

FLAREDB+

*Cellular booster for talk, text & 4G LTE data signal
for Verizon, AT&T, and T-Mobile devices*

User Guide



Introduction

Thank you for purchasing SureCall's FlareDB+ cellular signal booster kit. SureCall's FlareDB+ was specifically designed to eliminate frustrations over dropped calls and limited range by amplifying incoming and outgoing cellular signals in homes and offices.

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

Or, visit: www.surecall.com/support



Watch installation, optimization and troubleshooting techniques



@SureCall



Stay up to date with all things SureCall

How it works

1. The outside antenna collects signal from your carrier's cell tower.
2. The outside antenna sends the signal to the booster through coax cable.
3. The booster amplifies the cell signal and rebroadcasts the signal indoors to all mobile devices within range.
4. The booster then amplifies outgoing cell signal back to the tower.

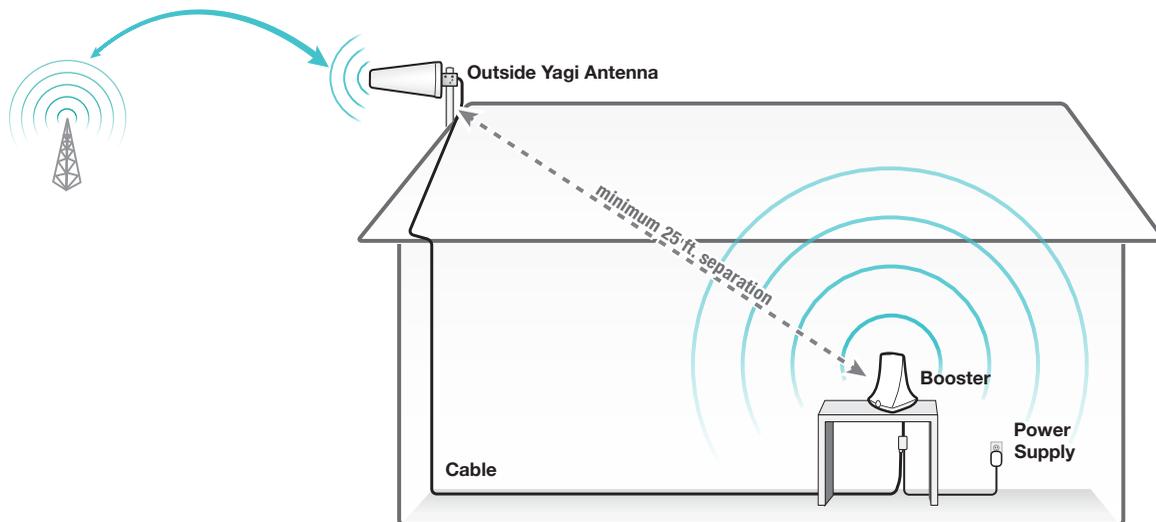


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PACKAGE CONTENTS

Unpack all package contents. For missing or damaged items, contact your reseller.

Turn over the signal booster and record the model and serial number for reference:

Serial #: _____

Purchase Date: _____

Keep the carton and packing material to store the product in case you need to return. Your FlareDB+ signal booster package includes the following items:

1. SureCall FlareDB+ signal booster
2. Power supply
3. Cable for connecting the outside antenna to the signal booster
4. Outside Yagi antenna

1. FlareDB+ Cellular Booster



2. Power Supply



3. Indoor Cable (50 ft.)



4. Outside Yagi Antenna



How the SureCall FlareDB+ Booster Works

BEFORE INSTALLATION

1. Prior to securing the location of any booster parts, a “soft install” is recommended as adjustments may be needed to optimize performance.
2. Note that the outside antenna can be mounted to an exterior surface or a 1-2” diameter pole. A mounting pole is available separately. PVC piping from your local hardware can also be used.
3. Your planned location for the booster (central to where signal is needed) should be near an existing electrical outlet.
4. Ensure adequate separation between the planned locations of the booster and outside antenna (at least 25 ft.).
5. Ensure sufficient cable length between the outside antenna location and booster location. The length of the provided cable is 50 ft.

Installation Overview

Step 1. Find the outside area with the strongest signal.

Step 2. Install the outside antenna

Step 3. Place the FlareDB+ on a table or desktop, center of the area where signal is needed.

Step 4. Connect the booster to an AC power source.

