Cell Phone Signal Booster Manual

Operational Diagram (How It Works) Package Contents Page 2

Basic Signal Knowledge Page 3

Step By Step Installation Page 4-8

Trouble Shooting Page 9-10

Technical Specification Warranty Information Page 11

Safety Guidelines Page 12

Manufactured and Warranted by
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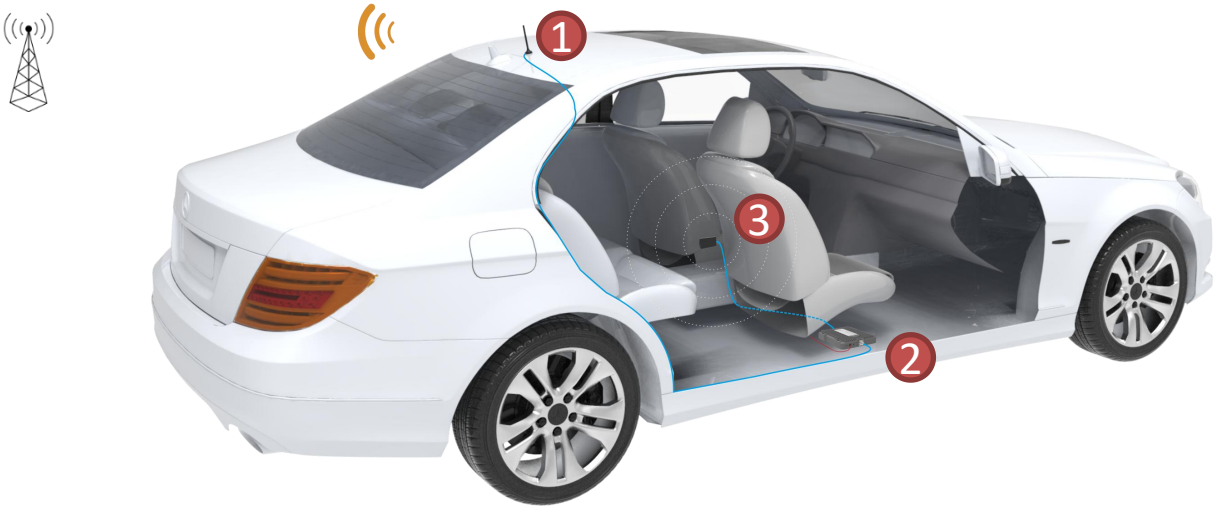
Working Diagram (How It Works)



1. The outside antenna catches the signal from the tower, transmit it through a coax cable into the booster.
2. Booster amplifies the signal and then transmit it through a coax cable to the inside antenna.
3. The inside antenna rebroadcasts the signal inside to all mobile devices within range.
4. The system also works in reverse; amplifying outgoing signal back to the tower.

The **size** and the coverage area and the **strength** of the boosted signal are directly related to two key factors:

1. Signal strength received by the outside antenna.
2. Distance of **separation** between the outside antenna and the inside antenna.

Package Contents

The kit includes the following items:

