitor Utility icon on the Windows taskbar and select Exit. The icon will disappear from the Windows taskbar. Then you can remove the wireless LAN card.**

## Disconnecting the Wireless LAN Card

Verify that you have uninstalled the software before you disconnect the wireless LAN card/adaptor. The wireless LAN card/adapters comply with the PCMCIA/USB standard that allows you to connect and disconnect devices to and disconnect devices from a computer even while the computer is powered on. Choose one of the following options depending on your type of wireless LAN card/adaptor:

- For a USB wireless adapter, simply remove the USB connector from the USB port on the computer
- For a PCMCIA card, follow the standard Windows procedure for disconnecting a PCMCIA device from the computer. This standard windows procedure follows next in this section.

## Disconnecting Your PCMCIA Card

Complete these steps to disconnect your PCMCIA card from your computer.

1. Right-click the PCMCIA icon on the Windows taskbar and then click **Adjust PC Card Properties**.
2. Select the wireless LAN card you want to remove in the **PC Card (PCMCIA) Properties** window, and then click **Stop**.
3. When the confirmation message appears notifying you that it is safe to remove the device click **OK**, and then remove the wireless LAN card from your computer.
4. Click **OK** to close the **PC Card (PCMCIA) Properties** window and exit this procedure.



## Troubleshooting

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This section provides tips for troubleshooting your wireless LAN card/adaptor.

### Radio Interference

Try the following procedures to reduce or eliminate radio interference from your network:

- Verify that all connections are secure and that the cables are not damaged.
- Increase the distance between the wireless computers and the device causing the radio interference.
- Plug the computer equipped with the wireless LAN card/adaptor into an outlet on a different electrical circuit from that being used by the affecting device.
- Do not place the computer with the wireless LAN card/adaptor near the microwave oven and large metal objects.
- Remove and reinstall the wireless LAN card/adaptor following the procedures provided earlier in this guide.
- Consult the dealer or an experienced radio technician for help.

### Card Not Detected

Try the following troubleshooting procedures if the wireless Ethernet client is not detected on the network:

- Verify that the wireless LAN card/adaptor is properly inserted in the PCMCIA slot or the USB port.
- Verify that the PCMCIA slot or USB port in your computer is operating correctly.
- Contact your dealer for additional testing if you believe there is a hardware problem with your wireless LAN card/adaptor.

### Cannot Connect to Another Wireless LAN Card

Try the following troubleshooting procedures if you cannot connect to another wireless Ethernet LAN card from your computer:

- Verify that the SSID is the same for all computers that have a wireless LAN card/adaptor.
- If your computer is not recognizing configuration changes, restart your computer.
- If you are using Ad Hoc mode, verify that the **Log on to Windows NT domain** check box is not selected in the **Client for Microsoft Networks Properties** dialog box on the **Network Configuration** tabbed page.
- Verify that the **IP Address** and **Subnet Mask** settings on the **Network Configuration** tabbed page in the **TCP/IP Properties** dialog box are correct.

## **Poor Link Quality**

Verify the following conditions if the Link Quality display remains in the **Poor** range:

- Radio interference.
- Distance between wireless LAN card/adaptor and the access point is too great. Decrease the distance between the wireless LAN card/adaptor and access point or another wireless LAN card/adaptor.

## **Cannot Connect to Access Point**

Verify the following possible causes if you cannot connect to the access point:

- Verify that all physical connections related to the wireless LAN card/adaptor and access point are secure and correct.
- Verify that the SSID for the wireless LAN card/adaptor is the same as the access point.
- Verify that the privacy type is the same as that of the access point.
- Verify that the Default Key is the same for both computers.


## Technical Specifications

This section provides the technical specifications for your wireless LAN card/adapter.



Specifications are subject to change without notice.

