

Actiontec

54 Mbps
Wireless PC Card

User Manual

Introduction

1

Congratulations for purchasing of the 54Mbps Wireless PC Card!

Your *Actiontec* 54 Mbps Wireless PC Card provides a single PC Card solution for connecting to Wireless-B (802.11b) and Wireless-G (802.11-g) networks. Whichever standard you encounter, your *Actiontec* 54 Mbps Wireless PC Card is ready to connect. Just insert it into a CardBus slot and run the included Setup Wizard. All wireless communications can be protected by 64- or 128-bit Wired Equivalency Privacy (WEP) for the highest level of security.

Product Features

The following list summarizes the features of your *Actiontec* 54 Mbps Wireless PC Card:

- Conforms to IEEE 802.11g and 802.11b standards.
- High-speed wireless 54 Mbps throughput that is nearly 5 times faster than 802.11b products.
- Backward compatible with 11 Mbps wireless products.
- 64- or 128-bit WEP for the highest level of security.
- 32-bit CardBus performance.
- Supports PC Card hot-swapping with true Plug-and-Play connectivity.

- Low power consumption.

Package Contents

Before you begin the installation of your *Actiontec* 54 Mbps Wireless PC Card, make sure you have the following items:

- *Actiontec* 54 Mbps Wireless PC Card.
- An installation CD-ROM containing drivers.
- This User Manual.
- Program License Agreement.

As you examine these items, look for any physical damage. Retain your proof of purchase and packing material in the event you need to return your *Actiontec* 54 Mbps Wireless PC Card.

Technical Support

Actiontec Electronics prides itself on making high-quality, durable, high-performance products. If you need assistance, the *Actiontec* Technical Support Department is available every day from 6 A.M. to 11 P.M. (MST) to provide professional support.



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Sunnyvale, CA 94085

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Installation

2

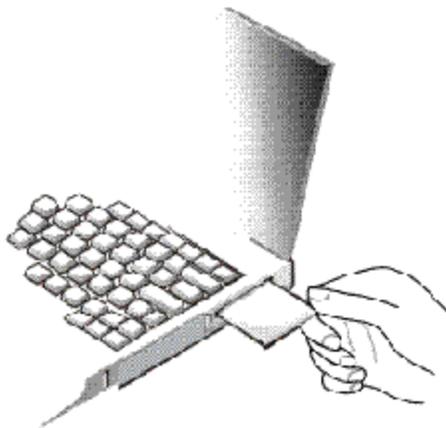
This chapter describes how to install the *Actiontec* 54 Mbps Wireless PC Card. Please refer to the appropriate section:

- Microsoft Windows XP users: refer to “Windows XP Installation Instructions,” below.
- Microsoft Windows 2000 users: refer to “Windows 2000 Installation Instructions” on page 7.
- Microsoft Windows ME users: refer to “Windows ME Installation Instructions” on page 12.
- Microsoft Windows 98 and 98SE users: refer to “Windows 98 and 98SE Installation Instructions” on page 14.

Windows XP Installation Instructions

To install the *Actiontec* 54 Mbps Wireless PC Card on a computer running Microsoft Windows XP, use the following procedure:

1. Locate an available Type II or Type III PCMCIA CardBus slot on your computer.
2. Hold the 54 Mbps Wireless PC Card so its 68-pin connector is facing your computer's PCMCIA CardBus slot and its label is facing up.



- Slide the 54 Mbps Wireless PC Card completely into the PCMCIA CardBus slot. When it is properly inserted, a sound should be heard, the Found New Hardware Wizard starts, and the following screen appears.



- Make sure that "Install the software automatically (Recommended)" is selected.
- In your computer's CD-ROM drive, insert the drivers CD supplied with your 54 Mbps Wireless PC Card.
- Click the **Next** button. Windows may notify you that the software has not passed Windows Logo testing. If this screen does appear, then press the **Continue Anyway** button to continue. If this screen does not appear, then go to **Step 8**.
- The wizard installs the software, then the following message appears.



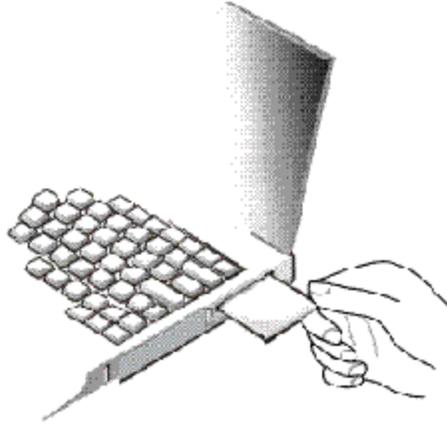
8. Click the **Finish** button. A pop-up message tells you that your 54 Mbps Wireless PC Card is now ready to use.

This completes the installation instructions for computers running Windows XP.

Windows 2000 Installation Instructions

To install the *Actiontec* 54 Mbps Wireless PC Card on a computer running Microsoft Windows 2000, use the following procedure:

1. Locate an available Type II or Type III PCMCIA CardBus slot on your computer.
2. Hold the 54 Mbps Wireless PC Card so its 68-pin connector is facing your computer's PCMCIA CardBus slot and its label is facing up.



3. Slide the 54 Mbps Wireless PC Card completely into the PCMCIA CardBus slot. When it is properly inserted, a beep should be heard, the Found New Hardware Wizard starts, and the following screen appears.



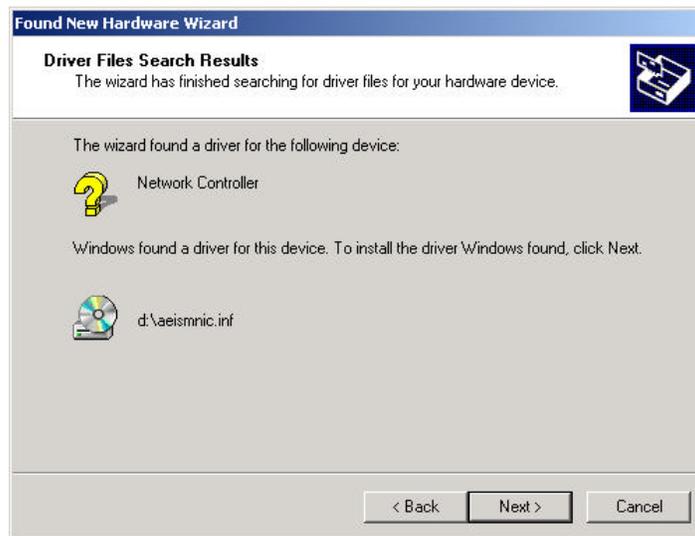
4. Click the **Next** button. The following screen appears.



5. Make sure that “Search for a suitable driver for my device (recommended)” is selected.
6. In your computer's CD-ROM drive, insert the drivers CD supplied with your 54 Mbps Wireless PC Card.
7. Click the **Next** button. The following screen asks where you want Windows to search for driver files.



