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Subject: 2 Pi completed

Posted by [Saracenblue](#) on Sat, 29 Dec 2018 20:17:46 GMT

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Hi,

After sitting on the parts for some time I have just completed the build. WOW!

I wish I'd had finished sooner. What an amazing sounding pair of speakers. Where does all that bass come from? Picture below.

Congratulations Wayne, magic design.

I don't have the largest room, use a single ended EL84 valve amp and until now, used to listen to mainly acoustic/small group music. Due to the increased SPL from the 2Pi I am now confident that I can play anything. Never expected that.

Had some friends listen too and I think they will soon be building these speakers themselves.

These are the largest speakers I have had and I am not totally happy with the stability of stands so I was wondering,

1. Would I compromise the speakers by building a floor standing box and fitting a false bottom about a third of the way up to maintain the volume of the 2Pi?
2. Could I reduce the baffle width, maximum one inch off each side? To make up the volume I will increase the height by about 2.5 inches.
3. I will retain the drivers positioning but I'm not sure about the port. I include a picture of what is proposed with the ports indicated close to the base of the inner box, either centered or to the side.

Reading through the advice given in the FAQs' 'Changing dimensions' section I'm hoping my plans will not prove too much of a departure as I do not want to do anything to spoil what I am now enjoying.

many thanks,  
Graham

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### File Attachments

- 1) [IMG\\_20181226\\_110539.jpg](#), downloaded 1178 times
  - 2) [IMG\\_20181229\\_191314.jpg](#), downloaded 1242 times
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Subject: Re: 2 Pi completed

Posted by [Wayne Parham](#) on Mon, 31 Dec 2018 15:36:28 GMT

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Your speakers look great!

the modifications are slight. I also wouldn't suggest mods on larger speakers and I wouldn't suggest mods to increase the internal volume too much on any of our models. Don't go past about two feet in any dimension without making acoustic measurements. That last statement is what I most concerned about; That and moving the positions of the drivers and/or port in relation to each other and to the cabinet walls.

The problem with large full-range speakers is their dimensions support internal standing waves at lower midrange and bass frequencies where damping material becomes ineffective. Small cabinets can only have standing waves at frequencies high enough that internal damping material attenuates quite well. But the larger the cabinet, the lower the internal standing wave modes. This means we have to mitigate (or even take advantage of) standing waves with careful placement of sound sources (drivers and port) and reflectors (cabinet walls).

But I do have one very optimistic suggestion: If you prefer a larger cabinet over the use of stands, cardboard mock-up - and they provide even deeper bass extension than the bookshelf model.

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Subject: Re: 2 Pi completed

Posted by [Saracenblue](#) on Mon, 31 Dec 2018 20:11:24 GMT

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Thanks Wayne for getting back to me.

The new speakers have been kidnapped for a by a friend for a listen with his system but I'll chase them up soon.

Thanks for your recommendations, I could probably sort something out with more substantial stands. The towers, well I could try but it may get me into trouble.

My proposed modifications would result in, a two inch reduction to the baffle width and a three and three quarter inch increase to the height. The volume would be unchanged. The drivers positions would remain the same distance from the top of the speaker as the original and the port siting is flexible.

I appreciate this takes things into uncharted territory but your advice would be appreciated.

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Subject: Re: 2 Pi completed  
Posted by [Wayne Parham](#) on Mon, 31 Dec 2018 22:25:36 GMT  
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I think your proposed mods will be fine. But I also think you're so close to towers in proportion that you'd be much happier building a pair of them.

Either way, Happy New Years!

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Subject: Re: 2 Pi completed  
Posted by [Saracenblue](#) on Tue, 01 Jan 2019 08:59:49 GMT  
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Thanks Wayne for your explanations and advice.  
I'll get some heavier stands as soon as possible and live with my new speakers for a while.

I also understand what you say about the towers but I fear even more bass in my little room could result in structural damage.

Happy New year to you from across the pond.

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Subject: Re: 2 Pi completed  
Posted by [Wayne Parham](#) on Tue, 01 Jan 2019 18:18:07 GMT  
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I understand completely.

When purchasing (or building) stands, I suggest having the base and the platform roughly equal to the dimensions of the bottom of the cabinet.

This is a photo that shows the kinds of stands I use:

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Subject: Re: 2 Pi completed  
Posted by [Saracenblue](#) on Tue, 01 Jan 2019 19:52:55 GMT  
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That's great Wayne.  
I'm on the case.  
Thanks

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Subject: Re: 2 Pi completed  
Posted by [Saracenblue](#) on Fri, 01 Mar 2019 09:19:24 GMT  
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Back again with my reshaped 2Pi' standmounts.  
Overall height about 39" and the volume is within 10 cubic inches of the plans.  
No loss of that wonderful sound and with the round overs, they just seem to fit my space.  
One question, I am currently using cotton felt (like 1" thick compressed cotton padding) for damping but I have some ordinary building insulation on its' way. This will be the rolled type and I am unsure of a suitable way to fix this, especially to the required vertical surfaces?  
Thanks Wayne for a great speaker.  
Graham

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- 1) [IMG\\_20190228\\_162419.jpg](#), downloaded 914 times
  - 2) [IMG\\_20190228\\_162520.jpg](#), downloaded 1179 times
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Subject: Re: 2 Pi completed  
Posted by [Wayne Parham](#) on Fri, 01 Mar 2019 15:55:55 GMT  
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Wow! Those look great!

They look a lot like the tower twos!

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