HiBOOST®

User Manual

Travel 3.0 Car （C30G-5S-BTW)

Travel 3.0 RV （C30G-5S-BTW.RV)

Travel 3.0 Truck （C30G-5S-BTW.TRUCK)

FOR VEHICLE

Boost Your Bars and Keep You Connected to the World

(972) 870-5666 (M-F from 9 am - 5 pm CST)

CONTENTS

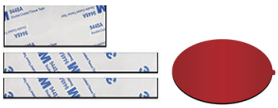
Travel 3.0 Car

Booster

Outside Magnetic Antenna

Inside Panel Antenna

DC Power Supply



Other Accessories
to fix the booster and antenna

Package Content

Travel 3.0 RV

Booster

Outside Omni-Directional Antenna

Inside Magnetic Antenna

Outside 26ft Cable

15.74in pole *2,Side-Exit Adapter,Spring, Mounting Accessories

Power Supply

DC Power Supply

Other Accessories to fix the booster and inside antenna

Package Content

Travel 3.0 Truck

Booster

Outside Omni-Directional Antenna

Inside Panel Antenna

Outside 15ft Cable

DC Power Supply

15.74in pole *2,Side-Exit Adapter,Spring, Mounting Accessories

Other Accessories to fix the booster and inside antenna

Note: Available accessories can be purchased through HiBoost.com

Warning: Un-authorized antennas, cables, and/or coupling devices are prohibited by new FCC rules, Please contact FCC for details: 1(888)-CALL-FCC.

Authorized Accessories List

Outside Antenna & Cable Kit Options

Omni outside Antenna HPTOOC-0727-05SF1: 698-960MHz 2±0.5dBi/ 1710-2170MHz 2.5±0.5dBi /2300-2700MHz 3±0.5dBi

Outside cable: Hiboost200/3D 26ft/8M; Hiboost200/3D 15ft/4.5M

Outside Magnetic Antenna C-ANT-V02: 698-960MHz 1.5±0.5dBi/ 1700-2700MHz 2.5±0.5dBi

Outside cable:3D-FB 13ft/4M

Inside Antenna & Cable Kit Options

Inside Panel Antenna C-ANT-FPC-V02: 698-960MHz 1±0.5dBi / 1700-2700MHz 2±0.5dBi

Inside Magnetic Antenna C-ANT-V02: 698-960MHz 1.5±0.5dBi/ 1700-2700MHz 2.5±0.5dBi

Inside cable: LMR100 9.8ft/3M; 3D-FB 13ft/4M

Introduction

Thanks again for purchasing HiBoost cell phone booster. The HiBoost vehicle series is a collection of precision-engineered products that improve cellular reception inside of vehicles by amplifying incoming and outgoing cell phone signals.

HiBoost cell booster's exclusive cloud-based Signal Supervisor mobile application and LED indicator allows users to monitor the live status of HiBoost cell phone signal boosters directly from the LED indicator or remotely from a mobile device anywhere at any time.

If there are any issues while installing a HiBoost cell phone signal booster, please contact the HiBoost technical support team through the following options:

Online Support: Create a ticket or chat via Signal Supervisor app

(972) 870-5666 (M-F from 9 am – 5 pm CST)

service@hiboost.com

www.hiboost.com

Pre-Installation Instructions

We strongly recommend you to read the user guide completely before installation.

The vehicle booster provides app assisted installation, which is a unique method provided by HiBoost.

For more precautions and details to install and use, please follow the Signal Supervisor app.

1.App Assisted Installation:
From Page 12~22.
It's convenient and the best part is that the maximum booster gain can be reached.

The app helps you find the best installation

Then why has HiBoost spent extra big efforts and costs to design app signal meter and LED light indicator to help you install?

Out of many reasons, the most important one is that we would like you to get maximum gain from the vehicle booster, as it is most crucial for you to still get the signals even in quite remote areas, like in mountains or forests.

As it is known and a big thanks, FCC makes signal boosters legal in 2014 so that every body can install and benefit from the signals;

But FCC regulations do limit the gain and output power of all consumer boosters to low values in order to avoid any interference to the cell towers;

Furthermore FCC stipulates that any improper install should trigger immediately further reduction of the booster's already-limited gain and power to protect the towers.

