SAGEM F@stTM 1500 SAGEM F@stTM 1500WG



Reference Manual

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Warning



Warning icon, used in this guide.

Information icon, used in this guide.

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1. Introduction

This chapter covers	an overview of the SAGEM F@st [™] 1500 router	Section 1.1
	the Features and Benefits	Section 1.2
	the Applications of the SAGEM F@st TM 1500 router	Section 1.3
	the composition of the supply	Section 1.4
	the IT prerequisites	Section 1.5

1 - Introduction

Congratulations on your purchase of the SAGEM F@st[™] 1500WG IEEE 802.11g ADSL Router, hereafter referred to as the "SAGEM F@st[™] 1500WG ADSL Router". We are proud to provide you with a powerful yet simple communication device for connecting your local area network (LAN) to the Internet. For those who want to surf the Internet in the most secure way, this router provides a convenient and powerful solution.

1.1 About the SAGEM F@st[™] 1500WG ADSL Router

The ADSL Router provides Internet access to multiple users by sharing a single-user account. Support is provided for both wired and wireless devices. New technology provides wireless security via Wired Equivalent Privacy (WEP) encryption and MAC address filtering. It is simple to configure and can be up and running in minutes.

1.2 Features and Benefits

- > Internet connection to an ADSL modem via an RJ-11 ADSL port.
- > Local network connection via four 10/100 Mbps Ethernet ports.
- > On-board IEEE 802.11g wireless network adapter.
- > DHCP for dynamic IP configuration, and DNS for domain name mapping.
- > Firewall with Stateful Packet Inspection, client privileges, intrusion detection, and NAT.
- NAT also enables multi-user Internet access via a single user account, and virtual server functionality (providing protected access to Internet services such as web, FTP, e-mail, and Telnet).
- > VPN pass-through (IPSec-ESP Tunnel mode, L2TP, PPTP).
- User-definable application sensing tunnel supports applications requiring multiple connections.
- > Easy setup through a web browser on any operating system that supports TCP/IP.
- > Compatible with all popular Internet applications.

1.3 Applications

Many advanced networking features are provided by the SAGEM F@st[™] 1500WG ADSL Router:

Wireless and Wired LAN

The SAGEM F@st[™] 1500WG ADSL Router provides connectivity to 10/100 Mbps devices, and wireless IEEE 802.11g compatible devices, making it easy to create a network in small offices or homes.

Internet Access

This device supports Internet access through an ADSL connection. Since many DSL providers use PPPoE or PPPoA to establish communications with end users, the SAGEM F@st[™] 1500WG ADSL Router includes built-in clients for these protocols, eliminating the need to install these services on your computer.

Shared IP Address

The SAGEM F@st[™] 1500WG ADSL Router provides Internet access for up to 253 users via a single shared IP address. Using only one ISP account, multiple users on your network can browse the web at the same time.

Virtual Server

If you have a fixed IP address, you can set the SAGEM F@st[™] 1500WG ADSL Router to act as a virtual host for network address translation. Remote users access various services at your site using a constant IP address. Then, depending on the requested service (or port number), the SAGEM F@st[™] 1500WG ADSL Router can route the request to the appropriate server (at another internal IP address). This secures your network from direct attack by hackers, and provides more flexible management by allowing you to change internal IP addresses without affecting outside access to your network.

DMZ Host Support

Allows a networked computer to be fully exposed to the Internet. This function is used when NAT and firewall security prevent an Internet application from functioning correctly.

Security

The SAGEM F@st[™] 1500WG ADSL Router supports security features that deny Internet access to specified users, or filter all requests for specific services that the administrator does not want to serve. The SAGEM F@st[™] 1500WG ADSL Router's firewall also blocks common hacker attacks, including IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP port loopback, Snork Attack, TCP null scan, and TCP SYN flooding. WEP (Wired Equivalent Privacy), SSID, and MAC filtering provide security over the wireless network.

• Virtual Private Network (VPN)

The SAGEM F@stTM 1500WG ADSL Router supports three of the most commonly used VPN protocols - PPTP, L2TP, and IPSec. These protocols allow remote users to establish a secure connection to their corporate network. If your service provider supports VPNs, then these protocols can be used to create an authenticated and encrypted tunnel for passing secure data over the Internet (i.e., a traditionally shared data network).

The VPN protocols supported by the SAGEM F@st[™] 1500WG ADSL Router are briefly described below:

- Point-to-Point Tunneling Protocol Provides a secure tunnel for remote client access to a PPTP security gateway. PPTP includes provisions for call origination and flow control required by ISPs.
- L2TP merges the best features of PPTP and L2F Like PPTP, L2TP requires that the ISP's
 routers support the protocol.
- IP Security Provides IP network-layer encryption. IPSec can support large encryption networks (such as the Internet) by using digital certificates for device authentication.

1.4 Composition of the supply

The SAGEM F@st[™] 1500 is supplied in a package with:

> one SAGEM F@st™ 1500 router

or

- > one SAGEM F@st™ 1500WG router
- > one mains adapter unit
- > one RJ11/RJ11 lead (length = 3 m)
- > one crossed RJ45/RJ45 Ethernet lead (length = 1.8 m)
- ➤ one CD-ROM
- ADSL filters (optional)
- wireless accessories (optional)
- **Note:** This list is by no means exhaustive; the package may also include safety instructions and other documents.

The CD ROM contains:

- the software for installing the four Ethernet (ETH) interfaces.
- the SAGEM F@st™ 1500 User Guide in pdf file format.
- the Acrobat® Reader™ software for reading pdf files.

Incomplete or	If the equipment is received damaged or incomplete, contact the
damaged supply	supplier of your SAGEM F@st™ 1500 router.

1.5 Prerequisites

To use the SAGEM F@st[™] 1500, you must have:

- > a line supporting ADSL transmission.
- > a subscription to a service provider (for the Internet connection).
- > terminals with a TCP/IP protocol stack,
 - an Ethernet 10BASE-T or 10/100BASE-T interface,

or

• a wireless interface (IEEE 802.11b/g).

and, for the SAGEM F@st[™] 1500's HTTP/HTML configuration:

- > a WEB browser (Internet Explorer, version 5 or above).
- > a monitor with a minimum resolution of 1024 x 728 pixels.



Before installing the SAGEM F@st[™] 1500 router, we would advise you to uninstall any other modem or ADSL router.

1 - Introduction

2. Description and Physical installation

This chapter covers	۶	a description of the SAGEM F@st [™] 1500	Section 2.1
	٨	how to install the SAGEM F@st [™] 1500	Section 2.2
	٨	how to connect the ports of the SAGEM F@st [™] 1500	Section 2.3
	A	how to power up the SAGEM F@st [™] 1500	Section 2.4

2 - Description and physical installation

Before installing the SAGEM F@st[™] 1500 ADSL Router, verify that you have all the items listed under the Package Contents list (see § 1.4). If any of the items are missing or damaged, contact your local distributor.

Also be sure that you have all the necessary cabling before installing the SAGEM F@st[™] 1500 ADSL Router. After installing the ADSL Router, refer to "Configuring the SAGEM F@st[™] 1500 ADSL Router" on chapter 4.

2.1 Hardware Description

The SAGEM F@st[™] 1500 ADSL Router contains an integrated ADSL modem and connects to the Internet or to a remote site using its RJ-11 WAN port. It can be connected directly to your PC or to a local area network using any of the four Fast Ethernet LAN ports.

Access speed to the Internet depends on your service type. Full-rate ADSL provides up to 8 Mbps downstream and 640 kbps upstream. G.lite (or splitterless) ADSL provides up to 1.5 Mbps downstream and 512 kbps upstream. However, you should note that the actual rate provided by specific service providers may vary dramatically from these upper limits.

Data passing between devices connected to your local area network can run at up to 100 Mbps over the Fast Ethernet ports and 54 Mbps over the built-in wireless network adapter.

The SAGEM F@st[™] 1500 ADSL Router includes an LED display on the front panel for system power and port indications that simplifies installation and network troubleshooting. It also provides the following ports on the rear panel.

2.1.1 Front panel

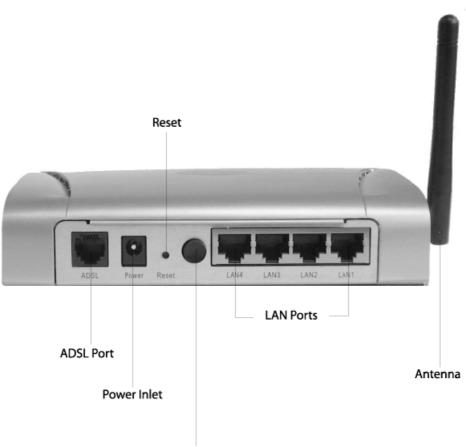


Figure 2.1 - Front Panel

From left to right, this comprises eight green supervisory LEDs, followed by the SAGEM logo, the meaning of which is given in the table below:

LED	Status	Description
PWR	On	The SAGEM F@st TM 1500 ADSL Router is receiving power. Normal operation.
	Off	Power off or failure.
ADSL	On	ADSL connection is functioning correctly.
	Flashing	The SAGEM F@st [™] 1500 ADSL Router is establishing an ADSL link.
	Off	ADSL connection is not established.
WLAN	Flashing	The indicated ADSL port is sending or receiving data.
ALM	On	PPP is not established.
	Off	PPP has been established.
ETHERNET	On	Ethernet connection is established.
(4 LEDs)	Flashing	The indicated LAN port is sending or receiving data.
	Off	There is no LAN connection on the port.

2.1.2 Rear panel



Power button

Figure 2.2 - Rear Panel

Ports / Button	Description
ADSL	WAN port (RJ-11). Connect your ADSL line to this port.
Power	Connect the included power adapter to this inlet.
	Warning: Using the wrong type of power adapter may damage the SAGEM F@st [™] 1500 ADSL Router.
Reset	Use this button to reset the power and restore the default factory settings. To reset without losing configuration settings, see "Reset" on chapter 4.
I/0	On/Off switch for secondary power from the mains adapter block
LAN4	Fast Ethernet ports (RJ-45). Connect devices on your local area
LAN3	network to these ports (i.e., a PC, hub, or switch).
LAN2	
LAN1	
	Directable antenna (180° rotation), not removable (only for the SAGEM F@st [™] 1500WG).

2.2 Physical Installation

2.2.1 Installation instructions

Environment

- > The SAGEM F@st[™] 1500 must be installed and used inside a building.
- > The room temperature must not exceed 45°C.
- > The SAGEM F@st[™] 1500 must be placed on a desktop.
- ➤ The SAGEM F@st[™] 1500 must not be exposed to strong sunlight or excessive heat.
- ➤ The SAGEM F@st[™] 1500 must not be placed in an environment subject to significant steam condensation.
- > The SAGEM F@st[™] 1500 must not be exposed to splashed water.
- > The SAGEM F@st™ 1500 casing must not be covered.
- ➤ The SAGEM F@st[™] 1500WG and its peripheral devices must not be used for outdoor transmissions.

Power supply source

- > The SAGEM F@st[™] 1500's mains adapter block must not be covered.
- ➤ The SAGEM F@st[™] 1500 router is supplied with its own power supply adapter. It must not be used with any other adapter.
- > This Class II adapter does not need to be earthed. The connection to the electrical network must comply with the information on its label.
- > Use a readily accessible mains outlet near to the router. The power supply lead is 2 m long.
- Arrange the power supply lead to avoid any accidental disconnection of the power supply to the router.
- The SAGEM F@st[™] 1500 is designed for connection to a TT or TN system power supply network.
- ➤ The SAGEM F@st[™] 1500 is not designed for connection to an IT system electrical installation (power supply with separate neutral).
- Protection against short circuits and leaks between phase, neutral and earth must be provided by the building's electrical installation. The power circuit for this equipment must be fitted with 16 A overcurrent protection and differential protection.
- > The mains connection must be via a readily accessible, switched wall socket.

Maintenance

- > The casing must not be opened. This must be done only by personnel qualified and approved by your supplier.
- > Do not use liquid or aerosol cleaning agents.
- > Never open the mains adapter block; this can expose you to mortal danger.

2.2.2 Desktop Installation

- > place the SAGEM F@st[™] 1500 on its plastic stand fitted with four non-slip rubber feet.
- make sure that the various leads pass correctly through the cable guide to avoid any risk of tension or of dropping the unit.

2.3 Settings and Connecting

2.3.1 ISP settings

Please collect the following information from your ISP before setting up the SAGEM F@st[™] 1500 ADSL Router:

- ISP account user name and password,
- Protocol, encapsulation and VPI/VCI circuit numbers,
- DNS server address,
- IP address, subnet mask and default gateway (for fixed IP users only).

2.3.2 Install the SAGEM F@st[™] 1500 ADSL Router

The SAGEM F@st[™] 1500 ADSL Router can be positioned at any convenient location in your office or home. No special wiring or cooling requirements are needed. You should, however, comply with the following guidelines:

- Keep the SAGEM F@st[™] 1500 ADSL Router away from any heating devices.
- Do not place the SAGEM F@st[™] 1500 ADSL Router in a dusty or wet environment.

You should also remember to turn off the power, remove the power cord from the outlet, and keep your hands dry when you install the SAGEM F@st[™] 1500 ADSL Router.

2.3.3 Connect the ADSL Line

Connect the supplied RJ-11 cable from the ADSL Microfilter/Splitter to the ADSL port on your Sagem SAGEM F@stTM 1500 Router. When inserting an ADSL RJ-11 plug, be sure the tab on the plug clicks into position to ensure that it is properly seated.

2.3.4 Phone Line Configuration

Installing a Full-Rate Connection

If you are using a full-rate (G.dmt) connection, your service provider will attach the outside ADSL line to a data/voice splitter. In this case you can connect your phones and computer directly to the splitter as shown below:

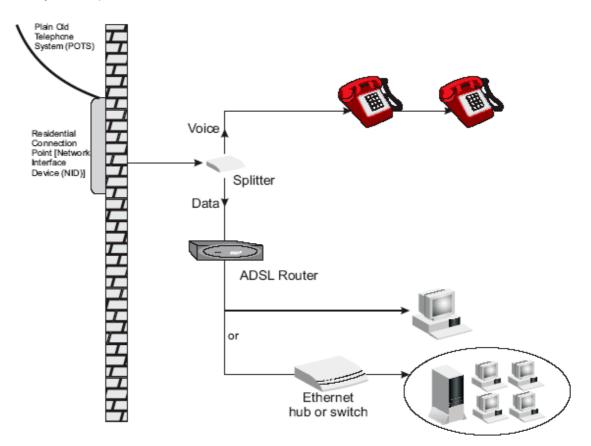


Figure 2.3 - Installing with a Splitter

Installing a Splitterless Connection

If you are using a splitterless (G.lite) connection, then your service provider will attach the outside ADSL line directly to your phone system.

In this case you can connect your phones and computer directly to the incoming ADSL line, but you will have to add low-pass filters to your phones as shown below:

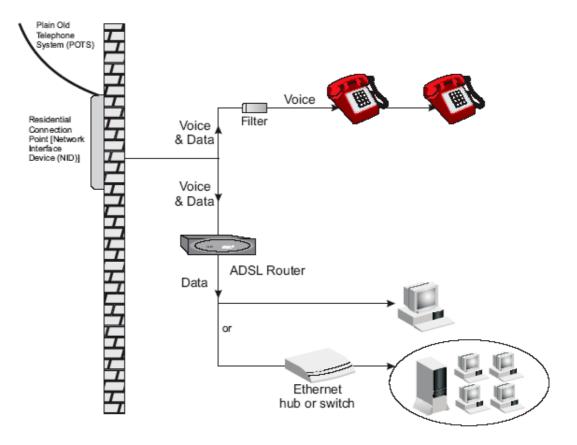


Figure 2.4 - Installing without a splitter

2.3.5 Attach to Your Network Using Ethernet Cabling

The four LAN ports on the SAGEM F@st[™] 1500 ADSL Router auto-negotiate the connection speed to 10 Mbps Ethernet or 100 Mbps Fast Ethernet, as well as the transmission mode to half duplex or full duplex. Use RJ-45 cables to connect any of the four LAN ports on the SAGEM F@st[™] 1500 ADSL Router to an Ethernet adapter on your PC. Otherwise, cascade any of the LAN ports on the SAGEM F@st[™] 1500 ADSL Router to an Ethernet to the hub or switch, and then connect your PC or other network equipment to the hub or switch. When inserting an RJ-45 connector, be sure the tab on the connector clicks into position to ensure that it is properly seated.



Do not plug a phone jack connector into an RJ-45 port. This may damage the SAGEM F@stTM 1500 ADSL Router.



Use 100-ohm shielded or unshielded twisted-pair cable with RJ-45 connectors for all Ethernet ports. Use Category 3, 4, or 5 for connections that operate at 10 Mbps, and Category 5 for connections that operate at 100 Mbps.



Make sure each twisted-pair cable length does not exceed 100 meters (328 feet).

2.3.6 Connect the Power Adapter

Plug the power adapter into the power socket on the rear of the SAGEM F@st[™] 1500 ADSL Router, and the other end into a power outlet.

Check the power indicator on the front panel is lit. If the power indicator is not lit, refer to "Troubleshooting" on Appendice A.

In case of a power input failure, the SAGEM F@st[™] 1500 ADSL Router will automatically restart and begin to operate once the input power is restored.

2.4 Powering up the SAGEM F@st[™] 1500 ADSL router

- Check that the SAGEM F@st[™] 1500 router is connected correctly to the electrical power supply network (see section 2.3.2).
- Set the **I/O** switch to **I** (bottom position).

Initially, the **PWR** LED and all the **ETHERNET** LEDs will come on. After a certain period, only the **PWR** LED will remain lit, the extreme right **ETHERNET** LED is slowly blinking, the **ALM** LED will come on and the **WLAN** LED (only for the SAGEM F@st[™] 1500WG) will then come on if the wireless module is installed and active, and finally the **ADSL** LED will start blinking.

3. Configuring Client Computer

This chapter covers	\triangleright	the TCP/IP Configuration	Section 3.1
		the configuration of your Windows computer	Section 3.2
		the configuration of your Mac computer	Section 3.3

After completing hardware setup by connecting all your network devices, you need to configure your computer to connect to the SAGEM F@stTM 1500 ADSL Router.

See:

PC

Windows 98/Me	on sub-section 3.2.1
Windows NT 4.0	on sub-section 3.2.2
Windows 2000	on sub-section 3.2.3
Windows XP	sub-section 3.2.4

Мас

Mac OS 10.2 on sub-section 3.3



Configuring Your Macintosh Computer" depending on your operating system.

