

**We strongly recommend you to read the quick install guide completely before you install.**

The vehicle booster provides 2 options of booster installation,  
And APP installation is unique method provided by HiBoost



The App helps you secure  
45-50dB gain precisely

1. App assisted installation, **FIRST CHOICE From Page 5~13**  
The best part is that the MAX booster working gain can be secured precisely.

APP assisted install is strongly recommended.

LED lights indicate the gain  
level and booster status



2. LED assisted installation, **SECOND CHOICE From Page 14~20**

This is a simple and rough way to adjust the booster by judging LED color, thus  
the gain value is not at its perfect condition.

LED lights indicate the gain level roughly.

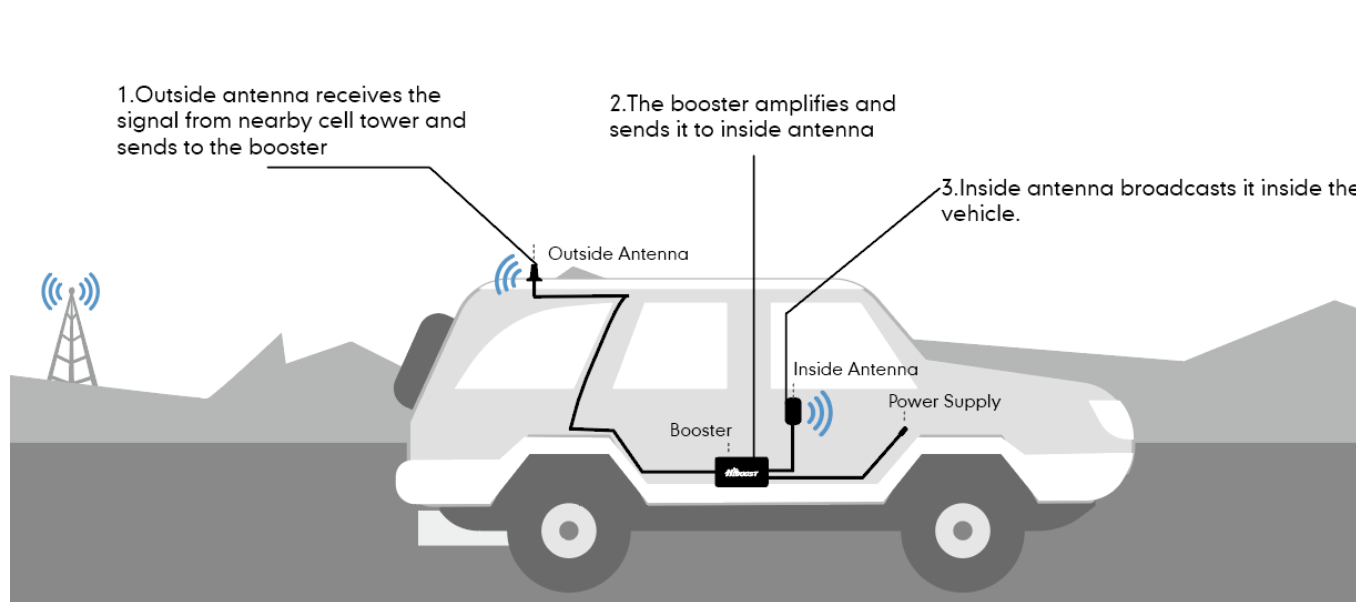
Then why has HiBoost spent extra big efforts and costs to design APP signal meter to help you install?

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.

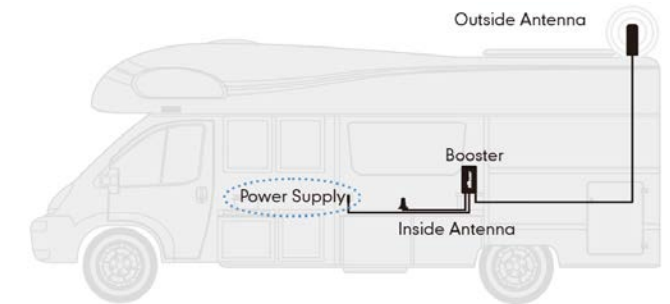
So before we start any of the two ways, please allow us to spend 3 pages to make you understand how the vehicle booster system works for you

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

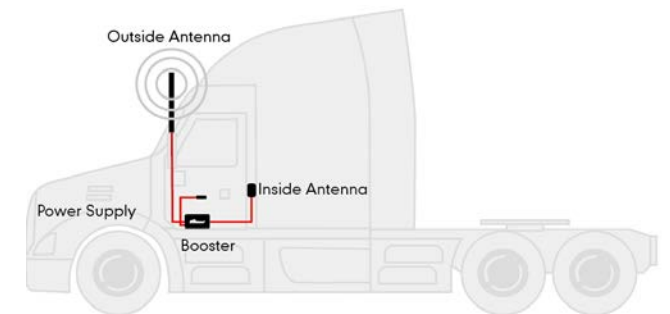
**General Working Principle: It is the same working principle for all vehicle boosters.**