Therefore, you can understand how important you need to squeeze every last gain from the booster, even 1dB more power is so precious when you suffer from no signals.

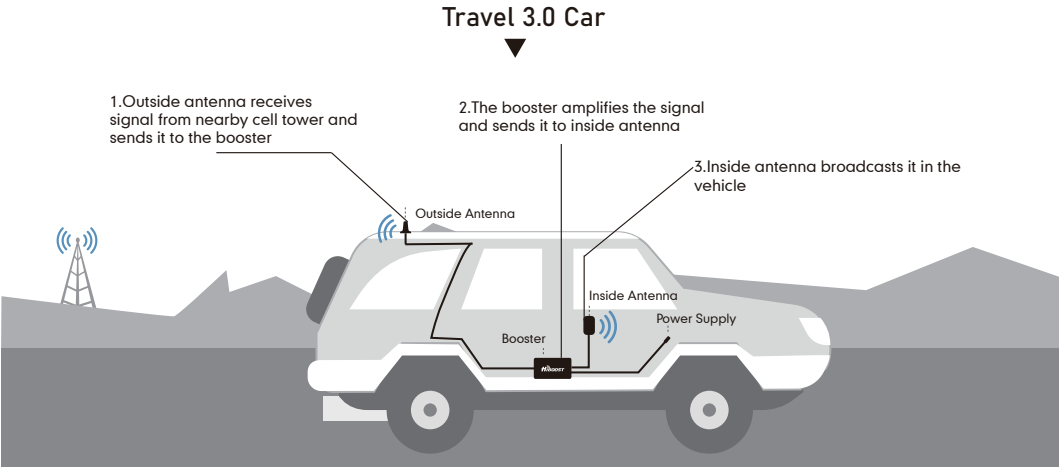
HiBoost app signal meter & LED light indicator will help you to fine tune the best power and get as much cover of your spaces.

General Working Principle:

Before we start any of the two ways, please allow us to spend 4 pages to make you understand how the vehicle booster system works for you.

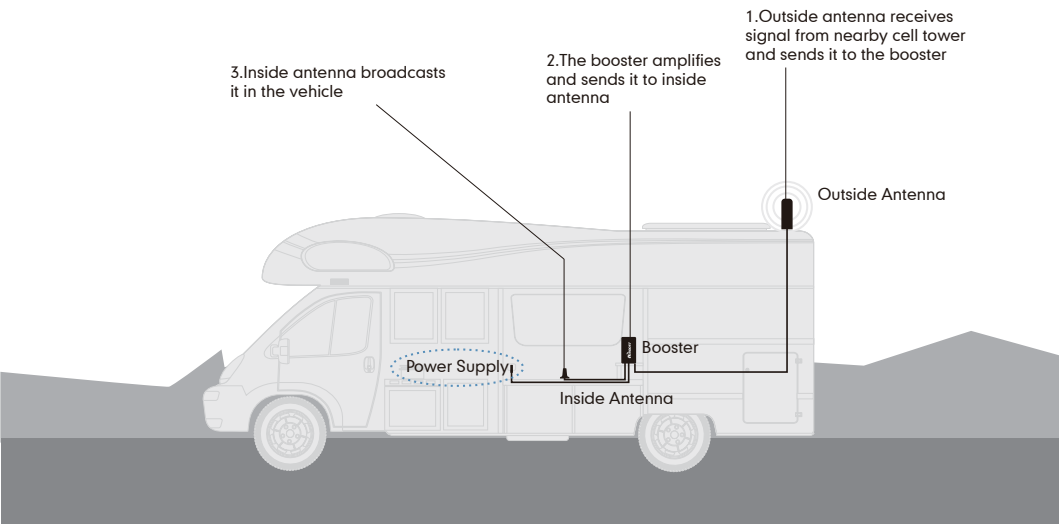
※ Please do spend sometime to read it fully, as it is crucial to get the best performance.

