

Table of Contents	Page
I. Introduction	2
II. Contacting Technical Support	3
III. Connecting the <i>Actiontec 802.11a Wireless PCCard</i>	4
IV. Installing the <i>Actiontec 802.11a Wireless PCCard</i>	5
Configuring Windows ME	5
Configuring the <i>Actiontec 802.11a Wireless PC Card</i>	7
<i>Setting AdHoc Mode</i>	8
<i>Setting infrastructure Mode</i>	10
<i>TCP/IP Configuration</i>	12
Un-installing the <i>Actiontec 802.11a Wireless PCCard</i>	14
Configuring Windows 2000	16
Configuring the <i>Actiontec 802.11a Wireless PC Card</i>	19
<i>Setting AdHoc Mode</i>	20
<i>Setting infrastructure Mode</i>	21
<i>TCP/IP Configuration</i>	23
Un-installing the <i>Actiontec 802.11a Wireless PCCard</i>	25
V Configuring File and Print Sharing	28
Windows ME	28
Windows 2000	33
VI <i>Actiontec 802.11a Wireless PCCard Operating Modes</i>	35
VII Troubleshooting	36
VIII Frequently Asked Questions	38

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Introduction

Thank you for purchasing the *Actiontec* 802.11a Wireless PC card. This Wireless PC Card is easy to use and easy to setup. If you are tired of all those messy wires needed to connect a laptop to your Home network, then take your networking to the next level with the *Actiontec* 802.11a Wireless PC Card. You will be able to have full access to your network and share files, printers and even your High-Speed Internet access wirelessly from anywhere within your home.

Package Contents

Make sure the following items came in this package:

- *Actiontec* 802.11a Wireless PC Card
- *Actiontec* 802.11a Wireless PC Card Installation CD-ROM
- This User's Manual and Quick Start Installation Guide
- Warranty Card

Minimum System Requirements

- PC Laptop computer with a 32-bit CardBus slot (PCMCIA Slot) or PC Computer with a 32-bit CardBus slot (PCMCIA) reader.
- 128 MB RAM or greater
- 733 MHz processor or higher
- Microsoft Windows 2000/Windows Millennium Edition, Windows 98 Second Edition (SE), XP/Windows NT 4.0 (with Service Pack 6)

Contacting Technical Support

Actiontec Electronics prides itself on making high-quality, durable, high-performance products. If you should need assistance, the *Actiontec* Technical Support Department is available 6 am to 11pm Mon - Sun (Mountain Time), to provide professional support.



***Actiontec* Electronics, Inc.**

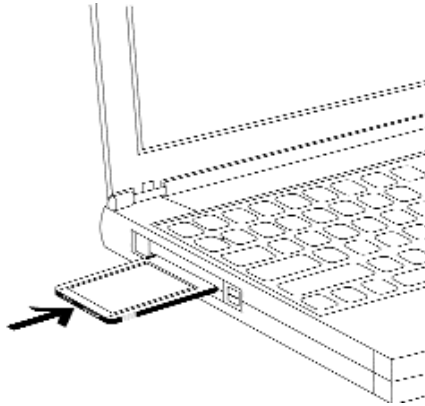
760 N. Mary Avenue

Sunnyvale, CA 94086

Phone: 1-719-884-8300 E-mail: techsupp@actiontec.com

Connecting the Actiontec 802.11a Wireless PC Card

1. Your computer can be on or off, it will not affect the installation process. Locate an available Type II or Type III PCMCIA slot on your laptop. If you are not sure where this may be, please consult your laptop's User Manual.
2. Insert the Actiontec 802.11a Wireless PC Card into the appropriate PCMCIA slot. Your hardware is now installed.



WARNING!!

While this device is in operation, a separation distance of at least 20 centimeters must be maintained between the radiating antenna and the body of all persons exposed to the transmitter in order to meet the FCC RF exposure guidelines.

Installing the Actiontec 802.11a Wireless PC Card

This device complies with Part 15 of FCC Rules., as well as ICES 003 B / NMB 003 B. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation. Modifications not expressly authorized by Actiontec Electronics may invalidate the user's right to operate this equipment.

Configuring Windows ME (Millennium Edition)

1. After you have installed the PC Card your computer will display the following dialog box. Choose "Specify the location of the driver (Advanced)" and click **Next** to continue.



2. Please insert the Actiontec 802.11a Wireless PC Card Installation CD into your CD-ROM drive. In the next screen, select the option **Search for the best driver for your device (Recommended)** and select "Removable Media (Floppy, CD-ROM...)" then click the **Next** button.



3. When the *Actiontec* 802.11a Wireless PC Card driver has been found, click **Next** to continue.



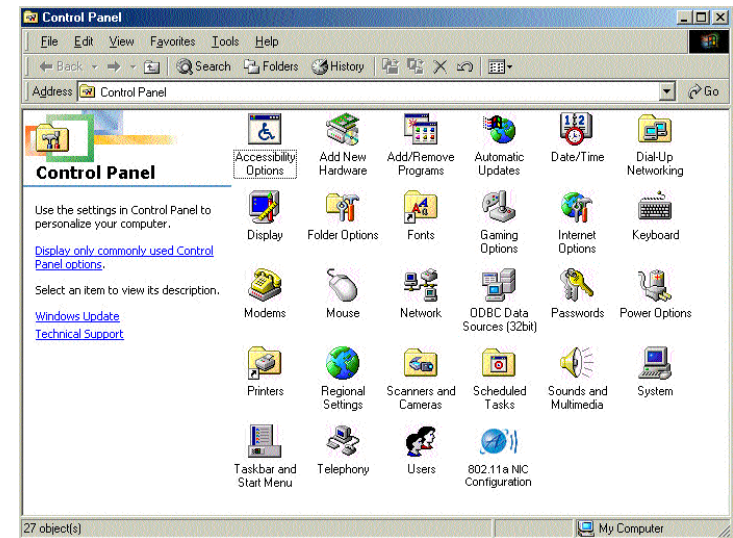
4. Click **Finish** to continue, and restart the system to complete driver installation.



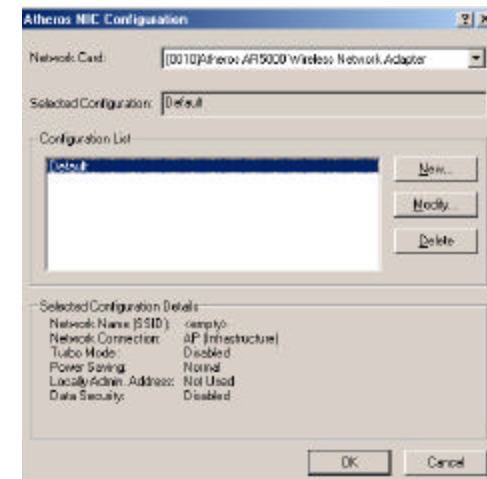
Note: Once the system is restarted, the *Actiontec* 802.11a Wireless PC Card will display two flashing green lights. .

Configuring the *Actiontec* 802.11a Wireless PC Card.

Configuration of the *Actiontec* 802.11a Wireless PC Card can be done through the *Actiontec* 802.11a configuration utility found in the Windows Control Panel. To launch the configuration utility, go to the Control Panel and double-click on the *Actiontec* 802.11a NIC configuration.



The configuration utility allows addition, modification, and deletion of configuration profiles. Select one of the existing configuration profiles under the configuration list to modify or click New to add a new configuration profile.



Setting AdHoc Mode.

This section defines the process of configuring the *Actiontec* 802.11a Wireless PC Card in AdHoc or IBSS mode. See section VI “*Actiontec* 802.11a Wireless PC Card Operating Modes” for descriptions of AdHoc operation.

1. Under the “General” tab, make sure the “Locally Administered Address” checkbox is unchecked. Use the following information as a guideline to choose the values of each field in the configuration window:

Configuration Name: This field identifies the configuration. This name must be unique. Configuration names are case insensitive.

Network name (SSID): A Network Name is mandatory for AdHoc mode. The SSID for all stations in a single AdHoc name must be the same.

Network Connection: AdHoc.

