

SpeedTouch™576

Wireless Residential ADSL Gateway



User's Guide







SpeedTouchTM 576

User's Guide





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About this User's Guide

Used symbols

The following symbols are used in this User's Guide:



A note provides additional information about a topic.



A *tip* provides an alternative method or shortcut to perform an action.



A *caution* warns you about potential problems or specific precautions that need to be taken.

Terminology

Generally, the SpeedTouch™576(i) will be referred to as SpeedTouch™ in this User's Guide.

Documentation and software updates

THOMSON continuously develops new solutions, but is also committed to improve its existing products.

For suggestions regarding this document, please contact documentation.speedtouch@thomson.net.

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1 Getting to know your SpeedTouch™

Introduction

With the SpeedTouch™576(i) Wireless Residential ADSL Gateway you can build a secure home or small office network, seamlessly connecting wired and wireless devices and surf the Internet at high speed, all combined in one device.

Installation

For more information on how to set up, install and wire your SpeedTouch™ and set up Internet connection, refer to the Installation and Setup Guide.

Configuration

This User's Guide will help you configuring your SpeedTouch™.

Before you begin

Before connecting the SpeedTouch $^{\text{TM}}$, please read the SpeedTouch $^{\text{TM}}$ Quick Installation Guide and the Safety Instructions and Regulatory Notices.

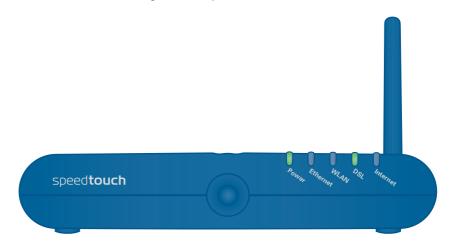




1.1 SpeedTouch™ LED Behaviour

Front panel LEDs

The SpeedTouch $^{\text{TM}}$ is equipped with a number of LEDs on its front panel, indicating the state of the device during normal operation.



The following table shows the meaning of the different LEDs.

Indicator			Description
Name	Colour	State	
Power	Green	Solid on	Power on, normal operation
	Red	Solid on	Power on, self-test failed, indicating device malfunction
	Orange	Solid on	Bootloader active
	Off		Power off
Ethernet	Green	Blinking	Ethernet activity
		Solid on	Ethernet connection, no activity
	Off		No Ethernet connection
WLAN	Green	Blinking	Wireless activity, WPA encryption
		Solid on	No wireless activity, WPA encryption
	Amber	Blinking	Wireless activity, WEP encryption
		Solid on	No wireless activity, WEP encryption
	Red	Blinking	Wireless activity, no security
		Solid on	No wireless activity, no security
	Red/ green	Toggling	Wireless client registration phase
	Off		WLAN disabled





Indicator			Description
Name	Colour	State	
DSL	Green Blinking		Pending DSL line synchronisation
		Solid on	DSL line synchronised
	Off		No DSL line
Internet	Green Blinking		Internet activity
		Solid on	Internet connectivity, no activity
	Red	Solid on	Internet connection setup failed
	Off		No Internet connection





1.2 Accessing your SpeedTouch™

Access methods

Your SpeedTouch $^{\text{TM}}$ is accessible in one of the following ways:

Access Method	Can be used to
Web browser	Configure your SpeedTouch™ via HTTP or HTTPS. For more information, see "1.2.1 Access via the Web Interface" on page 7.
Command Line Interface (CLI)	Fine-tune your SpeedTouch™ configuration. For more information, see "1.2.2 Access via CLI" on page 8.
File Transfer Protocol (FTP)	Back up and restore data on your SpeedTouch™. For more information, see "1.2.3 Access via FTP" on page 10.
Remote Assistance	Allow a remote user to help you configuring your SpeedTouch™. For more information, see "1.2.4 Remote Assistance" on page 13.





1.2.1 Access via the Web Interface

To access the SpeedTouch™ via the Web interface Proceed as follows:

- Open a Web browser.
- 2 In the address bar, type your SpeedTouch™'s IP address or DNS host name (http://speedtouch.lan or 192.168.1.254 by default)



You can access the pages via HTTP or HTTPS.

For remote assistance the secure version HTTPS is used in combination with certificates. Simply provide your ISP with the link as shown, user name and password before he can log on to the pages. For more information, see "1.2.4 Remote Assistance" on page 13.

The SpeedTouchTM Home page appears, from where you can navigate to all the configurable aspects of the SpeedTouchTM.

For more information on the Web pages, see "4 SpeedTouch™ Web Interface" on page 35.





1.2.2 Access via CLI

To access the SpeedTouch™ via the Command Line Interface (CLI) You can access the Command Line Interface (CLI) via:

- A Telnet session
 - This requires a TCP/IP connection between the host from which the Telnet session is opened and the SpeedTouch™. Your SpeedTouch™ and the connected computer must have an IP address in the same subnet.
- Quote site commands (over FTP)
 For more information, see " Quote site command" on page 12.

For more information on CLI commands, see the SpeedTouch $^{\text{TM}}$ CLI Reference Guide.





To start a Telnet session

Proceed as follows:

1 Open a telnet application.



You can use the Command Prompt window.

In Microsoft Windows XP for instance:

- 1 On the Windows taskbar, click **Start**.
- 2 Select (All) Programs > Accessories > Command Prompt.
- 2 Connect to your SpeedTouch™.



In the Command Prompt window:

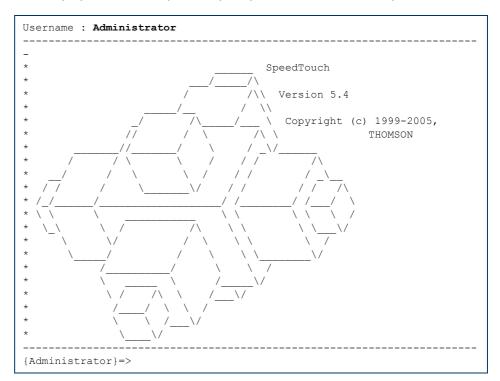
At the prompt, type telnet followed by the IP address of your SpeedTouchTM (192.168.1.254 by default).

3 Enter your SpeedTouch™ security user name and password.



The default user is 'Administrator' and the default password is blank.

As soon as you have opened a session to the CLI, the SpeedTouch $^{\text{TM}}$ banner is displayed, followed by the CLI prompt, as shown in the example below.







1.2.3 Access via FTP

To access the SpeedTouch™ via the File Transfer Protocol (FTP) You can access the file system of the SpeedTouch™ via the File Transfer Protocol (FTP), in order to:

- Restore or back up configuration files, templates or language packs.
- Upgrade your configuration.

File system

The SpeedTouch™ file system is stored on non-volatile memory and contains the SpeedTouch™ software, service template files and (optionally) default setting files.

To open an FTP session

Proceed as follows:

Open a **Command Prompt** window.



In Microsoft Windows XP for instance:

- On the Windows taskbar, click Start.
- Select (All) Programs > Accessories > Command Prompt.
- 2 At the prompt, type ftp followed by the IP address of your SpeedTouch™ (192.168.1.254 by default).
- 3 Enter your SpeedTouch™ security user name and password.



The default user is 'Administrator' and the default password is blank.

The example below shows an FTP session to the SpeedTouch™ file system.

```
C: C:\WINDOWS\system32\cmd.exe-ftp 192.168.1.254

Microsoft Windows XP [Uersion 5.1.2600]

(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\nielsenv\ftp 192.168.1.254

Connected to 192.168.1.254.

220 Inactivity timer = 120 seconds. Use 'site idle \langle secs\' to change.

User \langle (192.168.1.254:\langle (none)\rangle : Administrator \overline{\sigma}

331 SpeedTouch \langle (00-0E-50-5A-D9-A0) Password required.

Password:

230 OK

ftp\
```

File system structure

The structure of the file system is very simple: it consists of a single root directory called *root* and a subdirectory called *dl* (download).

- The *root* directory contains:
 - ▶ all the necessary files for the SpeedTouch™ to start correctly
 - the dl directory
- The **dl** directory contains the software image.



If you made changes to the SpeedTouch^{TM} configuration and saved them, a user.ini configuration settings file is created in the dl subdirectory.





File system access rights

In the different directories you have the following rights:

Directory	Access rights
root	NO read/write
dl	read/write

Common FTP commands

Depending on the access rights you have in a directory, you can use one of the following commands:

Use the command	to
cd	access another directory than the one currently open. Example: ftp>cd dl.
dir	list the directory files. Example: ftp>dir.
bin	set the transfer mode to 'binary'.
hash	turn on the hashing option.
put	upload files. Example: ftp>put C:/MyBackupFiles/user.ini. A configuration file must be uploaded to the dl directory.
get	download files. Example: ftp>get user.ini. Downloading the configuration file must be done from the dl directory.
delete	delete files.
bye	quit FTP.



FTP file transfer

To allow correct file transfers, set the transfer mode to "binary": at the ftp prompt, type bin and press ENTER.



Turn on the hashing option to see the progression of the file transfer: At the ftp prompt, type hash and press ENTER.

Example.

```
/home/doejohn{1}$ftp 192.168.1.254
Connected to 192.168.1.254
220 Inactivity timer = 120 seconds. Use 'site idle <secs>' to change.
Name (192.168.1.254:doejohn):
331 SpeedTouch™ (00-90-D0-01-02-03) User 'doejohn' OK. Password requir
ed.
Password : #####
330 OK
ftp>
ftp>bin
200 TYPE is now 8-bit binary
ftp>
ftp>hash
200Hash mark printing on (8192 bytes/hash mark).
ftp>cd dl
250 Changed to /dl
ftp>put C:\user.ini
200 Connected to 192.168.1.10 port 1271
150 Opening data connection for user.ini
226 File written successfully
ftp: 256 bytes sent in 0,000Seconds 256000,000Kbytes/sec.
ftp>
```

Quote site command

All the CLI commands can be executed from within an FTP session. Only complete CLI commands (in other words, the complete command syntax with all the parameters already specified) can be executed.

Example: To execute the CLI command :ip iplist to list all IP addresses currently assigned to SpeedTouch $^{\text{TM}}$ interfaces, at the FTP prompt, type 'quote site ip iplist' and press ENTER.

```
ftp> quote site ip iplist
200- Interface Type IP-address Point-to-point/Mask 200- 2 LocalNetwork Ethernet 10.0.0.138 255.255.255.0
200- 2
        LocalNetwork Ethernet *192.168.1.254
                                                     255.255.255.0
         Internet
200- 1
                       Serial
                                   81.240.198.191
                                                      81.240.198.1
200- 0
        loop
                       Internal 127.0.0.1
                                                     255.255.255.255
200-
200 CLI command "ip iplist" executed
ftp>
```

For more information on CLI commands, see the SpeedTouch™ CLI Reference Guide.





1.2.4 Remote Assistance

To access the SpeedTouch™ remotely

You can make your SpeedTouch accessible from the Internet with regard to remote support. In this way, you can allow your help desk to access your SpeedTouch™ remotely.

To enable remote access

Proceed as follows:

- 1 Go to the SpeedTouch™ pages, as described in "1.2.1 Access via the Web Interface" on page 7.
- 2 In the menu, select Toolbox > Remote Assistance.
- 3 Click Enable Remote Assistance.
- 4 Provide the following parameters to your help desk:
 - URL (the HTTPS link)
 - User name
 - Password

Your ISP is now able to access your SpeedTouch™ via the HTTPS link in combination with the provided certificate (a secure authentication mechanism).



For security reasons, remote assistance will be automatically disabled after 20 minutes of inactivity, or after restarting your SpeedTouch TM .

To disable remote access

Proceed as follows:

- 1 Go to the SpeedTouch™ pages, as described in "1.2.1 Access via the Web Interface" on page 7.
- 2 In the menu, select Toolbox > Remote Assistance.
- 3 Click Disable Remote Assistance.



Chapter 1

Getting to know your SpeedTouch™







2 Local Network Setup

Introduction

The SpeedTouch $^{\text{TM}}$ offers you the following local networking solutions:

- Wired Ethernet
- Wireless Ethernet

Device settings

Once you have connected a device, you can personalise its settings. For more information, see "Configure" on page 84.