1. Booster；
2. Inside Antenna;
3. Power supply;
4. Outside Antenna;

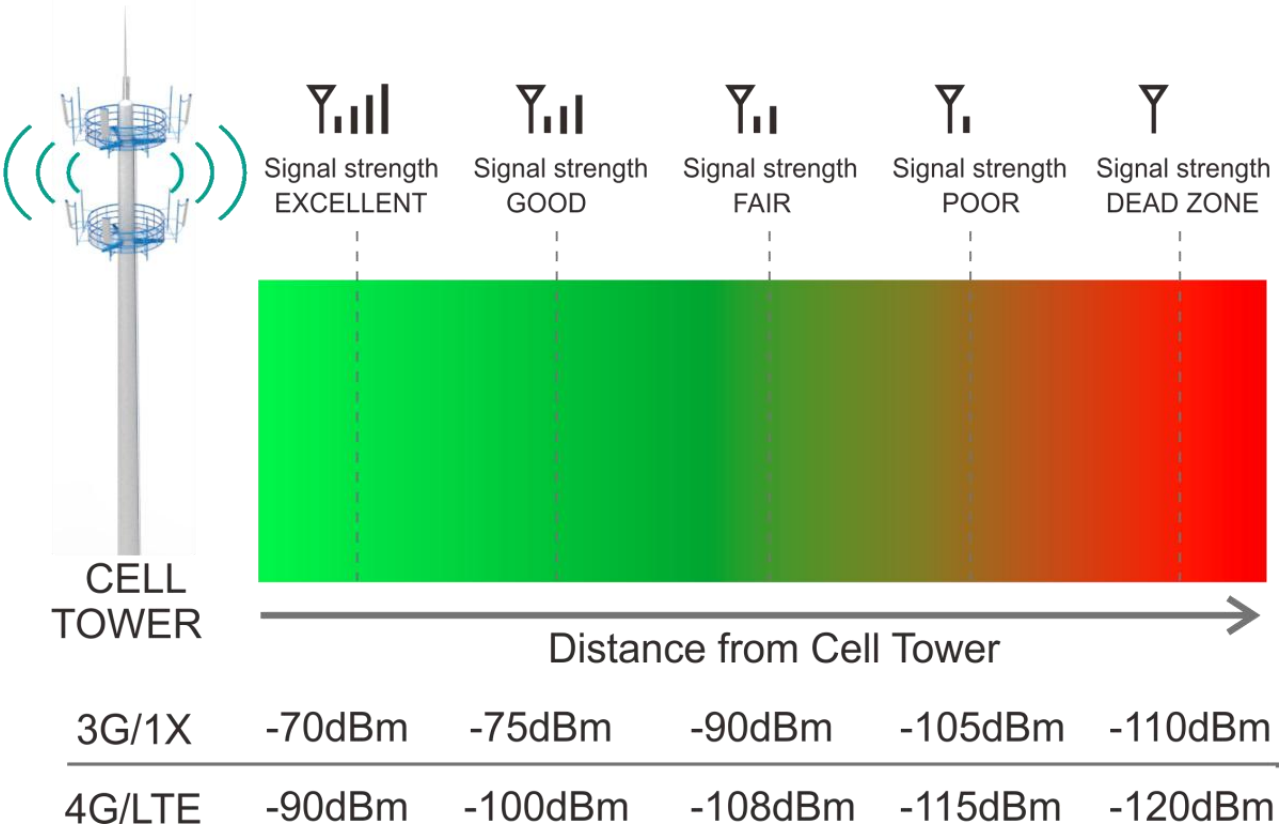
Booster

Inside Antenna

Power adaptor

Outside Antenna

Signal transmission loss and power level



3G/1X	-70dBm	-75dBm	-90dBm	-105dBm	-110dBm
4G/LTE	-90dBm	-100dBm	-108dBm	-115dBm	-120dBm

Coverage area ability

Note: FCC regulations limit the amplification of all cell phone boosters in order to prevent damage to the telecommunications infrastructure. Therefore, the maximum coverage area of a booster depends on the original power level of the signal captured by the outside antenna.

Notice: Not recommended when outside signal strength is less than -110dbm(3G/1x) or -120dBm(4G/LTE). The resulting coverage area of the boosted signal will be prohibitively small.

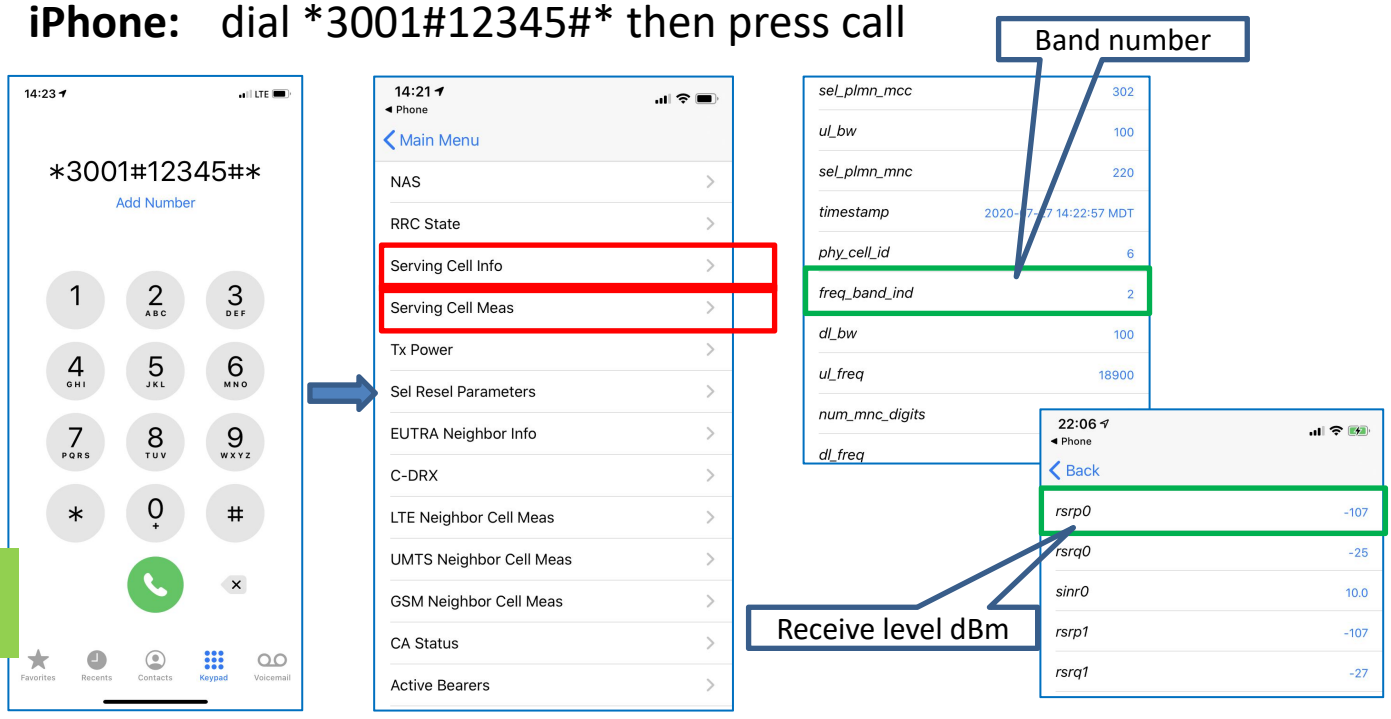
Power Level at the outside Antenna Location	Main Antenna Coverage Area (radius around antenna)
Strong (5 bars on the cellphone)	8 ft
Medium (3~4 bars on the cellphone)	4 ft
Weak (1~2 bars on the cellphone)	2 ft

