



THOMSON



THOMSON TG185n

Ethernet-to-WiFi Convertor/Wireless-n Repeater



Setup and User Guide

THOMSON TG185n

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.

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.
- **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

1 Introduction

Introduction

This Setup and User Guide will show you how to set up your THOMSON TG185n.

Supported wireless standards

The THOMSON TG185n supports the following wireless standards:

Standard	Maximum Data Rate
IEEE 802.11n	300 Mbps
IEEE 802.11g	54 Mbps
IEEE 802.11b	11 Mbps
IEEE 802.11a	54 Mbps

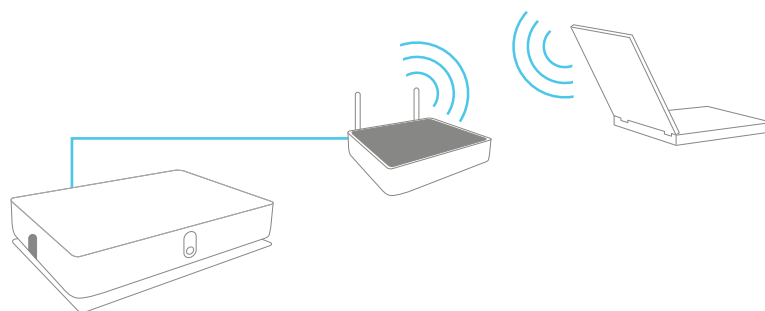
THOMSON TG185n Modes

You can use the THOMSON TG185n as:

- Wireless Access Point
- Wireless Repeater
- Wireless Client

Wireless Access Point

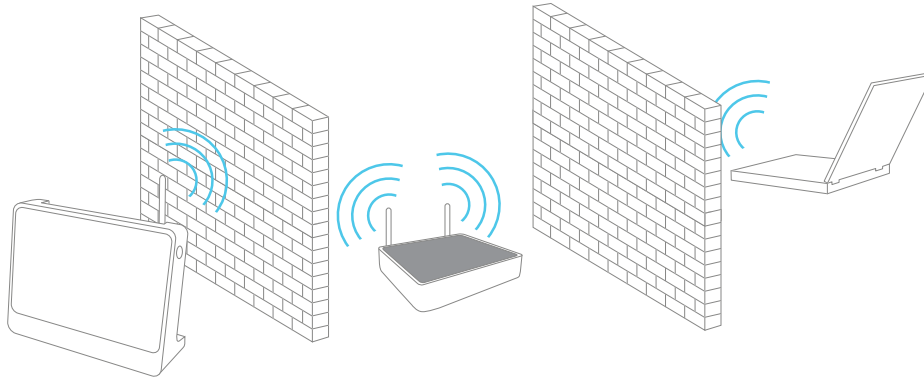
Use this mode if you are using a wired network and you now want to be able to access your network wirelessly.



1 Introduction

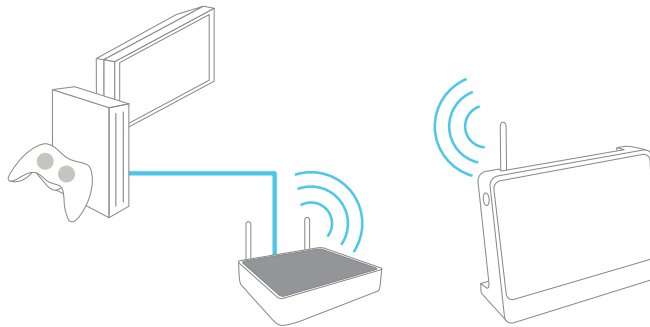
Wireless Repeater

Use this mode to extend the coverage of an existing wireless network:



Wireless Client

Use this mode to connect a wired Ethernet device (for example: a laptop, a gaming console with Ethernet connectivity,...):



2 Installation

Introduction

In this chapter we will help you to:

- 1 Connect the cables.
- 2 Configure the THOMSON TG185n.

Connect the cables

Proceed as follows:

- 1 Plug the connector of the electric power supply adapter into the power inlet port on the back panel of your THOMSON TG185n.
- 2 Plug the adapter into a nearby mains socket.
- 3 Plug one end of the Ethernet cable into the **Ethernet** port of your THOMSON TG185n.
- 4 Plug the other end of the Ethernet cable in the Ethernet port on your computer.



Ethernet ports are often marked with the following label: 

Configure the THOMSON TG185n

If you want to configure your THOMSON TG185n as:

- Wireless Access Point, proceed with “3.1 Configuring The THOMSON TG185n As Access Point” on page 8.
- Wireless Repeater, proceed with “4 The THOMSON TG185n as Wireless Repeater” on page 21.
- Wireless Client, proceed with “5 Your THOMSON TG185n as Wireless Client” on page 29.

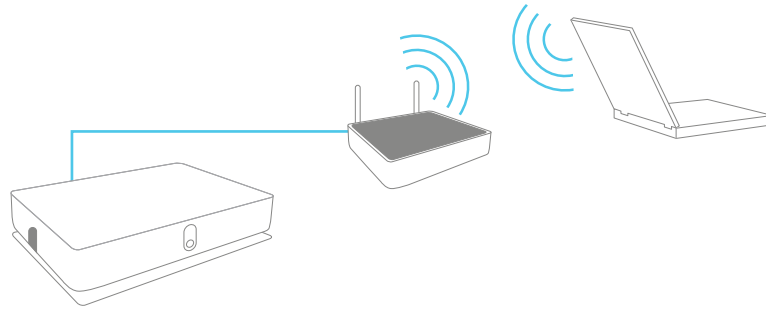
2 Installation

3 The THOMSON TG185n as Wireless Access Point

3 The THOMSON TG185n as Wireless Access Point

Usage

Use this mode if you are using a wired network and you now want to be able to access your network wirelessly.



In this chapter

Topic	Page
Configuring The THOMSON TG185n As Access Point	8
Connecting a Wireless Client via WPS	11
Manually Configuring a Wireless Client	15
Securing Your Wireless Network	16

3 The THOMSON TG185n as Wireless Access Point

3.1 Configuring The THOMSON TG185n As Access Point

Procedure

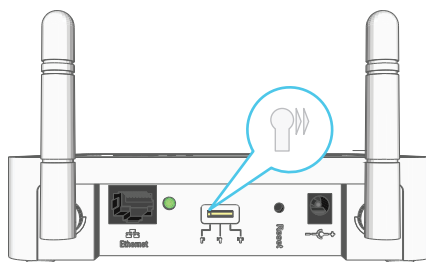
Before you can use your THOMSON TG185n as wireless access point you have to complete following steps:

- 1 Switch the THOMSON TG185n to access point mode.
- 2 Assign a static IP address to your computer.
- 3 Configure the wireless settings of your THOMSON TG185n.
- 4 Configure the IP settings of your THOMSON TG185n (optional).
- 5 Connect your THOMSON TG185n to your Internet gateway.
- 6 Configure your wireless clients.
- 7 Configure your computer to obtain an IP address automatically.

