
Subject: Re: 4PI Plans Request
Posted by [Wayne Parham](#) on Mon, 30 Dec 2019 17:11:47 GMT
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We all love to see build threads. So please create one and post often!

As for the mods you are considering, I am glad you understand the potential for anomalies from standing wave modes in large full-range cabinets. That knowledge will push you towards diligence in this regard.

For crossover information, please see the following thread:
Crossover optimization for DI-matched two-way speakers
Watch the video in that thread too, because it shows you how to find the position of the vertical nulls. The forward lobe is between the nulls.

I also encourage you to look at the concept of flanking subs. They work hand-in-hand with the three Pi and four Pi cabinets, meaning that they increase bass extension and conjugate lower rolloff both from cabinet alignment and from baffle step. In addition, each flanking sub mitigates SBIR from nearest boundaries and it smoothes higher frequency room modes.

By making the cabinets larger, you not only change the position and frequency of internal standing wave modes but you also change the bass alignment and possibly the frequency where baffle step occurs. This might change the overall synergy between the mains and their flanking subs.

So keep these things in mind as you incorporate your changes.