8. Uncheck **Floppy disk drives**. Only **CD-ROM drives** should be checked.
9. Click the **Next** button. Windows finds the driver for your 54 Mbps Wireless PC Card and displays the following screen.



10. Click the **Next** button. Windows may notify you that the software has

not passed Windows Logo testing. If this screen does not appear, then go to **Step 12**.



11. Click **Yes** to continue. The wizard installs the software, a beep sounds, and the following message appears.



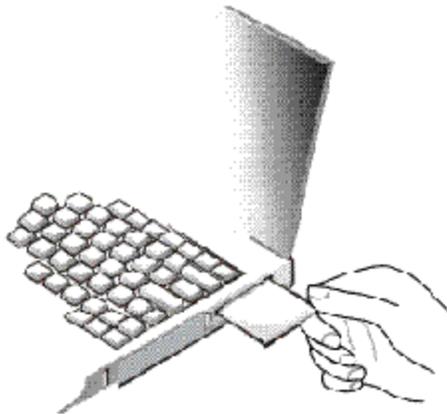
12. Click the **Finish** button.

This completes the installation instructions for computers running Windows 2000.

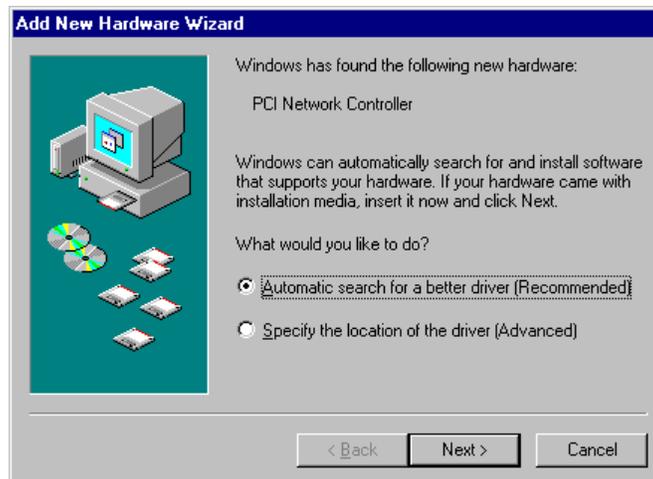
Windows ME Installation Instructions

To install the *Actiortec* 54 Mbps Wireless PC Card on a computer running Microsoft Windows ME, use the following procedure:

1. Locate an available Type II or Type III PCMCIA CardBus slot on your computer.
2. Hold the 54 Mbps Wireless PC Card so its 68-pin connector is facing your computer's PCMCIA CardBus slot and its label is facing up.



3. Slide the 54 Mbps Wireless PC Card completely into the PCMCIA CardBus slot. When it is properly inserted, the Add New Hardware Wizard starts and the following screen appears.



4. Make sure that “Automatic search for better driver (Recommended)” is selected.
5. In your computer’s CD-ROM drive, insert the drivers CD supplied with your 54 Mbps Wireless PC Card.
6. Click the **Next** button. A screen tells you that Windows has found the driver for the device, then Windows ME installs the driver files and displays the following screen.



7. Click the **Finish** button. The following screen asks whether you want to restart your computer at this time.



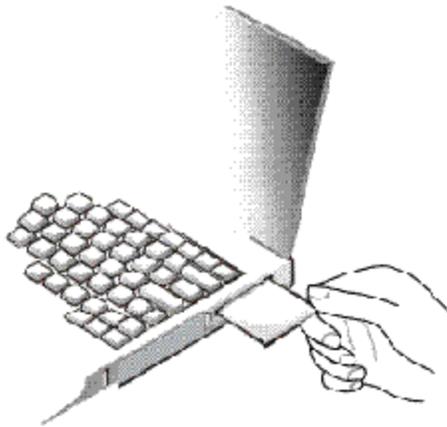
8. Remove the CD-ROM from your computer’s CD-ROM drive and click **Yes** to restart your computer.

This completes the installation instructions for computers running Windows ME.

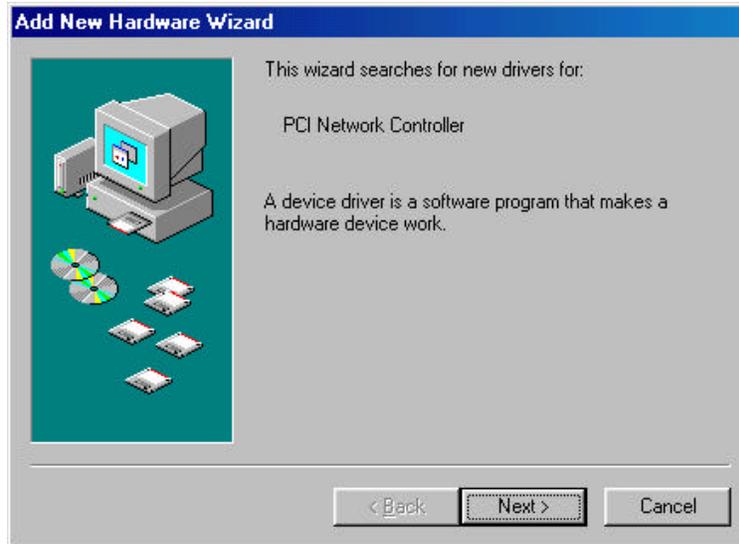
Windows 98 and 98SE Installation Instructions

To install the *Actiortec* 54 Mbps Wireless PC Card on a computer running Microsoft Windows 98 or Windows 98SE, use the following procedure:

1. Locate an available Type II or Type III PCMCIA CardBus slot on your computer.
2. Hold the 54 Mbps Wireless PC Card so its 68-pin connector is facing your computer's PCMCIA CardBus slot and its label is facing up.



3. Slide the 54 Mbps Wireless PC Card completely into the PCMCIA CardBus slot. When it is properly inserted, a beep should be heard, the Found New Hardware Wizard starts, and the following screen appears.



4. Click the **Next** button. The following screen appears.



5. Make sure that "Search for the best driver for your device (Recommended)" is selected.
6. In your computer's CD-ROM drive, insert the drivers CD supplied with your 54 Mbps Wireless PC Card.

7. Click the **Next** button. The following screen asks where you want Windows to search for driver files.



8. Uncheck every selection except **CD-ROM drive**.
9. Click the **Next** button. Windows finds the driver for your 54 Mbps Wireless PC Card and displays the following screen.



10. Click the **Next** button. Windows will install the software. During this step, Windows may prompt you for the Windows 98 CD-ROM. If it does, replace the drivers CD with your Windows 98 CD. After the files are copied, a beep sounds, and the following message appears.



11. Click the **Finish** button. The following screen asks whether you want to restart your computer at this time.



12. Remove the CD-ROM from your computer's CD-ROM drive and click **Yes** to restart your computer.

This completes the installation instructions for computers running Windows 98 or Windows 98SE.

Configuration

3

This chapter describes how to configure your *Actiontec 54 Mbps Wireless PC Card*.

