Verizon Home Service Gateway

TG790

DRAFT

Setup and User Guide

verizon | technicolor

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1

Getting Started

1 Getting Started

Introduction

This Setup and User Guide will help you to setup your Home Service Gateway (HSG) and deploy its services on your home network.

Your Home Network

Your home network consists of the following components:

- One Cantenna
- One Home Service Gateway (HSG)
- One or more network devices

The Cantenna

The Cantenna is located on the roof and is the interface between your home network and the Verizon 4G LTE network.

The Cantenna controls the following network devices:

- DTV Set Top Boxes
- Port Forwarding
- Application Layer Gateway (ALG)

The HSG

The Home Service Gateway is located in your home and is responsible for:

- Managing the communication between your network devices (computers, wireless devices).
- Acting as an interface between your home devices and the Cantenna (hence the Verizon 4G LTE network)

1.1   Check the Box Contents

Your box should contain the following items:
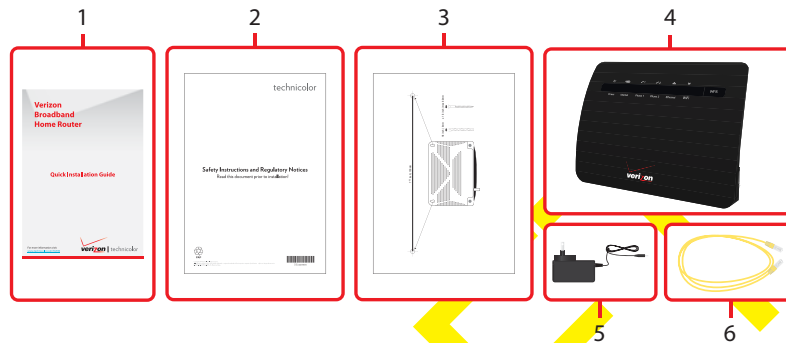
Item	Description
1	This Quick Installation Guide
2	The Safety and Regulatory Notices
3	The Wall Mount Instructions
4	The *H*ome *S*ervice *G*ateway. In this Setup and User Guide we will refer to it as *HSG*.
5	One power supply
6	One yellow Ethernet cable (RJ-45)

When one of these items is missing call *800- 837-4966*.

Read Safety Instruction

Please read "Safety Instructions and Regulatory Notices" before you start with the installation of the HSG.
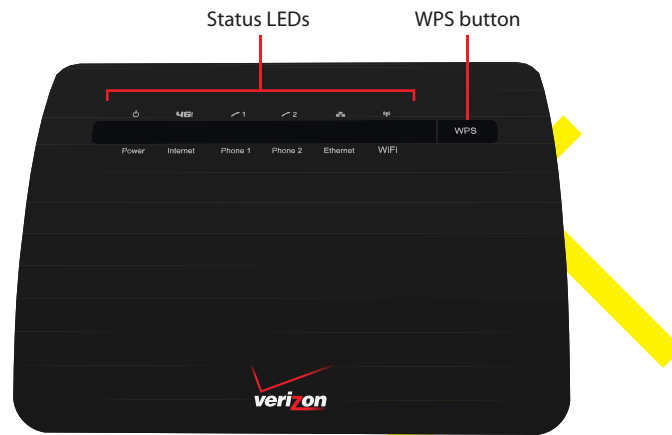
1 Getting Started

1.2   Getting to Know the HSG

This section introduces you to the different components of the HSG.

1.2.1   Front Panel

Status LEDs   WPS button

Components

On the front panel of your HSG, you can find:

■ The Status LEDs:
These Status LEDs allow you to check the state of the services offered by the HSG.

■ **WPS** button:
The **WPS** button allows you to add new wireless clients to your local network in a swift and easy way, without the need to enter any of your wireless settings (network name, wireless key, encryption type).

Status LEDs

On the front panel of your HSG, you can find the following items:

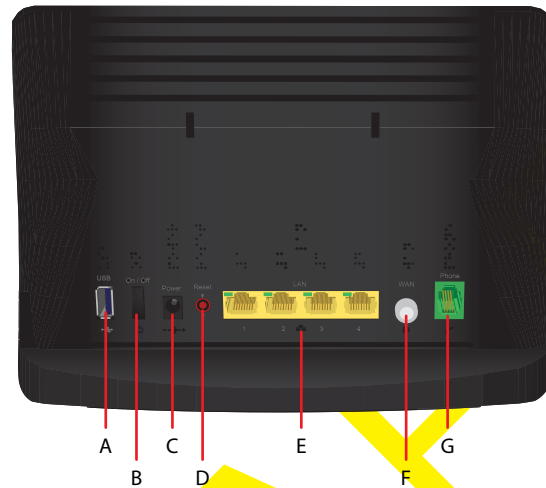| LED	Description
Power	Indicates the power status of the HSG.
Internet	Indicates the connectivity to the Cantenna.
Phone [1-2]	Indicates the connectivity to the phone connected to the HSG.
Wireless	Indicates whether wireless is enabled on your HSG.
USB	Indicates the connectivity of the connected USB devices.
Ethernet	Indicates the connectivity to the connected Ethernet devices.

1 Getting Started

LED	Description
WiFi	Indicates the connectivity to the Cantenna.

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1.2.2 Back Panel

Item	Name	Description
A	**USB** port	Allow you to power or charge your USB devices.
B	**Power** switch	Allows you to switch your HSG on/off.
C	**Power** inlet	This is where you will plug in the power adapter.
D	**Reset** button	If you press this button for 5 seconds the HSG will return to its factory default settings. All changes that you made to the default configuration will be lost.
E	**LAN** port	Allows you to connect your local devices (e.g. a computer) using Gigabit Ethernet.
F	**WAN** port	Allows you to connect your HSG to the Cantenna.
F	**Phone** port	Allows you to connect your telephone to the Verizon telephone network.

1 Getting Started

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Setup

2 Setup

Overview

To setup your HSG, you have to complete the following steps:

1 If a different router was being used previously, disconnect it. Remove all components, including power supplies and cables; they will not work with the HSG.

2 Connect the HSG to the Cantenna.
For more information, see *"2.1 Connect the HSG to the Cantenna" on page 11*.

3 Power on your HSG.
For more information, see *"2.2 Power on the HSG" on page 12*.

4 Connect your network devices.
For more information, see *"2.3 Connect Your Network Devices" on page 13*.

5 Optionally, you can further configure the HSG to your needs (for example, change the wireless security) using the Graphical User Interface (GUI) of the HSG.
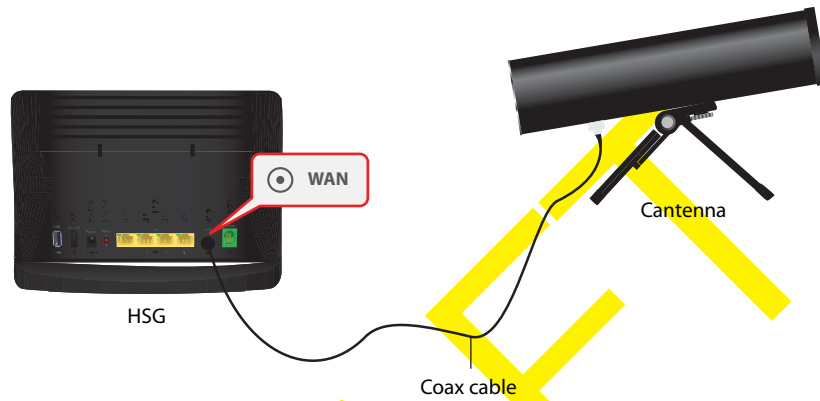For more information, see

In case of problems

If you have trouble configuring your HSG, try the following:

1 Refer to *"Support" on page 87*.

2 If you did not find a solution in the Troubleshooting section, call the Help Desk at *800- 837-4966*.

2.1   Connect the HSG to the Cantenna

Procedure
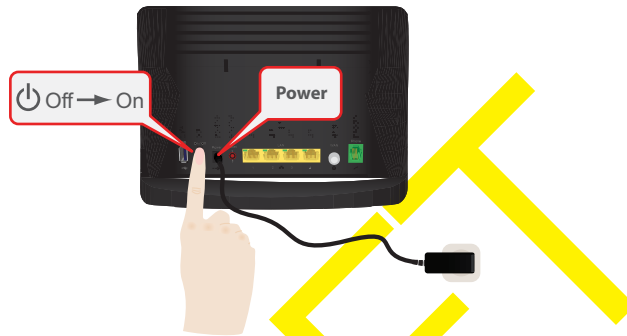

1   Take one end of the coaxial cable and connect into the coaxial wall jack.

2   Connect the other end to the **Coax** port of your HSG.

3   After a few minutes, the **WAN Coax** LED must be solid green. If this is not the case, make sure that the coaxial cable is connected properly at both ends.