Find The dBm Reading And Band Number On Your Phone

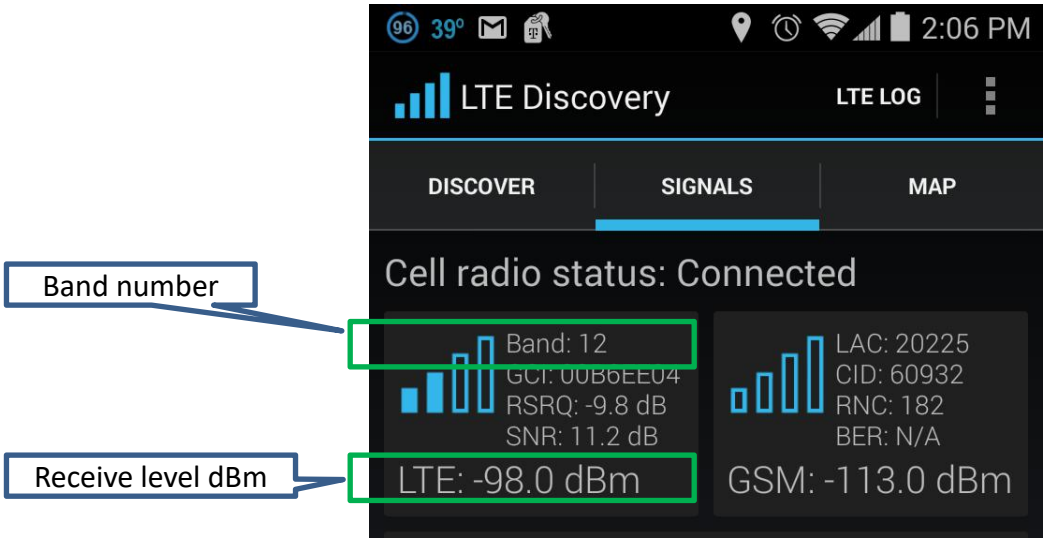
Having an accurate measurement of signal strength in decibels (dBm) is crucial when installing your system. Decibels accurately measure the signal strength you are receiving.

Note: Turn off your cell phone's WiFi to ensure you are checking the cellular connection. The dBm reading will be refreshed every 30-60 seconds. Want faster results? Once you have a reading, turn on airplane mode. Wait 15 seconds. Turn off airplane mode. The signal strength reading is refreshed.