Car



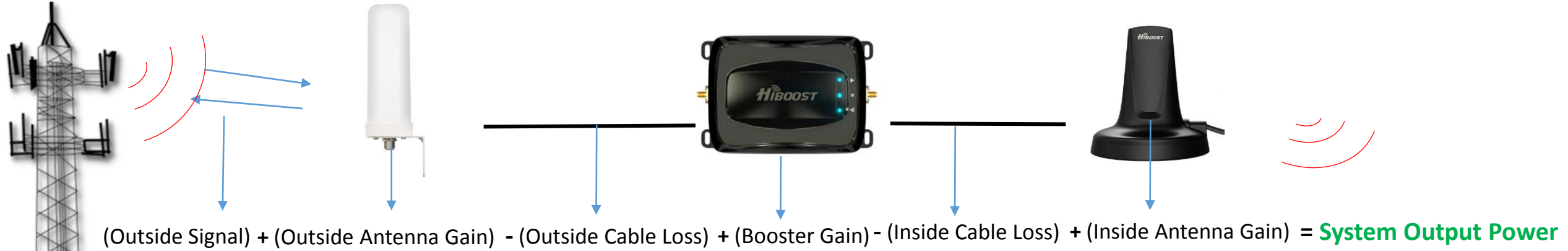
RV



Truck

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.

# 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 outside antenna

**Outside Cable Loss:** The loss of the outside cable

**Booster Working Gain:** Booster working gain will be decided by booster install, and FCC defines the highest vehicle gain is 50dB.

**Inside Cable Loss:** The loss of the inside cable

**Inside Antenna Gain:** The gain of inside antenna

## Taking RV booster for example:

$$-70\text{dBm} + 5\text{dBi} - 2.3\text{dB} + 50\text{dB} - 1\text{dB} + 3\text{dBi} = -15.3\text{dBm} \text{ (System Output Power)}$$

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

1. **Outside Signal**
2. **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.**



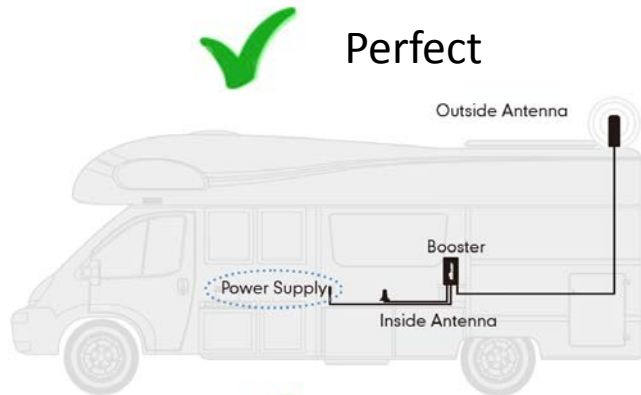
# Measures on how to get the MAX booster working gain.

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

Measures can be taken to avoid the loop back:

- 1) Increase the distance between outside and inside antennas, generally the same vertical distance generates more loss than horizontal distance.
- 2) Use barriers between outside and inside antennas.

Here are some good and bad solutions for your reference.

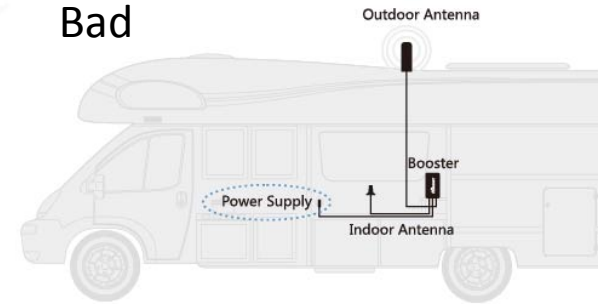


Perfect

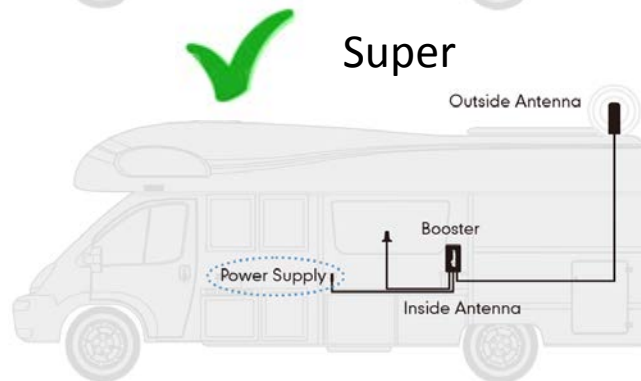
1. Outside antenna locates at highest position.
2. Enough vertical and horizontal distance between outside and inside antennas.
3. Inside antenna is close to demanded coverage area