2 Setup

2.2   Power on the HSG

Procedure

1   Take the power supply that is included in your box.
2   Connect the power cord to the **Power** port of your HSG.
3   Plug the other end into an electrical outlet.
4   Push the **On/Off** button to turn on the HSG.
5   Wait a few minutes to allow the HSG to complete the start up phase.
6   The **Power** LED on the front panel of your HSG must be solid green.

2.3 Connect Your Network Devices

Introduction

This section helps you to connect your network devices (for example, a computer, a network printer,...) to the HSG network.

Connection options

If you want to connect your computer to the HSG using:

- A wireless connection, proceed with *"2.3.1 Wireless Connection to the HSG" on page 14*.
- A wired (Ethernet) connection, proceed with *"2.3.2 Wired Connection to the HSG" on page 18*.

2 Setup

2.3.1   Wireless Connection to the HSG

Requirements

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

■ Your network device must be configured to obtain an IP address automatically. This is the default setting.

Procedure

If you want to connect a computer using the wireless network, configure the wireless client on your computer with the wireless settings printed on the label of your HSG.
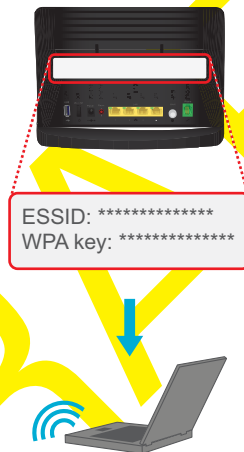
To configure these settings on:

■ Windows 7, proceed with *"Connect your computer on Windows 7" on page 15*.

■ Windows Vista, proceed with *"Connect your computer on Windows Vista" on page 15*.

■ Windows XP, proceed with *"Connect your computer on Windows XP" on page 16*.

■ Mac OS X, proceed with *"Connect your computer on Mac OS X" on page 17*.

■ On another operating system, consult the help of your wireless client or operating system.

Connect your computer on Windows 7

Proceed as follows:

1 Click the wireless network icon (▦)in the notification area.

2 A list of available wireless networks appears.

Double-click the HSG access point.

Note The HSG is listed with the network name (**ESSID**) that is printed on the bottom of your HSG (for example: TTTG7).

3 Windows prompts you to enter the network security key.

Type the **WPA key** that is printed on the bottom of your HSG in the **Network key** and **Confirm network key** box and click **Connect**.

Connect your computer on Windows Vista

Proceed as follows:

1 Click **Start** 🪟 and click **Connect To**.

2 A list of available wireless networks appears.

3 Double-click the HSG access point.

Note The HSG is listed with the network name (**ESSID**) that is printed on the bottom of your HSG (for example: TTTG7).

2 Setup

4 Windows prompts you to enter the network security key.

Type the **WPA key** that is printed on the bottom of your HSG in the **Network key** and **Confirm network key** box and click **Connect**.

Connect your computer on Windows XP

Proceed as follows:

1 Right-click the wireless network connection icon (▨ or ▨)in the notification area and then click **View Available Wireless Networks**.

2 A list of available wireless networks appears.

Double-click the HSG access point. The HSG is listed with the network name (**ESSID**) that is printed on the bottom of your HSG (for example: TTTG7).

Note If the HSG is not in the list, see *"Windows can not find the HSG access point" on page 91*.

3 Windows prompts you to enter the network security key.
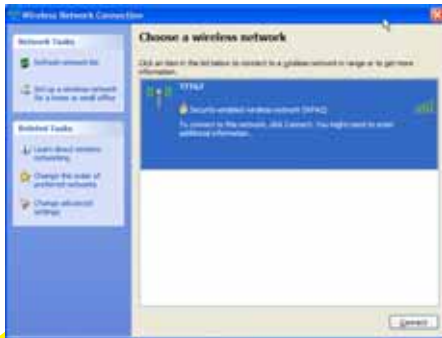

Type the **WPA key** that is printed on the bottom of your HSG in the **Network key** and **Confirm network key** box and click **Connect**.
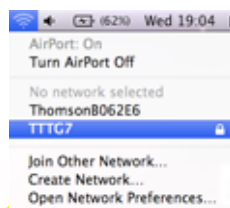
4 You are now connected to the HSG:

Connect your computer on Mac OS X
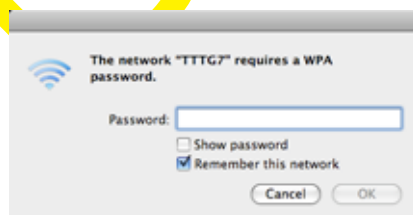
Proceed as follows:

1 Click the **Airport** icon on the menu bar.

2 A list of available wireless networks appears.

Select the HSG from the list.

Note The HSG is listed with the network name (**ESSID**) that is printed on the bottom of your HSG (for example: TTTG7).

3 The **AirPort** window prompts you to enter your WPA password.

Type the **WPA key** that is printed on the bottom of your HSG in the **Password** box, select the **Remember is network box** and click **OK**.

**4** You are now connected to the HSG network.

2 Setup

2.3.2 Wired Connection to the HSG

Requirements

- Both your network device (for example, a computer, an Ethernet switch,...) and HSG must have a free Ethernet port.

- Your network device must be configured to obtain an IP address automatically. This is the default setting. For more information, see *"10.4 Configuring Dynamic IP Addressing on Windows" on page 95*.

Procedure

Computer   HSG

Yellow Ethernet Cable
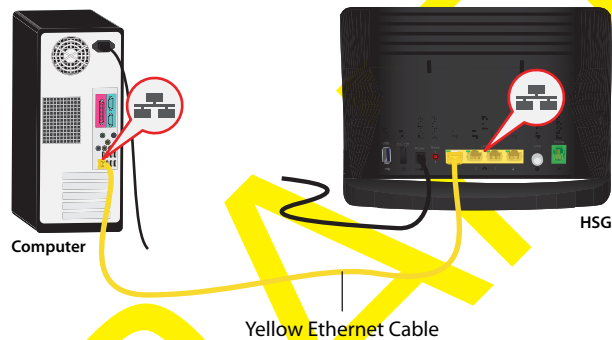
Proceed as follows:

1 Take the yellow Ethernet cable that was included in your box.

2 Plug the Ethernet cable into one of the four yellow Ethernet ports on the back of the HSG.

3 Plug the other end of the yellow Ethernet cable into an Ethernet port on the computer.

4 If you did not yet start up your computer, start up your computer.

5 The Ethernet LED on the front panel of your HSG should light up (solid or blinking).

6 Use the same procedure to connect your other Ethernet devices (computers, network printers,...).

3

Graphical User Interface (GUI)

3 Graphical User Interface (GUI)

Introduction

The Graphical User Interface (GIU) allows you to configure your HSG from your web browser.

Requirements

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

Accessing the GUI

Proceed as follows:

1 Open your web browser.

2 In the **Address** box, type http://sgw.lan **(**or http://192.168.1.254) and press ENTER.

3 The HSG prompts you to enter your user name and password. Enter your user name and password and click **OK**.

   Note   If you did not yet change the password, type **admin** in the **User Name** box and type the **Login password** printed on the bottom label of your HSG in the **Password** box.

4 The HSG GUI appears.

3 Graphical User Interface (GUI)

Menu

The menu bar on the front contains the following items:

Icon	Name	For more information, see...
	Main	*"3.1 Main" on page 22.*
	Wireless Settings	*"4 GUI: Wireless Settings" on page 29.*
	My Network	*"5 GUI: My Network" on page 41.*
	Firewall Settings	*"6 GUI: Firewall Settings" on page 53.*
	Parental Control	*"7 GUI: Parental Control" on page 55.*
	Advanced	*"8 GUI: Advanced Settings" on page 61.*
	System Monitoring	*"10 Support" on page 87.*

3 Graphical User Interface (GUI)

3.1 Main

Main page

The **Main** page provides a summary view of the main services of the HSG. The content of the page is divided into three groups:

- **My Router**
  For more information, see *"3.1.1 My Router " on page 23*.
- **My Network**
  For more information, see *"3.1.2 My Network" on page 26*.
- **Action Zone**
  For more information, see *"3.1.3 Action Zone" on page 28*.

