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Global Knowledge Services



SURFboard SBR-AC1900P Wi-Fi Router

User Guide

STANDARD PN 365-095-28244 x.1

April 2016

SURFboard SBR-AC1900P Wi-Fi Router User Guide
STANDARD PN 365-095-28244 x.1

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Other patents pending.

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Important Safety Instructions

Read This Before You Begin — When using your equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read all of the instructions listed here and/or in the user manual before you operate this device. Give particular attention to all safety precautions. Retain the instructions for future reference.
- This device must be installed and used in strict accordance with manufacturer's instructions, as described in the user documentation that is included with the device.
- Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this device.
- To prevent fire or shock hazard, do not expose this device to rain or moisture. The device must not be exposed to dripping or splashing. Do not place objects filled with liquids, such as vases, on the device.
- This device was qualified under test conditions that included the use of the supplied cables between system components. To ensure regulatory and safety compliance, use only the provided power and interface cables and install them properly.
- Different types of cord sets may be used for connections to the main POWER supply circuit. Use only a main line cord that complies with all applicable device safety requirements of the country of use.
- Installation of this device must be in accordance with national wiring codes and conform to local regulations.
- Operate this device only from the type of power source indicated on the device's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Do not overload outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded electrical outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords where they are attached to plugs and convenience receptacles, and examine the point where they exit from the device.
- Place this device in a location that is close enough to an electrical outlet to accommodate the length of the power cord.
- Place the device to allow for easy access when disconnecting the power cord of the device from the electrical wall outlet.
- Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.
- Place this device on a stable surface.

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- It is recommended that the customer install an electrical surge protector in the electrical outlet to which this device is connected. This is to avoid damaging the device by local lightning strikes and other electrical surges.
- Postpone installation until there is no risk of thunderstorm or lightning activity in the area.
- Do not use this product near water: for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.
- Do not cover the device or block the airflow to the device with any other objects. Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.
- Wipe the device with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the device or use forced air to remove dust.
- For added protection, unplug the device from the wall outlet and disconnect the cables to avoid damage to this device during lightning activity or power surges.
- Upon completion of any service or repairs to this device, ask the service technician to perform safety checks to determine that the device is in safe operating condition.
- Do not open the device. Do not perform any servicing other than that contained in the installation and troubleshooting instructions. Refer all servicing to qualified service personnel.
- This device should not be used in an environment that exceeds 104° F (40° C).

SAVE THE ABOVE INSTRUCTIONS

Temperature Requirements

The Wi-Fi Router is capable of operating in an ambient temperature range of 0° - 40°C, without any functional performance degradation.

FCC Part 15

This equipment has been tested and found to comply with the requirements for a Class B digital device under Part 15 of the Federal Communications Commission (FCC) rules. These requirements are intended to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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WARNING

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For the U.S. model, the country code is preset and cannot be changed. Per FCC regulations, the country code setting for all Wi-Fi products marketed in the U.S. must be fixed to U.S. operational channels only.

Operation of this device is restricted to indoor use only.

RF Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 11.8 inches (30 cm) between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux CNR exemptes de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes:
(1) Ce dispositif ne peut causer d'interférences; et(2) Ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

Caution:

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Avertissement:

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Industry Canada ICES-003 Compliance Label:CAN ICES-3(B)/NMB-3(B)

Industry Canada ICES-006 Compliance Label: CAN ICES-6/NMB-6

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Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 30 cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 30 cm de distance entre la source de rayonnement et votre corps.

Industry Canada ICES-003 Compliance Label:CAN ICES-3(B)/NMB-3(B)

Industry Canada ICES-006 Compliance Label: CAN ICES-6/NMB-6

IC Warning:

This radio transmitter (IC: 6670A-SBRAC1200P) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna		**Peak gain (dBi)**		
Type	**Connector**	**2400~2483.5MHz**	**5150~5250MHz**	**5725~5850MHz**
Dipole	I-pex	1.83		
Dipole	I-pex	2.02		
PIFA	I-pex		2.87	3.60
PIFA	I-pex		3.23	3.82

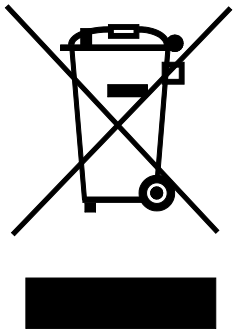
IC Avertissement:

Le présent émetteur radio (IC: 6670A-SBRAC1200P) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Antenne		**Gain de crête (dBi)**		
Type	**Connecteur**	**2400~2483.5MHz**	**5150~5250MHz**	**5725~5850MHz**
Dipôle	I-pex	1.83		
Dipôle	I-pex	2.02		
PIFA	I-pex		2.87	3.60
PIFA	I-pex		3.23	3.82

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CARING FOR THE ENVIRONMENT BY RECYCLING



When you see this symbol on an ARRIS product, do not dispose of the product with residential or commercial waste.

Recycling your ARRIS Equipment

Please do not dispose of this product with your residential or commercial waste. Some countries or regions, such as the European Union, have set up systems to collect and recycle electrical and electronic waste items. Contact your local authorities for information about practices established for your region.

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Product Overview

Introduction

Get ready to experience the Internet's express lane! Whether you're checking out streaming media, downloading new software, or checking your email, the SURFboard SBR-AC1900P Wi-Fi Router brings it all to you faster and more reliably.

The SURFboard SBR-AC1900P Wi-Fi® Router provides four Ethernet connections for use as the hub of your home/office Local Area Network (LAN). The SBR-AC1900P also provides 802.11a/b/g/n/ac wireless connectivity for enhanced mobility and versatility.

The SURFboard RipCurrent™ feature (using G.hn Power Line Communication) also allows you to place wired and wireless extenders around your home using your home's existing power lines and power outlets to allow for network connectivity in or around your home environment.



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About The Wi-Fi Router

The SBR-AC1900P is more than just a Wi-Fi Router. This advanced Access Point is the start of a new home network experience that offers the following benefits:

- Two concurrent 802.11ac radios: one for the 5 GHz band and one for the 2.4 GHz band. These radios provide automatic client-directed connections for optimal Wi-Fi connectivity and speed based on a client's capability. Each radio includes a 3x3 MIMO antenna array for the best reach, range, and throughput.
- Four gigabit Ethernet ports for ultra fast wired connectivity.
- A USB 3.0 port and a USB 2.0 port, for data and media storage or transfer and print sharing.
- Embedded RipCurrent technology via your home power lines, ready to connect to RipCurrent or other compatible G.hn extenders to reliably take your network to the farthest reaches of your environment.

The SBR-AC1900P includes the following features:

- Supports Ethernet and 802.11a/b/g/n/ac wireless connections; both wired and wireless connections can be used simultaneously.
- Auto connection to RipCurrent network extenders, including the wireless settings.
- Option for automated product firmware upgrades.
- Network supports up to 15 connected power line extenders.
- Easy to navigate User Interface, including a network set-up Wizard.
- Default settings configured for standard environments, with advanced settings for sophisticated users.
- USB ports include a file structure that provides high-speed throughput and data integrity protection.
- Support for NAS and DLNA.

What is RipCurrent?

SURFboard RipCurrent is a technology that allows you to set up a high-speed home network that uses existing AC wiring and outlets. There's no need to run additional cables; your devices can communicate at data rates up to 1 Gbps using the network of power lines that already exists in your home.

The SBR-AC1900P uses the power cable connected to the Wi-Fi Router to connect to the power lines that already exist in your home. RipCurrent is based on G.hn Power Line Communication (PLC), which is an ITU Specification managed by the HomeGrid™ Forum. This technology allows the SBR-AC1900P to distribute all data to each of the AC power outlets in the home. With a corresponding G.hn Extender, the Wi-Fi or wired network can be extended to any room, including basements, garages, or far reaching bedrooms. Connect entertainment devices, security cameras, gaming consoles, managed appliance, anything that uses IP (Internet Protocol).

The G.hn technology is more robust than previous home power line communication implementations to give you better 'real world' throughput and stability. G.hn proves much

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more efficient in an environment with multiple power line networks (such as apartment buildings or office buildings) with the capability of recognizing up to 250 other networks to avoid interference. G.hn communications are encrypted using the advanced standard AES 128-bit encryption for secure transmissions.

In order to ensure the best performance of your G.hn network, we recommend that you only use 3-prong grounded outlets. A 2-prong outlet will operate sufficiently, but with a lower throughput speed.

What's in the Box?

Make sure you have the following items before proceeding.

- SBR-AC1900P Wi-Fi Router.
- Power Cable.
- Wireless Installation Guide.
- Ethernet Cable.
- End User License Agreement.

Important: Before returning this product to the store, please call ARRIS Technical Support for assistance in resolving any technical issues.

Support for SURFboard products is managed by ARRIS. For assistance, please call 1-877-466-8646 or visit the ARRIS Consumer Support website at *http://www.arris.com/consumers*.

Items You Need

Make sure you have the following items on hand before continuing:

- **Wi-Fi Router package:** see *What's in the Box?* (page 13) for a list of items in the package.
- **Ethernet Cable for LAN input:** In addition to the Ethernet cable provided, you may need additional Ethernet cables if you want to connect to wired clients. Please use a standard CAT 5e or CAT 6-rated Ethernet cable with RJ45 type connectors on both ends. You can buy Ethernet cables from any electronics retailer and many discount stores.

System Requirements

The SURFboard Wi-Fi Router operates with most computers and wireless devices. The following describes requirements for each operating system; see the documentation for your system for details on enabling and configuring networking.

To use the Wi-Fi Router, you need high-speed Internet service from your service provider.

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Recommended Hardware

The following hardware configuration is recommended. Computers not meeting this configuration can still work with the SBR-AC1900P, but may not be able to make maximum use of SBR-AC1900P throughput.

- CPU: P4, 3 GHz or faster.
- RAM: 1 GB or greater.
- Ethernet: Gig-E (1000Base-T).
- Wi-Fi: 802.11a, b, g, n, or ac compliant Wi-Fi equipment.

Windows

Windows 7, Windows 8, or Windows 10. A supported Ethernet or wireless LAN connection must be available.

Mac OS

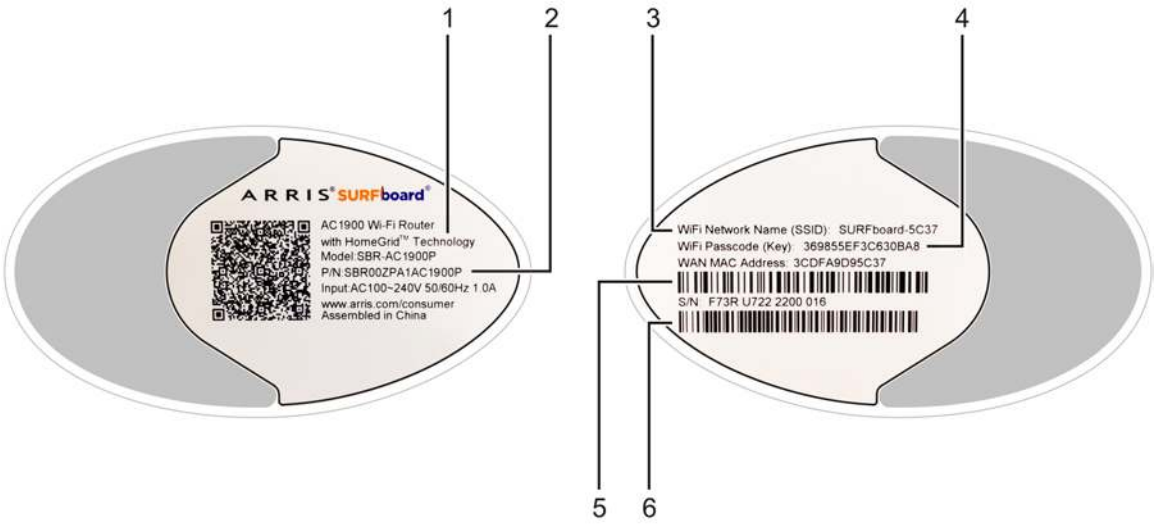
System 7.5 to Mac OS 9.2 (Open Transport recommended) or Mac OS X. A supported Ethernet or wireless LAN connection must be available.

Linux/Unix

Hardware drivers, TCP/IP, and DHCP must be enabled in the kernel. A supported Ethernet or wireless LAN connection must be available.

About this Manual

This manual covers the SURFboard SBR-AC1900P Wi-Fi Router. The model number is on the label affixed to the bottom of the Wi-Fi Router.



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1. Model name.
2. Part number.
3. WiFi network name (SSID).
4. WiFi passcode (key).
5. WAN MAC address.
6. Serial number.

Contact Information

Please visit the ARRIS Support website *http://www.SURFboard.com/Support/SBR-AC1900P* for self-help technical support and product documentation. We can also provide technical assistance via chat and email on the support website. ARRIS Support is available by phone at 877-466-8646. Please be prepared to provide your product's model number and serial number, which can be found on the Wi-Fi Router's label.

For information on additional SURFboard products, or to purchase SURFboard products (including other RipCurrent-enabled devices), visit *http://www.surfboard.com*.

For informational videos and tutorials about this and other ARRIS products, visit the ARRIS Everywhere YouTube channel at *https://www.youtube.com/user/ARRISmarketing/featured*.

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Installing the Wi-Fi Router

Before you start, make sure that:

- You have all the *Items You Need* (page 13).
- The modem and power outlets are available nearby.

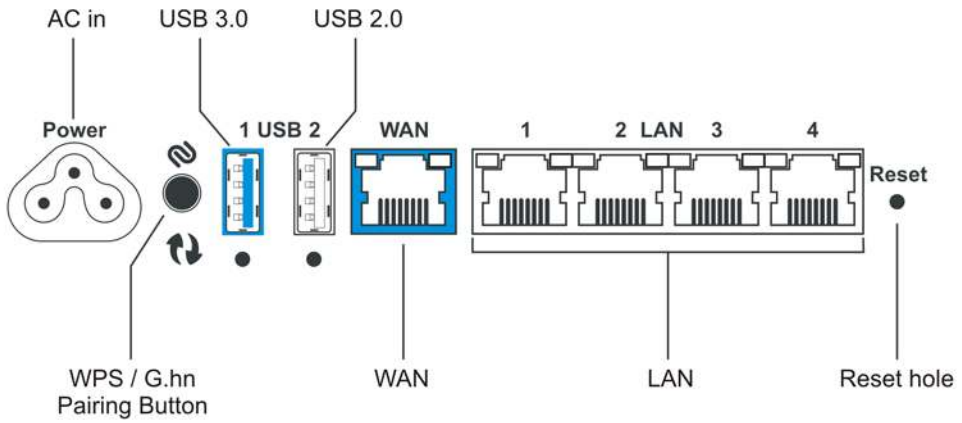
Front Panel

The front of the Wi-Fi Router has a single LED that indicates the status of the Wi-Fi Router.

Color/Behavior	Description
Solid green	Normal operation.
Solid amber	Standby mode.
Flashing amber	WPS pairing mode.
Flashing red	Start-up mode, or error.

