
Model: LTE-A

FCC ID:2A57XLTE-A

Cell Phone Signal Booster

User Guide

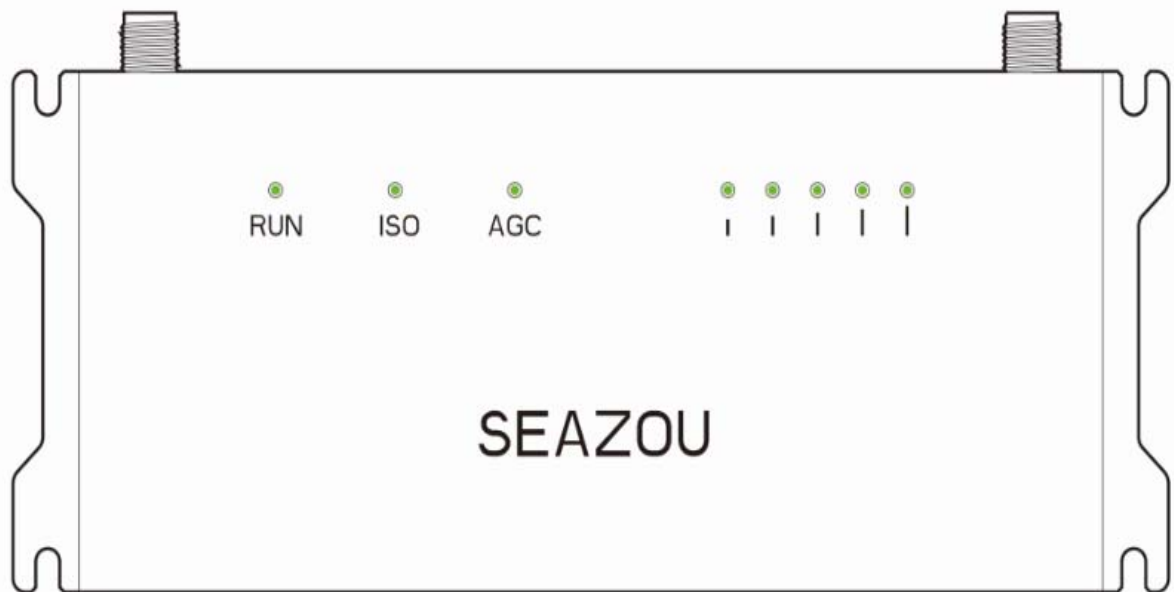


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The preface

We know that reading manuals is not fun. But we promise it will be worth it. We have helped hundreds of customers install signal amplifiers to enhance their signals, and in the process have compiled the lessons learned and problems encountered by customers during their installation in this manual. Read before installing to avoid the most common wrong installation and make sure your system works as well as possible.

How the Cell Phone Signal Booster works

Mobile phone intelligent link signal enhancer is used for wireless forwarding, bidirectional amplification of the front and back link signals of base station, expansion of mobile communication signal coverage range, to fill the blind area of mobile communication coverage. Designed to help mobile users improve homes, offices and other areas where cellular signals are weak or unreliable. When the intensifier system works, the outdoor antenna receives a signal from the nearest cellular base station, amplifies it, sends it to the signal booster, and then the indoor antenna retransmits the received signal to your mobile device. The signal generated by your phone is also amplified by the indoor antenna and radiated into the air through the boosters and the outdoor antenna.

Mobile phone Signal Booster self oscillating signal

Signal enhancer system receives and amplifies the upstream and downstream signals of base stations, mobile phones and other terminals through the antenna. When the signals are amplified by the enhancer system and radiated into space through the antenna, there will always be a part of the signals received and amplified again by the antenna at the other end through the spatial link, thus forming a closed loop. The distance between the two antennas is close, and the loss of spatial link is small, so the indoor antenna receives a large signal from the user's antenna, and the whole system forms a closed loop that keeps circulating and amplifying. Finally, the system will self-excitation and generate

shock signal, which is harmful, affecting normal communication and interfering with the base station.

