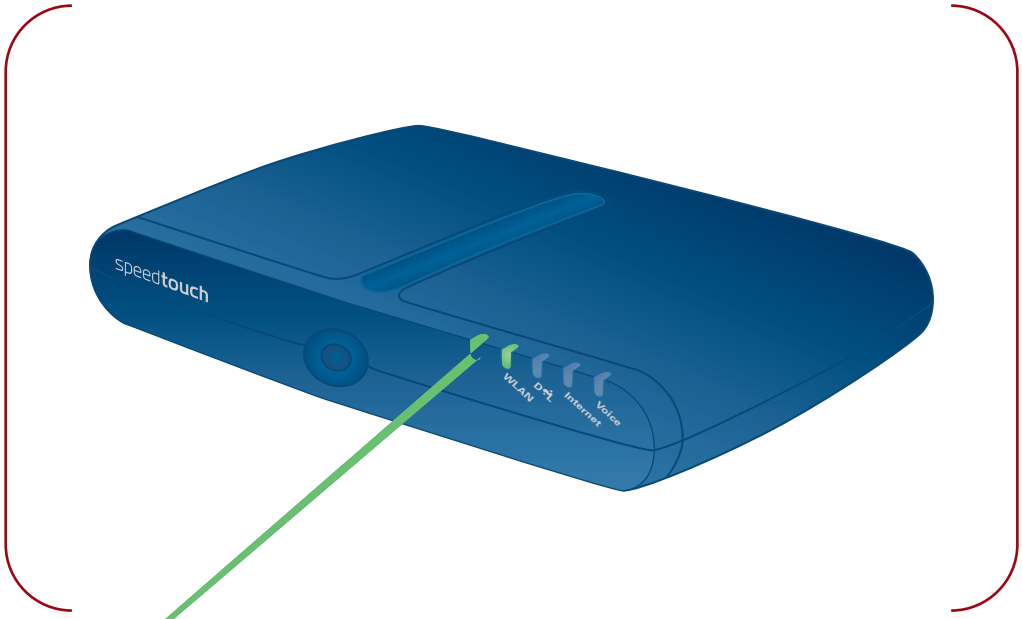
SpeedTouch™780 (WL)

Residential ADSL Gateway with VoIP (MGCP)

User's Guide



THOMSON

SpeedTouch™ 780 (WL)

User's Guide

MGCP

speedtouch™

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Contents

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™780(i) and the SpeedTouch™ 780(i) WL 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™780 (WL) (Wireless) Residential DSL Gateway with Voice over IP (VoiP) you can build a secure home or small office network, seamlessly connecting wired and wireless devices, surf the Internet at high speed, make and receive phone calls over the Internet or over the traditional phone line - 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™.

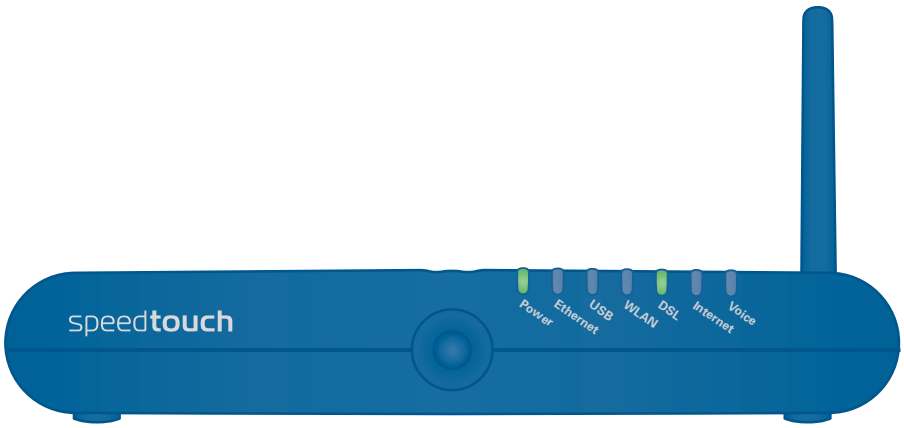
Before you begin

Before connecting the SpeedTouch™, please read the SpeedTouch™ Quick Installation Guide and the Safety Instructions and Regulatory Notices.

1.1 SpeedTouch™ LED Behaviour

Front panel LEDs

The SpeedTouch™ 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
USB	Green	Blinking	USB activity
		Solid on	USB connection, no activity
	Off		No USB connection

Indicator			Description
Name	Colour	State	
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
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
Voice	Green	Solid on	VoIP service up
		Blinking	VoIP activity
	Off		VoIP service down

1.2 Accessing your SpeedTouch™

Access methods

Your SpeedTouch™ 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:

1 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 SpeedTouch™ Home page appears, from where you can navigate to all the configurable aspects of the SpeedTouch™.

For more information on the Web pages, see "5 SpeedTouch™ Web Interface" on page 43.

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™ 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 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.

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

```
Username : Administrator
------------------------------------------------------------------------------
-
*                                  ______   SpeedTouch
*                              ___/_____/\
*                            /          /\\  Version 5.4
*                       _____/__        /  \\
*                    _/        /\_____/___ \  Copyright (c) 1999-2005,
*                  //         /  \        /\ \                 THOMSON
*         ________//________/     \      / _\/______
*       /       / \         \     /     / /         /\
*    __/       /   \         \   /     / /         / _\__
*   / /       /     \________\/    / /         / /    /\
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*  \ \       \                     \ \         \ \   \  /
*   \_\       \   /             /\    \ \         \ \___\/
*      \       \/             /  \    \ \         \  /
*       \______/             /    \    \ \_________\/
*             /____________/       \    \  /
*             \     _____  \       /_____\/
*              \ /     /\  \     /___\/
*               /_____/  \  \  /
*               \     \  /___\/
*                \_____\/
------------------------------------------------------------------------------
{Administrator}=>
```

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:

1 Open a **Command Prompt** window.

In Microsoft Windows XP for instance:

1 On the Windows taskbar, click **Start**.

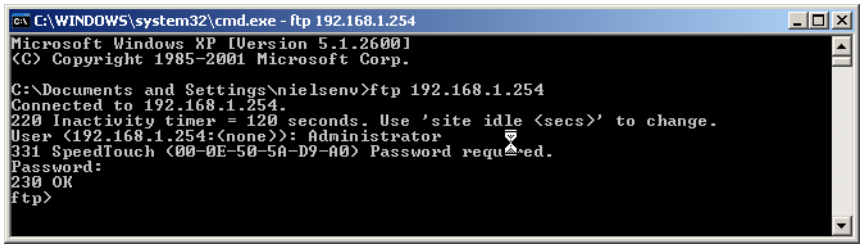
2 Select **(All) Programs > Accessories > Command Prompt**.

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.



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™ 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™ 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
200- 1   Internet      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™.

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**.

2 Local Network Setup

Introduction

The SpeedTouch™ offers you the following local networking solutions:

- Wired Ethernet
- USB (v1.1)
- Wireless Ethernet on the SpeedTouch™780 WL

Device settings

Once you have connected a device, you can personalise its settings. For more information, see “ Configure” on page 93.

2.1 Wired Ethernet

Local network

The Ethernet ports 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.

Using the SpeedTouch™ Ethernet switch, you can create a local Ethernet network of up to four devices, without needing extra networking devices.

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 one of the SpeedTouch™'s Ethernet ports.

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.

Managed Ethernet switch

Your SpeedTouch™ intelligently switches data between the devices on your LAN, using priority queuing to ensure that higher priority messages are delivered first and in real time. This feature maximizes your network performance.

The managed Ethernet switch allows you to configure a Virtual Local Area Network (VLAN), group ports or isolate a port, configure secure channel connections, define Quality of Service (QoS), and configure port mirroring, allowing monitoring from one port to another.

You can configure the managed Ethernet switch manually using CLI (For more information, see the SpeedTouch™ CLI Reference Guide).

To install Windows USB drivers

The first time you connect the SpeedTouch™ to your computer through the USB port, you will be prompted for a USB driver as soon as you plug the USB cable into the computer.

You can find the required USB driver software on the Setup CD. The installation is Plug and Play, meaning that installation requires almost no effort.

Proceed as follows:

1 Insert the blue USB cable into the SpeedTouch™ USB port marked with the USB logo:

A USB logo looks like this: 

2 Insert the other end of the USB cable into (one of) the USB port(s) of your computer. In most cases your computer's USB port is marked with the same USB symbol.

You can also connect your computer to the SpeedTouch™ via a USB hub.

Microsoft Windows will automatically recognise the Thomson USB Remote NDIS device.

The Windows **Found New Hardware Wizard** appears:

This wizard will guide you through the installation procedure of the USB drivers.

3 Click **Next** to continue.

The Windows Found New Hardware Wizard may ask your authorisation to connect to Windows Update to search for software. If this is the case, select **No, not this time**, and then click **Next**.

4 Select **Install the software automatically (Recommended)**, and then click **Next**.

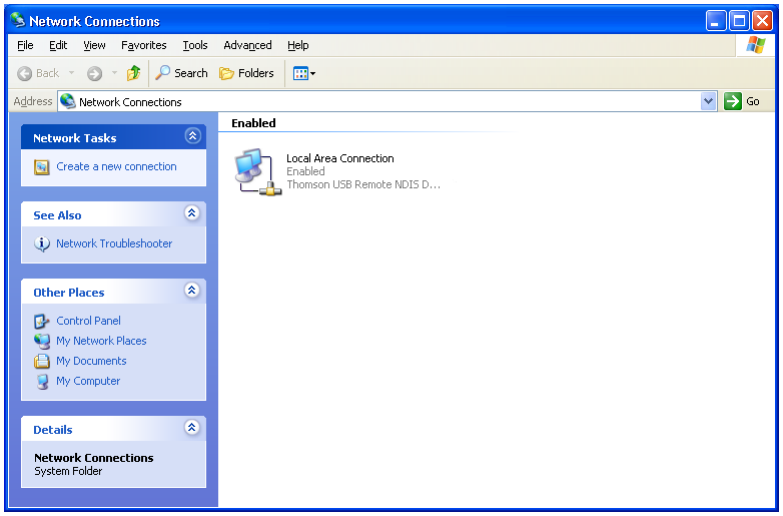
The USB driver is being installed. After a while a completing dialogue will appear.

5 Click **Finish** to complete the installation.

Your USB connection is installed and ready for use.

