



SETUP AND USER GUIDE

MediaAccess TG589vn v2

SETUP AND USER GUIDE

MediaAccess TG589vn v2

Copyright

Copyright ©1999-2012 Technicolor. All rights reserved.

Distribution and copying of this document, use and communication of its contents is not permitted without written authorization from Technicolor. The content of this document is furnished for informational use only, may be subject to change without notice, and should not be construed as a commitment by Technicolor. Technicolor assumes no responsibility or liability for any errors or inaccuracies that may appear in this document.

Technicolor Delivery Technologies Belgium NV
Prins Boudewijnlaan, 47
2650 Edegem
Belgium

<http://www.technicolor.com>

Trademarks

The following trademarks may be used in this document:

- AutoWAN sensing™ is a trademark of Technicolor.
- Adobe®, the Adobe logo, Acrobat and Acrobat Reader are trademarks or registered trademarks of Adobe Systems, Incorporated, registered in the United States and/or other countries.
- Apple® and Mac OS® are registered trademarks of Apple Computer, Incorporated, registered in the United States and other countries.
- Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc.
- DECT™ is a trademark of ETSI.
- DLNA® is a registered trademark, DLNA disc logo is a service mark, and DLNA Certified is a trademark of the Digital Living Network Alliance. Digital Living Network Alliance is a service mark of the Digital Living Network Alliance.
- Ethernet™ is a trademark of Xerox Corporation.
- Microsoft®, MS-DOS®, Windows®, Windows NT® and Windows Vista® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- UNIX® is a registered trademark of UNIX System Laboratories, Incorporated.
- UPnP™ is a certification mark of the UPnP™ Implementers Corporation.
- Wi-Fi®, WMM® and the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance®. Wi-Fi CERTIFIED, Wi-Fi ZONE, Wi-Fi Protected Access, Wi-Fi Multimedia, Wi-Fi Protected Setup, WPA, WPA2 and their respective logos are trademarks of the Wi-Fi Alliance®.

Other brands and product names may be trademarks or registered trademarks of their respective holders. All other logos, trademarks and service marks are the property of their respective owners, where marked or not.

Document Information

Status: v1.0 (April 2012)

Reference: DMS-CTC-20110713-0024

Short Title: Setup and User Guide MediaAccess TG589vn v2 R10.2.x

1	Getting Started	3
1.1	Features at a Glance	4
1.2	Components	5
1.2.1	Power	6
1.2.2	Local Network Connection.....	7
1.2.3	Broadband Connection	8
1.2.4	Buttons.....	9
1.2.5	Status LEDs	10
1.3	Preparing for the Installation.....	13
2	Guided Installation.....	15
3	Manual Installation.....	19
3.1	Connecting the MediaAccess Gateway to your Service Provider's Network	20
3.2	Powering on the MediaAccess Gateway	22
3.3	Connecting Your Network Devices to the MediaAccess Gateway	23
3.3.1	Setting up a Wireless Connection.....	24
3.3.2	Setting up a Wired Connection.....	25
3.4	Configure the MediaAccess Gateway	26
3.5	Setting Up the 3G Fall-Back WAN Connection.....	27
3.5.1	Managing your Mobile Connection with the MediaAccess Gateway GUI.....	28
3.5.2	Inserting a Mobile USB Adapter	29
4	Configuration Tools.....	31
4.1	MediaAccess Gateway GUI	32
4.1.1	Access.....	33
4.1.2	Components	34
4.1.3	Protecting Access to the MediaAccess Gateway	36
4.2	Backing Up/Restoring your Configuration	37
4.3	Access From the Internet.....	38
5	The MediaAccess Gateway Wireless Access Point	39
5.1	Connecting Your Wireless Client via WPS	40
5.2	Connecting Your Wireless Client without WPS	42
5.3	Connecting Your Wireless Client via QR Code.....	43
5.4	Securing Your Wireless Connection.....	44
6	Saving Energy	47
6.1	Code of Conduct.....	48
6.2	ECO Manager.....	49
6.3	Manually Switching Off Services to Reduce Power	50
7	Sharing Content.....	51
7.1	The Network File Server	53

7.2	The UPnP AV Media Server	56
7.2.1	Configuring the UPnP AV Media Server	57
7.2.2	Using the UPnP AV Media Server	58
7.3	The FTP Server	60
7.4	Managing your Shared Content.....	62
7.5	Safely Removing your USB Storage Device.....	64
8	Network Services	65
8.1	UPnP.....	66
8.1.1	Accessing Your MediaAccess Gateway via UPnP	67
8.1.2	Managing your Internet connection via UPnP	68
8.1.3	Configuring UPnP on the MediaAccess Gateway	70
8.1.4	Installing UPnP on Windows XP	71
8.2	Assigning a service (HTTP, FTP,...) to a Computer.....	73
8.3	Dynamic DNS	75
8.4	Network Time Server.....	76
9	Internet Security.....	79
9.1	Parental Control	80
9.1.1	Configuring Content-based Filtering.....	82
9.1.2	Adding Rules for Address-Based Filtering.....	83
9.2	Firewall.....	85
9.3	Access Control	87
9.4	Wireless Time Control	89
10	Support.....	91
10.1	Setup Troubleshooting.....	92
10.2	General MediaAccess Gateway Troubleshooting	93
10.3	Wired Connection Troubleshooting	94
10.4	Wireless Connection Troubleshooting.....	95
10.5	Content Sharing Troubleshooting	96
10.6	Reset to Factory Defaults.....	97

About this Setup and User Guide

In this Setup and User Guide

The goal of this Setup and User Guide is to show you:

- Set up your MediaAccess Gateway and local network
- Configure and use the main features of your MediaAccess Gateway.

For more advanced scenarios and features visit the documentation pages on www.technicolor.com.

Used Symbols



The **danger** symbol indicates that there may be a possibility of physical injury.



The **warning** symbol indicates that there may be a possibility of equipment damage.



The **caution** symbol indicates that there may be a possibility of service interruption.



The **note** symbol indicates that the text provides additional information about a topic.

Terminology

Generally, the MediaAccess TG589vn v2 will be referred to as MediaAccess Gateway in this Setup and User Guide.

Typographical Conventions

Following typographical convention is used throughout this manual:

- This sample text indicates a hyperlink to a Web site.

Example: For more information, visit us at www.technicolor.com.

- This sample text indicates an internal link.

Example: If you want to know more about guide, see *“About this Setup and User Guide” on page 1.*

- **This sample text** indicates an important content-related word.

Example: To enter the network, you **must** authenticate yourself.

- **This 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.

1 Getting Started

Introduction

This chapter gives you a brief overview of the main features and components of the MediaAccess Gateway. After this chapter we will start with the installation.



Do not connect any cables to the MediaAccess Gateway until instructed to do so.

1.1 Features at a Glance

Introduction

This section provides a brief overview of the main features of your MediaAccess Gateway.

IPv6 Ready

Your MediaAccess Gateway is IPv6 ready. Internet Protocol version 6 (IPv6) is the next generation of Internet technologies aiming to effectively support the ever-expanding Internet usage and functionality, and also to address security concerns that exist in an IPv4 environment.

Internet connection features

- **Broadband Internet access** via the integrated DSL modem.
The first chapters describe how to connect your MediaAccess Gateway to the Internet.
- **3G (Fall-back) High-speed Internet Access** via the optional mobile USB adaptor.
For more information, see “3.5 Setting Up the 3G Fall-Back WAN Connection” on page 27.
- **Internet Security** for your entire network.
For more information, see “9 Internet Security” on page 79.
- **Useful network tools** like UPnP, Dynamic DNS and many more.
For more information, see “8 Network Services” on page 65.

Local networking features

- **Wired access** for your local network devices via the Ethernet interface.
For more information, see “3.3 Connecting Your Network Devices to the MediaAccess Gateway” on page 23.
- **Wireless access** for your local network devices via the integrated IEEE 802.11n wireless access point.
For more information, see “5 The MediaAccess Gateway Wireless Access Point” on page 39.
- An **Integrated Media Server** allowing you to share your media with media players and other network devices. For more information, see “7 Sharing Content” on page 51.

ECO label

Technicolor's ECO label guarantees you that the MediaAccess Gateway is able to reduce its power consumption to an absolute minimum. For more information, see “6 Saving Energy” on page 47.

MediaAccess Gateway configuration tools

- The **MediaAccess Gateway Setup CD** allows you to configure your MediaAccess Gateway and helps you to connect your computers to the MediaAccess Gateway.
- The **MediaAccess Gateway GUI** allows you to configure your MediaAccess Gateway via your web browser.
For more information, see “4.1 MediaAccess Gateway GUI” on page 32.

1.2 Components

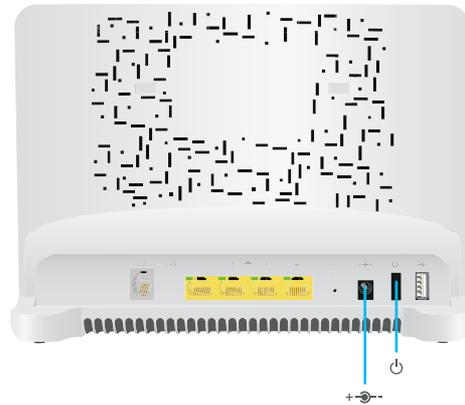
Overview

This section provides an overview of the different components of the MediaAccess Gateway:

Topic	Page
<i>1.2.1 Power</i>	<i>6</i>
<i>1.2.2 Local Network Connection</i>	<i>7</i>
<i>1.2.3 Broadband Connection</i>	<i>8</i>
<i>1.2.4 Buttons</i>	<i>9</i>
<i>1.2.5 Status LEDs</i>	<i>10</i>

1.2.1 Power

Overview



Power inlet

The power inlet (+  -) allows you to connect the power supply.



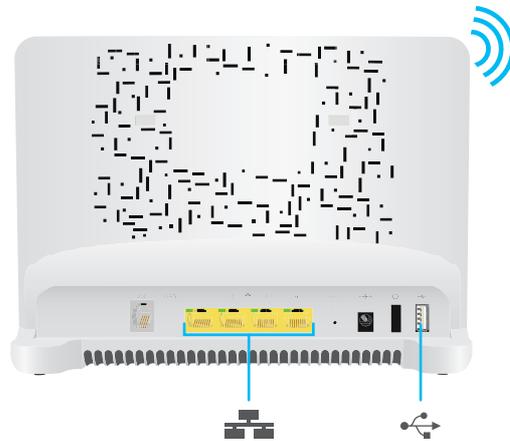
Only use the power supply delivered with your MediaAccess Gateway.

Power switch

The power switch () allows you to power on/off your MediaAccess Gateway.

1.2.2 Local Network Connection

Overview



Wireless Access Point

The built-in WiFi-certified wireless access point provides wireless access to your WiFi-certified wireless clients.

For more information, see “5 The MediaAccess Gateway Wireless Access Point” on page 39.

Ethernet switch

The Ethernet switch (🔌) allows you to connect an Ethernet device (for example, a computer) to your local network. For more information, see “3.3 Connecting Your Network Devices to the MediaAccess Gateway” on page 23.

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

LED Status	Description
Solid on	Device connected.
Blinking	Device connected and sending/receiving data.
Off	No device connected.

USB Port

The USB port (🔌) can be used to:

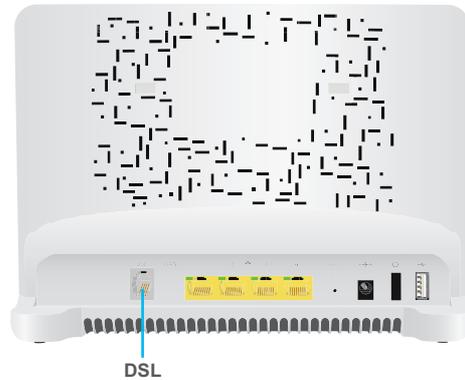
- Connect a USB mass storage device to **share your content** (for example, music, movies,...):
 - ▶ On your local network via the **Network File server** or the **UPnP AV Media Server**.
 - ▶ On Internet via **FTP**.

For more information, see “7 Sharing Content” on page 51.

- Connect a 3G mobile adaptor to set up a 3G connection that can work as a backup for your main Internet connection. For more information, see “3.5 Setting Up the 3G Fall-Back WAN Connection” on page 27.

1.2.3 Broadband Connection

Overview



DSL port

This port can be used to connect your MediaAccess Gateway to your service provider's DSL network.

For more information, see *"3.1 Connecting the MediaAccess Gateway to your Service Provider's Network"* on page 20.

1.2.4 Buttons

Overview



WPS button

The WPS (🌀) button allows you to add new wireless clients to your network in a swift and easy way, without the need to enter any of your wireless settings manually.

For more information, see “5.1 Connecting Your Wireless Client via WPS” on page 40.

ECO button

The ECO (🔌) button allows you to disable your wireless access point. You can do this when you do not have any devices that are connected to the wireless access point. This allows you to save the energy that the MediaAccess Gateway would be using for the wireless access point. For more information, see “ECO button” on page 50.

Reset button

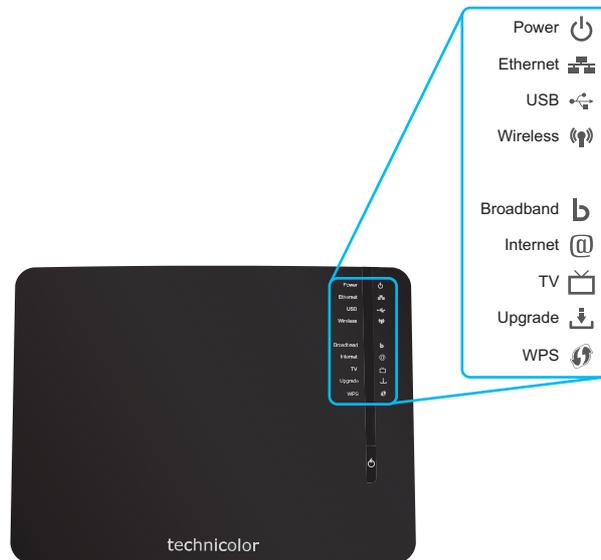
The Reset button allows you to reset your MediaAccess Gateway to factory defaults.

