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Subject: Re: 3Pi speakers - various questions

Posted by [Wayne Parham](#) on Thu, 20 Sep 2012 05:13:18 GMT

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That looks like an excellent layout. But I have a few suggestions.

First, keep the subs in separate boxes from the mains, so you can use them as distributed multisubs. This will help smooth room modes.

Second, don't run the mains sealed, but rather keep them ported. In fact, don't deviate from the plans at all. I don't say this to be arrogant, but just to prevent you from re-inventing the wheel. The alignment chosen is very smooth, provides good extension and limits excursion. And the layout of the midwoofer and port in the box prevents any standing wave nodes from creating anomalies too. So you really can't beat that system. A sealed box will just reduce extension and increase excursion, and neither are improvements.

Do not make the mistake of thinking sealed boxes provide better transient response. They don't - Room modes swamp all that. And forget anything people say about sealed boxes "integrating" better with subs. Indoors, room modes make point source integration irrelevant, because the

What you want, instead, is blending of multiple sound sources in the modal region. You want some extension in your mains, and you want them blended with other bass sound sources placed in various places in the room.

And finally, consider using the crossed-axes configuration described in the whitepaper below. Rather than having the speakers pointing straight at the listeners, have their axes cross ahead of the listeners. This will widen the area where stereo balance is good, which improves imaging considerably.

High-Fidelity Uniform-Directivity Loudspeakers

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