Rear Panel

The rear of the Wi-Fi Router has the following connectors and controls:



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Name	Description
AC in	Connector for the power cord.
WPS/G.hn pairing button	Begins associating the Wi-Fi Router with either a wireless device or a G.hn device. ■ Press and hold the button for two to three seconds to initiate G.hn pairing. ■ Press and hold the button for five to 10 seconds to initiate WPS pairing. ■ Press and hold the button for 15 Seconds or more to unpair the Wi-Fi Router from the G.hn network.
USB 3.0	USB 3.0 host connector.
USB 2.0	USB 2.0 host connector.
WAN	Connector for cabling to the Internet services modem.
LAN (1 - 4)	Connectors for cabling to devices using Ethernet cables.
Reset	Can be used either to reset the Wi-Fi Router to its factory settings or to restart the Wi-Fi Router. Use a pointed non-metallic object to press and hold this button. ■ Press and hold this button for **three to five seconds** to restart the Wi-Fi Router as if you power cycled the device. ■ Press and hold this button for **more than 10 seconds** if you want to reset the Wi-Fi Router to its factory default settings and restart the device. Any customized settings that you have set **will be lost**.

Indicator Lights for the SBR-AC1900P

The Wi-Fi Router has several LED indicator lights on the rear panel to assist in troubleshooting:



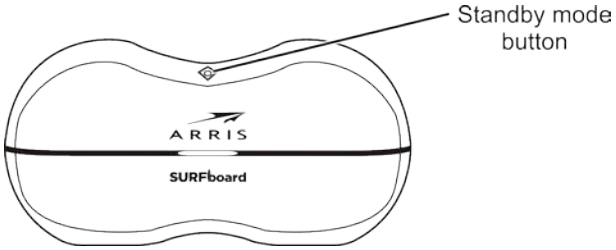
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LED	Color/Behavior	Description
G.hn signal strength	Solid green	Excellent link.
	Flashing green	Receiving/transmitting data, excellent link.
	Solid amber	Good link.
	Flashing amber	Receiving/transmitting data, good link.
	Solid red	Fair link.
	Flashing red	Receiving/transmitting data, fair link.
	Off	No link.
G.hn secure link	Solid green	Secure pairing complete. Connected to G.hn network with encryption enabled.
	Flashing green	Secure pairing in progress. Trying to connect to G.hn network.
	Solid red	Non-secure pairing complete. Connected to G.hn network without encryption.
	Flashing red	Non-secure pairing in progress. Trying to connect to G.hn network.
	Off	No link.
2.4 Ghz Wi-Fi	Solid green	2.4 Ghz wireless interface enabled, but no activity.
	Flashing green	2.4 Ghz wireless interface activity.
5 Ghz Wi-Fi	Solid green	5 Ghz wireless interface enabled, but no activity.
	Flashing green	5 Ghz wireless interface activity.

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Standby Mode

The diamond-shaped button on top of the Wi-Fi Router is used to put the Wi-Fi Router into Standby mode. When you press this button, the Wi-Fi capability is disabled for additional security and power savings. The front LED turns amber when Standby is activated.



Press the button again to re-activate the Wi-Fi Router.

Selecting an Installation Location

There are a number of factors to consider when choosing a location to install the Wi-Fi Router:

- Is an AC outlet available nearby? For best results, the outlet should not be switched and should be close enough to the Wi-Fi Router that extension cords are not required.
- Is the modem nearby? Can you easily run cables between the Wi-Fi Router's location and the modem?
- If you are connecting devices to the Ethernet ports, can you easily run cables between the Wi-Fi Router's location and those devices?
- If you want to install the Wi-Fi Router on a desktop, is there enough space on either side to keep the vents clear? Blocking the vents may cause overheating.
- How close are the wireless devices? In general, the Wi-Fi Router should be located close to the center of the user sphere. The Wi-Fi Router wireless connection range is typically 100–200 feet (30m–65m) for 2.4 GHz signals and less for 5 GHz signals. A number of factors can affect connection range, as described below.

Desktop Mounting Instructions

Position the Wi-Fi Router so that:

- Air flows freely around it.
- The back faces the nearest wall.
- It will not fall to the floor if bumped or moved.
- The sides of the unit are not blocked.

If the modem is not located in an ideal location for the Wi-Fi Router, you can add a RipCurrent Network Extender to the modem device, then connect the SBR-AC1900P to the Internet using the power line in another location.

Note: Clean the Wi-Fi Router using only a clean, slightly moistened, cloth. Do not use aerosols in the vicinity of the Wi-Fi Router.

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Factors Affecting Wireless Range

A number of factors can affect the usable range for wireless connections.

Increase range	■ Locating the unit centrally. ■ Creating as much "line-of-sight" as possible with client devices.
Decrease range	■ Metal or concrete walls between the Wi-Fi Router and other devices. ■ Large metal appliances, aquariums, or metal cabinets between the Wi-Fi Router and other devices. ■ Interference and RF noise (2.4 GHz wireless phones, microwave ovens, wireless speaker/receiver systems, or other wireless networks). ■ Placing the device in a cabinet or other enclosed space.

Note: Decreasing the range of the wireless network may be beneficial, as long as the decreased range is sufficient for your needs. By limiting the network's range, you reduce interference with other networks and make it harder for unwanted users to find and connect to the network.

Note: Setting the transmit power level to High increases the range. Setting it to Medium or Low decreases the range proportionately. Medium or Low may be more appropriate for high-density residential locations.

Note: For locations within the home that do not receive a steady/stable Wi-Fi signal, simply add a RipCurrent Wi-Fi extender for full coverage in that location.

Ethernet, Wireless, or Gigabit Home Networking?

There are three ways to connect the computer (or other equipment) to the Wi-Fi Router. The following will help you decide which is best for you:

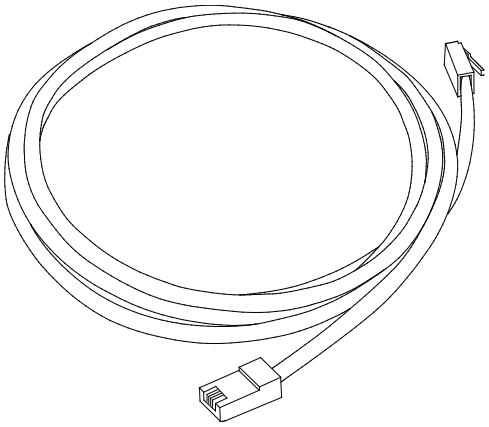
Ethernet

Ethernet is a standard method of connecting two or more computers into a Local Area Network (LAN). You can use the Ethernet connection if the computer has built-in Ethernet hardware. The SBR-AC1900P provides support for up to four such connected devices.

Note: To connect more than four computers to the SBR-AC1900P through the Ethernet ports, you need an Ethernet switch (available at computer retailers).

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The Wi-Fi Router package comes with one 4-foot (1.2m) Ethernet cable (the connectors look like wide telephone connectors); you can purchase more cables if necessary at a computer retailer. If you are connecting the Wi-Fi Router directly to a computer, or to an Ethernet switch with a cross-over switch, ask for Category 5e (CAT5e) straight-through cable. CAT5e or Cat6 cable is required for gigabit Ethernet (Gig-E), not regular CAT5 cable.



Wireless

Wireless access lets you connect additional (wireless-capable) devices to the Wi-Fi Router. The 802.11 wireless LAN standard allows one or more computers to access the SBR-AC1900P using a wireless (radio) signal. These connections are in addition to the connections supported via Ethernet.

Note: You can use the wireless connection if the computer has a built-in or aftermarket plug-in wireless adapter. To learn more about which wireless hardware works best with the computer, see your computer dealer.

Gigabit Home Networking

Gigabit Home Networking lets you connect additional devices over power lines using the G.hn Power Line Communications Standards. G.hn also allows you to use your AC power lines to transmit and receive network communications from your SBR-AC1900P to clients connected to a G.hn Network Extender.

Combined

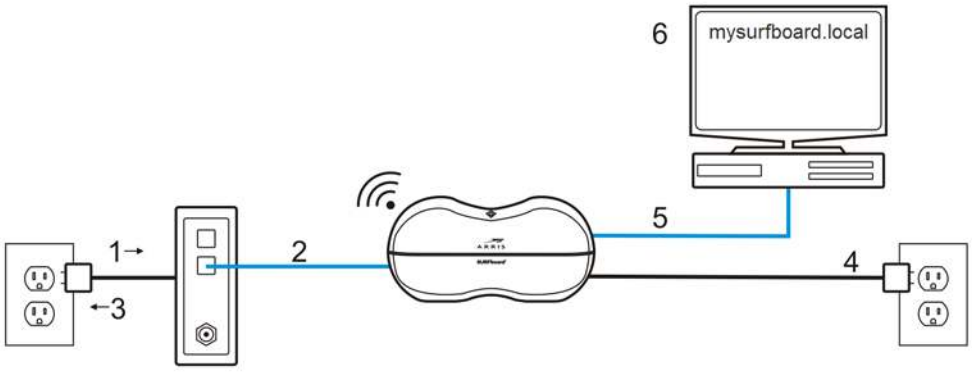
If you have two or more computers, you can use Ethernet for up to four devices and wireless or Gigabit Home Networking for the others. To connect five or more computers to the Ethernet ports, you will need an Ethernet switch (available at computer retailers).

Configuring and Installing the Wi-Fi Router

1. Unplug the power to turn off your modem.
2. Connect one end of the Ethernet cable (included) to the modem, and the other end to the WAN port on the Wi-Fi Router.
3. Reconnect the plug on the modem to turn the modem back on. Wait approximately 2 minutes to allow the modem to fully power up.

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4. Connect the power adapter (included) to the power connector on the back of the Wi-Fi Router, and then connect the power adapter to an available AC outlet. Wait until the 2.4 GHz and 5 GHz LEDs on the rear panel of the Wi-Fi Router turn solid green.
5. To manage the setup of the Wi-Fi Router, you can use a second Ethernet cable (not provided) to connect a computer to an available LAN port on the SBR-AC1900P, or you can connect wirelessly by using the preset wireless security settings printed on the Wi-Fi Router's label located on the bottom of the Wi-Fi Router.
6. Open a browser on the computer to access the management interface of the Wi-Fi Router, and navigate to http://mysurfboard.local. If the webpage does not display correctly, try another browser.



Note: If you are connecting to an existing Wi-Fi modem or gateway, you must place that device in a 'bridged mode.' For more information, see the documentation for your Internet access device, or contact your service provider or device manufacturer.

Configuring the Wireless Connection

The SBR-AC1900P ships with a secure SSID that is unique for every device. Wi-Fi network information is located on the label on the bottom of the Wi-Fi Router. You should configure the Wi-Fi Router's wireless settings.

Note: At a minimum, you should set a login password and set up wireless security. See *Setting Up a Wireless Network Connection* (page 26) for complete instructions on configuring the wireless connection.

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Setting up an Internet Connection

Important: Your computer may already be configured to automatically access the Internet. If so, do not change the network options on your computer. Please contact ARRIS Technical Support for assistance or verification.

If you cannot access the Internet after installing the Wi-Fi Router, you may have to manually set up your computer to connect to the Internet. To do this, you will have to enable the network options on your computer to automatically obtain an IP address and DNS server address. After configuring the network options, you should verify the IP address.

If you still cannot access the Internet after configuring the IP address, contact ARRIS Technical Support for assistance.

Please note, operating system-specific commands for configuring computer network options are not provided in this document. The same general steps provided below apply to the following Microsoft Windows operating systems:

- Windows 10.
- Windows 8.
- Windows 7.

Note: For Mac, UNIX, and Linux computers, please follow the instructions provided in the applicable user documentation.

If you are unfamiliar with the network configuration commands for your operating system or need assistance, we highly recommend that you refer to the user documentation for the operating system running on your computer for more information.

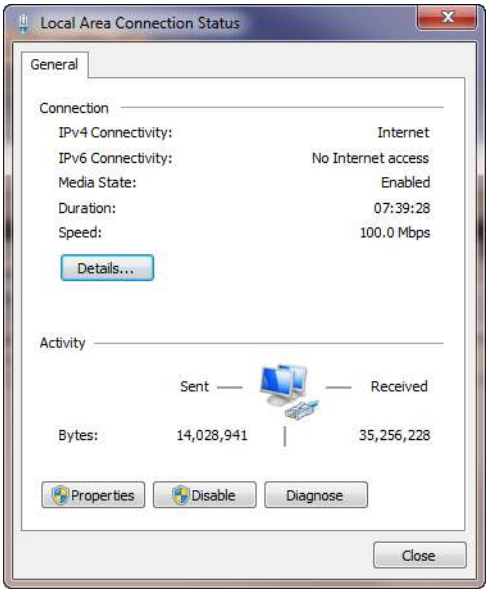
Configure Your IP Address

Note: The following instructions apply to Windows 7. Some windows and commands used in this procedure may differ slightly from your computer, depending on your operating system.

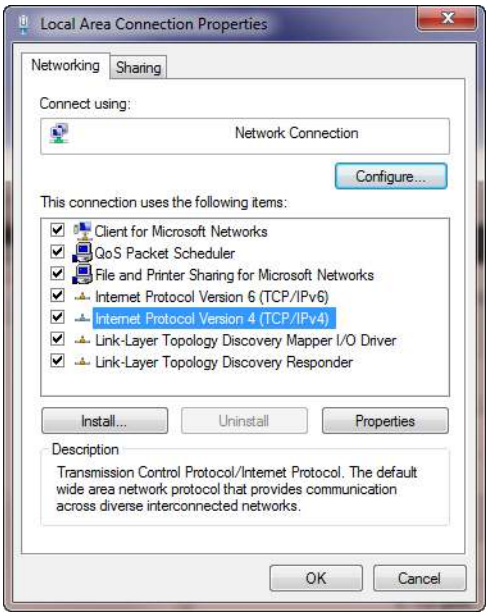
1. Click the Start button and use the Search box to search for **network and sharing**.
2. Select **Network and Sharing Center**.
3. Click **Change adapter settings** from the Control Panel Home pane to open the Network Connections window.

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4. Click **Local Area Connection** to open the Local Area Connection Status window.

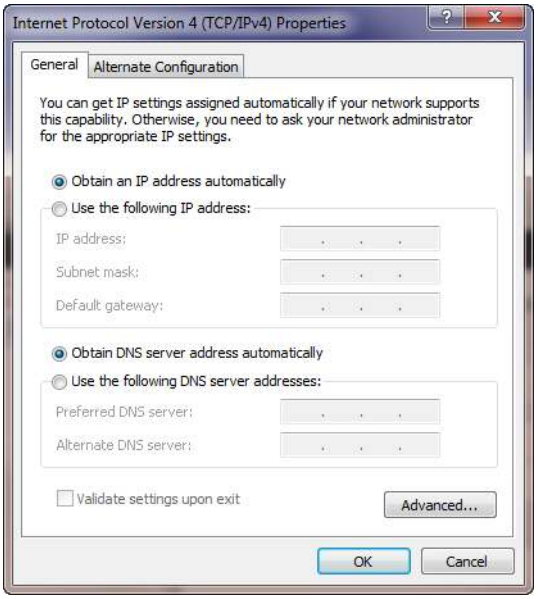


5. Click **Properties** to open the Local Area Connection Properties window.



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6. Select **Internet Protocol Version 4 (TCP/IPv4)** and then click **Properties** to open the TCP/IPv4 Properties window.



7. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.
8. Click **OK** to save the TCP/IP settings and close the Internet Protocol Properties window.
9. Close the remaining windows.