For more information, see “10.6 Reset to Factory Defaults” on page 97.

1.2.5 Status LEDs

Introduction

On the front panel of your MediaAccess Gateway, you can find a number of status LEDs, indicating the state of the device.



Power LED

Colour	State	Description
Green	Solid on	Power on, normal operation
	Blinking	Bootloader active (during upgrade)
Red	Solid on	Power on, self-test failed, indicating device malfunction
Orange	Solid on	Bootloader selftest
	Blinking	Bootloader active (during upgrade)
Off		The MediaAccess Gateway is powered off.

Ethernet LED

Colour	State	Description
Green	Solid on	Network device connected to the Ethernet switch.
	Blinking	Network device connected to the Ethernet switch and sending/receiving data.
Off		No Ethernet connection on your local network

USB LED

Colour	State	Description
Green	Solid on	Device(s) connected to the MediaAccess Gateway's USB port
Off		No device connected to the MediaAccess Gateway's USB port

Wireless LED

Colour	State	Description
Green	Solid on	No wireless activity, WPA2-PSK or WPA-PSK encryption
	Blinking	Wireless activity, WPA2-PSK or WPA-PSK encryption
Orange	Solid on	No wireless activity, WEP encryption
	Blinking	Wireless activity, WEP encryption
Red	Solid on	No wireless activity, no security
	Blinking	Wireless activity, no security
Red/green	Toggling	Wireless client registration phase
Off		Wireless access point disabled

Broadband LED

Colour	State	Description
Green	Solid on	DSL line synchronised
	Blinking	Trying to detect carrier signal or pending DSL line synchronisation
Off		MediaAccess Gateway powered off.

Internet LED

Colour	State	Description
Green	Solid on	Connected to the Internet, no activity
	Blinking	Connected to the Internet, sending/receiving data
Red	Solid on	Failed to setup the Internet connection
Off		No Internet connection

TV LED

Colour	State	Description
Green	Solid on	Set-Top Box (STB) connected to the MediaAccess Gateway
	Blinking	Unknown STB connected to the MediaAccess Gateway
Off		No STB connected to the MediaAccess Gateway

Upgrade LED

Colour	State	Description
Blue	Solid on	Software upgrade ongoing
Off		No software upgrade ongoing



Do not power off your MediaAccess Gateway or disconnect any cables as long as the **Upgrade LED** is on. Interrupting the upgrade procedure may damage your MediaAccess Gateway.

WPS LED

Colour	State	Description
Green	Solid On	Client successfully registered via WPS
Orange	Blinking	WPS registration ongoing
Red	Blinking	Error occurred

For more information about WPS, see “5.1 Connecting Your Wireless Client via WPS” on page 40.

1.3 Preparing for the Installation

DSL service requirements

Make sure that:

- Your service provider activated the DSL service on your telephone line by your service provider.
- You have the installation information (for example, user name, password, service profile,...) provided by your service provider at hand.

Local connection requirements

Wireless connection

If you want to connect your computer using a wireless connection, your computer must be equipped with a WiFi-certified wireless client adapter.

Wired connection

If you want to connect a computer using a wired connection, your computer must be equipped with an Ethernet Network Interface Card (NIC).

Start with the installation

You are now ready to start with the installation of your MediaAccess Gateway.

2 Guided Installation

Introduction

In the guided installation, the Setup wizard on the Setup CD will assist you with the installation of your MediaAccess Gateway.

If you do not want to use the Setup CD or if the Setup CD is not included in your package, follow the installation procedure described in “3 Manual Installation” on page 19.

Requirements

To use the guided installation you must comply with the following requirements:

- Your computer must run one of the following operating systems:
 - ▶ Microsoft Windows 7 and higher
 - ▶ Microsoft Windows 7 x64 and higher
 - ▶ Microsoft Windows Vista and higher
 - ▶ Microsoft Windows XP Service Pack 2 (SP2) and higher
 - ▶ Mac OS X 10.6 (Snow Leopard)
 - ▶ Mac OS X 10.5 (Leopard)
 - ▶ Mac OS X 10.4 (Tiger)
- You must have administrative rights on your computer.

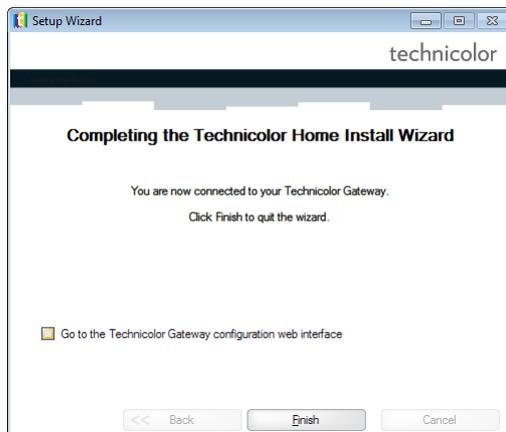
If you do not comply with these requirements, use the “3 Manual Installation” on page 19.

Running the Setup wizard

To start the Setup wizard:

- 1 Insert the Setup CD into your computer’s CD- or DVD drive.
- 2 If your computer runs:
 - ▶ Microsoft Windows: The Setup CD starts automatically.
If the Setup CD does not autostart, see “The Setup CD does not start automatically” on page 92.
 - ▶ Mac OS X: Double-click **Menu** in the window with the content of the Setup CD.
- 3 Select the language of your choice and click **OK**.
- 4 The Setup wizard will now guide you through the installation of your MediaAccess Gateway.

5 At the end of the installation, the following screen appears:

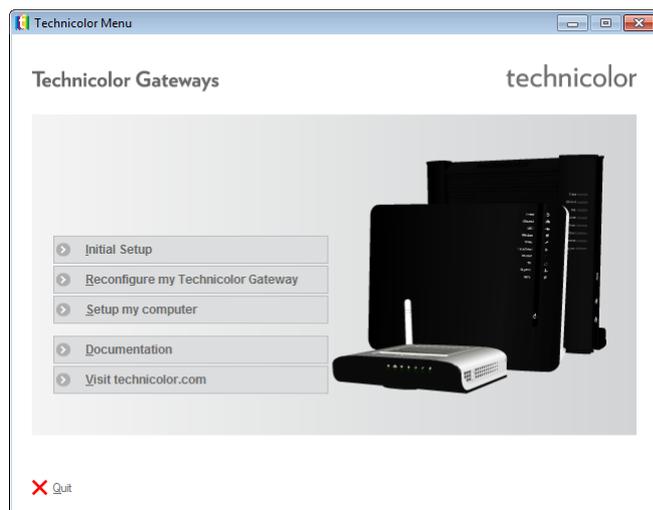


Select **Go to the Technicolor Gateway web interface** if you want to go to the *MediaAccess Gateway GUI* after closing the wizard. On the *MediaAccess Gateway GUI*, you can configure all services of your MediaAccess Gateway.

6 Click **Finish**.

7 The **CD menu** appears.

CD Menu



On the **CD Menu**, you can click:

- **Initial Setup** to connect your computer to the MediaAccess Gateway and configure your local network.
- **Reconfigure my Technicolor Gateway** to fully reconfigure your MediaAccess Gateway.



If you reconfigure your MediaAccess Gateway via the **CD menu**, the MediaAccess Gateway will be reconfigured from scratch. All your current settings will be lost. If you only want to make small changes to your configuration (for example, changing the security), we recommended you to do this via the *MediaAccess Gateway GUI*. For more information, see "4.1 MediaAccess Gateway GUI" on page 32.

- **Setup my computer** to connect your computer to the MediaAccess Gateway network.
- **Documentation** to view a list of the documentation that is available for your MediaAccess Gateway.
- **Visit technicolor.com** to visit the online support sections.



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

In case of problems

If you encounter problems during this installation please refer to “*10.1 Setup Troubleshooting*” on page 92.

Backup your configuration

Once you successfully installed your MediaAccess Gateway, it is recommend to backup your configuration. This will allows you to return to this configuration when needed (for example, after misconfiguration).

For more information, see “*4.2 Backing Up/Restoring your Configuration*” on page 37

3 Manual Installation

Installation

This chapter will help you to manually install your MediaAccess Gateway.

Setting up your network

Proceed as follows:

- 1 Connect your MediaAccess Gateway to your service provider's network.
For more information, see *"3.1 Connecting the MediaAccess Gateway to your Service Provider's Network"* on page 20.
- 2 Power on the MediaAccess Gateway.
For more information, see *"3.2 Powering on the MediaAccess Gateway"* on page 22.
- 3 Connect your computer to the MediaAccess Gateway.
For more information, see *"3.3 Connecting Your Network Devices to the MediaAccess Gateway"* on page 23.
- 4 Configure your MediaAccess Gateway.
For more information, see *"3.4 Configure the MediaAccess Gateway"* on page 26.
- 5 Share your content or media on your local network, continue with *"7 Sharing Content"* on page 51.
- 6 If you purchased the mobile USB adapter, setup the 3G backup connection.
For more information, see *"3.5 Setting Up the 3G Fall-Back WAN Connection"* on page 27.
- 7 Once you successfully installed your MediaAccess Gateway, it is recommend to backup your configuration. This will allows you to return to this configuration when needed (for example, after misconfiguration). For more information, see *"4.2 Backing Up/Restoring your Configuration"* on page 37.

3.1 Connecting the MediaAccess Gateway to your Service Provider's Network

Introduction

This section helps you to connect the MediaAccess Gateway to your service provider's network.

Signal arriving at your home

The **Line** signal that arrives at your home consists the following components:

- A **Phone** signal carrying the traffic for telephony.



This **Phone** signal is only used for communication over the traditional telephone network (PSTN). Voice over IP communication will be carried by the **DSL** signal.

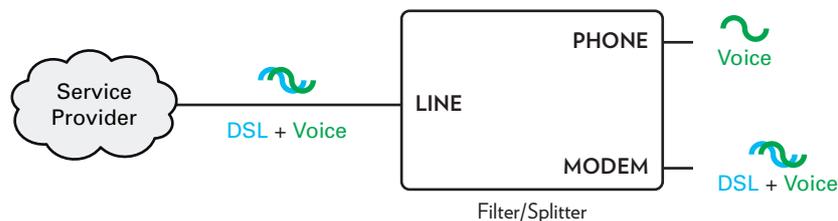
- A **DSL** signal carrying the Internet traffic.

DSL Gateways have a built-in solution to remove the **Phone** component. No additional devices are needed, you can connect them directly to the **Line**.

Telephones do not have this capability, so here you have to use a filter or splitter to remove the **DSL** signal.

What does a filter/splitter look like

A splitter/filter is a box that typically has the following connectors:



- A **Line** input

This connector must be connected to the input signal that needs to be filtered.

- A **Phone/PSTN** output

This connector offers filtered output signal. It only contains the **Voice** component and can only be used for connecting phones.

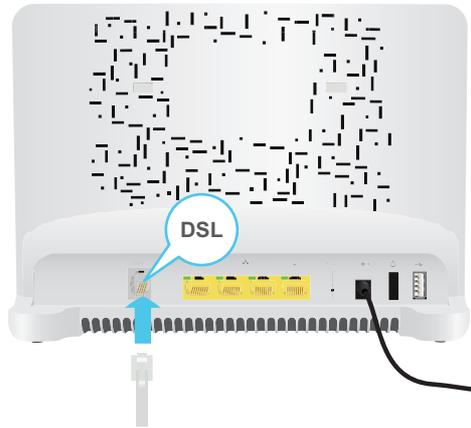
- A **Modem/DSL** output (optional)

This connector offers unfiltered output. It contains both the **Phone** and **DSL** signal and can be used to connect your MediaAccess Gateway.

Connecting the cables

Proceed as follows:

- 1 Take the DSL cable. This is the grey cable that is included in your box.
- 2 Plug one end of the cable in the grey **DSL** port on the back of your MediaAccess Gateway.



- 3 Plug the other end of the cable into the **DSL/MODEM** output port of your filter/splitter.

3.2 Powering on the MediaAccess Gateway

Procedure

Proceed as follows:

- 1 Connect the power cord to the power port of the MediaAccess Gateway.
- 2 Plug the other end of the power cord into an electrical outlet.
- 3 Press the power button to turn on the MediaAccess Gateway.
- 4 Wait at least two minutes to allow the MediaAccess Gateway to complete the start up phase.

3.3 Connecting Your Network Devices to the MediaAccess Gateway

Choose your connection method

To connect your device via:

- A wireless connection, continue with “3.3.1 Setting up a Wireless Connection” on page 24.
- A wired connection, continue with “3.3.2 Setting up a Wired Connection” on page 25.

3.3.1 Setting up a Wireless Connection

The MediaAccess Gateway access point

Your MediaAccess Gateway is equipped with a wireless access point that supports the following standards:

- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.11b

Requirements

Your network device must be equipped with a WiFi-certified wireless client.

Connection speed

When setting up your wireless network, keep in mind that the following factors may have a negative impact on your wireless connection speed:

- The obstacles (walls, ceilings,...) between the wireless client and the access point.
- Distance between the wireless client and the access point.
- To fully benefit from the improved connection speed offered by the IEEE 802.11n standard, it is recommended to only connect IEEE 802.11n wireless clients to your MediaAccess Gateway. Connecting older (for example, IEEE 802.11g) wireless clients may also slow down connection speed of the IEEE 802.11n capable clients.

If you have problems with your wireless performance, see *“Poor Wireless Connectivity or Range”* on page 95.

To set up a wireless connections

For more information on how to setup a wireless connection between your network device and your MediaAccess Gateway, see *“5 The MediaAccess Gateway Wireless Access Point”* on page 39.

3.3.2 Setting up a Wired Connection

Requirements

- Both your network device (for example, a computer, a gaming console,...) and MediaAccess Gateway must have a free Ethernet port.
- Your network device must be configured to obtain an IP address automatically. This is the default setting.