3.1 TCP/IP Configuration

To access the Internet through the SAGEM F@st[™] 1500 ADSL Router, you must configure the network settings of the computers on your LAN to use the same IP subnet as the SAGEM F@st[™] 1500 ADSL Router. The default IP settings for the SAGEM F@st[™] 1500 ADSL Router are:

IP Address	:	192.168.2.1
Subnet Mask	:	255.255.255.0



These settings can be changed to fit your network requirements, but you must first configure at least one computer to access the SAGEM F@stTM 1500 ADSL Router's web configuration interface in order to make the required changes. (See "Configuring the SAGEM F@stTM 1500 ADSL Router" on chapter 4 for instruction on configuring the SAGEM F@stTM 1500 ADSL Router).

3.2 Configuring your Windows computer

3.2.1 On Windows 98 / Me

You may find that the instructions in this section do not exactly match your version of Windows. This is because these steps and screen shots were created from Windows 98. **Windows Millennium Edition is similar, but not identical, to Windows 98.**

- 1) On the Windows desktop, click Start/Settings/Control Panel.
- 2) In Control Panel, double-click the Network icon.



- In the Network window, under the Configuration tab, double-click the TCP/IP item listed for your network card.
- 4) In the TCP/IP window, select the IP Address tab. If "Obtain an IP address automatically" is already selected, your computer is already configured for DHCP. If not, select this option.

Notwork	? ×	
Configuration	Identification Access Control	
	ng network components are installed	
	or Microsoft Networks	
📲 Dial-Up		
	Z Card 10/100 (SMC1211T%)	
	P → Dial-Up Adapter P → SMC EZ Card 10/100 (SMC1211TX)	
1 100110		
Бр	Remove Properties	
Primaty Ne	TCP/IP Properties	?×
Cliant for I	Bindings Advanced Net	BIDS 1
File an		IP Address
- Descripti		
TCP/IP (An IP address can be automatically assigned to this con If your network does not automatically assign IP addres	nputer. sea, ask
wide-are	your network administrator for an address, and then type the space below.	eitin
	e a space baddy.	
	 Ottain an IP address automatically 	
_	Specify an IP address	
	IF Address:	
	Sgimei Mask:	
	0K	Cancel

5) Windows may need your **Windows 95/98/Me** CD to copy some files. After it finishes copying, it will prompt you to restart your system. Click Yes and your computer will restart.



TCP/IP Configuration Setting

Primary DNS Server	
Secondary DNS Server	
Default Gateway	
Host Name	

Disable HTTP Proxy

You need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your browser can view the SAGEM F@st[™] 1500 ADSL Router's HTML configuration pages. The following steps are for Internet Explorer.

Internet Explorer

- 1) Open Internet Explorer.
- 2) Click the **Stop** button **(2)**, then click **Tools/Interne** Options.
- 3) In the **Internet Options** window, click the Connections tab. Next, click the **LAN Settings...** button.
- 4) Clear all the check boxes.
- 5) Click **OK**, and then click **OK** again to close the **Internet Options** window.

Internet Options	×
General Security Content Connections Programs Advanced	
Use the Internet Connection Wizard to Connect your computer to the Internet.	
Dial-up settings	
Add	
<u>R</u> emove	
Settings	
Never dial a connection Dial whenever a network connection is not present Always dial my default connection Current default None Set Default	
Perform system security check before dialing	
Local Area Network (LAN) settings	
OK Cancel Apply	

Local Area Network (LAN) Settings	? ×
Automatic configuration	
Automatic configuration may override manual settings. To ensure t use of manual settings, disable automatic configuration.	he
Automatically detect settings	
Use automatic configuration script	
Address	
Proxy server	
Use a proxy server	
Address: Port: Advange	d
Bypass proxy server for local addresses	
OK Can	cel

Obtain IP Settings from SAGEM F@st[™] 1500 ADSL Router

Now that you have configured your computer to connect to your SAGEM F@st[™] 1500 ADSL Router, it needs to obtain new network settings. By releasing old DHCP IP settings and renewing them with settings from your SAGEM F@st[™] 1500 ADSL Router, you can also verify that you have configured your computer correctly.

- 1) On the Windows desktop, click Start/Run...
- 2) Type "WINIPCFG" and click OK. It may take a second or two for the IP Configuration window to appear.
- 3) In the IP Configuration window, select your network card from the drop-down menu. Click Release and then click Renew. Verify that your IP address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your SAGEM F@st[™] 1500 ADSL Router is functioning. Click OK to close the IP Configuration window.

				F	?un					? ×
	-	Windows Update			Dpen:	Type the name resource, and V				t, or Internet
	.	<u>P</u> rograms	•		<u>o</u> pon.	Junuara				
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	-	<u>S</u> ettings	•		•	<mark>figuration</mark> Adapter Informat	ion —			
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m	~	<u> </u>				IP Ad	ldress	192	2.168.2.161	
õš	2	<u>B</u> un.,				Subnet I	Mask	255	6.255.255.0	
Vindows98		Log Cff Wlarson				Default Gate	eway	19	92.168.2.1	
Š	•	Sh <u>u</u> t Down				OK	_	elease	Re <u>n</u> ew	
	Start	🏉			_	Rele <u>a</u> se All	1e	ne <u>w</u> All	<u>M</u> ore Info	<u>>></u>

3.2.2 On Windows NT 4.0

1) On the Windows desktop, click Start/Settings/Control Panel.





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- 2) Double-click the Network icon.
- 3) In the Network window, select the Protocols tab. Double-click **TCP/IP Protocol**.
- 4) When the Microsoft TCP/IP Properties window open, select the IP Address tab.
- 5) In the Adapter drop-down list, be sure your Ethernet adapter is selected.
- 6) If "**Obtain an IP address automatically**" is already selected, your computer is already configured for DHCP. If not, select this option and click "**Apply**."
- 7) Click the **DNS** tab to see the primary and secondary DNS servers. Record these values, and then click "**Remove**." Click "Apply", and then "**OK**.

Network	<u>?</u> ×
Identificatio	n Service: Plotocols Adapters Binding:
<u>N</u> etwork	Protocols:
TCP	EUI Protocol
	licrosoft TCP/IP Properties
	IP Address DNS WINS Address Routing
Desc Tran: area	An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.
diver	Adapte:
	11 SMC EZ Caid 10/100 (SMC1256FT X)
	Obtain an IP address from a DHCP server
	[F Address:
_	Sybnet Mask:
	Default <u>B</u> ateway:
	A <u>d</u> vanced
	OK Cancel Apply

Microsoft TCP/IP Properties	? ×
IP Address DNS WINS Address Routing	
Domain Name System (DNS) Host Name: Domain:	
DNS Service Search Order	
	Lp† Do <u>w</u> ni
Add Edit Hemoge	
Domain Suffix Search Order	
	Lig† Dow <u>n</u> ‡
Add Edij Remove	
OK Cancel	Apply

8) Windows may copy some files, and will then prompt you to restart your system. Click **Yes** and your computer will shut down and restart.

TCP/IP Configuration Setting

Primary DNS Server	
Secondary DNS Server	·
Default Gateway	
Host Name	·

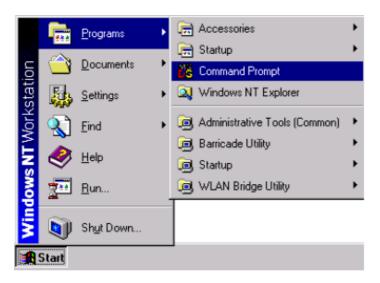
Disable HTTP Proxy

You need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your browser can view the SAGEM F@stTM 1500 ADSL Router's HTML configuration pages. (refer to Internet Explorer on § 3.2.1).

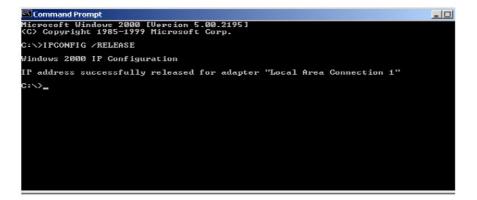
Obtain IP Settings from SAGEM F@st[™] 1500 ADSL Router

Now that you have configured your computer to connect to your SAGEM F@st[™] 1500 ADSL Router, it needs to obtain new network settings. By releasing old DHCP IP settings and renewing them with settings from your SAGEM F@st[™] 1500 ADSL Router, you can also verify that you have configured your computer correctly.

1) On the Windows desktop, click Start/Programs/ Command Prompt.



2) In the Command Prompt window, type "IPCONFIG /RELEASE" and press the ENTER key.



3) Type "IPCONFIG /RENEW" and press the ENTER key. Verify that your IP Address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your SAGEM F@st[™] 1500 ADSL Router is functioning.



4) Type "EXIT" and press the ENTER key to close the Command Prompt window.

Your computer is now configured to connect to the SAGEM F@st[™] 1500 ADSL Router.

3.2.3 On Windows 2000

- 1) On the Windows desktop, click **Start/Settings/Network** and **Dial-Up Connections**.
- Click the icon that corresponds to the connection to your SAGEM F@st[™] 1500 ADSL Router.
- 3) The connection status screen will open. Click **Properties**.

eneral			
- Connection			
Status:		Connecte	d
Duration:		00:15:1	
Speed:		10.0 Mbp	os
Activity Packets:	Sent — 🛛 🖁 49	Pa — Receive	d O
Properties D	isable		
		Ci	ose

4) Double-click Internet Protocol (TCP/IP).

Internet Protocol (TCP/IP) Prope	erties ?X
General	
	automatically if your network supports d to ask your network administrator for
Obtain an IP address automa	itically
C Use the following IP address:	
[P address:	
S <u>u</u> bnet mask:	· · ·
Default gateway:	
Obtain DNS server address a	automaticallu
$\neg \bigcirc$ Use the following DNS serve	
Preferred DNS server:	
<u>A</u> lternate DNS server:	· · ·
	Ad <u>v</u> anced
	OK Cancel

5) If "Obtain an IP address automatically" and "Obtain DNS server address automatically" are already selected, your computer is already configured for DHCP. If not, select this option.

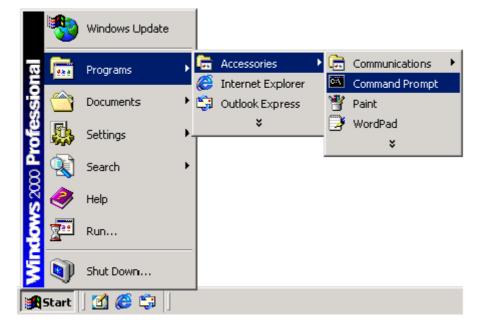
Disable HTTP Proxy

You need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your browser can view the SAGEM F@stTM 1500 ADSL Router's HTML configuration pages. (refer to Internet Explorer on § 3.2.1).

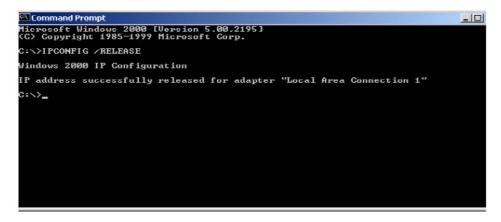
Obtain IP Settings from SAGEM F@st[™] 1500 ADSL Router

Now that you have configured your computer to connect to your SAGEM F@st[™] 1500 ADSL Router, it needs to obtain new network settings. By releasing old DHCP IP settings and renewing them with settings from SAGEM F@st[™] 1500 ADSL Router, you can verify that you have configured your computer correctly.

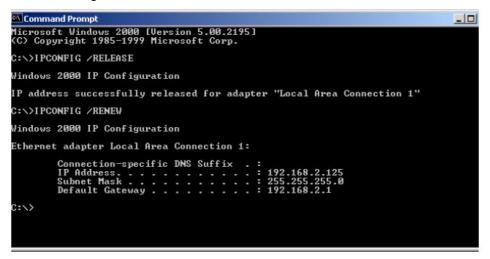
1) On the Windows desktop, click Start/Programs/Accessories/Command Prompt.



2) In the Command Prompt window, type "IPCONFIG/RELEASE" and press the ENTER key.



3) Type "IPCONFIG /RENEW" and press the ENTER key. Verify that your IP Address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your SAGEM F@st[™] 1500 ADSL Router is functioning.



4) Type "EXIT" and press the ENTER key to close the Command Prompt window.

Your computer is now configured to connect to the SAGEM F@st[™] 1500 ADSL Router.

3.2.4 On Windows XP

- 1) On the Windows desktop, click **Start/Control Panel**.
- 2) In the Control Panel window, click **Network and Internet Connections**.
- 3) The Network Connections window will open. Double-click the connection for this device.
- 4) On the connection status screen, click **Properties**.

🕹 Local Area Con	nection Status	? 🛛
General Support		
Connection		
Status:		Connected
Duration:		00:23:03
Speed:		100.0 Mbps
Activity	Sent — 剩 -	- Received
Bytes:	9 405	1 388
Properties	Disable	<u>C</u> lose

5)	Double-click	Internet	Protocol	(TCP/IP).
----	--------------	----------	----------	-----------

Internet Protocol (TCP/IP) Prope	rties 🛛 🛛 🔀
General Alternate Configuration	
You can get IP settings assigned auton this capability. Otherwise, you need to a the appropriate IP settings.	
Obtain an IP address automatical	y.
Use the following IP address: —	
IP address:	
S <u>u</u> bnet mask:	
Default gateway:	
⊙ 0 <u>b</u> tain DNS server address autor	natically
OUse the following DNS server add	Iresses:
Preferred DNS server:	· · · · · · · · ·
Alternate DNS server:	
	Ad <u>v</u> anced
	OK Cancel

 If "Obtain an IP address automatically" and "Obtain DNS server address automatically" are already selected, your computer is already configured for DHCP. If not, select this option.

Disable HTTP Proxy

You need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your browser can view the SAGEM F@stTM 1500 ADSL Router's HTML configuration pages. (refer to Internet Explorer on § 3.2.1).

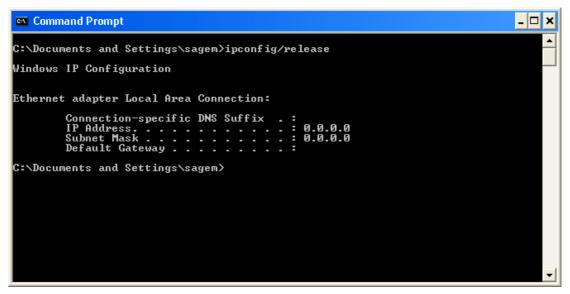
Obtain IP Settings from Sagem F@st1500 ADSL Router

Now that you have configured your computer to connect to your SAGEM F@st[™] 1500 ADSL Router, it needs to obtain new network settings. By releasing old DHCP IP settings and renewing them with settings from SAGEM F@st[™] 1500 ADSL Router, you can verify that you have configured your computer correctly.

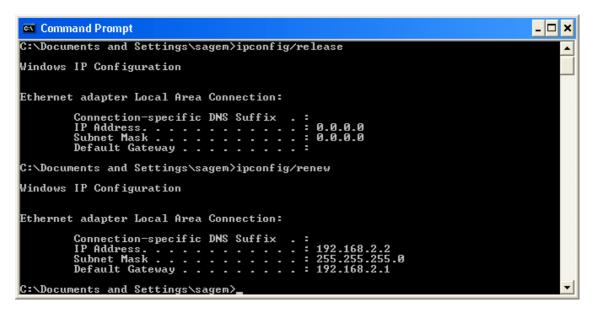
1) On the Windows desktop, click Start/All Programs/Accessories/ Command Prompt.



2) In the Command Prompt window, type "IPCONFIG/RELEASE" and press the ENTER key.



3) Type "IPCONFIG /RENEW" and press the ENTER key. Verify that your IP Address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your SAGEM F@st[™] 1500 ADSL Router is functioning. Type "EXIT" and press the ENTER key to close the Command Prompt window.



Your computer is now configured to connect to the SAGEM F@st[™] 1500 ADSL Router.

3.3 Configuring your Mac computer

You may find that the instructions here do not exactly match your operating system. This is because these steps and screenshots were created using Mac OS 10.2. Mac OS 7.x and above are similar, but may not be identical to Mac OS 10.2.

Follow these instructions:

- 1) Pull down the Apple Menu S. Click System Preferences. About This Mac Get Mac OS X Software... System Preferences... Dock Location Recent Items Force Quit... Sleep Restart... Shut Down... Log Out... ☆ #Q
- 2) Double-click the Network icon in the Systems Preferences window.

000		S	stem Prefere	nces		C
Personal						
9		E New	3		1	C
Desktop	Dock	General	International	Login Items	My Account	Screen Effects
Hardware						(Leona
0	6		Ŷ	(×	0	٩
CDs & DVDs	ColorSync	Displays	Energy Saver	Keyboard	Mouse	Sound
Internet & I	Network					
		0	1			
Internet	Network	QuickTime	Sharing			
System						
11	9	A	(0)	8	2	
Accounts	Classic	Date & Time	Software Update	5peech	Startup Disk	Universal

3) If "**Using DHCP Server**" is already selected in the Configure field, your computer is already configured for DHCP. If not, select this Option.

0.0		Location: Autematic		
Show: (Built-in Ether	net 🚺)	
_]	TCP/IP PPOE AP	pleTalk Proxies	
	Configure:	Using DHCP		
			DNS Servers (Option	na)
	IP Address:	10.128.83 Provided by SHCP Servers		
	Subnet Mask:	255.255.252.0		
	Router:	10.1.28.254	Search Domains (Option	uit.
DH	C# Client ID.	[]		
		(Optional)		
Ethe	rnet Address	00:50:e4:00:2c:06	Example: apple.com earthlink.set	
(ع) ei	alcalia loak ao j	recent further charges.	(heren) (App	ly teurs

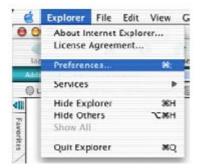
- 4) Your new settings are shown on the TCP/IP tab. Verify that your IP Address is now 192.168.2.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.2.1. These values confirm that your SAGEM F@st[™] 1500 ADSL Router is functioning.
- Close the Network window. Now your computer is configured to connect to the SAGEM F@st[™] 1500 ADSL Router.

Disable HTTP Proxy

You need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your browser can view the SAGEM F@stTM 1500 ADSL Router's HTML configuration pages. The following steps are for Internet Explorer.

