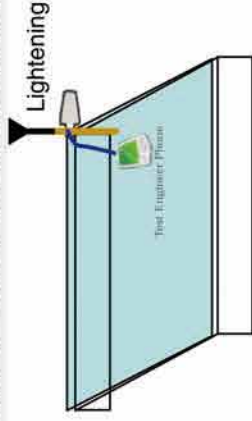


Installation Of Omni-directional Antenna



Test the call quality of Outdoor antenna (for professional installation team only)



Fix the Outdoor antenna after selecting the best position, and adjust slightly its height or angles in order to get the signals with suitable input power level and calling quality.

4.3. Cable layout and connector assembly

- (1) Keep the type, specifications, routing direction, location, and curvature radius of cables in compliance with the design requirement. Place cables in good order, bend them smoothly, and protect the outer skin against any damage.
- (2) Bind cables in good order when laying them on cable racks. When leading cables in or out of troughs, use a hole-opener to open cable troughs and then install PVC lock-nuts to protect them.
- (3) Keep horizontal cables straight and fasten them stably with a fixing clip every 1 to 1.5 meters, with a proper stress.
- (4) Bind and fasten vertical cables every two to three meters to avoid damaging cables or connectors owing to their own heavy weight. Take back the cables and re-lay them when you have difficulty in pulling them, and avoid using a strong force to pull them.
- (5) Separate RF cables from power cables. Take proper isolation measures if they have to be placed on the same cable racks owing to the site condition restriction.
- (6) Correctly fasten all connection parts of the whole system, from the antenna to active interfaces to passive interfaces, and keep electrical interfaces well contacted. Give waterproof treatment to Outdoor connection parts.
- (7) Take lightning protection measures for the antenna and feeder system in accordance with the design requirement. Avoid deforming the antenna feeder where grounding clips are placed, and give waterproof treatment to the feeder.
- (8) Keep exposed indoor cables in good order. Install PVC troughs or tubes if the exposed cables are more than 1 meter long. Place small passive RF parts such as power splitter in cable troughs.
- (9) Process both ends of RF coaxial cables as follows:
 - Keep the same redundant cable length and keep the length of stripped cables to agree with the corresponding connectors.
 - Use a proper force to cut the jacket layer or insulation layer and avoid damaging the braid shielded net and cores.
 - Weld cores firmly and smoothly with a proper amount of solder, without solder projections or nodules. Assemble coaxial cables strictly in accordance with the installation specifications.
 - Keep a moderate length of heat-shrinkable tubes and heat-shrink the tubes evenly when adding heat-shrinkable tubes to the end of cables.
 - Protect the ends of cables against water and dampness. Use waterproof tape to give waterproof treatment to exposed cable ends. Cut off the end if it is dampened or water-soaked.

5. Indoor antenna installation

Proper antennas shall be selected according to the site conditions and the requirement. And more than one antenna can be used with the repeater, especially for repeaters equal with or over 20dBm, and 30dBm can be connected with up to 10 antennas in order to send the signals to larger areas or distribute the signals equally. Please consult our professional engineers about the solution if you want to connect more than one antenna.

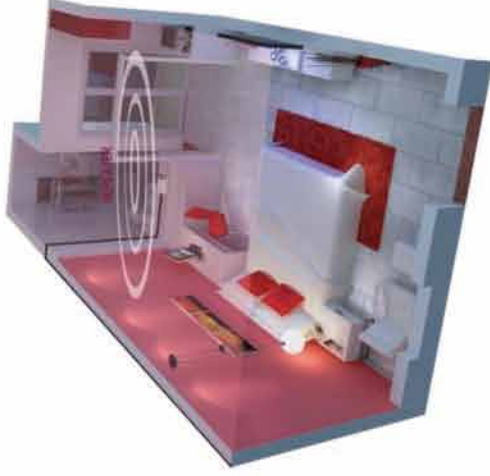
- (1) Indoor ceiling Omni antenna is suitable to be installed in the center and radiate all directions.



- (2) It is better to use a directional panel antenna when the coverage shape is long and narrow (corridors, long row of houses in two sides, tunnels or elevators or rural open space).



- 3) The small whip antenna is suitable to be installed use for small room or apartment. It is very convenient for simple use with a good result.