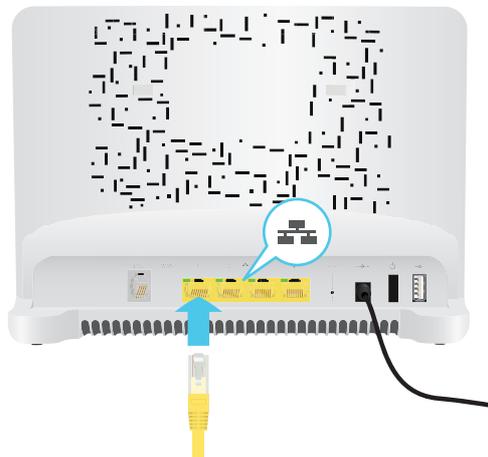
Ethernet cable

In your package, you will find a cable with yellow connectors. This is the Ethernet cable.

Procedure

Proceed as follows:

- 1 Connect one end of the Ethernet cable to one of the **yellow** Ethernet ports of your MediaAccess Gateway:



- 2 Connect the other end of the Ethernet cable to your network device.
 - ⚠ The MediaAccess Gateway does not support Power over Ethernet (PoE). All network devices that are connected to the MediaAccess Gateway must be powered by their own power source.
- 3 Your network device is now connected to your network. No additional configuration is needed unless specified by your service provider.

3.4 Configure the MediaAccess Gateway

Introduction

If your service provider did not preconfigure your MediaAccess Gateway, you may have to configure the MediaAccess Gateway via its Graphical User Interface (GUI).

Requirements

JavaScript must be enabled on your web browser (this is the default setting). For more information, consult the help of your web browser.

Procedure

Proceed as follows:

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

Welcome...

Congratulations on purchasing this Technicolor Gateway business gateway.
You are currently not connected to the Internet, click on the task below to continue.

 [Set up my Technicolor Gateway](#)

<http://www.google.com>

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

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

3.5 Setting Up the 3G Fall-Back WAN Connection

Introduction

Many SOHO (Small Offices, Home Offices) and SME (Small/Medium Enterprises) businesses choose DSL as their access technology for a Wide Area Network (WAN) connection because this is typically cheaper than using leased lines. A dropout of a DSL line can however have expensive consequences due to inaccessibility of the Internet and E-mail. Therefore backup solutions are available that provide an alternative path when the DSL line is down.

For example it is possible to switch to 2G / 3G mobile access technologies such as GPRS, UMTS, HSDPA, HSUPA, HSPA+, WIMAX and LTE when internet connectivity is not available via the main WAN connection. By plugging a mobile USB adapter into one of the USB ports of your MediaAccess Gateway, IP connectivity via a 2G / 3G network becomes possible.

3G is an umbrella-term to indicate the third generation mobile telephony technology. The services associated with 3G provide the ability to transfer both voice data and non-voice data. 3G networks are the successors of the 2G networks, such as the GSM networks and provide new services and higher data transfer speeds.

What do I need?

To start using 2G / 3G as a connection on the MediaAccess Gateway, you need:

- A mobile USB adapter



Only use the mobile USB adapters provided by your service provider.

- A registered Security Identity Module (SIM) card.

Configure 2G / 3G as WAN connection

Proceed as follows:

- 1 Configure your mobile connection.
For more information, see “3.5.1 Managing your Mobile Connection with the MediaAccess Gateway GUI” on page 28.
- 2 Insert your mobile USB adapter.
For more information, see “3.5.2 Inserting a Mobile USB Adapter” on page 29.
- 3 Now your mobile connection is up and ready to use.



If you need to remove your mobile USB adapter, make sure the MediaAccess Gateway is powered off first.

Result

MediaAccess Gateway will automatically enable your 3G backup connection when **both** of the following conditions are met:

- The main Internet connection has been unavailable for at least 60 seconds.
- The MediaAccess Gateway received a request to access the Internet (for example, when browsing to an Internet web site).

The MediaAccess Gateway will automatically disable the 3G connection in **either** of the following cases:

- The main Internet connection is available again. In this case the MediaAccess Gateway switches back to the main Internet connection.
- No Internet traffic has been detected during the last 10 seconds. For example, you finished surfing the Internet.

3.5.1 Managing your Mobile Connection with the MediaAccess Gateway GUI

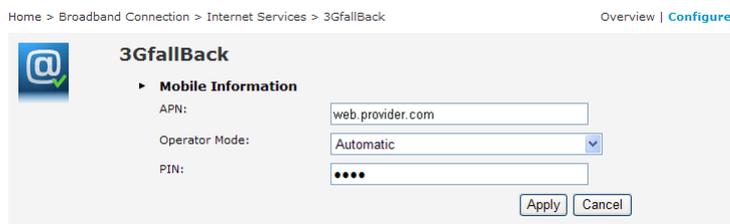
Introduction

You can view and manage the parameters of your mobile connection via the MediaAccess Gateway GUI.

Procedure

To manage your mobile USB connection via the MediaAccess Gateway GUI:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “4.1.1 Access” on page 33.
- 2 On the **Broadband Connection** menu, click **Internet Services**.
- 3 Click **View more...** for the mobile USB connection. The **Overview** page of the mobile USB connection is shown.
- 4 In the location bar, click **Configure**. The **Configure** page of the mobile connection appears.



- 5 Under **Mobile Information**, update the following fields if necessary:
 - ▶ **APN:**
The public APN used to access the Internet, or the private APN to access a local network.
 - ▶ **Operator Mode:**
2G / 3G / automatic (let the MediaAccess Gateway choose the best operator mode)
 - ▶ **Pin:**
The PIN code of your SIM card.
- 6 Click **Apply** to apply your configuration changes.



Configuration changes via the MediaAccess Gateway GUI are automatically saved.

3.5.2 Inserting a Mobile USB Adapter

Procedure

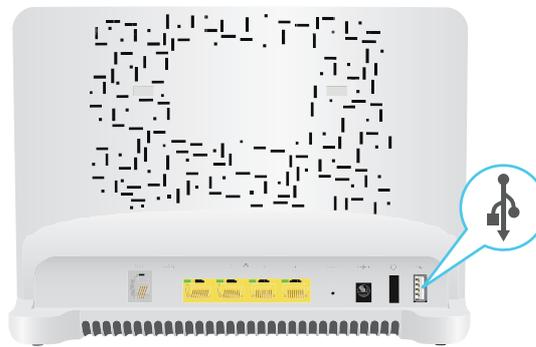
Once the mobile connection is configured you can proceed as follows to insert the mobile USB adapter:

- 1 Power off the MediaAccess Gateway.



If you do not power off the MediaAccess Gateway first, the mobile USB adapter will not be detected.

- 2 Insert your SIM card into the mobile USB adapter.
- 3 Plug the mobile USB adapter in (one of) the USB port(s) of your MediaAccess Gateway:



- 4 Power on the MediaAccess Gateway.

4 Configuration Tools

Configuration Tools

You can use the following tools to configure your MediaAccess Gateway:

- The **MediaAccess Gateway** Setup CD allows you to configure your MediaAccess Gateway and helps you to connect your computers to the MediaAccess Gateway. For more information, see “2 *Guided Installation*” on page 15.
- The **MediaAccess Gateway GUI** allows you to configure your MediaAccess Gateway via your web browser. For more information, see “4.1 *MediaAccess Gateway GUI*” on page 32.

4.1 MediaAccess Gateway GUI

Introduction

The MediaAccess Gateway Graphical User Interface (GUI) allows you to configure your MediaAccess Gateway using your web browser.

Requirements

JavaScript must be enabled on your browser (this is the default setting). For more information, consult the help of your web browser.

4.1.1 Access

Accessing the MediaAccess Gateway GUI

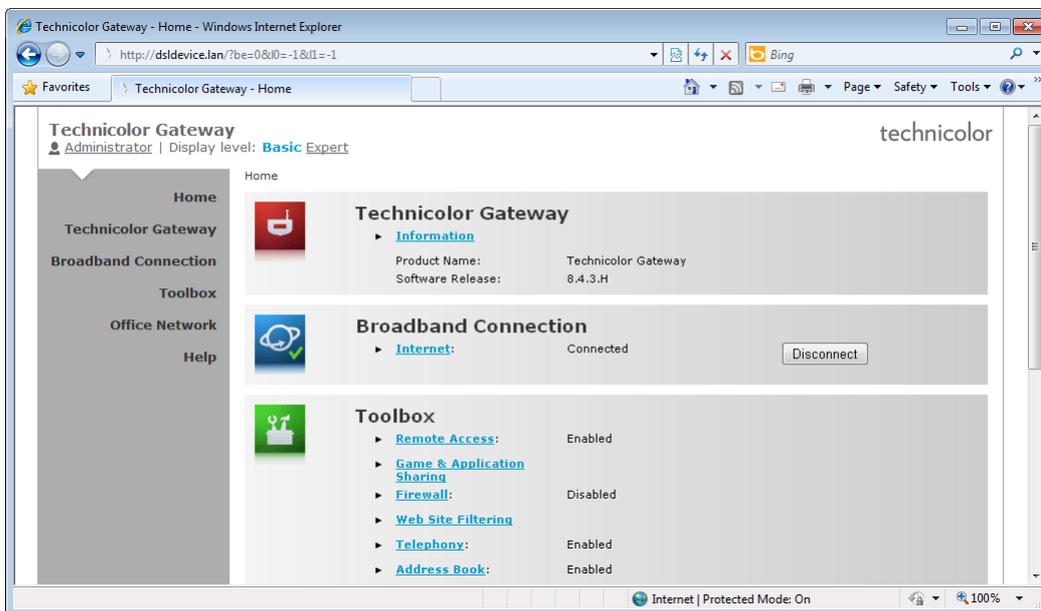
Proceed as follows:

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



For more information, see “4.1.3 Protecting Access to the MediaAccess Gateway” on page 36.

- 4 The *MediaAccess Gateway GUI* appears.



Access the MediaAccess Gateway via UPnP

You can also access the MediaAccess Gateway GUI using the Internet Gateway Device (IGD) icon if your computer runs one of the following operating systems:

- Microsoft Windows 7
- Microsoft Windows Vista
- Microsoft Windows XP

For more information, see “8.1 UPnP” on page 66.

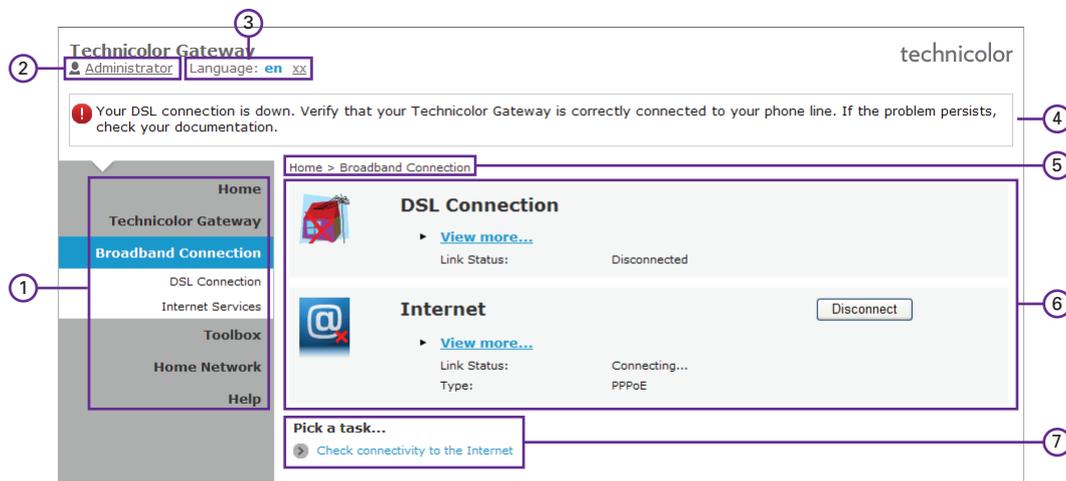
Remote access

It is also possible to access the MediaAccess Gateway GUI from the Internet. For more information, see “4.3 Access From the Internet” on page 38.

4.1.2 Components

Overview

Depending on your user right and location on the GUI, the following components can be available:



Label	Description
1	Menu
2	Login section
3	Language bar
4	Notification area
5	Navigation bar
6	Content pane
7	Tasks pane

Menu

The menu consists of the following menu items:

- **Home:**
Allows you to go back to the MediaAccess Gateway home page.
- **Technicolor Gateway:**
Provides basic information on the MediaAccess Gateway.
- **Broadband Connection:**
Allows you to view/configure your broadband connections.
- **Toolbox:**
Allows you to configure the network services and security settings of your MediaAccess Gateway.
- **Home Network:**
Allows you to manage your local network.
- **Help:**
Allows you to view context-related help information.

Each of these items contain a number of sub-menu items.

Login section

In the login section you can see the current user name.

By clicking the user name, you can:

- Change your password.
- Switch to another user.

Language bar

If more than one GUI language is available, a language bar is showed. This language bar allows you to change the language of the MediaAccess Gateway GUI.

Notification area

The notification area displays:

- Error messages, indicated by a red traffic light.
- Warning messages, indicated by an orange traffic light.
- Information messages, indicated by a green traffic light.



If none of these events occur, the notification is not shown.

Navigation bar

The Navigation bar displays your current position in the *MediaAccess Gateway GUI*.

Some page are available in different configuration levels. These pages have additional links (for example, **Overview**, **Configure**) in the right part of the navigation bar that allow you to switch between the configuration levels.

Content pane

The content pane displays the information and configurable items of the selected item.

Tasks pane

To allow a quick configuration of your MediaAccess 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.

4.1.3 Protecting Access to the MediaAccess Gateway

Introduction

To prevent that every user on your local network can access the MediaAccess Gateway, the MediaAccess Gateway is secured with a user name and password.

Default user name

The default user name is **Administrator**.

Default password

The default password is either blank or the **ACCESS KEY** printed on the label of your MediaAccess Gateway. This depends on the settings chosen by your Service Provider.



It is recommended to change the default password settings.

Choose a password that you can easily remember or write it down. If you forget your password the only option is to reset your MediaAccess Gateway. For more information, see “10.6 Reset to Factory Defaults” on page 97.

