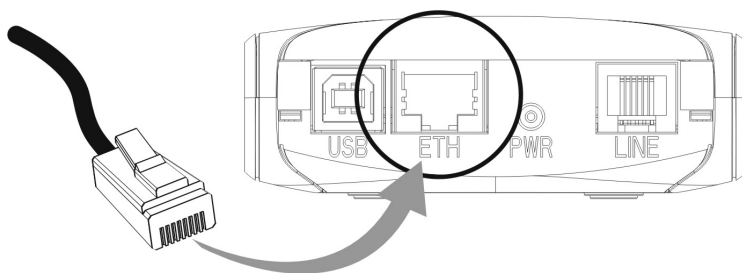


SAGEM F@st™ 908/948

Ethernet/USB Combo ADSL Modem



Reference Manual - Ethernet Interface

Reference: 288 055 899 ed. 1

July 2004 Issue



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Warning



Warning icon used in this manual.



Information icon used in this manual.

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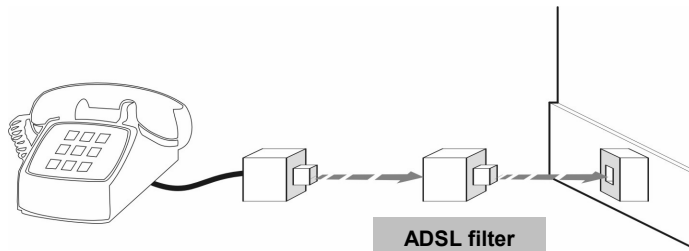
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1. Hardware installation

To install your modem without any difficulty, please follow the steps below in number order.

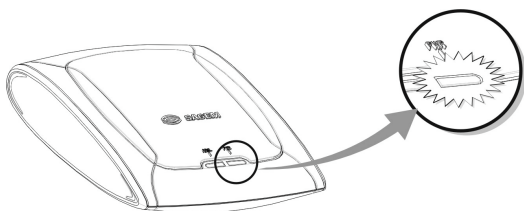
1. *Connect the ADSL splitters to your telephone sockets*

The ADSL splitters (or filters) let you make phone calls and use your ADSL link at the same time.



All the sockets used by a telephone device must be fitted with an ADSL splitter. This device may be an analog telephone, a DECT phone, an answering machine, a fax machine, a set-top-box decoder return channel, etc.

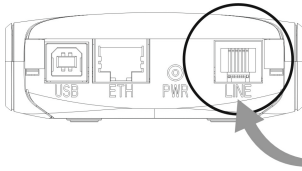
2. *Power up your modem*



For this, use the power supply unit supplied with your modem¹. When the modem is powered up, the PWR LED lights.

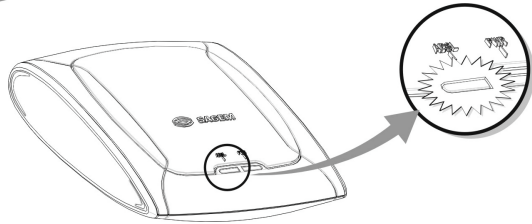
¹ The use of any other power supply unit will invalidate the manufacturer's warranty

3. Link your modem to your telephone line

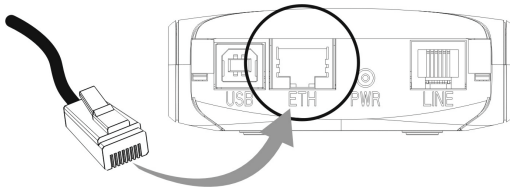


The line lead supplied in your pack should connect the modem to the connector provided on your splitter or to a telephone network adapter.

When the modem is linked to the telephone line, ADSL synchronization follows automatically. The ADSL LED is on **permanently**.

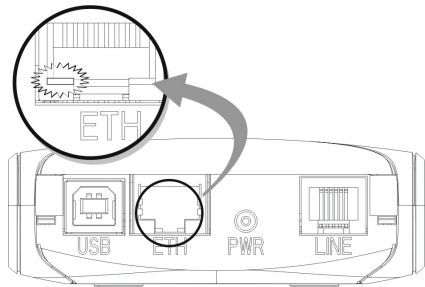


4. Connect your modem to your computer



For this, use the **cross-pinned** Ethernet cable supplied with your modem.

When the modem is connected to your computer, the Ethernet detection LEDs on your modem and your Ethernet card light up.



At this point, you have completed all the connections required to use your ADSL modem. All you now have to do is install the applications supplied with the modem and configure your Internet access.


2. ADSL application software

2.1 Installation in Windows XP

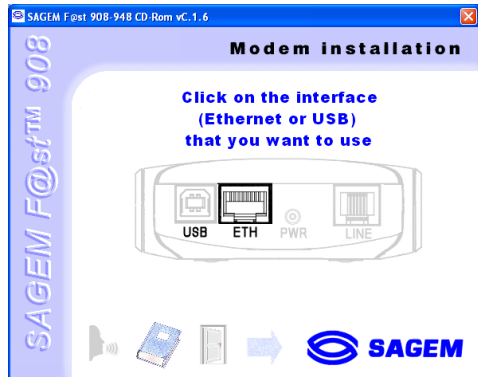


The **installation** procedure described in the section below was performed using **Windows® XP**. The procedure for other Windows® operating systems (98, ME and 2000) may differ slightly.

