

SpeedTouch™ 121g

IEEE802.11g Wireless USB Adapter



Setup and User's Guide

Release R1.0



SpeedTouch™

121g

Setup and User's Guide

R1.0

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1 SpeedTouch™ 121g Installation

Introduction The SpeedTouch™ 121g is a 54 Mbps wireless network adapter that seamlessly integrates with existing Ethernet networks to support applications such as mobile users or temporary conferences. Just install enough wireless access points to cover your network area, plug wireless adapters into your computers, and start networking.

Using this USB adapter in conjunction with a wireless access point, you can create an instant network that integrates with existing 10/100 Mbps Ethernet LANs. Moreover, moving or expanding your network is as easy as moving or installing additional access points – no wires!

Contents This Setup and User's Guide will assist you in getting acquainted with the SpeedTouch™ 121g and in getting connected to a wireless network.

Safety instructions Before connecting the SpeedTouch™ 121g please read the Quick Installation Guide and Safety Instructions.

Documentation and software updates SpeedTouch™ products continue to evolve as extra and new functionalities are made available.

For more information on the latest technological innovations, software updates, and documents, please visit the SpeedTouch™ web site at:

www.speedtouch.com

1.1 About your SpeedTouch™ 121g

Package Checklist

The SpeedTouch™ 121g package includes:

- ▶ SpeedTouch™ 121g Wireless USB Adapter
- ▶ SpeedTouch™ 121g Setup CD-ROM
- ▶ Quick Installation Guide
- ▶ Safety Instructions and Regulatory Information

Please inform your dealer if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials in case there is a need to return it.

The SpeedTouch™ 121g



LED indicators

Indicator		Description
Color	State	
Green	Flashing	SpeedTouch™ 121g enabled, and scanning for available networks and/or transmitting or receiving data
Off		SpeedTouch™ 121g disabled

1.2 SpeedTouch™ 121g Installation

System Requirements

Before you install the SpeedTouch™ 121g, check your system for the following:

- ▶ A computer with a USB port
 -  To obtain maximum wireless networking speed, a USB v2.0 port is needed.
- ▶ Microsoft Windows 98 SE/Me/2000/XP
 -  You may need your Windows installation CD during driver and utility installation.
- ▶ A minimum of 1.5 MB of free disk space for installing the driver and utility program

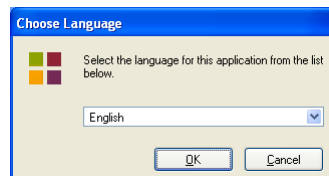
Installation procedure



Do not connect your wireless device to your PC until you are instructed to do so by the InstallShield wizard.

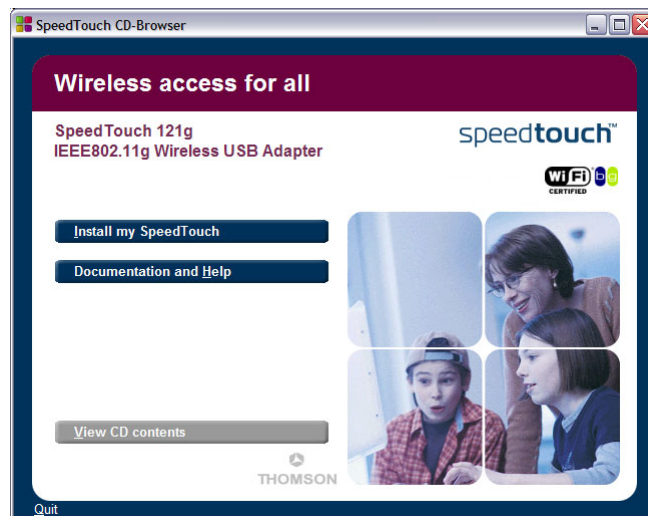
Proceed as follows:

- 1 Insert the SpeedTouch™ Setup CD-ROM in your computer's CD-ROM drive. The SpeedTouch™ CD Browser will start automatically.
 -  If the SpeedTouch™ CD Browser window does not appear automatically, click **Run** on the **Start** menu and enter the following path: D:\Menu.exe where D stands for the drive letter of your CD-ROM drive.
- 2 The **Choose Language** window prompts you to select a language:



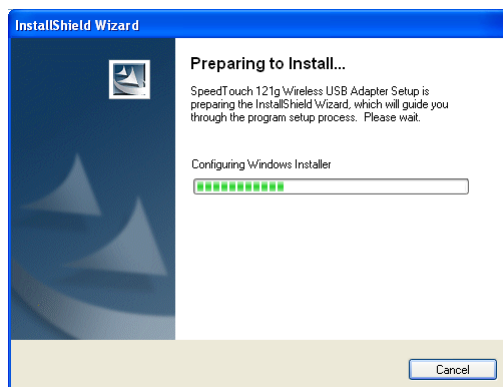
Select your language and click **OK**.