Switch the THOMSON TG185n to access point mode

Proceed as follows:

- 1 On the back panel of your THOMSON TG185n, move the switch to the access point position.



- 2 After a few seconds the **Access Point** LED will turn green.

Assign a static IP address to your computer

The IP address must be between 192.168.1.14 and 192.168.1.63 (for example 192.168.1.20). The subnet mask must be **255.255.255.0**.

For more information, see "7.1 Assigning a Static IP to Your Computer" on page 44.

Configure the wireless settings of your THOMSON TG185n

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.11>.
- 2 The THOMSON TG185n Web Interface appears. On the **Basic Setting** menu, click **Wireless Setting**.
- 3 The **Wireless Settings** page appears.
- 4 In the **Network ID (SSID)** box, you can change the name of your wireless network. This name will be displayed in the list of available networks when you try to connect a device to your THOMSON TG185n access point.

3 The THOMSON TG185n as Wireless Access Point

- 5 In the **Select Security Policy** list, select the security policy of your choice and enter a passphrase/ encryption key. For more information, see “3.4 Securing Your Wireless Network” on page 16.



If the **Enable WPS (Wi-Fi Protected Setup)** check box is enabled you can only select the following policies:

- **None**
- **WPA-PSK**
- **WPA2-PSK**
- **WPA-PSK-AUTO**

If you want to select another policy (not recommended), clear the **Enable WPS (Wi-Fi Protected Setup)** check box.

For more information on WPS, see “3.2 Connecting a Wireless Client via WPS”.

- 6 Select the **WPS Configured** check box, this way you are sure that your settings will not be changes during WPS.
- 7 Click **Apply**.
- 8 The THOMSON TG185n prompts you that the configuration was successful.

Configure the IP settings of your THOMSON TG185n (optional)

If you still want to be able to access your THOMSON TG185n after connecting it to your Internet gateway, you have to make sure that they are both using the same IP range.



If your Internet gateway is also a THOMSON product, this will automatically be the case and no extra configuration is needed. Continue with the next topic.

If you choose not to do this configuration or you don't know the IP settings of your Internet gateway, you will only be able to access the THOMSON TG185n by assigning a static IP address to your computer that is the same range as your THOMSON TG185n.

To change the IP settings of your THOMSON TG185n:

- 1 On the **Basic Setting** menu, click **Device IP Setting**.
- 2 The **Device IP Setting** page appears. On this page you can configure the IP address of your THOMSON TG185n. Select:
 - ▶ **Assign static IP address to this device** if you want to choose the IP address for your THOMSON TG185n yourself.
 - 1 In the **IP address** box, type an IP address that is in the same range as your Internet gateway.
 - 2 In the **IP Subnet Mask**, type the same subnet mask as your Internet gateway.
 - 3 In the **Gateway IP Address**, type the type the IP address of your Internet gateway.
 - 4 Write down this IP address and subnet mask. From now on, you can only access the THOMSON TG185n at this address
 - ▶ **Use the DHCP client protocol to automatically get the IP address for this device** if you want your Internet gateway to assign an IP address to your THOMSON TG185n. In this case you do not have to provide an **IP address**, **IP Subnet Mask** and **Gateway IP Address**.
- 3 Click **Apply**.

Connect your THOMSON TG185n to your Internet gateway

Proceed as follows:

- 1 Disconnect the Ethernet cable from your computer.
- 2 Plug the Ethernet in an Ethernet port on your Internet gateway.
- 3 Your THOMSON TG185n is now connected your Internet gateway via the Ethernet cable.

3 The THOMSON TG185n as Wireless Access Point

Configure your wireless clients

In order to connect your wireless clients to the THOMSON TG185n you must configure them with the same Network ID (SSID) and security as your wireless access point. You can do this:

- Automatically via WPS.
For more information, see “3.2 Connecting a Wireless Client via WPS” on page 11
- Manually entering these settings on the configuration utility of your wireless clients.either using Wi-Fi Protected Setup (WPS) or manually. For more information, see “3.3 Manually Configuring a Wireless Client” on page 15.

Configure your computer to obtain an IP address automatically

For more information, see “7.2 Restoring the IP Settings of Your Computer” on page 48.

3.2 Connecting a Wireless Client via WPS

WPS

Wi-Fi Protected Setup (WPS) allows you to add new wireless clients to your network in a swift and easy way, without the need to enter all of your wireless settings (SSID, encryption,...).

Requirements

- Your wireless clients must supports WPS. Check the documentation of your wireless client for this.
- WPS must be enabled on your THOMSON TG185n (factory default).
- You can only use WPS with the following security levels:
 - ▶ WPA-PSK
 - ▶ WPA2-PSK
 - ▶ No encryption

Supported WPS options

The THOMSON TG185n supports the following options:

- Push Button Configuration (PBC):
This is the easiest way to connect your wireless client. You have to push a button both on the THOMSON TG185n and the wireless client. For more information, see “3.2.1 Push Button Configuration” on page 12.
- PIN code entry on the wireless client:
The THOMSON TG185n generates a PIN code that you have to enter in the configuration utility of your wireless client. For more information, see “3.2.2 PIN Code Entry On The Wireless Client” on page 13.
- PIN code entry on the THOMSON TG185n:
The wireless client generates a PIN code that you have to enter on the web interface of your THOMSON TG185n. For more information, see “3.2.3 PIN Code Entry On the THOMSON TG185n” on page 14.



Your wireless client may not support all of these options. For more information, consult the documentation of your wireless client.

Troubleshooting

If you are having trouble connecting your wireless client via WPS, try to configure it manually. For more information, see “3.3 Manually Configuring a Wireless Client” on page 15.

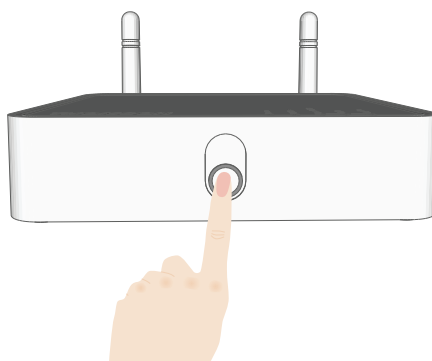
3 The THOMSON TG185n as Wireless Access Point

3.2.1 Push Button Configuration

Procedure

Proceed as follows:

- 1 Shortly press the WPS button on the THOMSON TG185n:



- 2 The WPS button LED starts blinking green. This indicates that the THOMSON TG185n is now searching for wireless clients that are in registration mode. You now have two minutes to start WPS on your wireless client.



If the LED does not start to blink, WPS is not enabled on your THOMSON TG185n. For more information on how to enable WPS, see "WPS does not work" on page 51.

- 3 Start WPS on your wireless client and choose Push Button Configuration (PBC) as method. For more information, consult the documentation of your wireless client.

