

**LET'S GO
GET YOUR MODEM
UP AND RUNNING**



HG659b MODEM USER GUIDE

CONTENTS

1	Preparation	2
2	Connect it together	4
3	Connect to the internet	6
4	Troubleshooting	8
5	Useful information	10

1. PREPARATION

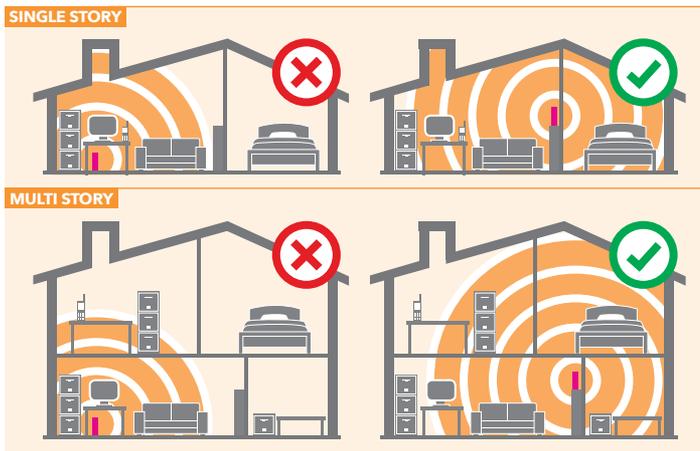
1.1 WHERE TO PUT YOUR MODEM

- Place the modem on a flat surface and ensure the modem is not covered by anything and has adequate ventilation at all times.
- Always keep the back of your modem out of public view as the sticker on the back of the modem has your WiFi network and password details.

1.2 OPTIMISE YOUR WiFi SIGNAL

- WiFi signal strength and range is dependent on physical and environmental factors outside of Spark's control. The following tips will help you optimise your WiFi signal:

Tips on modem placement:



- Dense obstacles such as walls, floors, ceilings, hot water cylinders, aquariums etc. limit WiFi performance and range.
- Do not place the modem near electronic devices such as microwave ovens, cordless phones or wireless transmitters like baby or room monitors.

- Do not place the modem in an enclosed space such as a cupboard, under or behind a desk or large item of furniture.
- Where possible place your modem up high for better WiFi performance.
- If you have WiFi coverage issues, you can opt to purchase products such as WiFi range extenders.

1.3 EQUIPMENT CHECK

Let's check everything is here. You should have:



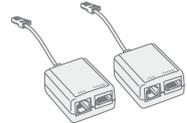
1 x
Spark HG659b Modem



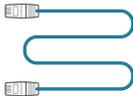
1 x
Safety Information



1 x
User Guide



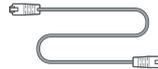
2 x ADSL Filters
Only for use with ADSL
broadband connection



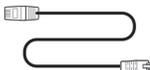
1 x Fibre Ethernet
Cable (blue)



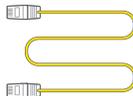
1 x Voice
Cable (grey)



1 x ADSL
Cable (grey)



1 x VDSL
Cable (black)



1 x LAN Ethernet
Cable (yellow)



1 x
Power Supply

Important: If you are running an alternative DHCP server on your network, contact your IT support specialist before progressing. (DHCP is enabled by default on the Gateway and this will conflict with your existing DHCP server).

2. CONNECT IT TOGETHER

First, connect it all together using the coloured cable for your broadband connection type
Fibre (blue). Then, **wait 5 minutes** for all the connections to be established. You can read