To verify USB connectivity in Windows

The SpeedTouch™ USB connection is represented as a local network interface. You can easily check this interface by opening the Network Connections window from Windows' Control Panel.



To install Mac USB drivers

You can find the required USB driver software on the Setup CD. The installation is Plug and Play, meaning that installation requires almost no effort.

Proceed as follows:

1 Insert the blue USB cable into the SpeedTouch™ USB port marked with the USB logo.

A USB logo looks like this:

2 Plug the other end of the USB cable into (one of) the USB port(s) of your computer. In most cases your computer's USB port is marked with the same USB symbol.

You can also connect your computer to the SpeedTouch™ via a USB hub, provided that the hub is autonomously powered.

Mac OS X will automatically recognise the detection of a new port.

3 Make sure the SpeedTouch™ Setup CD is inserted, and then click **OK**.

4 In the Network window, click **Apply Now**.

Device settings

Once you have connected a device, you can personalise its settings. For more information, see " Device settings" on page 15.

2.3 Wireless Ethernet

Introduction

The SpeedTouch™ 780 WL 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-Fi™ certified to ensure smooth interoperability with the SpeedTouch™'s WLAN.

2.3.1 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 SpeedTouch™ 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 SpeedTouch™.

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.

2.3.2 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 "2.3.3 Wireless Security" on page 25.
- 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 "6.4 Reset to Factory Defaults" on page 112 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.

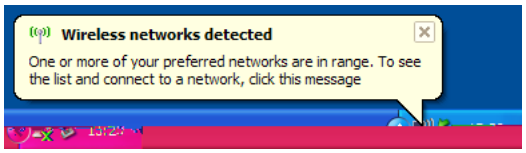
To configure wireless clients for the first time

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

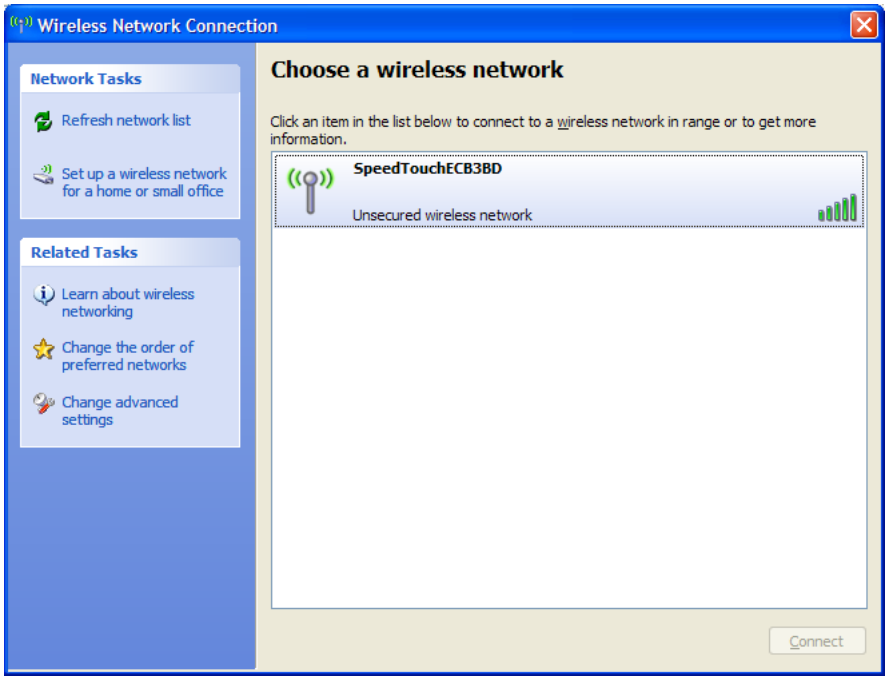
The example below shows how the SpeedTouch™ wireless network is presented towards a Windows XP Service Pack 2 system.



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:

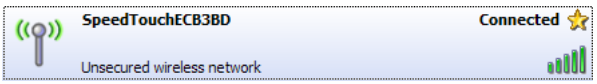


2 In the **Choose a wireless network** list, select the SpeedTouch™ wireless network and click **Connect**.

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.

2.3.3 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.

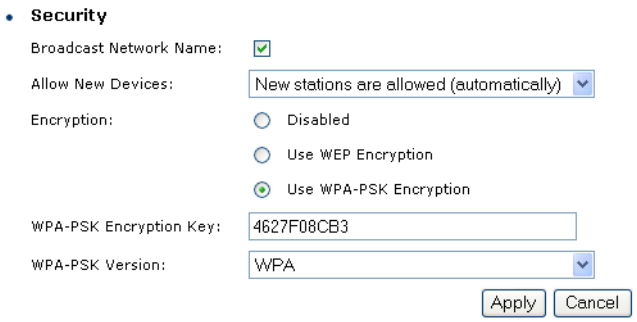
To secure your wireless network, the following wireless access point settings can be personalised:

- 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 SpeedTouch™ 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 SpeedTouch™.

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 27.
- **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 27.

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.

2.3.4 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

e l

Registering clients via the association button

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

1. 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.

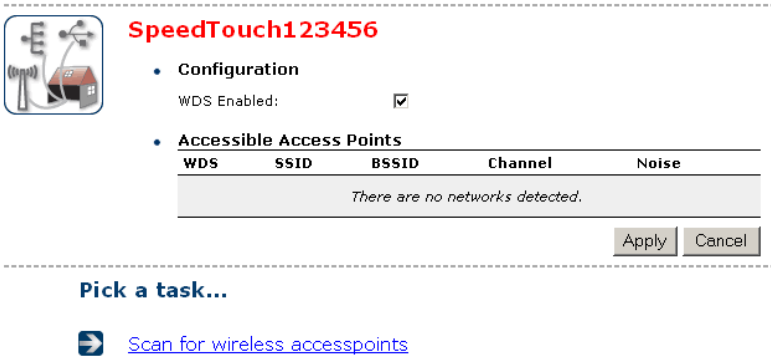
   The registration procedure can be repeated as often as needed.

To configure WDS

Proceed as follows:

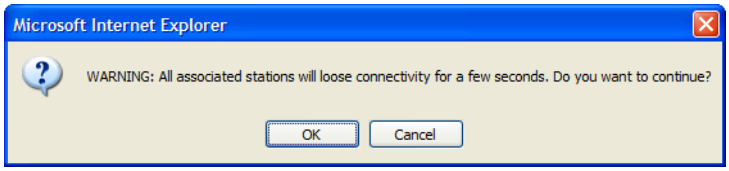
1. Go to the SpeedTouch™ Web pages.
2. In the menu, select **Home Network**.
3. Click your WLAN.
4. In the upper right corner, click **Configure**.

   If not already done, set a ***fixed*** channel and check whether the security settings (WEP encryption or no encryption) on your SpeedTouch™ are the same as on the repeater.
5. On the **Wireless Access Point** page, in the **Pick a task** list, click **Configure WDS**.



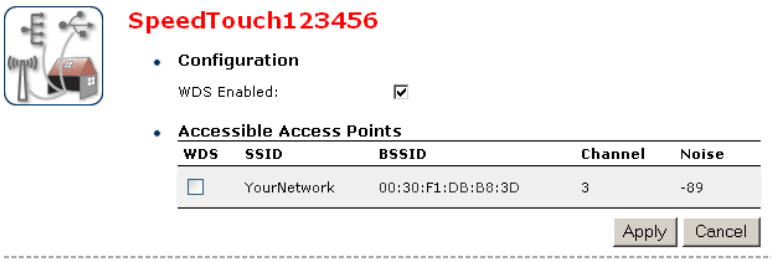
6. Select **WDS Enabled**.
7. In the **Pick a task** list, click **Scan for wireless access points**.

   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**.



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:		can be used on following operating system:	For more information, see:
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 35

Embedded PPP dial-in clients

The SpeedTouch™'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 33 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 35 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 SpeedTouch™ needs to be configured for Bridged Ethernet or Routed PPPoE (with PPPoE relay) via the SpeedTouch™ 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

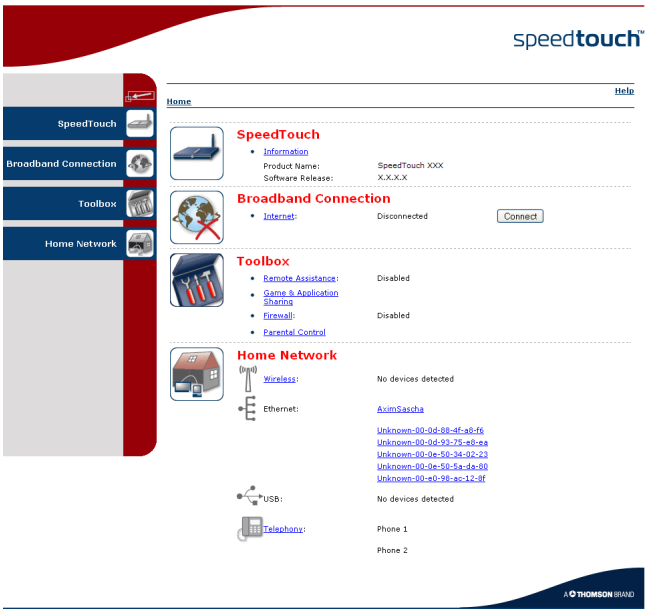
As the SpeedTouch™ Web pages are controllable from any Operating System with an installed Web browser, the method to establish PPP sessions described later, can be used on any computer system.

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:

1 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 "5.3.1 Information" on page 52.
- The SpeedTouch™ Diagnostics task: see "5.4.1 Connectivity Check" on page 60.

Terminating an Internet session

Proceed as follows to close an active PPP connection:

1 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:
  - UPnP™ (see " SpeedTouch™ not detected by UPnP™ or IGD Control Client" on page 109).
  - IGD Discovery and Control Client (see " Adding IGD Discovery and Control" on page 110).
- UPnP™ is enabled on your SpeedTouch™. To enable UPnP, see "5.5.3 Game & Application Sharing" on page 67.

