SAGEM F@st™ 3202

(LiveBox®)

Reference Manual

288 060 387-01

November 2004 Edition

SAGEM

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Symbol conventions used in this manual

Gives you important information that you should take into account.

Warns you against an action or a serious omission.

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1. Introduction

This chapter covers	➢ an overview of the SAGEM F@st™ 3202	§ 1.1
	➢ the composition of the supply	§ 1.2
	➢ the computer prerequisites	§ 1.3

1.1 Overview

The SAGEM F@st™ 3202 is a "Residential Gateway" with high bit rate ADSL interface providing simultaneous access to "Triple Play" services: it can be used to share your Internet connection between all the computers on your network with or without cables (wireless network compliant with IEEE 802.11b/g as an option). It can also be used to connect analog telephones and terminals for accessing telephony (VoIP) services through your ADSL line. Finally, other equipment, such as a set-top box, can be connected to the SAGEM F@st™ 3202 to support additional services such as TV and video on-demand (or, in the future, a videophone).

This Residential Gateway can be used for access to the Internet with all the computers fitted with a USB or Ethernet port or with a WLAN (Wireless LAN: wireless Ethernet network) function/card. You can also connect up to three analog telephones (Dual Tone Multi-Frequency) to it.

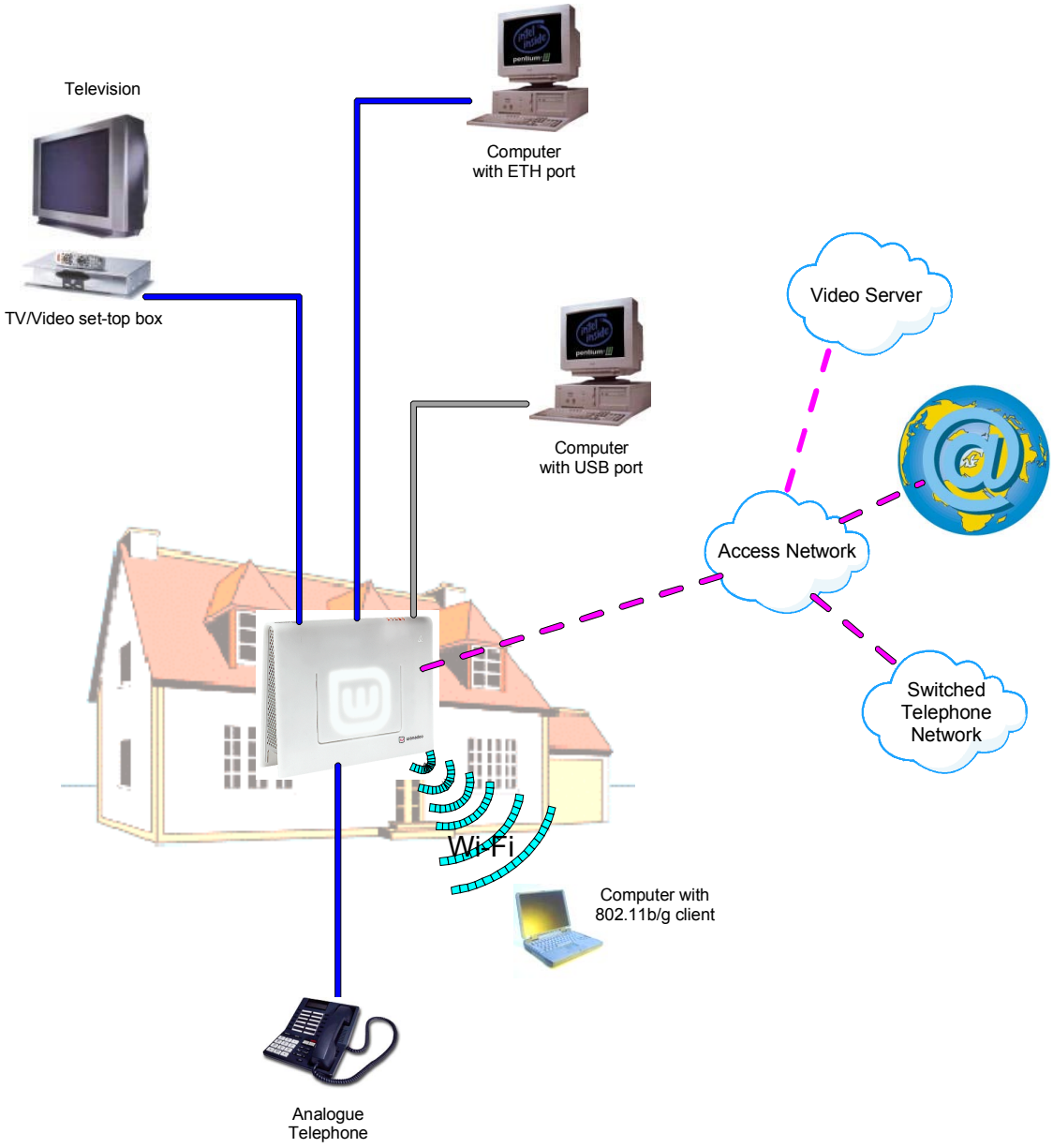


Figure 1.1 - Environment of your SAGEM F@st™ 3202

Its main characteristics and functions are as follows:

- High performance, secured bridge/router with ADSL interface,
- Ethernet 10/100BT, USB1.1, 802.11b/g and Bluetooth user ports,
- DHCP server, DNS relay,
- NAT/PAT router - FTP, IRC, Net2Phone, Netbios, DNS, Netmeeting H.323, SIP, RTSP, MGCP (RFC 3134), VPN passthrough (IPSec, IKE, PPTP, L2TP), CUSeeMe, RealAudio, AOL, Microsoft IM and other compatibilities,
- Firewall,
- Quality of service (QoS) management for protecting sensitive flows such as Voice over IP,
- H.323 Voice over IP,
- HTTP server for easy configuration,
- FTP server for software updating.

1.2 Contents of the SAGEM F@st™ 3202 package

The SAGEM F@st™ 3202 is supplied in a package with the following contents:

- One SAGEM F@st™ 3202 Residential Gateway,
- One mains adapter,
- One Type A male/Type A female USB cable (length = 1.5 m),
- One RJ11/RJ11 FDT line lead (length = 3 m),
- One Type A male/Type B male USB lead (length = 1.5 m),
- One RJ11/telephone socket adapter lead (length = 0.25 m) (according to model),
- One installation CD-ROM,
- One USB 802.11b/g Wi-Fi key (according to model),
- One User Guide,
- One ADSL splitter (according to model).

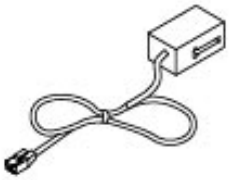
Residential Gateway

USB cable
(USB type A male/
USB type A female)

Power Supply Unit

ADSL line lead
(RJ11/RJ11)

USB cable
(USB type A male/
USB type B male)



Telephone cable (RJ11/Adapter)
(According to model)

CD-ROM

USB 802.11g Wi-Fi key

Startup Guide

ADSL/PSTN splitter
(According to model)

The CD ROM contains:

- the software for installing the Ethernet (ETH) and USB interfaces and the 802.11b/g drivers.
- the SAGEM F@st™ 3202 Reference Manual in pdf file format.
- the SAGEM F@st™ 3202 CE declaration.
- a download of a new software version (Rescue).

Supply incomplete or damaged. If on receipt, the equipment is damaged or incomplete, contact the Supplier of your SAGEM F@st™ 3202.

1.3 Prerequisites

To use the SAGEM F@st™ 3202, you must have the following:

- subscriptions to one or more service providers; access to certain services may entail taking out a subscription.
- a computer equipped with a TCP/IP protocol stack:
  - an 802.11b/g interface.

  or
  - a type A USB interface.

  or
  - an Ethernet 10BASE-T or 10/100BASE-T interface,
- a WEB browser (Internet Explorer version 5 or above recommended).

Your computer's minimum configuration should be:

- for Windows: Pentium II, 400 MHz, RAM: 128 Mbytes,
- for MacOS: Power PC G3, 233 MHz, RAM: 128 Mbytes,
- 30 Mbytes free on your hard disk,
- a monitor with minimum resolution of 1024 x 768.

If your computer does not have the Wi-Fi function, you must fit a Wi-Fi accessory (IEEE 802.11b/g standard) to be able to connect to the WLAN access point of the SAGEM F@st™ 3202. There are several types:

- USB Wi-Fi keys,
- PCMCIA Wi-Fi cards,
- PCI Wi-Fi cards.

Use of the USB Wi-Fi key supplied with your SAGEM F@st™ 3202 is recommended.

Before installing the SAGEM F@st™ 3202 Residential Gateway, we recommend you uninstall any modem or other router (for example, an ADSL modem/router).

2. Description and installation of your Residential Gateway

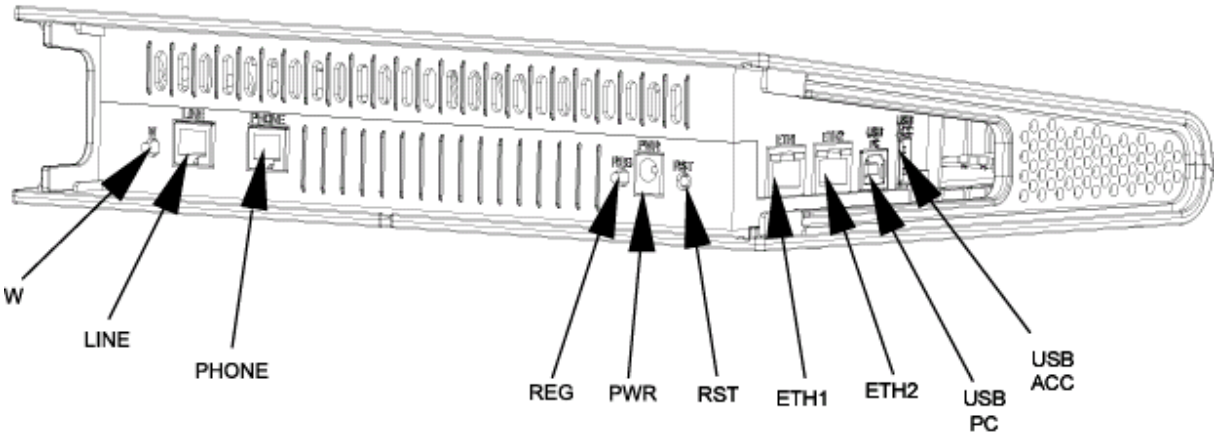
This section covers	➢ a description of your SAGEM F@st™ 3202	§ 2.1
	➢ installation of your SAGEM F@st™ 3202	§ 2.2
	➢ connection of a telephone set to your SAGEM F@st™ 3202	§ 2.3
	➢ connection of a Set-Top Box (TV/Video) to your SAGEM F@st™ 3202	§ 2.4
	➢ installation instructions	§ 2.5

2.1 Description

The SAGEM F@st™ 3202 Residential Gateway appears as shown below:

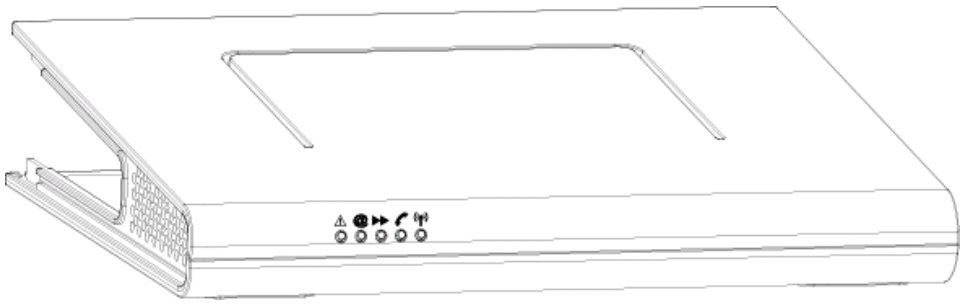
Figure 2.1 - Overview of the unit

2.1.1 "Connectors" side view



Marking	Meaning
W	This pushbutton is used to make the Internet service provider's logo lights flash more or less quickly or switch it off.
LINE	6-way RJ11 connector for connection to an ADSL line (WAN interface)
PHONE	6-way RJ11 socket for connection to an analogue telephone (with tone dialling) for access to telephony services (VoIP).
REG	This pushbutton is used to associate a Wi-Fi client station.
PWR	This connector is used to power up the Residential Gateway.
RST	This button is recessed from the other buttons to avoid an accidental loss of configuration. It is used to restore the Residential Gateway to its factory configuration (see section A.5).
ETH1	8-way RJ45 connector for connection to a terminal or to a local area network or to a videophone (Ethernet 10/100BASE-T interface).
ETH2	8-way RJ45 connector for connection for example to a television set via a TV/video set-top box (Ethernet 10/100BASE-T interface).
USB PC	"Slave" USB type B female connector for connection to a computer (USB interface).
USB ACC	"Master" USB type A female connector (USB interface) - **Not used in the current version.**

2.1.2 "LED" view



The various LEDS in the figure above are described in the table below:

LED	Meaning
⚠	**Alert LED**. This LED blinks when the Residential Gateway is running its power-on self-test. At the end of this test: • The LED remains **lit** if a failure is detected, • The LED remains **off** if operation is correct.
@	**Internet LED.** • This LED **blinks** when the ADSL line is not synchronised, • The LED remains **lit** when the ADSL line is synchronised.
▶▶	**Local area network (LAN) LED**. This LED indicated data traffic between the Residential Gateway and the various Wi-Fi, Ethernet (ETH), USB and Bluetooth interfaces. • This LED **blinks** when traffic is detected on one of the above interfaces. • The LED is **off** if no traffic is detected.
📞	**Telephony LED**. This LED indicates the state of the VoIP mode telephone line. • The LED is **lit** when the VoIP telephone line is available. • This LED **blinks** when the VoIP telephone line is available and the telephone is off-hook.
📶	**Wi-Fi LED**. This LED indicates activation/deactivation of the Wi-Fi mode. • This LED **blinks** when the Residential Gateway is in Wi-Fi "association" mode, • This LED is **lit** when the "Wi-Fi" interface is activated. • This LED is **off** when the "Wi-Fi" interface is deactivated.

2.2 Installing the Residential Gateway

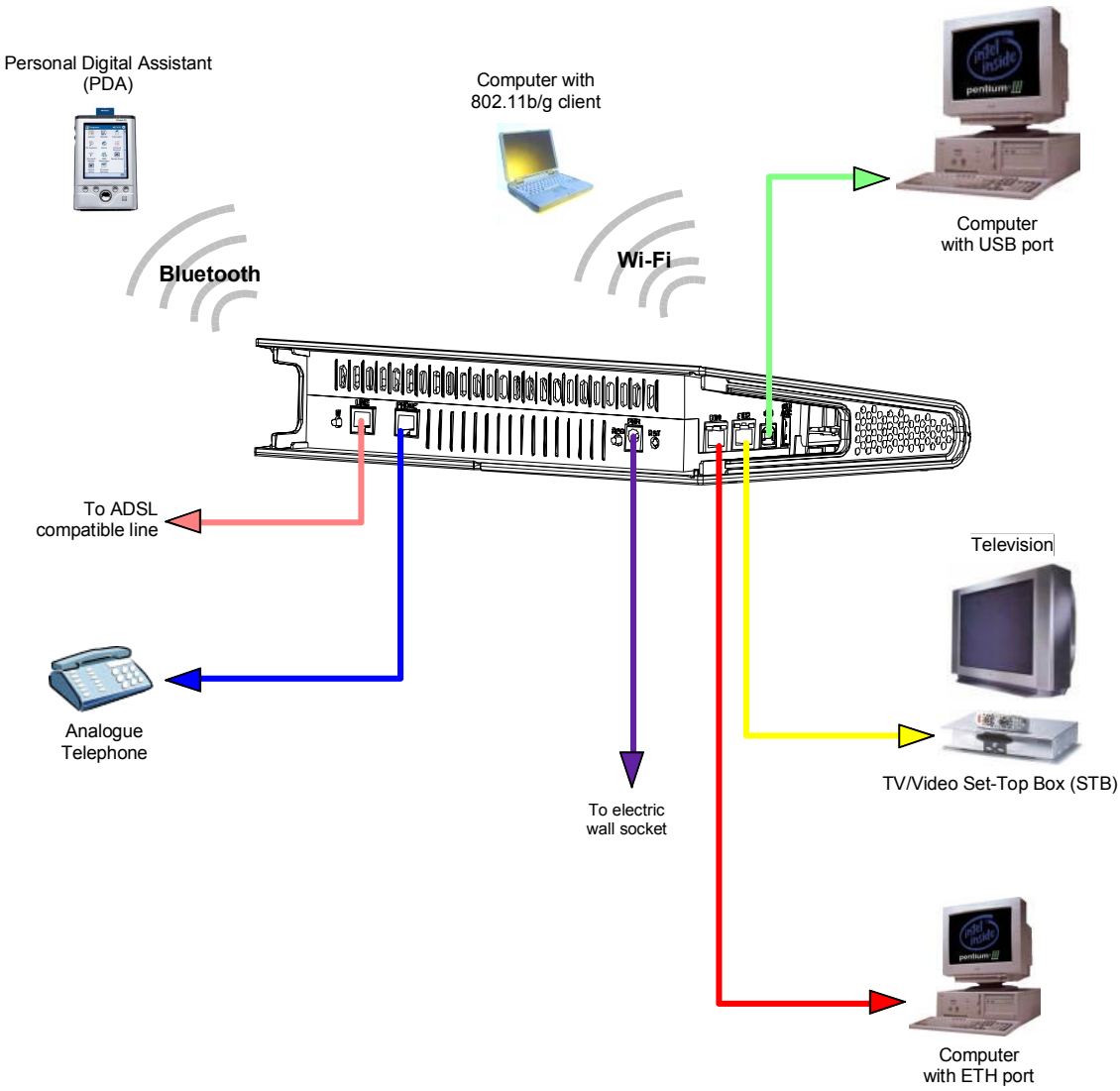


Figure 2.2 - Interconnecting the SAGEM F@st™ 3202 ports

2.2.1 Powering up

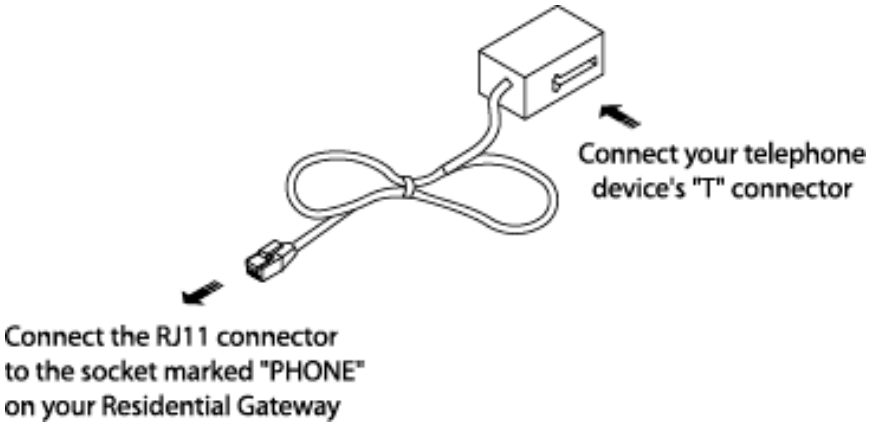
- First connect the end of the mains lead, supplied with the equipment, to the **PWR** socket on your SAGEM F@st™ 3202,
- Connect the adapter to a nearby power outlet,
- All five LEDs on the Residential Gateway light and go off in turn, then remain lit for a period of time and then all go off.