Verify & Renew Your IP Address

1. Open a command prompt window using the **Start** button and **Run** command from the Taskbar on your desktop.
2. Type **cmd** and click **OK** to open a command prompt window.
3. Type **ipconfig** and press **Enter** to display the IP configuration.
4. To renew the IP address, type **ipconfig/renew** and press **Enter**. A new IP address for your computer or other Ethernet-enabled device will display.
5. Type **exit** and then press **Enter** to return to Windows.

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Setting Up a Wireless Network Connection

It is highly recommended that you first verify that your computer can connect to the Internet using an Ethernet connection before configuring your wireless network.

You must currently have access to an Internet service in your home before you can set up a wireless network connection. Also, make sure your computer and the SBR-AC1900P are connected through an Ethernet connection.

Choose **one** of the following options to set up your wireless network connection:

- *Launch the SBR-AC1900P Quick Start Wizard* (page 26).
- *Manually Connect to Your Wireless Network* (page 30).
- *Use the WPS Button to Connect Your WPS-Enabled Wireless Device* (page 30).

After setting up a wireless connection on your home network, check that your wireless network connection was set up properly. See *Test Your Wireless Network Connection* (page 30) for more information.

Launch the SBR-AC1900P Quick Start Wizard

The SBR-AC1900P Quick Start Wizard helps you to quickly configure your basic wireless network settings. Depending on your home network setup, you can further customize your wireless home network configuration after completing the wizard.

1. Open a web browser (Internet Explorer, Google Chrome, Firefox, or Safari) on the computer connected to the SBR-AC1900P.
2. Type the default LAN IP address **http://mysurfboard.local** in the Address bar and then press **Enter**. The Login screen appears.
3. Type the default username and password. Both entries are case-sensitive.

   Username: **admin**

   Password: **password**

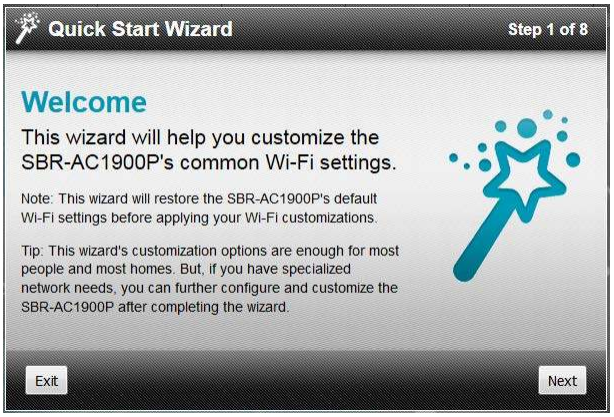
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4. Click **Login** to open the SBR-AC1900P Web Manager. The Launch Quick Start Wizard screen appears.



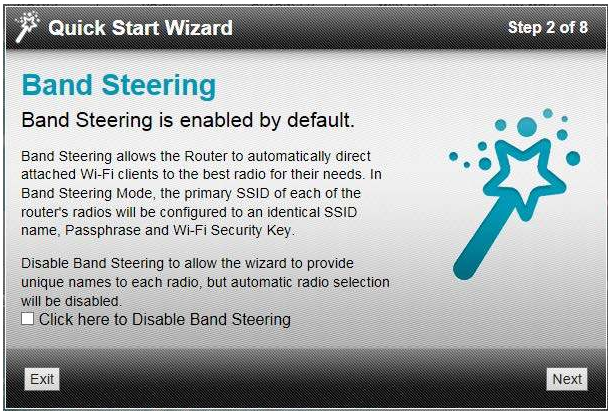
Note: If you have changed the default user name or password and cannot remember the new user name or password, you can reset the Wi-Fi Router to the factory default settings. To do this, insert a pointed, non-metallic object into the indented **Reset** button on the back of the SBR-AC1900P, then press and hold the button for more than 10 seconds. The Wi-Fi Router will be reset to its original factory settings, and any customized settings that you have set **will be lost**.

5. Click **Launch Quick Start Wizard** to start the wizard. The Welcome screen appears.

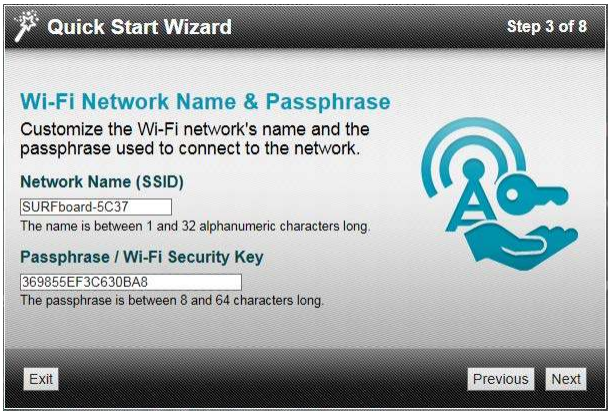


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6. Click **Next**. The Quick Start Wizard asks if you want to disable Band Steering.



7. Click **Next**. The Quick Start Wizard prompts you to enter a network name and passphrase.



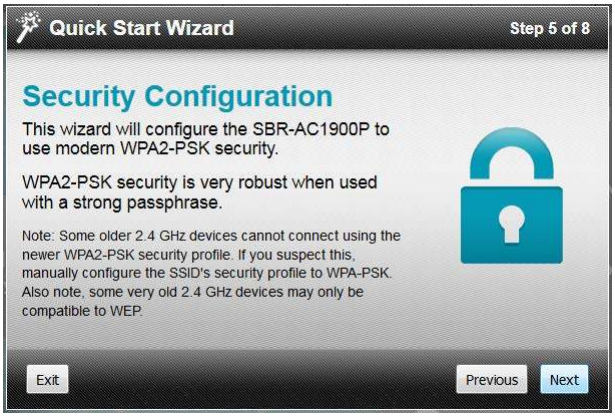
8. Enter a Network Name (SSID) for your wireless network. The network name must contain from one to 32 alphanumeric characters.
9. Enter a Passphrase or Wi-Fi Security Key. This is the sign-on access code for your wireless network. The code must contain from 8 to 64 characters consisting of any combination of letters, numbers, and symbols.

   Remember that your passphrase should be as unique as possible to protect your wireless network and deter hackers or unauthorized access to your network.
10. Click **Next**. Network configurations are created for each band in your wireless network.



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11. Click **Next**. The Wi-Fi security type is created. The WPA2-PSK security code is the strongest security default.



12. Click **Next**. The Quick Start Wizard prompts you to change the default username or password. If you do not change your username and password now, you can choose to change them later using the standard configuration screens.



13. Click **Next** to start the Wi-Fi Security mode. WPA2-PSK (the default security code) is automatically set, and the network settings are displayed.



14. Click **Apply** to accept or **Previous** to change the configuration.

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Manually Connect to Your Wireless Network

You can user your Wi-Fi-enabled device to connect to the SBR-AC1900P by searching for the network name assigned to your network. The default network name is listed on the security label on the bottom of your Wi-Fi Router.

When prompted, enter your Wi-Fi Passcode to connect. The default passcode is listed on the security label on the bottom of your Wi-Fi Router.

Use the WPS Button to Connect Your WPS-Enabled Wireless Device

You can use the Wi-Fi Protected Setup (WPS) button on the Wi-Fi Router to connect your WPS-enabled wireless devices. WPS automatically assigns a random wireless network name (SSID) and Wi-Fi Security Key (password) to the SBR-AC1900P and other WPS-enabled wireless devices to connect to your wireless network.

Note: To use the WPS Pairing button option, your computer hardware must support WPS and also have WPA security compatibility.

1. Power ON the Wi-Fi Router and your other WPS-enabled wireless devices that you want to connect to your wireless network.
2. Press and hold the WPS pairing button located on the back of the SBR-AC1900P for five to 10 seconds and then release. See *Rear Panel* (page 16) for the location of the pairing button.
3. If applicable, press the WPS button on your WPS-enabled computer or other WPS-enabled wireless device.
4. Repeat step 3 for each additional WPS-enabled wireless device that you want to connect to your wireless network.

Test Your Wireless Network Connection

Perform the following connectivity test to confirm that your wireless connection is working on the SBR-AC1900P and your computer:

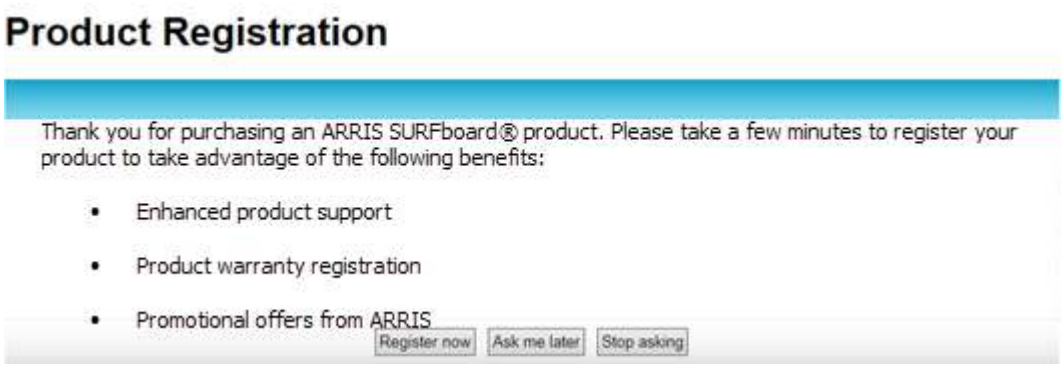
1. Disconnect the Ethernet cable, if connected, from the SBR-AC1900P and your computer.
2. Check that the **Wireless** LED on the SBR-AC1900P front panel is lit solid green.
3. Open a web browser on your computer, such as Internet Explorer, Google Chrome, Firefox, or Safari.
4. Type a valid URL (such as *http://www.surfboard.com*) in the address bar, and press **Enter**.

   If the website failed to open, please contact your service provider or call ARRIS Technical Support at **1-877-466-8646** for assistance.

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Register Your SBR-AC1900P

After you complete the Quick Start Wizard, the Web Manager prompts you to register your SBR-AC1900P.



1. Click **Register now** to register your SBR-AC1900P now.

Note: If you do not want to register your SBR-AC1900P right now, you can click **Ask me later**. The Web Manager will prompt you to register the next time you log into the Web Manager.

Note: If you do not want the Web Manager to prompt you to register again, click **Stop asking**. If you decide to register later, or if you need to update your registration, you can click **Status** from the configuration screen and select **Product Information** from the drop-down menu.

2. Follow the instructions on screen to register your SBR-AC1900P.

Connect Mobile Devices To Your Network

The SBR-AC1900P provides two simple ways that you can use to connect mobile devices to your network:

- *Use the ARRIS SURFboard Manager App* (page 36). When you first launch the app, you are prompted to scan the QR code on the bottom of the Wi-Fi Router.
- Use any QR code reader to scan the QR code on the bottom of your Wi-Fi Router.

After you scan the QR code, your default SSID and passkey are loaded into your phone. Follow the prompts on your screen to connect to your network.

Note: These two methods of connecting mobile devices only work if you are using the default SSID and passkey for your Wi-Fi Router and the default login for the Wi-Fi Router Web Manager.

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Adding G.hn Extenders To Your Network

Whenever you plug multiple G.hn devices into a power outlet in your home, the devices will detect each other automatically and begin to communicate over your home's existing power lines. However, these devices will be communicating over an unsecured network.

In order to create a secure network, you must securely pair the devices with each other. *Secure pairing* creates a secure connection between two or more G.hn devices on a power grid. It also allows you to help secure your local area network (LAN) by randomizing your domain name and password. Once your devices are securely paired, then devices that have not been securely paired will not be able to connect to your network. We recommend that you securely pair your devices to secure your network.

Pairing Your SBR-AC1900P with a Network Extender

There must be at least two G.hn transmitters for the distribution network to function. Your router will need at least one companion device to use the RipCurrent feature. To take advantage of the SBR-AC1900P RipCurrent capability, please visit www.SURFboard.com for information on SURFboard Extender and Accessory products compatible with the technology.

Follow these steps to pair your SBR-AC1900P with a network extender to create a secured link.

1. Plug in your RipCurrent, or other G.hn Extender, into an AC outlet close to the SBR-AC1900P Router. The G.hn network will connect automatically in a non-secure mode (indicated by a RED status LED).

Note: Allow two minutes for devices to fully power up before pairing.

2. Press and hold the G.hn Secure Pairing button on the back of the Router for three seconds. The Pairing LED will blink green and become solid green when pairing is successful. (In some instances the pairing LED will blink until the Wi-Fi Hotspot is moved.)

Note: If your pairing is not successful, you can reset the G.hn settings for the Wi-Fi Router by pressing and holding the Pairing button for at least 15 seconds. Then, test your connection in unsecured mode before trying again to pair securely.

3. Press the Pairing button on the other G.hn device. (For a SURFboard extender, press and hold for three seconds). The Pairing LED will blink green and become solid green when pairing is successful.

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The G.hn signal strength LED on the side of the SBR-AC1900P indicates the strength of the G.hn signal. If the LED is red or amber, consider adjusting the location to find a better signal.

LED Color	G.hn Signal Strength
Green	Excellent signal.
Amber	Good signal.
Red	Fair signal.

4. Once the devices are securely paired (Green LED), you are now ready to connect your client device (PC, TV, Game Console, etc.) to the Extender using a wired or wireless connection (depending on the capability of your Extender model).

To repeat the connection and pairing process for additional wireless hotspots, press the pairing button on any connected G.hn device and on the new Wi-Fi Router or Network Extender.

Note: If you are creating a new network, all of your devices must be set to the factory default settings before you begin. You must reset any devices that have been previously installed.

If you are adding a Network Extender to an existing network, then the Extender must be set to the factory settings, but the Router does not need to be reset. For more details, see the Quick Start Guide for your Extender.

Creating a Custom Domain Name and Password to Pair Your SBR-AC1900P

In most cases, when you pair your SBR-AC1900P with a network extender, the domain name and password are randomly generated and assigned to your network. If you prefer, you can follow these instructions to create your own domain name and password for your network.

Note: You must use the default user name and password (listed below) to log in to the SBR-AC1900P Web Manager for the first time. For network security purposes, we highly recommend that you change the default user name and password after logging onto the SBR-AC1900P for the first time. See *Change the Default User Name and Password* (page 53) for more information.

1. Open any web browser on the computer connected to the SBR-AC1900P.
2. In the Address bar, type **http://mysurfboard.local** for the IP address, and then press **Enter**. The Login screen appears.
3. Type the default user name and password. Both entries are case-sensitive.

   Username: **admin**

   Password: **password**

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4. Click **Login** to open the SBR-AC1900P Web Manager. The SBR-AC1900P Main Screen appears.
5. Click **Advanced** on the SBR-AC1900P Main Menu, and click **RipCurrent (G.hn)** from the Advanced submenu options.



6. In the Domain Name field, enter the domain name that you want to assign to your network.
7. In the Pairing password field, enter the pairing password that you want to assign to your network.
8. Click **Apply**.
9. Plug the network extender into an electrical outlet near the SBR-AC1900P.
10. You must manually enter the same domain name and password into any new extenders that were added to your RipCurrent network in order to create a secure connection. The pairing process begins. Once the pairing process is complete, both LEDs stop flashing and become solid green. It may take up to 60 seconds for the pairing process to complete.
11. Use an Ethernet cable to connect the network extender to its client device.

