SureCall®
RAISE YOUR BARS

N-Range™

Vehicle Voice and 4G Data Signal Booster

User Guide

1-888-365-6283 support@surecall.com surecall.com/support

08.03.2018

Thank you for purchasing SureCall's N-Range cell phone signal booster kit. N-Range provides enhanced voice, text and 4G data signal for any vehicle.

If you have any questions during setup, please reach out to our US-based experienced support technicians:

- Call: 1-888-365-6283
- Email: support@surecall.com

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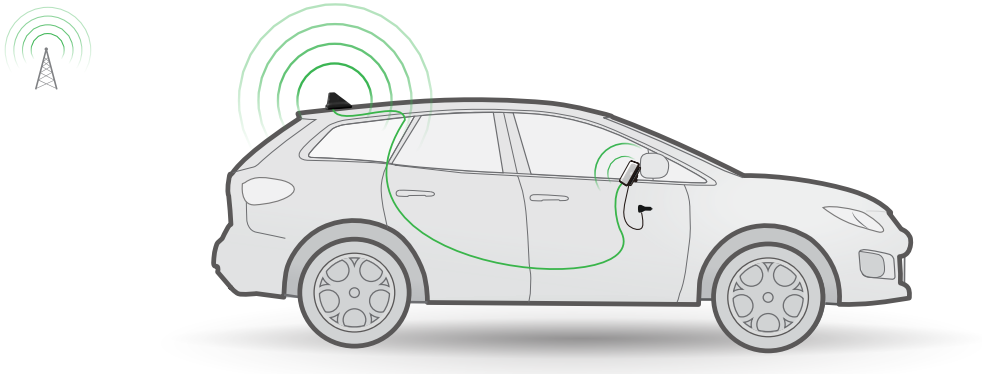
How It Works

The SureCall N-Range is a cellular signal booster that enhances cellular signals for a single device in your vehicle.

The N-Range 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 integrated booster and then sent to your cell phone via the inside antenna. When your phone transmits, the signal is sent back to the cell tower.



Package Contents

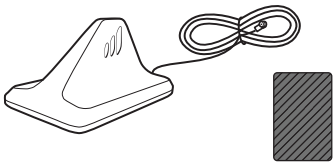
Unpack all package contents. For missing or damaged items, contact your reseller. Keep the carton and packing material to store the product in case you need to return it. Turn over the signal booster and record the model and serial number for reference:

Serial #: _____

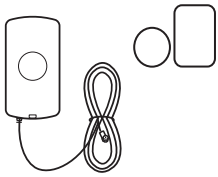
Purchase Date: _____

Your signal booster package includes the following items:

1. SureCall N-Range Outside Magnetic-mount antenna with optional adhesive mount
2. Magnetic phone mount with incorporated antenna and metal phone plates
3. DC power adapter



1. N-Range Antenna with Optional Adhesive Mount



2. Magnetic Cradle Antenna with metal plates

3. DC Power Adapter

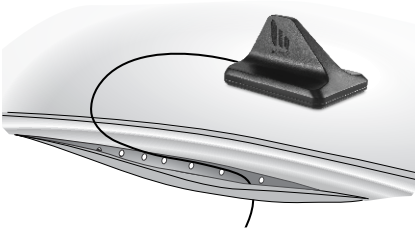
Step 1: Place N-Range Antenna on the Vehicle's Roof

Choose a location on the exterior of your vehicle that is toward the back and at least a 12-inches from obstructions and other radiating elements, such as a radio antenna.

Note: For non-metal vehicle surfaces, use the provided optional adhesive tape following the directions below.

Next, run the cable from the outside antenna across the car's roof and into the car.

To hide and protect the antenna cable, carefully pull down the door seal, run cable underneath it and push the seal back into place.



Run the cable to the inside of the vehicle near the planned location of the booster (under the seat of the vehicle, or in the front or middle console).

Note: The outside antenna must not be collocated or operating with any other antenna or booster.

Installation Using Adhesive Tape

Note, For applications that require a more secure mount or where mounting surface is not metal, an optional adhesive mount has also been included with your kit.

- Find a flat and horizontal surface toward the back of your vehicle that is at least 12-inches from obstructions and other radiating elements, such as a radio antenna.
- Use the alcohol pad to clean the mounting location. Apply the tape as soon as possible after cleaning to avoid contaminants.
- Remove backing from one side of the adhesive mount and press firmly to bottom of antenna.
- Remove the backing from the adhesive strip and press the N-Range antenna down firmly onto the mounting location.

