

## Troubleshooting Wireless Cards and Connections to the RAP

### *(Windows Users Only)*

If you are having trouble installing and/or configuring your wireless network card or you are unable to connect to the RAP (Log-in Page does not appear when you launch your web browser, etc), follow the troubleshooting steps below to correct the problem. Perform the steps in the order presented.

#### Step 1. Verify Card Recognition and Proper Driver Installation

The first step in troubleshooting your connection problem is to verify that your computer is recognizing the wireless card and that the driver software is installed properly. Follow the steps below to confirm these settings:

- A. Click the **Start** button and select **Settings > Control Panel**.
- B. Double-click the **System** icon.
- C. Click the **Device Manager** tab (In Windows 2000, you will need to select the **Hardware tab** followed by the **Device Manager** button).
- D. Inside the **Device Manager** window, click the “+” mark to the left of the **Network Adapters** listing. The name of your wireless card should be listed. If your card does NOT appear in the list, proceed to letter “E”. If your does appear in the list, proceed to letter “F”.
- E. If your wireless network card does NOT appear in the **Network Adapter** list, do the following:
  - i. Inside the **Device Manager** window, click the **Refresh** button. If your card then appears in the **Network Adapter** list, proceed to letter “F”. If the card does not appear, perform the step below.
  - ii. Power down your computer, remove the wireless card from its current slot, and re-insert it (if you have another PCMCIA slot available on your computer, insert the card into that slot instead). Reboot your computer, and perform letters “A-D” again. If the card then appears in the **Network Adapter** list, proceed to letter “F”. If the card still does NOT appear in the list, you will need to uninstall and re-install the software driver before proceeding.
- F. If your card is listed in the **Network Adapter** list, click on it and select the **Properties** button.
- G. A **Properties** window will appear. Check under **Device Status** and confirm that the following message is displayed: *“This device is working properly”*. If this message is displayed, proceed to letter H. If the message is NOT displayed, you will need to uninstall and re-install the software driver before proceeding.

- H. Click on the **Resources** tab. Check under the **Conflicting device list** to identify if there are any existing conflicts. If a conflict is NOT reported, proceed to letter “I”. If a conflict is reported, you will need to uninstall and re-install the software driver before proceeding.
- I. Click the **Start** button and select **Settings > Control Panel**
- J. Double-click the **PC Card (PCMCIA)** icon.
- K. The **PC Card Properties** window opens. Check that the name of your wireless card is displayed under the **Socket Status** tab. If the name of your card is NOT listed, you will need to uninstall and re-install the software driver before proceeding. If your card is listed, click **OK** to close the window and proceed to letter “L”.
- L. Click the **Start** button and select **Settings>Control Panel**.
- M. Double-click the **System** icon.
- N. Click the **Device Manager** tab (In Windows 2000, you will need to select the **Hardware tab** followed by the **Device Manager** button).
- O. Inside the **Device Manager** window, click the “+” mark to the left of the **PCMCIA Socket** listing. A **Card Bus Controller** should be listed.
- P. Highlight (select) the **Card Bus Controller**, and click on the **Properties** button.
- Q. Check under **Device Status** and confirm that the following message is displayed: “*This device is working properly*”. If this message is displayed, proceed to letter “R”. If you do NOT receive this message, the socket controller is not loading automatically. You will need to contact your computer manufacturer to troubleshoot the problem.
- R. Click on the **Resources** tab. Check under the **Conflicting device list** to determine if there are any existing conflicts. If no conflicts are reported, proceed to then next step of this troubleshooting document (Step 2). If a conflict is being reported, you will need to uninstall and re-install the software driver before proceeding.

## Step 2. Check the Network Settings of your Wireless Card

In order to connect to the Routing Access Point (RAP), your wireless card's network settings must be configured properly. If you have completed step 1 above and you are still unable to connect to the RAP, your next step is to verify the network settings (configuration) of your wireless card.

The network settings (configuration) of your wireless card must be as follows:

- **SSID / ESSID Setting (network name):**

**Note:** the network name is case sensitive and must be entered exactly as shown above.

- **Network Type or Network Mode:**
- **Encryption Type:**

The procedure for setting the network parameters of wireless cards varies depending on each card's manufacturer. For specific instructions on how to configure your wireless card and/or check its settings, refer to the manufacturer's documentation supplied with your wireless card.

## Step 3. Check Your Signal Strength and Link Quality

Almost all wireless network cards have monitoring software which measures the strength and quality of wireless signals. If you have completed troubleshooting steps 1 and 2 above, the next step is to check the strength and quality of your wireless signal.

