Subject: My Speaker Project - Looking for Advice
Posted by Obankenobi on Tue, 24 Nov 2015 17:29:33 GMT

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My first post and I'm looking for advice! What a way to kick off.

I've been mulling over custom speaker designs for years, big fan of Troels Graveson's work but could never settle on the pair I wanted to build. Buying components is the easy part - dedicating 2/3's of my garage to cabinet building is the deal breaker. But I've taken a head first dive now, and have a cabinet maker online to make 90% of the cabinets better than I ever could, and I will simply work on the baffles to fit the drivers.

I have Altec 811B horns and Radian 475PB compression drivers. I'm trying to decide on the woofer, probably JBL 2226 or 2235.   Will cross over around 850-960 Hz, 4th order, probably starting with an active crossover for ease of experimenting, and building passives later if I feel like it. Speaker cabinet volume should be around 6-7CF, attached drawing is a starting point for dimensions based on 1. space available and 2. WAF.

Love to hear any advice, I promise to soak it all in, but please don't be offended if I can't follow everyone's suggestions. I'll post pics as I progress, but as this is hobby time after work it may take a while!

Thanks in advance

File Attachments
1) speakerz.PNG, downloaded 1749 times

Subject: Re: My Speaker Project - Looking for Advice
Posted by Wayne Parham on Tue, 24 Nov 2015 18:54:47 GMT

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Looks like a great design! I'm all about speakers like that.

My only advice is to make sure to pay attention to summing through the crossover region, and I'd match the polars as well. I wouldn't set my sights on a particular crossover frequency and slope, but rather on the summing and the polars. It will be somewhere in the ~1kHz range, but you may move it above or below that a couple hundred Hertz and you'll probably arrive at asymmetrical slopes for best results.

The link below shows what I'm talking about in more detail:
Crossover optimization for DI-matched two-way speakers

Subject: Re: My Speaker Project - Looking for Advice
Posted by Obankenobi on Tue, 24 Nov 2015 20:26:28 GMT

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Wayne, thanks much! I've got some reading to do.