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Subject: Re: Are 7 Pi's for me?

Posted by [Wayne Parham](#) on Thu, 05 May 2011 19:42:00 GMT

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If I understand you right, I think you're saying you can put the cornerhorns at each end of a short wall that has two windows, each a couple feet from the corners. One of the adjacent walls also has a window but there are no entryways near the corners you'll be putting the speakers in.

If that's an accurate description, then it sounds like you have the perfect room for constant directivity cornerhorns. Windows don't hurt anything as long as they don't rattle or buzz. And of course, they can't be open for best performance. Open one, and you'll see what I mean - the tonal characteristics change and imaging is off. But as long as they're closed and not buzzing, they're fine.

Honestly, if you have a room layout that will support cornerhorns, don't give it a second thought. Do it, take advantage of the setup. There is no downside, provided you have the right room. The only reason I even make another loudspeaker configuration is there are so many rooms that cannot support a constant directivity cornerhorn because of entryways or other features like that.

There are two main reasons to go with constant directivity cornerhorns:

1. Constant directivity. It really does this, through the entire audio band, all the way down to the Schroeder frequency. No other configuration does this. The impact is substantial, in that the tonal balance is uniform throughout the room. It is just a very balanced sounding speaker.
2. Lack of boundary reflection anomalies. You don't get a bounce notch from the side walls, back walls and floor because the speaker is tucked back into the corner. This is also significant, and again, no other configuration does this. With other speakers, you can use flanking woofers and other techniques to smooth the notches that are formed by self-interference from boundaries. But with this configuration, there are no notches to smooth because they just don't exist.

Since you won't need flanking subs, you can move them further away, perhaps in the opposite corners (a la Welti) or in other convenient locations. That will allow you to smooth the lower frequency mode(s) better, without needing to add more subs.

High-Fidelity Uniform-Directivity Loudspeakers

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