How HiBoost booster works

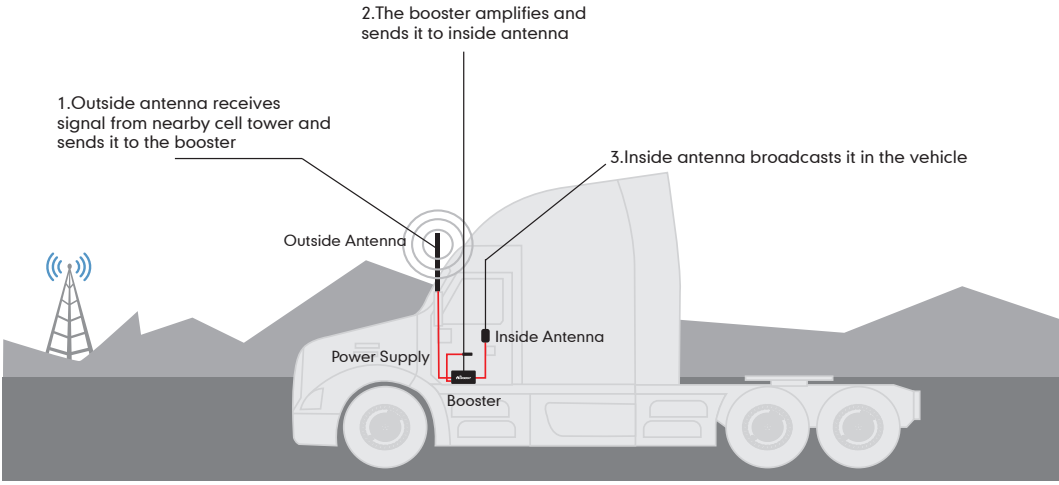


Vice versa, inside antenna receives phone signal and sends to the booster,
The booster then amplifies and sends it to outside antenna,
Outside antenna sends signal to the cell tower.
Then you can make phone calls and do internet streaming.

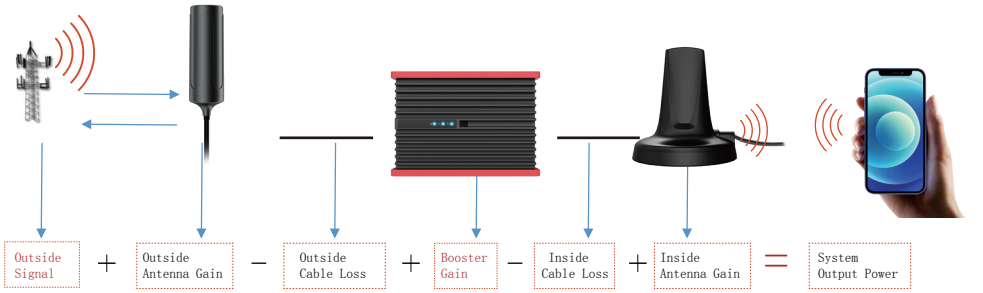
Travel 3.0 RV



Travel 3.0 Truck



Working Principle in Formula



Out of the Formula:

Outside Signal: To be received by outside antenna from cell tower

Outside Antenna Gain: The gain of the outside antenna

Outside Cable Loss: The loss of the outside cable

Booster Gain: The actual working gain of the booster

Inside Cable Loss: The loss of the inside cable

Inside Antenna Gain: The gain of inside antenna

For example:

-70dBm + 5dBi - 2.3dB + 50dB - 1dB + 3dBi = - 15.3dBm (System Output Power)

Since the figures in **Black** are fixed when you finish the purchase, thus below RED figures will play a vital role in successful vehicle install

- **Outside Signal**
- **Booster Working Gain**

And since the vehicle is driving anywhere with uncertain outside signals, the MAX booster working gain becomes quite crucial.

So the user guide is focused on: Get the MAX booster working gain.

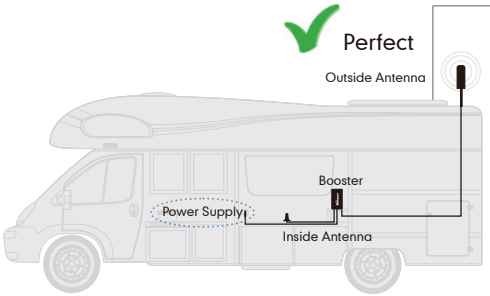
More notes on how to keep the maximum booster gain

The principle is that we need to avoid oscillation between outside and inside antennas as it reduces the gain.