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

You can Change the **installation language** by clicking on this icon  (availability depending on model).

Click on the **Ethernet connector** to set up your computer's Ethernet interface.



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

- 2 The screen opposite appears.
Select the **country** in which you are located, from the list (availability depending on model).

Choose your **Internet Access Provider** from the proposed list. If it is not shown, select «Other».



If you chose «Other» Provider on the previous screen, the data entry screen opposite appears.

Select the mode applicable to your Internet Access Provider (IAP), then set the values in accordance with the IAP's instructions.

For more information regarding this choice, refer to section 2.3.

Click OK to continue installation.

Click on this icon



- 3 At the end of installation, the screen opposite appears.

It prompts you to connect the modem first, then to restart your computer.

Click **Yes**.



- The Sagem-PPPoE software utility, which is suitable for your Internet Access Provider, has been installed in your computer.
- The "BridgeMon" application starts up, the "BridgeMon" icon below appears at the bottom right corner, in your desktop's taskbar, each time you start up Windows (icon shown framed).



- 4 A screen, designed for Internet connection dialogue, appears on the desktop.

Click « **Connexion** » button.



- 5 The screen opposite appears.
Enter your **user name** and **password**

Then click **OK**.



**You can now log on to the ADSL broadband Internet
using the brother of your choice.**

2.2 Installation in MacOS X



The **installation** procedure described was carried out in **MacOS X** (10.1 or 10.2). The SAGEM F@st™ 908/948 router can be installed on other operating systems such as **MacOS 8.6**, **MacOS 9.1** and **MacOS 9.2**.

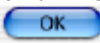
- 1 Insert the CD-ROM in your computer's appropriate CD-ROM drive; an icon appears in the desktop.

Double-click the icon to display the contents of the CD-ROM.

- 2 Select **ETH**, click in the **OS X** directory then double click on SAGEM F@st 908-948 to run the install program.

- 3 The authentication screen opposite appears.

Enter the user name and password for the **Administrator** account then

click .



Note : You must have "**Administrator**" rights to install the router.

- 4 The screen opposite appears.

From the list, select the language you want and then click

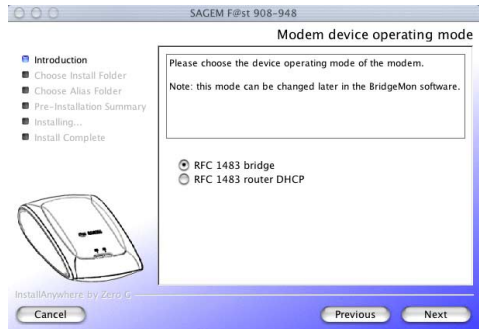
.



- 5 Depending on the versions of your modem, the screen opposite appears.

Select the mode applicable to your Internet Access Provider (IAP).

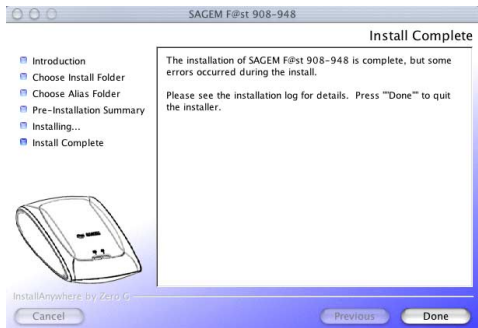
For more information concerning this choice, refer to section 2.3.



- 6 Then simply follow the instructions displayed by the installation software in the series of screens.

- 7 The screen opposite appears; installation is now finished.

Click .





At the end of the installation process, the **BridgeMon** diagnostics application icon, the **Uninstall** icon are created in the desktop.



2.3 Encapsulation options in Ethernet mode (depending on versions)

The encapsulation parameters are automatically set up, when the Internet Access Provider is chosen from the list offered by the installation software.

Nevertheless, it is possible to set up the parameters of an Internet Access Provider that would not have been listed.

In this particular case, you should select «**Other**» from the Internet Access Provider list. A window will show up and let you choose the encapsulation modes.

Depending on the Internet Access Provider, the SAGEM F@st™ 908/948 modem supports three encapsulation modes:

- RFC 1483 bridge,
- RFC 1483 router DHCP.
- RFC 1483 router static IP.



If your Internet connection has to be set up in PPPoE mode, you must use RFC 1483 bridge encapsulation.

See section 3 - Connecting to the Internet.

Please refer to your Internet Access Provider (IAP) to ascertain which encapsulation mode and Internet connection mode must be used on your ADSL line.