Internet Explorer

1) Open Internet Explorer and click the Stop button. Click Explorer/Preferences.



- 2) In the Internet Explorer Preferences window, under Network, select **Proxies**.
- 3) Uncheck all check boxes and click **OK**.

3 - Configuring Client Computer

Security Security Zones Ratings	If you are accessing the Internet from gateways to allow Internet access. for more information. Note: These applications through Internet Config	Contact your network manager settings are shared with other
Advanced	Use Proxy Servers	
▼ Forms AutoFill	Web Proxy:	Settings)
Forms AutoComplete	Use Web Proxy for all	
AutoFill Profile	Bypass Web Proxy for FTP	
Receiving Files	Secure Proxy:	(Settings)
Download Options File Helpers	Mail Proxy:	Settings
O Cookies	Gopher Proxy:	Settings
Network Protocol Helpers	List the sites you want to connect set above. Put a space or comma	
• Proxies		
Site Passwords E-mail		
General		
• General		Cancel OK

4. Configuring the SAGEM F@st[™] 1500 ADSL router

This chapter covers	The SETUP WIZARD menu	Section 4.2
	The ADVANCED menu	Section 4.11
	Finding the MAC address of a Network Card	Section 4.12



After you have configured TCP/IP on a client computer, you can configure the SAGEM @st[™] 1500 ADSL Router using Internet Explorer 5.0 or above.

To access the SAGEM F@st[™] 1500 ADSL Router's management interface, enter the default IP address of the SAGEM F@st[™] 1500 ADSL Router in your web browser: <u>http://192.168.2.1</u>.

SAGEM	
	Login Screen Password:
	Please enter correct password for Administrator Access. Thank you.
	We suggest that you use Internet Explorer 5.5 or above at a minimum of 1024x768 resolution.
	Copyright © 2004 SAGEM SA., All rights reserved.

No Password needed, just click "LOGIN".

Navigating the Management Interface

The SAGEM F@st[™] 1500 ADSL Router's management interface consists of a **Setup Wizard** and an **Advanced Setup** section.

Setup Wizard:	Use the Setup Wizard if you want to quickly set up the SAGEM F@st™ 1500 ADSL Router. Go to "SETUP WIZARD" on section 4.2
Advanced Setup:	Advanced Setup supports more advanced functions like hacker attack detection, IP and MAC address filtering, virtual server setup, virtual DMZ host, as well as other functions. Go to "Advanced Setup" on section 4.11.



You can also display router information on section 4.1.

Making Configuration Changes

Configurable parameters have a dialog box or a drop-down list. Once a configuration change has been made on a page, click the "**SAVE SETTINGS**" or "**NEXT**" button at the bottom of the page to enable the new setting.



To ensure proper screen refresh after a command entry, be sure that Internet Explorer 5.0 is configured as follows: Under the menu Tools/Internet Options/General/Temporary Internet Files/Settings, the setting for "Check for newer versions of stored pages" should be "Every visit to the page".

Some new settings require a "**Save & Reboot**" process to store the modification in the flush memory. You can click the "**Save & Reboot**" button at the top of page.

This section on the left of the Home screen contains the following menus:

- **STATUS** (see section 4.1),
- **SETUP WIZARD** (see section 4.2),
- **SYSTEM** (see section 4.3),
- ➤ WAN (see section 4.4),
- LAN (see section 4.5),
- ➢ WIRELESS (see section 4.6),
- > NAT (see section 4.7),
- FIREWALL (see section 4.8),
- **ROUTE** (see section 4.9),
- QoS (see section 4.10),
- > ADVANCED (see section 4.11).



On the Home screen, you can choose the language in which you want to configure your modem by clicking the appropriate flag (French or english).

4.1 STATUS

The Status page displays WAN/LAN connection status, firmware, and hardware version numbers, illegal attempts to access your network, as well as information on DHCP clients

connected to your network. The security log may be saved to a file by clicking the button and choosing a location.

Scroll down to view more information on the STATUS page.

									ST	ATUS
SAGEM						Home	Save an	d Reboot	Reset	Logout
STATUS	STATUS									
SETUP WIZARD										
SYSTEM	You can use the Status and hardware version nu									
WAN	DHCP client PCs currently					- -				
LAN	ADSL									
WIRELESS	ADSL: Physical Down									
NAT	Line Status: QUIET1 Up Stream: O (Kbps.)									
FIREWALL	Down Stream: 0 (Kbps.)								
ROUTE	WAN									
QoS	VC	VPI	VCI	Encapsulat	tion		Protocol	Link Sta	atus	
ADVANCED	1 Connect		35	VC MUX			PPPoA	Down		_
	IP Address: 192.168.2.: Subnet Mask: 255.25.: DHCP Server: Enabled Vireless: Enabled UPnP: Disabled Wireless: Enabled (char INFORMATION Numbers of DHCP Clients Runtime Code Version: 1 Boot Code Version: 0.6 ADSL Modem Code Versi LAN MAC Address: 00-6 Wireless MAC Address: 00-6 Hardware Version: 01 Serial Num: A41303403 Serial Num: A41303403 View any attempts that access to your network. 08/01/2003 04:44:00 08/01/2003 04:66:15 08/01/2003 03:50:15 08/01/2003 03:50:15 08/01/2003 03:50:15 08/01/2003 03:50:16 08/01/2003 03:50:16 08/01/2003 03:50:16 08/01/2003 03:50:16 08/01/2003 03:50:16 08/01/2003 03:50:16 08/01/2003 03:50:16 08/01/2003 03:50:16	255.0 nnel: 6) 3: 3 2.04 (Jul 2 2 on: 03.0(0-4C-3A-(00-60-4C- 30-60	0.12.0 30-00 -3A-30 -30-01 	le to gain	linked to ip=192 ip=192	ormation the ro .168.2 .168.2	n on LAN DH	-08-C7-25- -60-B3-25-	-AB -62 -53	telp

The following items are included on the Status page:

the Security Log.

ltem	Description
INTERNET	Displays WAN connection type and status. Click the Connect button to connect to your ISP.
vc	Displays your VC settings and its status. Click on the Connect button to establish the VC's connection, click on the Disconnect button to stop it.
GATEWAY	Displays system IP settings, as well as DHCP Server and Firewall status.
INFORMATION	Displays the number of attached clients, the firmware versions, the physical MAC address for each media interface, and for the SAGEM F@st™ 1500 ADSL Router, as well as the hardware version and serial number.
Security Log	Displays illegal attempts to access your network. Save Click on this button to save the security log file. Clear Click on this button to delete the access log. Refresh Click on this button to refresh the screen.
DHCP Client Log	Displays information on DHCP clients on your network.
Clear	In the Security Log field, click on this button to clear all the events from the Security Log.
Refresh	In the Security Log field, click on this button to refresh all the events from

4.2 "SETUP WIZARD" menu

In this menu is included the following sub-menus:

- PPP setting (see section 4.2.1),
- Channel and SSID (see section 4.2.2),
- ➢ WEP (see section 4.2.3),
- Access control (see section 4.2.4).

4.2.1 PPP Setting

SAGEM		WIZARD
	Home	eset Logout
1. PPP settings	1. PPP settings	
2. Channel and SSID 3. WEP	Please enter your PPP account information provided by your service provider.	
4. Access control	Username username	
	Password •••••	
	Confirm Password	
		Next

Enter the PPPoA (Point-to-Point Protocol over ATM) settings provided by your ISP.

Parameter	Description
Username	Enter the ISP assigned user name
Password	Enter your password
Confirm Password	Confirm your password

This will automatically configure the SAGEM F@st™ 1500 ADSL Router with the correct Protocol, Encapsulation and VPI/VCI settings for your ISP.

Click "Next", the router will try to connect to the Internet.

SAGEM	
1. PPP settings 2. Channel and SSID 3. WEP 4. Access control	Connecting to Internet, Please wait

SAGEM END Next

Once the ADSL Router has been connected to the Internet, you get the following message:

4.2.2 Channel and SSID

Now, you can start the wireless configuration.

SAGEM	SETUP WIZARD
1. PPP settings 2. Channel and SSID 3. WEP	2. Channel and SSID This page allows you to define SSID and Channel ID for wireless connection. In the wireless environment, the router can also act as an wireless access point. These parameters are used for the mobile stations to connect to this access point.
4. Access control	SSIDSAGEMSSID BroadcastImage: Comparison of the second
	Previous Next

You must specify a common radio channel and SSID (Service Set ID) to be used by the SAGEM F@st[™] 1500 ADSL Router and all of its wireless clients. Be sure you configure all of its clients to the same values.

Parameter	Description	
ESSID	Extended Service Set ID. The ESSID must be the same on the SAGEM F@st™ 1500 ADSL Router and all of its wireless clients.	
ESSID Broadcast	Enable or disable the broadcasting of the SSID.	
Wireless Mode	This device supports both 802.11g and 802.11b wireless networks. Make your selection depending on the type of wireless network that you have.	
Channel	The radio channel used by the wireless router and its clients to communicate with each other. This channel number must be the same on the ADSL Router and all of its wireless clients.	

4.2.3 WEP

To make your wireless network safe, you should turn on the security function.

SAGEM	SETUP WIZAR
	Home Reset Logou
1. PPP settings	3. WEP
2. Channel and SSID 3. WEP 4. Access control	WEP is the basic mechanism to transmit your data securely over the wireless network. Matching encryption keys must be setup on your router and wireless client devices to use WEP. Enable or disable WEP module function : ③ Disable ① Enable
	WEP Mode O 64-bit O 128-bit
	Key Entry Method O Hex O ASCII
	Static WEP Key Setting 10/26 hex digits for 64-WEP/128-WEP
	Default Key ID 1 💌
	Passphrase
	Key 1 0101010101
	кеу 2 0202020202
	кеу з 0303030303
	Key 4 0404040404
	Clear
	Previous Next

Parameter	Description
WEP module function	Select Disable or Enable key to use or not WEP module function.
	Remark: It is advised to select the Enable key.
WEP Mode	Select 64 bit or 128 bit key to use for encryption.
Key Entry Method	Select Hex or ASCII key to use a Key Entry Method (Hexadecimal or ASCII).

To validate the WEP security protection, you should to set the same parameters for the SAGEM F@st[™] 1500 ADSL Router and all your wireless clients.

You may automatically generate encryption keys or manually enter the keys. To generate the key automatically with passphrase, check the Passphrase box, enter a string of characters. Select the default key from the drop down menu. Click "**Next**".



The passphrase can consist of up to 32 alphanumeric characters. To manually configure the encryption key, enter five hexadecimal pairs of digits for each 64-bit key, or enter 13 pairs for the single 128-bit key (A hexadecimal digit is a number or letter in the range 0-9 or A-F.). Note that WEP protects data transmitted between wireless nodes, but does not protect any transmissions over your wired network or over the Internet.

4.2.4 Access Control

Access Control allows users to define the outgoing traffic permitted or not-permitted through the Wi-Fi interface. The default is to permit all outgoing traffic.

The following items are on the Access Control screen:

> Click **Yes** to turn on the filtering function, or **No** to disable this function.

If you have enabled this function, you can enter the client MAC addresses that you want to filter.



You can give up to 32 client stations.

SAGEM	SETUP WIZARD
1. PPP settings 2. Channel and SSID	4. Access control
3. WEP 4. Access control	addresses can be added to the MAC Filtering Table. When enabled, all registered MAC addresses are controlled by the Access Rule. Enable MAC Filtering: O Yes O No Access Rule for registered MAC address : O Allow O Deny
	• MAC Filtering Table (up to 8 stations)
	ID MAC Address 1 00 : 00 : 00 : 00 : 00
	2 00 : 00 : 00 : 00 3 00 : 00 : 00 : 00 : 00
	4 00 : 00 : 00 : 00 5 00 : 00 : 00 : 00 : 00
	6 00 : 00 : 00 : 00 7 00 : 00 : 00 : 00
	8 00 : 00 : 00 : 00 : 00 : 00 Add currently associated MAC stations
	Previous Finish

Once you have done your settings, click "Finish" to save these settings and quit the Setup Wizard.

Your SAGEM F@st[™] 1500 ADSL Router is now set up. Go to "Troubleshooting" on Appendice A, if you cannot make a connection to the Internet.

4.3 SYSTEM

In this menu is included the following sub-menus:

- \succ Time setting (see section 4.3.1),
- Password setting and SSID (see section 4.3.2),
- Configuration tools (see section 4.3.3),
- Firware upgrade (see section 4.3.4),
- Reset (see section 4.3.5).

4.3.1 Time Settings

Select your local time zone from the drop down list. This information is used for log entries and client filtering.

SAGEM	Time Settings	
STATUS	Time Settings	
SETUP WIZARD		
SYSTEM	Set Time Zone:	
» Time Settings	Use this setting to insure the time-based client filtering feature and system log entries are based on the correct localized time.	
» Password Settings		
» Configuration Tools	(GMT+01:00)Brussels, Copenhagen, Paris, Vilnius	
» Firmware Upgrade	Configure Time Server (NTP):	
» Reset		
WAN	You can automatically maintain the system time on your ADSL router by synchronizing with a public time server over the Internet.	
LAN		
WIRELESS	☑ Enable Automatic Time Server Maintenance	
NAT		
FIREWALL	When you enable this option you will need to configure two different time servers, use the options below to set the primary and secondary	
ROUTE	NTP servers in your area:	
QoS	Primary Server: 129132.21-Europe	
ADVANCED	Secondary Server: 130.149.17.8 - Europe	
	Help Apply Cancel	

For accurate timing of log entries and system events, you need to set the time zone. Select your time zone from the drop down list. If you want to automatically synchronize the SAGEM F@st[™] 1500 ADSL Router with a public time server, check the box to Enable Automatic Time Server Maintenance. Select the desired servers from the drop down menu.

4.3.2 Password Settings

Use this page to change the password for accessing the management interface of the SAGEM F@st[™] 1500 ADSL Router. Passwords can contain from 3 to 12 alphanumeric characters and are case sensitive.

SAGEM	Password Settings Home Save and Reboot Reset Logout
STATUS	Password Settings
SETUP WIZARD	Set a password to restrict management access to the router. If you want to manage the router from a remote location (outside of the
SYSTEM	set a password to restrict management access to the router. If you want to manage the router from a remote location (outside of the local network), you must also specify the IP address of the remote PC. You can do this in the Advanced - Remote Management menu.
» Time Settings	
» Password Settings	. Current Password :
» <u>Configuration Tools</u>	(Idle Time =0: NO Time Out)
» Firmware Upgrade	New Password:
» Reset	
WAN	Re-Enter Password for Verification:
LAN	
WIRELESS	
NAT	
FIREWALL	Help Apply Cancel
ROUTE	
QoS	
ADVANCED	

i

If you lost the password, or you cannot gain access to the user interface, press the blue reset button on the rear panel, holding it down for at least five seconds to restore the factory defaults. The default password is "**empty**".

Enter a maximum Idle Time Out (in minutes) to define a maximum period of time for which the login session is maintained during inactivity. If the connection is inactive for longer than the maximum idle time, it will perform system logout, and you have to log in again to access the management interface. The default timeout is fixed to 10 minutes.

4.3.3 Configuration tools

Use the Tools menu to backup the current configuration, restore a previously saved configuration, restore factory settings, update firmware, and reset the SAGEM F@st[™] 1500 ADSL Router.

SAGEM	Configuration Tools
STATUS SETUP WIZARD SYSTEM > Time Settings > Password Settings > Configuration Tools > Firmware Upgrade > Reset WAN LAN URELESS NAT FIREWALL ROUTE QoS ADVANCED	Configuration Tools Use the "Backup" tool to save the router's current configuration to a file named backup.bin" on your PC. You can then use the "Restore" tool to restore the saved configuration to the router. Alternatively, you can use the "Restore to Factory Defaults" tool to force the router to perform a power reset and restore the original factory settings.

Choose a function and click Next. Backup allows you to save the SAGEM F@st[™] 1500 ADSL Router's configuration to a file.

Restore can be used to restore the saved backup configuration file. Restore to Factory Defaults resets the SAGEM F@st[™] 1500 ADSL Router to the original settings.

You will be asked to confirm your decision.

4.3.4 Firmware Upgrade

Use this screen to update the firmware or user interface to the latest versions. Download the upgrade file from the Sagem web site, and save it to your hard drive. In the Upgrade Target field, choose Firmware. Then **click "Browse...**" to look for the downloaded file. Click **"Apply**".

Check the Status page Information section to confirm that the upgrade process was successful.

SAGEM	Firmware Upgrade
STATUS SETUP WIZARD	Firmware Upgrade This tool allows you to upgrade the router firmware using a file provided by us. You can download the latest firmware from
SYSTEM » Time Settings » Password Settings » Configuration Tools » Firmware Upgrade	http://www.sagem.com Enter the path and name, or browse to the location, of the upgrade file then click the Apply button. You will be prompted to confirm the upgrade to complete the process. Firmware File Parcourir
»Reset WAN LAN WIRELESS NAT	Help (Apply) Cancel
FIREWALL ROUTE QoS ADVANCED	

4.3.5 Reset

Click "REBOOT ROUTER" to reset the SAGEM F@st™ 1500 ADSL Router. The reset will be completed when the power LED stops blinking.

SAGEM	Reset
	Home Reset Logout
STATUS	Reset
SETUP WIZARD	
SYSTEM	In the event that the system stops responding correctly or in some way stops functioning, you can perform a reset. Your settings will not be changed. To perform the reset, click on the Apply button below. You will be asked to confirm your decision. The reset will be complete
» Time Settings	when the power light stops blinking.
» Password Settings	
» Configuration Tools	Help Apply Cancel
» Firmware Upgrade	
» Reset	
WAN	
LAN	
WIRELESS	
NAT	
FIREWALL	
ROUTE	
QoS	
ADVANCED	

If you perform a reset from this page, the configurations will not be changed back to the factory default settings.



If you use the Reset button on the front panel, the SAGEM F@st[™] 1500 ADSL Router performs a power reset. If the button is depressed for over five seconds, all the LEDs will be lighted and the factory settings will be restored.

4.4 "WAN" menu

Specify the WAN connection parameters provided by your Internet Service Provider (ISP).

The SAGEM F@st[™] 1500 ADSL Router can be connected to your ISP in one of the following ways:

- ATM PVC (see section 4.4.1),
- Clone MAC (see section 4.4.2).