### Software Specifications

Specification	Parameter
<b>Standards Compliance</b>	<ul style="list-style-type: none"> <li>• IEEE 802.11 / 802.11b Standard</li> <li>• PCMCIA v2.1 Standard (wireless LAN PCMCIA Card)</li> <li>• USB 1.1 Compliant (wireless LAN USB Card)</li> </ul>
<b>Operation Modes</b>	<ul style="list-style-type: none"> <li>• Ad Hoc mode</li> <li>• Infrastructure mode</li> </ul>
<b>Security Features</b>	<ul style="list-style-type: none"> <li>• SSID network identification for security</li> <li>• 64-bit and 128-bit WEP data encryption and decryption</li> </ul>
<b>Monitor and Configuration</b>	<ul style="list-style-type: none"> <li>• Reliable and robust monitor and configuration utilities</li> <li>• Dynamic configuration</li> <li>• Network traffic statistics gathering</li> <li>• Clear LED indicators for real time monitoring of current network status</li> </ul>
<b>Device Driver and Configuration Utility</b>	<ul style="list-style-type: none"> <li>• A PCMCIA NDIS 5.0 mini-port driver running on Windows 98/98SE/ME/2000/XP platforms(wireless LAN PCMCIA Card)</li> <li>• A USB NDIS 5.0 mini-port driver running on Windows 98(SE)/ME/2000/XP platforms(wireless LAN USB Card)</li> <li>• A monitor and configuration utility running on Windows 98/98SE/ME/2000 platform</li> </ul> <p> Under Windows XP, use the Windows XP built-in monitor and configuration utility.</p>

## Hardware Specifications

Specification	Parameter
<b>Interface</b>	<ul style="list-style-type: none"> <li>• One 2.4 GHz RF interface for wireless LAN transmission</li> <li>• Wireless LAN PCMCIA Card; one PCMCIA interface</li> <li>• Wireless LAN USB Card: one USB connector</li> </ul>
<b>Radio Characteristics</b>	<ul style="list-style-type: none"> <li>• Frequency Band: 2.400 ~ 2.4835 GHz ISM Band (subject to local regulations)</li> <li>• Spreading: Direct Sequence Spread Spectrum (DSSS)</li> <li>• Modulation: <ul style="list-style-type: none"> <li>– CCK: 11 Mbps and 5.5 Mbps</li> <li>– DQPSK: 2 Mbps</li> <li>– DBPSK: 1 Mbps</li> </ul> </li> <li>• Number of channels: <ul style="list-style-type: none"> <li>– 11 Channels (USA, Canada)</li> <li>– 13 Channels (Europe)</li> <li>– 14 Channels (Japan)</li> </ul> </li> <li>• Channel Spacing: 5 MHz</li> <li>• Data Rate: 11 Mbps / 5.5 Mbps / 2 Mbps / 1 Mbps</li> <li>• Antenna: <ul style="list-style-type: none"> <li>– Wireless LAN PCMCIA card – two internal antennas</li> <li>– Wireless LAN USB card: one external antenna</li> </ul> </li> <li>• Transmit Power: <ul style="list-style-type: none"> <li>– 17 dBm (typical) Wireless LAN PCMCIA card</li> <li>– 17 dBm (typical) Wireless LAN USB card (R)</li> <li>– 12 dBm (typical) wireless LAN USB card (I)</li> </ul> </li> <li>• Receiver Sensitivity: <ul style="list-style-type: none"> <li>– -80 dBm @ FER &lt; 8% (Wireless LAN PCMCIA card)</li> <li>– -80 dBm @ FER &lt; 8% (Wireless LAN USB card (R))</li> <li>– -80 dBm @ FER , 8% Wireless LAN USB card (I)</li> </ul> </li> </ul>