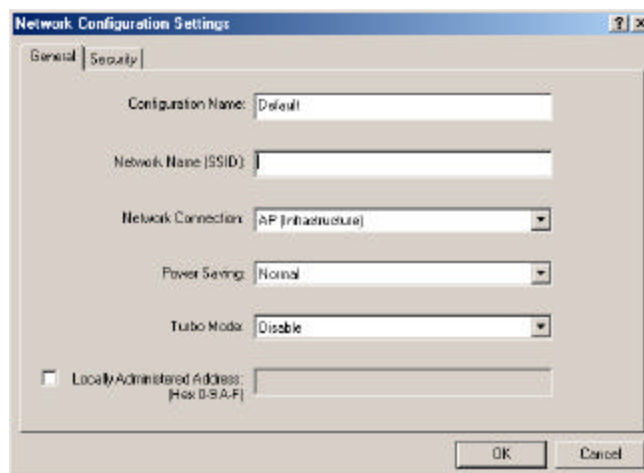
Power Saving: Power saving mode is not currently supported in an AdHoc network.

Turbo Mode: All stations participating in the AdHoc network must have the same rate setting.

Locally Administered Address: This field defines the locally administered MAC (media access controller) address (LAA). To enter a value in the address field, the check box needs to be selected.

2. You can optionally set up other properties, but because the duration of the AdHoc networks tends to be limited, Power Saving and Security features are not typically a requirement. For AdHoc network activity, the Power Savings and Security features can be disabled. Currently, shared key security is supported in AdHoc mode. Future *Actiontec* software implementations will provide unique key support.
3. Click **OK** when the properties are set correctly. The system needs to reboot in order for the changes to take effect.

Note: In AdHoc mode, a station scans the air for an existing BSS. If no BSS is found, the station establishes a BSS for other stations to join. When other stations scan the air and find an established BSS in place, they join that BSS to form an AdHoc network. If a specific set of stations requires AdHoc network connectivity, it is recommended to have one station establish a BSS first before configuring the remaining stations. This prevents the scenario of several stations trying to form a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple stations.



Setting Infrastructure Mode.

This section defines the process of configuring the *Actiontec* 802.11a Wireless PC Card in Infrastructure mode. See section **VI “Actiontec 802.11a Wireless PC Card Operating Modes”** for descriptions of Infrastructure mode.

1. Under the “General” tab, make sure the “Locally Administered Address” checkbox is unchecked. Use the following information as a guideline to choose the values of each field in the configuration window:

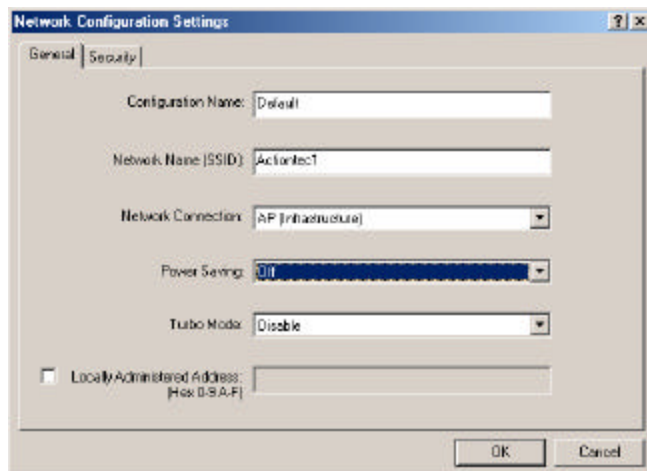
Configuration Name: This field identifies the configuration. This name must be unique. Configuration names are case insensitive.

Network name (SSID): This is the name of the IEEE 802.11a wireless network. This field has a maximum limit of 32 characters. If this field is left blank, the *Actiontec* 802.11a Wireless PC Card connects to the AP (Access Point) with the best signal strength.

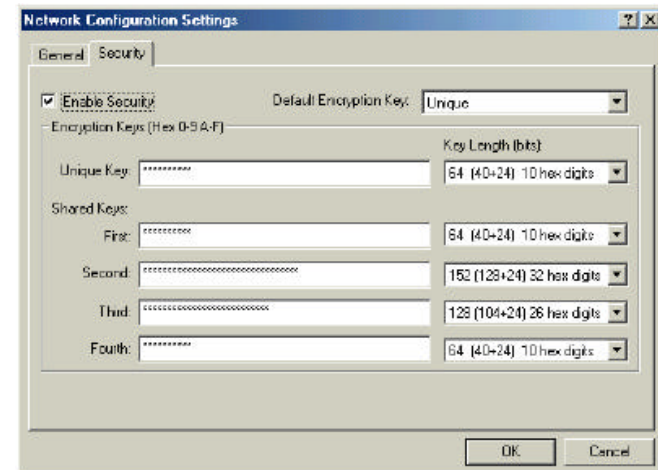
Network Connection: AP (Infrastructure)

Power Saving: This field allows the configuration of power management options. The options are Off, Normal, and Maximum.

Turbo Mode: This field enables or disables Atheros turbo mode.



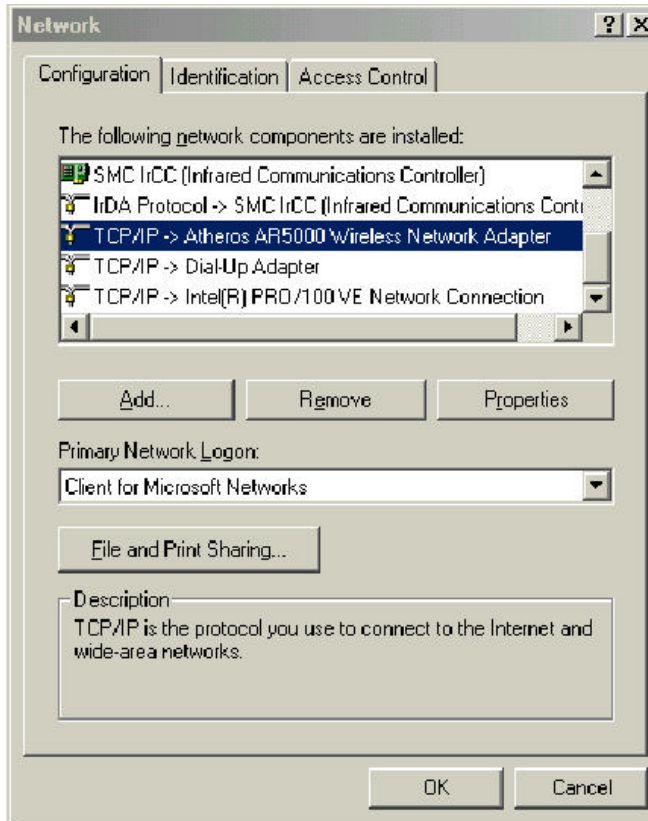
1. Usually, infrastructure mode is used as an enterprise environment where APs (Access Points) are installed and maintained by IT staff. Much of the data in the enterprise network is confidential. You must configure security to make sure only stations with appropriate keys can receive sensitive data. the *Actiontec* 802.11a Wireless PC Card and NDIS driver support key lengths of 40, 104, and 128 bits. Encryption and decryption keys are provided by the IT staff.



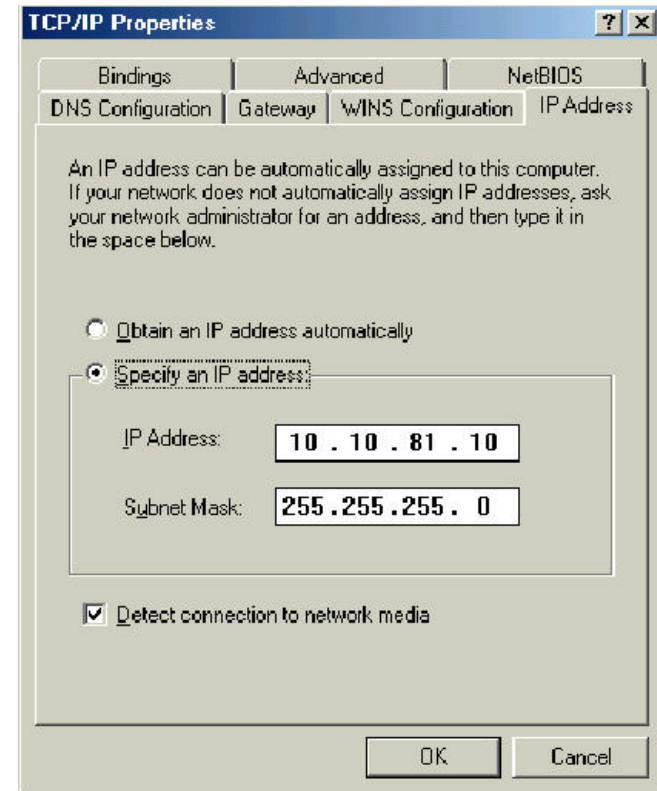
TCP/IP Configuration

After configuring the *Actiontec 802.11a Wireless PC Card*, the TCP/IP address for the network device needs to be configured.