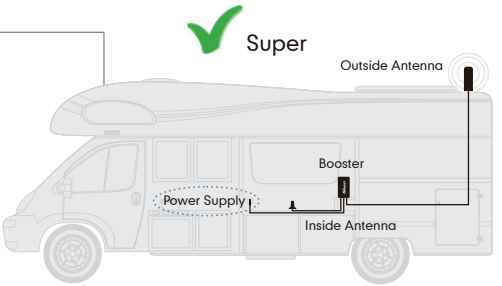
Measures can be taken to avoid oscillation:
1) Increase the distance between outside and inside antennas, generally the same vertical distance generates more loss than horizontal distance.
2) Use barriers (eg. metal plate or net) between outside and inside antennas.

Here are some good and bad solutions for your reference.

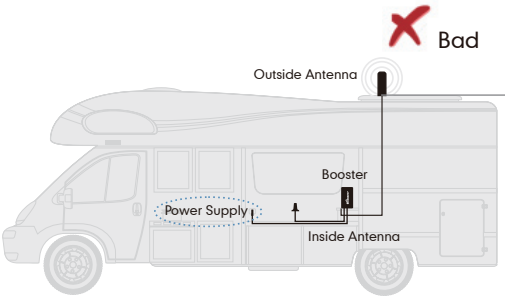
※ Please note: This separation is not an absolute mandate. The idea is to isolate the outdoor antenna from the indoor antenna.



1. Outside antenna locates at highest position.
2. Enough vertical and horizontal distance between outside and inside antennas.
3. Inside antenna is close to demanded coverage area.

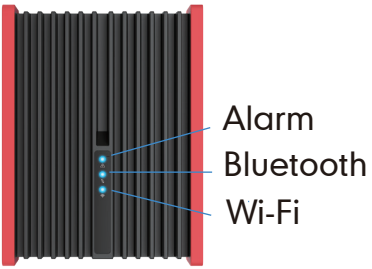


1. Outside antenna doesn't locate at highest position.
2. Enough horizontal distance between outside and inside antennas.



1. Not enough horizontal and vertical distance between outside and inside antennas.

LED Indicator Lights



LED STATUS INDICATORS		
ALARM	solid blue	normal
	solid red	excessive low input voltage
	slow flashing blue	slight oscillation
	quick flashing red	booster automatically shut off due to strong oscillation
Bluetooth LED	solid blue	bluetooth disconnected
	slow flashing blue	bluetooth connected
Wi-Fi LED	solid blue	wifi disconnected
	slow flashing blue	wifi connected

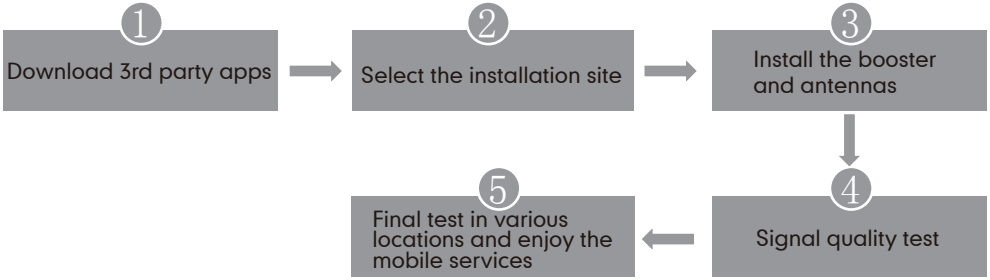
Bands contained in the Gauges

Gauge	Band	Uplink	Downlink
LTE700	12/17	698-716MHz	728-746MHz
	13	776-787MHz	746-757MHz
CELL800	5	824-849MHz	869-894MHz
PCS1900	25/2	1850-1915MHz	1930-1995MHz
AWS2100	4	1710-1755MHz	2110-2155MHz

Please focus on the gauge that contains the band you are using.