2.1 Wired Ethernet

Local network

The Ethernet port on the back panel allow you to connect the SpeedTouch™ to an existing 10 or 100Base-T Ethernet network or one (or more) computer(s) with an installed Ethernet card.



In the SpeedTouch™ package, a yellow full-wired straight-through RJ-45/RJ-45 Ethernet cable is included.



In the SpeedTouch™ package, a yellow full-wired straight-through RJ-45/RJ-45 Ethernet cable is included.

Standard wiring procedure

Use the yellow Ethernet cable provided to wire your computer's Ethernet port to the SpeedTouch $^{\text{TM}}$'s Ethernet port.



The Ethernet cable can also be used to wire an Ethernet port of your SpeedTouch™ to any external Ethernet hub or switch.

Please follow the installation instructions supplied with the external hub or switch for connections and Ethernet cabling.

Ethernet link check

Depending on the SpeedTouch™ model, LED indicators allow you to check your Ethernet. See "1.1 SpeedTouch™ LED Behaviour" on page 4 for more information.

Device settings

Once you have connected a device, you can personalise its settings.

For more information, see "Device settings" on page 15.





2.2 Wireless Ethernet

Introduction

The SpeedTouch™ Wi-Fi® certified IEEE 802.11g compliant wireless access point allows multiple computers to connect wirelessly to your local network over the SpeedTouch™ Wireless LAN environment. The SpeedTouch™ is backward compatible with IEEE 802.11b, which means 802.11b and 802.11g devices can coexist in the same wireless network.

The Wireless Distribution System (WDS) on your SpeedTouch™ allows you to extend the range of your wireless network. To be able to use WDS, you will need to introduce an additional WDS-enabled access point into your wireless network.

To be able to connect the computers, make sure that a wireless client adapter (WLAN client) is installed on each computer you want to connect via the WLAN.

Wireless client requirements

All wireless client adapters compliant to 802.11g and/or 802.11b can communicate with the SpeedTouch™ and other members of the SpeedTouch™ (W)LAN environment. However, be aware that only 802.11g compliant wireless clients are able to gain full profit of the 54 Mb/s (Max) bandwidth delivered by the SpeedTouch™.

It is highly recommended to use only wireless client adapters that are Wi-FiTM certified to ensure smooth interoperability with the SpeedTouchTM's WLAN.





2.2.1 Wireless Basics

802.11b/g

- 802.11b is an IEEE standard, operating at 2,4 GHz at a speed of up to 11 Mb/s.
- 802.11g, a newer IEEE standard also operating at 2,4 GHz, gives you up to 54 Mb/s speed, more security and better performance.

Wireless Fidelity

The Wi-Fi certification ensures that your SpeedTouch™ will interoperate with any Wi-Fi certified 802.11g and 802.11b compliant wireless device.

Access Point

The SpeedTouch™ Wireless LAN Access Point (AP) behaves as a networking hub allowing to wirelessly interconnect several devices to the local (W)LAN and to provide access to the Internet.

Network Name or SSID

The WLAN's 'radio' link is a shared medium. As no physical connection exists between the SpeedTouchTM and wireless clients, a name must be given to allow unique identification of your WLAN radio link. This is done by the Service Set ID (SSID), also referred to as Network Name. Wireless clients must be part of this SSID environment in order to be able to communicate with other clients on the (W)LAN - including the SpeedTouchTM.

Radio channels

The 802.11g standard allows several WLAN networks using different radio channels to be co-located. The SpeedTouch™ supports multiple radio channels and is able to select the best radio channel at each startup.

You can choose to set the channels automatically or manually.



The different channels overlap. To avoid interference with another access point, make sure that the separation (in terms of frequency) is as high as possible. It is recommended to keep at least 3 channels between 2 different access points.

The SpeedTouch™ supports all channels allowed for wireless networking. However, depending on local regulations, the number of channels actually allowed to be used may be additionally restricted, as shown in the table below.

Regulatory Domain	Allowed Radio Channels
China	1 to 13
Europe	1 to 13
Israel	5 to 8
Japan	1 to 14
Jordan	10 to 13
Thailand	1 to 14
USA / Canada	1 to 11





Antennas

Direct the external antenna to allow optimization of the wireless link. If for example the antenna is erect, wireless links in the horizontal plane are favoured. Please note that the antenna characteristics are influenced by the environment, that is by reflections of the radio signal against walls or ceilings. It is advisable to use the received signal strength as indicated by the wireless client manager to optimize the antenna position for the link to a given client.

Concrete walls weaken the radio signal and thus affect the connection.





2.2.2 Connecting Wireless Clients for the First Time

Wireless default settings

After every Reset-to-Defaults, the SpeedTouch™ wireless access point configuration is returned to its initial default settings.

These default settings are:

- Security level is low (security disabled) for an easy first use, meaning the data will not be encrypted. Wireless security settings are described in "2.2.3 Wireless Security" on page 22.
- This default network name (SSID) is printed on the identification label located on the bottom of your SpeedTouch™ and is unique for each device. It consists of the concatenation of the word "SpeedTouch" and 6 hexadecimal characters, without any spaces, for example SpeedTouch123456.
- ► The SpeedTouch™ is broadcasting its network name (SSID).
- The radio channel number is set to 'automatically scan for the best radio channel'
- Registration is not activated. New stations are allowed automatically. The Access Control List is open and empty. No wireless client will be denied access to the SpeedTouch™ based on its physical hardware address.



The default wireless settings may differ from the settings listed above depending on your Service Provider's requirements. If this is the case, refer to the installation/configuration instructions provided by your Service Provider.

To prepare wireless clients for the first time

Make sure that:

- ▶ The SpeedTouch™ is turned on and ready for service.
- ► The SpeedTouch™ is in its default configuration.

If necessary, reset the SpeedTouch™ to its default configuration (See "5.3 Reset to Factory Defaults" on page 103 for more information).

- A wireless client adapter is installed on your computer.
- The wireless client adapter's IP configuration is set to dynamically obtain its IP configuration (DHCP) this is usually the default. For more information, see the documentation of your wireless client adapter.

To configure wireless clients for the first time

The wireless client must be correctly configured for the default network name. As the SpeedTouch™ broadcasts its network name to the wireless clients, you can select the SpeedTouch™ wireless network from a list of available networks. Depending on your wireless client a wireless icon may become green or a message similar to the following may appear: "Successfully joined Wireless network SpeedTouch123456".



Some wireless clients do not automatically join a wireless network. If so, follow the instructions for the wireless client software to initiate association.





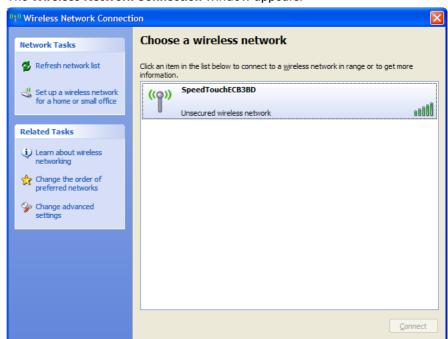
First-time association example

The example below shows how the SpeedTouch™ wireless network is presented towards a Windows XP Service Pack 2 system.



Proceed as follows to associate your wireless client to the SpeedTouch™:

1 Click the network icon in the notification area: The Wireless Network Connection window appears:



2 In the Choose a wireless network list, select the SpeedTouch™ wireless network and click Connect.

The following window appears:



3 Click Connect Anyway.

Your computer is now connected to the SpeedTouch™ wireless network.





For other Operating Systems the wireless client will in most cases be configured via dedicated client managers.





2.2.3 Wireless Security

Introduction

Since the SpeedTouch™ wireless environment is a radio environment, precautions must be taken to ensure that your wireless network is safe from malicious intruders.

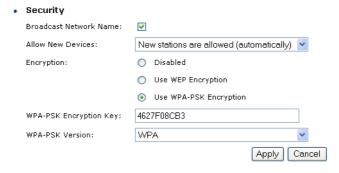
To secure your wireless network, the following wireless access point settings can be personalised:

- Your Network Name (SSID)
- ACL setting
- Data encryption

Security settings

To personalise the wireless security settings on your SpeedTouch™:

- **1** Go to the SpeedTouch™ Web pages.
- 2 In the menu, select Home Network.
- 3 Click your WLAN.
- 4 In the upper right corner, click Configure.
- 5 On the Wireless Access Point page, you can modify the Security settings.



Network Name (SSID)

On the Wireless Access Point page, you can give a new name to your Network Name (SSID).

Under **Security**, you can clear **Broadcast Network Name (SSID)**, to prohibit the Network Name from being broadcast.





Access Control List (ACL)

The SpeedTouchTM features a managed Access Control List (ACL) and a physical registration mechanism in the form of the Association / Registration button on the front panel of your SpeedTouchTM.

On the Wireless Access Point page, you have the following options for the ACL: New stations are

- Allowed (automatically): All new stations can access the SpeedTouch™.
- Allowed (via registration): Only allowed stations in the ACL have access. You can add new stations via:
 - The Association / Registration button.
 - The Search for wireless devices task.

For more information, see "Registering wireless clients" on page 24.

Not allowed: Only allowed stations in the ACL have access. You can add new stations to the ACL only via the Search for wireless devices task. For more information, see "Registering clients via Web pages" on page 24.

Data encryption

To set up wireless connectivity, you can choose different levels of security:

- Security disabled (default) No security; the data will not be encrypted, no authentication process will be used
- WEP (Wired-Equivalent Privacy)

Traffic between the SpeedTouch™ and the clients is encrypted by sharing a pre-defined 64-bit or a 128-bit Network key for secure communication with legacy 802.11b clients.



The default 64 bit hexadecimal WEP key is printed on the identification label located at the bottom of the SpeedTouch™ and is unique for each device.

WPA-PSK (Wi-Fi Protected Access Pre-Shared Key)

The highest form of security available for home users. Make sure that your wireless client and client manager are compatible with it.



The default WPA-Personal pass phrase is printed on the identification label located at the bottom of the SpeedTouch™ and is unique for each device.

The WPA-Personal pass phrase must consist of 8 to 63 ASCII characters or 8 to 64 HEX digits.



Wireless access points may already have been configured during the Home Install Wizard.



If you change wireless settings, wireless clients will be disconnected. In this case, you need to reconfigure the wireless clients before you can connect to the Internet again.





2.2.4 Connecting Additional Wireless Clients

Preconditions

Make sure that:

- ▶ The SpeedTouch™ is turned on and ready for service.
- ▶ The SpeedTouch™ has been configured as DHCP server (default).
- The wireless client adapters have been installed on all the computers you want to connect to the WLAN.

Security issues

- Depending on the personalised wireless settings:
 - Make sure you use the same encryption or security level on the client as on your SpeedTouch™. If for instance WPA-PSK is enabled on the SpeedTouch™, you must also configure the wireless client to use WPA-PSK and configure the same WPA-PSK pass phrase.
 - If the Network Name (SSID) is not broadcast, you must configure the wireless client for the SpeedTouch™ Network Name. Refer to the documentation of your wireless client for more information.
- If the SpeedTouch™ ACL settings are set to:
 - New stations are allowed (automatically), your device can access the SpeedTouch™ WLAN without additional configuration.
 - New stations are allowed (via registration), you have to register your wireless client(s). For more information, see "Registering wireless clients" on page 24.
 - New stations are not allowed, you have to search for wireless client(s) using the SpeedTouch™ web pages, see "Registering clients via Web pages" on page 24.

Registering wireless clients

If 'New stations are allowed (via registration)', you can add a wireless client to the ACL via:

- Registering clients via Web pages
- Registering clients via the association button

Registering clients via Web pages

Proceed as follows to add a wireless client to the ACL:

- 1 Go to the SpeedTouch™ Web pages.
- In the menu, select Home Network > Devices.
- 3 In the Pick a task list, click Search for wireless devices.

The SpeedTouchTM searches for new wireless stations that use the encryption key of the SpeedTouchTM Access Point.

