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Subject: How to improve?

Posted by [jgoodd8050](#) on Wed, 19 Feb 2014 20:16:16 GMT

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I'd like to get some input on how to improve bass response for this room. Left and right speakers are 7pi's that I enjoy very much. Adding subs is an obvious next step. The front wall is perfect for an IB sub system if the location proves good. I should probably build a small sealed sub to test... The back hall might be good for small sealed or ported.

Room dimensions are 7H x 11W x 17L.

I have "supper chunk" style absorption above the 7pi's.

Sound pannels are 2" thick, mounted on the wall.

The frequency response graph has no smoothing.

Measurements were taken from the listening position.

I run 60% music and 40% movies.

Objectives:

Smoother responce under 200hz.

Extension flat to 10-15hz at 110db.

Questons:

How would the multi-sub approach work with the 7pi's?

Do I need to be concerned about phase issues between the 7pi's subs on the front wall?

How high should I cross over the subs? (might effect driver choice)

What am I missing?

Thank in advance for the help!

Jeremy

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## File Attachments

1) [test.jpg](#), downloaded 3395 times

2) [HT Room.jpg](#), downloaded 3433 times

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Subject: Re: How to improve?

Posted by [Michaelzh](#) on Wed, 19 Feb 2014 20:56:48 GMT

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My setup has seven PI corner horns. I built 2 three PI subwoofers with three PI subwoofer kits I ordered from PI speakers web site. I placed the subs where it is convenient in the room for me some where in the mid section along the longer walls. The subs brought a very large good change in the sound presentation. It seems that with a smooth low end, the mid and high become more real.

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Subject: Re: How to improve?  
Posted by [jgoodd8050](#) on Wed, 19 Feb 2014 21:04:57 GMT  
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Thanks for the input. I expect similar results once I get a well designed sub system up and running!

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Subject: Re: How to improve?  
Posted by [BFP](#) on Thu, 20 Feb 2014 16:22:23 GMT  
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According to your graph you could use some support below 60hz. My experience has been that 2 smaller subs work better than 1 large one. I have a simple rectangular room 12.5 x 19ft with 3Pi's in 2 corners and 2 15" sealed subs in the corners behind me. I have no problem getting good integration in that setup. I previously had 1 large 2 driver sub and it was not as easy to integrate and always seemed to take more power to get good bass at the listening position.

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Subject: Re: How to improve?  
Posted by [Wayne Parham](#) on Thu, 20 Feb 2014 21:38:25 GMT  
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I agree with the comments already provided. Constant directivity cornerhorns benefit from multisub installations just as much as any other loudspeaker configuration. There is some debate as to what individual loudspeaker configurations are least sensitive to room modes, but there is no debate that any configuration solves them for an individual source. The only solutions to the room mode problem involve room damping and multiple sound sources.

That said, one thing the constant directivity cornerhorn does that no other configuration can is to remove the nearest boundary reflection. Since the source is acoustically close, there is no self-interference from nearest boundaries. This is a huge benefit, and it eliminates the need for flanking subs, which are a form of multisub setup.

Still, distributed subs work wonders for constant directivity cornerhorns. They can be in opposite corners, e.g. a Welti configuration. Or they can be placed in random locations, a la Geddes. Either way, when you add a couple subs to the room, you will then have four bass sound sources and that will greatly smooth room modes. It will also offer additional deep bass extension, which is really fun for home theater.

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Subject: Re: How to improve?

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Posted by [jgoodd8050](#) on Sat, 22 Feb 2014 17:27:02 GMT

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I probably better pick up a couple of subs to work on placement next. Thanks for all the input.

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