Overview

After you install your *Actiontec 54 Mbps Wireless PC Card*, you are ready to configure it using the *Actiontec* configuration utility program. This program was automatically installed on your personal computer when you installed your *54 Mbps Wireless PC Card*.

Using this program, you can:

- View status information about your network connection
- View and change configurations
- Enable or disable encryption
- Perform IBSS channel selection
- View and change domains

Understanding the *Actiontec* Configuration Utility

When your *54 Mbps Wireless PC Card* is inserted into your computer's CardBus slot, the *Actiontec* Client Utility driver loads automatically and a PC Card status icon appears in your System Tray at the bottom-right corner of your desktop.

The icon uses a series of color-coded vertical bars to show the link status to the wireless network connection:

Red indicates no or poor quality.

Yellow indicates a usable but weak link.

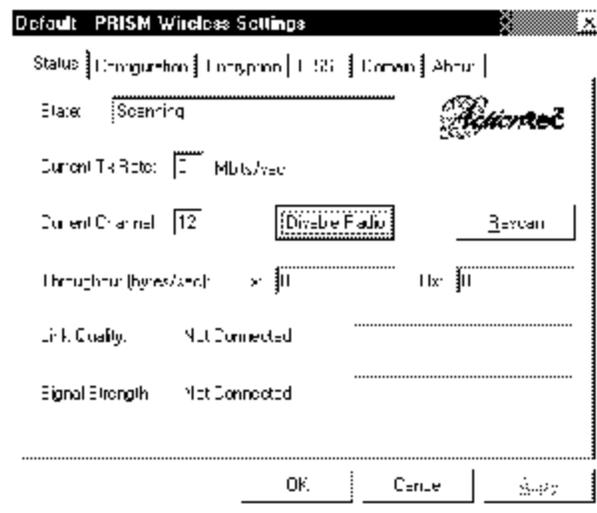
Green indicates a good or excellent link.

If you hold your mouse pointer over the icon, the transmit and receive rates appear, along with the name of the current configuration profile. You can also

To configure your 54 Mbps Wireless PC Card, you select the appropriate parameters in the *Actiontec* Configuration Utility screen. The next section described how to access this screen.

Accessing the *Actiontec* Configuration Utility Screen

To access the *Actiontec* Configuration Utility screen, double-click the PC Card status icon in your System Tray. The following main screen appears.



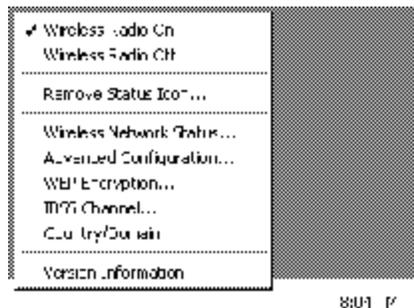
This screen has tabs for selecting various operating parameters.

- **Status** shows the status of your connection to the wireless network. Also, lets you control the radio-frequency from your 54 Mbps Wireless PC Card and rescan its connection to an Access Point. See page 22.
- **Configuration** lets you specify a profile name, network name, and network type (Access Point or Peer-to-Peer). See page 24.
- **Encryption** lets you enable or disable your 54 Mbps Wireless PC

Card's encryption security feature. See page 27.

- **IBSS** lets you select an IBSS channel. See page 29.
- **Domain** lets you select IEEE 802.11d support and a country or domain. See page 31.
- **About** shows version information for the network driver, configuration utility, and 54 Mbps Wireless PC Card firmware.

Another way to access the parameters in the main screen is through a pop-up menu that appears when you click or right-click the vertical-bar icon in the System Tray (see the following figure).



This pop-up menu provides commands that let you:

- Turn the wireless radio On or Off
- Remove the PC Card status icon from the System Tray. If you remove the icon, use the Windows Control Panel to configure your wireless network or restart the Configuration Utility from the Start Menu by selecting **Programs** and **PRISM Wireless LAN**.

If you click **Remove Status Icon**, a checkbox lets you remove the status icon permanently from the System Tray. If you check the **Remove Status Icon Permanently** check box, the Configuration Utility does not run at Windows startup. To start it and restore the icon at startup, select **Programs** and **PRISM Wireless LAN Configuration** from the Start menu, click the icon to display the menu, choose **Remove Status Icon**, and uncheck the **Remove Status Icon Permanently** check box.

- View your wireless network status (displays the **Status** tab in the

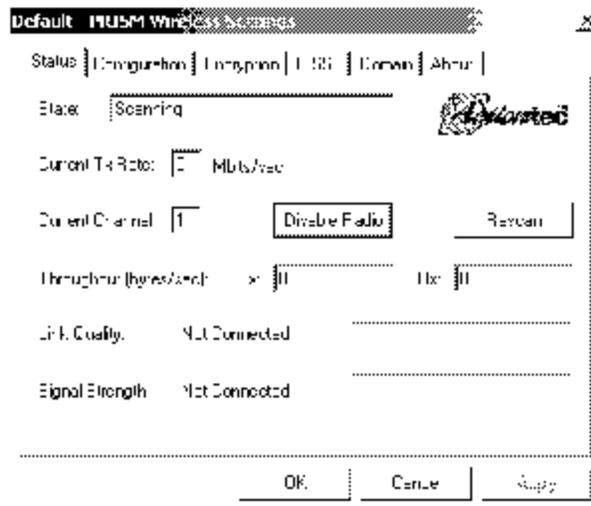
main screen)

- View and change advanced configuration parameters (displays the **Configuration** tab in the main screen)
- Enables or disables WEP encryption (displays the **Encryption** tab in the main screen)
- View and change IBSS channel parameters (displays the **IBSS** tab in the main screen)
- View and change country and domain parameters (displays the **Domain** tab in the main screen)
- View version information about the utility (displays the **About** tab in the main screen)

NOTE: Microsoft Windows XP provides a service called Wireless Zero Configuration to control wireless network devices. This service duplicates some services provided by the configuration utility. When the Wireless Zero Configuration service is activated, the **Configuration**, **Encryption**, and **IBSS** tabs and corresponding commands in the pop-up menu do not appear. Ending the Wireless Zero Configuration service reactivates these main screen tabs and pop-up menu commands.

Viewing Status Information (**Status** Tab)

The **Status** tab in the main screen shows status information about your wireless network connection.



State

In the **Status** tab, the **State** field shows the state of your computer with the wireless network. Possible values for this field are:

- **AdHoc:** Your 54 Mbps Wireless PC Card is operating in peer-to-peer mode. This field also shows the virtual MAC address used by computers participating in an AdHoc network.
- **Associated:** Your 54 Mbps Wireless PC Card is operating in Infrastructure mode. This field also shows the MAC address of the Access Point with which you are communicating.
- **Listening:** Indicates that your 54 Mbps Wireless PC Card is listening on all allowed channels, but has not found a peer-to-peer or infrastructure network with which to associate.
- **Stopped:** Your 54 Mbps Wireless PC Card's radio transmitter has been stopped by the **Disable Radio** button.
- **Scanning:** Your 54 Mbps Wireless PC Card is scanning for transmissions by other wireless adapters on all channels.
- **Associating:** Your 54 Mbps Wireless PC Card is in the process of associating with a network

- **Not Associated:** Your 54 Mbps Wireless PC Card has not found any network with which to associate.