The SpeedTouch[™] takes you to the Home Network. The new station will be shown next to the name of the SpeedTouch[™] WLAN.

- 4 Click the name of the new station.
- 5 Click Configure.
- 6 Select Allowed on WLAN, and then click Apply.

The device is added to the ACL and will always be allowed to connect to the SpeedTouch $^{\mathsf{TM}}$.





Registering clients via the association button

Proceed as follows to register new wireless network clients via the association button:

Push the Association button on the SpeedTouch™front panel for at least two seconds.

The WLAN LED toggles between green and red.

The ACL will be unlocked for a time frame of one minute. Any new wireless client successfully attempting to connect to the SpeedTouch™ (having the correct wireless settings, that is the network name and, if required, the network key) within the time frame of one minute, will be added to the table. The SpeedTouch™ automatically saves your current configuration at the end of the registration phase.



Some WLAN clients do not automatically join a WLAN. If so, follow the instructions for the WLAN client software to initiate the association.

- 2 Successfully registered stations are associated to the SpeedTouch™ WLAN. Depending on your WLAN client adapter, a wireless icon may become green or a message similar to the following may appear: "Successfully joined Wireless network SpeedTouch123456".
- 3 The wireless clients will be added to the SpeedTouch™ ACL.
- 4 After one minute the ACL is locked.



The registration procedure can be repeated as often as needed.



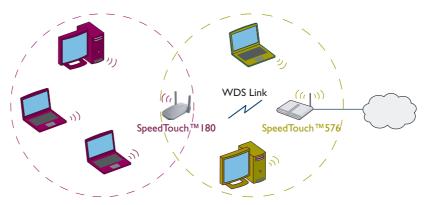


2.2.5 Extending the Range of Your Wirelstess Network

Wireless Distribution System (WDS)

The SpeedTouch™ features the Wireless Distribution System (WDS) functionality. This feature allows you to extend the range of your wireless network by introducing one or more WDS-enabled devices into your wireless network.

WDS enables data packets to pass from one wireless access point to another, as if the access points were ports on a wired Ethernet switch. WDS allows you to extend the range of your SpeedTouch™ by means of one or more wireless repeaters, like for instance a SpeedTouch™180. The following illustration depicts two WDS-enabled devices communicating via WDS.





The SpeedTouch™ allows you to add up to four wireless repeaters.



Repeaters extend the coverage area of your wireless LAN. However, bear in mind that throughput is reduced for wireless clients that are connected through a repeater.

Preconditions

Make sure that:

- Your wireless repeater is be WDS enabled.
- ▶ Both your SpeedTouch™ and your wireless repeater use:
 - The same WEP key if WEP is enabled.



WPA encryption is not supported when using WDS.

The same *fixed* channel.



The SpeedTouch™ and your wireless repeater do not necessarily need to use the same SSID. Using different SSIDs allows you to force your wireless clients to use either the access point of the SpeedTouch™ or the one of your wireless repeater.

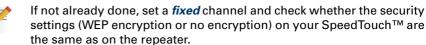




To configure WDS

Proceed as follows:

- Go to the SpeedTouch™ Web pages.
- 2 In the menu, select Home Network.
- 3 Click your WLAN.
- In the upper right corner, click Configure.

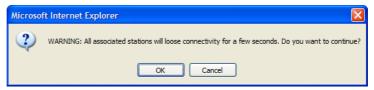


5 On the Wireless Access Point page, in the Pick a task list, click Configure WDS.



- Scan for wireless accesspoints
- Select WDS Enabled. 6
- 7 In the Pick a task list, click Scan for wireless access points.

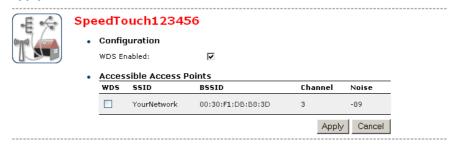
A warning is displayed.



8 Click OK.

The SpeedTouch™ scans for access points on the same radio channel.

9 Select your repeater in the List of Accessible Access Points, and then click Apply.





Chapter 2Local Network Setup







3 Internet Connectivity Dial-In Clients

Introduction

If you want to set up initial Internet connectivity using the Home Install Wizard on the Setup CD or the embedded Easy Setup, refer to the provided Installation and Setup Guide.

Access methods

Depending on the configuration of the SpeedTouch™ you may have:

Direct access:

As soon as the initial configuration is finished, immediate and uninterrupted WAN access is provided.



If you have direct access, the remote organisation might ask for a user name and password on an Internet welcome page.

Dial-in access:

Access must be explicitly established, that is by "dialling" into a Broadband Remote Access Server (BRAS).

Depending on the SpeedTouch™ configuration, dial-in access is provided via the SpeedTouch™'s Routed PPPoA or Routed PPPoE packet services with embedded PPP client.

Connection protocols

The applied connection protocol model depends on the service profile you selected to configure the SpeedTouch™ and should correspond with the Service Provider's requirements. If, for instance, your ISP provides PPPoE, you should configure PPPoE.

You can find more information on connection protocols in the Internet Connection Configuration Guide.

Dial-in clients

There are different ways to dial in, depending on the operating system on your computer and your preferences.

Dial-in method:		canbeusedonfollowing operating system:	For more information, see:		
En	Embedded PPP dial-in client:				
1	Dial-in client on embedded pages	Windows, Mac, unix, other	"3.1 SpeedTouch™ Web Pages"		
2	Windows XP/UPnP (Internet Gateway Device)	Windows XP	"3.2 Internet Gateway Device Control Agent" on page 33		





Embedded PPP dial-in clients

The SpeedTouch^{TM'}s embedded PPP dial-in client allows you to establish an Internet connection for computers residing on your local network, using only one computer of the network to control the client.

If this computer runs:

- Any Operating System
 you can always use the SpeedTouch™ Web pages.
 See "3.1 SpeedTouch™ Web Pages" on page 31 to proceed.
- Windows XP you can use the Windows XP Internet Gateway Device Control Client. See "3.2 Internet Gateway Device Control Agent" on page 33 to proceed.

Broadband host PPPoE dial-in clients

You can also connect to the Internet using a Broadband PPPoE dial-in application. The PPP over Ethernet connection scenario provides PPP-like dial-in behaviour over the virtual Ethernet segment.

To be able to use a broadband dial-in application on your computer for connecting to the Internet, the SpeedTouchTM needs to be configured for Bridged Ethernet or Routed PPPoE (with PPPoE relay) via the SpeedTouchTM Home Install Wizard on the Setup CD or the embedded Easy Setup. .

If your computer runs	you can use		
Windows XP	the Windows XP broadband dial-in client		
Mac OS X	a Mac OS X broadband dial-in client		
	a broadband PPPoE dial-in client provided by you Service Provider		



Upon availability of OS-specific PPPoE dial-in client applications, the latter method is Operating System independent.

For PPPoE session connectivity from a Mac OS 8.6/9.x, a Windows 95/98(SE)/ME/2000 or a Linux system, a host PPPoE dial-in application is mandatory.





3.1 SpeedTouch™ Web Pages

Introduction

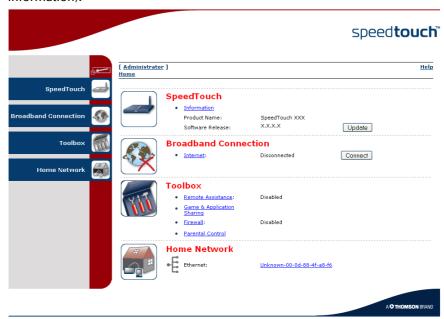
As the SpeedTouch™ Web pages are controllable from any Operating System with an installed Web browser, the method to establish PPP sessions described later, can be used on any computer system.

For more information on Internet connection setup, refer to the provided Installation and Setup Guide.

Starting an Internet session

Proceed as follows to start an Internet session:

Open a Web browser on your computer and browse to the SpeedTouch™ Web pages (see "1.2.1 Access via the Web Interface" on page 7 for more information).



The SpeedTouch™ home page appears by default.

2 Click Connect at the appropriate broadband connection.



You might be requested to enter your user name and password.

The SpeedTouch™ embedded PPP dial-in client establishes the Internet connection.

3 Browse the Web.

Monitoring your Internet connection

You can view and monitor your connection to the Internet as long as the session is running via:

- The SpeedTouch™ System Information page: see "4.3.1 Information" on page 44.
- ► The SpeedTouchTM Diagnostics task: see "4.4.1 Connectivity Check" on page 52.





Terminating an Internet session

Proceed as follows to close an active PPP connection:

- Go to the SpeedTouch™ Web pages.
- 2 Click **Disconnect** at the appropriate broadband connection.

The SpeedTouch™ embedded PPP dial-in client closes the Internet connection. The Internet Link status changes to **Disconnected** and your computer is offline.





3.2 Internet Gateway Device Control Agent

Introduction

Windows XP users can easily establish PPP sessions, thanks to the Windows XP Internet Gateway Device (IGD) Discovery and Control Client that allows you to control the SpeedTouch™ directly from you computer.



The IGD Control Client only allows to connect or disconnect a fully configured connection.

Preconditions

Make sure that:

- The following subcomponents of the Windows XP Networking Services are added to your Windows XP system:
 - ▶ UPnPTM (see "SpeedTouchTM not detected by UPnPTM or IGD Control Client" on page 101).
 - IGD Discovery and Control Client (see "Adding IGD Discovery and Control" on page 102).
- ▶ UPnPTM is enabled on your SpeedTouchTM. To enable UPnP, see "4.5.2 Game & Application Sharing" on page 58.

Starting an Internet session

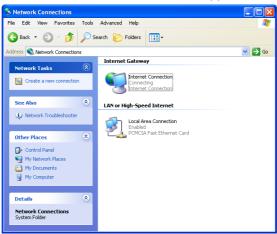
Proceed as follows to start an Internet session:

- 1 In the Windows taskbar, click Start.
- 2 Select (Settings >) Control Panel.

The **Control Panel** window appears.

3 Go to (Network and Internet Connections >) Network Connections.

The Network Connections window appears.



You will find an **Internet Gateway** icon, representing the SpeedTouch™ IGD Internet connection ability.

4 Double-click the Internet Connection icon.

The SpeedTouch™ embedded PPP dial-in client establishes the Internet connection. The **Internet Gateway** icon displays **Connected** and your computer is online.

5 Open a Web browser and surf the Internet.





Internet connection status

As long as the SpeedTouch™ embedded PPP dial-in client is connected, you can view the connection status and some counters by double-clicking the **Internet Connection** icon in the **Network Connections** window.



Terminating an Internet session

Proceed as follows to terminate an Internet session:

- 1 In the Windows taskbar, click Start.
- Select (Settings >) Control Panel > (Network and Internet Connections >) Network Connections.
- 3 In the Network Connections window, right-click the Internet Connection icon and select Disconnect to close the session.



You can also double-click the icon. Then the **Internet Connection Status** window will appear on which a **Disconnect** button is available to close the session.

4 The SpeedTouch™ embedded PPP dial-in client will close the Internet connection. The **Internet Gateway** icon displays **Disconnected** and your computers are offline.





4 SpeedTouch™ Web Interface

Embedded

The SpeedTouchTM comes with embedded Web pages, providing an interface to the software installed on the device. It allows easy setup and management of the SpeedTouchTM via your Web browser from any PC connected to the SpeedTouchTM.

See "1.2.1 Access via the Web Interface" on page 7 to access the pages.

SpeedTouch™ documentation

Consult:

► The SpeedTouch™ Installation and Setup Guide for more information on setup and installation procedures.



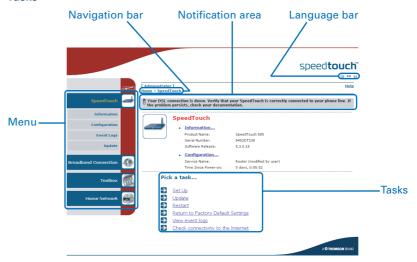


4.1 Navigation

Navigation components

The SpeedTouch $^{\text{TM}}$ Web interface consists of the following components:

- Menu
- Language Bar
- Navigation Bar
- Notification Area
- Tasks







4.1.1 Menu

Menu items

The menu is located on the left side of the page and consists of the following menu items:

SpeedTouch:

Provides basic information on the SpeedTouch $^{\text{TM}}$.