Bad



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



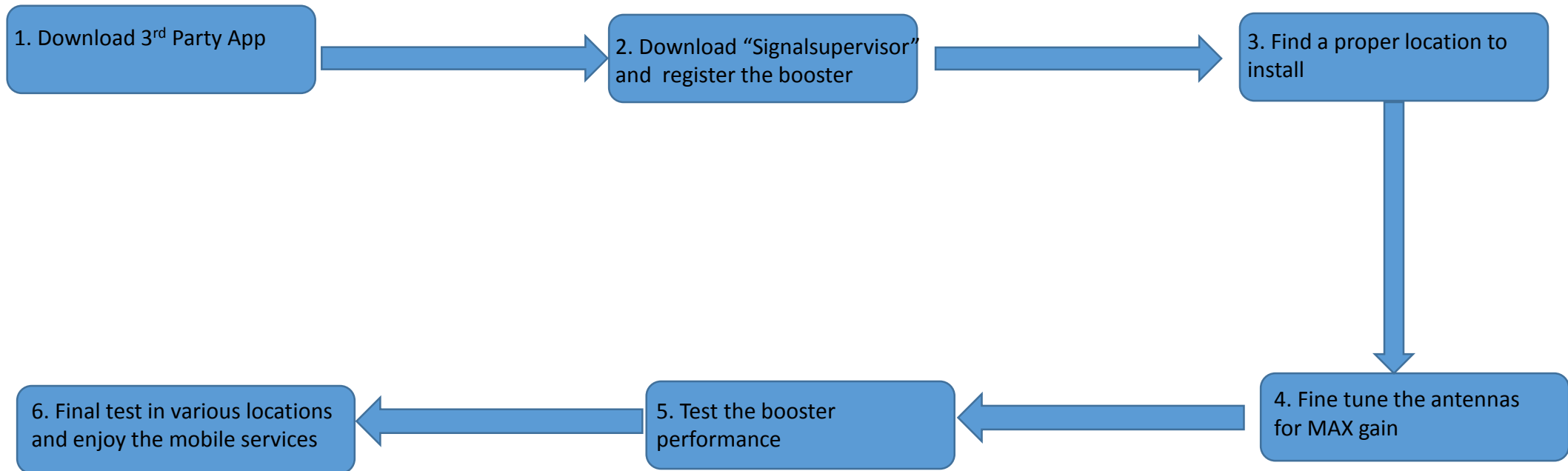
Super

1. Outside antenna locates at highest position.
2. Enough vertical and horizontal distance between outside and inside antennas.

The APP allows you to check the gain values all the time during the install to secure MAX booster working gain.

# 1 Now let's start by the APP assisted install after understanding the principle.

## Flow chart of APP Assisted Install

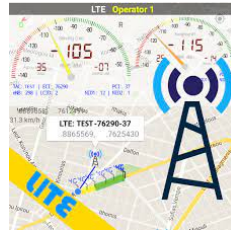


## Step 1 : Download the 3<sup>rd</sup> party Mobile Apps

We are going to use 3<sup>rd</sup> party APPs:

1. To find a suitable site to install the booster
2. To test the signal strength and quality

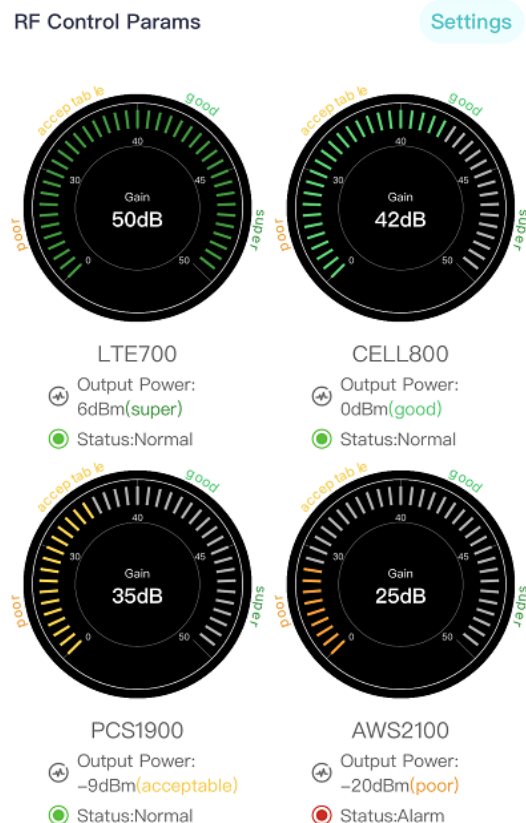
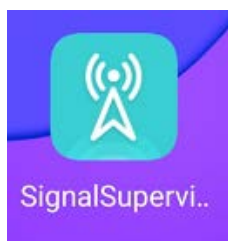
There are a variety of resources available online: Opensignal, Network cell info lite, etc.  
Please download them beforehand over Android and / or IOS:



✂ You can use either of them to your favor. Here we are using Opensignal and Network Cell Info Lite as first two choices.

