



Boost Weak Cell Service at Home: Your Options

Yardena Arar Fri, 15 Jul 2011 18:00:00 -0700

The problem is familiar to many cell phone users: When you're indoors, even within your carrier's coverage area, the network's signal sometimes simply isn't strong enough to support voice calls or data services. With so many consumers ditching their landlines for cell phones, poor reception at home is no longer acceptable. Fortunately, a slew of products now address the problem, though they don't come cheap.

Signal-boosting products generally fall into one of two categories: femtocells or signal repeaters. Both types of equipment can deliver strong signals within buildings, but they work in fundamentally different ways.

Femtocells act as miniature cell phone towers that connect to a home network router and use your wired broadband connection to move voice calls and data services to and from your carrier's network. Femtocells don't rely on the carrier's towers at all, but because they use technology that can direct data and calls back to the carrier networks over the Internet, most of them are sold by the carriers themselves.

Repeaters and boosters, on the other hand, amplify and rebroadcast cell tower signals. Since they don't require carrier support, they tend to be manufactured and sold by third parties such as Wi-Ex (under the brand name ZBoost) and Wilson Electronics. the brand names [Airave](#) and [Network Extender](#), respectively) for the past few years; AT&T introduced its [3G MicroCell](#) femtocell last year. ...



Repeaters and Boosters

Repeaters (also called "boosters")--the other class of products designed to improve poor cell reception--depend on at least a weak cell tower signal to amplify and rebroadcast. They work with specific frequencies, independent of carrier; some support more than one frequency. On the frequencies they support, repeaters improve both voice calls and data speeds.

Many repeaters have multiple parts, starting with an antenna that you place as close as possible to the strongest cell tower signal--typically, near a window or even outdoors. The antenna transmits signals over a cable connected to an amplifier, which boosts the signal and retransmits it indoors. In some cases, the amplifier and indoor antenna are integrated; in others, the amplifier hooks up to a separate, centrally located indoor antenna in the home or office. The area of coverage depends on the strength of the amplifier and of the signal being amplified.

Unlike femtocells, repeaters can't be configured to recognize specific phones. Consequently, the amplified signals benefit any mobile device within range that operates on the supported frequencies--though obviously the owner's devices are more likely to benefit than a neighbor's devices located farther away from the indoor antenna. It's up to you (with the help of your reseller) to ensure that your repeater kit amplifies the frequency or frequencies that your carrier uses in your area. You can get help in choosing the right repeater kit from specialty retailers such as [wpsantennas.com](#) or [RepeaterStore](#).