

SuperHALO™

2G-3G-4G

Wireless Cellular Booster Kit



| | |
|--------------------|-------|
| Introduction | 1 - 2 |
| Installation | 3 - 8 |
| Troubleshooting | 9 -10 |
| Specifications | 11 |
| Safety Information | 11 |

CA-VAT-10-R
User Guide

Congratulations on purchasing the SuperHalo, the finest cellular booster available!

The SuperHalo adjustable cellular boosters and kits remove the frustration over dropped calls, limited range, and slow data rates by amplifying incoming and outgoing cellular signals in watercraft of all sizes. The SuperHalo is designed with leading-edge technology to detect and amplify weak incoming signals your cellular device would otherwise miss and to broadcast a significantly stronger signal back to the cell tower.

This guide contains all the information you need to get your SuperHalo booster system up and running.

BEFORE USE, you MUST REGISTER THIS DEVICE with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not sp. consent to the use of this device on their network. If you are unsure, contact your provider.

Theory of Operation

The SuperHalo is a high-quality bi-directional booster that boosts cellular signals for areas prone to weak cellular coverage.

The SuperHalo is a multi-band cell booster, increasing signal for 2G-3G voice and 4G data.

The SuperHalo works with two antennas:

- An inside antenna that communicates with your cell phone.
- An outside antenna that communicates with the cell tower.

Signals sent from a cell tower are received by the outside antenna, amplified by the booster and then sent to your phone via the inside antenna.

When your phone transmits, the signal is sent to the inside antenna and then sent to the cell tower via the outside antenna.

Some cell signal is required for the SuperHalo to enhance cellular signal coverage. The weakest cell signal for the SuperHalo to work is low -100dBm to high -90dBm. dBm is an abbreviation for the power ratio in decibels of the radio power per one milliwatt.

To measure your existing cell signal on an Apple iPhone, dial *3001#12345#*and press Call. In the top-left corner, a number appears instead of bars.

For Android devices, you can download several apps to measure exact signal strength. In your phone's App Store, search for "check real signal strength" to find a cell signal measurement app.

INTRODUCTION

SuperHalo Package

Unpack all package contents, compare them against the package contents list, and check for damage. For missing or damaged items, contact your retailer. Keep the carton and packing material to store the product or if you need to return it.



booster



outside antenna with mount



inside antenna with bracket



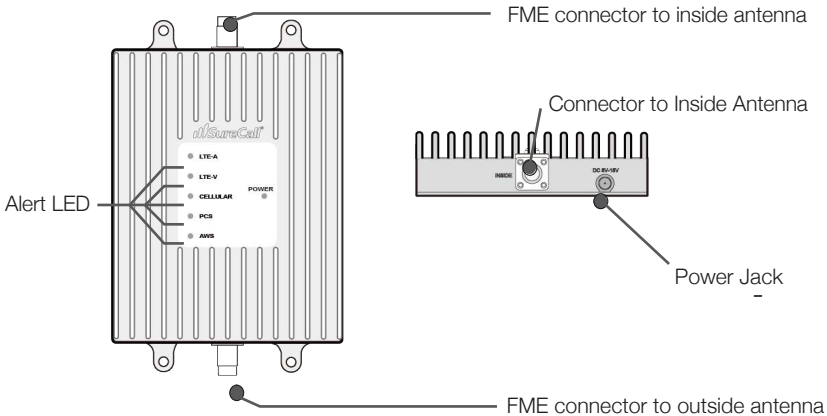
cable - 20' & 40'

| Package | Package Contents |
|-------------------------|---|
| SuperHalo Booster Kit * | Auto-adjusting marine booster |
| | 20 ft SC240-M marine cable |
| | 40 ft SC240-M marine cable |
| | Galaxy 5239 outside omni marine antenna |
| | 248 W-M inside panel antenna |
| | 110W -M 10-ft inside patch antenna |
| | 12V 18-ft DC power cord |

