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Subject: 3Pi plans and questions

Posted by [scwheat](#) on Thu, 02 Nov 2023 20:36:19 GMT

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Can you also send me the 3Pi plans? I would like to use the B&C DE250 if that makes a difference. I'd like to build 3 for LCR.

A few questions as well.

What would your recommendation for LFE crossing over to a 15-inch sub via the receiver? IE 80 (for a starting point)

I'd also like to build two for surrounds (if the cabinet was not so deep). If I did the math and made it 10 inches deep but taller would that be ok. Assuming the internal volume was the same.

I see I will need to get the horn from you. Do you also sell completed crossovers?

Thanks in advance.

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Subject: Re: 3Pi plans and questions

Posted by [Wayne Parham](#) on Thu, 02 Nov 2023 21:14:21 GMT

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You've got mail!

You can buy waveguides and crossovers from us.

I wouldn't suggest modifying cabinet dimensions unless you can do acoustic measurements to verify there is no regression from the changes. The thing to watch out for is lower-midrange anomalies, which can crop up from standing wave modes. See the Pi Speakers FAQ for more information on that subject.

As for subs, I recommend flanking subs for the left and right channels, and optionally, a distant multisub or two. You can do a search here and/or on the internet at large to learn more about multisubs and flanking subs. The Pi Speakers FAQ has a few links that discuss those topics as well.

But in short, flanking subs get a low-passed copy of the main speaker they are flanking, and their low-pass curve should be 100Hz second-order. The mains get high-passed at 30Hz. Flanking subs provide extension, baffle-step compensation and mitigation of SBIR and higher frequency room modes.

Distant multisubs are sent the LFE signal, which is an all-channel summed signal low-passed between 60Hz and 80Hz, fourth-order. Multisubs are placed fair from the mains, pretty much at the other side of the room. They're used for smoothing low frequency room modes.

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Subject: Re: 3Pi plans and questions

Posted by [scwheat](#) on Thu, 02 Nov 2023 23:19:37 GMT

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Thank you. Much appreciated. I see the crossovers on the website now. I missed them earlier.

I apologize on the sub question/answer. I really don't understand that. I am planning a 5.1.2 system for now with the sub between C/L behind an AT screen. Most places that I've seen recommend (starting) the receiver LFE at 80Hz and adjusting from there based on preference and speaker capability. I've seen some other Pro speakers that don't play as low and they recommended 100-120 as a starting point. I just wanted to make sure these could be set at 80Hz. I hoped that was ok for the 3Pi and assumed they play lower than the others that I was looking at.

Thanks again.

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Subject: Re: 3Pi plans and questions

Posted by [Wayne Parham](#) on Thu, 02 Nov 2023 23:51:19 GMT

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Certainly, a person can always employ the single-sub route. But to be very honest, this is a worst-case scenario. You really want to use at least a pair of subs - setup as flanking subs. And if possible, add one or two more distant subs configured as multisubs.

It may seem like overkill, but there was a time when people thought anything more than two speakers for stereo was overkill. And a time before that when things were mono - just one speaker. Now many people run three mains, two to four surrounds, Atmos speakers up high and subs.

One can always work their way up in stages too. Mains first, then surrounds, then subs. Or you could start off with one sub on the LFE channel and then later add a second and setup as flanking subs. Then maybe later add one or two more as distributed multisubs.

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