2.2.2 Connecting the ADSL cable to the SAGEM F@st™ 3202

- Connect one end of the RJ11/RJ11 cable supplied to the **LINE** socket of your SAGEM F@st™ 3202.
- Connect the other end of this cable to the port marked **ADSL** on your splitter connected to the French standard telephone socket (T connector) in your home.

2.3 Connecting a telephone set to your Residential Gateway

This connection is set up as shown in the figure below (depending on model):



Use the telephone adapter supplied with your Residential Gateway.

Consult your service provider for how to use the telephone service on your SAGEM F@st™ 3202.

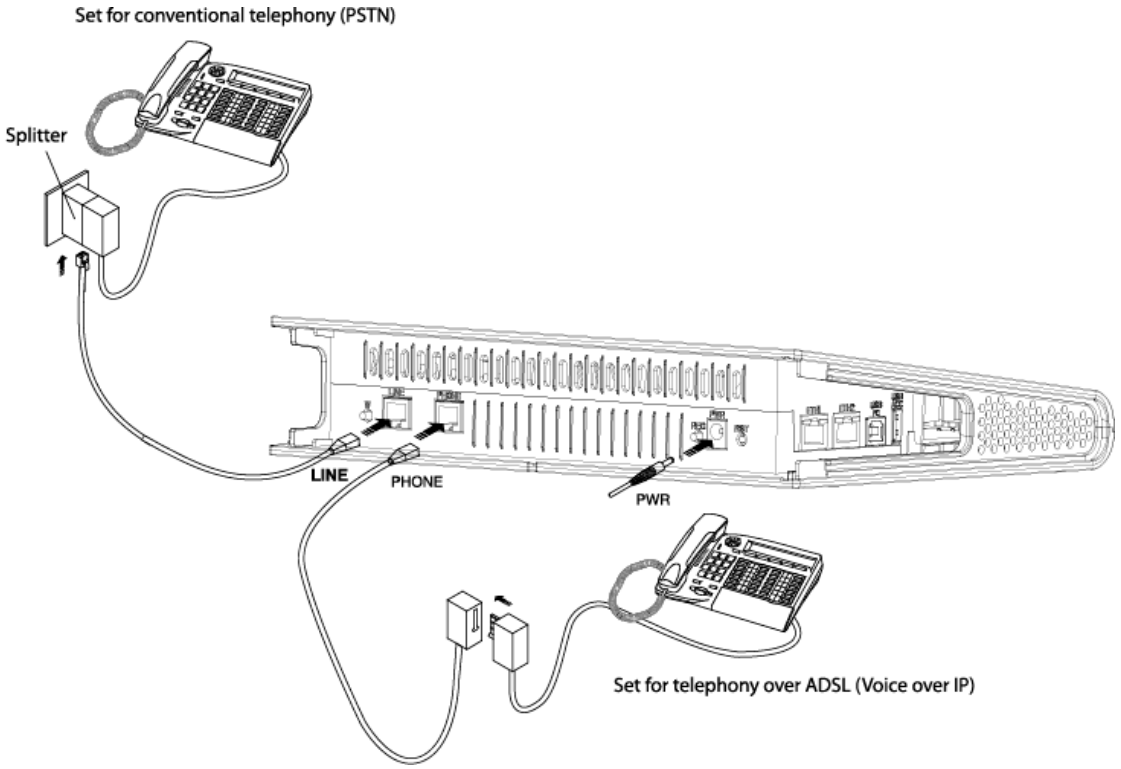


Figure 2.3 - Connecting the ADSL line/Telephone set/Power supply to the SAGEM F@st™ 3202

2.4 Connecting a set-top box (TV/Video) to your Residential Gateway

- Connect the end of an RJ45/RJ45 cable to the socket marked **ETH2** ( ) on your SAGEM F@st™ 3202,
- Connect the other end of the cable to your TV/Video set-top box.

Consult your service provider for how to use your set-top box to access the TV/Video services with your SAGEM F@st™ 3202.

2.5 Installation instructions

Environment

- The SAGEM F@st™ 3202 must be installed and used inside a building.
- The ambient temperature must not exceed 45°C.
- The SAGEM F@st™ 3202 must not be exposed to strong sunlight or to intense heat.
- The SAGEM F@st™ 3202 must not be placed in an environment subject to significant steam condensation.
- The SAGEM F@st™ 3202 must not be exposed to water splashes.
- The SAGEM F@st™ 3202 casing must not be covered.
- The SAGEM F@st™ 3202 must not be used for outdoor transmissions.

Power source

- Use a readily accessible mains outlet, near to the equipment. The power supply lead is 2 m long.
- Arrange the power lead so as to avoid any accidental disconnection of the Residential Gateway.
- The SAGEM F@st™ 3202 is designed to be connected to a TT or TN system power supply.
- The SAGEM F@st™ 3202 is not designed to be connected to an electrical installation with IT system (power supply with independent neutral).
- Protection against short circuits and leaks between phase, neutral and earth must be included in the building's electrical installation. The power supply circuit for this equipment must be provided with 16 A overcurrent protection as well as differential protection.

Upkeep

- Never open the unit. This must be done only by personnel qualified and approved by your provider.
- Do not use liquid or aerosol cleaning agents.

3. Installing and configuring the Residential Gateway

This section covers	➢ The installation and configuration of your Residential Gateway on your computer's USB port.	§ 3.1
	➢ The installation and configuration of your Residential Gateway on your computer's network card (Ethernet).	§ 3.2
	➢ The installation and configuration of your Residential Gateway with your computer's Wi-Fi interface.	§ 3.3
	➢ The installation and configuration of an additional computer.	§ 3.4

Your Residential Gateway can be installed and configured with the following interfaces:

- USB (see section 3.1),
- Ethernet (ETH1)(see section 3.2),
- Wi-Fi (see section 3.3).

When you have installed your Residential Gateway with an interface (USB, for example) and you want to install it with another (Ethernet or Wi-Fi), **you must uninstall** the Residential Gateway.

To do this:

Select **Start / Programs / LiveBox** / **Utilities** / **Uninstall**.

3.1 Installing and configuring your Residential Gateway on your computer's USB port

The **USB** port on the SAGEM F@st™ 3202 is a USB 1.1 supporting a maximum bit rate of 12 Mbit/s. The connector provided is type B enabling it to be connected to a computer port supporting a type A connector via the lead supplied with the equipment.

This port lets you can connect directly to a computer, on a type A USB input using a USB lead (supplied with the equipment).

The USB interface **must be configured before the USB connector is connected.**

3.1.1 Installing the USB drivers on your computer

Before installing your SAGEM F@st™ 3202 Residential Gateway, you must uninstall any other ADSL modem/router.

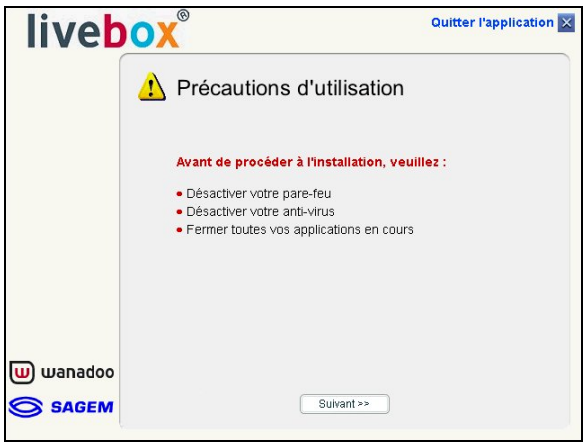
3.1.1.1 In Windows XP

The **installation** procedure described was performed in **Windows® XP**. Installation in other Windows® operating systems (98, ME and 2000) may differ slightly.

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Proceed as described on screen.

Click the Suivant >> button to continue installation.



Note: If this screen does not appear: Select **Start**, then **Run**, then enter: "<CD-ROM drive letter> :**autorun.exe** (for example e:\autorun.exe) then click **OK**.

2 The screen opposite appears.

Click Installation complète *Je souhaite **connecter** et **configurer** ma LiveBox pour l'accès à Internet.* .

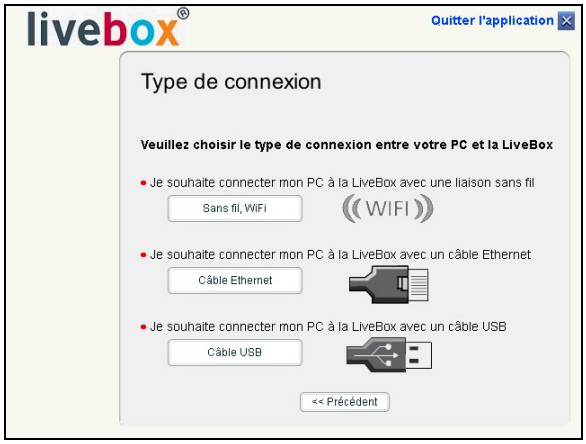
3 The screen opposite appears.

Carry out the operations described on screen.

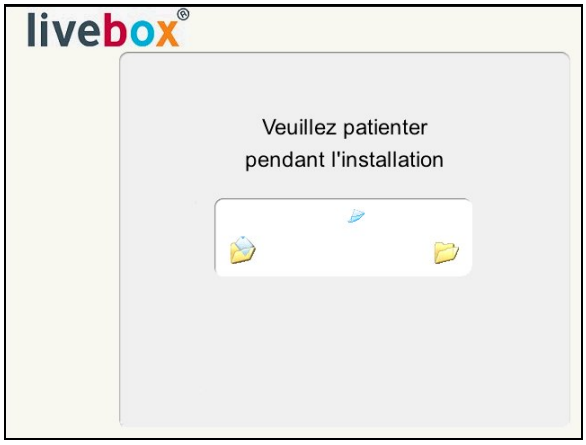
Click the Suivant >> button to continue installation.

4 The screen opposite appears.

Click the Câble USB button to install your Residential Gateway on the **USB** interface.

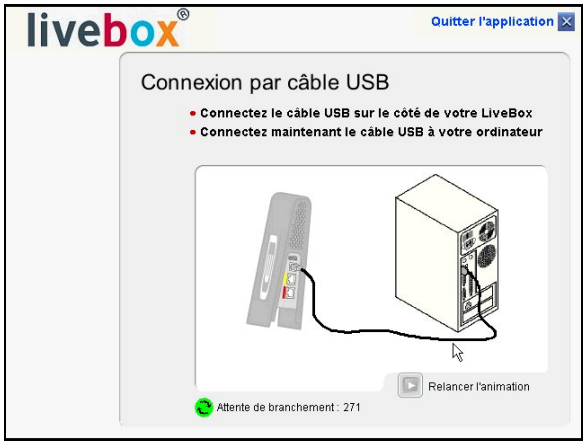


5 The screen opposite appears and prompts you to wait.



6 The screen opposite appears.

Now connect the USB cable by connecting the "square" type B end to the Residential Gateway (**USB PC** socket) then by connecting the other "flat" type A end to an available corresponding socket on your computer as shown in the animation on screen.



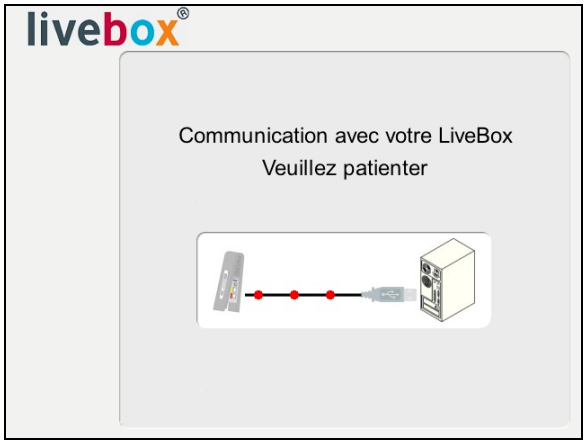
7 The next screen appears.

Enter the login identifier followed by the login password.

These can be found in your subscription confirmation email.

Click the Suivant >> button to continue installation.

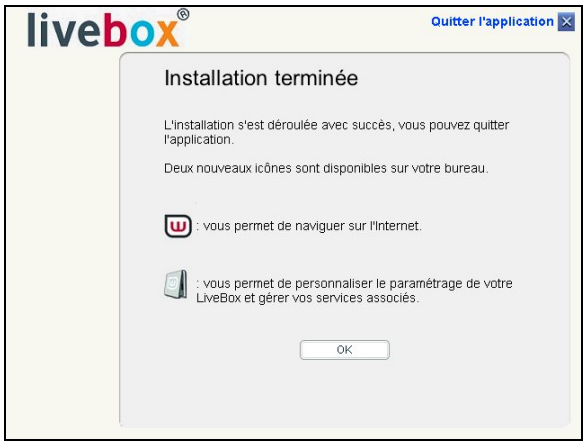
8 The screen opposite appears and prompts you to wait.



9 After a relatively short time, the screen opposite appears.

Installation is finished.

Click OK .



Accessing your Residential Gateway's HTTP configurator

1 Double click the configuration icon 

on the desktop, the Web browser opens and the screen prompting you to log in appears.

In the "User name" field, enter: **admin**

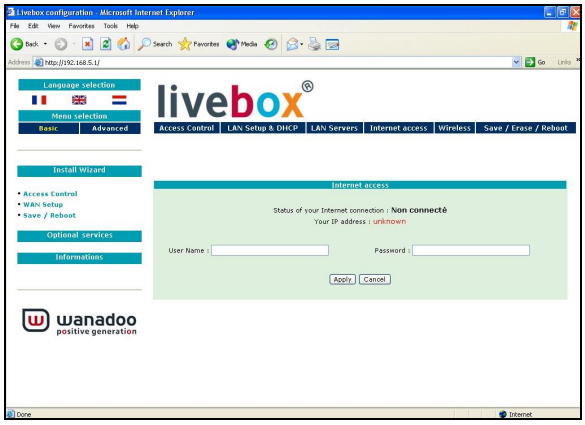
In the "Password" field, enter: **admin**.

Click **OK** to confirm.

Note: The bar at the top of the screen shows the equipment's IP address.

2 Your computer's Web browser displays the SAGEM F@st™ 3202 home screen via the default IP address specific to the USB interface: **http://192.168.2.1**

The name of the equipment is displayed in the home screen title: **livebox®**.



You can now:

- **Access the HTTP configurator (see section 5),**
- **Surf the Internet,**
- **Use the Internet to make phone calls if you have taken out a subscription to the ADSL telephony service with your Internet service provider (ISP).**

Caution: If, on installation, you entered an **incorrect** login identifier and password, you could have continued and finished installation and obtained access to the HTTP configurator.

However, you will not under any circumstances be able to surf the Internet.

To surf the Internet, you must enter the correct information sent to you by your Internet service provider. For this:

In the HTTP configurator's home page, select **Basic** followed by the **Internet access** menu.

3.1.1.2 In Mac

No installation available with the USB interface.

Installation with the Ethernet interface is described in section 3.2.1.2).

3.2 Installing and configuring your Residential Gateway on your computer's network card (Ethernet)

Only the **ETH1** Ethernet socket identified by  on the SAGEM F@st™ 3202 is provided for connecting your computers or wired Ethernet equipment. This port is an Ethernet 10/100BASE-T port, which supports bit rates of 10 Mbit/s and 100 Mbit/s in half or full duplex mode on a category 5 double twisted pair.

This port is an RJ45 connector with auto-detecting MDI or MDI-x type wiring.

On this port, you can connect using a lead (not supplied with the equipment):

- either direct to a computer with an Ethernet 10/100BASE-T network card installed,
- or to an Ethernet LAN connected to a network concentrator (HUB or Switch).

3.2.1 Configuring network parameters

3.2.1.1 In Windows XP

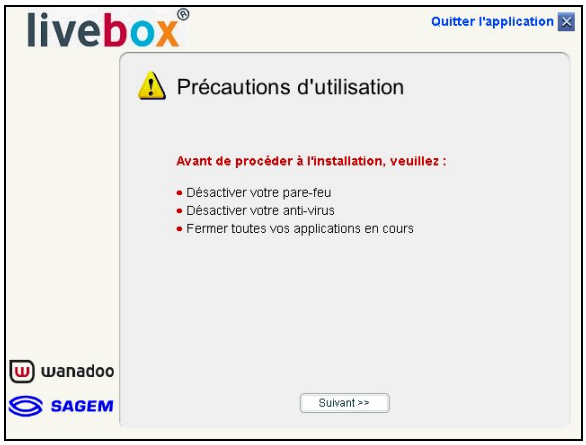
The **installation** procedure described was performed in **Windows® XP**. Installation in other Windows® operating systems (98, ME and 2000) may differ slightly.

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Proceed as described on screen.

Click the 

button to continue installation.



Note: If this screen does not appear: Select **Start**, then **Run**, then enter: "<CD-ROM drive letter> :**autorun.exe** (for example e:\autorun.exe) then click **OK**.

2 The screen opposite appears.

Click 

.

3 The screen opposite appears.

Carry out the operations described on screen.

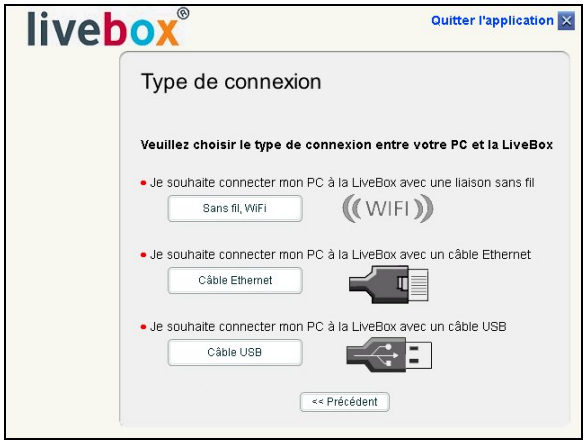
Click the 

button to continue installation.

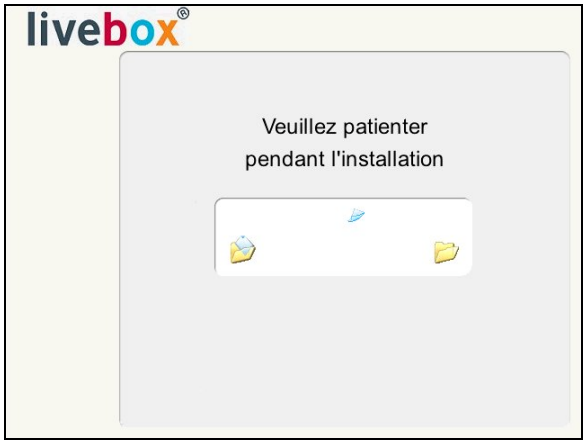
4 The screen opposite appears.

Click the 

button to install your Residential Gateway on the **ETH** interface.



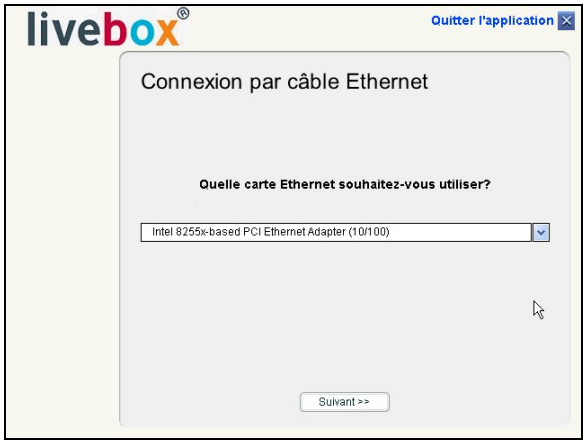
5 The screen opposite appears and prompts you to wait.



