Subject: Wayne, cab question...
Posted by one_speed on Mon, 28 Nov 2005 14:35:37 GMT
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A while back, I posted regarding the Fostex FW305, and you were kind enough to make some suggestions. As a quick reminder, my plan is to cross at 200hz. to a full range driver. You recommended going up to a 4 cu. ft. cab and gave thoughts on a cross over. I have the crossover parts you recommended and am working on the cab. I made it a touch larger to make up for stuffing and the driver, about 120 liters. (problem?) I thought I'd line the box with a very thin felt I have, then use the R-13(?) to line a couple of the inside walls as you have recommended to others.My questions are this, I did model this and thought it looked pretty good. But, remodeled it recently to double check and the curve didn't look so good this time around. Any thoughts? I was using a ported box spreadsheet for the Mac.A friend did some work and figured two 3" x 10" ports per cab. I'm wondering if you have any thoughts or recommendations on this. Also, any thoughts on what I'd get out of this if I went sealed?I am only on a Mac and have no way to jump on a PC and use your software. Actually, I can find very little modeling software for the Mac. I hope you don't mind me tapping you for your extensive experience and knowledge.Cheers!

Subject: Re: Wayne, cab question...
Posted by Wayne Parham on Mon, 28 Nov 2005 15:47:55 GMT
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Can you please list the T/S specs and any other information we discussed?

Subject: Details...
Posted by one_speed on Mon, 28 Nov 2005 16:21:48 GMT
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Wayne, thanks for taking a look at this. Here’s the original thread and your main response....http://www.audioroundtable.com/PiSpeakers/messages/16629.html“Cabinets between about 1.5ft3 and 3.0ft3 tuned to 38Hz are B4 alignments, which have flat response curves. Smaller cabinets become increasingly underdamped, but it isn’t bad until you are under 1.0ft3. If you make the cabinet larger, up to about 4.0ft3, it becomes increasing more like a C4 alignment. The response curve dips a little in the octave above cutoff and then rises again just above falling rapidly at cutoff. Cabinets larger than 4.0ft3 tuned to 38Hz or above are underdamped, and the peak rapidly becomes very large as the box is made larger. But you can make the cabinet larger and make the Helmholtz frequency lower to create an EBS alignment. This will give extended bass at a reduced level.As for crossovers, I would use a simple first-order filter at 200Hz. It will work very well in this application because wavelengths of bass frequencies are large, so summing will be good. Basically, as long as the front to back spacing is less than a

foot and a half apart, the two sounds sources will combine as one. Just use a 6.0mH coil on the woofer. If you need a passive crossover on the main driver, use a 16 ohm 10 watt non-inductive resistor across the speaker and a 100uF capacitor in series. That large a cap will probably tempt you to run electrolytic, and if so, you might go with a Black Gate N Type. You can also get several smaller values of another capacitor type and connect them in parallel to form 100uF. An example would be to use (5) 20uF polypropylene capacitors."T/SImpedance:8 ohmMinimum Frequency Response :25HzS.P.L.:95dB/W (m)Rated Input:40WMusic Power:125WEquivalent Mass:55g (0.121 lb)Magnet Weight:1.41kg (3.108 lb)Net Weight:5.0kg (11.023 lb)Fs:25HzRe:6.6 ohmQts:0.25Qes:0.28Vas:254 LXmax:4.8mm (0.187 in)no:1.4%Thanks again for your thoughts...

Subject: Re: Details...
Posted by Wayne Parham on Mon, 28 Nov 2005 19:16:20 GMT
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From my earlier reply to you, it looks like a 1.5ft3 to 3.03 box tuned to 38Hz would probably be your best bet. You might even tune slightly lower to give an overdamped response, which will be better in some rooms. A larger cabinet will give deeper bass but will also tend to shift the response curve towards an underdamped condition, which will sound boomy in some environments. Large boxes tuned slightly underdamped tend to sound good in large open spaces. Cabinets tuned slightly overdamped sound better in smaller spaces.

Subject: Re: Details...
Posted by one_speed on Mon, 28 Nov 2005 19:21:13 GMT
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Thank you so much Wayne. What do you recommend for ports, if you don't mind?Layne

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Subject: Re: Details...
Posted by Wayne Parham on Mon, 28 Nov 2005 19:53:34 GMT
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Depends on the size of cabinet. What size do you plan to make the box?

Subject: Re: Details...
Posted by one_speed on Mon, 28 Nov 2005 20:11:48 GMT

Sorry, I honestly know better than that...Are you comfortable with pushing it to about 3.5 cu. ft. total? My thought is that this would work as a balance of pushing the envelope just a bit, yet trying to avoid the boominess.If not and you think that's not the best direction, let's run with 3 cu. ft. Perhaps that's the better way to go.Thanks again Wayne, I really appreciate your opinion in this matter. Speakerman (Ron) was right, you are the man!

Subject: Re: Details...
Posted by Wayne Parham on Tue, 29 Nov 2005 04:28:38 GMT

I'd probably go with a 3" diameter port, 2.5" long or 4" diameter port, 5" long.

Subject: Thanks!! (nt)
Posted by one_speed on Tue, 29 Nov 2005 13:27:14 GMT

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