How to avoid the mobile phones Signal Booster vibration signal

As can be seen from the above description, the distance between the outdoor antenna and the indoor antenna is too close to the cause of the amplifier oscillation signal. For the wireless amplifier, it is necessary to ensure that the distance between the outdoor antenna and the indoor antenna is long enough. It is best to have wall isolation between the indoor and outdoor antennas. A lot of engineering problems with amplifiers are caused by the fact that the antennas are installed too close to each other and the enhancer system is self-excited. When the host detects the shock signal, it will activate the shock signal cancellation function. Activating the shock signal cancellation function will lead to a smaller coverage area of the equipment. If the distance between the indoor and outdoor antennas is too close, the system isolation is very poor, and the host cannot eliminate the shock signal. In order to avoid the shock signal interfering with the base station, the main machine will shut down. So it is very important to keep enough distance between the indoor and outdoor antennas for the amplifier system to work. The vertical distance between the indoor and outdoor antennas is more important than the horizontal distance. The minimum vertical distance between the two antennas should be more than 25 feet and the minimum linear distance should be more than 40 feet.

What does the product contain

The signal booster system consists of the following parts

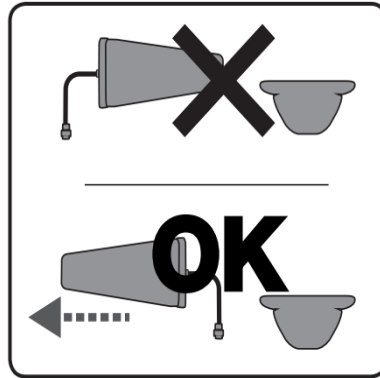
- (1) A host of signal booster.
- (2) An outdoor antenna.
- (3) An indoor antenna.
- (4) One power adapter.
- (5) One low loss coaxial cable.
- (6) One accessory package (fixed antenna and cable accessories).

Note: In order to ensure the stability of the equipment, it is forbidden to power on the mainframe (the port of the mainframe is not connected to the antenna). Please connect the indoor and outdoor antennas as required, and then power on the equipment.

How to install your signal booster

Before starting installation

- (1) Ensure that there is at least one bar of outdoor signal.
- (2) Ensure that the supercharger is placed close enough to the existing power socket.
- (3) Ensure that there is sufficient spacing between the location for installation of outdoor antennas and indoor antennas, with vertical distance between antennas more than 25 feet and linear distance between antennas more than 40 feet. Reducing the antenna spacing will reduce the coverage provided by the boosters.



NOTE: With a directional antenna (outside or inside) kit, the direction of the directional antenna should not be "toward" another antenna.

Tools Required



Phillips Screwdriver



Drill



Mobile Phone

Overview of installation process

- (1) Please read this User Manual, read from beginning to end.
- (2) Find the best location and direction of outdoor signals. This step is the most time-consuming, but it's worth the effort. Doing this well will greatly help amplifier system performance.
- (3) Install the outdoor antenna at the position determined in step 2.
- (4) in the need to increase the signal of the installation of indoor antenna.
- (5) Install signal booster.

(6) Cable layout.

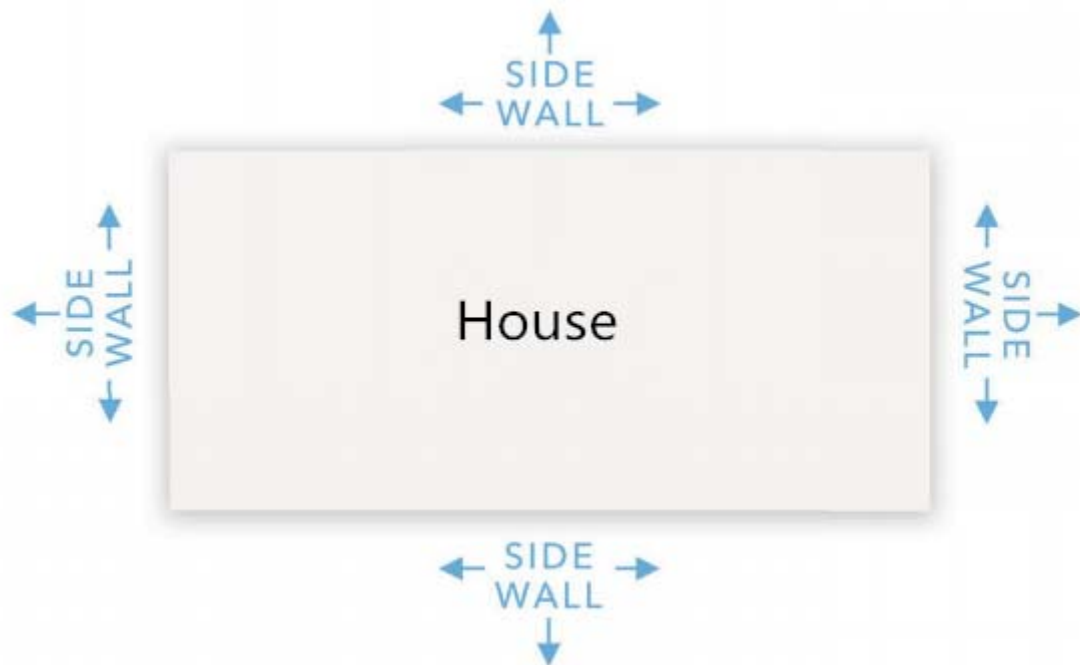
(7) Optimization of mainframe power test.