6 The next screen appears. If your computer has more than one Ethernet card installed,

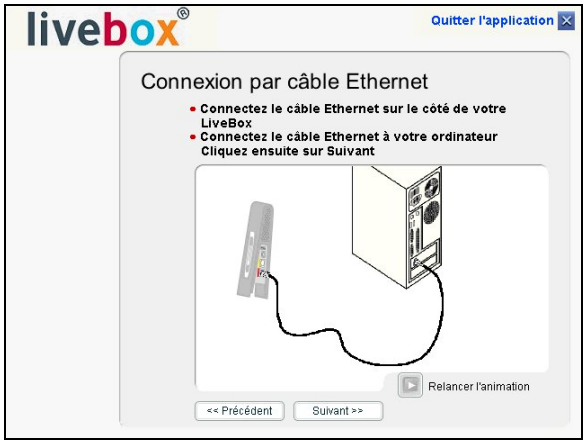
Select the Ethernet card connected to the SAGEM F@st™ 3202.

Then click Suivant >> to confirm your choice and continue configuring.



7 Now connect the RJ45/RJ45 Ethernet cable by connecting one end of the cable to the **ETH1** socket marked [ ] on your SAGEM F@st™ 3202 and then connecting the other end of the cable to an available Ethernet socket on your computer as shown in the animation displayed on screen.

Click the Suivant >> button to continue installation.



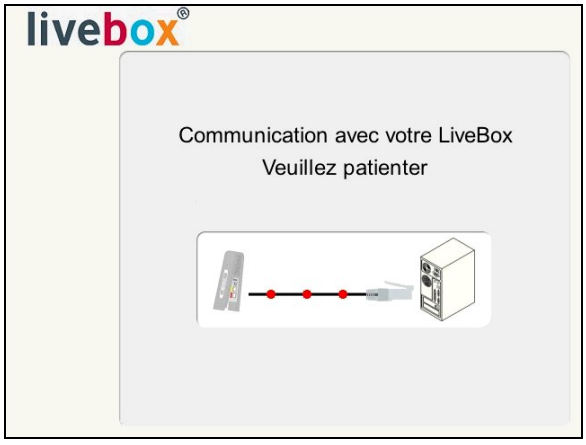
8 The next screen appears.

Enter the login identifier followed by the login password.

These can be found in your subscription confirmation email.

Click the Suivant >> button to continue installation.

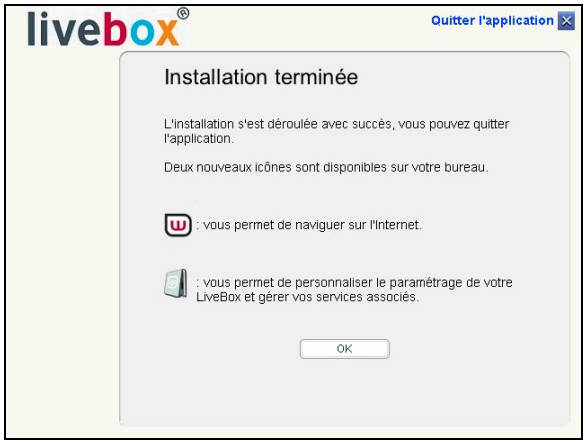
9 The screen opposite appears and prompts you to wait.



10 After a relatively short time, the screen opposite appears.

Installation is finished.

Click OK .



Accessing your Residential Gateway's HTTP configurator

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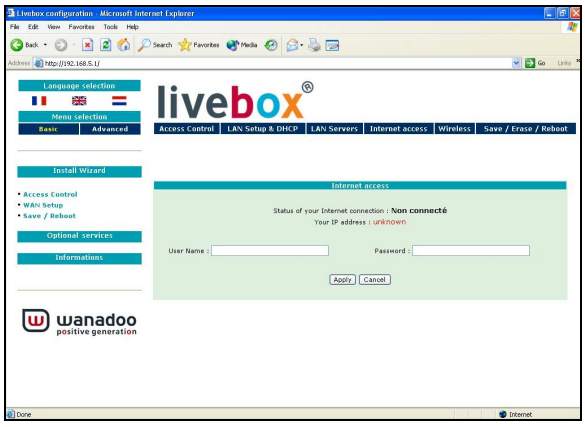
In the "Password" field, enter: **admin**.

Click **OK** to confirm.

Note: The bar at the top of the screen shows the equipment's IP address.

2 Your computer's Web browser displays the SAGEM F@st™ 3202 home screen via the default IP address specific to the ETH interface: **http://192.168.5.1**

The name of the equipment is displayed in the home screen title: **livebox®**.



You can now:

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- **Surf the Internet,**
- **Use the Internet to make phone calls if you have taken out a subscription to the ADSL telephony service with your Internet service provider (ISP).**

Caution: If, on installation, you entered an **incorrect** login identifier and password, you could have continued and finished installation and obtained access to the HTTP configurator.

However, you will not under any circumstances be able to surf the Internet.

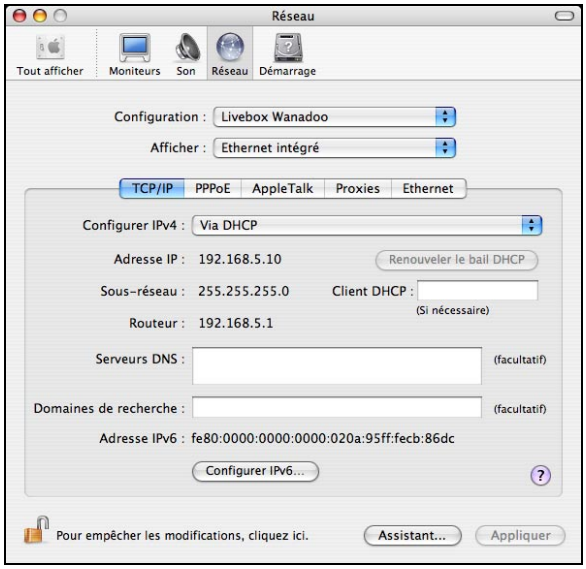
To surf the Internet, you must enter the correct information sent to you by your Internet service provider. For this:

In the HTTP configurator's home page, select **Basic** followed by the **Internet access** menu.

3.2.1.2 In MacOS X

The **configuration** procedure described below was performed in **MacOS X** (10.1 or 10.2). It can be performed in other operating systems such as **MacOS 8.6**, **MacOS 9.1** and **MacOS 9.2**.

1 Click the (apple) menu in the menu bar, select "**System Preferences**", then click the "**Network**" icon.
The screen opposite appears.



The **Configuration:** field should be set to **Automatic**

The **Display:** field should be set to **Built-in Internet**

Select the **TCP/IP** tab; the relevant panel appears.

The **Setup:** field should contain **Via DHCP** by default. If not, select this setting from the drop-down list.

Note: If the **Via PPP** setting is displayed, select the **PPPoE** tab then uncheck the **Login via PPPoE** box.

This panel should show the IP address, the subnet mask supplied by the Internet service provider (ISP) and the default IP address of the SAGEM F@st™ 3202's LAN interface (**192.168.5.1**).

Click Appliquer to confirm connection in DHCP mode.

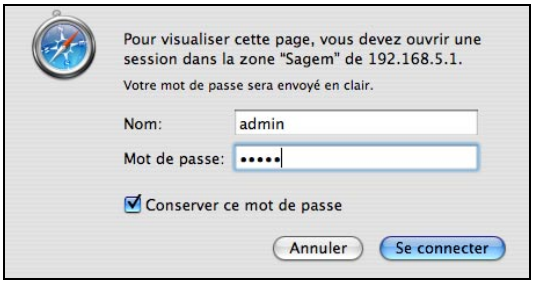
The **DHCP client, DNS servers** and **Search domains** fields are optional.

Open your browser then enter the default IP address of the SAGEM F@st™ 3202's LAN interface: **http://192.168.5.1**

then click **Go to** to confirm; the login screen opposite appears. Enter:

User name: **admin**

Password: **admin**



The home screen appears.

3.3 Installing and configuring your Residential Gateway with your computer's Wi-Fi interface

3.3.1 Installing the drivers for the USB Wi-Fi key on your computer

Before installing your SAGEM F@st™ 3202 Residential Gateway, you must uninstall any other ADSL modem/router.

3.3.1.1 In Windows XP

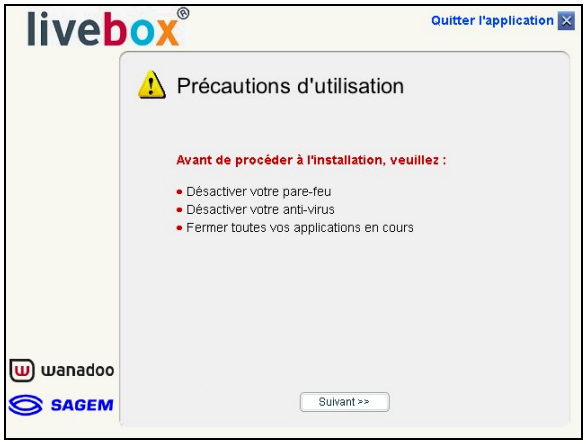
The **installation** procedure described was performed in **Windows® XP**. Installation in other Windows® operating systems (98, ME and 2000) may differ slightly.

On installation, you must not connect your USB Wi-Fi key before prompted to do so (see step 6).

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Proceed as described on screen.

Click the Suivant >> button to continue installation.



Note: If this screen does not appear: Select **Start**, then **Run**, then enter: "<CD-ROM drive letter> :**autorun.exe** (for example e:\autorun.exe) then click **OK**.

2 The screen opposite appears.

Click Installation complète *Je souhaite **connecter** et **configurer** ma LiveBox pour l'accès à Internet.* .

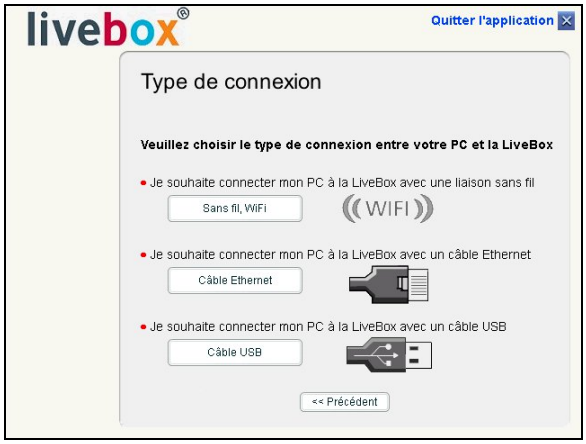
3 The screen opposite appears.

Carry out the operations described on screen.

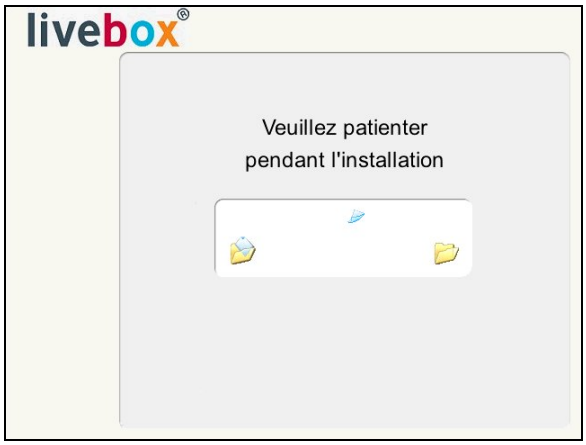
Click the Suivant >> button to continue installation.

4 The screen opposite appears.

Click the Sans fil, WiFi button to install your Residential Gateway on the **Wi-Fi** interface.

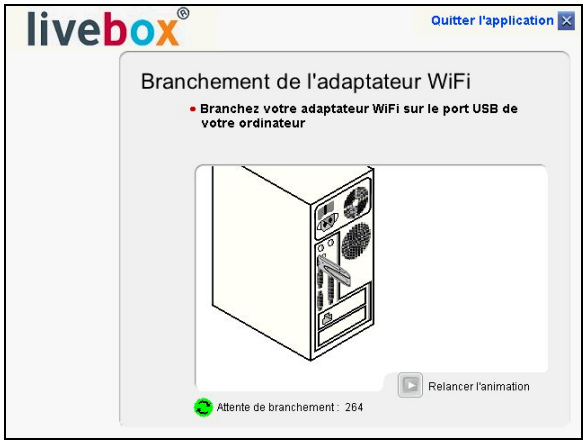


5 The screen opposite appears and prompts you to wait.



6 The screen opposite appears.

Connect your USB Wi-Fi adapter to a corresponding available socket on your computer as shown in the animation displayed on screen.



7 The screen opposite appears.

Enter the WEP key (26 characters for 128-bit encryption and ten characters for 64-bit encryption) marked on the label affixed to the packaging, on the CD-ROM cover and on the gateway's casing.

Enter the login identifier followed by the login password.

These can be obtained from your subscription confirmation email.

Click 

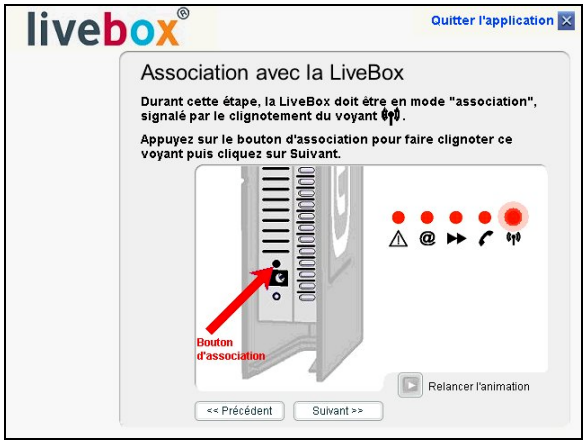
button to continue installation.

8 The screen opposite appears.

Click the association button marked **REG** on the Residential Gateway to make the  LED associated with the Wi-Fi function blink.

Click the 

button to continue installation.

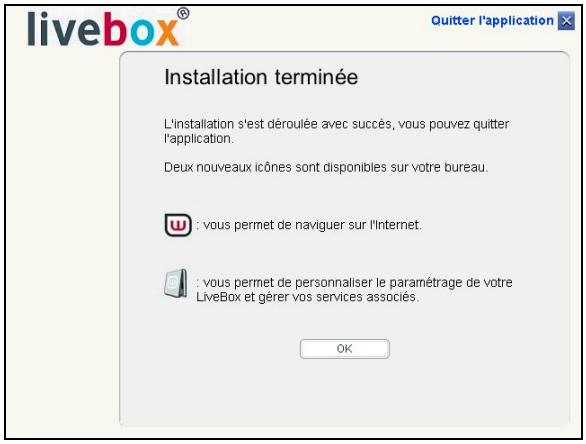


9 The screen opposite appears and prompts you to wait.

10 After a relatively short time, the screen opposite appears.

The installation is finished.

Click OK .



Accessing your Residential Gateway's HTTP configurator

1 Double click the configuration icon 

on the desktop, the Web browser opens and the screen prompting you to log in appears.

In the "User name" field, enter: **admin**

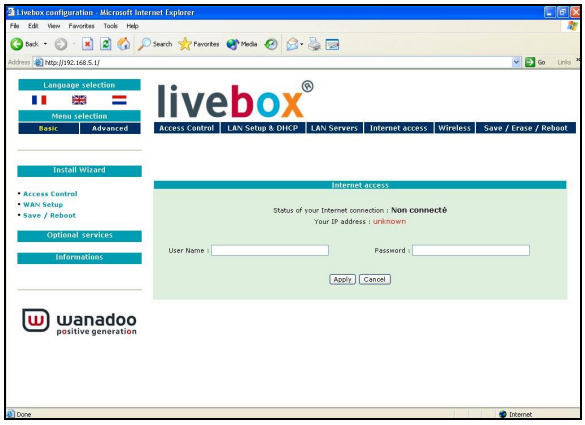
In the "Password" field, enter: **admin**.

Click **OK** to confirm.

Note: The bar at the top of the screen shows the equipment's IP address.

2 Your computer's Web browser displays the SAGEM F@st™ 3202 home screen via the default IP address specific to the USB interface: **http://192.168.3.1**

The name of the equipment is displayed in the home screen title: **livebox®**.



You can now:

- **Access the HTTP configurator (see section 5),**
- **Surf the Internet,**
- **Use the Internet to make phone calls if you have taken out a subscription to the ADSL telephony service with your Internet service provider (ISP).**

Caution: If, on installation, you entered an **incorrect** login identifier and password, you could have continued and finished installation and obtained access to the HTTP configurator.

However, you will not under any circumstances be able to surf the Internet.

To surf the Internet, you must enter the correct information sent to you by your Internet service provider. For this:

In the HTTP configurator's home page, select **Basic** followed by the **Internet access** menu.

3.3.1.2 In MacOS X

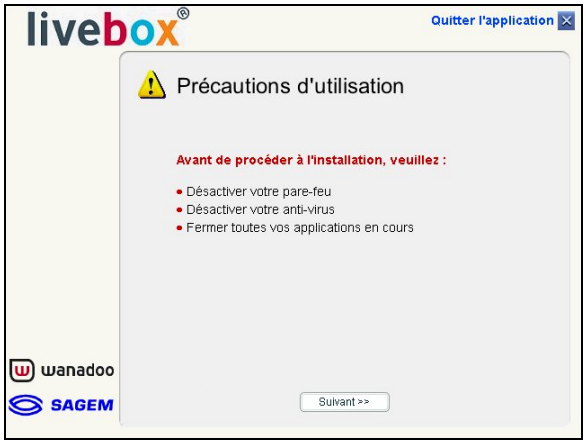
For future publication.

3.4 Installing and configuring an additional computer

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Proceed as described on screen.

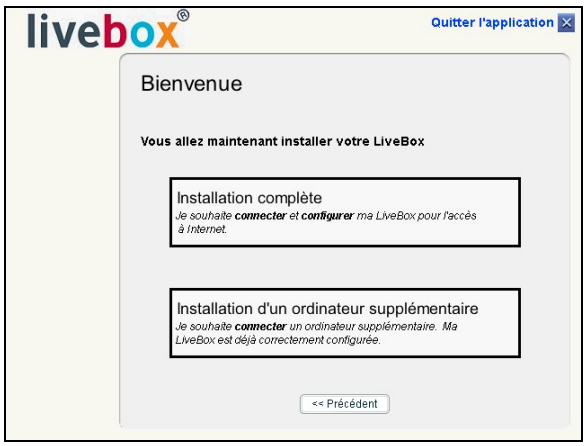
Click the Suivant >> button to continue installation.



Note: If this screen does not appear: Select **Start**, then **Run**, then enter: "<CD-ROM drive letter> :**autorun.exe** (for example e:\autorun.exe) then click **OK**.

2 The screen opposite appears.

Click Installation d'un ordinateur supplémentaire *Je souhaite **connecter** un ordinateur supplémentaire. Ma LiveBox est déjà correctement configurée.* .

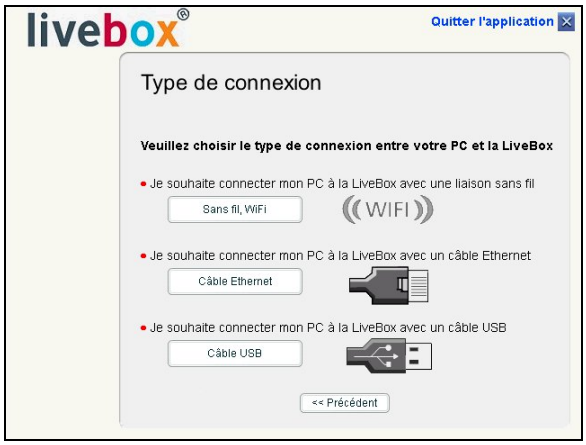


4 The screen opposite appears.

Click the Câble USB button to install your Residential Gateway on the **USB** interface (see section 3.1 - steps 5 to 9).

Click the Câble Ethernet button to install your Residential Gateway on the **ETH** interface (see section 3.2 - steps 5 to 10).