Frequency Band Check

FlareDB+ is a dual band 700 MHz cellular signal booster that amplifies 4G LTE voice and data for Verizon, AT&T and T-Mobile on Bands 12 and 13. Please confirm which bands your device is using prior to purchasing:

iPhone: Dial *3001#12345#* and press Call
Click 'Serving Cell Info'
Then 'Freq Band Indicator' and check band number

Android: Download and install the 'LTE Discovery' App
Click 'Signals' and check the band number

Warning: Unauthorized antennas, cables, and/or coupling devices are prohibited by FCC new rules. Please contact FCC for details: 1-888-CALL-FCC.
Changes or modifications not expressly approved by SureCall could void the user's authority to operate the equipment.

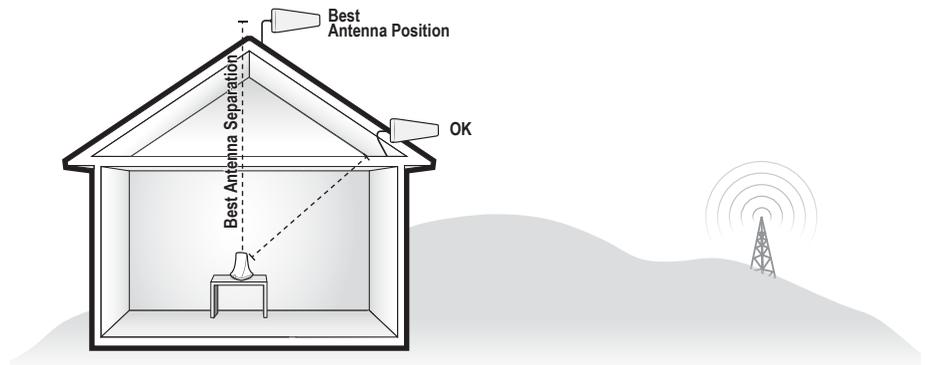
INSTALLATION

Step 1. Find the Area With the Strongest Signal

Using your phone, identify the outside location with the strongest signal for placement of your outside antenna. Generally, this is found above the roofline on the side facing your nearest cell tower and as high as possible – where the antenna can ‘see’ your cell tower. To find the location of your carrier’s closest cell tower, go to www.antennasearch.com.

The coverage area that the booster provides is directly related to the strength of incoming signal received by the outdoor antenna. Mounting the outside antenna where the signal is the strongest will provide the best results. Please note, if signal is extremely weak where the outside antenna is installed, indoor coverage will be limited.

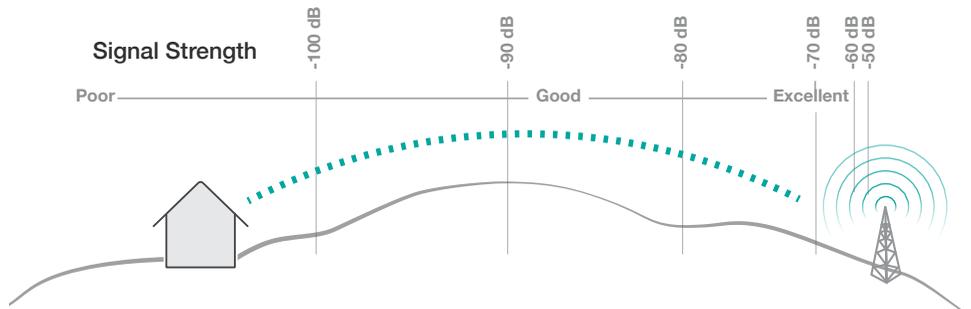
Note that Bars are not always a reliable measure of signal. The best way to confirm signal coverage is the ability to place and hold a call.



Putting your phone in Field Test mode will also indicate what level of decibels (dB) your phone is currently receiving. Decibels are measured in the negatives, and a score closer to zero indicates you have a better signal. A signal of -120 dB indicates you have no service, while a score of about -50 dB means you have excellent signal strength

For specific dB signal measurements, use the methods below.

- Apple iPhones: Dial *3001#12345#* and press Call. In the top-left corner, a dB number appears instead of bars.
- Android devices: download the app “Network Signal Info” in the Google Play store.



Step 2. Install the Outside Antenna

After identifying the area of strongest signal, choose the surface where you will mount the outside antenna.

Using the provided hardware, mount the outside antenna at the highest possible elevation, allowing a minimum separation of 25 feet from the planned location of the booster.