3.1.1   My Router

Introduction

The **My Router** pane displays the status of the HSG's network and Internet connection and contains the following items:

- *Router Status*
- *Broadband Connection*
- *Quick Links*

Router Status
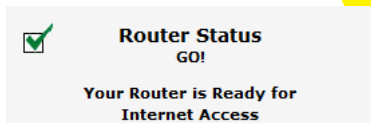
The **Router Status** informs you about the status of your Internet connection:

Icon	Description
	Indicates that the HSG is connected to the Internet.
	Indicates that the HSG is *not* connected to the Internet.

Broadband Connection

Under **Broadband Connection**, you can view:

- **Ethernet Status** or **Coax Status**.
- The IP address and connection type of your broadband connection (if you are connected to the Internet).

3 Graphical User Interface (GUI)

To view more information about your broadband connection:

1 Under **Broadband Connection**, click the **Disconnected** or **Connected** link:

Broadband Connection

Ethernet Status:	Connected
Connection Type:	DHCP
IP Address:	141.11.249.89

2 Depending on whether you choose Ethernet or Coax for your WAN connection, one of the following pages appears:

▸ The **Broadband Connection (Ethernet) Properties** page
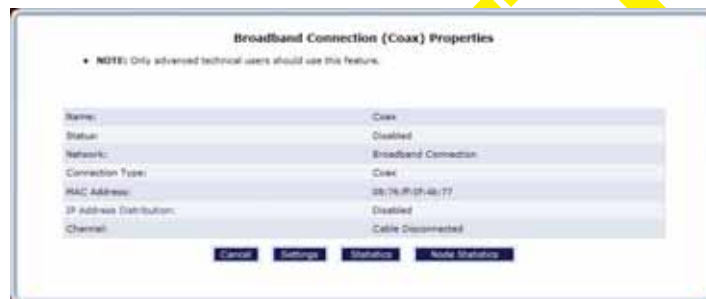
For more information, see *"5.2.5 Broadband Connection (Coax)" on page 50*.

▸ The **Broadband Connection (Ethernet) Properties** page

For more information, see *"5.2.4 Broadband Connection (Ethernet)" on page 48*.

Quick Links

The **Quick Links** section provides links to frequently used pages. The following quick links are available:

- **Port Forwarding**
  Click this link to assign a service (for example a HTTP server) to a network device. Request for this service that are initiated from the Internet will automatically be forwarded to this device.

- **Change Wireless Settings**
  Click this link to configure the wireless access point of your HSG.
  For more information, see *"GUI: Wireless Settings" on page 29*.

- **Change Login User Name/Password**
  Click this link to change your login information.
  For more information, see *"8.5 Users" on page 69*.

- **Adding a Webcam**
  Click this link to view the instructions for connecting a webcam to your network.

- **Verizon Help**
  Click this link to view the online help of your HSG.

- **Logout**:
  Click this link to quit your session. You will need to re-enter your user name and password to return to the GUI.

3 Graphical User Interface (GUI)

3.1.2 My Network

Introduction

The **My Network** pane, provides you an overview of the devices that are currently connected to the HSG.

The following information is provided for each device:

- **PC Name**:
  Displays the name that will be used to reference to this device.

- **Connection Type**:
  Displays how the device is connected to the HSG (Ethernet, Wireless or Coax).

- **IP Address**:
  Displays the IP address of the device.

- **Status**:
  Displays whether the device is currently connected or not.

Viewing detailed device information

To view the complete device information:

1 Click the icon next to the device.
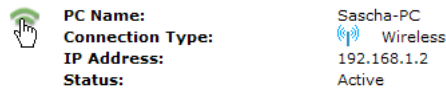
2 The **Device Information** page appears and displays detailed information about the device:

3 Click:

▸ The **Network Connection** link to view more information on the network interface that this device is using.

▸ **Windows Shared Folders** link to view the shared folders of this computer.

Windows Shared Folders:	\\192.168.1.2\

To test if this device is connected to your broad band home router, cli the 'Test Con
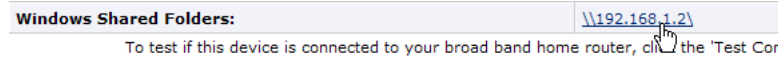
▸ **Test Connectivity** to check if the device is currently connected to the HSG.

▸ **Close** to return to the **Main** page.

3 Graphical User Interface (GUI)

3.1.3   Action Zone

Introduction

The **Action Zone** pane allows you to access

Click:

- **See Security Hazard** to check the security log.
- **GO TO THE INTERNET NOW** to browse to your home page.
- **Verizon. com** to access the Verizon corporate website.
- **Verizon Central** to browse the **My Verizon** portal
- **Verizon Business Center**
  The Business Center is a daily destination site aimed at helping companies improve productivity, stay informed, and expand their business connections
- **Verizon Surround**
  A cutting edge, broadband entertainment site featuring movie trailers, hot new tunes, cool games and fast-pace message boards. Stay up to date on the latest Hollywood happenings, special offers and more at Verizon Surround.
- **MUSIC** to browse to the music channel of Verizon Surround.
- **VIDEO** to browse to the music section of Verizon Surround.

4

GUI: Wireless Settings

4 GUI: Wireless Settings

4.1   Wireless Status

Introduction

The **Wireless Status** page provides you an overview of the wireless settings that are currently used by your HSG.

Overview

The following settings are available:

- **Radio Enabled**:
  Displays whether the HSG's wireless radio is active.

- **SSID**:
  To be able to distinguish one wireless network from another, each wireless network has its own network name, often referred to as Service Set IDentifier (SSID). All your wireless devices on your network must use this network name.

- **Channel**:
  Displays the channel to which the wireless connection is currently set. When you select **Automatic** (default setting), the HSG automatically selects the best channel for your wireless communication. The actual channel will then be displayed between parentheses (for example, **Automatic (6)** indicates that channel 6 is selected)

- **Security Enabled**:
  Displays whether wireless security is enabled. If security is enabled, the HSG is using one of the following encryption types to secure your wireless connection:

  ▸ **WEP 64-bit**:
    The oldest and also most encryption type. We recommend to use WPA instead. Only use it if your wireless client does not support WPA.

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

‣ **WPA2** (default):
The most recent and most secure version of WPA. Choose this version if you are sure that all your wireless clients support WPA2.

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

When you connect to the HSG, you have to enter the key that is listed next to the encryption type.

■ **SSID Broadcast**:
Displays whether the HSG is broadcasting its SSID. If activated, the SSID will appear in the list when a wireless client scans for available networks. For more information, see *"4.3.2 SSID Broadcast" on page 37*.

■ **MAC Authentication**:
If MAC authentication is enabled, only wireless clients that are included in the Access list are allowed to connect. For more information, see *"4.3.3 Wireless MAC Authentication" on page 38*.

■ **Wireless Mode**:
Displays the types of wireless device that can join the network. Options include:

‣ **Compatibility Mode (802.11b/g/n)**
In this mode 802.11b, 802.11g and 802.11n can be used to connect to the HSG.

‣ **Legacy Mode (802.11b/g)**
In this mode only 802.11b- and 802.11g connections can be used to connect to the HSG. 802.11n connections are not allowed

■ **Received Packets:**
The number of packets received and sent since the HSG's wireless capability was activated.

■ **Sent Packets:**
Displays the number of packets received and sent since the HSG's wireless capability was activated.

4 GUI: Wireless Settings

4.2 Basic Security Settings

Introduction

The **Basic Security Settings** page allows you to configure the basic wireless settings of your HSG in a step-by-step approach.

Overview of the steps

This section describes:

Step 1: Turn Wireless ON/OFF

Step 2: Change the SSID setting to any name or code you want

Step 3: Channel

Step 4: Click on the button next to WEP

Step 5: Select a WEP Key

Step 6: Turn WPS ON

Step 7: Write down wireless settings

Step 1: Turn Wireless ON/OFF

If you are not using your wireless connection, you might consider to turn it off.

Make sure that nobody is using the wireless connection before turning it off.

Step 2: Change the SSID setting to any name or code you want

If you want to change the default network name of your wireless network, type the new network name in the **SSID** box.

Step 3: Channel

If you want to change the channel for your wireless communication, select a new channel in the **Channel** list.

We recommend you to use **Automatic** (this is also the default). When **Automatic** is selected the HSG will choose the channel that has the least interference. Only change it if you experience wireless connectivity problems.