Detailed installation

Step1: Find the location where the received signal is strongest

Using your cell phone, locate the location where the outdoor signal is strongest and use it to install an outdoor antenna. In general, the area facing the base station is the best signal. To find the location of your carrier's nearest cell tower, head over to www.antennasearch.com.

Here are some of our recommendations for testing the location and orientation of your outdoor antenna:



vertical view

Note: The coverage area provided by the booster is directly related to the strength of the input signal received by the outdoor antenna. Outdoor antennas are best placed where the signal is strongest. Please note that if the signal is very weak where the outdoor antenna is installed,

indoor coverage will be limited.

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

For specific dB signal measurements, use the methods below.

- Apple iPhones: Dial *3001#12345#* and press Call. In the top-left corner, a dB number appears instead of bars.
- Android devices: download the app “Network Signal Info” in the Google Play store.
- Internet: Go to: www.speedtest.net to test your 3G and 4G data rates.

Step 2: Install an outdoor antenna

After finding the area where the signal is strongest, place the outdoor antenna as high as possible in the area. Should be considered when installing outdoor antenna, outdoor antenna installation position with indoor antenna installation position, whether there is enough distance to ensure that the vertical distance between the two antenna above 25 feet, horizontal distance according to the actual installation environment, but may increase the horizontal distance between two antennas, guarantee the linear distance between antennas above 40 feet.

Before installing a directional antenna, note that the antenna should be mounted on a pole or pipe (not provided), at the highest possible location above the roofline where the antenna can “see” your cell tower. Mount horizontally, aimed in the direction of your nearest cell tower. To find the

location of your carrier's closest cell tower, go to www.antennasearch.com.

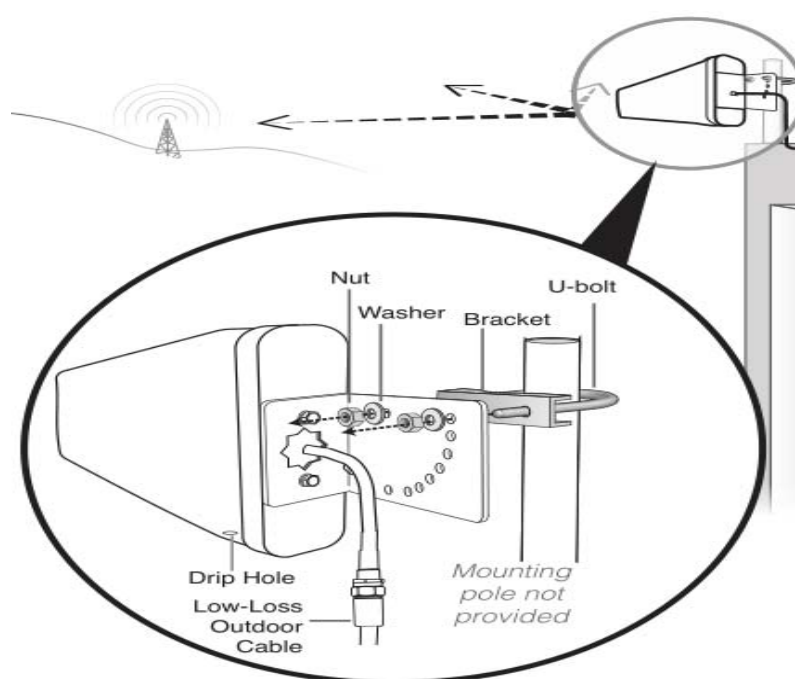
Ensure that the mounting area has at least a 3-ft radius clear of obstructions and other radiating elements and orient the antenna with the drip hole at the bottom.

Once you have identified your install location, assemble the u-bolt, bracket, nuts and washers onto a pole or pipe as shown in the illustration. Keep the connections loose enough to allow the antenna to rotate until the optimum direction is found.