***Screws not supplied. Please purchase separately.**

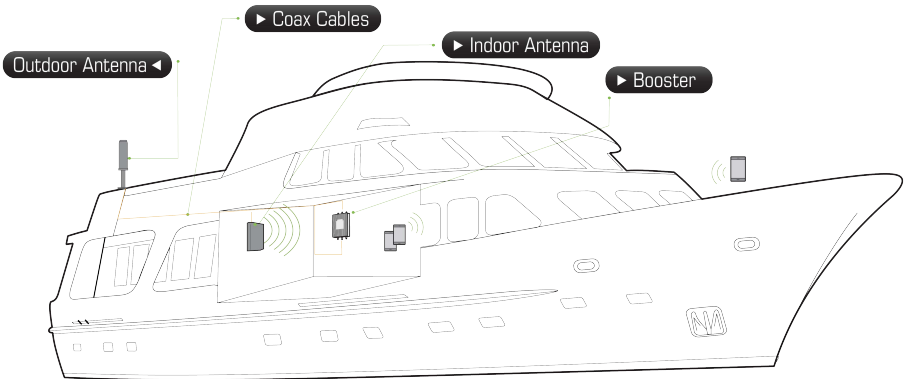
SuperHalo Booster Hardware

The following image shows the key hardware components on the cellular booster. Refer to this image as you install your SuperHalo kit components.



Quick Install Guide

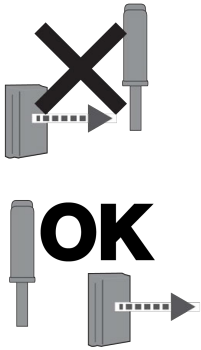
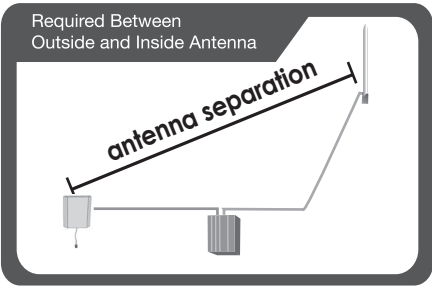
- 1 Mount outside antenna in an elevated area
- 2 Use cable to connect outside antenna to booster
- 3 Install inside antenna in location where increased cell reception desired
- 4 Mount booster
- 5 Connect booster to power source



INSTALLATION

Before beginning installation, note that antenna separation is key to optimizing performance. A minimum of 6 feet of separation is recommended between the inside and outside antennas.

Additionally, the inside panel antenna should not be aimed in the direction of the outside antenna.



Installation Steps

The SuperHalo booster kit is specially designed for installation on watercraft. Can be used in other applications with appropriate mounting hardware.

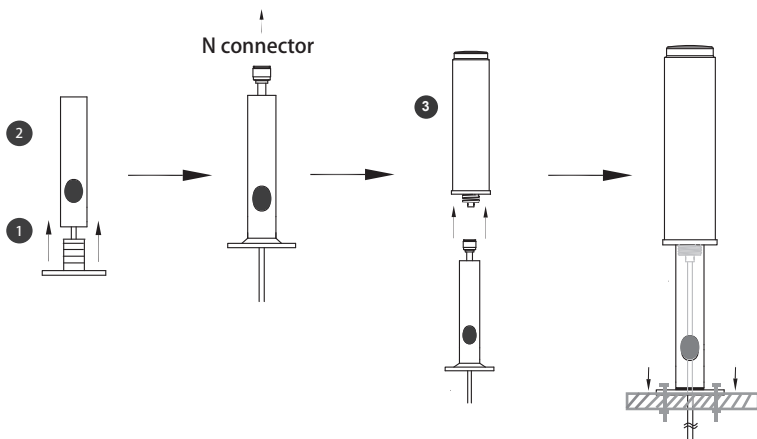
Step 1. Connect the Outside Antenna -Galaxy 5239

The **Galaxy 5239** is a full-band antenna, built specifically for marine use, it is weather resistant.

