

fasten tightly.

3. Connect with the power supply. If the indicated light is on, that means the set-up is completed.

## 8. Test and Adjustment

1. Test with the mobile phone everywhere indoor. When the signal indication of the mobile phone shows 3 to 4 marks (5 marks is full) at the corner of the room, which means the best receivability. Otherwise change position of the outdoor antenna until the mobile gets stronger signal. If it stays the same after doing that you can also install more pieces of amplifiers for bigger area.

## 9. Q & A

### **A We could not call even though signal of mobile-phone is good.**

Usually, that means the up-converter power is not strong enough or open antenna doesn't aim at the operator's antenna. We can adjust the open antenna or change another amplifier with higher-power.

### **B The signal is strong in some locations, weak in some locations.**

That means the power is distributed unevenly due to something wrong with the indoor antenna. If the signal in several positions is weak, we can distribute a line from the amplifier because there is too many places in weak, we can also connect antennas by the parallel connection.

### **C The signal everywhere is weak.**

That usually means the power of amplifier is not strong enough. Changing to a higher one should solve the problem.

### **D Sometimes the signal is good, sometimes it is weak.**

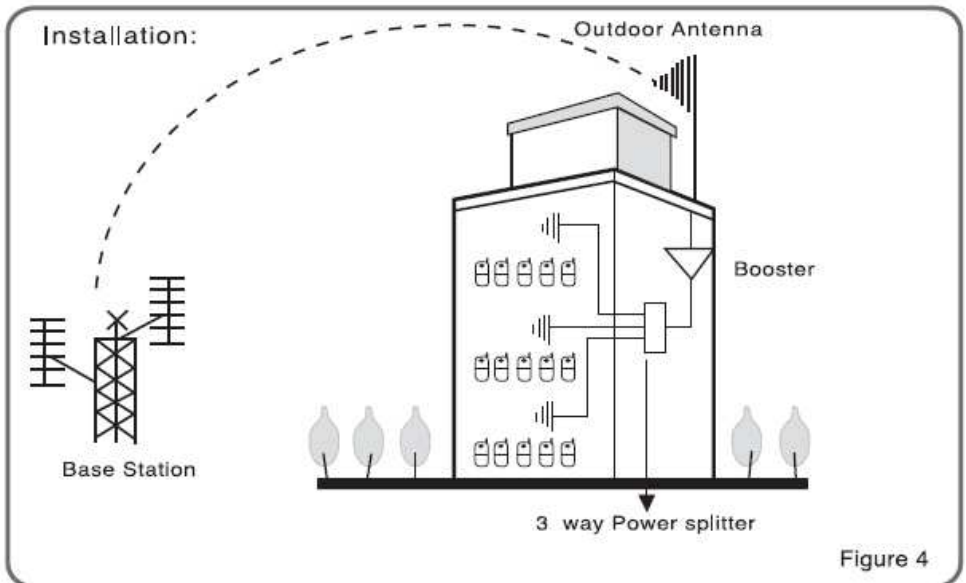
Because there is just one signal before building in the amplifier and there are two signals here after amplifier is set, this circulation could happen. You can try 2 methods to solve this problem. One is to change the amplifier to a different frequency, because now many big cities provide two kinds of frequencies, that is 900M and 1800M, to ensure the good mobile connection. The other is to change another amplifier with higher power to restrain communication electron wave of weak signal.

### **E Serious disturbance**

Outdoor antenna and indoor antenna are too close so that self-excitation happens. We can adjust the open antenna position.

cable should be as short as possible.