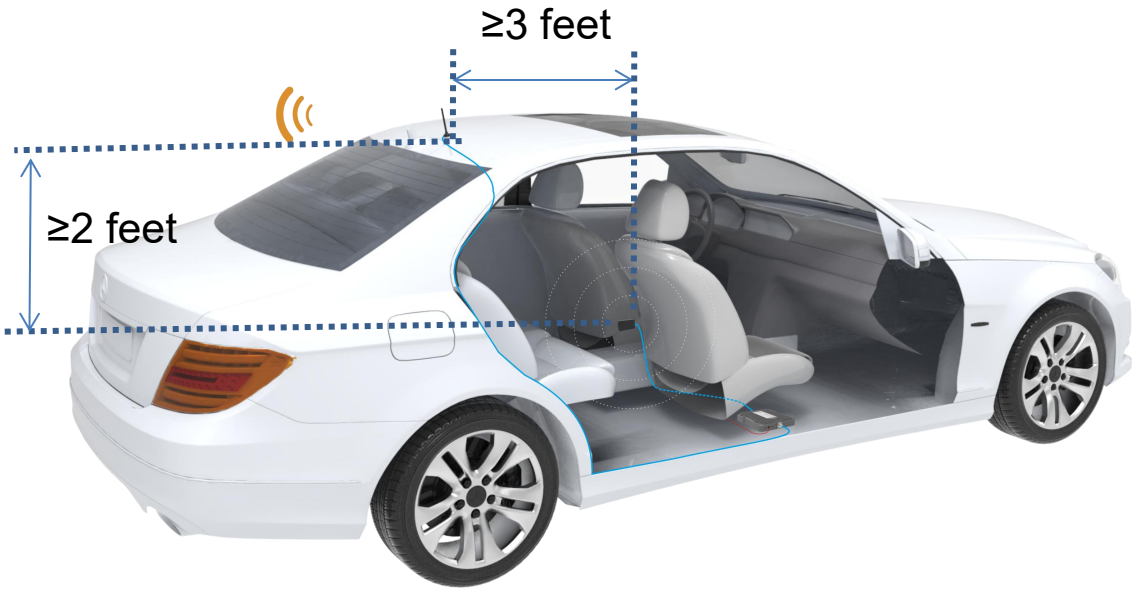
iPhone: dial *3001#12345#* then press call



Android: download third part APP-LTE Discovery



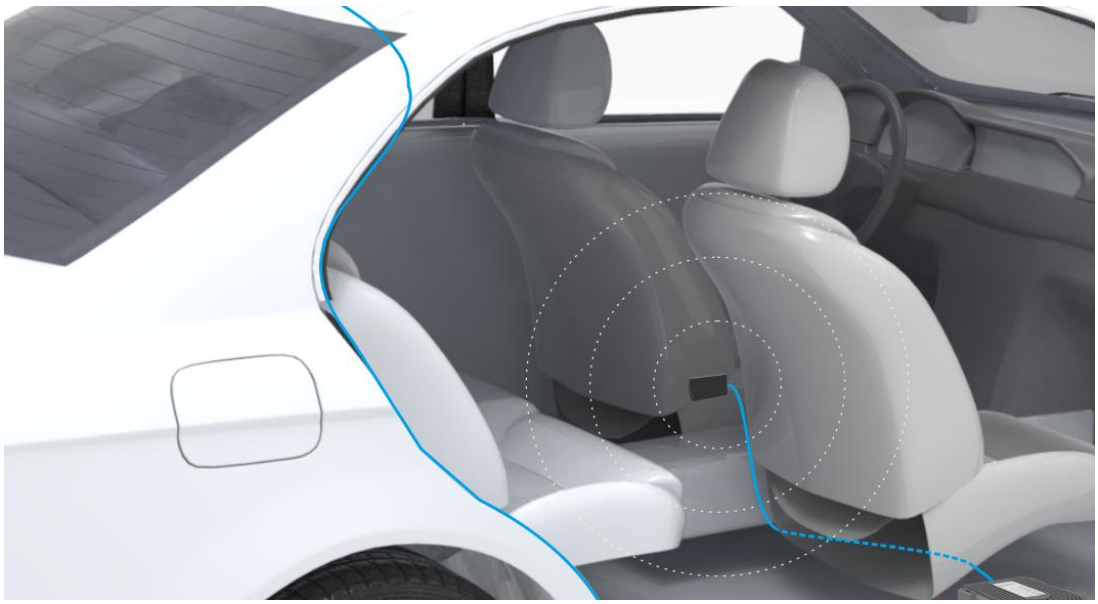
Step1: Study your vehicle and make a installation planning



In order to achieve the best signal coverage effect, there is a certain distance requirement between the inside antenna and outside antenna. Make sure that the outside antenna is horizontally attached to the roof and the inside antenna is parallel to the horizontal plane.

First determine the location of the inside antenna. It should be the place you use your cell phone signal most of the time.

NOTE: It is suggested that the inside antenna should be placed at the lower side of the driver's seat, so as to maximize the distance from the outside antenna. Be sure it's in a location that the cable can reach.



