



What is a Signal Booster?

A mobile phone Signal Booster is a system, which takes mobile phone signal from one area where the signal is active, and repeats (or amplifies) it to an area where the signal is poor or nonexistent. The basic setup of a Mobile Phone repeater is to have an external antenna placed in the area that has good signal (1-5 bars). That is then connected via low (or super low) loss cable to a Mobile Phone signal amplifier/repeater, which then amplifies the signal and transfers it to an internal antenna. The internal antenna takes the repeated signal and broadcasts it to the area, which is not receiving mobile phone signal.

Signal Booster Capabilities

A Mobile Phone repeater requires a stable signal in the area where the external antenna is placed. Ideally, this is a strong signal that it can repeat, but even a weak signal (0-2 bars) can be adequately amplified when combined with a strong amplifier. If you are able to place the external antenna in a location, which has signal, then a Mobile Phone repeater will work even better for you.

Types of Signal Boosters

Vehicle Mobile Phone Signal Boosters

Vehicle Mobile Phone repeaters come in two kinds. The first kind is a cradle Mobile Phone Signal Booster (old technology and very bad performance), which combines the amplifier and internal antenna into one device and can only be used by one mobile phone at a time. Cradle mobile phone Signal Boosters used to be one of the most popular types of repeaters because they're the lowest cost but they have always lacked performance. The other type of vehicle mobile phone Signal Booster has a separate amplifier and internal antenna, and can be used by multiple phones and data cards at the same time. This is the ideal mobile phone Signal Booster kit for long distance travelers, families, carpools, and more.

Home & Office Mobile Phone Repeaters

There is a line of Mobile Phone repeaters made by Signal Booster that combine the internal antenna and amplifier, but unlike the old style patch leads, can be used by multiple devices at the same time. These products are a great combination of cost and power, which is why the Mini Personal is the best selling mobile phone Signal Booster in the United Kingdom. For situations where you need more power to cover a greater area, there are kits from Signal Booster that have



different types of antennas and strong amplifiers to cover any type of situation that you could run into.

The Best Signal Booster for You

The best way to get started finding the best mobile phone Signal Booster for you is to determine whether the primary situation you need it for is at home or small office, in a vehicle, or in a large building or structure. Once you've decided that, then you need to determine how large of an area you need to cover and how many devices you need to support. Finally, be sure that you choose the mobile phone Signal Booster that supports your primary mobile phone carrier.

If you have any questions on how to choose a Signal Booster or if the one you've chosen is right for your situation, then please contact us at sales@signalrepeater.co.uk or live chat with one of our experts. We're always here to help, whether you're purchasing or installing a kit you've already purchased.

Can I Do a Site Survey Myself?

The short answer is yes. It requires taking a few simple readings, with either your mobile phone or laptop.

Measuring the Signal Strength in Decibels (dB)

To do a site survey, you need to be able to accurately measure the signal strength at various locations. While “bars” of signal can give you a rough measurement, it's more accurate to measure the signal in Decibels or dBs

To process for viewing the current signal strength in decibels varies by phone. See our Field Test Mode guide page for more information.

Decibels are expressed as a negative number, like -70 dBs the closer the number is to 0, the stronger the signal. For example, -70 dB is a stronger signal than -90 dBs if your phone or computer shows a positive number, just add a negative sign to it, so 70 would really be -70 dBs

How to do a Site Survey



If you receive a weak signal on your phone or mobile broadband inside a building and you experience dropped calls or slow data speeds, the solution is to install a mobile Signal Booster boosting system. However, the exact equipment you'll need will greatly depend on the signal outside of your building. It's important to do a site survey to find out exactly how weak your signal is outside and the size of the area you need to cover inside. This will tell you what type of equipment will work best for you.

Before getting started, it helps to know a little bit about how mobile phone signal boosting / repeater systems work. In short, they're made up of an antenna that receives the signal outside, an amplifier that increases the signal strength, and an inside antenna to redistribute the amplified signal. This lets you receive a stronger signal on your phone, tablet or laptop.