Do not collocate antennas or operate the outdoor antenna with any other antenna or signal booster.

Outside Yagi Antenna Installation

Before installing a Yagi, or directional antenna, note that the antenna should be mounted on a pole or pipe (not provided), at the highest possible location and mounted horizontally, aimed in the direction of your nearest cell tower. To find the location of your carrier's closest cell tower, go to www.antennasearch.com.

Ensure that the mounting area has at least a 12-inch radius clear of obstructions and other radiating elements and orient the antenna with the drip hole at the bottom.

Once you have identified your install location, assemble the u-bolt, bracket, nuts and washers onto a pole or pipe (not provided) as shown in the illustration. Keep the connections loose enough to allow the antenna to rotate until the optimum direction is found.

Once the outside antenna is secured to a pipe or pole, connect antenna to one end of the provided RG6 cable and tighten the connection. Run the cable along route to planned location of your booster.

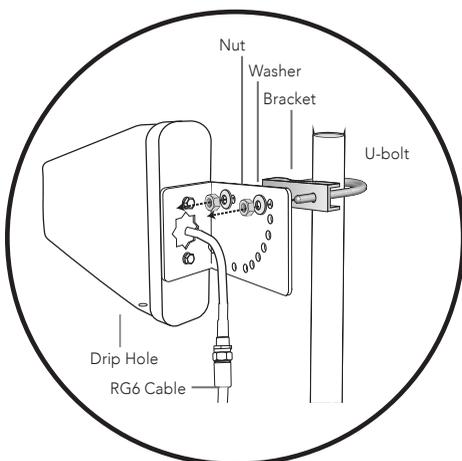
Note: Avoid placing either component (booster or outside antenna) near windows where possible as it increases the potential for oscillation.



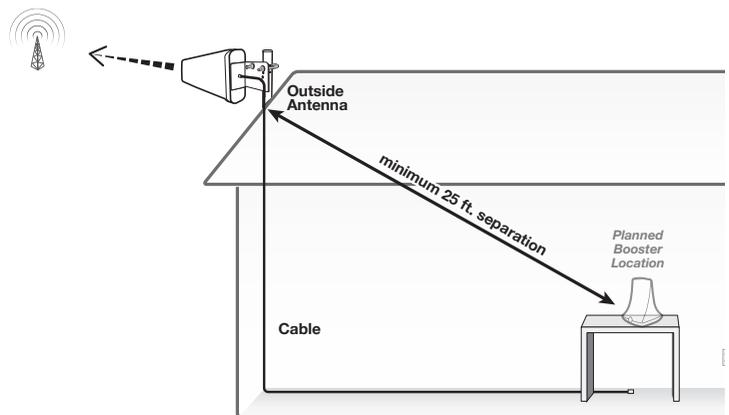
Yagi Antenna



Mounting hardware



Outside Antenna Assembly



Yagi Antenna Install Illustration

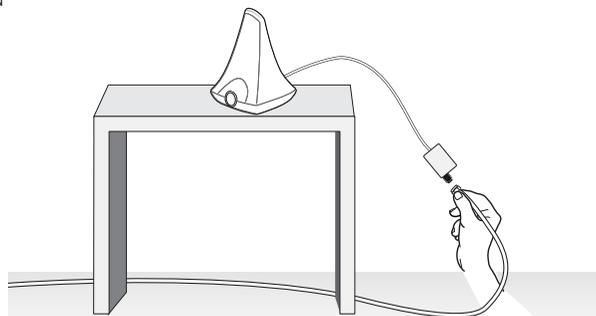
Installation

Step 3. Place the Booster

Place the booster in a central location where signal is needed and at least 25 ft. from the outdoor antenna location. When placing the booster, note that further separation between the booster and outside antenna will increase booster performance. Connect the open end of the RG6 cable from the outside antenna to the booster and tighten connection.

Please note that the performance and range of your booster depends on three factors:

1. Signal strength at the location of the outside antenna.
2. Interior building materials between the booster and your mobile device.
3. Distance between the outside antenna and booster (while at least 25 ft. separation is recommended, further separation will increase performance).