- 3 The **SpeedTouch™ CD Browser** menu appears:

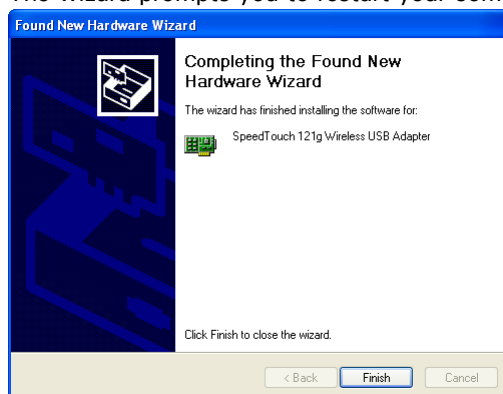


Click **Install my SpeedTouch™**.

- 4 The Setup window will appear:



- 5 The InstallShield Wizard will start installing the utility software. This may take a few minutes. Once the software installation is finished, you will be prompted to plug in your SpeedTouch™ 121g.
- 6 Firmly insert the SpeedTouch™ 121g into your computer's USB port.
- 7 After connecting the adapter to your computer, Windows will detect that new hardware has been installed.
- 8 The wizard prompts you to restart your computer:



Click **Finish** to restart your computer.

Installation result

When the installation is completed, the Wireless Client Manager icon will appear on the desktop:



A small icon in your notification area (bottom right corner of most screens) will also appear to indicate the status of your connection.

In case the icon is:

▶ Green



You are successfully connected to a wireless network

▶ Red



You have no connection to a wireless network:



For more information on the SpeedTouch™ 121g Wireless Client Manager, see [“2 Wireless Client Manager”](#) on page 11.

2 Wireless Client Manager

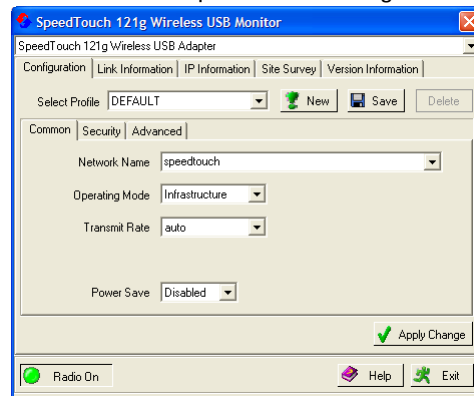
Using the Wireless Card Manager utility

To configure the SpeedTouch™ 121g, double-click the SpeedTouch™ 121g Wireless Client Manager icon on the desktop to launch the utility:



You can also access it from Windows' Start menu.

As a result the SpeedTouch™ 121g Wireless Client Manager utility appears:



Configuration tabs

The wireless card manager includes five tabs:

- ▶ **Configuration**
Allows you to configure the SpeedTouch™ 121g wireless settings.
- ▶ **Link Information**
Shows SpeedTouch™ 121g statistics.
- ▶ **IP Information**
Shows the IP Address of the SpeedTouch™ 121g.
- ▶ **Site Survey**
Scans/shows all the wireless devices in range.
- ▶ **Version Information**
Shows version information for the driver and utility.

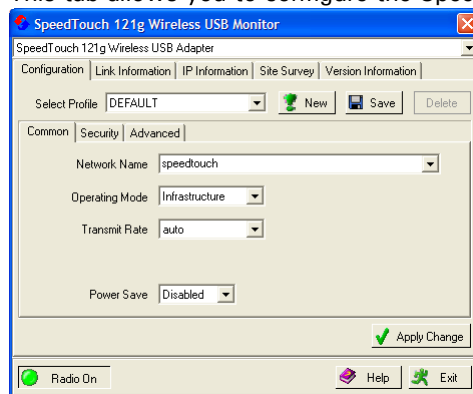
At the bottom of each screen, there are three items that can be selected:

- ▶ **Radio On/Radio Off**
This allows you to turn on/off the transmission/reception of the SpeedTouch™ 121g.
- ▶ **Help**
Click here to display the help file.
- ▶ **Exit**
Clicking on this button closes the configuration utility dialogue box.