Protected items

The following items are protected by these is will secure access to:

- The MediaAccess Gateway GUI.
- The embedded FTP Server.
for more information, see “7.3 The FTP Server” on page 60.

How to change your password

Proceed as follows:

- 1 On the **Toolbox** menu, click **User Management**.
- 2 In the **Pick a task** list, click **Change my password**.
- 3 Enter your new password and click **OK**.
- 4 Your new password is now active. The next time that you log on to the *MediaAccess Gateway GUI* you will have to enter this password.



This password will also be used by the network file server and FTP server.

For more information about the network file server and FTP server, see “7 Sharing Content” on page 51

4.2 Backing Up/Restoring your Configuration

Introduction

Once you have configured your MediaAccess Gateway to your needs, it is recommended to backup 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 MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI” on page 33.*
- 2 On the **Technicolor 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 MediaAccess Gateway prompts you to save your backup file.
- 6 Save your file to a location of your choice.



Do not edit the backup files, this may result in corrupt files making them worthless as configuration backup.

Restoring your configuration

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI” on page 33.*
- 2 On the **Technicolor Gateway** menu, click **Configuration**.
- 3 In the **Pick a task** list, click **Save or Restore Configuration**.
- 4 Under **Restore saved configuration**, click **Browse** and open your backup file.



Backup files usually have **.ini** as extension.

- 5 The MediaAccess Gateway restores your configuration.

4.3 Access From the Internet

Modes

To access your MediaAccess Gateway from the Internet, you can choose between two modes:

- **Permanent Mode (Remote Access):**
The remote session ends when you disable remote assistance or after restarting your MediaAccess Gateway.
- **Temporary Mode (Remote Assistance):**
The remote session ends when you disable remote assistance, after restarting your MediaAccess Gateway or after 20 minutes of inactivity.

To enable Remote Assistance / Remote Access.



Enabling remote assistance is only possible when you are connected to the Internet.

To enable remote assistance/access:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 Complete and check the following parameters:
 - ▶ **Mode:**
Select the mode that you want to use.
 - ▶ **URL:**
Contains the URL that must be used to access the MediaAccess Gateway from the Internet.
 - ▶ **User name and Password:**
Contains the user name and password are needed to access your MediaAccess Gateway remotely. If wanted you can change the automatically generated password in the **Password** box.
- 3 Click **Enable Remote Assistance**.

Accessing your MediaAccess Gateway from the Internet

Proceed as follows:

- 1 Open your web browser.
- 2 Type the URL that was listed in the URL field on the **Remote Assistance** page (for example `https://141.11.249.150:51003`).
 - 

You can replace the IP address in this URL by the dynamic DNS host name if you enabled and configured Dynamic DNS. For more information, see *Dynamic DNS*.
Example: `https://141.11.249.150:51003` can be replaced by `https://mygateway.dyndns.org:51003`.
- 3 Enter the user name and password that you specified on the **Remote Assistance** page.
- 4 The *MediaAccess Gateway GUI* appears.

It is now possible for a remote user to access your MediaAccess Gateway via the specified URL using the provided user name and password.

5 The MediaAccess Gateway Wireless Access Point

Introduction

This section will help you set up your wireless network.

What you need to set up a wireless network

To set up a wireless network, you need the following components:

- A *Wireless Access Point* (already integrated into your MediaAccess Gateway)
- A *Wireless client* the device that you want to connect (for example, a computer, smartphone, network printer,...)

Wireless Access Point

The wireless access point is the heart of your wireless network. The wireless access point:

- Connects different wireless devices.
- Secures the data sent over wireless connection.

The MediaAccess Gateway comes with an integrated wireless access point.

Wireless client

The wireless client allows you to connect a device, typically a computer, to a wireless access point. Both built-in and external (for example via USB) clients are available.

 Devices like media players and smartphones may also have a built-in wireless client. Check the documentation of your device for more information.

Check the documentation of your computer if you are not sure if your computer is equipped with a wireless client.

Configuring your wireless clients

For more information on how to establish a wireless connection to the MediaAccess Gateway, see:

- “5.1 Connecting Your Wireless Client via WPS” on page 40
- “5.2 Connecting Your Wireless Client without WPS” on page 42
- “5.3 Connecting Your Wireless Client via QR Code” on page 43

Secure your wireless connection!

When using an unsecured connection, everyone who is within the range of your MediaAccess Gateway can access your network. If not:

- People may use your connection to access the Internet.
- Hackers may use your connection to commit computer crimes.

You can easily prevent this by securing your wireless access point. For more information, see “5.4 Securing Your Wireless Connection” on page 44.

5.1 Connecting Your Wireless Client via WPS

WPS

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

Requirements

- Your wireless client must support WPS. Check the documentation of your wireless client for this.



Both Windows 7 and Windows Vista Service Pack 1 have native WPS support.

- Your MediaAccess Gateway must use WPA(2)-PSK encryption (default encryption) or no encryption. WPS with WEP encryption is not possible.

WPS Methods

The following WPS methods are supported by your MediaAccess Gateway:

- **Push Button Configuration (PBC):**
You have to put both your Wireless USB Adaptor and access point in registration mode.
- **PIN code entry:**
You have to enter a PIN code on the Wireless Configuration Utility.

Procedure for PBC

Proceed as follows:

- 1 Shortly press the WPS button on the **MediaAccess Gateway**:



- 2 The WPS button LED starts blinking orange. This indicates that the MediaAccess Gateway is now searching for wireless clients that are in registration mode. You now have two minutes to start WPS on your wireless client.
- 3 Start WPS on your wireless client.
- 4 The MediaAccess Gateway is now exchanging the security settings.
- 5 At the end of the procedure the status of the WPS LED will change to either of the following:
 - ▶ Solid green
This indicates that you have successfully registered your wireless client. You are now connected to the MediaAccess Gateway network.

- ▶ **Blinking red**

This indicates that the MediaAccess Gateway could not find your wireless client. Use the same procedure to try again (you do not need to wait until the LED turns off).

Procedure for PIN code entry

Proceed as follows:

- 1 Check the label on your MediaAccess Gateway and write down the following information:

- ▶ The PIN code that is printed next to the WPS logo.



- ▶ The **Network Name**.

This is the default network name (SSID). If you already configured a new network name, write down the new one.

- 2 Go to the WPS PIN code page of your wireless client.

- 3 Enter the PIN code,



Do not include the hyphen when entering the PIN code. For example, if your PIN code is **1234-5678**, then enter **12345678**.

- 4 Your wireless client may prompt you to select your access point. If this is the case, select the access point with the network name that you wrote down.

Troubleshooting

If you are having trouble connecting your wireless client via WPS, this may be caused by one of the following reasons:

- **WPS can not be correctly executed:**

Configure your wireless manually. For more information, see “5.2 Connecting Your Wireless Client without WPS” on page 42.

- **Your wireless client is out of range:**

If possible move your wireless client closer to your MediaAccess Gateway or use a wireless repeater to extend the range of your wireless network.

- **Another device is interfering on the selected wireless channel:**

Change the wireless channel of your MediaAccess Gateway. For more information, see “Change the wireless channel” on page 95.

5.2 Connecting Your Wireless Client without WPS

Before you start

Before you can connect a wireless client (for example, a computer) to your wireless network you need to know the wireless settings that are currently used by the MediaAccess Gateway, i.e.:

- The Network Name (SSID)
- The wireless key

What Network Name (SSID) is my MediaAccess Gateway using?

If you did not change the SSID, your MediaAccess Gateway uses the Network Name that is printed on the back panel label of your MediaAccess Gateway.

What wireless key is my MediaAccess Gateway using?

If you did not change the security settings, no wireless key is used.



If your service provider did choose to use a default wireless key, use the **Wireless Key** that is printed on the bottom panel label of your MediaAccess Gateway.

Forgot your wireless key?

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

- 1 Use a computer that is already connected to your network.



If none of your computers is connected yet, connect one with an Ethernet cable. For more information, see *"3.3.2 Setting up a Wired Connection"* on page 25.

- 2 Browse to the MediaAccess Gateway GUI.
For more information, see *"Accessing the MediaAccess Gateway GUI"* on page 33.
- 3 On the **Home Network** menu, click **Wireless**.
- 4 In the upper-right corner, click **Details**.
- 5 Under:
 - ▶ **Configuration**, you can find the network name (SSID).
 - ▶ **Security**, you can find the encryption.

Connecting your wireless client

Configure your wireless client with the same wireless settings as your MediaAccess Gateway (network name and wireless key). For more information, consult the documentation of your wireless client.

5.3 Connecting Your Wireless Client via QR Code

Introduction

The MediaAccess Gateway allows you to generate a Quick Response (QR) code that contains all wireless settings that are needed to connect. You are then able to connect to the wireless network by scanning the generated code.

Target devices

This connection method is typically used for tablet computers and smartphones.

Requirements

Your wireless device must have:

- A camera to scan the code.
- An application (app) to interpret the QR code and connect to a wireless network.
For example: if you are using Android on your device, you could download **Bar Code Scanner** from **Google Play**.

Procedure

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI” on page 33*.
- 2 Under **Home Network**, click **Wireless**.



- 3 Under **Pick a Task**, click **Generate QR code image**.
- 4 The wireless QR code appears.



You can now:

- ▶ Scan the code directly from your screen.
 - ▶ Print this page and scan the code from the paper version.
- 5 Your QR code app shows you the wireless settings used by your MediaAccess Gateway and offers you to connect to its wireless network. Connect to the network.

5.4 Securing Your Wireless Connection

Introduction

You can protect the wireless communication between the wireless clients and your MediaAccess Gateway with a wireless key. This means that:

- Only clients which use the correct Network Name (SSID) and wireless key can connect to your network.
- All data passing through your wireless access point is secured and encrypted.

Encryption types

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

- **WPA-PSK Encryption:**

The wireless connection is secured with a pre-shared key that has been defined by the user. Wireless clients must be configured with this key before they can connect to the MediaAccess Gateway. The MediaAccess Gateway supports the following WPA-PSK versions (ordered by descending security):

- ▶ **WPA2-PSK:**

The most recent and most secure version of WPA-PSK. Choose this version if you are sure that all your wireless clients support WPA2-PSK.

- ▶ **WPA-PSK + WPA2-PSK:**

This is a mixed mode. In this mode WPA2-PSK, is the preferred encryption type but wireless clients do not support WPA2-PSK, can still use WPA-PSK as encryption type. Choose this option if not all of your wireless clients support WPA2-PSK or if you are not sure. Wireless clients that support WPA2-PSK will use WPA2-PSK, the others will use WPA-PSK.

- ▶ **WPA-PSK:**

The first version of **WPA-PSK**. Choose this option if you are sure that none of your wireless clients support WPA2-PSK.



If you want to configure WPA2-PSK on the built-in wireless utility of Windows XP Service Pack 2 (SP2), you first have to:

- Upgrade your Windows XP to Service Pack 3.
- or -
- Install the following update: <http://support.microsoft.com/kb/917021>.

- **WEP Encryption:**

The least safe encryption type used for wireless connections. Like WPA-PSK it uses a user-defined key, but WEP has been proven to have security issues.



Although the MediaAccess Gateway allows you to use WEP or no security, we strongly advise against using one of them! Use **WPA(2)-PSK** instead.

Configuration

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 Under **Home Network**, click **Wireless**.



- 3 The **Wireless Access Point** page appears. In the upper-right corner, click **Configure**.

4 In the **Security Mode** list, select one of the following modes:

- ▶ **WPA-PSK**
- ▶ **WPA2-PSK**
- ▶ **WPA-PSK + WPA2-PSK**

For more information, see *“Encryption types” on page 44.*

5 In the **WPA-PSK Encryption Key** box, type a the key of your choice. The key must be in one of the following formats:

- ▶ 8 to 63 alphanumeric characters. For example: MyKey123
- ▶ 8 to 64 hexadecimal characters (characters from 0 to 9 and from A to F). For example: C54F48A5.

6 Click **Apply**.

7 Reconnect your wireless client(s) to the MediaAccess Gateway using these new security settings.

For more information, see *“5.1 Connecting Your Wireless Client via WPS” on page 40* or *“5.2 Connecting Your Wireless Client without WPS” on page 42.*

6 Saving Energy

Code of Conduct

To prove its commitment to protect the environment, Technicolor has signed the Code of Conduct, a global agreement to reduce the power consumption of broadband access devices.

For more information, see “6.1 Code of Conduct” on page 48.

Technicolor power saving innovations

To further reduce the power consumption, Technicolor has developed the *ECO Manager*. This system constantly monitors the services provided by the MediaAccess Gateway and automatically switches unused services to an ECO-friendly state. For more information, see “6.2 ECO Manager” on page 49.

Next to this automated tool, you can also choose to manually disable services that you will not be using. For more information, “6.3 Manually Switching Off Services to Reduce Power” on page 50.

6.1 Code of Conduct

Power states

Code of Conduct provides rules for the power consumption in:

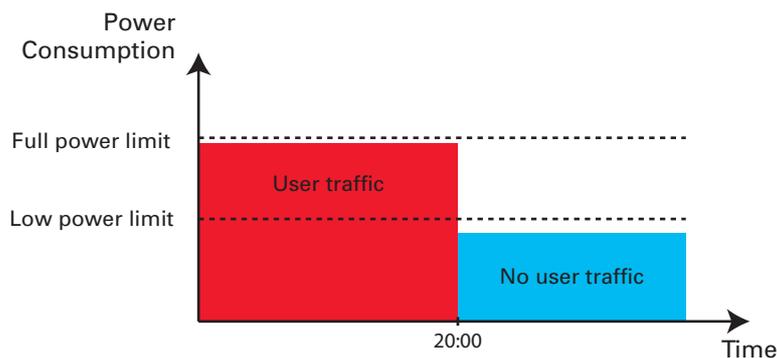
- Full power state:
This is the normal operation mode of the device, where all functionality is enabled.
- Low power state:
When there is no user traffic on the device, the device should switch to low power mode. This is a state in which devices are only allowed to use a limited amount of energy to be able to power its components and respond to user activity.