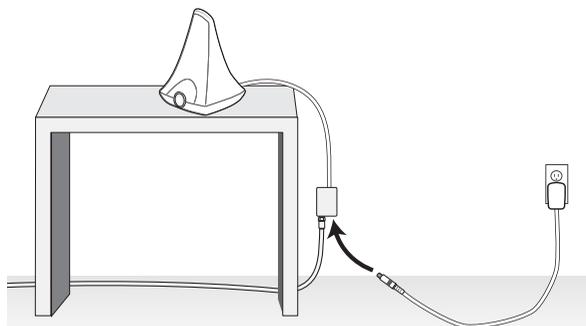
Placing Booster and connecting cable

Step 4: Connect to Power

Once the booster and outside antenna are connected and in place, connect the power cord to the signal booster and plug into a power outlet.

Enjoy Boosted Signal

Place a call in the room where the booster is located to confirm that your phone is receiving a boosted signal. 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.



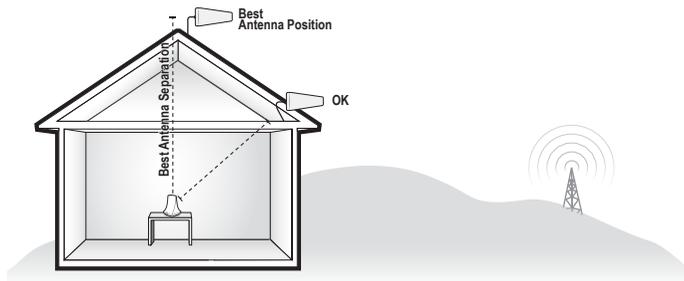
Connecting the Power Supply

Note: 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, cause personal injury, and void your warranty.

This booster should not be used near open fire or flame. Storage and transportation: Store and place in non-extreme room-temperature and dry environment.

IF YOU WANT TO IMPROVE PERFORMANCE

- Identify a location outside that receives a stronger signal and move the outside antenna to that location (higher is usually better).
- Increase the distance between the booster and outside antenna.
- Optimize the angle of your outside antenna by testing at small incremental rotations.
- See more tips and tricks or contact us at www.SureCall.com/support



TROUBLESHOOTING

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, or Visit: www.surecall.com/support

| Problem | Resolution |
|--|---|
| Signal booster has no power | <p>Connect the power supply to an alternate power source.</p> <p>Be sure the power source is not controlled by a switch that can remove power from the outlet.</p> <p>Check the POWER LED (🔌) on the signal booster. If it is OFF, contact tech support at: 1-888-365-6283 or support@surecall.com, or go to www.surecall.com/support</p> |
| After installing your signal booster system, you have no signal or reception | <p>Verify that cable connections are tightly fitted to the booster and antenna.</p> <p>Try further separating the booster and antenna.</p> <p>Check that your carrier uses the supported frequency bands (12 or 13) in your area. See "Frequency Band Check" on page 5 for instructions.</p> <p>Verify that there is usable signal where the antenna is placed.</p> <p>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.</p> |

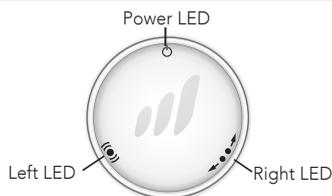
Warning: Any product modifications that use unauthorized antennas, cables, and/or coupling devices are prohibited by the FCC. Contact FCC for details: 1-888-CALL-FCC. Changes or modifications not expressly approved by SureCall could void the user's authority to operate the equipment.

LED INDICATORS

NOTE: Normal operation is indicated by LEDs that are OFF -or- YELLOW Flashing. Only the presence of RED LEDs indicate potential need for adjustments.

Note that power cycling the booster after each adjustment may be necessary.

| Position | Condition | Indication |
|---------------|---------------------------------|--|
| Left or Right | OFF | The booster is operating normally |
| Left | Yellow Flashing | Automatic Gain Control (AGC) is self-adjusting. This is part of normal operation. |
| Right | Yellow Flashing | Indicates Automatic Gain Control (AGC) is active and the booster is self adjusting. This is part of normal operation and, whether intermittent or ongoing, does not require action. |
| Left | Red Flashing | <p>The booster is receiving too strong of a signal which may cause one or more of the supported frequency bands to shut off. Unaffected frequency bands will not be impacted, however, and continue to receive enhanced signal.</p> <p>If this happens but your signal is still improved: It is possible that the impacted frequency bands are not used by your carrier and thus, no action is needed.</p> <p>If this happens and your signal has not improved, consider the following options:</p> <ul style="list-style-type: none"> • Relocate the outside antenna to a location where the signal is weaker. • Adjust the angle of the Yagi antenna by rotating it in small increments away from cell tower until Red flashing stops. • If using an omni antenna, try shielding the antenna by partially or completely obstructing one side of the antenna. Shielding materials include metal or masonry, for example. As a last resort, utilize signal attenuators. |
| Right | Red/Yellow Alternately Flashing | <p>One or more of the supported frequency bands have shut off. Unaffected frequency bands will not be impacted, however, and continue to receive enhanced signal.</p> <p>If this happens and service quality has not improved, consider the following options:</p> <ul style="list-style-type: none"> • Try increasing antenna isolation by adding vertical distance between the outside antenna and Flare booster. • Ensure the Yagi antenna is not aimed in the direction of the Flare booster. • Check for sources of interference such as, cellular modems or hotspots. Added separation from the Flare booster may be needed. <p>Keep in mind, identifying the setup that yields the best possible results for your environment will come from testing -- balancing between elimination of interference while receiving the best possible signal.</p> |