## Step 2: Download and Register Signal Supervisor APP on cellphone

- 1) Scan the following QR Code or search “Signal Supervisor” on Google Play/App Store to download the App.
- 2) Register on the Signal Supervisor App.
- 3) Turn on the Bluetooth and Location Services on your mobile phone, power on the booster.
- 4) Click “Add device” to register the booster into the App by Bluetooth successfully. You will then be able to watch the gain and power data by the signal gauge.



Note: It is not a must nor necessary to connect the booster through WiFi. Bluetooth is enough but can't go beyond 30ft.



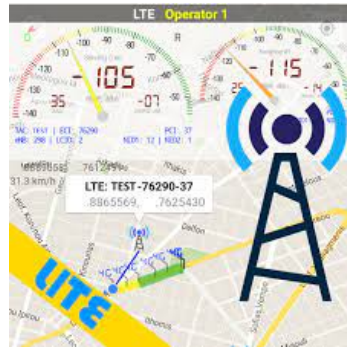
### Step 3. Select the installation site

Drive to a place with outside signal at -70~-85dBm.

You can use the 3<sup>rd</sup> party App “Network Cell Info Lite” to test on the site to make sure the signal strength is about -70~-85dBm. 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.

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



Network Cell Info Lite



Quick Install Guide-App



## Step 4-1. Installation of the Booster and Antennas (For Car)

(1) Place the outside antenna at the top of the vehicle vertically, and as high as possible in order to get the best outside signal at any driving location. Then connect it with outdoor port of the booster through outside cable.

*Notes: Keep the outside antenna 30cm away from windows (including the sunroofs)*

(2) And put the inside antenna in a place where mobile phone or other mobile devices are mostly used, connect it with indoor port of the booster.

*Notes: Try placing inside antenna in the center console, or stuck down by the driver's side interior console wall.*

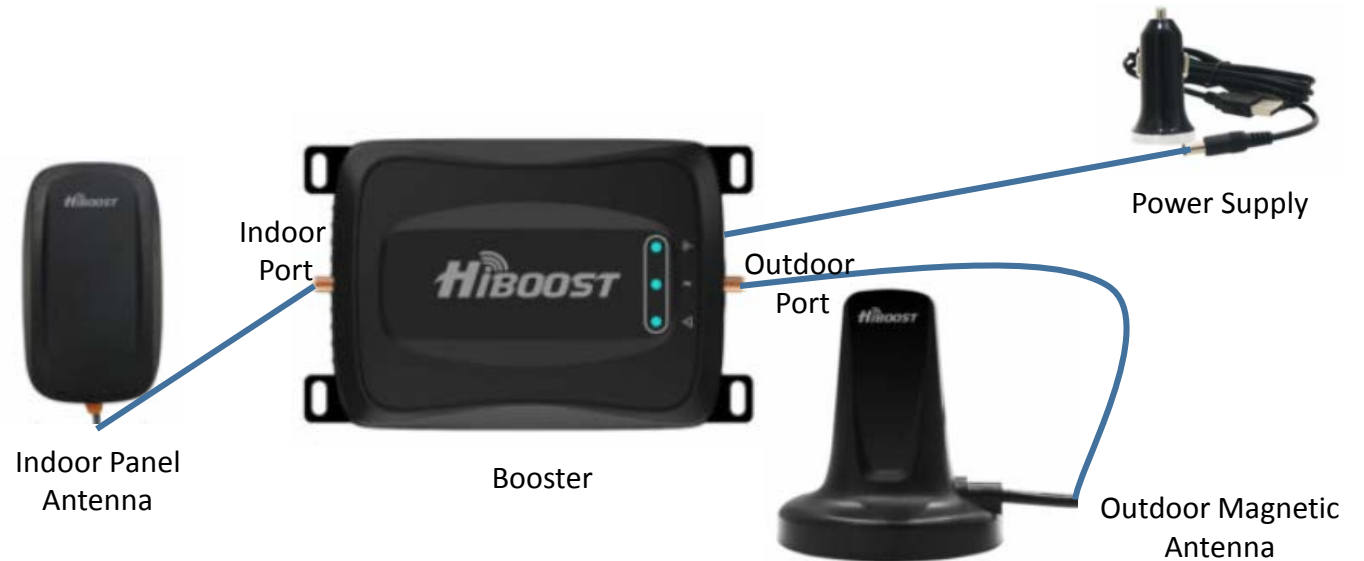
(3) After that, please close the vehicle door, power on the booster, and open the Signal Supervisor App in the phone and watch the App signal gauge to see if the gain value is 50dB or close to 50dB. If not, adjust the position of the inside antenna firstly, or adjust the outside antenna to enable the gain value to reach 50dB or close to 50dB.

Make sure the vehicle door is closed when checking the gain in order to simulate the real vehicle driving status.

If the gain is less than 50dB, it must be as close as 50dB possible, and the bottom line, gain value should not be less than 40dB, otherwise it will seriously affect the performance of the booster, especially when you want a signal in remote areas. The more gain you are getting from the booster, the signal is more guaranteed when you drive farther away. This point is particularly important.