SAGEM			WAN Home Reset Logout
STATUS	WAN		
SETUP WIZARD	-	han an a	
SYSTEM	The router can	be connected to your service provider in any of the following ways:	
WAN	ATM PVC	To configure ATM VC parameters	
»VC1	Clone MAC	To configure WAN Interface MAC Address	
» VC2 » VC3			
» VC3			
» VC4			
» VC5			
» VC6 » VC7			
» VC7			
» VC8			
» Clone MAC Address			
LAN			
WIRELESS			
NAT			
FIREWALL			
ROUTE			
QoS			
ADVANCED			

4.4.1 ATM PVC

Enter ATM (Asynchronous Transfer Mode) function parameters here.

SAGEM				ATM Interface
			Home	Save and Reboot Reset Logout
STATUS	ATM Interface			
SETUP WIZARD				
SYSTEM		ATM1		
WAN	Protocol	PPPoA 🔽		
»VC1	VPI/VCI	8 / 35		
» VC2 » VC3	Encapsulation	VC MUX 🔽		
» VC3	QoS Class	UBR V		
» VC4	PCR/SCR/MBS	4000 / 4000 / 10		
» VC5 » VC6	IP assigned by ISP	Yes V		
» VC6				
» VC7	IP Address	0.0.0.0		
» VC8	Subnet Mask	0.0.0		
» Clone MAC Address	Connect Type	Always Connected		
LAN	Idle Time (Minute)	20		
WIRELESS				
NAT	Username	sagem		
FIREWALL	Password	••		
ROUTE	Confirm Password	••		
QoS	мти	1500		
ADVANCED				
				Help Apply Cancel

Parameter		Description			
Protocol	• 1483 Bridging		Disables the ATM mode.		
			Bridging: Bridging is a standardized layer 2 technology. It is typically used in corporate networks to extend the physical reach of a single LAN segment and increase the number of stations on a LAN without compromising performance. Bridged data is encapsulated using the RFC1483 protocol to enable data transport.		
	• PPPoA:		Point-to-Point over ATM		
	• 1483 Rou	ting	Use 1483 Routing protocol.		
	• PPPoE		Point-to-Point over Ethernet.		
	MAC Enc Routing	apsulated	MAC Encapsulated Routing		
VPI/VCI		Identifier (VPI) and Virtual Circuit Identifier (VCI).Each connection must have a of VPI/VCI settings.			
Encapsulation	Specifies h	ow to handle multiple protocols at the ATM transport layer.			
	• VC-MUX	Point-to-Point Protocol over ATM Virtual Circuit Multiplexer (null encapsulation) allows only one protocol running per virtual circuit with less overhead.			
	• LLC	Point-to-Point Protocol over ATM Logical Link Control (LLC) allows multiple protocol running over one virtual circuit (using slightly more overhead).			
QoS	• CBR	Constant Bit Rate	e. It is used for voice application.		
	• VBR	Variable Bit Rate. It is used for video application.			
	• UBR	U nspecified B it R ate. It is used in Best Effort for IP and Ethernet (for Data Application)			
PCR/SCR/MBS	• PCR	Peak Cell Rate.			
	• SCR	Sustainable Cell	Rate.		
	• MBS	Maximum Burst Size.			

4 - Configuring the SAGEM F@st™ 1500 ADSL router

IP assigned by ISP	Click Yes or No to assign or no IP address to your ISP				
IP Address	IP address of the ATM interface.				
Subnet Mask	Subnet mask of the ATM interface.				
Connect Type	Always connected Your router is always connected to the WAN (automatic mo				
	Auto - Triggered by traffic Your router only connect to WAN when traffic is on (autor mode).				
	•Manual - Start in Disconnected When your router start, this is disconnected to WAN mode).				
	Manual - Start in Disconnected When your router start, this is connected to WAN (Manumode).				
	• Manual - Start in Last State	When your router start, this connect to WAN in last stated (Manual mode).			
Idle Time (Minute)	Enter the maximum idle time for t connection will be terminated.	Enter the maximum idle time for the Internet connection. After this time has been exceeded the connection will be terminated.			
Username	In the field it appears the usernan	ne that you entered during the SETUP WIZARD menu			
Password	In the field it appears the Passwo	rd that you entered during the SETUP WIZARD menu			
Confirm Password	In the field it appears the Confirm Password that you entered during the SETUP WIZARD menu				
Confirm Password	In the field it appears the Confirm Password that you entered during the SETUP WIZARD menu				
ΜΤυ	Specifies the maximum size of the payload data in IP packets as a number of bytes (1500 in general)				

The following parameters only appear in "**Routed**" mode that you can select in the "Protocol" field:

Default Gateway	Default gateway of the ATM interface.
DHCP Client	Check this box if your ISP assigns an IP to clients using DHCP.

4.4.2 Clone MAC

Some ISPs require you to register your MAC address with them. If this is the case, the MAC address of the SAGEM F@st[™] 1500 ADSL Router must be changed to the MAC address that you have registered with your ISP.

SAGEM	Clone MAC Address
SAGEINI	Home Save and Reboot Reset Logout
STATUS	Clone MAC Address
SETUP WIZARD	
SYSTEM	Some ISPs require you to register your MAC address with them. If you have done this, the MAC address of the Gateway must be changed to the MAC address that you supplied to your ISP.
WAN	
» VC1	WAN Interface MAC Address:
» VC2	O Use the Gateway's default MAC address 00:60:4C:3A:30:01
» VC3	
» VC4	Use this PC's MAC address 00:08:C7:25:AB:6B
» VC5	Enter a new MAC address manually:
» VC6 » VC7	00 : 08 : C7 : 25 : AB : 6B
» VC8	
» Clone MAC Address	Help Apply Cancel
LAN	
WIRELESS	
NAT	
FIREWALL	
ROUTE	
QoS	
ADVANCED	

4.5 LAN

Use the LAN menu to configure the LAN IP address and to enable the DHCP server for dynamic client address allocation.

SAGEM						LAN
			Home	Save and Reboot	Reset	Logout
STATUS	LAN					
SETUP WIZARD	You can enable DHCP to dynamically allocate IP address	as to your client BCs or	configure filtering fur	ctions based on specif	ic clients	or
SYSTEM	protocols. The router must have an IP address for the lo		configure intening fur	ctions based on specin	ic clients	01
WAN						
LAN	LAN IP					
» DNS						
WIRELESS						
NAT	IP Address	19216821				
FIREWALL	IF Add(655	132.100.2.1				
ROUTE	IP Subnet Mask	255.255.255.0				
QoS	DHCP Server	⊙ Enabled ○ Disabled				
ADVANCED						
	Lease Time	Two Days 💌				
	IP Address Pool			-		
	I Address Foor					
	Start IP	192.168.2.2				
	End IP	192.168.2.254				
	Domain Name					
				Help A	pply Ca	ancel

Parameter	Description
LAN IP	
IP Address	The IP address of the SAGEM F@st™ 1500 ADSL Router.
IP Subnet Mask	The subnet mask of the network.
DHCP Server	The SAGEM F@st™ 1500 ADSL Router comes with the DHCP function. To dynamically assign an IP address to client PCs, enable this function.
	Set the IP lease time. For home networks this may be set to Forever, which means there is no time limit on the IP address lease.
IP Address Pool	
Start IP	Specify the start IP address of the DHCP pool. Do not include the gateway address of the SAGEM F@st™ 1500 ADSL Router in the client address pool. If you change the pool range, make sure the first three octets match the gateway's IP address, i.e., 192.168.2.xxx
End IP	Specify the end IP address of the DHCP pool.
Domain Name	If your network uses a domain name, enter it here. Otherwise, leave this field blank.



Remember to configure your client PCs for dynamic address allocation (See section **3.1** for details).

In this menu is included the following sub-menu:

➢ DNS (see section 4.5.1).

4.5.1 DNS

Domain Name Servers (DNS) are used to map a domain name (e.g., <u>www.sagem.com</u>) with the IP address (e.g., **212.234.211.50**). Your ISP should provide the IP address of one or more Domain Name Servers.

Enter those addresses on this page, and click "Apply".

SAGEM	DN Home Save and Reboot Reset Logout
STATUS	DNS
SETUP WIZARD	
SYSTEM	A Domain Name Server (DNS) is an index of IP addresses and Web addresses. If you type a Web address into your browser, such as www.sagem.com, a DNS server will find that name in its index and find the matching IP address: xxx.xxx.xxx. Most ISPs provide a DNS
WAN	server for speed and convenience. Since your Service Provider may connect to the Internet with dynamic IP settings, it is likely that the
LAN	DNS server IP's are also provided dynamically. However, if there is a DNS server that you would rather use, you need to specify the IP address here.
» DNS	
WIRELESS	
NAT	Domain Name Server (DNS) Address
FIREWALL	Secondary DNS Address (optional)
ROUTE	
QoS	
ADVANCED	
	[Help] [Apply] [Cancel]

4.6 Wireless

The SAGEM F@st[™] 1500 ADSL Router also operates as a wireless access point, allowing wireless computers to communicate with each other. To configure this function, all you need to do is enable the wireless function, define the radio channel, the domain identifier, and the security options. Check **Enable** and click "**Apply**".

SAGEM	WIRELESS
STATUS	WIRELESS
SETUP WIZARD	The gateway can be quickly configured as an wireless access point for roaming clients by setting the service set identifier (SSID) and
SYSTEM	channel number. It also supports data encryption and client filtering.
WAN	
LAN	Enable or disable Wireless module function : ③ Enable
WIRELESS	
» Channel and SSID	Help Apply Cancel
» Access control	
» Security	
» WEP	
» WPA	
» 802.1X	
NAT	
FIREWALL	
ROUTE	
QoS	
ADVANCED	

In this menu is included the following sub-menus:

- Channel and SSID (see section 4.6.1),
- Access control (see section 4.6.2),
- Security (see section 4.6.3),
- \blacktriangleright WEP (see section 4.6.4),
- ➢ WPA setting (see section 4.6.5),
- ➢ 802.x (see section 4.6.6).

4.6.1 Channel and SSID

You must specify a common radio channel and SSID (Service Set ID) to be used by the SAGEM F@st[™] 1500 ADSL Router and all of its wireless clients. Be sure you configure all of its clients to the same values.

SAGEM				Home	Cha Save and Rebo	nnel and ot Reset	d SSID Logout
STATUS	Channel and SSID						
SETUP WIZARD							
SYSTEM		fine SSID and Channel ID for wir se parameters are used for the				an also act as	an
WAN							
LAN		SSID	SAGEM				
WIRELESS		0070 0 1					
» Channel and SSID		SSID Broadcast	● ENABLE ○ DISABLE				
» <u>Access control</u>		Wireless Mode	Mixed (11b+11g) 🔽				
» Security		Channel	Auto 🗸				
» WEP		Charmer	Auto				
» WPA							
» 802.1X					He	p Apply C	ancel
NAT							
FIREWALL							
ROUTE							
QoS							
ADVANCED							

Parameter	Description
SSID	Service Set ID. The ESSID must be the same on the SAGEM F@st™ 1500 ADSL Router and all of its wireless clients.
SSID Broadcast	Enable or disable the broadcasting of the SSID.
Wireless Mode	This device supports both 11g and 11b wireless networks. Make your selection depending on the type of wireless network that you have.
Channel	The radio channel used by the wireless router and its clients to communicate with each other. This channel number must be the same on the ADSL Router and all of its wireless clients.

4.6.2 Access Control

Access Control allows users to define the outgoing traffic permitted or not-permitted through the Wi-Fi interface. The default is to permit all outgoing traffic.

The following items are on the Access Control screen:

SAGEM										ess C	
						ŀ	lome		Save and Reboot	Reset	Logou
STATUS	Access Control										
SETUP WIZARD	For a more secure Wireless	s network you can specif	y tha	t or	ily ce	ertai	in Wir	eless	PCs can connect t	to the Ac	cess
SYSTEM	Point. Up to 32 MAC addre	For a more secure Wireless network you can specify that only certain Wireless PCs can connect to the Access Point. Up to 32 MAC addresses can be added to the MAC Filtering Table. When enabled, all registered MAC addresses are controlled by the Access Rule.									
VAN	addresses are controlled b	y the access Rule.									
AN VIRELESS	• Enable MAC Filterin	. Enable MAC Filtering : ○Yes ④No									
Channel and SSID	Anna Pula farma	Access Bule for registered MAC address :Alleu@Deeu									
Access control	• Access Rule for registered MAC address : ○ Allow ③ Deny										
Security	 MAC Filtering Table 	e (up to 32 stations)									
WEP	ID		MAC	۰ ۵ ri	ldres:	<					
WPA 802.1X	1	00 : 00 :	00	-	00].[00	: 00			
NAT	2		00	-	00].[: 00	-		
IREWALL				_					_		
OUTE	3		00		00]:[: 00			
205	4		00	-	00			: 00			
ADVANCED	5		00	-	00			: 00			
	6	00 : 00 :	00	:	00	:	00	: 00			
	7	00 : 00 :	00	:	00] • [00	: 00			
	8	00 : 00 :	00	:	00] . [00	: 00			
	9	00 : 00 :	00	:	00]:[00	: 00			
	10	00 : 00 :	00	:	00] [00	: 00			
	11		00	1.	00	1.[: 00	_		
	12		00	-	00] [_	: 00			
	13		00	-	00].[_	: 00	_		
	14		00	_	00] : [: 00	-		
								-	_		
	15		00		00]:[: 00	_		
	16		00	-	00			: 00	_		
	17	00 : 00 :	00	:	00		00	: 00			
	18	00 : 00 :	00	:	00	:	00	: 00			
	19	00 : 00 :	00	:	00		00	: 00			
	20	00 : 00 :	00	:	00]:[00	: 00			
	21	00 : 00 :	00	:	00] : [00	: 00			
	22	00 : 00 :	00	:	00]:[00	: 00			
	23	00 : 00 :	00	1.	00] [: 00			
	24		00	-	00	1.[_	: 00			
	25		00		00] : [: 00			
	26		00		00] [: 00			
	20		00	-	00] [: 00			
				-			_				
	28		00	-	00]:[_	: 00			
	29		00	_	00]:[: 00			
	30		00		00			: 00			
	31	00 : 00 :	00	_	00			: 00			
	32	00 : 00 :	00	:	00] : [00	: 00			
		Add currently	asso	ciate	ed M4	AC st	tations	;			
									Help /	Apply 0	Cancel

Click Yes to turn on the filtering function, or No to disable this function.



If you have enabled this function, you can enter the client MAC addresses that you want to filter. (You can give up to 32 client stations).

4.6.3 Security

To make your wireless network safe, you should turn on the security function. The SAGEM F@st[™] 1500 ADSL Router supports WEP (Wired Equivalent Privacy), WPA (Wi-Fi Protected), and 802.1x security mechanisms.

SAGEM	
SAGEM	Home Save and Reboot Reset Logout
STATUS	Security
SETUP WIZARD	
SYSTEM	The router can transmit your data securely over the wireless network. Matching security mechanisms must be setup on your router and wireless client devices. You can choose the allowed security mechanisms in this page and configure them in the sub-pages.
WAN	
LAN	Allowed Client Type: No WEP, No WPA
WIRELESS	
» Channel and SSID	
» Access control	Help Apply Cancel
» Security	
» WEP	
» WPA	
» 802.1X	
NAT	
FIREWALL	
ROUTE	
QoS	
ADVANCED	

4.6.4 WEP

If you want to use WEP to protect your wireless network, you need to set the same parameters for the SAGEM F@st[™] 1500 ADSL Router and all your wireless clients.

SAGEM				Home	Save and Reboot	Reset	WEP
STATUS	WEP						^
SETUP WIZARD							
SYSTEM	WEP is the basic mechanism to transm router and wireless client devices to us		securely over the wireless network.	Matching enc	ryption keys must be se	etup on yo	our
WAN							
LAN	WEP Mode	📀 64-bit	🔿 128-bit				
WIRELESS	Key Entry Method	• Hex	OASCII				
» Channel and SSID » Access control	Key Provisioning	 Static 	ODynamic				
» Security	Key Herbiering	Ostatio	Obynamie				
» WEP	Static WEP Key Setting						
» WPA	Static wep key setting						
» 802.1X	10/26 hex digits for 64-WEP/128-WEP						
NAT							=
FIREWALL ROUTE	Default Key ID						
QoS	Passphrase		(1~32 charac	cters)			
ADVANCED	Key 1	0101010101					
	Key 2	0202020202					
	Кеу З	0303030303					
	Key 4	0404040404					
		Clear					
					Help ,	Apply Ci	ancel
							*

Parameter	Description
WEP Mode Key Provisioning	Select 64 bit or 128 bit key to use for encryption.
	Select Static if there is only one fixed key for encryption. If you want to select Dynamic, you would need to enable 802.1x function first.

You may automatically generate encryption keys or manually enter the keys. To generate the key automatically with passphrase, check the Passphrase box, enter a string of characters. Select the default key from the drop down menu. Click "**Apply**".



The passphrase can consist of up to 32 alphanumeric characters. To manually configure the encryption key, enter five hexadecimal pairs of digits for each 64-bit key, or enter 13 pairs for the single 128-bit key (A hexadecimal digit is a number or letter in the range 0-9 or A-F). Note that WEP protects data transmitted between wireless nodes, but does not protect any transmissions over your wired network or over the InternetSAGEM @st[™] 1500 ADSL Router using Internet Explorer 5.0 or above.

4.6.5 WPA

Wi-Fi **P**rotected **A**ccess (**WPA**) combines **T**emporal **K**ey Integrity **P**rotocol (**TKIP**) and 802.1x mechanisms. It provides dynamic key encryption and 802.1x authentication service.

SAGEM		Home Save and Reboot Reset Logout
STATUS	WPA	
SETUP WIZARD	WPA	
	WPA is a security enhancement that strongly increases the level of data protection and	
SYSTEM	authentication and encryption methods must be setup on your router and wireless client	devices to use WPA.
WAN		
LAN	Cypher suite TKIP 💌	
WIRELESS	Authentication 0802.1X OPre-shared Key	
» Channel and SSID		
» Access control » Security	Pre-shared key type OPassphrase (8~63 characters) OHex (64 digits)	
» WEP		
» WPA	Pre-shared Key	
» 802.1X	• Per 86400 Seconds	
NAT	Group Key Re_Keying Oper 1000 K Packets	
FIREWALL	ODisable	
ROUTE		
QoS		Help Apply Cancel
ADVANCED		

Parameter	Description				
Cypher suite	The security mechanism used in WPA for encryption.				
Authentication	Choose 802.1X or Pre-shared Key to use as the authentication method.				
•802.1X: for the enterprise network v		for the enterprise network with a RADIUS server.			
	•Pre-shared key	for the SOHO network environment without an authentication server.			
Pre-shared key type	Select the key type to be used in the Pre-shared Key.				
Pre-shared Key	Type in the key here.				
Group Key Re-Keying	The period of renewing broadcast/multicast key.				

