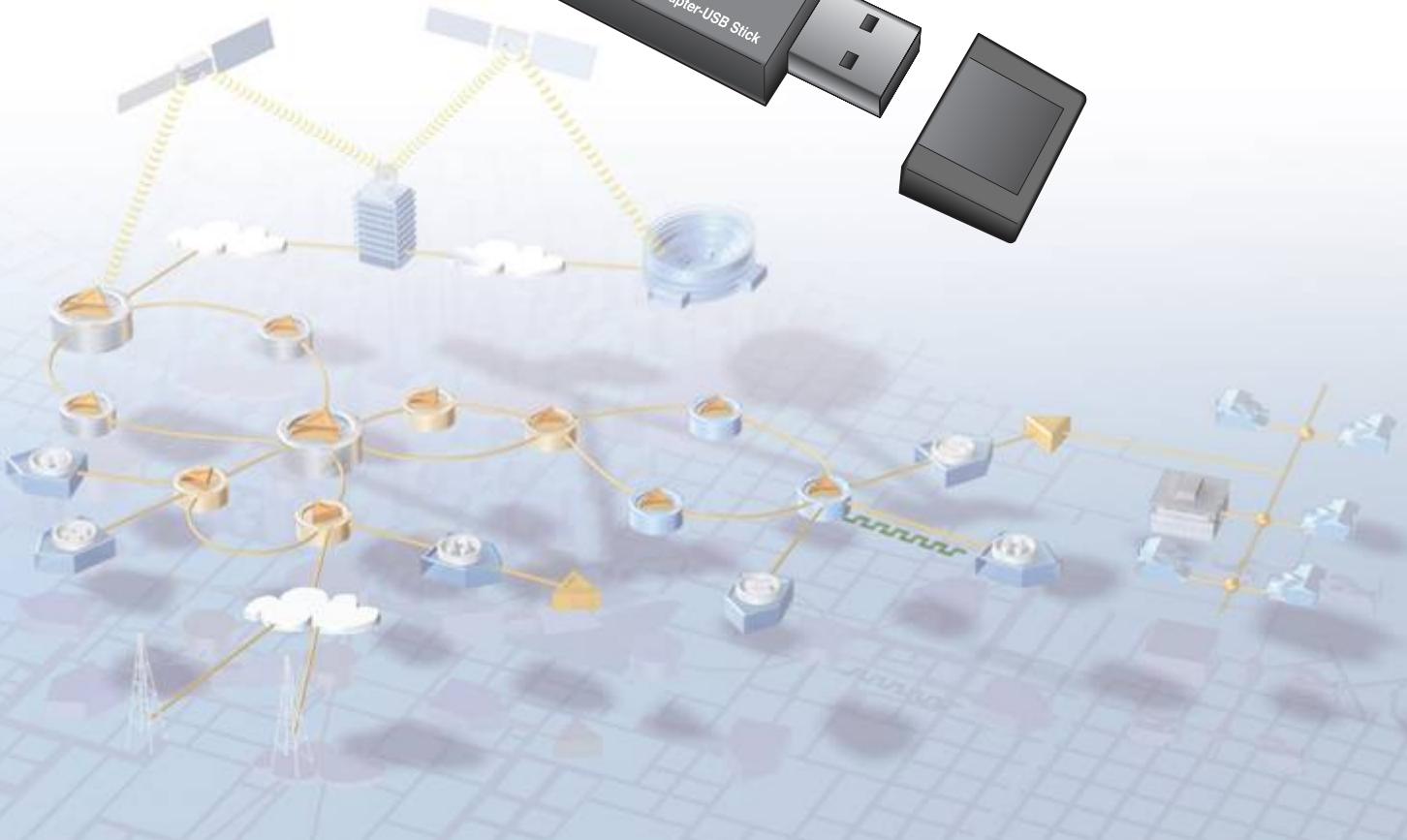


WebSTAR Model DPW939 USB Wireless LAN Adapter

User's Guide



WebSTAR™ Model DPW939™ USB Wireless LAN Adapter User's Guide

Introduction

Thank you for choosing the WebSTAR™ Model DPW939™ USB Wireless local area network (LAN) Adapter (DPW939)! The WebSTAR DPW939 USB Wireless LAN Adapter allows you to experience the speed and convenience of wireless networking. The WebSTAR DPW939 USB Wireless LAN Adapter is a compact easy-to-install and use USB wireless LAN adapter. Implementing the new IEEE 802.11g standard for wireless local area network (WLAN), the DPW939 is capable of up to 54 Mbps data transmission rate. This capability makes the DPW939 a cost-effective solution for both home and small office wireless networking. The DPW939 is also backward compatible with the earlier IEEE 802.11b standard thereby allowing seamless interfacing of *both* wireless LAN (WLAN) standards.

The DPW939 supports several wireless network configurations including Infrastructure and Ad-hoc networks. This support gives you flexibility and versatility for your existing or future wireless network configurations. To provide efficient security to your wireless communication, the DPW939 comes with a 64-bit/128-bit Wired Equivalent Privacy (WEP) encryption and wired fidelity (WiFi) Protected Access (WPA) features. With these and many more outstanding features, the DPW939 is sure to keep you ahead in the world of wireless computing.

This guide provides procedures and recommendations for installing, configuring, operating, and troubleshooting the DPW939 for Internet access and for high-speed wireless networking for your home or office. Refer to the appropriate section in this guide for the specific information you need for your situation. Contact your Internet service provider for further assistance.

Benefits and Features

The DPW939 also offers the following additional benefits and features:

- Facilitates a high-speed wireless Internet connection that energizes your online experience, and makes sharing files and photos with your family and friends hassle free
- Features reliable data transfer rates of up to 54 Mbps
- Includes secure data transmission using WEP and WiFi Protected Access encryptions
- Supports an operating distance of up to 130 ft (40m) indoors and 1000 ft (310m) outdoors
- Provides support for both Infrastructure and Ad-hoc networks
- Utilizes USB power and a compact design for easy placement and use
- Includes a convenient extension cable with a built-in base
- Offers Plug and Play operation for uncomplicated set up and installation
- Features Microsoft Windows 98SE, ME, 2000, and XP compatibility
- Allows quick and easy access to wireless networks when traveling

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What's In The Carton?

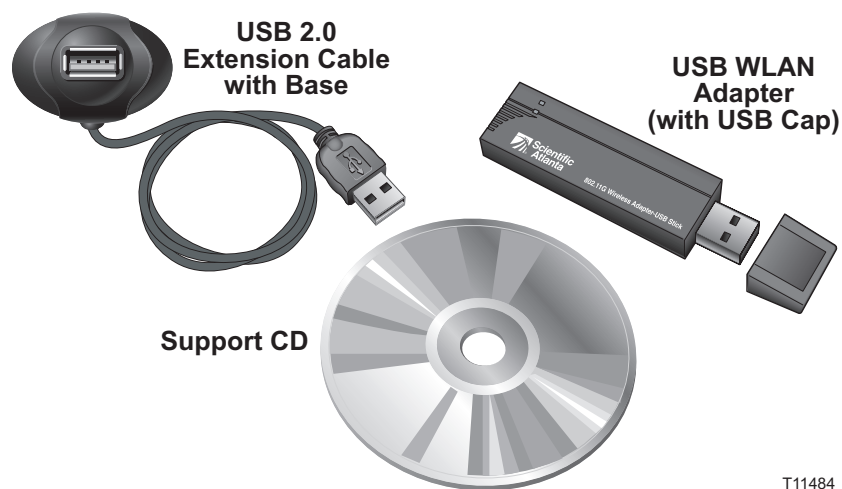
When you receive your WebSTAR DPW939 USB Wireless LAN Adapter, you should inspect the equipment and accessories to verify that each item is in the carton and that each item is undamaged. The carton contains the following items:

Package Contents

Verify that the following items are in your WebSTAR DPW939 USB Wireless LAN Adapter package.

- WebSTAR DPW939 USB Wireless LAN Adapter
- USB 2.0 extension cable with base
- Support CD

Note: Unless otherwise specified, the term “device” in this User’s Guide, refers to the WebSTAR DPW939 USB Wireless LAN Adapter.



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

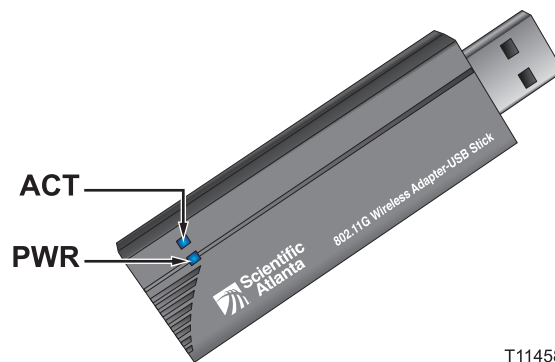
Additional cables and other equipment needed for wired or wireless networking must be purchased separately. Contact your Internet service provider to inquire about the additional equipment and cables you may need.

About the WebSTAR Model DPW939 USB Wireless LAN Adapter

This section describes the physical features of the WebSTAR DPW939 USB Wireless LAN Adapter and presents a detailed description of the LED indicators.

LED Indicators

The WebSTAR DPW939 USB Wireless LAN Adapter has Activity (ACT) and Power (PWR) LED indicators. Refer to the following illustration and table for LED function and indications.



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LED	Status	Indication
ACT	Blinking	The device is transmitting or receiving data packets.
	Off	There is no wireless data activity.
PWR	On	The device is receiving power from the USB port.
	Off	The device is not receiving power from the USB port. The device may be disconnected or the computer is OFF.

Recommended Network Settings

The WebSTAR DPW939 USB Wireless LAN Adapter may be used in both Ad-hoc and Infrastructure network modes. The following sections describe how the device functions in these network modes.

The WebSTAR DPW939 USB Wireless LAN Adapter connects to one of the following:

- A wireless device (Ad-hoc network mode)
- An access point (Infrastructure network mode)

Ad-hoc network mode

When in an Ad-hoc network, the WebSTAR DPW939 USB Wireless LAN Adapter connects to another wireless device. No access point (AP) is present in this wireless environment. Ad-hoc mode is also referred to as peer-to-peer mode or an Independent Basic Service Set (IBSS). Ad-hoc is useful for establishing a network where wireless infrastructure does not exist or where services are not required.

Infrastructure network mode

When in an Infrastructure network, the wireless network is centered on an access point (AP) that provides a central link for wireless clients to communicate with each other or with a wired network. In this configuration, the WebSTAR DPW939 USB Wireless LAN Adapter connects to an AP using a single or multiple Internet protocol (IP) to establish connection to a wired or wireless LAN.

Note: Determine your network settings before installing the device in order to take advantage of all its features.

Operating Range

The WebSTAR DPW939 USB Wireless LAN Adapter range is dependent on the operating environment. Every home or office layout varies in obstacles, barriers, or wall types that may reflect or absorb radio signals. For example, two 802.11b devices in an open space may achieve an operating distance of up to 1000 meters, while the same devices may only achieve up to 300 meters of range when used indoors.