Current Tx Rate

This field shows the current transmit rate of the current association.

Current Channel

This field shows the channel on which the connection is made. In Infrastructure mode, this number changes as the radio scans the available channels.

Throughput

This field shows the short term transmit and receive throughput in bytes/second, and is continuously updated.

Link Quality

The value shown here is based on the quality of the received signal of the Access Point beacon.

Signal Strength

Signal strength is based on the received signal strength measurement of the baseband processor of the beacon.

Disable Radio Button

The **Disable Radio** button is a “toggle” button. If you click this button:

- The **State** field indicates that your 54 Mbps Wireless PC Card's radio has been stopped.
- The remaining fields in this tab display either a zero or **Not Applicable**.
- The button changes to **Enable Radio**.

Clicking the button again turns on your 54 Mbps Wireless PC Card's radio and changes the button to **Disable Radio**.

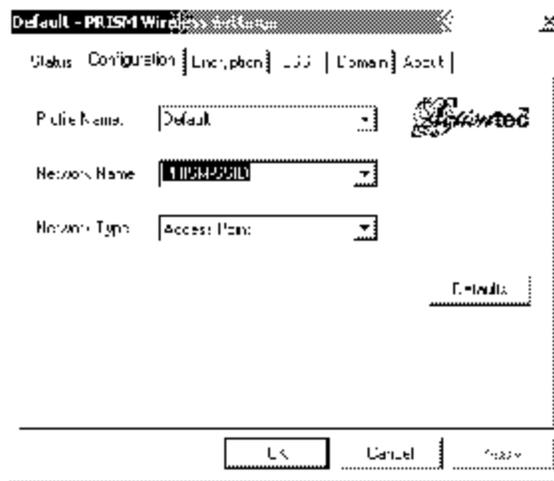
Rescan Button

Click the **Rescan** button to force your 54 Mbps Wireless PC Card's radio to rescan all available channels. If the PC Card's link quality or signal strength is poor, rescanning can be used to push the radio off a weak Access Point and search for a better link with another Access Point.

Viewing and Changing Configuration Information (**Configuration** Tab)

The **Configuration** tab lets you select a profile name, network name, and network type (Access Point or peer-to-peer). This tab appears for all operating systems except Windows XP.

The **Configuration** tab provides a **Defaults** button that lets you return to the default configuration parameters.



Profile Name

A profile is a named set of operating parameters for your 54 Mbps Wireless PC Card. Using **Profile Name**, you can set values for all parameters by selecting a previously defined profile. Click the down arrow at the right of this field to display the available profiles for your 54 Mbps Wireless PC Card.

You will always have at least one profile, named **Default**. Initially, this profile contains the parameters configured at installation. You can modify this profile at any time after the installation. After changing parame-

ters, you can save them in the profile named in this field by clicking the **Apply** button.

You can also create additional profiles by typing a name in the **Profile Name** field. When you change the name in this field and click the **Apply** button, the configuration utility uses the current parameters for your adapter to create a separate profile. You can then switch between profiles by clicking the down arrow at the right of the **Profile Name** field, selecting a profile from the drop-down list, and clicking the **Apply** button.

The following example describes a situation in which you would want to create multiple profiles. Suppose that you use a wireless LAN at work, but also have a network in your home (with a wireless Access Point) for sharing an internet connection and a printer between several computers. Also, suppose you have another office within your business that has WLAN capability, but which is configured differently than your main office.

In this situation, you can create a different profile for each of these three environments. Each profile specifies the parameters used on a single network. Moving from one location to another, you need only apply the appropriate profile to be able to participate in the local network.

Network Name

Your 54 Mbps Wireless PC Card scans the available channels looking for an Access Point or another station which has specified this same SSID. (SSID, or Service Set Identifier, is used by Access Points and stations to identify a wireless network.) It then tries to associate with these Access Points or stations to form a wireless network.

To change the SSID, highlight it, type the new SSID, and click the **Apply** button.

In typical Infrastructure applications, a company uses a single SSID for all Access Points. If the radio is scanning and cannot find a channel when an Access Point is known to be in range, verify that the **Network Name** is set correctly.

Network Type

Your 54 Mbps Wireless PC Card operates in one of two types of networks, specified in the **Network Type** field of the **Configuration** tab: **Peer-to-Peer** and **Access Point**. Clicking the down arrow at the right of this field displays the available types.

Peer-to-Peer Mode

Peer-to-Peer IEEE 802.11 defines two modes to handle two separate needs. The first, called AdHoc (or IBSS) mode, is used when two or more wirelessly enabled PCs exchange data directly, without an Access Point. The PCs can establish a peer-to-peer network in which they are the only members and over which they can exchange data. To exchange data, each computer participating in the AdHoc network must specify the same **Network Name** in this tab.

Peer-to-Peer networks operate on a single communications channel. You specify the channel on which your adapter communicates in an IBSS network either in this tab or through either the **Bands** tab or the **IBSS** tab.

IBSS operation is incompatible with the 802.11d standard. If you use 802.11d operation, disable 802.11d support in the **Domain** tab.

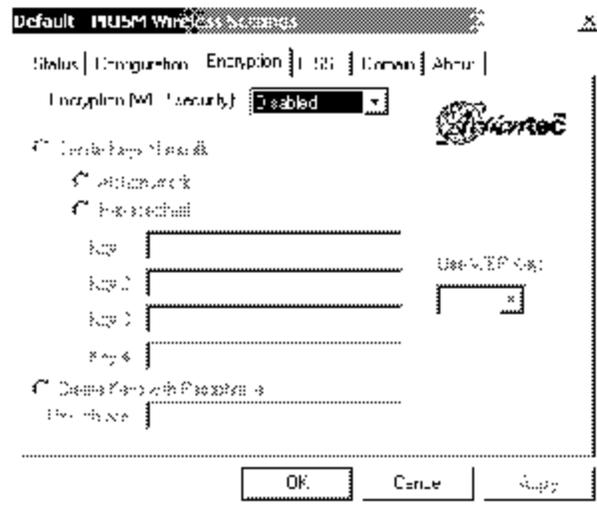
Access Point Mode

The second mode defined by the IEEE 802.11 standard is called Infrastructure mode. This mode is the primary application for wireless network operation. In this mode, data on the wireless network is directed to an Access Point, which routes the data to the appropriate wireless station. The Access Point can also be configured to allow data to be bridged from the wireless network to wired networks.