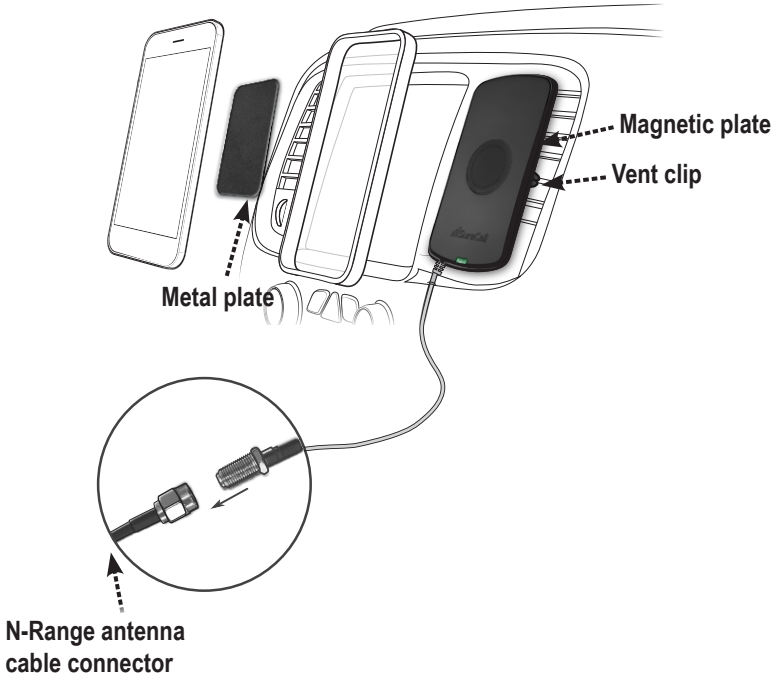
Step 2. Mount Cradle Antenna & Connect Components

Identify a location for the inside antenna on or near your front dashboard that is

1. Within 2-3 feet of the typical cell phone location
2. At least 8 inches (20cm) from cellular devices and
3. At least 4 inches (10cm) from metal

Attach adhesive metal plate to mobile phone for a secure magnetic hold.

1. Place the magnetic cradle antenna on an air-vent, in your cup-holder or center-console.
2. Route the cable from the antenna to the location of the N-Range cable connector.
   We recommend running the cable under the floor-mats or beneath the car's molding for a professional look.
3. Join cables and hand tighten.
4. Adhere one of the magnetic stickers to the back of your phone or phone-case and place your phone on the magnetic cradle antenna.



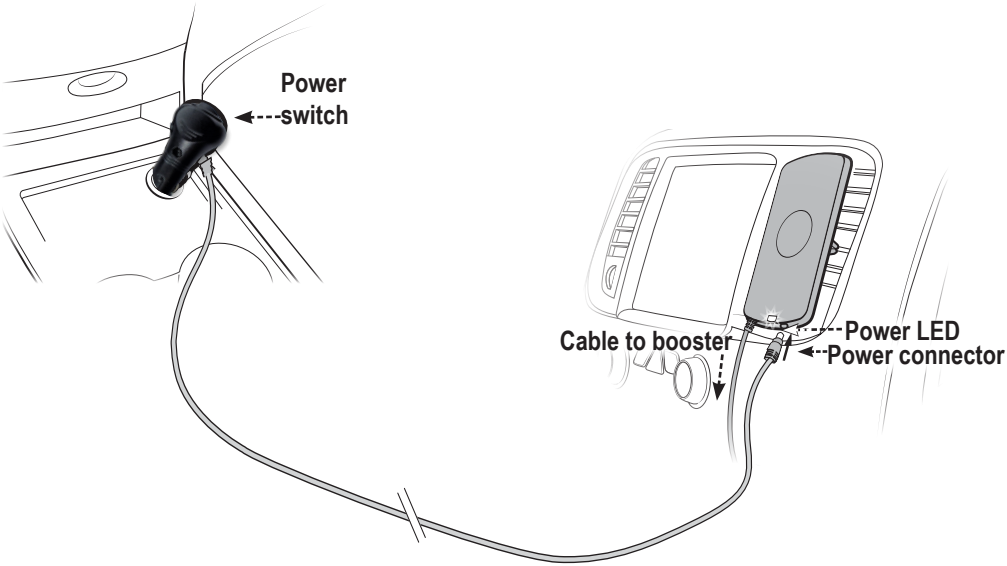
IMPORTANT: The antenna must be located at least 8 inches from all persons. The FCC requires to never use the cell phone in the cradle next to your ear.