2.1 Configuration

The Configuration tab

This tab allows you to configure the SpeedTouch™ 121g wireless settings.



SpeedTouch™121g wireless profiles

The wireless parameters, configured via the Wireless Client Manager are stored in profiles. By default one profile DEFAULT is configured with common default wireless settings.

You can:

- ▶ **Select Profile**
To select an existing profile, or to specify a profile name for a (new) specific set of parameters.
- ▶ Click **New**
To set up a new profile.
- ▶ Click **Save**
To save a profile after configuring the set of parameters.
- ▶ Click **Delete**
To delete the profile, selected in the Select Profile drop-down menu.

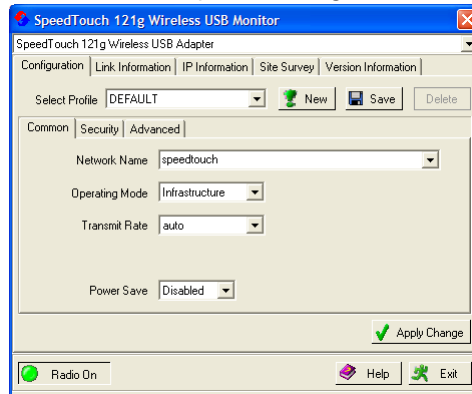
Configuration sub-tabs

The Configuration tab features three sub-tabs:

- ▶ **Common**
To configure the basic wireless parameters for your SpeedTouch™ 121g.
- ▶ **Security**
To configure the wireless security of the SpeedTouch™ 121g connection.
- ▶ **Advanced**
To configure advanced power and wireless performance parameters of the SpeedTouch™ 121g.

Common

Common allows you to configure the basic wireless parameters:

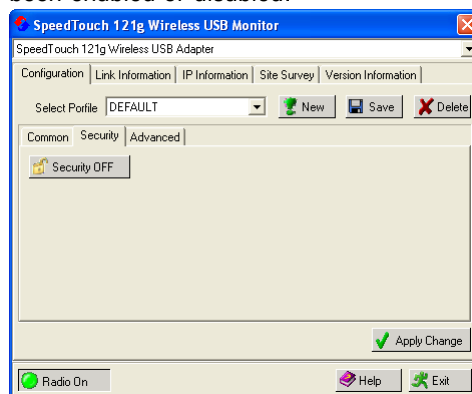


The following fields are available:

- ▶ **Network Name** (default: "speedtouch")
Input an SSID string for the wireless network to which you want to connect. This should be set to the same value as the SSID of the access point or wireless router to which you are connected. Set this value to ANY to allow connection to any access point. This assumes that the access points are broadcasting the SSID. If not, then set the SSID to the value configured on the Access Point.
- ▶ **Operating Mode**
Set the operation mode to:
 - ▶ **802.11 ad hoc**
To create a wireless network without access point.
 - ▶ **Infrastructure**
For connections with an access point.
- ▶ **Transmit Rate**
Indicates the data transmission rate. Select an appropriate transmission speed.
- ▶ **Channel**
If you are setting up an ad hoc wireless LAN, set the channel to the same radio channel as that used by the other wireless clients in your group. However, if you are connecting to a network via an access point, then the channel is automatically set by the access point.

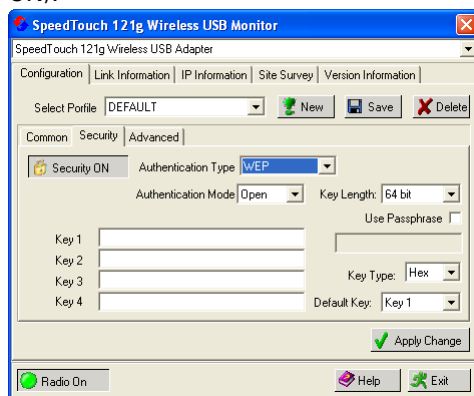
Security

The Security ON/Security OFF button indicates whether the security function has been enabled or disabled:



By default wireless security is disabled.