Example

Take the following example:

- The user switches off his computer at 20:00.
- There are no other devices connected to the MediaAccess Gateway.

The MediaAccess Gateway switches to low power mode. This results in a considerable drop in the overall power consumption of the MediaAccess Gateway.



6.2 ECO Manager

Introduction

The MediaAccess Gateway constantly monitors the user activity and uses this information to optimise the power consumption:

For example:

- The MediaAccess Gateway **reduces the clock frequency of the central processor** when there is no or low user activity. This lowered clock frequency will result in a lower power consumption of the MediaAccess Gateway.
- **Disable the USB port(s)** when they are not used
- **Switch the wireless interface to power reduction mode.**

Wireless access point power reduction mode

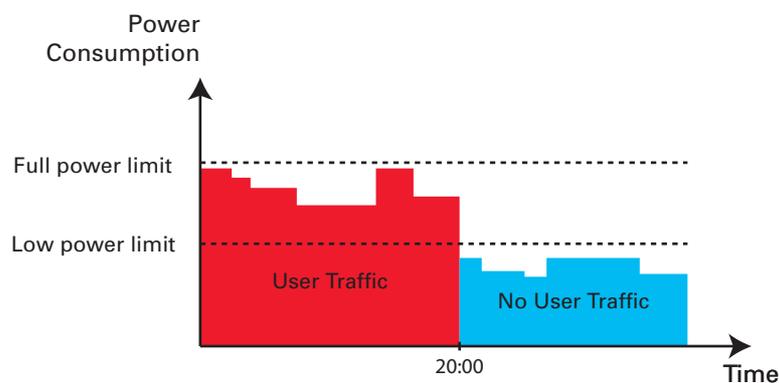
When the MediaAccess Gateway access point switches to power reduction mode, the access point is switched off and is only power on periodically to be able to detect new clients. If new clients are detected the wireless access point is fully powered again. This is only possible if there are no devices connected to the MediaAccess Gateway.

Power reduction is enabled by default, but it is possible to disable it via the MediaAccess Gateway GUI. To configure power reduction:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 Under **Home Network**, click **Wireless**.
- 3 In the *Navigation bar*, click **Configure**.
- 4 Under **Configuration**:
 - ▶ Select **Power Reduction Enabled** to enable power reduction.
 - ▶ Clear **Power Reduction Enabled** to disable power reduction.
- 5 Click **Apply**.

Example

If we use the same example as in the previous section, you can see that the MediaAccess Gateway is now able to further reduce the power consumption in periods where less action is required from the MediaAccess Gateway.



6.3 Manually Switching Off Services to Reduce Power

ECO button

If you are not using the wireless access point of your MediaAccess Gateway, you might consider to disable the wireless access point permanently. This allows you to further reduce the power consumption.

To turn the wireless interface:

- **Off**, press the **ECO** (🔌) button until the Wireless LED is off.
- **On**, press the **ECO** (🔌) button until the Wireless LED is on.

Zero power consumption

If you will not be using your MediaAccess Gateway for a longer time (for example: you are going on holiday), you should consider to turn off the MediaAccess Gateway. This way no energy will be consumed at all.

However, be aware that if you turn off the MediaAccess Gateway, **all services provided by the MediaAccess Gateway that require access to the Internet will not be available**. For example:

- You will not be able to browse to Internet websites, listen to radio streams etc.
- No Digital TV is provided
If your set-top box is connected to your MediaAccess Gateway, it will no longer be able to connect to the Internet, hence not be able to service your TV set.

7 Sharing Content

Introduction

The MediaAccess Gateway allows you to share the content stored on your USB storage device with other users on your network or even access this shared content from the Internet.

Features

- The MediaAccess Gateway supports USB 2.0
- The following file systems are supported:
 - ▶ NTFS (optional)
 - ▶ FAT32
 - ▶ FAT16
 - ▶ HFS+ (optional)
 - ▶ EXT2/EXT3 (optional)
- You can connect up to five USB storage devices (via a USB hub).
- Each USB storage device can have up to 10 partitions. If your device has more partitions the extra partitions will be ignored.

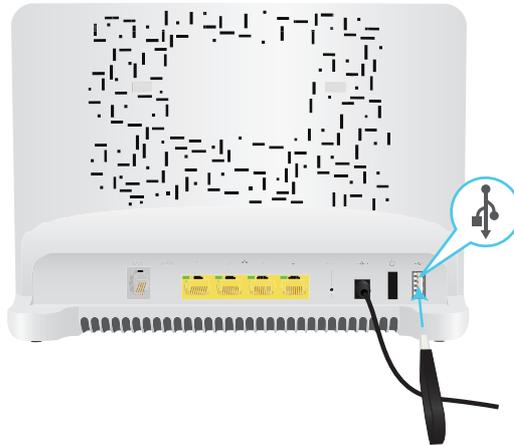
Content Sharing Servers

The MediaAccess Gateway offers three types of services to share your content. The following table gives you a brief overview of the main functions:

	Network File Server	UPnP AV Media Server	FTP Server
Function	Store and access your data on your local network.	Make media files available for UPnP AV capable devices like Media players, Set-Top boxes from your local network.	Store and access your data from the Internet.
Access	Read and write	Read-only	Read and write
Accessible from	Local network	Local network	Internet and Local network
Type of content shared	All files from all partitions and disks that are connected.	Media files (music, movies and pictures) from all partitions and disks that are connected.	All files that are stored in the Shared folder of the managed partition.
For more information, see...	<i>"7.1 The Network File Server" on page 53</i>	<i>"7.2 The UPnP AV Media Server" on page 56</i>	<i>"7.3 The FTP Server" on page 60</i>

Configuration

All servers are **enabled by default**. The only thing that you need to do is to plug your USB memory stick or external hard disk in (one of) the USB port(s) of your MediaAccess Gateway.



-  By using a USB hub, you can connect up to five USB mass storage devices to the MediaAccess Gateway.
-  Do not remove your USB storage device without stopping it first, otherwise data might be lost! For more information, see “7.5 Safely Removing your USB Storage Device” on page 64.

7.1 The Network File Server

Introduction

The Network Server allows you to share the content on your USB storage device(s) with other devices that are connected to your local network (mostly computers).

These devices have **read and write access** to this USB device(s).

Configuration

The Network File Server is **enabled by default** and ready for use.

To change the default settings, proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI” on page 33.*
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the *Navigation bar*, click **Configure**.
- 4 Under **Network File Server (Windows Networking)**, you can change the following settings:
 - ▶ **Server Name:**
Enter the name that you want to use to access the MediaAccess Gateway.
 - ▶ **Server Description:**
Add a short description for what kind of data is stored on the USB storage device.
 - ▶ **Workgroup:**
Enter the same workgroup as used by your computer(s).
 - ▶ **Server Enabled:**
Select this option to enable the Network File Server
- 5 Click **Apply**.
- 6 All users connected to the MediaAccess Gateway can now access the data on stored your USB storage device.
- 7 If you want to limit the number of folders that can be accessed, continue with *“7.4 Managing your Shared Content” on page 62.*

Accessing the shared content on Windows

Proceed as follows:

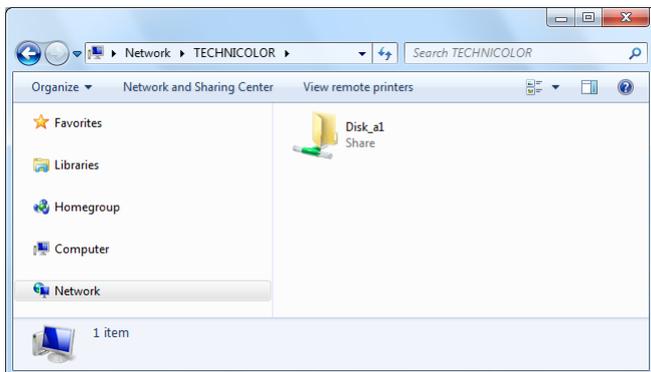
- 1 Open **Windows Explorer**.
- 2 In the address bar, type two backslashes followed by the name that you entered in the **Server Name** box (default: **\\Technicolor**).



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

If you made changes to the DHCP settings, the IP address may diff. For more information, see *“Getting the IP address of your USB storage device” on page 96.*

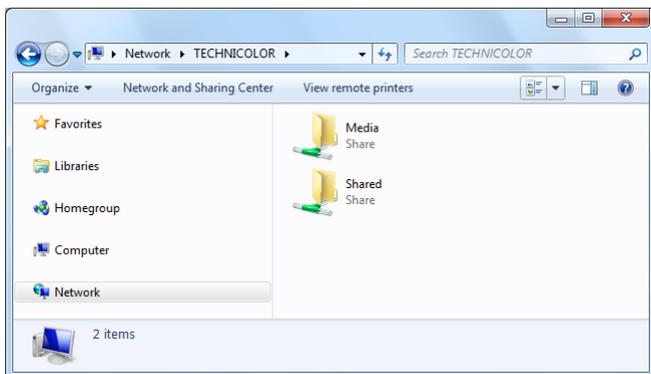
- 3 An Explorer windows appears. The storage devices that are attached to your MediaAccess Gateway are listed as folders.



If the storage device has multiple partitions an index number will be added at the end (for example: Disk_a1 and Disk_a2).

If multiple storage devices are inserted the first one is listed as Disk_a1, the second one as Disk_b1, and so on.

If the partition is a managed partition, only the **Media** and **Shared** folders of the managed partition are displayed:



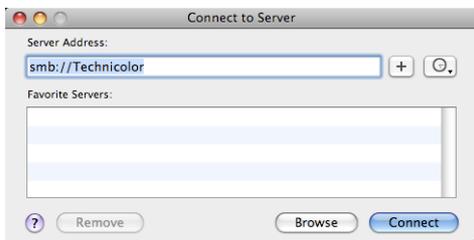
For more information on managed partitions, see “7.4 Managing your Shared Content” on page 62.

- 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 the help of your operating system.

Accessing the shared content on Mac

Proceed as follows:

- 1 On the **Go** menu, click **Connect To Server**.
- 2 The **Connect To Server** window appears.



In the **Server Address** box, type **smb://<server name>**, where <server name> is the Server Name you assigned to your USB storage device (default: **smb://Technicolor**).



If you did not provide a server name, type **smb://192.168.1.253**.

If you made changes to the DHCP settings, the IP address may diff. For more information, see “Getting the IP address of your USB storage device” on page 96.

- 3 The following window appears:



Select **G**uest and click **C**onnect.

- 4 If prompted, select the partition that you want to open and click **O**K:



- 5 Your USB storage device is now mounted and is displayed on your desktop.

7.2 The UPnP AV Media Server

Introduction

Your MediaAccess Gateway has a built-in DLNA-certified UPnP AV media server. This section describes how to use and configure this media server.

UPnP AV

UPnP AV (AV stands for Audio and Video) is a protocol especially designed to share *media* files on your *local network*.

DLNA-certified

The Digital Living Network Alliance (DLNA) is an organisation that imposes requirements to ensure the interoperability of your media devices and standardize the communication between them.

Buying a DLNA-certified device like the MediaAccess Gateway guarantees you that it will seamlessly integrate with your other DLNA-certified devices.

To allow you to access your media in a quick and easy way, the MediaAccess Gateway scans your storage device for meta data information (for example, title, artist, album) and stores it in a database. When you are looking for a file, the MediaAccess Gateway can simply query the database instead of having to go through all the files.



This database will only be created if the following conditions are met:

- Your disk or partition must have at least 250MB of free space
- Your disk or partition must not be read-only.

UPnP AV network components

A UPnP AV network consists of the following components:

- The **UPnP AV server** is directly connected to your media files and makes them available on the network. In your network the MediaAccess Gateway will fulfil this role.
- The **UPnP AV client** is a software application or hardware device that allows you to play or view the media files provided by your UPnP AV media server.

7.2.1 Configuring the UPnP AV Media Server

Introduction

The Network File Server is *enabled by default* and ready to use.

Enabling/disabling the UPnP AV Media Server

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the *Navigation bar*, click **Configure**.
- 4 Under **UPnP AV Media Server**, click **Server Enabled**.
- 5 Click **Apply**.

Media Database

When you plug in your USB storage device, the MediaAccess Gateway will automatically start building the *media database*. This database contains all meta data of the media files stored on your USB storage device.

To view the status of the media database:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 In the *Navigation bar*, click **Configure**.
- 4 Under **UPnP AV Media Server**, you can find the **Database Status**.



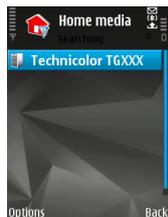
- 5 If you want to rebuild the database, click **Rebuild**.

7.2.2 Using the UPnP AV Media Server

Introduction

The UPnP AV Media Server lists all audio, video and picture files located on the connected USB storage device. All UPnP AV renderers (for example, a DLNA-certified Set-Top box) that are connected to your network are able to view this list and play or view items from this list.

On your UPnP AV renderer, the MediaAccess Gateway's UPnP AV media server will be listed as **Technicolor TGXXX**. Below you can find a screenshot taken on a smartphone with a UPnP AV client.



Via this entry, you can browse to your media files.

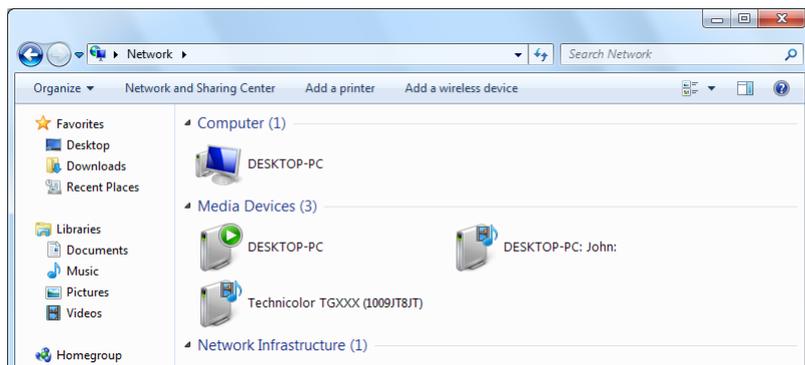


Windows 7

Windows 7 has native support for UPnP AV. It automatically detects UPnP AV and makes your media files available for playback on your Windows Media Player.