Step 2: Find position for outside antenna

Then choose the location of the outside antenna. It should be rear on the roof, has the most distance from the inside antenna location. Also need consider how the route the cable inside. We suggest the installation location with green identification, please refer to

Car

SUV

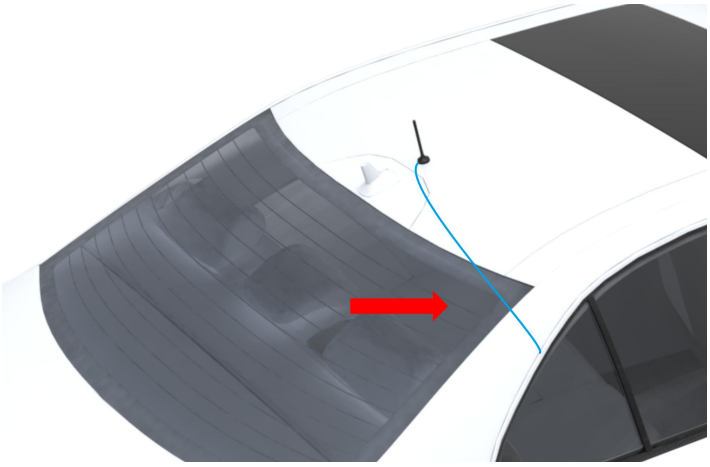
VAN

Truck

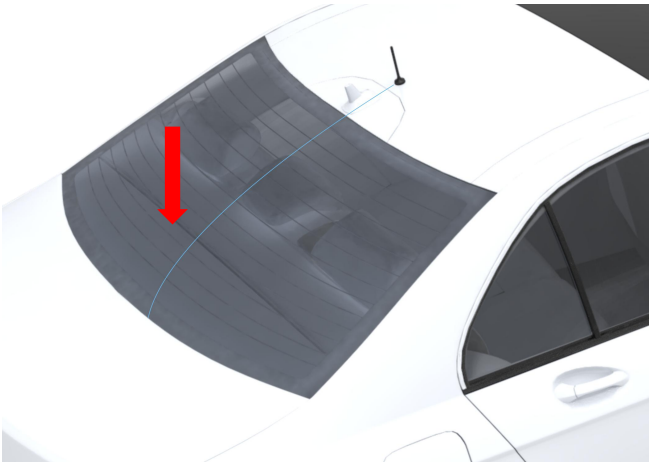
Step3: Outside Antenna Installation

Determine where you want the cable to enter the vehicle.
NOTE: With two options

Option A: Enter the car through the back door



Option B: Enter the car through the trunk and pass through the rear seats

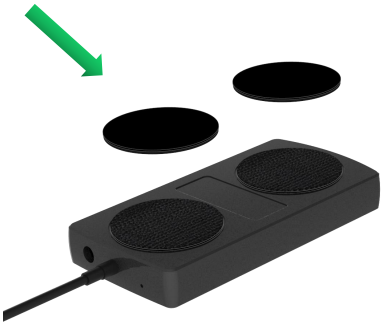


Determine where you want to have the outside antenna on your vehicle.
There is a powerful magnet at the bottom of the outside antenna, which can attract the device to the surface of ferrous materials
Make sure that the outside antenna is horizontally attached to the roof.

If the roof is not made of iron, please stick the three pieces of iron sticker supplied by us on the roof according to the ruler

Step4: Indside Antenna Installation

There are 2 powerful celcro at the bottom of the inside antenna, which can attract the antenna to the side of seat.



Note: Make sure that the inside antenna is parallel to the horizontal plane

Step5: Connect the System

1. Connect the outside antenna cable to the booster at the “OUTSIDE” port.

2. Connect the intside antenna cable to the booster at the “INSIDE” port.

3. Plug in the power adaptor and connect it to the nearest power outlet

Step6: Evaluate the Effects

- Now that all of the components of the booster are in place, and the booster is powered on, it's time to check the performance. If everything checks out, return to steps 2 and 3 to finalize installation. Here's what you should look for:

  1.) Run a signal strength/speed check. Test the signal strength with the booster off, then re-test the signal in the same location after you plug-in the power supply. You should have a stronger signal. You can access the signal strength through the settings menu of your phone (a negative number in dBm) or download a speed test App. Remember that a stronger signal means the dBm is closer to zero.
  2.) When you plug-in the power adaptor, the booster runs a self-diagnostic as it powers on. Use the LED light on the panel to interpret the results. If everything is connected properly, and there is an adequate power supply, the LED light should flash 1 second and then go off.

- If something is wrong, refer to the "Quick Troubleshooting" section at the end of the manual. Otherwise, finalize the installation. Happy boosting, happy trails!