Step 4: Click on the button next to WEP

In this step you are able to use WEP encryption to secure your wireless connection. WEP has been proven to have some security issues. It is recommended to keep the **Off** option selected and use WPA(2) instead. For more information, see *"4.3.1 Securing Your Wireless Connection" on page 36*.

The only reason why you might consider to use WEP is if you have older wireless devices in your network that only support WEP.

Step 5: Select a WEP Key

If you did choose to use WEP, this step allows you to choose the WEP key.

1 In the **Select a WEP key** list, select:

‣ **64/40 bit** and **Hex** to enter a combination of 10 digits. You can choose any letter from A-F or any number from 0-9. For example: **0FB310FF28**.

‣ **64/40 bit** and **ASCII** to enter a combination of 5 ASCII characters. For example: **hello**.

‣ **128/104 bit** and **Hex** to enter a combination of 26 digits. You can choose any letter from A-F or any number from 0-9. Sample HEX WEP Key: **0FB310FF280FB310FF28123456**.

‣ **128/104 bit** and **ASCII** to enter a combination of 13 ASCII characters. For example: **sayhelloworld**.

2 Enter the key of your choice in the **Key Code** box.

3 If needed, complete the other steps

4 Click **Apply** on the bottom of the page.

Step 6: Turn WPS ON

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

WPS can only be turned on if you are using WPA or WPA2 to encrypt your wireless connection. If WEP or no encryption is used, the selection will be unavailable.

To turn WPS on/off:

1 Under WPS, select **On**/**Off**.

2 If needed complete the other steps.

3 Click **Apply**.

Step 7: Write down wireless settings
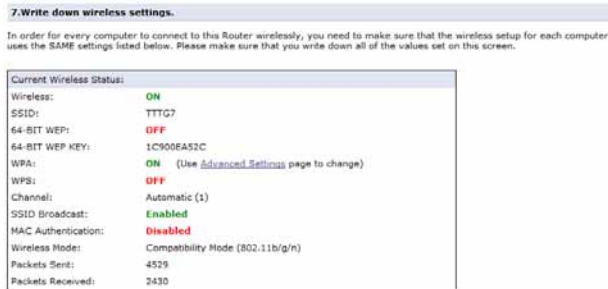
This step gives you an overview of the settings that will be active as soon as you click the **Apply** button on the bottom of the page.

You can print or write down this overview, to

APPLY YOUR CHANGES

Do not forget to click **Apply** on the bottom of your page to activate your changes.

4.3   Advanced Security Settings

Introduction

The **Advanced Security Settings** page allows you to take your wireless security to the next level.

To improve the security of your wireless network you can add the following security levels:

- **Level 1**: Encrypt your wireless traffic with a wireless key to make sure that only the sender and the receiver can read the data that is sent over your wireless connection.
  For more information, see *"4.3.1 Securing Your Wireless Connection" on page 36*.

- **Level 2**: Disable the broadcasting of your wireless network name to hide your wireless network from other users.
  For more information, see *"4.3.2 SSID Broadcast" on page 37*.

- **Level 3**: Limit access to your wireless network for certain devices.
  - Limit access based on the MAC address of the wireless device.
    For more information, see *"4.3.3 Wireless MAC Authentication" on page 38*.
  - Limit access based on the wireless mode supported by the wireless device.
    For more information, see *"4.3.4 802.11b/g/n Mode" on page 39*.

4 GUI: Wireless Settings

4.3.1 Securing Your Wireless Connection

Encryption types

The HSG supports the following encryption types:

- **WEP**:
  The least safe encryption type used for wireless connections. WEP has been proven to have security issues. Only use this encryption if your wireless device does not support **WPA(2)**.

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

- **WPA2** (default)**:**
  The most recent and most secure version of WPA. Choose this version if you are sure that all your wireless clients support WPA2.

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

- None

  > If you want to configure WPA2 on the built-in wireless utility of Windows XP Service Pack 2 (SP2), you first have to:
  >
  > - Upgrade your Windows XP to Service Pack 3.
  >
  > - or -
  >
  > - Install the following update: http://support.microsoft.com/kb/917021.

Although the HSG allows you to use WEP or no security, we strongly advise against using on of them! We recommend you to use **WPA2**.

Changing the encryption type

1 On the **Wireless Settings** menu, click **Advanced Security Settings**.

2 Under **Level 1**, select the encryption type of your choice.

3 Enter a the pre-shared key of your choice or use the default one.

4 Click **Apply**.

4.3.2   SSID Broadcast

SSID

To be able to distinguish one wireless network from another, each wireless network has its own network name, often referred to as Service Set IDentifier (SSID). All your wireless devices on your network must use this network name (and the correct encryption).

Broadcast

By default, the HSG broadcasts its wireless SSID. Wireless clients can then detect the presence of your network and inform the users that this network is available.

Note   Enabling SSID broadcast does not mean that everyone can connect to your network. They still need the correct wireless key to connect to the HSG network. It only informs them that your network is present.

Disabling SSID Broadcast

Proceed as follows:

1 On the **Wireless Settings** menu, click **Advanced Security Settings**.

2 Under **Level 2**, click **SSID Broadcast**.

3 The SSID Broadcast page appears:

Click:

▸ **Enable** to allow wireless clients to see your wireless network.

▸ **Disable** to prevent wireless clients from seeing your wireless network.

4 Click **Apply**.

4 GUI: Wireless Settings

4.3.3　Wireless MAC Authentication

MAC Address

A MAC (Media Access Control) address is a unique hexadecimal code that identifies a device on a network. Each network device has such a MAC address.

MAC Authentication

When using MAC authentication, you allow or deny devices to access to your network based on their MAC address.

Warning: MAC authentication alone is not enough!

Wireless MAC Authentication only offers a limited level of security. Hackers can easily detect a trusted MAC addresses and clone this trusted MAC address to their own computer, which will enables them to pass the MAC authentication filter. That's why it is important that you first secure your wireless connection (preferably with a **WPA** encryption key). This way hackers won't be able to interpret your wireless traffic.

Enabling MAC

Proceed as follows:

1 On the **Wireless Settings** menu, click **Advanced Security Settings**.

2 Under **Level 3**, click **Wireless MAC Authentication**.

3 Select **Enable Access List**.

4 Select:

 ▸ **Accept all devices listed below** if you want to *block all devices by default*.

 ▸ **Deny all devices listed below** if you want to *allow all devices by default*.

5 Now you can add exceptions to the default rule: enter the MAC addresses of the device in the **Client MAC Address** box and click **Add**. Repeat this step for each device.

 Note If you choose **Accept all devices listed below** and you are currently connected using a wireless connection, make sure to add the MAC address of your wireless client. If you do not do so, your will disconnected from the wireless network.

6 Click **Apply**.

4.3.4   802.11b/g/n Mode

Introduction

The **802.11b/g/n Mode** page allows you to specify which wireless standards you want to support.

Wireless standards

The HSG is able to support the following wireless standards:

- *802.11n* offers the highest speed (up to 130Mbps) and best range.
- *802.11g* offers speeds up to 54Mbps.
- *802.11b* offers speeds up to 11Mbps.

Procedure

Proceed as follows:

1   On the **Wireless Settings** menu, click **Advanced Security Settings**.

2   Under **Level 3**, click **802.11b/g/n Mode**.

3   The **802.11 Mode** page appears:

In the **802.11 Mode** list, select either of the following modes:

▶ **Compatibility Mode (802.11b/g/n)**
In this mode 802.11b, 802.11g and 802.11n can be used to connect to the HSG.

▶ **Legacy Mode (802.11b/g)**
In this mode only 802.11b- and 802.11g connections can be used to connect to the HSG. 802.11n connections are not allowed.

4   Click **Apply**.

4.3.5   Other Advanced Wireless Options

Warning

Changing the **Advanced Wireless Options** may affect your router's wireless performance. Do not make any changes to these options unless you have been instructed to do so by Verizon support personnel.

Accessing the Advanced Wireless Options page

Proceed as follows:

1 On the **Wireless Settings** menu, click **Advanced Security Settings**.

2 Under **Level 3**, click **Other Advanced Wireless Options**.

3 The **Advanced Wireless Options** page appears.

5

GUI: My Network

5 GUI: My Network

5.1 Network Status

Introduction

The **Network Status** page provides you an overview of the devices that are currently connected to the HSG.

Device Information

The following information is provided for each device:

■ **PC Name**:
Displays the name that will be used to reference to this device.