Starting an Internet session

Proceed as follows to start an Internet session:

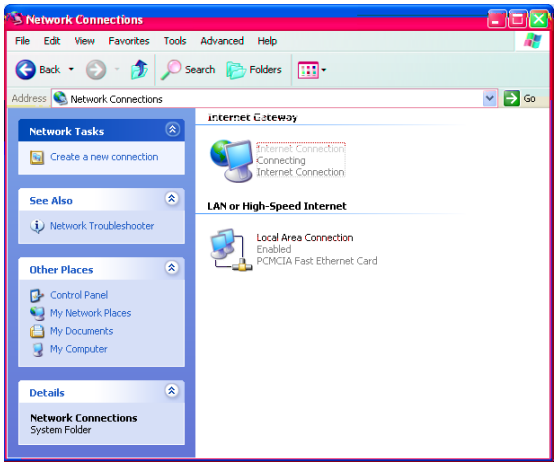
1 In the Windows taskbar, click **Start**.

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.

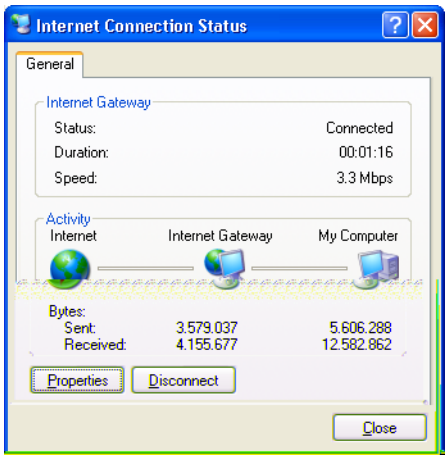
4 Double-click the **Internet Connection** icon.

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**.
2. 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 Voice over IP

Voice over IP

Internet telephony or Voice over IP (VoIP) can be defined as the transfer of telephone calls over your Internet connection.

The SpeedTouch™ VoIP solution

With your SpeedTouch™ you can make Internet and regular telephone calls using traditional analogue phones, connected to your SpeedTouch™.

As VoIP signalling protocol your SpeedTouch™ uses the Media Gateway Control Protocol (MGCP), RFC 3435.

Multi-line service

The voice service on your SpeedTouch™ provides additional lines without the need for additional copper pairs. The additional lines allow you to make and receive several internal and external Internet calls simultaneously.

Fax

You can also connect a fax machine to your SpeedTouch™ in order to send and receive faxes over your Internet connection or over the traditional phone line.

The following MGCP configuration parameters are provided by your ISP:

- IP address and port number (usually 2727) of the provider's call agent

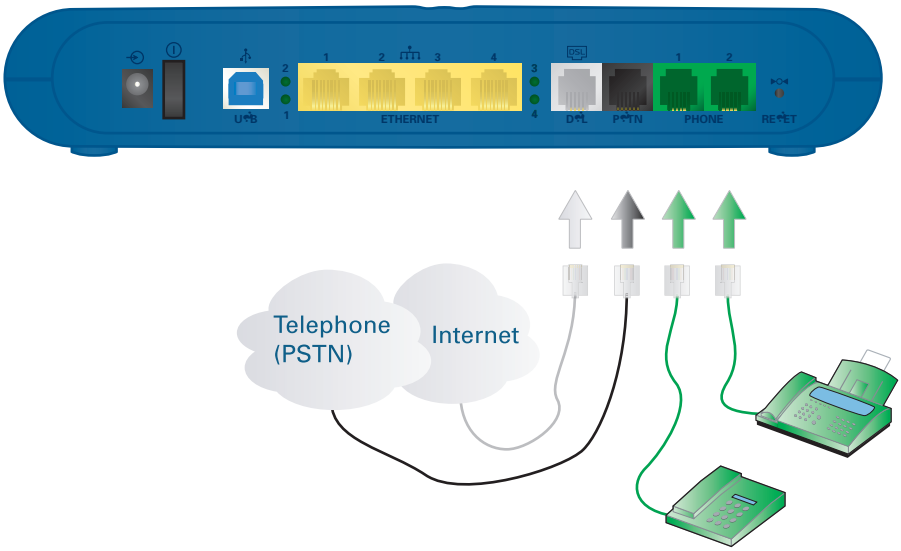
Call agent

The provider's call agent contains the call control "intelligence". It creates, modifies and deletes connections in order to establish and control media sessions with other multimedia endpoints.

4.1 Telephony Setup

Telephony installation

The SpeedTouch™ is equipped to connect one or two analogue phones or faxes.



Use a phone cable with RJ-11 connectors to:

1 Wire the SpeedTouch™ Phone port(s) to your phone(s) or fax.

2 If your SpeedTouch has a black-coloured port labeled "PSTN", you must connect this port to the telephone output of your DSL splitter to allow regular phone calls with the same telephone set. In the other case, no additional connections are needed.

This is only required if you still want to make phone calls using the regular telephone line.

Be aware that, if the PSTN port (if provided) is not wired to your telephone wall outlet or distributed filter, emergency calls are not always possible!

As distributed filters are country-specific, you cannot use the device everywhere.

Telephony configuration

The telephony service might already have been configured on your SpeedTouch™ during initial setup.

If not, follow the instructions below:

- Enable the telephony service
- Configure the telephony service

Your Internet connection must be up and running before you can configure Internet telephony.

Enable the telephony service

Proceed as follows to enable the telephony service:

1 Go to the SpeedTouch™ Web pages.

For more information, see "1.2.1 Access via the Web Interface" on page 7.

2 In the menu, select **Toolbox > Telephony**.

3 In the upper right corner, click **Configure**.

4 Select **Service Enabled**.

5 Click **Apply**.

Configure the telephony service

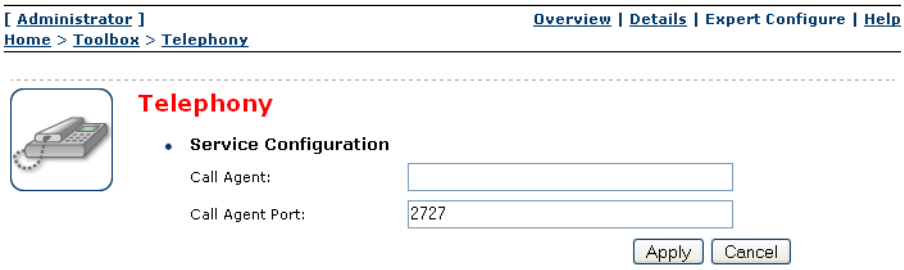
Proceed as follows to configure the MGCP telephony service:

1 Go to the SpeedTouch™ Web pages.

2 In the menu, select **Toolbox > Telephony**.

3 In the upper right corner, click **Expert configure**.

4 Enter the IP address and the port number of the call agent, as provided by your ISP.



5 Click **Apply**.

Verifying telephone connectivity

Proceed as follows to verify the voice connection:

1 Make sure the SpeedTouch™ is turned on and ready for service.

2 Check whether your phone is properly attached to the SpeedTouch™.

3 Make sure the Internet telephony service is enabled and configured.

4 The **VoIP Ready** LED must be lit.

5 Pick up your phone, wait for the dialling tone, and dial the number. If you dial a '#' after the phone number, the phone number will be called instantly.

The phone(s) attached to the SpeedTouch™ can receive incoming VoIP calls, as long as your SpeedTouch™ is turned on and the VoIP Ready LED is lit.

For calls over the regular phone line, your phones are line powered by the telephone company and can therefore always be reached, even if the modem is turned off.

4.2 Supplementary Telephony Services

Supported telephony services

Depending on your provider's configuration, the following services will be available.

Service	Description
Call Hold	Allows you to put a call on hold, to dial another number, and to switch between the active and held call whenever you want, or to terminate the active or held call.
Call Waiting	Allows you to answer or reject an incoming call while you are in a conversation.
Call Transfer	Allows you to transfer a call to another person.
Conference Call (3 Parties)	Allows you to make a conference call.
Calling Line Identification Presentation (CLIP)	Allows you to see the phone number of the person who is calling you on your phone display. If you cannot take the call, the phone number is stored on the SpeedTouch™ Web pages, guaranteeing you do not miss important calls. CLIP will only work if CLIR is deactivated on the calling phone.
Calling Line Identification Restriction (CLIR)	Restricts the transmission of your phone number when you make a call, in order to protect your confidentiality. Your phone number will not appear on the screen of your partner. When this service is activated, your phone number will never be transmitted. To activate CLIR on call basis, see " Using the services on the phone" on page 41.
Forced FXO	Allows you to force the SpeedTouch™ to make the phone call over the PSTN, that is the regular telephone line.

For more information on how to use some of these services, see " Using the services on the phone" on page 41.

Using the services on the phone

The following table explains how to use a telephony service. The commands depend on your provider's configuration and might be different from those described here. For more information, see your provider's documentation.

Make sure your phone is off-hook when you dial the commands.

If your phone does not have an ***R*** or another hook flash button, put down the hook for 1/2 second and then dial the command number.

To use the service:	Proceed as follows:
Call Hold	To put person A on hold: 1 Dial ***R***, ***2*** to put the call with person A on hold. 2 Dial ***R***, ***1*** to retrieve the call on hold. To put person A on hold and set up a call to person B: 1 Dial ***R***, ***2*** to put the call with person A on hold. 2 Wait for the dialling tone, and dial the number of person B. 3 Dial ***R***, ***2*** to switch back to person A. Person B is put on hold.
Call Waiting	You are in a phone conversation with person A while person B is calling you. The phone produces a waiting tone and - if CLIP is enabled and CLIR disabled - displays the number of person B. Do one of the following: ▸ To reject the incoming call, dial ***R***, ***0***. ▸ To terminate the first call and to switch to the waiting call, dial ***R***, ***1***. ▸ If you do not want to terminate the first call, dial ***R***, ***2*** to keep the first caller on hold while answering the second call. ▸ To return to person A while putting person B on hold, dial ***R***, ***2***. ▸ To return to person A while terminating the call with person B, dial ***R***, ***1***.
Call Transfer	You receive a phone call from person A and you want to transfer him to person B. 1 Dial ***R***, ***2***. 2 Wait for the dialling tone. 3 Dial the number of person B. Person B picks up the phone. 4 Dial ***R***, ***4*** to transfer the call. 5 Hang up.

Conference Call (3 Parties)	To set up a conference call: 1

Command overview

The table below lists all standard service codes of the telephony services. These might be different on your SpeedTouch™, depending on your provider.