Click **Security OFF** to enable the security function (the button changes to Security ON):



The following fields are available:

- ▶ **Authentication Type**
WEP (Wired Equivalent Privacy) and WPA (Wi-Fi Protected Access) are implemented in the SpeedTouch™ 121g to prevent unauthorized access.
 - ▶ **Authentication Mode**
This drop-down list box allows you to choose between following modes:
 - ▶ **Open:**
All wireless clients using a correct SSID and WEP key are able to authenticate. The WEP key is **only** used to authenticate.
 - ▶ **Shared:**
Only wireless clients using a correct SSID and WEP key are able to authenticate. The WEP key is used to authenticate **and** to encrypt/decrypt data.
-  Please consult the user documentation of your Access Point to find out which authentication type to use. In most cases, the Open System type will be used.
- ▶ **Key Length**
Set the Key Length to 128-bit or 64-bit.

► **Use Passphrase**

Select the Use Passphrase option to automatically generate key strings for encryption.



Both SpeedTouch™ 121g and the access point must use Passphrase.

► **Key Type**

Select ASCII or Hex.

► **Default Key**

Choose the key for encryption.

How to set up WEP

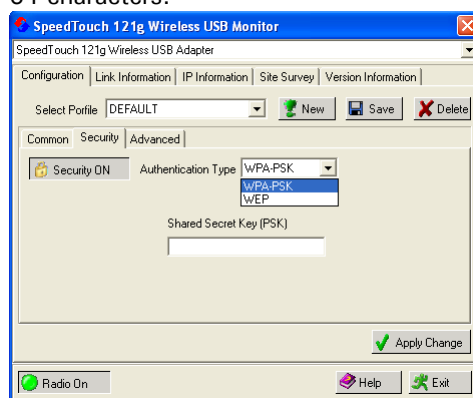
WEP provides a basic level of security, preventing unauthorized access to the network and encrypting data transmitted between wireless clients (and the access point). WEP uses static shared keys (fixed-length hexadecimal or alphanumeric strings) that are manually distributed among all clients that want to use the network.

To use the WEP function, take the following steps:

- 1** Select **WEP** from the **Authentication Type** drop-down menu.
- 2** Select **128-bit** or **64-bit** in the **Key Length** field.
- 3** In the **Key Type** field, select **ASCII** or **Hex**.
- 4** In the **Default Key** field, select one key as the default key that you want to use for encryption.
- 5** Manually type in a string of characters in the corresponding Key # (Key 1 ~ Key 4) field that you selected in step.
- 6** Click **Apply changes** to allow the settings to take effect.

How to set up WPA

Wi-Fi Protected Access is an interoperable security enhancement that strongly increases the level of data protection and access control for existing and future wireless LAN systems. It is derived from and will be forward-compatible with the upcoming IEEE 802.11i standard. WPA employs a combination of several technologies to provide an enhanced security solution for 802.11 wireless networks, including TKIP (Temporal Key Integrity Protocol) for data protection and 802.1x for authenticated key management. WPA provides a simple operating mode that uses just a pre-shared password for network access. The Pre-Shared Key mode uses a common password for user authentication that is manually entered on the access point and all wireless clients on the network. Manual Pre-Shared Key supports up to 64 characters.



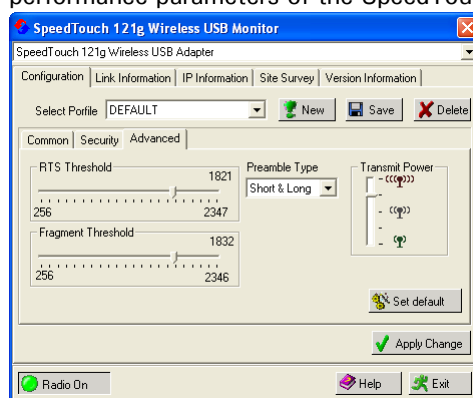
To use the WPA function, take the following steps:

- 1** Select **WPA-PSK** from the **Authentication Type** drop-down menu.
- 2** Type in the Shared Secret Key (PSK).
- 3** Click **Apply changes** to allow the settings to take effect.

If there is no authentication server on your network, you can issue the Pre-Shared Key to your SpeedTouch™ 121g. Be sure to use the same key for the wireless access point and your SpeedTouch™ 121g.

