
Subject: Speaker placement and wavefront launch, revisited
Posted by [George Swanson](#) on Thu, 22 Jan 2015 15:45:20 GMT
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Hi Wayne,

I'm finally able to access the forum! I sent you an email about Four Pi loudspeakers but I've been having issues with my personal email, sooo...

I'd like a copy of the plans but I also asked about designing a corner bass reflex (or Jensen style corner Onken) cabinet for the JBL driver so I can try corner loaded constant directivity horns without going the whole hog and building the Seven Pi corner horns. Would one need to redesign the crossover in order to do that?

Also, I'm interested in purchasing a set of waveguides. Do you also sell the B&C compression drivers and woofers?

Thanks,

George

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

Subject: Re: Speaker placement and wavefront launch, revisited

Posted by [George Swanson](#) on Thu, 22 Jan 2015 21:52:03 GMT

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I never received it so thanks twice for the response! There's something screwy about my comcast account and I need to get it sorted.

The link is very interesting. I'll tell you about my room and you can tell me if the Seven Pi speakers would work. The room is 12 feet by 21 feet and the speakers would be on the short wall. They are good corners and the listening position would be at the far end of the room from the speakers. The far end of the room is actually an opening into a much larger room with a vaulted ceiling.

Are you up and running with mid horn flat packs yet? I'd understand if not due to the move and other things going on in your life right now.

Are you a dealer for all the components of the kits (drivers, etc.)?

Thanks,

George

Subject: Re: Speaker placement and wavefront launch, revisited

Posted by [Wayne Parham](#) on Fri, 23 Jan 2015 16:47:30 GMT

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I tend to prefer constant directivity cornerhorns in rooms like that, with them placed in corners at opposite ends of the short wall. The best listening area is just beyond where the speakers' axes cross. See the link below for more information.

We have a new source for midhorns now. I have some of them already. So I'll be adding them back into the shopping cart very soon.

We are a dealer for all components that we don't manufacture directly. But we do not sell partial kits. We do sell crossovers and waveguides individually though for those that want to source their own drivers. This is sometimes attractive for overseas customers, who can get the drivers locally and save shipping costs.

High-Fidelity Uniform-Directivity Loudspeakers