Step 3. Connect To Power

1. Plug the DC Power Adapter into power port of your car.
2. Switch the Power Switch to On and a red light will illuminate on the adapter.
3. The cradle antenna will illuminate a green light when it is receiving power.

Note: Your phone will only receive the enhanced signal when it is placed on the cradle antenna.

When your car is off, turn the power switch to OFF to keep the booster from continuing to draw power from your vehicle.



Troubleshooting

Signal booster has no power	Verify that the Power LED is ON. Connect the power supply to an alternate power source. Verify that the power source is operational and the fuse is intact. If it remains OFF, contact tech support at: 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. ⓘ **Note:** 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.

Specifications

Product	**N-RANGE (SC-NRANGE)**
Uplink Frequency Range (MHz):	698-716 / 776-787 / 824-849 / 1850-1915 / 1710-1755 (G Block Included)
Downlink Frequency Range (MHz):	728-746 / 746-757 / 869-894 / 1930-1995 / 2110-2155 (G Block Included)
Input / Output Impedance:	50 Ω
Maximum Gain:	23 dB
Gain Adjustment:	20 dB (Automatic)
Supported Standards:	CDMA, WCDMA, GSM, EDGE, HSPA+, EVDO, LTE and all cellular standards
Noise Figure:	≤ 7 dB
VWSR:	≤ 2.0
Maximum Output Power:	1 Watt EIRP
DC Power:	8-15VDC
Cable:	SC-174, 15 ft
RF Connectors:	SMA Female
Power Consumption:	<12W
Operation Temperature:	14°F – 122°F
Dimensions:	5 x 3.5 x 3 in
Weight:	0.62 lbs (9.92 oz)
Certification:	FCC ID: RSNRANGE IC: 7784A-RANGE

Note: The term “IC” before the radio certification number only signifies that Industry Canada technical specifications were met.

Antenna Kitting Information

Component	Prod No. (Description)	Gain/Loss					Notes
		LTE-A	LTE-V	800 MHz	1900 MHz	1700 MHz / 2100 MHz	
N-Range Kit							
Outdoor Antenna	SC-326W	-1 dBi	-1 dBi	0 dBi	2.5 dBi	2 \ 3 dBi	Integrated antenna
Indoor Antenna	SC128W	-0.1 dBi	-0.1 dBi	-0.3 dBi	3 dBi	2.5 \ 3.2 dBi	
Indoor Cable	SC-174-6ft (6 Feet)	1.6 dB	1.6 dB	1.7 dB	2.8 dB	2.6 \ 2.9 dB	

*All equivalent antennas and cables are suitable for use with the N-Range
As above , lower gain antenna can also be used.

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.

	PreAGC			PreAGC		
	Pulse GSM			4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
Uplink: 1710-1755	0.9	21.6	20.7	1.2	21.6	20.4
Uplink: 1850-1915	5.8	25.9	20.1	2.9	23.1	20.2
Uplink: 824-849	2.9	24.5	21.6	1.5	22.4	20.9
Uplink: 698-716	2.4	25.1	22.7	2.0	22.9	20.9
Uplink: 777-787	1.4	23.7	22.3	1.7	22.7	21.0
Downlink: 2110-2155	-23.7	-1.2	22.5	-20.4	1.2	21.6
Downlink: 1930-1995	-20.7	0.8	21.5	-22.4	-0.7	21.7
Downlink: 869-894	-22.8	-1.1	21.7	-23.5	-1.0	22.5
Downlink: 728-746	-21.9	-0.4	21.5	-23.2	-1.6	21.6
Downlink: 746-757	-21.0	-2.4	18.6	-22.4	-3.4	19.0

FCC Statement

27.50(d)(4) 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.

When used with any mobile device utilizing the 1710-1755 MHz band, the FCC limits booster equipment placement to a maximum of 10 meters above ground level. Installation of this equipment which does not comply with federal requirements may subject the owner to FCC enforcement action.

15.105 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 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.

15.19 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.

Important: The antenna must be located at least 8 inches from all persons. The FCC requires to never use the cell phone in the cradle next to your ear.

Consumer Guidelines

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.

In Canada, **BEFORE USE** you must meet all requirements set out in ISED CPC-2-1-05[1]

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 (i.e. MUST NOT be installed within 20 cm of) any person.

You MUST cease operation of this device immediately if requested by the FCC (or ISED in Canada) 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.