5 SpeedTouch™ Web Interface

SpeedTouch™ documentation

Consult:

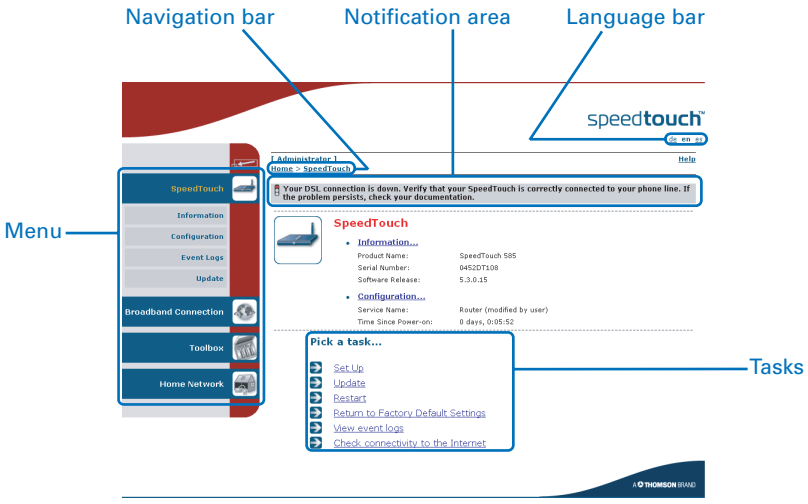
- The SpeedTouch™ Installation and Setup Guide for more information on setup and installation procedures.

5.1 Navigation

Navigation components

The SpeedTouch™ Web interface consists of the following components:

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



5.1.1 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™.
- 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.

5.1.2 Language Bar

Language bar

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

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

5.1.3 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.

5.1.4 Notification Area

Notification area

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

- Error 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.

5.1.5 Tasks

Tasks

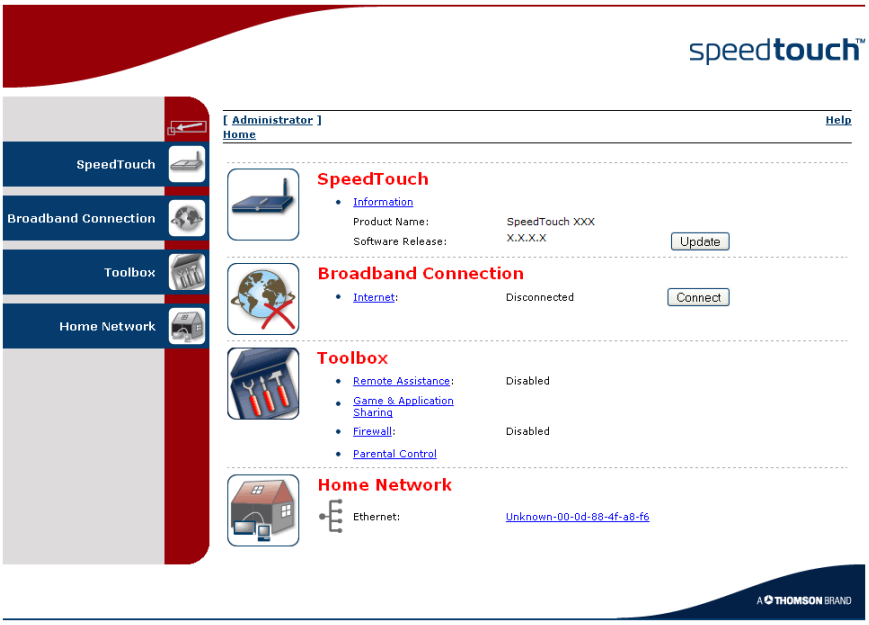
To allow a quick configuration of your SpeedTouch™, some pages may offer you a number of related tasks in the **Pick a task** list. These tasks will guide you to the page where you can perform the selected task.

5.2 Home

SpeedTouch™ home page

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

- SpeedTouch
- Broadband Connection
- Toolbox
- Home Network



5.3 SpeedTouch

The SpeedTouch menu

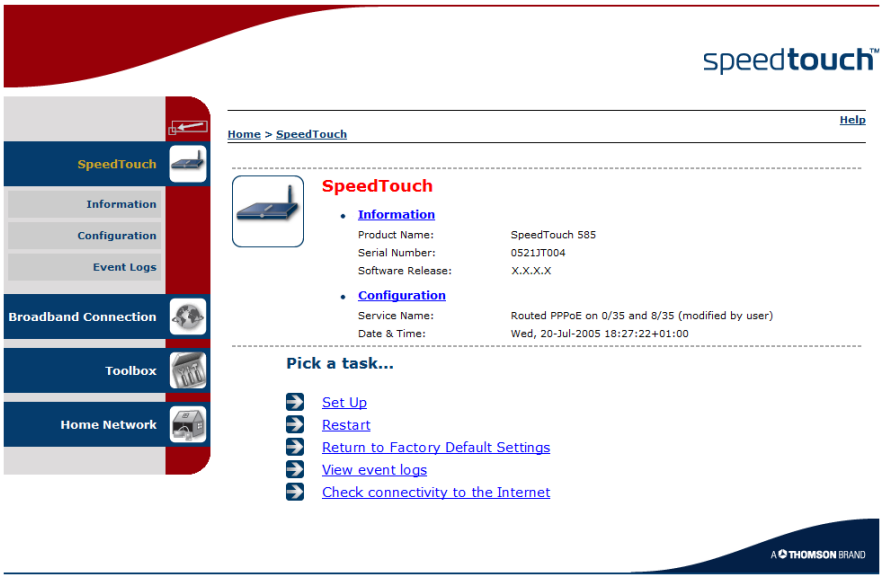
The SpeedTouch menu consists of the following items:

- Information
- Configuration
- Event Logs

The SpeedTouch page

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

- Product Information
- Configuration



5.3.1 Information

Information

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

5.3.2 SpeedTouch™ Easy Setup

Easy Setup Wizard

The Easy Setup Wizard helps you to configure your SpeedTouch™ Internet connection.

Proceed as follows to configure the SpeedTouch™ using the SpeedTouch™ 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™.

5.3.3 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™ restarts.

The SpeedTouch™ returns to the Home page.

5.3.4 Configuration

Overview

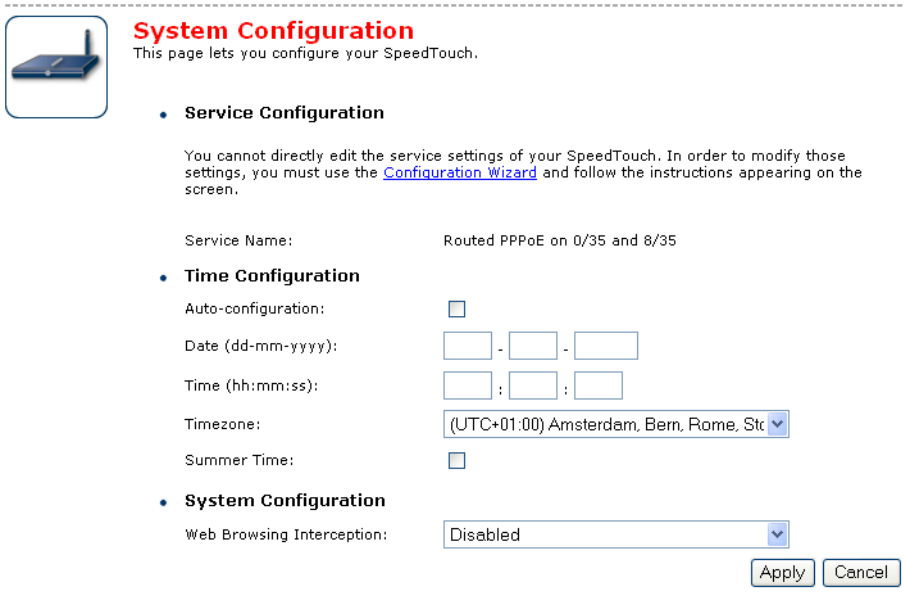
The **Overview** page displays the current configuration of your SpeedTouch™.

Details

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

Configure

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



If you want to:

- Reconfigure your SpeedTouch™:
  Click **Configuration Wizard** under **Service Configuration**. For more information, see "5.3.2 SpeedTouch™ Easy Setup" on page 53.
- 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.

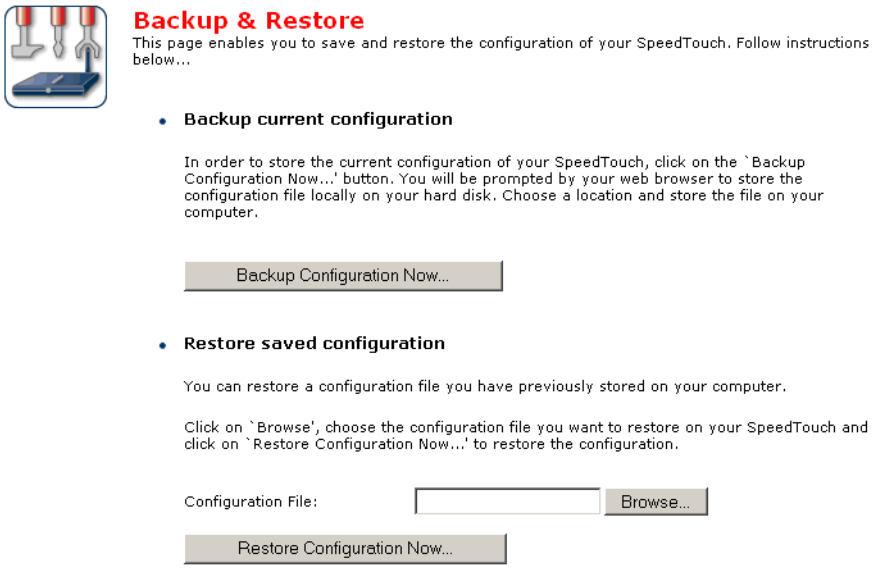
Click **Apply** to apply and save your settings.

5.3.5 Back up & Restore

Introduction

The **Back up & Restore** page allows you to:

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



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:

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

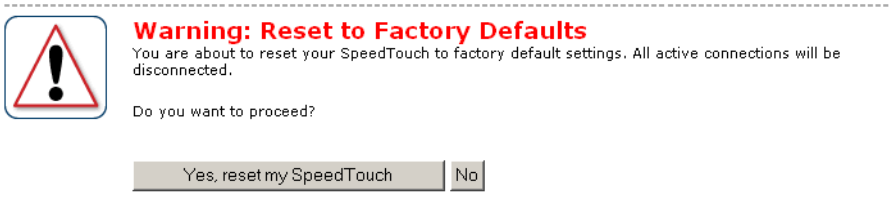
   The SpeedTouch™ loads your configuration and restarts.

