



The

Broadcasters' Desktop Resource

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... edited by Barry Mishkind – the Eclectic Engineer

Checking it Out

zBoost YX545 SOHO Dual-Band Cell Extender from Wi-Ex



By Dana Puopolo

[November 2012] It seems like there is some rule, no matter what cell phone company you use, there is a dead spot – exactly where you need the cell service the most. There are solutions though, as Dana Puopolo discovered.

My last rental was constructed with stucco over screen construction.

As I expected, cellular reception was terrible, with zero to one bar the norm. It was so bad that I had to go outside to make or take cell calls.

Sprint offered me a femtocell to solve the problem. (A femtocell is a mini cell site that uses your Internet to complete phone calls.)

Unfortunately it was utterly useless for most other things such as streaming video and even texting. Plus Sprint charged me 5 dollars a month for the privilege of letting them use my broadband to complete calls (and also charged me airtime).

Worse of all, I eventually discovered that my neighbors (with whom I did not get along) were

also using my rented femtocell and Internet for their cell phone calls – free of charge.

zBOOST

I figured there must be an alternative to this kluge – and I found it in the zBoost YX-545 from Wi-Ex.



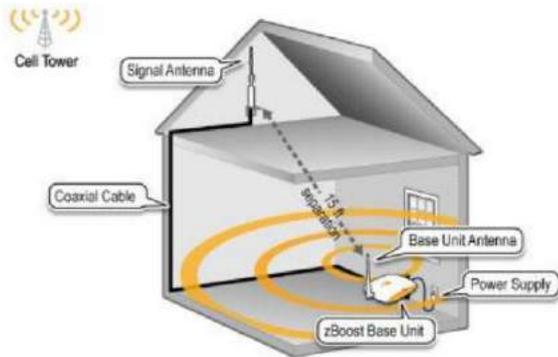
The zBoost YX545 Cell Extender base unit

The zBoost is an on channel repeater. It consists of a base unit, 50 feet of small diameter 75-Ohm coax cable, and a weatherproof external antenna designed to be mounted high up and outside, where the cell signal is strong.

Most of us are broadcasters and we understand the common problem of an on-channel amplifier: you have to be careful to make sure that the output and input are sufficiently isolated or nasties like oscillation and desensing can happen.

The zBoost people are aware of this too, which is why they provide you with well shielded coax cable and clearly state in their instructions that you should ideally have 15 feet of vertical separation between the receive antenna and the base station.

I was able to do this by putting the receive antenna outside a second floor window and the base unit in my basement.



The booster and antenna need to be separated

Here is a hint for easy installation: to find the best location to put the antenna use the signal strength bars on your cell phone – or the free App Wi-Ex has released, now available in the Google Play or the iTunes Store. The construction of my building, which served as such a great shield for cell signals, actually enhanced the isolation for my installation.

PUT TO THE TEST

How does this unit work? As the British might say, “smashing!” This unit is the ideal solution to weak signals.

I was able to get a full five bars of signal all over my home – even in the second floor room just inside where the outside antenna was mounted. Voice, texting, 3G Internet, and everything else now works perfectly.

Unlike the femtocell, the zBoost will also enhance signals of the other cell providers (except Nextel), so visitors also get to use its benefit.

POSSIBILITIES

I would imagine engineers such as us can see other uses for it.

One idea is to use a directional antenna on a tower, aimed at a distant cell site, and using RG-6 coax to run to this unit located in the transmitter building. You will have instant phone service at your mountain site.

By the way, the zBoost unit uses readily available reverse SMA connectors.

The possibilities to using this unit are only limited by your imagination.

I highly recommend the zBoost YX545. At less than \$200.00 on Amazon.com it is a bargain for what it does – and it was interesting to note that most of the people who wrote about the unit on Amazon also agree.

More information about the YX545 is on the Wi-Ex site, and is [found here](#).

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