Antenna **Galaxy 5239** - Installation Instruction

OPTION 1 (Recommended)

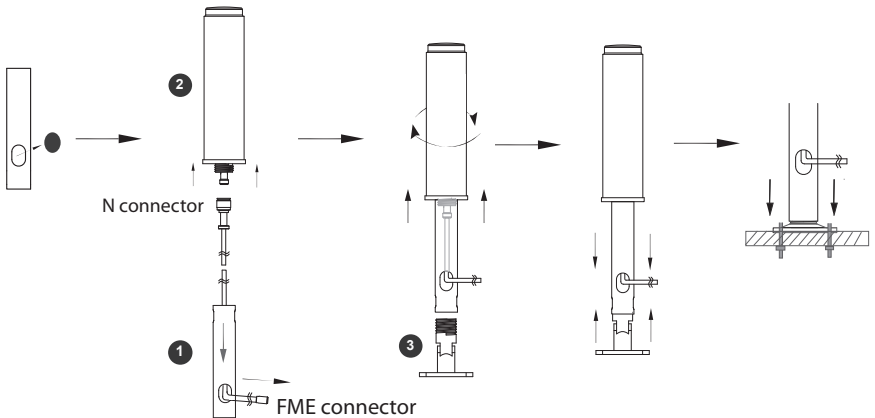
1. Choose a mounting location that is as high as feasible, as free as possible from obstructions, and as far as possible from other antennas and strong sources of RF signal.
2. Before mounting base, drill a hole in the middle of the mounting location wide enough in diameter to allow cable with FME connector to go through.
3. Hand tighten the antenna base to the ferrule.
4. Feed cable, N connector end first, through bottom of base and through hollow ferrule.
5. Hand tighten N connector to outside antenna and antenna to ferrule.
6. Feed cable, FME end first through the drilled hole.
7. Mount base (screws not provided) and hand tighten ferrule to mount base.



INSTALLATION

OPTION 2

1. When location of outside antenna has been determined, remove cap from ferrule side hole.
2. Feed FME connector (small end) and cable through side hole on the ferrule as shown in figure below.
3. Feed remainder of cable through ferrule hole until approx 1 in. of cable remain
4. Connect N connector to antenna.
5. Screw antenna onto ferrule, bend cable to prevent cable from twisting.
6. Screw base onto other end of ferrule.
7. Mount base onto location.



Step 2. Use Cable to Connect Outside Antenna to Booster

Use the cable FME connector to connect the outside antenna to the booster connector marked OUTSIDE (see page 2).

Make sure to not coil additional coax cable that might be left over from installation.

Hand tighten the connection.

Step 3 . Connect the Interior Antenna

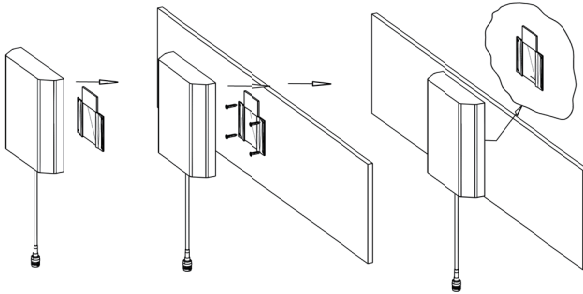
A : Standard Wireless Usage - (Recommended)

This SC 248W full band panel antenna is a compact directional antenna designed to cover 2G/3G/4G systems for Cellular, PCS, AWS and LTE frequencies. It's a high gain indoor antenna suited for places where the signal needs to be broadcast over a wide area. This interior antenna transmits and receives signal to cell phones.

Antenna SC248W-M - Installation Instruction

1. Choose location for mounting antenna on vertical surface. Ideal height from the cabin deck or floor should be the approximate height of cellphone use.
2. Using plate, mark position of desired placement with pencil or marker.
3. Screw (not supplied) mounting plate into place with the slide panel protruding towards you. Provided plastic anchors are only to be used in sheetrock installation.
4. Slide antenna securely onto mounting plate.
5. Use the other SC240-M cable to connect SC 248W-M to "inside" of the booster.

Note: Be sure to provide enough separation from outside antenna. Panel antenna should not face outside antenna.

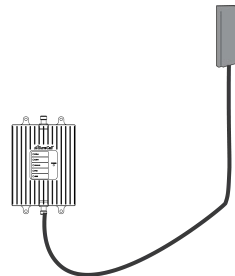


B : Low Profile Usage - (Optional)

1. The patch antenna is intended for indoor use only. Do not mount on a surface within 4" of metal.

2. Screw the patch antenna cable to the connector marked "inside."

Note: Laboratory tests show that patch antenna can work as close as 2 ft. from outside antenna if the patch antenna is facing away from outside antenna.