Typically, to conduct a site survey, you'll use the device that you're aiming to improve the signal for. If you need to improve the signal on a phone or tablet, you'll use that device. If you need a better mobile broadband signal for your laptop, you'll connect your mobile broadband modem (or "air card" "dongle" "rocket stick") to your laptop and you'll measure the signal strength on your laptop.

Conducting a Site Survey with a Cell Phone or Mobile Broadband Modem

There are two main goals when conducting a Site Survey. First, you want to find the location outside of your home or office with the strongest signal. This will often be on the roof of the building since the higher up you go, the fewer obstacles exist between you and the mobile mast. The second goal is to determine what area needs to be covered inside your home or office. In some buildings, only a lower level may need a signal boost. Other buildings will require the entire inside area to receive a stronger signal.

To determine the signal strength that you have outside of your building, you'll need to take some measurements in the places that you could mount your outside antenna. Generally, you want to mount the outside antenna as high as possible so that it gets a strong signal and doesn't interfere with the inside system. Therefore, try to take a few decibel measurements on the roof of the building to get the most accurate readings.



Next, determine in square footage of the area inside where you need a stronger signal.

Interpreting the Results of Your Site Survey

The first thing to check is to make sure that you have an existing signal in at least one point outside. If you didn't receive a signal in any of your outside measurements, there isn't enough signal available to amplify and a cell phone signal booster system won't work in your situation.

If your outside signal is weaker than -90 dB, we strongly recommend using a directional yagi-type outside antenna to ensure the system has a strong enough signal to cover your inside area. In general, unless you need to support multiple operators, we always recommend using a directional antenna.

Choosing the best signal booster amplifier for your situation is more complicated. The advertised coverage area is under ideal conditions, so if you have a weaker signal, you'll get a smaller coverage area.

Once you've gathered all of this information, Signal Booster sales team at 02 8103 4083 and one of our technical support specialists will be able to help you interpret the results of your Site Survey and recommend the best Signal Booster system for you.

FAQ

- Can I get better mobile phone reception with an app?

Unfortunately not. If you could boost your mobile phone signal with software, Apple/Samsung would have done that already.

- Do the "sticker mobile phone boosters" work?

Definitely not. The stickers that you place on the back of your mobile phone have been proven to be a major scam.



- Is it actually possible to boost the signal on my iPhone 4 or 4S?

Absolutely. Hardware Signal Boosters that employ antennas and amplifiers to increase signal work.

- Where are mobile phone Signal Boosters used?

Mobile phone Signal Boosters are used everywhere from hospitals & stadiums to offices, homes and vehicles.

How To Measure your Signal

When most people talk about mobile phone signal strength, they talk about “bars” in reference to the signal strength bar indicator on the phone. While bars are an easy way to talk about signal strength, it turns out that it’s not a very accurate way. While many phones show the signal strength on a 5-bar scale, some phones only have 4 bars while others have 8. Even among phones with the same number of bars, there’s no standardization, so the strength of a 4 bar signal on one phone can be very different than a 4 bar signal on another. Finally, bars aren’t very granular so for example, saying 3 bars of signal is not being very specific.

When experts discuss mobile phone signal strength, they measure the signal in decibels. Decibels are a logarithmic unit of measuring signal strength and are very precise making them ideal for communicating just how strong of a signal you’re currently receiving.

By default, most phones do not display the signal strength in decibels. Most phones, however, have with we call a Field Test Mode which you can use to view useful information about your phone, including the signal strength in decibels.

iPhone Field Test Mode

Accessing Field Test Mode on the iPhone is relatively simple, just open the Phone app, switch to the keypad and dial the following code: *3001#12345#* and then press call. If you dialed it correctly, your iPhone will enter Field Test Mode and you’ll see the numerical value for signal strength in the upper left hand corner of the screen where the signal strength was previously displayed in bars. To exit and return your iPhone to normal status, all you need to do is hit the



Home button. The mode is available on any iPhone running iOS 4.1 and all later versions.