Ce produit est un appareil de CONSOMMATION

AVANT DE L'UTILISER, vous **DEVEZ ENREGISTRER CE DISPOSITIF** auprès de votre fournisseur de services cellulaires et obtenir son consentement. La plupart des fournisseurs de services cellulaires autorisent l'utilisation d'amplificateurs de signal. Il se peut que certains fournisseurs n'autorisent pas l'utilisation de ce dispositif sur leur réseau. Si vous n'êtes pas sûr, contactez-le.

Au Canada, **AVANT DE L'UTILISER** vous devez répondre à toutes les exigences ISED CPC-2-1-05[2]

Vous DEVEZ utiliser ce dispositif avec les antennes et les câbles autorisés, tel que le spécifie le fabricant. Les antennes DOIVENT être installées à au moins 20 cm (8 po) (NE DOIVENT PAS être installées à moins de 20 cm) de toute personne avoisinante.

Vous DEVEZ arrêter cet appareil immédiatement à la demande de la FCC (ISED au Canada) ou de tout fournisseur de services cellulaires autorisé.

AVERTISSEMENT: Il se peut que les informations relatives à la localisation E911 ne soient pas disponibles ou soient inexactes pour les appels qui utilisent cet appareil.

1 For details on the requirements specified in ISED CPC-2-1-05, visit: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08942.html
2 Pour plus de détails sur les exigences ISED CPC-2-1-05, reportez-vous au site: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08942.html

Register your cellular booster with your wireless carrier at the following urls:

Verizon: http://www.verizonwireless.com/wcms/consumer/register-signal-booster.html
AT&T: https://securec45.securewebsession.com/attsignalbooster.com/
T-Mobile: https://support.t-mobile.com/docs/DOC-9827
Sprint: https://www.sprint.com/legal/fcc_boosters.html
U.S. Cellular: http://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp

CAN ICES-3 (B)/NMB-3(B) (Canada) :

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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

The Manufacturer's rated output power of this equipment is for single carrier operation. For situations when multiple carrier signals are present, the rating would have to be reduced by 3.5 dB, especially where the output signal is re-radiated and can cause interference to adjacent band users. This power reduction is to be by means of input power or gain reduction and not by an attenuator at the output of the device.

Cet appareillage numérique de la classe B répond a toutes les exigencies de l'interférence canadienne causant des réglements d'équipment. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle intérference reçue, y compris l'intérference qui peut causer l'opération peu désirée.

La puissance de sortie nominale indiquée par le fabricant pour cet appareil concerne son fonctionnement avec porteuse unique. Pour des appareils avec porteuses multiples, on doit réduire la valeur nominale de 3,5 dB, surtout si le signal de sortie est retransmis et qu'il peut causer du brouillage aux utilisateurs de bandes adjacentes. Une telle réduction doit porter sur la puissance d'entrée ou sur le gain, et ne doit pas se faire au moyen d'un atténuateur raccordé à la sortie du dispositif.

Three-Year Product Warranty

Register at www.SureCall.com

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.

Limitations of Warranty, Damages and Liability:

EXCEPT AS EXPRESSLY SET FORTH HEREIN, THERE ARE NO WARRANTIES, CONDITIONS, GUARANTEES, OR REPRESENTATIONS AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHER WARRANTIES, CONDITIONS, GUARANTEES, OR REPRESENTATIONS, WHETHER EXPRESSED OR IMPLIED, IN LAW OR IN FACT, ORAL OR IN WRITING.

SURECALL AGGREGATE LIABILITY IN DAMAGES OR OTHERWISE SHALL NOT EXCEED THE PAYMENT, IF ANY, RECEIVED BY CELLPHONE-MATE, INC. FOR THE UNIT OF PRODUCT OR SERVICE FURNISHED OR TO BE FURNISHED, AS THE CASE MAY BE, WHICH IS THE SUBJECT OF CLAIM OR DISPUTE. IN NO EVENT SHALL SURECALL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, HOWSOEVER CAUSED.

All matters regarding this warranty shall be interpreted in accordance with the laws of the State of California, and any controversy that cannot be settled directly shall be settled by arbitration in California in accordance with the rules then prevailing of the American Arbitration Association, and judgment upon the award rendered may be entered in any court having jurisdiction thereof. If one or more provisions provided herein are held to be invalid or unenforceable under applicable

law, then such provision shall be ineffective and excluded to the extent of such invalidity or unenforceability without affecting in any way the remaining provisions hereof.

SureCall has made a good faith effort to ensure the accuracy of the information in this document and disclaims the implied warranties of merchantability and fitness for a particular purpose and makes no express warranties, except as may be stated in its written agreement with and for its customers. SureCall shall not be held liable to anyone for any indirect, special or consequential damages due to omissions or errors. The information and specifications in this document are subject to change without notice.

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