2.4 Display of the ADSL connection status

The BridgeMon diagnostics application allows you to check the status of the ADSL connection and the data transfer rates.

For this, it must be installed on the computer connected to the SAGEM F@st™ 908 / 948. Its installation is described in §.2.1 (Windows XP) and 2.2 (MacOS X).

This application is not essential to ADSL modem operation. We do, however, recommend its installation on your computer. It will provide you with a better knowledge of your ADSL line status.

The application can be run on the following operating systems :



- Microsoft™ Windows® 98,
- Microsoft™ Windows® Millenium,
- Microsoft™ Windows® 2000,
- Microsoft™ Windows® XP,
- MacOS® X,
- Linux.

2.4.1 Running in Windows XP



When the "BridgeMon" application has been installed, the "BridgeMon" icon appears bottom right in your desktop's task bar (icon shown framed), each time you start up Windows.

Double-click this icon, or right click on the icon and then select **BridgeMon**.



2.4.2 Running in MacOS X



When the "BridgeMon" application has been installed, the **BridgeMon** icon appears on the desktop each time you start up the operating system.



2.5 BridgeMon application functions

Once started, the BridgeMon diagnostics application displays the screen opposite.











The table below gives the various fields and their meanings.

The screenshot shows a Windows-style application window titled "SAGEM F@st 908-948 VC.1.6". The main content area displays "DSL Status : OPERATIONAL" with a green right-pointing triangle icon. Below this, there are two sections: "Data Rate" and "Bridge Lock". In the "Data Rate" section, "Transmit" is set to 192 Kbps and "Receive" is set to 640 Kbps. In the "Bridge Lock" section, the "Off" radio button is selected. There is an "Apply" button to the right of the radio buttons. At the bottom of the window, there are four buttons: "Restart", "SW Upgrade", "About", and "Close". The SAGEM logo is in the bottom right corner.

Field	Value
DSL Status	OPERATIONAL
Data Rate - Transmit	192 Kbps
Data Rate - Receive	640 Kbps
Bridge Lock	Off

2.5.1 ADSL transmission status

The table below gives the meaning of the different fields and of the buttons.

Parameter	Value	Flag	Comment
DSL Status	Modem not responding	 Red	The modem is not responding to requests from the BridgeMon application (see note).
	Searching for modem	 Red	The BridgeMon application is looking for the modem.
	Training	 Yellow	The ADSL connection is in progress.
	Initializing	 Green	The modem searches the active VPI / VCI / Encaps values, the PPPoE client can be started up.
	Operational	 Green	The modem is operational.
Data rate	Transmit	 Green	Maximum transmit ADSL rate in kbps.
	Receive	 Green	Maximum receive ADSL rate in kbps.
Bridge lock See section 2.5.4	Off	 Green	The "Bridge Lock" function is not active; traffic from the Internet is allowed.
	On	 Lock	The "Bridge Lock" function is active; traffic from the Internet is blocked.
	Auto / Minutes	 Lock	The modem has switched to "Bridge Lock" mode automatically after N minutes idle. See section 2.5.4.

Note: If this icon remains permanently red, check if a Firewall is activated (Firewall provided with Windows® XP or software external to your computer). In this case, you have to parameter it to make your modem operational. To allow traffic, enter the following characteristics :

- External Port number : 3456,
- Internal Port number : 3456,
- Transport layer Protocol : UDP.

To set the firewall activated:

- 1) Firewall provided with Windows® XP, refer to chapter 6 (appendice),
- 2) Software external to your computer, refer to appropriate documentation.

2.5.2 Active buttons

Button	Meaning
Apply	Registers the changes to the "Bridge Lock" mode.
Restart	Restarts the modem.
SW Upgrade	Updates the modem's onboard software from the BridgeMon application (see section below).
About	Gives the software version of the diagnostics application.
Close	Closes the BridgeMon diagnostics screen, but keeps the BridgeMon application running.

2.5.3 Updating the modem software from the BridgeMon application

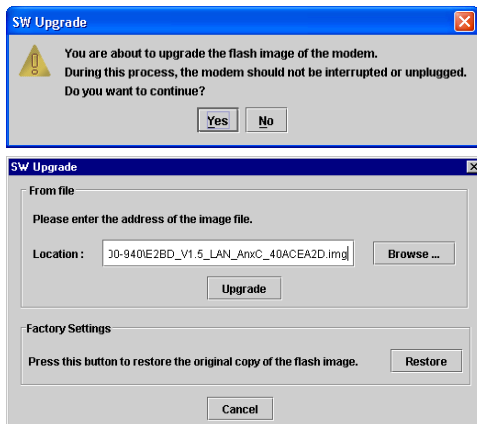
The SAGEM F@st™ 908/948 contains a permanent memory for saving the onboard software. This software can be updated from the **BridgeMon** application.

Click the **SW Upgrade** button in the "BridgeMon" screen and the screen opposite appears.

