
Subject: 3Pi and 4Pi Plans Request

Posted by [endo](#) on Mon, 21 Sep 2020 15:17:56 GMT

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Hi,

I would like to request the 3pi and 4pi plans.

Regards,

Endo

Subject: Re: 3Pi and 4Pi Plans Request

Posted by [Wayne Parham](#) on Mon, 21 Sep 2020 18:03:12 GMT

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Please choose which of those two models you would prefer and let me know. I'll send plans.

The two models are similar, with the biggest difference being the driver compliment. Please see the Pi Speakers FAQ for more information. Pay particular attention to the section called "Models, Upgrades and Driver Characteristics." It has links to information about the differences between models and available options.

Subject: Re: 3Pi and 4Pi Plans Request

Posted by [endo](#) on Mon, 21 Sep 2020 19:08:40 GMT

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Wayne,

Thanks- please send the 4Pi, if you could. I am debating whether to attempt to build the box on my own or purchase the flat-pack. I have zero wood working skills/experience and the flat-pack sounds intriguing. But, of course I'm trying to save money too.

Regards,

Endo

Subject: Re: 3Pi and 4Pi Plans Request

Posted by [Wayne Parham](#) on Mon, 21 Sep 2020 21:20:54 GMT

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Subject: Re: 3Pi and 4Pi Plans Request
Posted by [endo](#) on Tue, 22 Sep 2020 20:02:53 GMT
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Wayne,

Thanks for sending the plans. How many clamps do you recommend I have when putting the 4Pi speakers together? I am starting from scratch (tool-wise) and I'm figuring out what I need.

Thanks,
Endo

Subject: Re: 3Pi and 4Pi Plans Request
Posted by [Wayne Parham](#) on Tue, 22 Sep 2020 22:12:28 GMT
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I'll defer to the cabinetmakers here to offer suggestions. I'm the acoustics and electronics guy, and others here are better at the woodworking. Some amazingly so.

That said, I think you could get by with two 30" bar clamps, but four or six would be even better.

Subject: Re: 3Pi and 4Pi Plans Request
Posted by [OutOfSpace](#) on Wed, 23 Sep 2020 14:46:25 GMT
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Endo, the number of clamps you need depends on the details of how the pieces fit together and how many pieces have to be clamped at a time. My guess is a minimum of 4 (one for each opposing corner).

Butt joints verses miter joints verses using screws instead of clamps make a difference as well. Are you going to sand, fill, sand, and paint, or do you want a natural wood finish? You'll have to think those details all the way through, and dry-fit everything so you know what to do once you have glue on the joints. You don't want to be figuring that out while the glue is drying.

As for your question about the cost of the kits, they are vastly cheaper than getting a usable table saw. It's possible to use a circular saw with a guide to get good cuts, but in all cases, practice before trying to build your first speakers. MDF is cheap enough to make that practical.

Chris

Subject: Re: 3Pi and 4Pi Plans Request
Posted by [endo](#) on Wed, 23 Sep 2020 15:18:28 GMT
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Chris,

Thanks for the reply. I am planning a Home Theater and am thinking about putting the speakers behind an acoustically transparent screen. I am debating whether to spend time finishing the speakers or just hastily painting them black since they will likely never be seen.

I admit, I am waffling between the 4Pi and the DIY Sound Group HT-10 or HT-12. I am trying to keep my costs down and the 4Pi's are quite a bit more expensive. I am "sold" on the need for a high-sensitivity speaker which offers excellent off-axis response and both seem like contenders.

I'd appreciate any thoughts on the advantages of the 4Pi over DIYSG offerings. There are some older threads on AVSForum which were quite passionate but seemed less based on facts/measurements. I'm not trying stir things up!

-Endo

Subject: Re: 3Pi and 4Pi Plans Request

Posted by [Wayne Parham](#) on Wed, 23 Sep 2020 19:51:16 GMT

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I think if you peruse the Pi Speakers FAQ and do searches here in the forum, you'll probably find all the answers to any questions you might have.

In particular, you might want to read the H290C Horn/Waveguide thread. It discusses the benefits of that design quite a lot. And look at what is offered by shorting rings in the drivers. Also, look for things about spacing of the vertical nulls, things like crossover frequency and slope and spacing between drivers, which is largely dependent on their size. And finally, look at baffle step and how the flanking sub configuration is used to compensate for that while at the same time reducing SBIR from nearest boundaries.

For me, the best loudspeaker designs use high-quality components and also optimize their interactions with one another. It's a whole systems approach.