If you want your iPhone to always display numerical signal strength instead of signal bars, you can perform the following process. Once in Field-test mode (accessed by entering and dialing the code above), hold down the power button until you see "Slide to Power Off", then release it. Then hold the Home button until you're returned to your main app screen. You'll now see your numerical signal strength while you use your phone, and you'll be able to tap the signal numbers to switch to signal bars, and vice versa. To exit this permanent field-test mode, simply reboot the phone or re-load Field Test Mode and exit it via the Home button.

Android Field Test Mode

Accessing Field test mode on Android phones is also straightforward. You simply need to find your way to "Settings" > "About Phone", and your numerical signal strength will be available under either Network or Status, depending on the model of the phone you own.

Field Test Mode on Other Phones

Most other phones also support a Field Test Mode. Some more popular phones are listed in the following document: [Field Test Modes](#).

What Is It Used For?

The most common use of Field Test Mode is to conduct a special kind of field test known as a site survey. If you find yourself living or working in an area with weak signal strength on your device, and you want to boost your signal, performing a site survey will be useful before you choose a Signal Booster system. The site survey involves taking several accurate readings of signal strength in and around your building, in order to calculate whether a cellular boosting system will help, and if so, what sort of equipment will be necessary.

Field Test mode is an immensely useful tool in such a situation - switching from unreliable signal bars to a precise numerical value is essential if you want to quantitatively assess your



smartphone's signal strength in different places.

Although a site survey field test is a multi-step process, it isn't overly complex, and it's possible to follow the steps and conduct your own testing and around your home or office, using the field test mode on your phone.

Site Survey Numbers Explained

This numerical value is known as RSSI, which stands for Received Signal Strength Indication. It will generally be double or triple digits, and it will be negative. Some phones don't show a negative sign so if your phone shows just a number such as 90, the signal strength is really -90. The closer the number is to zero, the better the reception, so -80 is a stronger signal than -90. The unit of measurement of RSSI is the decibel (dB), which is a measure of the power of a signal. Similar to the volume of a stereo, the numerical RSSI value is really telling you exactly how "loudly" your phone is receiving the signal from your operator's mobile network.

The decibel scale is not linear – an increase of 3 dB corresponds to a signal that is twice as strong while a 10 dB increase corresponds to a 10 times increase in signal strength. So an RSSI value of -60 is actually ten times stronger than an RSSI of -70, for example.

Having an accurate reading of your Received Signal Strength is crucial when you're assessing an area with the purpose of installing a possible signal boosting system. Being able to see exactly how strong your signal is, outside and inside your building, is essential in finding out how a mobile Signal Booster system can improve your reception.

Solving Indoor Mobile Phone Reception Problems

You need your wireless devices and services to work for you...anywhere. But when it comes to reliable indoor mobile phone reception, your building works against you, absorbing radio signals as they pass through. Large buildings, such as warehouses, hospitals and factories, often have no mobile reception further than a few meters from the outside wall. So how do you make your laptop, cell phone, and other applications work inside?



Solution

To make mobile work indoors, you need an In-Building Repeater System that utilizes RF equipment to distribute wireless signals throughout your facility. Signal Booster utilizes components from the world's most reputable In-Building Wireless Amplifier manufacturers and designs and implements systems that provide optimum efficiency.

Technology/How it Works

Step 1

A source, such as an outside Mobile Tower or BTS provides the RF signal to the building through a rooftop donor antenna or wired landline connection.

Step 2

Front end equipment (cellular repeater / cellular amplifier) receives and conditions the signal for distribution throughout the building.

Step 3

The wireless signal is transported via cabling throughout the building to a network of discreet internal antennas (cellular repeater /cellular amplifier).

Step 4

The internal antennas transmit and receive strong mobile signal for use by the end user.

Useful Information:

A Signal Booster, mobile phone repeater, mobile amplifier, mobile phone amplifier, or wireless mobile signal booster, is a type of bi-directional amplifier (BDA), a device used for boosting mobile phone reception to the local area by the usage of a reception antenna, a signal amplifier and an internal rebroadcast antenna. These are similar to the cellular broadcast towers used for broadcasting by the network providers, but are much smaller, usually intended for use in buildings and large homes. Mobile amplifiers rebroadcast mobile signals inside the building. The systems usually use an external, directional antenna to collect the best mobile signal, which is then transmitted to an amplifier unit, which amplifies the signal, providing significantly improved mobile phone signal strength.