Click the Sans fil, WiFi button to install your Residential Gateway on the **Wi-Fi** interface (see section 3.3 - steps 5 to 10).



The steps concerning:

- connecting the Residential Gateway to the telephone socket and to the mains outlet.
- And setting up your SAGEM F@st™ 3202 (login identifier and login password, etc),

are not to be carried out when installing and setting up an additional computer, whatever the interface (USB, ETH or Wi-Fi).

4. Telephony over ADSL service

This section covers	➢ connection of an analogue telephone	§ 4.2
	➢ operation of the telephony over ADSL service	§ 4.3
	➢ unavailability of the telephony over ADSL service	§ 4.4

4.1 Introduction

The SAGEM F@st™ 3202 offers you an integrated telephony over ADSL service.

You can phone via the Internet (Voice over IP telephony) using your conventional telephone set.

Consult your service provider for how to enable and use the telephony over ADSL service on your SAGEM F@st™ 3202.

The SAGEM F@st™ 3202 interface can be used to connect conventional terminals:

- Telephone sets (compliant with ETSI TBR21 and ITU-T Q.552 and France Telecom specification ST/PAA/TPA/STP/1063 and the TNR-G specification).

The interface supports only tone dialling sets.
Pulse dialling terminals are not supported.

Recent terminals can support both types of dialling. If such is the case, check that they are set up for tone dialling.

4.2 Connecting an analogue telephone

Many analogue telephones have their own specific lead; it is therefore preferable to connect them to the SAGEM F@st™ 3202 via their own lead.

Use the adapter supplied with your SAGEM F@st™ 3202.

4.3 Operation of the telephony over ADSL service

The telephony over ADSL service available on the Residential Gateway is signalled by the following parameters:

- "" LED lit,
- Dial tone different from the one on a telephone connected to the conventional switched telephone network (PSTN).

The calls received on the sets connected to the Residential Gateway are from the telephony over ADSL network. Calls originating directly from the switched telephone network (PSTN) will not ring the telephone sets connected to the Residential Gateway.

In this case, all the calls made from the sets connected to the Residential Gateway are routed over the telephony over ADSL network, apart from calls to the following numbers:

- **15** : Ambulance,
- **17** : Police,
- **18** : Fire,
- **112** : Europen emergency call,
- **115** : Social emergency,
- **119** : Child abuse.

All these emergency numbers are directly routed over the conventional switched telephone network (PSTN).

4.4 If the telephony over ADSL service is unavailable

Telephony over ADSL may not be available on the Residential Gateway for one of the following reasons:

- The Residential Gateway is powered down (all the LEDs are off),
- The ADSL line is not synchronised,
- The PPPoA or PPPoE link is not set up,
- The telephony over ADSL subscription is not activated,
- The Internet service provider's service is not available.

If the telephony over ADSL service is unavailable, the telephones connected to the Residential Gateway switch over to the switched telephone network (PSTN) and behave like analogue telephones. The "" LED is off.

5. Configuring your Residential Gateway

This section covers	➢ access to the home screen	§ 5.1
	➢ recommendations for the use of the configuration screens	§ 5.2
	➢ activation/deactivation of optional services	§.5.3
	➢ access to information	§ 5.4
	➢ your Residential Gateway's **"Basic"** configuration menu	§ 5.5
	➢ your Residential Gateway's **"Advanced"** configuration menu	§ 5.6

5.1 Accessing the home screen

To configure your SAGEM F@st™ 3202 Residential Gateway, connect it to a **USB** port or to the **Ethernet** network card on your computer. Configuration can also be carried out by connecting your computer to the Residential Gateway via the **wireless network** (WiFi).
If you use a USB lead, connect it to the slave USB type B port, the socket of which is marked **USB**.
If you use your Ethernet network card to configure your Residential Gateway, connect it to the Ethernet port, the socket of which is marked **ETH1** ( ).

Your Residential Gateway is then configured via a simple Internet browser (for example Internet Explorer).

To access this function, you need to have configured the Ethernet or USB interface or the wireless network function on your computer using the installation CD supplied with your LiveBox.

The SAGEM F@st™ 3202's DHCP server function is enabled by default with a range of addresses dependent on the interface used, as indicated in section 5.5.2.

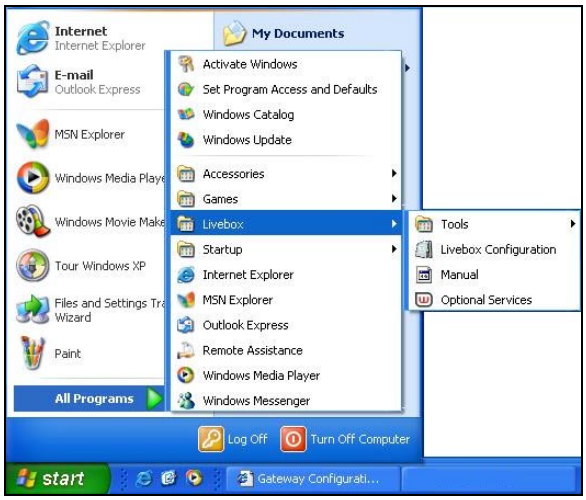
1 Double click the configuration icon 

created on the desktop after installing the equipment.

or

1 In the **Start** menu, select **Programs** and the following screen appears.

Left click on **LiveBox / LiveBox Configuration**.



2 The screen opposite prompts you to log in.

In the "User name" field, enter the default: **admin**.

In the "Password" field, enter the default: **admin**.

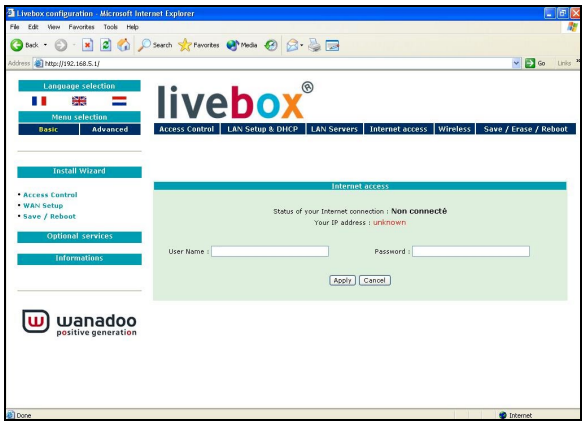
Then click **OK** to confirm.

Note: The bar at the top of the screen shows the equipment's IP address.

3 The PC's Web browser opens and displays the Residential Gateway's home screen via the IP address of the chosen configuration mode.

The name of the equipment ("**Livebox®**") appears in the home screen title.

Equipment configuration menus appear in the lefthand part of the home screen.



To optimise your network security, you should preferably alter the password when configuration is complete.

If you have altered the default address and changed the default password of your Residential Gateway, follow the procedure below to access the home screen using an Internet browser (Internet Explorer, for example):

- Enter the new IP address of your Residential Gateway, **for example: http://192.168.5.10.**
- Then confirm by pressing **Enter**. The screen prompting you to log in appears.
- Enter the **"User name"** and **"Password"** you have previously configured.
- Then click **OK** to confirm.

5.2 Recommendations

You can select the language of your choice by clicking the appropriate flag:

	French
	English
	Dutch

The meanings of the main buttons commonly displayed in all the configuration windows are given in the table below.

Apply	Click this button to confirm the values entered and/or the selections made in the drop-down lists.
Cancel	Click this button to return: ▪ to the last values entered and/or to the last selections made. ▪ to the preceding screen.
Add	Click this button to display a new window to complete the fields required to add an object.
Modify	Click this button to display a new window to modify the accessible fields of a previously selected object.
Delete	Click this button to delete a selected object from a list.
Close	Click this button to close the window and return to the preceding window without saving the input.

5.3 Optional services

5.3.1 Selecting and activating

Click Optional services in the lefthand part of the home screen.

The links for the four submenus opposite appear.

When you **select a submenu** the activate/deactivate window opens for the service chosen from the following four:

- **Internet access**.
- **TV by ADSL**.
- **Internet routing**.
- **Wanadoo Phone** (Voice over IP service).

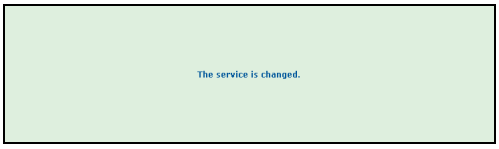
The window of each submenu displays the status of the selected service, Deactivated or Activated.
Depending on the state, the **"Activate / Deactivate"** button will appear as Activate in the first case and Deactivate in the second.

Button	Meaning
Activate	Click this button to activate a service.
Deactivate	Click this button to deactivate a service.

The screen opposite appears.

Click **OK** to confirm the change of service.

The window opposite appears and confirms that the change has been accepted by your Residential Gateway.

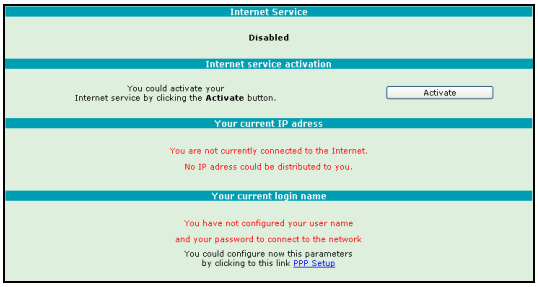


5.3.2 Internet access

In the lefthand part of the home screen, click in the **Optional services** menu, then select **Internet access** from the list of services displayed.

The screen opposite appears and lets you activate or deactivate the Internet service (see section 5.3.1).

A link offers you the option of setting up your Internet connection from this screen, if it is not already configured.



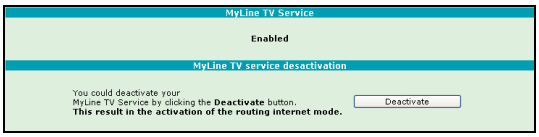
You need to have entered the user name and the password (supplied by your Internet service provider) to activate the Internet service.

Deactivating the Internet service disconnects the PPP connection.
In this case, you can use its login identifiers elsewhere.

5.3.3 TV by ADSL

In the lefthand part of the home screen, click in the **Optional services** menu, then select **TV by ADSL** from the list of services displayed.

The screen opposite appears and lets you activate or deactivate this service (see section 5.3.1).

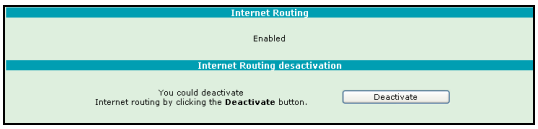


When the TV over ADSL service is activated, the **yellow Eth port** is reserved for the TV service; it cannot be used for access to the Internet.

When the TV over ADSL service is disabled, the yellow Eth port can be used for Internet access. Its range of IP addresses is 192.168.6.1/24.

5.3.4 Internet routing

In the lefthand part of the home screen, click in the **Optional services** menu, then select **Internet routing** from the list of services displayed.



The screen opposite appears and lets you activate or deactivate the service (see section 5.3.1).

When the Internet routing service is activated, the **red Eth port** can be used for Internet access. Its range of IP addresses is 192.168.5.1/24.

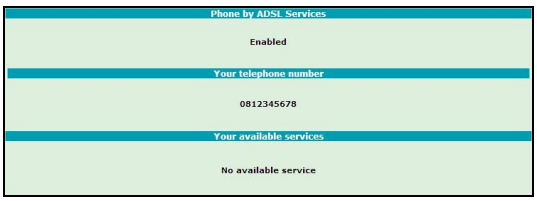
When the Internet routing service is deactivated, the red Eth port can be used for access to the videophone service (consult your ISP). It cannot be used for Internet access.

5.3.5 Wanadoo Phone

In the lefthand part of the home screen, click in the **Optional services** menu, then select **wanadoo Phone** from the list of services displayed.

If your Voice over IP service is not active, the screen opposite appears, and the link with your ISP's web site offers you the option of setting up your connection to the Voice over IP service from this screen.

If your Voice over IP service is active, the screen opposite appears. It shows the number of the line linking the Residential Gateway to the public telephone network and supplies a list of the services subscribed to with the operator.

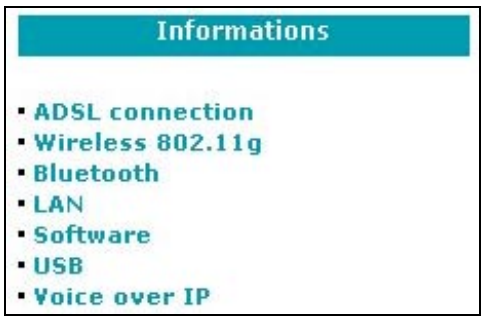


5.4 Information

5.4.1 Introduction

Click Informations in the lefthand part of the home screen.

The links for the seven submenus opposite appear.

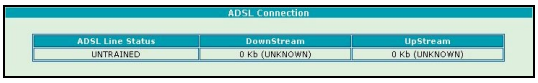


When you **select a submenu**, the corresponding information window is opened for you to check the status of the connections and the configuration settings of your Residential Gateway (IP and MAC addresses, for example).

5.4.2 ADSL connection

In the lefthand part of the home screen, click in the **Information** menu, then select **ADSL connection** from the list of services displayed.

The screen opposite appears and displays the ADSL bit rates on your line, in both uplink and downlink directions.

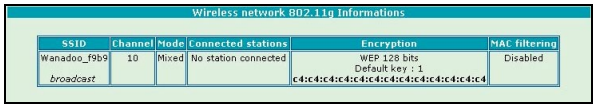


Field	Meaning
ADSL Line Status	Displays the status of the ADSL line: **UNTRAINED:** Synchronising the computer has detected the presence of the Residential Gateway on one of its dedicated USB or Ethernet ports and ADSL synchronisation is in progress. **TRAINED:** The Residential Gateway is operational; the ADSL link is synchronised. A connection to the Internet can be set up.
Downstream	Displays the downstream or incoming rate (data from the Internet) negotiated by the ADSL link (expressed in kbit/s) and the latency (Interleave or Fast).
UpStream	Displays the upstream or outgoing bit rate (data sent towards the Internet) negotiated by the ADSL link (expressed in kbit/s) and the latency (Interleave or Fast).

5.4.3 802.11g wireless

In the lefthand part of the home screen, click in the **Information** menu and select **Wireless 802.11g** from the list of services displayed.

The screen opposite appears and displays the information concerning the 802.11g wireless network.

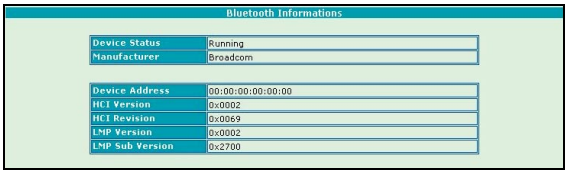


Field	Meaning
SSID	Displays the name of the wireless network and indicates that transmission of the SSID over the network is enabled.
Channel	Indicates the number of the radio channel used by your Residential Gateway's WLAN access point.
Mode	Displays the selected operating mode: ➢ **802.11 g:** Your Residential Gateway's WLAN access point accepts only IEEE802.11g clients. ➢ or **802.11 b+g (mixed):** Your Residential Gateway's WLAN access point accepts IEEE802.11b and IEEE802.11g clients.
Connected stations	Gives the number of stations linked to the server via the wireless network and their MAC addresses.
Encryption	Specifies the options activated to protect data on the network (None, WEP encryption, WPA encryption) and details the characteristics of the encryption used.
MAC filtering	Gives information on the Deactivated or Activated status of filtering by MAC addresses, which is used to limit the number of computers allowed access to the network.

5.4.4 Bluetooth (Not available in the current version)

In the lefthand part of the home screen, click in the **Information** menu, then select **Bluetooth** from the list of services displayed.

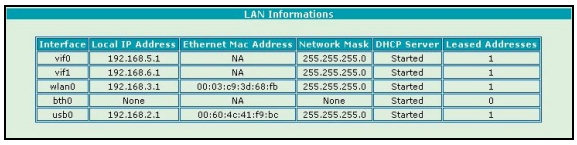
The screen opposite appears and displays information corresponding to the Bluetooth function.



5.4.5 LAN

In the lefthand part of the home screen, click in the **Information** menu, then select **LAN** from the list of services displayed.

The screen opposite appears and displays LAN information.

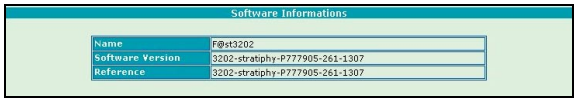


Field	Meaning
Interface	List the interfaces available to build your local area network (LAN).
Local IP Address	Provides the IP address of each of the Residential Gateway's interfaces, as seen from the LAN.
Ethernet Mac Address	Provides the physical address of each interface (12 hexadecimal characters).
Network mask	Displays the subnet mask.
DHCP Server	Gives the status of the DHCP service (In Service or Out of Service).
Leased Addresses	Number of addresses distributed by the DHCP server on the local area network, on each interface.

5.4.6 Software

In the lefthand part of the home screen, click in the **Information** menu, then select **Software** from the list of services displayed.

The screen opposite appears and displays information concerning the software installed in your Residential Gateway.

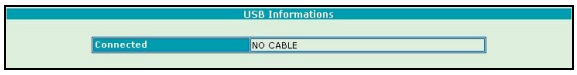


Field	Meaning
Name	Indicates the name of the Residential Gateway.
Software Version	Indicates the version of the equipment software.
Reference	Gives the reference code of the equipment software.

5.4.7 USB

In the lefthand part of the home screen, click in the **Information** menu, then select **USB** from the list of services displayed.

The screen opposite appears and displays information concerning the USB interface.

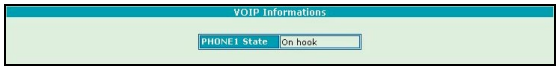


Field	Meaning
Connected	Specifies the status of the connection of the Residential Gateway to a computer, via its USB interface.

5.4.8 Voice over IP

In the lefthand part of the home screen, click in the **Information** menu, then select **Voice over IP** from the list of services displayed.

The screen opposite appears and displays information corresponding to the Voice over IP service.



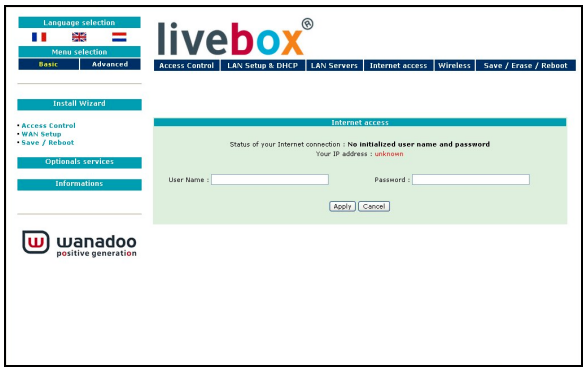
Field	Meaning
PHONE1 State	Specifies the status of the telephone terminal operating the Voice over IP function.

5.5 Configuring your Residential Gateway: "Basic" menu

This section contains, from left to right on the home screen, the following menus:

- Access control (see 5.5.1),
- LAN & DHCP setup (see 5.5.2),
- LAN servers (see 5.5.3),
- Internet access (see 5.5.4),
- Wireless network (see 5.5.5),
- Save/Delete/Reboot (see 5.5.6).

To access one of these configuration menus from the "Basic" section, select it in the menu bar located under "**Livebox®**".

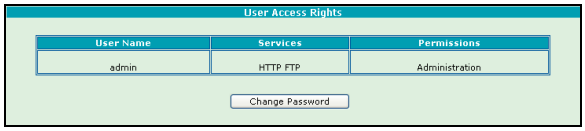


5.5.1 Access control

Object: This menu lets you display the "User name" for accessing your Residential Gateway's configuration screens. It can also be used to modify the "Password" associated with this "User name".

Click the **Access control** menu.