Click **Yes** to continue (**No** to abort).

The screen opposite appears.

Use the **Browse** button to select the .img file containing the new software then click the **Upgrade** button to update the onboard software in non-volatile memory (save the .img file, the default name and location of which are displayed in the **Location:** field).



Note : Click **Cancel** to abandon any changes made and return to the BridgeMon screen.
Click **Restore** to restore the modem software to its ex-works state.

2.5.4 "Bridge Lock" traffic lock function

This function is used to increase the security level on the local area network (LAN) by blocking traffic from the Internet in certain conditions. It is activated in one of two ways, from the "BridgeMon" application:

- Manually,
- Automatically.

Commande	Description
Off	Normal operation ("Bridge Lock" function disabled). This value is taken by default.
On	The modem blocks all communication from the Internet and to the Internet. To reenale traffic, you must select Bridge Lock : Off again.
Automatic	If there is no traffic to the Internet for a certain period of time (configurable), any traffic from the Internet is blocked. When traffic to the Internet is detected, traffic from the Internet is reenaled.

3. Connection to the Internet

When the modem is correctly connected and the BridgeMon application installed, you still have to set up your Internet connection.

The SAGEM F@st™ 908 / 948 modem is compatible with the following two Internet connection modes:

- PPPoE (see section 3.1),
- DHCP (see section 3.2).



Check with your IAP to find out which connection mode is available on your ADSL compatible telephone line.

3.1 PPPoE mode

A PPPoE client software utility lets you authenticate yourself and then log on to your IAP.



To use the PPPoE mode, the modem must be installed in RFC1483 Bridge mode (see section 2.1 - step 2).



There are two possibilities :

➤ **On Microsoft™ Windows® (98, Me, 2000, XP)**

A PPPoE client software utility is automatically installed if your Internet Access Provider requires it.

On Microsoft™ Windows® XP, you can use the Windows® XP PPPoE client instead. Please refer to § 3.1.1 and 3.1.2 for more details.

➤ **On MacOS®**

MacOS® 8.6 et 9 : The PPPoE client software utility is provided on the CD-ROM. Double-click on MacOS® PPPoE icon, then follow the instructions.

MacOS® X : The PPPoE client software utility is integrated in the operating system. Please refer to sections 3.1.3 and 3.1.4 for the configuration.

3.1.1 Configuring the PPPoE client in Windows® XP



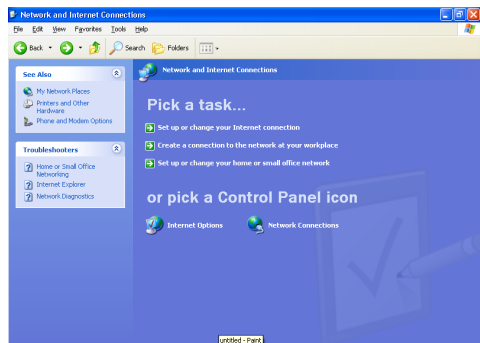
You can skip this paragraph if you did the installation according to § 2.1



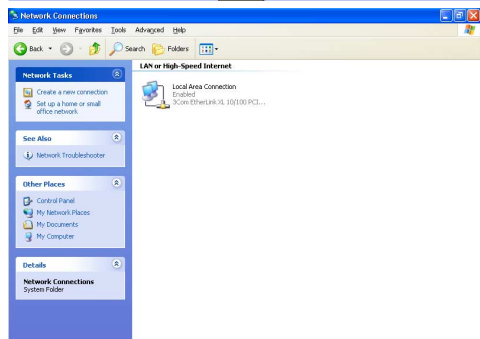
The installation procedure described below does not apply to any Microsoft™ operating systems other than Windows® XP.

- 1 In the **Start** menu, select **Control panel, Network and Internet connections**; the screen opposite appears.

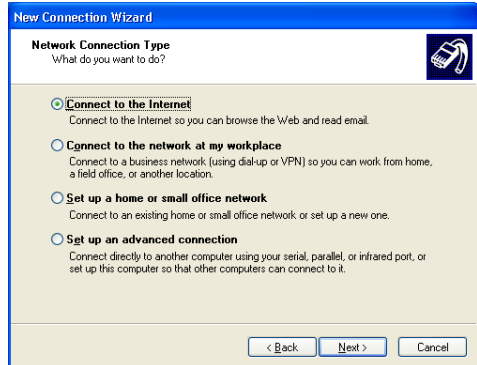
Click **Network connections**.



- 2 The connection screen appears.
Click "**Create a new connection**" in the "**Network tasks**" area,
or select **File / New connection** in the menu bar.



