

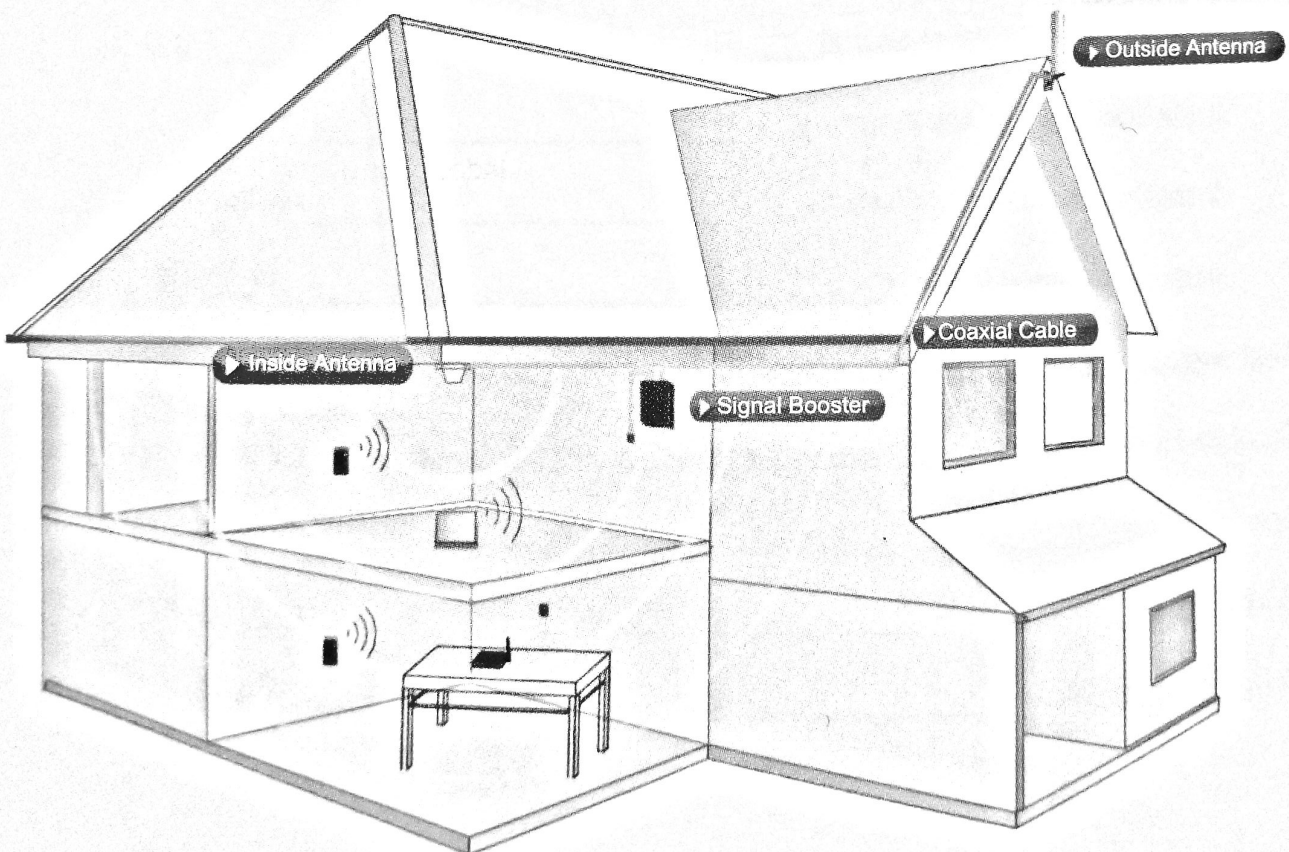
# How It Works

Our signal booster is a high-quality bidirectional signal booster that enhances cellular signals to areas that are prone to weak cellular coverage.

works with two antennas:

- An inside antenna that communicates with your cell phone.
- An outside antenna that communicates with the cell tower.

Signals sent from a cell tower are received by the outside antenna, amplified by the booster and then sent to your phone via the inside antenna. When your phone transmits, the signal is sent to the inside antenna, and then sent to the cell tower via the outside antenna.