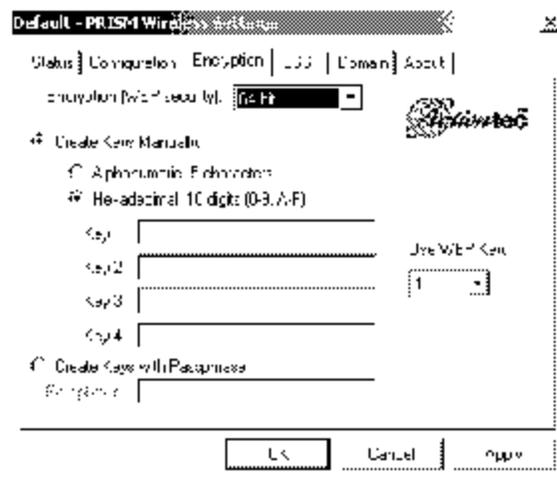
To participate in a wireless network in Infrastructure mode, every station and Access Point must specify the same **Network Name**. In Infrastructure mode, all available channels are scanned for traffic. As a result, there is no need to specify a channel.

Setting Up Encryption (**Encryption** Tab)

The **Encryption** tab lets you enable encryption and specify encryption keys.



To enable encryption, click the down arrow at the right of the **Encryption** field, select either **64 bit** or **128 bit** and click the **Apply** button. After enabling an encryption method, specify encryption keys, as described in the following sections.



Creating Encryption Keys Manually

When you specify 64-bit or 128-bit encryption, the configuration utility selects **Create Keys Manually** and lets you enter keys as either

alphanumeric or hexadecimal characters. When you click one of these buttons, the cursor appears next to **Key 1**.

- For 64-bit encryption, type exactly 5 alphanumeric or 10 hexadecimal characters in each of the four key fields.
- For 128-bit encryption, type exactly 13 alphanumeric or 26 hexadecimal characters.

Then click the **Apply** button to create your encryption keys. After you click **Apply**, the configuration utility uses asterisks to mask your keys.

The **Use WEP Key** field lets you specify which of the four encryption keys you use to transmit data on your wireless network. You can change the default key by clicking on the down arrow at the right of this field, selecting the number of the key you want to use and clicking the **Apply** button. As long as the Access Point or station with which you are communicating has the same key in the same position, you can use any of the keys as the default.

Creating Encryption Keys Using a Passphrase

To create encryption keys using a passphrase, click **Create Key with Passphrase** and type a character string in the **Passphrase** field. As you type, the configuration utility displays asterisks to mask your passphrase and uses an algorithm to generate four keys used for encryption. Using a passphrase to generate the four keys makes it easy to set the same keys for all members of your wireless network.

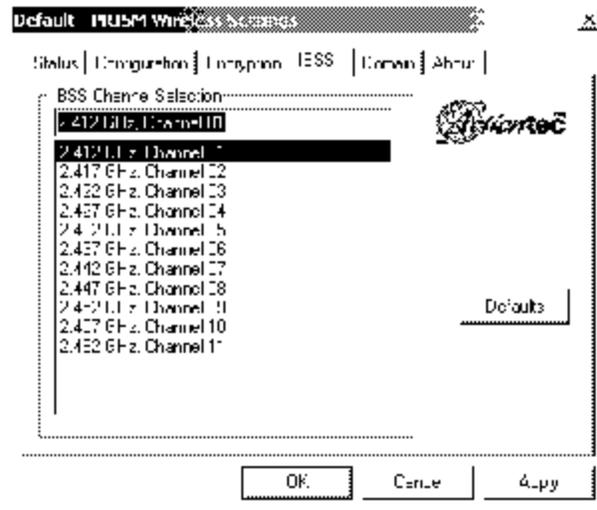
IBSS Channel Selection (**IBSS** Tab)

When communicating in a peer-to-peer network, you can use the **IBSS** tab to specify a channel on which you prefer communications to take place. Just click on the channel in the **IBSS Channel Selection** field, then click the **Apply** button.

The channel you select is not necessarily the channel on which peer-to-peer communications will be established. If the IBSS network names (SSID) are the same for nodes in the peer-to-peer network, but have different preferred channels, a network can still be established. In this case, if it cannot find a network with the specified network name on the preferred channel, a station will scan other channels until it finds a peer-to-peer network with the specified network name on which to communi-

cate.

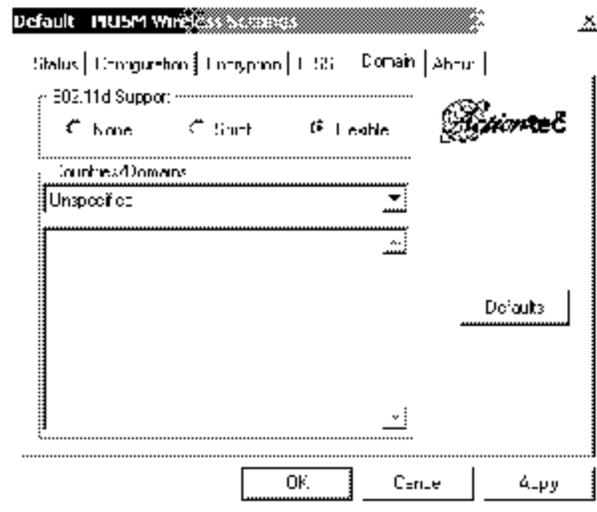
If you specified **Access Point** as the network type in the **Configuration** tab, selecting a channel in this tab has no effect until you change the **Network Type** to **Peer-to-Peer**.



Selecting a Domain (**Domain** Tab)

“Domain” refers to a territory where radio frequency transmissions must conform to the standards set by a single regulatory agency. For example, the frequencies and channels allowed for wireless data communications in the United States are set by the FCC. Every country sets its own standards, although in practice many countries may use the same standards.

The IEEE 802.11d standard provides a way for a wireless network adapter to detect the domain in which it is located and conform its transmissions to the standards set by the controlling regulatory agency.



802.11d Support

The **Domain** tab lets you specify one of three levels of 802.11d support. If you specify **None**, you must choose the county in the **Countries/Domains** field that corresponds to your location. Your 54 Mbps Wireless PC Card operates according to the standards set by the appropriate regulatory agency.

Note: If you specify Peer-to-Peer as the network type, you must specify **None**. If you select **Strict**, your 54 Mbps Wireless PC Card will only communicate with Access Points that provide 802.11d support. In this case, the 54 Mbps Wireless PC Card scans all communications channels for an Access Point which provides information on the channels, frequencies, and power levels permitted in your location. Once it finds such an Access Point, the 54 Mbps Wireless PC Card conforms its operations to these standards. The 54 Mbps Wireless PC Card will not communicate with an Access Point that does not provide this information, nor will it join or create a peer-to-peer network if **Strict 802.11d** support is specified in this field.

If you choose **Flexible**, your 54 Mbps Wireless PC Card can communicate with any Access Point it finds. In this case, you must also choose the county in the **Countries/Domains** field which corresponds to your location. Your 54 Mbps Wireless PC Card searches for an Access Point

that provides information on the channels, frequencies, and power levels permitted in your location. If it finds such an Access Point, the adapter conforms its operations to these standards.