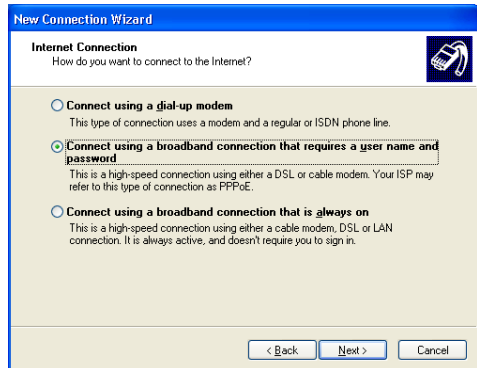
- 3 When the following screen appears, select **"Connect to the Internet"**.
Then click **Next**.



- 4 The following screen appears.
Select **"Set up my connection manually"**.
Then click **Next**.



- 5 The following screen appears.
Select **"Connect using a broadband connection that requires a user name and password"**. The PPPoE mode is mentioned here. This is the mode that you want to use.
Then click **Next**.



- 6 The next screen lets you name your connection. Enter a connection name (Internet ADSL, for example).
Then click **Next**.

7 The next screen lets you store the information on your Internet account.

- > Enter your "**User name**".
- > Enter your "**Password**" and confirm.

Note: This data will be given to you by your IAP.

Then click **Next**.

8 The final screen appears. Check the box if you want to create an **Internet ADSL** shortcut on your desktop. It is a good idea to create a shortcut on the desktop.

Finally, click **Finish**.



At this point, your Internet connection is created.
You can now log on to the Internet.

3.1.2 Internet reconnection in Windows® XP

- 1 If you checked the appropriate



box, the icon will have been created on the desktop.

Double click this icon and the screen opposite appears.




- 2 Then click on "**Connexion**".
- 3 The screen opposite appears :
Enter your **user name** and **password**

Then click **OK**.



- 4 **Open your browser. You can now surf the Internet.**

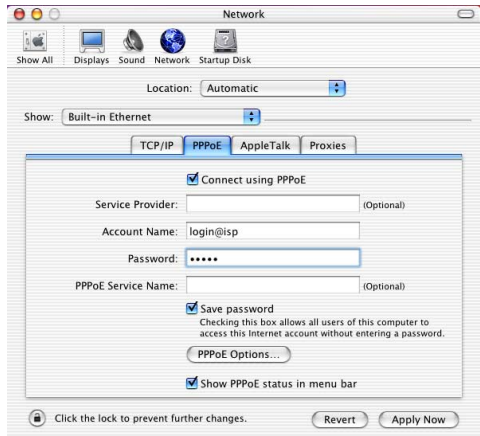
3.1.3 Configuring the PPPoE client in MacOS® X

- 1 Click the  (apple) menu in the menu bar, select **System Preferences**, then click the **Network** icon.

The following screen appears.

The **Location:** field should contain **Automatic**.

The **Show:** field should contain **Built-in Ethernet**.



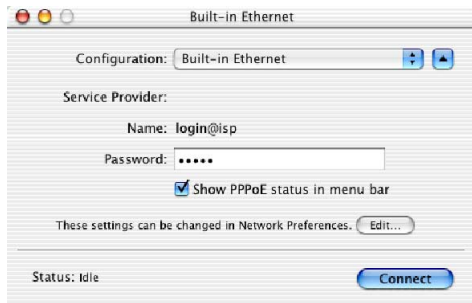
- 2 Select the **PPPoE** tag and the relevant panel appears.
 - 3 Check the **Connect using PPPoE** box to force connection in PPPoE mode and enable you to complete the grayed out fields.
 - 4 Complete the **Account name** field with your user name.
 - 5 Complete the **Password** field with your password.
- Note :** This "Account name" and "Password" information will be supplied to you by your Internet Access Provider (IAP).
- 6 It is advisable to check the **Show PPPoE status in menu bar** box.
 - 7 Click **Apply now** to register your input.

3.1.4 Internet connection in MacOS® X

- 1 In the desktop, double-click the icon representing your Mac OS X hard disk. Open the **Applications** folder and then double-click the connection icon.



The screen opposite appears.



- 2 Check that the information contained in the **Configuration**, **Name** and **Password** fields is correct.

Click **Connect** to set up the connection.

- 3 Open your browser. **You can now surf the Internet.**

3.2 DHCP connection mode

To connect your computer (PC or Mac) operating in DHCP client mode via its Ethernet interface to the SAGEM F@st™ 908 / 948, you must correctly configure the computer. This can be done irrespective of your computer's operating system.

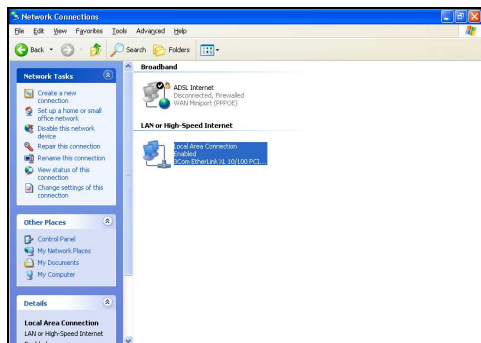
Configuration entails assigning a public IP address to your computer (PC or Mac) by DHCP request.