1. From the Control Panel, launch the Network Properties window. Select “TCP/IP *Actiontec 802.11a Wireless PC Card*” and click properties. Depending on the type of network the station connects to, Gateway and DNS configuration information (DHCP or assigned IP address, Gateway or DNS server IP address) is usually obtained from the corporate IT staff. For a simple demonstration, the station is assigned a static IP address. From “TCP/IP Properties,” Choose “IP Address” and select “Specify an IP address.” Input and IP address and subnet mask. Assigning an IP address and subnet mask allows the station to interact with the AP or other stations in the same IP subnet.. Click OK to complete the TCP/IP configuration, and restart the system for the changes to take effect.



2. Input and IP address and subnet mask. Assigning an IP address and subnet mask allows the station to interact with the AP or other stations in the same IP subnet.. Click OK to complete the TCP/IP configuration, and restart the system for the changes to take effect.



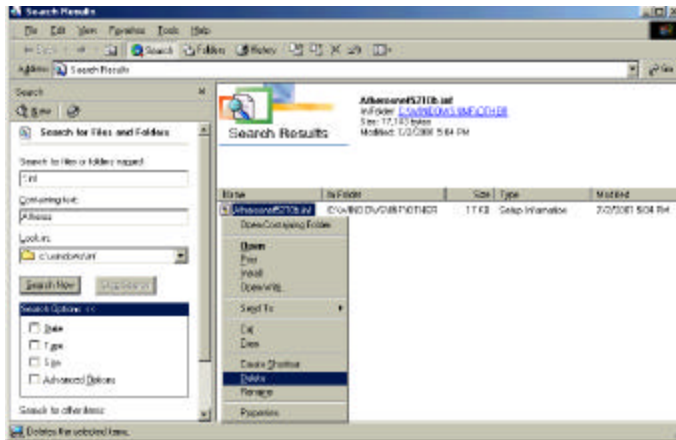
2. To determine if the TCP/IP configuration has taken place, and to test IP connectivity in AdHoc or infrastructure mode, use the “ping <ip address>” command from the DOS prompt. The DOS prompt is accessed by clicking “Start”, “Programs”, “Accessories”, and “Command Prompt”

When a TCP/IP connection is established, the LinkMon utility can be used to monitor the *Actiontec 802.11a Wireless PC Card* Status. Refer to section IX for details on the functions of LinkMon.

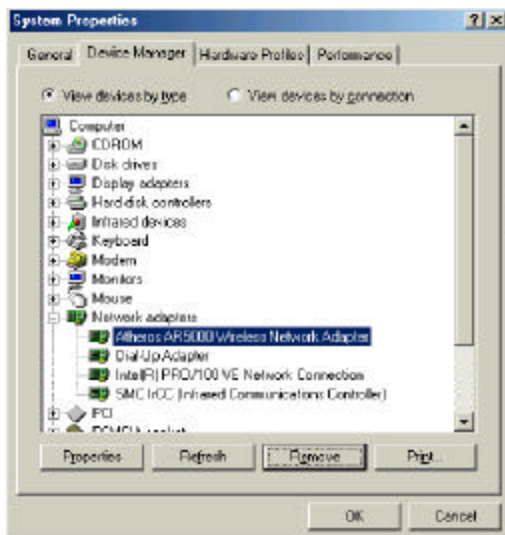
Un-installing the Actiontec 802.11a Wireless PC Card.

To remove the Actiontec 802.11a Wireless PC Card from your system, use the following steps.

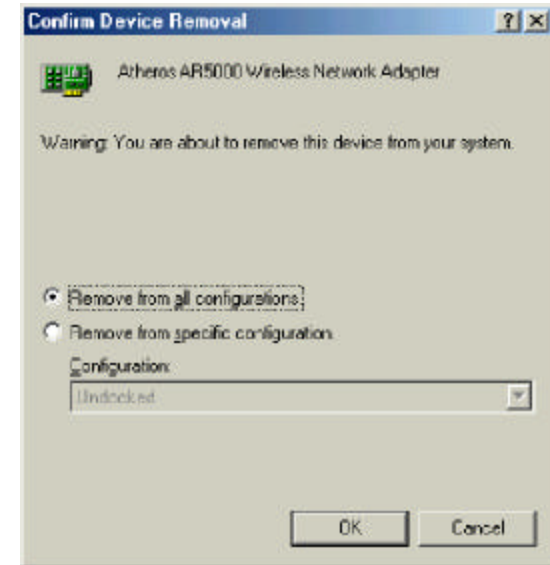
1. Go to "Start Menu", click Search "For Files or Folders" and search for the INF File containing the "Actiontec" text string under the \WINDOWS\INF folder. Be sure to include sub-folders in the search criteria. When "Atheros5210b.inf" has been found, delete it by right-clicking the file and choose delete.



2. From the Control Panel, launch System Properties window by clicking on the **SYSTEM ICON**. Select "Actiontec 802.11a Wireless PC Card" from the Device Manager and click **Remove** to un-install the device.



3. Click OK to confirm the removal of the device. Restart the system to complete un-installation.

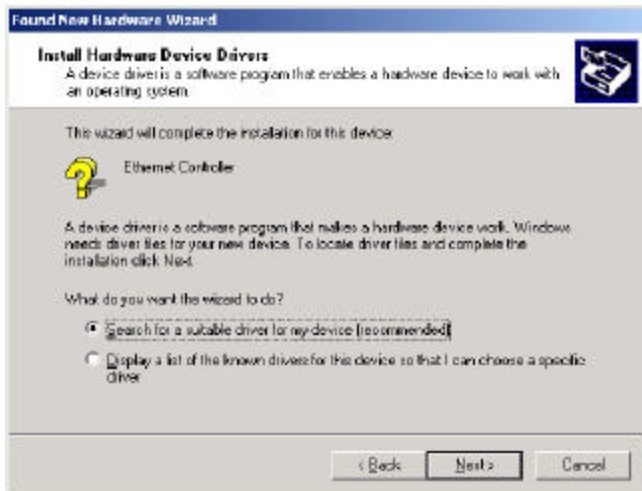


Configuring Windows 2000

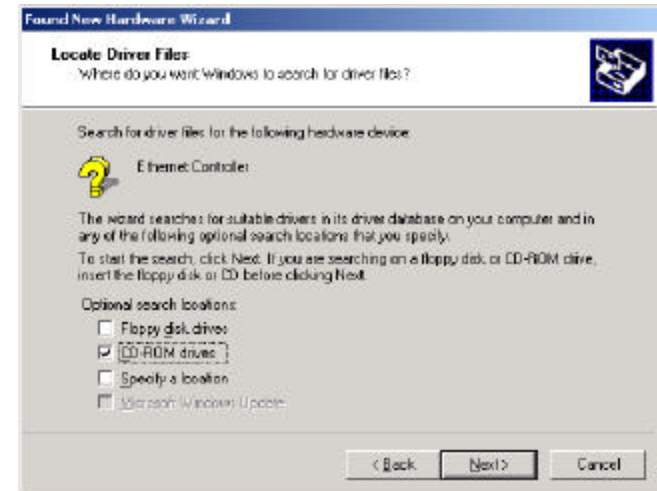
1. After you have installed the PC Card your computer will display the following dialog box. Click **Next** to continue.



