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Subject: Cornerhorn too much?

Posted by [Brad](#) on Tue, 04 Sep 2007 00:44:29 GMT

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I'm building a Bottlehead SEX amp (2wpc SET). I want to either find some old efficient speakers, or build some myself. The Pi cornerhorn seem to be very efficient, and the price is good, too. My main problem is if they will be too large for my room. I'm only 16 (don't hold that against me), so I have my stereo set up in my bedroom. We're currently selling our house, and the bedroom that I'll probably get is decently sized. It's 17'x11', has hardwood floors, a solid wall on the western side, one small window at about 5' up on the south side, two of the same windows on the east side, closets on the north side, and the door is in the northwest corner on the west side. I plan to set my room up according to my stereo. Is there a way that I could set it up to use the Theater series 6 pi corner horn, or is my room just going to be way too small? If it is, what Pi speaker would you suggest in it's place? Lastly, I noticed that the specs show that they only go up to 16khz, do you find this lacking(if so, do you add a supertweeter or something?), or does it sound fine? I should mention that I mostly listen to all form of rock, from oldies to death metal. I throw in some Frank Sinatra, reggae, or classical every once in a while. Thanks, Brad

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Subject: Re: Cornerhorn too much?

Posted by [Brad](#) on Tue, 04 Sep 2007 00:51:19 GMT

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I forgot to mention that I will also be using it with a Pioneer Elite M91 amplifier and the 91 system (200wpc at 8 ohms). I also might occasionally might use the speakers for movies (in stereo).

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Subject: Re: Cornerhorn too much?

Posted by [dB](#) on Tue, 04 Sep 2007 08:03:30 GMT

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in time you can build a big one if that's not enough (if you move to a big house/living). I have my "PA" for twenty years on, and it never had an upgrade (it's in a small bedroom, my small speakers are in the living room, go figure...).

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Subject: Re: Cornerhorn too much?

Posted by [Wayne Parham](#) on Tue, 04 Sep 2007 15:19:50 GMT

The thing I find most troublesome is the hardwood floors. If the floors are laid upon concrete foundation, then they're fine. But if what you have is a crawlspace underneath a raised hardwood floor, that's probably going to cause trouble no matter what kind of speakers are used. It tends to make the bass sound boomy. Raised hardwood floors and room treatments

On a budget, you nice speaker, and it has the advantage of horn loading. If your budget is higher, the Professional

rooms, from large to small, with good results. The only time I don't like them is in extremely small rooms, under 10' in length. They're too much speaker for a room that size. But when the room is bigger than about 15', the cornerhorns work well. Your room is 17' x 11', so they'll sound pretty good there. If possible, put them in your corners with 11' wall between them. About the tweeters, I find that output up to 16kHz gives plenty of sparkle. Cymbals and chimes sound right, and it doesn't sound muffled, like there is a lack of treble. But I won't kid you. You can hear a little extra "air" in that region between 16kHz and 20kHz from a tweeter that goes up that high. You can tell the difference between a ribbon or dome tweeter with response up beyond 20kHz and a compression horn that goes only up to 16kHz. It's subtle, and you don't miss much. The compression horn gives you all the sparkle and doesn't sound like it's missing anything but a whisper of "hiss" or "air". There are a few compression horn tweeters with beryllium diaphragms that can reach 20kHz. That's an excellent way to get that last few kilohertz of audible sound. But they're expensive. Another option is to add a super-tweeter, but I'm not as thrilled with this

at this high frequency, so summing is a problem. Super-tweeters crossed over above 5kHz sound "phasey" to me so I don't use them. One of the strengths of the cornerhorn is its uniformity of response throughout the listening room. When a super-tweeter is added, this is lost. That's the reason I use a compression horn tweeter as the highest frequency device. Here's the thing that makes compression horn tweeters so good. Let's say you're playing some music with the low passages around 95dB/M or 100dB/M. That's not terribly loud, particularly if you're sitting five or ten feet back and the low passages are the average level. Lots of music is this way, particularly classical and some rock, like art rock. When the music rises to a crescendo, or hits a loud peak, it's at least 15dB to 20dB louder. That's not uncommon, just a 15dB to 20dB dynamic range, not unexpected. What you have here though is a 120dB peak, and that's something the dome or ribbon just won't do. You'll send the dome flying out into the room at that level. But the compression horn tweeter has no problem with sound at those levels. It's designed for that. Compression horns do a few things very well, better than any other kind of tweeter. They're designed to reach 120dB/M and more. They don't need a lot of power to reach these levels either, they're just cruising and distortion is very low. Another thing is their controlled directivity. Horns put the sound where you want it, and they can be used to uniformly cover the listening area. A good horn tweeter will put the splash of the cymbals throughout the room, not just straight out on-axis. Their controlled directivity, low-distortion and wide dynamic range are the strengths of compression horn tweeters, and that's why I tend to prefer them over other tweeters.

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Subject: Re: Cornerhorn too much?

Posted by [Brad](#) on Wed, 05 Sep 2007 00:59:09 GMT

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WOW! Thank you. My room will be on a second floor, so hopefully I'll be able to find some way to deal with tht modes. Do the cornerhorn plans come with plans to make the little cabinet for the horn shown in the drawing on this page? <http://www.pispeakers.com/CornerHorn.html> have no experience with cornerhorns, so I am wondering how their imaging is with the speakers playing indirectly at you is. Also, how do I find out the ideal listenig position for the Theater 6Pi's if they were in the 11ft apart corners? Thanks.

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Subject: Re: Cornerhorn too much?

Posted by [Wayne Parham](#) on Wed, 05 Sep 2007 01:55:29 GMT

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so much of a "sweet spot". It really sounds good throughout the room. However, stereo imaging is naturally best when you're equidistant between speakers. It sounds good anywhere within a 90° horizontal arc, which is everywhere in the room, but best within 60° (+/- 30° off-axis). You also want to be seated within a 40° vertical arc (+/- 20° off-axis) from the midhorn and tweeter. That's pretty easy, just be seated at least a couple feet back, in the center, between speakers. Plans come with dimensions for the cabinets and schematic for the crossover. Tell me your E-Mail address and I'll send you the plans.

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Subject: Re: Cornerhorn too much?

Posted by [Brad](#) on Wed, 05 Sep 2007 10:10:09 GMT

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Thanks. My email is [bradbauchmoyer@sbcglobal.net](mailto:bradbauchmoyer@sbcglobal.net)

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Subject: You've got mail!

Posted by [Wayne Parham](#) on Wed, 05 Sep 2007 12:25:49 GMT

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Subject: Re: Cornerhorn too much?

Posted by [Paulo](#) on Tue, 18 Sep 2007 23:43:30 GMT

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May I also receive the plans execute them and compare it to my current Davids. Thanks, Paulo.

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Subject: You've got mail!

Posted by [Wayne Parham](#) on Wed, 19 Sep 2007 02:22:20 GMT

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