The procedure for checking signal strength and quality varies depending on each card's manufacturer. For more information on how to use your particular card's monitoring software, refer to the manufacturer's documentation supplied with your wireless card.

**NOTE:** When troubleshooting, it is always a good idea to move as close as possible to the wireless access point. This will help eliminate poor signal strength and/or quality as the cause of a connection problem.

## Step 4. Check your Web Browser Settings

If you have completed steps 1-3 above, and you are still unable to communicate with the RAP, the next step is to check the configuration settings within your Web Browser. With your web browser open, check the following:

## **Internet Explorer**

- a. Select **Tools > Internet Options > Connections > LAN Settings**.
- b. In the **LAN Settings** window, make sure that **none** of the options available are selected (no check marks). If any of the options are selected (check marked), de-select them and then click **OK**.
- c. Exit your web browser, and then re-open it. If the problem is corrected, the Wireless Log-in Page should appear. If the problem is not corrected, proceed to letter d.
- d. Select **Tools>Internet Options>Connections**
- e. Under the section of the window entitled, **Dial-up and Virtual Private Network Settings**, make sure the option “Never Dial a Connection” is selected (if selected properly, a black dot will appear inside the circle to the left of the option).
- f. Exit your web browser, and then re-open it. If the problem is corrected, the Wireless Log-in Page should appear. If the problem is not corrected, proceed to step 5.

### **Step 5. Release and Renew Your IP addresses**

If you have completed steps 1-4 above without success, the next step is to release and renew your computer's IP addresses. Follow the steps below based on your computer's operating system:

#### **Windows 95 / 98 / ME Users**

- a. Press the **Start** button and select **Run**. Type **winipcfg** in the “Open:” field and press **OK**. An IP configuration window will appear.
- b. Select the name of your wireless card from the drop down box at the top of the configuration window.
- c. After selecting your card, click the **Release All** button at the bottom of the window.
- d. Next, click the **Renew All** button at the bottom of the window. Click **OK**.
- e. Open your web browser (if your browser was already open, close it and then re-open it). If the problem is corrected, the Wireless Log-in Page should appear.

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## Windows 2000 and NT users

- a. Press the **Start** button and select **Run**. Type **command** in the “Open:” field and press **OK**. When the command prompt appears (C:\>), type the following bolded commands in the order shown:
  - A. C:\> **ipconfig /release\_all**
  - B. Press the Enter Key.
  - C. C:\> **ipconfig /renew\_all**
  - D. Press the Enter Key.
  - E. C:\> **exit**
  - F. Press the Enter Key.
- b. Open your web browser (if your browser was already open, close it and then re-open it). If the problem is corrected, the Wireless Log-in Page should appear.

### Step 6. Confirm the Installation of the TCP/IP protocol.

In order for your wireless card to communicate with the Access Point and the Internet, you must have the TCP/IP protocol installed and "bound" to your card. If you have completed steps 1-5 above without success, you will need to confirm the installation of the TCP/IP protocol.

To check your card's TCP/IP settings, do the following (*Windows Based Computers Only*):

- a. Go to **Start>Settings>Control Panel**
- b. Double-click on the **Network** icon (for Windows 2000, click **Network and Dial up connections>Local Area Connection>Properties**).
- c. Highlight the name of your wireless card, and click the **Properties** button (for Windows 2000, confirm that “Internet Protocol (TCP/IP)” is listed in the **components used box**. If it is not listed, click the **Install** button and proceed to step #5 under letter “D”).
- d. Click the **Bindings** tab. Confirm that **TCP/IP->(name of your card)** is listed and that a check mark is present (skip this step if you are using Windows 2000). If TCP/IP is NOT listed, you will need to install it before your wireless card will work. Follow the instructions below to install the TCP/IP protocol:
  1. Go to **Start>Settings>Control Panel**
  2. Double-click on the **Network** icon.
  3. Click on the name of your wireless card, and click the **Add** button.
  4. Select **Protocol** and click **Add**.

5. Under "Manufacturers", select **Microsoft**.
6. Under "Network Protocols", scroll down and select **TCP/IP**. Click **OK**.
7. The TCP/IP protocol is now installed and available for your wireless card to use. Repeat letters A-D above to confirm proper installation and binding.

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**If you are still unable to use the wireless service after completing all of the troubleshooting steps above, please contact Customer Support at 1-866-497-5377.**

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