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

# Package Contents

1. Unpack all package contents. For missing or damaged items, contact sellers.
2. Turn over the signal booster and record the signal booster information for reference:

Details #: \_\_\_\_\_

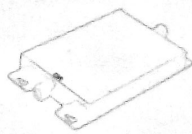
Purchase Date: \_\_\_\_\_

3. Keep the carton and packing material to store the product in case you need to return it.

Standard signal booster packages include the following items:

- One signal booster
- One outside antenna
- Cable for connecting the outside antenna to the signal booster, signal booster to indoor antenna
- One inside antenna
- One power supply

Signal Booster



Indoor Cable



Outside Antenna

(Option)



Yagi



sucker



logarithmic



ceiling







# Package Contents

Note: The following is our default kit. If you need other packages, you can contact customer service:

Model	Package Options
01- Kit	1 Outdoor logarithmic Antenna, 1 interior panel antenna and coax cable
02-Kit	1 Outdoor sucker Antenna, 1 interior stick antenna and coax cable
03-Kit	1 Outdoor logarithmic Antenna, 1 interior ceiling antenna, coax cable

For a detailed description, see Kitting Information.

picture	Antenna Type	Model No.	Usage Coverage
	Ceiling Indoor Antenna	CL	Ceiling antennas are ideal for signal divergence
	Logarithmic Outdoor Antenna Inside Antenna (Option)	LO	logarithmic antennas are designed to reach carrier towers
	Stick Antenna	SA	Designed for signal enhancement in 1-2 rooms
	Panel Antenna	PA	Panel Antennas allow optimum reception to targeted areas

# Before You Install

You will need (tools not included)

Make sure the following materials are prepared and ready for your installation.

\*1 to 3 hours

\*2 people (a person to help with antenna calibration)

\*ladder, phillip-head screwdriver, open-end wrench or adjustable wrench, drill (if routing Cable through wall)

## Installation Overview

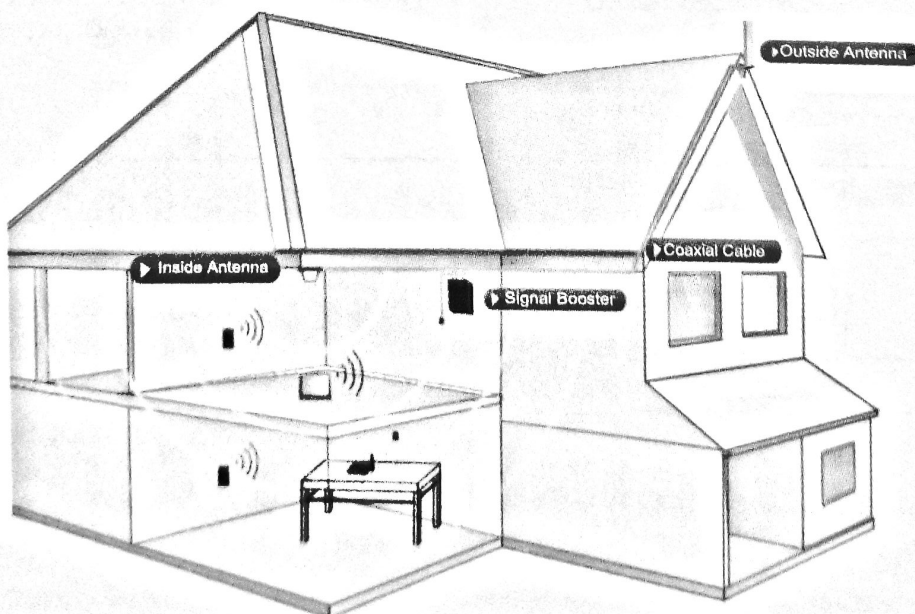
Step 1. Find the outside area that has the strongest signal. (See page 6 for directions as needed)

Step 2. Install the outside antenna in the area identified in step 1. (See page 7-8 for directions as needed)

Step 3. Install the inside antenna. (See page 8-9 for directions as needed)

Step 4. Mount the signal booster, connect the outside and inside antenna cables to the signal booster, and connect the booster to an AC power source. (See page 9-10 for directions if needed)