■ **Connection Type**:
Displays how the device is connected to the HSG (Ethernet, Wireless or Coax).

■ **IP Address**:
Displays the IP address of the device.

■ **IP Address Allocation**:
Displays whether the device is using:

▸ A **Dynamic** IP address
In this case the HSG assigns the first available address in the address pool. This also means that your may get a different IP address the next time you connect.

▸ A **Static** IP address
In this case the device uses a dedicated IP address, you will always use the same IP address for your connection. You can assign a static IP address either on the HSG or your device.

■ **MAC Address**:
Displays the unique hardware address of the HSG.

Connected Devices

The **Connected Devices** pane on the right displays how many devices are connected to a specific interface on the HSG.

5.2   Network Connections

Warning

The settings covered in this section should be configured by experienced network technicians only!

Introduction

The **Network Connections** page allows you to configure the network connections of your HSG.

Click ![icon] or the name of the connection to edit or view the settings of the connection.

5 GUI: My Network

5.2.1   Ethernet Properties

Introduction

The **Ethernet Properties** page allows you to view the properties of the Ethernet switch of your HSG.

Accessing the Ethernet Properties page

Proceed as follows:

1 On the **My Network** menu, click **Network Connections**.

2 The **Network Connections** table appears. Under **Network (Home/Office)**, click **Ethernet**.

    Note   If you do not see this item, click **Advanced** on the bottom of the page.

3 The **Ethernet Properties** page appears:

4 If you want to change the DHCP settings of your HSG, click **IP Address Distribution**. For more information, see .

5.2.2   Wireless Access Point Properties

Introduction

The **Wireless Access Point Properties** page allows you to:

- View the properties of the wireless access point of your HSG.
- View/ change the network name (SSID) of the wireless access point.

Access

Proceed as follows:

1   On the **My Network** menu, click **Network Connections**.

2   The **Network Connections** table appears. Under **Network (Home/Office)**, click **Wireless Access Point**.

   Note   If you do not see this item, click **Advanced** on the bottom of the page.

3   The **Wireless Access Point Properties** page appears:

4   If you want to:

   ▶ Turn off the wireless access point, click **Disable** in the upper-right corner.

   ▶ Change the network name (SSID), type the new name in the **Name** box and click **Apply**.

5 GUI: My Network

5.2.3 Coax Connection

Introduction

A Coax connection connects devices (such as set-top boxes) to the HSG Router using a coaxial cable.

The **Coax Properties** page allows you to view/change the settings of this connection.

Accessing the Coax Properties page

Proceed as follows:

1 On the **My Network** menu, click **Network Connections**.

2 The **Network Connections** table appears. Click **Coax**.

3 The **Coax Properties** page appears:

Properties

The following properties are available:

- **Status**:
  Displays the status of the coax connection.

- **Network**:
  Displays the type of network.

- **Connection Type**:
  Displays the type of connection.

- **MAC Address**:
  Displays the unique hardware address of this interface.

- **IP Address Distribution**:
  To change the value, click **IP Address Distribution**. For more information, see *"8.10 IP Address Distribution" on page 75*.

- **Channel**:
  The channel used by the coax connection.

Controls

Click**:**

- **Settings** to change the following advanced settings:

‣ Channel

‣ Allowable frequency

‣ Network Coordinator Mode

‣ Transmit Power Control

‣ Maximum Transmit Power

‣ Privacy

■ **Statistics** to view the statistics of your Coax connection

■ **Node statistics** to view the statistics of the devices that are using the Coax connection.

5 GUI: My Network

5.2.4   Broadband Connection (Ethernet)

Introduction

The Broadband Ethernet connection connects the HSG Router to the Internet using an Ethernet cable.

The **Broadband Connection (Ethernet) Properties** page allows you to view/change the settings of this connection.

Accessing the Broadband Connection (Ethernet) Properties page

Proceed as follows:

1 On the **My Network** menu, click **Network Connections**.

2 The **Network Connections** table appears. Click **Broadband Connection (Ethernet) Properties**.

3 The **Broadband Connection (Ethernet) Properties** page appears.

Properties

The following properties are available:

■ **Status**:
Displays the status of the Ethernet connection (for example, "Down", "Connected").

■ **Network**:
Select the type of connection being configured from the drop-down list (options: Network [Home/Office], Broadband Connection, or DMZ).

■ **Connection Type**:
Displays the type of connection. Since this is an Ethernet Connection, "Ethernet" is displayed. Physical Address Displays the physical address of the network card used for the network.

■ **MAC Address**:
Displays the unique hardware address of this interface.

■ **IP Address**:
The local IP address of the HSG and its DHCP server.

- **Subnet mask**:
  The subnet mask is used in combination with the IP address to identify your network.

- **Default Gateway**:
  The server that is used to pass traffic outside the local network.

- **DNS Server**:
  The DNS servers used by the Broadband Connection (Ethernet). These servers will translate the DNS names (for example: www.google.com) into IP addresses (for example: 74.125.230.84).

- **IP Address Distribution**:
  To change the value, click **IP Address Distribution**. For more information, see *"8.10 IP Address Distribution" on page 75*.

- **Packets Received**:
  The number of packets that were received over the Broadband Connection (Ethernet) connection.

- **Sent Packets**:
  The number of packets that were sent over the Broadband Connection (Ethernet) connection.

- **Time Span**

Changing the properties

Clicking **Settings** allows you to change:

- The DHCP setting
- The DNS settings
- The routing table

5 GUI: My Network

5.2.5   Broadband Connection (Coax)

Introduction

A Coax Broadband connection connects the HSG Router to the Internet using a coaxial cable.

The **Broadband Connection (Coax) Properties** page allows you to view/change the settings of this connection.

Accessing the Broadband Connection (Coax) Properties page

Proceed as follows:

1   On the **My Network** menu, click **Network Connections**.

2   The **Network Connections** table appears. Click **Broadband Connection (Coax) Properties**.

3   The **Broadband Connection (Coax) Properties** page appears.

Properties

The following properties are available:

■ **Status**:
Displays the status of the coax connection.

■ **Network**:
Displays the type of network.

■ **Connection Type**:
Displays the type of connection.

■ **MAC Address**:
Displays the unique hardware address of this interface.

■ **IP Address Distribution**:
To change the value, click **IP Address Distribution**. For more information, see *"8.10 IP Address Distribution" on page 75*.

■ **Channel**:
The channel used by the coax connection.

Changing the properties

Clicking **Settings** allows you to change:

- The DHCP setting
- The DNS settings
- The routing table

5 GUI: My Network

6

GUI: Firewall Settings

6 GUI: Firewall Settings

Introduction

The firewall controls the flow of data between the local network and the Internet. Both incoming and outgoing data are inspected and then either accepted (allowed) or rejected (barred) from passing through according to a set of rules.

To make sure that your entire network is protected the firewall is integrated in the Cantenna.

Accessing the Cantenna Firewall pages via the HSG

Proceed as follows:

1 On the top menu, click **Firewall Settings**.

2 The HSG directs you to the Cantenna firewall page.

7

GUI: Parental Control

7 GUI: Parental Control

7.1   Parental Control

Introduction

The **Parental control** page allows you to:

■ Block a website:
   When the user tries to access the blocked page he will get the standard page
   announcing that this page has been blocked.
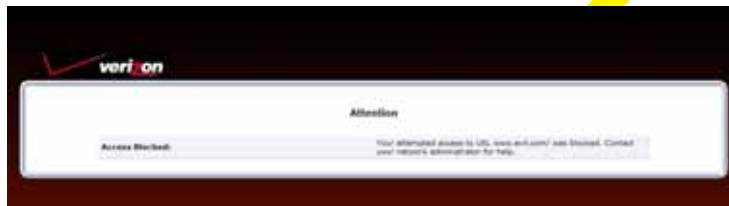
   For more information, see *"Blocking a website" on page 56*.

■ Redirect a website to another website.
   When the user tries to access the blocked page he will be redirected to the page
   of your choice (for example: an intranet page explaining the intranet policy). For
   more information, see *"Redirecting a website to another website" on page 57*.

Blocking a website

Proceed as follows:

1   On the top menu, click **Parental Control**.

2   The **Parental Control** page appears.

3 Select **Block the following website** and enter the URL of the Website that you want to block in the **Website** box for example (www.evil.com).