3 The THOMSON TG185n as Wireless Access Point

3.2.2 PIN Code Entry On The Wireless Client

Get the THOMSON TG185n's PIN code

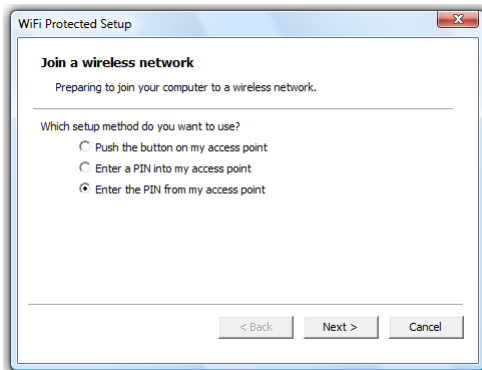
You can find the WIRELESS PIN:

- On the label on the bottom of your THOMSON TG185n.
- On the THOMSON TG185n Web Interface:
 - 1 Open your web browser and browse to <http://192.168.1.11>.
 - 2 On the **Basic Setting** menu, click **Wireless Setting**.
 - 3 You can find the PIN code in the **WPS Pin** box.

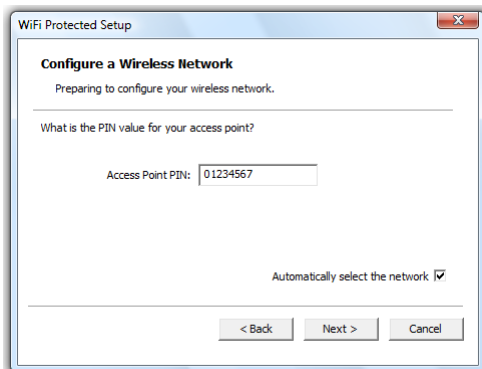
Enter the THOMSON TG185n's PIN code in the client utility

Proceed as follows:

- 1 Open the configuration utility of your wireless client.
- 2 Start WPS on your wireless client and choose to enter a PIN from your access point. For example, on the TG121n Wireless Client Utility you will see the following screen:



- 3 Enter the PIN code of your THOMSON TG185n and follow the instructions. For example, on the TG121n Wireless Client Utility you will see the following screen:



- 4 At the end of the installation your utility will inform you that WPS was successful.

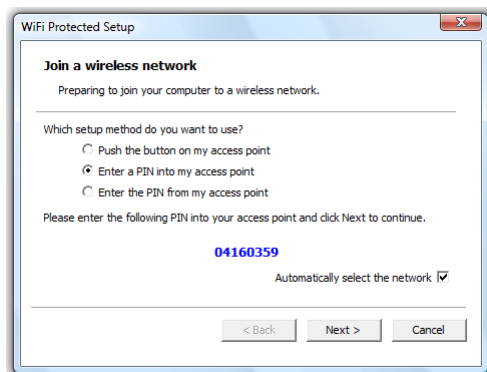
3 The THOMSON TG185n as Wireless Access Point

3.2.3 PIN Code Entry On the THOMSON TG185n

Get your wireless client's PIN code

Proceed as follows:

- 1 Open the configuration utility of your wireless client.
- 2 Start WPS and choose to generate a PIN code or enter a PIN code into your access point. For example on the TG121n Wireless Client Utility you will see the following screen:



- 3 Write down the PIN code generated by the configuration utility.

Enter your wireless client's PIN code in the THOMSON TG185n web interface

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.11>.
- 2 On the **Advanced Setting** menu, click **WPS Setting**.
- 3 Under **Select the WPS Method**, select PIN and enter the PIN code in the **Pin Number** box.
- 4 Click **Submit**.
- 5 Continue with the configuration on the configuration utility of your wireless client.
- 6 At the end of the installation your utility will inform you that WPS was successful.

3.3 Manually Configuring a Wireless Client

Before you start

Before you can connect a computer to your wireless network you need to know which Network ID (SSID) and encryption your THOMSON TG185n is using.

Default values

If you did not yet change the wireless settings, you must use the default settings that are printed on the label on the bottom of your THOMSON TG185n.

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 Open your web browser and browse to <http://192.168.1.11>.
- 2 The THOMSON TG185n Web Interface appears. On the **Basic Setting** menu, click **Wireless Setting**.
- 3 On the **Wireless Setting** menu, you can find:
 - ▶ The network name (SSID).
 - ▶ 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 TG185n and reconfigure it all over again. For more information, see "7.4 Reset to Factory Defaults" on page 52.

Procedure

Configure your computer with the same wireless settings as your THOMSON TG185n. For more information, consult the help of your wireless client.

3 The THOMSON TG185n as Wireless Access Point

3.4 Securing Your Wireless Network

Introduction

By using encryption, communication between the wireless clients and your THOMSON TG185n 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:

For Enterprise environment:

- WPA(2) Encryption:
To use this encryption, a RADIUS authentication server must be available in your network. In this scenario wireless clients first have to authenticate to the RADIUS server. The RADIUS server will tell the wireless client which key it should use to encrypt its data. The RADIUS server will change this key after a specified time.
- If you do not have a RADIUS server in your network, use one of the encryption types for home and small office environment.

For home or small office environment:

- WPA(2)-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 TG185n.
- 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.

Which encryption method should I use?

We strongly recommend you to *use the highest level* of encryption that is supported by all your wireless clients.

Configuring the wireless encryption

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.11>.
- 2 The THOMSON TG185n Web Interface appears. On the **Basic Setting** menu, click **Wireless Setting**.
- 3 The **Wireless Setting** page appears.
- 4 In the Security Policy list, you can select the policy of your choice. If you want to use:
 - ▶ WPA(2)-PSK Encryption, continue with "3.4.1 Configuring WPA(2)-PSK Encryption" on page 17.
 - ▶ WEP Encryption, continue with "3.4.3 Configuring WEP Encryption" on page 19.
 - ▶ WPA(2) Encryption, continue with "3.4.2 Configuring WPA Encryption" on page 18.

3.4.1 Configuring WPA(2)-PSK Encryption

Procedure

Continuing from “ Configuring the wireless encryption” on page 16:

1 In the **Select Security list**, select:

▶ **WPA2-PSK:**

WPA2-PSK is the most secure version, but not all wireless clients already support it. Before you select this version, make sure that all of your wireless clients support it.

▶ **WPA-PSK-AUTO:**

If not all of your wireless clients support WPA2-PSK or you are not sure if they support WPA2-PSK, we recommend you to choose **WPA-PSK-AUTO**. Wireless clients that support WPA2-PSK will use WPA2-PSK, the others will use WPA-PSK.

▶ **WPA-PSK:**

If none of your wireless clients support WPA2-PSK choose this option.



To use WPA2-PSK on Windows XP Service Pack 2 (SP2) you first have to install Wi-Fi Protected Access 2 (WPA2)/Wireless Provisioning Services Information Element (WPS IE) update or install SP3 on your Windows XP.

You can find the WPS IE update on <http://support.microsoft.com/kb/917021>.

2 In the **Pre-Shared Key** box, type a pass phrase (also known as Pre-shared key) of your choice. The key must consist of 8 to 63 alphanumeric characters or 64 hexadecimal characters (characters from 0 to 9 and from A to F).

