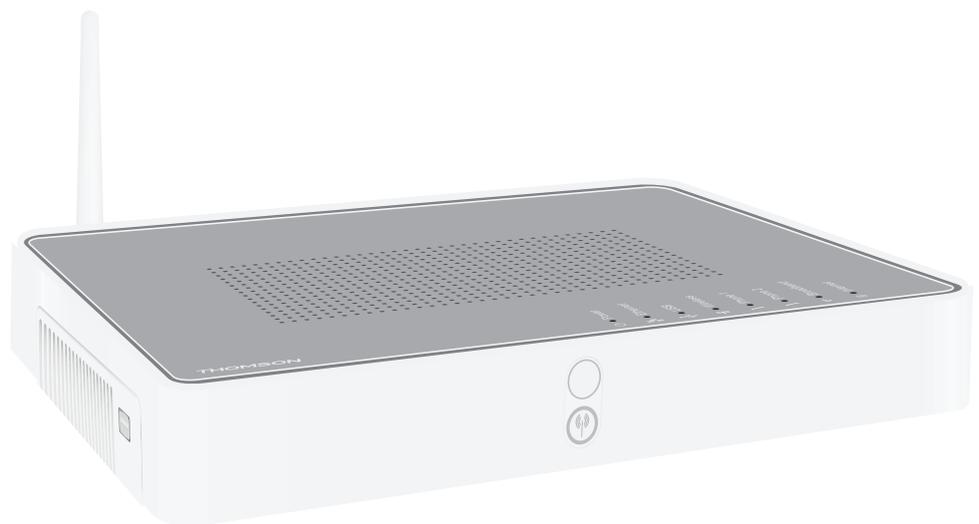




## **THOMSON TG787**

Wireless VoIP Residential Gateway



## **Setup and User Guide**



# THOMSON TG787

Setup and User Guide

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## About this Setup and User Guide

### Used Symbols



A **note** provides additional information about a topic.



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

### Terminology

Generally, the THOMSON TG787 will be referred to as Thomson Gateway in this Setup and User Guide.

### Typographical Conventions

Following typographical convention is used throughout this manual:

- **Sample text** indicates a hyperlink to a Web site.  
Example: For more information, visit us at [www.thomson-broadband.com](http://www.thomson-broadband.com).
- **Sample text** indicates an internal cross-reference.  
Example: If you want to know more about guide, see "1 Introduction" on page 7".
- **Sample text** indicates an important content-related word.  
Example: To enter the network, you **must** authenticate yourself.
- **Sample text** indicates a GUI element (commands on menus and buttons, dialog box elements, file names, paths and folders).  
Example: On the **File** menu, click **Open** to open a file.

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# About this Setup and User Guide

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## 1 Installation

### **Introduction**

In a few minutes you will be able to access the Internet using your Thomson Gateway.

This Setup and User Guide will show you how to set up your Thomson Gateway and how to connect your computer(s) to the Internet.

# 1 Installation

## 1.1 Preliminary Steps

### DSL service

The DSL service must be up and running on your telephone line.

If both conventional telephone and DSL service are simultaneously available from the same copper pair, you will need a central splitter or distributed filters for decoupling DSL and telephone signals.



Public telephone lines carry voltages that can cause electric shock. Only try to set up splitter/filters that have been designed to be installed by unqualified personnel. For further assistance, contact your Internet Service Provider.

### Computer requirements

- To connect a computer via Ethernet, make sure the computer is equipped with an Ethernet Network Interface Card (NIC).
- For wireless networking, you will need a WiFi-certified wireless client adapter for each computer you want to connect wirelessly.

### Internet connection details

You may need the following connection details from your Internet Service Provider (ISP):

- Your ISP's method for connecting to the Internet (for example PPPoE)
- The VPI/VCI (for example 8/35)
- Your user name and password to connect to the Internet for PPP connections
- Your IP settings in case of static configurations



Optionally your ISP may indicate the Service Profile to use during Setup.

You may have received this information when you subscribed to DSL at your Internet Service Provider (ISP). You will be prompted for this information at a given step in the installation procedure.

### Voice over IP (VoIP) connection details

If you want to be able to make phone calls over the Internet, you will need following details for your VoIP connection:

- A user account at your VoIP Service Provider
- The server settings of your VoIP Service



These settings may be provided by your Internet Service Provider.

## 1.2 Placing your Thomson Gateway

### Possibilities

You can mount the Thomson Gateway on a wall or simply place it on a desk.

### Wall mount

Proceed as follows to mount the Thomson Gateway on a wall or other vertical surface:

- 1 Take the wall mount leaflet out of the box.
- 2 Stick the wall mount leaflet on the place where you want to mount your Thomson Gateway.
- 3 Drill two holes through the marked positions.
- 4 Fasten two screws in the wall holes. The screws should protrude five millimetres from the surface of the wall.
- 5 Attach your Thomson Gateway on the wall using the two mounting slots on the bottom.



If you install the Thomson Gateway onto plasterboard, use dowels to secure the screws. Otherwise the strain of the cables connected to the Thomson Gateway rear panel connectors could pull the Thomson Gateway from the wall.

# 1 Installation

---

## 1.3 Installing your Thomson Gateway

### Installation methods

There are two ways to set up your Thomson Gateway:

- Guided Installation
- Manual Installation

### Guided Installation

#### *How it works*

The Setup wizard included on the CD will guide you through all configuration aspects of your Thomson Gateway. This is the recommended way to install your Thomson Gateway.

#### *Requirements*

- Your computer must run one of the following operating systems:
  - ▶ Microsoft Windows Vista (x64)
  - ▶ Microsoft Windows XP Service Pack (SP) 2 or higher
  - ▶ Microsoft Windows XP x64 SP 1 or higher
  - ▶ Microsoft Windows 2000 SP4
  - ▶ Mac OS X 10.3 (Panther)
  - ▶ Mac OS X 10.4 (Tiger)
- You must have administrative rights on your computer

#### *Getting started*

Proceed with "1.3.1 Guided Installation" on page 7.

### Manual Installation

#### *How it works*

The Setup and User Guide will first help you to connect your computer to the Thomson Gateway. After this is done, you can configure your Thomson Gateway using your web browser.

#### *Requirements*

Javascript must be enabled on your web browser.

#### *Getting started*

Proceed with "1.3.2 Manual Installation" on page 9.

## 1.3.1 Guided Installation

### Connecting devices: wait!

Do not plug in any cables or connect any devices until you are prompted to do so by the wizard.

### In case of problems

If you encounter problems during this installation please refer to "7.1 Setup wizard Troubleshooting" on page 74.

### Starting the wizard

To start the wizard:

- 1 Insert the Setup CD into your computer's CD- or DVD-ROM drive.
- 2 If your computer runs:
  - ▶ Microsoft Windows: The CD should autostart.
  - ▶ Mac OS X: Double-click **Menu** in the window with the content of the CD.
- 3 Select the language of your choice and click **OK**.
- 4 The Setup wizard will now guide you through the installation.
- 5 At the end of the installation, following screen appears:



- 6 Select the [Go to the Thomson Gateway Web Interface](#) if you want to go to the Thomson Gateway Web Interface after closing the wizard. On the Thomson Gateway Web Interface, you can further configure your Thomson Gateway.
- 7 Click **Finish**.
- 8 The **CD menu** appears.

# 1 Installation

## CD menu



On the **CD Menu**, click:

- **(Re)configure my Thomson Gateway** to reconfigure your Thomson Gateway or add a new computer to your network.
- **View Documentation** to view the documentation that is available for your Thomson Gateway. This list will be automatically updated if you are connected to the Internet.
- **Visit Thomson Broadband** to visit the online support sections on [www.thomson-broadband.com](http://www.thomson-broadband.com).



Actual available items may depend on the Setup CD delivered with your Thomson Gateway.

## 1.3.2 Manual Installation

### Procedure

Proceed as follows:

- 1 Connect the cables
- 2 Configure the Thomson Gateway

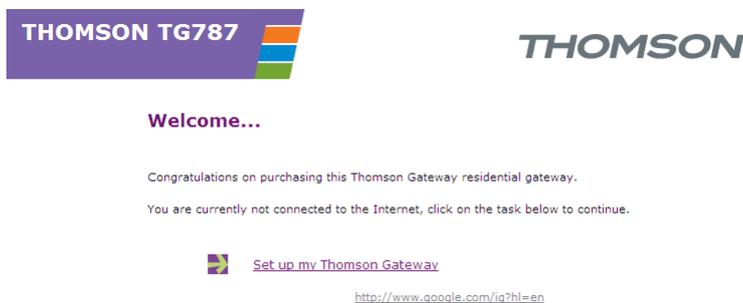
### Connect the cables

Proceed as follows:

- 1 Connect your computer to the Thomson Gateway as described in “3.1 Adding a Computer to your Network” on page 20.
- 2 Connect the Thomson Gateway to the DSL line.
- 3 Connect the power supply.
- 4 Turn on the Thomson Gateway.

### Configure the Thomson Gateway

- 1 Open your web browser.
- 2 The Thomson Gateway informs you that you have not yet configured your Thomson Gateway.



If this window does not appear browse to <http://dsldevice.lan> or to the IP address of your Thomson Gateway (by default: [192.168.1.254](http://192.168.1.254)) and click **Thomson Gateway** on the menu on the left-hand side.