4 Click **Apply**.

Redirecting a website to another website

Proceed as follows:

1 On the top menu, click **Parental Control**.

2 The **Parental Control** page appears.

3 Select **Redirect the following website to another website**.

4 Enter the URL of the website that you want to block in the **Website** box (for example: www.evil.com).

5 Enter the URL of the website that you want to redirect to in the **Redirect to Website** box (for example: www.company.com).

6 Click **Apply**.

7 GUI: Parental Control

7.2 Rule Summary

Introduction

The **Rule Summary** page allows you to view or change the existing parental control rules.

Changing a parental control rule

Proceed as follows:

1 On the **Parental Control** menu, click **Rule Summary**.

2 The **Rule Summary** page appears.

3 Click:

‣ 🖉 to edit a rule. The **Parental Control** page will then allow you to change the rule.

For more information, see *"7.1 Parental Control" on page 56*.

‣ 🗑 to delete a rule.

7.2.1   Parental Control Log

Introduction

The **Parental Control Log** page allows you to view when people tried to access the a blocked page.

Accessing the Parental Control Log page

Proceed as follows:

1 On the **Parental Control** menu, click **Parental Control Log**.

2 The **Parental Control Log** page appears.

Under Details you can see the detailed information about the event. The most important items are:

- **src**: The IP address of the user that tried to access the website.
- **url**: The URL of the website that the user tried to access.

3 Optionally, click:

- **Close** to go to the **Rule Summary** page.
- **Clear Log** to remove all entries.
- **Save Log** to save the log entries to a text file.
- **Refresh** to update the list.

7 GUI: Parental Control

DRAFT

8

GUI:
Advanced
Settings

DRAFT

8 GUI: Advanced Settings

Introduction

The **Advanced** page allows you to configure the more advanced services of both the HSG and the Verizon.

To access the **Advanced**, proceed as follow:

1 On the top menu, click **Advanced**.

2 The **Advanced** page appears.

3 On the bottom of this page, click:

‣ **Cantenna Advanced Settings** to configure the settings of the Cantenna.
For more information about these settings, read the user documentation of your Cantenna.

‣ **HSG Advanced Settings** to configure the settings of the HSG.
For more information about these settings, read the rest of this chapter.

Utilities

Click:

■ **Diagnostics** to perform diagnostic tests on the HSG.
For more information, see *"8.1 Diagnostics" on page 64*.

■ **Restore Defaults** to reset the HSG to its default settings.
For more information, see *"8.2 Restore Defaults" on page 66*.

■ **Reboot Router** to restart the HSG
For more information, see *"8.3 Reboot Gateway" on page 67*.

■ **ARP Table** to display active devices and their IP and MAC addresses.
For more information, see *"8.4 ARP Table" on page 68*.

■ **Users** to create and manage users.
For more information, see *"8.5 Users" on page 69*.

DNS Server

Click **DNS Server** to manage the local (LAN) network for host name and IP address.
For more information, see *"8.6 DNS Server" on page 70*.

Configuration

Click:

- **System Settings** to change the system settings of the HSG.
  For more information, see *"8.7 System Settings" on page 72*.
- **Port Configuration** to configure the Ethernet LAN ports.
  For more information, see *"8.8 Port Configuration" on page 73*.

Date and time

Click **Date and Time** to configure the HSG clock and calendar of the HSG.
For more information, see *"8.9 Date and Time" on page 74*.

IP Address Distribution

Click **IP Address Distribution** to manage the IP addresses of devices on the network.
For more information, see *"8.10 IP Address Distribution" on page 75*.

8 GUI: Advanced Settings

8.1 Diagnostics

Introduction

The **Diagnostics** page allows you to ping a device or website. Ping is used to test if a host (for example, a website, a computer) is reachable.

Procedure

To diagnose network connectivity:

1 On the top menu, click **Advanced**.

2 The **Advanced** page appears. Click **HSG Advanced Settings** on the bottom of the page and then click **Yes** to confirm that you want to access the advanced settings.

3 Under ![icon], click **Diagnostics**.

4 The **Diagnostics** page appears.

Ping (ICMP Echo)		
Destination:	Sascha-PC.lan	Go
Number of pings:	4	
Status	Test Succeeded	
Packets:	4/4 transmitted, 4/4 received, 0% loss	
Round Trip Time:	Minimum = 2 ms Maximum = 12 ms Average = 5 ms	

In the **Destination** box, type one of the following:

▸ The DNS name (for example: www.google.com) or IP address (for example: 141.11.249.33) of a website.

▸ The DNS name (for example: Sascha-PC.lan) or IP address (for example: 192.168.1.3) of network device.

5 If needed change the number of pings in the **Number of pings box**.

6 Click **Go**.

7 The HSG is now pinging the destination. You can follow the progress in the Packets box.

8 At the end of the test the results appear.

Ping (ICMP Echo)		
Destination:	Sascha-PC.lan	Go
Number of pings:	4	
Status	Test Succeeded	
Packets:	4/4 transmitted, 4/4 received, 0% loss	
Round Trip Time:	Minimum = 2 ms Maximum = 12 ms Average = 5 ms	

Under:

▸ **Status** you can see if the test was successful or not.

▸ **Packets** you can see the number packets that were received and how many percent that were lost.

‣ **Round trip time**, you can see the amount of time it took for the packet to get back to the HSG.

8 GUI: Advanced Settings

8.2 Restore Defaults

Introduction

The **Restore Defaults** page allows you to return to the factory defaults of your HSG. For more information, see *"10.3 Resetting your HSG" on page 93*.

8.3   Reboot Gateway

Introduction

This **Reboot Gateway** page allows you to restart your HSG.

WARNING

During the reboot all services provided by the HSG will be unavailable.

Procedure

To reboot the HSG:

1 On the top menu, click **Advanced**.

2 The **Advanced** page appears. Click **HSG Advanced Settings** on the bottom of the page and then click **Yes** to confirm that you want to access the advanced settings.

3 Under 🟥, click **Reboot Gateway**.

4 The HSG prompts you to confirm the reboot.
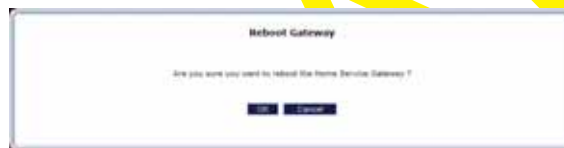
Click **OK**.

5 The HSG restarts. This may take up to two minutes.

Note   To access the HSG's GUI after restarting the HSG, click the **Refresh** button of your web browser.

8 GUI: Advanced Settings

8.4   ARP Table

ARP

The **Address Resolution Protocol** is a protocol that translates the IP address of a network device into its MAC address.

The ARP table page

The **ARP Table** page provides you a mapping between the IP address and the MAC address of the device that is using this IP address.

Viewing the ARP table

Proceed as follows:

1   On the top menu, click **Advanced**.

2   The **Advanced** page appears. Click **HSG Advanced Settings** on the bottom of the page and then click **Yes** to confirm that you want to access the advanced settings.

3   Under 🔴, click **ARP Table**.

4   The **ARP Table** page appears.

The following fields are available:

▸ **IP Address**

▸ **MAC Address**

▸ **Device**
Displays the network interface that the device is using. For more information, see *"5.2 Network Connections" on page 43*.

8.5 Users

Introduction

The **Users** page allows you to manage the user accounts for access to the HSG GUI.

1 On the top menu, click **Advanced**.

2 The **Advanced** page appears. Click **HSG Advanced Settings** on the bottom of the page and then click **Yes** to confirm that you want to access the advanced settings.

3 Under , click **Users**.

4 The **Users** page appears.

5 If you want to:
  ▸ Create a new user, click **New User**.
  ▸ Change the settings of an existing user, click the name of the user or .
  ▸ Delete a user, click .

User Settings page

When editing or creating a user account the **User Settings** page appears:

The following fields are available:

■ **User Name**
  The name a remote user will use to access the home or office network. This entry is case-sensitive.

■ **New Password/Retype New Password**
  The password for the user (and enter again to confirm).

■ **Permissions**
  The level of access the user is allowed. Options include: Administrator or User.

Note You can not change the **User Name** and **Permissions** of the **admin** user.

8 GUI: Advanced Settings

8.6 DNS Server

Introduction

The Domain Name System (DNS) translates domain names into IP addresses and vice versa. The HSG's DNS server is an auto-learning DNS, which means that when a new computer is connected to the network, the DNS server learns its name and automatically adds it to the DNS table. Other network users can immediately communicate with this computer using either its name or its IP address.