The device automatically adjusts the data rate to maintain an operational wireless connection. A wireless device that is close to an AP may operate at higher speeds than a device far from the AP. You can configure the data rates that a device uses. If you limit the range of data rates available to the WebSTAR DPW939 USB Wireless LAN Adapter, you may reduce the effective range of the wireless LAN coverage.

Site Survey

A site survey utility provided with the WebSTAR DPW939 USB Wireless LAN Adapter analyzes the installation environment and provides users with recommendations for equipment and its placement. The optimum placement differs depending on the device design and specifications. Refer to **Locating Available Wireless Networks**, later in this guide for detailed procedures on using the site survey utility.

Roaming Information

Use the Mobile Manager utility to set up automatic roaming and network reconfiguration between different locations. Roaming allows you to change your location and still maintain communication between other devices within range that have compatible wireless PC cards installed. Roaming among different access points is controlled automatically to maintain the wireless connectivity at all times.

Tips on Roaming

- The DPW939 can only roam between APs of the same type.
- All computers with WebSTAR WLAN cards must have the same SSID as the access points to enable roaming.
- If encryption is enabled, all wireless clients must use the same encryption to establish connection.
- We strongly recommended that you perform a site survey using the WebSTAR DPW939 USB Wireless LAN Adapter utility to determine the best location for each wireless device.

Software and Hardware Installation

This section provides information on how to install the software and hardware for the WebSTAR DPW939 USB Wireless LAN Adapter.

System Requirements

Before installing the WebSTAR DPW939 USB Wireless LAN Adapter, make sure that your system's network equipment meets the following requirements:

- Intel Pentium or AMD system
- Minimum 64MB system memory
- Windows 98SE, ME, 2000, or XP operating system
- CD-ROM drive (for software installation)
- An available USB port (USB 2.0 recommended because USB 1.1 cannot achieve maximum wireless performance)

Device Installation

Follow these instructions (detailed later in this section) to install the WebSTAR DPW939 USB Wireless LAN Adapter.

1. Install the device utilities from the support CD.
2. Connect the device to your computer.

Important: You *must* install the WebSTAR DPW939 USB Wireless LAN Adapter drivers and utilities from the support CD *before* connecting the device to your computer.

Before You Proceed

Note the following guidelines before installing the WebSTAR DPW939 USB Wireless LAN Adapter:

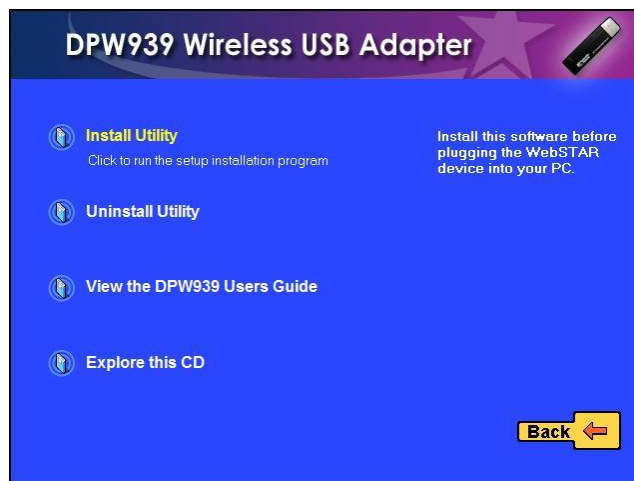
- Place the device on a flat, stable surface as far from the ground as possible.
- Keep the device clear from metal obstructions and away from direct sunlight to avoid damage to the device.
- Keep the device away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, and other industrial equipment to prevent signal loss.
- Install the device in a central area to provide ideal coverage for all wireless mobile devices.
- Install the device at least 20 cm from a person to insure that the product is operated in accordance with the RF Guidelines for Human Exposure adopted by the Federal Communications Commission.

To install the device drivers and utilities

1. Insert the support CD into the CD-ROM drive of your PC or laptop. The CD automatically loads and the 802.11b/g WebSTAR Wireless LAN installation window opens displaying three device installation options.

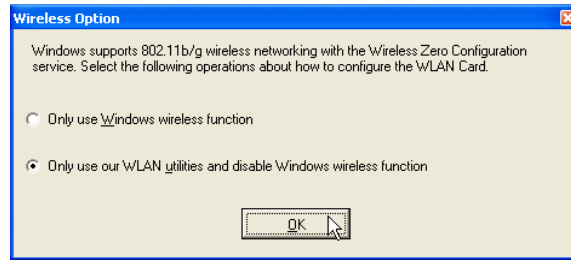


2. Select **DPW939 – Wireless USB Adapter**. The DPW939 Wireless USB Adapter installation window opens.



3. Click **Install Utility**.
Note: If Autorun is NOT enabled in your computer, browse the contents of the support CD and double-click the **Setup.exe** file to run the CD.
4. Follow the on-screen instructions. The device drivers and utilities are copied to your computer.
5. Restart your computer if prompted to do so.

Important: If the **Wireless Option** window opens, select **Only use our WLAN utilities and disable Windows wireless function**. Then, click **OK**.

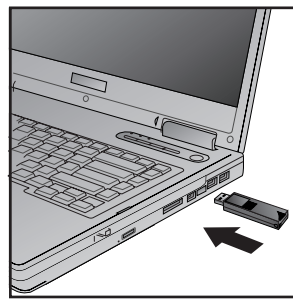


To install the device

After you have installed the Utility, insert the DPW939 into any USB port.

Notebook PC: Insert the device into any USB port using the correct orientation.

Desktop PC: A USB 2.0 extension cable with base is provided. Plug the extension cable into a USB port before inserting the DPW939.

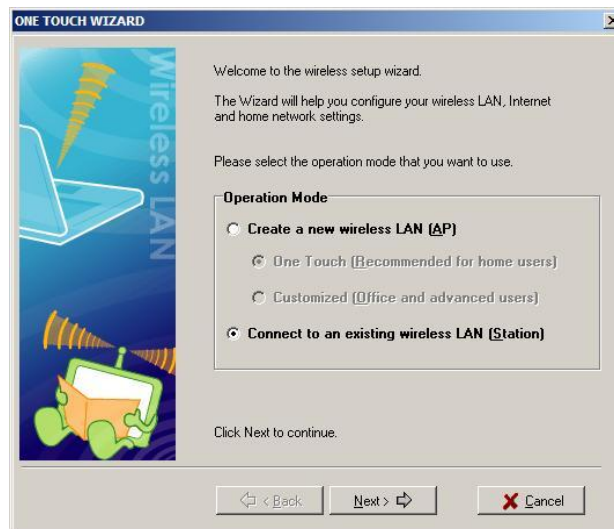


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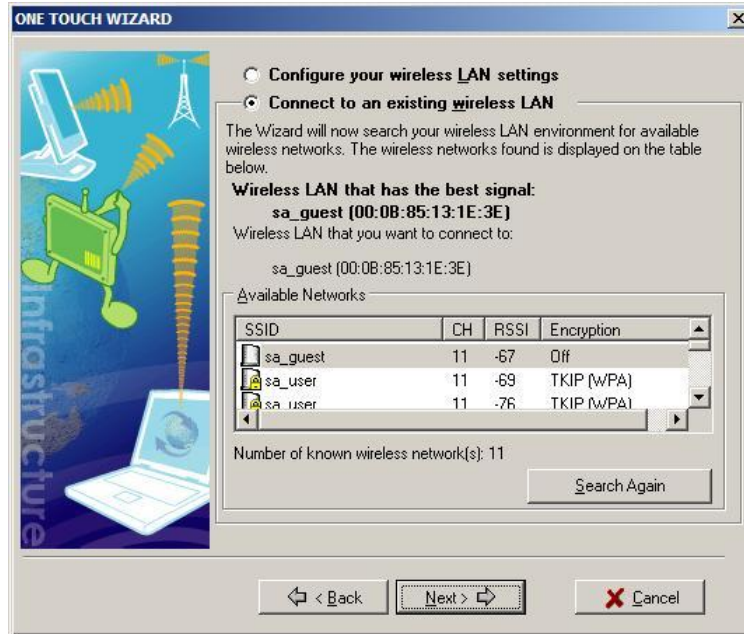


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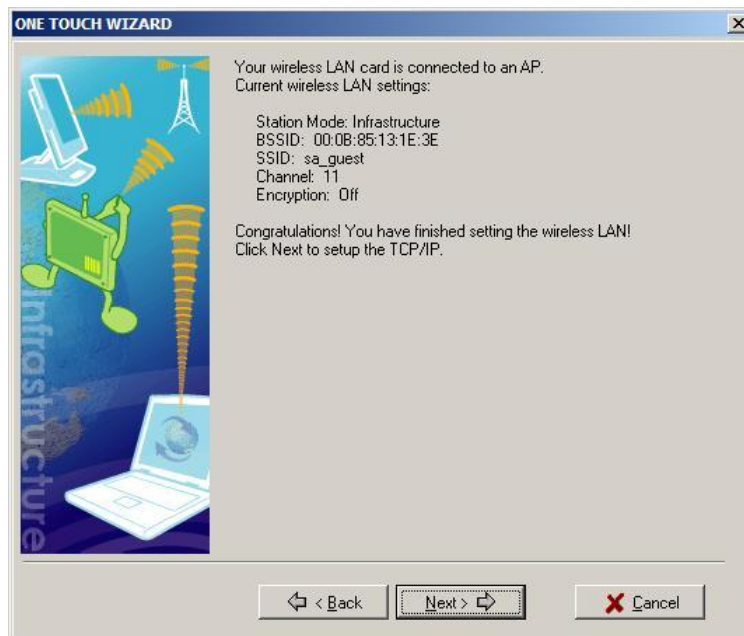
1. Double-click on the **WLAN Control Center** icon on your desktop. After a few moments, the One Touch Wizard window opens displaying operation mode options. Select the option you want to use and click **Next**.



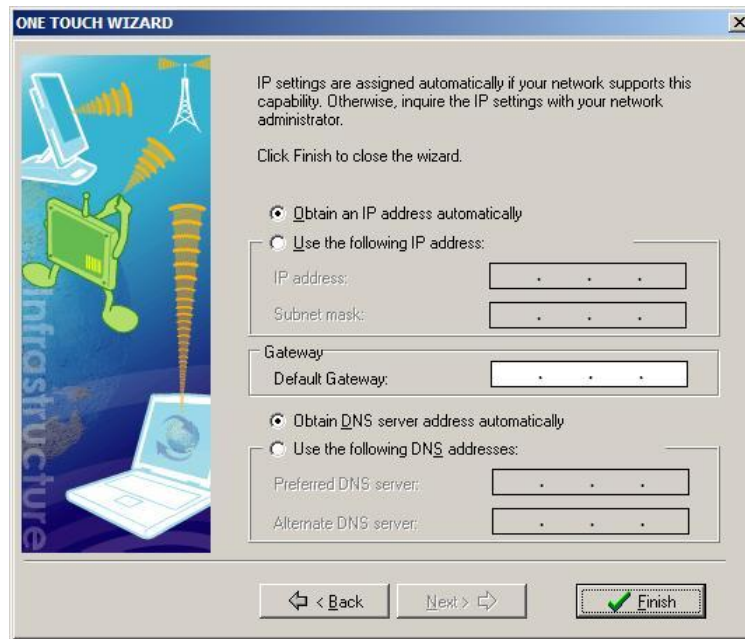
2. If you select **Connect to an existing wireless LAN (Station)**, the following window opens. Click **Next**, then go to step 3. If you select **Create a new wireless LAN (AP)**, go to **To create a new wireless LAN**, next in this section.