▶ Broadband Connection:

Allows you to view/configure your broadband connections.

Toolbox:

Allows you to assign games or applications to a device and secure your Internet connection.

▶ Home Network:

Allows you to manage your local network.

Collapsing and expanding the menu

You can collapse/expand the menu by clicking the arrow located at the top of the menu.







4.1.2 Language Bar

Language bar

The language bar is located under the SpeedTouchTM logo and allows you to change the language of the SpeedTouchTM Web interface.



The language bar will only be shown if more than one language is available.



4.1.3 Navigation Bar

Navigation bar

The navigation bar is located at the top of the page and allows you to:

- View the current user name.
 Click this name to change your password or switch to another user.
- View the current position on the SpeedTouch™ Web interface.
- ▶ Get context-related **Help** information.

Display level

Depending on the page you are viewing, the following buttons will be available:

- Overview to view a summary of the current status or configuration.
- Details to view more detailed information on the current status or configuration.
- Configure to change the current settings.





4.1.4 Notification Area

Notification area

The notification area is located under the Navigation Bar and is used to display:

- Frror messages, indicated by a red traffic light.
- Warnings, indicated by an orange traffic light.
- Information, indicated by a green traffic light.



If none of these events occur, the notification area will not be shown.



4.1.5 Tasks

Tasks

To allow a quick configuration of your SpeedTouch™, some pages may offer you a number of related tasks in the **Pick a task** list. These tasks will guide you to the page where you can perform the selected task.





4.2 Home

SpeedTouch™ home page

The SpeedTouchTM home page gives you a short overview of all the configurable aspects of the SpeedTouchTM:

- SpeedTouch
- Broadband Connection
- Toolbox
- ▶ Home Network





4.3 SpeedTouch

The SpeedTouch menu

The **SpeedTouch** menu consists of the following items:

- Information
- Configuration
- Event Logs

The SpeedTouch page

The **SpeedTouch** page gives you some basic information on the SpeedTouch™:

- Product Information
- **▶** Configuration







4.3.1 Information

Information

The **Information** page summarizes important information on your SpeedTouch™. You may need this information when you contact your helpdesk.



System Information

This page summarizes important information on your SpeedTouch. You may need this information when you contact your helpdesk.

 Product Name:
 SpeedTouch XXX

 Serial Number:
 0452DT108

 Software Release:
 X.X.X.X

 Software Variant:
 AA

 Boot Loader Version:
 1.0.16

 Product Code:
 35723430

 Board Name:
 BANT-K



4.3.2 SpeedTouch™ Easy Setup

Easy Setup Wizard

The Easy Setup Wizard helps you to configure your SpeedTouch $^{\rm TM}$ Internet connection.

Proceed as follows to configure the SpeedTouch $^{\text{TM}}$ using the SpeedTouch $^{\text{TM}}$ Easy Setup wizard:

- 1 In the left menu, click **SpeedTouch**.
- 2 In the Pick a task list, click Set up.

The **Easy Setup** wizard will now guide you through the configuration of your SpeedTouch $^{\rm TM}$.







4.3.3 Restart

Restarting your SpeedTouch™

Proceed as follows:

- 1 In the left menu, click **SpeedTouch**.
- 2 In the Pick a task list, click Restart. The following message appears:



3 Click Yes, restart my SpeedTouch.

The SpeedTouch $^{\text{TM}}$ restarts.

The SpeedTouch™ returns to the Home page.





4.3.4 Configuration

Overview

The **Overview** page displays the current configuration of your SpeedTouch™.

Details

The **Details** page displays more detailed information on the current configuration of your SpeedTouch TM .

Configure

The **Configure** page allows you to change the current configuration.



System Configuration

This page lets you configure your SpeedTouch.

Service Configuration

You cannot directly edit the service settings of your SpeedTouch. In order to modify those settings, you must use the <u>Configuration Wizard</u> and follow the instructions appearing on the screen.

Ser	rvice Name:	Routed PPPoE on 0/35 and 8/35
• Tir	me Configuration	
Aut	to-configuration:	
Dat	te (dd-mm-yyyy):	
Tim	ne (hh:mm:ss):	: : :
Tim	nezone:	(UTC+01:00) Amsterdam, Bern, Rome, Str.
Sur	mmer Time:	
• Sy	stem Configuration	
We	b Browsing Interception:	Disabled
		Apply Cancel

If you want to:

- ▶ Reconfigure your SpeedTouchTM: Click Configuration Wizard under Service Configuration. For more information, see "4.3.2 SpeedTouchTM Easy Setup" on page 45.
- Configure the time settings of your SpeedTouch™:
 - Select Auto-configuration if you want the SpeedTouch™ to use a time server to synchronise its clock to a dedicated time server.
 - Clear Auto-configuration to manually configure the SpeedTouch™ time settings.
- Disable/enable Web browsing interception or set it to automatic: In the Web Browsing Interception list, click the Web browsing interception setting of your choice.
 - If you disable Web browsing interception or set it to automatic you will not be able to use Parental Control.

Click Apply to apply and save your settings.





4.3.5 Back up & Restore

Introduction

The Back up & Restore page allows you to:

- Save your current configuration.
- Restore a previously saved configuration.



Backup & Restore

This page enables you to save and restore the configuration of your SpeedTouch. Follow instructions below...

Backup current configuration

In order to store the current configuration of your SpeedTouch, click on the `Backup Configuration Now...' button. You will be prompted by your web browser to store the configuration file locally on your hard disk. Choose a location and store the file on your computer.

Backup Configuration Now...

· Restore saved configuration

You can restore a configuration file you have previously stored on your computer.

Click on `Browse', choose the configuration file you want to restore on your SpeedTouch and click on `Restore Configuration Now...' to restore the configuration.

Configuration File:		Browse
Restore Configuration N	low	

Accessing the Backup & Restore page

Proceed as follows:

- 1 In the SpeedTouch menu, click Configuration.
- 2 Click Configure.
- 3 In the Pick a task list, click Save or Restore Configuration.

Saving your current configuration

Proceed as follows:

- 1 Click Back up Configuration Now.
- 2 Click Save.
- 3 Choose a location to save your backup file and click Save.

Restoring a previously saved configuration

Proceed as follows:

- Click Browse.
- 2 Select the configuration file you want to restore and click **Open**.
- 3 Click Restore Configuration Now.

The SpeedTouch™ loads your configuration and restarts.

At the end of the procedure, the SpeedTouch™ returns to the Home page.





4.3.6 Reset to Factory Defaults

Introduction

The **Reset to Factory Defaults** page allows you to reset the SpeedTouch™ to return to the initial configuration of your SpeedTouch™. All your changes will be deleted. The following message appears:



Warning: Reset to Factory Defaults

You are about to reset your SpeedTouch to factory default settings. All active connections will be disconnected.

Do you want to proceed?

Yes, reset my SpeedTouch

Resetting the SpeedTouch™ factory defaults

Proceed as follows:

- In the left menu, click SpeedTouch.
- In the Pick a task list, click Return to Factory Default Settings.
- 3 Click Yes, reset my SpeedTouch.



If you reset your SpeedTouch™ to factory default settings, all active connections will be disconnected.

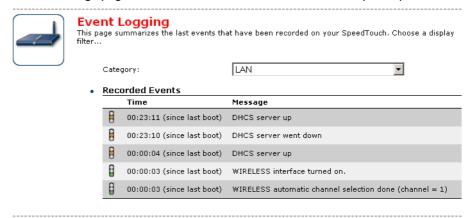




4.3.7 Event Logs

Event Logging

The **Event Logs** page summarizes the last events recorded on your SpeedTouch™.



Recorded Events

The **Recorded Events** table gives you an overview of the last event logs that have been recorded since the SpeedTouch™ was turned on. The first column of the table indicates the importance of the event log.

Indicator	Description
8	Informational
	Warning
8	Error

Category

The **Category** list allows you to filter the events shown in the **Recorded Events** table. For example, by clicking **Security** you can view all security related events, for example generated by the SpeedTouch™ firewall.





4.4 Broadband Connection

The Broadband Connection menu

The Broadband Connection menu consists of following menu items:

- DSL Connection
- Internet Services

The Broadband Connection page

The **Broadband Connection** page gives you a short status overview of the connections configured on the SpeedTouch™.



Click View more to see more information on the selected broadband connection.



If you configured a dial-up connection, you can establish/terminate the connection by clicking **Connect/Disconnect**.





4.4.1 Connectivity Check

Introduction

On this page, you can perform a connectivity check on an Internet service of your SpeedTouch™. The following message appears:



Checking your Internet connectivity

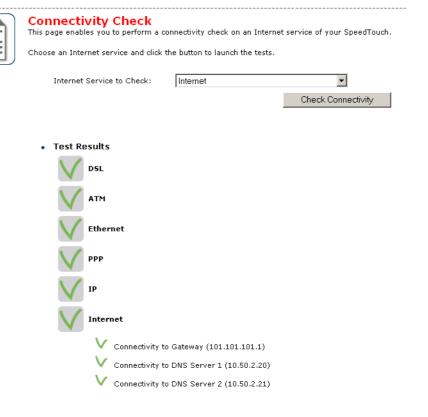
Proceed as follows:

- In the left menu, click Broadband Connection.
- 2 In the Pick a task list, click Check connectivity to the Internet.
- 3 In the Internet Service to Check list, click the Internet service that you want to check.
- 4 Click Check Connectivity.

The SpeedTouch™ lists the test results in the **Test Results** list.

Analysing the test results

If the test is successful, you will get a list of green check marks. Otherwise a red cross will indicate which tests have failed.







4.4.2 DSL Connection

Overview

Click **Overview** to view basic information on your DSL connection.

Details

Click **Details** to view more detailed information on your DSL connection.



DSL Connection

Link Information

Uptime: 4 days, 4:19:08 Modulation: G.992.1 Annex A Bandwidth (Up/Down) [kbps/kbps]: 512 / 4.640 Data Transferred (Sent/Received) [MB/MB]: 36,15 / 385,19 Output Power (Up/Down) 11,5 / 19,5 [dBm]: Line Attenuation (Up/Down) 14,0 / 25,0 [dB]: SN Margin (Up/Down) [dB]: 19,0 / 19,5 Vendor ID (Local/Remote): TMMB / ALCB Loss of Framing (Local/Remote): Loss of Signal (Local/Remote): 0/0 Loss of Power (Local/Remote): 0/0 Loss of Link (Remote): Error Seconds 0/0 (Local/Remote): FEC Errors (Up/Down): 0/0 CRC Errors (Up/Down): 0/0

HEC Errors (Up/Down):

speed**touch**™



4.4.3 Internet Services

Internet Services information

The Internet Services page displays information on your Internet Connection(s).



Internet

Disconnect

View more...

 Type:
 PPPoE

 Uptime:
 1 day, 4:14:25

 IP Address:
 217.136.53.59

 Data Transferred (Sent/Received) [MB/MB]:
 14,70 / 328,71



If you configured a dial-up connection you can establish/terminate the connection by clicking **Connect/Disconnect**.

To view more detailed information on a specific connection, click the ${\bf View\ more\ link}$ of the corresponding connection.





4.4.4 Internet Service Settings

Accessing the Internet Service Settings page

Proceed as follows:

- In the Broadband Connection menu, click Internet Services.
- 2 Click the **View more** link of the Internet service you want to view.

Overview

The **Overview** page gives you basic information on the selected Internet Service.



If you configured a connection you can establish/terminate the connection by clicking **Connect/Disconnect**.

Details

The **Details** page gives you more detailed information on the selected Internet Service.



Internet

Disconnect

Connection Information

Uptime: 1 day, 4:13:24
Data Transferred
(Sent/Received) [KB/B]: 14,65 / 325,99

Connection Settings

PVC Info (VPI.VCI): 8.35 Type: PPPoE

PPP Settings

Username: cpesit@rednet
Password: ********
Connection Mode: Always-On
Service Name: -

Concentrator Name: 15031100007146-Redback

TCP/IP Settings

IP Address: 101.101.101.39/32
Default Gateway: 101.101.101.1
Primary DNS: 10.50.2.20
Secondary DNS: 10.50.2.21



If you configured a dial-up connection you can establish/terminate the connection by clicking **Connect/Disconnect**.