Services offered

The following services are provided by the DNS server of the HSG:

- Shares a common database of domain names and IP addresses with the DHCP server.
- Supports multiple subnets within the local network simultaneously.
- Automatically appends a domain name to unqualified names.
- Allows new domain names to be added to the database using the HSG's GUI.
- Permits a computer to have multiple host names.
- Permits a host name to have multiple IPs (needed if a host has multiple network cards).

Configuration

The DNS Server does not require configuration. However, the list of computers known by the DNS can be viewed or a new computer can be added to the list.

Viewing DNS Table

Proceed as follows:

1 On the top menu, click **Advanced**.

2 The **Advanced** page appears. Click **HSG Advanced Settings** on the bottom of the page and then click **Yes** to confirm that you want to access the advanced settings.

3 Under ![icon], click **DNS Server**.

4 The **DNS Server** page appears.

Click:

- ▶ **Add** or ![icon] to add a new entry to the list. For more information, see *"Adding a DNS entry" on page 71*.

▶ 📝 to edit an existing DNS entry.

▶ 📝 to delete an existing DNS entry.

Adding a DNS entry

On the **DNS Server** page:

1 Click **Add DNS Entry** at the bottom of the page.

2 The **DNS Entry** page appears.

3 Enter a DNS name for the host in the **Host Name** box.

4 Enter the IP address of the host in the **IP Address** box.

5 Click **Apply**.

Accessing a device via its DNS name

Once that a device is listed in the DNS table you can access it via **<DNS. name>.<DNS suffix>**.

Example

Your host is using **PC-Jim** as DNS name and **lan** as DNS suffix (this is the default DNS suffix).

If this host is running a web server, you can access it via http://PC-Jim.lan.

If this host is a Windows computer with shared files on it, you can access these shared files via \\PC-Jim.lan.

8 GUI: Advanced Settings

8.7   System Settings

Introduction

The **System Settings** page allows you to configure various system and management parameters.

The page is divided into the following groups:

- *Gateway Status*
- *Security*

Gateway Status

Under **Gateway Status**, the following properties are available:

- **Home Service Gateway's Hostname**
  Specify the HSG's host name by entering it into the text box. The host name is used in combination with the **Local Domain** to access the HSG.

- **Local Domain**
  Specify the network's local domain by entering it into this text box. The **Local Domain** is used in combination with the **Home Service Gateway's Hostname** to access the HSG.

So if you change the host name to **gateway** and the local domain to **home**, you will have to access the GUI using http://gateway.home instead of http://hsg.lan.

Security

Under **Security**, you can enter how many tries a user gets to login to the GUI without blocking GUI access.

8.8   Port Configuration

Introduction

The **Port Configuration** page allows you to set up the HSG's Ethernet ports as either

Supported speeds

The HSG supports the following speeds:

- 1 Gigabit (=1000 Megabits) per second (Gbps)
- 100 Megabits per second (Mbps)
- 10 Megabits per seconds

The HSG also has an **Auto** setting where it automatically selects the highest speed supported by the connected device.

Supported Duplex

The HSG supports the following communication systems:

- Full-duplex:
  Supports communication in both directions and at the same time.
- Half-duplex:
  Supports communication in both directions but only one at a time.

8 GUI: Advanced Settings

8.9   Date and Time

Introduction

The Date and Time page allows you to configure the date and time that the HSG will be using for System logging.
For more information, see .

Accessing the Date and Time page

Proceed as follows:

1   On the top menu, click **Advanced** and then click **Yes** to confirm that you want to access the advanced settings.

2   Under , click **Date and Time**.

3   In the **Time Zone** list, select your time zone or select Other to create one if your time zone is not listed.

4   Under **Daylight Saving Time** you can change the daylight saving settings

5   Under **Automatic Time Update**:

  ‣ Select **Enabled** if you want the HSG to synchronize its time settings with a Network Time Protocol (NTP) server. This guarantees you that you will always be using the correct time.

  ‣ Clear **Enabled** if you want to set the time manually. Use the **Clock Set** button on the bottom of the page to enter the correct date and time.

6   Click **Apply**.

8.10 IP Address Distribution

Introduction

The HSG's DHCP server makes it possible to easily add computers configured as DHCP clients to the network. It provides a mechanism for allocating IP addresses to these hosts and for delivering network configuration parameters to them.

For example, a client (host) sends out a broadcast message on the network requesting an IP address for itself. The DHCP server then checks its list of available addresses and leases a local IP address to the host for a specific period of time and simultaneously designates this IP address as "taken." At this point, the host is configured with an IP address for the duration of the lease.

The host can choose to renew an expiring lease or let it expire. If it chooses to renew a lease, it will also receive current information about network services,

as it did with the original lease, allowing it to update its network configurations to reflect any changes that occurred since it first connected to the network. If the host wishes to terminate a lease before its expiration, it can send a release message to the DHCP server, which will then make the IP address available for use by others.

HSG DHCP server functions

The DHCP server of the HSG:

- Displays a list of all DHCP hosts devices connected to the HSG.
- Defines the range of IP addresses that can be allocated in the network.
- Defines the length of time for which dynamic IP addresses are allocated.
- Provides the above configurations for each network device and can be configured and enabled/disabled separately for each network device.
- Can assign a static lease to a network computer so that it receives the same IP address each time it connects to the network, even if this IP address is within the range of addresses that the DHCP server may assign to other computers.
- Provides the DNS server with the host name and IP address of each computer connected to the network.

Accessing the IP Address Distribution page

To view a summary of the services currently being provided by the DHCP server:

1 On the top menu, click **Advanced** and then click **Yes** to confirm that you want to access the advanced settings.

2 Under ![icon], click **IP Address Distribution**.

8 GUI: Advanced Settings

3 The **Routing** page appears.

Click:

▸ 📝 or the name of the entry to change the settings.

▸ **Connection List** to see the current DHCP connections.

▸ Access Control to allow/deny access for specific client based on their MAC address of the client.

9

GUI: System Monitoring

9 GUI: System Monitoring

Introduction

The **System Monitoring** menu consists of the following items:

- **Router Status**
  For more information, see *"9.1 Router Status" on page 79*.
- **Advanced Status**
  For more information, see *"9.2 Advanced Status" on page 80*.

9.1 Router Status

Introduction

The **Router Status** page provides basic information about your HSG.

Accessing the Router Status page

On the top menu, click **System Monitoring**.

9 GUI: System Monitoring

9.2 Advanced Status

Introduction

The **Advanced Status** page contains more advanced status information that is bundled in the following groups:

- **System Logging**:
  For more information, see *"9.2.1 System Logging" on page 81*.
- **Full Status/System wide Monitoring of Connections**:
  For more information, see *"9.2.2 Full Status/System wide Monitoring of Connections" on page 82*.
- **Traffic Monitoring**:
  For more information, see *"9.2.3 Traffic Monitoring" on page 83*.
- **Bandwidth Monitoring**:
  For more information, see *"9.2.4 Bandwidth Monitoring" on page 84*.
- **IGMP Proxy**:
  For more information, see *"9.2.5 IGMP Proxy" on page 85*.

WARNING

The advanced status pages are intended for advanced technical users only!

Accessing the Advanced Status page

Proceed as follows:

1 On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2 The **Advanced Status** page appears:

3 Click on the item that you want to view.

9.2.1 System Logging

Introduction

The **System Logging** page summarizes the last events recorded on your Thomson Gateway.

Accessing the System Logging page

Proceed as follows:

1 On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2 The **Advanced Status** page appears.

Click **System Logging**.

3 The **System Logging** page appears.

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9.2.2 Full Status/System wide Monitoring of Connections

Introduction

The **Full Status/System wide Monitoring of Connections** page provides an overview of all network connections.

Accessing the System Logging page

Proceed as follows:

1 On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2 The **Advanced Status** page appears.

Click **Full Status/System wide Monitoring of Connections**.

3 The **Full Status/System wide Monitoring of Connections** page appears.

4 Click:

  ▸ **Refresh** to update the information.

  ▸ **Automatic Refresh On** to let the HSG automatically update the information.

9.2.3   Traffic Monitoring

Introduction

The HSG constantly monitors traffic within the local network and between the local network and the Internet. The **Traffic Monitoring** page allows you to view up-to-the-second statistical information about data received from and transmitted to the Internet, and about data received from and transmitted to computers in the local network.

Accessing the System Logging page

Proceed as follows:

1   On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2   The **Advanced Status** page appears.

Click **Traffic Monitoring**.