Measures taken to get the MAX booster working gain:

- 1. Antennas shall be far away from each other**
- 2. To have barriers between antennas**



**Quick Install Guide-App**

## Step 4-2. Installation of the Booster and Antennas (For RV)

(1) Place the outside antenna at the top of the vehicle vertically, and as high as possible in order to get the best outside signal at any driving location. Then connect it with outdoor port of the booster through outside cable.

*Notes: Keep the outside antenna 30cm away from windows (including the sunroofs)*

(2) And put the inside antenna in a place where mobile phone or other mobile devices are mostly used, connect it with indoor port of the booster.

*Notes: Try placing inside antenna in the center console, or stuck down by the driver's side interior console wall.*

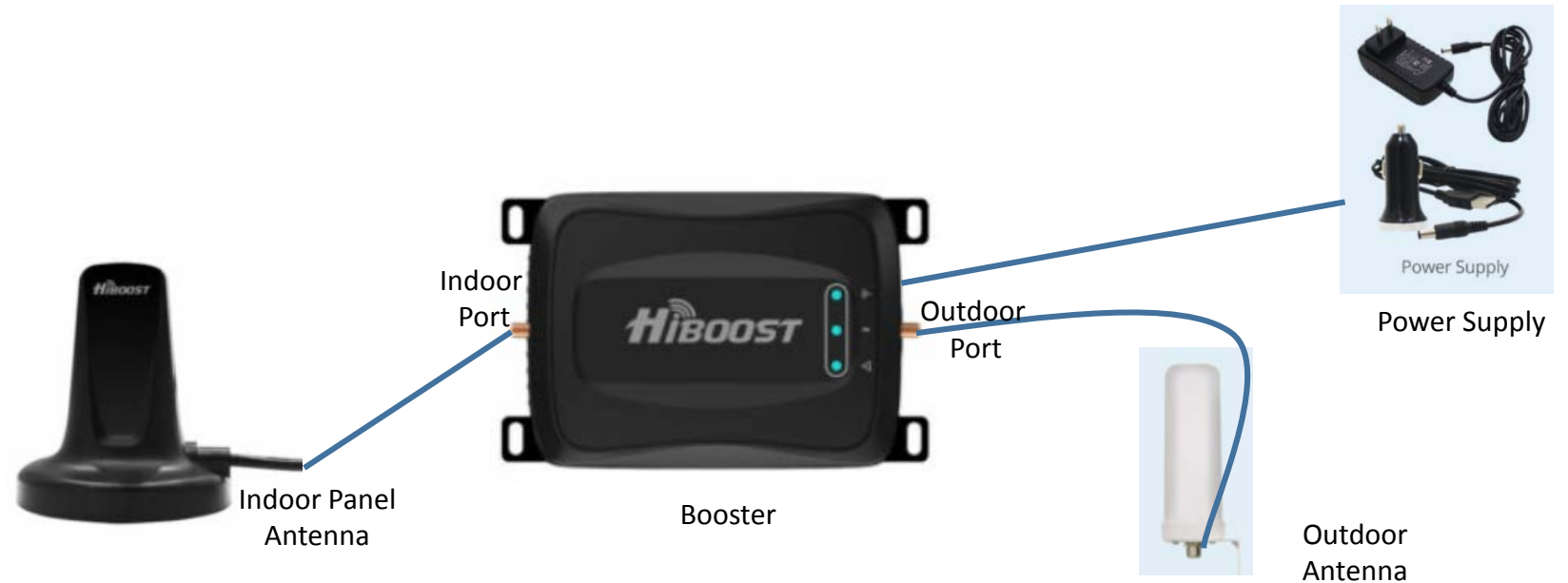
(3) After that, please close the vehicle door, plug in the DC Power and power on the booster. And open the Signal Supervisor App in the phone and watch the App signal gauge to see if the gain value is 50dB or close to 50dB. If not, adjust the position of inside antenna firstly, or adjust outside antenna to enable the gain value to reach 50dB or close to 50dB.

Make sure the vehicle door is closed when checking the gain in order to simulate the real vehicle driving status.

If the gain is less than 50dB, it must be as close as 50dB possible, and the bottom line, gain value should not be less than 40dB, otherwise it will seriously affect the performance of the booster, especially when you want a signal in remote areas. The more gain you are getting from the booster, the signal is more guaranteed when you drive farer away. This point is particularly important.

Measures taken to keep the MAX booster working gain

- 1. Antennas shall be far awat from each other**
- 2. To have barriers between antennas**



**Quick Install Guide-App**

## Step 4-3. Installation of the Booster and Antennas (For TRUCK)

(1) Place outside antenna at the top of the vehicle vertically, and as high as possible in order to get the best outside signal at any driving location. Then connect it with outdoor port of the booster through outside cable.

*Notes: Keep the outside antenna 30cm away from windows (including the sunroofs)*

(2) And put the inside antenna in a place where mobile phone or other mobile devices are mostly used, connect it with the indoor port of the booster.