INSTALLATION

Step 4. Mount Booster

If mounting booster, mount on vertical location using booster screw fittings.

Step 5. Connect to DC Power

1. The positive red and negative black wired end will connect to watercraft's power supply-either battery, ignition or fusebox – whichever is located most conveniently.
2. Connect the DC power cord to the booster.
 - When the power LED turns ON, the booster is ready for use.
 - The Alert LEDs flash up to 15 seconds on each band.

Note: While the watercraft is in port, the alert light may light up red. This means that the signal coming into the booster is too strong and it may cause the booster to shut down. As you move out to sea this will no longer be a problem.

If red alert LEDs continue, increased antenna separation may be needed.

LED Indicators

Place a call in a location you have previously experienced poor signal and confirm that your phone is receiving a boosted signal. Normal operation is indicated by Green LEDs (both flashing and solid). In the event Red LEDs appear, antenna adjustments may be needed.

| Color | Condition | Indication |
|-------|-----------|--|
| Green | Solid | Indicates normal operation. |
| Green | Flashing | Normal operation. Indicates that Automatic Gain Control (AGC) is self-adjusting due to over-signal or antenna proximity. |
| Red | Flashing | Indicates issues caused by overpowering or oscillation. Adjustment of your outside antenna placement is likely needed. Verify that it has sufficient separation from the inside antenna, as well as, any potentially interfering objects or antennas |

Note that the booster case may become warm during operation. This is normal.

WARNING. This booster is rated for 5-15V input voltage. DO NOT use the booster with a higher voltage power supply. This can damage the booster and/or cause personal injury.

Record the model and serial number for your products:

Serial #: _____

Purchase Date: _____

Avoiding Interference

If the booster interferes with your radio or other electronic receivers, move the booster further away from those devices.

Frequently Asked Questions

For a list of Frequently Asked Questions and a comprehensive, up-to-date Troubleshooting Guide, please visit www.surecall.com.

Obtaining Technical Support

You can also consult a SureCall technical specialist directly by emailing us at support@surecall.com, or call 1-888-365-6283 and ask for tech support.

Antenna Kitting Info

Sold in Shakespeare®
SuperHalo marine kit

| Component | Product No | Gain | | | | |
|-------------------------|--|----------|----------|----------|----------|------------------|
| | | LTE-A | LTE-V | 800 MHz | 1900 MHz | 1700 \ 2100 MHz |
| Marine 1 Kit | | | | | | |
| Outdoor Antenna & Cable | SC288W or Galaxy 5412-P and SC240-40FN (40 ft) | -0.52 dB | -0.52 dB | -0.98 dB | -2.52 dB | -2.12 / -2.92 dB |
| Indoor Antenna & Cable | SC248W Panel and SC240-20FN (20 ft) | 4.94 dB | 4.94 dB | 4.71 dB | 6.44 dB | 6.64 / 6.24 dB |
| Indoor Antenna & Cable | SC302W and SC240-20FN (20 ft) | 0.44 dB | 0.44 dB | 0.71 dB | 1.44 dB | 0.64 / 1.24 dB |

*All equivalent antennas and cables are suitable for use with the SuperHalo

Warning Unauthorized antennas, cables, and/or coupling devices are prohibited by FCC new rules. Changes or modifications not expressly approved by SureCall could void the user's authority to operate the equipment.

FCC 27.50(d)(4) Statement: Fixed, mobile and portable (hand-held) stations operating in the 1720-1755 MHz band are limited 1 Watt EIRP. Fixed stations operating in this band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in this band must employ a means for limiting power to the minimum necessary for successful communications.

TROUBLESHOOTING

Troubleshooting

| | |
|--|--|
| | |
| Signal booster has no power | Verify that the LED on the booster is ON. Connect the power supply to an alternate power source. Verify that the power source is operational and the fuse is intact. If the POWER LED on the signal booster remains OFF, Contact SureCall: 1-888-365-6283 or support@surecall.com |
| After completing installation, signal has not Improved | Verify that cable connections are tightly fitted to the booster. Try further separating the antennas. Remember: Bars are not always a reliable measure of signal. The best way to confirm signal coverage is the ability to place and hold a call. |

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.