Proceed as follows:

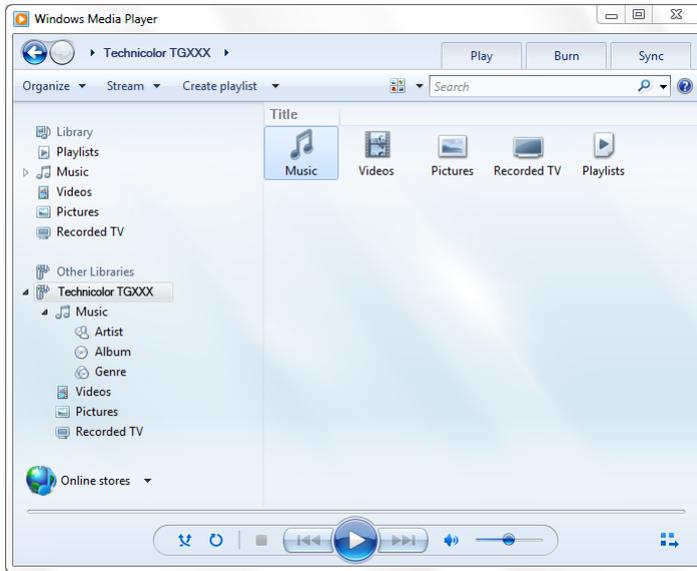
- 1 On the Windows **Start** menu, click **Network**.
- 2 The **Network** window appears:



Under **Media Devices** you will find the MediaAccess Gateway's UPnP AV Media Server (displayed as **Technicolor TGXXX**).

- 3 Double-click the MediaAccess Gateway's UPnP AV Media Server to access your media files.

4 Windows Media Player starts up.



Your MediaAccess Gateway's UPnP AV Media Server is listed on the left. This entry allows you to browse to your media files.

7.3 The FTP Server

Introduction

The MediaAccess 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.

Via FTP you can **download and upload** all types of files both from your **local network and the Internet**.

Setting up the FTP server

Proceed as follows:

- 1 *Protect your account with a password.*
- 2 *Enable the FTP Server and select the managed partition.*

Protect your account with a password

If you did not yet configure your login to the *MediaAccess Gateway GUI* with a password:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 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.

Enable the FTP Server and select the managed partition

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 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 to make it managed.
- 6 The MediaAccess 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**.

Result

The **Shared** folder and its subfolders are now accessible using FTP. The other folders are not accessible via FTP.

If you are connected to the Internet, the link to the FTP server is displayed under FTP Server:

Home > Toolbox > Content Sharing [Overview](#) | [Configure](#)



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.

! Before you can safely unplug a USB storage device, you must **stop** it.

- ▶ **Network File Server (Windows Networking)**
 - Server Name: Technicolor
 - Server Description: DSL Gateway
 - Workgroup: WORKGROUP
 - Server Enabled: Yes
- ▶ **UPnP AV Media Server**
 - Server Enabled: Yes
 - Profiler Status: Files are being analyzed ...
 - Database Status: Database construction in progress ...
- ▶ **FTP Server**
 - Server Address: <ftp://Administrator@172.18.17.79>
 - Server Enabled: Yes
- ▶ **List of connected disks**

			Managed partition
U3 Cruzer Micro (Disk 1)			
Partition 1	7.64 GB	4.05 GB free	

A managed partition has not been selected.

On the MediaAccess Gateway network, you can also access the FTP server using its local address (192.168.1.253).

Additional configuration

Because most service providers use dynamic IP addresses, the IP address of your Internet connection may change 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 “8.3 Dynamic DNS” on page 75.

7.4 Managing your Shared Content

Managed Partition

If you select your drive or partition as managed partition, users only have access to the following folders:

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

All other folders will be hidden from the user. These hidden folders are still on the USB storage device, but you can not access them. If you connected more than one USB storage device, those devices will also be hidden.

Media folder

Use the **Media** folder to share your audio, video and picture files. This folder can only be accessed via the following servers:

- The Network File Server
For more information, see “7.1 The Network File Server”.
- UPnP AV Media Server.
For more information, see “7.2 The UPnP AV Media Server”.



If your partition is managed, the UPnP AV server will only use the media files that are located in the **Media** folder.

Shared folder

The **Shared** folder is a folder to share files both on the **local network and the Internet**. This folder can only be accessed via the following server:

- The Network File Server
For more information, see “7.1 The Network File Server”.
- FTP Server
For more information, see “7.3 The FTP Server”.



The FTP Server can only be used with a managed partition.

Unmanaged vs. managed

The following table compares the two modes:

Access via	Accessible folders	
	Unmanaged	Managed
Network File Server	All	Media and Shared folder.
UPnP AV Media Server	All	Media folder.
FTP Server	Not available in this mode.	Shared folder.

Setting up the managed partition

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “Accessing the MediaAccess Gateway GUI” on page 33.
- 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 MediaAccess 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 other data with other users on your network. Optionally, users can also access this folder using FTP. For more information, see “7.3 The FTP Server” on page 60.

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

7.5 Safely Removing your USB Storage Device

Introduction

If you just unplug your USB storage device from the MediaAccess Gateway you may lose your data. To avoid this you must first stop your USB storage device.

Stopping your USB storage device

Proceed as follows

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Content Sharing**.
- 3 In the *Navigation bar*, click **Configure**.
- 4 Click **Stop**.
- 5 Unplug your USB storage device from the MediaAccess Gateway.

8 Network Services

In this chapter

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

Topic	Page
<i>8.1 UPnP</i>	66
<i>8.2 Assigning a service (HTTP, FTP,...) to a Computer</i>	73
<i>8.3 Dynamic DNS</i>	75
<i>“8.4 Network Time Server” on page 76</i>	76

Feature availability

Depending on the configuration offered by your service provider, some features may not be available on your MediaAccess Gateway. For more information, contact your service provider.

8.1 UPnP

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

The following operating systems support UPnP:

- Windows 7
- Windows Vista
- Windows XP



If your computer is running Windows XP, you first have to install the UPnP component. For more information, see “8.1.4 Installing UPnP on Windows XP” on page 71.

UPnP and the MediaAccess Gateway

UPnP offers you the following functions:

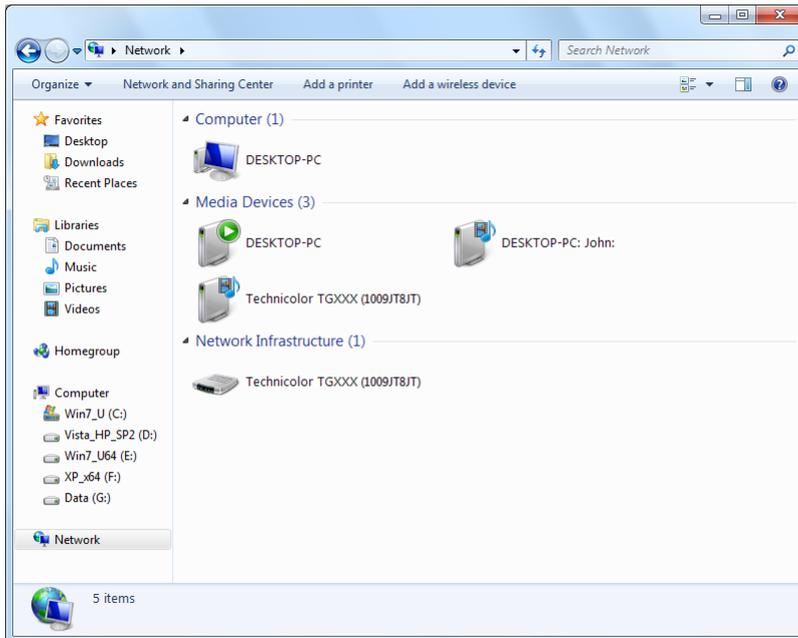
- You can access the *MediaAccess Gateway GUI* without having to remember the address of the MediaAccess Gateway. For more information, see “8.1.1 Accessing Your MediaAccess Gateway via UPnP” on page 67.
- If you are using a PPP connection to connect to the Internet, you can enable/disable your Internet connection without having to open the *MediaAccess Gateway GUI*. For more information, see “8.1.2 Managing your Internet connection via UPnP” on page 68.
- You do not have to manually create port mappings to run services on a computer. The automatic port configuration mechanism for UPnP-enabled games and applications will do this for you. If the application is UPnP-enabled, UPnP will create these entries automatically. For more information, see “8.2 Assigning a service (HTTP, FTP,...) to a Computer” on page 73.

8.1.1 Accessing Your MediaAccess Gateway via UPnP

Windows 7/Vista

If your computer runs Windows 7/Vista:

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

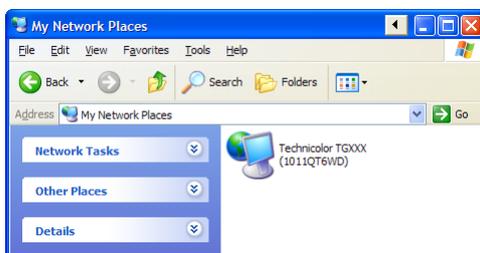


- 3 Right-click your MediaAccess Gateway (displayed as Technicolor TGXXX) and click **View device web page**.
- 4 The *MediaAccess Gateway GUI* appears.

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 MediaAccess Gateway (displayed as Technicolor TGXXX).
- 4 The *MediaAccess Gateway GUI* appears.

8.1.2 Managing your Internet connection via UPnP

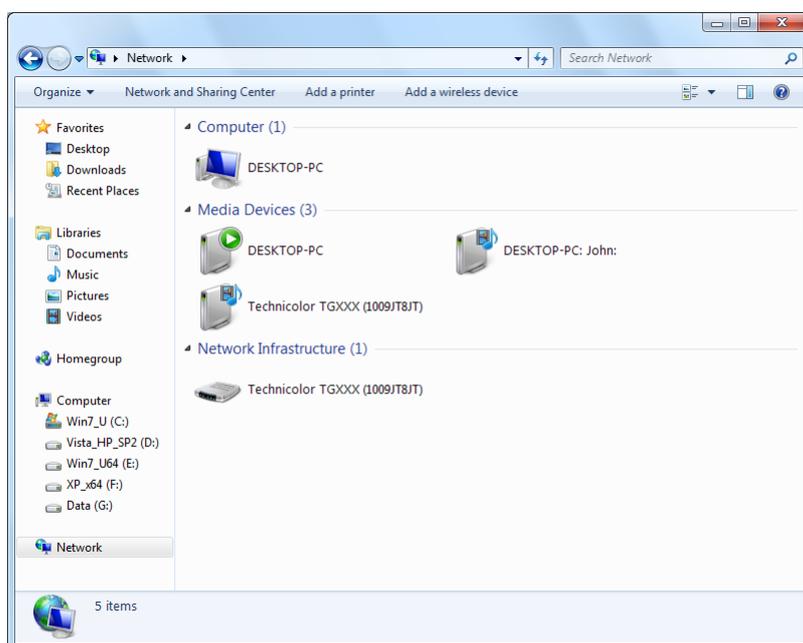
Applicability

This section only applicable if you are using a PPP connection to the Internet.

Windows 7/Vista

If your computer runs Windows 7/Vista:

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



- 3 Right-click your MediaAccess Gateway (displayed as Technicolor 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.

Disabling this feature

To prevent that users can connect/disconnect you can enable **Extended Security**. This feature is enabled by default. For more information, see *“8.1.3 Configuring UPnP on the MediaAccess Gateway” on page 70.*

8.1.3 Configuring UPnP on the MediaAccess Gateway

Introduction

On the *MediaAccess Gateway GUI* you can:

- Enable/Disable *UPnP*.
- Enable/Disable *Extended Security*.

Enable/Disable UPnP

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 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 enabled, only limited UPnP operation between the host and the MediaAccess Gateway is allowed:

- A local host is not allowed to connect/disconnect the MediaAccess Gateway Internet connection. You can then only connect/disconnect the Internet connection via the *MediaAccess Gateway GUI*
- Address translation mappings can only be added or changed via UPnP for the host on which the UPnP application is running.

Extended Security is enabled by default.

Enable/Disable Extended Security

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Game & Application Sharing**.
- 3 Under **Universal Plug and Play**, select **Use Extended Security**.
- 4 Click **Apply**.

8.1.4 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.

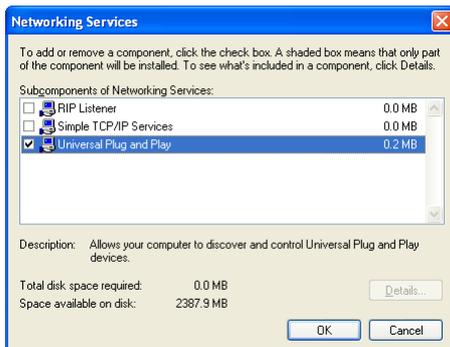
Proceed as follows:

- 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.

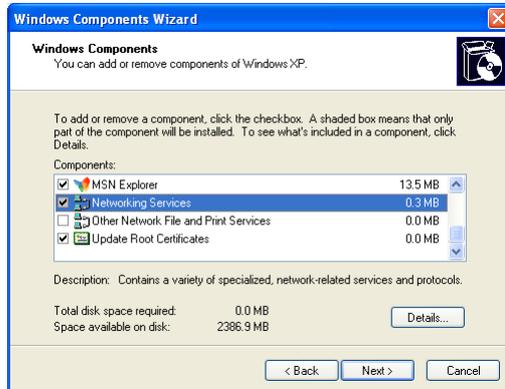
Adding IGD Discovery and Control

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

Proceed as follows:

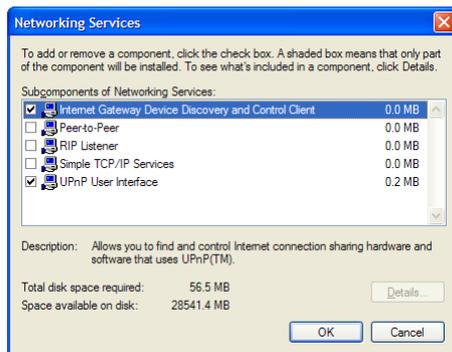
- 1 On the Windows taskbar, click **Start**.