3. The following window opens. Click **Next**.



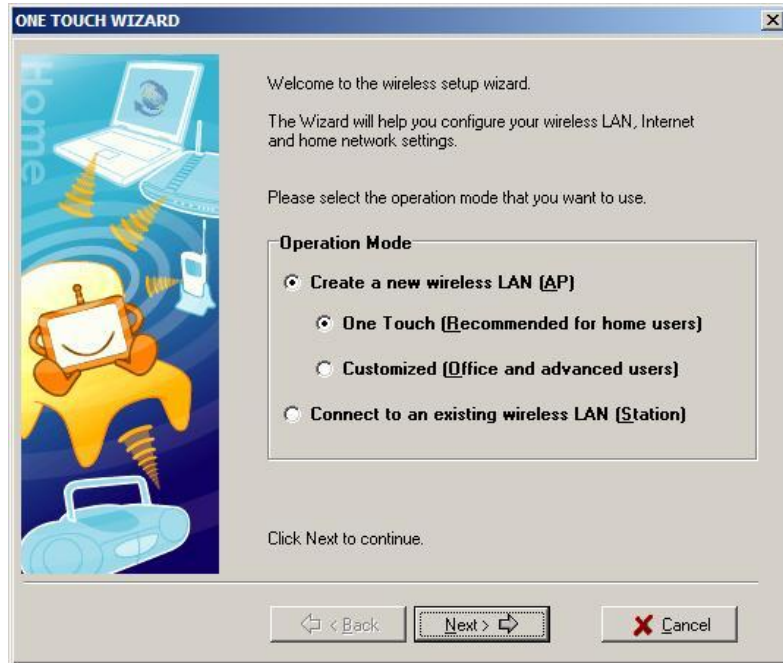
- The following window opens. Verify that BOTH **Obtain an IP address automatically** and **Obtain DNS server address automatically** are selected. If they are not selected, select each option. Then, click **Finish**.



- After completing the installation, you must configure the WebSTAR DPW939 USB Wireless LAN Adapter using the **Wireless Settings** option from the Control Center right-click menu. Go to **Control Center Right-Click Menu**, later in this guide.

To create a new wireless LAN

1. To create a new wireless LAN, select **Create a new wireless LAN (AP)** in the One Touch Wizard window. Click **Next**.



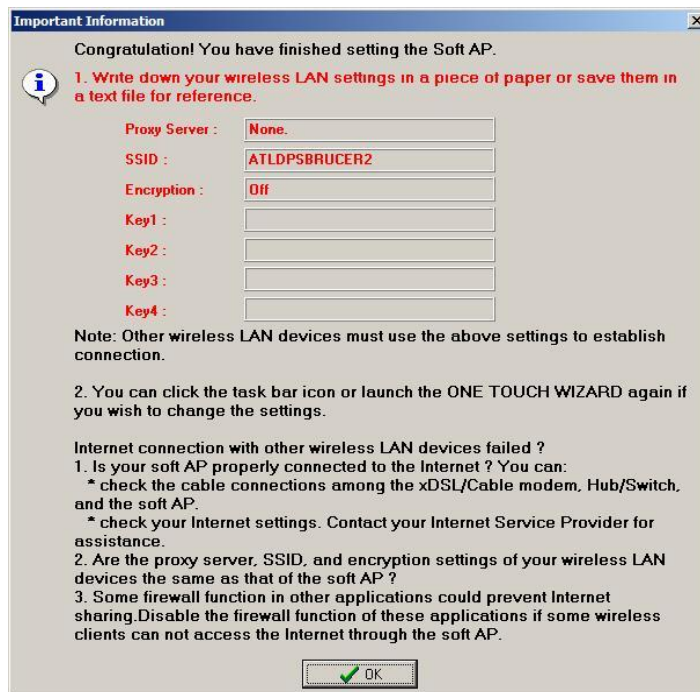
2. Verify that the SSID shown is correct, or type the correct SSID in the SSID field. Also select **Data encryption**, if desired, and then click **Next**.



- The following screen opens. If your setup is complete, click **Finish**. If you want to configure Internet Connection Sharing, click **Next**.



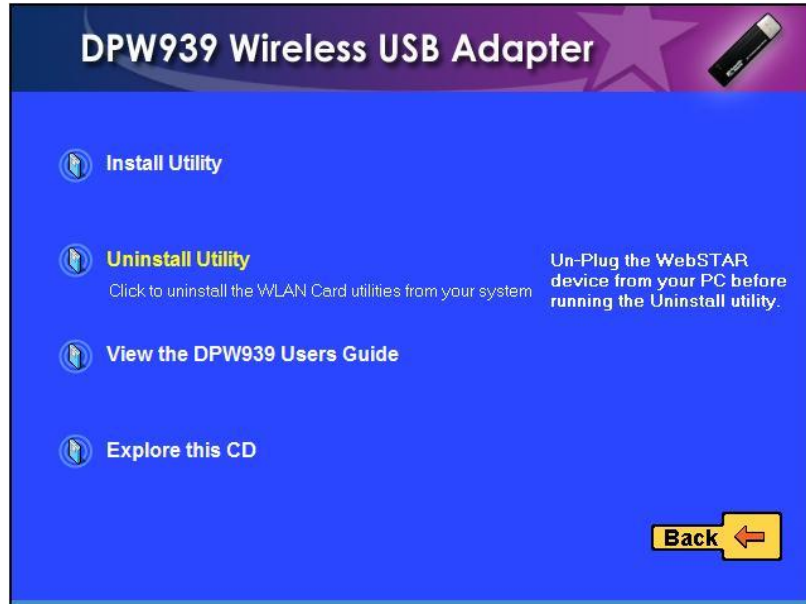
- The following screen opens when your setup is complete.



Additional support CD options

The following options are also available on the support CD:

- **Uninstall Utility**—Click this option to uninstall the WebSTAR DPW939 Wireless USB Adapter WLAN Card utilities from your system.




- **View the DPW939 User's Guide**—Click this option to view the DPW939 User's Guide. The User's Guide is in Adobe PDF format. An Adobe Reader utility is included on the CD for your convenience. You can also copy the User's Guide to your PC for future use.
- **Explore this CD**—Click this option to explore the support CD contents.

Monitoring and Configuring the WebSTAR DPW939 USB Wireless LAN Adapter

This section provides information on how to monitor and configure the WebSTAR DPW939 USB Wireless LAN Adapter using the Control Center utility.

Launching the Control Center











The Control Center utility is a management software that launches applications and configures network settings. The Control Center starts automatically when

the system boots and displays the Control Center icon  in the Windows taskbar. The Control Center icon serves both as an application launcher and as an indicator of signal quality and Internet connection.




About the Control Center Icon

The Control Center icon indicates the quality of link to the access point and connection to the Internet. Refer to the following tables for icon indications in both Infrastructure and Ad-hoc networks.


Infrastructure network (wireless LAN adapter linked to an access point)

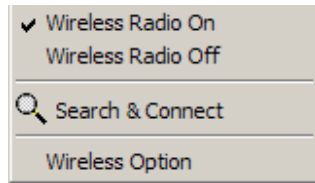
ICON	Indicates	ICON	Indicates
	Excellent link quality and connected to the Internet		Excellent link quality but not connected to the Internet
	Good link quality and connected to the Internet		Good link quality but not connected to the Internet
	Fair link quality and connected to the Internet		Fair link quality but not connected to the Internet
	Poor link quality but connected to the Internet		Poor link quality and not connected to the Internet
	Not linked but connected to the Internet		Not linked and not connected to the Internet.

Ad-hoc network (wireless LAN adapter linked to another Wi-Fi device)

ICON	Indicates
	The device is linked to another device
	The device is not linked to another device
	The device is connected to the Internet

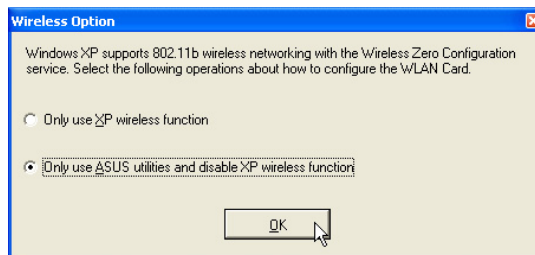
Control Center Left-Click Menu

Left clicking the Control Center icon  displays the left-click menu for the WebSTAR DPW939 USB Wireless LAN Adapter. The following illustration and list describes the options available from the Control Center left-click menu.




The left click menu shows if the wireless radio state is on (enabled) or off (disabled).

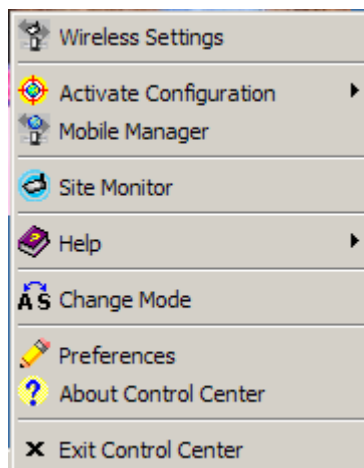
Search & Connect opens the Site Survey window that allows you to view available wireless networks that are within range.



Wireless Option opens the Wireless Option window that allows you to set your Windows XP wireless networking environment. The Wireless Option window appears when you select this option. Select **“Only use our WLAN utilities and disable Windows wireless function”** to utilize all WebSTAR DPW939 USB Wireless LAN Adapter features. Then, click **OK**.

Control Center Right-Click Menu

Right clicking the Control Center icon  displays the software and utilities that the WebSTAR DPW939USB Wireless LAN Adapter supports. The following illustration and list describes the utilities and features available from the Control Center right-click menu. A detailed description of each utility and feature follows later in this section.



Wireless Settings allows you to view the operational and connection status or to modify the wireless LAN adapter configuration.

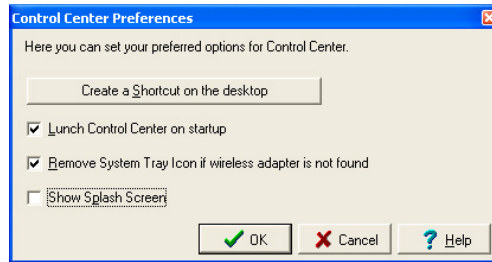
Activate Configuration allows you to select the wireless profile to use.

Mobile Manager allows you to launch the Mobile Manager utility.

Site Monitor allows you to launch the Site Monitor utility.