3   The **Traffic Monitoring** page appears.

Buttons

Under the overview table, the following buttons are available

- **Close** to return to the **Advanced Status** page.
- **Refresh** to update the information.
- **Automatic Refresh On** to let the HSG automatically update the information every minute or **Automatic Refresh Off** to switch back to manual updating.

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9.2.4   Bandwidth Monitoring

Introduction

The **Bandwidth Monitoring** page allows you to view the traffic sent or received by the HSG during a specific time slot.

Accessing the System Logging page

Proceed as follows:

1 On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2 The **Advanced Status** page appears.

Click **Bandwidth Monitoring**.

3 The **Bandwidth Monitoring** page appears.

Buttons

Under the overview table, the following buttons are available

- **Close** to return to the **Advanced Status** page.
- **Automatic Refresh On** to let the HSG automatically update the information every minute or **Automatic Refresh Off** to switch back to manual updating.
- **Refresh** to update the information.
- **Reset Statistics** to reset the counters.
- **Disable Statistics** to turn off bandwidth monitoring or **Enable Statistics** to re-enable bandwidth monitoring.

9.2.5   IGMP Proxy

Introduction

The **IGMP Proxy** task allows you to view IGMP Proxy multicast group memberships and statistics.

Viewing the IGMP Proxy Multicast Group Membership page

Proceed as follows:

1 On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2 The **Advanced Status** page appears.

Click **IGMP Proxy**.

3 The **Multicast Group Membership** page appears.

Viewing the IGMP Proxy Multicast Group Statistics

Proceed as follows:

1 On the top menu, click **System Monitoring** and then click **Yes** to confirm that you want to access the advanced settings.

2 The **Advanced Status** page appears.

Click **Bandwidth Monitoring**.

3 The **Multicast Group Membership** page appears. On the left menu, click **IGMP Proxy Multicast Group Statistics**.

4 The **IGMP Proxy Multicast Group Statistics** page appears.

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Call the Help Desk

If this Troubleshooting section does not provide a solution to your problem, please call the Help Desk at *800-837-4966*.

10.1 General Troubleshooting

Check the LEDs

If the HSG does not work as expected, the status LEDs on the front panel may provide you enough information to locate the problem:

LED	Color	State	Description
Power	Green	Solid	Powered on.
		Blinking	Upgrade ongoing. Do *not* remove any cables or switch off the HSG when the HSG is upgrading.
	Red	Solid	Self-test failed, indicating device malfunction
	Off		Not powered.
Internet	Green	Solid	Connected to the Internet, no activity detected.
		Blinking	Connected to the Internet, activity.
	Orange	Solid	Failed to connecting to the Internet.
	Off		The HSG is either powered off or starting up.
Phone	Green	Solid	Connected to the Verizon telephone network.
		Blinking	Call ongoing or connecting to the Verizon telephone network.
	Red	Solid	Failed to connect to the Verizon telephone network.
	Orange	Blinking	Voice mail message available.
	Off		The HSG is either powered off or telephony is not enabled.
WiFi	Green	Solid	Wireless is enabled on your HSG, no activity
		Blinking	Wireless is enabled on your HSG, activity
	Off		Wireless is disabled on your HSG.

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LED	Color	State	Description
Ethernet	Green	Solid	Connected to the Ethernet device, no activity
		Blinking	Connected to the Ethernet device, activity
	Off		No device connected.

10.2 Troubleshooting Your Wireless Connection

Windows can not find the HSG access point

If the built-in Windows wireless client manager can not find your HSG access point:

- If you are using a laptop, check if your laptop has a button to enable/disable the wireless client. Switch it on and try again.

- Make sure your computer is within range.

- Make sure that wireless is enabled on your HSG:

  a Take a computer that is connected to the HSG or connect your computer with an Ethernet cable (for more information, see *"2.3.2 Wired Connection to the HSG" on page 18*).

  b Browse to the GUI. For more information, see *"Accessing the GUI" on page 20*.

  c On the **Wireless Settings** menu, click **Basic Security Settings**.

  d Under **1. Turn Wireless ON**, select **On**.

  > **1.Turn Wireless ON**
  >
  > **Wireless:** ● On   ○ Off

  e Click **Apply**.

- Change the wireless channel:

  a Take a computer that is connected to the HSG or connect your computer with an Ethernet cable (for more information, see *"2.3.2 Wired Connection to the HSG" on page 18*).

  b Browse to the GUI. For more information, see *"Accessing the GUI" on page 20*.

  c On the **Wireless Settings** menu, click **Basic Security Settings**.

  d Under **3. Channel**, select another channel.

  e Click **Apply**.

Poor wireless connectivity

Try the following:

- Change the wireless channel:

  a Take a computer that is connected to the HSG or connect your computer with an Ethernet cable (for more information, see *"2.3.2 Wired Connection to the HSG" on page 18*).

  b Browse to the GUI. For more information, see *"Accessing the GUI" on page 20*.

  c On the **Wireless Settings** menu, click **Basic Security Settings**.

  d Under **3. Channel**, select another channel.

  e Click **Apply**.

- Check the signal strength, indicated by the wireless client manager. If the signal is low, try to move the HSG for optimal performance.

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- Use WPA2 as encryption. For more information, see *"4.3.1 Securing Your Wireless Connection" on page 36*

DRAFT

10.3 Resetting your HSG

Resetting your HSG

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

Warning

A reset to factory default settings deletes all configuration changes you made. For example:

■ The **ESSID** and **WPA key on** the bottom of your HSG will be used to secure your wireless connection. So you may need to re-associate your wireless clients, as described in *"2.3.1 Wireless Connection to the HSG" on page 14*.

■ The **Login password** required to access the GUI pages will be reset to the one that is printed on the bottom of the HSG.

Methods

You can choose between:

■ *Resetting the HSG via the HSG GUI*

■ *Reset the HSG via the Reset button*

Resetting the HSG via the HSG GUI

Proceed as follows:

1   Browse to the GUI.
    For more information, see *"Accessing the GUI" on page 20*.

2   On the menu on the top click **Advanced**.

3   The HSG prompts you to confirm your choice. Click **Yes**.

4   Under ![icon], click **Restore Defaults**.

5   The **Restore Defaults** page appears. Click **Restore Defaults**.

6   The HSG prompts you to confirm your choice, click **OK**.

7   The HSG restores the factory defaults and restarts.

8   The HSG returns to the HSG login page.

Reset the HSG via the Reset button

Proceed as follows:

1   Make sure the HSG is turned on.

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2 Use a pen or an unfolded paperclip to push the recessed **Reset** button for 5
seconds and then release it.

3 The HSG restarts with the factory default settings

10.4 Configuring Dynamic IP Addressing on Windows

Windows 7/Vista

1   Select **Network and Sharing** in the **Control Panel**.

2   Click **View Status**, then click **Properties**.

3   Click **Continue** in the **User Account Control** window.

4   In the **General** tab of the **Local Area Connection Properties** window select **Internet Protocol Version 4 (TCP/IPv4)**, then click **Properties**.

5   The **Internet Protocol Version 4 (TCP/IPv4) Properties** window appears.

6   Click the **Obtain an IP address automatically** radio button.

7   Click the **Obtain DNS server address automatically** radio button.

8   Click **OK** in the **Internet Protocol Version 4(TCP/IPv4) Properties** window, then click **OK** in the **Local Area Connection Properties** screen to save the settings.

Windows XP

1   Select **Network Connections** in the **Control Panel**.

2   Right-click **Ethernet Local Area Connection**, then click **Properties**.

3   In the **General** tab, select **Internet Protocol (TCP/IP)**, then click **Properties**.

4   The **Internet Protocol (TCP/IP) Properties** window appears.

5   Click the **Obtain an IP address automatically** radio button.

6   Click the **Obtain DNS server address automatically** radio button.

7   Click OK in the **Internet Protocol (TCP/IP) Properties** screen, then click **OK** in the **Local Area Connection Properties** screen to save the settings.

Macintosh OS X

1   Click on the Apple icon in the top left corner of the desktop.

2   From the menu that appears, select **System Preferences**.

3   The **System Preferences** window appears. Click **Network**.

4   From the **Network** window, make sure **Ethernet** in the list on the left is highlighted and displays **Connected**"

5   Click **Assist me**.

6   From the tab that appears, click **Diagnostics**.

7   Follow the instructions in the **Network Diagnostics** assistant.

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