USER GUIDE

SVG2500

SURFboard® Wireless Voice Gateway

MOTOROLA

SAFETY AND REGULATORY INFORMATION

IMPORTANT SAFETY INSTRUCTIONS — when using your telephone 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 systems 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 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 AC 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 device to allow for easy access when disconnecting the power cord of the device from the AC 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.
- It is recommended that the customer install an AC surge protector in the AC 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.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning. For added protection, unplug the device from the wall outlet and disconnect the cables to avoid damage to this device due to lightning and power surges.

- 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.
- CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger (e.g., 24 AWG) UL Listed or CSA Certified Telecommunication Line Cord, or national equivalent.
- Disconnect TNV circuit connector(s) before disconnecting power.
- Disconnect TNV circuit connector before removing cover.
- 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 use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible disposal instructions.
- 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.

SAVE THESE INSTRUCTIONS

Note to CATV System Installer - This reminder is provided to call the CATV system installer's attention to Section 820.93 of the National Electric Code, which provides guidelines for proper grounding and, in particular, specifies that the Coaxial cable shield shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

SAFETY REQUIREMENTS FOR THE SVG2500 LITHIUM-ION BATTERY

You must properly handle the SVG2500 lithium-ion rechargeable battery to ensure your safety. Improper handling can cause leakage, heat, smoke, explosion, or fire resulting in damage to the equipment or the user.

Use the SVG2500 battery only in the SVG2500 SURFboard Wireless Voice Gateway.

- **CAUTION:** Risk of explosion if battery is replaced by the incorrect type. Use only Motorola approved batteries, Motorola part number 515757-001 and 538043-001. Dispose of used batteries according to the instructions.
- Do not use the battery where static electricity is generated.
- Do not heat the battery or discard into a fire. Keep the battery away from high-temperature locations.
- Properly discard the battery if it exhibits an abnormal condition, such as heat, odor, color, or a change in shape. When discarding, place insulated tape over the battery terminals.
- The battery should be stored out of the reach of children.
- Do not store the battery close to metal objects.
- If the battery leaks fluid and you touch it, immediately wash your hands. If the fluid gets into your eye, do not rub the eye. Rinse with water and immediately seek medical care. Left untreated, the battery fluid could cause damage to the eye.
- Ensure that the battery does not receive any strong impacts, such as dropping or striking with a hard object.
- At the end of battery life, the SVG2500 battery must be disposed of properly and may need to be recycled. Contact your local recycling center for proper disposal methods.
- Do not expose the battery to ultrasonic energy.
- Do not disassemble, modify, or attempt to repair the battery.
- Before installation, the battery should not be subjected to temperatures below –10ºC or above +60ºC (14º F to 140º F). After initial customer usage (initially charged above shipping charge state), the battery should not be subjected to temperatures outside the operating temperature range:
- Battery Pack External Exposure Operating Temperature Range:

  Charging: 0.0°C to +45.0°C (0º F to 113º F)

  Discharging: –10.0°C to +60.0°C (14º F to 140º F)

IMPORTANT VOIP SERVICE INFORMATION

When using this VoIP device, you CANNOT make any calls, including an emergency call, and E911 location services WILL NOT be available, under the following circumstances:

- Your broadband ISP connection goes down, is lost or otherwise fails.
- You lose electrical power.

When using this VoIP device, you may be able to make an emergency call to an operator, but E911 location services may not be available under the following circumstances:

- You have changed the physical address of your VoIP device, and you did not update or otherwise advise your VoIP service provider of this change.
- You are using a non-U.S. telephone number.
- There are delays in making your location information available in or through the local automatic location information database.

Note: Your service provider, not Motorola, is responsible for the provision of VoIP telephony services through this equipment. Motorola shall not be liable for, and expressly disclaims, any direct or indirect liabilities, damages, losses, claims, demands, actions, causes of action, risks or harms arising from or related to the services provided through this equipment.

FCC STATEMENTS

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. 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 device 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 device 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.

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.

FCC CAUTION: Any changes or modifications not expressly approved by Motorola for compliance could void the user's authority to operate the equipment.

FCC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC RF exposure compliance requirements, the separation distance between the antenna and any person's body (including hands, wrists, feet and ankles) must be at least 20 cm (8 inches).

This transmitter must not be co-located or operation in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destinations. The firmware setting is not accessible by the end user.

INDUSTRY CANADA (IC) STATEMENT

This device complies with RSS-210 of the Industry Canada Rules. 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.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 2 dB. Antennas not included in this list or having a gain greater than 2 dB are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p) is not more than that permitted for successful communications.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

IC RADIATION EXPOSURE STATEMENT

IMPORTANT NOTE: This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

WIRELESS LAN INFORMATION

This device is a wireless network product that uses Direct Sequence Spread Spectrum (DSSS) radio technology. The device is designed to be inter-operable with any other wireless DSSS product that complies with:

- The IEEE 802.11 Standard on Wireless LANs (Revision B and Revision G), as defined and approved by the Institute of Electrical Electronics Engineers
- The Wireless Fidelity (Wi-Fi) certification as defined by the Wireless Ethernet Compatibility Alliance (WECA).

