Subject: 4pi vs 7pi
Posted by coctostan on Sat, 04 Oct 2008 19:26:11 GMT
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I'm interested in building a set of Pi speakers. I'm curious about the increased performance of the 7pi vs the 4pi. My plans will be to build either 2 7pi's + a 4pi center or 3 4pi's. There will be ample bass reinforcement below the cutoff of 2226 woofers.I guess I'm mainly curious about the advantages of the corner loading and adding the midrange horn.

Subject: Re: 4pi vs 7pi
Posted by Wayne Parham on Sun, 05 Oct 2008 15:38:48 GMT
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The midhorn takes the load off the woofer, so it doesn't run as wide bandwidth. This reduces IMD and makes midrange smoother.

Subject: Re: 4pi vs 7pi
Posted by coctostan on Sun, 05 Oct 2008 15:49:44 GMT
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I have a few more questions about the 7Pi's.1. Would they do fine placed in the corners of a HT 16' wide and 20' deep? Seating is at 13' and 18' from the front wall. Would they need to be toe'd out at all? Would you change the orientation of just the Mid-Tweet section or the entire speaker?2. Do you suggest treating the front corners above the 7Pi's? If I were using non-cornerloaded speakers I would build corner trap style bass traps from floor to ceiling. Should I make a bass trap that extended from the ceiling to near the top of the 7pi?Could you email me the plans for both the 7pi and 4pi?ThanksMax

Subject: Re: 4pi vs 7pi
Posted by Wayne Parham on Sun, 05 Oct 2008 16:42:19 GMT
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Your placement situation is ideal. Don't change the orientation - the're designed to be toed in exactly 45°, as their shape and corner placement suggests. The speaker is designed to provide uniform directivity through a 90° arc, and response is good everywhere within the pattern. Imaging is best when you're equaidistant from each channel but the tonal balance is good everywhere in the room.Room treatment is specific to the room. What you want is well damped

room modes and reduced early reflections. The directivity and orientation of the speakers helps reduce early reflections but if you have a lively room, you can always add absorbing or diffracting surfaces. Framed drywall construction helps damp room modes but if you have rigid walls, you might want to add panel dampers. Adding subs also helps, as the more bass sound sources you have, the more the modal region is smoothed via dense interference.

Subject: Re: 4pi vs 7pi
Posted by coctostan on Sun, 05 Oct 2008 18:36:21 GMT
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I'm glad to hear that my placement is ideal.Once the room is complete, I will build absorption panels at first reflection points. My setup will allow me to tweak the treatments as necessary.I was more concerned with standing waves in the two front corners. In the past I've made corner trap style bass traps, but with corner loaded speakers that won't be possible, at least not in the bottom front corners. I guess I will just use trial and error.I will have 2 separate subs so hopefully, along with bass trapping, I will minimize room mode effects.Thanks for the replies.