3.2.1 DHCP connection to PC

In **Windows® XP**, for example, proceed as follows:

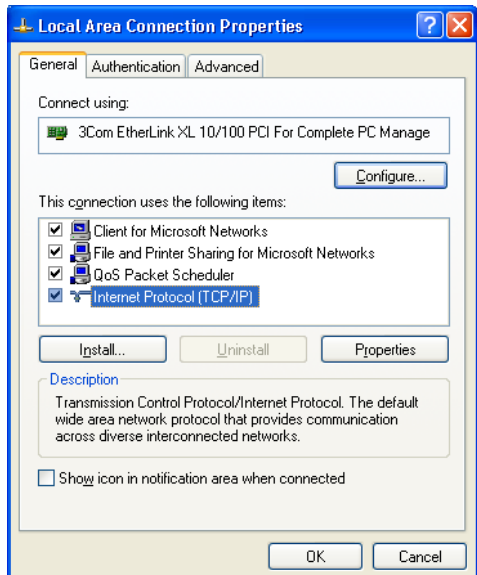
- 1 Select **Start / Connections / Show all connections**, and the screen opposite appears.

Select the local connection you want to use with the SAGEM F@st™ 908 / 948 then right click and select **Properties**.



- 2 The screen opposite appears.

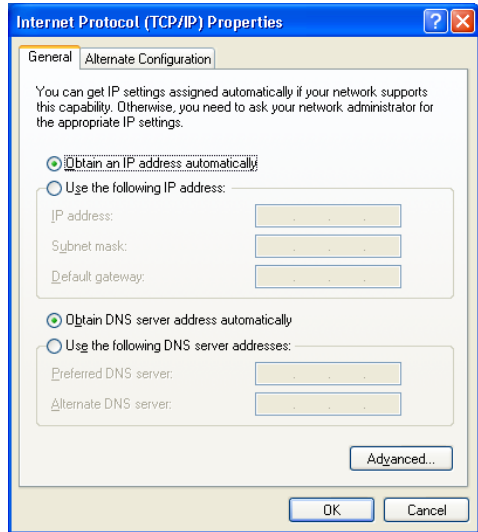
Select the **General** tab and then the TCP/IP protocol, and click the **Properties** button.



- 3 The screen opposite appears.

Select the **General** tab and then the **Obtain an IP address automatically** command and the **Obtain DNS server address automatically** command.

Click **OK** to confirm your choices.



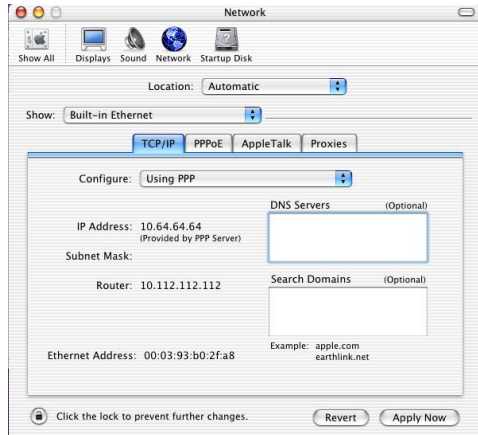
3.2.2 DHCP connection to Mac

In **MacOS X**, for example, proceed as follows:

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

The **Location:** field should contain **Automatic**.

The **Show:** field should contain **Built-in Ethernet**.



- 2 Select the **TCP/IP** tab and the relevant panel appears.
- 3 The **Configure:** field should contain **Via DHCP** by default. If not, select this setting from the drop down list.

Note: If the **Via PPP** setting appears, select the **PPPoE** tab, then uncheck the **Connect using PPPoE** box.

- 4 Click **Apply** to enable connection in DHCP mode.

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

4. Uninstalling the ADSL application software

Procedures for uninstalling on PC in Windows XP and on MacOS X are described below.

4.1 Uninstalling in Windows XP



The procedure for **Uninstalling** described below is performed in **Windows® XP**. In other Windows® operating systems (98FE, 98SE, ME, 2000), the procedure may differ slightly.



To carry out the **uninstallation** procedure, **you must exit from the application** and delete the "BridgeMon" icon from the task bar. To do this, right click on the icon and select **Exit**.



The uninstallation must be carried out in two stages :

- > Uninstallation of the BridgeMon diagnostics application.
- > Uninstallation of the Sagem-PPPoE client software utility.

1 For uninstall BridgeMon diagnostics application :

Select **Start / All programs / SAGEM F@st 908-948** then **Uninstall.- ETH.**

or



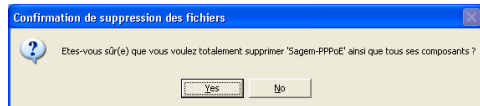
Click this socket displayed on the first installation screen.

The screen, designed for Internet connection dialogue, disappears on the desktop. The application is uninstalled.