Step 5. Configure gain settings on the signal booster if needed. (See page 11 for directions as needed)



# Installing Your Hardware

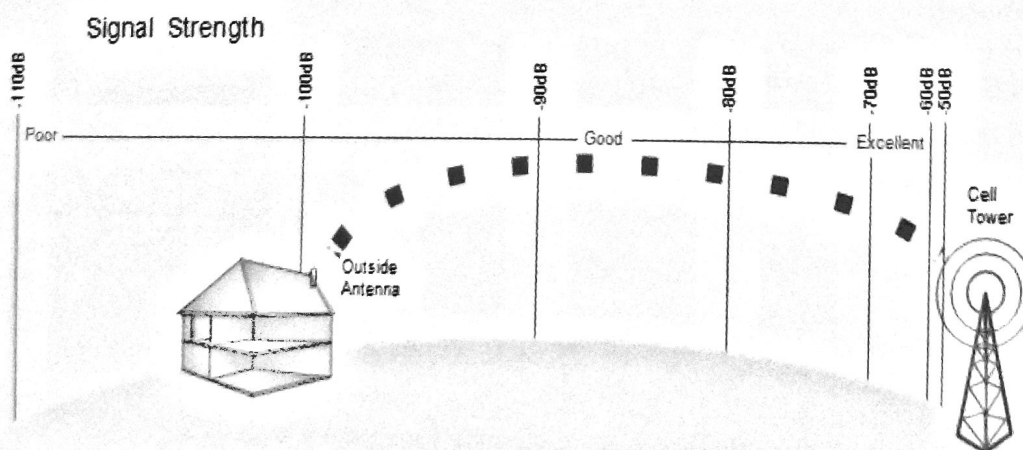
## Step 1. Find the area with the Strongest Signal

Before installing the outside antenna, find the area with a strong cellular signal source from your service provider by following the directions below.

Measure the strength of the existing cellular signal in various locations.

- Apple iPhones: Dial \*3001#12345#\* and press Call. In the top-left corner, a dB number appears instead of bars.
- Android devices: download apps such as "Network Signal Info" in the Google Play store to measure signal strength. Search check real signal strength to find other cell signal measurement apps.
- Internet: go to [www.speedtest.net](http://www.speedtest.net) to test 3G and 4G data rates.

The signal booster needs to acquire a minimum mobile communication signal as low as  $-100\text{dBm}$ . Signal readings usually appear as a negative number (for example,  $-85$ ). It is recommended that the signal be between  $-70\text{dB}$  to  $-90\text{dB}$ . That's when the signal is neither too strong nor too weak. Signals stronger than  $-50\text{dB}$  may cause the affected bands to shut down while displaying a flashing red LED (see the graph below). If your outside signal is too weak ( $-95\text{dB}$  or worse) you may need a high gain antenna, which can be aimed at the cell tower of your carrier to pull in a stronger signal to the booster.



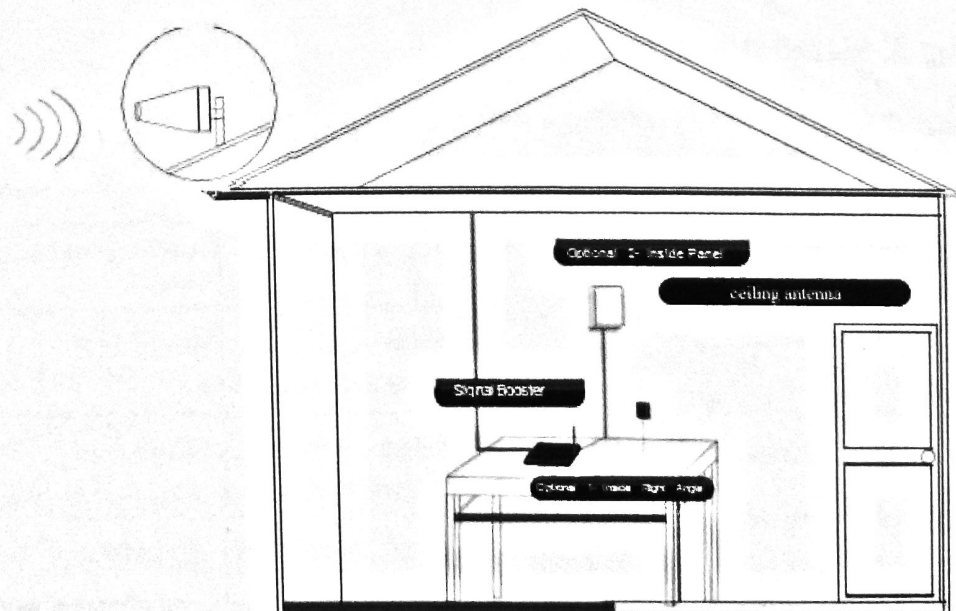
*Note:* Where you install your outside antenna in relation to the carrier's cell phone tower also determines signal strength. Although cell phone carriers try to place towers for maximum coverage, local ordinances and terrain features can restrict tower locations, which can limit signal strength at your location.