4.6.6 802.1X

If 802.1X is used in your network, then you should enable this function for the SAGEM F@st[™] 1500 ADSL Router.

SAGEM	802.1X
SAGEIWI	Home Save and Reboot Reset Logout
STATUS	802.1X
SETUP WIZARD	This page allows you to set the 802.1X, a method for performing authentication to wireless connection. These parameters are used for
SYSTEM	this access point to connect to the Authentication Server.
WAN	
LAN	802.1X Authentication 🔿 Enable 💿 Disable
WIRELESS	Session Idle Timeout 300 Seconds (0 for no timeout checking)
» Channel and SSID	Session Idle Timeout 300 Seconds (0 for no timeout checking)
» Access control » Security	Re-Authentication Period 3600 Seconds (0 for no re-authentication)
» WEP	Quiet Period 60 Seconds after authentication failed
» WPA	
» 802.1X	Server Type RADIUS
NAT	RADIUS Server Parameters
FIREWALL	
ROUTE	Server IP 192 , 168 , 2 , 1
QoS	Server Port 1812
ADVANCED	Server Port 1812
	Secret Key
	NAS-ID
	Help Apply Cancel

Parameter	Description				
802.1X					
802.1X Authentication	Enable or disable this authentication function.				
Session Idle timeout	Defines a maximum period of time for which the connection is maintained during inactivity.				
Re-Authentication Period	Defines a maximum period of time for which the authentication server will dynamically re-assign a session key to a connected client.				
Quiet Period	Defines a maximum period of time for which the SAGEM F@st™ 1500 ADSL Router will wait between failed authentications.				
Server Type	Select TINY or RADIUS as the authentication server.				
RADIUS Server Paran	neters				
Server IP	The IP address of your authentication server.				
Server Port	The port used for the authentication service.				
Secret Key	The secret key shared between the authentication server and its clients.				
NAS-ID	Defines the request identifier of the Network Access Server.				
TINY Server Users Profile (up to 10 users)	The Tiny Encryption Algorithm is used to encrypt the password with a randomly generated number sent by the server.				
Index	Check the box of the user you wish to modify.				
Username	Defines the user name of clients.				
Password	Set the single-use password for the clients.				
Re-Type Password	Confirm your password.				
New	Create a new Tiny service account.				
Clear	Clear the profile settings.				

4.7 NAT

Network Address Translation allows multiple users to access the Internet sharing one public IP.

SAGEM	
SAGEIN	Home Save and Reboot Reset Logout
STATUS	NAT
SETUP WIZARD	And an a second star with the second star as a second star to be a second star to be started as the second started star
SYSTEM	Network Address Translation (NAT) allows multiple users at your local site to access the Internet through a single public IP address or multiple public IP addresses. NAT can also prevent hacker attacks by mapping local addresses to public addresses for key services such as
WAN	the Web or FTP.
LAN	Enable or disable NAT module function : ③Enable ①Disable
WIRELESS	Enable of disable NAT module function : Cenable O Disable
NAT	
» Address Mapping	Help Apply Cancel
» Virtual Server	
» Special Application	
» NAT Mapping Table	
FIREWALL	
ROUTE	
QoS	
ADVANCED	

In this menu is included the following sub-menus:

- Address Mapping (see section 4.7.1),
- Virtual Server (see section 4.7.2),
- Special Application (see section 4.7.3),
- > NAT Mapping Table (see section 4.7.4).

4.7.1 Address Mapping

This feature allows one or more public IP addresses to be shared by multiple internal users. This also hides the internal network for increased privacy and security. Enter the Public IP address you wish to share into the Global IP field. Enter a range of internal IPs that will share the global IP into the "from" field.

SAGEM			Address Mapping
SAGEIW		Home	Save and Reboot Reset Logout
STATUS	Address Mapping		
SETUP WIZARD		ate local network to be mapped to one or more addresses used in the public, global Internet. This	
WAN	addresses required from the ISP and also maintains the privacy and s	acurity of the local network. We allow one or more than one public IP address to be mapped to a	Jool of local addresses.
LAN	Address Mapping		
WIRELESS	1. Global IP: is transformed as multiple virtual I	25	
NAT	from to		
» Address Mapping » Virtual Server			
Special Application	2. Global IP: is transformed as multiple virtual I	⁰ 5	
NAT Mapping Table	from to		
FIREWALL ROUTE	3. Global IP: is transformed as multiple virtual I	2s	
QoS	from to		
ADVANCED	4. Global IP: is transformed as multiple virtual II	26	
		°	
	from to		
	5. Global IP: is transformed as multiple virtual I	0g	
	from to		
	6. Global IP: is transformed as multiple virtual I	os	
	from to		
	7. Global IP: is transformed as multiple virtual I	25	
	from to		
	8. Global IP: is transformed as multiple virtual I	24	
		°2	
	from to		
	9. Global IP: is transformed as multiple virtual I	^b s	
	from to		
	10. Global IP: is transformed as multiple virtual	IPs	
	from to		
			Help Apply Cancel

4.7.2 Virtual Server

If you configure the SAGEM F@st[™] 1500 ADSL Router as a virtual server, remote users accessing services such as web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP addresses. In other words, depending on the requested service (TCP/UDP port number), the SAGEM F@st[™] 1500 ADSL Router redirects the external service request to the appropriate server (located at another internal IP address).

SAGEM							Virtual Serv
SAGEM						Home	Save and Reboot Reset Logo
TATUS ETUP WIZARD YSTEM	Virtual Server	as a virtual server so that ren	note users accessing services su is, depending on the requested s	ich as the Web or FTP at :	your local site via public IP a	addresses can be automatic	ally redirected to local
AN AN	server (located at another in For example:	ternal IP address). This tool ca	an support both port ranges, mu	Itiple ports, and combination	ons of the two.		
rIRELESS A T Address Mapping Airtual Server Special Application	 Port Ranges: ex. 100-1 Multiple Ports: ex. 25,1 Combination: ex. 25-10 	10,80					
NAT Mapping Table	No.	LAN IP Address	Protocol Type	LAN Port	Public Port	Enable	
IREWALL	1		TCP				Add Clean
OUTE	2		TCP 💌				Add Clean
oS DVANCED	3		TCP 💌				Add Clean
DVANCED	4		TCP V				Add Clean
	5		TCP 🔽				Add Clean
	6		TCP 💌				Add Clean
	7		TCP 🔽				Add Clean
	8		TCP 🗸				Add Clean
	9		TCP 🗸				Add Clean
	10		TCP 💌				Add Clean
	11		TCP 💙				Add Clean
	12		TCP 💌				Add Clean
	13		TCP				Add Clean
	14		TCP V				Add Clean
	15		TCP V				Add Clean
	16		TCP				Add Clean
	17		TCP V				Add Clean
	18		TCP V				Add Clean
	19		TCP V				Add Clean
	20		TCP V				Add Clean Help Can

For example, if you set Type/Public Port to TCP/80 (HTTP or web) and the Private IP/Port to 192.168.2.2/80, then all HTTP requests from outside users will be transferred to 192.168.2.2 on port 80. Therefore, by just entering the IP address provided by the ISP, Internet users can access the service they need at the local address to which you redirect them. The more common TCP service ports include: HTTP: 80, FTP: 21, Telnet: 23, and POP3: 110. A list of ports is maintained at the following link: http://www.iana.org/assignments/port-numbers.

4.7.3 Special Application

TATUS	Spec	ial Application				
ETUP WIZARD YSTEM VAN	Some enable enter	applications require mult d. If you need to run ap the public ports associa	tiple connections, such as Interr pplications that require multiple c tted with the trigger port to oper er Ports is from 1 to 65535.	et gaming, video conferencing, Intarnet telephony and others. T ornections, specify the port normally associated with an applica them for inbound traffic.	hese applications cannot work when Network tion in the "Trigger Port" field, select the pro	: Address Translation (NAT) is tocol type as TCP or UDP, then
/IRELESS		Trigger Port	Trigger Type	Public Port	Public Type	Enabled
I A T Address Mapping Virtual Server	1.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
Special Application NAT Mapping Table IREWALL	2.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
OUTE oS	з.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
DVANCED	4.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	5.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	6.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	7.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	8.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	9.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	10.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
		Popular applications	-selectione - V COPY	то		

Some applications require multiple connections, such as Internet gaming, video-conferencing, and Internet telephony.

SAGEM						Special Application
SAGEN					Home	Save and Reboot Reset Logo
TATUS EETUP WIZARD EYSTEM VAN	Some ap enabled enter th	. If you need to run ap the public ports associat	iple connections, such as Intern plications that require multiple c ed with the trigger port to open Ports is from 1 to 6555.	onnections, specify the port normally associated wi	and others. These applications cannot work when Netw th an application in the "Trigger Port" field, select the p	ork Address Translation (NAT) is rotocol type as TCP or UDP, then
AN /IRELESS		Trigger Port	Trigger Type	Public Port	Public Type	Enabled
A T Address Mapping Virtual Server	1.		⊙ TCP ○ UDP		⊙ tcp ⊖ udp	0
ipecial Application IAT Mapping Table REWALL	2.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
DUTE	з.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
OVANCED	4.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	5.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	6.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	7.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	8.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
	9.		⊙ TCP ○ UDP		⊙ tcp ⊖ udp	
	10.		⊙ TCP ○ UDP		⊙ TCP ○ UDP	
		Popular applications	-select one - COPY -select one - Bottle.net Dialpad ICU II MSN Gaming Zone	TO V		Help Apply Cancel
			MSN Gaming Zone PC-to-Phone Quick Time 4			

These applications may not work when **N**etwork **A**ddress **T**ranslation (**NAT**) is enabled. If you need to run applications that require multiple connections, use these pages to specify the additional public ports to be opened for each application.

4.7.4 NAT Mapping Table

SAGEM		ping Table Reset Logout
STATUS SETUP WIZARD SYSTEM WAN LAN WIRELESS NAT > Address Mapping > Virtual Server > Special Application > NAT Mapping Table FIREWALL ROUTE QoS ADVANCED	NAT Mapping Table NAT Mapping Table displays the current NAPT address mappings. Index Protocol Local IP Local Port Pseudo IP Pseudo Port Peer IP Peer Port Refresh	Help

4.8 Firewall

The SAGEM F@st[™] 1500 ADSL Router's firewall inspects packets at the application layer, maintains TCP and UDP session information including time-outs and the number of active sessions, and provides the ability to detect and prevent certain types of network attacks.

SAGEM	FIREWALL
STATUS	FIREWALL
SETUP WIZARD	
SYSTEM	The Device provides extensive firewall protection by restricting connection parameters to limit the risk of hacker attack, and defending against a wide array of common attacks. However, for applications that require unrestricted access to
WAN	the Internet, you can configure a specific client/server as a demilitarized zone (DMZ).
LAN	
WIRELESS	Enable or disable Firewall features : 💿 Enable 🔿 Disable
NAT	
FIREWALL	Help Apply Cancel
» Access Control	
» MAC Filter	
» URL Blocking	
» Schedule Rule	
» Intrusion Detection	
» DMZ	
ROUTE	
QoS	
ADVANCED	

Network attacks that deny access to a network device are called **D**enial-**o**f-**S**ervice (**DoS**) attacks. DoS attacks are aimed at devices and networks with a connection to the Internet. Their goal is not to steal information, but to disable a device or network so users no longer have access to network resources.

The SAGEM F@st[™] 1500 ADSL Router protects against the following DoS attacks: IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP port loopback, Snork Attack, TCP null scan, and TCP SYN flooding. (See section 4.8.5 for details).

The firewall does not significantly affect system performance, so we advise leaving it enabled to protect your network. Select **Enable** and click the "**Apply**" to open the Firewall submenus.

In this menu is included the following sub-menus:

- Access Control (see section 4.8.1),
- MAC Filter (see section 4.8.2),
- URL Blocking (see section 4.8.3),
- Schedule Rule (see section 4.8.4),
- Intrusion Detection (see section 4.8.5),
- DMZ (see section 4.8.6).

4.8.1 Access Control

Access Control allows users to define the outgoing traffic permitted or not-permitted through the WAN interface. The default is to permit all outgoing traffic.

SAGEM						Acc	cess Cor	ntrol
SAGEINI					Home Sa	ve and Reboot	Reset Lo	ogout
STATUS	Access Contro	4						
SETUP WIZARD								
SYSTEM	Access Control allov includes IP address			permitted or not-pe	ermitted to WAN	l port service. 1	This page	
WAN								
LAN	 Enable Filter 	ing Function :	💿 Yes \mid 🔘 No					
WIRELESS	. Inbound Defa	ault Rules :						
NAT								
FIREWALL	Enable	Serv	rice					
» Access Control		RIP (UDP 520)						
» MAC Filter		BOOTP (UDP 67)						
» URL Blocking								
» Schedule Rule	. Normal Filter	ing Table (up to	10 computers)					
» Intrusion Detection			,					
» DMZ ROUTE	Client PC	Client PC IP Address		Client Service		Schedule Rule	Configure	
QoS	Description	Address	No. No.	d Filtering Rule !!		Rule	-	
ADVANCED			NU Vali	u Filtering Rule !!	•			
	Add PC							
						Help	Apply Canc	el

The following items are on the Access Control screen:

Parameter	Description				
Enable Filtering Function	Click Yes to turn on the filtering function.				
Normal Filtering Table	Displays the IP address (or an IP address range) filtering table.				

To add the PC to the filtering table:

- 1) Click "Add PC" on the Access Control screen.
- 2) Define the appropriate settings for client PC services.
- 3) Click "OK" and then click "SAVE SETTINGS" to save your settings.

SAGEM			Access Cor	trol Add PC
		Home	Save and Reboot	Reset Logout
STATUS	Access Control Add PC			
SETUP WIZARD	This page allows users to define as	ervice limitations of client PCs, including	. ID address, service tu	
SYSTEM	scheduling rule criteria. For the UR	L blocking function, you need to config	jure the URL address firs	t on the "URL
WAN	Blocking Site" page. For the sched "Schedule Rule" page.	uling function, you also need to config	ure the schedule rule firs	st on the
LAN	Schedule kule page.			
WIRELESS	Client PC Description:			
NAT				
FIREWALL	Client PC IP Address:	~		
» Access Control	Client PC Service:			
» MAC Filter » URL Blocking	Service Name	Detail Description		Blocking
» ORL BIOCKING » Schedule Rule	www	HTTP, TCP Port 80, 3128, 8000, 8	001, 8080	
» Intrusion Detection	WWW with URL Blocking	HTTP (Ref. URL Blocking Site Page)	
» DMZ	E-mail Sending	SMTP, TCP Port 25	/	
ROUTE	News Forums	NNTP, TCP Port 119		
QoS	E-mail Receiving	POP3, TCP Port 110		
DVANCED	Secure HTTP	HTTPS, TCP Port 443		
	File Transfer	FTP, TCP Port 21		
	Telnet Service	TCP Port 23		
	AIM	AOL Instant Messenger, TCP Port	5190	
	NetMeeting	H.323, TCP Port 1720, 1503		
	DNS	UDP Port 53		
	SNMP	UDP Port 161, 162		
	VPN-PPTP	TCP Port 1723		
	VPN-L2TP	UDP Port 1701		
	тср	All TCP Port		
	UDP	All UDP Port		
	User Define Service			
	Protocol: O TCP O UDP Port Range: 0 ~ 0 Clear	, 0 ~ 0 , 0 ~ 0 ,	0 ~ 0 , 0	~ 0
	. Schedding Kure (Kel. SChe	OK Cancel		

4.8.2 MAC Filter

The SAGEM F@st[™] 1500 ADSL Router can also limit the access of hosts within the local area network (LAN). The MAC Filtering Table allows the SAGEM F@st[™] 1500 ADSL Router to enter up to 32 MAC addresses that are not allowed access to the WAN port.

🚫 SAGEM									MAC Filte
SAGEW							Home	Save and Reboot	Reset Logout
TATUS	MAC Filter								
ETUP WIZARD	This section helps	nrovides MAC P	ilter confic	uration	When	i enable	d. only M	C addresses configu	red will have
YSTEM	access to your ne	twork. All other						security feature car	
VAN	32 devices and ap	plies to clients.							
AN	. MAC Addre	ss Control :	O Yes) No					
IRELESS									
AT	• MAC Filteri	ng Table (up to	32 comp	uters)					
IREWALL		ID			M	IAC Add	ress		
Access Control MAC Filter		1	:		:	:	:	:	
JRL Blocking		2			. [
Schedule Rule									
ntrusion Detection		3	:		: _	_:		_:	
DMZ		4			:	_ :	:	:	
DUTE		5	:		:	:			
oS		6			:	:			
DVANCED		7	:		:	:		· ·	
		8			: [- .			
		9					:		
		10							
					:		:		
		11			:	_ :	:	_:	
		12	:		:	:	:		
		13	:		:	:		:	
		14	:			:	:	:	
		15				:		:	
		16			: [-	•		
		17							
		18			:		:	_:	
		19			• L_	:	!		
		20	:		•	:	:	:	
		21	:		:	:	:		
		22	:		:	:		:	
		23				- - -			
		24							
		25							
					:	: [
		26		닏	: _	_:		_:	
		27			:	_ :	:	_:	
		28	:		:	:			
		29	:		:	:	• [:	
		30	:		:	:	:	:	
		31	<u> </u>		. [- - -			
		32							
		HCP Client List:					·	сору то 1 🗸	
						10331	-		

Click **Yes** to enable, or **No** to disable this function.

Enter the MAC address in the space provided.

4.8.3 URL Blocking

The SAGEM F@st[™] 1500 ADSL Router allows the user to block access to web sites from a particular PC by entering either a full URL address or just a keyword. This feature can be used to protect children from accessing violent or pornographic web sites.