Advanced

The **Advanced** sub-tab allows you to configure advanced power and wireless performance parameters of the SpeedTouch™ 121g

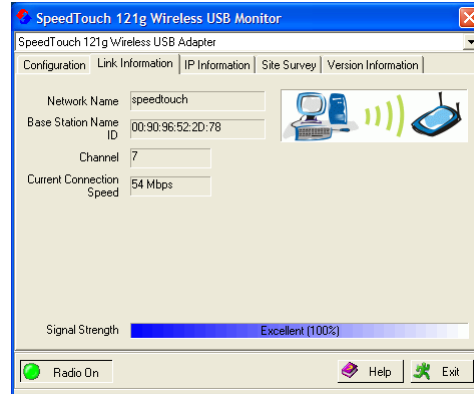


This feature is intended for *advanced users only!*

2.2 Link Information

The Link Information
tab

This screen displays current connection information of the SpeedTouch™ 121g:



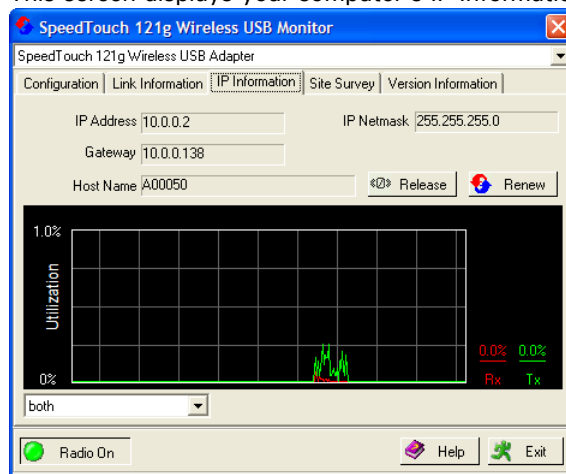
The following fields are available:

- ▶ **Network Name (SSID)**
The name of the network to which the SpeedTouch™ 121g is currently connected with other clients on the network.
- ▶ **Base Station Name ID**
The MAC address of the access point to which the SpeedTouch™ 121g is connected in an infrastructure network. In an ad hoc network, the Network Name is a random number generated by the first station that communicates with other clients on the network.
- ▶ **Channel**
The channel used to communicate with the connecting wireless device.
- ▶ **Current Connection Speed**
The data transmission speed.
- ▶ **Receive/Transmit Fragments**
The number of the messages or message fragments received/transmitted by the SpeedTouch™ 121g. The running rate of this counter is a general indication of the amount of activity at the SpeedTouch™ 121g.
- ▶ **Signal Strength**
Indicates the relative strength of the connection between the SpeedTouch™ 121g and the connected device.

2.3 IP Information

The IP Information tab

This screen displays your computer's IP Information:



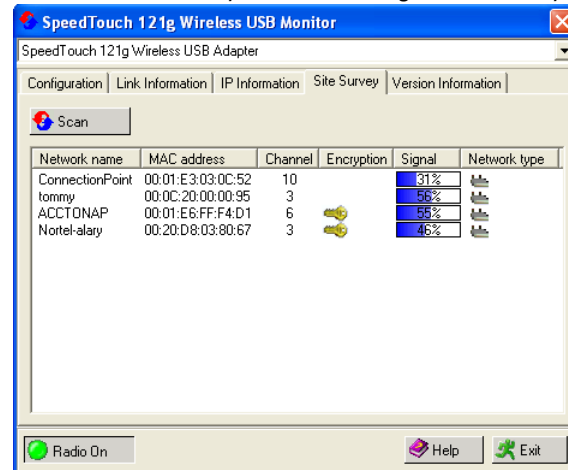
The following fields are available:

- ▶ **IP Address Client**
IP address of the computer.
- ▶ **IP Netmask Client**
A mask used to determine to what subnet an IP address belongs.
- ▶ **Gateway**
The IP address of the Gateway.
- ▶ **Host Name Client**
The computer's name on the network.
- ▶ Click **Release**
To release the current IP settings of the SpeedTouch™ 121g.
- ▶ Click **Renew**
To obtain a new IP address for the SpeedTouch™ 121g.