App Assisted Installation

Flow Chart of App Assisted Installation



Step 1: Download the 3rd party apps

We are going to use 3rd party app:

- To find a suitable site to install the booster
- To test the signal strength and quality

There are a variety of resources available online: Opensignal, Cell mapper, Network cell info lite, etc.

Please download them beforehand over Android and / or iOS:

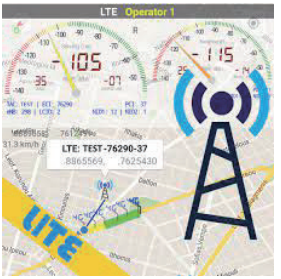
※ You can use either of them to your favor. Here we recommend Opensignal and Network Cell Info Lite as the first two choices.

Step 2: Select the installation site

Drive to a place with outside signal below -85dBm.
Here the 3rd party app “Network Cell Info Lite” is taken as an example. Android users can use it to test the site, so as to make sure the signal strength is about less than -85dBm. IOS users please choose Opensignal or Cell mapper.

Reasons why you need such a place:
1) A proper outside signal will create a clean environment for booster install so that we can adjust the booster to get its maximum gain without influencing from outside signal. Because too strong outside signal, say -40dBm, will reduce the working gain itself.
2) A place with proper signal is also suitable for performance test after the booster has been installed.

You can also use “Network Cell Info Lite” to measure the signal strength before & after install. The good point of Network Cell Info Lite is that you can see the signal levels.



Network Cell Info Lite

The signal strength requested by the booster system is as below.

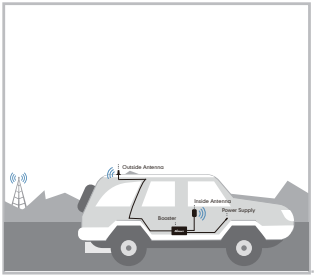
SIGNAL STRENGTH	EXCELLENT	GOOD	FAIR	POOR	DEAD ZONE
3G/1X	-70dBm	-70 to -85dBm	-86 to -100dBm	-101 to -109dBm	-101dBm
4G/LTE	-90dBm	-90 to -105dBm	-106 to -110dBm	-111 to -119dBm	-120dBm

Your signal strength is going to be a good indicator of how fast you can download and stream, but for voice, it’s more like “Can I make a call, or not?” If you can make a call you should not care how many bars you have, as long as the call goes through and everyone can hear everyone. Looking at bars is just going to make you cranky.

The reason to test your internet speed is to make sure you'll be able to stream high-bandwidth movies, like those from Netflix, Hulu, Amazon, and other providers. If your internet speed is too slow, you'll get choppy video or regular buffering.

Step 3: Install the booster and antennas

Travel 3.0 Car



1. Assemble and Mount the Outside Antenna

1.1 Determine where you would like to set up the outside antenna

Usually, the outside antenna is mounted to the roof of the car near the back.

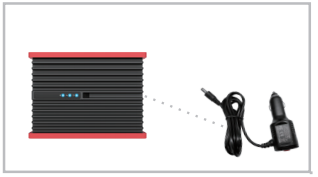
Note: Please make sure the outside antenna is not placed on the glass. If you cannot make it, please keep the outside antenna as close to the back as possible.

1.2 Fix the outside antenna

The antenna has a built-in magnet. You can fix it directly on the metal roof or use the double-side tape in the accessories.

2. Connect the Outside Antenna to the Booster

Routing the cable into your car and connect it to the booster.



3. Connect the DC Power Supply to the Booster

4. Place Inside Antenna & Connect the Cable

Place the inside antenna where you would like to cover signal and connect it to the booster.

5. Download the Signal Supervisor App, register ID and booster.

Register an ID first and log in.

Add the booster to the device list.

Use the Signal Supervisor to help installation

The booster will work at best if the gain reaches 50dB. But if you can't get so, at least ensure the gain on the gauges reaches 46~50dB. If not, please kindly adjust the position of the inside antenna.

6. Fix the Inside Antenna and the Booster

Fix the inside antenna vertically with the provided double-side tape.

Fix the booster with the provided Hook & Loop.