Three-Year Product Warranty

SureCall warrants its products for three years from the date of purchase against defects in workmanship and/or materials. Specifications are subject to change. The three-year warranty only applies to products meeting the latest FCC Certification Guidelines stated on 2/20/2013 and going into effect April 30, 2014. A two-year warranty applies to any products manufactured before May 1, 2014.

Products returned by customers must be in their original, un-modified condition, shipped in the original or protective packaging with proof-of-purchase documentation enclosed, and a Return Merchandise Authorization (RMA) number printed clearly on the outside of the shipping container.

Buyers may obtain an RMA number for warranty returns by calling the SureCall Return Department toll-free at 1-888-365-6283. Any returns received by SureCall without an RMA number clearly printed on the outside of the shipping container will be returned to sender. In order to receive full credit for signal boosters, all accessories originally included in the signal booster box must be returned with the signal booster. (The Buyer does not need to include accessories sold in addition to the signal booster, such as antennas or cables.)

This warranty does not apply to any product determined by SureCall to have been subjected to misuse, abuse, neglect, or mishandling that alters or damages the product's physical or electronic properties.

SureCall warrants to the Buyer that each of its products, when shipped, will be free from defects in material and workmanship, and will perform in full accordance with applicable specifications. The limit of liability under this warranty is, at SureCall's option, to repair or replace any product or part thereof which was purchased up to THREE YEARS after May 1, 2014 or TWO YEARS for products purchased before May 1, 2014, as determined by examination by SureCall, prove defective in material and/or workmanship. Warranty returns must first be authorized in writing by SureCall. Disassembly of any SureCall product by anyone other than an authorized representative of SureCall voids this warranty in its entirety. SureCall reserves the right to make changes in any of its products without incurring any obligation to make the same changes on previously delivered products.

As a condition to the warranties provided for herein, the Buyer will prepay the shipping charges for all products returned to SureCall for repair, and SureCall will pay the return shipping with the exception of products returned from outside the United States, in which case the Buyer will pay the shipping charges.

The Buyer will pay the cost of inspecting and testing any goods returned under the warranty or otherwise, which are found to meet the applicable specifications or which are not defective or not covered by this warranty.

Products sold by SureCall shall not be considered defective or non-conforming to the Buyer's order if they satisfactorily fulfill the performance requirements that were published in the product specification literature, or in accordance with samples provided by SureCall. This warranty shall not apply to any products or parts thereof which have been subject to accident, negligence, alteration, abuse, or misuse.

SureCall makes no warranty whatsoever in respect to accessories or parts not supplied by it. SureCall is not responsible for any fees associated with the removal or servicing of the product.

Booster Technical Specs

| | |
|--|--|
| Model No. | CA-VAT-10-R |
| Frequency uplink Frequency downlink | 698-716 / 776-787 / 824-849 / 1850-1915 / 1710-1755 (G Block Included) 728-746 / 746-757 / 869-894 / 1930-1995 / 2110-2155 (G Block Included) |
| Input / Output Impedance | 50ohm |
| Maximum Gain / Gain Adjustment | 50dB / 20dB Automatic |
| VSWR | ≤ 2.0 |
| Standard Supported | CDMA, WCDMA, GSM, EDGE, HSPA+, EVDO, LTE and all cellular standards |
| Max Uplink Power | 29.0 dBm |
| Noise Figure | ≤ 5dB |
| Connectors | FME Male (both ends) |
| Power Supply / Consumption | 6-15VDC, 2.1A Max. @ 12 VDC |
| Dimensions | 5.625 x 4 x 1.125 inches |
| Weight | 1.43 lbs |
| RoHS Compliant | Yes |

FCC Information [FCC ID: RSNF2GO]

This is a **CONSUMER** device.

BEFORE USE, you **MUST REGISTER THIS DEVICE** with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

You **MUST** operate this device with approved antennas and cables as specified by the manufacturer. Antennas **MUST** be installed at least 20 cm (8 Inches) from any person.

You **MUST** cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

WARNING. E911 location information may not be provided or may be inaccurate for calls served by using this device.