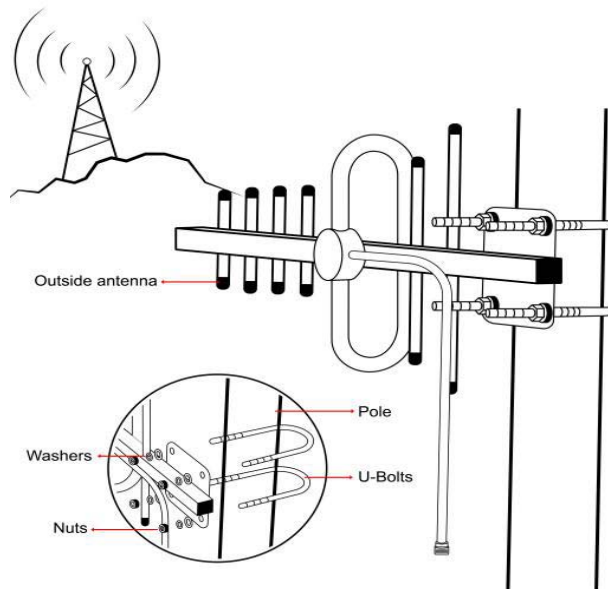
Once the outside antenna is secured to a pipe or pole, Connect antenna to cable connector for the outdoor cable provided with your kit and run along route to planned location of your booster.

Installation steps

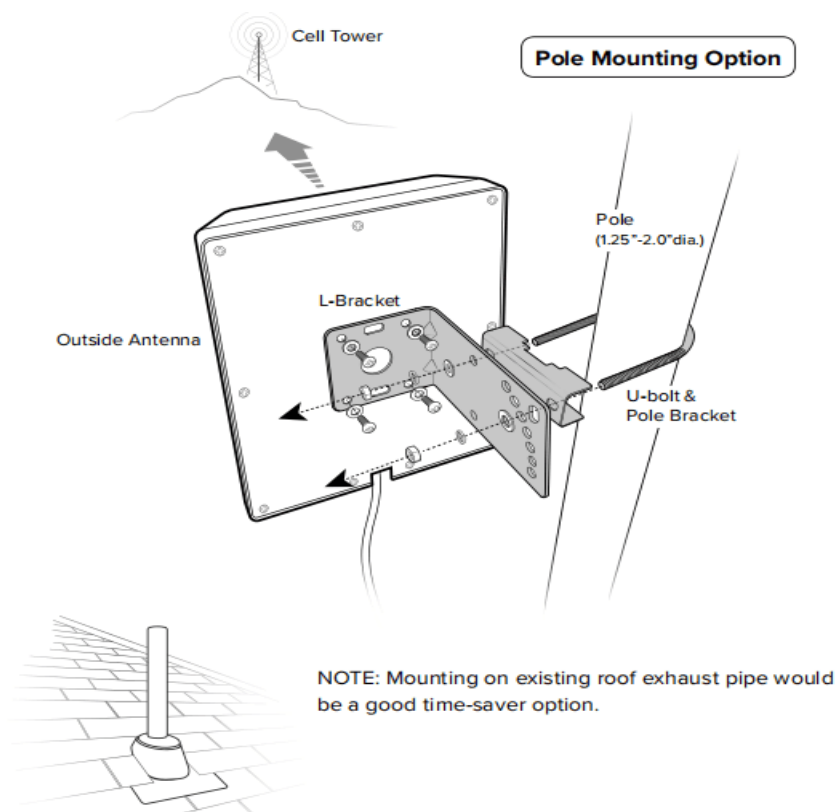
- (1) Fix the outdoor antenna on a long rod and tighten the screws.
- (2) Let the outdoor antenna point to the direction of the base station.