Unpairing Your SBR-AC1900P

Follow these steps if you need to unpair the SBR-AC1900P from the network extender.

Note: You must use the default user name and password (listed below) to log in to the SBR-AC1900P Web Manager for the first time. For network security purposes, we highly recommend that you change the default user name and password after logging onto the SBR-AC1900P for the first time. See *Change the Default User Name and Password* (page 53) for more information.

1. Open any web browser on the computer connected to the SBR-AC1900P.

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2. In the Address bar, type **http://mysurfboard.local** for the IP address, and then press **Enter**. The Login screen appears.
3. Type the default user name and password. Both entries are case-sensitive.

   Username: **admin**

   Password: **password**
4. Click **Login** to open the SBR-AC1900P Web Manager. The SBR-AC1900P Main Screen appears.
5. Click **Advanced** on the SBR-AC1900P Main Menu, and click **RipCurrent (G.hn)** from the Advanced submenu options.
6. Click **UNPAIR**. All of the paired devices will be disconnected from the SBR-AC1900P, and any client devices that are connected to network extenders will lose connection to the Internet. The domain name and password will also be deleted as well.

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Managing Your Wi-Fi Router and Connected Networks

Use the ARRIS SURFboard Manager app or the SBR-AC1900P Web Manager to view and monitor the configuration settings and operational status of your Wi-Fi Router.

You can also use the SBR-AC1900P Web Manager to configure your network connections and wireless security settings. See *Protecting & Monitoring Your Wireless Network* (page 53) for more information.

Use the ARRIS SURFboard Manager App

The ARRIS SURFboard Manager app is available for Android™ and Apple® mobile devices at no charge. You can download it on Google Play™ or from the App Store®.

The app lets you manage the SBR-AC1900P directly from your mobile devices. Use the ARRIS SURFboard Manager to view connected devices on your network, manage parental controls, and set other network parameters. Once you have connected your mobile device to the SBR-AC1900P, then you can view and manage the SBR-AC1900P either locally on the network or remotely.

The ARRIS SURFboard Manager lets you scan the QR code on your Wi-Fi Router's security label to automatically connect the Wi-Fi Router with your mobile device.

The SBR-AC1900P Quick Start Guide also includes QR codes to download this User Guide or connect to the ARRIS Everywhere YouTube channel.

Note: In order to connect your mobile device to the SBR-AC1900P using the QR code, your network must be using the default network name and Wi-Fi security password.

You can download the ARRIS SURFboard Manager on Google Play or from the App Store. Follow the instructions in the app to connect and manage your Wi-Fi Router.

GET IT ON Google Play

Download on the App Store

Start the Wi-Fi Router Web Manager

Note: You must use the default user name and password (listed below) to log in to the SBR-AC1900P Web Manager for the first time. For network security purposes, we highly recommend that you change the default user name and password after logging onto the

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SBR-AC1900P for the first time. See *Change the Default User Name and Password* (page 53) for more information.

1. Open any web browser on the computer connected to the SBR-AC1900P.
2. In the Address bar, type **http://mysurfboard.local** for the IP address, and then press **Enter**. The Login screen appears.
3. Type the default user name and password. Both entries are case-sensitive.

   Username: **admin**

   Password: **password**
4. Click **Login** to open the SBR-AC1900P Web Manager. The SBR-AC1900P Main Screen appears.

Note: If you have changed the default user name or password and cannot remember the new user name or password, you can reset the Wi-Fi Router to the factory default settings. To do this, insert a pointed, non-metallic object into the indented **Reset** button on the back of the SBR-AC1900P, then press and hold the button for more than 10 seconds. The Wi-Fi Router will be reset to its original factory settings, and any customized settings that you have set **will be lost**.



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Wi-Fi Router Web Manager Menu Options

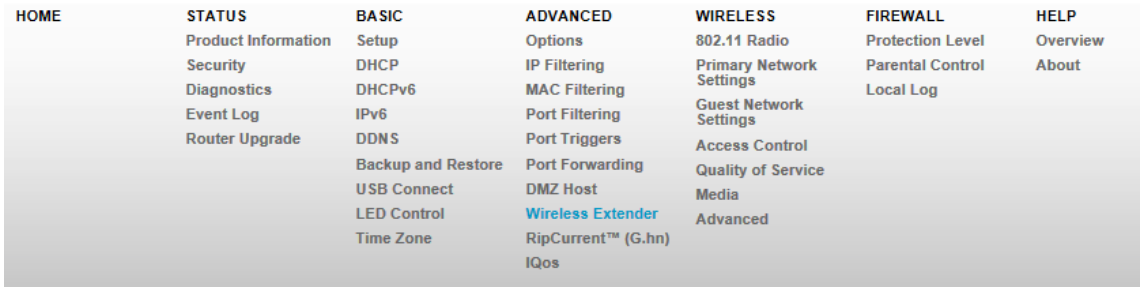
Main Menu Buttons

The SBR-AC1900P main menu buttons are displayed along the top of the SBR-AC1900P Web Manager screen. To display the drop-down submenu options, click the menu button.



Main Menu Links

The SBR-AC1900P main menu and related submenu option links are also displayed along the bottom of the SBR-AC1900P Web Manager screen. To open a submenu option, click the link.



Menu Option	Function
Home	Displays the Quick Start Wizard main screen.
Status	Provides information about the Wi-Fi Router hardware and software, MAC address, Wi-Fi Router IP address, serial number, and related information. Additional screens provide diagnostic tools and also allow you to change your Wi-Fi Router user name and password.
Basic	Configures the Wi-Fi Router IP-related configuration data, including Network Configuration, WAN Connection Type, DHCP, and DDNS.
Advanced	Controls Internet protocols which configure and monitor how the Wi-Fi Router routes IP traffic on the SBR-AC1900P.
Wireless	Configures and monitors the Wi-Fi Router wireless networking features.
Firewall	Configures and monitors the Wi-Fi Router firewall.
Help	Provides general information to help you set up your home network.

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Menu Option	Function
Logout	Closes the SBR-AC1900P Web Manager.

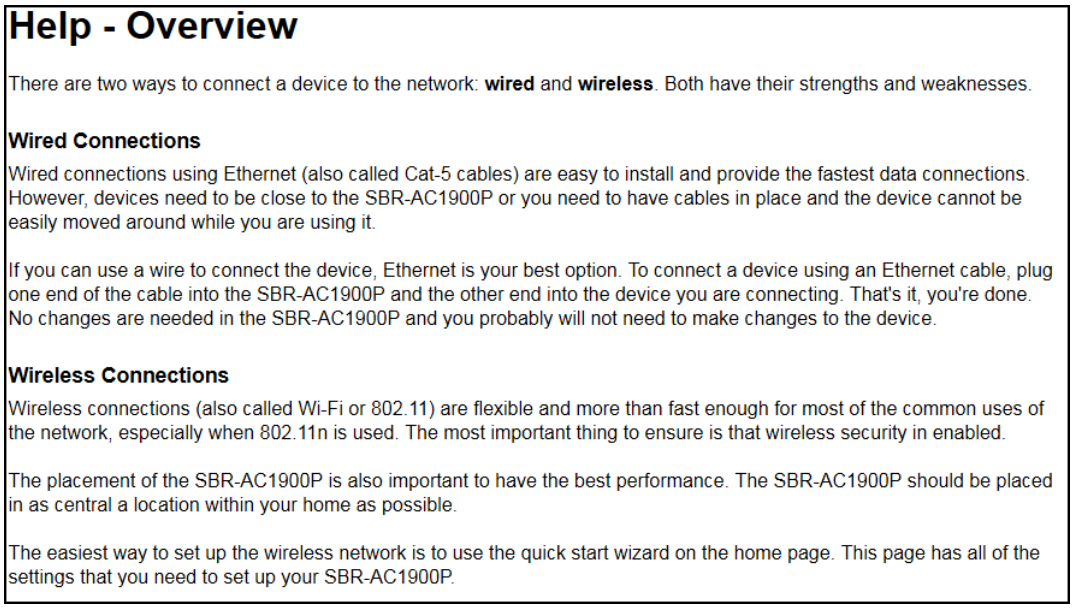
Get Help

You can choose any of the following three options to obtain help information for any SBR-AC1900P Web Manager function. General help information is available for any SBR-AC1900P menu option when you click the **Help** button on that page.

- *Help Overview* (page 39).
- *Help Links* (page 40).
- *Field Level Help* (page 40).

Help Overview

General help information is available when you click **Help, Overview** on the SBR-AC1900P Main Menu.



Help - Overview

There are two ways to connect a device to the network: **wired** and **wireless**. Both have their strengths and weaknesses.

Wired Connections

Wired connections using Ethernet (also called Cat-5 cables) are easy to install and provide the fastest data connections. However, devices need to be close to the SBR-AC1900P or you need to have cables in place and the device cannot be easily moved around while you are using it.

If you can use a wire to connect the device, Ethernet is your best option. To connect a device using an Ethernet cable, plug one end of the cable into the SBR-AC1900P and the other end into the device you are connecting. That's it, you're done. No changes are needed in the SBR-AC1900P and you probably will not need to make changes to the device.

Wireless Connections

Wireless connections (also called Wi-Fi or 802.11) are flexible and more than fast enough for most of the common uses of the network, especially when 802.11n is used. The most important thing to ensure is that wireless security in enabled.

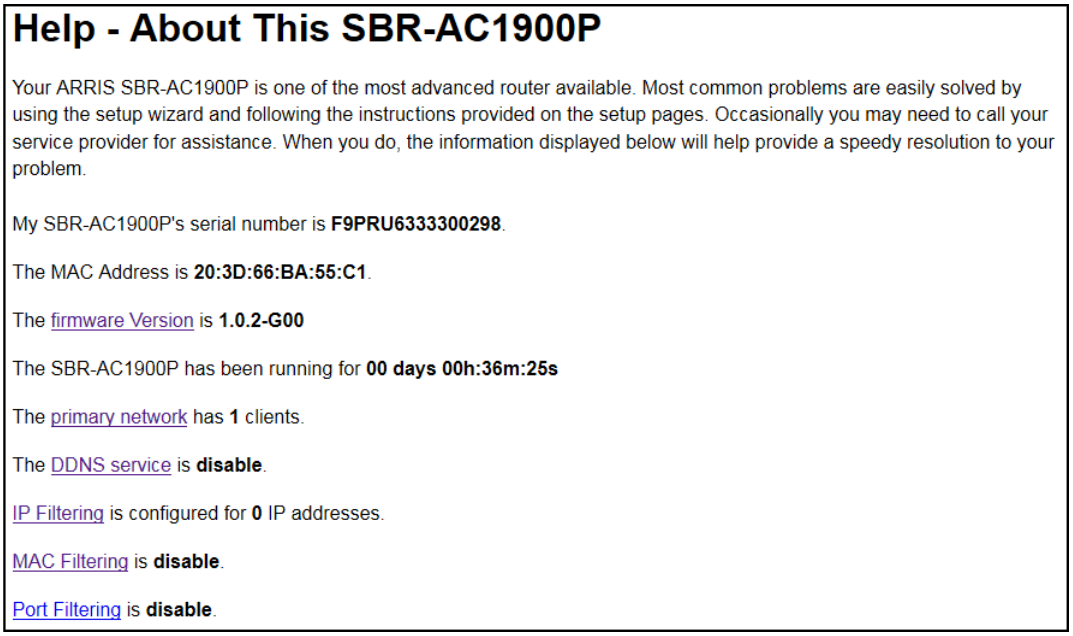
The placement of the SBR-AC1900P is also important to have the best performance. The SBR-AC1900P should be placed in as central a location within your home as possible.

The easiest way to set up the wireless network is to use the quick start wizard on the home page. This page has all of the settings that you need to set up your SBR-AC1900P.

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Help Links

Provides a concise list of your configuration settings with applicable links for easy access when you click **Help, About** on the SBR-AC1900P Main Menu. The link opens the related configuration screen.



Field Level Help

More specific help information is available throughout the web manager for field level help when you click **Help** located to the right of the applicable field (see sample screenshot below).



View the Wi-Fi Router Product Information

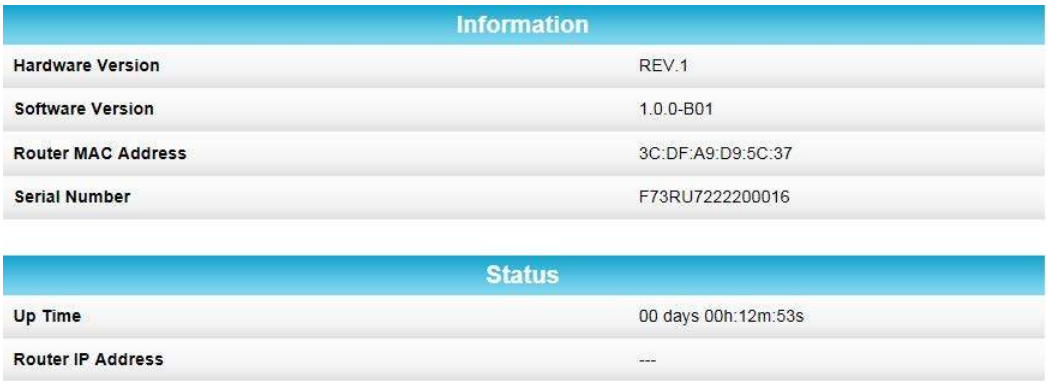
The Status Product Information screen displays general product information, including the software (or firmware) version and the current network connection status of the Wi-Fi Router.

To open the Status Product Information page:

1. Click **Status** on the SBR-AC1900P Main Menu.
2. Click **Product Information** from the Status submenu options.

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3. Click the **Refresh** button (F5) in your web browser to reload the information on the screen.

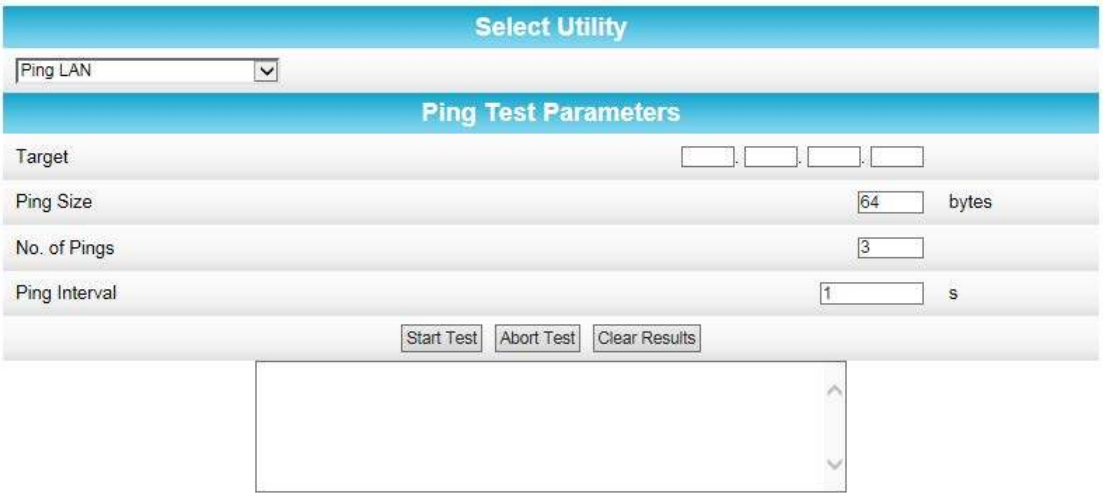


Test Your Connection

The Status Diagnostics screen lets you perform a series of tests to make sure that your SBR-AC1900P is connected and displays information about the ping test parameters.