- 2 For uninstall the Sagem-PPPoE client software utility :

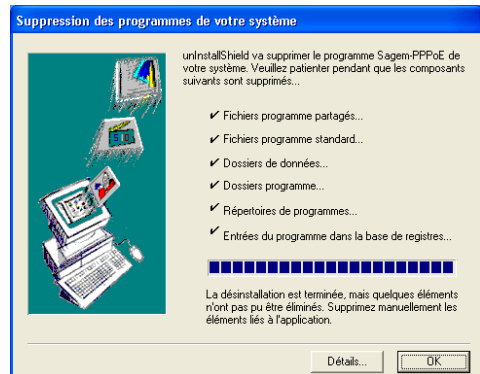
Select **Start / All programs / SAGEM F@st 908-948** then **Uninstall / SAGEM - PPPoE**.

The screen opposite appears.



- 2 Click **Yes**.

The screen opposite appears.



Click **OK**, to finish doing Sagem-PPPoE client software utility uninstallation.

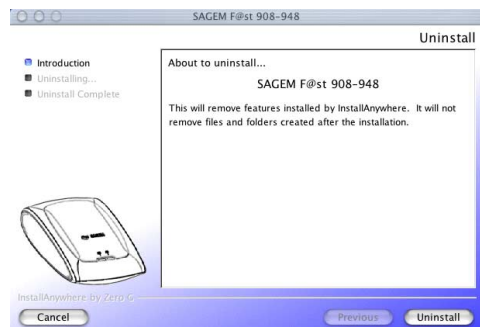
4.2 Uninstalling in MacOS X

1



Double-click the **Uninstall** icon to start the uninstallation program. The screen opposite appears.

Click the **Uninstall** button to continue uninstalling.



5. Problem solving in Ethernet mode

5.1 Interpreting LED indications

5.1.1 LEDs visible on the modem cover


LED	ADSL	PWR
On steady	ADSL synchronized	Modem powered up
Off	No ADSL synchronization	Modem not powered
Blinking	Trying to set up ADSL synchronization	Not applicable

5.1.2 "ETH" connector LEDs on the rear panel of the modem

LED	Status	Meaning
Left	On	Indicates that the connection is OK and that the link is set up between the computer and the SAGEM F@st™ 908 / 948 modem
	Off	No connection
Right	Blinking	Traffic in progress (sending or receiving)

5.2 Problem solving in Ethernet mode

5.2.1 No modem power supply


LEDs	Flag	Status	Corrective action
ADSL off PWR off	 Red	Modem not powered	<p>Check that the modem is receiving power supply. Only the power supply unit supplied with the modem should be used.</p> <p>Check that your PSU's electrical specifications are compatible with your mains electricity network.</p> <p>Lastly, uninstall then reinstall the BridgeMon application.</p>



Reminder : The SAGEM F@st™ 908 / 948 must always be powered by its mains adapter unit. It does not use the power supply provided by the USB interface.


5.2.2 Modem not detected

Firstly check that the conditions in the previous section are satisfied.

LEDs	Flag	Status	Corrective action
ADSL off PWR off	 Red	<p>Modem powered.</p> <p>Modem not detected by your computer.</p>	<p>Check that the Ethernet cable supplied in your pack is correctly connected to your modem, and to an active Ethernet port on your computer. At both ends, you have Ethernet detection LEDs. The Ethernet cable to be used is a cross-pinned UTP RJ45 cable.</p>



5.2.3 Absence of ADSL synchronization

Firstly check that the conditions in the previous section are satisfied.

LEDs	Flag	Status	Corrective action
ADSL off PWR on	 Yellow	Modem detected by your computer. ADSL not synchronized	<p>Check the connection of your ADSL splitters. Each of your installation's telephone sockets should be fitted with an ADSL splitter.</p> <p>Check that the RJ11 type line lead supplied with your modem is connected to one of your sockets. It is best not to use any telephone line extension.</p> <p>Lastly, check with your IAP that the ADSL service is available on your telephone line.</p>

5.2.4 Internet connection not possible

Firstly check that the conditions in the previous section are satisfied.

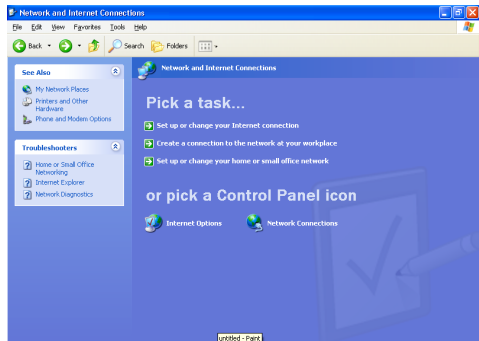
LEDs	Flag	Status	Corrective action
ADSL on PWR on	 Green	ADSL set up. Modem initialized Connection not possible	In PPPoE mode: Check that your PPPoE client software is correctly installed on your computer. In Windows XP, MacOS X, you can refer to section 4.1 of the SAGEM F@st™ 908/948 Ethernet Interface Reference Manual. For any other OS, look up the documentation supplied with the PPPoE client software you are using. If you have more than one Ethernet card on your computer, check that your PPPoE client is linked to the Ethernet card to which your modem is connected.
			In DHCP mode: Check that your computer correctly receives an IP address from the network. For this, in Windows, you can open a DOS window and type the command "ipconfig". Lastly, in your Web browser's properties, check that no remote network connection is selected by default. For Microsoft™ Internet Explorer®: Menu: Tools/Internet options/ Select: "Never dial a connection"
ADSL on PWR on	 Lock	ADSL set up Modem locked.	You cannot access the Internet because the modem is in locked mode. Please refer to section 2.6.4 of the SAGEM F@st™ 908 / 948 Ethernet Interface Reference Manual to unlock your modem.