4.5 Toolbox

The Toolbox menu

The **Toolbox** menu consists of the following menu items:

Remote Assistance

Allows you to make your SpeedTouch™ accessible for remote support.

Game & Application Sharing

Allows you to share services and games that you run in your private network towards the Internet.

Parental Control

Allows you to block/allow access to specific Web sites.

Firewall

Allows you to configure the security level of the SpeedTouch™ firewall.

Intrusion Detection

Allows you to view the intrusions you are protected against.

Dynamic DNS

Allows you to assign a DNS host name to your broadband connection(s).

User Management

Allows you to manage the users configured on your SpeedTouch™.

The Toolbox page

The **Toolbox** page gives you an overview of the available services and their current status. You can click on the names of these services to go to the corresponding Web page.



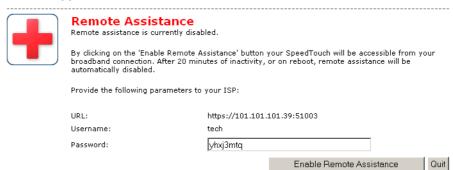




4.5.1 Remote Assistance

Enabling Remote Assistance

The **Remote Assistance** page allows you to make your SpeedTouch™ accessible for remote support.





If you want to enable remote assistance, you must be connected to the Internet.

Proceed as follows to use remote assistance:

- 1 If necessary, type a password in the **Password** box.
- 2 Click Enable Remote Assistance.
- 3 Pass the information listed under:
 - URL
 - Username
 - Password

to your technical support, in order for them to be able to access your SpeedTouch $^{\text{TM}}\!.$



Once the technical support is connected, no other connections can be made.

Terminating remote assistance

The remote assistance session ends:

- if the technical support disables remote assistance.
- after 20 minutes of inactivity.
- ▶ after restarting your SpeedTouch™.





4.5.2 Game & Application Sharing

Overview

The **Overview** page summarizes the applications or games installed on a particular local host on your network, for which the SpeedTouch™ should accept inbound initiated connections coming from the Internet.

Configure

On the Configure page, you can:

▶ Select **Use UPnP** to enable UPnP on the SpeedTouch[™].

UPnP provides NAT-Traversal: UPnP aware applications on a PC will automatically create Hyper-NAT entries on the SpeedTouch[™] for incoming traffic on the protocol ports this type of traffic needs. As a consequence these applications are able to traverse the SpeedTouch[™] without the need for extra and manual configuration.



UPnP is an architecture for transparent peer-to-peer connectivity of computers, intelligent appliances, and (wireless) devices. It enables seamless operation of a wide range of games and messaging applications.

For security reasons you are able to configure the UPnP policy towards Windows XP and UPnP aware applications and Operating Systems.

In case you select the **Use Extended Security** check box, only limited UPnP operation between a host running MS Windows XP and the SpeedTouch™ is allowed: A local host is:

- NOT allowed to connect/disconnect the SpeedTouch™ Internet Gateway Device (IGD) connection.
- Allowed to add/delete Hyper-NAT entries only for its own IP address, not for other local hosts.

If you clear the **Use Extended Security** check box, all UPnP- and IGD-based communication between any local host and the SpeedTouch™ is allowed.





Assign a game or application to a specific network device.



Game & Application Sharing
This page summarizes the games and applications defined on your SpeedTouch. Each game or application can be assigned to a device on your local network.

Universal Plug and Play

Universal Plug and Play (UPnP) is a technology that enables seamless operation of a wide range of games and messaging applications.

Use UPnP:	V			
Use Extended Security:				
			Apply	Cancel

Assigned Games & Applications

Click on 'Unassign' to disable a game or a application or use the last row in the table to assign a game or application to a local network device.

If the game or the application you are looking for does not exist, <u>click here</u> to create it (you will be asked for game or application details).

Choose 'User-defined' in the device list and enter its IP address if the device you are looking for does not appear in the device list.

Game or Application	Device	Log		
FTP Server	<u>YourPC</u>	Off	<u>Edit</u>	<u>Unassign</u>
HTTP Server (World Wide Web)	<u>YourPC</u>	Off	<u>Edit</u>	<u>Unassign</u>
NetMeeting	<u>YourPC</u>	Off	<u>Edit</u>	<u>Unassign</u>
ABC (Another Bittorent Client)	▼ YourPC ▼			Add





4.5.3 Defined Games & Applications

Accessing the Defined Games & Applications Proceed as follows to access the **Defined Games & Applications** page:

- In the Toolbox menu, click Game & Application Sharing.
- In the Pick a task list, click Modify a game or application.

The Defined Games & Applications page

This page gives you an overview of the games and applications defined on your SpeedTouch™. Each game or application can be assigned to a device on your local network.



Defined Games & Applications
This page summarizes the games and applications defined on your SpeedTouch. Each game or application can be assigned to a device on your local network.

Assigned to	Mode		
	Client	<u>Edit</u>	Delete
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	Delete
	Client	<u>Edit</u>	Delete
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	Delete
	Client	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	Delete
	Client	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	<u>Delete</u>
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	Delete
	Server	<u>Edit</u>	Delete
	Server	Edit	Delete
		Client Server Server Client Server Client Server Server Client Server	Client Edit Server Edit Client Edit Client Edit Server Edit Client Edit Server Edit Client Edit Server Edit Server Edit Server Edit Client Edit Server Edit

If you want to:

- View the translation rules of a game or application, click the name of the rule.
- Change the translation rules of a game or application, click the Edit link of the game or application.
- Remove a game or application from your SpeedTouch™, click the **Delete** link of the game or application.





4.5.4 Game or Application Definition

Accessing the Game or Application Definition page

Proceed as follows to access the Game or Application Definition page:

- 1 In the Toolbox menu, click Game & Application Sharing.
- 2 In the Pick a task list, click Modify a game or application.
- 3 Click the name of the game or application you want to view/change.

Overview

This page gives you an overview of the port mappings used to allow this service or game to be initiated from the Internet.



Consult the user's guide or support pages of your application to know which ports are being used by this application.

A service consists of one or more TCP/UDP port ranges. Each incoming port range can be translated into a different internal (local network) port range. Port ranges can be statically assigned to devices or dynamically assigned using an outgoing trigger.

Configure

Under:

- Game or Application Name you can: Change the name of the game or application.
 - Game or Application Definition you can:
 Change the TCP/UDP port definition for this game or application.



Lotus Notes

Game or Application Name

New Name:	Lotus Notes		
	I	Apply	Cancel

Game or Application Definition

A game or application is made of one or more TCP/UDP port ranges. Each incoming port range can be translated into a different internal (local network) port range. Port ranges can be statically assigned to devices or dynamically assigned using an outgoing trigger.

Protoco	Port Range	Translate To	Trigger Protocol	Trigger Port	
Any	1352 - 1352	1352 - 1352	-	-	Edit Delete
Any 🔻	to		Any		Add

Adding a Port Translation rule

Proceed as follows:

- 1 Click the **Edit** link of the TCP/UDP port definition of the game or application.
- 2 In the **Protocol** list, click the protocol the game or application uses.
- 3 In the **Port Range** box, type the port range the game or application uses.
- In the Translate To box, type the port range to which the SpeedTouch™ has to translate the ports specified under Port Range.
- 5 If you want to make a dynamic translation rule you must specify a trigger protocol and port.



As soon as the SpeedTouch™ receives outgoing traffic on this trigger port, it will activate this translation rule.

6 Click Apply.





4.5.5 New Game or Application

Creating a new game or application

Proceed as follows:

- 1 In the Toolbox menu, click Game & Application Sharing.
- In the Pick a task list, click Create a new game or application. The following window appears:



- 3 Type the name of the game or application in the **Name** box.
- 4 Click:
 - Clone Existing Game or Application if you want to start from the port mappings of the selected game or application.
 - Manual Entry of Port Maps if you want to manually configure the port mapping for this game or application.

The SpeedTouch™ creates the game or application and takes you to the Game or Application Definition page to configure the port mappings for this game or application.

5 Enter the necessary port mappings and click Add.





4.5.6 Parental Control

Parental Control

The SpeedTouch™ allows you to block/allow particular Web sites:

Based on the Web site's URL.



As within a Web site lots of references can be made to other URLs, it is recommended to use this feature in combination with content based filtering.

- Based on the Web site's content.
- By redirecting a Web site to another Web site.



If your administrator account is configured as default user, make sure you configure a password for this account or change the default user. Otherwise users on your local network can browse to your SpeedTouch™ to disable your filtering rules.

For more information, see "4.5.13 User Management" on page 75 and "4.5.15 Change Default User" on page 78.

Overview

The Overview page displays:

- The current Address Based Filtering rules.
- ▶ The current Content Based Filtering configuration. To view which content types are blocked/allowed, click Details. For more information, see "4.5.8 Content Level" on page 67.



Address based filtering rules have priority over content based filtering rules.

Configure

On the Configure page, you can:

- Deny access to a specific web site.
- Allow access to a specific Web site.
- Redirect a Web site.
- Configure content based filtering settings.

Content levels

The following content levels are available:

▶ All:

Allow all categorized Web sites.

Legal:

Allow all except illegal, extreme, spam and spyware Web sites.

Teenagers:

Block illegal, adult, extreme, online ordering/gambling, spam and spyware Web sites.

▶ Children:

Only allow children-save Web sites.

▶ BlockAll:

Block all categorized Web sites.





Deny access to a specific Web site

Use this feature if:

- Allow is selected under Action for Unknown Sites.
- **Block** is selected under **Action for Unknown Sites** and you want to make an exception on an allow rule. For example: you are allowing "provider.com" but you want to deny access to "mail.provider.com".
- A content category/group is allowed by Content Based Filtering and you want to make an exception. For example: you are allowing **Web Mail** content but you want to deny access to "mail.provider.com".

Proceed as follows:

- Type the URL of the Web site you want to block (for example "mail.provider.com") in the Web Site box.
- 2 In the Action list, click:
 - **Block** if you want to block this Web site.
 - Redirect if you want to redirect to another page. Type the address of the redirect page in the Redirect box.
- 3 Click Add.

Allow access to a specific Web site

Use this feature if:

- Block is selected under Action for Unknown Sites
- Allow is selected under Action for Unknown Sites and you want to make an exception on a block/redirect rule. For example: you are blocking "bank.com" but you want to allow access to "netbanking.bank.com".
- A content category/group is blocked by Content Based Filtering and you want to make an exception. For example: you are blocking **Finance / Investment** content but you want to allow access to "netbanking.bank.com".

Proceed as follows:

- 1 Type the URL of the Web site you want to allow (for example "netbanking.bank.com") in the Web Site box.
- 2 Click Allow in the Action list.
- 3 Click Add.

Redirect a Web site

Proceed as follows:

- 1 Type the URL of the Web site you want to redirect (for example "cracks.am") in the Web Site box.
- 2 Click Redirect in the Action list.
- Type the URL of the Web site you want to redirect to (for example "mycompany.com/internetpolicy.htm") in the **Redirect** box.
- 4 Click Add.





Redirecting all Web

Proceed as follows:

- 1 Type "*" in the **Web Site** box.
- 2 Click Redirect in the Action list.
- 3 Type the URL of the Web site you want to redirect to (for example "mycompany.com/internetpolicy.htm") in the **Redirect** box.
- 4 Click Add.
- 5 Type the URL of the Web site you want to redirect to (for example "mycompany.com/internetpolicy.htm") in the **Web Site** box.
- 6 Click Allow in the Action list.
- 7 Click Add.

Configure content based filtering settings

Under Content Based Filtering you can:

- Enable/disable content based filtering.
- Allow/block uncategorized Web sites.
- Select a content level in the Content Level list.



To change a content level definition, click the **Edit** link of the content level you want to change. For more information, see "4.5.8 Content Level" on page 67.