How to visually confirm that your installation is effective and correct?

At a distance of 1 feet from the indoor antenna, test the signal strength without obstruction. If this test result is 15~20db higher than your test result at the outdoor antenna position, then your system has reached the best effect.
For example, you test a signal of -90dbm at 1 feet away from the indoor antenna. Your outside antenna position record is -105dbm. So the improvement is:
-90dbm - (-105dbm) = 15db
If your results do not reach this range, please check your installation or contact us.

Note1: In daily life, the signal dbm readings of our mobile phones range from -70dbm to -120dbm. Because it is a negative number, the smaller the number, the greater the signal strength.

Note2: In the case of no problems with the installation, the strength of the indoor signal depends entirely on the strength of the outdoor signal.

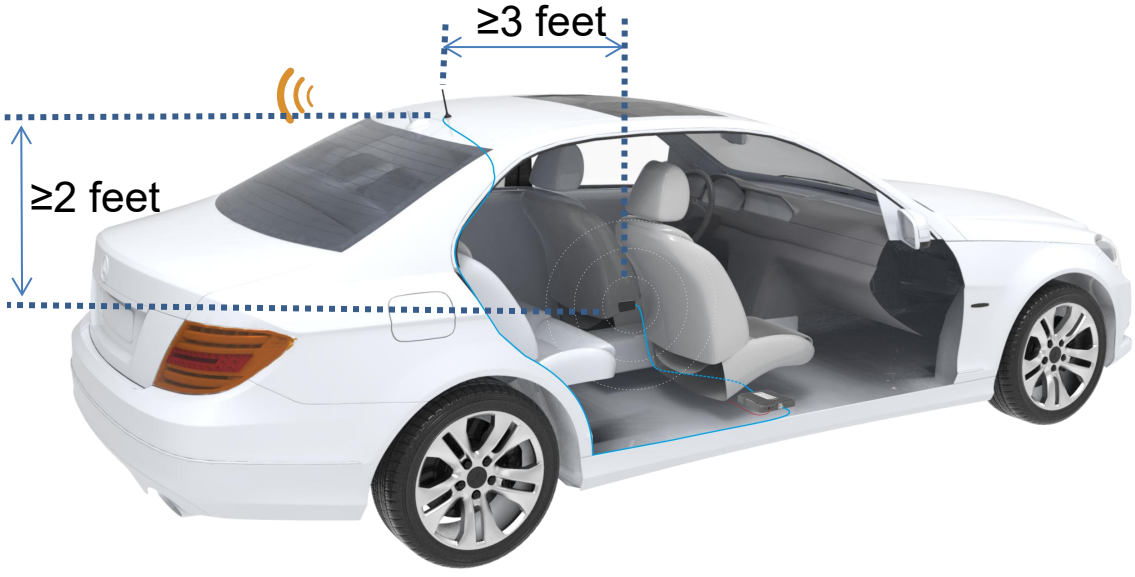
Trouble Shooting: No Signal Improvement

Step 1. Check power. Ensure the indoor unit is plugged in and the LED Power Light is green.

Step 2. Check incoming signal level at outdoor antenna position. Usage of a booster is not recommend when the outside signal is less than -110dbm(3G/1x) or -120dBm(4G/LTE).

Step 3. If any of the lights on the front panel are flashing in green then off/continue flashing/solid green, it means that self oscillation is occurring. You must switch off the booster and check the outside and inside antennas' seperation immediately. Make sure that the Minimum Separation Requirements have been met.

Horizontal distance: 3 ft (1 meters), Vertical distance: 2 ft (0.6 meters)



Technical Specification

Frequency (MHz)		LTE (band 12/17)	LTE (band 13)	Cellular (band5)	PCS (band2/25)	AWS (band 4)
	Uplink	698-716	776-787	824-849	1850-1915	1710-1755
	Downlink	728-746	746-757	869-894	1930-1995	2110-2155
Noise figure	<5dB					
In-band Flatness	<8dB					
Weight	0.7Kg					
EIRP	≤0.2W					
Gain adjustment	20dB					
Impedance	50 ohm					
Operating temperature	-5° ~60°					
Current	≦1.5A(9V/12V DC)					

WARRANTY

The Booster is covered under a three-year product warranty for failures or defects that result from craftsmanship and/or materials. Dated proof of purchase should be retained for use in warranty cases. Contact the retailer/reseller directly with any warranty issues, or alternatively contact the manufacturer in cases where the reseller is no longer available to handle warranty claims. In cases where the reseller is unavailable, the product may be returned to the manufacturer at the consumer's expense, with a dated proof of purchase and a return authorization letter which can be attained by contacting Amazboost.