To run a ping test:

1. Click **Status** on the SBR-AC1900P Main Menu.
2. Click **Diagnostics** from the Status submenu options.



3. In the Select Utility section, select the kind of test that you want to run.
4. In the Ping Test Parameters section, set the parameters that you would like to use for your test.
5. Click **Start Test** to begin the test. The results will appear in the box at the bottom of the screen.

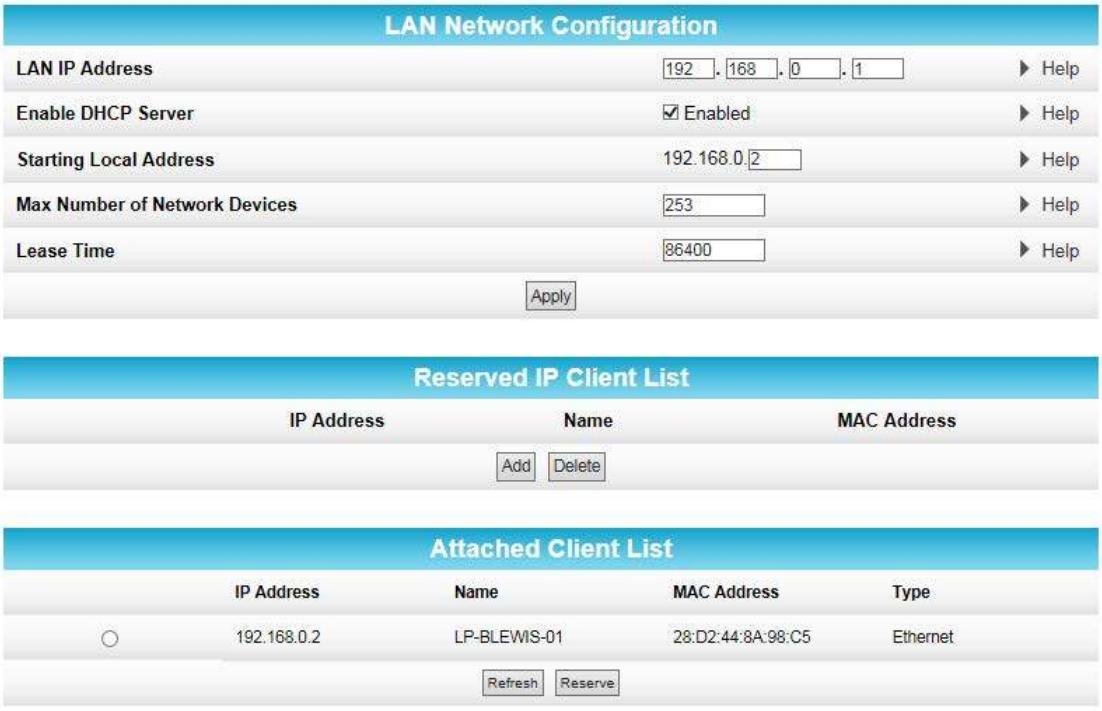
Set Up DHCP

The Basic DHCP screen lets you manually assign IP addresses to devices on your LAN.

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To configure your LAN:

1. Click **Basic** on the SBR-AC1900P Main Menu.
2. Click **DHCP** from the Basic submenu options.



3. In the LAN Network Configuration section, choose the settings that you would like to apply to your LAN, and click **Apply**.
4. In the Reserved IP Client List section, click **Add** to set up a list of IP addresses that you want to reserve.
5. In the Attached Client List section, select the IP address of any clients that you want to reserve, and click **Reserve**.

Set Up Dynamic DNS

The Basic DDNS screen uses dynamic DNS to let you give your SBR-AC1900P a "friendly" name, for example, in case you are setting up a web server in the home. Most users will not need to set up dynamic DNS.

If you do need to set up dynamic DNS:

1. Click **Basic** on the SBR-AC1900P Main Menu.

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2. Click **DDNS** from the Basic submenu options.



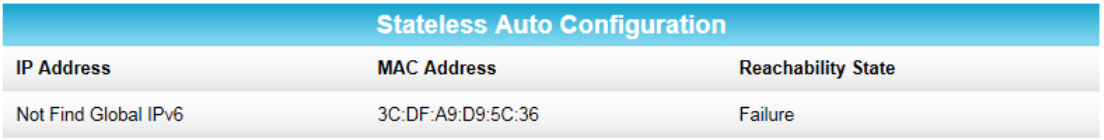
3. In the DDNS Service field, select the DDNS service that you are using.
4. In the Username field, type the username associated with the DDNS account.
5. In the Password field, type the password associated with the DDNS account.
6. In the Host Name field, type the "friendly" name that you want to assign to your SBR-AC1900P.
7. Click **Apply** to save your changes.

View Your IPv6 Configuration

The Basic IPv6 screen shows the IP address, MAC address, and reachability status of your Wi-Fi Router.

To view your IPv6 configuration:

1. Click **Basic** on the SBR-AC1900P Main Menu.
2. Click **IPv6** from the Basic submenu options.



View Your USB Configuration and Status Information

The Basic USB Connect screen shows the USB configuration and status information for your Wi-Fi Router.

To view your USB configuration and status information:

1. Click **Basic** on the SBR-AC1900P Main Menu.

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2. Click **USB Connect** from the Basic submenu options.



Disable LEDs on the Back Panel

The Basic LED Control screen lets you disable the LEDs on the back panel of your Wi-Fi Router, if you want.

To disable the LEDs on the back panel:

1. Click **Basic** on the SBR-AC1900P Main Menu.
2. Click **LED Control** from the Basic submenu options.



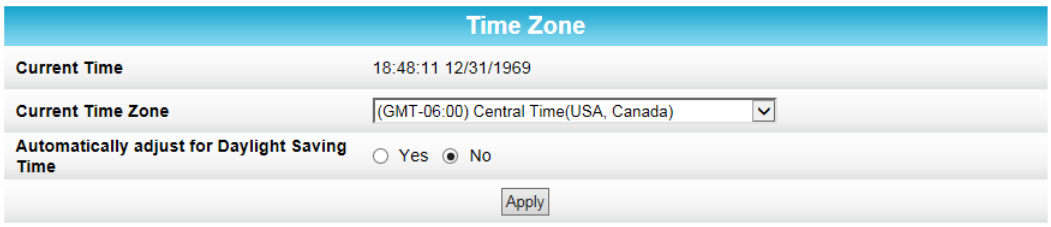
3. In the LEDs field, select **Disabled**.
4. Click **Apply**.

Adjust Your Time Zone

You can adjust your time zone if necessary so that the SBR-AC1900P is set to the correct local time. You can also choose to adjust for Daylight Saving Time automatically.

To disable the LEDs on the back panel:

1. Click **Basic** on the SBR-AC1900P Main Menu.
2. Click **Time Zone** from the Basic submenu options.

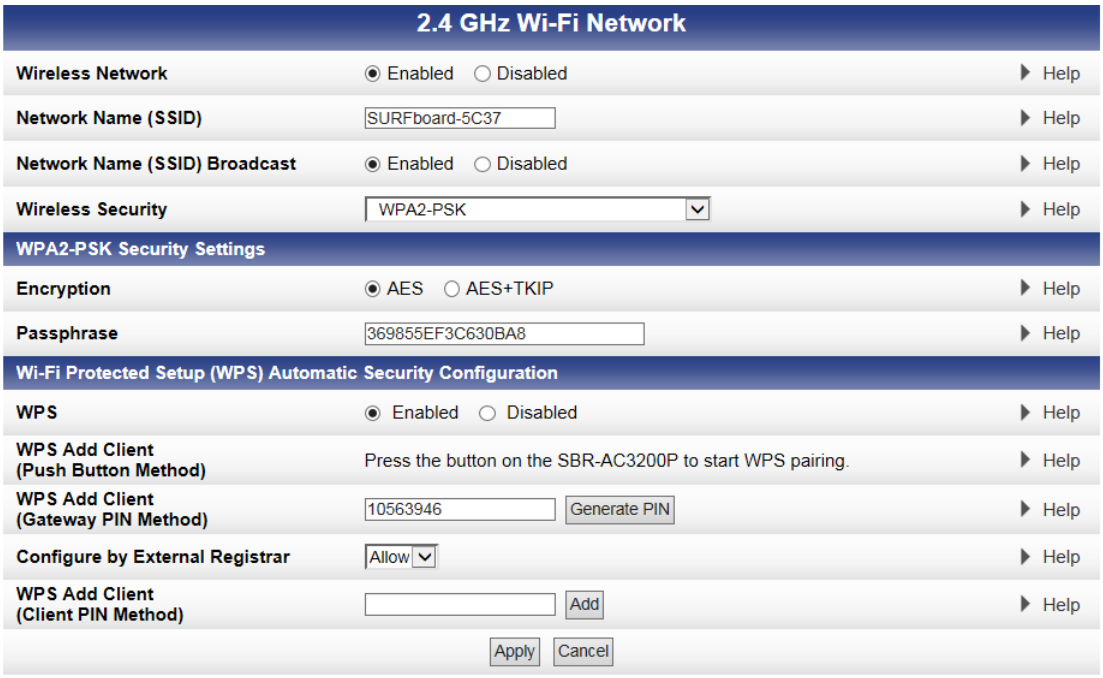


3. Select your time zone from the Current Time Zone drop-down box.
4. Select **Yes** or **No** to automatically adjust the time for Daylight Saving Time.
5. Click **Apply**.

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Set Up Your Primary Wireless Network

1. Click **Wireless** on the SBR-AC1900P Main Menu.
2. Click **Primary Network Settings** from the Wireless submenu options.



3. Select the tab for the band whose settings you want to configure.
4. Select **Enabled** or **Disabled** in the Wireless Network field to turn ON or OFF wireless networking on your home network.
5. Do one of the following to set the network name for your wireless network in the Network Name (SSID) field:
   - Keep the default network name listed in the field (also listed on your gateway label).
   - Enter a different name for your primary network.

   The wireless network name must be different from any other network name on your home network. You can use any combination of letters (lowercase and uppercase), numbers, and/or special characters (symbols); 32 characters maximum.
6. Select **Enabled** or **Disabled** in the Network Name (SSID) Broadcast field to turn On or Off showing your SSID as an available network.

   When SSID Broadcast is enabled, your SSID is visible to wireless clients that are within range of your home network to connect to it.

   When SSID broadcast is disabled, your SSID is not visible to unauthorized wireless clients.
7. Select one of the following **Wireless Security** modes for your wireless gateway from the Security Mode drop-down list:
   - **WPA2-PSK:** Wi-Fi Protected Access version 2 with Pre-Shared Key. Provides the best security for your network (recommended).
   - **WPA2-PSK + WPA-PSK:** combination Wi-Fi Protected Access version 2 with Pre-Shared Key and Wi-Fi Protected Access with Pre-Shared Key.

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- **Unencrypted:** network security is not set for your wireless network. This allows access to your wireless network without a Wi-Fi Security key.
- **WPA-PSK:** combination Wi-Fi Protected Access with Pre-Shared Key and Wi-Fi Protected Access with Pre-Shared Key.
- **WPA2 (Enterprise):** Wi-Fi Protected Access version 2 provides additional network security and requires a user name and password for network logon.
- **WPA2 + WPA (Enterprise):** combination Wi-Fi Protected Access version 2 and Wi-Fi Protected Access provides additional network security and requires a user name and password for network logon.

8. Choose the **Encryption** type for your wireless network in the Encryption field:
   - **AES** – Advanced Encryption Standard: Provides the strongest encryption (recommended).
   - **AES+TKIP** – Advanced Encryption Standard and Temporal Key Integrity Protocol: Allows both AES and TKIP-capable clients to connect to your wireless network.
9. Enter your wireless network password in the Passphrase field. You can use any combination of letters, numbers, and/or special characters.
10. Click **Apply**.

Set Up a Guest Wireless Network

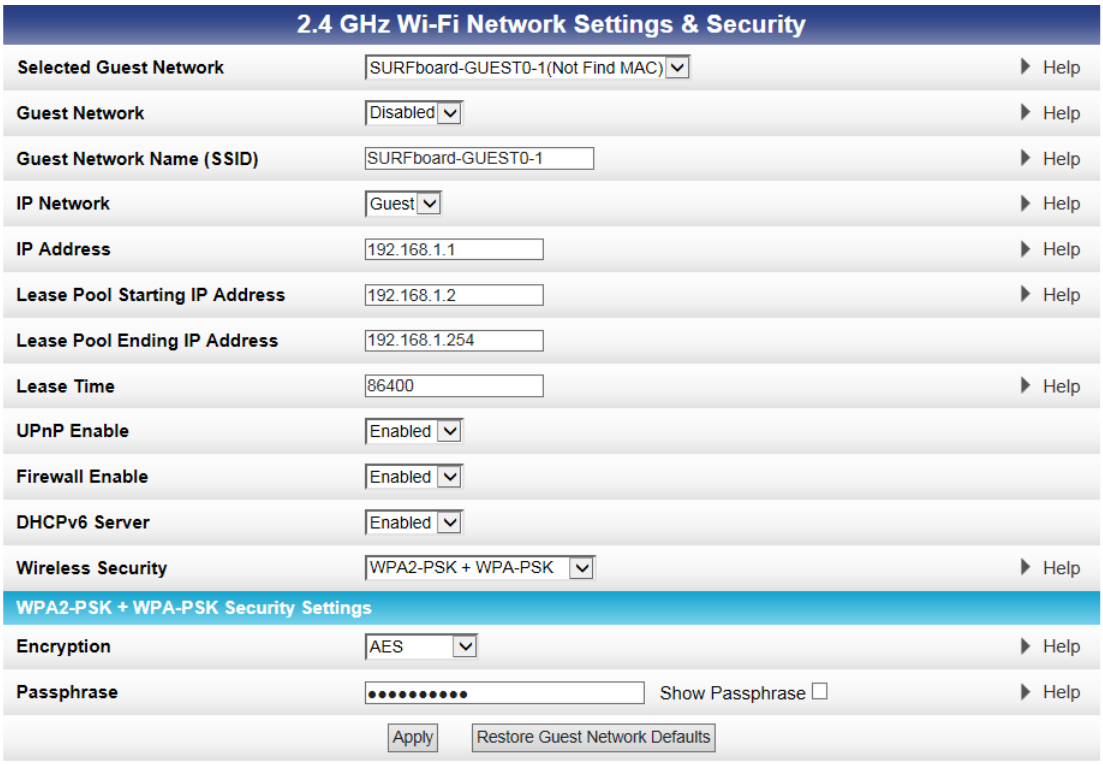
If you wish, you can set up your Wi-Fi Router to host a guest network. By doing so, you can give your guests access to part of your wireless network, yet still keep certain parts private.

To set up a guest network:

1. Click **Wireless** on the SBR-AC1900P Main Menu.

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2. Click **Guest Network Settings** from the Wireless submenu options.