4.5.7 Web Filtering Activation

Accessing this page

Proceed as follows:

- 1 In the Toolbox menu, click Parental Control.
- 2 In the Pick a task list, click Activate Web Filtering License.

Web Filtering Activation

page

This page you can:

- Activate a Web Filtering evaluation license.
- Activate a free 30-days Web Filtering evaluation license.

Standard license activation

Proceed as follows:

- 1 Click Standard.
- 2 In the License Key box, type the license key provided by your ISP.
- 3 Click Apply.



4.5.8 Content Level

Accessing the Content Level page

Proceed as follows:

- 1 In the Toolbox menu, click Parental Control.
- 2 Click Configure.
- 3 Click the Edit link of the content level you want to edit.

Overview

The **Content Level** page gives you an overview of the different categories and their rules.

The following icons indicate whether the content type is allowed or not.

Icon	Description
٧	The category/group is allowed.
×	The category/group is not allowed.
加	The group is partly allowed.

Configure

This page allows you to change:

- The content level name.
- ▶ The content level description.
- ▶ The content level configuration.





4.5.9 New Content Level

Accessing the New Content Level page

On this page you to create a new content level. Proceed as follows to access this page:

- 1 In the Toolbox menu, click Parental Control.
- 2 In the upper right corner, click Configure.
- 3 In the Pick a task list, click Create a new content level.

Procedure

To apply a new content level, you must perform the following actions:

- 1 Content level creation
- 2 Content level configuration
- 3 Content level definition
- 4 Content level activation



You can create up to 16 content levels.

Content level creation

Proceed as follows:

- 1 In the **Name** box, type a name for the new content level.
- 2 In the Description box, type a short text to describe what this security level will do.
- 3 Click Next.

The **Configuration** section appears.

Content level configuration

Proceed as follows:

- 1 Click:
 - ▶ Clone Existing Level to start from a previously created content level.



If no levels have been defined before, this option will not be shown.

- ▶ Black List to allow all Web sites by default.
- White List to block all Web sites by default.
- 2 Click Next.

The Content level definition section appears.





Content level definition

Only Web sites that match the selected content level will be allowed. Proceed as follows:

- 1 If you want to:
 - Allow a category:
 Select the check box next to the category name.
 - Allow an entire group:
 Select the check box next to the group name.
 - Block a category:Clear the check box next to the category name.
 - Block an entire group: Clear the check box next to the group name.
- 2 Click Apply.

Content level activation

To activate your new content level:

- 1 In the Toolbox menu, click Parental Control.
- 2 In the upper right corner, click Configure.
- 3 In the Content Level list, select your new content level.
- 4 Click Apply.

The new content level is now active.





4.5.10 Firewall

About the firewall

The firewall allows you to secure traffic from and to the SpeedTouch™. There are different security levels, depending on the degree of security you need.

Overview

The **Overview** page summarizes the overall security policy configured on your SpeedTouch TM .

Configure

On the **Configure** page you can select the security level of the SpeedTouch™.



Firewall

This page summarizes the overall security policy configured on your SpeedTouch.

Security Settings

Security Level:

O BlockAll

Use this Security Level to block all traffic from and to the Internet. Game & Application sharing is not allowed by the firewall.

Standard

Use this Security Level to allow all outgoing connections and block all incoming traffic. Game & Application sharing is allowed by the firewall..

C Disabled

Disable the firewall. All traffic is allowed to pass through your SpeedTouch. Game & Application sharing is allowed by the firewall.



Security Levels

Select one of following security levels:

▶ BlockAll:

All traffic from and to the Internet is blocked. Game and Application Sharing is not allowed by the firewall.



Although BlockAll should block all connections, some mandatory types of traffic such as DNS will still be relayed between LAN and WAN via the SpeedTouch $^{\text{TM}}$.

> Standard:

All outgoing connections are allowed. All incoming connections are blocked, except for inbound connections assigned to a local host via Game and Application Sharing.

Disabled

All in- and outgoing traffic is allowed to pass through your SpeedTouch™, including Game and Application Sharing.
This is the default firewall level.



The firewall levels only have impact on the forward hook. This means that the handling of traffic from and to the Web pages of the SpeedTouch™ is independent of the selected firewall level.



Protocol checks will be performed on all accepted connections, irrespective of the chosen level. You can only disable protocol checks via the CLI.





Details of a security level

To view the details of the currently active security level:

- 1 In the Toolbox menu, click Firewall.
- 2 Click the Details link.

Following information is provided per rule that is part of the security level

- The name of the rule
- The **Action** that is applied on the traffic when the rule is valid
- The Source and Destination interface or IP address (range) to which the rule applies
- The protocol or SpeedTouch™ **Service** for which the rule applies.
- The number of **Hits** (number of times that the rule was applied to traffic).

Creating a new security level

Proceed as follows:

- 1 In the **Toolbox** menu, click **Firewall**.
- 2 In the upper right corner, click Configure.
- 3 In the Pick a task list, click Create a new Security Level.
- 4 In the Name box, type a name for the new security level.
- 5 Choose an existing security level to clone from.
- 6 Click Apply.

Editing a security level

Proceed as follows:

- 1 In the Toolbox menu, click Firewall.
- 2 In the upper right corner, click Configure.
- 3 Select a security level, and then click the Edit link.

The firewall settings of the selected security level appear.

- 4 You can:
 - Select a row using the Edit link to modify the security rule.
 - Click Add to create a new security rule.
- 5 Edit or define following parameters of the rule:
 - The Name of the security rule
 - The Source Interface and IP Address (range)



Use **Any** as IP address in case all traffic for the interface should be parsed.

Or you can type a User-defined IP address (range).

The **Destination Interface** and **IP Address** (range)



Use **Any** as IP address in case all traffic for the interface should be parsed.

Or you can type a User-defined IP address (range).

► The **Service** type of the traffic; this can be a protocol (dns, smtp, ...) or a specific SpeedTouchTM system service.





- **6** Select an **Action** that should be done on traffic for which the security rules applies:
 - ▶ Accept: to allow the traffic to pass
 - **Deny**: to drop the traffic (without notification)
 - **Count**: to let the traffic pass, but count it (Hits)
- 7 Click Apply.





4.5.11 Intrusion Detection

Intrusion Detection

Your SpeedTouch™ protects your network against malicious intrusions. The **Intrusion Detection** page shows you the intrusions you are protected against.

The **Protected Intrusions** table shows the number of times the SpeedTouch™ actively protected your network against each intrusion since last statistics reset.





4.5.12 Dynamic DNS

Dynamic DNS

The Dynamic DNS service allows you to assign a dynamic DNS host name (for example john.dyndns.org) to a broadband connection even if it is using a dynamic IP address. As soon as the device gets a new IP address, the dynamic DNS server updates its entry to the new IP address.

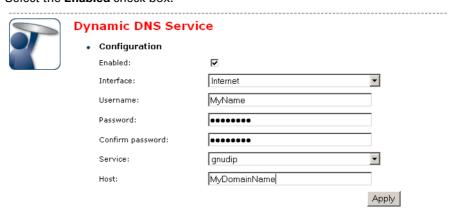
Overview

Click **Overview** to view the different Dynamic DNS clients with their name, host names, interface and IP address.

Configure

On the **Configure** page, you can assign a Dynamic DNS host name to a broadband connection. Proceed as follows:

- 1 Create an account at the Dynamic DNS service of your choice, for example:
 - www.dyndns.org
 - www.no-ip.com
 - www.dtdns.com
- 2 On the Dynamic DNS page, click Configure.
- 3 Select the Enabled check box.



- 4 If necessary, click the broadband connection to which you want to assign the Dynamic DNS hostname in the Interface list.
- 5 Type the user name and password of your Dynamic DNS service account in the corresponding fields.
- 6 In the **Service** list, click your Dynamic DNS service.
- 7 In the Host box, type the host name you want to assign to this interface (for example myspeedtouch.dyndns.org).
- 8 Click Apply.



4.5.13 User Management

Overview

The **Overview** page gives you an overview of the currently configured users and their privileges.

Click the name of a user to edit his user account.



User Management

This page provides you with information regarding the users configured on your SpeedTouch.

Local User Data

The table below shows the configured users who are able to access your SpeedTouch. You need to configure user privileges if you want to differentiate between people using your SpeedTouch. The current privileges of the user are mentioned in the privileges column.

Username	Privileges	Default User		
Administrator	Administrator	V	Edit	
<u>Jon</u>	User		<u>Edit</u>	<u>Delete</u>
<u>Melissa</u>	User		<u>Edit</u>	<u>Delete</u>
				Add

Configure

On the **Configure** page, you can:

- Click Add to create a new user account.
- Click Edit to change a user account.
- Click Delete to remove a user.

Types of users

The table below shows the types of users and their privileges:

User	Privileges
root	This is the root (master) account. This user has all privileges without any exceptions or limitations.
SuperUser	This user can perform any service via any access channel from any access origin.
TechnicalSupport	This user can perform any service via any access channel from WAN origin only.
Administrator	This user can perform any service via any access channel from LAN or Local origin only.
LAN_Admin	This user can perform only LAN related configurations via any access channel from any origin.
Poweruser	This user has access to the GUI (Service/overview page) via HTTP or HTTPS access channel from LAN origin only.





User	Privileges
WAN_Admin	This user can perform only WAN related configurations via any access channel from any origin.
User	This user has access to the GUI (Overview pages, remote assistance) via HTTP or HTTPS access channel from LAN origin only.
Guest	This user does not have any privileges.





4.5.14 Edit User

Editing a user account

Proceed as follows:

- 1 In the Toolbox menu, click User Management.
- Under Local User Data, click the name of the user you want to edit.



Edit User

This page allows you to edit the user settings. Besides resetting your password you're not allowed to change your own settings. If you want to have your settings changed, ask someone with higher privileges.

 User definition Name: Jon • User Administration Privileges: Reset Password Apply Cancel

The **Edit User** page appears. On this page, you can:

- Click Reset Password to reset the password of the selected user to the user name. So, if you reset the password of John his password will be "John".
- Change the administration rights of the selected user.



You can not change the administration rights of the account you are logged on with.





4.5.15 Change Default User

The Default User page

On this page you can change the default user. If users browse to the SpeedTouch™ Web pages, they will be automatically logged on with this account.



To allow users to automatically log on under this account, this default user account must be configured with a blank password.

Changing the default user

Proceed as follows:

- 1 In the Toolbox menu, click User Management.
- 2 In the Pick a task list, click Set the default user.
- 3 The Change Default User page appears.



- 4 In the User Name list, click the name of the new default user.
- 5 Click Change Default User to confirm your choice.



4.5.16 Add User

Adding users

Proceed as follows:

- 1 In the Toolbox menu, click User Management.
- 2 In the Pick a task list, click Add new user.
- 3 The Add User page appears.



- 4 Under **User definition** you can configure:
 - The name of the new user.
 - The password of the new user will be equal to the user name; for example if the user name is John Doe, the password will be John Doe. Also when resetting a user, the password will be changed into the user name.
 - The administration rights of the new user.
 - You can only add users with less than or equal administration rights as yourself.





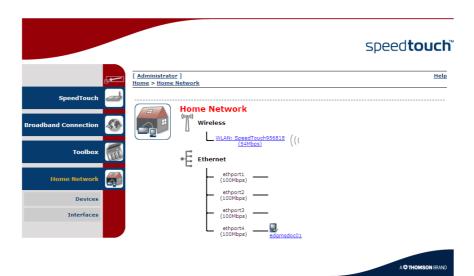
4.6 Home Network

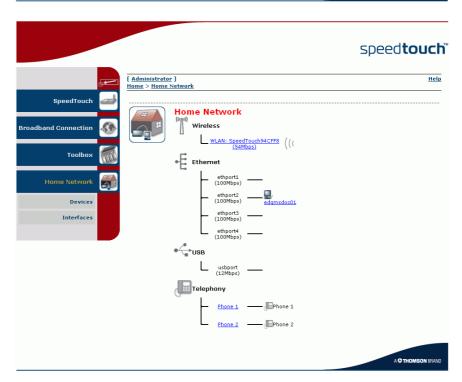
Home Network Menu

The **Home Network** menu consists of the following items:

- Devices
 - Allows you the view/configure the devices detected on your local network.
- Interfaces

Allows you to view/configure the interfaces that are available on the SpeedTouch $^{\rm TM}$.