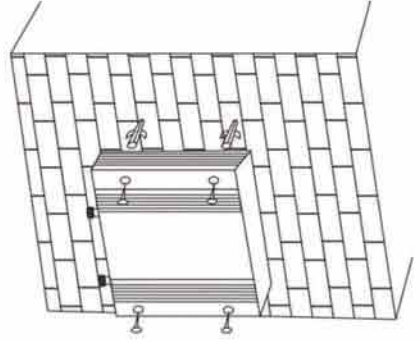


5.1. Repeater Installation

5.1.1. Installation Steps

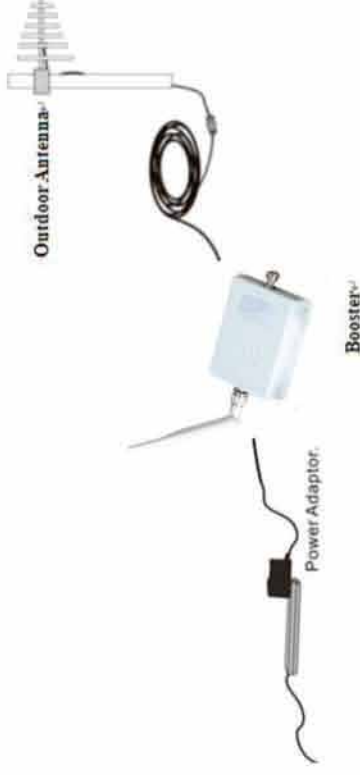
The Repeater shall be installed in Indoor areas only

- 1) Connect the power supply and the cables properly to the repeater ports.
- 2) Check again to make sure the repeater is installed firmly and repeater alarm LED must stay green.



5.1.2. Repeater's ports description

- 1) Outdoor Port: connected with the outdoor antenna by cable.
- 2) Indoor Port: connected with indoor antenna directly or by cable.
- 3) DC Port: connected with power supply.



5.1.3. Accessories selection

Please pay attention to the two points of "frequency" and "impedance" during the selection of the accessories. All accessories shall support the repeater's frequencies from feeder line, antenna and splitter to combiners etc. For example, the repeater's frequency is GSM900, so all the accessories must support the GSM900 frequency. And the repeater's impedance is 50ohm, so the accessories shall all be 50ohm. To use any other impedance of coax will put an extra load on your repeater, shorten its life span and decrease the system performance.

5.1.4. Switch on power

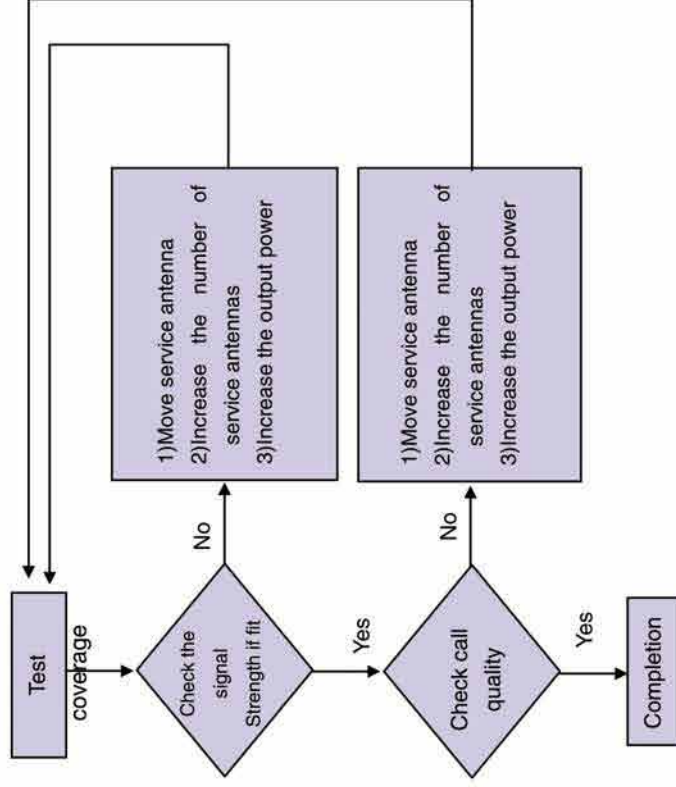
After power is on, check firstly the alarm and power LEDs.

Status and definition of POWER indicators:

Status	Definition
Green	Normal
Off	DC power problem

5.1.5. Check whether the coverage is good

- (1) Have a test with mobile phone or data card (engineering mobile phone is preferred). If the signals in most areas have not been improved, please check below again:
 - The weak input signal leads to the low output power. Change the direction of Outdoor antenna or its installation position or replace Outdoor antenna with higher gain antenna to increase input signal power level.
 - Check whether it is necessary to add more Indoor antennas since barriers block the signal penetration, also check whether the repeater's power is enough; please install more Indoor antennas or replace with a repeater of higher power level.
- (2) If the signals in small part of the areas have not been improved, please check below:
 - Check whether the service antenna is installed correctly or not, you may try to move the antenna location to improve coverage.
 - Check if it is necessary to adjust the direction of the sever antenna.
 - Check whether it is necessary to add one or more antenna to enhance the coverage of special areas.



● Remark:

Increase the output power ---recommended ways: adjust the Outdoor antenna direction / location, or replace with higher gain antenna to increase input signal strength.

5.16 Repeater does not communicate in Power-ON status

- (1) The power is on but can not to call the phones. It shall be caused by the insufficient isolation between Outdoor antenna and serve antenna.