The **Help** menu guides you in using the Control Center and Wireless Settings utilities.

The **Change Mode** menu allows you to select between Station Mode and Soft Access Point Mode.



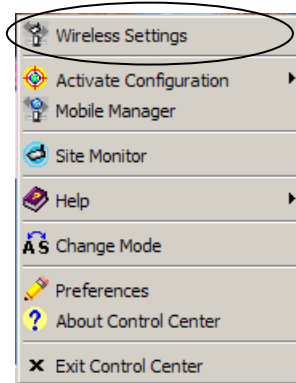
Preferences opens the Control Center Preference window that allows you to customize the Control Center Utility settings.




About Control Center opens the About Control Center window that displays the Control Center software version and copyright information.

Viewing or Modifying Wireless Settings

The **Wireless Settings** selection allows you to control the WebSTAR DPW939 USB Wireless LAN adapter. Use Wireless Settings to view the operational and connection status or to modify the wireless LAN adapter configuration.

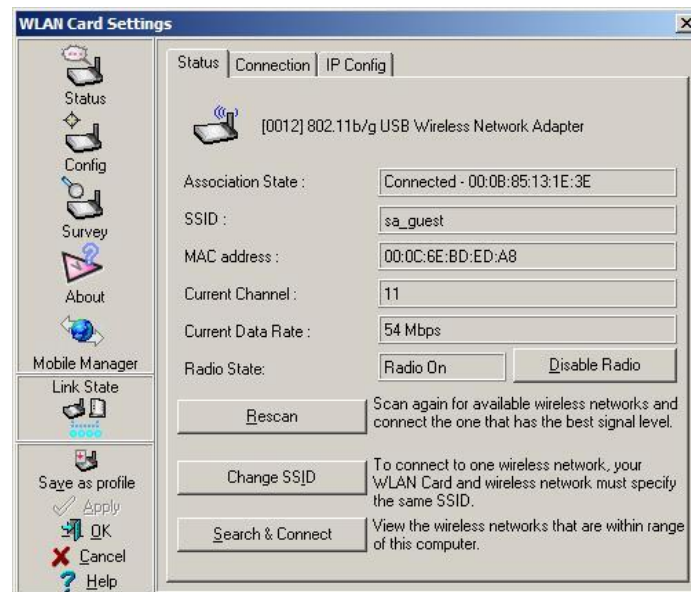


To view or modify wireless settings

Right-click the Control Center icon  and select **Wireless Settings** to display the WLAN Card Settings window. The WLAN Card Settings window opens.

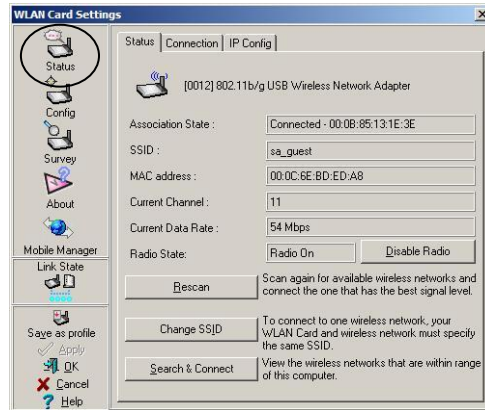
Displaying General Information

The WLAN Card Settings window includes icons, tabbed pages, and additional function keys that allow you to monitor and configure the DPW939. Click an icon in the window and then select the appropriate tab to display the individual tabbed pages. A detailed description of the screens and configuration options that display when you select each icon and each tab follows next in this section.



To display general information

The **Status** icon provides general information about the WebSTAR DPW939 USB Wireless LAN adapter. The following illustration and list describes the fields that display on the Status tab when you select the Status icon on the WLAN Card Settings window.



Association State – This field displays the connection status and MAC address of the network where the system is connected.

SSID (Service Set Identifier) – This field displays the SSID of the network to which the card is associated or is intending to join. The SSID is a group name shared by every member of a wireless network. Only client PCs with the same SSID are allowed to establish a connection.

MAC address – This field displays the hardware address of a device connected to a network.

Current Channel – This field displays the radio channel to which the card is currently tuned. The channel changes as the wireless LAN adapter scans the available channels.

Current Data Rate – This field displays the data transfer rate between the wireless LAN adapter and the access point.

Radio State – This field allows you to enable or disable the wireless radio state.

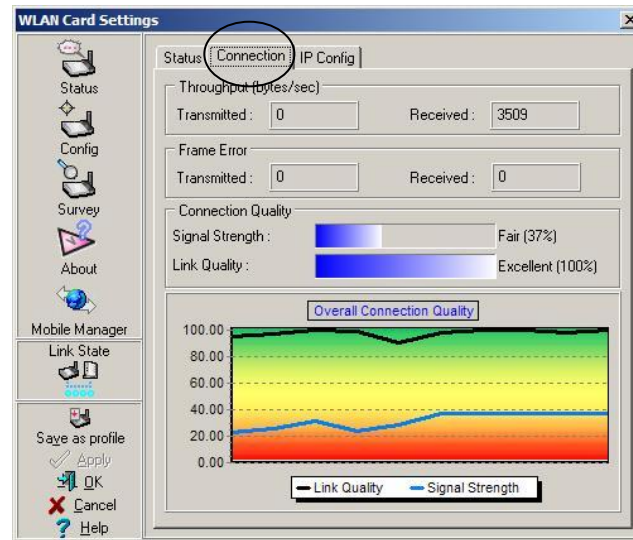
Rescan – Click to allow the wireless LAN adapter to scan available wireless networks and to connect to the network with the best signal quality.

Change SSID – Click to change the SSID. Clicking this button opens the Config-Basic window.

Search & Connect – Click to view all wireless networks within the range of your system. Clicking this button opens the Site Survey window.

To display connection status

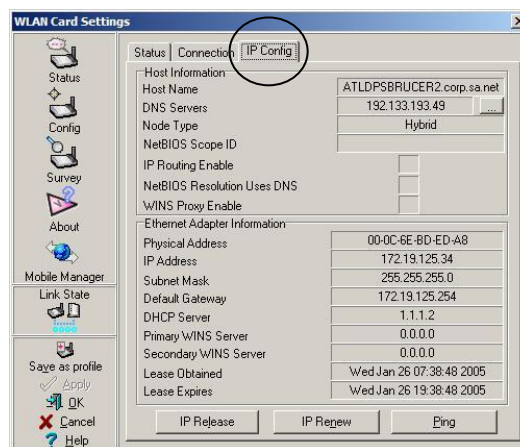
The **Connection** tab provides real-time information on connection throughput, frame errors, signal strength, link quality, and overall connection quality in an easy-to-view graphical representation. Refer to the **Troubleshooting** section, later in this guide, for additional information on using the connection status information shown in this window.



To verify network settings

The **IP Config** tab displays the current host and Ethernet adapter configurations. The IP Config tab also displays TCP/IP information including the IP address, subnet mask, default gateway, DNS, and Windows Internet Naming Service (WINS) configurations. Use the IP Config tab to verify your network settings.

The following illustration and list describes the function buttons that appear on the IP Config tab when you select the Status icon on the WLAN Card Settings window. Refer to the **Troubleshooting** section, later in this guide, for additional information about the functions shown in this window.



IP Release – Click to release (clear) the DHCP IP address for the wireless LAN adapter.

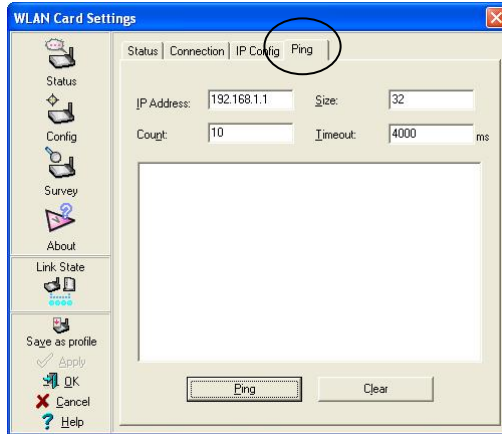
IP Renew – Click to renew (update) the DHCP IP address for the wireless LAN adapter.

Ping – Click to display the Ping tab. Send a ping signal to verify a connection to a particular host name or IP address.

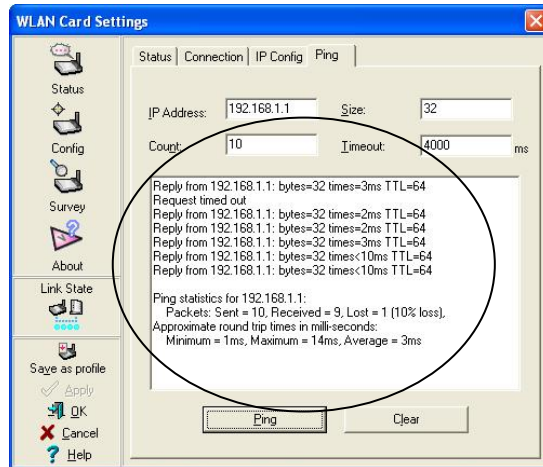
Note: The IP Release and IP Renew buttons may only be used on a DHCP-configured wireless LAN adapter.

To verify connection to another computer

The **Ping** tab allows you to verify the connection of your computer with another computer in a network. The Ping tab appears when you select the Ping button on the IP Config tab on the WLAN Card Settings window. Complete these steps to ping a connection.



1. Type the IP address of the connection you want to verify in the **IP Address** field.
2. Configure the ping session by assigning the size and count of the packets to send and the time limit for a ping session to continue (in milliseconds).
3. Click the **Ping** button.



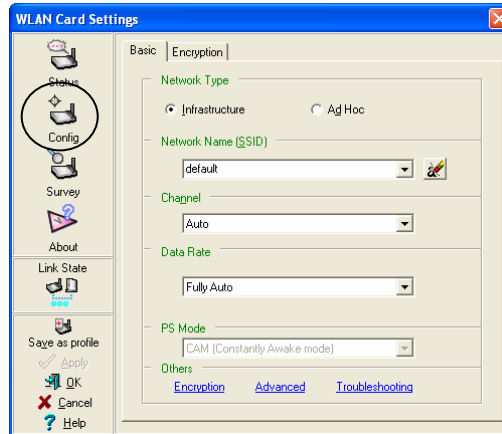
Note: During the ping session, the **Ping** button toggles into a **Stop** button. Click **Stop** anytime during the session to cancel the ping session. The **Stop** button toggles back to **Ping** when the ping session stops.

The session field displays information on the verified connection including the roundtrip time (minimum, maximum, and average) along with packets sent, received, and lost after a ping session.

4. Click the **Clear** button to clear the session field.

Configuring the Network

The **Config** icon on the WLAN Card Settings window allows you to display general information on network types and other configurations. The following illustration and list describes the fields and options that appear on the **Basic** tab when you select the **Config** icon on the WLAN Card Settings window.



Network Type – This option allows you to select the type of network that you wish to use. Select **Infrastructure** to establish a connection with an access point (AP). In this mode, your system can access wireless LAN and wired LAN (Ethernet) through the AP. Select **Ad Hoc** to communicate directly with other mobile clients within the wireless LAN adapter range.