## Step 2. Install the Outside Antenna

1. Outside logarithmic antenna or directional antennas work best when facing the direction of cellular phone towers. Mount the outside antenna as high as possible.

If you are installing a logarithmic antenna, mount it facing the nearest cellular tower being used by your carrier in the area where you located the best signal source (see step 1 on the previous page).

2. Ensure that the mounting area has at least a 12-inch radius clear of obstructions and other radiating elements.
3. For best performance, place the outside antenna at least 30 feet from the inside antenna. Note that if the mounting area is prone to weak cellular signals or if dense building materials partially block the signal, the booster will operate at its default setting of 65 dB gain.
4. Do not collocate antennas or operate the outside antenna with any other antenna or signal booster.
5. Run the cable from the outside antenna to the signal booster. Hand tighten the connection



*Note: The outside antenna must be at least 30 feet horizontal or 50 feet vertical from the inside antenna for best performance. Make sure the inside antenna and outside antenna are facing away from each other.*

# Installing Your Hardware

## Installing the Logarithmic Antenna:

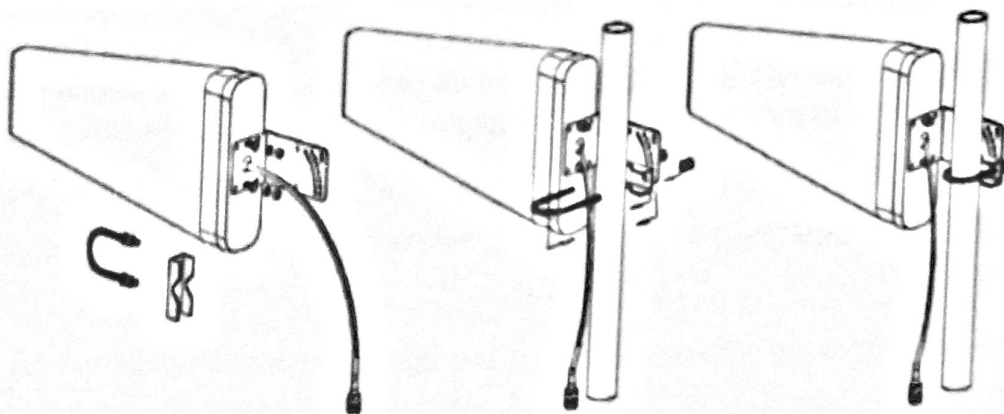
Step 1: Install U-Bolt on pole

Step 2: Slide pipe clamp over U-Bolt with the flat side facing away from the pipe.

Step 3: Slide antenna bracket onto U-Bolt in desired location.

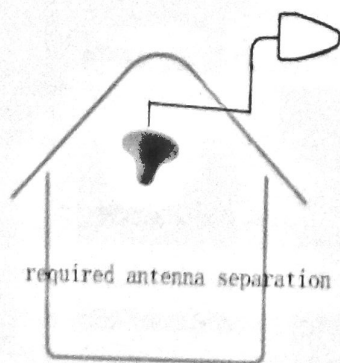
Step 4: Install flat washer, split washer and nut, hand tighten

Note: Antenna may be installed on a variety of pipe angles, ensure that the antenna is pointing in the direction of the closest cellular tower and is vertical with the drip hole at the bottom.