URL Blocking Disallowed Web Sites a	nd Keyv			Home	Save and Reboot	Reset	Logout
Disallowed Web Sites a	nd Keyv						
Disallowed Web Sites a	nd Keyv						
	nd Keyv						
	na koyv	vords					
		vorus.					
		in Web sites from a partic	cular PC b	y enteri	ing either a full URL addre	ss or just	a
keyword of the web sit	е.						
			introl" pag	e and o	check the box for "Http w	ith URL	
Blocking"in the "Normal	Filtering	j Table".					
Rule Nun	nber	URL / Keyword	Rule Nur	nber	URL / Keyword		
Site	1		Site	16			
Site	2		Site	17			
Site	3		Site	18			
Site	7		Site :	22			
Site	8		Site :	23			
Site	9		Site :	24			
Site :	10		Site :	25			
Site :	11		Site :	26			
Site :	12		Site :	27			
Site	13		Site :	28			
Site :	15		Site	50			
		Cle	ar All				
					Help A	Apply Ca	ancel
	keyword of the Web sit To specify the particula Blocking"in the "Normal Site Site Site Site Site Site Site Site	keyword of the Web site. To specify the particular PC, g	keyword of the Web site. To specify the particular PC, go back to the "Access Construction Table". Rule Number URL / Keyword Site 1	Rule Number URL / Keyword Rule Num Site 1 Site 3 Site 3 Site 3 Site 3 Site 3 Site 4 Site 3 Site 3 Site 5 Site 3 Site 3 Site 6 Site 3 Site 3 Site 7 Site 3 Site 3 Site 7 Site 3 Site 3 Site 8 Site 3 Site 3 Site 9 Site 3 Site 3 Site 10 Site 3 Site 3 Site 11 Site 3 Site 3 Site 12 Site 3 Site 3 Site 13 Site 3 Site 3	keyword of the Web site. To specify the particular PC, go back to the "Access Control" page and of Blocking"in the "Normal Filtering Table". Rule Number URL / Keyword Rule Number Site 1 Site 16 Site 17 Site 2 Site 17 Site 18 Site 3 Site 19 Site 19 Site 4 Site 20 Site 21 Site 6 Site 21 Site 22 Site 7 Site 23 Site 24 Site 9 Site 23 Site 24 Site 10 Site 25 Site 26 Site 11 Site 27 Site 28 Site 13 Site 29 Site 29 Site 14 Site 29 Site 30	Rule Number URL / Keyword Rule Number URL / Keyword Site 1	Number URL / Keyword Rule Number URL / Keyword Site 1 Site 16 Site 17 Site 3 Site 17 Site 13 Site 4 Site 19 Site 10 Site 7 Site 21 Site 21 Site 7 Site 22 Site 23 Site 8 Site 23 Site 24 Site 9 Site 25 Site 24 Site 10 Site 26 Site 26 Site 12 Site 12 Site 10 Site 13 Site 26 Site 21 Site 14 Site 23 Site 24 Site 15 Site 24 Site 24 Site 10 Site 25 Site 10 Site 12 Site 26 Site 10 Site 13 Site 28 Site 10 Site 14 Site 29 Site 24 Site 14 Site 29 Site 10 Site 15 Site 30 Site 30



You can define up to 30 sites here.

4.8.4 Schedule Rule

You may filter Internet access for local clients based on rules. Each access control rule may be activated at a scheduled time. Define the schedule on the Schedule Rule page, and apply the rule on the Access Control page.

				S	chedule	e Rule
SAGEM			Home	Save and Reboot	Reset	Logout
STATUS	Schedule Rule					
SETUP WIZARD						
SYSTEM	This page defines schedule ri	ule names and activates the schedule	for use in	n the "Access Contro	ol" page.	
WAN	 Schedule Rule Table ((up to 10 rules)				
LAN						_1
WIRELESS	Rule Name	Rule Commer	nt		Configure	
NAT		No Valid Schedule Rule	e !!!			
FIREWALL						
» Access Control	Add Schedule Rule					
» MAC Filter						
» URL Blocking						
» Schedule Rule				Help	Apply Ca	incel
» Intrusion Detection						
» DMZ						
ROUTE						
QoS						
ADVANCED						

Follow these steps to add a schedule rule:

- 1) Click "Add Schedule Rule".
- 2) Define the appropriate settings for a schedule rule (as shown in this example).
- 3) Click "OK" and then click "SAVE SETTINGS" to save your settings.

SAGEM			Edit Schedule				
SAGEM				Home	Save and Reboo	t Reset	Logout
STATUS	Edit Schedule R	ule					
SETUP WIZARD							
SYSTEM	Name:						
WAN							
LAN	Comment:						
WIRELESS	Activate Time Period:						
NAT							
FIREWALL		Week Day	Start Time (hh:mm) End	Time (hh:mm)		
» Access Control		Every Day			:		
» MAC Filter		Sunday			· ·		
» URL Blocking		Mondau					
» Schedule Rule		Monday					
» Intrusion Detection		Tuesday			:		
» DMZ ROUTE		Wednesday	:		:		
QoS		Thursday	:		:		
ADVANCED		Friday	:		:		
		Saturday	:		:		
			Apply Cancel				

4.8.5 Intrusion Detection

1) Intrusion Detection Feature

Stateful Packet Inspection (SPI) and Anti-DoS firewall protection (Default: Enabled) - The Intrusion Detection Feature of the SAGEM F@st™ 1500 ADSL Router limits access for incoming traffic at the WAN port. When the SPI feature is turned on, all incoming packets will be blocked except for those types marked in the Stateful Packet Inspection section.

RIP Defect (Default: Enabled) - If an RIP request packet is not acknowledged to by the router, it will stay in the input queue and not be released. Accumulated packets could cause the input queue to fill, causing severe problems for all protocols. Enabling this feature prevents the packets from accumulating.

Discard Ping to WAN (Default: Disabled) - Prevent a ping on the ADSL Router's WAN port from being routed to the network.

2) Stateful Packet Inspection

This is called a "stateful" packet inspection because it examines the contents of the packet to determine the state of the communications; i.e., it ensures that the stated destination computer has previously requested the current communication. This is a way of ensuring that all communications are initiated by the recipient computer and are taking place only with sources that are known and trusted from previous interactions. In addition to being more rigorous in their inspection of packets, stateful inspection firewalls also close off ports until connection to the specific port is requested.

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SAGEM		Intrusion Detection
		Home Save and Reboot Reset Logout
STATUS SETUP WIZARD	Intrusion Detection	
SYSTEM	When the SPI (Stateful Packet Inspection) firewall feature is er	abled, all nackets can be blocked. Stateful
WAN	Packet Inspection (SPI) allows full support of different application unders. For the applications checked in the list below, the De	on types that are using dynamic port
LAN	from the local LAN.	wice win support fun operation as initiated
WIRELESS	The Device firewall can block common hacker attacks, including	IP Spoofing, Land Attack, Ping of Death, IP
NAT	with zero length, Smurf Attack, UDP port loopback, Snork Attac	k, TCP null scan, and TCP SYN flooding.
FIREWALL	Intrusion Detection Feature	
» Access Control » MAC Filter	SPI and Anti-DoS firewall protection	
» URL Blocking	SPI and Anti-DoS firewall protection	_
» Schedule Rule	Discard Ping To WAN	-
» Intrusion Detection		
» DMZ	Stateful Packet Inspection	
ROUTE	Packet Fragmentation	
QoS ADVANCED	Packet Fragmentation	
	UDP Session	
	FTP Service	
	H.323 Service	
	TFTP Service	
	 When hackers attempt to enter your network, we can 	n alert you by e-mail
	Your E-mail Address :	
	SMTP Server Address :	
	POP3 Server Address :	
	User name :	
	Password :	
	Connection Policy	
	Fragmentation half-open wait: 10 secs	
	TCP SYN wait: 30 sec.	
	TCP FIN wait: 5 sec.	
	TCP connection idle timeout: 3600 sec.	
	UDP session idle timeout: 30 sec.	
	H.323 data channel idle timeout: 180 sec.	
	• DoS Detect Criteria:	
	Total incomplete TCP/UDP sessions HIGH: 300	session
	Total incomplete TCP/UDP sessions LOW: 250	session
	Incomplete TCP/UDP sessions (per min) HIGH: 250	session
	Incomplete TCP/UDP sessions (per min) LOW: 200	session
	Maximum incomplete TCP/UDP sessions number from same	host: 10
	Incomplete TCP/UDP sessions detect sensitive time period	: 300 msec.
	Maximum half-open fragmentation packet number from sa	ne host: 30
	Half-open fragmentation detect sensitive time period: 100	00 msec.
	Flooding cracker block time: 300 sec.	
		Help Apply Cancel

When particular types of traffic are checked, only the particular type of traffic initiated from the internal LAN will be allowed. For example, if the user only checks "**FTP Service**" in the Stateful Packet Inspection section, all incoming traffic will be blocked except for FTP connections initiated from the local LAN.

Stateful Packet Inspection allows you to select different application types that are using dynamic port numbers. If you wish to use the Stateful Packet Inspection (SPI) to block packets, click on the Yes radio button in the "Enable SPI and Anti-DoS firewall protection" field and then check the inspection type that you need, such as Packet Fragmentation, TCP Connection, UDP Session, FTP Service, H.323 Service, or TFTP Service.

3) When hackers attempt to enter your network, we can alert you by e-mail

Enter your email address.

Specify your SMTP and POP3 servers, user name, and password.

4) Connection Policy

Enter the appropriate values for TCP/UDP sessions as described in the following table.

Parameter	Defaults	Description
Fragmentation half-open wait	10 sec	Configures the number of seconds that a packet state structure remains active. When the timeout value expires, the router drops the unassembled packet, freeing that structure for use by another packet.
TCP SYN wait	30 sec	Defines how long the software will wait for a TCP session to synchronize before dropping the session.
TCP FIN wait	5 sec	Specifies how long a TCP session will be maintained after the firewall detects a FIN packet.
TCP connection idle timeout	3600 seconds (1 hour)	The length of time for which a TCP session will be managed if there is no activity.
UDP session idle timeout	30 sec	The length of time for which a UDP session will be managed if there is no activity.
H.323 data channel idle timeout	180 sec	The length of time for which an H.323 session will be managed if there is no activity.

5) DoS Criteria and Port Scan Criteria

Set up DoS and port scan criteria in the spaces provided (as shown below). Note: The firewall does not significantly affect system performance, so we advise enabling the prevention features to protect your network.

Parameter	Defaults	Description
Total incomplete TCP/UDP sessions HIGH	300 sessions	Defines the rate of new unestablished sessions that will cause the software to <i>start</i> deleting half-open sessions.
Total incomplete TCP/UDP sessions LOW	250 sessions	Defines the rate of new unestablished sessions that will cause the software to <i>stop</i> deleting halfopen sessions.
Incomplete TCP/UDP sessions (per min) HIGH	250 sessions	Maximum number of allowed incomplete TCP/UDP sessions per minute.
Incomplete TCP/UDP sessions (per min) LOW	200 sessions	Minimum number of allowed incomplete TCP/UDP sessions per minute.
Maximum incomplete TCP/UDP sessions number from same host	10	Maximum number of incomplete TCP/UDP sessions from the same host.
Incomplete TCP/UDP sessions detect sensitive time period	300 msec	Length of time before an incomplete TCP/UDP session is detected as incomplete.
Maximum half open fragmentation packet number from same host	30	Maximum number of half open fragmentation packets from the same host.
Half-open fragmentation detect sensitive time period	10000 msec	Length of time before a half-open fragmentation session is detected as half-open.
Flooding cracker block time	300 second	Length of time from detecting a flood attack to blocking the attack.

4.8.6 DMZ

If you have a client computer that cannot run an Internet application properly from behind the firewall, you can open the client up to unrestricted twoway Internet access. Enter the IP address of a **DMZ** (**DeM**ilitarized **Z**one) host on this screen. Adding a client to the **DMZ** may expose your local network to a variety of security risks, so only use this option as a last resort.

SAGEM		DMZ Home Save and Reboot Reset Logout
07.17110		
STATUS	DMZ	
SETUP WIZARD	If you have a local client PC that cannot run an Internet application pro	operly from behind the NAT firewall, then you can open the client up
SYSTEM	to unrestricted two-way Internet access by defining a Virtual DMZ Hos	
WAN		
LAN	Enable DMZ: 🔿 Yes 💿 No	
WIRELESS	Multiple PCs can be exposed to the Internet for two-way communicatio	ns e.g. Internet gaming, video conferencing, or VPN connections.
NAT	To use the DMZ, you must set a static IP address for that PC.	
FIREWALL		
» Access Control	Public IP Address	Client PC IP Address
» MAC Filter	1. 0.0.0.0	
» URL Blocking	2.	
» Schedule Rule	3.	
» Intrusion Detection	5.	
» DMZ	4.	
ROUTE	5.	
QoS	6.	
ADVANCED		
	7.	
	8.	
		Help Apply Cancel

4.9 Route

These pages define routing related parameters, including static routes and **RIP** (Routing Information **P**rotocol) parameters.

In this menu is included the following sub-menus:

- Static Route (see section 4.9.1),
- RIP (see section 4.9.2),
- Routing Table (see section 4.9.3).

4.9.1 Static Route

	Static Route Home Save and Reboot Reset Logout
STATUS Static Route SETUP WIZARD Please enter the following configuration parameters: SYSTEM Index Network Address Subnet Mask Gateway Config WAN Index Network Address Subnet Mask Gateway Config LAN No Valid Static Route Entry !!! WIRELESS NAT FIREWALL Add > Static Route Add > RIP Add > Routing Table QoS QOS ADVANCED	ure Help Apply Cancel

Click "Add" to add a new static route to the list, or check the box of an already entered route and click "Modify". Clicking "Delete" will remove an entry from the list.

SAGEM		Home	Save and Reboot	Static Reset	Route Logout
STATUS SETUP WIZARD SYSTEM WAN LAN WIRELESS NAT FIREWALL ROUTE > Static Route > RIP > Routing Table	Static Route Please enter the following configuration parameters: Index Network Address Subnet Mask Gateway Configure 1 N/A		Ныр	Apply) C	ancel
QoS ADVANCED					

Parameter	Description
Index	Check the box of the route you wish to delete or modify.
Network Address	Enter the IP address of the remote computer for which to set a static route.
Subnet Mask	Enter the subnet mask of the remote network for which to set a static route.
Gateway	Enter the WAN IP address of the gateway to the remote network.

4.9.2 RIP

SAGEM										RIP
SAGEM							Home	Save and Reboot	Reset	Logout
STATUS	RIP									
SETUP WIZARD	Discourse the the									
SYSTEM	Please enter the	e tollowing cont	iguration	parameters:						
WAN		(P parameter:								
LAN		te: 💿 Disable 🤇								
WIRELESS		′V: ⊙Disable (
NAT	. Table of c	urrent interface	e kie para	imeter:						
FIREWALL	Interface	Operation Mode	Version	Poison Reverse	Authentication Required	Authentication Code				
ROUTE » Static Route	LAN	Disable 🔽	1 🗸	Disable 🔽	None 🔽					
» RIP	WLAN	Disable 💙	1 🗸	Disable 💌	None 🗸					
» Routing Table	ATM1	Disable 🗸	1 🗸	Disable 🗸	None 🗸					
QoS	ATM2	Disable 🗸	1 🗸	Disable 🗸	None 🗸					
ADVANCED	ATM3		1	Disable V	None V					
		Disable 💙								
	ATM4	Disable 💌	1 💌	Disable 🚩	None 💌					
	ATM5	Disable 💌	1 💌	Disable 💙	None 💌					
	ATM6	Disable 🚩	1 💌	Disable 🚩	None 💌					
	ATM7	Disable 🚩	1 💌	Disable 💙	None 💌					
	ATM8	Disable 🔽	1 🔽	Disable 🔽	None 💌					
	PPPoE1	Disable 🚩	1 💌	Disable 💌	None 🖌					
	PPPoE2	Disable 💌	1 💌	Disable 💌	None 💌					
	PPPoE3	Disable 💌	1 💌	Disable 💌	None 💌					
	PPPoE4	Disable 🛩	1 🗸	Disable 🔽	None 💌					
	PPPoE5	Disable 💙	1 🗸	Disable 🗸	None 🗸					
	PPPoE6	Disable 🗸	1 🗸	Disable 🗸	None 🗸					
	PPPoE7	Disable 🗸	1 🗸	Disable 🗸	None 🗸					
	PPPoE8	Disable 🗸	1 🗸	Disable 🗸	None V					
	111000	Disquie			NUIR					
								Help .	Apply C	ancel

Parameter	Description				
General RIP Parame	ters				
RIP mode	Globally enables or disables RIP.				
Auto summary	If Auto summary is disabled, then RIP packets will include sub- network information from all subnetworks connected to the router. If enabled, this sub-network information will be summarized to one piece of information covering all subnetworks.				
Table of current Inte	rface RIP parameter				
Interface	The WAN interface to be configured.				
Operation Mode	Disable: RIP disabled on this interface.				
	• Enable: RIP enabled on this interface.				
	• Silent: Listens for route broadcasts and updates its route table. It does not participate in sending route broadcasts.				
Version	Sets the RIP (R outing Information P rotocol) version to use on this interface.				
Poison Reverse	A method for preventing loops that would cause endless retransmission of data traffic.				
Authentication Required	 None: No authentication. Password: A password authentication key is included in the packet. If this does not match what is expected, the packet will be discarded. This method provides very little security as it is possible to learn the authentication key by watching RIP packets. MD5: An algorithm that is used to verify data integrity through the creation of a 128-bit message digest from data input (which may be a message of any length) that is claimed to be as unique to that specific data as a fingerprint is to a specific individual. 				
Authentication Code	Password or MD5 Authentication key.				

RIP sends routing-update messages at regular intervals and when the network topology changes. When a router receives a routing update that includes changes to an entry, it updates its routing table to reflect the new route. RIP routers maintain only the best route to a destination. After updating its routing table, the router immediately begins transmitting routing updates to inform other network routers of the change.

4.9.3 Routing Table

SAGEM						
STATUS SETUP WIZARD	Routing T	able				
SYSTEM	The content (of run-time Routing Ta	able:			
WAN	Flags	Network Address	Netmask	Gateway	Interface	Metric
LAN	С	192.168.2.0	255.255.255.0	directly	LAN	
WIRELESS	C Elagori	127.0.0.1	255.255.255.255 ted, S - static, R - RI	directly	Loopback Podiroct	
NAT	riags .	C anocity connect	iou, o biallo, k - ki	-ji iomer	Concot	
FIREWALL						
ROUTE						
» Static Route						
» RIP						
» Routing Table						
QoS						
ADVANCED						

Parameter	Description			
Flags	Indicates the route status:			
	C = Direct connection on the same subnet.			
	S = Static route.			
	R = RIP (Routing Information Protocol) assigned route.			
	I = ICMP (Internet Control Message Protocol) Redirect route.			
Network Address	Destination IP address.			
Netmask	The subnetwork associated with the destination.			
	This is a template that identifies the address bits in the destination address used for routing to specific subnets. Each bit that corresponds to a "1" is part of the subnet mask number; each bit that corresponds to "0" is part of the host number.			
Gateway	The IP address of the router at the next hop to which frames are forwarded.			
Interface	The local interface through which the next hop of this route is reached.			
Metric	When a router receives a routing update that contains a new or changed destination network entry, the router adds 1 to the metric value indicated in the update and enters the network in the routing table.			