Option A: Log Periodic Antenna



Option B:Yagi Antenna

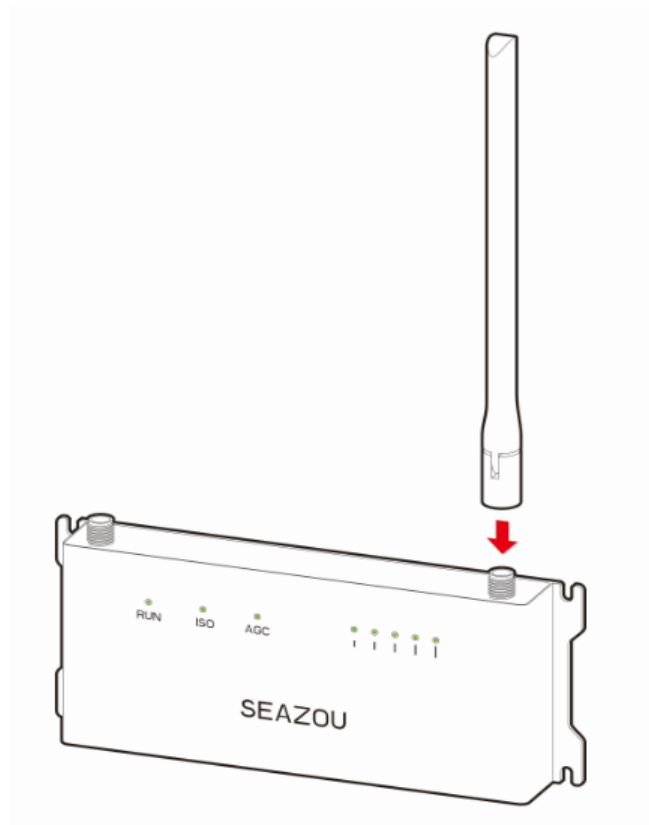


Option C: Panel Antenna

Step 3: Install an indoor antenna

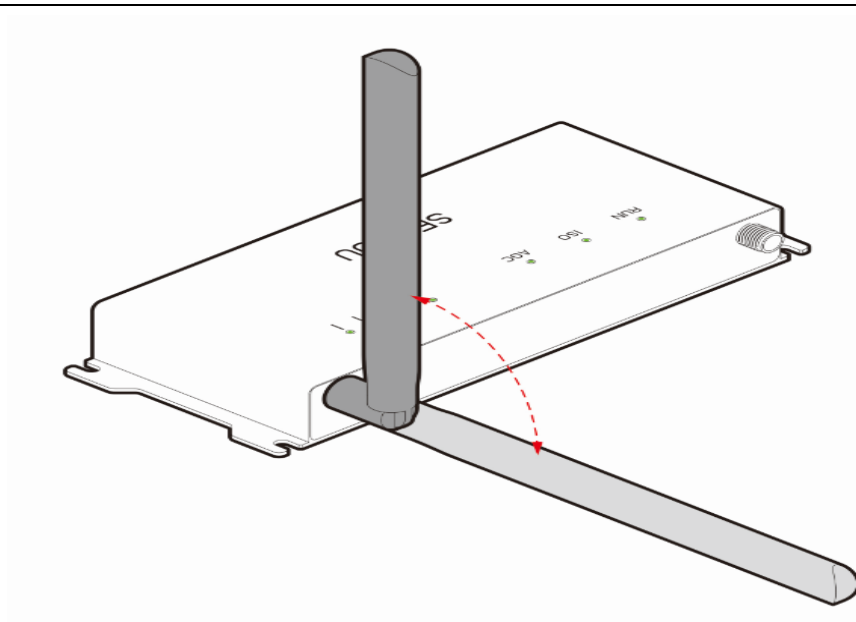
Indoor antenna has right Angle antenna, panel antenna or ceiling antenna, buy different packages with different indoor antenna.

Option A: Right Angle Antenna



Installation steps

- (1) the whip antenna is connected to the turbocharger "INDOOR" port.
- (2) Place the host with the right Angle antenna in the area where the signal is weak.

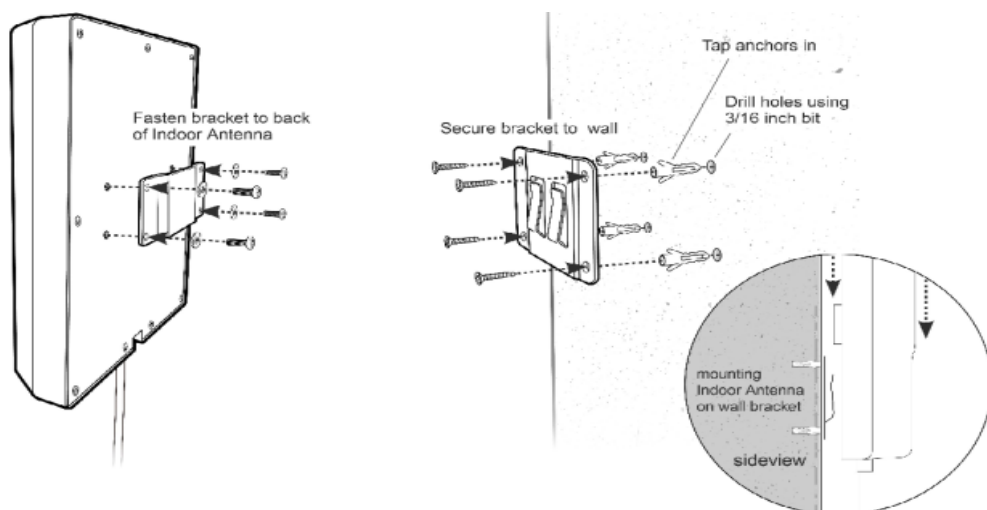


Note: the right Angle antenna should be oriented perpendicular to the ground, whether the mainframe is flat or mounted on a wall