2.4 Site Survey

The Site Survey tab

Site Survey scans and displays all wireless devices within range. You can connect to a wireless device by double-clicking on that entry:



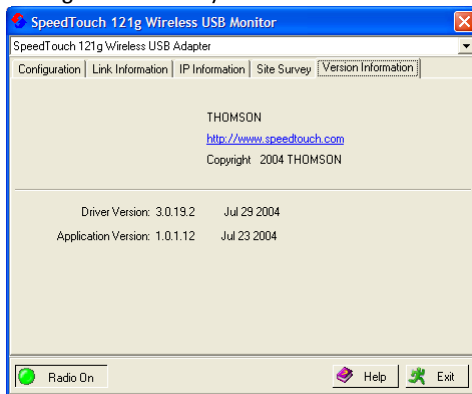
The following fields are available:

- ▶ **Click Scan**
To scan for available network connections.
- ▶ **Network name**
SSID (See [Common](#) in “2.1 Configuration” on page 12.)
- ▶ **MAC address**
The MAC address of the listed wireless device.
- ▶ **Channel**
The radio channel on which the wireless device operates.
(See [Common](#) in “2.1 Configuration” on page 12.)
- ▶ **Encryption**
The key indicates that an encryption method has been enabled.
- ▶ **Signal**
Shows the signal strength from the adapter to the listed wireless devices.
- ▶ **Network Type**
Scroll right to see more information on the operating mode of the listed networks.

2.5 Version Information

The Version Information
tab

This screen shows information on the current version of the driver and configuration utility:



To upgrade the firmware, click the link to download the latest driver and utility software.

3 Troubleshooting

Adapter Installation Problems

If your computer cannot find the SpeedTouch™ 121g or the driver software does not install correctly, check the following:

- ▶ Make sure the SpeedTouch™ 121g is securely connected with the USB port. Check for any hardware problems, such as physical damage to the card's connector.
- ▶ Try the SpeedTouch™ 121g in another USB port. If this also fails, test your computer with another wireless USB adapter that is known to operate correctly.
- ▶ Make sure your computer is using the latest BIOS, check the manual of your computer for details.
- ▶ If there are other network adapters in the computer, they may be in conflict. Remove the other network adapters from the computer and test the wireless adapter separately.
- ▶ Check for a defective computer or USB connection by trying the adapter in another computer that is known to operate correctly.

If all fails, and the card still does not work, take out the SpeedTouch™ 121g. Uninstall the driver and utility from your system, then go to "Control Panel" and delete the SpeedTouch™ 121g from your network configuration menu. Restart your computer and reinstall the SpeedTouch™ 121g, the driver and the utility software.

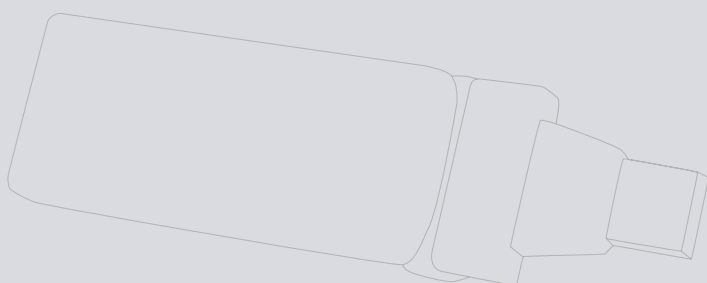
Network Connection Problems

If the Link LED on the SpeedTouch™ 121g does not light, or if you cannot access any network resources from the computer, check the following:

- ▶ Make sure the driver and utility software is installed correctly. If necessary, try uninstalling and then reinstalling the software.
- ▶ Make sure the computer and other network devices are powered on.
- ▶ The access point that you are connecting to might be defective. Try connecting to another access point.
- ▶ If you cannot access a Windows or NetWare service on the network, check that you have enabled and configured the service correctly. If you cannot connect to a particular server, be sure that you have access rights and a valid ID and password.
- ▶ If you cannot access the Internet, be sure you have configured your system for TCP/IP.

If your SpeedTouch™ 121g cannot communicate with a device in the Ethernet LAN when configured for Infrastructure mode, check the following:

- ▶ Make sure the access point that the SpeedTouch™ 121g is associated with is powered on.
- ▶ Check the SSID of the access point that you are connecting to, and make sure you set the SpeedTouch™ 121g to the same SSID.
- ▶ If there is still no connection, change the radio channel of the access point and all the clients associated to this access point.
- ▶ Check if the WEP or WPA settings have been enabled in the access point to which you are connecting to. Make sure that the encryption, default key and passphrase settings of the adapter are set to the same as the access point. Contact your network administrator for more information.



Need more help?

Additional help is available online at www.speedtouch.com