4.10 QoS

The QoS function allows users to classify traffic of applications and provides them differentiated services (Diffserv).

SAGEM							QoS	
SAGEINI				Home	Save and Reb	oot Reset	Logout	
STATUS	QoS S	Settings						
SETUP WIZARD								
SYSTEM			ween LAN and WAN may sign uch as VoIP, gaming, and VPI				cify	
WAN			nd provides them with differe				sity	
LAN								
WIRELESS	Enable	Enable or disable OoS module function : O Enable O Disable						
NAT	LINGDIC							
FIREWALL	Diffser	Diffserv Forwarding Groups :						
ROUTE	Below s	Below shows the Diffserv forwarding behaviors this router supports. User can further configure the						
QoS			each forwarding behavior.		/IDTH ALLOCATION			
» Traffic Mapping								
» Traffic Statistics		Name	Descri	ption		Priority		
ADVANCED		BE	Best Effort forwarding			Lowest		
		AF1×				Low		
		AF2x	Assured Forwarding, provi			±==		
		AF3x	each AF class, an IP packet can be assigned one of		Ļ			
		AF4x	three different levels of drop precedence. High					
			Expedited Forwarding, is ir	atandad tu	- provide law	-		
		EF	delay, low jitter and low lo			Highest		
					He	alp Apply C	ancel	

The following items are on the "QoS Settings" screen:

Parameter	Description
Enable or disable QoS module function	Click Enable to activate QoS module function.
BANDWIDTH ALLOCATION	To configure bandwidth Allocation.

 Click 	ANDWIDTH AL	LOCATION ; the followin	g screen	appears :		
SAGEM				Home Save	and Reboot Res	QoS et Logout
STATUS SETUP WIZARD SYSTEM WAN LAN WIRELESS NAT FIREWALL ROUTE QoS > Traffic Mapping	as VoIP, gaming, differentiated ser Enable or disabl Diffserv Forwar	ip between LAN and WAN may significantly and VPN. This QoS function allows users to vices (Diffserv). e QoS module function : ① Enable ling Groups : Diffserv forwarding behaviors this router st	o classify tra Disable	ffic of applications	and provides them v	with
» Traffic Statistics	Nar	e Description	Priority	Bandwidth Minimum	n Allocation Allow More	
ADVANCED	BE	Best Effort forwarding	Lowest	25 %		
	AF: AF2 AF3	Assured Forwarding, provides deliven of packets in four independently forwarded AF classes. Within each AF class, an IP packet can be assigned one of three different levels of drop precedence	v Low ↓ High	0% 0% 0% 75%		
	Eł	Expedited Forwarding, is intended to provide low delay, low jitter and low loss delivery of packets.	Highest	0_%	✓ Help Apply	Cancel

Allow users to configure guaranteed bandwidth of each Forwarding Group (EF, AF4x to AF1x and BE). The amount of guaranteed bandwidth for the Forwarding Groups must not be over 100%.

Allow to limit whether or not the guaranteed bandwidth of each Forwarding Group by checking or not the "Allow More" box

In this menu are included the following sub-menus:

- Traffic Mapping (see section 4.10.1),
- Traffic statistics (see section 4.10.2).

4.10.1 Traffic Mapping

SAGEM					Traffi	c Map	ping
			Home	Save and	Reboot	Reset Lo	ogout
STATUS							
SETUP WIZARD	Traffic M	lapping					
SYSTEM	Up to 16 rul	es can be defined to classify traffic i	nto Diffserv	forwarding c	roups and		
WAN	outgoing VC	s.					
LAN	Rule	Traffic Description	Map to	Outgoing	Cont	fiqure	
WIRELESS	Name	•	Diffserv	VC		ngaro	
NAT		No Traffic Mapping was define	ed, all traff	ic is mapped	to BE		
FIREWALL	Add trat	fic class					
ROUTE	Addition						
QoS							
» Traffic Mapping						Hel	lp
» Traffic Statistics							
ADVANCED							

No traffic Mapping was defined.

Add traffic class

• Click on the appears:

button to add a traffic class ; the following screen

SAGEM	Traffic Mapping
	Home Save and Reboot Reset Logout
STATUS	Edit Traffic Class
SETUP WIZARD	
SYSTEM	This page is for user to specify a classify rule. First, define the class by the traffic type and the local and remote addresses. Then set the Diffserv forwarding group this class is mapped to. Finally, select the outgoing VC that traffic of
WAN	this class would be routed to.
LAN	
WIRELESS	
NAT	Rule Name
FIREWALL	Traffic Type WILDCARD 🗸 ADVANCED CONFIG
ROUTE	Map to Forwarding
QoS	Group BE V Remark DSCP
» Traffic Mapping	Direct to VC By Routing 🗸
» Traffic Statistics	
ADVANCED	
	Help Apply Cancel

Parameter	Description
Rule Name	Enter a Rule Name.
Traffic Type	Select FTP, VoIP, E-MAIL, SNMP, TELNET, WWW, VPN, User define - TCP, User define - UDP or User define - IP,
Map to forwarding Group	Select Forwarding Service from th lowest to the highest : BE (Best Effort), AF1x (Assured Forwarding), AF2x , AF3x , AF4x or EF (Expedited Forwarding).
Remark DSCP	Check the box to change the DSCP (Differenciated Service Code Point) field in the "IP header" of each outgoing frame.
Direct to VC	Select "By routing" or "VCx"

4 - Configuring the SAGEM F@st™ 1500 ADSL router

Click on the	ADV	ANCED CONFIG	button ; the following screen appears:
SAGEM			Traffic Mapping Home Save and Reboot Reset Logout
STATUS SETUP WIZARD SYSTEM WAN LAN	addresses.	for user to specify a clas	ssify rule. First, define the class by the traffic type and the local and remote warding group this class is mapped to. Finally, select the outgoing VC that traffic of
WIRELESS NAT		Rule Name	ftp1
FIREWALL		Local Address	IP range 💌
ROUTE QoS			192 . 168 . 2 . 3 ~ 3
» Traffic Mapping		Remote Address	WILDCARD V
» Traffic Statistics		Traffic Type	FTP
ADVANGED		Map to Forwarding Group	
		Direct to VC	VC1 VC1
			Help Apply Cancel

Almost fields are been informed, please inform these last ones:

Parameter	Description
Local Address	Select Mac addr, IP range, This router or ANY.
Remote Address	Select Mac addr, IP range, This router or ANY.

ĺ

In the fields **Local Address** or **Remote Address**, if you choose **Mac addr**, **IP range**, an other screen appears and you may enter the Mac address or a IP address range (or the IP address) on the local or remote part.

For example, in the screen above IP range has been selected

After having entered several services classes, the following screen appears:

SAGEM					Traffic Ma	apping
S SAULIN				Home Save	e and Reboot Reset	Logout
STATUS						
SETUP WIZARD	Traffic Ma	pping				
SYSTEM	Up to 16 rules	can be defined to classify traffic into Diffser	rv forwarding g	roups and outq	oing VCs.	
WAN		•	Map to		-	
LAN	Rule Name	Traffic Description	Diffserv	Outgoing VC	Configure	
WIRELESS	ftp1	from 192.168.2.3 , FTP	BE	VC1	Edit Del Down	
NAT	ftp2	from 192.168.2.2 , FTP	AF4x	VC1	Edit Del Up	
FIREWALL						
ROUTE	Add traffic	class				
QoS						
» Traffic Mapping						
» Traffic Statistics						Help
ADVANCED						

Edit	This button allows to modify all parameters of each traffic class.
Del	This button allows to delete a traffic class.
Up	This button allows to move up the matching priority of the selected rule.
Down	This button allows to move down the matching priority of the selected rule.

4.10.2 Traffic statistics

SAGEM		Statistics
SAGEINI	Home Save and Reboot	Reset Logout
STATUS	Traffic Statistics	
SETUP WIZARD	Tanc Staustics	
SYSTEM	This page shows the WAN outbound traffic statistics of all the Diffserv forwarding groups in the last 12 hours (automatically update every 5 mins).	
WAN	Graph applet by GraphsCharts.com	
LAN	BE FAC	
WIRELESS	Out Bytes/sec • AF2x	
NAT	40000 +	
FIREWALL	30000	
ROUTE	20000	
QoS	10000	
» Traffic Mapping	,	
» Traffic Statistics	19:21 23:21 03:21 07:21	
ADVANCED	Graph applet by GraphsChards.com	
	Otaping provide of Otaping name, comm PEF S0000 +AF1x AF2x +AF2x	
	50000 +	
	40000	
	30000	
	20000	
	10000	
	19:21 23:21 03:21 07:21	
	10.21 U1.21 U1.21	
		Help

4.11 Advanced

In this menu is included the following sub-menus:

- ADSL (see section 4.11.1),
- Remote Management (see section 4.11.2),
- SNMP (see section 4.11.3),
- ➢ UPnP (see section 4.11.4).

4.11.1 ADSL

ADSL Status Information

ADSL (Asymmetric Digital Subscriber Line) is designed to deliver more bandwidth downstream (from the central office to the customer site) than upstream. This section is used to display the ADSL operation type its status.

Status

The Status screen displays information on connection line status, data rate, operation data and defect indication, and statistics. Scroll down to view more information.

							ADSL
SAGEM				Home	Save and Reboot	Reset	Logout
STATUS	ADGI						
	ADSL						
SETUP WIZARD	This page allows you to specify the ADSL standards to operate with. You may explicitly set a						
SYSTEM	specific standard, o	specific standard, or choose "Automatic" to automatically negotiate with remote DSLAM.					
WAN							
LAN	Operation Mode: Autor	natic 🚩					
WIRELESS							
NAT	Monitoring In	idex:					
FIREWALL	. ADSL Status	Information:					
ROUTE	• <u>Status</u>	Information.					
QoS	• Data Ra	ate Information					
-	 <u>Defect</u> <u>Statisti</u> 	<u>/Failure Indicat</u> ics	<u>tion</u>				
ADVANCED	• <u>518656</u>	<u>US</u>					
» ADSL	. Status:						
» Remote Management		Configu	ired C	Current			
» SNMP	Line Status			QUIET1			
» UPnP	Link Type		Interl	eaved Path			
	• <u>[Go To</u> p	쾨					
	. Data Rate:						
		m Type	Actual Dat	ta Rate			
		tream	0 (Кbр				
	Down	Stream	0 (Кbр	os.)			
	<u>[Go Top</u>	<u>əl</u>					
	. Operation Da	ta / Defect Inc	dication:				
	Operatio			Downstream			
	Noise M		0 dB	0 dB			
	Attenu	ation	0 dB	0 dB			
	Indicat	tor Name	Near End Indicator	Far End Indicato			
	Fast Path F	EC Correction	0	0			
		ed Path FEC rection	0	0			
	Fast Path	CRC Error	0	0			
	Interleaved #	Path CRC Error	0	0			
		ignal Defect	0				
		HEC Error	0	0			
		Path HEC Error	0	0			
	• <u>[Go To</u> j	21					
	. Statistics:						
	Received Cells 0						
	Transmitted Cells 0						
	• [Go Top]						
					Help 7	Apply Re	fresh
							licon

The following items are included on this information page:

Parameter	Description
Status	
	Shows the current status of the ADSL line connection.
Data Rate	
	Maximum upstream data rate.
Downstream	
Operation Data/D	
Noise Margin	Maximum upstream and downstream noise margin.
-	Maximum fluctuation in the output power.
	Maximum reduction in the strength of the upstream and downstream signal.
Fast Path FEC Co	
	There are two latency paths that may be used: fast and interleaved. For either path, a forward error correction (FEC) scheme is employed to ensure higher data integrity. For maximum noise immunity, an interleaver may be used to supplement FEC
Interleaved Path	FEC Correction
	An interleaver is basically a buffer used to introduce a delay, allowing for additional error correction techniques to handle noise. Interleaving slows the data flow and may not be optimal for real-time signals such as video transmission.
Fast Path CRC Er	ror
	The number of Fast Path Cyclic Redundancy Check errors.
Interleaved Path	CRC Error
	The number of Interleaved Path Cyclic Redundancy Check errors.
Loss of Signal De	fect
	Momentary signal discontinuities.
Loss of Frame De	ifect
	Failures due to loss of frames.
Loss of Power De	ifect
	Failures due to loss of power.
Fast Path HEC Er	ror
	Fast Path Header Error Concealment errors.
Interleaved Path	HEC Error
	Interleaved Path Header Error Concealment errors.
Statistics	
	Superframes represent the highest level of data presentation.
	Each superframe contains regular ADSL frames, one of which is used to provide superframe synchronization, identifying the start of a superframe. Some of the remaining frames are also used for special functions.rs.
Received Superfr	ames Interleaved
	Number of interleaved superframes received.
Transmitted Supe	erframes Interleaved
	Number of interleaved superframes transmitted.
Received Superfr	
	Number of fast superframes received
Transmitted Supe	
	Number of fast superframes transmitted.

4.11.2 Remote Management

By default, management access is only available to users on your local network. However, you can also manage the SAGEM F@st[™] 1500 ADSL Router from a remote host by entering the IP address of a remote computer on this screen. Check the Enabled check box, and enter the IP address of the Host Address and click "**Apply**".

SAGEM				lanagement
		Home	Save and Reboot	Reset Logout
STATUS	Remote Management			
SETUP WIZARD				
SYSTEM	Set the remote management of the router. If you wa location (outside of the local network), you must also			
WAN	······································	,		
LAN	Host Address Enabled			
WIRELESS	0.0.0.0			
NAT				
FIREWALL				
ROUTE			Help	pply Cancel
QoS				
ADVANCED				
» ADSL				
» Remote Management				
» SNMP				
» UPnP				



If you check Enable and specify an IP address of 0.0.0.0, any remote host can manage the SAGEM F@st™ 1500 ADSL Router.

For remote management via WAN IP address you need to connect using port 8080. Simply enter WAN IP address followed by :8080, for example,

212.120.68.20:8080.

4.11.3 SNMP

Use the SNMP configuration screen to display and modify parameters for the Simple Network Management Protocol (SNMP).

SAGEM								SNN	/IP
				H	lome S	ave and F	Reboot	Reset Logo	ut
STATUS	SNMP								
SETUP WIZARD									
SYSTEM	In the context of SNM security characteristic								
WAN	establishes one comm	unity for e	each desired c	ombinatio	on of auther	ntication,	access	control, and	
LAN	proxy characteristics. the management stati								
WIRELESS	name in all get operati			tablish a	number of c	ommuniti	ies, with	overlapping	
NAT	management station m	iembersni	þ.						
FIREWALL		No.	Community		Access	Valid			
ROUTE		1	public		Read 🗸				
QoS		1	public						
ADVANCED		2	private		Write 🔽				
» ADSL		з			Read 🔽				
» Remote Management » SNMP						_			
» UPnP		4			Read 🚩				
		5			Read 💌				
	SNMP Trap								
	In the context of SNMP, an unsolicited message can be sent by an agent to management station. The purpose is to notify the management station of some unusual event.								
	No.	IP Addre	SS	Commun	ity	Versio	on		
	1					Disab	oled 🔽		
	2					Disab	oled 🔽		
	з					Disab	oled 🔽		
	4					Disat	oled 🔽		
	5					Disab	oled 🔽		
						H	elp Apr	oly Cancel	

SNMP Setting

A computer attached to the network, called a Network Management Station (NMS), can be used to access this information. Access rights to the agent are controlled by community strings. To communicate with the SAGEM F@st[™] 1500 ADSL Router, the NMS must first submit a valid community string for

authentication.

Parameter	Description
Community	A community name authorized for management access.
Access	Management access is restricted to Read Only (Read) or Read/Write (Write).
Valid	Enables/disables the entry.



Up to five community names may be entered.

SNMP Trap

Specify the IP address of the NMS to notify when a significant event is detected by the agent. When a trap condition occurs, the SNMP agent sends an SNMP trap message to any NMS specified as a trap receiver.

Parameter	Description
IP Address	Traps are sent to this address when errors or specific events occur on the network.
Community	A community string (password) specified for trap management. Enter a word, something other than public or private, to prevent unauthorized individuals from accessing information on your system.
Version	Sets the trap status to disabled, or enabled with V1 or V2c. The v2c protocol was proposed in late 1995 and includes enhancements to v1 that are universally accepted. These include a get-bulk command to reduce network management traffic when retrieving a sequence of MIB variables, and a more elaborate set of error codes for improved reporting to a Network Management Station.

4.11.4 UPnP

Click **Enable** to turn on the Universal Plug and Play function of the ADSL Router. This function allows the device to automatically:

- dynamically join a network,
- > obtain an IP address.

SAGEM	UPnP Home Save and Reboot Reset Logout
STATUS SETUP WIZARD SYSTEM WAN LAN WIRELESS NAT FIREWALL ROUTE QoS ADVANCED » ADSL » Remote Management » SNMP » UPNP	UPnP The Universal Plug and Play architecture offers pervasive peer-to-peer network connectivity of PCs of all form factors, intelligent appliances, and wireless devices. UPnP enables seamless proximity network in addition to control and data transfer among networked devices in the home, office and everywhere in between. Enable or disable UPnP module function : O Enable O Disable Help Apply Cancel

4.12 Finding the MAC address of a Network Card

Windows 98/ME

Click Start/Run. Type "winipcfg" and press "ENTER".

The MAC address is in the "Adapter Address" section.

Windows NT4/2000/XP

Click Start/Programs/Command Prompt. Type "ipconfig /all" and press "ENTER".

The MAC address is listed as the "Physical Address."

Macintosh

Click System Preferences/Network.

The MAC address is listed as the "Ethernet Address" on the TCP/IP tab.

Linux

Run the command "/sbin/ifconfig."

The MAC address is the value after the word "HWaddr."

A. Appendix A - Troubleshooting

This section describes common problems you may encounter and possible solutions to them. The SAGEM F@stTM 1500 ADSL Router can be easily monitored through panel indicators to identify problems.

