

WIRELESS MOBILE SIGNAL BOOSTER INSTALLATION GUIDE

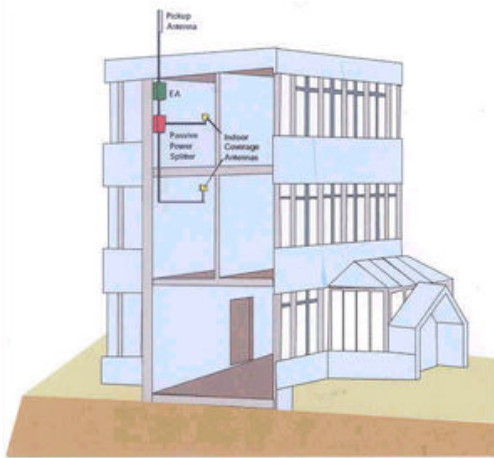
The complete wireless booster package consists of

- A yagi antenna.
- Low loss cable.
- Another low loss cable from booster amplifier to the panel antenna.
- Panel Antenna.
- The Wireless Mobile Signal Booster

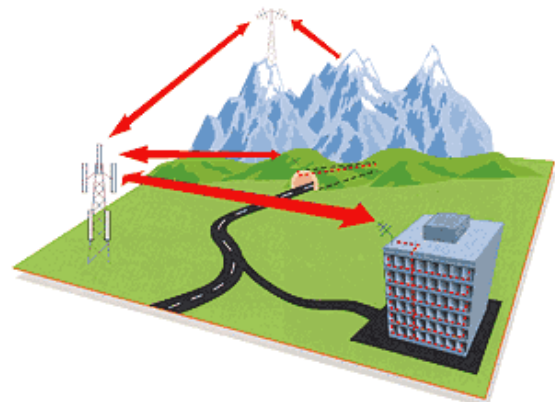


1. Remove the antenna from the shipping box. Inspect it for physical damage and make sure all parts are on hand.
2. Inspect the antenna feed assembly output connector (Type-N, female or TNC) to determine that it mates with the end of your station transmission line.
3. Verify that the frequency band to which your antenna has been tuned matches the frequency on which your radio system operates.
4. Determine the direction of the desired maximum range and the tower leg on which the antenna is to be mounted. We are installing the antenna to achieve the best cellular signal link over the air from the nearest cell tower(BTS). Mount the antenna to the tower using the furnished "U" bolt and bracket. Make sure the antenna is properly positioned with the gamma-matched element/radome pointing upward. Orient the antenna in the desired direction; tighten the mounting clamps securely to avoid movement after alignment. (Refer to Figures 1 and 2.) Find the highest possible location at the site and check the signal strength in different directions using a S4 or Nokia 5110 Net Monitor activated cellphone. Ensure that the antenna is vertically aligned to the ground plane as in the photo above and that the black cap is on the top side.

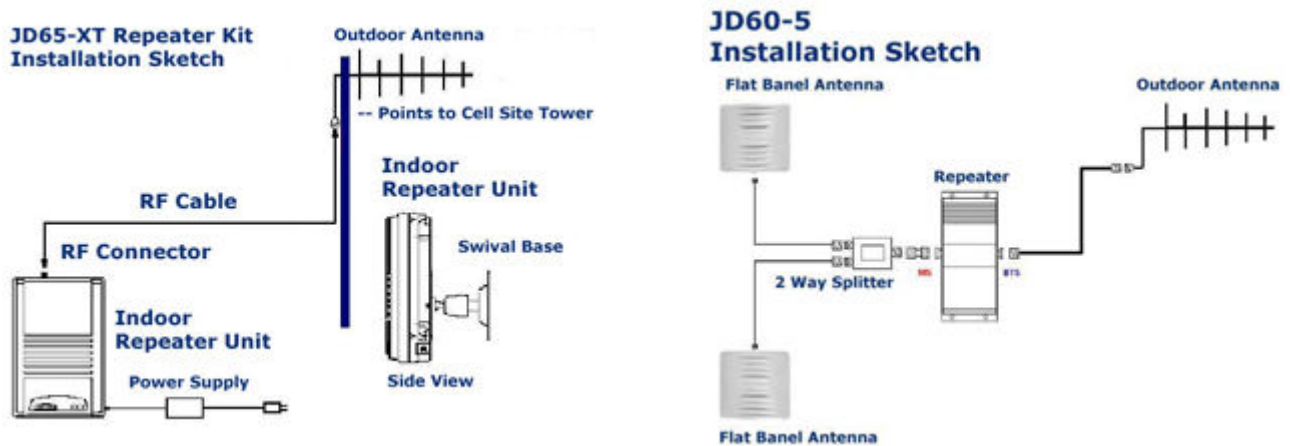
Typical Booster Building Installation



Typical Mountain Terrain Installation Sketch



5. Fix the YAGI-900 Antenna 30 cms below from the top of the pipe to minimize the effect of lightning on the antenna.
6. Keep the coaxial antenna cable length as short as possible. To avoid signal losses over long distances it is recommended to use Belden RG-8 cable.
7. Minimum movement of pipe while demonstration will only ensure a stable signal. Mount the YAGI-900 Antenna on a 2 inch diameter GI pipe having a length of at least 20 ft. The secret of better signal is always more height and therefore it is recommended to use even a 40-60 ft welded GI pipe in very weak signal areas. For 60 ft pipe weld 4inch upto 20ft, 3 inch upto another 20ft and 2 inch in the final pipe for stability.
8. Fine tune the antenna position by slowly rotating the pipe and checking on the RX(Signal receive Level); the lower the dB level the better the signal strength. In veryweak signal areas even a steady signal upto 100 dB can allow voice calls. Final fixing of the antenna position should be done in a direction where the maximum number of bars appear or the dB level is the minimum on the cellphone. An RX level of 90-100dB can deliver good voice clarity. Use Water Proof Insulation tape to cover all cracks and smooth it over the outer jackets. Failure to waterproof the connection will result in improper operation of your antenna.
9. After the antenna and cable wire have been installed, make a careful check to ensure that:
 - All mechanical connections have been securely made.
 - The antenna is mounted on the proper leg of the tower with sufficient physical clearance.
 - The antenna is mounted with the gamma match element/ radome in the "up" position.
10. Make an outgoing call and receive an incoming call to check the call clarity. If the call clarity is good and the signal optimized then lock the antenna position and fix the pipe permanently. Check that the cable is tied or taped to the pipe and does not hang loose.



11. Connect the N Male connector to the booster amplifier on the side where "Yagi" is mentioned. Now connect another wire on the side labeled "Patch" and experience the voice clarity by switching on the booster. If the voice is clear, then the patch antenna can be directly connected and this will complete the successful installation of the booster. However, if there is a voice clarity problem, then fine tuning of the Yagi antenna and also booster tuning may be required.
12. Make a note of the signal strength, date of installation, Cell Id and Time Advance for future reference in a log book.