Specification	Parameter
<p><b>Power Requirements</b></p>	<ul style="list-style-type: none"> <li>• Power Consumption                             <ul style="list-style-type: none"> <li>– Wireless LAN PCMCIA card:                                     <ul style="list-style-type: none"> <li>– Receive mode: 220 mA</li> <li>– Transmit mode: 440 mA</li> <li>– Doze mode: TBD</li> </ul> </li> <li>– Wireless LAN USB card (R) :                                     <ul style="list-style-type: none"> <li>– Receive mode: 250 mA</li> <li>– Transmit mode: 420 mA</li> <li>– Doze mode: TBD</li> </ul> </li> <li>– Wireless LAN USB card (I) :                                     <ul style="list-style-type: none"> <li>– Receive mode: 322 mA</li> <li>– Transmit mode: 382 mA</li> <li>– Standby mode: TBD</li> <li>– Sleep mode: TBD</li> </ul> </li> </ul> </li> </ul>
<p><b>Operating Environment Requirements</b></p>	<ul style="list-style-type: none"> <li>• Temperature                             <ul style="list-style-type: none"> <li>– Wireless LAN PCMCIA card:                                     <ul style="list-style-type: none"> <li>– Operating temperature 0°C to 55°C (32°F to 131°F)</li> <li>– Storage temperature -10°C to 65°C (14°F to 149°F)</li> </ul> </li> <li>– Wireless LAN USB card (R) :                                     <ul style="list-style-type: none"> <li>– Operating temperature 0°C to 55°C (32°F to 131°F)</li> <li>– Storage temperature -10°C to 80°C (14°F to 176°F)</li> </ul> </li> <li>– Wireless LAN USB card (I) :                                     <ul style="list-style-type: none"> <li>– Operating temperature 0°C to 55°C (32°F to 131°F)</li> <li>– Storage temperature -20°C to 80°C (-4°F to 176°F)</li> </ul> </li> </ul> </li> <li>• Humidity                             <ul style="list-style-type: none"> <li>– 5% to 80% (non-condensing)– Wireless LAN PCMCIA card</li> <li>– 5% to 80% (non-condensing)– Wireless LAN USB card (R)</li> <li>– 5% to 95% (non-condensing)– Wireless LAN USB card (I)</li> </ul> </li> </ul>

Specification	Parameter
<b>LED Indicators (left to right on the front panel)</b>	<ul style="list-style-type: none"> <li>• Activity (Green)</li> <li>• Power (Green)</li> </ul>
<b>PCMCIA Specification—Wireless LAN PCMCIA card</b>	<ul style="list-style-type: none"> <li>• PCMCIA v2.1 Standard</li> <li>• Plug and Play</li> <li>• Hot Swapping</li> </ul>
<b>USB Specification—Wireless LAN USB card</b>	<ul style="list-style-type: none"> <li>• USB 1.1 compliant</li> <li>• USB Slave</li> <li>• Plug and Play</li> <li>• Hot Swapping</li> </ul>
<b>Physical—Wireless LAN PCMCIA card</b>	<ul style="list-style-type: none"> <li>• Form Factor: PCMCIA (16-bit) Type II PC card</li> <li>• PCB dimensions: 118.20 mm (L) x 54.00 mm (W) x 0.76 mm (H)</li> <li>• PCB weight: 46g</li> </ul>
<b>Physical—Wireless LAN USB card (R) and Wireless LAN USB card (I)</b>	<ul style="list-style-type: none"> <li>• Dimensions: 79.52 mm (L) x 48.00 mm (W) x 0.80 mm (H)</li> </ul>
<b>Safety and Regulatory Approvals</b>	<ul style="list-style-type: none"> <li>• FCC</li> <li>• VCCI</li> <li>• CE</li> <li>• TELEC &amp; JATE</li> </ul>

## Glossary

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- 10BaseT** An IEEE standard (802.3) for operating 10 Mbps Ethernet networks (LANs) with twisted pair cabling and a wiring hub.
- Access Point** An inter-networking device that seamlessly connects wired and wireless networks. Access points, when combined with a distributed system, support the creation of multiple radio cells that enable roaming throughout a facility.
- Ad Hoc** A network composed solely of stations within mutual communication range of each other (no access point connected).
- BSS** Basic Service Set. A set of stations controlled by a single coordination function.
- Channel** A medium used to pass protocol data units that can be used simultaneously in the same volume of space by other channels of the same physical layer, with an acceptably low frame error ratio due to mutual interference.
- Encapsulated** An Ethernet address mode that treats the entire Ethernet packet as a whole and places it inside an 802.11 frame along with a new header.
- ESS** Extended Service Set. A set of one or more interconnected Basic Service Sets (BSSs) and integrated Local Area Networks (LANs) can be configured as an Extended Service Set.
- Ethernet** The most widely used medium access method, which is defined by the IEEE 802.3 standard. Ethernet is normally a shared media LAN; i.e., all the devices on the network segment share total bandwidth. Ethernet networks operate at 10 Mbps using CSMA/CD to run over 10BaseT cables.
- Gateway** A network component that acts as an entrance to another network.
- IEEE 802.11** The IEEE 802.xx is a set of specifications for LANs from the Institute of Electrical and Electronic Engineers (IEEE). Most wired networks conform to 802.3, the specification for CSMA/CD-based Ethernet networks or 802.5, the specification for token ring networks. 802.11 defines the standard for wireless LANs encompassing three incompatible (non-interoperable) technologies: Frequency Hopping Spread Spectrum (FHSS), Direct Sequence Spread Spectrum (DSSS), and Infrared. IEEE standards ensure interoperability between systems of the same type.
- Infrastructure** A wireless network centered about an access point. In this environment, the access point not only provides communication with the wired network but also mediates wireless network traffic in the immediate neighborhood.
- IP** Internet Protocol. The standard protocol within TCP/IP that defines the basic unit of information passed across an Internet connection by breaking down data messages into packets, routing and transporting the packets over network connections, then reassembling the packets at their destination. IP corresponds to the network layer in the ISO/OSI model.