The Home Network page

The **Home Network** page gives you an overview of your SpeedTouch™ network.

Viewing (wireless) client information

If you click on a (wireless) client you can:

- View the (wireless) client's network settings.
- Configure the (wireless) client's network settings by clicking Configure.





4.6.1 Devices

Overview

The **Overview** page gives you an overview of the devices that are currently connected to the SpeedTouch[™] network. Click on a device name to get more information on a specific device.





The detected device 'dsldevice' is the SpeedTouch™ itself.

Configure

The **Configure** page gives you an overview of the devices that are currently connected to the SpeedTouch TM network.

If you want to:

- Get more information on a specific device, click on the name of the device. See "4.6.2 Device Settings" on page 83 for more information.
- Edit a device from the Detected Device(s) list, click Edit.
- Delete a device from the **Detected Device(s)** list, click **Delete**.



Once a device connects to the SpeedTouch™ network, it will remain listed in the **Detected Device(s)** list until you delete it.





4.6.2 Device Settings

Accessing the device settings page

Proceed as follows:

- 1 In the Home Network menu, click Devices.
- 2 In the **Detected Device(s)** list, click the name of the device you want to view.

Overview

The **Overview** page displays the following items:

- Information allows you to view:
 - Status shows whether the device is currently connected to the SpeedTouch™ network.
 - Type shows the device type.
 - Connected To shows the interface to which the device is currently connected.
- Addressing allows you to view:
 - Physical Address shows the MAC address of the device.
 - IP Address Assignment shows whether the device is using a static or dynamic IP address.
 - **IP Address** shows the current IP address of the device.
 - Always use the same address indicates whether the wireless client has a static DHCP lease or not.
 - DHCP Lease Time displays the time for which the wireless client can use this IP address.

Connection Sharing:

Gives you an overview of the games or services that are currently assigned to this device. Click the name of the game or service to view the used port mappings.

For more information, see "4.5.4 Game or Application Definition" on page 61.

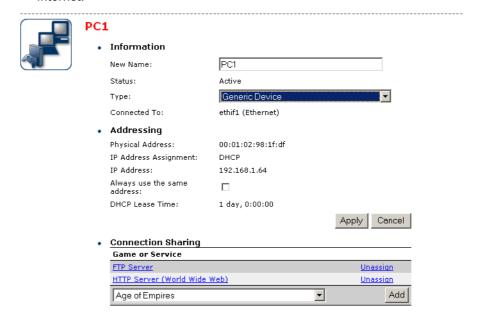




Configure

The **Configure** page allows you to:

- Change the device information.
- Allow a game or service running on this device to be initiated from the Internet.







4.6.3 Assign Public IP

Introduction

On this page you can assign the public IP address of your Internet Connection(s) to a specific device on your local network. You might want to do this if:

- You do not want to use the Network Address Translation engine of your SpeedTouch™.
- This device is running server applications (Web server,...) and you want it to be accessible from the Internet.



You can also achieve this by creating a port mapping for the specified server, as described in "4.5.2 Game & Application Sharing" on

This device has to be considered as the unique access point to your local network (DMZ).



Be aware that the device to which you assign the public IP address will lose all security offered by the SpeedTouch™.

Assigning the public IP address to a device

Proceed as follows:

- In the Home Network menu, click Devices.
- 2 In the Pick a task list, click Assign the public IP address of a connection to a device.
- 3 Click the **Edit** link of your Internet connection.
- 4 In the **Device** list, select the device you want to assign the public address to.



Assign the public IP address of a connection to a LAN device

This page allows you to assign the public IP address of your Internet Connection(s) to a specific device on your local network...

You might want to do this if:

- You encounter issues with some applications through the Network Address Translation engine of
- your SpeedTouch.

 This device is running server applications (web server, ...) and you want it to be accessible
- This device has to be considered as the unique entry to your local network (DMZ).



5 Click Apply.

> The SpeedTouch™ prompts you to make some adjustments as a result of the new configuration.

- 6 Click OK.
- 7 Release and renew the IP address of the device.



For more information, see your operating system's user guide or help.

8 If necessary, reassign server applications to this device.





4.6.4 Wireless Device Settings

Accessing the wireless device settings page

Proceed as follows:

- 1 In the Home Network menu, click Devices.
- In the Detected Device(s) list, click the name of the wireless device you want to view.

Overview

The **Overview** page displays the following items:

- Information allows you to view:
 - **Status** displays whether the device is currently connected to the SpeedTouch™ network.
 - Type displays the device type.
 - Connected To displays the interface to which the device is currently connected.
 - ► Allowed on LAN indicates whether the wireless client is allowed to connect to the SpeedTouch™ WLAN.
- Addressing allows you to view:
 - Physical Address displays the MAC address of the device.
 - IP Address Assignment displays whether the device is using a static or dynamic IP address.
 - ▶ IP Address displays the current IP address of the device.
 - Always use the same address indicates whether the wireless client has a static DHCP lease or not.
 - DHCP Lease Time displays the time for which the wireless client can use this IP address.

Connection Sharing:

Gives you an overview of the games or services that are currently assigned to this device. Click the name of the game or service to view the used port mappings.

For more information, see "4.5.4 Game or Application Definition" on page 61.

Configure

On the Configure page you can:

- Change the device information.
- Assign a static DHCP server lease to this device by selecting the Always use the same address check box.
- Allow a game or service running on this device to be initiated from the Internet.





4.6.5 Access Point Settings

Accessing the Access Point settings

Proceed as follows:

- 1 In the left menu, click Home Network.
- 2 Under Wireless, click the name of the Access Point you want to view or configure.



The Access Point names have the following format: "WLAN: " + Network Name, for example "WLAN: SpeedTouch123456".

Overview

The **Overview** page displays a brief overview of the current configuration.

Details

The **Details** page displays a more detailed overview of the current configuration.

Under Configuration, the following fields are available:

Interface Enabled:

Indicates whether the wireless interface is enabled or disabled.

Physical Address:

Displays the Base Service Set Identifier (BSSID) of the selected Access Point.

Network Name (SSID):

Displays the network name of your WLAN.

Interface Type:

Displays one of the following interface types:

- ▶ 802.11b
 - Only stations that are configured in 802.11b mode can associate.
- 802.11b(legacy)/g

This is a special compatibility mode for 802.11b/g and is in fact designed for older types of b-clients. Use this mode if you are experiencing problems with wireless clients that connect to the SpeedTouch™ Access Point.

▶ 802.11b/g

Only stations that are configured in 802.11b/g mode can associate.

▶ 802.11g

Only stations that are configured in 802.11g mode can associate.

Actual Speed:

Displays the current transmission speed.

▶ Channel Selection:

Displays whether you select a fixed channel yourself or the SpeedTouch $^{\text{TM}}$ selects a channel for you.

Region:

Displays your region.

Channel

Displays the channel that is currently used by the Access Point.

Allow multicast from Broadband Network:

Displays whether you to allow/deny multicast messages from the Internet.



Large bandwidth streams, like video streams, have a large impact on your wireless performance.





WMM:

Displays whether WMM is enabled or disabled.



WMM or Wi-Fi MultiMedia enhances QoS at wireless driver level. It provides a mechanism to prioritise wireless data traffic to and from the associated (WMM capable) stations.

Under Security the following fields are available:

Broadcast Network Name:

By default the SpeedTouch™ broadcasts its network name, allowing you to easily recognise your wireless network in the list of available networks. Once you have configured your wireless clients, it is recommended to disable this feature by clearing this check box.

Allow New Devices:

Allows you to change the access control used by the SpeedTouch™.

Encryption:

Allows you to select an encryption level for your wireless network. The following encryption methods are supported by the SpeedTouch™:

- ▶ The Wired Equivalent Protocol (WEP)
- WPA-Pre Shared Key (WPA-PSK)



The default WEP key and the default WPA key are printed on the SpeedTouch™ bottom label.



Before configuring the SpeedTouch™ encryption, make sure you know which encryption methods are supported by your wireless client.

Configure

On the **Configure** page, you can change the configuration details displayed on the **Details** page.

WEP

The Wired Equivalent Privacy (WEP) algorithm protects wireless communication from eavesdropping.

WEP relies on a secret key that is shared between the wireless client (for example a laptop with a wireless Ethernet card and the SpeedTouchTM. The fixed secret key is used to encrypt packets before they are transmitted. Meaning during transmission between client and AP ("in the air") the information in the packets is encrypted.



If your wireless client(s) support(s) WPA-PSK we recommend you to use WPA-PSK, because WEP encryption has been proven to have some security issues.

To enable WEP:

- 1 Select Use WEP Encryption
- In the WEP Key Length list, click the desired Data Security level (either 64-bit or 128-bit and Alphanumeric or Hexadecimal).
- 3 In the Encryption key box, type a Network key of your choice. In case of:
 - 64 bit, Alphanumeric:

The 40-bit Network key must consist of 5 alphanumeric characters.

▶ 64 bit, Hexadecimal:

The 40-bit Network key must consist of 10 hexadecimal digits.

128 bit, Alphanumeric:

The 104-bit Network key consists of 13 alphanumeric characters.

128 bit, Hexadecimal:

The 104-bit Network key consists of 26 hexadecimal digits.

4 Click Apply to immediately apply your changes.





5 Configure your wireless client(s) with the same settings.

WPA-PSK

The SpeedTouch™ supports WPA-PSK, which offers three advantages over WEP:

- Authentication via a 4-way handshake to check whether the Pre-Shared Keys (PSKs) are identical.
 - Stronger encryption types:
 - Temporal Key Integrity Protocol (TKIP) (default): Instead of using a fixed WEP key, TKIP uses in pairs temporary session keys which are derived from the PSK during the 4-way handshake. For each packet it uses a different key. TKIP also provides a message integrity check (MIC) and a rekeying mechanism (in seconds).
 - Advanced Encryption Standard (AES): State-of-the-art encryption; can only be used if all wireless devices in your WLAN support AES.
- Message Integrity Check (MIC). Which is a strong mathematical function in which the recipient and transmitter each compute and compare the MIC. If they don't match it is assumed that a third person has been trying to read the data.

Proceed as follows to enable WPA-PSK:

- 1 Select Use WPA-PSK Encryption.
- In the WPA-PSK Encryption Key box, type a pass phrase (also known as Preshared key) of your choice. The pass phrase must consist of 8 to 63 ASCII characters or 64 HEX digits.
- 3 In the WPA-PSK Version list, click the desired WPA-PSK version.



Depending on the WPA-PSK version you choose, one of the following WPA-PSK encryption will be set automatically:

WPA: TKIPWPA2: AES

WPA+WPA2: TKIP+AES

AES is not yet implemented in most clients but it is in the SpeedTouchTM because it will be the future security standard.

- 4 Click Apply to immediately apply your changes.
- 5 Configure your wireless client(s) with the same settings.

Access control on the SpeedTouch™

The following modes are available:

- New stations are allowed (automatically): All New stations can access the SpeedTouch™ WLAN.
- New stations are allowed (via registration):

Only allowed stations in the Access Control List (ACL) have access. You can add new stations via registration.

For more information, see " Allowing new wireless" on page 90

New stations are not allowed:

Only allowed stations in the Access Control List (ACL) have access.





Allowing new wireless

If you selected **New stations are allowed (via registration)** or in the **New stations are not allowed** list, wireless clients have to be added manually.

Proceed as follows:

- 1 In the Home Network menu, click Devices.
- 2 In the Pick a task list, click Search for wireless devices.

The SpeedTouch™ searches for new wireless stations that use the encryption key of the SpeedTouch™ Access Point.

The SpeedTouchTM takes you to the **Home Network**. The new station will be shown next to the name of the SpeedTouchTM WLAN.



To view the device settings, click the name of the new station. For more Information, see "4.6.4 Wireless Device Settings" on page 86.