Mobile Coverage Where You Need It - Small Commercial/Residential Solutions

A mobile phone Signal Booster system extends mobile signal in poor coverage areas by amplifying transmit and receive signals for stronger, more reliable voice and data transmission. Repeaters are ideal for use in offices, large vehicles (ships, trains, buses), or inside homes with multiple users. Signal Booster will design and propose a repeater system to meet your specific voice and data requirements, enabling your employees and visitors to have uninterrupted coverage. We provide complete installation services for facilities over 1,500 square meters in size. Please call to discuss a solution specific to your needs with an in-building specialist.

Why Choose Signal Booster?

- Superior Customer Support
- FREE Technical Design Services
- GUARANTEED LOWEST PRICE
- Nationwide Professional Install Available
- Technical Assistance During Self-Install
- 30 Day Guarantee / Return Policy
- One-Year Amplifier Warranty

We provide systems to boost signal in buildings from under 1000 sq m to over 100,000 sq ft. (Professional installation available for coverage in facilities over 5,000 square feet)

Small Business

Signal Booster provides complete design and installation services of repeater systems to optimize mobile signal inside small business facilities throughout the country. Our multi-carrier applications support multiple users and enable use of both voice and data applications. The Signal Booster SR100-65dB repeater is ideal for providing coverage inside mid-size commercial buildings and is one of many amplifiers we offer. Depending on outside signal strength and internal antenna configuration, this linear dual-band amplifier can improve mobile phone reception in buildings up to 10,000 square feet or more. Stronger amplifiers are also available that will help overcome marginal outdoor signal strengths or difficult internal propagation



variables. Please contact a system specialist to assure proper product selection and an appropriate design specific to your building.

Residential

For users requiring improved mobile phone performance inside their homes, Signal Booster offers numerous install friendly applications and offers complete technical support to assure system optimization at start up. The Signal Booster 65dB mobile phone repeater kit is the ideal solution supporting multiple mobile phones and data cards simultaneously, and works with all major European/African/UK and Middle Eastern mobile phone operators. Depending on outside signal strength, the 65dB repeater kit can improve mobile strength in homes as large as 250 square meter. Please contact a system specialist to assure proper product selection for your home.

Small Office / Home Office

For users needing improved mobile performance in a Small Office or Home Office environment, Signal Booster offers a variety of solutions, including the Signal Booster 55dB mobile phone repeater kit. This kit supports multiple mobile phones and data cards simultaneously, and works with all major European/African/UK and Middle Eastern mobile phone operators. Depending on outside signal strength, the 55dB repeater kit can improve cellular strength in a single room or an entire 150 square meter home.

Cellular Coverage When You Need It - Large Home Solutions

Signal Booster specializes in providing strong cellular signal inside large luxury homes where signal was previously weak or unavailable. We will design and install a home wireless repeater system to meet your specific wireless voice and data requirements, enabling yourself, your family, visitors, and employees to have mobile coverage and instant access to essential wireless personal and business applications. Our staffs extensive technical knowledge and state of the art engineering, coupled with our experienced and highly meticulous installation team ensure the quality implementation of an effective and trouble free system specific to your individual needs that will improve mobile phone reception.



Pre-Design Site Evaluation

An in building system specialist will evaluate the wireless environment of your home to determine the reason why a lack of mobile signal exists. We will provide you with a technical evaluation and recommendations before proceeding with your project design assuring you have a comprehensive understanding of the complete project and the approximate cost involved.

- Perform signal testing
- Prioritize areas of concern
- Evaluate propagation variables
- Determine cable paths and equipment placement locations

Professional System Design

Our professional engineering team will design an home mobile repeater solution specific to your home based on your own needs and objectives. A complete system schematic depicting amplifier location, cable pathways, and antenna placement will be provided to accommodate the installation process.

Expert Installation

Concentrating on precision and detail, our professional installation team will provide a stealth application which exceeds client expectations and performs at optimum efficiency. Signal Booster provides a 100% satisfaction guarantee offering piece of mind and assurance of an effective mobile phone repeater home system.