If it does not find an Access Point that provides this information, it establishes communications with any Access Point it finds.

Configuring File and Printer Sharing

4

This chapter describes how to establish a network that will allow you to share files and printers. This is an easy method to set up a network in your home or small office.

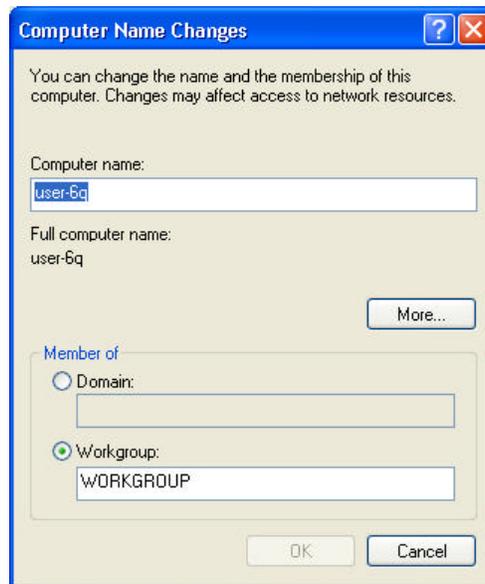
Windows XP

1. Right-click the **My Computer** icon and click **Properties**. The System Properties dialog box appears.



2. Select the **Computer Name** tab.
3. Click the **Change** button.

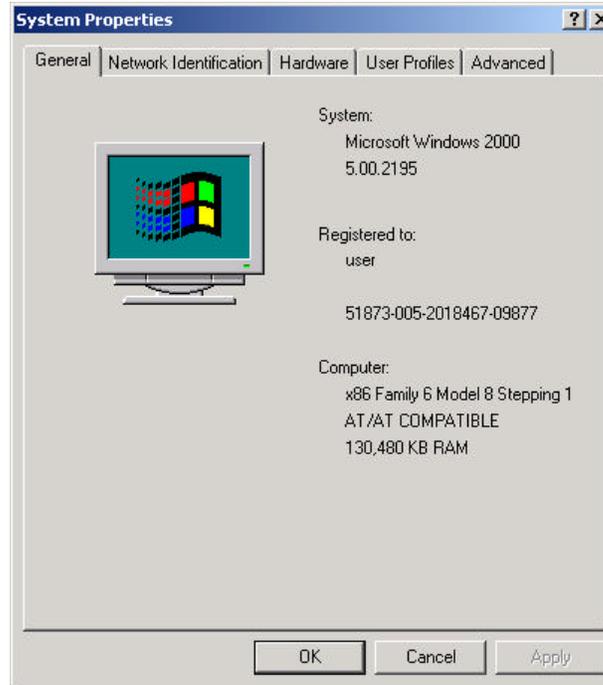
4. Under **Computer Name**, enter a new computer name.
5. Under **Workgroup**, enter a workgroup name.



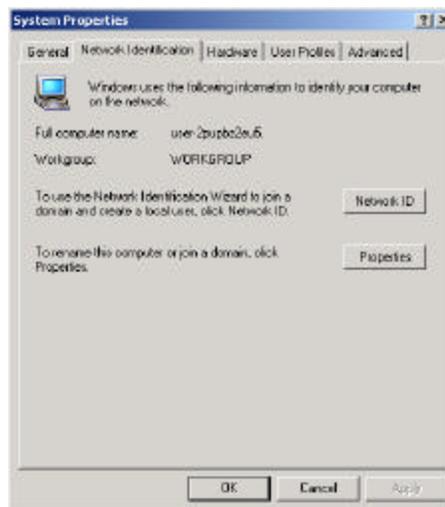
6. When you finish, click **OK**.
7. Restart your computer.

Windows 2000

1. After you install and configure your 54 Mbps Wireless PC Card, Windows 2000 automatically enables file sharing. The only item that needs to be altered is your workgroup settings. All the computers on your network must have the same workgroup name but different computer names. To check or change this, right-click the **My Computer** icon on your desktop, then select **Properties** from the given list.



2. In the System Properties window, click the **Network Identification** tab. The System Properties dialog box appears.



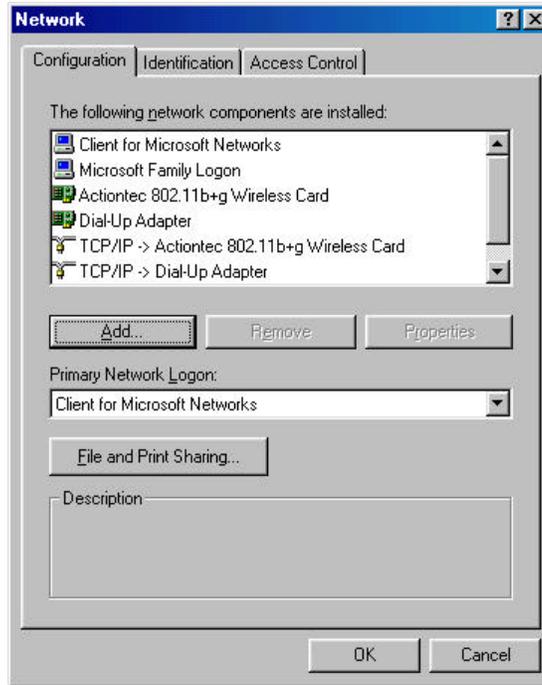
3. If the **Workgroup** name is already the same as all the other computers on your network, you do not need to change it and you can click **OK**. If it is not the same, click **Properties**. The Identification Changes dialog box appears.



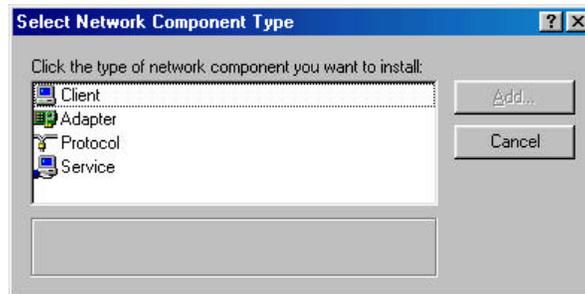
4. In the **Computer Name** field, type a name that is different than the other PCs on your network. Then, in the **Workgroup** field, type the name you are using to identify your network. This will be the same on each computer on your network.
5. Click **OK** to return to the Network Properties dialog box.
6. Click **OK** again.
7. Restart your computer, even if you are not prompted by Windows to do so.