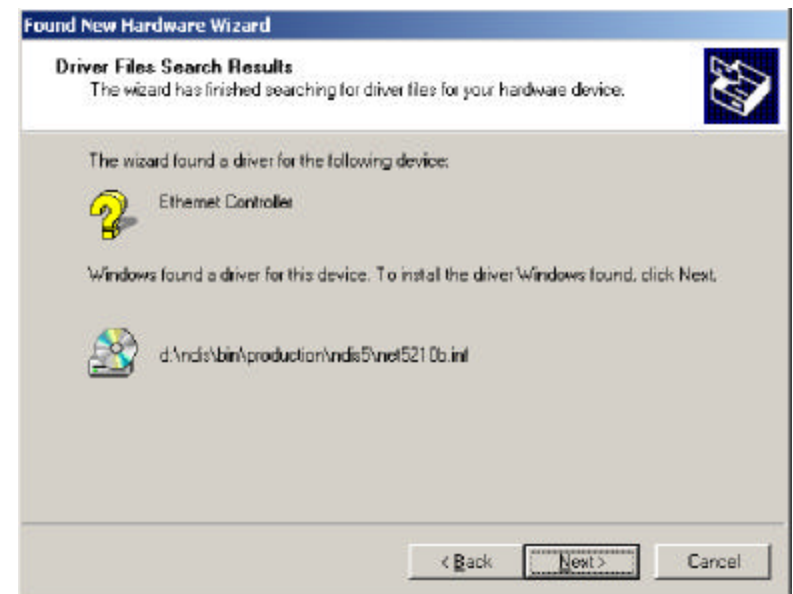
2. Choose "Search for a suitable driver for my device (recommended)" and click **Next**



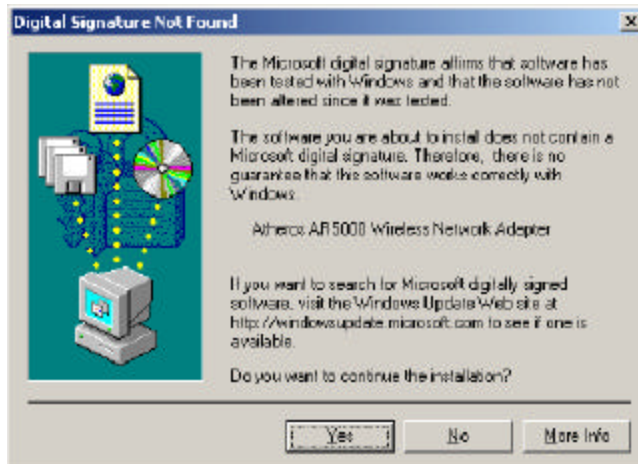
3. Insert the *Actiontec* 802.11a Wireless PC Card Installation CD into your CD-ROM drive. Choose "CD-ROM Drive", and click **Next** to continue.



4. When the appropriate *Actiontec* 802.11a Wireless PC Card driver is found, click **Next** to continue.



5. The *Actiontec* 802.11a Wireless PC Card NDIS driver currently does not have a digital signature from Microsoft. Therefore Windows 2000 shows a warning message, click **Yes** to proceed with the driver installation.



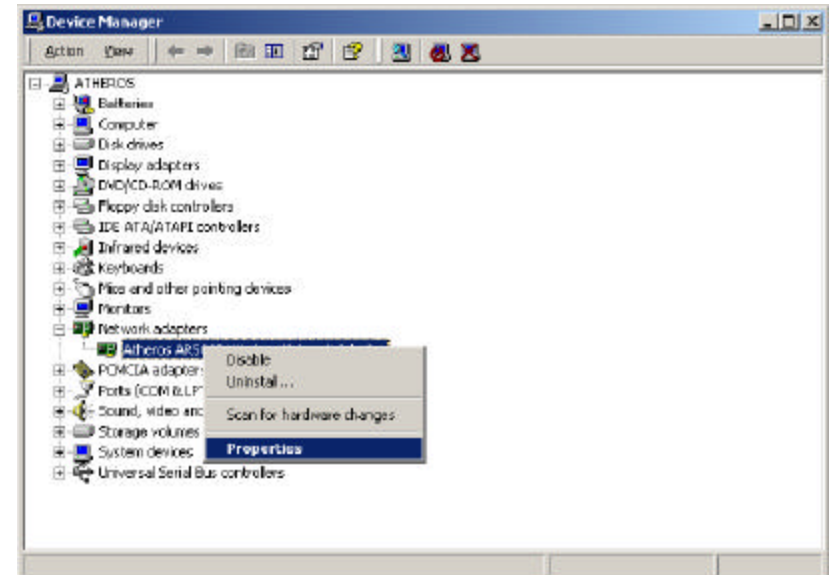
6. Click **Finish** to complete the driver Installation.



Configuring the *Actiontec* 802.11a Wireless PC Card.

Configuration of the *Actiontec* 802.11a Wireless PC Card can be done through the Network Control Panel (NCP) in adapter properties.

1. In the Device Manager, right-click "*Actiontec* 802.11a Wireless PC Card" and click properties to access the properties of the adapter.



2. Select one of the configurations under the configuration list, and click Modify to show the "Network Configuration Settings" screen.
3. Proceed to "Setting AdHoc" Mode.

Setting AdHoc Mode.

This section defines the process of configuring the *Actiontec* 802.11a Wireless PC Card in AdHoc or IBSS mode. See section VI “*Actiontec 802.11a Wireless PC Card Operating Modes*” for descriptions of AdHoc operation.

1. Under the “General” tab, make sure the “Locally Administered Address” checkbox is unchecked. Use the following information as a guideline to choose the values of each field in the configuration window:

Configuration Name: This field identifies the configuration. This name must be unique. Configuration names are case insensitive.

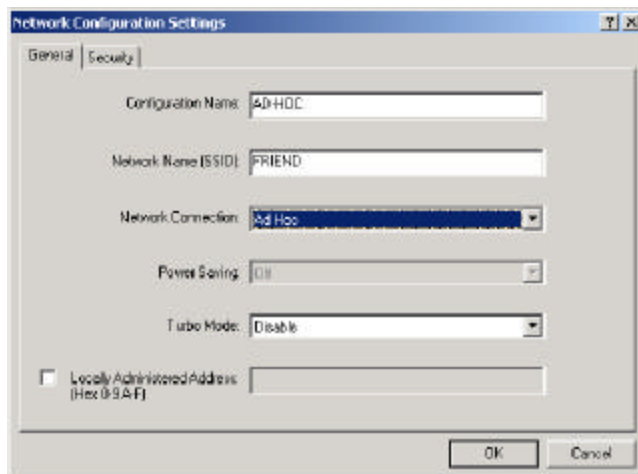
Network name (SSID): A Network Name is mandatory for AdHoc mode. The SSID for all stations in a single AdHoc name must be the same.

Network Connection: AdHoc.

Power Saving: Power saving mode is not currently supported in an AdHoc network.

Turbo Mode: All stations participating in the AdHoc network must have the same rate setting.

Locally Administered Address: This field defines the locally administered MAC (media access controller) address (LAA). To enter a value in the address field, the check box needs to be selected.



Setting Infrastructure Mode.

This section defines the process of configuring the *Actiontec* 802.11a Wireless PC Card in Infrastructure mode. See section VI “*Actiontec 802.11a Wireless PC Card Operating Modes*” for descriptions of Infrastructure mode.

1. Under the “General” tab, make sure the “Locally Administered Address” checkbox is unchecked. Use the following information as a guideline to choose the values of each field in the configuration window:

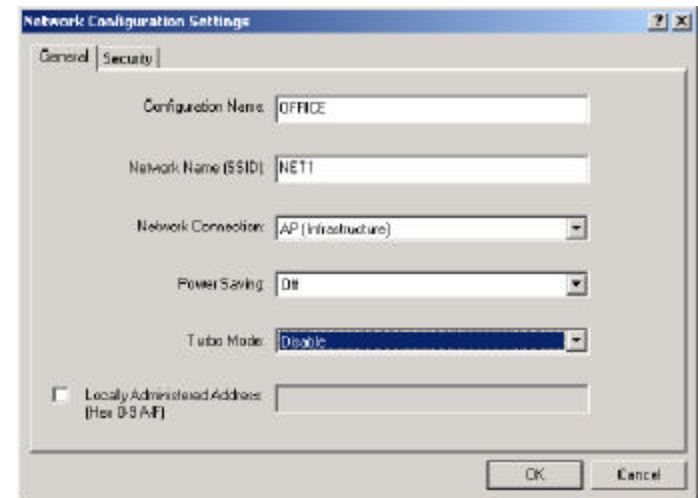
Configuration Name: This field identifies the configuration. This name must be unique. Configuration names are case insensitive.

Network name (SSID): This is the name of the IEEE 802.11a wireless network. This field has a maximum limit of 32 characters. If this field is left blank, the *Actiontec* 802.11a Wireless PC Card connects to the AP (Access Point) with the best signal strength.