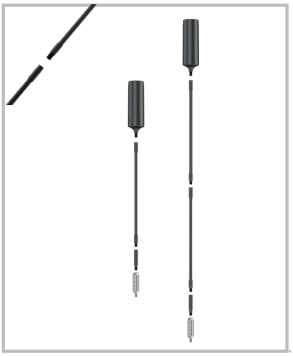
Enjoy your boosted signal!

1. Assemble and Mount the Outside Antenna

1.1 Determine where you would like to set up the outside antenna

Usually, the outside antenna is mounted to a ladder at the top of the vehicle vertically and as high as possible so that it can get a good signal.

Note: Please make sure the outside antenna stay below the height limit allowed by law.



1.2 Assemble the outside antenna

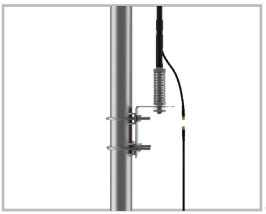
1) Insert the cable through the pole and then through the side exit adapter.

2) Screw into place.

Notes:
1) The accessories include 2 poles and you can decide to use 1 or 2 depending on the situation.

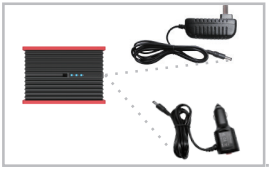
1.3 Fix the outside antenna

Use the provided accessories to fix the outside antenna to the ladder.



2. Connect the Cable to the Outside Antenna

Connect the booster and the outside antenna with the 26′ cable.



3. Connect the DC Power Supply to the Booster.

Use power supply or DC power supply.

4. Place Inside Antenna & Connect the Cable

Place the inside antenna horizontally on a desk or a countertop in the area where you would like to cover signal and connect it to the booster.

5. Download the Signal Supervisor App, register ID and booster.

Register an ID first and log in.
Add the booster to the device list.

Use the Signal Supervisor to help install

The booster will work at best if the gain reaches 50dB. But if you can't get so, at least ensure the gain on the gauges reaches 46~50dB. If not, please kindly adjust the position of the inside antenna.

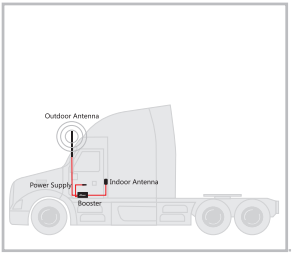
6. Fix the Inside Antenna and the Booster

Fix the inside antenna with the provided double-side tape.

Fix the booster with the provided Hook & Loop.

Enjoy your boosted signal!

Travel 3.0 Truck

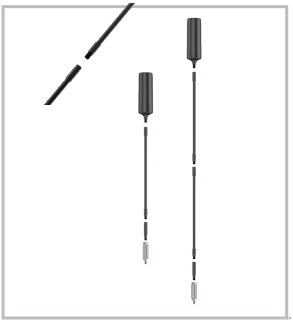


1. Assemble and Mount the Outside Antenna

1.1 Determine where you would like to set up the outside antenna

Usually, the outside antenna is mounted to a rearview mirror. It would be great if you could set it as high as possible.

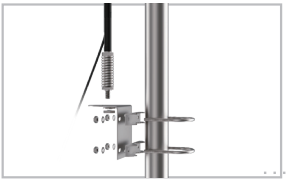
Note: Please make sure the outside antenna stay below the height limit allowed by law.



1.2 Assemble the outside antenna

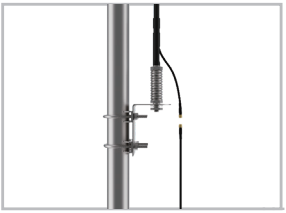
1) Insert the cable through the pole and then through the side exit adapter.
2) Screw into place.

Notes:
1) The accessories include 2 poles and you can decide to use 1 or 2 depending on the situation.



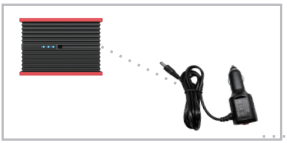
1.3 Fix the outside antenna

Use the provided accessories to fix the outside antenna to the rearview mirror.



2. Connect the Cable to the Outside Antenna

Connect the booster and the outside antenna with the 15' cable.



3. Connect the DC Power Supply to the Booster.

4. Place Inside Antenna & Connect the Cable

Please place the inside antenna on the dash or the side of driver's seat.