- 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.

8.2 Assigning a service (HTTP, FTP,...) to a Computer

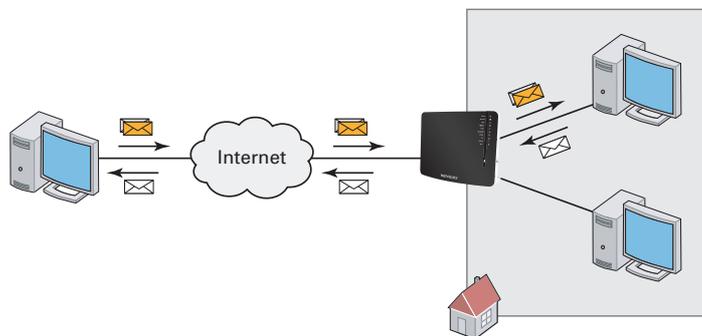
Introduction

The MediaAccess 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 were connected to the outside world.

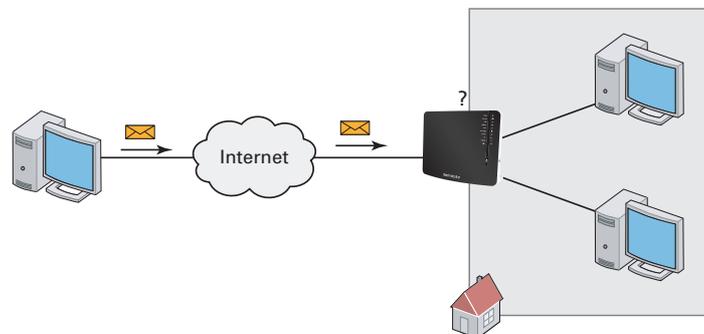
Issue

When the MediaAccess Gateway receives an incoming message, the MediaAccess Gateway has to decide to which computer it has to send this message.

If the incoming message is a response to an outgoing message originating from one of your computers, the MediaAccess 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 MediaAccess Gateway has no information to decide to which computer it should forward the incoming message.



Solution

To avoid this problem you can do either of the following:

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

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 MediaAccess Gateway which services are running on the computer.

For example, when you start a UPnP-enabled application on your computer, it will automatically create the necessary port mappings on this computer and on the MediaAccess Gateway.

For more information on UPnP, see “8.1 UPnP” on page 66.

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 MediaAccess 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 MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI” on page 33.*
- 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 *MediaAccess Gateway GUI*.
- 5 In the **Device** list, select the computer to which you want to assign the service. Your computer will be listed with its computer name.
- 6 All incoming requests for the selected service will now be directed to the selected device. The MediaAccess Gateway will also configure its firewall to allow this service.

8.3 Dynamic DNS

Introduction

The Dynamic DNS service allows you to assign a dynamic DNS host name (for example mywebpage.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 you can configure Dynamic DNS, you first have to create an account at a Dynamic DNS service provider. For example:

- www.dyndns.org
- www.no-ip.com
- www.dtdns.com

Procedure

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI” on page 33.*
- 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**.

8.4 Network Time Server

Introduction

A **Network Time Server** is a server that makes sure that the time settings of your device (your MediaAccess Gateway) are in sync with the official time.

This time will be used for features like:

- Access Control
For more information, see “9.3 Access Control” on page 87.
- Wireless Time Control
For more information, see “9.4 Wireless Time Control” on page 89.
- Event logs

Requirements

Your MediaAccess Gateway must be connected to the Internet.

Specifying a time server for your MediaAccess Gateway

Proceed as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see “Accessing the MediaAccess Gateway GUI” on page 33.
- 2 On the **Technicolor Gateway** menu, click **Configuration**.
- 3 The **System Configuration** page appears. On the *Navigation bar*, click **Configure**.
- 4 Under **Time Configuration**, select **Auto-configuration** and configure the following settings:

Home > Technicolor Gateway > Configuration

Overview | Details | **Configure**

System Configuration
This page lets you configure your Technicolor Gateway.

► **Service Configuration**

You cannot directly edit the service settings of your Technicolor Gateway. In order to modify those settings, you must use the [Configuration Wizard](#) and follow the instructions appearing on the screen.

Service Name: Routed PPP

► **Time Configuration**

Auto-configuration:

Timezone: (UTC+01:00) ▼

Summer Time:

Time Server 1: pool.ntp.org

Time Server 2:

Time Server 3:

Time Server 4:

Time Server 5:

► **System Configuration**

Web Browsing Interception: Automatic ▼

Apply Cancel

- **Time Zone:**
Select your time zone from this list.

▶ **Summer Time:**

Select **Summer Time** if you want the clock to follow daylight saving time.

- ▶ In the **Time Server** box, type the address of the time server of your choice (for example: **pool.ntp.org**). You can define up to five time servers.

5 Click **Apply**.

6 Under **Time Configuration** you can see the newly applied time.

Home > Technicolor Gateway > Configuration

Overview | [Details](#) | Configure



System Configuration

This page summarizes the current configuration of your Technicolor Gateway.

▶ **Service Configuration**

This section contains information regarding the service configuration currently applying to your Technicolor Gateway.

Service Name:	Routed PPP (modified by user)
Description:	Routed Connection.
Region:	World
Provider:	Basic
Configuration Date:	Configuration set by Embedded Wizard

▶ **Time Configuration**

Time Source:	Automatic
Date:	09-03-2012
Time:	14:44:56
Timezone:	(UTC+01:00)
Summer Time:	Yes
Time Since Power-on:	0 days, 0:36:12
Time Server 1:	pool.ntp.org

▶ **System Configuration**

Web Browsing Interception:	Automatic
----------------------------	-----------

9 Internet Security

Overview

The MediaAccess Gateway offers various options to secure your network and network connection:

Topic	Page
<i>9.1 Parental Control</i>	<i>80</i>
<i>9.2 Firewall</i>	<i>85</i>
<i>9.3 Access Control</i>	<i>87</i>
<i>9.4 Wireless Time Control</i>	<i>89</i>

9.1 Parental Control

Introduction

The MediaAccess Gateway allows you to deny access to specific web sites.

Access Denied page

When a user tries to access a page that is being blocked, the following page is displayed:

Access Denied...

Access to the requested website has been blocked because of the following reason:

You are not allowed to view this website.

<http://www.evill.com/>

For more information or if you believe the website has been incorrectly blocked, please contact your Technicolor Gateway administrator.

Address-based filtering

With address-based filtering (or URL-filtering) you can **block web sites based on their address** (for example www.porn.com).

Content-based filtering

As you know, the Internet consists of a large number of web sites, and that number still increases every day. This makes it almost impossible to keep the list of addresses up-to-date.

To solve this problem MediaAccess Gateway introduced content-based filtering.

With content-based filtering you can **block web sites based on their content category** (for example pornography) instead of their URL. This way, you only need to select the appropriate categories and the content category server takes care of the rest. This content category server is updated at regular intervals.

Combining the two filters

Address-based filtering has priority over content-based filtering. This means that when you are blocking a specific category, you can still access a specific address provided you create a rule to allow access to that URL.

For example, if you are blocking content from the **Finance / Investment** category, you can create a rule to make an exception for netbanking.mybank.com.

Activating content-based filtering

Before you can use content-based filtering you must first activate it by purchasing a license key at your service provider or by activating the 30-day trial.

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 In the **Pick a task** list, click **Activate Web Filtering License**.
- 4 The **Web Filtering Activation** page appears. Under **License Type**, select:
 - ▶ **30-days evaluation** if you first want evaluate this feature.
 - ▶ **Standard** if you have already purchased a license key. The License key box appears as soon as you select this option.
Type the license key that you received from your service provider in this box.
- 5 Click **Apply**.

Option 1: content-based filter (combined with the address-based filter)

If you want to use the content-based filtering:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 On the *Navigation bar*, click **Configure**.
- 4 Make sure that the **Use Content-Based Filter** check box is selected.
- 5 Configure the content-based filter. For more information, see “*9.1.1 Configuring Content-based Filtering*” on page 82.
- 6 If you want to make exceptions for specific web sites, add the necessary rules in the address-based filter. For more information, see “*9.1.2 Adding Rules for Address-Based Filtering*” on page 83.

Option 2: address-based filter only

Take this option if content filtering is not available on your MediaAccess Gateway or you don't want to use it.

To configure address-based filtering:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 On the *Navigation bar*, click **Configure**.
- 4 Make sure that the **Use Address-Based Filter** check box is selected.
- 5 In the **Action for Unknown Sites**, select:
 - ▶ **Allow** as the default rule if you want to allow access to *all* web sites and manually specify which web sites may not be accessed.
 - ▶ **Block** as the default rule if you want to deny access to *all* web sites and manually specify a number of web sites that may be accessed.
- 6 Click **Apply**.
- 7 If you want to make exceptions for specific web sites, add the necessary rules in the address-based filter.
For more information, see “*9.1.2 Adding Rules for Address-Based Filtering*” on page 83.

9.1.1 Configuring Content-based Filtering

Requirements

Content-based filtering must be activated on your MediaAccess Gateway.

For more information, see *“Activating content-based filtering”* on page 80.

Accessing the configuration page

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see *“Accessing the MediaAccess Gateway GUI”* on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 On the *Navigation bar*, click **Configure**.
- 4 Under **Content-Based Filtering** you can change the settings of the content-based filter.

Configuration

Under **Content-Based Filtering**:

- 1 Select **Use Content-Based Filter** check box (if needed).
- 2 In the **Action for uncategorised sites** list, select a default action for sites that have not yet been categorised.
- 3 Under **Content Level**, select the content level you want to use.
If you want a more detailed view of the content that will be blocked for this level, click the **Edit** link next to the content level.
If needed, you can change the **Name**, **Description** and **Configuration** of the content level.
- 4 Click **Apply** after you have made your changes.

Creating your own content level

Proceed as follows:

- 1 In the **Pick a task** list, click **Create a new content level**.
- 2 Enter a **Name** and **Description** for your content level and click **Next**.
- 3 Under **Configuration**, select:
 - ▶ **Clone Existing Level** if you want to start from an existing level. You can now select the level that you want to clone.
 - ▶ **White list** if you want to block everything and select which content should be allowed.
 - ▶ **Black list** if you want to allow everything and select which content should be blocked.
 Click **Next**.
- 4 Under **Configuration**:
 - ▶ Select the check boxes of the categories/groups you want to allow.
 - ▶ Clear the check boxes of the categories/groups you want to block.
- 5 Click **Apply**.
- 6 Configure the content-based filter with the new level. For more information, see *“Configuration”* on page 82.

9.1.2 Adding Rules for Address-Based Filtering

Introduction

Address-based filtering has a higher priority than content-based filtering. This means that when you are blocking a specific category, you can still access a specific site if you allow it in the address-based filter.

Example

If you block content from the **Finance / Investment** category and allow access to netbanking.mybank.com, netbanking.mybank.com will still be accessible.

Options

With the address-based filter you can:

- Deny access to a specific web site.
- Allow access to a specific web site.
- Redirect a web site.
- Redirect all web sites.

Deny access to a specific web site

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 Make sure the **Use Address-Based Filter** check box is selected.
- 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**.
- 6 Click **Add**.

Allow access to a specific web site

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 Make sure the **Use Address-Based Filter** check box is selected.
- 4 Type the URL of the Web site you want to allow (for example “netbanking.bank.com”) in the **Web Site** box.
- 5 In the **Action** list, click **Allow**.
- 6 Click **Add**.

Redirect a web site

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 Make sure the **Use Address-Based Filter** check box is selected.
- 4 Type the URL of the Web site you want to redirect (for example “cracks.am”) in the **Web Site** box.

- 5 Click **Redirect** in the **Action** list.
- 6 Type the URL of the Web site you want to redirect to (for example “mycompany.com/internetpolicy.htm”) in the **Redirect** box.
- 7 Click **Add**.

Redirect all web sites

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Parental Control**.
- 3 Make sure the **Use Address-Based Filter** check box is selected.
- 4 Type “*” in the **Web Site** box.
- 5 Click **Redirect** in the **Action** list.
- 6 Type the URL of the Web site you want to redirect to (for example “mycompany.com/internetpolicy.htm”) in the **Redirect** box.
- 7 Click **Add**.

9.2 Firewall

Introduction

The MediaAccess Gateway comes with an integrated firewall that helps you protect your network from attacks from the Internet. This firewall has a number of predefined levels to allow you to adjust the firewall to your needs.

The Firewall is disabled by default. This means that **all** traffic passing through the MediaAccess Gateway (from and to the Internet) is allowed.

Predefined security levels

The MediaAccess Gateway has a number of predefined security levels. The following levels are available:

- **BlockAll:**

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



Although BlockAll will block all connections, some mandatory types of traffic such as DNS will still be relayed between LAN and WAN by the MediaAccess Gateway.

- **Standard:**

All outgoing connections are allowed. All incoming connections are blocked, except for inbound connections assigned to a local host via Game and Application Sharing. This is the **default firewall level**.

- **Disabled:**

All in- and outgoing traffic is allowed to pass through your MediaAccess Gateway, including Game and Application Sharing.



The firewall levels only have impact on traffic passing through your MediaAccess Gateway. This means that the handling of traffic directly appointed from and to MediaAccess Gateway is independent of the selected firewall level.



Protocol checks will be performed on all accepted connections, irrespective of the chosen level.

Changing the security level

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Toolbox** menu, click **Firewall**.
- 3 The **Firewall** page appears. In the upper-right corner, click **Configure**.
- 4 Under **Security Settings**, select the security level of your choice and click **Apply**.