*Notes: Try placing inside antenna in the center console, or stuck down by the driver's side interior console wall.*

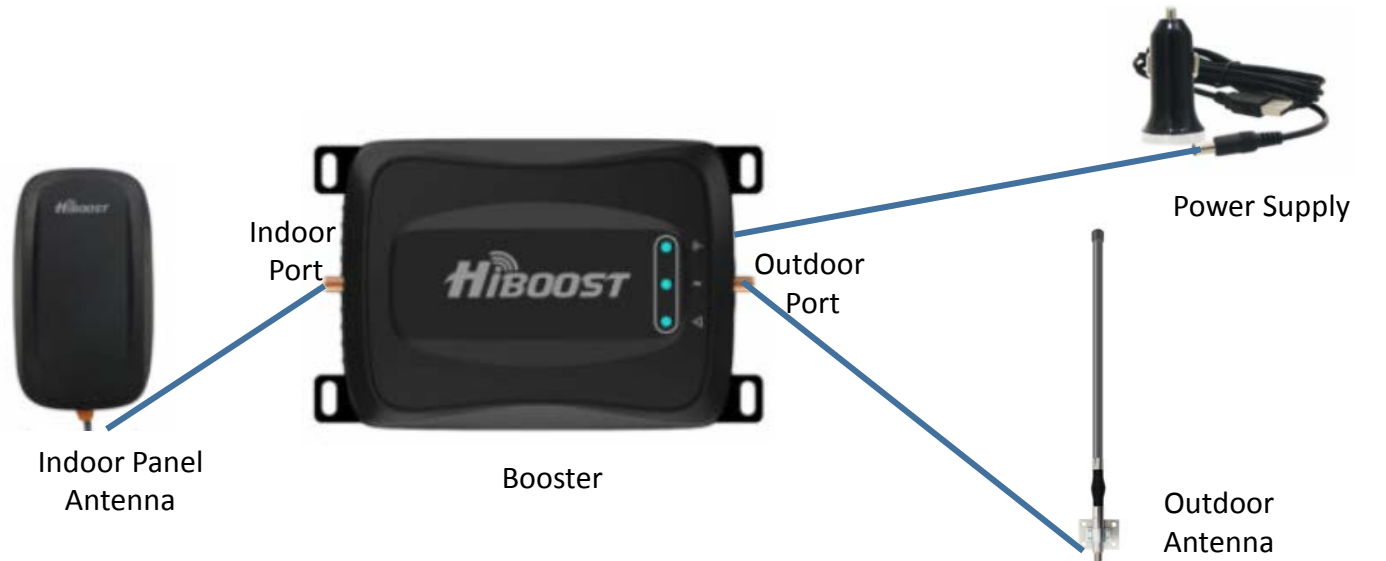
(3) After that, please close the vehicle door, plug in the DC Power and power on the booster. And open the Signal Supervisor App in the phone and watch the App signal gauge to see if the gain value is 50dB or close to 50dB. If not, adjust the position of inside antenna firstly, or adjust outside antenna to make the gain value reach 50dB or close to 50dB.

Make sure the vehicle door is closed when checking the gain in order to simulate the real vehicle driving status.

If the gain is less than 50dB, it must be as close as 50dB possible, and the bottom line, gain value should not be less than 40dB, otherwise it will seriously affect the performance of the booster, especially when you want a signal in remote areas. The more gain you are getting from the booster, the signal is more guaranteed when you drive farther away. This point is particularly important.

Measures taken to keep the maximum gain

- 1. Antennas shall be far away from each other**
- 2. To have barriers between antennas**



**Quick Install Guide-App**

## Step 5. Test the Voice and Network after booster install

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 3<sup>rd</sup> party app Network Cell Info Lite.



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 your whole area, because its gain is limited to 50dB by FCC and may further reduce during booster install and the outside signal is changing all the time during the drive.*