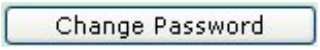
The screen opposite appears.



User name	"User name" **admin** by default.
Services	Authorized access mode: **HTTP**: Configuration by HTTP, **FTP**: Software update by FTP.
Permissions	**Administration** (read and modify).

Note: This information cannot be modified.

"Change password" button (for your Residential Gateway)

Click the 

button to change your Residential Gateway's "Password".

The screen opposite appears.

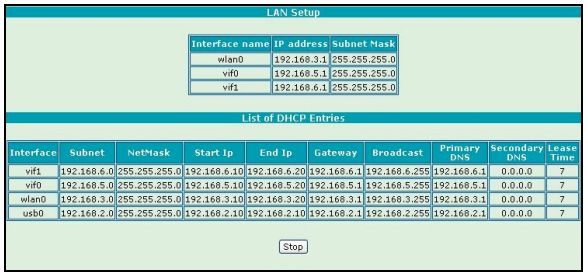
Old password	Enter your old "Password".
New password	Enter a new "Password".
Confirm New password	Confirm the new "Password".

5.5.2 LAN & DHCP setup

1 Click the **LAN & DHCP setup menu**.

The screen opposite appears.

The meanings of the fields displayed on screen are explained in the tables below.



1) LAN setup

Object: This menu lets you display the IP address and the subnet mask of your local area network (LAN, interface wlan0 or vif0). Default parameters are preconfigured.

Each interface (Eth, USB, WLAN) defines a range of IP addresses:

- Red Eth: 192.168.5.1/24
- Yellow Eth: 192.168.6.1/24
- USB 192.168.2.1/24
- WiFi 192.168.3.1/24
- Bluetooth 192.168.4.1/24 (according to version)

- **Vif0** corresponds to **red Eth** (ETH1).
- **Vif1** corresponds to **yellow Eth** (ETH2).

This table displays the interfaces used by the SAGEM F@st™ 3202.

Field	Meaning
Interface name	This field shows the name of the interface (wlan0 or vif0).
IP address	This field shows the IP address dedicated to the Residential Gateway's interface in the local area network.
Subnet Mask	This field shows the local subnet mask dedicated to the interface.

2) List of DHCP entries

Object: This menu lets you display the settings assigned to the various DHCP server parameters for each interface used. It can be used to activate or deactivate the DHCP server.

Field	Meaning
Interface	Interface that can be used (usb0, wlan0 and vif0).
Subnet	IP subnetwork address.
NetworkMask	Subnet mask of the IP network.
Start IP	The first address assigned by the DHCP server. **Note:** This IP address must belong to the same subnetwork as that of the local area network.
End IP	The last address assigned by the DHCP server. **Note:** This IP address must belong to the same subnetwork as that of the local area network.
Gateway	IP address of the gateway.
Broadcast	The IP network's subnetwork broadcast IP address.
Primary DNS	The primary address of the domain name server. **Note:** Your Residential Gateway is configured by default to provide the DNS relay function.
Secondary DNS	Secondary address of the domain name server.
Lease time	Period of availability (in days) of each IP address assigned. The default value shown is **7** (days).

The settings displayed in the various fields are dedicated to one interface.

"Start/Stop" buttons

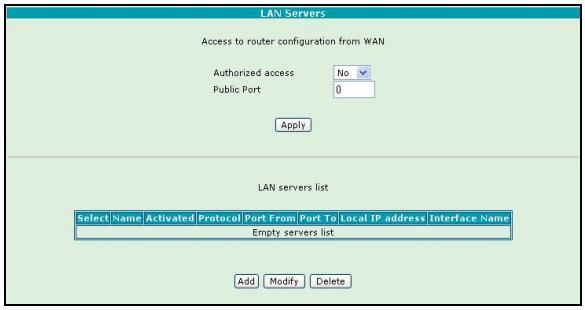
Button	Meaning
Start	Click this button to place the DHCP server "**In Service**"; the Stop button is displayed.
Stop	Click this button to place the DHCP server "**Out of Service**"; the Start button is displayed.

5.5.3 LAN servers

Object: This menu lets you control access to Residential Gateway configuration from the Internet, and allow servers to be hosted in your LAN.

Click the **LAN Servers** menu.

The screen opposite appears.



1) Accessing the configuration of the router via the wide area network

Field	Meaning	Default value
Access allowed	Select **Yes** to allow access to the configuration screens for your Residential Gateway from the Internet. Select **No** to prevent this type of access. By default, access is not allowed.	**No**
Public port	Complete this field with the value of the TCP port providing access to your Residential Gateway (value from 1 to 65 535).	**0**

For reasons of security, it is best to leave this access closed (Access allowed set to **No**).

2) List of servers installed on a local area network

"Add" button

To allow access from the Internet to a server installed on your local area network, you must:

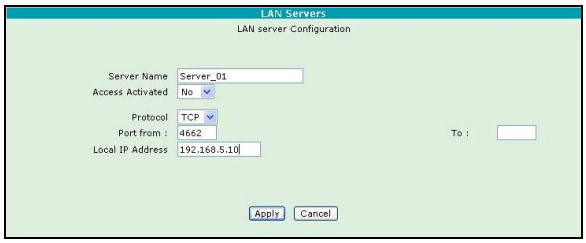
1) Indicate to the Residential Gateway the address of the computer hosting the server so that it can redirect the requests it receives to this computer. We would advise you to give your server a fixed IP address.
2) Enable (using IP filters) the received requests to enter into your local area network. However, the Residential Gateway's firewall is enabled by default and prevents connections from the Internet.

This configuration must be set up once for each server or computer that uses the software. To do this, the connection with your ISP must be set up (in other words, surfing must be possible).

Click the Add button to add a server to your LAN.

The screen opposite appears.

Complete the fields displayed on screen (see table below) then click the Apply button to confirm your input.



Field	Meaning
Server Name	Enter the name of your server (for example, Serveur_01). **Note:** You can enter any name of your choice.
Access Activated	Select **Yes** to activate the server and **No** to deactivate it in the drop-down list.
Protocol	Select the Transport layer protocol you want to use (**TCP** or **UDP**). Please refer to the table below for more information.
Port from	Start of the range of ports used by your server, or unique port number. Please refer to the table below for more information.
To	End of the range of ports used by your server.
Local IP Address	IP address of your server on your LAN. **This must belong to the range of addresses that corresponds to the interface used to link your server to the local area network (see section 5.5.2).**

It is vitally important to **save the configurations** that you have just specified before restarting your LiveBox.

If you make any omissions, the corresponding information will be lost.

The configuration described previously may be required if you want to host a ftp, http, email or other server in your LAN.

Depending on the type of servers that you want to install, the parameters to specify may differ:

	Private FTP server access from Internet	Private HTTP server access from Internet
Protocol	TCP	TCP
Port	20 or 21	80

To **delete** a LAN server from the list or **modify** its parameters, you must select it by checking the **Selection** box.

5.5.4 Internet access

Object: This menu lets you enter the parameters of your Internet service provider (ISP) so that you can connect to the Internet.

1 Click on the **Internet access** menu.

The screen opposite appears.

Enter the user name (**User name**) and the password (**Password**) supplied by your ISP.

Click the Apply button.

Field	Meaning	Default setting
User name	On first commissioning, this field is blank. Enter the user name (32 characters maximum) **supplied by the ISP**.	-
Password	On first commissioning, this field is blank. Enter the password associated with the user name (32 characters maximum) **supplied by your ISP.** As you enter the password, dots appear concealing what you have typed.	-

When entering the data, you must enter uppercase and lowercase characters correctly.

In the event of problems, refer to your ISP.

5.5.5 Wireless network (depending on version)

Your Residential Gateway offered a wireless network access point service according to the 802.11b and 802.11g standards.

Object: This menu lets you configure all the settings of a wireless network (Wi-Fi), activate the network and filter all the MAC addresses.

5.5.5.1 Adding a computer to the wireless network and configuring

The default configuration of your Residential Gateway is optimised to require a minimum of configuration operations.
However, you can customise your gateway with your own settings, using the information in section 5.5.5.3.

1. Adding a computer

The Residential Gateway uses the MAC address (for more information, refer to section 5.5.5.2) of the 802.11b or 802.11g wireless network component of your computer to make it appear in the list of stations allowed to communicate over the wireless network.

The MAC address of a computer can be added to the list of MAC addresses automatically authorised.

For this, press the association button (marked REG). The Residential Gateway switches to association mode, the WiFi/Bluetooth LED blinks. **Configure the SSID and the WEP key on this computer** and then use the computer to connect to the Residential Gateway in WiFi mode.

> ***The SSID and the WEP encryption key, provided by default are marked on the casing and also on the product packaging and on your Residential Gateway's installation CD-ROM ("Livebox®").***

The Residential Gateway allows five minutes for this configuration. During this period, the LED continues to blink, telling you that the gateway is available to receive settings from your computer.

If necessary, you can press the REG button again to extend the period by a further five minutes to continue configuring.

Adding an MAC address using the association function automatically activates protection by MAC address filtering.

2. Configuration

If the 802.11b or 802.11g wireless communication module used by your computer is a SAGEM accessory, insert the installation CD in your drive and set up the SSID and the WEP or WPA encryption key.

Otherwise, to configure the SSID and the WEP or WPA key on your computer, please refer to the documentation supplied with your Wi-Fi accessory. These items can be programmed using the application installed with your Wi-Fi accessory's drivers.

In Windows XP, configuration is possible via the properties of your wireless connection.

5.5.5.2 Some technical definitions

To use an 802.11b wireless network, you must take precautions against certain malicious acts such as:

1) use of the Internet connection without the knowledge of the owner of the wireless network,
2) snooping on data interchanged over the wireless network.

To protect yourself, the SAGEM F@st™ 3202 offers measures to counter these malicious acts:

- **Against the use of the Internet connection without the knowledge of the owner of the wireless network:**
  - Protection by customisation of the SSID,
  - Protection by MAC address filtering.
- **Against snooping on data interchanged over the wireless network:**
  - Protection by WEP or WPA encryption.

SSID:

The SSID is the identifier of your wireless network. For your wireless network to operate, the same SSID must be entered on your Residential Gateway and on all the computers that make up your wireless network.

MAC address:

When filtering by MAC address is activated, the SAGEM F@st™ 3202 allows only data from and to predefined stations to pass.
To be known to the SAGEM F@st™ 3202, a station must be entered, by its MAC address, in the list of MAC filters on the Residential Gateway.
The MAC address is the identification number of the network cards.

An MAC address is an identifier which uniquely identifies an Ethernet network interface.

To obtain the MAC address of a wireless network card:

- In Windows 98: Start then Run, enter winipcfg.
- In Windows XP, 2000, Me: Start then Run, enter cmd then ipconfig /all. Confirm by pressing Enter.
- Identify your wireless network card from the list that appears, on the "Description" line.
- The MAC address you are looking for corresponds to the "Physical address" line. It comprises 12 hexadecimal characters (digits from 0 to 9 or letters from A to F).

WEP:

The WEP (Wired Equivalent Privacy) key is used to encrypt the information exchanged over your wireless network, and is shared by the sender and receiver of the message.
Like the SSID, this WEP key must be configured the same on each computer connected to your wireless network and on your Residential Gateway.

The format of the WEP key suggested by the Residential Gateway is as defined by IEEE 802.11b.

The keys can be of different length. The longer the key, the greater the data protection. Two key lengths are available on the Residential Gateway:

- 64-bit encryption key,
- 128-bit encryption key.

A 64-bit encryption key is made up of 5 x 2 hexadecimal encoding characters (digits from 0 to 9 or letters from A to F).

A 128-bit encryption key comprises 13 x 2 hexadecimal-encoded characters (digits from 0 to 9 or letters from A to F).

In the 802.11b device documentation, the 64-bit encryption key is often called a 40-bit encryption key. In practice, it is made up of 40 bits to be configured in the Residential Gateway and the stations, and 24 bits that are generated automatically and transmitted in the message exchanged.

Similarly, the 128-bit encryption key is often called a 104-bit encryption key.

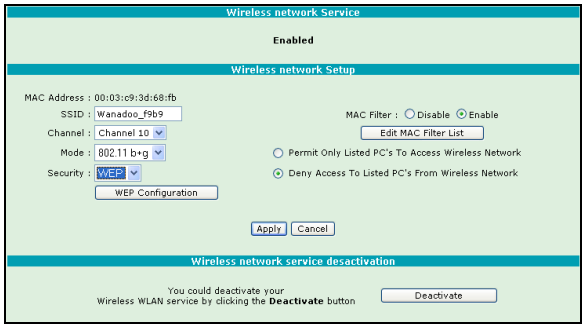
Note: The selected key will be used in all cases by the Residential Gateway to encrypt the messages to be sent. The message sent is made up of encrypted data and the key number (key N° 1, 2, 3 or 4) used for encryption. For the station to be able to decrypt the message received, it must therefore have the same key configured with the same number.

5.5.5.3 Configuring the wireless network on your residential gateway (depending on version)

Click on the **Wireless network** menu.

The screen opposite appears.

Complete the fields displayed on screen (see table below).



1) Wireless network service

The top part of the screen shows the **activated** or **deactivated** status of the wireless network, resulting from the last selection made by clicking the **Activate / Deactivate** button located at the bottom of the screen.

The **Activate / Deactivate** button takes the name of the command required to change status:
Activate, when the network is deactivated.
Deactivate, when the network is activated.

By default, the 802.11 wireless network is activated.

Click Deactivate to switch off the 802.11 wireless network.

2) Setting up the wireless network

Object: This menu lets you configure the main setting of your 802.11 (WLAN) wireless network, and configure certain security settings.

This screen is available only if the "Wireless network" function is activated in your Residential Gateway. Refer to your supplier for more information.

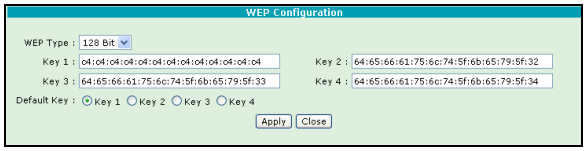
Field	Meaning	Default setting
SSID	The SSID field is customised for your Residential Gateway. It is marked on the label stuck to the unit and to the CD and product packaging.	**Wanadoo_xxxx** **Example: Wanadoo_f9b9**
Channel	Select the required **channel** from the drop-down list (channel 1 to channel 13). For example, channel "**10**" corresponds to the frequency of 2457 MHz. Observe the conformity/radio CE declaration rules set out in Appendix B, subsection B.2.	**10**
Mode	Used to choose the **802.11 g** or **802.11 b+g** mode. In **802.11 g** mode, your Residential Gateway can communicate only with 802.11g clients, and cannot communicate with 802.11b clients. This mode provides improved bit rates when 802.11g clients are used. In **802.11 b+g** mode, the access point can communicate with 802.11g and 802.11b clients. The performance of the 802.11g clients is then limited.	**802.11 b+g**
MAC Filter	Click Deactivate or Activate to respectively deactivate or activate MAC filtering.	**Enable**
Permit only the listed PCs To Access the Wireless Network **or** **Deny Access To listed PCs From Wireless Networks**	Select one of these boxes: Only the computers for which the MAC address of the wireless network accessory is in the list can use the wireless network; others are rejected. The computers for which the MAC address of the wireless network accessory is in the list cannot use the wireless network.	**Permit only the listed PCs To Access the Wireless Network**
Security	Used to select from the drop-down list: **None** — No protection is provided on the wireless network. **WEP** — Enable WEP (**W**ired **E**quivalent **P**rivacy) encryption. When you select "WEP", the **Configure WEP** button appears. **WPA** — Enable the WPA (**W**ireless **P**rotected **A**ccess) encryption. When you select "WPA", the **Configure WPA** button appears.	**WEP**

"Configure WEP" button

You must first enable WEP encryption by selecting **WEP** in the "Security" field before clicking the WEP Configuration button to configure WEP encryption.

Click the WEP Configuration button.

The screen opposite appears. Complete the fields displayed on screen (see table below).



Field	Meaning	Default setting
WEP Type	Select **64 bit** or **128 bit** for 64-bit or 128-bit encryption respectively.	**128 Bit**
Key x (1 to 4)	• The WEP key indicated is customised for your Residential Gateway. • It is marked on the label stuck to the unit and on the CD and product packages. • You can alter the keys by entering them directly in the boxes. • The characters are "0" to "9" and "A" to "F". • Keep the keys entered in a safe place. • Do not record them in a file that can be found on your computer.	**Customised**
Default Key	Select the key from the four displayed. The transmit key is used to encrypt data sent by your computer.	**Key 1**

The WEP key is used to encrypt the data circulating on your wireless network.
Configure all the computers linked to your wireless network with the same WEP key.

"Configure WPA" button

You must first activate the WPA function by selecting **WPA** in the "Security" field before clicking the WPA Configuration button to configure this function.

Click the WPA Configuration button.

The screen opposite appears. Complete the fields displayed on screen (see table below).

Field	Meaning	Default setting
Passphrase	Enter a phrase (8 to 64 alphanumeric characters). • Keep the encryption phase in a safe place. • Avoid recording it in a file that could be found on your computer.	**password**
Encryption	Select the encryption mode: **TKIP** or **AES**.	**TKIP**

The WPA encryption phrase is used to encrypt the data circulating on your wireless network.

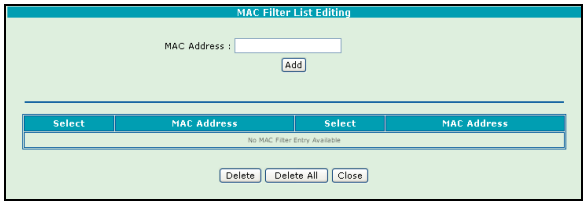
Configure all the computers linked to your wireless network with the same WPA encryption phrase.

"Edit MAC filter list" button

The MAC address filtering function is used to limit the number of computers allowed access to your wireless network.

Click the Edit MAC Filter List button.
To display a list of the MAC addresses of the client stations connected to the wireless network.

The screen opposite appears.



To add an MAC address:
Complete the fields displayed on screen (see table below).

Field	Meaning	Default setting
MAC address	Enter the MAC addresses to be filtered (addresses of the computers allowed to log on to the wireless network), then click the Add button.	_

Delete	Click this button to delete an MAC address (see warning icon).
Delete All	Click this button to delete all the addresses listed.

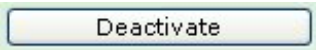
To **delete** an MAC address, you must select it by checking the **Select** box.

Once you have finished configuring your wireless network on your Residential Gateway, remember to save the configuration.
To do this:

- Click **Save** in **Save / Restart** accessible in the lefthand column of the screen.
- Or select the (Basic) **Save / Delete / Restart** menu, accessible from the horizontal bar located under "**Livebox®**", then click the **Save** button.

3) Deactivating / Activating the wireless network service

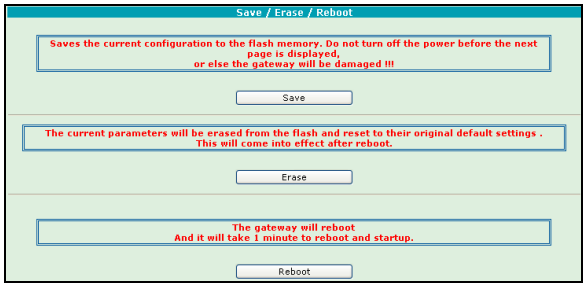
"Deactivate / Activate" button

Button	Meaning
	Click this button to deactivate your "wireless network" service; the  button is displayed.
	Click this button to activate your "wireless network" service; the  button is displayed.

5.5.6 Save / Delete / Reboot

Click the **Save / Erase / Reboot** menu.

The screen opposite appears.