- 3 Click **Setup my Thomson Gateway**.
- 4 The **Easy Setup** wizard appears. This wizard will guide you through the configuration of your Thomson Gateway. Click **Next** and follow the instructions.

# 1 Installation

---

## 2 Thomson Gateway Basics

### In this chapter

Topic	Page
Thomson Gateway LED Behaviour	12
Thomson Gateway Web Interface	14
Backing Up/Restoring your Configuration	17

## 2 Thomson Gateway Basics

### 2.1 Thomson Gateway LED Behaviour

#### Status LEDs

On the top panel of your Thomson Gateway, you can find a number of status LEDs, indicating the state of the device during normal operation.

#### Power LED

Name	Colour	State
Green	Solid on	Power on, normal operation
Red	Solid on	Power on, self-test failed, indicating device malfunction
Orange	Solid on	Bootloader active (during upgrade)
Off		Power off

#### Ethernet LED

Name	Colour	State
Green	Blinking	Ethernet activity
	Solid on	Ethernet connection, no activity
Off		No Ethernet connection

#### Wireless/WLAN LED

Name	Colour	State
Green	Blinking	Wireless activity, WPA(2) encryption
	Solid on	No wireless activity, WPA(2) 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

### Broadband/DSL LED

Name	Colour	State
Green	Blinking	Pending DSL line synchronisation
	Solid on	DSL line synchronised
Off		No DSL line

### Internet LED

Name	Colour	State
Green	Blinking	Internet activity
	Solid on	Internet connectivity, no activity
Red	Solid on	Internet connection setup failed
Off		No Internet connection

### Phone/Voice LED

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

### Ethernet LED (Ethernet port)

A LED may be provided per Ethernet port to indicate link integrity (or activity).

LED Status	Description
Off	No connection on this port
Solid on	Ethernet link up
Blinking	Data is flowing from/to this port

## 2 Thomson Gateway Basics

---

### 2.2 Thomson Gateway Web Interface

#### Introduction

The Thomson Gateway Web Interface allows you to configure your Thomson Gateway using your web browser.

#### Requirements

Javascript must be enabled on your browser.

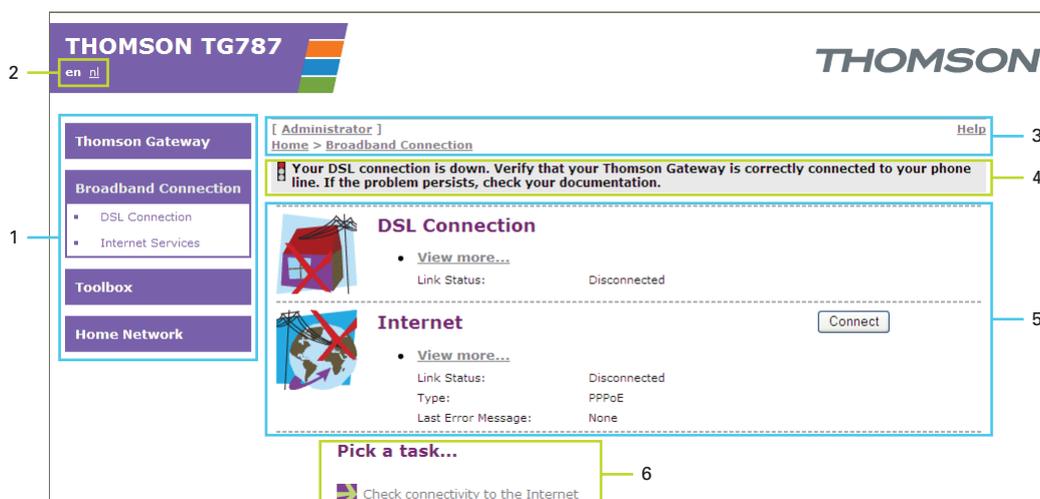
#### Accessing the Thomson Gateway Web Interface

Proceed as follows:

- 1 Open your web browser.
- 2 Browse to <http://dsldevice.lan> or to the IP address of your Thomson Gateway (by default: [192.168.1.254](http://192.168.1.254)).
- 3 If you have protected your Thomson Gateway with a user name and password, the Thomson Gateway will prompt you to enter these. Enter your user name and password and click **OK**.
- 4 The Thomson Gateway Web Interface appears.

If your computer runs Windows Vista or Windows XP, you can also access the Thomson Gateway Web Interface using the Internet Gateway Device icon. For more information, see "4.3 Universal Plug and Play" on page 46.

### Components



Label	Description
1	Menu
2	Language Bar
3	Navigation Bar
4	Notification Area
5	Content pane
6	Tasks

### Menu

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

- **Thomson Gateway:**  
Provides basic information on the Thomson Gateway.
- **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.

### Language Bar

The language bar is located in the top banner and allows you to change the language of the Thomson Gateway Web interface.



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

## 2 Thomson Gateway Basics

---

### 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 Thomson Gateway Web interface.
- Select change the display level of the page (for example: **Overview**, **Details** or **Configure**)
- Get context-related **Help** information.

### 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.

### Content pane

The content pane is located at the centre of the page and displays the information and configurable items of the selected topic.

### Tasks

To allow a quick configuration of your Thomson Gateway, 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.

### 2.3 Backing Up/Restoring your Configuration

#### Introduction

Once you have configured your Thomson Gateway to your needs, it may be a good idea to save your configuration for later use. This way you can always return to your working configuration in case of problems.

#### Backing up your configuration

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Thomson Gateway** menu, click **Configuration**.
- 3 In the **Pick a task** list, click **Save or Restore Configuration**.
- 4 Under **Backup current configuration**, click **Backup Configuration Now**.
- 5 The Thomson Gateway prompts you to save your file.
- 6 Save your file to a location of your choice.

#### Restoring your configuration

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Thomson Gateway** menu, click **Configuration**.
- 3 In the **Pick a task** list, click **Save or Restore Configuration**.
- 4 Under **Restore saved configuration**, click **Browse**.
- 5 Open your backup file.
- 6 The Thomson Gateway restores your configuration.

## 2 Thomson Gateway Basics

---

### 3 Adding New Devices to your Network

#### In this chapter

Topic	Page
Adding a Computer to your Network	20
Adding a Phone to your Network	23

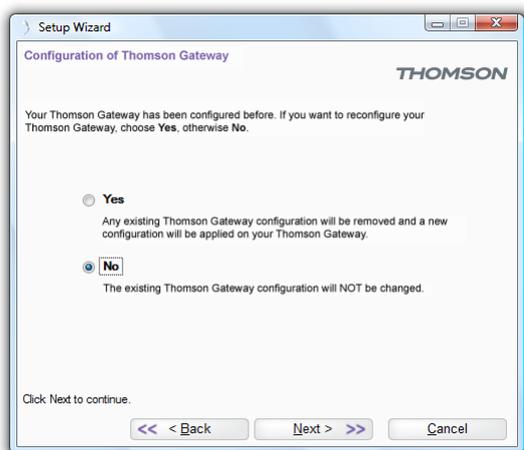
## 3 Adding New Devices to your Network

### 3.1 Adding a Computer to your Network

#### Guided Installation

If you configured your Thomson Gateway using the Guided Installation, use the same procedure on the computer that you want to add.

At a specific point in the installation, the Setup wizard will inform you that the Thomson Gateway has already been configured:



Select **No** and click **Next** to continue.

#### Manual Installation

You can also manually add a new computer to your local network:

- Connecting a computer using Wireless
- Connecting a computer using Ethernet

### 3.1.1 Connecting a computer using Wireless

#### Before you start

Before you can connect a computer to your wireless network you need to know which Network Name (SSID) and encryption your Thomson Gateway is using.

#### Where can I find the SSID?

If you did not change the SSID manually, your Thomson Gateway uses the SSID that is printed on the bottom panel label of your Thomson Gateway.

#### Where can I find the encryption?

*You have not yet configured your Thomson Gateway*

In this case, no encryption is used.

*You have already configured your Thomson Gateway using the Guided Installation*

If you choose to use the wireless settings proposed by the Setup wizard, you can find the encryption keys on the label on the bottom of your Thomson Gateway:

#### Forgot your wireless settings?

If you have changed the wireless settings manually and you can't remember your settings, try one of the following:

If one of your computers is already connected to your network:

- 1 Browse to the Thomson Gateway Web Interface on a computer that is already connected to your network.
- 2 On the **Home Network** menu, click **Wireless**.
- 3 In the upper-right corner, click **Details**.
- 4 The wireless Access Point page appears. Under:
  - ▶ **Configuration**, you can find the network name (SSID).
  - ▶ **Security**, you can find the encryption.

If none of your computers is connected to your network, connect a computer using a wired connection and follow the procedure above to find out what your wireless settings are.

Another option is to reset your Thomson Gateway and reconfigure it all over again. For more information, see "7.4 Reset to Factory Defaults" on page 79.

#### Procedure

Proceed as follows:

- 1 Configure your computer with the same wireless settings as your Thomson Gateway. For more information, consult the help of your wireless client.
- 2 If you enabled the access control list on the Thomson Gateway, you have to register your computer before you can connect to the network. Access control is disabled by default. For more information, see "5.2 Access Control" on page 61.