Option B: Panel Antenna

Installation steps

- (1) Press the antenna fixing plate on the wall of the position of the indoor antenna to be installed, and mark the position of the screw hole.
- (2) Drilling holes at the mark on the wall with drill bit, and fixing the antenna fixing plate with self-tapping screw.
- (3) Fix the antenna firmly on the mounting plate.

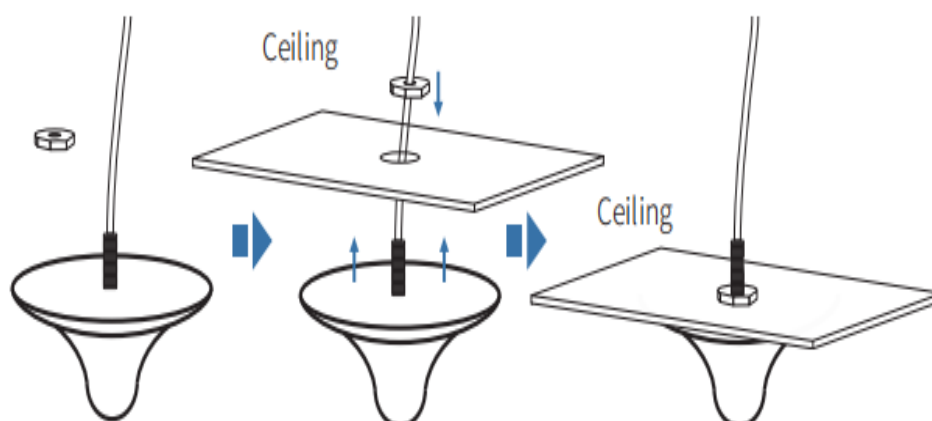


Note: The panel antenna should be oriented to the area that needs signal coverage, and should not point to the outdoor antenna.