Booster LED Diagram

SPECIFICATIONS

| | |
|---------------------------------|---|
| Uplink Frequency Range (MHz): | 698–716 / 776–787 (Bands: 12, 13) |
| Downlink Frequency Range (MHz): | 728–746 / 746–757 (Bands: 12, 13) |
| Donor/Server Port Impedance: | 75 ohm / 50 ohm |
| Maximum Gain: | 72 dB |
| Noise Figure: | 7 dB |
| VSWR: | ≤2.0 |
| Supported Standards: | CDMA, WCDMA, GSM, EDGE, HSPA+, EVDO 4G and all cellular standards |
| AC Input: | Input: AC 110 – 240 V, 60 Hz ; Output: DC 5V / 3A |
| Maximum Output Power: | 1 Watt EIRP |
| Cable: | RG6 (50 ft.) |
| RF Connectors: | Donor port: F Female, Server port: Integral |
| Power Consumption: | <12W |
| Weight: | 1. 8125 lb. |
| Dimensions: | 5.125 × 7.25 × 5.625 inches |
| Certifications: (Flare DB+) | FCC ID: RSNFLARE-DB |

| | PreAGC | | | PreAGC | | |
|-------------------|-------------|--------------|-----------|--------------|--------------|-----------|
| | Pulse GSM | | | 4.1 MHz AWGN | | |
| Frequency (MHz) | Input (dBm) | Output (dBm) | Gain (dB) | Input (dBm) | Output (dBm) | Gain (dB) |
| Uplink: 698-716 | -38.1 | 24.6 | 62.7 | -37.7 | 25.2 | 63.2 |
| Uplink: 777-787 | -39.4 | 24.1 | 63.5 | -37.9 | 24.5 | 62.4 |
| Downlink: 728-746 | -49.9 | 12.5 | 62.4 | -49.6 | 12.6 | 62.2 |
| Downlink: 746-757 | -49.8 | 12.3 | 62.1 | -49.4 | 12.4 | 61.8 |

Kitting Information

| Component | Product # | Gain/Loss | | Note |
|------------------|-----------|-----------|---------|-------------------|
| | | 707 MHz | 731 MHz | |
| Outdoor Antenna* | SC-289W | 3 dBi | 3 dBi | |
| | SC-231W | 8 dBi | 8 dBi | |
| Outdoor Cable* | SC-RG6-50 | 3.32 dB | 3.5 dB | 50 Feet or longer |
| Indoor Antenna* | SC-323W | 2.5 dBi | 2.5 dBi | |

*Note: The Flare DB+ booster is suitable for use with all equivalent and lower gain antennas, as well as, equivalent or greater lengths of cable.

| Component | Product # | Maximum Gain | Minimum Gain |
|------------------|-----------|--------------|--------------|
| Outdoor Antenna* | SC-289W | 4 dBi | 3 dBi |
| | SC-231W | 10 dBi | 8 dBi |
| Indoor Antenna | SC-323W | 4 dBi | 2.5 dBi |

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.

This device may be operated **ONLY** in a fixed location, for in-building use.

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.

Cet appareil peut fonctionner seulement à un emplacement fixe à l'intérieur d'un bâtiment;

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>

This device complies with Part 15 of 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.

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 à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. 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 interférence reçue, y compris l'interférence 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.

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>

WARRANTY

Three-Year Product Warranty

Activate your three-year manufacturer's warranty at www.SureCall.com/activate

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. © 2020. All Rights Reserved. All trademarks and registered trademarks are the property of their respective owners.

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