## Step 6. 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.

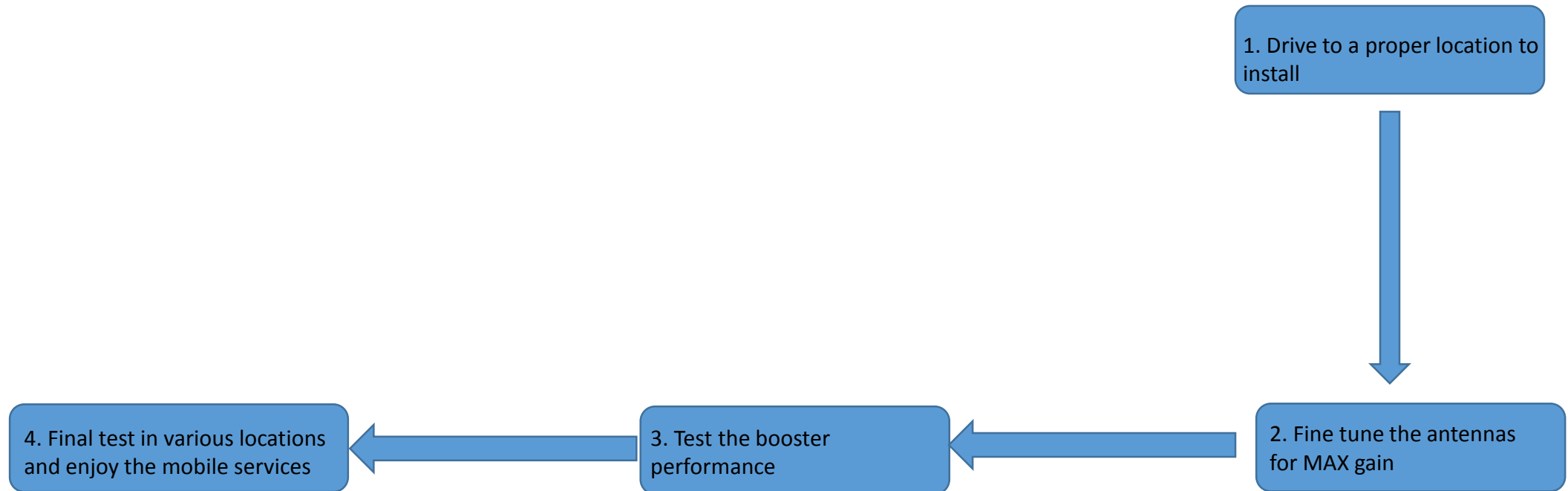
### Warm Tips

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.



## 2 Now let's start by the LED assisted installation.

### Flow chart of LED Assisted Installation





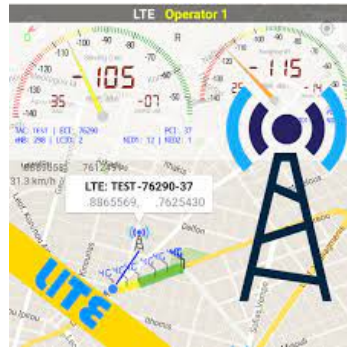
## Step 1. Select the installation site

Drive to a place with outside signal at -70~-85dBm.

You can use the 3<sup>rd</sup> party App “Network Cell Info Lite” to test on the site to make sure the signal strength is about -70~-85dBm. 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.

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



Network Cell Info Lite



Quick Install Guide-App



## Step 2-1. Installation of the Booster and Antennas (For Car)

(1) Place outside antenna at the top of the vehicle vertically, and as high as possible in order to get the best outside signal at any driving location. Then connect it with outdoor port of the booster through outside cable.

*Notes: Keep the outside antenna 30cm away from windows (including the sunroofs)*

(2) And put inside antenna in a place where mobile phone or other mobile devices are mostly used, connect it with indoor port of the booster.

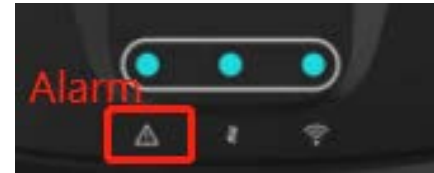
*Notes: Try placing inside antenna in the center console, or stuck down by the driver's side interior console wall.*

(3) After that, please close the door, power on the booster, check if the Alarm LED color is green or near orange or not. If not, adjust the position of inside antenna firstly, or then adjust the outside antenna to make LED stay green, then the gain value reaches or near 50dB. If you can't get so, please try to make it Orange color, it means the gain is close to 50dB. Pay attention to keep the door closed when checking the gain in order to simulate the real vehicle driving status.

If the Alarm LED color can't be kept green, it shall be at least Orange, as this will ensure a better gain, otherwise it will seriously affect the performance of the booster, especially when the outdoor signal is weak in remote areas. This point is particularly important.

Measures taken to keep the maximum gain

1. Antennas shall be far away from each other
2. To have barriers between antennas



## Step 2-2. Installation of the Booster and Antennas (For RV)

(1) Place outside antenna at the top of the vehicle vertically, and as high as possible in order to get the best outside signal at any driving location. Then connect it with outdoor port of the booster through outside cable.

*Notes: Keep outside antenna 30cm away from windows (including the sunroofs)*

(2) And put inside antenna in a place where mobile phone or other mobile devices are mostly used, connect it with indoor port of the booster.

*Notes: Try placing inside antenna in the center console, or stuck down by the driver's side interior console wall.*

(3) After that, please close the door, power on the booster, check if the Alarm LED color is green or near orange or not. If not, adjust the position of inside antenna firstly, or then adjust outside antenna to make LED stay green, then the gain value reaches or near 50dB. If you can't get so, please try to make it Orange color, it means the gain is close to 50dB. Pay attention to keep the door closed when checking the gain in order to simulate the real vehicle driving status.

If the Alarm LED color can't be kept green, it shall be at least Orange, as this will ensure a better gain, otherwise it will seriously affect the performance of the booster, especially when the outdoor signal is weak in remote areas. This point is particularly important.