3 Click **Apply**.

4 The THOMSON TG185n prompts you that the configuration was successful.

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

3 The THOMSON TG185n as Wireless Access Point

3.4.2 Configuring WPA Encryption

Configure the RADIUS server


Continuing from “Configuring the wireless encryption” on page 16:

Proceed as follows:

- 1 On the **Advanced Setting** menu, click **RADIUS setting**.
- 2 Under **Primary Server**, select **Enable Primary Server**.
- 3 In the **Server IP address** box, type the IP address of your RADIUS server.
- 4 In the **Port Number** box, type the RADIUS Port.
- 5 In the **Shared Secret** box, type the RADIUS Key.

Enable WPA

Proceed as follows:

- 1 On the **Basic Setting** menu, click **Wireless Setting**.
 - 2 Clear the **Enable WPS (Wi-Fi Protected Setup)** check box.
 - 3 In the **Select Security Policy** list, click the desired WPA version.
 - ▶ **WPA2:**
WPA2 is the most secure version, but not all wireless clients already support it. Before you select this version, make sure that all of your wireless clients support it.
 - ▶ **WPA-AUTO:**
If not all of your wireless clients support WPA2 or if you are not sure if they support WPA2, we recommend you to choose **WPA-AUTO**. 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.
- 
- To use WPA2-PSK on Windows XP Service Pack 2 (SP2) you first have to install Wi-Fi Protected Access 2 (WPA2)/Wireless Provisioning Services Information Element (WPS IE) update or install SP3 on your Windows XP.
- You can find the WPS IE update on <http://support.microsoft.com/kb/917021>.
- 4 Click **Apply** to immediately apply your changes.
 - 5 The THOMSON TG185n prompts you that the configuration was successful.
 - 6 Configure your wireless client(s) with the same settings.

3.4.3 Configuring WEP Encryption

Warning

WEP has been proven to have some security issues. We strongly recommend you to use WPA-PSK instead.

Procedure

Continuing from “Configuring the wireless encryption” on page 16:

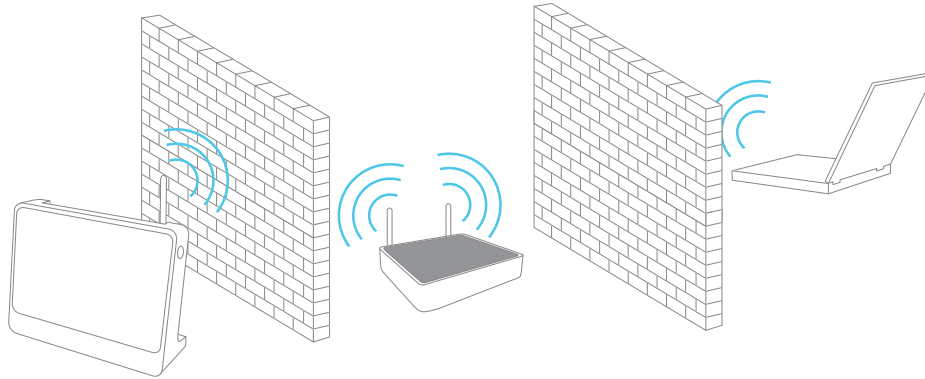
- 1 Clear the **Enable WPS (Wi-Fi Protected Setup)** check box.
- 2 In the **Select Security Policy** list, select **WEP**.
- 3 In the **WEP Key Length** list, click the desired key length (a higher key length offers higher security).
- 4 Select:
 - ▶ **WEP64-ASCII** if you want to use a key consisting of 5 alphanumeric characters.
 - ▶ **WEP64-Hex** if you want to use a key consisting of 10 hexadecimal characters (characters from 0 to 9 and from A to F).
 - ▶ **WEP128-ASCII** if you want to use a key consisting of 13 alphanumeric characters.
 - ▶ **WEP128-Hex** if you want to use a key consisting of 26 hexadecimal characters (characters from 0 to 9 and from A to F).
 - ▶ **WEP152-ASCII** if you want to use a key consisting of 16 alphanumeric characters.
 - ▶ **WEP152-Hex** if you want to use a key consisting of 32 hexadecimal characters (characters from 0 to 9 and from A to F).
- 5 In the text box next to this selection, type the network key of your choice.
- 6 Click **Apply**.
- 7 The THOMSON TG185n prompts you that the configuration was successful.
- 8 Configure your wireless client(s) with the same settings.

3 The THOMSON TG185n as Wireless Access Point

4 The THOMSON TG185n as Wireless Repeater

Usage

Use this mode if you want to extend the coverage of an existing wireless network:



Terminology

The wireless access point to which we will try to connect can both be a stand-alone wireless access point or a built-in wireless access point (for example, your Internet Gateway may be equipped with a wireless access point). In the following pages we will just refer to it as your access point.

Configuring your THOMSON TG185n

If your Internet Gateway:

- Supports WPS, see “4.1 Automatic Configuration (Via WPS)” on page 22.
- Does not support WPS or you know if it does or not, see “4.2 Manual Configuration (Without WPS)” on page 26.

In this chapter

This chapter will help you to configure your THOMSON TG185n as wireless repeater.

4 The THOMSON TG185n as Wireless Repeater

4.1 Automatic Configuration (Via WPS)

WPS

Wi-Fi Protected Setup (WPS) allows you to connect new wireless devices to your network in a swift and easy way, without the need to enter all of your wireless settings (SSID, encryption,...).

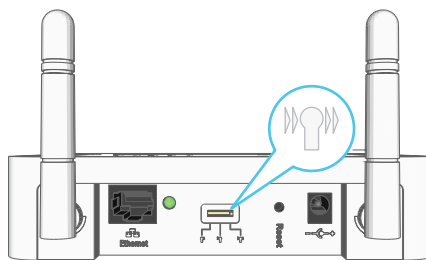
Requirements

- Your access point must supports WPS. Check the documentation of your access point for this.
- WPS must be enabled on your THOMSON TG185n (factory default).
- You can only use WPS with the following security levels:
 - ▶ WPA-PSK
 - ▶ WPA2-PSK
 - ▶ No encryption

Procedure

Proceed as follows:

- 1 On the back panel of your THOMSON TG185n, move the switch to the repeater position.



- 2 After a few seconds the **Repeater** LED will turn green.
- 3 Connect your THOMSON TG185n to you access point. The THOMSON TG185n supports the following options to do this:
 - ▶ Push Button Configuration (PBC):
This is the easiest way to connect your access point. You have to push a button both on the THOMSON TG185n and the access point. For more information, see "4.1.1 Push Button Configuration" on page 23.
 - ▶ PIN code entry on the access point:
The THOMSON TG185n generates a PIN code that you have to enter in the configuration utility of your access point. For more information, see "4.1.2 PIN Code Entry On The Access Point" on page 24.
 - ▶ PIN code entry on the THOMSON TG185n:
The access point generates a PIN code that you have to enter on the web interface of your THOMSON TG185n. For more information, see "4.1.3 PIN Code Entry On the THOMSON TG185n" on page 25.