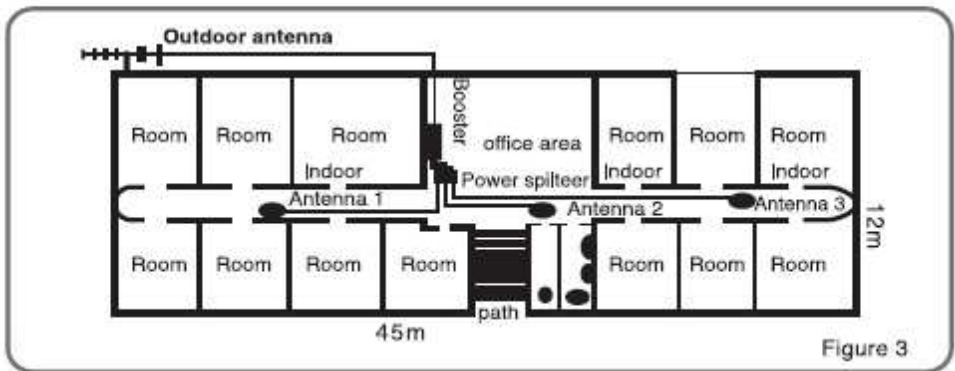
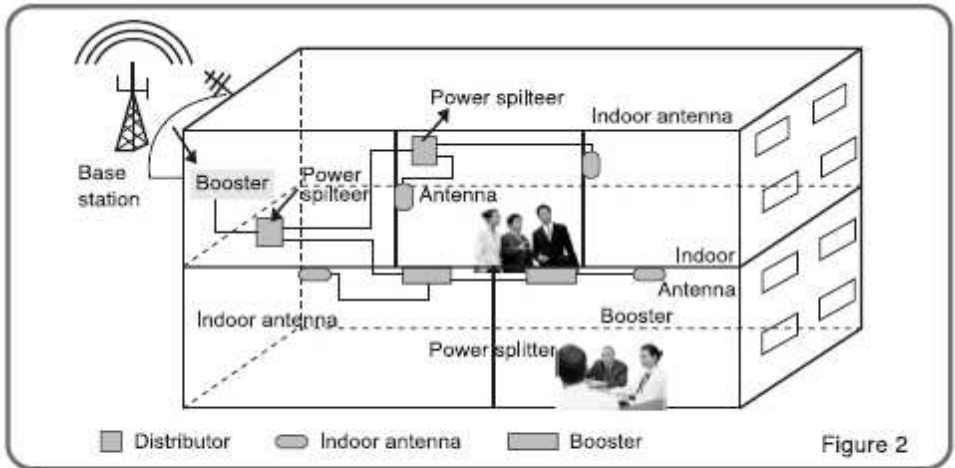
- E. Detect safe direction and position with the strongest signal on top of the building or surrounding by using the mobile phone; It would be better to make it near the booster in order to be easily maintained; Keep the outdoor antenna away from the high frequency aerial, metal net, high voltage cable or transformer; Be aware of avoiding suffering from thunder and lightning strike.
- F. Adjust the outdoor antenna. As usual, it should be fixed straightly and face the direction of the base, as illustrated in the figure.
- G. Tie a circle in the cable, as illustrated in the figure, to avoid that the water filters into the booster through the cable resulting in short circuit.



## 7. Installation Steps

1. After identifying the position of outdoor antenna, indoor antenna and booster, insert the joint of outdoor antenna into the interface in the BS side of the amplifier and fasten tightly.
2. Plug the end of the cable of indoor antenna into the MS side of the amplifier and

disposal of specific design in order to meet the demand of signal coverage in large indoor area with complicated distribution.



## 6. Notice for Installation

- A. In case of any interface, the indoor antenna should be installed away from the outdoor antenna, at least 5m
- B. The indoor antenna should be installed at the corner of the 2-meter height, or inversed and fastened to the ceiling. Find the proper position for indoor antenna and it should make the indoor antenna looks practical beautiful, as well as make it easy to balance the coverage of the signal.
- C. In case of downsizing of the indoor signal coverage caused by the oxidation because of dampness, all the joints should be sealed with waterproof tape.
- D. In order to reduce the waste and to enlarge the coverage, when installing, the

## 4.2 Optional Accessories



E. 2 way power splitter



F. Microstrip Coupling



G. Combiner



H. 7dbi indoor High gain antenna

Note: Choose to buy low-losser cable and high gain indoor antenna to increase the signal

## 5. Picture of Structure

As figure 1, it adopts single indoor antenna to meet the demands of the whole indoor coverage system, which is suitable for the narrow and simply-distributed indoor space.

