
Subject: Changing dimentions..

Posted by [Firefli](#) on Thu, 06 Jun 2002 14:07:03 GMT

[View Forum Message](#) <> [Reply to Message](#)

After deciding that the Theater 4Pi or the Thermionic 3Pi are both too big for my room, I figured I could build them with altered dimentions. Would I be able to build a Thermionic 3Pi into a 42"x15"x17" box (this would maintain the same volume)? Or would I need to do more than just maintain the internal volume of the box? Height isnt really an issue in my room, only width (depth too, but width is more important). My System and DIY Projects page

Subject: Re: Changing dimensions

Posted by [Wayne Parham](#) on Thu, 06 Jun 2002 20:49:10 GMT

[View Forum Message](#) <> [Reply to Message](#)

Your cabinet volume is close to that of the "stock" design, so I suspect that speakers built to these dimensions will perform well. Cabinet volume is the main thing, and if you make it the same - Your speakers will work well. Of course, you can't make one dimension very thin in relation to the others, or standing waves will become significant. But your suggested dimensions are probably just fine. I recommend that you move the woofer and tweeter up towards the top of the cabinet, and keep them the same distance apart from one another. I'm not as concerned with port placement, but I would leave it near the bottom of the cabinet.

Subject: Re: Changing dimensions

Posted by [Firefli](#) on Fri, 07 Jun 2002 13:17:49 GMT

[View Forum Message](#) <> [Reply to Message](#)

Thanks for the advice - I think I might just go with this configuration (except make the 17" side be the front baffle...would probably allow the woofer to fit better) So to get even closer I am planning on making the boxes 42"x17"x15.25" which works out to a box volume of 10888.5 cu in, the original 33x22x15 box has a volume of 10890 cu in. I am assuming a difference of 1.5 cu in wont make a different (0.01%). My System and DIY Projects page

Subject: depending on which wall is the wide one,

Posted by [Sam P.](#) on Sat, 08 Jun 2002 15:46:13 GMT

[View Forum Message](#) <> [Reply to Message](#)

I can visualize how you might end up with a approximately 15x15 internal "pipe" about 40 inches long. Not great from a standing wave perspective, I would expect some 1/4 wave "excitement" somewhere in the bass region, near 84Hz. If the woof is at one end and the port at the other, you have a short TL system, right? 15x15 is close enough to Sd, consider the top end of the enclosure the TL throat, the floor end the mouth, the port is the exit. Moving the woof down from the top is cool, most TQWT builders use a 1/3 to 1/2 pipe position to locate the driver, but the physics of the 1/4 wave pipe will remain (just the f3 is reduced). Sam

Subject: Re: depending on which wall is the wide one,
Posted by [Firefli](#) on Sun, 09 Jun 2002 12:55:39 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hmm interesting...would making the boxes 17x15 be enough to attenuate any TL effects? I am not sure what to do here...the standard shape of the Pi won't work in my room. My System and DIY Projects page