Option C: Top Suction Antenna

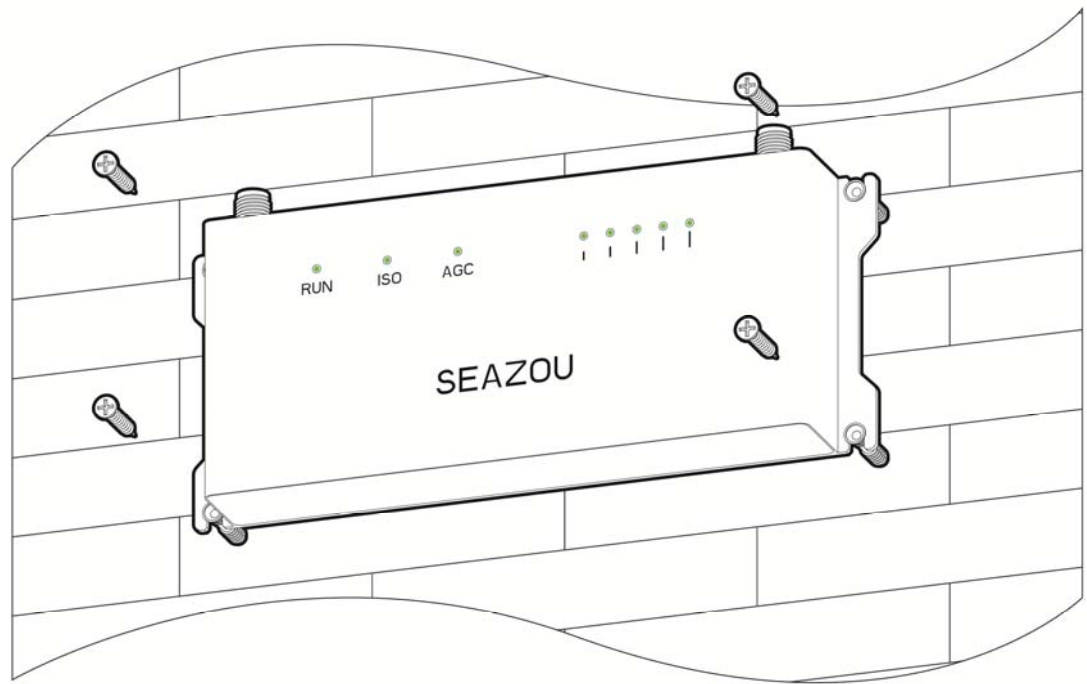
Installation steps

- (1) Drill a hole 20mm in diameter on the ceiling. The maximum thickness of the ceiling should be 30mm.
- (2) Unscrew the fixing nut from the antenna, put the antenna cable into the hole, and use the fixing nut to screw down the fixing antenna through the cable.
- (3) Connect the indoor antenna to the port marked indoor on the booster.
- (4) tighten the antenna fixing nut.



Note: The ceiling antenna is suitable for 180 degree coverage in the center position. Please install it on the ceiling in the center of the room.

Step 4: Install the host



The main engine must be installed in the indoor area. Changes in air humidity and temperature may affect the reliability of the equipment. Can not be installed in places exposed to direct sunlight and rain. The host machine is suitable for horizontal or wall-mounted installation, and can be placed in a suitable place.

Wall Mounting

- (1) select the appropriate installation wall.
- (2) Install the host machine on the wall manually, and mark the location of the screw hole on the wall.
- (3) Drill holes at marks on the wall with drill bits.
- (4) Install 3.5*30 self-tapping screws in the drilled hole, and fix the main machine.

Step 5: Cable layout

After the indoor and outdoor antenna and the main machine are installed and fixed, connect the antenna with the port of the main machine by cable. The distance between the port of the main machine and the indoor and outdoor antenna should be wired in the shortest way.

The steps are as follows

- (1) Disassemble the cable package and place it so that it can bend naturally and smoothly.
- (2) One end of the cable is screwed together with the antenna port, and the cable is kept natural and smooth. The cable is fixed on the wall with a fixing clip every 1-1.5 meters in the direction of the indoor host, and the other end of the cable is connected with the host port.
- (3) the vertical place of the cable wiring should be naturally bent to avoid damage caused by the strong pull of the cable.
- (4) Tighten the antenna and the cable port, and the cable and the host port to ensure good contact of the interface.
- (5) The cable end is waterproof and moisture-proof to avoid water oxidation, which will lead to the reduction of indoor signal coverage area.
- (6) Complete cable layout.

Step 6: Optimize the mainframe power test

After completing the installation steps above, check the following notes

- (1) Minimum vertical distance between outdoor and indoor antennas is 25 feet and minimum straight-line distance is 40 feet.
- (2) The orientation of the outdoor antenna should not point to the indoor antenna.
- (3) The OUTDOOR antenna and INDOOR antenna are properly connected to the host port. The OUTDOOR antenna is connected to the host "OUTDOOR"


and the INDOOR antenna is connected to the host "INDOOR" port.

The host port	Instructions
DC12V	Connect the power adapter
OUTDOOR	Connect the outdoor antenna
INDOOR	Connect the Indoor Antenna

Interface specification

Power on the main engine when the check is complete. After connecting the power supply, the green light of ISO and RUN of the host machine is always on (when the outdoor signal is strong, the AGC light is on). The signal bar displays the working signal grid, indicating that the installation is successful and the system works normally.

Description of main engine indicator light

Light indicating indicator light	Functional specifications
	Signal indicator light, the more light, the stronger the signal
RUN	Running indicator light, always on when working
ISO	Indoor and outdoor antenna isolation indicator, when the antenna isolation is satisfied, the host is working normally, the green light is on; when the antenna isolation is not satisfied, the host is off and the red light is on
AGC	Automatic gain control indicator light, the space signal is generally better when the light is flashing or always on

How to improve amplifier system performance

After installing the signal amplifier system, you do not need to concern yourself with this step if the signal is satisfactory for use.

(1) Find a location that receives a stronger signal and reinstall the outdoor antenna to that location.

(2) Increase the distance between outdoor and indoor antennas.

Note:

(1) The signal enhancer can only work at the correct frequency, so please make sure that your mobile phone frequency band is the same as the signal enhancer frequency.

(2) Signal enhancer only makes weak signals stronger. It can't produce a signal. This means that if the outside antenna doesn't pick up any signal, it won't work.

(3) The antenna must be connected first, and then the power supply; Otherwise you could damage the amplifier.

