Subject: 3Pi or 4Pi?
Posted by Jimmy D. on Tue, 28 Apr 2020 21:04:45 GMT
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I'm new to the forum. I want to help my graduating son build a pair of high efficiency speakers to compliment his singled ended KT88 amp he built. I want a compression driver and a very high efficiency. Looks like my options with Wayne's designs are either the 3 or 4, that can fit a modest space at least.

A couple questions:

Why is there so much difference in efficiency between the 3 and 4?

How can I get a copy of the plans for the 4?

Are the kit parts readily available for the 3 and 4?

What is the approximate -3 dB point for the 3 and 4?

Thanks in advance,
Jim

Subject: Re: 3Pi or 4Pi?
Posted by Wayne Parham on Tue, 28 Apr 2020 21:35:16 GMT
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The real difference - besides efficiency - is the choice of midwoofer brand you prefer. It's kind of

choosing between two top-notch manufacturers.

You can see the specifications for each model here:

Parts are readily available for both models. We sell complete kits, or we can sell you just the waveguides and maybe the crossovers of you want to source the drivers yourself.

The waveguide is the only part that you must buy from us, because we're the only source for that part. But everything else can be purchased wherever you wish.

Beyond that, I encourage you to look through the Pi Speakers FAQ, especially the section called "Models, Upgrades and Driver Characteristics." This will help you learn more about each model and option available. That might help you decide which model is best for you, and what options you think you'd like to have.

Once you decide, let me know and I'll send the plans.

Subject: Re: 3Pi or 4Pi?
Posted by Jimmy D. on Sat, 02 May 2020 12:35:09 GMT
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Wayne,

Why does the design of the 3 pi have a 2" wider baffle than the 4 pi? I'm struggling to find a design less wide however I'm guessing that reducing baffle width to minimums will affect efficiency?

Jim

Subject: Re: 3Pi or 4Pi?
Posted by Wayne Parham on Sat, 02 May 2020 18:35:13 GMT
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though, and they're large enough that baffle step happens right about the Schroeder frequency. So below the baffle step, we're in the room's modal region.

Instead of adding energy into the mains to compensate for baffle step - or worse yet, removing energy above the baffle step as it usually done with BSC filters - it's nice to be able to use a flanking sub approach. This provides simultaneous solutions to three important acoustic problems:

Provides baffle step correction (BSC)
Mitigation of Speaker Boundary Interference Response (SBIR) and higher-frequency room modes
Provides deep bass extension

Subject: Re: 3Pi or 4Pi?
Posted by Jimmy D. on Tue, 05 May 2020 13:26:37 GMT
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Thank you Wayne. Please email the 3 Pi plans to me.

Regards,
Jim

Subject: Re: 3Pi or 4Pi?
Posted by Wayne Parham on Tue, 05 May 2020 15:16:45 GMT

You've got mail!