Network Name (SSID) – This field displays the network SSID. The network SSID is a string used to identify a wireless LAN. Assign different SSIDs to segment the wireless LAN and increase network security. Set the SSID to a null string to allow your station to connect to any available access point. Null string may not be used in Ad-hoc mode.

Channel – In Infrastructure mode, the wireless LAN adapter automatically tunes in to the access point channel. In Ad-hoc mode, select a channel that is allowed for use in your country/region.

Data Rate – Sets the data transmission rate to Fixed or Auto. Select **Fully Auto** to allow the device to adjust to the most suitable connection. You may also fix data transfer rates to 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, and 1 Mbps.

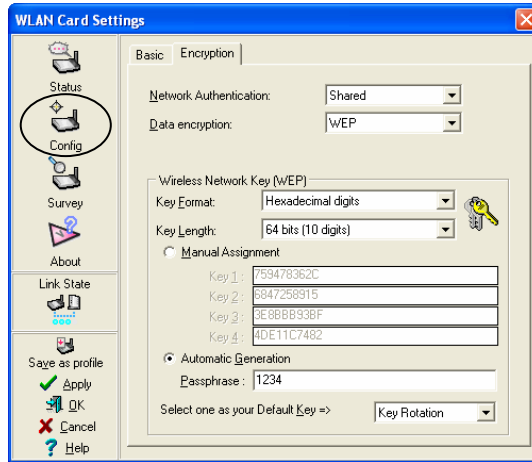
Note: Operating the device at very high data rates reduces the operating range. When the “Data Rate” is changed, the adapter will survey available APs and connect to the AP with the strongest signal.

PS Mode – This field allows you to select a power consumption mode.

Others – Click the **Encryption** link or the **Advanced** link to open the Encryption or Advanced tabbed pages. Click **Troubleshooting** to open the Troubleshooting utility.

To configure encryption

Wireless data transmissions between your wireless LAN adapter and the AP are secured using the Wired Equivalent Privacy (WEP) encryption. The following illustration and list describes the fields and options that appear on the **Encryption** tab when you select the Config icon on the WLAN Card Settings window.



Network Authentication allows you to select one of the following four Network Authentication methods:

- Shared
- Open
- WPA-PSK
- WPA

Select one of these four options if you wish to use a network key to authenticate a preferred wireless network.

Important: Use the online help to find detailed information about these Network Authentication methods.

Data encryption allows you to enable or disable WEP keys.

Wireless Network Key (WEP)

Key Format allows you to set a hexadecimal digit or ASCII character WEP key.

Key Length allows you to choose a 64-bit or a 128-bit WEP key.

- 64-bit encryption contains 10 hexadecimal digits or 5 ASCII characters.
- 128-bit encryption contains 26 hexadecimal digits or 13 ASCII characters.

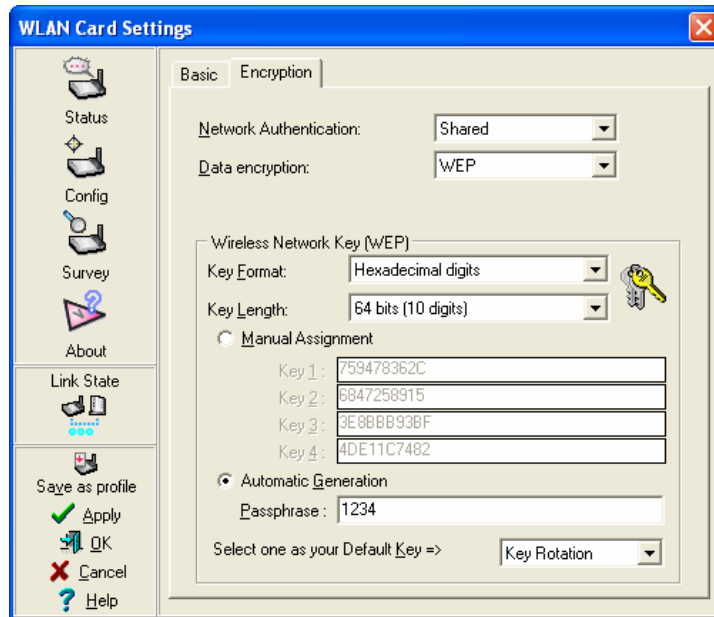
Important: All wireless clients in a network must have identical WEP keys to communicate with each other or with an access point.

To assign WEP keys

Complete these steps to assign WEP keys.

Manual Assignment. For 64-bit encryption, enter 10 hexadecimal digits (0~9, a~f, A~F) or 5 ASCII characters in each of the four WEP keys. For 128-bit encryption, enter 26 hexadecimal digits (0~9, a~f, A~F) or 13 ASCII characters in each of the four WEP keys.

Automatic Generation. Type a combination of up to 64 letters, numbers, or symbols in the Passphrase field. The Wireless Settings utility uses an algorithm to generate four WEP keys based on the typed combination.

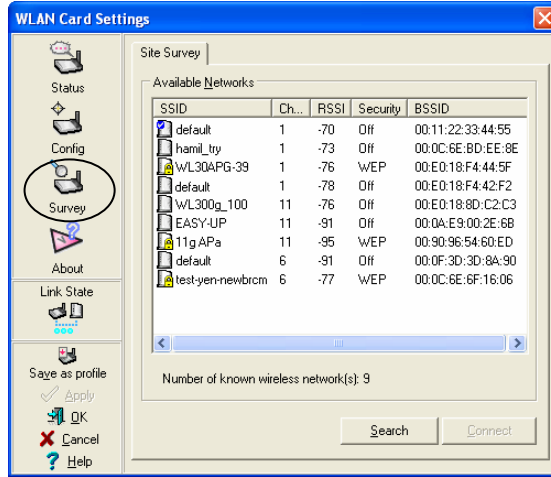


Important:

- 64-bit and 40-bit WEP keys use the same encryption method and can interoperate on wireless networks. This lower level of WEP encryption uses a 40-bit (10 hexadecimal digits assigned by the user) secret key and a 24-bit Initialization Vector assigned by the wireless LAN adapter. 104-bit and 128-bit WEP keys use the same encryption method.
- After assigning the WEP keys, click **Apply** to save and activate the encryption. Manually assigned encryptions are more secure than automatically generated encryptions.
- Use Manual Assignment instead of Automatic Generation if you are not sure whether other wireless clients use the same algorithm as that of wireless LAN adapter.
- Keep a record of the WEP encryption keys.

Locating Available Wireless Networks

The **Site Survey** window displays the available networks within the wireless LAN adapter range. The following illustration and list describes the fields that display on the Site Survey tab when you select the Survey icon in the WLAN Card Settings window.



SSID – Displays the SSID (service set identifier) of the network.

Ch – Displays the direct sequence channel used by the network.

RSSI – Displays the Received Signal Strength Indicator (RSSI) in dBm.

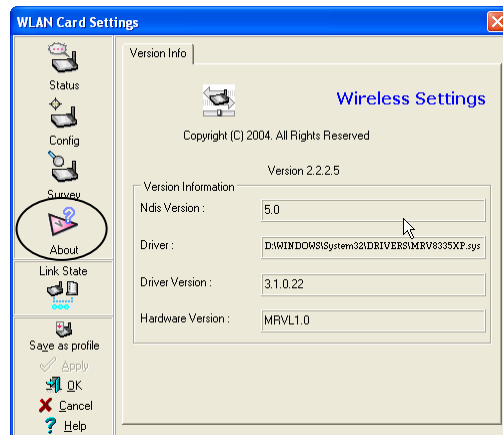
Security - Shows whether a network has an enabled (On) or disabled (Off) WEP encryption.

BSSID – Displays the MAC address of the access point or the BSSID of the Ad-hoc node.

Search – Scans all available wireless networks and displays the scan result in the Available Networks field. Select an available wireless network from the Available Networks field and click **Connect** to establish a connection. If you do not find an available network, click **Search** again to rescan all available networks.









About Wireless Settings

The **About** icon displays the software version, driver version, and copyright information.



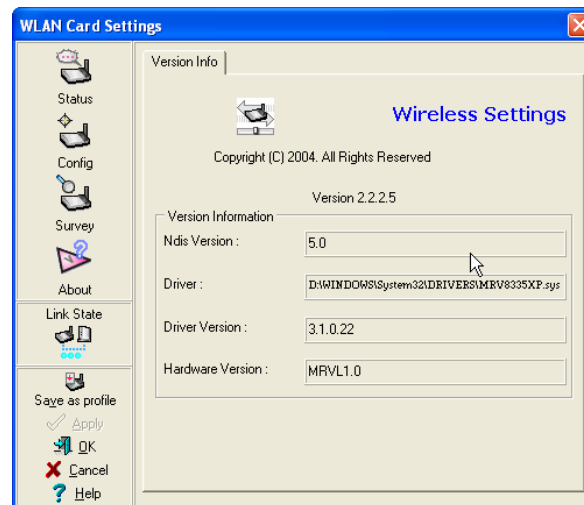
Displaying Connection Status

The **Link State** icon on the WLAN Card Settings window displays the current connection status of the wireless LAN adapter to the AP or to other Wi-Fi devices. An icon represents the link state for easy identification. Refer to the following table for icon indications.

	Excellent link quality (Infrastructure)		Not linked (Infrastructure)
	Good link quality (Infrastructure)		Linked (Ad-hoc)
	Fair link quality (Infrastructure)		Not linked (Ad-hoc)
	Poor link quality (Infrastructure)		Scanning

Command Icons

The command icons that appear on the WLAN Card Settings window allow you to perform various functions. The following illustration and list describes these functions.



Apply – Click to apply the changes made on the Wireless Settings utility.

OK – Click to close the Wireless Settings utility window.

Cancel – Click to cancel any changes made on the Wireless Settings utility. Clicking **Cancel** closes the Wireless Settings utility window.

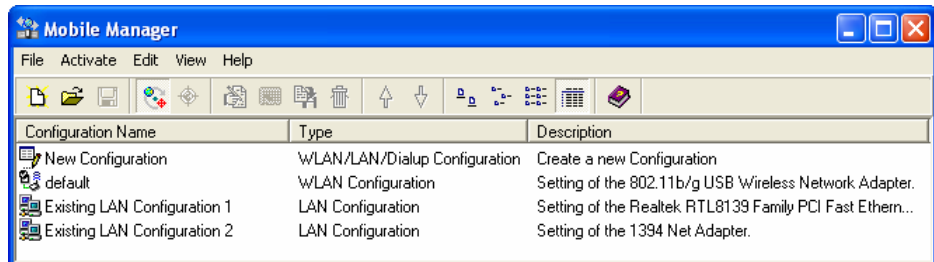
Help – Click to display the context-sensitive (window-specific) online help menu.

Configuring and Managing Network Location Settings

The **Mobile Manager** utility is a convenient tool to configure and manage network location settings. This utility allows users to configure multiple alternative configurations for different locations. You need to set up this utility once so you can easily switch configurations when you change your location.