## 3 Adding New Devices to your Network

### 3.1.2 Connecting a computer using Ethernet

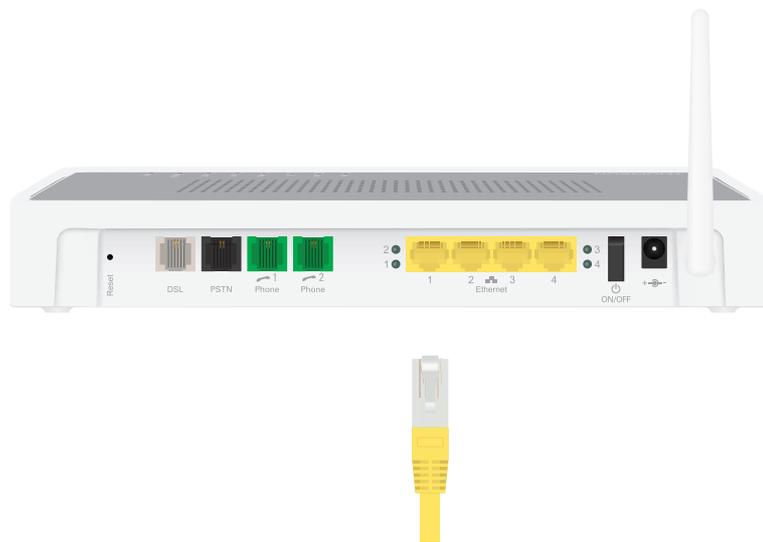
#### Requirements

- Your computer must have a free Ethernet port.
- Your computer must be configured to obtain an IP address automatically. This is the default setting.

#### Procedure

Proceed as follows:

- 1 Connect one end of the (yellow) Ethernet cable to (one of the) yellow Ethernet port(s) of your Thomson Gateway:



- 2 Connect the other end of the (yellow) Ethernet cable to your computer.
- 3 Your computer is now connected to your network. No additional configuration is needed.

### 3.2 Adding a Phone to your Network

#### Introduction

Depending on your Thomson Gateway, you can connect one or two analogue phones or faxes to the Thomson Gateway.

#### Procedure

Before you can make a phone call over the Internet, you must:

- 1 Connect your phone to the Thomson Gateway.  
For more information, see “3.2.1 Connecting Phones to the Thomson Gateway” on page 24.
- 2 Configure the telephone services on your Thomson Gateway.  
For more information, see “3.2.2 Configuring your Thomson Gateway” on page 25.

#### After the Installation

In “4.2 Telephony Features” on page 39, we will take a closer look at some telephony features.

## 3 Adding New Devices to your Network

---

### 3.2.1 Connecting Phones to the Thomson Gateway

#### Procedure

Use a phone cable with RJ-11 connectors to:

- 1 Wire the green Thomson Gateway Phone port(s) to your phone(s) or fax.
- 2 If your Thomson Gateway has a black port labelled "PSTN", you must connect this port to the telephone output of your DSL splitter to allow analogue phone calls with the same telephone set that you use for VoIP calls.



This is only required if you still want to make phone calls using the analogue 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.

If this is not the case, no additional connections are needed.

#### Emergency calls

If the device is not powered, the Thomson Gateway will automatically select the analogue signal (if connected). So you still will be able to make emergency calls.

## 3.2.2 Configuring your Thomson Gateway

### Introduction

If you configured your Thomson Gateway using the Guided Installation, the telephony service will already be configured by the Setup wizard.

If you choose to configure your Thomson Gateway manually or you still need to configure the telephony service, you can follow the procedure below.

### Procedure

Proceed as follows:

- 1 Enable the Telephony Service
- 2 Assign Phone Numbers
- 3 Configure the Telephony Service



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

### Enable the Telephony Service

To enable the telephony service:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Telephony**.
- 3 In the Navigation Bar, click **Configure**.
- 4 Select **Service Enabled**.
- 5 Click **Apply**.

### Assign Phone Numbers

To configure your Internet SIP telephone numbers:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Telephony**.
- 3 In the Navigation Bar, click **Configure**. Assign phone numbers to the ports. If you want to use the same number for all ports, select Port 'All'.



The phone numbers are provided by your provider.

- 4 Click **Apply**.

### Configure the Telephony Service

Proceed as follows to configure the telephony service:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Telephony**.
- 3 In the Navigation Bar, click **Expert configure**.

## 3 Adding New Devices to your Network

---

- 4 Enter the IP address and the port number of the registrar, and the proxy, as provided by your ISP:
- 5 Click **Apply**.

### Verifying Telephone Connectivity

Proceed as follows to verify the voice connection:

- 1 Make sure the Thomson Gateway is turned on and ready for service.
- 2 Check whether your phone is properly attached to the Thomson Gateway.
- 3 Make sure the Internet telephony service is enabled and configured.
- 4 The **Voice** LED must be solid green.
- 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 Thomson Gateway can receive incoming VoIP calls, as long as your Thomson Gateway is turned on and the **Voice** LED is lit.

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

### 3.2.3 Multiple Identities

#### Introduction

You can assign up to three Internet telephone numbers or URIs to one or both phone ports, or you can assign a common number to both phone ports.



The phone numbers are provided by your provider.

#### Procedure

Proceed as follows:

- 1 Browse to the Thomson Gateway web pages.
- 2 On the **Toolbox** menu, click **Telephony**.
- 3 In the Navigation Bar, click **Configure**.
- 4 In the **Pick a task** list, click **Use multiple identities**.
- 5 Click **Add**.
- 6 Enter another URI, your user name and password.
- 7 Choose the phone port for which you want to use this telephone number.
- 8 Click **Apply**.

## 3 Adding New Devices to your Network

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## 4 Getting the Most Out of Your Thomson Gateway

### In this chapter

In this chapter we will take a closer look at following features:

Topic	Page
Sharing Content on your Network	30
Telephony Features	39
Universal Plug and Play	46
Assigning a service (HTTP, FTP,...) to a computer	53
Dynamic DNS	55

### Feature availability

Depending on the configuration offered by your Internet Service Provider (ISP), some features may not be available on your Thomson Gateway. For more information, contact your ISP.

# 4 Getting the Most Out of Your Thomson Gateway

## 4.1 Sharing Content on your Network

### Introduction

The Thomson Gateway allows you to store your data on a centralised place in the network. This way you can share your files with everyone that is connected to your network.

### What do I need?

A FAT32 formatted USB storage device.



To format your device for FAT32, consult the help of your operating system. Make sure to make a copy of your data before you doing this. Formatting your device will erase all data.

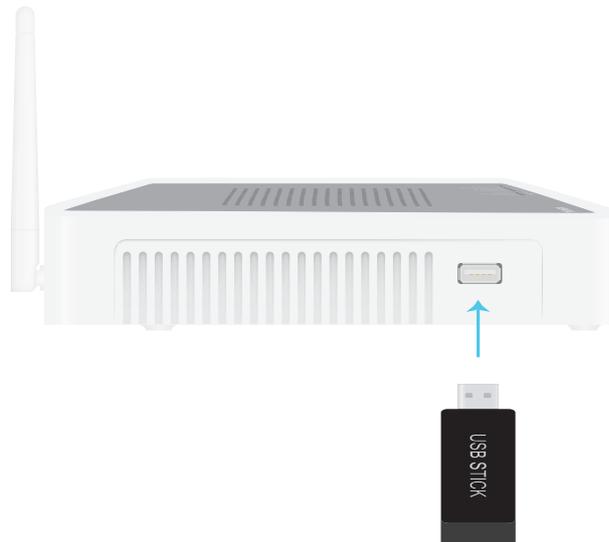
### Procedure

Proceed as follows:

- 1 Connect your USB storage device to the Thomson Gateway.
- 2 Configure Content Sharing on the Thomson Gateway.

### Connect your USB storage device to the Thomson Gateway

Plug your USB memory stick or external hard disk in (one of) the USB master port(s) of your Thomson Gateway.



# 4 Getting the Most Out of Your Thomson Gateway

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## Configure Content Sharing on the Thomson Gateway

If you want to:

- Simply share your data and media with other users on the network, proceed with “4.1.1 Setting Up the File Server” on page 32.
- Share your media with media devices like an IP Set-Top Box, proceed with “4.1.3 Using UPnP AV to Share Content with Media Devices” on page 36.

# 4 Getting the Most Out of Your Thomson Gateway

## 4.1.1 Setting Up the File Server

### Introduction

If you want to allow users to change the content on your USB storage device, you have to enable the **Network File Server** on your Thomson Gateway. This way, all users connected to your Thomson Gateway will be able to access your USB storage device and make changes to it.