This warranty does not apply to any signal booster components determined by Amazboost to have been subjected to misuse, abuse, neglect, tampering, or mishandling that result in damages to the physical or electronic properties of the product. Refurbished products that have been recertified to conform to product specifications may be used for product replacements.

DISCLAIMER: The information provided by Amazboost is believed to be complete and accurate, to the best of our knowledge. However, no responsibility is assumed by Amazboost for any business or personal losses arising from the use of the information herein contained, or for any infringements of patents or other rights of third parties that may result from its use.

Warnings and Recommendations

- ⚠ Warning: This consumer booster is for Consumer use only.
- ⚠ Warning: Unauthorized antennas, cables, and/or coupling devices are prohibited by FCC regulations. Please contact FCC for details: 1-888-CALL-FCC.
- ⚠ Warning: Outside antenna orientation must be back side of inside antenna is to prevent the indoor antenna receiving the signal emitted by outside antenna. Otherwise it will cause self-oscillation of booster.
- ⚠ Warning: RF safety, any antenna used with this device must be located at 20 cm (8 inches) away from persons or by bystanders.
- ⚠ Warning: It will damage the mobile device and the booster if connect them with a cable directly.
- ⚠ Warning: Use the power supply provided by SolidRF only. Other power supplies may cause damage of the booster.
- ⚠ Warning: Antenna installation is restricted to 10 meters or less height above ground, even if the antenna is installed inside when used with a mobile device that operates in the 1710-1755 MHz band. Violation of this requirement may subject the owner of the booster to potential FCC enforcement actions.
- ⚠ Warning: Never point the front of a directional antenna toward the inside antenna. Verify that both the outside antenna and the inside antenna are connected to the booster before powering up the booster.

(EN) RF Exposure: 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 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 attenuating at the output of the device.
(FR) Exposition RF: La puissance de sortie nominale du fabricant de cet équipement est pour le fonctionnement d'une seule porteuse. Pour les situations où plusieurs signaux de porteuse sont présents, la note devrait être réduite de 3,5 dB, en particulier lorsque le signal de sortie est rayonné et peut causer des interférences aux utilisateurs de bande adjacents. Cette réduction de puissance doit se faire au moyen d'une puissance d'entrée ou d'une réduction de gain et non pas par un atténuateur à la sortie du dispositif.

FCC Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment should be installed and operated with minimum distance 20cm between the radiator& your body

(EN) This system has been evaluated for RF Exposure per RSS-102 and is in compliance with the limits specified by Health Canada Safety Code 6. The system must be installed at a minimum separation distance from the antenna to a general bystander of 8 inches (20 cm) to maintain compliance with the General Population limits.
(FR) L'exposition aux radiofréquences de ce système a été évaluée selon la norme RSS -102 et est jugée conforme aux limites établies par le Code de sécurité 6 de Santé Canada. Le système doit être installé à une distance minimale de 8 pouces (20 cm) séparant l'antenne d'une personne présente en conformité avec les limites permises d'exposition du grand public.

Description of network protection features:

This booster including safeguards to protect the cellular network from interference. Each Signal Booster is individually tested and factory set to ensure FCC compliance.

1. The Signal Booster cannot be adjusted without factory reprogramming or disabling the hardware.
2. The Signal Booster will amplify, but **ONLY** incoming and outgoing signals in order to increase coverage of authorized frequency bands.
3. If the Signal Booster is not in use for five minutes, it will reduce gain until a signal is detected.
4. If a detected signal is too high in a frequency band, or if the Signal Booster detects an oscillation, the Signal Booster will automatically turn the power off on that band.
5. For a detected oscillation the Signal Booster will automatically resume normal operation after a minimum of 1 minute. After 5 times consecutive such automatic restarts, if the detected oscillation still remains, any problematic bands are permanently shut off until the Signal Booster has been manually restarted by reconnecting power supply to the Signal Booster.
6. Noise power, gain, and linearity are maintained by the Signal Booster's microprocessor.

This is a CONSUMER device

BEFORE USE , you **MUST REGISTER THIS DEVICE** with your wireless provider and have your provider's consent .Most wireless provider 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 antenna and cables as specified by the manufacturer .
Antennas **MUST** be installed at least 20cm (8inches) 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.

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.