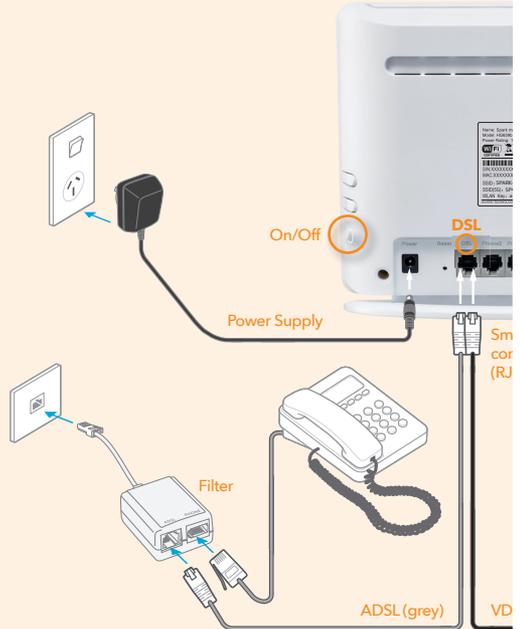
ADSL BROADBAND

Use a filter

ADSL filters are required for every phone socket in use, including phone lines, faxes or digital TV decoders. Filters remove interference on your phone lines and improve your broadband service (even if you don't have a home phone plugged in). Use the ADSL filter supplied with this modem when setting up as old filters can cause speed and stability problems. Don't use telephone extension cables with the modem as these cause speed and stability problems.

If you use 4 or more phone sockets in your home, or have a monitored security or medical alarm, Spark recommends you have an ADSL Splitter installed by a technician.

Want to connect your mobile/tablet/WiFi device to your modem?
See page 7 for more info



VDSL BROADBAND

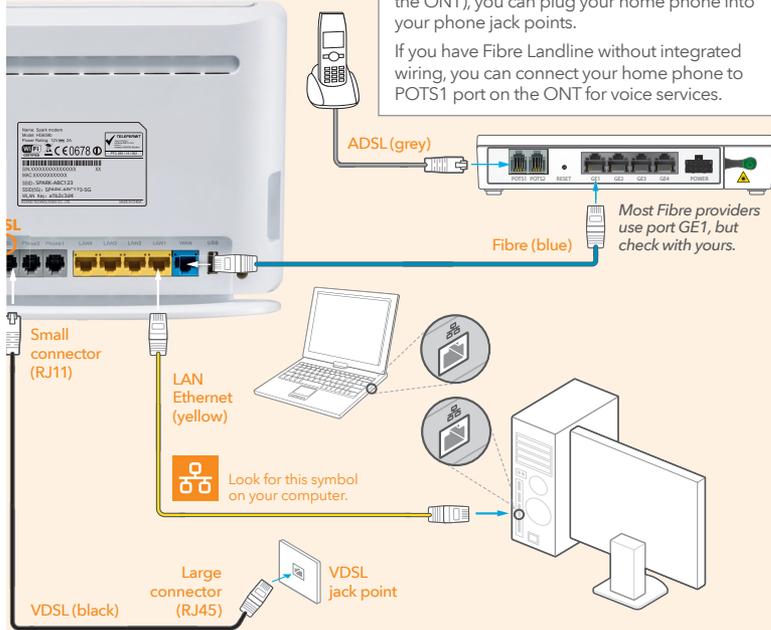
To get a VDSL connection, a technician jack point (RJ45). Your home phone n

n type: ADSL (grey), VDSL (black) or read the next pages while you wait.

FIBRE BROADBAND Fibre Landline

If you have Fibre Landline with integrated wiring (your phone jack points have been connected to the ONT), you can plug your home phone into your phone jack points.

If you have Fibre Landline without integrated wiring, you can connect your home phone to POTS1 port on the ONT for voice services.



hnician will first install a VDSL splitter and a VDSL phone remains connected to its current jack point.

Download **Spark Broadband Assist** to your computer, a **free** tool to help set up and manage your modem and your Yahoo! Mail. **See page 6 for more info**

3. CONNECT TO THE INTERNET

Wait 5 minutes after plugging it all together then check the lights.

3.1 WHAT DO THE LIGHTS MEAN?



Power and WAN light should be **GREEN** and steady. Internet light and a LAN light (if using yellow LAN port) should be **GREEN** and blinking. WLAN light should be **GREEN** and steady or blinking (if using WiFi).

If the lights don't look like this, and you have waited 5 minutes since plugging it all together, look at '**Troubleshooting**' on page 8.

Once the lights are displaying correctly, open a web browser (such as Internet Explorer, Firefox, Safari or Chrome) and go to **spark.co.nz/broadbandsetup** or any other web page to test your connection.

3.2 WHY USE SPARK BROADBAND ASSIST?

Spark Broadband Assist is a free tool you can download from **spark.co.nz/broadbandsetup** for your computer that lets you:

- Set up your home WiFi
- Help troubleshoot your internet connection
- Change your WiFi name & password to make it more secure or easier to remember
- Change your WiFi channel which may help WiFi performance
- Help link your Yahoo! Mail to the email on your computer

Broadband Assist currently works on your computer or Mac with the following operating systems (Windows Vista, Windows 7, Windows 8, OS X Mountain Lion, OS X Yosemite). It is up to 20MB to download and will count towards your monthly data allowance.