3. Select the tab for the band whose settings you want to configure.
4. Select the guest network from the Selected Guest Network drop-down list.
5. Select **Enabled** or **Disabled** in the Guest Network field to turn ON or OFF the selected wireless guest network.
6. Do one of the following to set the network name for your wireless network in the Network Name (SSID) field:
   - Keep the default network name listed in the field.
   - Enter a different name for your guest network.

   The wireless network name must be different from any other network name on your home network. You can use any combination of letters (lowercase and uppercase), numbers, and/or special characters (symbols); 32 characters maximum.
7. Select **LAN** or **Guest** from the IP Network drop-down list.
   - **LAN** – Configures the guest network to be part of your primary network and allow guest users to connect to your primary network.
   - **Guest** – Configures the guest network to only allow access to a specific network and not your primary network.
8. Enter the IP address for the SBR-AC1900P on the Guest network in the IP Address field.
9. Enter the first IP address of the range of IP addresses for the guest network lease pool in the Lease Pool Starting IP Address field. These are IP addresses that the SBR-AC1900P assigns to devices on your guest network.
10. Enter the last IP address of the range of IP addresses for the guest network lease pool in the Lease Pool Ending IP Address field.

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11. Enter the amount of time (in seconds) that an IP address will be available to a device on your guest network in the Lease Time field.
12. Select **Enabled** or **Disabled** in the UPnP (Universal Plug and Play) Enable field to allow or block any network devices, such as computers, smart phones, tablets, gaming devices, or printers to automatically connect to your home network.
13. Select **Enabled** or **Disabled** in the Firewall Enable field to turn ON or OFF the gateway firewall.
14. Select **Enabled** or **Disabled** in the DHCPv6 Server field to allow the DHCP server to send leases to the guest network clients from the guest network lease pool you specified earlier.



Note: If the DHCP server is disabled, you must assign static IP addresses to the guest network stations.

15. Select one of the following wireless network security options for your wireless network from the Wireless Security drop-down list:
    - **WPA2-PSK:** Wi-Fi Protected Access version 2 with Pre-Shared Key. Provides the best security for your network (recommended).
    - **WPA2-PSK + WPA-PSK:** combination Wi-Fi Protected Access version 2 with Pre-Shared Key and Wi-Fi Protected Access with Pre-Shared Key.
    - **Unencrypted:** network security is not set for your wireless network. This allows access to your wireless network without a Wi-Fi Security key.
    - **WPA-PSK:** combination Wi-Fi Protected Access with Pre-Shared Key and Wi-Fi Protected Access with Pre-Shared Key.
    - **WPA2 (Enterprise):** Wi-Fi Protected Access version 2 provides additional network security and requires a user name and password for network logon.
    - **WPA2 + WPA (Enterprise):** combination Wi-Fi Protected Access version 2 and Wi-Fi Protected Access provides additional network security and requires a user name and password for network logon.
16. Choose the wireless network encryption type in the Encryption field:
    - **AES** – Advanced Encryption Standard: Provides the strongest encryption (recommended).
    - **TKIP+AES** –Temporal Key Integrity Protocol and Advanced Encryption Standard: Allows both AES and TKIP-capable clients to connect to your wireless network.
17. Enter any combination of characters and letters for the wireless guest network password in the Passphrase field.
18. Select **Show Passphrase** to display your password while you type.
19. When done, deselect **Show Passphrase** so that your password will not be visible.
20. Click **Apply**.

Configure Your Wi-Fi Radio

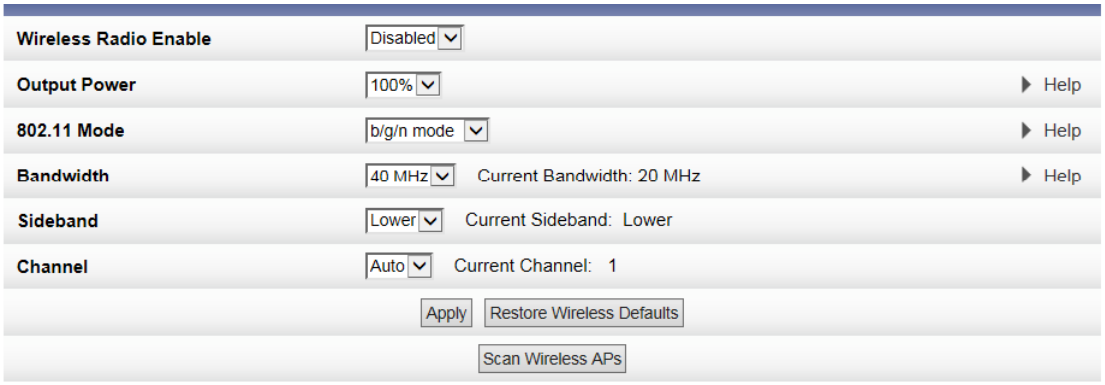
Network interference can occur at any time when using a wireless network connection. This may be caused by other wireless access points that are using the same wireless channel as

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your SBR-AC1900P and are also operating within close proximity in your home. If you experience wireless network interference, try changing the wireless channel on the SBR-AC1900P to improve network connectivity (or signal strength) and avoid network interference. By default, your SBR-AC1900P is set to choose a channel automatically.

To change the wireless channel on the SBR-AC1900P:

1. Click **Wireless** on the SBR-AC1900P Main Menu.
2. Click **802.11 Radio** from the Wireless submenu options.



3. Select the tab for the band whose settings you want to configure.
4. Select **Enabled** from the Wireless Radio Enable drop-down list to turn ON the Wi-Fi Radio on the SBR-AC1900P.
5. Select a new channel number from the Channel drop-down list.
6. Click **Apply**.

Back Up Your Wi-Fi Router Configuration

You can save a backup copy of the current configuration settings to your local computer. You can use the backup file to restore your custom settings in the event that you made changes that you no longer want.

Caution: We highly recommend that you perform the configuration backup using the SBR-AC1900P default login username and password.

To create a backup copy of your configuration settings:

1. Click **Basic** on the SBR-AC1900P Main Menu.
2. Click **Backup and Restore** from the Basic submenu options.



3. Click **Backup** to create a backup file of your SBR-AC1900P configuration settings. Follow the on-screen prompts to save the configuration file.

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Restore Your Gateway Configuration Settings

Caution: This action will delete your current SBR-AC1900P configuration settings and allow you to restore a previously saved gateway configuration.

Note: After the configuration settings are restored, the SBR-AC1900P will automatically reboot and you will have to log on using the default username (admin) and password (password).

1. Click **Basic** on the SBR-AC1900P Main Menu.
2. Click **Backup and Restore** from the Basic submenu options.
3. Click **Browse** to search for a previously saved configuration file from the Downloads folder on your computer.
4. Click **Restore.** The SBR-AC1900P will automatically reboot.

Reset the SBR-AC1900P Configuration Settings

You can reset your SBR-AC1900P configuration back to the factory default configuration. There are two options available for resetting the SBR-AC1900P:

- Use a pointed, non-metallic object to press the Reset button on the back of the SBR-AC1900P. Hold the button for more than 10 seconds to reset the SBR-AC1900P to factory default settings and reboot. See *Rear Panel* (page 16) for more information.
- Use the SBR-AC1900P Web Manager. Follow the steps below.

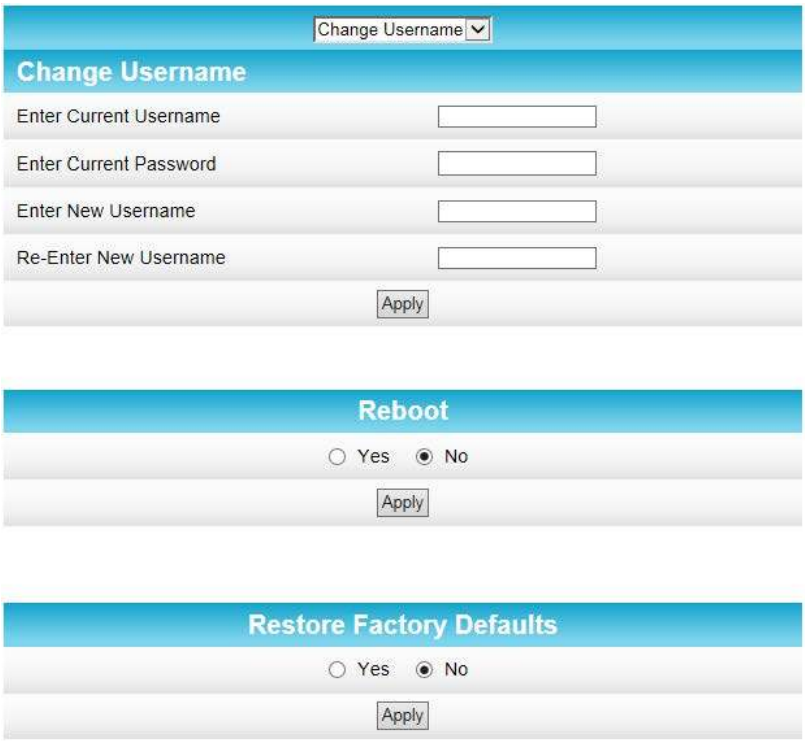
Caution: This process deletes your current user name, password, and any custom gateway configurations you may have already set up. We recommend that you create a backup copy of your configuration before resetting the SBR-AC1900P. See *Back Up Your Wi-Fi Router Configuration* (page 49) for more information.

From the SBR-AC1900P Web Manager, do the following to open the Status Security screen:

1. Click **Status** on the SBR-AC1900P Main Menu.

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2. Click **Security** from the Status submenu options.



3. Select **Yes** under Restore Factory Defaults.
4. Click **Apply**. A message appears, telling you to reboot the modem for the new settings to take effect.
5. Click **OK**.
6. Click **Status** on the SBR-AC1900P Main Menu.
7. Click **Configuration** from the Status submenu options to display the Status Configuration screen.
8. Click **Reboot**.
9. Log back in using the default username and password.
   - Username: **admin**
   - Password: **password**

Update Your Wi-Fi Router Firmware

You can update the firmware on your SBR-AC1900P Wi-Fi Router when ARRIS releases new firmware versions. The new firmware releases may contain updates for operational improvements or resolutions to problems. These updates will not delete or overwrite your personal user settings such as your password.

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You can download the latest firmware release from *http://www.SURFboard.com/Support/SBR-AC1900P*. To load the new firmware release onto your SBR-AC1900P Wi-Fi Router:

1. Click **Status** from the configuration screen and select **Router Upgrade** from the drop-down menu.



2. Click **Browse** to locate the new firmware file.
3. Select the new firmware file and click **Open**.
4. Click **Upload** to load the new firmware onto your SBR-AC1900P Wi-Fi Router.

Exit the SBR-AC1900P Web Manager

To log out and close the SBR-AC1900P Web Manager:

- Click **Logout** located in the upper right corner of the SBR-AC1900P Web Manager window.

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Protecting & Monitoring Your Wireless Network

After you have successfully connected the SBR-AC1900P and your wireless devices, you should configure the Wi-Fi router to protect your wireless network from unwanted and unauthorized access by any wireless devices that are within range of your wireless network. Although security for the SBR-AC1900P is already configured, you can use the SBR-AC1900P Web Manager to set the level of security and access that you want on your home network.

Prevent Unauthorized Access



Caution: To prevent unauthorized access and configuration to your wireless network, we highly recommend that you immediately change the default user name and password after connecting to the Internet and logging on to the SBR-AC1900P for the first time.

One of the most important recommendations for securing your wireless home network is to change the default administrator password on your SBR-AC1900P and other wireless devices as well. Default passwords are commonly used and shared on the Internet.

To ensure that your wireless home network is secure, it is recommended that you follow these best practices for user passwords:

- Always create a secure password or pass phrase that is not easily guessed.
- Use phrases instead of names so that it may be easier for you to remember.
- Use a combination of upper and lowercase letters, numbers, and symbols.
- Continue to change your administrator password on a regular basis.

Change the Default User Name and Password

1. Open any web browser on the computer connected to the SBR-AC1900P.
2. In the Address bar, type **http://mysurfboard.local** for the IP address, and then press **Enter**. The Login screen appears.
3. Type the default user name and password. Both entries are case-sensitive.

   Username: **admin**

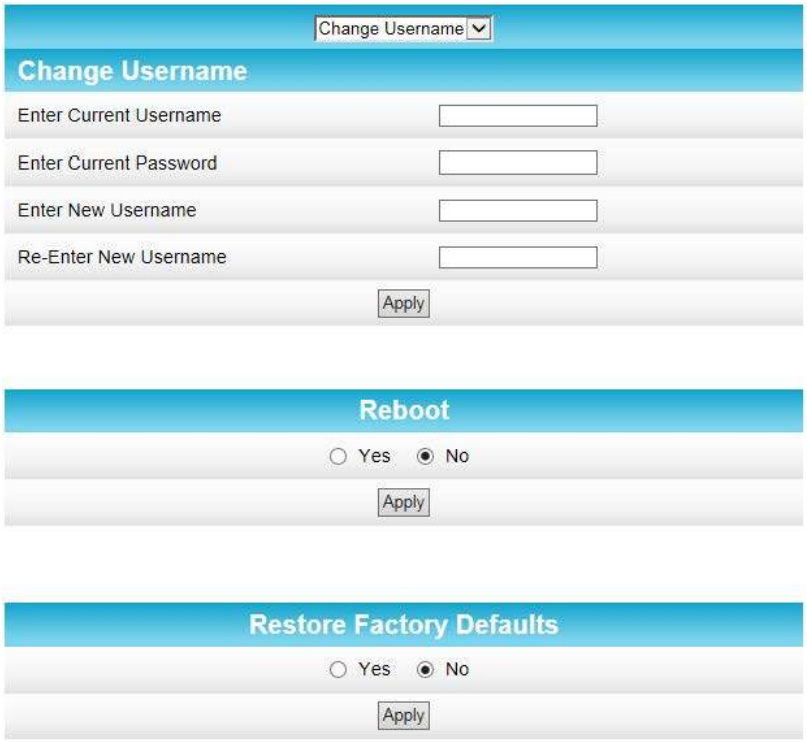
   Password: **password**
4. Click **Login** to open the SBR-AC1900P Web Manager. The SBR-AC1900P Main Screen appears.
5. Click the **Status** menu button and then click **Security** to display the Status Security screen.
6. Confirm that Change Username is displayed in the drop-down selection box.

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7. Complete each field entry, but note the following:
   - All fields (for example, Current Username & Current Password) are case-sensitive.

Note: The first time that you log in, the Current Username is **admin** and the Current Password is **password**.