5. Download the Signal Supervisor App, register ID and booster.

Register an ID first and log in.
Add the booster to the device list.

Use the Signal Supervisor to help install

The booster will work at best if the gain reaches 50dB. But if you can't get so, at least ensure the gain on the gauges reaches 46~50dB. If not, please kindly adjust the position of the inside antenna.

6. Fix the Inside Antenna and the Booster

Fix the inside antenna vertically with the provided double-side tape.

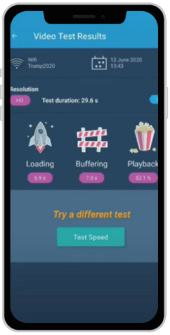
Fix the booster with the provided Hook & Loop.

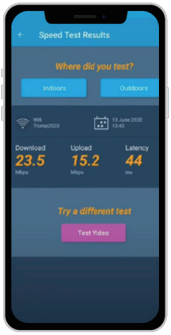
Enjoy your boosted signal!

Step 4: Signal quality test

After reaching the MAX possible gain (50dB or as close to 50dB as possible), fix the outside & inside antennas, and then use the mobile phone to test the effect of phone call and browse the web page or video in the vehicle by 3rd party app Network Cell Info Lite & Open Signal.

*Notes Again: Just remember that strength and quality are two separate issues. A poor quality "strong" signal can be next to useless, but a clean signal of two bars might be all your device needs.





If it is not ideal, adjust the position of inside or outside antennas, and meantime ensure that the gain remains MAX possible.

When it reaches the ideal test value, the booster, antenna and cable can be firmly installed.

The installation order is: Outside antenna – Inside antenna – Booster.

Notes: Please don't expect the vehicle booster system to cover the whole area of a large RV, because its gain is limited to 50dB by FCC and may further reduce during booster installation and the outside signal is changing all the time during the drive.

Step 5: Drive the vehicle to other places to see how it works

Drive the vehicle to various weak areas to test the performance.
Drive the vehicle to various strong areas to test the performance.

Warm Tips

If the vehicle is driving to quite remote places where the signal outside is particularly weak and the mobile phone cannot be used, the inside antenna can cling closely to the back of the mobile phone, so that a certain signal can be obtained. This is not a normal operation, but it can help you maintain communication in these particular places.

Meanwhile, remind you that this method will not help when there is no signal outside the vehicle or the signal is very weak, because the booster must have a signal to boost.

Troubleshooting Guide

LED STATUS INDICATORS		
ALARM	solid blue	normal
	solid red	excessive low input voltage
	slow flashing blue	slight oscillation
	quick flashing red	booster automatically shut off due to strong oscillation
Bluetooth LED	solid blue	bluetooth disconnected
	slow flashing blue	bluetooth connected
Wi-Fi LED	solid blue	wifi disconnected
	slow flashing blue	wifi connected

Common Issues	Troubleshooting Instructions
Excessive low input voltage	Check the output voltage of the vehicle
The vehicle booster is installed but there's still no signal	Check to see if the vehicle is started. Double check connections to make sure none are loose.
The signal is not stable after turning on the booster power	Check that the outside signal is stable by referring to your mobile device and checking your coverage.
The Alarm LED is quick flashing red or device shuts off	Ensure sufficient isolation between inside and outside antenna.
There is No Power	Check that the booster is turned on and the DC power outlet is plugged into the DC 12V port or lighter adapter

Note:

The APP may push an alarm notice when the alarm light indicates solid blue, you do not need to adjust anything at this time, for this may be a result of excessive strong signal.