4.6.6 Configuring WDS

What is WDS

The **Wireless Distribution System** (WDS) allows you to extend the range of your wireless network by introducing one or more WDS-enabled devices into your wireless network.



You can only establish WDS links with WDS-enabled devices.

Configuring WDS

Proceed as follows to access the WDS pages on the SpeedTouch™:

- 1 In the left menu, click Home Network.
- 2 Under Wireless, click the Access Point you want to configure for WDS.



The Access Point names have the following format: "WLAN: " + Network Name, for example "WLAN: SpeedTouch123456.

- 3 Click Configure.
- 4 In the Pick a task list, click Configure WDS.

Establishing a WDS connection

Proceed as follows:

- In the Pick a task list, click Scan for wireless Access Points.
 - The SpeedTouch™ warns you that all associated stations will lose connectivity for a few seconds.
- 2 Click OK.

The SpeedTouch™ lists the results in the **Accessible Access Points** table.

- 3 Select the Access Point to which you want to establish a WDS connection.
- 4 Click Apply.
- 5 Configure this Access Point with:
 - The same WEP key if WEP is enabled.
 - The same fixed channel.

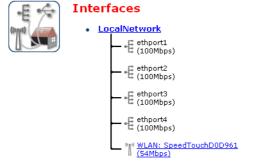




4.6.7 Interfaces

Interfaces overview

The Interfaces page gives you an overview of the interfaces used on your SpeedTouch TM . If you want to know more about the network settings of a specific interface, click the name of the interface you want to view.







4.6.8 Interface Settings

Overview

The **Overview** page gives you an overview of the current interface settings.



Interface - LocalNetwork

• Interface Information

Interface Group: lar

TCP/IP Configuration

Auto-IP: Disabled Use DHCP Server: Enabled

IP Addresses

IP Address/Mask	Туре	
10.0.0.138/24	Static	
192.168.1.254/24	Static	

 DHCP Pools
 Address Range
 Gateway

 LAN_private
 192.168.1.64 - 192.168.1.253
 192.168.1.254

Configure

The Configure page allows you to:

- Change the IP address settings of the SpeedTouch™.
- ▶ Change the DHCP IP address pool settings.



Before changing the DHCP pools, make sure that at least one IP address of the SpeedTouch TM uses the same subnet as the IP addresses in the DHCP pools.

Assigning a new IP address to the SpeedTouch™

Under IP Addresses, proceed as follows:

- 1 Type the IP address of your choice (for example 192.168.1.1) in the left text box.
- 2 Type subnet mask (for example 255.255.255.0) in the right text box.
- 3 Click Add.

Network devices using the same subnet mask can now access the SpeedTouch™ using this IP address.





4.6.9 DHCP Pool

DHCP Pool page

On the **DHCP Pool** page, you can create/change a DHCP pool.

Accessing the DHCP Pool page

Proceed as follows:

- 1 In the Home Network menu, click Interfaces.
- 2 Click the name of the interface which DHCP pool settings you want to change.
- 3 Click Configure.
- 4 Under **DHCP Pools**, click:
 - Add to add a new DCHP pool.
 - Edit to edit an existing DHCP pool.
 - **Delete** to delete an existing DHCP pool.



This link will only be shown if there are more than one DHCP pools.

The DHCP Pool page appears.



Your_DHCP_pool
Configure parameters for your DHCP pool.

Pool Configuration

Interface:	LocalNetwork
Start Address:	192.168.1.10
End Address:	192.168.1.20
Subnet Mask:	255.255.255.0
Server:	192.168.1.254
Gateway:	192.168.1.254
Primary DNS:	192.168.1.254
Secundary DNS:	0.0.0.0
Primary WINS:	0.0.0.0
Secondary WINS:	0.0.0.0
Lease Time:	Infinite
Always give same address to DHCP clients:	▼

Apply	Cancel





Components of the DHCP Pool page

The following settings are available for configuration:

Interface:

The SpeedTouch™ interface to which the DHCP pool applies.

Start Address:

The start IP address of the DHCP server's address pool.

▶ End Address:

The end IP address of the DHCP server's address pool.



Both the start and end IP address define the IP address range used by the DHCP server to assign leases.

Subnet Mask:

The subnet mask of the DHCP server's address pool.

Server:

The SpeedTouch™ IP address used as DHCP server address.

Gateway:

The IP address that will be assigned to the DHCP clients as their default gateway.

Primary DNS:

The IP address of the primary DNS server.

Secondary DNS:

The IP address of the secondary DNS server.

Primary WINS:

The IP address of the primary WINS server.

Secondary WINS:

The IP address of the secondary WINS server.

Lease Time:

The time for which the DHCP client is allowed to use the assigned IP address:



If you select **Always give same address to DHCP clients**, the lease time will be automatically set to **Infinite**.

Always give same address to DHCP clients:

Select this check box if you always want to use the same IP address for the DHCP clients.



Chapter 4
SpeedTouch™ Web Interface





5 Troubleshooting

Introduction

This chapter suggest solutions for problems you may encounter while installing or configuring your SpeedTouch TM .

If the suggestions do not resolve the problem, look at the support pages on http://www.speedtouch.com/support or contact your service provider.

For Internet connection troubleshooting, refer to the provided Installation and Setup Guide.

Topics

In this chapter:

- ▶ General SpeedTouch™ Troubleshooting
- ▶ UPnP™ on Windows XP Systems
- Reset to Factory Defaults





5.1 General SpeedTouch™ Troubleshooting

SpeedTouch™ does not work

If none of the LEDs light up, make sure that:

- The SpeedTouch™ is plugged into a power socket outlet.
- You are using the correct power supply for your SpeedTouch™ device.



The power requirements for your SpeedTouch[™] are clearly indicated on the identification label on the bottom of the SpeedTouch[™].

▶ The SpeedTouch™ is turned on via the push button at the back panel.

SpeedTouch™ unreachable

If your SpeedTouch™ is cannot be reached due to misconfiguration, you might consider a hardware reset to factory defaults as described in "5.3 Reset to Factory Defaults" on page 103.



However, note that resetting the SpeedTouch™ to its factory settings will revoke all the changes you made to the configuration.

Poor SpeedTouch™ performance

Make sure that the SpeedTouch $^{\text{TM}}$ is installed and configured as instructed in the Installation and Setup Guide or as instructed by the Service Provider.





5.1.1 Wired Ethernet Troubleshooting

LANLED does not light up

Make sure that:

- ▶ The LAN cable is securely connected to the 10/100Base-T port.
- You are using the correct cable type for your Ethernet equipment, that is UTP CAT5 with RJ-45 connectors.





5.1.2 Wireless Ethernet Troubleshooting

Not able to connect wireless clients

Check the following:

- If registration is enabled, you must press the 'Association' button to register the wireless client or search for wireless devices via the embedded Web pages.
- Make sure the SpeedTouch™ Association Control List is not locked. You can check this on the Web pages. On the Wireless Access Point settings, make sure New stations are not allowed is NOT selected.

No wireless connectivity

Make sure that:

- Both the wireless client adapter and the SpeedTouch™ are allowed to connect through wireless channels as defined for local regulatory domain.
- The WLAN client is configured for the correct wireless settings (SSID, security settings).
- Check the signal strength, indicated by the wireless client manager. If the signal is low, try to place the SpeedTouch™ or to direct the SpeedTouch™'s antenna for optimal performance.
- Make sure that the wireless client adapter is enabled (message like "radio on").

Poor wireless connectivity or reach

Check the following:

- Choose automatic channel selection or carefully select a radio channel that does not interfere with other radio channels.
- Make sure both the WLAN client adapter and the SpeedTouch™ are allowed to connect through wireless channels as defined for local regulatory domain.
- Check the location of the SpeedTouch™ in the building.
- ► Check the signal strength, indicated by the wireless client manager. If the signal is low, try to place the SpeedTouchTM or to direct the SpeedTouchTM's antenna for optimal performance.



5.2 UPnP™ on Windows XP Systems

SpeedTouch™ not detected by UPnP™ or IGD Control Client

Check the following:

- Make sure the UPnP[™] and Internet Gateway Device Control Client Networking components are added to your Windows XP system.
- Your computer doesn't support UPnP™ if you run an operating system other than Windows XP and Windows Millennium.
- Make sure that UPnP™ is not disabled in the SpeedTouch™ Web page; see "4.5.2 Game & Application Sharing" on page 58.

Adding UPnP™

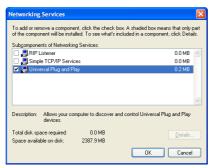
If you are running Microsoft Windows XP, it is recommended to add the $\mathsf{UPnP^{TM}}$ component to your system.

Proceed as follows:

- In the Start menu, click (Settings >) Control Panel.
 The Control Panel window appears.
- 2 Click Add or Remove Programs.
 The Add or Remove Programs window appears.
- 3 Click Add/Remove Windows Components.
- 4 In the Windows Components Wizard, select Networking Services in the Components list and click Details.



5 In the Networking Services window, select Universal Plug and Play or UPnP User Interface and click OK.



- 6 Click Next to start the installation and follow the instructions in the Windows Components Wizard.
- 7 At the end of the procedure the wizard informs you that the installation was successful. Click Finish to quit.





Adding IGD Discovery and Control

Your Windows XP system is able to discover and control Internet Gateway Devices (IGD), like the SpeedTouch™ on your local network. Therefore it is recommended to add the IGD Discovery and Control client to your system.

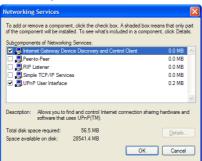
Proceed as follows:

- 1 On the Windows taskbar, click Start.
- 2 Select (Settings >) Control Panel > Add or Remove Programs.
- 3 In the Add or Remove Programs window, click Add/Remove Windows Components.

The Windows Components Wizard appears:



- 4 Select Networking Services in the Components list and click Details.
- 5 In the Networking Services window, Select Internet Gateway Device Discovery and Control Client and click OK.



- 6 Click Next to start the installation and follow the instructions in the Windows Components Wizard.
- 7 At the end of the procedure the wizard informs you that the installation was successful. Click **Finish** to quit.





5.3 Reset to Factory Defaults

Resetting your SpeedTouch™

You might consider a reset to factory defaults as described below.



Be aware that a reset to factory defaults will revoke all configurational changes you made to the SpeedTouch TM .

You can choose between:

- Software reset
- Hardware reset

A reset to factory default settings deletes the configuration profile settings. Therefore, after the reset, a reconfiguration of your SpeedTouch™ will be needed.

Also your WLAN clients will have to be re-associated, as described in "2.2.2 Connecting Wireless Clients for the First Time" on page 20.

Software reset

Proceed as follows:

- 1 Go to the SpeedTouch™ Web pages.
- 2 In the menu, select SpeedTouch > Configuration.
- 3 In the Pick a task list, click Reset my SpeedTouch to default settings. The SpeedTouch™ restarts.
- The SpeedTouch[™] returns to the SpeedTouch[™] home page (unless the IP address of your computer is not in the same subnet as the default IP address of the SpeedTouch[™], being 192.168.1.254).

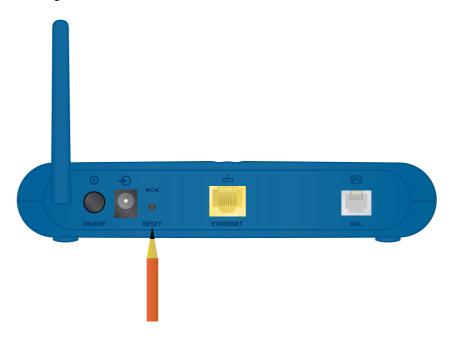
Hardware reset

Proceed as follows:

- 1 Make sure the SpeedTouch™ is turned on.
- 2 Use a pen or an unfolded paperclip to push the recessed reset button on the back panel. The reset button is marked with a red circle. Push it until the power



LED lights red - this will take about 7 seconds.



- 3 Release the reset button.
- 4 The SpeedTouch™ restarts.





Need more help?

Additional help is available online at www.speedtouch.com