### Procedure

To enable the Network File Server:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the Navigation Bar, click **Configure**.
- 4 Under **Network File Server (Windows Networking)**, click **Server Enabled**. It is also recommended to complete in following fields:
  - ▶ **Server Name:**  
You will use this name to access the Thomson Gateway. If you leave this field empty you can only access your USB storage device by entering the IP address (by default: 192.168.1.253)
  - ▶ **Server Description:**  
Here you can add a short description for what kind of data is stored on the USB storage device.
  - ▶ **Workgroup:**  
Enter the same workgroup as your computer(s).
- 5 Click **Apply**.
- 6 All users connected to the Thomson Gateway can now connect to your SUB storage device. If you want to limit the number of folders users can access, continue with "4.1.2 Managing your Shared Content" on page 35.
- 7 If your computer runs:
  - ▶ Microsoft Windows, continue with How to access the shared content on Windows.
  - ▶ Mac, continue with How to access the shared content on Mac

# 4 Getting the Most Out of Your Thomson Gateway

## How to access the shared content on Windows

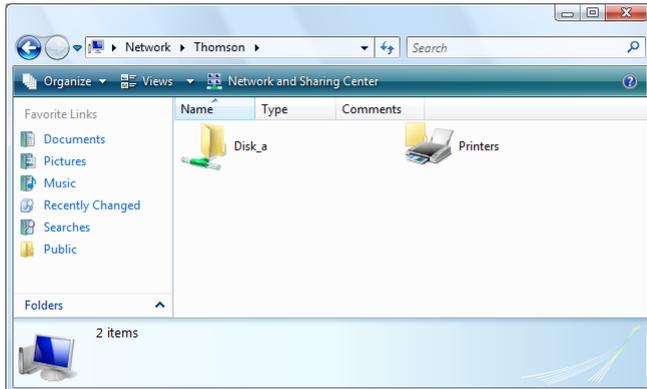
Proceed as follows:

- 1 Open **Windows Explorer**.
- 2 In the address bar type two backslashes followed by the name that you entered in the **Server Name** box (in our example: \\Thomson).



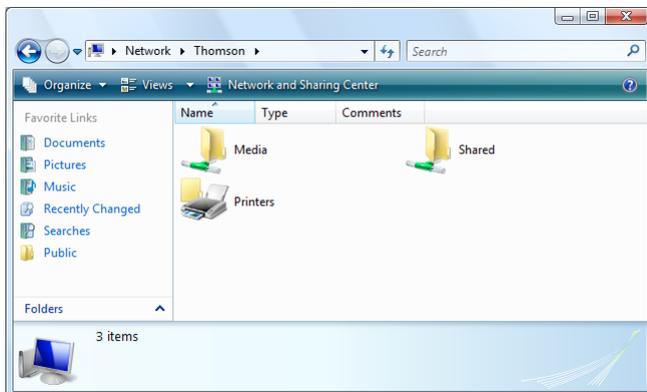
If you did not provide a server name, type \\192.168.1.253.

- 3 All storage devices that are attached to your Thomson Gateway are listed as folders.



If the storage device has multiple partitions an index number will be added at the end (for example: Disk\_a1 and Disk\_a2).

If the partition is a managed partition, the **Media** and **Shared** folders will be displayed instead:



For more information on managed partitions, see “4.1.2 Managing your Shared Content” on page 35.

- 4 If you plan to frequently use this folder, it might be useful to map this folder as a network drive. For more information, see your operating system’s help.

## 4 Getting the Most Out of Your Thomson Gateway

### How to access the shared content on Mac

Proceed as follows:

- 1 On the **Go** menu, click **Connect To Server**.
- 2 The **Connect To Server** window appears.
- 3 In the **Server Address** box, type **smb://<server name>**, where <server name> is the Server Name you assigned to your USB storage device. So in our example we will type **smb://Thomson**.



- 4 The **SMB Mount** window appears.



Select the shared folder you want to mount and click **OK**.

- 5 The **SMB/CIFS Filesystem Authentication** window appears. You do not need to authenticate, click **OK**.
- 6 Your USB storage device is now mounted and is displayed on your desktop.

## 4.1.2 Managing your Shared Content

### Introduction

To prevent that users start creating folders on your USB storage device and to keep the directory structure clean and transparent, the Thomson Gateway allows you to configure your USB storage device as Managed Partition.

### Managed Partition

If you select your drive or partition as managed partition, users will only be able to access following folders:

- **Media**
- **Shared**

All other folders will be hidden from the user. If you connected more than one USB storage device, those device will be hidden.

If these folders are not on your USB storage device. The Thomson Gateway will create them automatically.

### Procedure

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the Navigation Bar, click **Configure**.
- 4 Under **List of connected disks**, click the radio button next to the partition you want to configure as Managed Partition.
- 5 Click **Apply**.

### Result

The Thomson Gateway creates following folders:

- **Media:**  
Use this folder to share your media files with others users on your network. You can store your media files in following subfolders:
  - ▶ **Movies**
  - ▶ **Music**
  - ▶ **Pictures**
- **Shared:**  
Use this folder to share your data with other users. Optionally, users can also access this folder using FTP. For more information, see "4.1.4 Accessing your Shared Content by FTP" on page 37.

If the above folders are already exist, the existing folders are used.

# 4 Getting the Most Out of Your Thomson Gateway

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## 4.1.3 Using UPnP AV to Share Content with Media Devices

### Introduction

If you want to share your media files with media devices like IP Set-Top Boxes, you have to configure the Thomson UPnP AV Server.

### Thomson UPnP AV Server

The Thomson UPnP AV Server is a server that shares media files with devices that are connected to the same network. These media files are stored on a USB storage device connected to the Thomson Gateway.

### Procedure

Proceed as follows:

- 1 Enable UPnP AV on the Thomson Gateway.
- 2 Select your USB storage device as managed partition.

### Enable UPnP AV on the Thomson Gateway

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the Navigation Bar, click **Configure**.
- 4 Under **UPnP AV Media Server**, click **Server Enabled**.

### Select your USB storage device as managed partition

Proceed as follows:

- 1 Under **List of connected disks**, click the radio button next to the partition of which you want to share the media files.
- 2 Click **Apply**.

## 4.1.4 Accessing your Shared Content by FTP

### Introduction

The Thomson Gateway allows you to access your shared content by FTP. This can be useful if you want to be able to access your shared content from the Internet.

### Procedure

Proceed as follows:

- 1 Protect your Thomson Gateway Web Interface login account with a password.  
If you have already configured a password for your login account, you can continue with the next step.
- 2 Configure FTP access for your shared content.

### Protect your Thomson Gateway Web Interface login account with a password

If your login account is not yet configured with a password:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **User Management**.
- 3 In the **Pick a task** list, click **Change my password**.
- 4 Leave the **Old Password** box empty.
- 5 Type your new password both in the **New Password** box and **Confirm New Password** box.

### Configure FTP access for your shared content

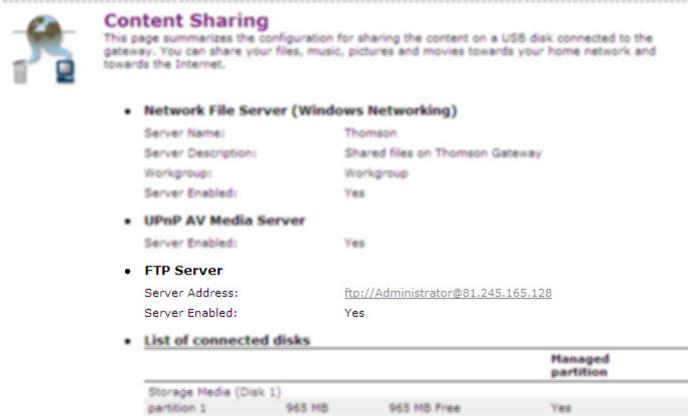
Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the Navigation Bar, click **Configure**.
- 4 Under **FTP Server**, click **Server Enabled**.
- 5 Under **List of connected disks**, click the radio button next to the partition that you want to access using FTP.
- 6 The Thomson Gateway now creates a **Media** and **Shared** folder on the selected partition. The **Shared** folder will be used as root location for FTP sessions.
- 7 Click **Apply**.

# 4 Getting the Most Out of Your Thomson Gateway

## Result

The **Shared** folder is now accessible using FTP. If you are connected to the Internet, the link to the FTP server is displayed under FTP Server:



**Content Sharing**  
This page summarizes the configuration for sharing the content on a USB disk connected to the gateway. You can share your files, music, pictures and movies towards your home network and towards the Internet.

- Network File Server (Windows Networking)**
  - Server Name: Thomson
  - Server Description: Shared files on Thomson Gateway
  - Workgroup: Workgroup
  - Server Enabled: Yes
- UPnP AV Media Server**
  - Server Enabled: Yes
- FTP Server**
  - Server Address: <ftp://Administrator@81.245.165.128>
  - Server Enabled: Yes
- List of connected disks**

			Managed partition
Storage Media (Disk 1)			
partition 1	965 MB	965 MB Free	Yes

On the Thomson Gateway network, you can also FTP to the local address (192.168.1.253).

## Additional configuration

As you may know the IP address of your Internet connection changes frequently. This implies that the link to the FTP server will also change every time the public IP changes. With Dynamic DNS, you can assign a host name to the IP address (for example **mygateway.dyndns.org**). For more information, see "4.5 Dynamic DNS" on page 55.

## 4.2 Telephony Features

### Contents

In this chapter we will have a closer look at some interesting telephony features:

Topic	Page
Address Book	40
Telephony services	41
Viewing Telephony Statistics	45

# 4 Getting the Most Out of Your Thomson Gateway

## 4.2.1 Address Book

### Introduction

The Thomson Gateway allows you to store the contact details of your contacts on the Thomson Gateway Web Interface. On this page, you can make a call or send a message simply by clicking on a link.

### Accessing the Address Book page?

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Address Book**.
- 3 The **Address Book** page appears.