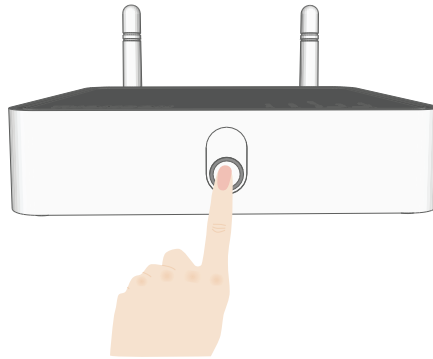
Your access point may not support all of these options. For more information, consult the documentation of your access point.

4.1.1 Push Button Configuration

Procedure

Proceed as follows:

- 1 Start Push Button Configuration on your access point. For more information, consult the documentation of your access point.
- 2 Shortly press the WPS button on your THOMSON TG185n:



- 3 The WPS button LED starts blinking green.



If the LED does not start to blink, WPS is not enabled on your THOMSON TG185n. For more information on how to enable WPS, see “ WPS does not work” on page 51.

- 4 The WPS button LED will turn solid green when the configuration has been completed. After a few seconds the LED will turn off again.

4 The THOMSON TG185n as Wireless Repeater

4.1.2 PIN Code Entry On The Access Point

Get the THOMSON TG185n's PIN code

You can find the WIRELESS PIN:

- On the label on the bottom of your THOMSON TG185n.
- On the THOMSON TG185n Web Interface:
 - 1 Open your web browser and browse to <http://192.168.1.13>.
 - 2 On the **Basic Setting** menu, click **Wireless Setting**.
 - 3 You can find the PIN code in the **WPS Pin** box.

Enter the THOMSON TG185n's on your access point

Proceed as follows:

- 1 Open the configuration utility or web interface of your access point.
- 2 Start WPS on your access point and choose to enter a PIN code.
- 3 Enter the PIN code of your THOMSON TG185n and follow the instructions.

4.1.3 PIN Code Entry On the THOMSON TG185n

Get your access point's PIN code

Check the documentation of your THOMSON TG185n to know where to find the PIN code of your access point. You may find this PIN code:

- On a label on the housing
- On the configuration utility or web interface

Enter your access point's PIN code in the THOMSON TG185n web interface

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.13>.
- 2 On the **Advanced Setting** menu, click **WPS Setting**.
- 3 Under **Select the WPS Method**, select PIN and enter the PIN code in the **Pin Number** box.
- 4 Click **Submit**.
- 5 Continue with the configuration on configuration utility or web interface of your access point.

4 The THOMSON TG185n as Wireless Repeater

4.2 Manual Configuration (Without WPS)

What you need

Before you start make sure you have the following information at hand:

- The Network ID (SSID) of your access point.
- The encryption key/passphrase used by your access point (if security is enabled).

For more information on how to find these items, consult the documentation of your access point.

Procedure

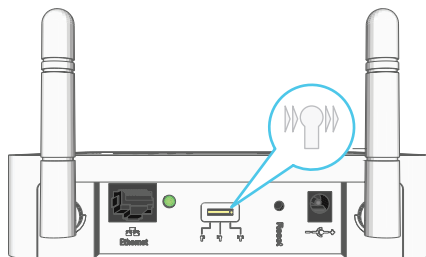
Before you can use your THOMSON TG185n as a repeater you have to complete following steps:

- 1 Switch the THOMSON TG185n to repeater mode.
- 2 Assign a static IP address to your computer.
- 3 Configure the wireless settings of your THOMSON TG185n.
- 4 Configure the IP settings of your THOMSON TG185n (optional).

Switch the THOMSON TG185n to repeater mode

Proceed as follows:

- 1 On the back panel of your THOMSON TG185n, move the switch to the repeater position.



- 2 After a few seconds the **Repeater** LED will turn green.

Assign a static IP address to your computer

The IP address must be between 192.168.1.14 and 192.168.1.63. The subnet mask must be **255.255.255.0**. For more information, see “7.1 Assigning a Static IP to Your Computer” on page 44.

Configure the wireless settings of your THOMSON TG185n

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.13>.
- 2 The THOMSON TG185n Web Interface appears. On the **Basic Setting** menu, click **Wireless Setting**.
- 3 The **Wireless Settings** page appears.
- 4 Under **Wireless configurations for repeater mode**, select **Universal Repeater**.
- 5 In the **Network ID (SSID)** box, type the SSID of your access point.
- 6 In the **Select Security Policy** list, select the same encryption as your access point.

4 The THOMSON TG185n as Wireless Repeater

- 7 Click **Apply**.
- 8 The THOMSON TG185n prompts you that the configuration was successful.

Configure the IP settings of your THOMSON TG185n (optional)

If you still want to be able to access your THOMSON TG185n after connecting it to your access point, you have to make sure that they are both using the same IP range.



If your access point is also a THOMSON product, this will automatically be the case and no extra configuration is needed.

If you choose not to do this configuration or you don't know the IP settings of your Internet Gateway, you will only be able to access the THOMSON TG185n by assigning a static IP address to your computer that is the same range as your THOMSON TG185n.

To change the IP settings of your THOMSON TG185n:

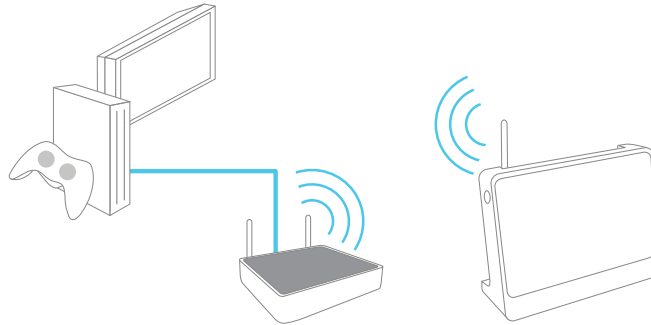
- 1 On the **Basic Setting** menu, click **Device IP Setting**.
- 2 The **Device IP Setting** page appears. On this page you can configure the IP address of your THOMSON TG185n. Select:
 - ▶ **Assign static IP address to this device** if you want to choose the IP address for your THOMSON TG185n yourself.
 - 1 In the **IP address** box, type an IP address that is in the same range as your Internet Gateway.
 - 2 In the **IP Subnet Mask**, type the same subnet mask as your Internet Gateway.
 - 3 In the **Gateway IP Address**, type the type the IP address of your Internet Gateway.
 - 4 Write down this IP address and subnet mask. From now on, you can only access the THOMSON TG185n at this address.
 - ▶ **Use the DHCP client protocol to automatically get the IP address for this device** if you want your access point to assign an IP address to your THOMSON TG185n. In this case you do not have to provide an **IP address**, **IP Subnet Mask** and **Gateway IP Address**.
- 3 Click **Apply**.
- 4 You can now remove the Ethernet cable form your THOMSON TG185n and computer.

4 The THOMSON TG185n as Wireless Repeater

5 Your THOMSON TG185n as Wireless Client

Usage

Use this mode if you want to add wireless connectivity to an Ethernet device (for example: a laptop, a gaming console with Ethernet connectivity,...):



Terminology

The wireless access point to which we will try to connect can both be a stand-alone wireless access point or a built-in wireless access point (for example, your Internet Gateway may be equipped with a wireless access point). In the following pages we will just refer to it as your access point.