RESTRICTIONS ON THE USE OF WIRELESS DEVICES

In some situations or environments, the use of wireless devices may be restricted by the proprietor of the building or responsible representatives of the organization. For example, using wireless equipment in any environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the applicable policy for the use of wireless equipment in a specific organization or environment, you are encouraged to ask for authorization to use the device prior to turning on the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this product, or the substitution or attachment of connecting cables and equipment other than specified by the manufacturer. Correction of the interference caused by such unauthorized modification, substitution, or attachment is the responsibility of the user.

The manufacturer and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from failing to comply with these guidelines.

SECURITY WARNING: This device allows you to create a wireless network. Wireless network connections may be accessible by unauthorized users. Please read the SVG2500 User Guide or visit the Motorola website to learn how to protect your network.

INTERNATIONAL DECLARATION OF CONFORMITY

We,

Motorola, Inc.
101 Tournament Drive
Horsham, PA, U.S.A.

Declare under our sole responsibility that the
SVG2500 SURFboard Wireless Voice Gateway
To which the declaration relates is in conformity with the following standards:
EN 60950-1
EN 300 328
EN 301 489-1/-17
EN 61000-3-2
EN 61000-3-3

The following provisions of the Directive(s) of the Council of the European Union:
EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC
R&TTE Directive 1999/5/EC
Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC
Restriction of the Use of Certain Hazardous Substances in Electrical Equipment (RoHS) Directive 2002/95/EC

CARING FOR THE ENVIRONMENT BY RECYCLING

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

Recycling your Motorola 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. If collection systems are not available, call Motorola Customer Service for assistance.

SOFTWARE LICENSE

SVG2500 SURFboard Wireless Voice Gateway
Motorola, Inc.
Connected Home Solutions Business ("Motorola")
101 Tournament Drive, Horsham, PA 19044

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WARRANTY INFORMATION

SVG2500 SURFboard Voice Modem

Motorola, Inc., Connected Home Solutions Business ("Motorola")

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How long does this Limited Warranty last? Contact your Service Provider for details.

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1 OVERVIEW

Thank you for purchasing a Motorola® SVG2500 SURFboard Wireless Voice Gateway for your home, home office, or small business/enterprise. Applications where the Motorola SVG2500 is especially useful include:

- Households with multiple computers requiring a network connection and Internet access
- Small businesses or home offices requiring fast, affordable, and secure Internet access
- Households and home offices requiring more affordable telephone access with a Voice-Over-Internet-Protocol (VoIP) connection through the Internet
- Internet gamers desiring easier setup for:
  - Programs such as DirectX® 7 or DirectX® 8
  - Sites such as MSN Games by Zone.com or Battle.net®
- Video conferencing

A home network enables you to share information between two or more computers. You can connect your home network to the Internet through your cable TV system. The SVG2500 is the *central connection point* between your computers and the Internet. It directs (routes) information between the computers connected to your home network. A built-in cable modem transmits information between your home network and the Internet.

An SVG2500 offers the following standard features:

- Combines five separate products — a DOCSIS® cable modem, IEEE 802.11g wireless access point (with Wi-Fi™), Ethernet 10/100Base-T connections, two VoIP Internet telephone connections, and firewall — into one compact unit
- Enables you to create a custom network sharing a single broadband connection, files, and peripherals, with or without wires
- Advanced firewall for enhanced network security for wired and wireless users
- Provides easy setup

For the most recent documentation, visit the Cable Modems and Gateways page on the Motorola website:
http://broadband.motorola.com/consumers/support/default.asp.

This product is subject to change.

Easy Setup

It is much easier to configure a local area network (LAN) using an SVG2500 than using traditional networking equipment:

- The Installation Assistant application on the *SVG2500 Installation* CD-ROM enables easy connection to the cable network.
- For basic operation, most default settings require no modification.
- The SVG2500 Configuration Manager (CMGR) provides a graphical user interface (GUI) for easy configuration of necessary wireless, Ethernet, router, DHCP, and security settings. For information about using the SVG2500 Configuration Manager, see Section 3, Basic Configuration.

Network Connection Types

The SVG2500 provides different network connection types for your computers to exchange data. The connection between your computers and the SVG2500 may be with a wireless or a wired connection or a combination of the two. Your network can use one or any combination of all the following network connections:

- Ethernet local area network (LAN)
- Wireless LAN (IEEE 802.11g that also supports IEEE 802.11b wireless clients)
- Wi-Fi (Wireless Fidelity) connections to Wi-Fi enabled devices
- Universal Serial Bus (USB)