### Managing contacts

To:

- Add a contact, click **Add**.
- Edit a contact, click **Edit**.
- Delete a contact, click **Delete**.

All information provided per contact is optional except for the Last and First Name, and can be updated or completed at any time.



The Address book resides on the Thomson Gateway, so everyone with access to the Thomson Gateway web interface can view and use the Address book.

### Using the Address book

The contact details of a contact in your Address book allow you to directly make a call or send a message from out the Thomson Gateway web interface.

Per contact you can click (if available):

- **Business:** to make a call to the contact's business telephone number
- **Home:** to make a call to the contacts home telephone number
- **Mobile:** to make a call to the contact's mobile telephone number
- **Other or SIP uri:** to make a call to the contact's VoIP telephone number
- **E-mail:** for sending an E-mail message to the contact with your e-mail client.

## 4.2.2 Telephony services

### Introduction

Telephony services or supplementary services add extra functionality to your phone. Which supplementary services that are available is determined by your service provider.

The following list gives an overview of the services that may be available:

- 3pty: three party call
- Callreturn: to call back the last missed call
- Ccbs: call completion on busy subscriber (automatic callback)
- Cfbs: call forwarding on busy
- Cfnr: call forwarding on no reply
- Cfu: call forwarding unconditional
- Clip: calling line identification presentation
- Clir: calling line identification restriction
- Clironcall: clir for only one call
- ForcedFXO: switch to FXO (PSTN)
- Hold: put an active call on hold
- Mwi: message waiting indication
- Transfer: call transfer between local ports
- Waiting: incoming call while active call indication
- Waitingoncall: call waiting active for only one call.

### Checking which services that you can use?

To check which services you can use:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the Navigation Bar, click **Configure**.
- 4 In the **Pick a task** list, click **View Telephony Services**.
- 5 Under **Telephony Services**, you can see the services that are supported by your provider.

### Activating services

You can activate/deactivate supplementary services in two ways:

- Via activation/deactivation codes, also referred to as service code commands.
- Via the Telephony Configure page.

The activation/deactivation codes for a specific supplementary service is displayed in the overview.

For example, to activate **Call Hold** dial \*94, to deactivate the service dial #94.

# 4 Getting the Most Out of Your Thomson Gateway

## Activating services on the web pages

To activate/deactivate supplementary services via the web page:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the Navigation Bar, click **Configure**.
- 4 In the **Pick a task** list, click **View Telephony Services**.
- 5 In the Navigation Bar, click **Configure**.
- 6 To activate/ deactivate supplementary services select/clear the check box of the supplementary service.
- 7 Click **Apply**.

## Call Forwarding

**Call Forwarding** informs you about the call forwarding parameters:

- **CFNR-timer** or Call Forwarding on No Reply timer is the time expressed in seconds after which an incoming call is forwarded when not answered.
- **CFNR-destination** or Call Forwarding on No Reply destination is the telephone number to which a call is forwarded to when the CFNR-timer expires.
- **CFU-destination** or Call Forwarding Unconditional is the telephone number to which an incoming call is always forwarded to.
- **CFBS-destination** or Call Forwarding on Busy Subscriber is the telephone number to which an incoming call is forwarded to when your telephone is busy.

## Using switching order commands

In order to use switching order commands (R or hook flash followed by a digit), certain supplementary services have to be activated.

The following list gives an overview of the supplementary services that have to be activated in order to use switching order commands (SOC):

- Activate **Hold** when you want to

Action	Press	Illustration
To put an active call on hold and enable a call set up (the dial tone is generated)	R, 2	<p>The diagram shows two states. In the first state, a red line connects node A and node B, with 'active' written below the line. Node C is shown as a black dot. An arrow labeled 'A presses R2' points to the second state. In the second state, a dashed line connects node A and node B, with 'on hold' written below the line. A red arrow points from node A to node C, with 'dial tone' written next to it.</p>
To terminate the call on hold	R, 0	<p>The diagram shows two states. In the first state, a dashed line connects node A and node B, with 'on hold' written below the line. Node C is shown as a black dot. An arrow labeled 'A presses R0' points to the second state. In the second state, a red line connects node A and node B, with 'active' written below the line. Node C remains a black dot.</p>
To terminate an active call and switch to the call on hold	R, 1	<p>The diagram shows two states. In the first state, a red line connects node A and node B, with 'active' written below the line. Node C is shown as a black dot. An arrow labeled 'A presses R1' points to the second state. In the second state, a dashed line connects node A and node B, with 'on hold' written below the line. Node C is now connected to node A by a red line, with 'active' written below the line.</p>

# 4 Getting the Most Out of Your Thomson Gateway

Action	Press	Illustration
To retrieve the call on hold (when there is no active call)	R, 1	<p>The diagram shows a central node A connected to node B (labeled 'on hold') and node C (labeled 'on hold'). An arrow labeled 'A presses R1' points to the next state where node A is connected to node B (labeled 'active') and node C remains 'on hold'.</p>
To terminate an active call and enables a call set up (the dial tone is generated)	R, 9	<p>The diagram shows a central node A connected to node B (labeled 'active') and node C (labeled 'on hold'). An arrow labeled 'A presses R9' points to the next state where node A is connected to node C (labeled 'on hold') and node B is shown with a red dot and a downward arrow labeled 'dial tone'.</p>

- Activate **Waiting** when you want to:

Action	Press	Illustration
To terminate an active call and switch to an incoming call	R, 1	<p>The diagram shows a central node A connected to node B (labeled 'active') and node C (labeled 'incoming'). An arrow labeled 'A presses R1' points to the next state where node A is connected to node C (labeled 'active') and node B is shown with a red dot and a downward arrow.</p>
To reject an incoming call	R, 0	<p>The diagram shows a central node A connected to node B (labeled 'active') and node C (labeled 'incoming'). An arrow labeled 'A presses R0' points to the next state where node A is connected to node C (labeled 'active') and node B is shown with a red dot and a downward arrow.</p>
To switch between an active call and a call on hold	R, 2	<p>The diagram shows a central node A connected to node B (labeled 'active') and node C (labeled 'on hold'). An arrow labeled 'A presses R2' points to the next state where node A is connected to node C (labeled 'active') and node B is shown with a red dot and a downward arrow labeled 'on hold'.</p>
To switch between an active call and an incoming call	R, 2	<p>The diagram shows a central node A connected to node B (labeled 'active') and node C (labeled 'incoming'). An arrow labeled 'A presses R2' points to the next state where node A is connected to node C (labeled 'active') and node B is shown with a red dot and a downward arrow labeled 'on hold'.</p>

- Activate **3 PTY** when you want to:

Action	Press	Illustration
To establish a conference call (or 3 party connection)	R, 3	<p>The diagram shows a central node A connected to node B (labeled 'on hold') and node C (labeled 'active'). An arrow labeled 'A presses R3' points to the next state where node A is connected to both node B and node C, both labeled 'active'.</p>
During 3 pty: put B and C on hold	R, 2	<p>The diagram shows a central node A connected to node B and node C, both labeled 'active'. An arrow labeled 'A presses R2' points to the next state where node A is connected to both node B and node C, both labeled 'on hold'.</p>

## 4 Getting the Most Out of Your Thomson Gateway

Action	Press	Illustration
During 3 pty: retrieve B and C	R, 3	

- Activate **Transfer** when you want to:

Action	Press	Illustration
Transfer a call	R, 4	

- Activate **CCBS** when you want to set up a call to a busy subscriber (Press R, 5).

## 4.2.3 Viewing Telephony Statistics

### Introduction

The **Telephony Statistics** page on the Thomson Gateway Web Interface lists:

- Successful incoming calls.
- Missed incoming calls.
- Successful outgoing calls.
- Failed outgoing calls.

### Accessing the Telephony Statistics page

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Telephony**.
- 3 The **Address Book** page appears.

### Call Statistics

The **Call Statistics** page shows you the number of:

- Successful incoming calls.
- Missed incoming calls.
- Successful outgoing calls.
- Failed outgoing calls.

for each phone separately and combined.

# 4 Getting the Most Out of Your Thomson Gateway

## 4.3 Universal Plug and Play

### Introduction

UPnP is designed to automate the installation and configuration of a (small) network as much as possible. This means that UPnP-capable devices can join and leave a network without any effort of a network administrator.

### Supported Operating Systems

Following operating systems support UPnP:

- Windows Vista
- Windows XP



If your computer is running Windows XP, you first have to install the UPnP component. For more information, see "4.3.4 Installing UPnP on Windows XP" on page 51.

### UPnP and the Thomson Gateway

With UPnP you can:

- Access the Thomson Gateway Web Interface without having to open the Thomson Gateway Web Interface. For more information, see [Accessing Your Thomson Gateway with UPnP](#).
- Connect/disconnect without having to open the Thomson Gateway Web Interface. For more information, see [Managing your Internet connection with UPnP](#).
- Automatic port configuration for UPnP-enabled games and applications. You do not have to create port to run services on a computer. If the application is UPnP-enabled, UPnP will create these entries automatically. For more information, see [Assigning a service \(HTTP, FTP,...\) to a computer](#).