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

5.3.6 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:



Resetting the SpeedTouch™ factory defaults

Proceed as follows:

1 In the left menu, click **SpeedTouch.**

2 In the **Pick a task** list, click **Return to Factory Default Settings.**

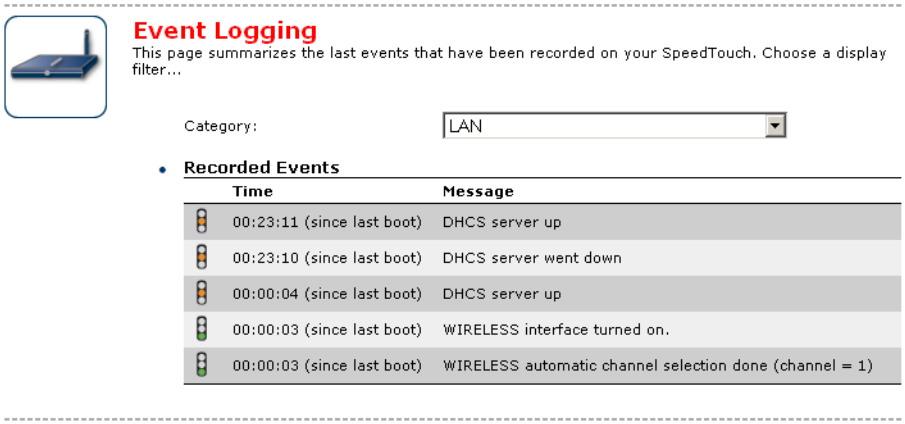
3 Click **Yes, reset my SpeedTouch**.

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

5.3.7 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
	Informational
	Warning
	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.

5.4 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™.

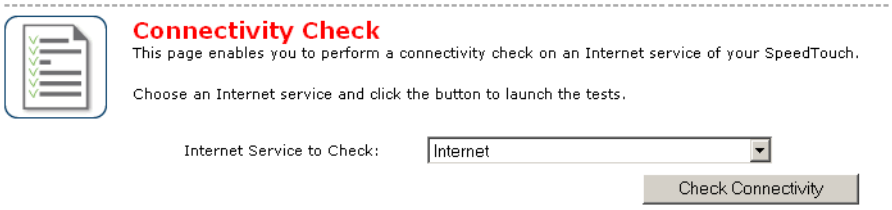
Click **View more** to see more information on the selected broadband connection.

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

5.4.1 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

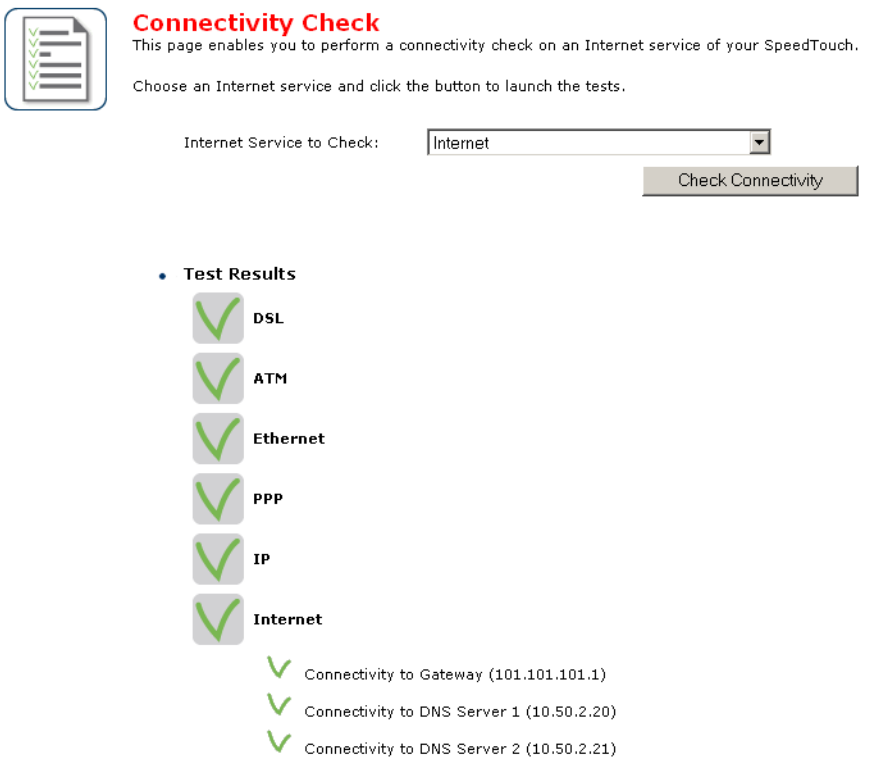
Proceed as follows:

1. 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.



5.4.2 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) [dBm]:	11,5 / 19,5
Line Attenuation (Up/Down) [dB]:	14,0 / 25,0
SN Margin (Up/Down) [dB]:	19,0 / 19,5
Vendor ID (Local/Remote):	TMMB / ALCB
Loss of Framing (Local/Remote):	0 / 0
Loss of Signal (Local/Remote):	0 / 0
Loss of Power (Local/Remote):	0 / 0
Loss of Link (Remote):	0
Error Seconds (Local/Remote):	0 / 0
FEC Errors (Up/Down):	0 / 0
CRC Errors (Up/Down):	0 / 0
HEC Errors (Up/Down):	0 / 0

5.4.4 Internet Service Settings

Accessing the Internet Service Settings page

Proceed as follows:

1 In the **Broadband Connection** menu, click **Internet Services**.

2 Click the **View more** link of the Internet service you want to view.

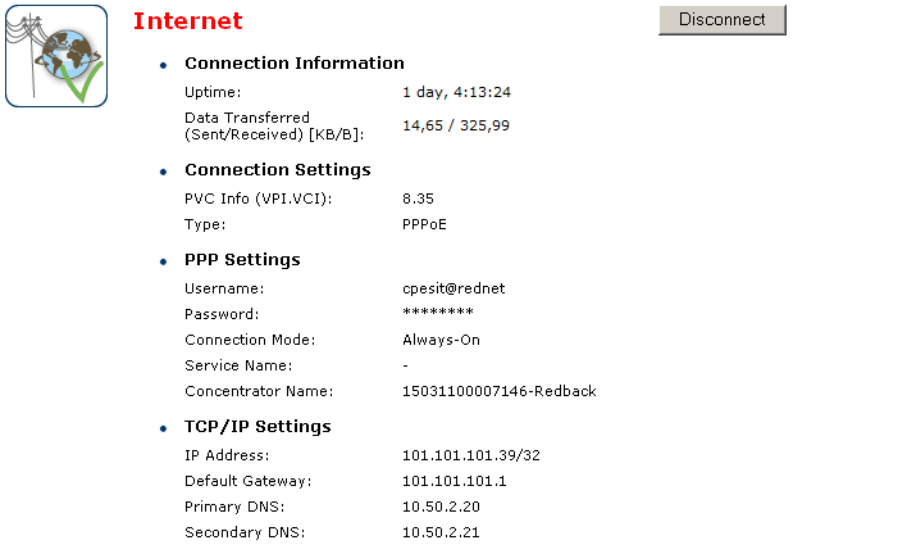
Overview

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.

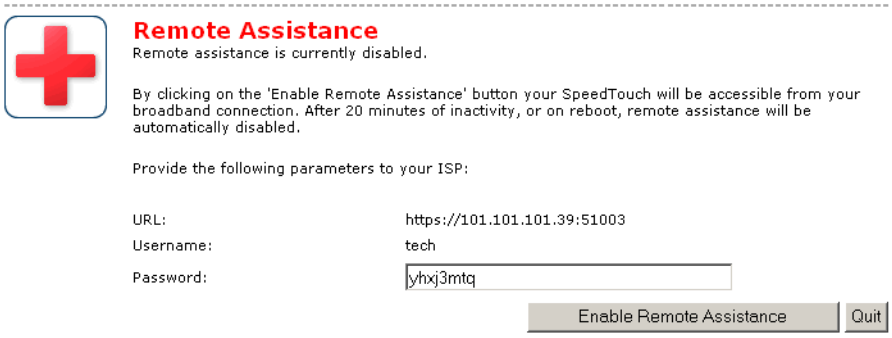


If you configured a dial-up connection you can establish/terminate the connection by clicking **Connect/Disconnect**.

5.5.1 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™.

   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™.

5.5.2 Telephony

Introduction

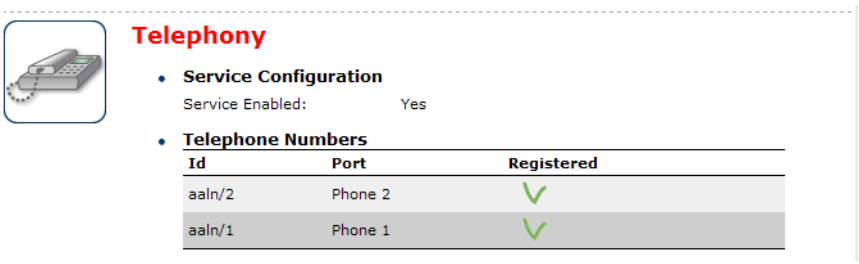
The SpeedTouch™ is equipped with:

- Two **Phone** ports allowing you to connect up to two phones for making phone calls over the Internet.
- One **PSTN** port allowing you to make phone calls over the Public Switched Telephone Network (PSTN) network.

For more information on how to set up your Voice over IP (VoIP) network, consult the User's Guide on the SpeedTouch™ Setup CD.

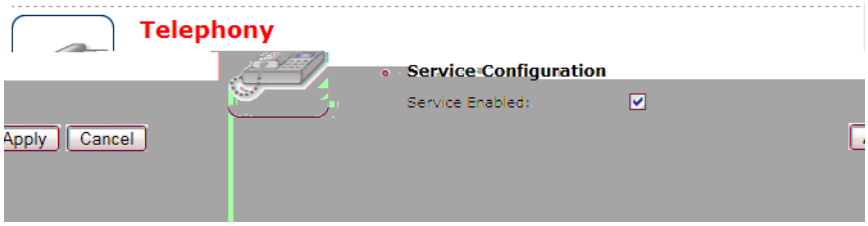
Overview

On this page you can view information on your current VoIP configuration.