Launching the Mobile Manager Utility

To launch the Mobile Manager utility, right-click the Control Center icon on the Windows taskbar, and select **Mobile Manager**. The Mobile Manager window opens.







Note: Use the Mobile Manager utility main window to create, edit, or activate a configuration. The main window displays the menu bar, toolbar, and existing configurations. The toolbar buttons allow quick access to some common commands in the Mobile Manager utility. All toolbar button commands are also available from the menu bar.



Mobile Manager Utility Menus

The following tables describe the features available from the Mobile Manager window menu bar and toolbar.

File Menu

 New Configuration	Select this option to launch the New Configuration Wizard. See Creating a New Configuration , later in this section, for details.
 Import Configuration	Select this option to load a configuration from an INI File.
 Export Configuration	Save the selected configuration (containing Wireless Settings, TCP/IP Settings, Network Settings, etc.) to an INI file. The INI file may be saved on a floppy disk, and may be imported by other computers with the Mobile Manager utility. You may also use this file as a backup.
 Exit	Select to close the Mobile Manager utility.







Mobilize Menu

 Auto Roaming	Activating this option allows the WebSTAR DPW939 USB Wireless LAN Adapter to switch to another association you have specified when changes to an existing association occurred. If no associations are made, Auto Roaming automatically connects to a wireless network based on your specified configurations.
 Activate Configuration	Applies the configuration you selected from the list. Follow the on-screen instructions to activate a configuration.





Note: Activating a configuration requires system restart when you are using Windows 98 or Windows ME. Windows 2000 and Windows XP do *not* require a system restart after you activate a configuration.

Edit Menu



Note: The Edit menu commands appear when you right-click a configuration in the Mobile Manager window.

 Edit Configuration	The Edit Configuration option allows you to edit selected configuration items. See Editing a Configuration , later in this section, for details.
 Rename	Changes the name of the selected configuration
 Copy	Duplicates the selected configuration
 Delete	Discards the selected configuration
 Up Arrow	Raises the position of a selected wireless network configuration in the preferred network list
 Down Arrow	Lowers the position of the selected wireless network configuration in the preferred network list

View Menu

	Large Icons	Displays large icons for each configuration
	Small Icons	Displays small icons for each configuration
	List	Shows a list of available configurations
	Details	Displays the name, type, and description of a selected configuration

Help Menu

	Contents	Displays the WinHelp window for context-sensitive (window-specific) online help
	About Mobile Manager	Displays the Mobile Manager version number and copyright information. Click on the WebSTAR logo to open the WebSTAR Web site

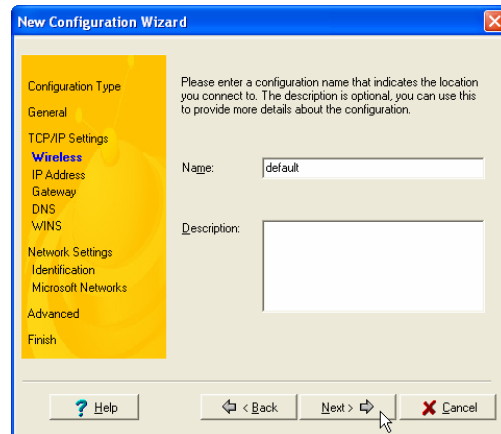
Creating a New Configuration

Complete these steps to create a new configuration.

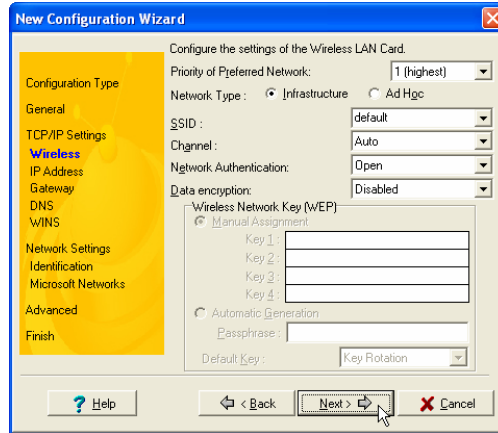
1. Right-click the Control Center icon on the Windows taskbar and select **Mobile Manager**. The Mobile Manager window opens.
2. To launch the New Configuration Wizard, click **File** and then select **New Configuration** from the menu. The New Configuration Wizard dialog box opens.



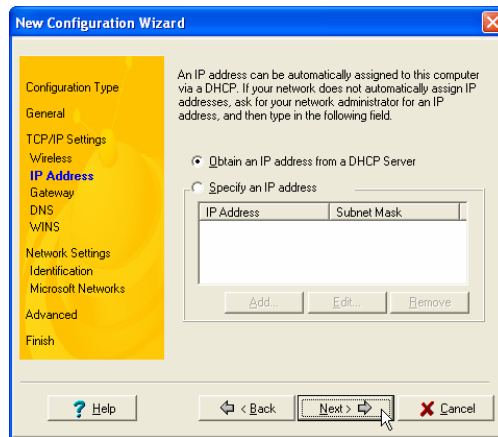
3. Choose one of the following configuration types; then, click **Next**:
 - Select **802.11b/g Wireless Local Area Network Configuration** if you have an installed WebSTAR DPW939 USB Wireless LAN Adapter in your computer.
 - Select **Local Area Network Configuration** if your computer has an installed network interface card other than a WebSTAR DPW939 USB Wireless LAN Adapter.
 - Select **Dialup Networking Configuration** if your computer has an installed modem.



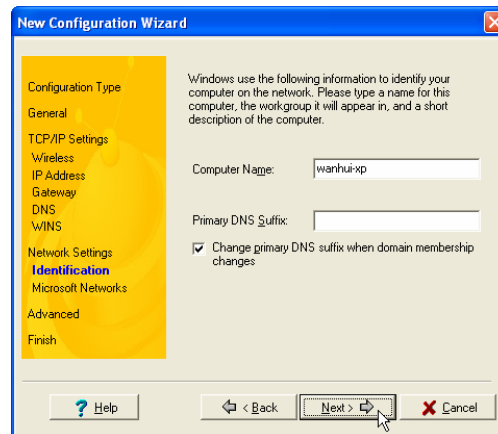
4. Enter the name and description of the configuration you wish to create. Then, click **Next**.



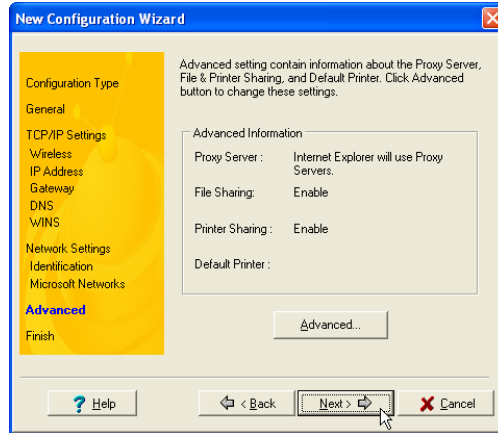
5. Select the wireless settings you want to use. Then, click **Next**.



6. Select **“Obtain an IP address from a DHCP Server”** to allow the system to automatically assign an IP address. Or, select **“Specify an IP address”** to manually enter an IP address; then, type the IP address and the Subnet Mask in the text box. Then, click **Next**.



7. Enter the computer name that identifies your computer on the network. Do *not* change the Primary DNS Suffix. Then, click **Next**.



8. Use this window to verify and/or change the proxy server and printer sharing settings. Click **Advanced** to display and/or change the proxy server and printer sharing options. Then, click **Next**.



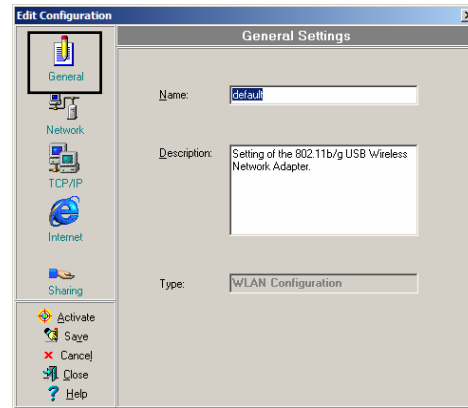
9. Select the **Activate Configuration Now** option to start using the created configuration.

Note: The Mobile Manager window displays the newly created configuration even when it is not activated.

10. Click **Finish** to close the wizard.

Editing a Configuration

If you change your location or make changes in the network, you may need to edit an existing configuration. Use the Edit Configuration window to edit an existing configuration.



1. Select a configuration from the Mobile Manager window.
2. Click **Edit** from the menu bar, then, select **Edit Configuration**. The Edit Configuration window opens. Navigate through the various Edit Configuration windows by clicking the icons on the left side of the window and then on the tabs that display within each window. A description of these icons and tabs follows next in this section.

General settings

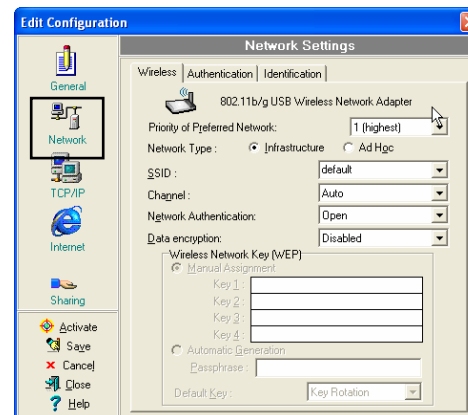
This selection allows you to type a name and add a description (optional) for your configuration.

Name – This field allows you to name your configuration. You can use the location from where you are dialing or connecting to a network. For example, name your configuration “Work-Meeting Room” if you are using this connection at your workplace meeting room.

Description – (Optional) This field allows you to enter additional details about the configuration in this field.

Network settings—Wireless tab

This selection allows you to edit your wireless network settings



Priority of Preferred Network – This field allows you to select the priority of the preferred network.

Network Type:

- **Infrastructure** – Select Infrastructure to establish connection to an access point.
- **Ad Hoc** – Select Ad Hoc to communicate directly with other WLAN devices without using an access point.

SSID – This field allows you to select an SSID. SSID is a string used to identify a wireless LAN. You can only connect with an access point that has the same SSID. Use different SSIDs to segment the wireless LAN and add security.

Channel – This field allows you to select the radio channel for the WebSTAR DPW939 USB Wireless LAN Adapter. In an Infrastructure network, your wireless LAN adapter automatically selects the correct frequency channel required to communicate with an access point.

Network Authentication – This field allows you to select Open System, Shared Key, or WPA-PSK network authentication methods.

Data encryption – This field allows you to disable or enable (64-bit or 128-bit) WEP encryption. The WEP Key is a 64-bit (5 byte) or 128-bit (13 byte) hexadecimal digit use to encrypt transmitted data packets and decrypt received data packets.