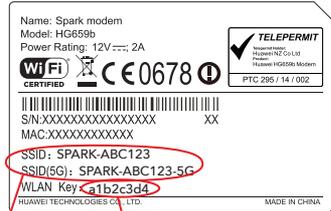
Broadband Assist also gives you access to free Premium services such as:



- 6 Check out **spark.co.nz/myspark/myinternet/premiumservices/** for more information.

3.3 HOW TO CONNECT A MOBILE, TABLET OR OTHER WiFi CAPABLE DEVICE

After you make sure you can connect to the internet via your modem (see previous page), then you can connect your other devices via WiFi.



1. Go to 'Settings' and turn on WiFi on your device.



2. Select the WiFi network that matches the sticker on the back of your modem.



3. Enter the password.

TIP 1: This modem uses both 2.4Ghz and 5Ghz public wavelength bands to transit radio signals between the modem and WiFi enabled devices. If you have a device (e.g. a premium smartphone/tablet/computer) that displays the 5G network option when searching for WiFi network, you can connect to the 5G band at a higher speed than the 2.4 Ghz band.

TIP 2: If you select the 'remember me' or 'connect automatically' option your device will automatically connect to this WiFi network when you're in range.

3.4 HOW TO SET UP GUEST WiFi ACCESS

You can set up guest WiFi to allow others to access the internet via your modem. Check out instructions for your modem at spark.co.nz/help.

4. TROUBLESHOOTING

PROBLEM	POSSIBLE REASONS	HOW TO FIX
WAN light is off	ADSL, VDSL or Fibre connection is not established. There could be a problem with the broadband equipment or your line.	Check the modem and relevant coloured cables are connected. Turn the modem off for 30 seconds then on again (and wait 5 minutes for connection to establish). ADSL - If you have a landline, check that it is working. If not you may have a line fault and need to contact Spark.
Internet light is off or I can't browse the internet	There is no access from your modem to the internet - this could be because: <ul style="list-style-type: none"> • Provisioning of your service may not have been completed. • There is a problem with the broadband network. • Incorrect password on your modem. • There is a problem with your account. 	Check the date Spark has advised that your service will be connected. Check you have waited 5 minutes since plugging it all together. Turn the modem off for 30 seconds then on again (and wait 5 minutes for connection to establish). Check you have correctly input your modem password, including upper or lower case letters.
I can't find the WiFi network name on my mobile or tablet The WLAN light on my modem is off	The modem WiFi is turned off.	To turn WiFi on, press the WLAN button on the side of the modem for 2-3 seconds (until the light comes on). 
My connection or WiFi was working but it keeps dropping	There could be a problem with your line. There could be a problem with the WiFi drivers on the device you are using. (e.g. computer or laptop).	Turn the modem off for 30 seconds and then on again (and wait 5 minutes for the connection to establish). Check your device manufacturer's website for any updates to WiFi drivers.
My WiFi is slow	Many factors can affect WiFi performance - such as: <ul style="list-style-type: none"> • Speed of internet connection. • Number and specifications of WiFi devices connected. • Your home layout. • Location of modem. • Interference from other devices. 	Check out spark.co.nz/wifiathome for more information on WiFi performance and how to improve it.

If you've tried these fixes and the problem persists visit spark.co.nz/help or call Spark on **0800 225 598 (Consumer)** or **0800 BUSINESS (2874 6377)**