Configure

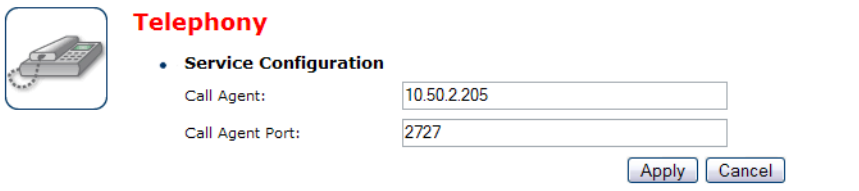
On this page you can disable/enable the VoIP service by selecting or clearing the **Service Enabled** check box.



Expert Configure

On this page you can view/change the following MGCP parameters:

- **Call agent:**
  The IP address of your provider's MGCP server.
- **Call agent port:**
  The port used by your call agent (usually port 2727). This port will be used to contact the call agent.



5.5.3 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.

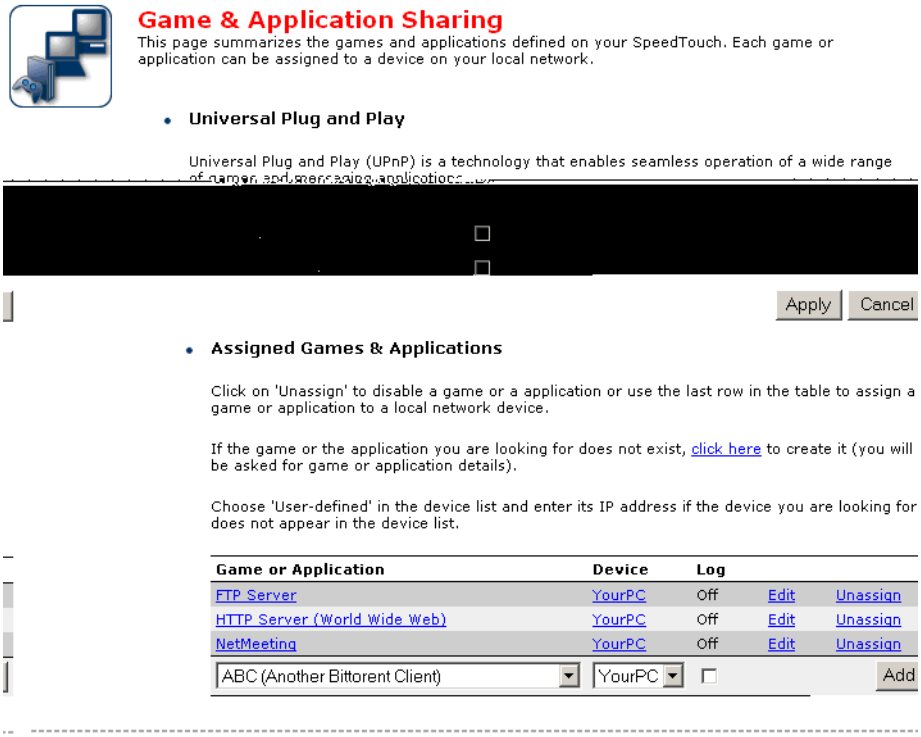
  

  UPnP is an architecture for transparent peer-to-peer connectivity of computers, intelligent appliances, and (wireless) devices. It enables seamless operation of a wide range of games and messaging applications.
- For security reasons you are able to configure the UPnP policy towards Windows XP and UPnP 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.



5.5.4 Defined Games & Applications

Accessing the Defined Games & Applications page

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

1 In the **Toolbox** menu, click **Game & Application Sharing**.

2 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.

Game or Application	Assigned to ...	Mode		
ABC (Another Bittorent Client)		Client	Edit	Delete
Age of Empires		Server	Edit	Delete
Age of Mythology		Server	Edit	Delete
AIM Talk		Client	Edit	Delete
Aliens vs. Predator		Server	Edit	Delete
America s Army		Server	Edit	Delete
Azureus		Client	Edit	Delete
Bay VPN		Server	Edit	Delete
BearShare		Server	Edit	Delete
BitTorrent		Client	Edit	Delete
Black and White		Server	Edit	Delete
Call of Duty		Server	Edit	Delete
Call of Duty - United Offensive		Server	Edit	Delete
CarbonCopy32		Server	Edit	Delete
Castle Wolfenstein		Server	Edit	Delete
Championship Manager 03-04		Server	Edit	Delete
Checkpoint FW1 VPN		Server	Edit	Delete
Command and Conquer Generals		Server	Edit	Delete
Command and Conquer Zero Hour		Server	Edit	Delete
Counter Strike		Server	Edit	Delete
Cu-SeeMe Cornell		Server	Edit	Delete
Cu-SeeMe White Pine 3.1.2 and 4.0		Server	Edit	Delete
Dark Reign 2		Server	Edit	Delete
Default Server		Server	Edit	Delete
Delta Force		Server	Edit	Delete
Destroyer Command		Server	Edit	Delete
Diablo II		Server	Edit	Delete
Direct Connect		Server	Edit	Delete
DirectX 7		Server	Edit	Delete
DirectX 8		Server	Edit	Delete
DirectX 9		Server	Edit	Delete
Doom3		Server	Edit	Delete
Dune 2000		Server	Edit	Delete
Dungeon Siege		Server	Edit	Delete
eDonkey		Server	Edit	Delete
Elite Force		Server	Edit	Delete
eMule		Server	Edit	Delete
Enemy Territory		Server	Edit	Delete
Everquest		Server	Edit	Delete

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.

5.5.5 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.

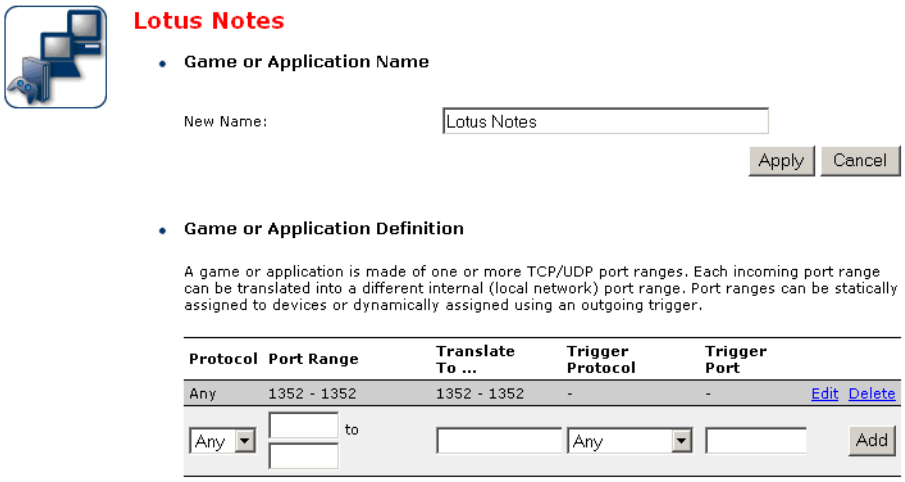
Consult the user's guide or support pages of your application to know which ports are being used by this application.

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.



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.
4. 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**.

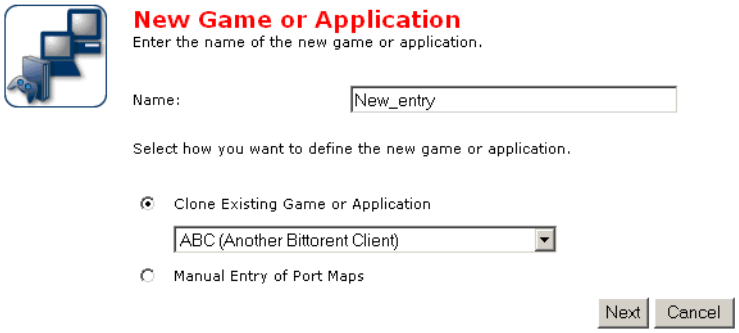
5.5.6 New Game or Application

Creating a new game or application

Proceed as follows:

1 In the **Toolbox** menu, click **Game & Application Sharing**.

2 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**.

5.5.7 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 "5.5.14 User Management" on page 85 and "5.5.16 Change Default User" on page 88.

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 "5.5.9 Content Level" on page 77.

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:

1. 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.
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**.

Redirecting all Web sites

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 "5.5.9 Content Level" on page 77.

5.5.8 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**.

5.5.9 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
	The category/group is allowed.
	The category/group is not allowed.
	The group is partly allowed.

Configure

This page allows you to change:

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

5.5.10 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.

5.5.11 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™.

Configure

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

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.
- **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™,

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 SpeedTouch™ 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**.

5.5.12 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.

5.5.13 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.

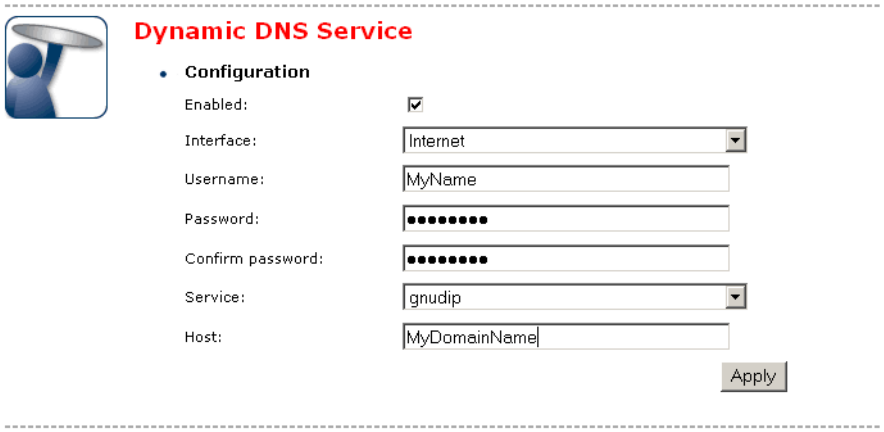
Overview

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 DN**page, click **Configure**.
3. Select the **Enabled** check box.



