Subject: Re: Speaker placement and wavefront launch, revisited
Posted by Wayne Parham on Thu, 22 Jan 2015 16:53:59 GMT
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I got your email and replied. But if you didn't see it, I'll post the jist of my reply here.

They are designed to be true constant directivity cornerhorns, and they have specific features that make them better suited for corner placement. For one thing, the sound sources are acoustically close to the apex of the corner, so there is no self-interference. And for another thing, the crossover is optimized for the application.

The problem with putting a DI-matched two-way speaker in a corner is that the midwoofer is only acoustically close at low frequencies. At higher frequencies, from midrange up, the midwoofer is acoustically distant but is not directional enough to reduce reflections. So the nearest boundaries give self-interference from reflections.

Flanking subs help mitigate this problem, but they're really designed to deal with the self-interference notches that occur at the upper end of the modal region, just below the Schroeder frequency. Above that, the sound field is statistical and reflections are "blended" with direct sound, but still, early reflections are never desirable.

And that's what we have with a speaker mounted close to the wall but not flush with it, e.g.

close, basically the same as in-wall mounted, having no reflection. It's the in-between range that muddies the sound.
Speaker placement and wavefront launch