Windows 98, 98SE, and ME

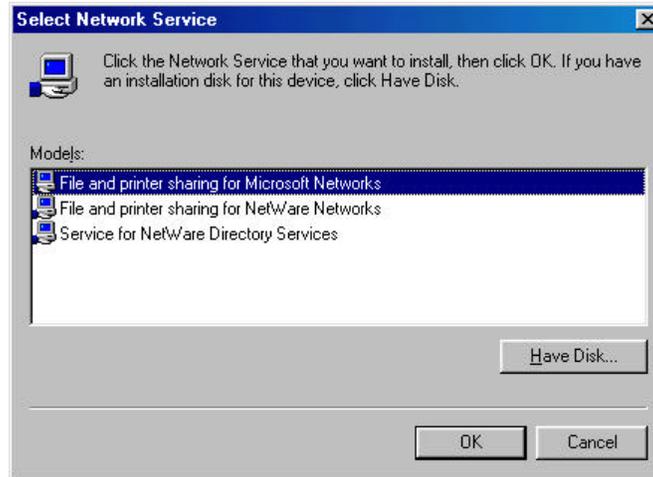
1. Click the Start in the Windows Taskbar, point to **Settings**, and click **Control Panel**.
2. In the Control Panel window, double-click the **Network** icon. The Network dialog box appears.



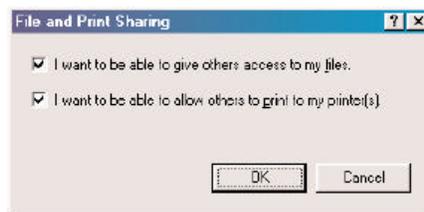
3. In the **Configuration** tab, click the **Add** button. The Select Network Component Type dialog box appears.



4. Click **Service**, then click the **Add** button. The Select Network Service dialog box appears.

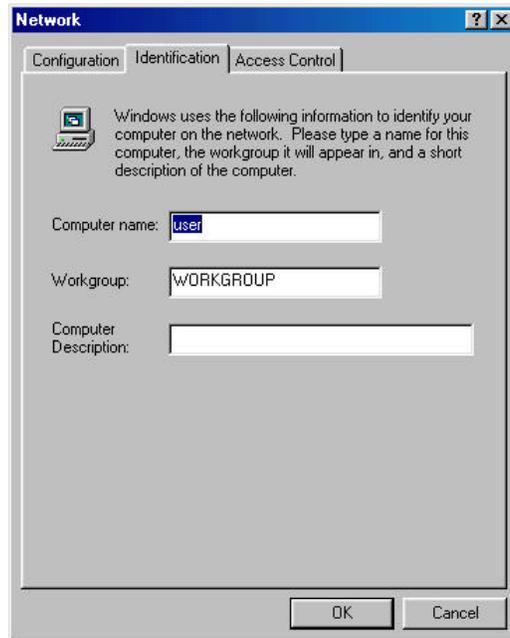


5. Select **File and printer sharing for Microsoft Networks** and click **OK**.
6. In the File and Print Sharing dialog box, be sure both the selections have a check mark beside them. If not, click on the box next to each statement.

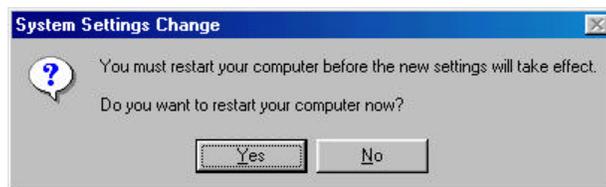


7. Click **OK**. The Network dialog box reappears.
8. Click the **Identification** tab. Then complete it as follows:
 - **Computer Name:** Enter any name you want. (for example, My Computer, John, CPU654). Use a unique name for each computer you want to have on your network.
 - **Workgroup:** This field lets you assign a unique name for your network. The same name must be specified up on every other computer you want to have on your network.

- **Computer Description:** Enter any description you like. Traditionally, the location name or main user's name is entered.



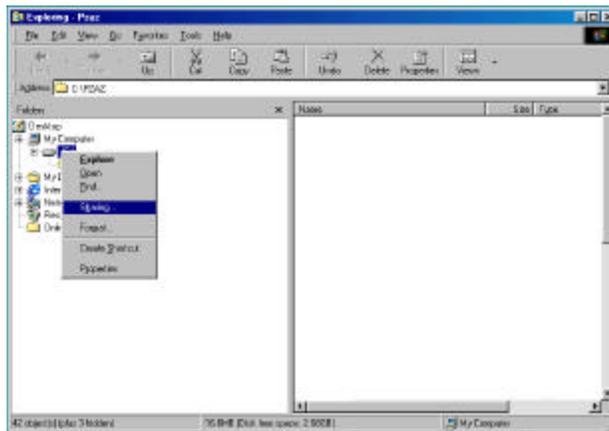
9. Click the **Configuration** tab to redisplay the Configuration dialog box.
10. In the Primary Network Logon box above the **File and Print Sharing** button, be sure **Client for Microsoft Networks** is selected. If not, click the down arrow and select it from the given list.
11. Click **OK**. A screen asks you to restart your computer.



12. Click **Yes** to restart the computer. (If this screen does not appear, restart your computer anyway.)
13. After your computer restarts, Windows prompts you for a user name

and password. Enter whatever user name and password you would like, but write them on a sheet of paper, as they will enable you to access your network.

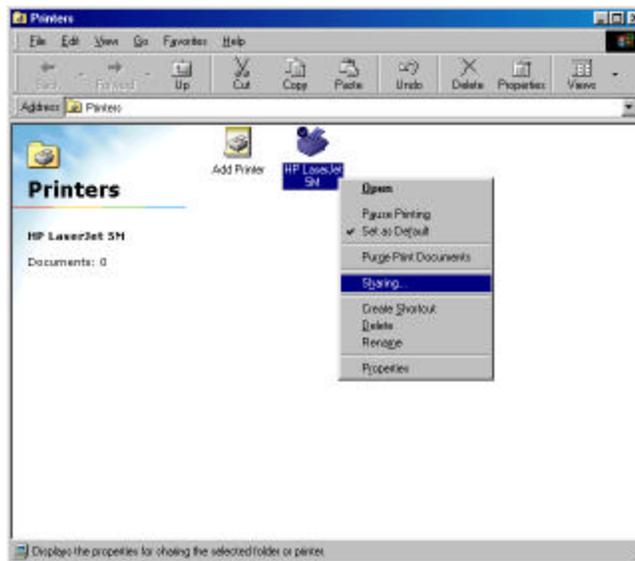
14. Using Windows Explorer, find a file or drive you want to share. When you find it, right-click it and select **Sharing** from the pop-up menu. The Properties dialog box appears.



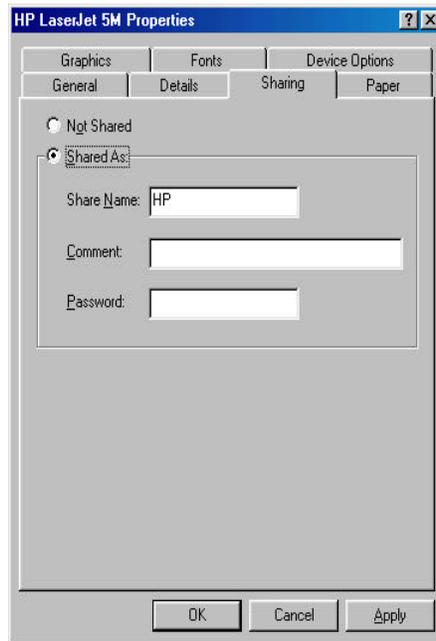
15. Click the **Sharing** tab.