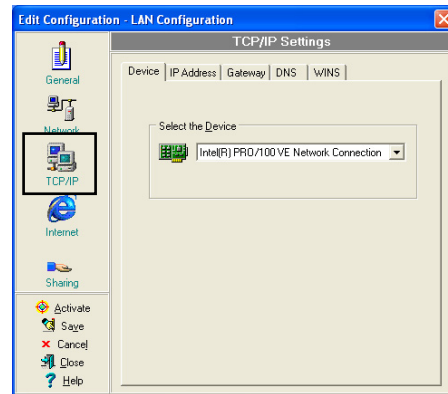
Network settings—Identification tab

This selection allows you to edit the computer name and workgroup that identifies your computer on the network.

Computer name – This field allows you to assign your computer a unique name of up to 15 characters. The computer name allows other users in a network to recognize your computer. The computer name is generally the same with the DNS hostname.

Workgroup – This field allows you to specify the workgroup that your computer is in.

Note: Avoid using spaces or symbols in your computer name or workgroup.



TCP/IP settings—Device tab

The TCP/IP settings Device tab allows you to select the network adapter you want to use for this configuration.

Note: This item appears only when you are editing a wired LAN configuration.

TCP/IP settings—IP Address tab

This selection allows you to verify and/or change the way your computer receives an IP address.

Obtain an IP address from a DHCP server – The Dynamic Host Configuration Protocol (DHCP) server assigns IP addresses automatically within a specified range of devices.

Specify an IP address – Ask your network administrator for the IP address and subnet mask you should use. Type in the IP address and Subnet Mask manually.

TCP/IP settings—Gateway tab

This selection allows you to specify the gateways used to access the network. You may specify more than one gateway. Set up the primary gateway first.

Add – This button allows you to add a new TCP/IP gateway address. The added gateway appears in the **Default gateways** list. Repeat the process to add another gateway. The value in each gateway field must be between 0 and 255. You can have up to eight IP addresses for gateways.

Edit – This button allows you to edit a selected gateway address.

Remove – This button allows you to delete a selected gateway address.

TCP/IP settings—DNS tab

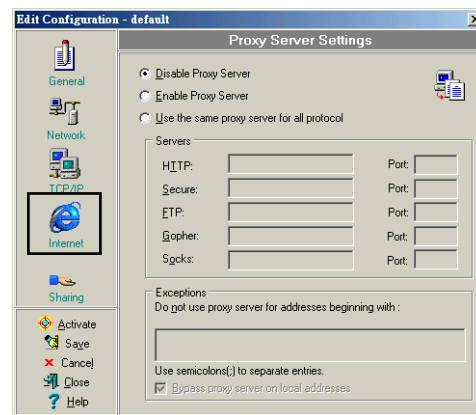
The DNS tab allows you to configure the DNS settings of the selected configuration. This tab also allows you to add a DNS server and arrange them in order of their use. You may also assign a DNS suffix for a specified DNS server.

TCP/IP settings—WINS tab

The WINS tab allows you to configure the WINS settings of the selected configuration. This tab allows you to add WINS addresses and arrange them in order of their use. This tab also allows you to enable or import LMHOST lookup and adjust the NetBIOS settings.

Internet settings

This selection allows you to configure your proxy server settings.



A proxy server acts as a security barrier between your internal network (intranet) and the Internet. A proxy server restricts other people on the Internet from gaining access to confidential information on your intranet or your computer.

Disable Proxy Server – This selection allows you to disable the proxy server.

Enable Proxy Server – This selection allows you to use the Proxy server to access the Internet.

Note: You may gain access to local addresses easier and faster if you do not use the proxy server.

Use the same proxy server for all protocols – This selection specifies whether you want to use the same proxy server to gain access to the Internet using all protocols.

Servers fields – These fields allow you to type the address and port number of the proxy server you want to use to gain access to the Internet over HTTP, Secure, FTP, Gopher, or Socks protocol.

Exceptions field

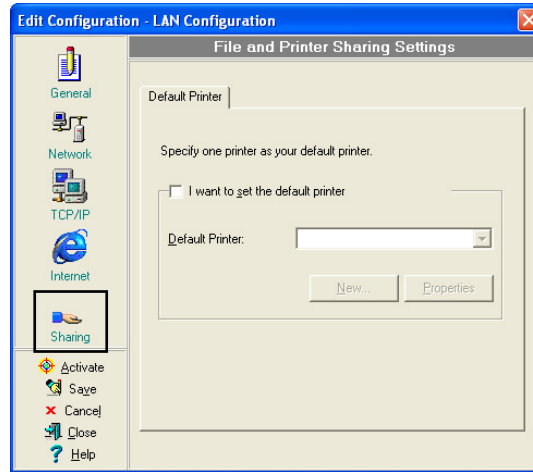
This selection allows you to specify exceptions to your proxy server settings.

Do not use proxy server for address beginning with – This field allows you to type the Web addresses that do not need to be accessed through the proxy server. If you want to connect to a computer on your intranet, make sure you type its address in this text box. You may use wild cards to match domain and host names or addresses, for example, “*.company.com” or “192.72.111.*”

Bypass proxy server for local addresses – This option allows you to use the proxy server for all local (intranet) addresses.

Sharing settings

This selection allows you to share printers over the network. To activate these settings you must have File and Printer Sharing for Microsoft Networks installed on your computer.



I want to set the default printer– This option allows you to select the default printer for printer sharing.

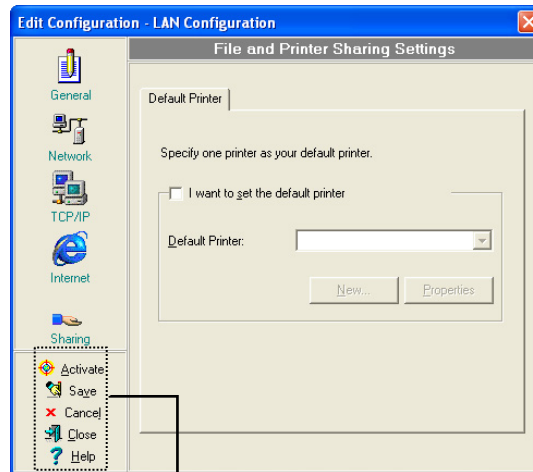
Default printer – This option allows you to select the default printer from a list of installed printers.

Click **New** to add a new printer using the Windows® Add Printer Wizard.

Click **Properties** to display the properties of a selected printer.

Command options

Click these buttons to activate, save, or cancel changes made in the configuration. Click **Close** to close the Edit Configuration window. Click **Help** to view the context-sensitive (window-specific) help files.



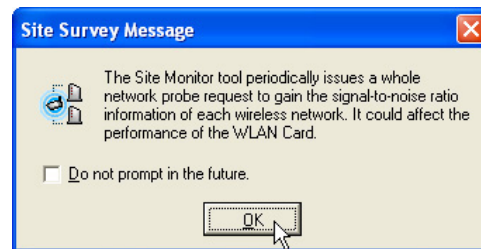
Command Options

Monitoring Available Wireless Networks

The **Site Monitor** utility measures the signal-to-noise (SNR) values of all available wireless networks. Use this utility to determine the best placement of access points in a wireless network.

To monitor available wireless networks

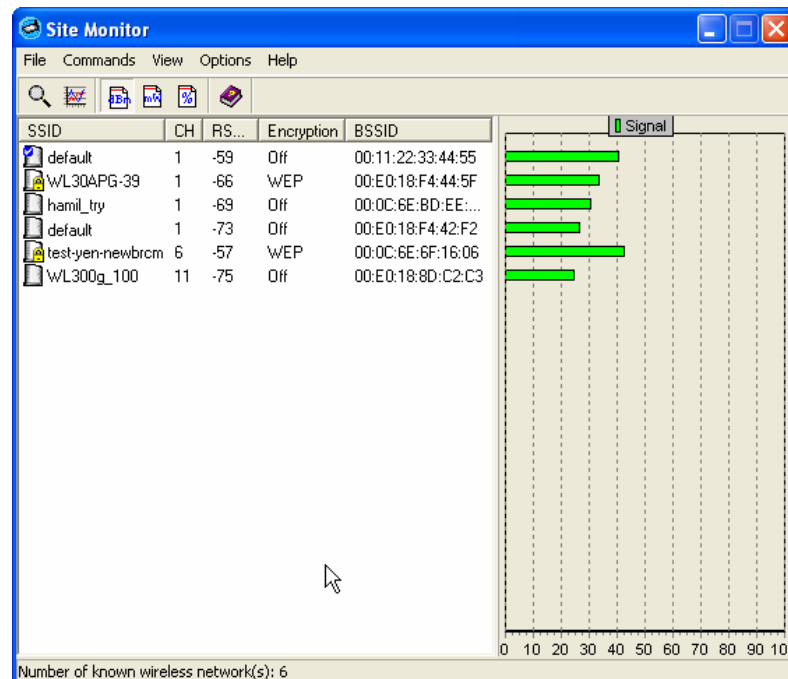
Follow this procedure to monitor available wireless networks using the Site Monitor utility.



1. Right-click the **Control Center** icon on the Windows taskbar and select **Site Monitor**. The Site Monitor survey message appears.
2. Click **OK**. The Site Monitor window opens.

To view available wireless connections

The Site Monitor main window displays the available wireless connections and the SNR value of each available connection. Use the Site Monitor window to locate the available wireless connection with the best signal.

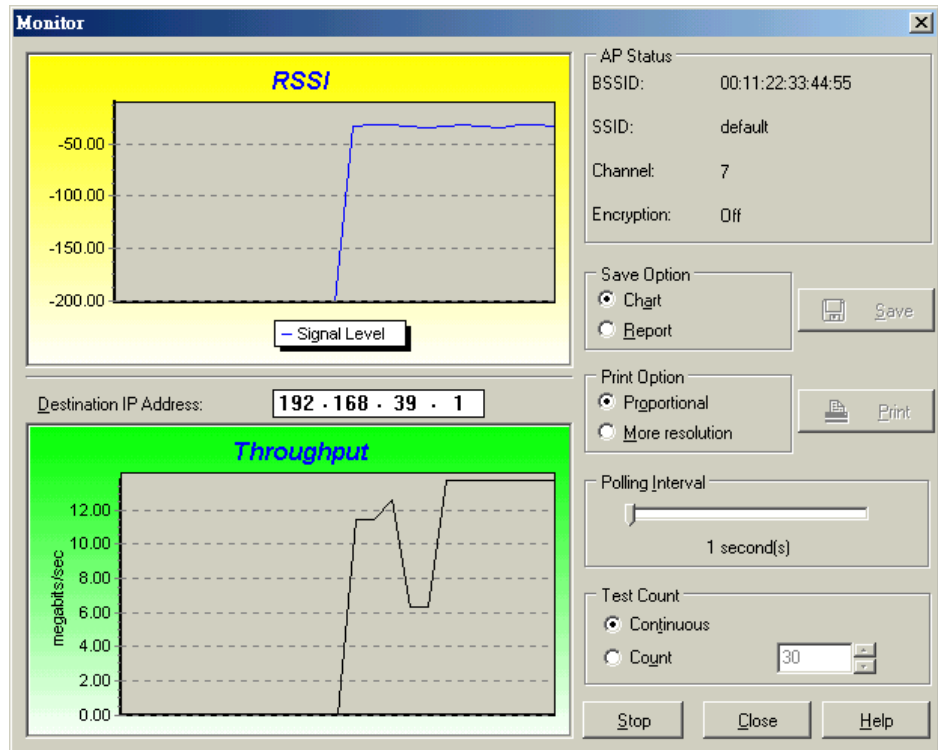


Note: Some access points disable their SSID broadcasting to hide themselves from “Site Survey” or “Site Monitor.” You may join these APs if you know their SSIDs.