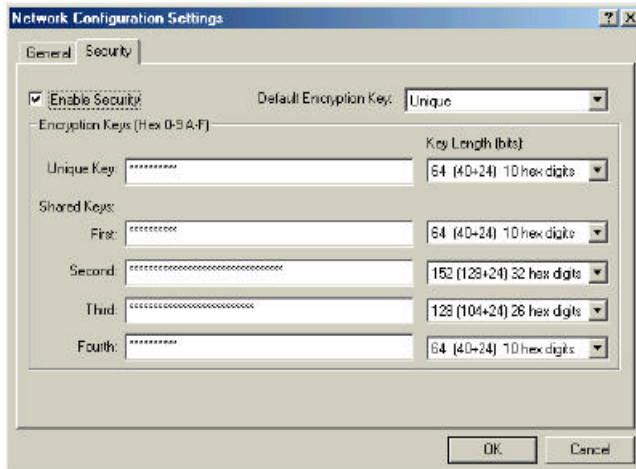
Network Connection: AP (Infrastructure)

Power Saving: This field allows the configuration of power management options. The options are Off, Normal, and Maximum.

Turbo Mode: This field enables or disables Atheros turbo mode.



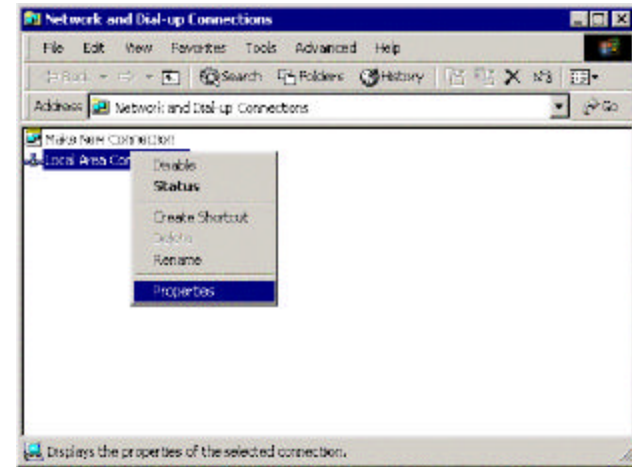
1. Usually, infrastructure mode is used as an enterprise environment where APs (Access Points) are installed and maintained by IT staff. Much of the data in the enterprise network is confidential. You must configure security to make sure only stations with appropriate keys can receive sensitive data. the *Actiontec 802.11a Wireless PC Card* and NDIS driver support key lengths of 40, 104, and 128 bits. Encryption and decryption keys are provided by the IT staff.



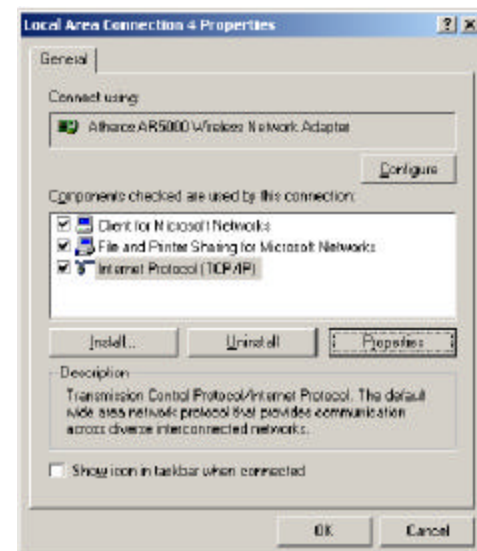
TCP/IP Configuration

After configuring the *Actiontec 802.11a Networking PC Card*, the TCP/IP address for the network device must be configured.

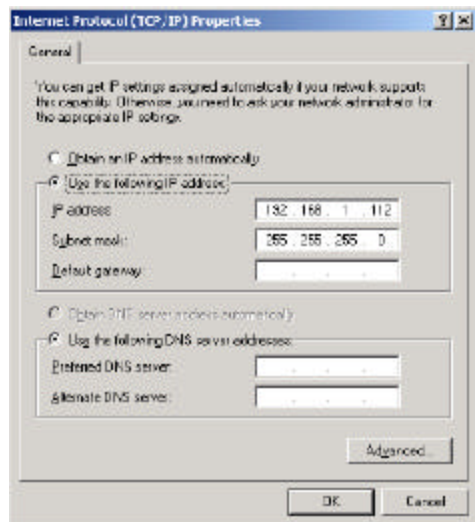
1. Open the "Control Panel" and click "Network and Dial-Up Connections".
2. Find the "Local Area Connection" that is associated with the "*Actiontec 802.11a Networking PC Card*", right-click that connection and click properties.



3. Select "Internet Protocol (TCP/IP)" and click properties..



4. Click “Use the following IP address” and input the IP address and Subnet mask. Assigning an IP address and Subnet mask allows stations to operate in infrastructure mode and to have internet access “Default Gateway” and DNS server” information is also required. IP configuration information (DHCP or assigned IP address, Gateway and DNS server IP addresses) is usually obtained from the corporate IT staff.
4. After obtaining IP configuration information from the appropriate IT staff, click OK in both “Internet Protocol (TCP/IP) Properties” and “Local Area Connection Properties” to complete the IP configuration.



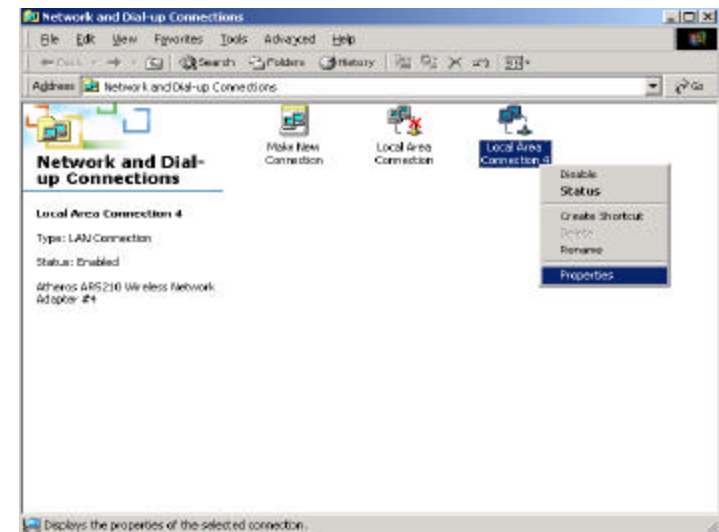
5. To determine if the TCP/IP configuration has taken place, and to test IP connectivity in AdHoc or infrastructure mode, use the “ipconfig <ip address>” command from the DOS prompt. The DOS prompt is accessed by clicking “Start”, “Programs”, “Accessories”, and “Command Prompt”

When a TCP/IP connection is established, the LinkMon utility can be used to monitor the *Actiontec 802.11b Wireless PC Card* Status. Refer to section IX for details on the functions of LinkMon.

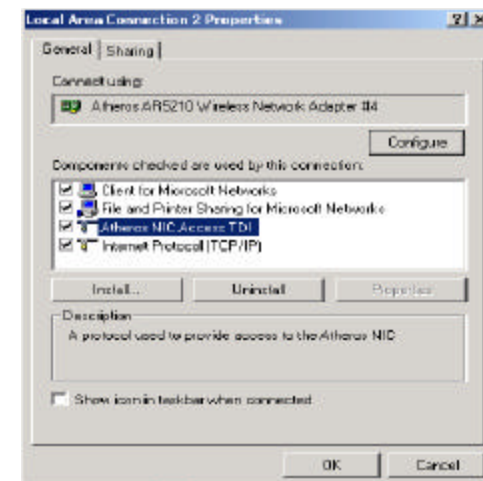
Un-installing the *Actiontec 802.11a Wireless PC Card*.

To remove the *Actiontec 802.11a Wireless PC Card* from your system, use the following steps.

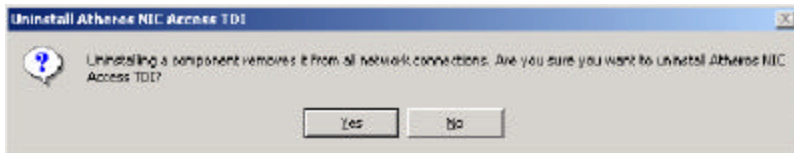
1. Go to “Network and Dial-up Connection” In he control Panel.
2. Right-click the *Actiontec 802.11a Wireless PC Card* “Local Area Connection” icon and choose properties.



