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Subject: inductor and mid driver questions

Posted by [braddog100](#) on Thu, 29 Dec 2005 14:44:48 GMT

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I have recently started my exploration into spkr technology. Desiring to build cabinets for my kids from older cerwin vega 12" based 3 ways I noticed attempting to reverse engineer to build another set, that the Inductors of the same value are considerably larger from DIY supplier, also the measured resistance of the old very thin wire inductors is close to .5 ohms. The replacement had 0 ohms. Parallel with an 8ohm spkr driver, doesn't this matter? also the original had a metal core. Is this superior? Desiring for the mid to carry 500 - 4000Hz, is there a preferred mid for this job? Also interestingly, I found a web site with a passive component calculator with both Butterworth and Linkwitz - Riley values. [www.bcael.com/xoorder.htm](http://www.bcael.com/xoorder.htm) I also noticed that the high pass inductor value differs greatly from what I originally had, though I'm sure they are less relevant than low pass inductors. Should I redesign the Xovers to fit the component values from the calculator? Both kids have very high grade solid states, pioneer 1050s with extensive capacitor upgrades. Muse Es thru out audio path, cascading etc. I would consider any suggestions carefully, observing the level of expertise on this site to be high. I understand that there are no stupid questions, but, are there many inquisitive idiots? Brad

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Subject: Re: inductor and mid driver questions

Posted by [Wayne Parham](#) on Thu, 29 Dec 2005 17:49:58 GMT

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A garden-variety calculator crossover is worthless. The speaker is not a resistive load, so more information is required even just to calculate the electrical transfer function. Then when you consider that the driver and/or horn have mechanical and acoustic transformations, you have much more to consider than a simple website calculator can account for.

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Subject: Re: inductor and mid driver questions

Posted by [Matts](#) on Fri, 30 Dec 2005 00:45:34 GMT

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Some of these old speakers designs are classics, but I'll bet you could do much better by using the cabinets to fit a more modern design. The whole state of the art is much higher now, but you could still use the cabs, if they fit what sound you'd desire. How big are the cabs? Are they ported? Are they big enough to put a new baffle on the front and use a 15" woofer?

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Subject: Re: inductor and mid driver questions  
Posted by [braddog100](#) on Sat, 31 Dec 2005 05:23:11 GMT  
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Thank you Matts for your time. Wayne has been very helpful. I'm learning quite a bit right now. Realized the value of reading on the site before I reveal myself "an Idiot". I hope readers enjoyed my joke earlier, ...I thought it was funny. I have alot of parts right now. All are Cerwin Vega. Not the best Fi. I rebuilt a pair of 12" based 3 ways that actually sound pretty Good using solens and jansen inductors, Axon T1s's were a good replacement for the non-tweeters installed. I have 2) 12" woofers and 2) 15" woofers. and 4 empty cabs (all too boomy) before I invest in anything more I'm going to build a set of 2 pi's towers, limited budget. I do enjoy the 3 ways but I run mostly tube gear and need better impedence. The 4 ohm pair is a bit thin. They sure sound good thru a Pioneer SX1250 preamp section upgraded with Muse ES caps. Reading earlier I noticed someone making reference to bi amping. The pioneer (biggest they made) would be very good for the 12's and 15's, Tubes driving quality mid's with vifa's. I'm not sure...I think I will probably find that the bass in the tower 2's is all I need.

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Subject: Re: inductor and mid driver questions  
Posted by [braddog100](#) on Sat, 31 Dec 2005 16:39:40 GMT  
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Hello Wayne Thank you for your time. You eased my tension concerning the replacement parts. These really sound pretty good. However, modeled after the originals, they only have a 4 ohm load. Running mostly tube gear, I need my components to deliver closer to 8. However, I do have an out standing solid state with extensive cap upgrades. I could utilize to drive the 12's and use tubes to drive high range mids and tweeters. I have material I have gathered from your forum concerning this, but have not studied. Personally, I prefere simplicity. I look for your advice on this matter I am interested in your plans for the tower 2's. also in one room the footprint could be a problem. Could I narrow the cab but keep the speaker volume the same by raising the height?In my living area, to have rear speakers, the concession my wife and I have come up with is wall speakers. ....are you laughing? Well do you have suggestions using these 2Pi components and Xover design to best accomodate. Maybe building a 2Pi monitor mounting the whole thing in the attic (I have a cathedral ceiling which faces out not down). Thank you again, Brad

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Subject: You've got mail!  
Posted by [Wayne Parham](#) on Sun, 01 Jan 2006 16:50:46 GMT  
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front and rear 13" wide and making the cabinet 16" deep. That narrows the speaker a little bit without changing anything else that might adversely affect the sound.

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