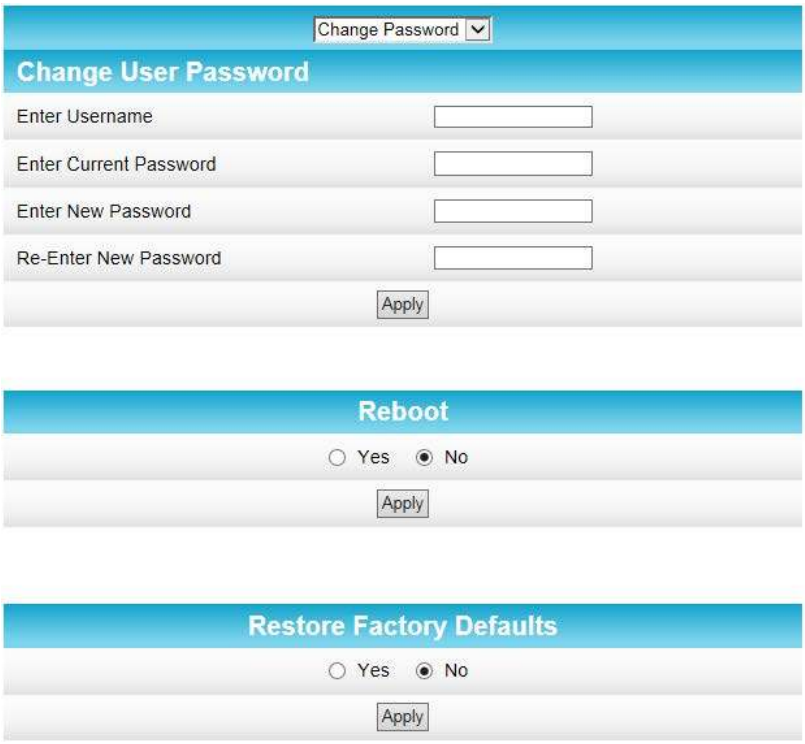
   - Make sure **No** is selected under Restore Factory Defaults.



8. Click **Apply** to update your user name.

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9. Click the drop-down arrow to select **Change Password**.



10. Complete each field entry, but note the following:
    - All fields are case-sensitive.
    - The Username is your new user name, if you changed it.
    - Make sure **No** is selected for Restore Factory Defaults.
    - Find a secure place to write down and keep your new user name and password.
11. Click **Apply** to update your password.

Set Up Firewall Protection

You can set up firewall filters and firewall alert notifications on your wireless home network. You can also block Java Applets, Cookies, ActiveX controls, popup windows, Proxies, and website access.

To set the firewall protection level:

1. Click **Firewall** on the SBR-AC1900P Main Menu.

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2. Click **Protection Level** from the Firewall submenu options.



3. Click the Firewall Protection Setting drop-down button to select the firewall protection level.

   Possible values:

   - Off.
   - Low.
   - Medium.
   - High.

Note: Selecting Off will disable firewall protection on your home network. Your computer(s) and other Ethernet-enabled devices on your network will be at risk for possible attacks from viruses and hackers.

4. Use the IPv6 Firewall Protection drop-down button to turn firewall protection on or off for IPv6 connections.
5. Select each Web filter that you want to set for the firewall and then click **Apply**.

Set Up Firewall Event Log Notifications

When a firewall attack is detected on your home network, a separate email alert notification is generated and a local log or report of the event is created. You can set up automatic email alert notifications for whenever a firewall attack is detected on the SBR-AC1900P.

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To set up Firewall Event Log notifications:

1. Click **Firewall** on the SBR-AC1900P Main Menu.
2. Click **Local Log** from the Firewall submenu options.



3. Enter your email address in the Contact Email Address field.
4. Enter the name of the email server in the SMTP Server Name field. Check with your service or email provider.
5. Enter the user name for your email account in the SMTP Username field.
6. Enter the password for your email account in the SMTP Password field.
7. Select **Enable** in the E-mail Alerts field to allow for automatic Email alerts.
8. Click **Apply**.

Set Up Remote Configuration Management

The Advanced Options screen lets you set up Remote Configuration Management so that you can access and configure the SBR-AC1900P from anywhere on the Internet. Once you set up Remote Configuration Management, you can access the SBR-AC1900P by browsing to the WAN IP address at port 80.

To set up remote configuration management:

1. Click **Advanced** on the SBR-AC1900P Main Menu.
2. Click **Options** from the Advanced submenu options.



3. Click the check box to enable Remote Config Management, and click **Apply**.

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Note: Most users will not need to set up a pass-through MAC address. However, if you need to do so, type the address in the Pass-through MAC Addresses field, and click **Add MAC Address**.

Filter Devices Based on IP Address

You can set up your Wi-Fi Router to prevent certain devices from accessing the Internet, based on IP address.

To block certain devices from reaching the Internet:

1. Click **Advanced** on the SBR-AC1900P Main Menu.
2. Click **IP Filtering** from the Advanced submenu options.



3. Use the Start Address and End Address fields to identify ranges of IP addresses that you want to prevent from reaching the Internet.
4. Click **Enabled** to block each range of IP addresses.
5. Click **Apply**.

Filter Devices Based on MAC Address

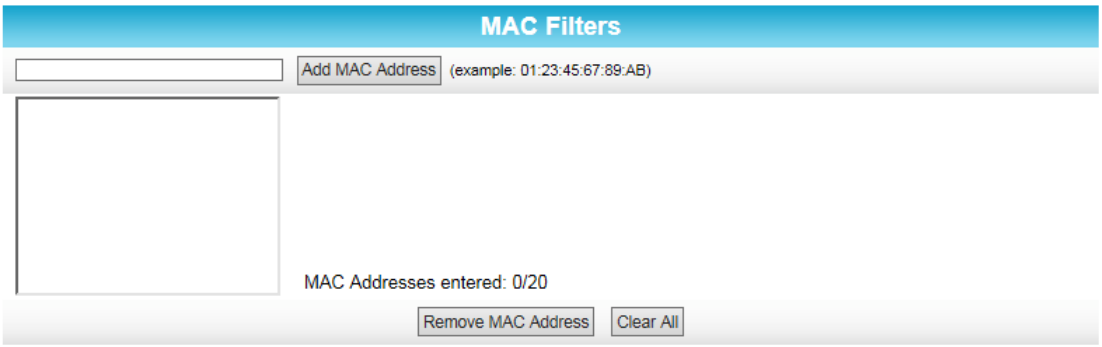
You can set up your Wi-Fi Router to prevent certain devices from accessing the Internet, based on MAC address.

To block certain devices from reaching the Internet:

1. Click **Advanced** on the SBR-AC1900P Main Menu.

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2. Click **MAC Filtering** from the Advanced submenu options.



3. In the MAC Filters section, type the MAC address of the device that you want to block from reaching the Internet, and click **Add Mac Address**. The address is added to the white box in the middle of the screen.

Choose a Method for Configuring Wireless Extenders

You can set up your Wi-Fi Router to configure wireless extenders automatically, or you can choose to configure any wireless extenders manually. Your Wi-Fi Router is set up to configure wireless extenders automatically by default.

To choose a method for configuring wireless extenders:

1. Click **Advanced** on the SBR-AC1900P Main Menu.
2. Click **Wireless Extender** from the Advanced submenu options.



3. In the Configure Mode field, select one of the following:
   - Choose **Auto** if you want your Wi-Fi Router to automatically push the settings from your Wi-Fi Router to the wireless extenders.
   - Choose **Semi-Auto** if you want to choose which wireless extender should receive settings from the Wi-Fi Router.
   - Choose **Disable** if you do not want to be able to configure wireless extenders from the Wi-Fi Router. If you choose Disable, you will need to access each wireless extender individually in order to change its configuration settings.
4. Click **Apply**.

Restrict Wireless Access

You can restrict access to your wireless network based on MAC address.

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To restrict access to your wireless network:

1. Click **Wireless** on the SBR-AC1900P Main Menu.
2. Click **Access Control** from the Wireless submenu options.



3. Select the tab for the band whose access you want to restrict.
4. In the **Selected Network** field, choose the network for which you want to restrict access.
5. In the MAC Restrict Mode field, select one of the following:
   - Select **Allow** if you want to allow access to the devices that you specify (and deny all others).
   - Select **Deny** if you want to deny access to the devices that you specify (and allow all others).
6. Use the MAC Address List fields to identify a list of devices.
7. Click **Apply**.

Prioritize Network Traffic Based on Media Type

Wi-Fi Multimedia (WMM) allows you to prioritize network traffic based on its media type. You can configure the quality of service (QoS) parameters for WMM.

To configure your quality of service parameters:

1. Click **Wireless** on the SBR-AC1900P Main Menu.

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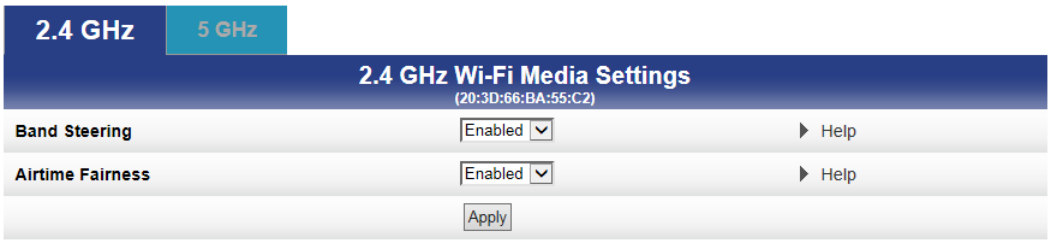
2. Click **Quality of Service** from the Wireless submenu options.



3. Choose your configuration settings, and click **Apply**.

Configure Wireless Media Settings

1. Click **Wireless** on the SBR-AC1900P Main Menu.
2. Click **Media** from the Wireless submenu options.



3. Select the tab for the band whose settings you want to configure.
4. Choose your configuration settings, and click **Apply**.

Set Up Parental Controls

You can set up the following Parental Controls on your home network:

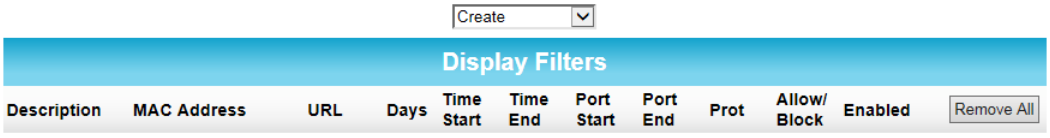
- Block access to specific Internet sites.
- Block access to specific MAC addresses.
- Set time limitations for computer usage or Internet access.

Note: Any Parental Control filters that do not include assigned ports will apply to all ports. This also applies to MAC addresses as well.

You can also link each user on your network to specified rules for login, time-access, and content filtering.

To set Parental Controls:

1. Click **Firewall** on the SBR-AC1900P Main Menu.
2. Click **Parental Control** from the Firewall submenu options.



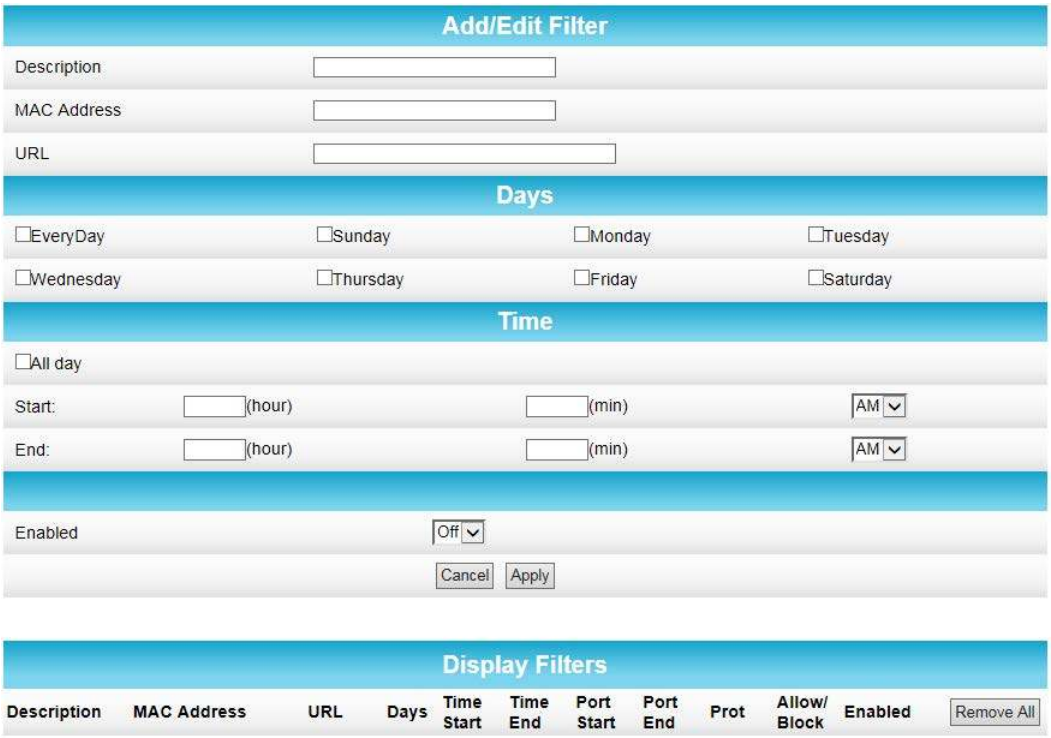
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3. Follow the directions in the following sections to set up different kinds of filters.

Note: You can set up multiple filters, if necessary. For example, suppose you want to block certain websites at all times, but you also want to block all web browsing on weekdays between 2:00 and 5:00 p.m. You would follow the steps in *To Block Certain URL Addresses* (page 62) to set up a filter to block that website at all times. Then you would use *To Block All Web Browsing* (page 63) to set up a different filter to block all web browsing during the times you specify.

To Block Certain URL Addresses

1. At the top of the screen, click the drop-down box and select **Block URL**.

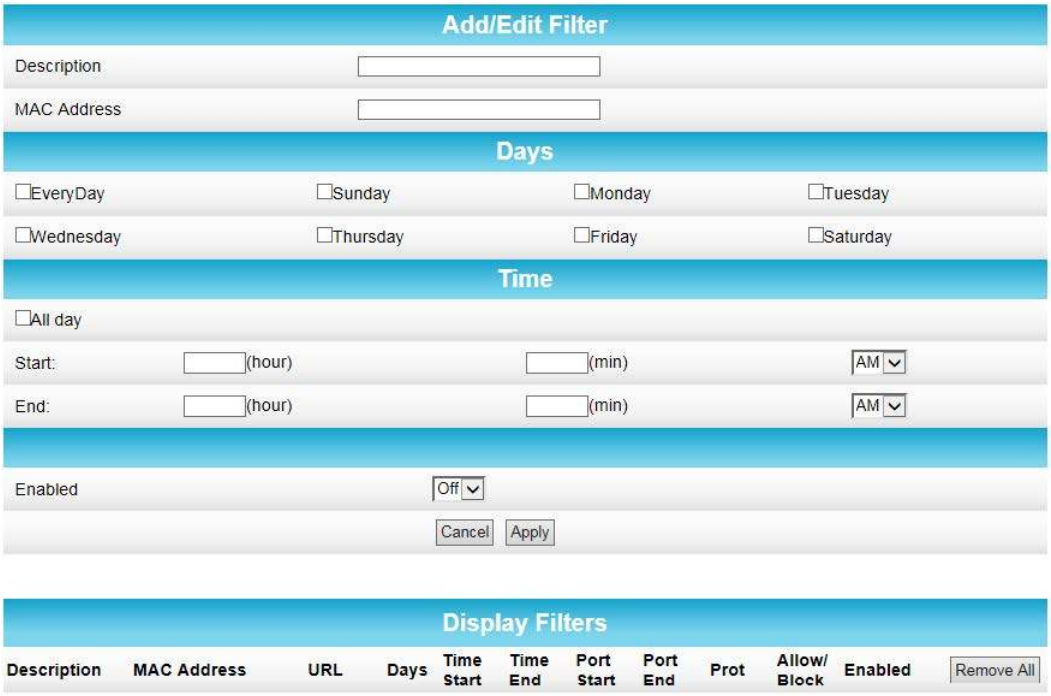


2. Enter a name to identify this user profile in the Description field.
3. Enter the 12-digit (hexadecimal) MAC address of the device for which you are creating Parental Controls in the MAC Address field.
4. Enter the web address of the Internet site that you want to block in the URL field.
5. Select the days of the week that you want to block access.
6. Select the time range that you want to block access.
7. In the Enabled field, select **On** or **Off** to enable or disable this Parental Control restriction.
8. Click **Apply**.