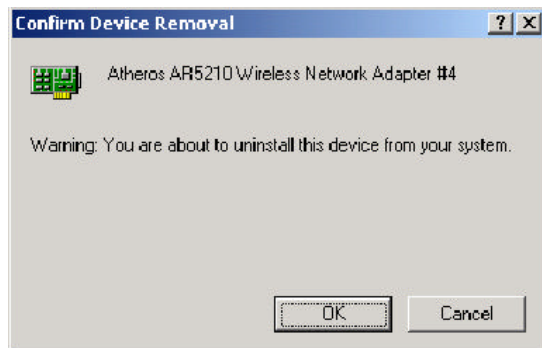
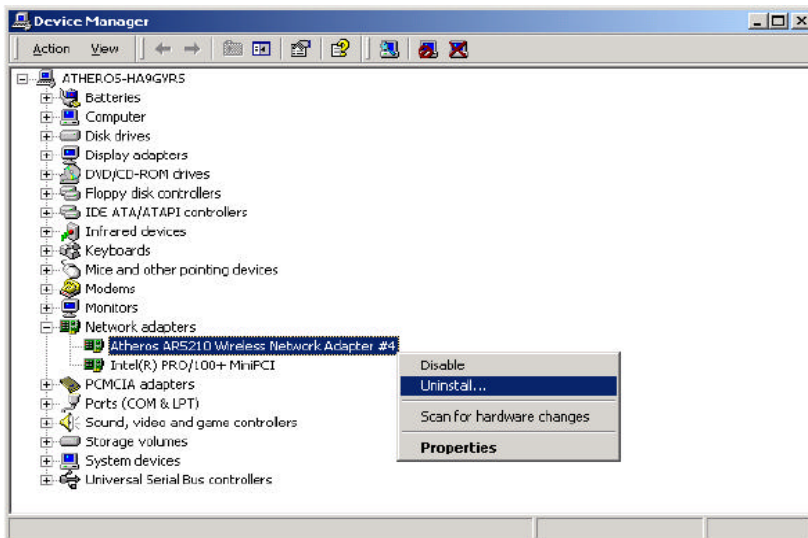
3. Choose “*Actiontec 802.11a Wireless PC Card*” and click **Uninstall**.



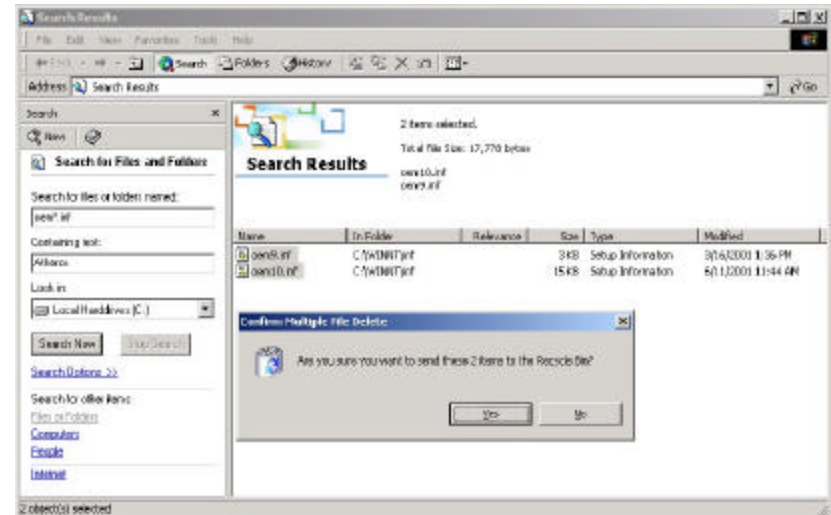
- Click **Yes** to confirm the uninstallation of the *Actiontec 802.11b Wireless PC Card Interface*.



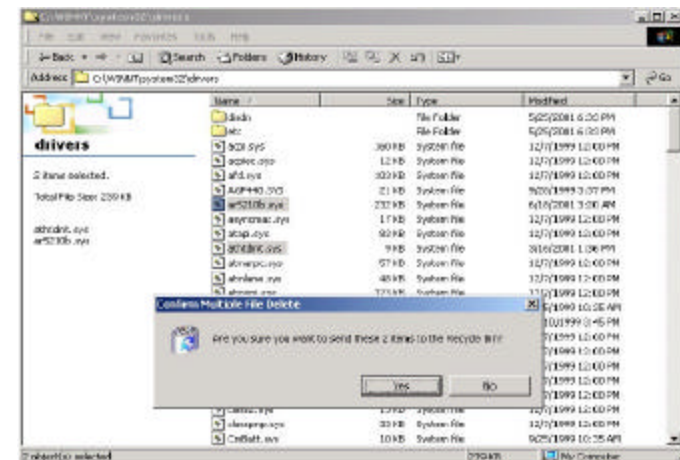
- To remove the NDIS driver from the OS (Operating system), go to the Device Manager, right-click "*Actiontec 802.11b Wireless PC Card #?*," and choose **Uninstall**.



- When the device is uninstalled from Device Manager, search for and delete the driver files that reside in the system. To do so, go to the "Start" menu and choose "Search For Files or Folders" enter "oem*.inf" in the "Search for files or folders named:" field, and enter "*Actiontec*" in the "Containing text:" field. Click "Search Now", two files matching these criteria are displayed. Choose the files that have been found and delete them from the system.



- To complete the uninstallation, two driver binary files, "*ar5210b.sys*" and "*athtdint.sys*", should also be removed from the "*\WINNT\system32\drivers*" folder. If there is a file named "*athnic.ini*" in the "*\WINNT\System32\drivers*" folder, this file must be deleted as well.

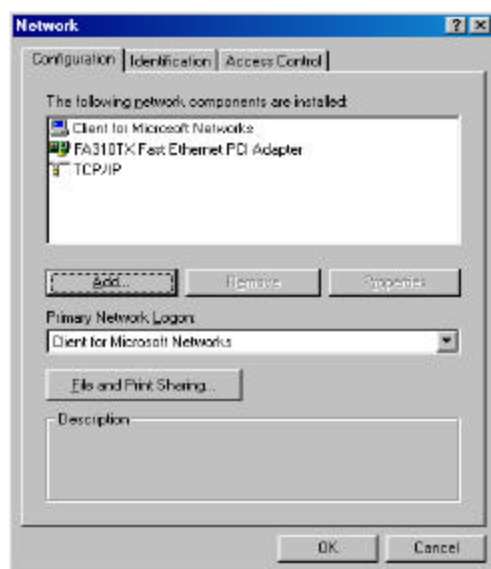


Configuring File and Print Sharing

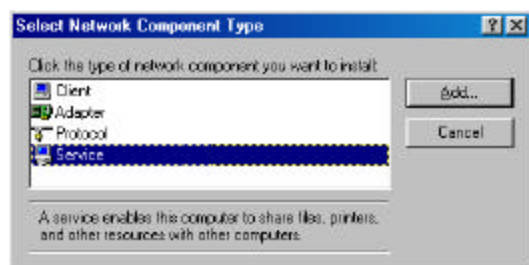
You can establish a network that will allow you to share files and printers. This is an easy method to set up a network in your home or small office. Please follow these steps to setup file and print sharing:

For Windows 98 and ME

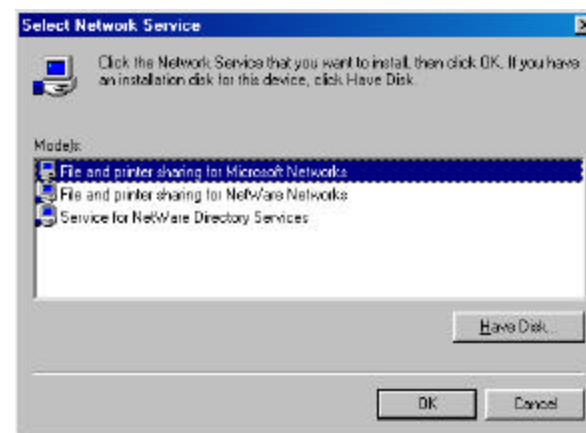
1. On your computer's desktop click **Start** then select **Settings** and then select **Control Panel**. In the "Control Panel" window double click the **Network** icon.
2. The following "Network" screen should appear. Click the **Add** button.



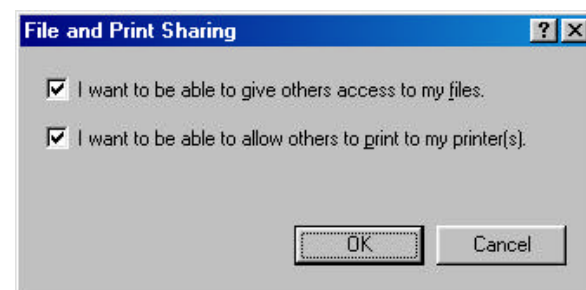
3. In the "Select Network Component Type" screen, click **Service** and then click the **Add** button.