6. Appendice

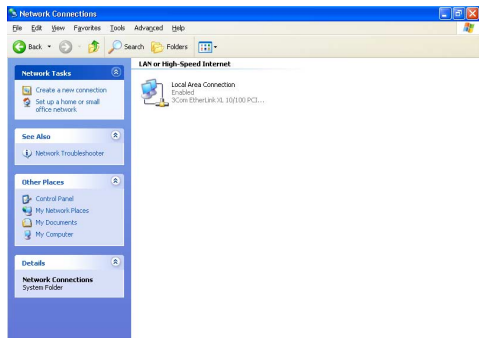
6.1 Setting Firewall provided with Windows® XP

- 1 In the **Start** menu, select **Control panel, Network and Internet connections**; the screen opposite appears.

Click **Network connections**.



- 2 The screen opposite appears.
Right click on the used network card then select **Properties**.

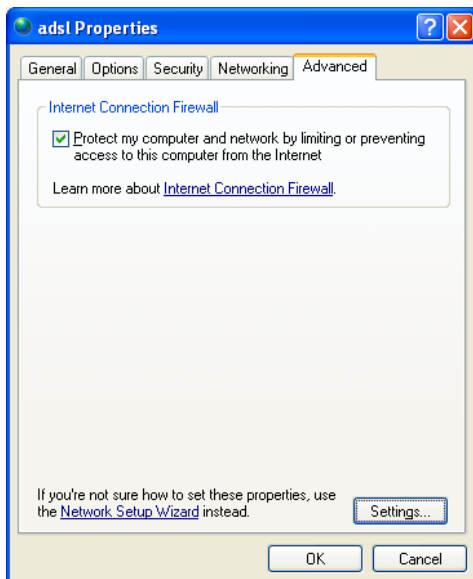


- 3 The screen opposite appears.

Select the panel **Advanced**.

Remark : When the firewall is activated, the box of Internet Connection Firewall field is checked and the **Settings** button is active.

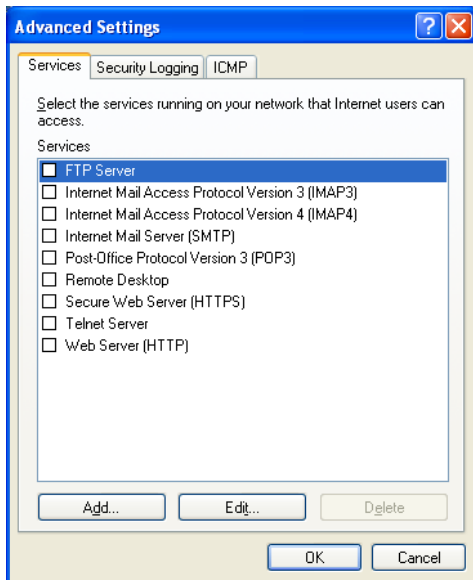
Click on the **Settings** button.



- 4 The screen opposite appears.

Select the panel **Services**.

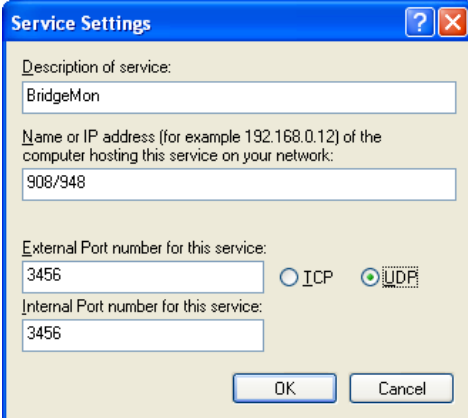
Click on the **Add** button.



5 The screen opposite appears.

Enter **3456** in the fields External Port number and Internal Port number allocated to the BridgeMon application and select **UDP** protocol for transport layer.

Note: The others fields must necessarily be filled in, but for their content, the user is left to form his opinion.



Service Settings

Description of service:
BridgeMon

Name or IP address (for example 192.168.0.12) of the computer hosting this service on your network:
908/948

External Port number for this service:
3456

Internal Port number for this service:
3456

☐ ICP ☒ UDP

OK Cancel

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