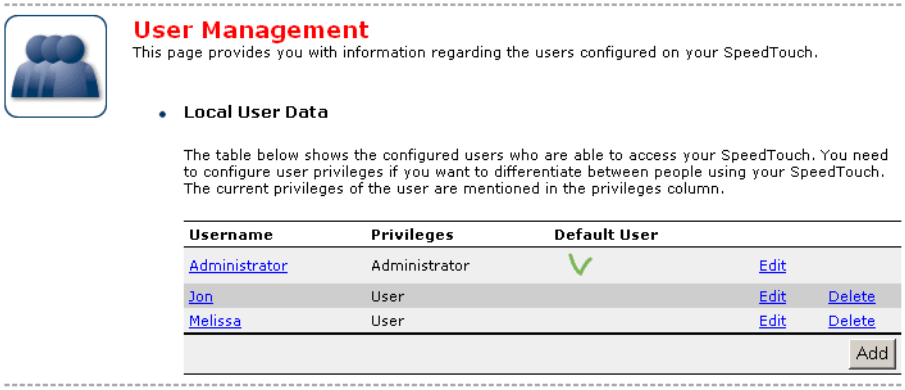
4. If necessary, click the broadband connection to which you want to assign the Dynamic DNS hostname in the **Interface** list.
5. Type the user name and password of your Dynamic DNS service account in the corresponding fields.
6. In the **ervice** list, click your Dynamic DNS service.
7. In the **Host**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

5.5.14 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.



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.

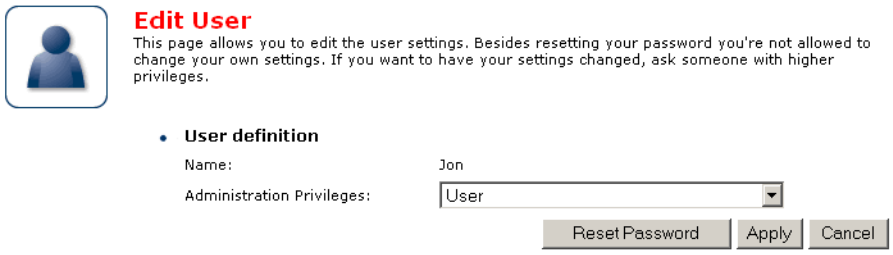
5.5.15 Edit User

Editing a user account

Proceed as follows:

1 In the **Toolbox** menu, click **User Management**.

2 Under **Local User Data**, click the name of the user you want to edit.



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.

5.5.16 Change Default User

The Default User page

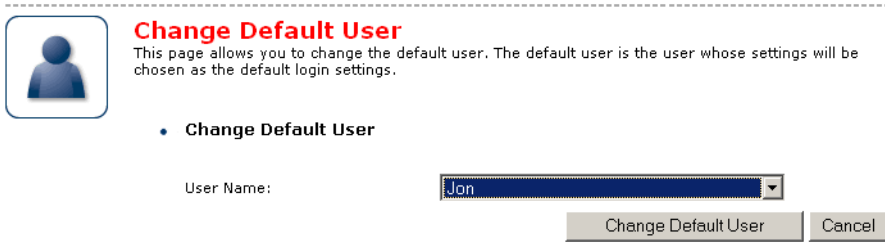
On this page you can change the default user. If users browse to the SpeedTouch™ Web pages, they will be automatically logged on with this account.

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.

5.5.17 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.

5.6 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™.

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**.

Viewing Telephony information

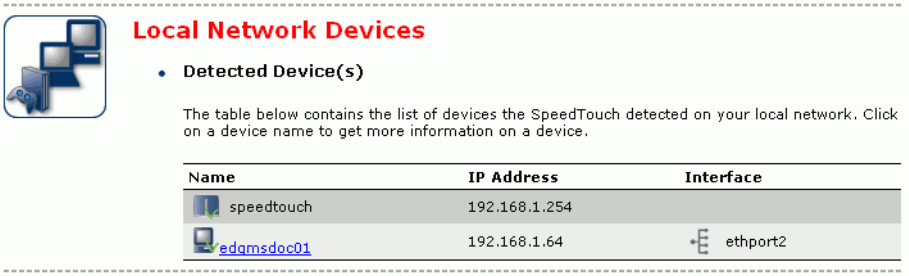
If you click **Telephony** you can view/change your VoIP configuration.

For more information, see "5.5.2 Telephony" on page 66.

5.6.1 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™ network.

If you want to:

- Get more information on a specific device, click on the name of the device. See "5.6.2 Device Settings" on page 92 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.

5.6.2 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

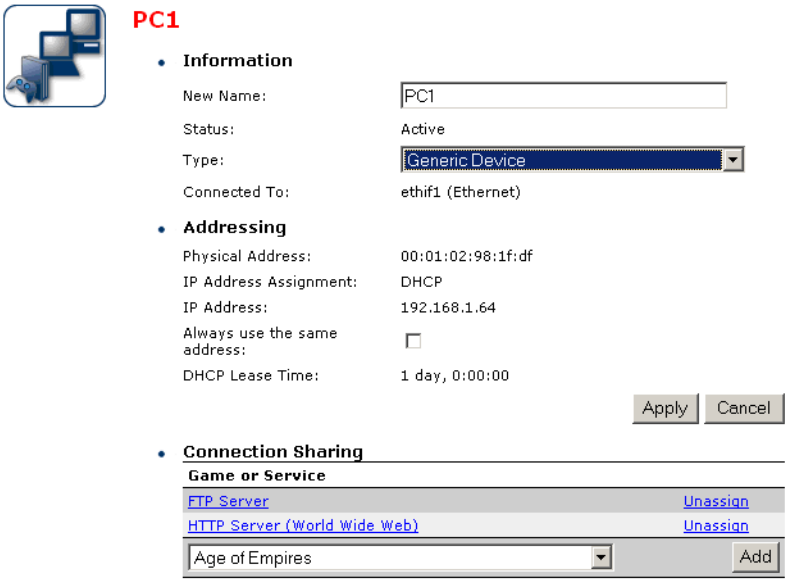
The **Overview** page displays the following items:

- **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 "5.5.5 Game or Application Definition" on page 70.

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.



5.6.3 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.

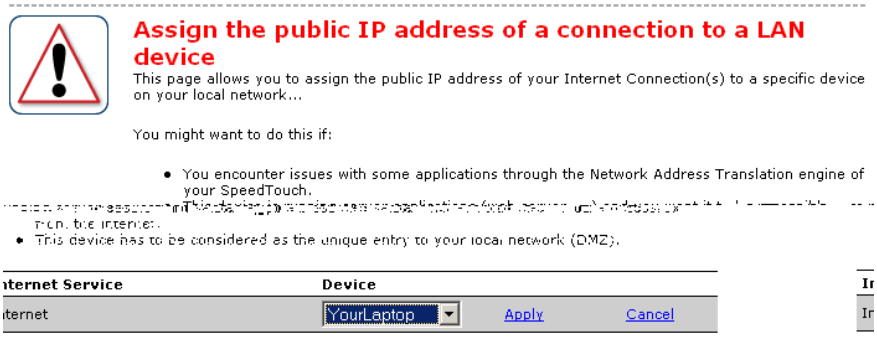
  You can also achieve this by creating a port mapping for the specified server, as described in "5.5.3 Game & Application Sharing" on page 67.
- This device has to be considered as the unique access point to your local network (DMZ).

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:

1. 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.



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.

5.6.5 Access Point Settings

Availability

This page is only available on SpeedTouch™ devices equipped with a wireless access point.

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™ 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 SpeedTouch™. 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**
2. 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**.

2 In the **WPA-PSK Encryption Key** box, type a pass phrase (also known as Pre-shared 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: TKIP
- WPA2: AES
- WPA+WPA2: TKIP+AES

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

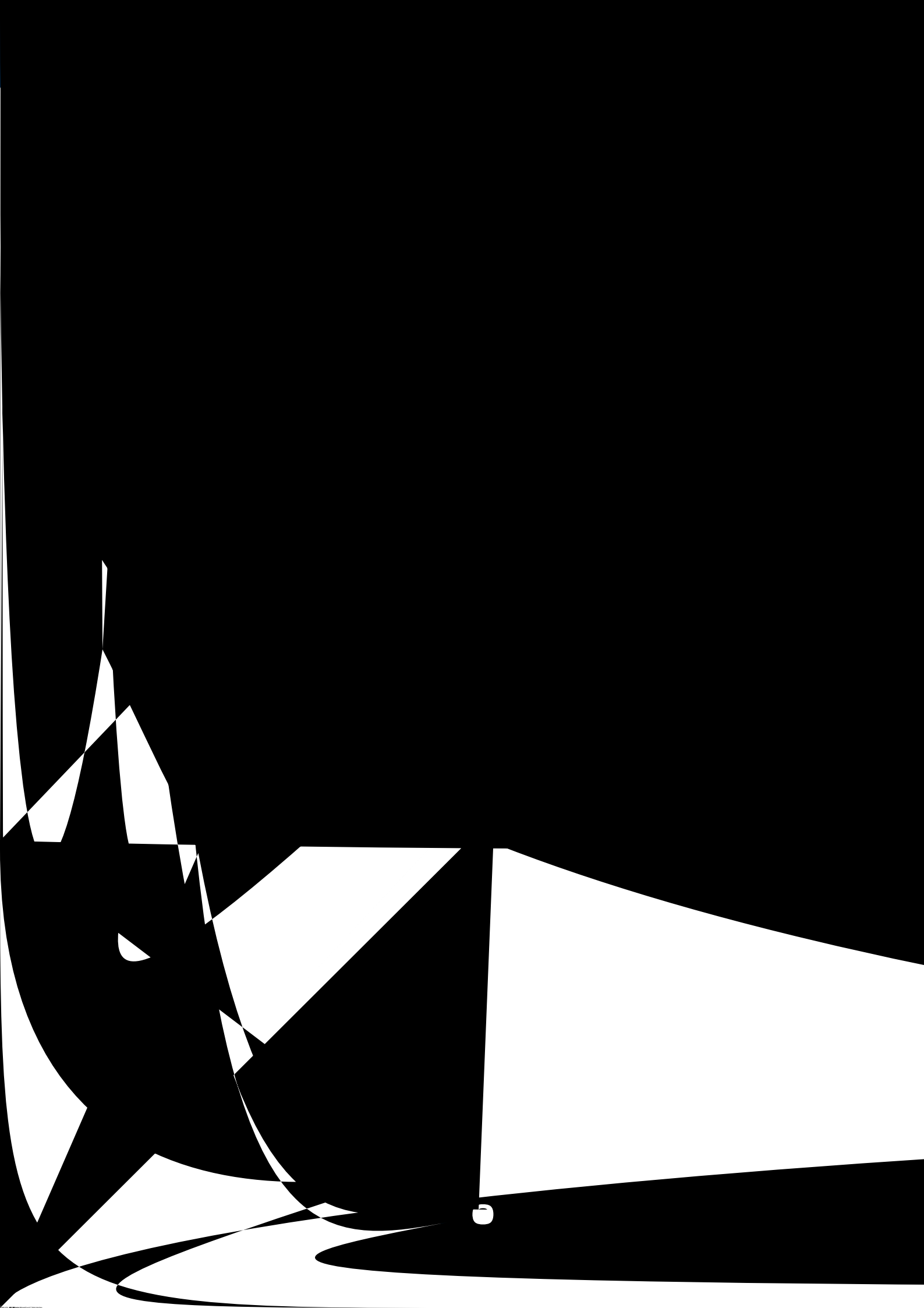
4 Click **Apply** to immediately apply your changes.