If there are any issues while installing a HiBoost cell phone signal booster, please contact the technical support team through the following channels:

Online Support: Create a ticket or chat via Signal Supervisor app

(972) 870-5666 (M-F from 9 am – 5 pm CST)

service@hiboost.com

www.hiboost.com

Technical Specifications

RF Parameter		Uplink	Downlink
Frequency Range	LTE(A+B)	698-716MHz	728-746MHz
	LTE(C)	776-787MHz	746-757MHz
	CDMA	824-849MHz	869-894MHz
	PCS	1850-1915MHz	1930-1995MHz
	AWS	1710-1755MHz	2110-2155MHz
Max. Gain		50dB	
Max. Power		UL 22 dBm	DL 0 dBm
Electrical Parameter			
Power Supply		Input DC12-24V, Output DC12V-24V/3A	
		Input AC100-240V/1.5A, Output DC12V/3A	
Input Impedance		50 Ω	
Mechanical Parameter			
I/O Port Type		RPSMA-K / SMA-Female	
Environment Parameter			
Operating Temperature		-10°C~+55°C	
Storage Temperature		-25°C~+80°C	
Environment Conditions		IP40	

FCC and ISEDC Statements

FCC RF EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instruction for satisfying RF exposure compliance. This transmitter must not be colocated or operating in conjunction with any other antenna or trans-mitte.This equipment should be installed andoperated with minimum distance 20cm between the radiator& your body.

ISEDC RF EXPOSURE STATEMENT

The devices is compliance with RF exposure limits. The minimum distance from body to use the device is 20 CM.

Le présent appareil est conforme aux conformité ou aux limites d'intensité de champ RF. La distance minimale du corps à utiliser le dispositif est de 20 CM.

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.

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:

- Re-orient 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 Changes or modifications not expressly approved by HiBoost could void the user's authority to operate the equipment. For a complete list of antennas and cables approved for use with these boosters see Authorized Kitting Options

Minimum separation distances for MSCL calculation or measurements: 30cm

FURTHER INFORMATION ON SIGNAL BOOSTER END-USE REGISTRATION

The following links are the currently active contacts for booster registration with U.S. wireless providers:
https://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp https://www.sprint.com/legal/fcc_boosters.html
https://www.verizonwireless.com/solutions-and-services/accessories/register-signal-booster/ https://support.t-mobile.com/docs/DOC-9827 https://securec45.securewebsession.com/attsignalbooster.com/

ISEDC Statement: This device complies with Innovation, Science, and Economic Development Canada licence-exempt RSS standard(s). Opera-tion 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.
Le présent appareil est conforme aux CNR d' Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivant-es :
(1) l'appareil nedoit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionne-ment.
This device complies with Innovation, Science and Economic Development Canada ICES-003 Compliance Label: CAN ICES-3 (B)/ NMB-3(B). Le présent appareil est conforme Innovation, science et développement économique Canada ICES-003 Étiquette de conformité: CAN ICES-3 (B) / NMB-3 (B). Please follow the link to access the CPC-2-1-05:
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08942.html

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.

You MUST operate this device with approved antennas and cables as specified by the manufacturer. Antennas MUST be installed least 20 cm(8 inches)from(i. e..MUST NOT be installed within 20 cm of)any person.

You MUST cease operating 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.

Return and Warranty Policies

30-Day Money-Back Guarantee: If for any reason the performance of any product is not acceptable, the product may be returned to the reseller within 30-days with proof of purchase. Please contact the customer support team.

3-Year Warranty: Signal boosters and kits are warranted for 3 years. We will repair or replace the unit and will cover the cost of delivery back to consumers located within the continental US and Canada. We will only cover shipping to our office if the booster was delivered to you recently, and was delivered defective.

Customers can choose to return the signal boosters and kits directly to the manufacturer at the purchaser's expense with a dated proof of purchase and a Returned Material Authorization (RMA) number supplied by us. RMA numbers may be obtained by contacting customer support at 972-870- 5666 or support @hiboost.com

This warranty does not apply to any signal boosters or kits determined by us to have been subjected to tampering, misuse, abuse, neglect, or mishandling that alters or damages physical or electronic properties.

We are not liable for any Signal Supervisor application network connectivity issues. The cell phone signal booster relies on a strong, continuous and reliable connection to the internet in order to communicate with the cell phone application. For all Signal Supervisor Application related issues, please check your network strength and call our technical support.

Failure to use a surge-protected AC power strip with at least a 1000 Joule rating will void your warranty. Damage caused by lightning is not covered by this warranty.

All of the products that are packaged with other accessory products are intended for resale and used as a single integrated system. Such product kits are required to be sold to the end-users or subsequent reseller as packaged.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