Please take below measures:

 - ★ Firstly check whether the connection is correct.
 - ★ Secondly adjust the antennas' directions or locations or enlarge the distance between them.
 - ★ Thirdly replace a lower gain repeater if you have one backup.

The following measures can also be tried:

- ★ Use the roof of the building to enlarge the isolation (Please try to place the Outdoor antenna and Indoor antenna in different floors).
- ★ Use some obstacles (Such as wall).
- (2) The repeater's power is on but the phone is not connected into the network and still cannot communicate.
 - ★ **Reason 1:** There are loose or wrong connections in the repeater system.
 - ★ **Solution:** Please try to fasten the connections between the different parts of the system.
 - ★ **Reason 2:** The signals received by Outdoor antenna of other operators nearby are too strong. (For example, the other operators' signals are 10 dB stronger than the needed signals.)
 - ★ **Solution 1:** Change the direction of Outdoor antenna or its installation position, so that the gap of signal strength is reduced between operators.
 - ★ **Solution 2:** Use barriers (like buildings) to block signals of other operators.



SAFETY INFORMATION

The Federal Communications Commission(FCC) has tested this product and found it to comply with their RF Exposure Requirements,pursuant to FCC Part 22 and 24.

To comply with the FCC RF exposure requirements, keep the human user's body at least 8" (20cm) from the indoor antenna of the booster.

Don't expose this product to extreme low or high temperature (-20°C and 55°C).

There are no 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.

PACKAGE CONTENTS

- 40db Booster
- Magnetic Mount Antenna
- Patch Antenna
- Velcro And Screw Mounting Kit
- User Manual (This Document)

Usually you should get the Mobile Booster kit like picture I or II, it includes everything you need for installation. Before using it , please confirm your Booster's frequency range is correct with your service network, otherwise, the amplifier will not proper working for you.

CONNECTING THE BOOSTER

The outside antenna receives a signal from the cell tower and passes them to the booster, which amplifies the signal and transmits it to your cell phone via the internal antenna. The inside antenna receives the outgoing signal from your cell phone and passes it to the booster, which amplifies the signal and sends it to the outside antenna. The outside antenna transmits the signal back to the cell tower

1.Connect the Outside Antenna :The magnetic antenna is for outdoor use only. Select an outside mounting location. For best performance, keep the antenna on top of the vehicle. The outside antenna should be located in an area with at least 12" (30cm) of space on all sides that is free of obstructions, and other radiating elements such as a radio antenna. Screw the outside antenna to the outdoor connector of the booster, and then tighten it until snug. Do not over-tighten.

2.Connect the Inside Antenna: The patch antenna is intended for indoor use only. Do not mount on a surface within 4" (10cm) of metal. Screw the patch antenna to the indoor connector on the booster. The patch antenna must be placed directly on the cell phone or cellular data card with the VELCRO provided for best results. The cable is long enough to reach the booster and cradle location for convenience of use. The booster is designed to be used while the cell phone is in its cradle or connected to a cellular modem. If the phone is disconnected from the cradle , reception will significantly decrease.

Note: The inside and outside antennas should be at least 6' (2 m)apart, if possible.

3.Connect the Power Cord: Connect the DC power cord into the vehicle's DC power source, Verify that all of the connections to the booster are tight and secure, plugging the power cord to the booster, the green LED light will glow, indicating that the booster is ready to use. Note: You may purchase an optional AC power supply if you want to use the booster as an indoor desktop system.

WARNING: The booster is rated for DC6V input voltage. DO NOT use the booster with a higher-voltage power supply. This could damage the booster or cause personal injury.

4.Mounting the booster (optional): Select a location to install the booster that is away from excessive heat, direct sunlight or moisture and that has proper ventilation. Recommended installation locations are:
Under the seat
Under the dash

FCC Statement

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.

This device has been evaluated to meet general RF exposure requirement. The device can be used in

Portable exposure condition without restriction.

Warning Thus us 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.

You **MUST** operate this device with approved

antennas and cables as specified by the

manufacturer. Antennas **MUST** be installed

at least 20 cm (8 inches) from any person.

You **MUST** cease operating the 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 the device.

USING THE BOOSTER

The signal is received by the outside antenna from the cell tower, then amplified and transmitted to your phone through the inside antenna. When the phone transmits, the signal is received by the inside antenna, then amplified and transmitted to the cell tower through the outside antenna.

Now you are ready to make and receive cell phone calls with powerful signal amplification! Note that it is normal for the Amplifier's case to be warm during operation. Press any cell phone key to refresh its communication with the base station. If your signal is weak, having this Amplifier installed and operating properly will give you a large increase in the signal strength and quality. The change in the signal strength can be seen on the visual display of your cell phone, and heard on your receiver or headset. To see the difference, try operating your phone in an area that is known to have weak cell phone signals.

TROUBLESHOOTING

During using your Amplifier, if the Amplifier interferes with your radio or other electronic device, move the Amplifier further away from those devices, you might be able to solve it yourself.

If necessary, please contact your local dealer directly.