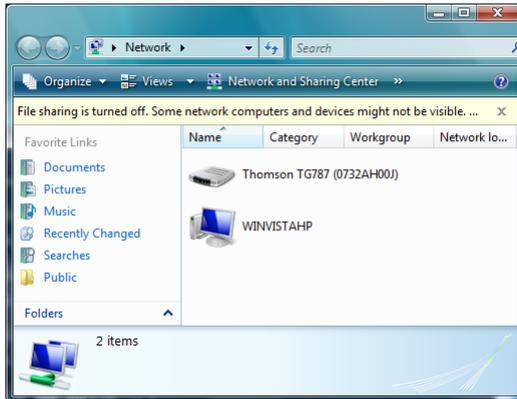
# 4 Getting the Most Out of Your Thomson Gateway

## 4.3.1 Accessing Your Thomson Gateway with UPnP

### Windows Vista

If your computer runs Windows Vista:

- 1 On the Windows **Start** menu, click **Network**.
- 2 The **Network** window appears:

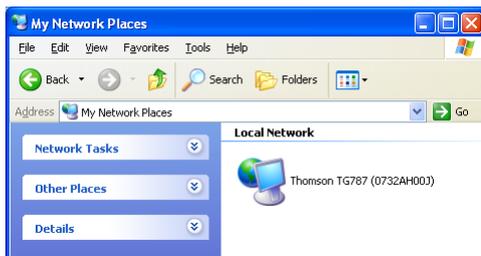


- 3 Right-click your Thomson Gateway (displayed as THOMSON TGXXX) and click **View device web page**.
- 4 The Thomson Gateway Web Interface appears.

### Windows XP

If your computer runs Windows XP:

- 1 Go to **My Network Places**.
- 2 The **My Network Places** window appears:



- 3 Double-click your Thomson Gateway (displayed as THOMSON TGXXX).
- 4 The Thomson Gateway Web Interface appears.

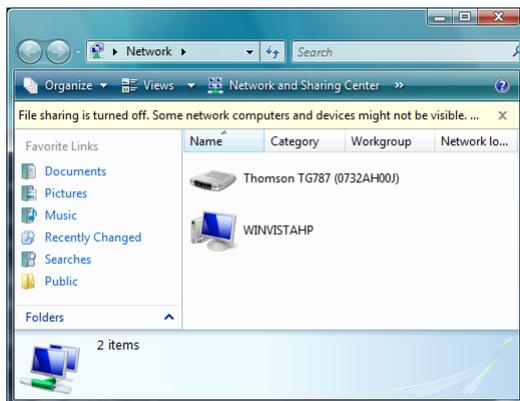
# 4 Getting the Most Out of Your Thomson Gateway

## 4.3.2 Managing your Internet connection with UPnP

### Windows Vista

If your computer runs Windows Vista:

- 1 On the Windows **Start** menu, click **Network**.
- 2 The **Network** window appears:



- 3 Right-click your Thomson Gateway (displayed as THOMSON TGXXX).
- 4 If you are currently:
  - ▶ Connected to the Internet, click **Disable** to disconnect from the Internet.
  - ▶ Not connected to the Internet, click **Enable** to connect to the Internet.

### Windows XP

Proceed as follows:

- 1 On the Windows **Start** menu, click **(Settings >) Control Panel**.
- 2 The **Control Panel** window appears. Click **(Network and Internet Connections) > Internet Connections**.
- 3 The **Network Connections** window appears;



- 4 If you right-click the **Internet Connection** icon, you can connect/disconnect your connection to the Internet.

## 4 Getting the Most Out of Your Thomson Gateway

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### Disabling this feature

To prevent that users can connect/disconnect you can enable Extended Security. For more information, see "4.3.3 Configuring UPnP on the Thomson Gateway" on page 50.

# 4 Getting the Most Out of Your Thomson Gateway

## 4.3.3 Configuring UPnP on the Thomson Gateway

### Introduction

On the Thomson Gateway Web Interface you can:

- Enable/Disable UPnP
- Extended Security

### Enable/Disable UPnP

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Game & Application Sharing**.
- 3 Under **Universal Plug and Play**:
  - ▶ Select the **Use UPnP** check box, to enable UPnP.
  - ▶ Clear the **Use UPnP** check box, to disable UPnP.
- 4 Click **Apply**.

### Extended Security

If Extended Security is enable only limited UPnP operation between the host and the Thomson Gateway is allowed. A local host is not allowed to connect/disconnect the Thomson Gateway Internet connection. You can then only connect/disconnect the Internet connection on the Thomson Gateway Web Interface.

### Enabling Extended Security

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Game & Application Sharing**.
- 3 Under **Universal Plug and Play**, select **Use Extended Security**.
- 4 Click **Apply**.

## 4.3.4 Installing UPnP on Windows XP

### Adding UPnP

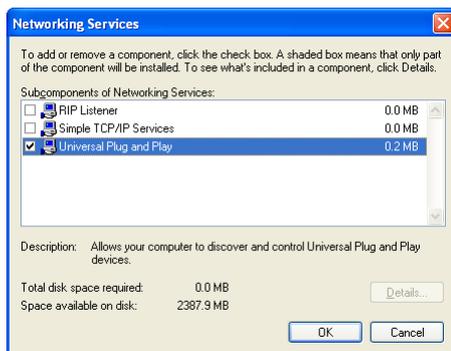
If you are running Microsoft Windows XP, it is recommended to add the UPnP component to your system. Proceed as follows:

- 1 In the **Start** menu, click **(Settings >) Control Panel**.
- 2 The **Control Panel** window appears.  
Click **Add or Remove Programs**.
- 3 The **Add or Remove Programs** window appears.  
Click **Add/Remove Windows Components**.
- 4 The **Windows Components Wizard** appears:



In the **Components** list, select **Networking Services** and click **Details**

- 5 The **Networking Services** window appears:



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.

## 4 Getting the Most Out of Your Thomson Gateway

### Adding IGD Discovery and Control

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

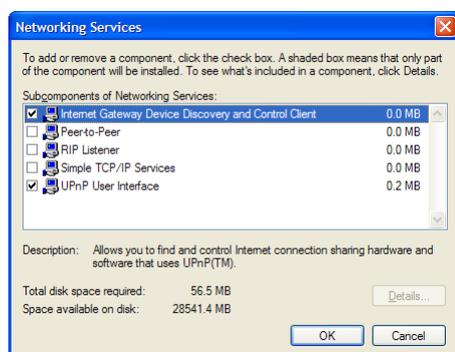
Proceed as follows:

- 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**.
- 4 The **Windows Components Wizard** appears:



Select **Networking Services** in the **Components** list and click **Details**.

- 5 The **Networking Services** window appears:



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.

# 4 Getting the Most Out of Your Thomson Gateway

## 4.4 Assigning a service (HTTP, FTP,...) to a computer

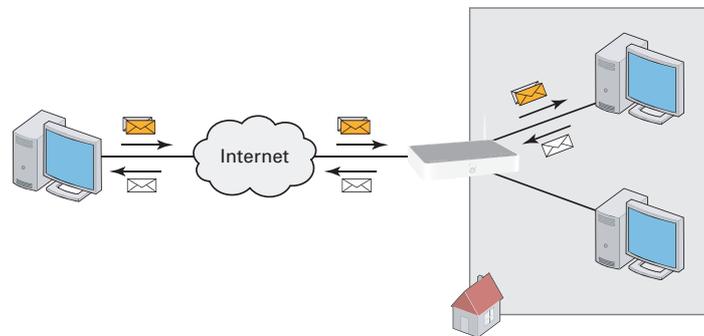
### Introduction

The Thomson Gateway allows you to use one internet connection for multiple computers. This means that all your computers share one public IP address, as if only one computer is connected to the outside world.

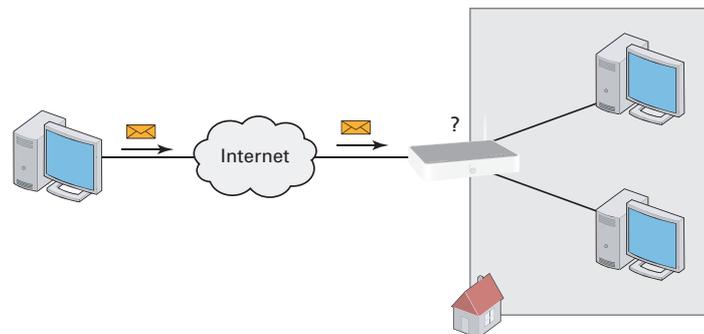
### Problem

When the Thomson Gateway receives an incoming message, the Thomson Gateway has to decide to which computer he will have to send this message.

If the incoming message is a response to an outgoing message originating from one of your computers, the Thomson Gateway sends the incoming message to this computer.



If you are running a server or an application that acts as a server (for example a HTTP server, internet game), the initial message will come from the internet and the Thomson Gateway has to decide to which computer he should forward the incoming message.



### Solution

To avoid this problem you can:

- Enable UPnP.
- Assign a game or application to a local networking device.

# 4 Getting the Most Out of Your Thomson Gateway

## UPnP

UPnP is a technology that enables seamless operation of a wide range of games and messaging applications. Your computer will use UPnP to communicate to the Thomson Gateway which services are running on the computer.

For more information on UPnP, see “4.3 Universal Plug and Play” on page 46.

## Assign a game or application to a local networking device

If you assign a game or application to a local networking device, you will basically tell the Thomson Gateway that if it receives requests for a specific game or application, it has to forward these messages to a specific computer.