Measures taken to keep the maximum gain

1. Antennas shall be far away from each other
2. To have barriers between antennas



**Quick Install Guide-LED**

## Step 2-3. Installation of the Booster and Antennas (For TRUCK)

(1) Place outside antenna at the top of the vehicle vertically, and as high as possible in order to get the best outside signal at any driving location. Then connect it with outdoor port of the booster through outside cable.

*Notes: Keep outside antenna 30cm away from windows (including the sunroofs)*

(2) And put inside antenna in a place where mobile phone or other mobile devices are mostly used, connect it with the indoor port of the booster.

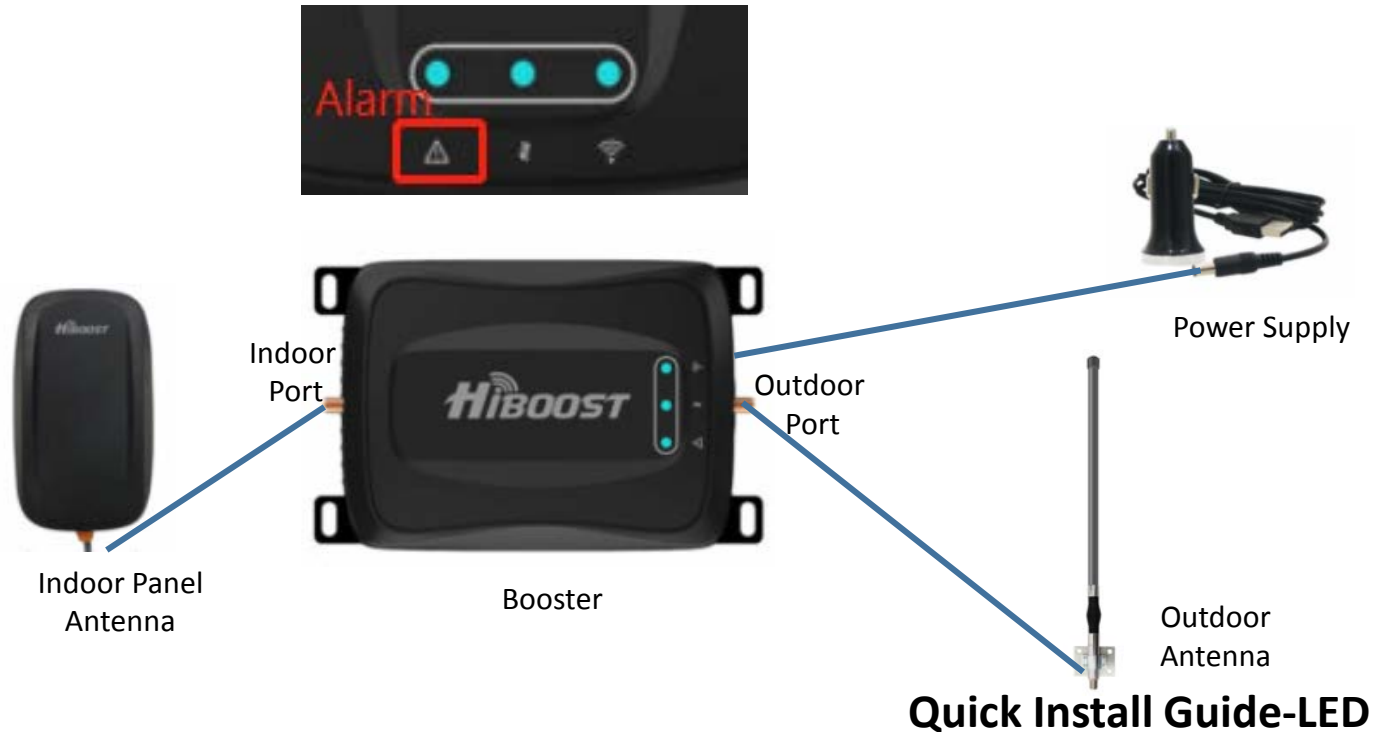
*Notes: Try placing inside antenna in the center console, or stuck down by the driver's side interior console wall.*

(3) After that, please close the door, power on the booster, check if the Alarm LED color is green or near orange or not. If not, adjust the position of inside antenna firstly, or then adjust outside antenna to make LED stay green, then the gain value reaches or near 50dB. If you can't get so, please try to make it Orange color, it means the gain is close to 50dB. Pay attention to keep the door closed when checking the gain in order to simulate the real vehicle driving status.

If the Alarm LED color can't be kept green, it shall be at least Orange, as this will ensure a better gain, otherwise it will seriously affect the performance of the booster, especially when the outdoor signal is weak in remote areas. This point is particularly important.

Measures taken to keep the maximum gain

1. Antennas shall be far away from each other
2. To have barriers between antennas



### Step 3. Test the Voice and Network after booster install

After above adjustment, 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 3<sup>rd</sup> party app Network Cell info lite.



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

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 your whole area, because its gain is limited to 50dB by FCC and may further reduce during booster install and the outside signal is changing all the time during the drive.*

#### Step 4. 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.