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 99
- **New stations are not allowed**:
  Only allowed stations in the Access Control List (ACL) have access.



5.6.6 Configuring WDS

Availability

This page is only available on SpeedTouch™ devices equipped with a wireless access point.

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:

1 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**.

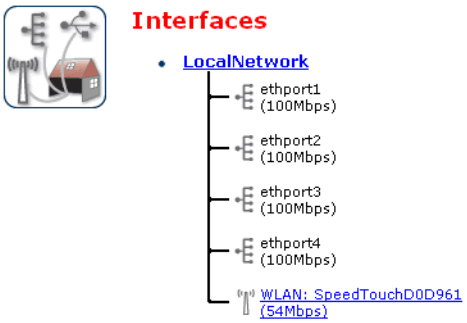
5 Configure this Access Point with:

- The same WEP key if WEP is enabled.
- The same **fixed** channel.

5.6.7 Interfaces

Interfaces overview

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



5.6.8 Interface Settings

Overview

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

Interface - LocalNetwork

- **Interface Information**

  Interface Group: lan

- **TCP/IP Configuration**

  Auto-IP: Disabled

  Use DHCP Server: Enabled

- **IP Addresses**

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

- **DHCP Pools**

DHCP Pool Name	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™ 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.

5.6.9 DHCP Pool

DHCP Pool page

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

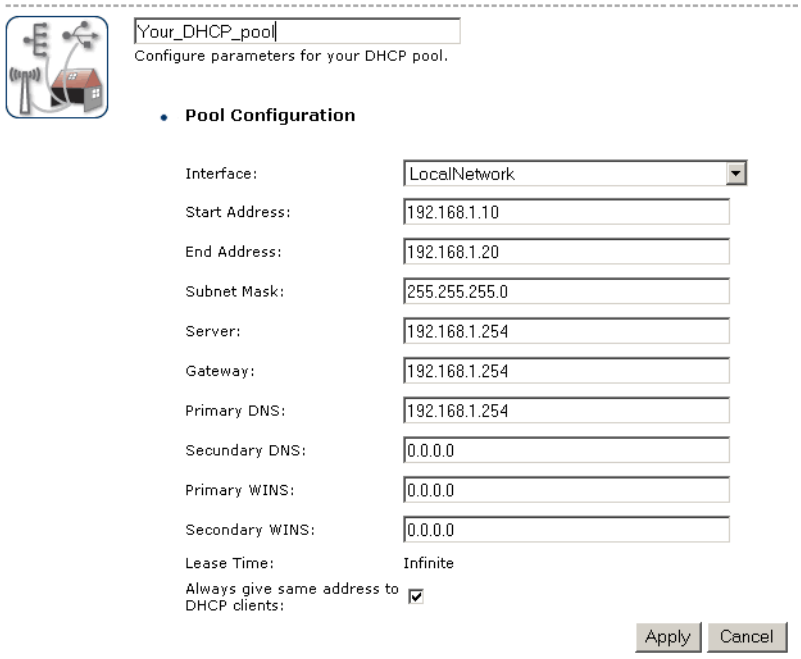
Accessing the DHCP Pool page

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.



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6 Troubleshooting

Introduction

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

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:

6.1 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 "6.4 Reset to Factory Defaults" on page 112.

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™ is installed and configured as instructed in the Installation and Setup Guide or as instructed by the Service Provider.

6.1.1 Wired Ethernet Troubleshooting

LAN LED 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.

6.1.2 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 SpeedTouch™ or to direct the SpeedTouch™'s antenna for optimal performance.

6.2 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 "5.5.3 Game & Application Sharing" on page 67.

Adding UPnP™

If you are running Microsoft Windows XP, it is recommended to add the UPnP™ component to your system.

Proceed as follows:

1 In the **Start** menu, click (**Settings >**) **Control Panel**.

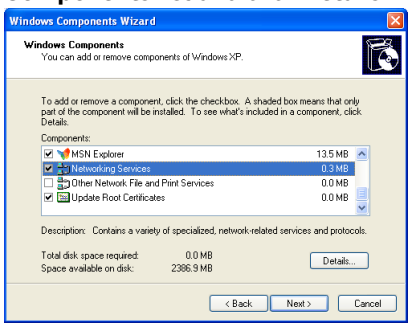
The **Control Panel** window appears.

2 Click **Add or Remove Programs**.

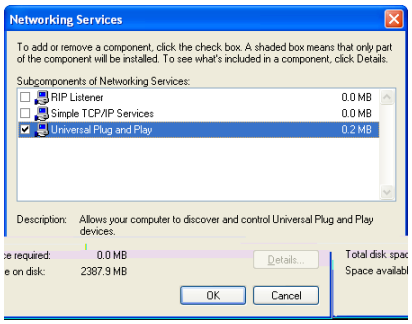
The **Add or Remove Programs** window appears.

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.

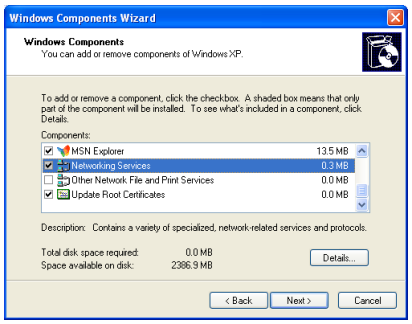
Adding IGD Discovery and Control

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.

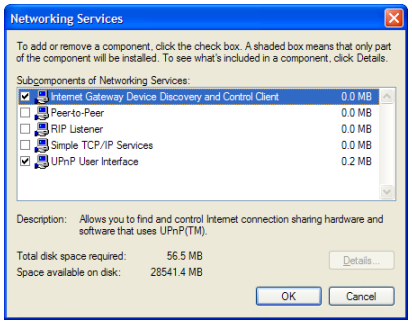
Proceed as follows:

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.

6.3 Voice over IP Troubleshooting

Introduction

If you cannot establish a phone call via your SpeedTouch™, try the suggestions below.

Calling over VoIP

If you have problems calling via VoIP, check whether:

- Your telephone is correctly connected to the SpeedTouch™.
- Your telephone is working on the PSTN network:
  - Connect your phone directly to PSTN.
  - Try to make a phone call.
- The call agent's IP address and call agent's port number are configured correctly.
- The PWR, PPP and VoIP Ready LEDs are on.

  As soon as the VoIP Ready LED turns on, you will hear a click, indicating the switch from PSTN to VoIP.

Calling over PSTN

If you have problems calling via the regular phone line, check whether:

- Your telephone is correctly connected to the SpeedTouch™.

  If the SpeedTouch™ is turned off, phone calls are always routed over PSTN.
- Your telephone is working on the PSTN network:
  - Connect your phone directly to PSTN.
  - Try to make a phone call.
- The Forced FXO service is activated, or whether your service provider requested you to dial an extra prefix for making calls via PSTN.

  If VoIP is enabled (VoIP Ready LED is on), and when making a forced FXO call, you will hear a click, indicating the switch from VoIP to PSTN.

6.4 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™.

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 "2.3.2 Connecting Wireless Clients for the First Time" on page 23.

Software reset

Proceed as follows:

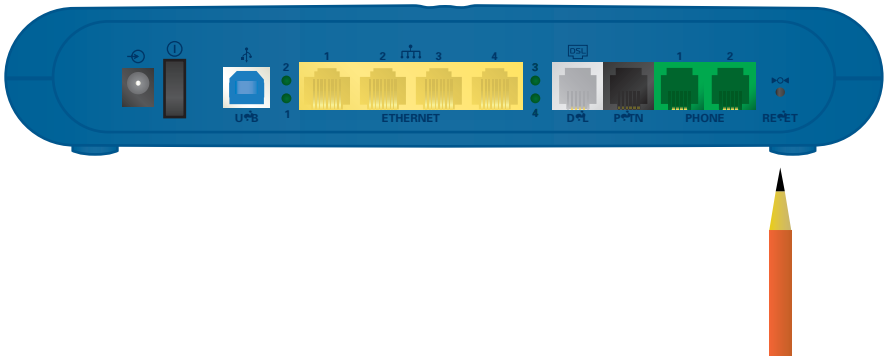
1. Go to the SpeedTouch™ Web pages.
2. In the menu, select **SpeedTouch > Configuration**.
3. In the **Pick a task** list, click **Reset my SpeedTouch to default settings**.

   The SpeedTouch™ restarts.
4. 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.

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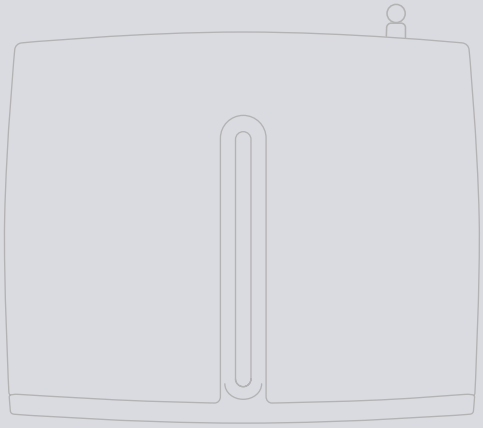

Need more help?

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