Default behaviour

If the THOMSON TG185n is still using its factory default settings, it will automatically repeat the strongest unsecured network.

Configuring your THOMSON TG185n

If your access point:

- Supports WPS, see “5.1 Automatic Configuration (Via WPS)” on page 30.
- Does not support WPS or you don't know if it does or not, see “5.2 Manual Configuration (Without WPS)” on page 33.

5 Your THOMSON TG185n as Wireless Client

5.1 Automatic Configuration (Via WPS)

WPS

Wi-Fi Protected Setup (WPS) allows you to connect the THOMSON TG185n to your access point in a swift and easy way, without the need to enter all of your wireless settings (SSID, encryption,...).

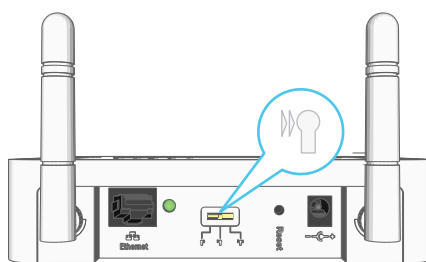
Requirements

- Your access point must support WPS. Check the documentation of your access point for this.
- You can only use WPS with the following security levels:
 - ▶ WPA-PSK
 - ▶ WPA2-PSK
 - ▶ No encryption

Procedure

Proceed as follows:

- 1 On the back panel of your THOMSON TG185n, move the switch to the client position.



- 2 After a few seconds the **Client** LED will turn green.
- 3 Configure the THOMSON TG185n with the wireless settings of your access point. The THOMSON TG185n supports the following options to do this:
 - ▶ Push Button Configuration (PBC):
This is the easiest way to connect your wireless client. You have to push a button both on your access point and the THOMSON TG185n. For more information, see "5.1.1 Push Button Configuration" on page 31.
 - ▶ PIN code entry on your THOMSON TG185n:
Your access point generates a PIN code that you have to enter on the web interface of your THOMSON TG185n. For more information, see "5.1.2 PIN Code From Your Access Point" on page 32.

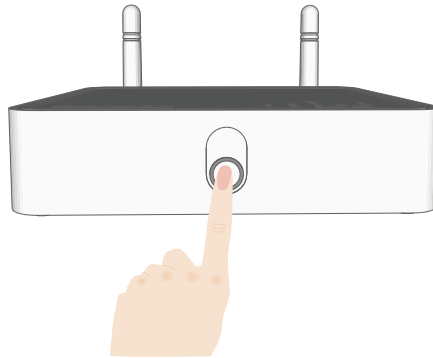


Your wireless client may not support all of these options. For more information, consult the documentation of your wireless client.

5.1.1 Push Button Configuration

Procedure

- 1 Start Push Button Configuration on your access point. For more information, consult the documentation of your access point.
- 2 Shortly press the WPS button on your THOMSON TG185n:



- 3 The WPS button LED starts blinking green.
- 4 The WPS button LED will turn solid green when the configuration has been completed. After a few seconds the LED will turn off again.

5 Your THOMSON TG185n as Wireless Client

5.1.2 PIN Code From Your Access Point

Get your access point's PIN code

Check the documentation of your THOMSON TG185n to know where to find the PIN code of your access point. You may find this PIN code:

- On a label on the housing
- On the configuration utility or web interface

Enter the PIN code in the THOMSON TG185n web interface

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.12>.
- 2 On the **Advanced Setting** menu, click **WPS Setting**.
- 3 Under **Select the WPS Method**, select PIN and enter the PIN code in the **Pin Number** box.
- 4 Click **Submit**.
- 5 Continue with the configuration or web interface of your access point.

5.2 Manual Configuration (Without WPS)

Procedure

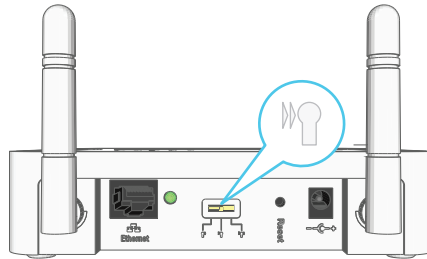
Before you can use your THOMSON TG185n as a repeater you have to complete following steps:

- 1 Switch the THOMSON TG185n to wireless client mode.
- 2 Assign a static IP address to your computer.
- 3 Connect the THOMSON TG185n to your access point.
- 4 Configure the IP settings of your THOMSON TG185n.
- 5 Configure your computer to obtain an IP address automatically.

Switch the THOMSON TG185n to wireless client mode

Proceed as follows:

- 1 On the back panel of your THOMSON TG185n, move the switch to the client position.



- 2 After a few seconds the **Client** LED will turn green.

Assign a static IP address to your computer

The IP address must be between 192.168.1.14 and 192.168.1.252. The subnet mask must be **255.255.255.0**. For more information, see "7.1 Assigning a Static IP to Your Computer" on page 44.

Connect the THOMSON TG185n to your access point

Proceed as follows:

- 1 Open your web browser and browse to <http://192.168.1.12>.
- 2 The THOMSON TG185n Web Interface appears. On the **Device Status** menu, click **Site Survey**.
- 3 The THOMSON TG185n lists all the access points that are within range.
- 4 Select your access point and click **Associate**.
- 5 If your access point is secured, the THOMSON TG185n will take you to the **Wireless Settings** page. Enter the passphrase/key used by your access point and click **Apply**.
- 6 The THOMSON TG185n prompts you that the configuration was successful.

5 Your THOMSON TG185n as Wireless Client

Configure the IP settings of your THOMSON TG185n

To change the IP settings of your THOMSON TG185n:

- 1 On the **Basic Setting** menu, click **Device IP Setting**.
- 2 The **Device IP Setting** page appears. On this page you can configure the IP address of your THOMSON TG185n. Select:
 - ▶ **Assign static IP address to this device** if you want to choose the IP address for your THOMSON TG185n yourself.
 - 1 In the **IP address** box, type an IP address that is in the same range as your access point.
 - 2 In the **IP Subnet Mask**, type the same subnet mask as your access point.
 - 3 In the **Gateway IP Address**, type the type the IP address of your access point.
 - 4 Write down this IP address and subnet mask. From now on, you can only access the THOMSON TG185n at this address.
 - ▶ **Use the DHCP client protocol to automatically get the IP address for this device** if you want your access point to assign an IP address to your THOMSON TG185n. In this case you do not have to provide an **IP address**, **IP Subnet Mask** and **Gateway IP Address**.
- 3 Click **Apply**.
- 4 Remove the Ethernet cable from your THOMSON TG185n and computer.

Configure your computer to obtain an IP address automatically

For more information, see "7.2 Restoring the IP Settings of Your Computer" on page 48.

