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Subject: 2 PI - maximum volume to avoid Helmholtz standing waves

Posted by [CRISTIAN M](#) on Sun, 13 Jul 2014 02:20:54 GMT

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Hi Wayne,

I'm preparing myself to build a pair of 2PI to be used primarily as stereo speakers (not for home theater or anything like that), so they need to be as full range as possible.

BUT...Due to physical constraints in my living room I cannot use the tower version of the 2PI. I cannot even use the "standard" bookshelf version because they won't fit either (I need to put them at both sides of a big sofa and in between 2 small tables, so the remaining space is  $25.6 / 2 = 12.8$  inches per speaker at most)

Anyway....Somewhere on an old topic you mentioned "You can make a box between about 1.5 ft<sup>3</sup> and 5.5 ft<sup>3</sup> tuned to 40Hz and make the Alpha 10 happy". The bookshelf version for 2PI is 1.5ft<sup>3</sup>, while the tower one is (roughly) 4.5ft<sup>3</sup>, so I wonder - gradually going up from the minimum recommended volume - what's the maximum enclosure volume for the 2PI before you start suffering from severe standing waves?

In your opinion:

1. would something like 12"(W) x 17"(D) x 27"(H)(rougly 2.7 ft<sup>3</sup>) work in a decent way? Or maybe 12" x 16" x 25"?
2. would port positioning for that enclosure be as crucial as with the tower 2PI's?
3. would that volume require bracing?

Thanks!

PS. I read literally 42 pages of posts (almost back to 2008) trying to find some answers, so please be patient with me

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