4. In the following screen please select **File and printer sharing for Microsoft Networks** from the given list.



5. In the "File and Print Sharing" screen make sure that both of the selections have a check mark beside them. If they do not please click on the box next to each statement and then click **OK**.

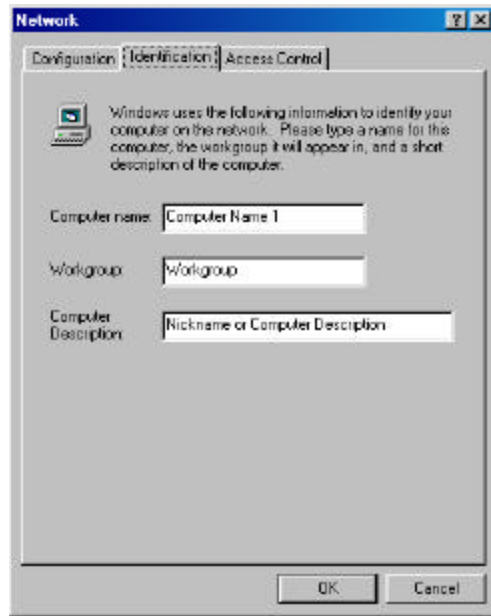


6. After you have clicked OK you will return to the network screen from step 2. Please click on the **Identification** tab (see the first image on page 26).

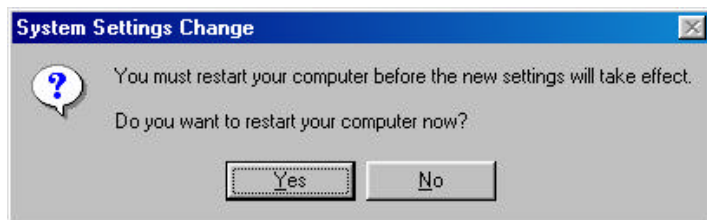
Computer Name: In this field you can type any name you want. (i.e. My Computer, John, CPU654) Do not use the same name for each computer you wish to have on your network.

Workgroup: This field enables you to set a unique name for your network. This name must be set up on every other computer you wish to have on your network.

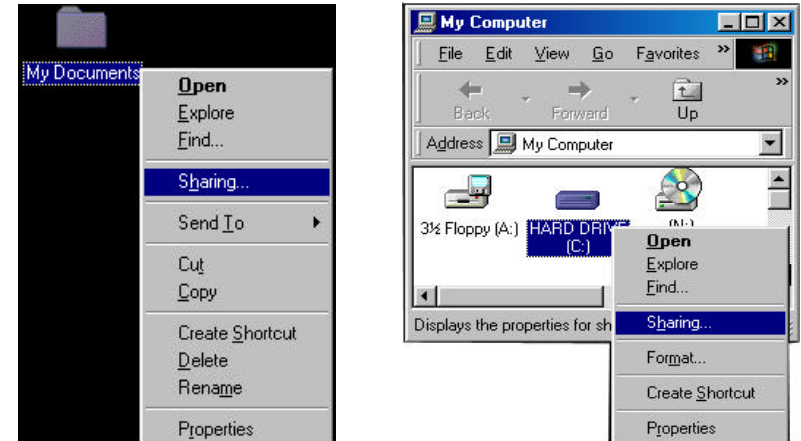
Computer Description: You can enter anything you wish. Traditionally, the location name or main user's name is used in this field.



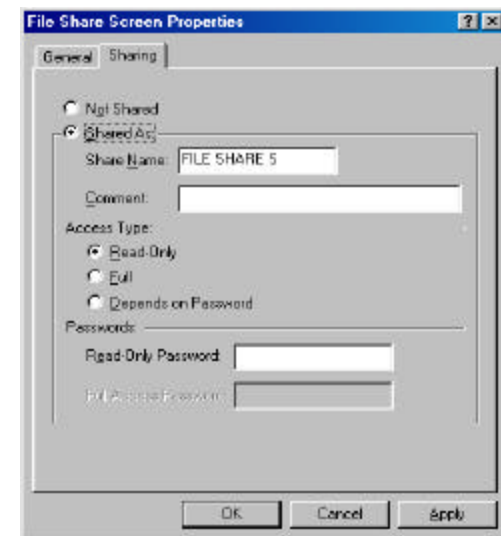
7. Click on the **Configuration** tab. This will take you back to the screen from step 2. In the "Primary Network Logon:" box, located just above the "File and Print Sharing" button, make sure that **Client for Microsoft Networks** is selected. If it is not then click the down arrow and select it from the given list. Click **OK**.
8. A screen will appear asking you to restart your computer. Click **Yes** to restart the computer. If you do not see this screen please restart your computer manually. After your computer restarts you will be asked to supply a User Name and Password. Enter whatever you would like but be sure to write down these values, as they will enable you to access your network.



9. After your computer has restarted and you entered a password and user name, you must enable a file or drive for sharing. Locate the file or drive you wish to share. (The easiest way to achieve this is through your Windows Explorer, located in the start menu) Right click on the **File** or **Drive** you wish to share. In the given menu select **Sharing**.



10. The following screen will appear. Please select **Shared As**. This will enable other users on your network to see the file or drive you selected. Then you can chose the Access Type:



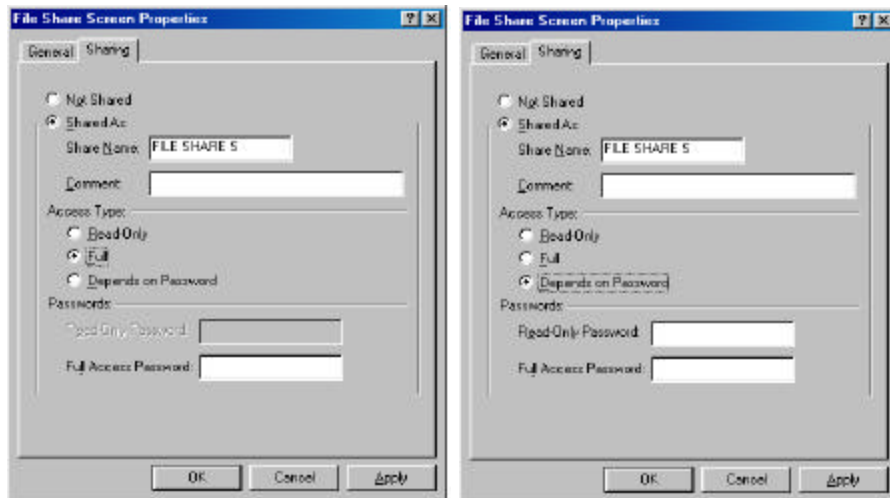
Read Only: This will allow other users on your network to view and read the file or drive you selected. They will not be able to modify it in any way.

You can further restrict their privileges by entering a password in the appropriate field.

Full: This will allow other users on your network to 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.

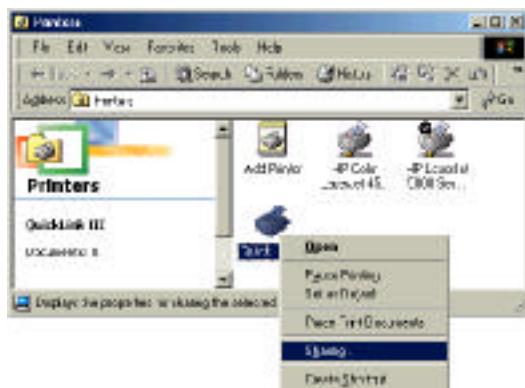
Depends on Password: This will allow you to set both Read Only and Full access on the shared file or drive. The level of access will depend on the passwords you enter in the appropriate field.

When you are finished click **Apply** and then **OK**.



11. Next you need to share your printer. On your desktop, click **Start**, click **Settings**, and then select **Printers**.