Ceci est un appareil CONSOMMATEUR
AVANT UTILISATION, VOUS DEVEZ ENREGISTRER CET APPAREIL auprès de votre fournisseur de services sans fil et obtenir le consentement de votre fournisseur. La plupart des fournisseurs de services sans fil consentent à l'utilisation d'amplificateurs de signal. Certains fournisseurs peuvent ne pas consentir à l'utilisation de cet appareil sur leur réseau. Si vous n'êtes pas sûr, contactez votre fournisseur.
Vous devez utiliser cet appareil avec des antennes et des câbles approuvés comme spécifié par le fabricant. Les antennes DOIVENT être installées à au moins 20 cm (8 pouces) de toute personne.
Vous DEVEZ cesser immédiatement d'utiliser cet appareil à la demande de la FCC ou d'un fournisseur de services sans fil agréé.
AVERTISSEMENT. Les informations de localisation E911 peuvent ne pas être fournies ou peuvent être inexactes pour les appels traités à l'aide de cet appareil.

Contact information for providers
A subscriber must have the consent of a wireless provider to operate a consumer signal booster. Please register your booster with your wireless service provider, refer to contact information for providers:
Sprint:
signalbooster@sprint.com
T-Mobile:
www.T-Mobile.com/BoosterRegistration
https://support.t-mobile.com/docs/DOC-9827
Verizon:
http://www.verizonwireless.com/wcms/consumer/register-signal-booster.html
AT&T:
https://securec45.securewebsession.com/attsignalbooster.com/
U.S. Cellular:
http://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp
Metro PCS
https://www.metropcs.com/support/signal-booster

CPC-2-1-05 — Zone Enhancers - Spectrum management and telecommunications
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08942.html

Install the indoor antenna according to the minimum service distance of the antenna model below.

Minimum Separation Distances for MSCL Calculation or Measurements D(m)	
Inside server antenna model	Minimum separation distances D (m)
ANT010901、ANT010701、ANT050701	0.6
ANT060302、ANT040301、ANT080301、ANT080302、ANT060301、SR-21300100	
ANT070101、ANT060303	0.2

Antenna Kitting Information

Component	Prod No. Description	Gain/Loss					Manufacturer
		698-746 MHz	746-787 MHz	824-894MHz	1850-1995MHz	1710-1755MHz\2110-2155MHz	
Outside Antenna	ANT060302	3dBi	3dBi	3dBi	5dBi	5dBi	Shenzhen Dachi Communications Co., Ltd.
Outside Antenna	ANT060303	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Outside Cable	ANT060302 (Cable)	1.5dB	1.5dB	1.8dB	2.8dB	2.7dB\3.5dB	Suirongcable
Outside Cable	ANT060303 (Cable)	1.5dB	1.5dB	1.8dB	2.8dB	2.7dB\3.5dB	Suirongcable
Inside Cable	RG6SS 45Feet	2.2dB	2.3dB	2.5 dB	3.8 dB	3.3 dB\4.2dB	Suirongcable
Inside Cable	SRG58-30SS 30Feet	4.5dB	4.5dB	4.9dB	7.6dB	7.2dB\8dB	Suirongcable
Inside Cable	SRG58-15SS 15Feet	2.35dB	2.4dB	2.56dB	3.9dB	3.7dB\ 4.1dB	Suirongcable
Inside Cable	SRG174-10SS 1Feet	2.5dB	2.7dB	2.9dB	5dB	5dB\6dB	Suirongcable
Inside Cable	SRG178-10SS 1Feet	2.6dB	2.9dB	3.7dB	6dB	6dB\6.8dB	Suirongcable
Inside Cable	RG316-15SS	3.5dB	3.8dB	4.1dB	6.2dB	5.9dB\6.7dB	Suirongcable
Inside Cable	RG316-10SS	2.4dB	2.6dB	2.8dB	4.2dB	4dB\4.5dB	Suirongcable
Power Supply	AC/DC Power Adapter	0.1dB	0.1dB	0.1dB	0.2dB	0.2dB	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT050701	7dBi	7dBi	7dBi	10dBi	10dBi\10dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT010901	9dBi	9dBi	9dBi	9dBi	9dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT010701	9dBi	9dBi	9dBi	9dBi	9dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT060302	3dBi	3dBi	3dBi	3.5dBi	3.5dBi\3.5dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT040301	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT080301	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT080302	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT060301	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT060303	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT070103	3dBi	3dBi	3dBi	3dBi	3dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	ANT070101	1dBi	1dBi	1dBi	1dBi	1dBi	Shenzhen Dachi Communications Co., Ltd.
Inside Antenna	SR-21300100	3dBi	3dBi	3dBi	3.5dBi	3.5dBi\3.5dBi	Shenzhen Dachi Communications Co., Ltd.

All equivalent antennas and cables are suitable for use with the SolidRF booster.

Default combination:

SR75502001B + ANT060302+ ANT070103+ Power Supply