Save	Used to save the current configuration settings in your Residential Gateway's permanent memory.
Erase	Used to erase the current settings and recover your Residential Gateway's default settings.
Reboot	Used to reboot your Residential Gateway.

To recover the default settings, you **must reboot** your **SAGEM F@st™ 3202**.

5.6 Configuring your residential gateway: "Advanced" menu

The menus in the **"Advanced"** section provide access to the detailed settings of your Residential Gateway, their use is intended for experienced users.

This section contains the following menus from left to right on the home screen:

- Bluetooth (see 5.6.1),
- Firewall (see 5.6.2),
- Network (see 5.6.3),
- Statistics (see 5.6.4),
- Tools (see 5.6.5).

To access one of these configuration menus from the "Advanced" section, select it in the menu bar located under "**Livebox®**".

5.6.1 Bluetooth (depending on version)

This feature is not available in the current version of the SAGEM F@st™ 3202 Residential Gateway.

This menu comprises five submenus:

- Identity (see 5.6.1.1),
- IP configuration (see 5.6.1.2),
- Accessibility (see 5.6.1.3),
- Local services (see 5.6.1.4),
- Security (see 5.6.1.5).

5.6.1.1 Identity

Click in the **Bluetooth** menu, then select the **Identity** submenu from the drop-down list.

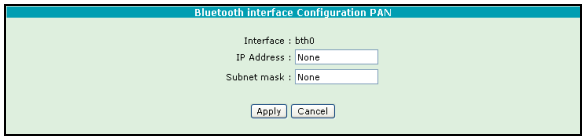
The screen opposite appears.

Field	Meaning	Default setting
My Bluetooth Name	Enter a name for your Bluetooth network.	**F@st_f9b9**

5.6.1.2 IP configuration

Click in the **Bluetooth** menu, then select the **IP configuration** submenu from the drop-down list.

The screen opposite appears.



Field	Meaning	Default setting
Interface	**Not modifiable**	**bth0**
IP Address	Enter the "Bluetooth" dedicated IP address.	**None**
Subnet mask	Enter the "Bluetooth" dedicated subnet mask.	**None**

5.6.1.3 Accessibility

Click in the **Bluetooth** menu, then select the **Accessibility** submenu from the drop-down list.

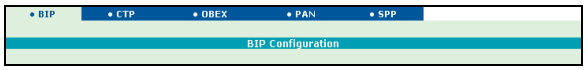
The screen opposite appears.

Field	Meaning	Default setting
Let other Bluetooth devices discover my gateway	Select **Yes** to let the other Bluetooth equipment discover your gateway or **No** otherwise.	**Yes**
Device allowed to connect to my gateway	Select: **None** For no equipment to be allowed to connect to your gateway. **All** For all equipment to be able to connect to your gateway. **Assoc.**	**All**

5.6.1.4 Local services

Click in the **Bluetooth** menu, then select the **Local services** submenu from the drop-down list.

The screen opposite appears.



5.6.1.5 Security

Click in the **Bluetooth** menu, then select the **Security** submenu from the drop-down list.

The screen opposite appears.

Field	Meaning	Default setting
PIN code	Enter an authentication PIN code so that you can pair up remote Bluetooth equipment.	_

5.6.2 Firewall

This menu comprises four submenus:

- Access control (see 5.6.2.1),
- Policies (see 5.6.2.2),
- NAT (see 5.6.2.3),
- Traces (see 5.6.2.4).

Object: This function lets you apply access controls to the Residential Gateway to protect it from external attacks.

Applying filters to the LAN interfaces can make it impossible to access the Residential Gateway's configuration interface.

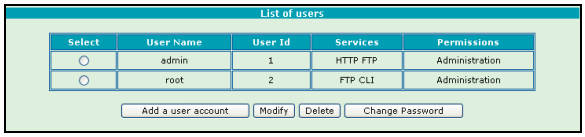
If you encounter this problem, please restore the gateway to its factory configuration using the "Reset" button (RST).

The procedure for restoring the factory configuration is described in section A.5.

5.6.2.1 Access control

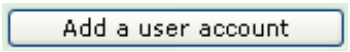
Click in the **Firewall** menu, then select the **Access control** submenu from the drop-down list.

The screen opposite appears.



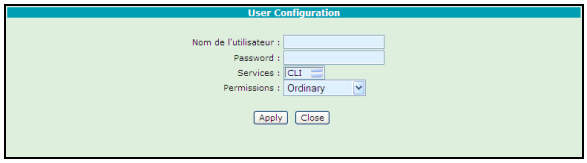
Complete the fields displayed on screen (see table below).

"Add a user account" button

Click 

to configure an access.

The screen opposite appears.

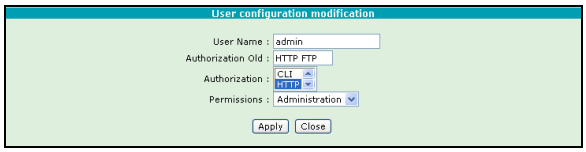


Field	Meaning
User name	Enter a user name.
Password	Enter a password.
Services	Select the authorised access mode: configuration by HTTP (**HTTP**), configuration by Telnet (**CLI**), update by **FTP**.
Permissions	Select **Ordinary** (read only) or **Administration** (read and modify).

"Modify" button

Click Modify to modify a user's rights.

The screen opposite appears.



Field	Meaning
User Name	**Not modifiable**
Authorisation Old	**Not modifiable**
Authorisation	Select the authorised access mode: configuration by HTTP (**HTTP**), configuration by Telnet (**CLI**), update by **FTP**.
Permissions	Select **Ordinary** (read only) or **Administration** (read and modify).

To **modify** a user's rights, the user must be selected by checking the **Selection** box.

"Change password" button

Click 

to change the password.

The screen opposite appears.

Field	Meaning
Old Password	Enter the old password.
New Password	Enter a new password.
Confirm new Password	Confirm the new password.

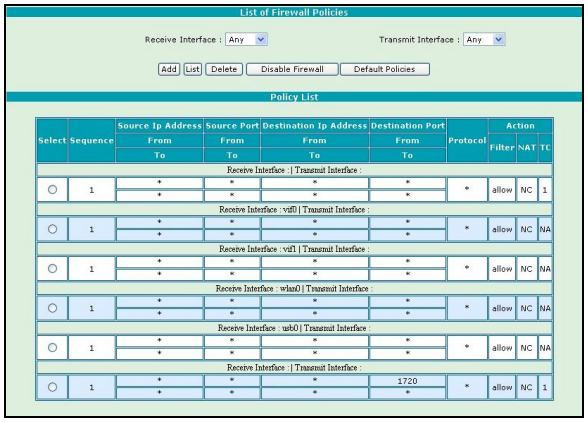
To **Delete** a user or **change a user's password**, the user must be selected by checking the **Selection** box.

5.6.2.2 Policies

This submenu provides access to firewall configuration, activation or deactivation commands.

Click in the **Firewall** menu, then select the **Policies** submenu from the drop-down list.

The screen opposite appears and displays a list of the IP filters configured.



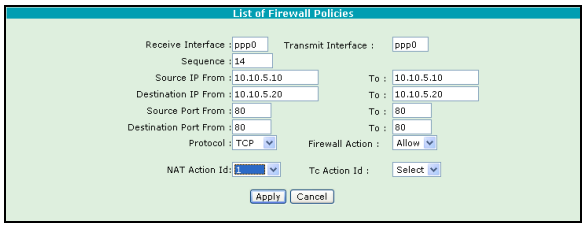
Field	Meaning
Receive interface	Name of the receive interface: eth0, usb0, ph0, wlan0, ppp(0), or any (Any).
Transmit interface	Name of the transmit interface: eth0, usb0, ph0, wlan0, ppp(0), or any (Any).
List of policies	The table below details all of the configurable parameters for an interface selected from the list.

"Add" button

You **must** select an interface (receive and transmit).

Your choice of interface must **not any under circumstances** be Any.

Click the Add button to add a filtering rule and the screen opposite appears.



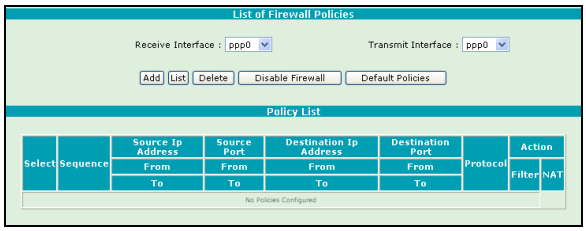
Field	Meaning
Sequence	Enter a filtering rule priority (**Smallest number for the highest priority rule**).
Source IP From	Enter the start of range source IP address.
To	Enter the end of range source IP address.
Destination IP from	Enter the start of range destination IP address.
To	Enter the end of range destination IP address.
Source port from	Enter the start of range source port.
To	Enter the end of range source port.
Destination port from	Enter the start of range destination port.
To	Enter the end of range destination port.
Protocol	Select one of these protocols: Any, TCP, UDP, ICMP, GRE, AH, ESP.
Firewall action	Allow: Allows packets to pass through the Residential Gateway. Deny[1]: Prevents packets from passing through the Residential Gateway without a message being generated.
NAT action ID	Select the identifier of the NAT action applied at the firewall.
Tc Action ID	

[1] The Deny action is possible only if the firewall is activated (**Activate firewall**).

"List" button

First **Select** a receive interface and a transmit interface then click **List** to display a list of the IP filters configured for the selected interfaces.

Click **List** to display a list of the IP filters configured and the screen opposite appears.



To obtain a **list of all the interfaces**, select **All**.

Deactivate Firewall button

Click this button to deactivate the firewall; the button then shows Activate Firewall. Click this button to activate the firewall.

Default Policy button

Click this button to restore the default settings for the filtered datagrams.

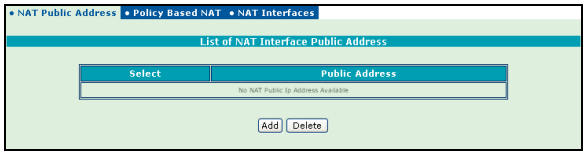
5.6.2.3 NAT

NAT is a configurable IP address translation function which will be applied to the Residential Gateway interfaces that you will have activated for this function.
A number of configurations of the translation function, the NAT actions, can be set up and can be activated as indicated in section 2) below.

1) NAT public address

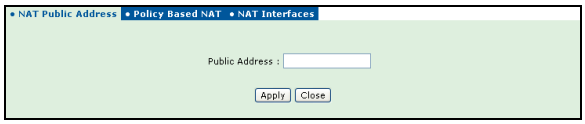
Click in the **Firewall** menu, then select the **NAT** submenu from the drop-down list followed by the **NAT public address** tab.

The screen opposite displays a list of the public addresses of the NAT interface.



"Add" button

Click the Add button to add NAT public addresses.

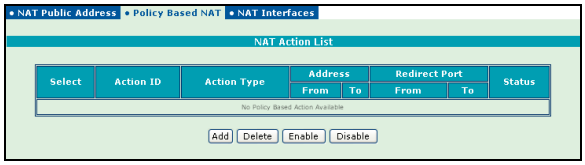


Field	Meaning
Public address	Enter a static WAN address.

2) Policy based on NAT

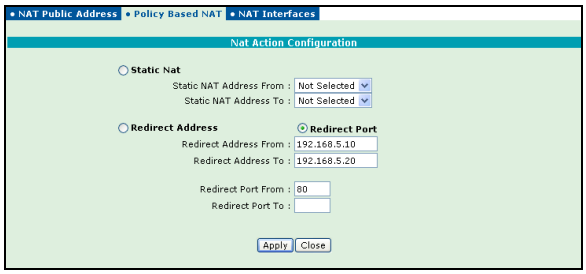
Click in the **Firewall** menu, then select the **NAT** submenu from the drop-down list and then select the **Policy based on NAT** tab.

The screen opposite displays a list of the actions.



"Add" button

Click the Add button to add an NAT action to a static address.



Field	Meaning	Default setting
Static NAT		
Originating static NAT address	Enter an originating static NAT address.	Not selected
Terminating static NAT address	Enter a terminating static NAT address.	Not selected
Redirected address		
Originating redirected address	Enter an originating redirected address.	_
Terminating redirected address	Enter a terminating redirected address.	_
Redirected port		
Originating redirected port	Enter an originating redirected port.	_
Terminating redirected port	Enter a terminating redirected port.	_

"Enable / Disable" button

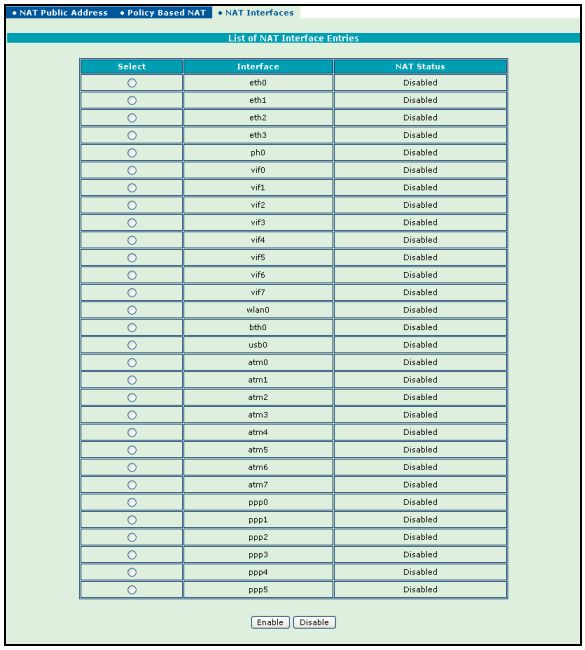
Button	Meaning
Enable	Click this button to enable a selected NAT action.
Disable	Click this button to disable a selected NAT action.

3) NAT interfaces

Click in the **Firewall** menu, then select the **NAT** submenu from the drop-down list followed by the **NAT interfaces** tab.

The screen opposite displays a list of the static NAT entries configured. A static NAT entry is used to translate all the addresses of a local address range (source address) into a public address.

Click in the **selection** column, on the line corresponding to the interface for which you want to modify the NAT state.



"Enable / Disable" button

Button	Meaning
Enable	Click this button to apply the IP/NAT address translation function to the interface that you previously selected (ethx, ph0, vifx, wlan0,bth0, usb0, atmx and pppx).
Disable	Click this button to deactivate NAT on an interface (ethx, ph0, vifx, wlan0,bth0, usb0, atmx and pppx).

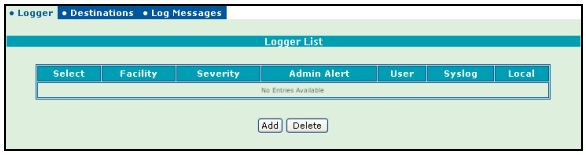
To **enable** or **disable** NAT on an interface, you must select it by checking the appropriate box in the **selection** column.

5.6.2.4 Traces

1) Recorder

Click in the **Firewall** menu, then select the **Traces** submenu from the drop-down list followed by the **Recorder** tab.

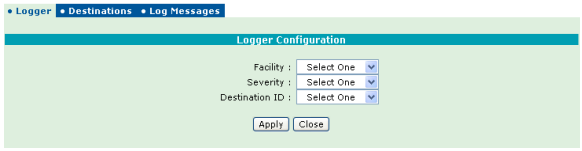
The screen opposite appears.



"Add" button

Click Add to configure a recorder.

The screen opposite appears.

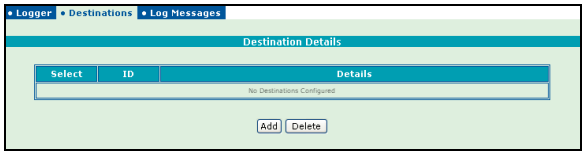


Field	Meaning	Default setting
Equipment	Select equipment from the drop-down list.	By selecting one
Severity	Select a severity from the drop-down list.	By selecting one
Destination ID	Enter a destination identifier.	By selecting one

2) Destinations

Click in the **Firewall** menu, then select the **Traces** submenu from the drop-down list followed by the **destinations** tab.

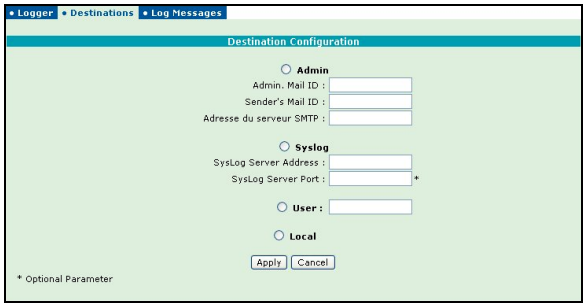
The screen opposite appears.



"Add" button

Click  to add a destination.

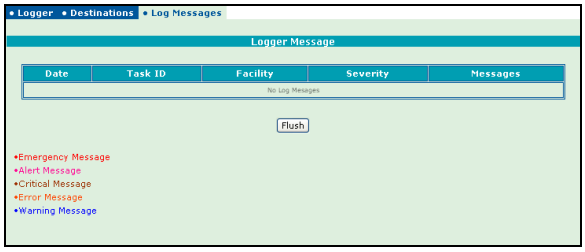
The screen opposite appears.



3) Stored messages

Click in the **Firewall** menu, then select the **Traces** submenu from the drop-down list followed by the **Stored messages** tab.

The screen opposite appears.



Each message appears in the colour associated with its severity.

"Clear" button

Flush

Click this button to delete all the messages displayed.

5.6.3 Network

Object: .

This menu has four submenus:

- DHCP relay (see 5.6.3.1),
- DNS relay (see 5.6.3.2),
- Routing (see 5.6.3.3),
- Spanning Tree (see 5.6.3.4).

5.6.3.1 DHCP relay

Click in the **Network** menu, then select the **DHCP relay** submenu from the drop-down list.

The screen opposite appears.

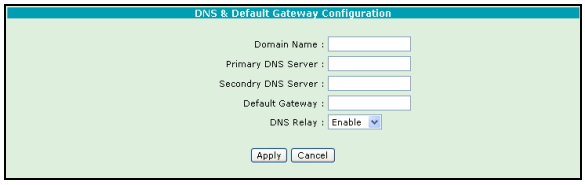
Field	Meaning	Default setting
IP address	Enter the IP address of the DHCP server to which the Residential Gateway should relay the DHCP requests.	–
DHCP relay	Select **Deactivated** or **Activated** from the drop-down list to respectively deactivate or activate the DHCP relay.	Deactivated

Activating the DHCP relay automatically deactivates the DHCP servers configured and activated previously on the Residential Gateway.

5.6.3.2 DNS relay

Click in the **Network** menu, then select the **DNS relay** submenu from the drop-down list.

The screen opposite appears.



Field	Meaning	Default setting
Domain name	Enter a domain name.	_
Primary DNS server	Enter the IP address of your ISP's first DNS server (ISP).	_
Secondary DNS server	Enter the IP address of your ISP's second DNS server (ISP).	_
Default gateway	Enter the IP address of the default gateway.	_
DNS relay	Select **Activated** or **Deactivated** from the drop-down list to respectively activate or deactivate the DNS relay.	Activated

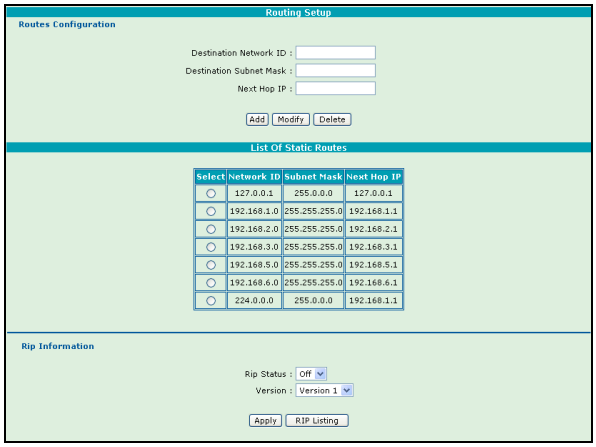
By default, the DNS relay automatically acquires these parameters, on setting up the connection with the Internet service provider.