WHAT THE LIGHTS MEAN

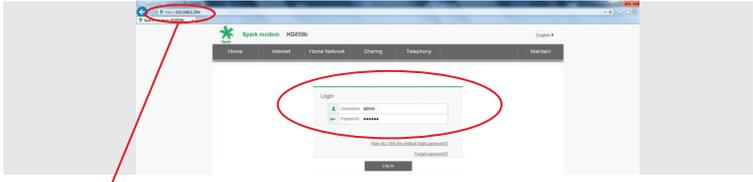
INDICATOR	EXPECTED STATE	DESCRIPTION
Power	Steady green	Power is on.
WAN	Blinking green	Connection is being activated.
	Steady green	Connection has been set up & activated.
	Off	The DSL port (for ADSL or VDSL) or WAN port (for Fibre) is not connected.
Internet	Blinking green	Modem is connected to the internet, and data is being transmitted.
	Steady green	Modem is connected to the internet, but no data is being transmitted.
	Off	Modem is not connected to the internet (or is in bridge mode – see online user guides for more info on bridge mode).
WLAN	Blinking green	WiFi network is set up, and data is being transmitted.
	Slow blinking green	Modem is trying to connect to a WiFi capable device via WPS. Duration is up to 2 minutes.
	Steady green	WiFi network is set up, but data is not being transmitted.
	Off	WiFi is turned off. See “Troubleshooting” on page 8 for how to turn on.
VoIP	Blinking green	Modem is registered with a SIP server and data is being transmitted.
	Steady green	Modem is registered with a SIP server, but no data is being transmitted.
	Off	Modem is not registered with a SIP server.
LAN 1 - LAN 4	Blinking green	A LAN port (yellow ports on back of modem) is connected to a Ethernet device (e.g. computer) with a network cable (yellow cable), and data is being transmitted.
	Steady green	A LAN port (yellow ports on back of modem) is connected to a Ethernet device (e.g. computer) with a network cable (yellow cable), and no data is being transmitted.
	Off	No connection on the port.
USB	Blinking green	Modem is connected to a USB device, and data is being transmitted.
	Steady green	Modem is connected to a USB device, but no data is being transmitted.
	Off	No connection on USB port.

5. USEFUL INFORMATION

INCREASE YOUR MODEM SECURITY BY CHANGING WIFI NAME & PASSWORD

You can download Spark Broadband Assist to help do this or log into your modem.

HOW TO LOG INTO YOUR MODEM TO CHECK OR CHANGE SETTINGS



Enter **192.168.1.254** into a browser on your computer/mobile/tablet.

Enter the default modem settings to log in as the administrator.

The default username = admin | The default password = admin

To protect against unauthorised access, change your default password after the first login.

TIP: You can use the menu options to change other modem settings.

CHANGE YOUR WIFI NAME AND PASSWORD



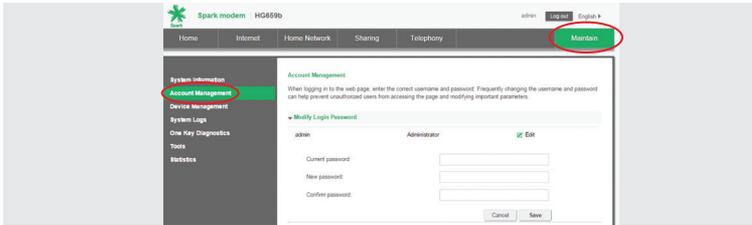
1. Select **Home**, then **Set up WLAN**.



2. Enter the name for your WiFi network in the 2.4Ghz or 5Ghz **SSID** box.

3. Enter your password in the **Password** box.
Remember: if you factory reset the modem, these settings will revert to what's on the label on the back of the modem.
4. Then select **Save** at the bottom of the page.

CHANGE YOUR PASSWORD TO LOG INTO YOUR MODEM



Click on **Maintain** from the menu at the top, then **Account Management**. Insert your current password (default: admin), enter new password and click **Save**. Remember: if you factory reset the modem, these settings will revert to:

Username: admin | Password: admin

HOW TO FACTORY RESET YOUR MODEM

WARNING! A factory reset restores the modem to the default settings – all remembered WiFi connections and any user customisations such as your own WiFi name and password are erased.

Most users should only perform a factory reset when you are directed to by Spark.

To factory reset your modem, do the following:

1. While the modem is turned on, insert a paper clip into the reset hole on the side, press down for 8 to 10 seconds until all the modem lights turn off, then release.
2. The modem will reset and then restart. This can take up to 5 mins for the connection to establish.
3. After a factory reset, you must manually reconnect each WiFi device and re-do any customisations.

HOW TO CONNECT TO WiFi USING WPS

You can also connect to WiFi using WPS (WiFi Protected Setup) enabled devices. Check out the instructions for your modem at spark.co.nz/help.





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