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To Block All Web Browsing

1. At the top of the screen, click the drop-down box and select **Block Web Browsing**.

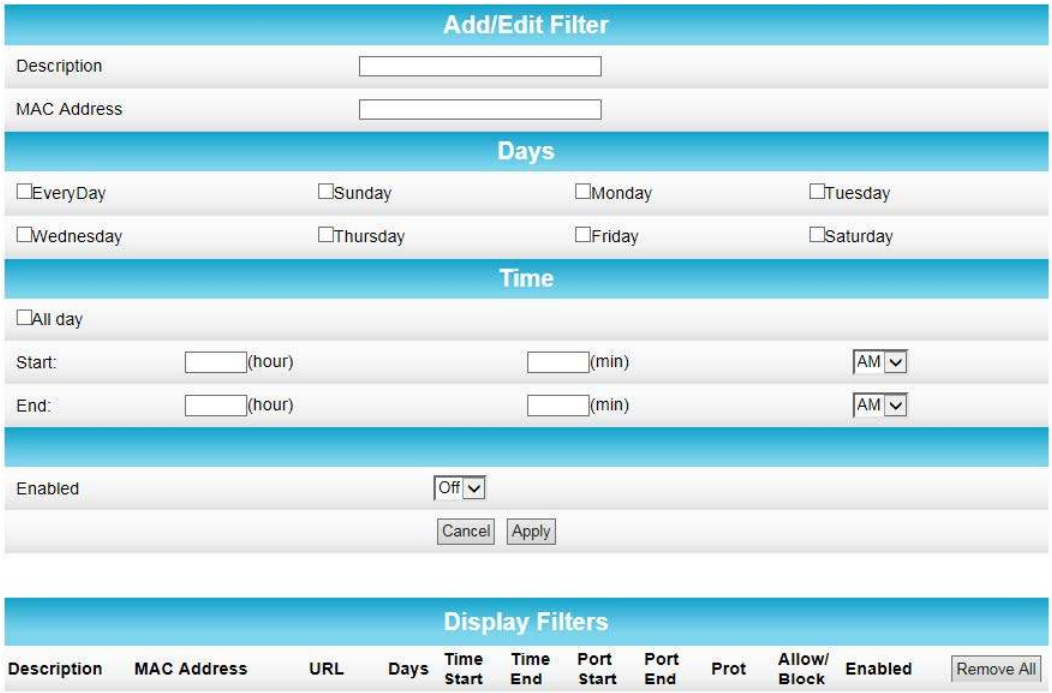


2. Enter a name to identify this user profile in the Description field.
3. Enter the 12-digit (hexadecimal) MAC address of the device for which you are creating Parental Controls in the MAC Address field.
4. Select the days of the week that you want to block access.
5. Select the time range that you want to block access.
6. In the Enabled field, select **On** or **Off** to enable or disable this Parental Control restriction.
7. Click **Apply**.

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To Block All Internet Use

1. At the top of the screen, click the drop-down box and select **Block All Internet**.

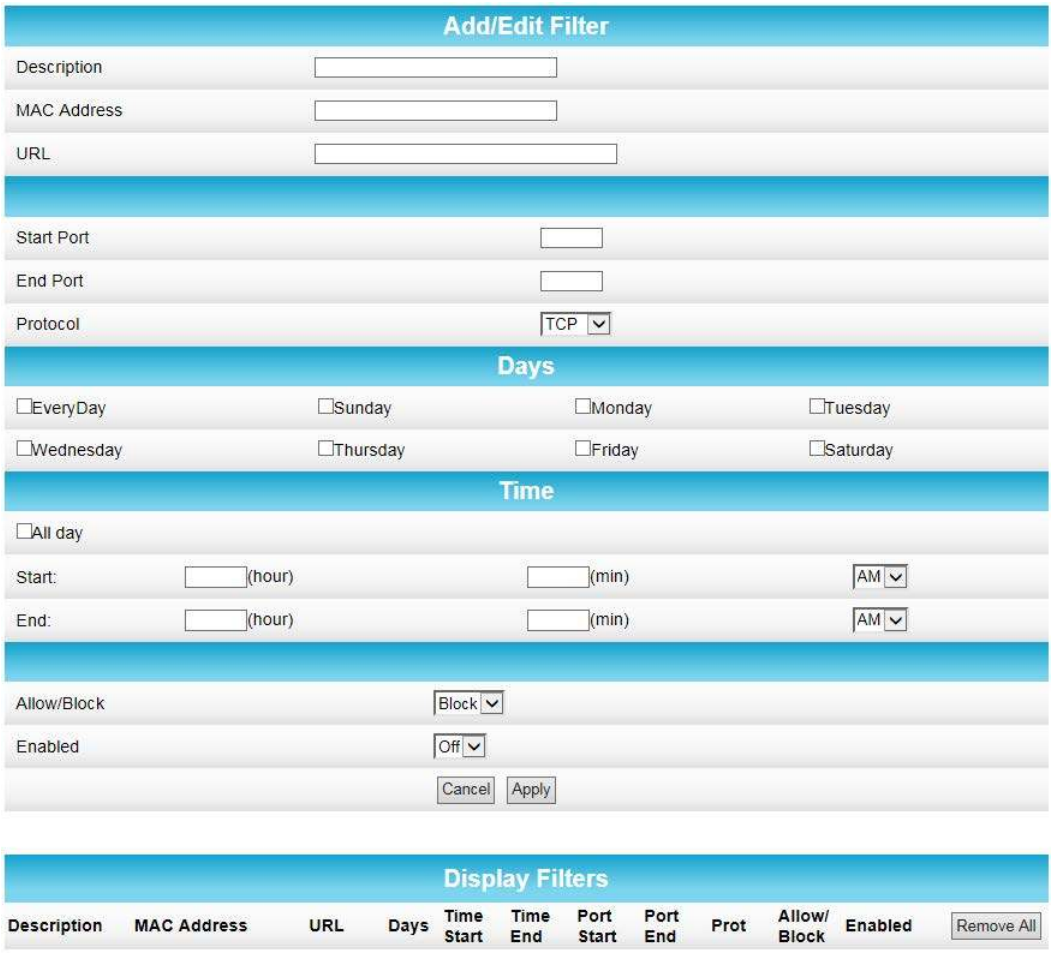


2. Enter a name to identify this user profile in the Description field.
3. Enter the 12-digit (hexadecimal) MAC address of the device for which you are creating Parental Controls in the MAC Address field.
4. Select the days of the week that you want to block access.
5. Select the time range that you want to block access.
6. In the Enabled field, select **On** or **Off** to enable or disable this Parental Control restriction.
7. Click **Apply**.

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To Set Up a Custom Filter

1. At the top of the screen, click the drop-down box and select **Block Custom.**



2. Enter a name to identify this user profile in the Description field.
3. Enter the 12-digit (hexadecimal) MAC address of the device for which you are creating Parental Controls in the MAC Address field.
4. Enter the web address of the Internet site that you want to block in the URL field.
5. Enter the Start Port number and the End Port number, and select the Protocol that you want to use.
6. Select the days of the week that you want to block access.
7. Select the time range that you want to block access.
8. In the Enabled field, select **On** or **Off** to enable or disable this Parental Control restriction.
9. Click **Apply**.

Set Up Port Triggers

You can use Port Triggers to configure dynamic triggers to specific devices on the LAN. This allows special applications that require specific port numbers with bi-directional traffic to

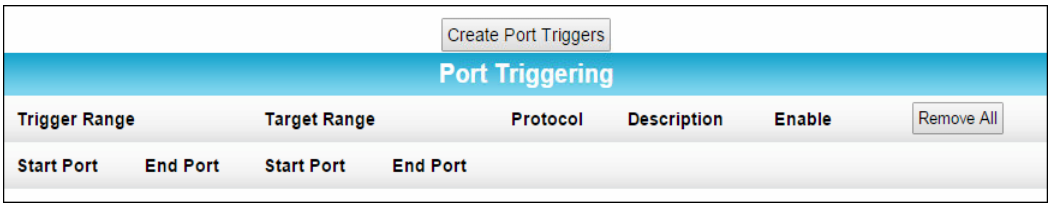
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function properly. Applications such as video conferencing, voice, gaming, and some messaging program features may require these special settings.

Note: If you enable the firewall and set up custom port triggers, then you must configure the firewall to allow traffic through those custom ports. See *Set Up Firewall Protection* (page 55) for more information.

To configure Port Triggers:

1. Click **Advanced** on the SBR-AC1900P Main Menu bar.
2. Click **Port Triggers** from the Advanced submenu options.



3. Click **Create Port Triggers** to open the Add Port Triggering Entry window.



4. Enter the starting and ending port numbers for the port to be triggered in the Trigger Start Port and Trigger End Port fields.
5. Enter the starting and ending port numbers of the Port Trigger range in the Target Start Port and Target End Port fields.
6. Select TCP, UDP, or BOTH from the Internet Protocol field.
7. Select **On** to enable IP port triggers or **Off** to disable them.
8. Click **Apply** to create your port triggers.
9. Repeat steps 3 through 8 for each additional port trigger that you want to create.

Set Up Port Forwarding

You can use Port Forwarding to set up a computer or other network device on your home network (LAN) to be accessible to computers or other remote network devices on the Internet. This allows you to open specific ports behind the firewall on your LAN to set up dedicated connections between your computer and other remote computers for online gaming or other online services. Some allowable services are predefined under the Commonly Forwarded Ports.

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Note: It is recommended that you manually configure the TCP/IP settings listed below on the computer you are setting up for remote access. Otherwise, remote access to your computer will not be available on the Internet.

- IP address
- Subnet mask
- Default gateway
- DNS address (at least one)

To set up Port Forwarding:

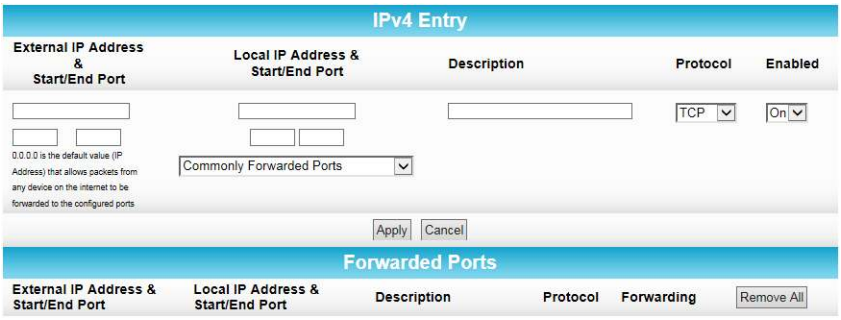
1. Click **Advanced** on the SBR-AC1900P Main Menu bar.
2. Click **Port Forwarding** from the Advanced submenu options.



To Set Up Port Forwarding for IPv4 Addresses

Note: To map a port for IPv4, you would enter the range of port numbers that you want forwarded locally and the IP address for sending traffic to those ports. If you only want a single port specification, enter the same port number in the start and end locations for that IP address.

1. Click **Create IPv4** to view the IPv4 Entry screen.



2. Do either of the following to set up the External IP Address:
   - Keep the IP Address set at 0.0.0.0 in the External IP Address field and then enter the port number in the Start Port field. Repeat the same port number in the End Port field. This allows incoming data traffic on the specified ports from any remote IP address.
   - Enter a specific remote IP address of your choice in the External IP Address field and then enter the specific port numbers in the Start Port and End Port fields. This allows incoming data traffic on the specified ports from only one remote IP address.

Note: To forward a range of ports, enter the first number of the port range in the Start Port field and the last number of the port range in the End Port field.

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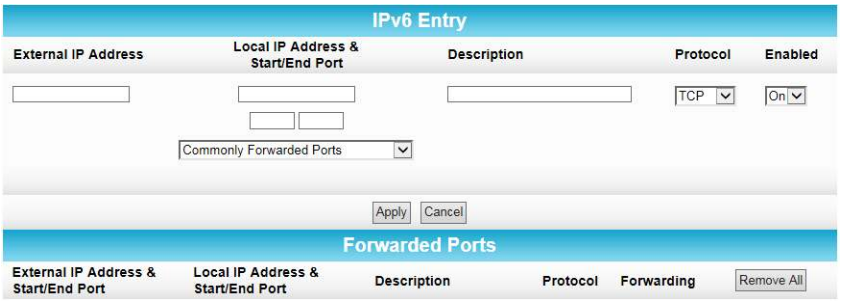
3. Do the following to set up your Local IP Address:
   a. Enter the IP address of your local computer that you are setting up for port forwarding.
   b. Enter the port number of your choice in the Start Port field. Repeat the same port number in the End Port field.

Note: To forward a range of ports, enter the first number of the port range in the Local Start Port field and the last number of the port range in the Local End Port field.

   c. Enter a description to name the forwarded port you are creating.
   d. Select **TCP**, **UDP**, or **BOTH** from the Internet Protocol drop-down list.
   e. Select **On** to enable port forwarding or **Off** to disable it.
4. Click **Apply**.

To Set Up Port Forwarding for IPv6 Addresses

1. Click **Create IPv6** to view the IPv6 Entry screen.



2. Enter the remote IP address of your choice in the External IP Address field. This allows incoming data traffic from only one remote IP address.
3. Do the following to set up your Local IP Address:
   a. Enter the IP address of your local computer that you are setting up for port forwarding.
   b. Enter the port number of your choice in the Start Port field. Repeat the same port number in the End Port field.

Note: To forward a range of ports, enter the first number of the port range in the Local Start Port field and the last number of the port range in the Local End Port field.

   c. Enter a description to name the forwarded port you are creating.
   d. Select **TCP**, **UDP**, or **BOTH** from the Internet Protocol drop-down list.
   e. Select **On** to enable port forwarding or **Off** to disable it.
4. Click **Apply**.

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Set Up the DMZ Host

Caution: The gaming DMZ host is not protected by the SBR-AC1900P Wi-Fi Router firewall. It is exposed to the Internet and thus vulnerable to attacks or hacking from any computer on the Internet. Consider carefully before configuring a device to be in the DMZ.

You can configure one computer on your home network to be the DMZ Host. That computer will operate outside of the SBR-AC1900P firewall and allow remote access from the Internet to your computer, gaming device, or other IP-enabled device. The DMZ Host feature will only allow outside users to have direct access to the designated DMZ Host device and not your home network.

To create the DMZ Host:

1. Click **Advanced** on the SBR-AC1900P Main Menu bar.
2. Click **DMZ Host** from the Advanced submenu options.



3. Enter the last one to three digits (from 2 to 254) of the IP address of the computer or gaming device that you are setting up as the DMZ host.
4. Click **Apply**.

Note: Remember to reset the IP address back to 0 (zero) to close all the ports when you are finished with the needed application. If you do not reset the IP address, that computer will be exposed to the public Internet.

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