5.6.3.3 Routing

1) Configuring routes

Click in the **Network** menu, then select the **Routing** submenu from the drop-down list.

The screen opposite appears.



Field	Meaning
Destination network ID	Subnetwork address.
Destination network mask	Subnet mask.
IP of the next hop	Address of the next hop.

To **Add a route**, enter the parameters of the route to be added then click the Add button.

To **Modify** or **Delete**, you must first **select** a static route from the list of routes then click the appropriate button.

2) Rip Information

Field	Meaning
Rip status	Select **Activated** or **Deactivated** from the drop-down list to respectively activate or deactivate this status.
Version	Select **Version 1** or **Version 2** from the drop-down list.

RIP Listing	Displays the routing table.

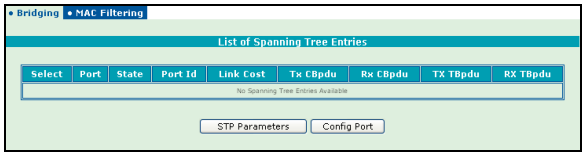
5.6.3.4 Spanning Tree

Object: This protocol uses an algorithm that can be used to calculate the best route for the data with least cost (without looping through the network).

1) Bridging

Click in the **Network** menu, then select the **Spanning Tree** submenu from the drop-down list followed by the **Bridging** tab.

The screen opposite appears and displays a list of the "Spanning Tree" entries.

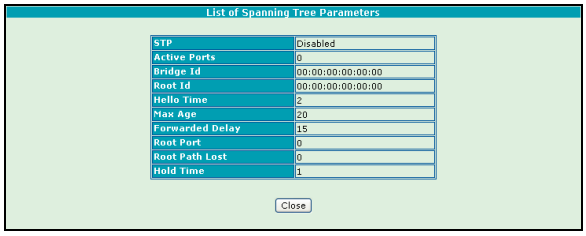


Field	Meaning
Port	Port number.
Status	Port status: **Blocking**, **Listening**, **Learning**, **Forwarding** and **Disabled**.
Port Id	Identifier (MAC address) of the port (value from 0 to 6500).
Link cost	Cost of the link.
Tx CBpdu	
Rx CBpdu	
Tx TBpdu	
Rx TBpdu	

"STP parameters" button

Click STP Parameters to display the Spanning Tree protocol parameters.

The screen opposite appears.

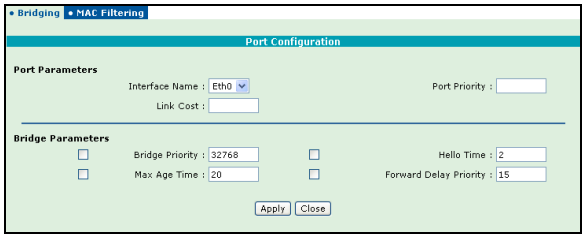


Field	Meaning
STP	Status of the "Spanning Tree" protocol (Activated: In Service, Deactivated: Out of Service).
Ports active	Number of ports active.
Bridge Id	Unique identifier (MAC address) of the bridge.
Root Id	MAC address of the bridge elected for Root, in the network topology.
Hello Time	Time during which a supervision mechanism is activated. This value is expressed in seconds (2 or 3 seconds normally).
Maximum age	
Routing delay	Routing delay.
Root port	Port of the bridge chosen for Root, in the network topology.
Root Path Lost	
Holding time	

"Configure port" button

Click Config Port to configure the port.

The screen opposite appears.



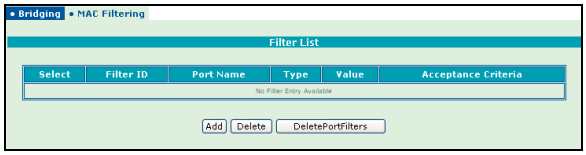
Field	Meaning	Default setting
Port parameters		
Interface name	Select the name of the interface from the drop-down list (Eth0, atmx).	Eth0
Link cost	Enter a value from 0 to 65535.	_
Port priority	Enter a value from 0 to 255.	_
Bridge parameters		
Bridge priority	Enter a value from 0 to 65 000	32 768
Hello Time	Time for which a surveillance mechanism is activated. This value is expressed in seconds. Enter a value from 1 to 10 seconds (2 or 3 seconds normally).	2
Maximum age	Enter a **Maximum age** value from 1 to 60.	20
Passage delay priority	Time for a port spent in the learning and listening state expressed in seconds (value from 10 to 200).	15

To confirm a value entered in one of the four "Bridge parameters" fields by Apply, you must check the appropriate box.

2) MAC filtering

Click in the **Network** menu, then select the **Spanning Tree** submenu from the drop-down list followed by the **MAC filtering** tab.

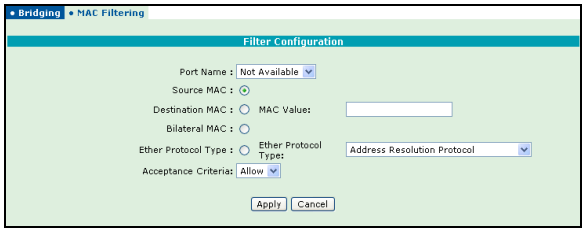
The screen opposite appears.



"Add" button

Click Add to add a destination.

The screen opposite appears.

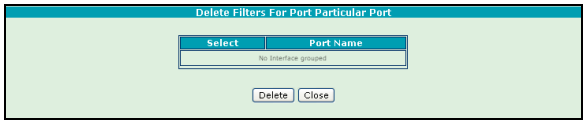


Field	Meaning	Default setting
Port name	Select the name of the port from the drop-down list (eth0, atmx).	eth0
Source MAC	Check the box to select the source MAC address.	_
Destination MAC	Check the box to select the destination MAC address.	_
MAC value	Enter the destination MAC address.	_
Bilateral MAC	Check the box to select the bilateral MAC address (source and destination).	_
Ethernet protocol type	Check the box to select the Ethernet protocol type.	_
Ethernet protocol type	Select the Ethernet protocol type from the drop-down list.	Address Resolution Protocol (ARP)
Acceptance criterion	Select Allow or Delete from the drop-down list.	Allow

"DeleteFilter" button

Click DeletePortFilters to delete a filter for a particular port.

The screen opposite appears.



Field	Meaning	Default setting
Port name	Select the name of the port (eth0, atmx) by checking the box in the corresponding **Selection** field.	_

Click the Delete button to actually delete the filter chosen according to the port criteria (eth0, atmx).

5.6.4 Statistics

Object: This menu lets you display all the statistics concerning your Residential Gateway.

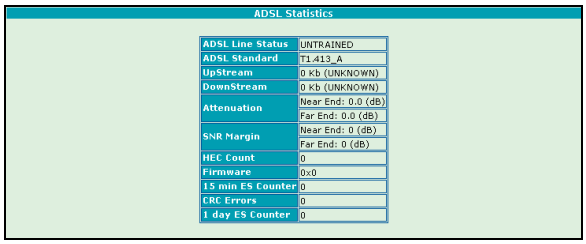
This menu has four submenus:

- ADSL statistics (see 5.6.4.1),
- DHCP statistics (see 5.6.4.2),
- H.323 statistics (see 5.6.4.3),
- System statistics (see 5.6.4.4).

5.6.4.1 ADSL statistics

Click in the **Statistics** menu, then select the **ADSL statistics** submenu from the drop-down list.

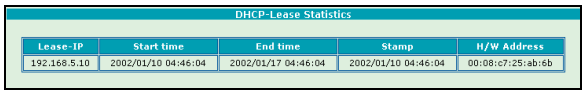
The ADSL statistics screen opposite appears.



5.6.4.2 DHCP statistics

Click in the **Statistics** menu, then select the **DHCP statistics** submenu from the drop-down list.

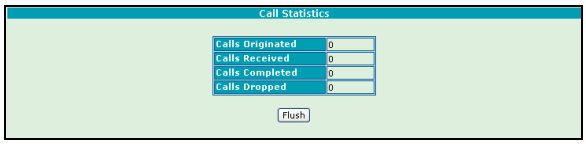
The DHCP statistics screen opposite displays all the computers having obtained an IP address, via the Residential Gateway's DHCP server.



5.6.4.3 H.323 statistics

Click in the **Statistics** menu, then select the **H.323 statistics** submenu from the drop-down list.

The H.323 statistics screen opposite appears.



Click the Flush button to reset the call statistics.

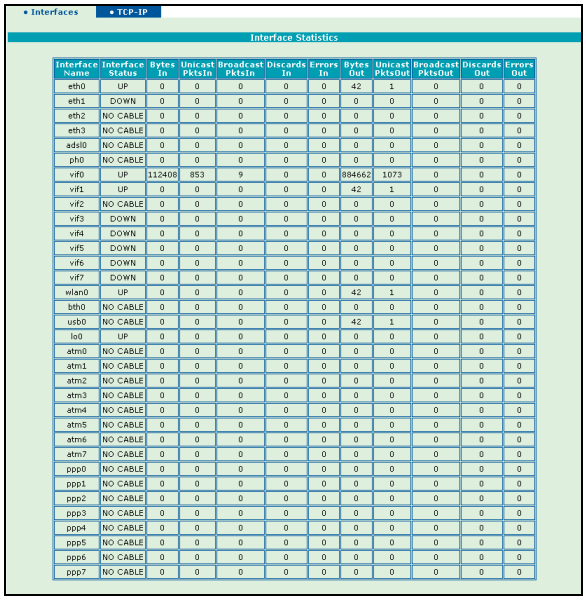
5.6.4.4 System statistics

Object: This menu lets you obtain statistics on the traffic sent and received by your Residential Gateway.

1) Interfaces

Click in the **Statistics** menu, then select the **System Statistics** submenu from the drop-down list followed by the **Interfaces** tab.

The screen opposite displays the statistics for your Residential Gateway's various internal and external interfaces (ethx, adsl0, ph0, vifx, wlan0, bth0, usb0, lo0, atmx and pppx).

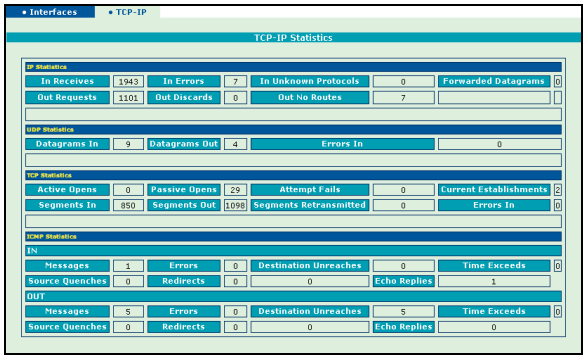


Interface Name	Interface Status	Bytes In	Unicast PktsIn	Broadcast PktsIn	Discards In	Errors In	Bytes Out	Unicast PktsOut	Broadcast PktsOut	Discards Out	Errors Out
eth0	UP	0	0	0	0	0	42	1	0	0	0
eth1	DOWN	0	0	0	0	0	0	0	0	0	0
eth2	NO CABLE	0	0	0	0	0	0	0	0	0	0
eth3	NO CABLE	0	0	0	0	0	0	0	0	0	0
adsl0	NO CABLE	0	0	0	0	0	0	0	0	0	0
ph0	NO CABLE	0	0	0	0	0	0	0	0	0	0
vif0	UP	112408	853	9	0	0	884662	1073	0	0	0
vif1	UP	0	0	0	0	0	42	1	0	0	0
vif2	NO CABLE	0	0	0	0	0	0	0	0	0	0
vif3	DOWN	0	0	0	0	0	0	0	0	0	0
vif4	DOWN	0	0	0	0	0	0	0	0	0	0
vif5	DOWN	0	0	0	0	0	0	0	0	0	0
vif6	DOWN	0	0	0	0	0	0	0	0	0	0
vif7	DOWN	0	0	0	0	0	0	0	0	0	0
wlan0	UP	0	0	0	0	0	42	1	0	0	0
bth0	NO CABLE	0	0	0	0	0	0	0	0	0	0
usb0	NO CABLE	0	0	0	0	0	42	1	0	0	0
lo0	UP	0	0	0	0	0	0	0	0	0	0
atm0	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm1	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm2	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm3	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm4	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm5	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm6	NO CABLE	0	0	0	0	0	0	0	0	0	0
atm7	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp0	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp1	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp2	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp3	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp4	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp5	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp6	NO CABLE	0	0	0	0	0	0	0	0	0	0
ppp7	NO CABLE	0	0	0	0	0	0	0	0	0	0

2) TCP-IP

Click in the **Statistics** menu, then select the **System Statistics** submenu from the drop-down list followed by the **TCP-IP** tab.

The screen opposite displays the statistics for the various traffic protocols sent and received (IP, UDP, TCP and ICMP) by your Residential Gateway.



5.6.5 Tools

This menu has three submenus:

- Diagnosis (see 5.6.5.1),
- Save/Restart (see 5.6.5.2),
- Delete/Restart (see 5.6.5.3).

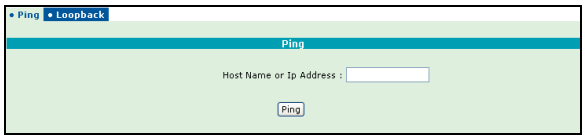
5.6.5.1 Diagnosis

Object: This command can be used to set up "OAM" loops and send "**Ping**" requests from the SAGEM F@st™ 3202 Residential Gateway.

1) Ping

Click in the **Tools** menu, then select the **Diagnosis** submenu from the drop-down list followed by the **Ping** tab.

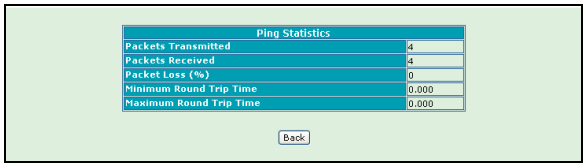
The screen opposite appears.



Field	Meaning
Host name of IP address	Enter an IP address or a host name of a remote computer then click the Ping button.

The screen opposite displays the statistics for the "Ping" request.

Click the Back button to return to the previous screen.

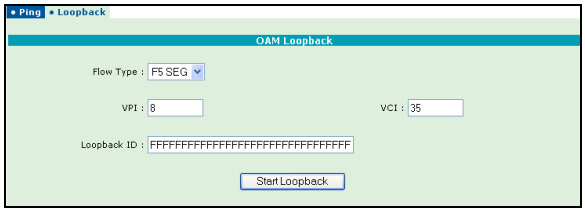


2) Loopback interface

This command is used to send an OAM-F5 cell (segment or "End to End") and wait for the response from the remote equipment.

Click in the **Tools** menu, then select the **Diagnostic** submenu from the drop-down list followed by the **Loopback interface** tab.

The screen opposite appears.



Field	Meaning
Flow type	Select the loopback type: **F5 SEG** Segment type F5 loopback, **F5 ETE** End-to-end type F5 loopback.
VPI	Enter the VPI of the VC over which the loop is sent.
VCI	Enter the VCI of the VC over which the loopback is sent.
Return loop ID	Enter the connection point identifier (size = 32 hexadecimal characters).

Click the 

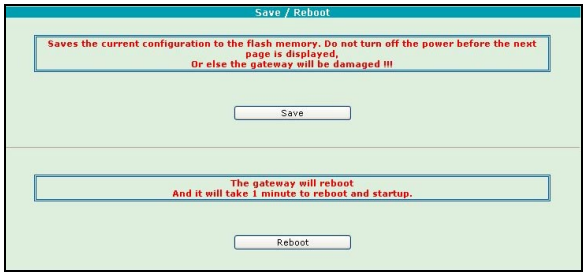
button to set up the loop. A screen showing the loop appears. Click the 

button to return to the previous screen.

5.6.5.2 Save / Reboot

Click in the **Tools** menu, then select the **Save / Reboot** submenu from the drop-down list.

The screen opposite appears.

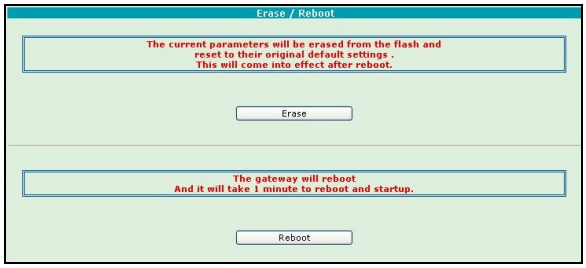


Save	Used to save the current configuration parameters in your Residential Gateway's permanent memory.
Reboot	Used to reboot your Residential Gateway.

5.6.5.3 Delete / Reboot

Click in the **Tools** menu, then select the **Delete / Reboot** submenu from the drop-down list.

The screen opposite appears.



Erase	Used to erase the current settings and recover your Residential Gateway's default settings.
Reboot	Used to reboot your Residential Gateway.

6. Updating the software

This section covers	➢ general information on updating	§ 6.1
	➢ setting up the download	§ 6.2

The procedure for downloading the software version is performed automatically.

6.1 General

When a new embedded software version has been approved, ***SAGEM SA*** posts it on its server.

The code and configuration file download uses the FTP protocol.

6.2 Setting up the download

The new software version download is performed automatically on starting up the Residential Gateway.

Throughout the download procedure, **you must**:

- not power down the Residential Gateway,
- not disconnect from the ADSL line.

During the download, the five LEDs blink and then the Residential Gateway restarts.

When the download is finished, the Residential Gateway is operational again as shown by the LEDs:

- The @ LED lights when the Internet connection is set up.
- The and LEDs light when their interfaces are activated.
- The LED blinks when there is data traffic on the Wi-Fi, Ethernet and USB interfaces.

The download takes approximately 5 minutes.

A. Appendix A - Troubleshooting

This section covers	➢ checking the assignment of an IP address	§ A.1
	➢ interpreting LEDs	§ A.2
	➢ operating alarms	§ A.3
	➢ loss of the password	§ A.4
	➢ restoring the factory configuration	§ A.5
	➢ off-line mode	§ A.6

A.1 Checking the assignment of an IP address

A range of IP addresses is assigned for each interface (see section D.2).

A.1.1 In Windows

In Windows 98

- Click the **Start** button, select **Run**, enter **winipcfg** then click **OK**; the dedicated application appears.
- Check that the IP address entry contains a value other than **0.0.0.0** (**192.168.5.10**, for example for the ETH1 interface). If not, reboot your computer.

In Windows XP, 2000 and Me

- Click the **Start** button, select **Run**, enter **cmd** then click **OK**; the command prompt screen appears. Enter **ipconfig /all** then confirm by pressing **Enter**.
- Check that the IP address entry contains a value other than **0.0.0.0** (**192.168.5.10**, for example for the ETH1 interface). If not, reboot your computer.

A.1.2 In Mac (for example MacOS X)

- Click the **Apple** in the menu bar.
- Select **System Preferences** then click the **Network** icon.
- Check that the IP address entry contains a value other than **0.0.0.0** (**192.168.5.10**, for example for the ETH1 interface). If not, reboot your computer.

All the troubleshooting procedures described below are performed in **Windows® XP**. These procedures in other Windows® operating systems (98, ME and 2000) may differ slightly.

A.2 Interpreting the LEDs

The five LEDs on the SAGEM F@st™ 3202 reflect the status of the various interfaces.

When the SAGEM F@st™ 3202 is powered up, all the LEDs light signifying their operation.

A.3 Operating alarms

These alarms represent events that occur in operation of the SAGEM F@st™ 3202. They can be diagnosed by the red coloured LEDs.

The table below details the meanings of these various LEDs.