Creating your own security level

Proceed as follows:

- 1 In the **Toolbox** menu click **Firewall**.
 - 2 In the **Firewall** section, go to the **Configure** page.
 - 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 and select an existing security level to clone from.
 - 5 Click **Apply**.
-  Once you create a security level, you can not delete it anymore. It will always be available in the list of available security levels.
- 6 A page with the firewall settings of your newly created security level appears. Click **Edit**.
 - 7 Enter the following information:
 - ▶ The **Name** of the firewall rule.

- ▶ The **Source Interface** and **IP Address** (range).



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

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

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



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

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

- ▶ The **Service** type of the traffic; this can be a protocol (DNS, SMTP,...) or a specific MediaAccess Gateway system service.

- 8 Select an **Action** that should be done on traffic for which the firewall rules applies:

- ▶ **Accept**: to allow the traffic to pass
- ▶ **Deny**: to drop the traffic (without notification)
- ▶ **Count**: to let the traffic pass, but count it (Hits)

- 9 Click **Apply**.

9.3 Access Control

Introduction

Access Control allows you to create *access schedules for Internet access*.

By default, all devices have constant access to the Internet. Access Control allows you to create exceptions on this rule by adding an access schedule for devices. You can define two schedules for each device:

- One schedule for weekdays (Monday until Friday)
For example. On weekdays, your child's computer is allowed to access the Internet from 6:00 until 7:59 and from 19:00 until 21:59.
- One schedule for the weekend (Saturday and Sunday)
For example. In the weekend, your child's computer is allowed to access the Internet from 9:00 until 22:59.



Depending on the software version used by your service provider, this feature may not yet be available on your MediaAccess Gateway.

Warning

Make sure that the persons using these devices are aware of the time schedule. This to avoid the loss of data or unexpected service interruption.

Requirements

Before you can start:

- Your MediaAccess Gateway must be connected to the Internet.
- Your MediaAccess Gateway must use a time server for its time configuration.
For more information, see "8.4 Network Time Server" on page 76.

Creating an access schedule

Proceed as follows:

- 1 On the **Home Network**, click **Access Control**.
- 2 The **Access Control** page appears.
- 3 If you did not yet create an access rule for the device, select the device under **Device Access Scheduler** and click **Add**.

Home > Office Network > Access Control

Device Access Scheduler
This feature allows you to configure the times that specific devices can access the Internet through your Technicolor Gateway.

This can be used as a form of parental control.

Select device:

Any device that show in the format Unknown-XX-XX-XX-XX-XX-XX are your devices that the Technicolor Gateway can not find the full name for, you can configure these manually [here](#).

The selected device is now listed under **Current Scheduled Devices**.

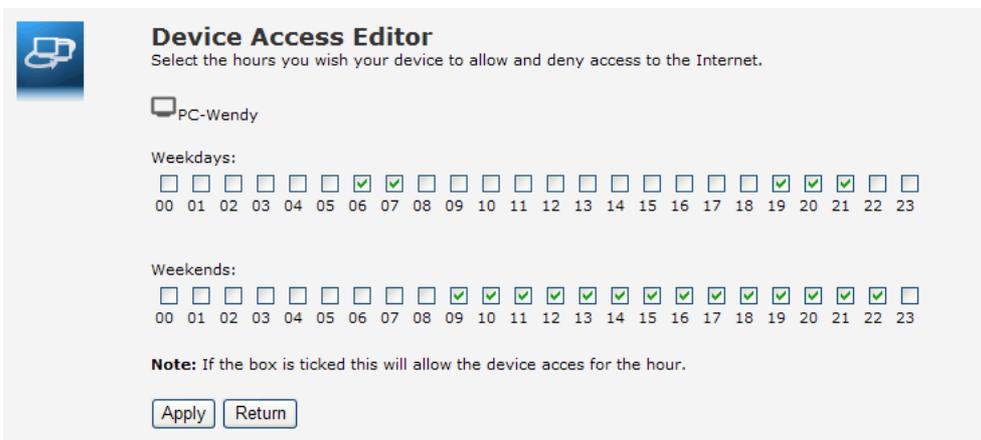
- 4 Under **Current Scheduled Devices**, click the **Edit** button next to your device.

Current Scheduled Devices
This list shows all the device currently configured for time based Internet Access.

If you want to change the settings for a device select the edit button next to the corresponding device.

PC-Wendy

- The **Device Access Editor** page appears. Select the hours for which you want to **allow** Internet access. For example, if you select **06** this means that access is allowed from 6:00 until 6:59.



Device Access Editor
Select the hours you wish your device to allow and deny access to the Internet.

PC-Wendy

Weekdays:

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																
00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23

Weekends:

<input checked="" type="checkbox"/>																							
00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23

Note: If the box is ticked this will allow the device access for the hour.

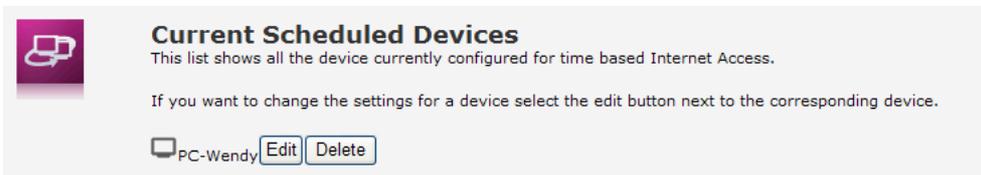
- Click **Apply**.
- The schedule is now active.

Removing an access schedule

By removing the access schedule for a device, you will provide it constant access to the Internet.

Proceed as follows:

- On the **Home Network**, click **Access Control**.
- The **Access Control** page appears. Under **Current Scheduled Devices**, click the **Delete** button next to your device.



Current Scheduled Devices
This list shows all the device currently configured for time based Internet Access.

If you want to change the settings for a device select the edit button next to the corresponding device.

PC-Wendy

- This device now has constant access to the Internet.

9.4 Wireless Time Control

Introduction

Wireless Time Control allows you to restrict wireless access to one or two sessions. This means that your wireless devices will not be able to connect to the Internet (or your local network) outside these time frames.



Depending on the software version used by your service provider, this feature may not yet be available on your MediaAccess Gateway.

Warning

Make sure that the persons that use a wireless connection are aware of these time frames. This to avoid the loss of data or unexpected service interruption.

Requirements

Before you can start:

- Your MediaAccess Gateway must be connected to the Internet.
- Your MediaAccess Gateway must use a time server for its time configuration.
For more information, see “8.4 Network Time Server” on page 76.

Procedure

- 1 Browse to the Technicolor GUI.
For more information, see “4.1 MediaAccess Gateway GUI” on page 32.
- 2 On the **Home Network**, click **Access Control**.
- 3 The **Access Control** page appears. In the **Pick a task list**, click **Wireless Time Control**.
- 4 The **Wireless Network Time Control** page appears.

Wireless Network Time Control
This feature allows you to configure the times the wireless on your Technicolor Gateway will be active.
This can be used as a power saving feature or a form of parental control.

Wireless Status: enabled

Enable Schedule:

Select the time your Network will be available from:

Session 1 Start Time: 07:00 End Time: 12:00

Session 2 Start Time: 12:00 End Time: 22:00

- 5 Select the **Enable Schedule** box.
- 6 Select a start time and end time for the first session.
- 7 Select a start time and end time for the second session.
- 8 Click **Apply**.

10 Support

Introduction

This chapter suggests solutions for issues that you may encounter while installing, configuring or using your MediaAccess Gateway.

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

Topics

This chapter describes the following topics:

Topic	Page
<i>10.1 Setup Troubleshooting</i>	92
<i>10.2 General MediaAccess Gateway Troubleshooting</i>	93
<i>10.3 Wired Connection Troubleshooting</i>	94
<i>10.4 Wireless Connection Troubleshooting</i>	95
<i>10.5 Content Sharing Troubleshooting</i>	96
<i>10.6 Reset to Factory Defaults</i>	97

10.1 Setup Troubleshooting

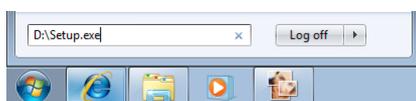
Introduction

If you have trouble to install your MediaAccess Gateway with the Setup CD, try the suggested solutions in this section.

The Setup CD does not start automatically

If your computer runs:

- Microsoft Windows 7 and Vista:
 - a Click the Windows **Start** button.
 - b In the **Search programs and files** box, type the following path: **D:\Setup.exe**, where D stands for the drive letter of your CD- or DVD-ROM drive.



- c Press ENTER.
- Microsoft Windows XP:
 - a Click the Windows **Start** button.
 - b Click **Run**.
 - c 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:
 - a On your desktop, double-click the CD icon.
 - b Double-click **Menu**.

Your MediaAccess Gateway has not been found

If you see this error during setup, make sure that:

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

10.2 General MediaAccess Gateway Troubleshooting

None of the LEDs light up (MediaAccess Gateway does not work)

Make sure that:

- The MediaAccess Gateway is plugged into a power socket outlet.
- You are using the correct power supply for your MediaAccess Gateway device.
 -  The power requirements for your MediaAccess Gateway are clearly indicated on the identification label of the MediaAccess Gateway. Only use the power adaptor supplied with your MediaAccess Gateway.
- The MediaAccess Gateway is turned on via the push button or rocker switch on the back panel.

The Broadband LED does not light up or is blinking

Make sure that:

- The DSL cable is correctly connected. For more information, see “3.1 Connecting the MediaAccess Gateway to your Service Provider’s Network”.
- The DSL service is enabled on your telephone line. For more information, contact your Internet Service Provider.

The Internet LED does not light up

If you must authenticate to connect to the Internet, make sure that your user name and password are correct.

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “Accessing the MediaAccess Gateway GUI” on page 33.
- 2 On the **Broadband** menu, click **Internet Services**.
- 3 Under **Internet**, click **View More**.
- 4 Check your user name
- 5 Re-enter your password.
- 6 Click **Connect**.

MediaAccess Gateway unreachable

If you can not access your MediaAccess Gateway via your web browser or the Setup wizard, you might consider a hardware reset as described in “10.6 Reset to Factory Defaults” on page 97.

10.3 Wired Connection Troubleshooting

Ethernet LED does not light up

Make sure that:

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

10.4 Wireless Connection Troubleshooting

No Wireless Connectivity

Try the following:

- Make sure that the wireless client adapter is enabled (message like “radio on”).
- Make sure that the wireless client is configured for the correct wireless settings (Network Name, security settings).
- If the signal is low or not available, try to reposition the MediaAccess Gateway or (if available) redirect the antenna(s) of the MediaAccess Gateway for optimal performance.
- *Change the wireless channel.*

Poor Wireless Connectivity or Range

Try the following:

- Check the signal strength, indicated by the wireless client manager. If the signal is low, try to reposition the MediaAccess Gateway or (if available) redirect the antenna(s) of the MediaAccess Gateway for optimal performance.
- *Change the wireless channel.*
- Use WPA(2)-PSK as encryption.
For more information, see “5.4 Securing Your Wireless Connection” on page 44.

Change the wireless channel

Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “Accessing the MediaAccess Gateway GUI” on page 33.
- 2 Under **Home Network**, click **Wireless**



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

Can not connect via WPS

If you are having trouble connecting your wireless client via WPS, try to configure it manually. For more information, see “5.2 Connecting Your Wireless Client without WPS” on page 42.

10.5 Content Sharing Troubleshooting

Getting the IP address of your USB storage device

The MediaAccess Gateway always uses the highest available address in your DHCP pool. When using the default settings this will be **192.168.1.253**.

You can always check the IP address as follows:

- 1 Browse to the MediaAccess Gateway GUI.
For more information, see *“Accessing the MediaAccess Gateway GUI”* on page 33.
- 2 On the **Tools** menu, click **Content Sharing**.
- 3 Under **IP configuration**, you can find the IP address to use.

10.6 Reset to Factory Defaults

Resetting your MediaAccess Gateway

If at some point you can no longer connect to the MediaAccess 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 MediaAccess Gateway will be needed.

Also your wireless clients will have to be re-associated, as described in “5 The MediaAccess Gateway Wireless Access Point” on page 39.

Methods

You can choose between:

- *Resetting the MediaAccess Gateway via the MediaAccess Gateway GUI*
- *Reset the MediaAccess Gateway via the Reset button*

Resetting the MediaAccess Gateway via the MediaAccess Gateway GUI

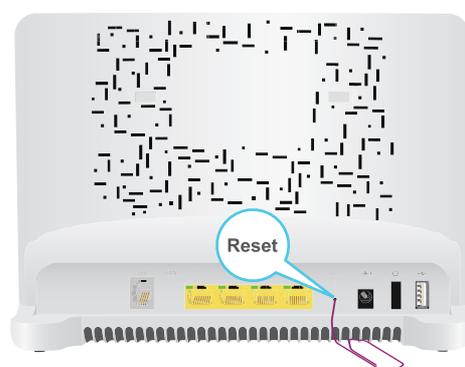
Proceed as follows:

- 1 Browse to the *MediaAccess Gateway GUI*.
For more information, see “*Accessing the MediaAccess Gateway GUI*” on page 33.
- 2 On the **Technicolor Gateway** menu, click **Configuration**.
- 3 In the **Pick a task** list, click **Reset my Technicolor Gateway**.
- 4 The MediaAccess Gateway restores the initial configuration and restarts.
- 5 The MediaAccess Gateway returns to the MediaAccess Gateway home page (unless the IP address of your computer is not in the same subnet as the default IP address of the MediaAccess Gateway, being 192.168.1.254).

Reset the MediaAccess Gateway via the Reset button

Proceed as follows:

- 1 Make sure the MediaAccess Gateway is turned on.
- 2 Push the **Reset** button for 7 seconds and the release it.



3 The MediaAccess Gateway restarts.



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

TECHNICOLOR DELIVERY TECHNOLOGIES BELGIUM NV

Prins Boudewijnlaan 47
2650 Edegem
Belgium

www.technicolor.com

technicolor



Copyright 2012 Technicolor. All rights reserved.
All tradenames referenced are service marks, trademarks, or
registered trademarks of their respective companies. Specifications
subject to change without notice.
DMS-CTC-20110713-0024 v1.0