Monitoring a Connection

Follow this procedure to monitor a connection for troubleshooting or configuration purposes. The Monitor window provides a detailed analysis of the wireless connection.

1. Select the connection from the available networks displayed in the Site Monitor window.
2. Click **Commands** from the Site Monitor window menu bar, and then select **Monitor**. The Monitor window opens.



Troubleshooting

This section contains troubleshooting tips for solving common problems you may encounter when using the WebSTAR DPW939 USB Wireless LAN Adapter.

Troubleshooting the DPW939 USB Wireless LAN Adapter

This troubleshooting section provides answers to some common problems which you may encounter while installing and/or using WebSTAR DPW939 USB Wireless LAN Adapter. These problems require simple troubleshooting that you can perform by yourself. Contact SciCare Broadband Services if you encounter problems not mentioned in this section.

Problem	Solution
My computer does not recognize the installed WebSTAR DPW939 USB Wireless LAN Adapter.	<p>Verify that the WebSTAR DPW939 USB Wireless LAN Adapter drivers are properly installed by following these instructions:</p> <ol style="list-style-type: none"> 1. Open the Control Panel window from the Windows desktop. 2. Double-click the System icon. Choose one of the following options depending on your operating system: <ul style="list-style-type: none"> • <i>Windows 98SE and Me users:</i> Select the Device Manager tab. • <i>Windows 2000 and XP users:</i> Select the Hardware tab; then, click Device Manager. 3. Click the + symbol preceding the Network Adapters item then check the 802.11b/g Network Adapter item. <p>Note: A yellow exclamation point or a red plus sign preceding the network adapter means that the device driver is not properly installed. Re-install the device driver according to the instructions that follow next.</p>
A yellow exclamation point or a red plus sign appears on the WebSTAR 802.11b Network Adapter or WebSTAR 802.11g Network Adapter item.	<p>The device driver is not properly installed. Follow these instructions to uninstall and re-install the driver.</p> <ol style="list-style-type: none"> 1. Insert the Support CD into the CD-ROM drive. 2. When the WebSTAR Wireless LAN installation window appears, click Uninstall Utility. 3. Restart your computer and repeat the software installation following the installation instructions found in the Software and Hardware Installation section, earlier in this guide.

Problem	Solution
I cannot connect to an Access Point.	<ul style="list-style-type: none"> • Verify that the Network Type of the device is set to Infrastructure mode. • Verify that the device has the same Service Set Identifier (SSID) as that of the AP. • Verify that the device and the AP have the same Encryption. If WEP encryption is enabled, set the same WEP keys for the device and the AP. • Verify that the MAC address of the device is added in the AP Authorization Table. Verify this with your LAN administrator. • Verify that there is good signal reception. Shorten the distance between the device and the access point.
I can connect to an Access Point but I cannot connect to the Internet.	<ul style="list-style-type: none"> • Verify that the device and the AP have the same Encryption. If WEP encryption is enabled, set the same WEP keys for the device and the AP. • Verify that the network protocol parameters (IP address, subnet mask, gateway, and DNS) of your computer are correctly set. • Verify the proxy settings of the Web browser.
I cannot connect to another station with a wireless LAN device.	<ul style="list-style-type: none"> • Verify that the device has the same Service Set Identifier (SSID) with that of the other station. • Verify that there is good signal reception. Shorten the distance between the device and the station. • Verify that the device and the other station have the same Encryption. If WEP encryption is enabled, set the same WEP keys for the device and the AP.
I cannot connect to other computers linked via an Access Point or Ad-hoc network.	<ul style="list-style-type: none"> • Verify that the device and the other APs and/or clients have the same Encryption. If you enable WEP encryption, you must set the same WEP keys for the device and the other AP/s and/or clients. • Verify the TCP/IP settings (IP address, subnet mask, gateway, and DNS) of your computer. • Enable file and printer sharing in each client computer to allow file sharing.

Problem	Solution
I always have poor link quality and low signal.	<p>Do the following to achieve better link quality and stronger signal:</p> <ul style="list-style-type: none"> • Keep the device away from microwave ovens and large metal objects to avoid radio interference. • Shorten the distance between the device and the AP/station.
The throughput seems slow.	<ul style="list-style-type: none"> • Avoid placing the device behind a metal object. Clear obstacles between the AP and the device. • Try moving the client closer to the WebSTAR DPW939 USB Wireless LAN Adapter to see if the throughput increases. • Consider adding a second WebSTAR DPW939 USB Wireless LAN Adapter to implement roaming.
Why do I get the warning “Hi-Speed USB Device Plugged Into Non-Hi-Speed USB Hub” message when I connected the WebSTAR DPW939 USB Wireless LAN Adapter to the USB port?	<p>This warning message appears when you plug the WebSTAR DPW939 USB Wireless LAN Adapter to a USB 1.1 port. Select from one of the following options according to your operating system:</p> <ul style="list-style-type: none"> • For Windows XP users, you need to upgrade your OS to Service Pack 1 to convert your USB ports to USB 2.0. • For Windows 2000 users, you must install Service Pack 4 in order to convert your USB ports into USB 2.0. You can download these service packs from the Windows Update Web site (www.windowsupdate.microsoft.com).
When I remove the wireless adapter from my computer running Windows 98SE, my system becomes very slow and stops responding.	<p>This is a limitation with computers equipped with Intel/NVIDIA USB 2.0 controller and running the newest OrangeWare USB 2.0 driver.</p>

Regulation Domain

IEEE 802.11b/g networks are regulated worldwide because these networks use the 2.4GHz ~ 2.5GHz ISM (Instrumentation, Scientific, and Medical) Band. The WebSTAR DPW939 USB Wireless LAN Adapter is shipped with a default regulation domain allowed in your country and location. The FCC (US) and ETSI (Europe) specify operation from 2.4 GHz to 2.4835 GHz. For Japan, operation is specified as 2.4 GHz to 2.497 GHz. For each supported regulatory domain, all channels marked with "Yes" are supported. The channel center frequencies and channel ID (CH ID) numbers are shown in the following table.

DSSS PHY frequency channel plan

CH ID	Frequency	Regulatory Domain		
		X'10' FCC	X'30' FCC	X'40'MKK
1	2412 MHz	Yes	Yes	Yes
2	2417 MHz	Yes	Yes	Yes
3	2422 MHz	Yes	Yes	Yes
4	2427 MHz	Yes	Yes	Yes
5	2432 MHz	Yes	Yes	Yes
6	2437 MHz	Yes	Yes	Yes
7	2442 MHz	Yes	Yes	Yes
8	2447 MHz	Yes	Yes	Yes
9	2452 MHz	Yes	Yes	Yes
10	2457 MHz	Yes	Yes	Yes
11	2462 MHz	Yes	Yes	Yes
12	2467 MHz	–	Yes	Yes
13	2472 MHz	–	Yes	Yes
14	2484 MHz	–	–	–

In a multiple cell network topology, overlapping and/or adjacent cells using different channels can operate simultaneously without interference if the distance between the center frequencies is at least 30 MHz.

Important: Channel 14 is specifically for operation in Japan.

Regulating agencies and allowed channels

Country	Regulating Agency	Allowed Channels
Unites States	FCC	1-11
Europe	ETSI	1-13
Japan	MKK	1-14

Technical Specifications

This section provides the technical specifications for your WebSTAR DPW939 USB Wireless LAN Adapter.

Important: Specifications are subject to change without notice.

Hardware and Software Specifications

Specification	Parameter
Standard	IEEE 802.11g
Interface	USB 2.0
Operation Modes	<ul style="list-style-type: none"> Ad-hoc network mode Infrastructure network mode
Security Features	<ul style="list-style-type: none"> SSID network identification for security 64-bit and 128-bit WEP data encryption and decryption WiFi Protected Access (WPA)
Data transfer rate	<ul style="list-style-type: none"> 802.11g: 54Mbps with auto-fallback to 48, 36, 24, 18, 12, 9, and 6Mbps 802.11b: 11Mbps with auto-fallback to 5.5, 2, and 1Mbps
Technology	<ul style="list-style-type: none"> Octagonal Frequency Division Multiplexing (OFDM) Direct Sequence Spread Spectrum (DSSS)
Supported Operating Systems	Windows 98SE, ME, 2000, and XP
Device Driver and Configuration Utility	<p>Wireless Setting Utility running on Microsoft Windows 98SE, ME, 2000 (SP4), and XP (SP1) platform</p> <p>Note: Under Windows XP, use the Windows XP built-in monitor and configuration utility.</p>
Operating Distance	<ul style="list-style-type: none"> Indoors @ 11Mbps : 130 ft (40 m) Indoors @ 54Mbps : 80 ft (25 m) Outdoors @ 11Mbps LOS* : 1000 ft (310 m) Outdoors @ 54Mbps LOS* : 200 ft (60 m)

* Line-of-sight

Specification	Parameter
Frequency Band	2.4 GHz ~ 2.5 GHz
Compatibility	Compatible with IEEE 802.11b and 802.11g devices
Power Requirements	USB bus powered
LED Indicators	<ul style="list-style-type: none">• Activity• Power
Safety and Regulatory Approvals	<ul style="list-style-type: none">• FCC• VCCI• CE• TELEC & JATE
Software Support	<ul style="list-style-type: none">• Control Center• One Touch Wizard• Wireless Settings• Mobile Manager• Site Monitor• Troubleshooting

Note: The DPW939 USB Wireless LAN Adapter operating distance may be shorter if there are walls, barriers, or interferences in the home layout or operating environment.

Glossary

- 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; for example, 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). Specification 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 using cable modems and ISDN, while the larger ISPs also offer private line hookups (T1, fractional T1, T3, 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 as the internal network and the other is designated as the external. The internal network then appears as one entity to the outside world.
- RF** Radio Frequency. The international unit for measuring frequency is Hertz (Hz), which is 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 MHz to 1.6 MHz. The FM broadcast radio frequency band is 88 MHz to 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 IP 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 device 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.
- USB** Universal Serial Bus. A Plug and Play standard for connecting multiple input/output devices to a single high-bandwidth port. The design of the bus allows hot-swapping of the devices (disconnection and reconnection without powering the computer off) and automatic configuration.
- 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.

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Canada EMI Regulation

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.

Regulatory Compliance

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 DPW939 USB Wireless LAN Adapter

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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 20 cm between the radiator & your body.

For Information

If You Need Technical Assistance

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



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