Marking	⚠	@	▶▶	📞	📡
Assignment	**ALERT**	**INTERNET**	**LAN**	**TELEPHONY**	**Wi-Fi**
On steady	Failure detected	ADSL line synchronised	SAGEM F@st™ 3202 powered up	Telephone over ADSL line available	Wi-Fi activated
Slow blinking	Starting diagnostic	–	Detection of traffic on all local wired or wireless interfaces	Call in progress	Activating of Wi-Fi / Bluetooth association mode And Stopping MAC address checking via new equipment
Fast blinking	–	ADSL line not synchronised (see section A.3.1)	–	–	–
Off	Normal operation	–	No traffic on the local area network	Telephone over ADSL line not available (see section A.3.2)	Wi-Fi deactivated (see section A.3.3)

A.3.1 "@" LED blinking

- Check the connection of your ADSL splitters. Each telephone socket in your installation should be fitted with an ADSL splitter.
- Check that the RJ11 type line lead supplied with your Residential Gateway is connected to one of your outlets. You are advised not to use any telephone extension leads.
- Finally check with your ISP that the ADSL service is available on your telephone line.

A.3.2 "📞" LED off

Telephony over ADSL is not available on your Residential Gateway:

- Check that the Residential Gateway is powered up,
- Check that the ADSL line is synchronised (@ LED off if not synchronised),
- Check that the PPPoA or PPPoE link is set up,
- Check that the telephony over ADSL subscription is activated,
- Check with your ISP that the telephony over ADSL service is available.

Restart your SAGEM F@st™ 3202.

A.3.3 "📶" LED off

If this LED is off, this indicates that the WLAN interface of the SAGEM F@st™ 3202 is not active. In this case, check that:
In the "**Wireless network**" menu in the "**Basic**" section, the "Wireless network service" is activated; if not, click the associated "**Activate**" button.

A.3.4 All the LEDs are off

- Check that the type of power supply available in your premises conforms to the mains voltage required to power your SAGEM F@st™ 3202.
- Check that the power supply lead supplied is correctly connected at one end to the mains power network.
- Check that the power supply connector is correctly inserted into the corresponding connector (power) on the SAGEM F@st™ 3202.

A.4 Loss of your Residential Gateway's password and IP address

If the password protecting the configuration is lost, is cannot be accessed again. Similarly, if your Residential Gateway's IP address is lost, communication by HTTP with the equipment becomes impossible.

To recover the default password (admin) and the IP address of your Residential Gateway, restore the factory configuration (see section A.5).

A.5 Restoring the factory configuration

To **restart** your gateway **in factory configuration** mode.

- Hold down the **RST** button for approximately one minute; the five LEDs light in turn and then come on steady.
- Disconnect the power supply to your Residential Gateway by disconnecting the power lead connected to the **PWR** socket, then reconnect.
- Release the pressure on the **RST** button when the LEDs go off; your Residential Gateway restarts in factory configuration mode.

This operation clears all of the customised configuration setting on your Residential Gateway: password, Internet service provider (ISP) configuration, etc.

A.6 Offline mode

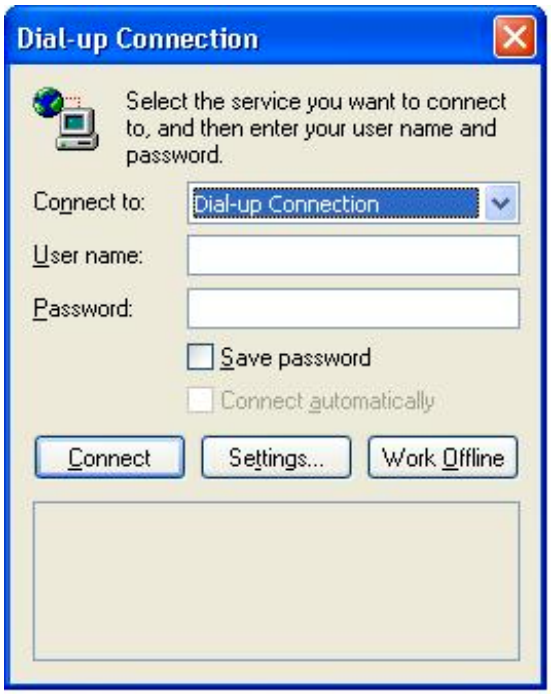
To start configuring the SAGEM F@st™ 3202 in HTTP mode, the browser opens, the default IP address of the router's LAN interface appears in the browser's Address field **but the home screen does not appear**.

The screen opposite appears.

Click Connect .

The screen opposite appears.

Click Settings... .



The screen opposite appears.

Select the Connections tabs and then the "**Never set up a connection**"[1].

Click OK to confirm your choice.

In the menu bar, select the "**File**" menu then deselect the "**Work Offline**" command.

Click **OK** in the browser's "**Address**" field to display the home screen.

[1] When the SAGEM F@st™ 3202 is installed, this box is checked.

B. Appendix B - Safety warnings

This section covers	➢ warnings regarding safety	§ B.1
	➢ the CE declaration of conformity	§ B.2

B.1 Safety warnings

The SAGEM F@st™ 3202 product conforms to EN 60950 December 2001 edition.
The safety levels in the sense of this standard are as follows:

B.1.1 Safety levels on the SAGEM F@st™ 3202 unit

Connector	*Function*	*Safety level*
PWR	Primary power supply port	HPV[1]
PHONE	Analogue interface port	TNV[2]
USB PC	USB interface port	SELV[3]
USB ACC	USB interface port	SELV[4]
ETH1	Ethernet port	SELV[4]
ETH2		SELV[4]
LINE	ADSL port	TNV3[5]

[1] **H**azardous **P**rimary **V**oltage circuit
[2] **T**elecommunication **N**etwork **V**oltage level **2** circuit
[3] **S**afety **E**xtra **L**ow **V**oltage circuit
[4] **S**afety **E**xtra **L**ow **V**oltage circuit
[5] **T**elecommunication **N**etwork **V**oltage level **3** circuit

B.2 CE declaration of conformity

CE

Products bearing this symbol conform to the EMC regulations and the low Voltage Directive published by the European Commission.

SAGEM SA declares that the SAGEM F@st™ 3202 product conforms to the requirements of European directives 1995/5/CE and the essential requirements of directives 89/336/CEE dated 03/05/1989 and 73/23/CEE dated 19/02/1973, and that it effectively uses the spectrum assigned for terrestrial or space radio calls.

The CE declaration of conformity for the SAGEM F@st™ 3202 is made within the framework of the R&TTE directive.

Conformity is presumed by the full compliance with the harmonised European standards:

Safety

EN 60950-1	Ed : 12.2001

EMC

EN 301 489-1	Ed 08-2002
EN 301 489-17	Ed 08-2002

Radio

EN 300 328-1	Ed 12-2001
EN 300 328-2	Ed 12-2001

The radiofrequency bands allowed for wireless transmission in IEEE 802.11b/g depend on national regulations. In most European countries, the authorised channels are channels 1 to 13 (2400 - 2483.5 MHz band):

- In France, for a maximum transmit power of 100 mW inside a building, channels 10 to 13 (2446.5 - 2483.5 MHz band) are allowed throughout the country, and channels 1 to 13 (2400 - 2483.5 MHz band) are allowed in 58 of the regions (decision N° 02-1008 of the ART dated 31/10/2002). A list of the regions can be viewed on the ART's WEB site.

SAGEM SA accepts no liability for failure to comply with current regulations at the place of installation.

The SAGEM F@st™ 3202's CE declaration of conformity is available in the form of a pdf file on the product delivery CD-ROM.

C. Appendix C - Technical specifications

This section covers	➢ mechanical and display specifications	§ C.1
	➢ specifications of the various interfaces	§ C.2
	➢ environmental specifications	§ C.3
	➢ software and protocols	§ C.4

C.1 Mechanical and display specifications

Mechanical specifications		
Dimensions (mm)	• Height	: 205 mm
	• Width	: 270 mm
	• Depth	: 55 mm
Weight of gateway alone	•	710 g

Displays		
5 LEDs	⚠	Alert LED
	@	Internet LED
	▶▶	Local area network (LAN) LED
	📞	Telephony LED
	📶	Wi-Fi / Bluetooth LED

C.2 Specifications of the various interfaces

Ethernet LAN interface	
Bit rate	• 10 Mbit/s or 100 Mbit/s, auto-configurable
	• Half / Full Duplex
Standard	• IEEE 802.3
Connectors	• RJ45 • Auto-detecting MDI or MDI-x type port • Crossed or straight pinned cable

ADSL interface	
Transmission code	DMT
Standards supported	G.992.1 (G.DMT)
	G.Handshake (Multimode)
Maximum uplink bit rate	896 kbit/s
Maximum downlink bit rate	8160 kbit/s
Latency	Simple (Fast or Interleaved)

USB interface	
Bit rate	• 1.5 Mbit/s to 12 Mbit/s
Standard	• USB 1.1
Data	• Asynchronous
Transmission mode	• bidirectional
Consumption	• none (only voltage detection on the high impedance port of a computer)
Connector	• USB - Type B

Wireless interface	
Standard	• **IEEE 802.11b DSSS**
Frequency band	• 2400 MHz to 2497 MHz (ISM band)
Bit rate	• 1 / 2 / 5.5 / 11 Mbit/s
Modulation method	• DBPSK, DQPSK, CCK
Security	• WEP 64 / 128 bits
	• Filtering by MAC address list
	• SSID masking
	• Authentication by Login / Password
Range	• Up to 300 m in free space
	• From 10 to 100 m inside buildings
Standard	• **IEEE 802.11g DSSS**
Frequency band	• 2400 MHz to 2497 MHz (ISM band)
Bit rate	• 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbit/s
Modulation method	• OFDM, CCK
Security	• WEP 64 / 128 bits
	• Filtering by MAC address list
	• Authentication by Login / Password
	• WPA (encryption mode: TKIP or AES)
Range	• 200 m in free space
	• 30 m inside buildings

Mains power supply specifications for the unit	
Type	• Mains lead
Class	• II
Mains voltage	• 230 V
Power absorbed	• < 13 W
Mains connector	• Type C Europlug

C.3 Environmental specifications

Climatic and mechanical environment	
Warehousing	• ETS 300 019-1-1 Class T1.2
Transport	• ETS 300 019-1-2 Class T2.3
Operation	• ETS 300 019-1-3 Class T3.2 Temperature: -5°C / +45°C

Electrical robustness	
Standard	• ITU-T K.21 2000 edition: basic level

Electromagnetic compatibility	
Susceptibility / Emission	• EN 301 489-1 Ed. 2002
	• EN 301 489-17 Ed. 2002

Radio part for the ISM band at 2.4 GHz	
802.11g/b emission	• ETR 300 328-2 Ed. July 2000

C.4 Software and protocols

IP specifications	
TCP-IP, UDP, ICMP, ARP	
DHCP server	
DHCP relay	
Routing (LAN and WAN)	• Static
NAT / PAT	• 8 maps maximum

Encapsulation protocols	
PPP over Ethernet (PPPoE)	• RFC 2516
PPP over Ethernet (PPPoA)	• RFC 2684

Configuration	
HTTP	• LAN or WAN access (on specific option)
Management	• From ETH, USB and WAN (specific option)
Version download	FTP client mode

D. Appendix D - Default configuration

This section covers	➢ the default user name and password	§ D.1
	➢ the default configuration on the local area network (LAN) side	§ D.2
	➢ the default configuration on the wireless local area network (WLAN) side	§ D.3

This section lists the default parameter settings for the SAGEM F@st™ 3202 on leaving the factory.

These default settings can be modified by preconfiguring the SAGEM F@st™ 3202.

D.1 Default user name and password

User name	admin
Password	admin

D.2 Default configuration on the local area network (LAN) side

The table below gives the main default LAN settings for your Residential Gateway (**ETH1**, **ETH2**, **USB PC**):

LAN specifications	Value	Status
ETH1 IP address ( )	192.168.5.1/24	Internet access and HTTP configurator (routed)
ETH2 IP address ( )	192.168.6.1/24	TV set-top box port (bridged)
USB PC IP address	192.168.2.1/24	Internet access and HTTP configurator (routed)
802.11 IP address	192.168.3.1/24	Internet access and HTTP configurator (routed)
BROADCAST, ARP, MULTICAST		Activated
Router		LAN traffic is routed to your ISP
NAT/PAT		Activated

D.3 Default configuration on the wireless local area network (WLAN) side

The table below gives the main default WLAN settings for your Residential Gateway:

Wi-Fi

Specification (Wi-Fi)	Status / Value
IP address	192.168.3.1/24
SSID broadcast	Authorised (not modifiable)
SSID	**Wanadoo_xxxx** In which xxxx are the last four values of the gateway's MAC address
Channel	10
WEP	Activated

	Refer to the description of the screens for the **Save** / **Delete** / **Restart** menu in the **Basic** section of the configuration interface for details of the procedure for restoring the default configuration.

	Refer to the description of how to use the **Reset** button on your Residential Gateway for details of the procedure for restoring the default configuration.

Bluetooth (Not available in this version)

Appendix D - Default configuration

E. Appendix E - Glossary

Glossary

ACL	Access Configuration List
AP	Access Point
ARP	Address Resolution Protocol
ART	French telecommunications regulation authority
BER	Bit Error Ratio
CC	Continuity Check
CCK	Complimentary Code Keying
CHAP	Challenge Handshake Authentication Protocol
CLI	Command Line Interface
CTS	Clear To Send
DBPSK	Demodulator Baseband Phase Shift Keying
DECT	Digital Enhanced Cordless Telephone
DHCP	Dynamic Host Configuration Protocol
DMT	Discrete MultiTone
DNS	Domain Name Server
DQPSK	Differential Quadrature Phase Shift Keying
DSSS	Direct Sequence Spread Spectrum
DTIM	Delivery Traffic Indication Message
DTMF	Dual Tone Multi-Frequency
ESSID	Extended Service Set IDentifier
FHSS	Frequency Hopping Spread Spectrum
FTP	File Transfer Protocol
FTP	File Transfer Protocol
GAP	Generic Access Profile
HTML	Hyper Text Markup Language
HTTP	Hyper Text Transfer Protocol
ICMP	Internet Control Message Protocol
IEEE	Institute of Electrical and Electronics Engineers
IEEE 802.11b/g	Specifications that use the MAC protocol for the wireless local area network (WLAN) in the 2.4 GHz band
IGMP	Internet Group Membership Protocol
IP	Internet Protocol
IPQoS	IP Quality of Service
ISP	Internet Service Provider
LAN	Local Area Network
LCP	Link Control Protocol
LLC	Logical Link Control (encapsulation with header)
MAC	Medium Access Control

MDI	Media Dependent Interface
MER	MAC Encapsulation Routing
MGCP	Media Gateway Control Protocol
MIB	Management Information Base
MTU	Maximum Transfer Unit
NAPT	Network Address Port Translation
NAT	Network Address Translation
OAM	Operation, Administration and Maintenance
PAP	Password Authentication Protocol
PCI	Peripheral Component Interconnect
PCMCIA	Personal Computer Memory Card International Association
PID	Protocol IDentifier
PING	Packet InterNet Groper
PLC	Packet Loss Concealment
POP	Point Of Presence
POTS	Plain Old Telephone Service
PPP	Point to Point Protocol
PPPoE	PPP over Ethernet
PSD	Power Spectral Density
PVC	Permanent Virtual Circuit
QoS	Quality of Service
RDI	Remote Defect Indicator
RFC	Request For Comments
RGW	Residential GateWay
RTCP	Real Time Control Protocol
RTP	Real-time Transport Protocol
RTS	Request To Send
SCR	Sustained Cell Rate
SNAP	SubNetwork Attachment Point
SNMP	Simple Network Management Protocol
SOHO	Small Office Home Office
SSID	Service Set IDentifier
STB	Set-Top Box
TCP	Transmission Control Protocol
TELNET	TELecommunication NETwork
TFTP	Trivial File Transfer Protocol
UBR	Unspecified Bit Rate
UDP	User Datagram Protocol
UNI	User Network Interface
URL	Uniformed Resource Locator
USB	Universal Serial Bus
UTP	Unshielded Twisted Pair
VAD	Voice Activity Detection
VBR-nrt	Variable Bit rate - non real time

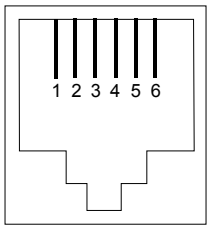
VBR-rt	Variable Bit rate - real time
VC	Virtual Channel
VCC	Virtual Channel Connection
VCI	Virtual Channel Identifier
VCI	VC Multiplexing (encapsulation without header)
VLAN	Virtual LAN
VoIP	Voice over IP
VP	Virtual Path
VPI	Virtual Path Identifier
VPN	Virtual Private Network
WAN	Wide Area Network
WEB	Meshed information server network
WEP	Wired Equivalent Privacy
WFQ	Weighted Fair Queuing
Wi-Fi	Wireless Fidelity (wireless network)
WLAN	Wireless Local Area Network
WPA	Wireless Protected Access

F. Appendix F - Connectors

This section covers	➢ pin-out of the "**LINE**" connector	§ F.1
	➢ pin-out of the "**PHONE**" connector	§ F.2
	➢ pin-out of the "**PWR**" connector	§ F.3
	➢ pin-out of the "**ETH**" connector	§ F.4
	➢ pin-out of the "**USB PC**" connector	§ F.5

F.1 Pin-out of the "LINE" connector

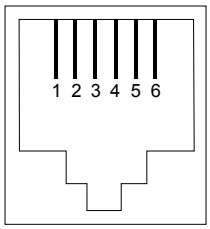
The equipment is connected to the "WAN" via an RJ11 socket (6 pins).



Pin N°	Signal	Meaning
3	LINE-A	Line A signal
4	LINE-B	Line B signal
1	NC	Not connected
2	NC	Not connected
5	NC	Not connected
6	NC	Not connected

F.2 Pin-out of the "PHONE" connector

The equipment is connected to an analogue telephone via an RJ11 socket (6 pins).



Pin N°	Signal	Meaning
3	LINE-A	Line A signal
4	LINE-B	Line B signal
1	NC	Not connected
2	NC	Not connected
5	NC	Not connected
6	NC	Not connected

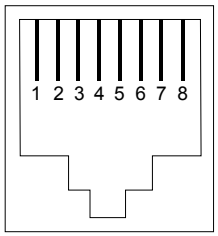
F.3 Pin-out of the "PWR" connector

The mains adapter is connected to the equipment via the unit's miniature socket.

Pin	Signal	Meaning
Inner	+12 V	DC "+" connection
Outer	Ground	DC "-" connection

F.4 Pin-out of the "ETH1" and "ETH2" connectors

The Ethernet interface is connected to the equipment via an RJ45 socket (8 pins).

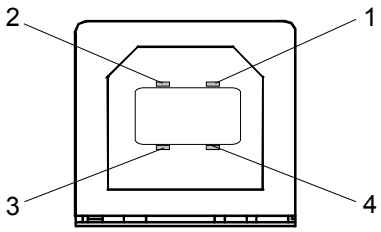


Pin N°	Signal	Meaning
1	TXD+	(+) Transmit to terminal
2	TXD-	(-) Transmit to terminal
3	RXD+	(+) Receive from terminal
4	NC	Not connected
5	NC	Not connected
6	RXD-	(-) Receive from terminal
7	NC	Not connected
8	NC	Not connected

The Ethernet connector system is auto-detecting. You can use straight or cross-pinned cables interchangeably. The detection of a transmit or receive signal takes place automatically.

F.5 Pin-out of the "USB PC" connector

The "USB" interface is connected to the equipment via a type B USB socket.



Pin N°	Signal	Meaning
1	Vcc	PC power (+)
2	- Data	Subscriber line signal
3	+ Data	Subscriber line signal
4	Ground	Ground

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