Proceed as follows to do so:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Game & Application Sharing**.
- 3 In the **Pick a task** list, click **Assign a game or application to a local network device**.
- 4 In the **Game or application** list, click the service you want to run on the computer. For example, **HTTP Server (World Wide Web)**.



If the service is not available in the list, click **Create a new game or application** in the **Pick a task** list. For more information, click **Help** on the Thomson Gateway Web Interface.

- 5 In the **Device**, list select the computer to which you want to assign the service. Your computer will be listed with it's computer name.
- 6 All incoming request for the selected service will now be directed to the selected device. The Thomson Gateway will also configure the Thomson Gateway firewall to allow this service.

## 4.5 Dynamic DNS

### Introduction

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.

### What you need

Before we can configure Dynamic DNS, you first have to create an account at one of the following Dynamic DNS service providers:

- [www.dyndns.org](http://www.dyndns.org)
- [www.no-ip.com](http://www.no-ip.com)
- [www.dtdns.com](http://www.dtdns.com)

### Procedure

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Dynamic DNS**.
- 3 On the Navigation Bar, click **Configure**.
- 4 Select the **Enabled** check box.
- 5 If necessary, select the broadband connection to which you want to assign the Dynamic DNS host name in the Interface list.
- 6 Type the user name and password of your Dynamic DNS service account in the corresponding fields.
- 7 In the **Service** list, click the name of your Dynamic DNS service provider.
- 8 In the **Host** box, type the host name that you got from the Dynamic DNS service provider (for example mywebpage.dyndns.org).
- 9 Click **Apply**.

## 4 Getting the Most Out of Your Thomson Gateway

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### 5 Wireless Security

#### Methods

The Thomson Gateway offers you following tools to protect your wireless network from intruders:

- Encryption
- Access Control
- Disabling SSID Broadcast

As you will find out in the following sections, not all of these security measures are hard to crack. But all together it may discourage some hackers to break into you network.

# 5 Wireless Security

## 5.1 Encryption

### Introduction

By using encryption, communication between the wireless clients and your Thomson Gateway is protected by a passphrase. Only clients which use the correct network name (SSID) and passphrase can connect to your network.

### Encryption methods

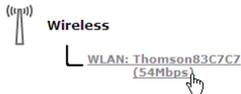
During the years a number of encryption types have been developed. The list below gives you an overview of the supported encryption types ordered by security level, you will find the highest level of security at the top of the list:

- **WPA-PSK Encryption:**  
The wireless data is being encrypted with a user-defined key. Wireless clients must be configured with this key before they can connect to the Thomson Gateway.
- **WEP Encryption:**  
The first encryption type used for wireless connections. Like WPA-PSK it uses a user-defined key, but WEP has been proven to have some security issues. We strongly recommend you to use WPA-PSK instead.

### Configuring the wireless encryption

Proceed as follows:

- 1 Open the Thomson Gateway Web Interface.
- 2 On the left menu, click **Home Network**.
- 3 Under **Wireless**, click your access point.



Your access point will be listed in the following format: "WLAN:<Network Name> (<Actual Speed>)". For example, **WLAN: Thomson83C7C7 (54Mbps)**.

- 4 The **Wireless Access Point** page appears.
- 5 In the Navigation Bar, click **Configure**.
- 6 Under **Security**, you can change the **Encryption**. If you want to use:
  - ▶ WEP Encryption, continue with "5.1.1 Configuring WEP Encryption" on page 59.
  - ▶ WPA-PSK Encryption, continue with "5.1.2 Configuring WPA-PSK Encryption" on page 60.

### 5.1.1 Configuring WEP Encryption

#### Procedure

Continuing from “Configuring the wireless encryption”:

- 1 Select **Use WEP Encryption**
- 2 In the **WEP Key Length** list, click the desired key length (a higher key length offers higher security).
- 3 In the **Encryption key** box, type a Network key of your choice. If you are using:
  - ▶ A 64-bit key:  
Type 10 hexadecimal characters (characters from 0 to 9 and from A to F) or 5 alphanumeric characters.
  - ▶ A 128-bit key:  
Type 26 hexadecimal characters (characters from 0 to 9 and from A to F) or 13 alphanumeric characters.
- 4 Click **Apply**.
- 5 Configure your wireless client(s) with the same settings.

## 5.1.2 Configuring WPA-PSK Encryption

### Procedure

Continuing from “ Configuring the wireless encryption”:

- 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 alphanumeric characters or 64 hexadecimal characters (characters from 0 to 9 and from A to F).
- 3 In the **WPA-PSK Version** list, click the WPA-version of your choice. Following options are available:
  - ▶ **WPA2:**  
WPA2 is the most secure version, but not all wireless clients already support it. Before you select this version, make sure all of your wireless clients support it.
  - ▶ **WPA+WPA2:**  
If not all of your wireless clients support WPA2 or you are not sure if they support WPA2, we recommend you to choose WPA+WPA2. Wireless clients that support WPA2 will use WPA2, the others will use WPA.
  - ▶ **WPA:**  
If none of your wireless clients support WPA2 choose this option.
- 4 Click **Apply**.
- 5 Configure your wireless client(s) with the same settings.



To use WPA2 on Windows XP SP2 you first have to install Wi-Fi Protected Access 2 (WPA2)/ Wireless Provisioning Services Information Element (WPS IE) update. You can find this update on <http://support.microsoft.com/kb/917021>.

## 5.2 Access Control

### What is access control?

Every network device carries a unique hexadecimal code (MAC address). Access control enables you to allow/deny access to wireless clients based on their MAC address.

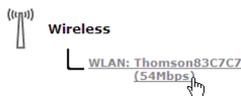
### Drawbacks

- MAC authentication is linked to the user's hardware and not to his identity.
- You can easily change the MAC address of your wireless clients.

### How can I configure this on the Thomson Gateway?

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the left menu, click **Home Network**.
- 3 Under **Wireless**, click your access point.



Your access point will be listed in the following format: "WLAN:<Network Name> (<Actual Speed>)". For example, **WLAN: Thomson83C7C7 (54Mbps)**.

- 4 The **Wireless Access Point** page appears.
- 5 In the Navigation Bar, click **Configure**.
- 6 Under **Security**, you can set the **Allow New Devices** property to:
  - ▶ New stations are allowed (automatically).
  - ▶ New stations are allowed (via registration)
  - ▶ New stations are not allowed.
- 7 Select the option of your choice and click **Apply**.

### New stations are allowed (automatically)

Access control is disabled. All wireless client can connect if they use the correct SSID and encryption.

### New stations are allowed (via registration)

Access Control is enabled. To add new wireless clients to the access control list, you have to search for new wireless devices using the:

- Registration button on the front panel of your Thomson Gateway.
- Search for wireless devices task on the Thomson Gateway Web Interface.

## 5 Wireless Security

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### New stations are not allowed

Access Control is enabled. You can only add your wireless devices to the access control list using the Search for wireless devices task on the Thomson Gateway Web Interface.

### Search for wireless devices task

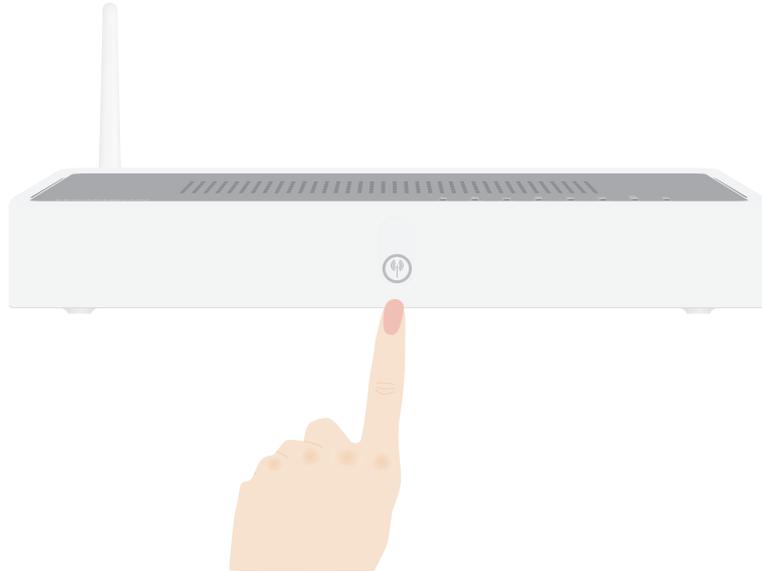
To add new wireless devices to the access control list:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Home Network** menu, click **Devices**.
- 3 In the **Pick a task** list, click **Search for wireless devices**.
- 4 The Thomson Gateway is now in registering mode and will add all devices that use the correct SSID and encryption to the access control list. During this phase the WLAN LED colour will switch between red and green.
- 5 Your new wireless clients should now be connected to the Thomson Gateway.

### Registering Clients via the Association Button

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

- 1 Push the Registration button on the Thomson Gateway front panel and hold it for at least two seconds.



- 2 The WLAN LED toggles between green and red.
- 3 The Thomson Gateway unlocks the Access Control List for one minute. Wireless clients configured with the correct wireless settings that try to connect to the Thomson Gateway will be added to the list of allowed devices.