6 THOMSON TG185n Basics

In this chapter

Topic	Page
THOMSON TG185n LED Behaviour	36
THOMSON TG185n Web Interface	40
Saving/Restoring Your Configuration	41

6.1 THOMSON TG185n LED Behaviour

Content

This chapter describes the behaviour of:

- Status LEDs
- WPS Button LED
- Ethernet LEDs

6.1.1 Status LEDs

Introduction

On the top panel of your THOMSON TG185n, you can find a number of status LEDs, indicating the state of the device during normal operation.

Power LED

Colour	State	Description
Green	Solid on	Power on, normal operation
Off		Power off

Wireless LED

Colour	State	Description
Green	Blinking	Wireless activity
	Solid on	Wireless service enabled, no activity
Off		No Ethernet connection

Access Point LED

When the LED is solid green, the THOMSON TG185n is in Wireless Access Point mode. For more information see "THOMSON TG185n Modes" on page 3.

Client LED

When the LED is solid green, the THOMSON TG185n is in Wireless Client mode. For more information see "THOMSON TG185n Modes" on page 3.

Repeater LED

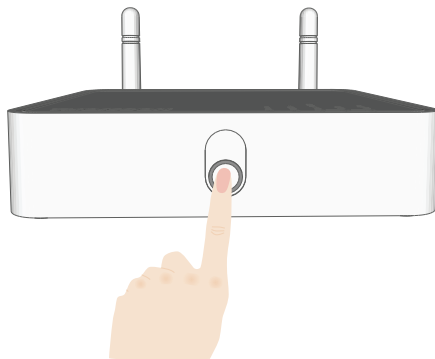
When the LED is solid green, the THOMSON TG185n is in Wireless Repeater mode. For more information see "THOMSON TG185n Modes" on page 3.

6 THOMSON TG185n Basics

6.1.2 WPS Button LED

Introduction

The WPS button allows you to connect the THOMSON TG185n with other wireless devices.



WPS LED

Colour	State	Description
green	Solid On	Client successfully registered via WPS
	Blinking	WPS registration ongoing
Off		No WPS registration ongoing.

6.1.3 Ethernet LEDs

Ethernet LED

On the right of the Ethernet port, you can find a LED indicating the 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

6 THOMSON TG185n Basics

6.2 THOMSON TG185n Web Interface

Introduction

The THOMSON TG185n Web Interface allows you to configure your THOMSON TG185n using your web browser.

Requirements

- Javascript must be enabled on your browser. For more information, consult the help of your Internet browser.
- The IP address of your computer must be between 192.168.1.14 and 192.168.1.63 (for example 192.168.1.20). The subnet mask must be **255.255.255.0**. For more information, see “7.1 Assigning a Static IP to Your Computer” on page 44.

Accessing the THOMSON TG185n Web Interface

Proceed as follows:

- 1 Open your web browser.
- 2 If your THOMSON TG185n is switched to:
 - ▶ Access Point mode, browse to <http://192.168.1.11>.
 - ▶ Wireless Client mode, browse to <http://192.168.1.12>.
 - ▶ Repeater mode, browse to <http://192.168.1.13>.



If you have changed the IP address of your THOMSON TG185n during installation, use this IP address to access the THOMSON TG185n Web Interface.

- 3 The THOMSON TG185n Web Interface appears.
- 4 You can now browse through all configurable items of the THOMSON TG185n using the menu on the left. If you have protected your THOMSON TG185n with a password, the THOMSON TG185n will prompt you to enter your password. Enter your password and click **Log on**.

Please enter your password:

.....

(Forgot your password? - see the User Guide for instructions.)

6.3 Saving/Restoring Your Configuration

Introduction

Once you have configured your THOMSON TG185n 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 TG185n Web Interface.
- 2 On the **System Tools** menu, click **Configuration Save and Restore**.
- 3 Under **Save Configuration**, click **Save to file**.
- 4 The THOMSON TG185n prompts you to save your file.
- 5 Save your file to a location of your choice.

Restoring your configuration

Proceed as follows:

- 1 Browse to the THOMSON TG185n Web Interface.
- 2 On the **System Tools** menu, click **Configuration Save and Restore**.
- 3 Under **Restore Configuration**, click **Browse**.
- 4 Open your backup file.
- 5 Click **Restore from file**.
- 6 The THOMSON TG185n prompts you that the THOMSON TG185n will have to restart after restoring the configuration. Click **OK**.
- 7 The THOMSON TG185n restores your configuration.
- 8 After restarting, the THOMSON TG185n returns to the home page.

7 Support

Introduction

This chapter suggests solutions for problems you may encounter while installing or configuring your THOMSON TG185n.

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

Topics

This chapter describes the following topics:

Topic	Page
Assigning a Static IP to Your Computer	44
Restoring the IP Settings of Your Computer	48
General THOMSON TG185n Troubleshooting	49
Reset to Factory Defaults	52

7.1 Assigning a Static IP to Your Computer

IP addresses

In a network, each device carries a unique address, the IP address. If a network device wants to communicate with another network he will send his message to this IP address.

Why a static IP address?

These IP addresses are normally assigned to your computer by a dedicated server, the Dynamic Host Configuration Protocol (DHCP) server. This server can be integrated in your (Internet) gateway or located on the Internet. But since your THOMSON TG185n is currently not connected to either of these, we will have to manually assign an address to your computer.

How can I configure this on my computer?

If your computer runs:

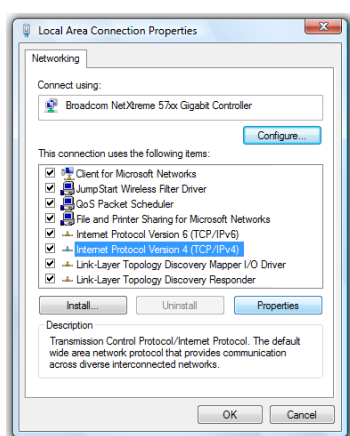
- Windows Vista, proceed with "7.1.1 Assigning a Static IP Address On Windows Vista" on page 45.
- Windows XP, proceed with "7.1.2 Assigning a Static IP Address On Windows XP" on page 46.
- Mac OS X, proceed with "7.1.3 Assigning a Static IP Address On Mac OS X" on page 47.
- Another operating system, consult the help of your operating system.

7.1.1 Assigning a Static IP Address On Windows Vista

Procedure

Proceed as follows:

- 1 On the Windows **Start** menu, click **Network**.
- 2 In the top bar, click **Networking and Sharing Center**.
- 3 In the **Tasks** list, click **Manage network connections**.
- 4 Right-click **Local Area Connection** and click **Properties**. If Windows prompts you for your permission, click **Continue**.
- 5 The **Local Area Connection Properties** window appears:



In the **This connection uses the following items** list, select **Internet Protocol Version 4(TCP/IPv4)** and click **Properties**.

