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Subject: four Pi and subs

Posted by [Jetpump](#) on Sat, 15 May 2021 15:13:16 GMT

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I'm still lurking about with the 4pi idea. Why does the sub need to sound good up to 200hz? How well will SVS SB-3000 subs do?

Thanks,  
Billy

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Subject: Re: four Pi and subs

Posted by [Jetpump](#) on Sat, 15 May 2021 15:16:12 GMT

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Wayne Parham wrote on Tue, 19 May 2020 15:59 The woofer and tweeter are direct replacements, and they can be exchanged through the front of the baffle. The cabinet stays the same.

There are some crossover changes required, but they are inexpensive and pretty easy to do. Some resistor values are different for the DE250 because it has slightly higher voltage sensitivity than the PSD2002. You can see the components used for each option in the "Notes" section of the crossover document.

Here are some of my thoughts about the upgrades available:

Options in a nutshell

Upgrades

For different compression drivers, is it only resistor swaps? I guess I'm wondering if the horn dictates the frequency response vs. the driver for crossover design.

Thanks,  
Billy

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Subject: Re: four Pi and subs

Posted by [Wayne Parham](#) on Sun, 16 May 2021 14:16:26 GMT

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Compression driver changes sometimes need different R1/R2 values to match voltage sensitivity. The amplitude and polar response is set by the waveguide, which has much more influence than the driver.

The only things set by the driver are mass-rolloff - which sets the upper frequency limit - and breakup modes which must be well damped or they end up being deal-breakers. So basically, compression drivers act similarly provided they have adequate high-frequency response and don't have excessive breakup in the top octave.

As for subs, the reason we need clean output above 100Hz is for a specific application called flanking subs. That configuration blends the subs with the mains up to around 150Hz or so. It is done to smooth higher frequency room modes and SBIR from nearest boundaries. It is a type of multisub configuration, part of a complete multisub setup.

You might do some searches and read on the concepts of flanking subs and multisubs to learn more about their benefits.

Flanking subs and multisubs

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