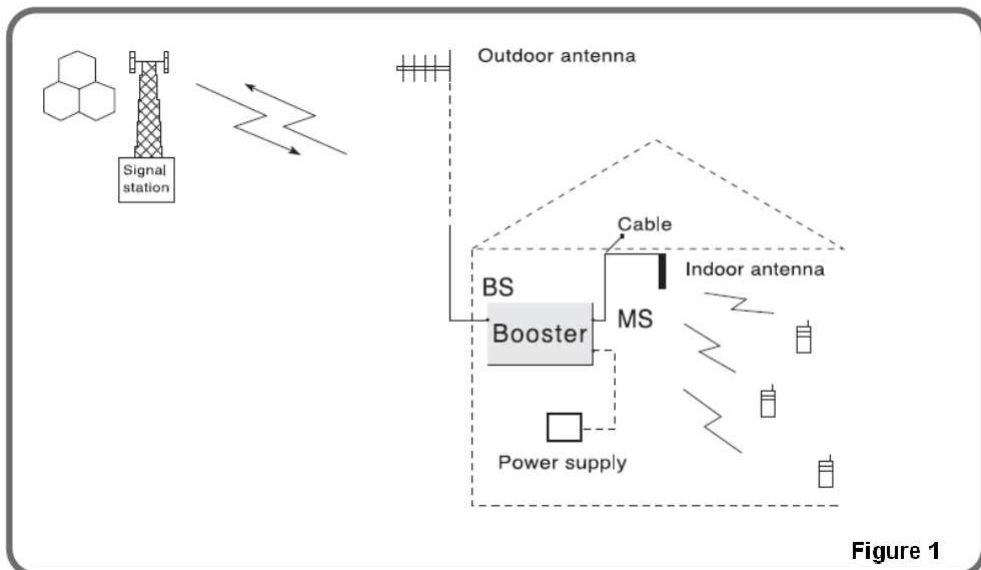


Figure 1

As figure 2 and figure 3, distributor, extending amplifier and several antennas compose the indoor coverage system. The specific application should be at the Page 3

## 2. Features

Indoor coverage: 600m<sup>2</sup> (more pieces for bigger area)

Adopt two ports full-duplex design

Practical, beautiful and easy to install

Good reliability, meet the standard of GB69993-86

The compatibility of electromagnetism meets the standard of ETS300 609-4

ATT & ALC Auto-adjustment for electronic level

## 3. Technique specification of GOR-70

Frequency Range:

Up Link: 890-915MHz Down Link: 935-960MHz

Output Power: UL: 27dBm DL:27dBm

Gain: UL: 60dB DL: 70Db

Pass band ripple: 3dB

Group Delay: 1.5us

Spurious Emission Out of Band:  $\leq -40$ dBm

Impedance: 50 $\Omega$

Power supply: AC 220V / AC 110V DC 10V

Temperature range ( $\square$ ): -25 to +55

Humidity relative (%): 5-95

Coverage:  $\geq 600$  m<sup>2</sup>

### 4.1 Standard Accessories



A. Booster



B. Outdoor antenna  
(including 10-meter standard cable)  
(high gain yagi antenna 9dB)



C. Indoor omnidirectional Antenna (2.5dB)



D. 5-meter standard cable

# GSM CELL-PHONE REPEATER GOR-70

## INSTRUCTION MANUAL

Thank you for choosing GOR-70 GSM cell phone repeater.

Repeater can amplify the signal for the mobile phone. Making you keep in touch with others freely even in the place without signal or with weak signal.

Please read through this instruction manual before using.

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### 1. Functions

People communicate with mobile conveniently in modern communication. But regretly because of the shadow effect of the wireless transmission and the buildings shielding effect on the electromagnetic wave, when people enter some spaces, such as hotel, office building and download market tunnel, parking lot mobile communication signal become impossible so that people who enter into those places would miss some information or business chances for mobile phone and can't receive signal normally.

GSM cell-phone repeater is a very effective equipment that can offset the covering shortage of the base station and fill the signal zone to ensure the convenient communication.

GSM cell-phone repeater works at full duplex: it not only receives the signal from base station and then diverts it to mobile phone after amplifying but also receives the signal from mobile phone and diverts it to base station after amplifying.