## Step 3. Install the Inside Antenna

Inside antennas come in ceiling antenna and flat panel versions.



If Coverage Area is ...	And Antenna Separation is...	Set all Dials to...
1500 - 2,000 square feet	40-60 feet	Maximum Power
1,000 - 1,500 square feet	30-40 feet	55 or 60
1,000 square feet and below	20-30 feet	45 or 50

Note: As you can see from the table above, acquiring the recommended inside and outside antenna separation optimizes coverage significantly. Any reduced antenna separation reduces the booster's coverage.

## Installing the Panel Antenna:

Connect the antenna by firmly screwing it onto the inside port of the Signal Booster. For best results, the antenna should be mounted in an upright position. The right angle antenna connects directly to the amplifier port labeled "Inside".

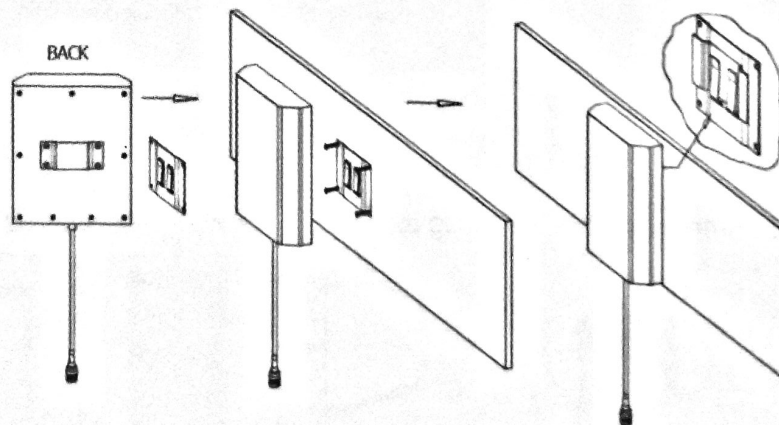
Step 1. Choose a location for mounting the antenna on vertical surface. Ideal height off the ground or floor should be the approximate height of your cell phone when in use.

Step 2. Using plate, mark position of desired screw placement with pencil or marker.

Step 3. Screw mounting plate into place with the slide panel protruding towards you.

Step 4. Slide antenna securely onto mounting plate.

Note: Be sure to provide enough separation from outside antenna. Panel antenna should not face outside antenna.



## Step 4. Install the Signal Booster

1. Select a location close to a working AC outlet. Do not expose the signal booster to excessive heat, direct sunlight, moisture, and airtight enclosures.
2. If you'd like to mount the booster to a wall, mark location of screw tabs on the wall in the desired location.
3. Use supplied screws or appropriate screws for surface of mounting location and drill through screw tab holes on booster.

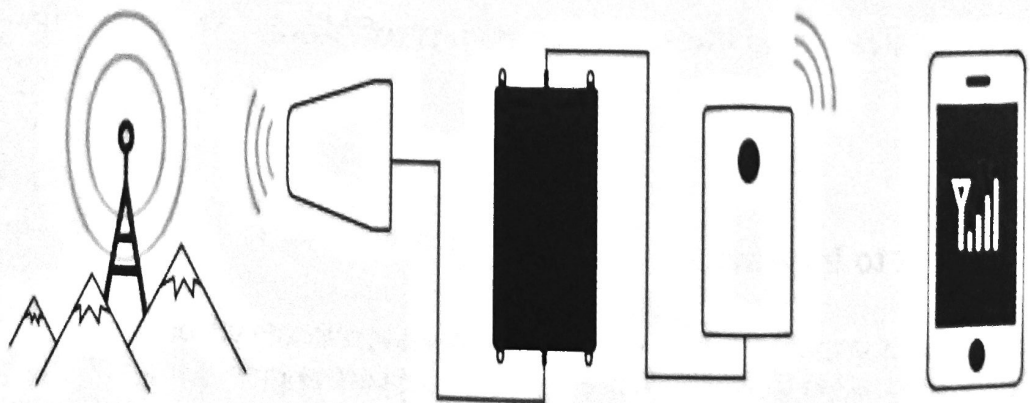


# Installing Your Hardware

4. Connect the outside antenna cable to the signal booster connector marked "Outdoor".  
Hand-tighten the connection.
5. Connect the inside antenna cable to the signal booster connector marked "Indoor".  
Hand-tighten the connection.
6. Connect the AC power cord to the signal booster.
7. Connect the plug on the other end of the AC power outlet.