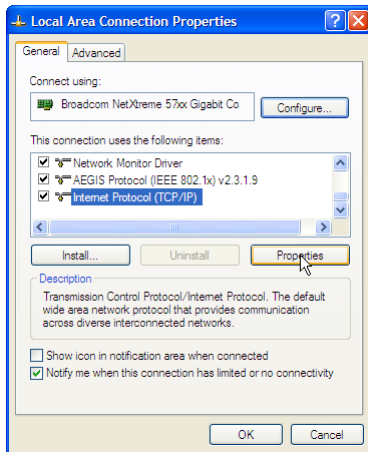
- 6 The **Internet Protocol Version 4 (TCP/IPv4)** window appears. Select **Use the Following IP address**.
- 7 In the **IP address** box, type an IP address between 192.168.1.14 and 192.168.1.63 (for example 192.168.1.20).
- 8 In the **Subnet mask** box, type **255.255.255.0**.
- 9 Click **OK**.
- 10 Click **OK**.

7.1.2 Assigning a Static IP Address On Windows XP

Procedure

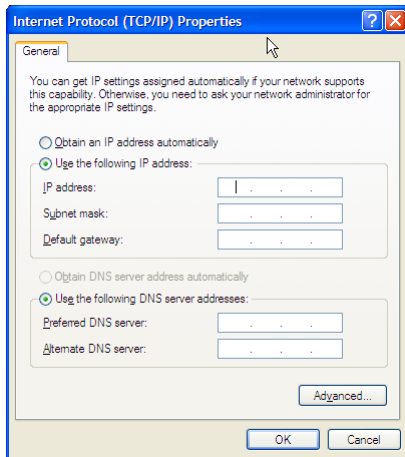
Proceed as follows:

- 1 On the Windows **Start** menu, click **Control Panel**.
- 2 Double-click **Network Connections** (if needed, switch to **Classic View** first).
- 3 Right-click **Local Area Connection** and click **Properties**.
- 4 The **Local Area Connection Properties** window appears:



In the **This connection uses the following items** list, select **Internet Protocol (TCP/IP)** and click **Properties**.

- 5 The **Internet Protocol (TCP/IP)** window appears:



Select **Use the Following IP address**.

- 6 In the **IP address** box, type an IP address between 192.168.1.14 and 192.168.1.63 (for example 192.168.1.20).
- 7 In the **Subnet mask** box, type **255.255.255.0**.
- 8 Click **OK**.
- 9 Click **OK**.

7.1.3 Assigning a Static IP Address On Mac OS X

Procedure

Proceed as follows:

- 1 In the apple menu, click **System Preferences**.
- 2 Under **Internet & Network**, click **Network**.
- 3 Select **Built-in Ethernet** and click **Configure**.
- 4 In the **Configure IPv4** list, select **Manually**.
- 5 In the **IP Address** box, type an IP address between 192.168.1.14 and 192.168.1.63 (for example 192.168.1.20).
- 6 In the **Subnet Mask** box, type **255.255.255.0**.
- 7 Click **Apply Now**.

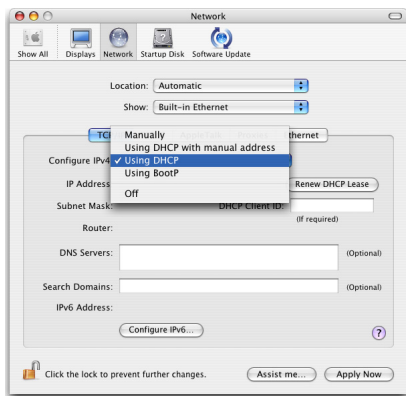
7.2 Restoring the IP Settings of Your Computer

MS Windows

Use the same procedure as described in “7.1 Assigning a Static IP to Your Computer” on page 44, but select **Obtain an IP address automatically** instead of **Use the following IP address**.

Mac OS X

Use the same procedure as described in “7.1 Assigning a Static IP to Your Computer” on page 44, but select **Using DHCP** instead of **Manually** in the **Configure IPv4** list:



7.3 General THOMSON TG185n Troubleshooting

THOMSON TG185n does not work

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

- The THOMSON TG185n is plugged into a power socket outlet.
- You are using the correct power supply for your THOMSON TG185n device.



The power requirements for your THOMSON TG185n are clearly indicated on the identification label on the bottom of the THOMSON TG185n. Only use the power adaptor supplied with your THOMSON TG185n.

THOMSON TG185n unreachable

If your THOMSON TG185n 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 52.

7.3.1 Wired Connection Troubleshooting

Ethernet LED does not light up

Make sure that:

- The Ethernet cable is securely connected to the **Ethernet** port on your THOMSON TG185n and your computer.
- You are using the correct cable type for your Ethernet equipment that is at least UTP CAT5 with RJ-45 connectors.

7.3.2 Wireless Connection Troubleshooting

WPS does not work

Make sure that WPS is enabled on your THOMSON TG185n:

- 1 Browse to the THOMSON TG185n Web Interface.
- 2 On the **Basic Setting** menu, click **Wireless Setting**.
- 3 The **Wireless Setting** page appears.
- 4 Select the **Enable WPS** check box.
- 5 Click **Apply**.
- 6 The THOMSON TG185n prompts you that the configuration was successful.

No Wireless Connectivity

Make sure that:

- The access point and wireless clients 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 TG185n or directing the THOMSON TG185n'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 of your access point. If you are also using a repeater, do not forget to change it also.
- Make sure both the access point and the wireless clients are allowed to connect through wireless channels as defined for local regulatory domain.
- Check the location of the access point in the building.
- Use WPA(2)-PSK as encryption.

Changing the wireless channel on a THOMSON TG185n in Access Point mode

Proceed as follows:

- 1 Browse to the THOMSON TG185n Web Interface.
- 2 On the **Basic Setting** menu, click **Wireless Setting**.
- 3 The **Wireless Setting** page appears.
- 4 In the **Channel** list, select the channel of your choice.
- 5 Click **Apply**.
- 6 The THOMSON TG185n prompts you that the configuration was successful.

7.4 Reset to Factory Defaults

Resetting your THOMSON TG185n

If at some point you can no longer connect to the THOMSON TG185n or you want to make a fresh install, it may be useful to perform a reset to factory defaults.

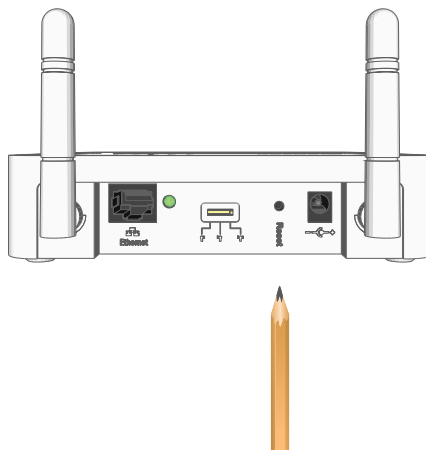
Warning

A reset to factory default settings deletes all configuration changes you made. Therefore, after the reset, a reconfiguration of your THOMSON TG185n will be needed.

Procedure

Proceed as follows:

- 1 Use a pen or an unfolded paperclip to push the recessed **Reset** button for 7 seconds.



- 2 Release the **Reset** button.
- 3 The THOMSON TG185n restores the initial configuration and restarts.

THOMSON Telecom Belgium

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2650 Edegem

www.thomson-broadband.com

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