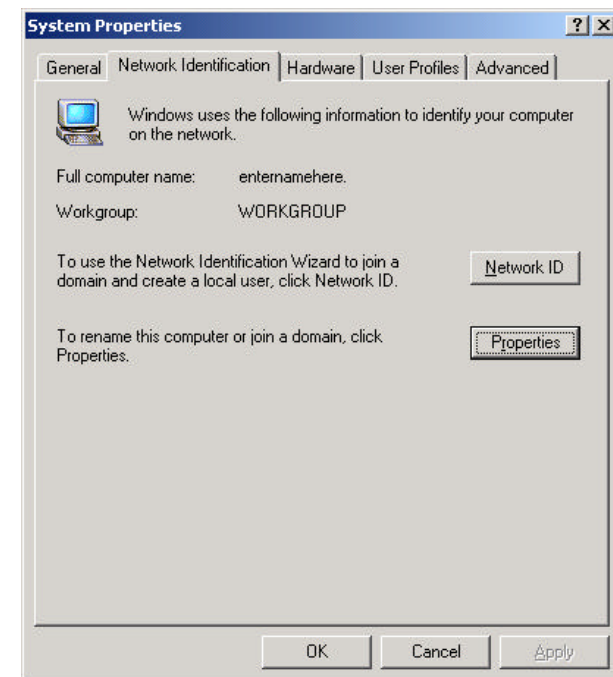
12. Right click on the printer you want to share. Select “Sharing” from the given list.



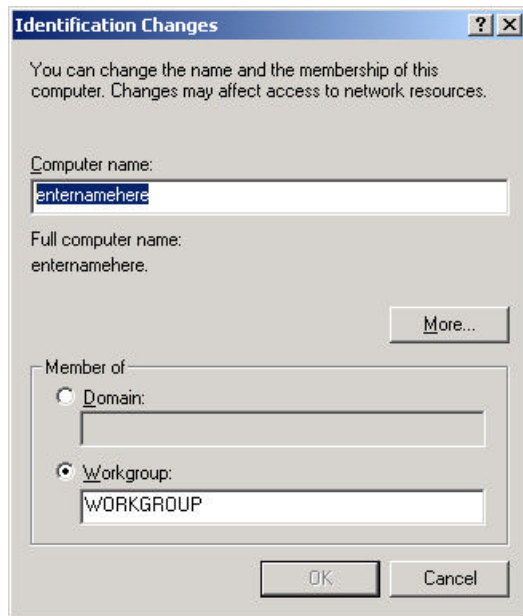
13. The next step will be to enable the sharing by selecting the “Share As” button. It will automatically insert a default name for the Share Name. You may set a password for the printer at this time if you want to restrict who on the network can use this resource. You may also set the default printer settings by modifying information on the other tabs of this window.

For Windows 2000

1. After you have installed and configured your PC Card, Windows 2000 will automatically enable file and print sharing for your computer. 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 locate the “My Computer” icon on your desktop. Right click on it and select **Properties** from the given list.
2. In the “System Properties” click on the **Network Identification** tab. If the “Workgroup” name is already the same as all the other computers on your network, then you do not need to change it. Click **OK**. If it is not the same then click **Properties**.



3. In the “Computer Name:” box type a name that is different from your other PC’s on your network. Then, in the “Workgroup” box type the name that you are using to identify your network. This will be the same on each computer on your network. Click **OK** and you will return to the “Network Properties” screen. Click **OK** again and even if you are not asked to do so, please restart your computer.



Actiontec 802.11a Wireless PC Card operating modes

The Actiontec 802.11a Wireless PC Card can be set to operate in one of two modes: **AdHoc** mode or **Infrastructure** mode.

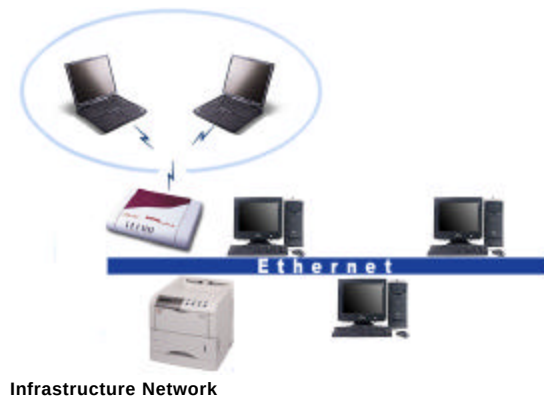
AdHoc mode.

When configured for AdHoc mode, the Actiontec 802.11a Wireless PC Card is able to operate in an environment where a wireless network consists of a number of stations using additional 802.11a Wireless Cards without access points. They can share files and printer this way, but not be able to access Wired LAN (Local Area Network) resources.



Infrastructure mode.

When configured for Infrastructure mode, the Actiontec 802.11a Wireless PC Card network is able to operate in a network composed by stations and access points. It can connect the wireless network to a wired LAN (Local Area Network), allowing wireless computers access to LAN resources, such as file and print servers or existing Internet connectivity.



This section provides solutions to common problems that may arise during the installation and operation of the *Actiontec 802.11a Wireless PC Card*. If you are having problems, refer to the section below to find an answer. Please contact *Actiontec's* technical support for further assistance.

1. **My computer does not recognize the *Actiontec 802.11a Wireless PC Card*.**
Make sure the CardBus card is properly inserted into a 32 bit CardBus slot. If windows does not detect the hardware upon insertion of the card, the system could have a previous *Actiontec* NDIS driver installed. Remove the old driver and try again.
2. **The *Actiontec 802.11a Wireless PC Card* does not work properly after the driver is installed.**
Re-insert the CardBus card into the slot. A beep should be heard if the adapter is properly inserted. Go to the Device Manager and make sure the *Actiontec 802.11a Wireless PC Card* adapter exists under the network adapters device node. If you see the yellow exclamation then there are conflicting resources. In this case, make sure the computer system has a free IRQ and make sure you have installed the proper driver. Uninstall the driver, restart the system, and repeat the driver installation steps if necessary.
3. **Stations cannot associate in AdHoc mode**
Make sure the same service set identifier is specified for all stations that need to join the same AdHoc network. Set up one station to establish a BSS and wait briefly before setting up other stations. This prevents several stations from trying to establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple stations associated to it.
4. **The station cannot access the internet in the Infrastructure configuration.**
Make sure the station is associated and joined with the AP (Access Point). If Wired Equivalent Privacy (WEP) security is enabled on the AP, the station must have the proper WEP keys specified. Also make sure TCP/IP properties are correctly configured.

1. **How fast can I access my network?**
The *Actiontec 802.11a Wireless PC Card* supports all IEEE 802.11a data rates of 6, 9, 12, 24, 36, 48, and 54Mbps.
2. **What is the range for network access, and how reliable is the connection?**
It is recommended that operations occur within 300 feet of a station. The throughput received ranges based on how far your system is from a station. Based on tests, the reliability of 802.11a is such that it delivers 2 to 5 times the performance at the same range as its predecessor 802.11b.
3. **Can I operate an 802.11b network in the same area or vicinity?**
Networks based on the IEEE 802.11b standard can coexist with networks based on the *Actiontec 802.11a Wireless PC Card* because each network operates in its own frequency band. IEEE 802.11b operates at 2.4 GHz while IEEE 802.11a operates at 5.0 GHz
4. **Can I perform realtime multimedia functions QoS?**
Yes, the *Actiontec 802.11a Wireless PC Card* supports Quality of Service for realtime multimedia applications. This allows multiple video, audio, voice, data, and telephony applications to coexist on the same radio channel. The *Actiontec 802.11a Wireless PC Card* is compatible with CableLabs CQoS, Microsoft GQoS and IEEE 802.1 p/q Quality of Service.
5. **Can I share my network resources, such as printers and drives?**
The *Actiontec 802.11a Networking PC Card* is a fully functional networking device, it allows ICS (Internet connection sharing), printer sharing, and drive sharing. Please refer to section **V Configuring and File and Print Sharing** for further help.
6. **Will my Network be affected by my Cordless phone or Microwave Oven?** No. The *Actiontec 802.11a Wireless PC Card* operates at a radio frequency of 5.0GHz, most microwaves operate around the 2.4 GHz range and most handsets at 900MHz to 2.4 GHz, therefore enough of a spectral separation is allowed for the operation of IEEE 802.11a networks.

FCC Statement

Note: 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 connect the interference by one or more of the following measures:

- Reorient the receiving antenna
- Increase the separation between the equipment and receiver
- Move the computer away from the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Radio Frequency Interference Requirements: This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.

High power radar are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device.

Actiontec Electronics, Inc. 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.

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In the United States

Actiontec Electronics, Inc
760 North Mary Avenue
Sunnyvale, CA 94085

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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 principles and excluding the United Nations Convention on Contracts for the International Sale of Goods.