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

- 4 Depending on your wireless client adapter, a wireless icon may become green or a message similar to the following may appear: "Successfully joined Wireless network Thomson123456".
- 5 After one minute, the Thomson Gateway locks the Access Control List again.



The registration procedure can be repeated as often as needed.

## 5.3 Disabling SSID Broadcast

### What does this mean?

Access points broadcast their Network Name (SSID) to announce themselves to the wireless stations and other access points. Wireless clients will make a list of these access points and show them to the user. The user can then select his wireless client and try to connect to this access point.

By disabling the SSID broadcasting, your access point will no longer be available in those lists. Users will have to enter the Network Name manually if they want to connect to your wireless network.

### Security

This was the first method to secure a WLAN, because you have to know the Network Name in order to access the wireless network. With the correct tools, hackers can still find out which SSID you are using. But you can see it as a first step in discouraging them to try and break in to your wireless network.

### Procedure

To disable SSID broadcast, proceed as follows:

- 1 Open the Thomson Gateway Web Interface.
- 2 Under **Home Network**, click **Wireless**.
- 3 The Wireless Access Point page appears.
- 4 In the Navigation Bar, click **Configure**.
- 5 Under Security, clear the **Broadcast Network Name** check box.

## 6 Internet Security

### Overview

The Thomson Gateway offers you various options to secure your network:

Topic	Page
Firewall	66
Web site Filtering	67

# 6 Internet Security

## 6.1 Firewall

### Changing the security level

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Firewall**.
- 3 The **Firewall** page appears. In the upper-right corner, click **Configure**.
- 4 A list with security settings with a brief description is displayed.
- 5 Select the security level of your choice and click **Apply**.

### Creating a new security level

If you do not find a security level up to your need, you are able to create a new security level.



This feature is intended for *advanced users only*.

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 In the **Clone from existing Security Levels** list, click the security level you want to start from.
- 6 Click **Apply**.
- 7 You can now make the necessary changes to the security level.

## 6.2 Web site Filtering

### Introduction

Web site filtering allows you to restrict access to specific web sites.

### Strategies

There are two strategies you can follow:

- **Allow** access to **all** web sites and manually specify which web sites may not be accessed.
- or -
- **Deny** access to **all** web site and manually specify a number of web sites that may be accessed.

### Procedure

Proceed as follows:

- 1 Enable Web site filtering and specify a default action.
- 2 Configure the exceptions.

### Enable Web site filtering and specify a default action

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Web Site Filtering**.
- 3 On the Navigation Bar, click **Configure**.
- 4 Select the **Use Address Based Filter** check box.
- 5 In the **Action for Unknown Sites**, select the action you want to use by default.
- 6 Click **Apply**.

### Configure the exceptions

You can now:

- Denying access to a specific Web site
- Allowing access to a specific Web site
- Redirecting a Web site
- Redirecting all Web sites

## 6.2.1 Denying access to a specific Web site

### Use cases

Use this feature if:

- **Allow** is selected under **Action for Unknown Sites** and you want to make an exception for a specific site.
- **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 block access to “mail.provider.com”.

### Procedure

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Toolbox** menu, click **Web Site Filtering**.
- 3 Select the **Use Address Based Filter** check box.
- 4 Type the URL of the Web site you want to block (for example “mail.provider.com”) in the **Web Site** box.
- 5 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.
- 6 Click **Add**.

### 6.2.2 Allowing access to a specific Web site

#### Use cases

Use this feature if:

- **Block** is selected under **Action for Unknown Sites** and you want to make an exception for a specific site.
- **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”.

#### Procedure

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**.

## 6 Internet Security

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### 6.2.3 Redirecting a Web site

#### Procedure

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**.

### 6.2.4 Redirecting all Web sites

#### Procedure

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**.



## 7 Troubleshooting

### Introduction

This chapter suggest solutions for problems you may encounter while installing or configuring your Thomson Gateway.

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

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

### Topics

In this chapter:

- General Thomson Gateway Troubleshooting
- Voice over IP Troubleshooting
- Reset to Factory Defaults

## 7.1 Setup wizard Troubleshooting

### The Setup CD does not start automatically

If your computer runs:

- Microsoft Windows:
  - 1 Click the Windows **Start** button.
  - 2 Click **Run**.
  - 3 In the **Open** field, type the following path: **D:\Setup.exe**, where D stands for the drive letter of your CD- or DVD-ROM drive.
- Mac OS X:
  - 1 On your desktop, double-click the CD icon.
  - 2 Double-click **Menu**.

### Your Thomson Gateway has not been found

If you see this error during setup, check whether:

- The Thomson Gateway is turned on and fully initialized.
- Your computer has a valid IP address, that is any address but 0.0.0.0.
- No dedicated firewall device or router is placed between your computer and the Thomson Gateway.
- No personal network security software (for example firewall software) is running on your computer.
- Your computer is correctly connected to the Thomson Gateway

## 7.2 General Thomson Gateway Troubleshooting

### Thomson Gateway does not work

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

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



The power requirements for your Thomson Gateway are clearly indicated on the identification label on the bottom of the Thomson Gateway. Only use the power adaptor supplied with your Thomson Gateway.

- The Thomson Gateway is turned on via the push button or rocker switch on the back panel.

### Thomson Gateway unreachable

If your Thomson Gateway cannot be reached due to misconfiguration, you might consider a hardware reset to factory defaults as described in “7.4 Reset to Factory Defaults” on page 79.

### Poor Thomson Gateway performance

Make sure that the Thomson Gateway is installed and configured as instructed in “1 Installation” on page 3 or as instructed by the Service Provider.

## 7.2.1 Wired Connection 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.

## 7.2.2 Wireless Connection 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 Thomson Gateway 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 Thomson Gateway are allowed to connect through wireless channels as defined for local regulatory domain.
- The wireless 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 repositioning the Thomson Gateway or directing the Thomson Gateway's antenna(s) for optimal performance.
- Make sure that the wireless client adapter is enabled (message like "radio on").

### Poor Wireless Connectivity or Range

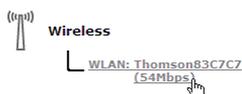
Try the following:

- Change the wireless channel.
- Make sure both the wireless client adapter and the Thomson Gateway are allowed to connect through wireless channels as defined for local regulatory domain.
- Check the location of the Thomson Gateway in the building.
- Check the signal strength, indicated by the wireless client manager. If the signal is low, try to place the Thomson Gateway or to direct the Thomson Gateway's antenna(s) for optimal performance.

### Change the wireless channel

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the left menu, click **Home Network**.
- 3 Under **Wireless**, click your access point.



Your access point will be listed in the following format: "WLAN:<Network Name> (<Actual Speed>)". For example, **WLAN: Thomson83C7C7 (54Mbps)**.

- 4 The **Wireless Access Point** page appears.
- 5 In the Navigation Bar, click **Configure**.
- 6 Under **Configuration**, select the channel of your choice in the **Channel Selection** list.
- 7 Click **Apply**.

# 7 Troubleshooting

## 7.3 Voice over IP Troubleshooting

### Introduction

If you cannot establish a phone call via your Thomson Gateway, try the suggestions below.

### Calling over VoIP

If you have problems calling via VoIP, check whether:

- Your telephone is correctly connected to the Thomson Gateway.
- Your telephone is working on the PSTN network:
  - ▶ Connect your phone directly to PSTN (not via the Thomson Gateway).
  - ▶ Try to make a phone call.
- Your phone number, user name, and password is configured correctly.
- The registrar's and proxy server's IP address and port number are configured correctly.
- The **Power**, **Broadband/DSL** and **Voice** LEDs are on.



As soon as the **Voice** 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 Thomson Gateway.



If the Thomson Gateway 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.

### Problems with Supplementary Services

If you have a problem with a supplementary telephony service, check whether the service is activated.

## 7.4 Reset to Factory Defaults

### Resetting your Thomson Gateway

If at some point you can no longer connect to the Thomson Gateway or you want to make a fresh install, it may be useful to perform a reset to factory defaults.

### Warning

A reset to factory default settings deletes all configuration changes you made. Therefore, after the reset, a reconfiguration of your Thomson Gateway will be needed.

Also your WLAN clients will have to be re-associated, as described in “3.1.1 Connecting a computer using Wireless” on page 21.

### Methods

You can choose between:

- Software Reset
- Hardware Reset

### Software Reset

Proceed as follows:

- 1 Browse to the Thomson Gateway Web Interface.
- 2 On the **Thomson Gateway** menu, click **Configuration**.
- 3 In the **Pick a task** list, click **Reset my Thomson Gateway to default settings**.
- 4 The Thomson Gateway restores the initial configuration and restarts.
- 5 The Thomson Gateway returns to the Thomson Gateway home page (unless the IP address of your computer is not in the same subnet as the default IP address of the Thomson Gateway, being 192.168.1.254).

# 7 Troubleshooting

## Hardware Reset

Proceed as follows:

- 1 Make sure the Thomson Gateway is turned on.
- 2 Use a pen or an unfolded paperclip to push the recessed **Reset** button on the back panel. Push it until the **Power** LED lights red - this will take about 7 seconds.



- 3 Release the **Reset** button.
- 4 The Thomson Gateway restarts.



Your system administrator may have disabled the physical reset button of the Thomson Gateway. In this case, a hardware reset to defaults is not possible.



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