Subject: One Pi with sub in one cabinet (ie: 3-way)
Posted by spkrman57 on Wed, 24 Jul 2002 11:53:08 GMT
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Wayne, I will first admit you like 2-way systems (Yes, I love my 3677's w/2226 and 2418/2373-maybe like first cousin of your Pro 4 Pi). I have various speakers here and there in my house and was wondering about a 1 Pi with a 1st order low-pass on a 15" mated with a 1st order high pass on the Alpha 8. Actually, I was thinking 6 mh coil on Jbl 2205A and 47 ufd cap on the Alpha 8. (these values were picked as closest matching components I have in-house at moment and seemed to maybe mesh somewhere around 300 hz. The Alpha 8 and KSN-1038 would be housed in a sub-enclosure within the 2205's enclosure. I looked at your 4 Pi plans (1982w/2205-x1/2105-x2/KSN-1041-x2) and then it hit me, I liked the idea using the Alpha 8 instead of 2105(x2) and the KSN-1038 you use to match up the Pi 1 with could be used instead of KSN-1041(x2). I think this would be a great combination. The entire setup would be no larger than your orig 4 Pi (of 1982) being around 2 to 2 1/2 cubic '. Just my lone "Braincell" running loose again. But, seriously, I would love to hear comments on this. This would be cheaper to some folks than buying compression driver and horn, and crossover parts I think would be cheaper. You use 1.8 mh coil on JBL 2205A/H for psuedo (shave midrange only). You used a 3.6 mh coil on your (1982) 2205A/H for 1st order crossover. but you had both 2105's shunted with cap and resistor in series with each other through I think (off top of my head - memeory shortage here) 1 mh coil and 8 ufd cap. I really liked the piezo crossover (I think 18db/oct RC network). Could the Ist order solution I gave work with only coil on 15" and cap on 8" using natural rolloff for the rest???????Thanks for listening. Capt Ron

Subject: Re: One Pi with sub in one cabinet (ie: 3-way)
Posted by Wayne Parham on Wed, 24 Jul 2002 18:55:54 GMT
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I think the woofer to mid crossover should be kept as low and as simple as possible, perhaps even omitted entirely. That way the overlap will reduce any floor bounce notch that might otherwise be present.Sounds like an interesting project! Please keep us posted!

Subject: Re: One Pi with sub in one cabinet (ie: 3-way)
Posted by Chris R. on Thu, 25 Jul 2002 14:27:35 GMT
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JBL 2123's are available for $130ea. Higher than lots of the otherdeals, but have a ruler flat response from about 200->5KHz.There's a PDF of the specs with the graphs.

Subject: Re: One Pi with sub in one cabinet (ie: 3-way)
Posted by spkrman57 on Fri, 26 Jul 2002 13:03:50 GMT
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Wayne,I ordered a pair of KSN-1038A's from Parts Express only to find out when I received shipment they are out of them. Okay, so I saved $8.50 per piezo by not having them. Was disappointed, I have a lot of misc piezo's and wanted to try out the one you use in 1 and 2 Pi's. I did not know that the 2105's reached up to 10Khz, that being the case, is that why you used the KSN 1041's instead of the ksn 1038's????? I know the Alpha 8's are good to 5khz, so I will try the system breadboarded and see what happens, I will post the results for the curious ones here. I have another question, when I pruchase coils from parts express, they alway come out a little low in measured value, but the coils with the iron cores come out in the high end measured out. I just got two .7mh 14 guage and they come out the closest (of the others I have bought there in the past) as far as the air cores go (.683mh if I bend wires totally in coil, will go to .685mh) I finally got some 8 ohm 2226's (I already had 2226J's - 16 ohm) I am going to try and properly port the 3677 cabinets this time. Previously I removed the foam from the two 3" ports and they played pretty well (the 2226J's that is). Thanks, Capt Ron

Subject: Re: One Pi with sub in one cabinet (ie: 3-way)
Posted by Wayne Parham on Fri, 26 Jul 2002 18:07:54 GMT
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The KSN 1038, 1041 and 1056 are basically the same tweeter, different only in cosmetics. One has a chrome trim, one has a chrome trim and chrome phase plug and the other is all black. I forget which is which, and I've always tended to order the 1038's.About the coils, don't fret a 2% variance. The crossover filters don't need any more precision than that, and in fact, 5% and even 10% is fine in some cases.

Subject: Re: Some questions to Wayne about variations of this idea
Posted by Erik Johansson on Mon, 29 Jul 2002 17:55:02 GMT
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I like these discussions as I plan to make som LF-cabinets (separate though) for my 1 Pi speakers if I like them once finished (built and veneered now. Currently working on the finish, got 6 layers of

the baffles, etc which the little program does not help me with) for these drivers. Also Wayne, does the Delta 15 integrate well with the Alpha 8 or should I choose the Alpha 15? Also, how big is the difference between the Delta 12LF and Delta 15 in deep-bass capabilities?/Erik

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Posted by Wayne Parham on Tue, 30 Jul 2002 03:36:11 GMT
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The two speakers are very similar in tonal character, actually. The 15 sounds a little "bigger" and the 12 sounds a little "fuller."To quantify the differences, first know that the lower -3dB point is virtually the same on both speakers, at 50Hz. That, in itself, is significant because the Theater

rising response through the midrange, and so is louder but also depends more on room

that's more like an EBS alignment, which means there is a shelved response that's good down to

rising response profile through the midrange.Size and efficiency are important considerations in

If you plan to run a SET amp, it probably should be pretty powerful with good damping ability if

there are valid reasons to go with each speaker; There are strengths and weaknesses with each one. Let us know which you choose, and how it works out!

Posted by Erik Johansson on Tue, 30 Jul 2002 04:27:56 GMT
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Wow thanks for that great answer Wayne!However, when I run Pialign it suggests a 5.2 cu feet

Posted by Erik Johansson on Tue, 30 Jul 2002 04:32:10 GMT
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Also, is the Theater 3 Pi good with a fairly "powerful" tube amp at 2x14W?/Erik

Posted by Wayne Parham on Tue, 30 Jul 2002 05:08:30 GMT
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has usable output just under -10dB (about -13dB) all the way down to 15Hz. So this speaker box. It works well on any amplifier, from the flea-power SET amps to larger prosound amps. The suggest a trial on very low-power SET amps but it is fine on all others.