Troubleshooting Chart					
Symptom	Action				
LED Indicators					
The PWR LED is Off .	 Check connections between the SAGEM F@st[™] 1500 ADSL Router, the external power supply, and the wall outlet. 				
	 If the power indicator does not turn on when the power cord is plugged in, you may have a problem with the power outlet, power cord, or external power supply. However, if the unit powers off after running for a while, check for loose power connections, power losses, or surges at the power outlet. If you still cannot isolate the problem, then the external power supply may be defective. In this case, contact Technical Support for assistance. 				
The ADSL LED is Off .	 Verify that the SAGEM F@st[™] 1500 ADSL Router and attached device are powered on. 				
	 Be sure the cable is plugged into both the ADSL Router and the corresponding device. 				
	 Verify that the proper cable type is used and that its length does not exceed the specified limits. 				
	 Be sure that the network interface on the attached device is configured for the proper communication speed and duplex mode. 				
	• Check the adapter on the attached device and cable connections for possible defects. Replace any defective adapter or cable if necessary.				
Network Connection Pro	blems				
The user cannot ping the SAGEM F@st [™] 1500 ADSL Router from the attached LAN.	 Verify that the IP addresses are properly configured. For most applications, you should use the A DSL Router's DHCP function to dynamically assign IP addresses to hosts on the attached LAN. However, if you manually configure IP addresses on the LAN, verify that the same network address (network component of the IP address) and subnet mask are used for both the SAGEM F@stTM 1500 ADSL Router and any attached LAN devices. 				
	 Be sure the device you want to ping (or from which you are pinging) has been configured for TCP/IP. 				
Management Problems					
The user cannot connect using the web browser.	 Be sure to have configured the SAGEM F@st[™] 1500 ADSL Router with a valid IP address, subnet mask, and default gateway. 				
	 Check that you have a valid network connection to the SAGEM F@st[™] 1500 ADSL Router and that the port you are using has not been disabled. 				
	 Check the network cabling between the management station and the SAGEM F@st[™] 1500 ADSL Router. 				
The user forgot or lost the password.	 Press the Reset button on the rear panel (holding it down for at least five seconds) to restore the factory defaults. 				

Troubleshooting Chart		
Symptom	Action	
LED Indicators		
Wireless Problems		
A wireless PC cannot associate with the ADSL Router.	 Make sure the wireless PC has the same SSID settings as the SAGEM F@st[™] 1500 ADSL Router. See "Channel and SSID" on section 4.6.1. 	
	 You need to have the same security settings on the clients and the SAGEM F@st[™] 1500 ADSL Router. See "Security" on section 4.6.3. 	
The wireless network is often interrupted.	 Move your wireless PC closer to the SAGEM F@st[™] 1500 ADSL Router to find a better signal. If the signal is still weak, change the angle of the antenna. 	
	 There may be interference, possibly caused by a microwave ovens or wireless phones. Change the location of the interference sources or of the ADSL Router. 	
	 Change the wireless channel on the SAGEM F@st[™] 1500 ADSL Router. See "Channel and SSID" on section 4.6.1. 	
	Check that the antenna, connectors, and cabling are firmly connected.	
The SAGEM F@st [™] 1500 ADSL Router	 The distance between the SAGEM F@st[™] 1500 ADSL Router and wireless PC is too great. 	
cannot be detected by a wireless client.	 Make sure the wireless PC has the same SSID and security settings as the SAGEM F@stTM 1500 ADSL Router. See ADSL Router. See "Channel and SSID" on section 4.6.1 and "Security" on section 4.6.3. 	

Appendix A - Troubleshooting

B. Appendix B - Safety warnings

This chapter covers	\triangleright	Safety warnings	Section B.1
		CE declaration of conformity	Section B.2

B.1 Safety warnings

The SAGEM F@st[™] 1500 product is compliant with EN 60950, April 2002 edition. The safety levels in the sense of this standard are:

B.1.1 Safety levels on the mains adapter unit

Connectors	Function	Safety level
Two-pole mains AC connector	Primary power supply access	HPV ¹
Miniature DC socket	DC power supply port	SELV ²

B.1.2 Safety levels on the SAGEM F@st[™] 1500 unit

Connectors	Function	Safety level
Power Inlet	DC power supply port SE	
LAN Ports	LAN Ports 10/100BASE-T Ethernet port SELV	
ADSL Port	SL Port ADSL line port TNV3 ³	

¹ Hazardous Primary Voltage circuit

² Safety Extra-Low Voltage circuit

³ Telecommunication Network Voltage level 3 circuit

B.2 CE declaration of conformity



Products bearing this symbol are compliant with the EMC regulations and the low voltage directive published by the European Commission.

SAGEM sA declares that the SAGEM F@stTM 1500 product is compliant with the requirements of European Directives 1995/5/CE and the main 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 communications.

The CE declaration of conformity concerning the SAGEM $F@st^{TM}$ 1500 is drawn up within the context of the R&TTE directive.

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

Safety

EN 60950	Ed: 04-2002

EMC

EN 55022	Ed: 09.1998
EN 55024	Ed: 09.1998

Radio (specific to SAGEM F@st 1500WG)

EN 300 328-1	Ed 12-2001
EN 300 328-2	Ed 12-2001
EN 301 489-1	Ed 08-2002
EN 301 489-17	Ed 08-2002
SAR EN 50371	(Limits of human exposure to electromagnetic fields)

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

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

SAGEM sA cannot except any liability if current regulations are not observed at the place of installation.

The CE declaration of conformity for the SAGEM $F@st^{TM}$ 1500 is included in the form of a file with pdf extension in the product delivery CD-ROM.

Appendix B - Safety warnings

C. Appendix C - CABLES

This chapter covers	\triangleright	Ethernet cable	Section C.1
	4	ADSL cable	Section C.2

C.1 Ethernet cable



DO NOT plug a phone jack connector into any RJ-45 port.

Use only twisted-pair cables with RJ-45 connectors that conform with FCC standards.

C.1.1 Specifications

Cable Types and Specifications			
Cable	Туре	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm UTP	100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	100 m (328 ft)	RJ-45

C.1.2 Wiring Conventions

For Ethernet connections, a twisted-pair cable must have two pairs of wires. Each wire pair is identified by two different colors. For example, one wire might be red and the other, red with white stripes. Also, an RJ-45 connector must be attached to both ends of the cable

Each wire pair must be attached to the RJ-45 connectors in a specific orientation. The following figure illustrates how the pins on an Ethernet RJ-45 connector are numbered. Be sure to hold the connectors in the same orientation when attaching the wires to the pins.

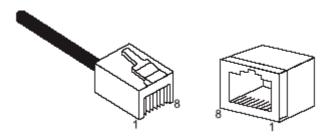


Figure C.1 - RJ-45 Ethernet Connector Pin Numbers

C.1.3 RJ-45 Port Connection

Use the straight-through CAT-5 Ethernet cable provided in the package to connect the Sagem F@st1500 ADSL Router to your PC. When connecting to other network devices such as an Ethernet switch, use the cable type shown in the following table.

Attached Device Port Type	Connecting Cable Type
MDI-X	Straight-through
MDI	Crossover

SAGEM F@st™ 1500 Reference Manual - 288053220-03

C.1.4 Pin Assignments

General

With 100BASE-TX/10BASE-T cable, pins 1 and 2 are used for transmitting data, and pins 3 and 6 for receiving data.

RJ45 Pin Assignments	
Pin Number Assignment1	
1	Tx+
2	Tx-
3	Rx+
6	Rx-



The "+" and "-" signs represent the polarity of the wires that make up each wire pair.

Straight-Through Wiring

If the port on the attached device has internal crossover wiring (MDI-X), then use straight-through cable.

Straight Through Cable Pin Assignments		
End 1	End 2	
1 (Tx+)	1 (Tx+)	
2 (Tx-)	2 (Tx-)	
3 (Rx+)	3 (Rx+)	
6 (Rx-)	6 (Rx-)	

Crossover Wiring

If the port on the attached device has straight-through wiring (MDI), use crossover cable.

Crossover Cable Pin Assignments			
End 1	End 2		
1 (Tx+)	1 (Rx+)		
2 (Tx-)	2 (Rx-)		
3 (Rx+)	3 (Tx+)		
6 (Rx-)	6 (Tx-)		

C.2 ADSL Cable

Use standard telephone cable to connect the RJ-11 telephone wall outlet to the RJ-45 ADSL port on the Sagem F@st1500 ADSL Router.



DO NOT plug a phone jack connector into any RJ-45 port.

C.2.1 Specifications

Cable Types and Specifications		
Cable Type Connector		
ADSL	Line Standard	Telephone cable RJ11

C.2.2 Wiring Conventions

For ADSL connections, a cable requires one pair of wires. Each wire is identified by different colors. For example, one wire might be red and the other, red with white stripes. Also, an RJ-11 connector must be attached to both ends of the cable.

Each wire pair must be attached to the RJ-11 connectors in a specific orientation. The following figure illustrates how the pins on the RJ-11 connector are numbered. Be sure to hold the connectors in the same orientation when attaching the wires to the pins.

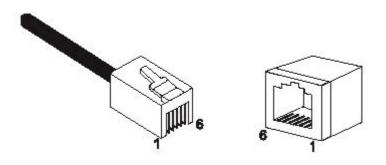


Figure C.2 - RJ-11 Connector Pin Numbers

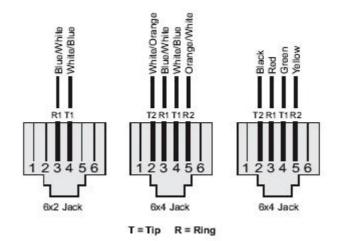


Figure C.3 - RJ-11 Pinouts

Pin	Signal Name	Wire Color
1	Not used	_
2	Line 2 Tip	Black or White/Orange
3	Line 1 Ring	Red or Blue/White
4	Line 1Tip	Green or White/Blue
5	Line 2 Ring	Yellow or Orange/White
6	Not used	_

D. Appendix **D** - Technical specifications

This chapter covers	٨	the Mechanical Characteristics - Displays	Section D.1
		the Electrical Characteristics	Section D.2
		the Soft Component Features	Section D.3
		the Radio Features	Section D.4
		the Environmental characteristics	Section D.5

D.1 Mechanical Characteristics - Displays

Mechanical specifications					
Dimensions (mm)	Height without antenna	: 35 mm			
	Height with antenna	: 100 mm			
	Depth with cable guide	: 140 mm			
	Width of stand	: 170 mm			
Weight (without mains adapter)	Unit with stand	: 400 g			
Weight (without mains adapter)	Mains unit	: 580 g			
Installation	Desktop				

Displays	
1 LED	Presence of power supply (PWR)
1 LED	ADSL interface set up (ADSL)
1 LED	• WLAN 802.11b/g (WLAN)
1 LED	Alarm Detection (ALM)
4 LEDs	Ethernet activity (ETHERNET)

Po	Ports			
٠	Four ports 10 / 100 bps - RJ45 (LAN1 to LAN4)			
٠	One port ADSL - RJ11 (ADSL)			
٠	One Type 2 Europlug socket (Power)			
•	One external dipole antenna			

D.2 Electrical Characteristics

ADSL Features

Supports DMT line modulation,

Supports Annex A Full-Rate ADSL: up to 8 Mbps downstream, up to 1 Mbps upstream (G.992.1 &T1.413, Issue 2),

Supports G.Lite ADSL: up to 1.5 Mbps downstream, up to 512 Kbps Upstream,

Dying GASP support.

Input Power

12 V / 1 A.

D.3 Soft Component Features

ATM Features

RFC1483 Encapsulation (IP, Bridging and encapsulated routing), PPP over ATM (LLC &VC multiplexing) (RFC2364), Classical IP (RFC1577), Traffic shaping (UBR, CBR), OAM F4/F5 support, PPP over Ethernet Client.

Management Features

Firmware upgrade via web based management, Web based management (configuration), Power indicators, Event and history logging, Network ping.

Security Features

Password protected configuration access, User authentication (PAP/CHAP) with PP, Firewall NAT NAPT, VPN pass through (IPSec-ESP Tunnel mode,L2TP, PPTP).

LAN Features

IEEE 802.1d (self-learning transparent Bridging), DHCP Server, DNS Proxy, Static Routing, RIPv1 and RIP.

QoS Features

Diffserv (RFC 2475), Diffserv PHBs : BE, AF1x, AF1x, AF1x, AF1x and EF, Diffserv code point (DSC) remarking, Layer 2/3 Multi-field Classification, Application Layer Classification.

Applications

Netmeeting, ICQ, Real Player, QuickTime, DialPad, PC Anywhere, Telnet, SNTP, NNTP.

D.4 Radio Features

Wireless RF module Frequency Band

802.11g Radio: 2.4GHz. 802.11b Radio: 2.4GHz. USA - FCC 2412 to 2462 MHz (Ch1 to Ch11). Canada - IC 2412 to 2462 MHz (Ch1 to Ch11). Europe - ETSI 2412 to 2472 MHz (Ch1 to Ch13). Spain 2457 to 2462 MHz (Ch10 et Ch11). France 2457 to 2472 MHz (Ch10 to Ch13). Japan - STD-T66/STD-33 2412 to 2484 MHz (Ch1 to Ch14).

Modulation Type

OFDM, CCK.

Operating Channels IEEE 802.11b compliant:

- 11 channels (US, Canada),
- 13 channels (ETSI),
- 2 Channels (Spain),
- 4 Channels (France),
- 14 channels (Japan).

Operating Channels IEEE 802.11g compliant:

13 channels (US, Canada, Europe, Japan).

RF Output Power Modulation Rate-Output Power (dBm)

802.11b - 1Mbps (16 dBm), 802.11b - 2Mbps (16 dBm), 802.11b - 5.5Mbps (16 dBm,) 802.11b - 11Mbps (16 dBm).

Modulation Rate-Output Power (dBm)

802.11g - 6Mbps (15 dBm),

802.11g - 9Mbps (15 dBm),

802.11g - 12Mbps (15 dBm),

802.11g - 18Mbps (15 dBm),

802.11g- 24Mbps (15 dBm),

802.11g - 36Mbps (15 dBm),

802.11g- 48Mbps (15 dBm),

802.11g - 54Mbps (15 dBm).

Sensitivity Modulation Rate-Receiver 2.412 ~ 2.484 HGz Sensitivity (dBm)

802.11b - 1Mbps - (90 dBm), 802.11b - 2Mbps - (88 dBm), 802.11b - 5.5Mbps - (85 dBm), 802.11b- 11Mbps - (84 dBm).

Modulation Rate-Receiver Sensitivity Typical (dBm)

802.11g - 6Mbps - (88 dBm), 802.11g - 9Mbps - (87 dBm), 802.11g - 12Mbps - (84 dBm), 802.11g - 18Mbps - (82 dBm), 802.11g - 24Mbps - (79 dBm), 802.11g - 36Mbps - (75 dBm), 802.11g - 48Mbps - (68 dBm), 802.11g - 54Mbps - (68 dBm).

D.5 Environmental characteristics

SAGEM F@st[™] 1500WG complies with the following standards:

Temperature: IEC 68-2-14

0 to 50 degrees C (Standard Operating), -40 to 70 degrees C (Non-operation).

Humidity

10% to 90% (Non-condensing).

Vibration

IEC 68-2-36, IEC 68-2-6.

Shock

IEC 68-2-29.

Drop

IEC 68-2-32.

IEEE Standards

IEEE 802.3, 802.3u, 802.11g, 802.1d, ITU G.dmt, ITU G.Handshake, ITU T.413 issue 2 - ADSL full rate.

Standards Conformance Electromagnetic Compatibility

CE, ETSI, R&TTE, FCC part 15 class B & FCC part 68, ETS 300 328, ETS 300 826.

Safety

CSA/NRTL (UL1950, CSA 22.2.950) GS (EN60950), CB (IEC60950), ITU K21.

Internet Standards

RFC 826 ARP,

RFC 791 IP,

RFC 792 ICMP,

RFC 768 UDP,

RFC 793 TCP,

RFC 783 TFTP,

RFC 1483 AAL5 Encapsulation,

RFC 1661 PPP,

RFC 1866 HTML,

RFC 2068 HTTP,

RFC 2364 PPP over ATM.

Appendix D - Specifications

E. Appendix E - Default configuration

This chapter covers	the default user name and password		Section E.1
	the default configuration on the local area network		Section E.2
	A	the default configuration on the wide area network side	Section E.3



This section gives the default factory settings for the SAGEM F@st™ 1500. The SAGEM F@st™ 1500 is set to "Router" mode by default.

These default settings can be modified by a special pre-configuration of the SAGEM F@st[™] 1500.

E.1 Default user name and password

Empty

Password

E.2 Default configuration on the local area network side

LAN characteristics	Function - Mode	State/Value
IP characteristics	IP address	192.168.2.1
	Mask	255.255.255.0
	BROADCAST, ARP, MULTICAST	Enabled
IP - SERVICES	RIP	Disabled
	DHCP server activated on the LAN	192.168.2.2 to 192.168.2.254
"Wireless" characteristics	SSID broadcasting	Enabled
Only	ESSID	"SAGEM"
SAGEM F@st [™] 1500WG	Channel	6 (when channels 1 to 13)
		10 (when channels 10 to 13)
	WEP	Enabled
	Keys	64 bits / Hex / Key1 (01/01/01/01/01)

E.3 Default configuration on the wide area network side

WAN characteristics	Function - Mode	State/Value
ATM characteristics	Protocol	IP/PPP/ATM
	VPI	8
	VCI	35
	Encapsulation	VC MUX
	CLASS	Traffic-type CBR PCR 800 000 bit/s
	NAT	Enabled
	Default route	ADSL interface address
	DNS relay	Enabled
	Firewall	Enabled
	Intrusion detection	Disabled
	OAM F4 and F5 (see Note)	Enabled

Note: The OAM functions provided are as follows:

- Segment and end-to-end flow F4 and F5 management by VC.
- AIS/RDI functions.
- Response to loopback cells F4 or F5.
- Response to continuity check (CC) enable/disable cells.

PPP characteristics	IP address	Automatic negotiation
	MTU	1500
	PPP restart	Enabled
Management	Access	Disabled
ADSL characteristics	Maximum upstream rate	896 kbit/s
	Maximum downstream rate	8160 kbit/s
	Mode	Multimode
	Latency	Simple latency (fast or interleaved)

Note: The user can revert to the default configuration via the HTTP interface.

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