16. Click **Shared As**. This allows other users on your network to see the file or drive you selected.
17. Select the **Access Type**:
 - Read Only**: This selection lets other users on your network view and read the file or drive you selected. They will not be able to modify it in any way. You can further restrict their privileges by entering a password in the appropriate field.
 - Full**: This selection lets other users on your network read, modify, move and delete any information in the shared drive or file. You can further restrict their privileges by entering a user name and password.
 - Depends on Password**: This selection allows you to set both Read Only and Full access on the shared file or drive. The level of access will depend on the passwords you enter in the appropriate field.
18. When you are finished click **Apply**, then **OK**.
19. To share your printer, click the Start button in the Windows Taskbar, point to **Settings**, and click **Printers**.
20. Right-click the printer you want to share and select **Sharing**.



A Properties dialog box appears for the printer you selected.



21. In the **Share** tab, enable the sharing by selecting **Shared As**. This automatically inserts a default name for the share name. You can set a password for the printer at this time if you want to restrict who on the network can use this resource. You can also set the default printer settings by modifying information on the other tabs of this window.

LED

5

Your *Actiontec* 54 Mbps Wireless PC Card has one light-emitting diode (LED) indicator. This indicator shows the link status.

- When your 54 Mbps Wireless PC Card is associated with a client, the LED remains ON.
- If your 54 Mbps Wireless PC Card is not associated with a client and is scanning, the LED blinks 5 second on and 200 milliseconds off.

Troubleshooting

6

In the unlikely event you encounter a problem using your *Actiontec* 54 Mbps Wireless PC Card, refer to the troubleshooting procedures in this chapter to resolve your problem.

1. My computer does not recognize my 54 Mbps Wireless PC Card.

Be sure the 54 Mbps Wireless PC Card is properly inserted into a 32-bit CardBus slot. If Windows does not detect the hardware when you insert the Card, your computer could have a driver for a previous PC Card installed. Remove the old driver and try again.

2. My 54 Mbps Wireless PC Card does not work properly after the configuration utility is installed.

Reinsert the 54 Mbps Wireless PC Card into the slot. Go to Device Manager and verify that your 54 Mbps Wireless PC Card appears as a network node. If you see a yellow exclamation point, there are conflicting resources. In this case, be sure your computer has a free IRQ and be sure you have installed the configuration utility for your 54 Mbps Wireless PC Card. If necessary, uninstall your 54 Mbps Wireless PC Card (see Chapter 8) and then reinstall it,

3. Stations cannot associate in AdHoc mode.

In the **Network Name** field of the configuration utility's **Configuration** tab, be sure the same SSID is specified for all stations that need to join the same AdHoc network (see Chapter 3).

4. The station cannot access the Internet in Infrastructure mode.

Be sure the station is associated with and joined an Access Point. If WEP security is enabled in the configuration utility's **Encryption** tab, the station must have the proper WEP keys specified. Also, be sure TCP/IP properties are configured appropriately.

Uninstalling

7

If you no longer wish to use your *Actiontec 54 Mbps Wireless PC Card*, you can uninstall it. Refer to the appropriate section:

Windows XP Instructions

To uninstall the *Actiontec 54 Mbps Wireless PC Card* on a computer running Microsoft Windows XP or 2000, use the following procedure:

1. From the computer desktop, right-click **My Computer** and select **Manage**.
2. Select **Device Manager** from the list on the left.
3. Expand the **Network Adapters** item on the right side of the dialog box.
4. Right-click **Actiontec 802.11b+g Wireless Card** and select **Uninstall**.

Windows ME, 98, and 98SE Instructions

To uninstall the *Actiontec 54 Mbps Wireless PC Card* on a computer running Microsoft Windows ME, 98, or 98SE, use the following procedure:

1. From the computer desktop, right-click **My Computer** and select **Properties**.
2. Click the **Device Manager** tab.
3. Click the plus sign next to **Network Adapters** item to expand it.
4. Right-click **Actiontec 802.11b+g Wireless Card** and select **Remove**.

Notices

Regulatory Compliance Notices

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by implementing one or more of the following measures:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and receiver;
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected;
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by *Actiontec Electronics, Inc.*, may void the user's authority to operate the equipment.

Declaration of conformity for products marked with the FCC logo – United States only.

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

1. This device may not cause harmful interference;
2. This device must accept any interference received, including interference that may cause unwanted operation.

 *Note:* To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

For questions regarding your product or the FCC declaration, contact:

Actiontec Electronics, Inc.
760 North Mary Ave.
Sunnyvale, CA 94086
United States
Tel: (408) 752-7700
Fax: (408) 541-9005

Limited Warranty

Hardware: Actiontec Electronics, Inc., warrants to the end user ("Customer") that this hardware product will be free from defects in workmanship and materials, under normal use and service, for twelve (12) months from the date of purchase from Actiontec Electronics or its authorized reseller.

Actiontec Electronics' sole obligation under this express warranty shall be, at Actiontec's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, Actiontec Electronics may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of Actiontec Electronics, Inc. Replacement products may be new or reconditioned. Actiontec Electronics warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

Software: Actiontec Electronics warrants to Customer that each software program licensed from it will perform in substantial conformance to its program specifications, for a period of ninety (90) days from the date of purchase from Actiontec Electronics or its authorized reseller. Actiontec Electronics warrants the media containing software against failure during the warranty period. The only updates that will be provided are at the sole discretion of Actiontec Electronics and will only be available for download at the Actiontec Web site, www.actiontec.com. Actiontec Electronics' sole obligation under this express warranty shall be, at Actiontec Electronics' option and expense, to refund the purchase price paid by Customer for any defective software product, or to replace any defective media with software which substantially conforms to applicable Actiontec Electronics published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. Actiontec Electronics makes no warranty or representation that its software products will meet Customer's requirements or work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected. For any third-party products listed in the Actiontec Electronics software product documentation or specifications as being compatible, Actiontec Electronics will make reasonable efforts to provide compatibility, except where the

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Return the product to:
(In the United States)
Actiontec Electronics, Inc.
760 North Mary Avenue
Sunnyvale, CA 94085

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Limited Warranty

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Dispute Resolution: The customer may contact the Director of Technical Support in the event the Customer is not satisfied with Actiontec Electronics' response to the complaint. In the event that the Customer is still not satisfied with the response of the Director of Technical Support, the Customer is instructed to contact the Director of Marketing. In the event that the Customer is still not satisfied with the response of the Director of Marketing, the Customer is instructed to contact the Chief Financial Officer and/or President.

Governing Law: This Limited Warranty shall be governed by the laws of the State of California, U.S.A., excluding its conflicts of laws and principles, and excluding the United Nations Convention on Contracts for the International Sale of Goods.