- IP Address** An IP address is a 32-bit number that identifies each sender or receiver of information sent across the Internet. An IP address has two parts: the identifier of a particular network on the Internet and an identifier of the particular device (which can be a server or a workstation) within that network.
- ISP** Internet Service Provider. An organization that provides access to the Internet. Small ISPs provide service via modem and ISDN while the larger ones also offer private line hookups (T1, fractional T1, etc.).
- LAN** Local Area Network. A communications network that serves users within a defined geographical area. The benefits include the sharing of Internet access, files, and equipment, such as printers and storage devices. Special network cabling (10BaseT) is often used to connect the PCs together.
- NAT** Network Address Translation. The translation of an Internet Protocol address (IP address) used within one network to a different IP address known within another network. One network is designated the internal network and the other is the external. The internal network then appears as one entity to the outside world.
- Radio Frequency** RF, Terms: GHz, MHz, Hz —The international unit for measuring frequency is Hertz (Hz), equivalent to the older unit of cycles per second. One megahertz (MHz) is one million Hertz. One gigahertz (GHz) is one billion Hertz. The standard U.S. electrical power frequency is 60 Hz. The AM broadcast radio frequency band is 0.55–1.6 MHz. The FM broadcast radio frequency band is 88–108 MHz. Wireless 802.11 LANs operate at 2.4 GHz.
- SSID** Service Set ID. A group name shared by every member of a wireless network. Only client PCs with the same SSID are allowed to establish a connection.
- Subnet Mask** A value that defines whether your computer communicates only within your LAN or communicates outside of your LAN, where it is routed out to the rest of the Internet. A Subnet Mask that has the same first three components (for example, 255.255.255.0) is the routing pattern for a Class C address.
- TCP** Transmission Control Protocol. The standard transport level protocol that provides the full duplex, stream service on which many applications' protocols depend. TCP allows a process on one machine to send a stream of data to a process on another. Software implementing TCP usually resides in the operating system and uses the IP to transmit information across the network.
- WEP** Wired Equivalent Privacy. The optional cryptographic confidentiality algorithm specified by 802.11. The algorithm is being used to provide data confidentiality that is subjectively equivalent to the confidentiality of a wired LAN medium that does not employ cryptographic techniques to enhance privacy.



## Notices

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## Regulatory Compliance

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### FCC Part 15 Declaration of Conformity (DoC)

**FCC Declaration of Conformity**

This device complies with *Part 15 of FCC Rules*. Operation is subject to the following two conditions: 1) the device may not cause harmful interference, and 2) the device must accept any interference received, including interference that may cause undesired operation.

WebSTAR Model DPW700 PCMCIA Wireless LAN Card  
WebSTAR Model DPW730 USB Wireless Adapter

Manufactured by: Scientific-Atlanta, Inc.; 5030 Sugarloaf Parkway;  
Atlanta, Georgia 30042; USA  
Telephone US and Canada: **1-800-283-2636** (toll-free)  
Telephone outside US: **1-800-236-2200** (toll-free)  
Telephone within US: **+1-800-236-1077** (direct)

### FCC Rules and Regulations – Part 15

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, 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:

- Relocate your wireless LAN equipped laptop computer
- Increase the separation between the wireless LAN equipped laptop computer and other electronics
- Connect the wireless LAN equipped laptop computer into an outlet on a circuit different from that of other electronics
- Consult the dealer or an experienced radio/TV technician for assistance

### FCC Radiation Exposure Statement

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

## For Information

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### If You Need Technical Assistance

If you need technical assistance, contact your cable service provider.



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