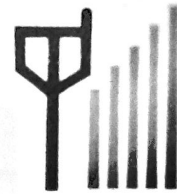
## Overall installation diagram

The following image shows how to install your kit components.

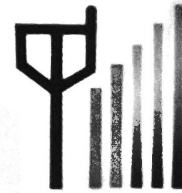


## Step 5. Test signals status

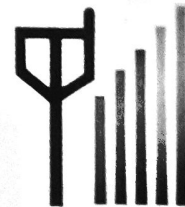
1)if there is only one signal,the signal strength is dead zone;



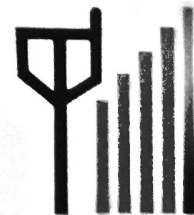
2)if there is two signal ,the signal strength is normal;



3)if there is three signal,the signal strength is OK;



4)if there is four signal,the signal strength is good;



5)if there is five signal,the signal strength is excellent.



## If you Want to Improve Coverage

1. Find a location that receives a stronger signal and relocate the outside antenna to that location or, for the logarithmic antenna, optimize the antenna angle.
2. Increase the distance between the outside and inside antennas.
3. Be sure your signal booster's dB gain is turned up to maximum gain on each dial.

**WARNING:** Do not attenuate the uplink and downlink dB settings below 35dB. This could cause the affected frequency band to shut down.

# Troubleshooting

In the event you encounter a problem, follow the suggestions below to resolve the issue.

## Troubleshooting

Problem	Resolution
Signal booster has no power	<p>Verify that the switch on the power supply is turned on and red LED is ON.</p> <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>
After installing your signal booster system, you have no signal or reception.	<p>Cable connections should be tightly fitted to the booster and antenna.</p> <p>Be sure the location of the outdoor antenna can receive good signals.</p>

## Signal Indicators

status	Resolution
No signal display	Note that the host does not receive the signal transmitted by the outdoor antenna. We need to check whether the outdoor antenna is installed correctly, whether the connector is tight, and whether the cable is up to standard.
Signal display but not full	The host has received the signal, but the signal source is not strong. It can be improved by adjusting the height, direction, and angle of the outdoor antenna.
	The first two methods do not solve the problem, you can try to replace the high gain outdoor antenna, or replace the better quality cable
The host signal is full, the phone is also full, but the phone cannot be called.	Check if the distance between the outdoor antenna and the indoor antenna is too close
The main unit and accessories are not damaged, but the signal is not received.	Check the geographical location of the installation site, whether there is any network signal

# Specifications

Specification	
Frequency	700 Mhz / 800Mhz / 850Mhz/ 900Mhz / 1700 Mhz / 1800Mhz / 1900Mhz / 2100Mhz / 2300Mhz / 2500Mhz / 2600Mhz
Gain	60-75dB
Max output Power	23dBm/+3DBM Total power
Impedance	50ohm
Seclusion	>80dB
Power Supply	AC 110V - 220V DC 5V – 12V
Noise Figure:	$\leq 5$ dB
Connector	N-Female connector
Operation Temperature	-10°C - 60°C
Delay	$\approx 5$ usec
Standing Wave	$\leq 1.5$ dB

# Warranty

## One-year Products Warranty

Our warrants its products for one year from the date of purchase against defects in workmanship and/or materials. Specifications are subject to change.

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.

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.

This warranty does not apply to any product determined by us to have been subjected to misuse, abuse, neglect, or mishandling that alters or damages the product's physical or electronic properties.

Warranty returns must first be authorized in writing by us. Disassembly of any our product by anyone other than an authorized representative of us voids this warranty in its entirety. We reserves the right to make changes in any of its products without incurring any obligation to make the same changes on previously delivered products.

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 us 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 us. This warranty shall not apply to any products or parts thereof which have been subject to accident, negligence, alteration, abuse, or misuse. We makes no warranty whatsoever in respect to accessories or parts not supplied by it.