(4) Make sure the indoor antenna is at least 25 feet away from the outdoor antenna vertically and 40 feet away straight from the outdoor antenna. The outdoor antenna should not point to the indoor antenna.

The above is essential for the proper operation of the booster.

Common faults and solutions

Fault 1: ISO lights up red

solution:

(1) Check whether indoor and outdoor antennas are installed as required. The vertical distance between antennas is more than 25 feet, and the linear distance is more than 40 feet. There should be wall isolation between indoor and outdoor antennas.

(2) Check whether the radio frequency cable connector is loose, tighten it and install it firmly.

(3) Check whether the receiving antenna is damaged, and replace it if necessary.

(4) Replace the installation position of the outdoor antenna.

(5) Restart the host.

Fault 2: Main engine indicator light is not on

solution :

(1) Check the power supply.

(2) Recharge the adapter.

Fault 3: Indicator light is normal, but the signal strength is unchanged

solution:

(1) Check whether indoor and outdoor antennas are installed in reverse.

(2) Check whether the receiving antenna is damaged, and replace it if necessary.

(3) Check whether the RF connection port is loose, tighten it and install it firmly.

(4) Check whether the amplifier host, antenna and other accessories are selected correctly, and whether they match the type of mobile phone card they are using.

Fault 4: The signal is improved after installation, but the coverage area is small

(1) Check the status of indicator light of main engine:

A. AGC indicator light is always on, and there are only four or less signals in the signal grid.

Reason: The main engine is operating in self - slashing gain mode.

solution: Shut down the main engine, reinstall the outdoor antenna position, keep the maximum distance between the outdoor antenna and the indoor antenna.

B. AGC indicator light is not on, and there are only signals below four grids in the signal grid.

Reason: Weak spatial signal.

solution: Find the location of strong signal again and install the outdoor antenna.

Kitting Information

By default, the outdoor antenna is shipped with the Yagi Antenna, and the indoor antenna is matched with the Right Antenna.

Component	Description	Gain/Loss
Outdoor Antenna	Log Periodic Antenna	7.5dBi
	Yagi Antenna	6dBi
	Panel Antenna	6.5dBi
Outdoor Cable	3D-FB(50Feet)	3.7dB
Indoor Antenna	Right Angle Antenna	3dBi
	Panel Antenna	6.5dBi
	Top Suction Antenna	4dBi
Indoor Cable	3D-FB(15Feet)	1.2dB

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

STATEMENT

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 co-located or operating in conjunction with any other antenna or transmitter.

IC RF EXPOSURE STATEMENT

The device is compliance with RF exposure limits. The minimum distance from body to use the device is 20 CM. Le present appareil est conforme aux conformite ou aux limites d'intensite de champ RF. La distance minimale du corps a utiliser le dispositif est de 20cM.

WARRANTY AND SAFETY STATEMENT

There are on consumer serviceable or modifiable parts inside this booster product. Alteration or abuse of the booster or other components will void this product's warranty, and could be dangerous to the user.

This is a CONSUMER device.
BEFORE USE ,you MUST FEGISTER THIS DEVICE with your wireless provider and have your provider's. 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.
You MUST operate this device with approved antennas and cables as specifile by the manufacturer. Antennas MUST be installed at least 20 cm(8 inches)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 may be operated ONLY in a fixed location for in-building use.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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:

- Reorient 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

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.

How to register the booster with Serial Number ?

Step 1: Open the following registration Link given

 www.waveform.com/pages/guide-to-signal-booster-registration

Step 2: Find out mobile phone service provider that compatible with your booster. Click and Enter.

Step 3: Fill in your Location information and Booster's Serial Number, The Serial Number is the FCCID, (on the label on the back of Booster unit)

WARRANTY

PRODUCT WARRANTY 30-Day Money-Back: All SEAZOU products are protected by a 30-day moneyback guarantee. If for any reason the performance of any product is not acceptable, the product may be returned to the reseller with a dated proof of purchase.

2-Year Warranty SEAZOU signal boosters and kits are warranted for 2 years. 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 Returned Material Authorization (RMA) number supplied by SEAZOU will supply two options: repair or replace. SEAZOU will cover the cost of delivery for the consumers located within the continental U.S. This warranty does not apply to any signal boosters or kits determined by SEAZOU to have been subjected to misuse, abuse, neglect, or mishandling that alters or damages physical or electronic properties. 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 SEAZOU products that are packaged with other SEAZOU accessory products are intended for resale and used as a single integrated system.