Subject: 6Pi - 7Pi bass cab same dimensions?
Posted by Psychoacoustic on Mon, 02 Mar 2009 01:33:22 GMT
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As per the subject title- I have 6Pi plans but intend to build 7Pi. Are the bass cabinets the same dimensions? If not, may I request the 7Pi plans, please? Thanks, Ant.

Subject: Close, but not the same
Posted by Wayne Parham on Mon, 02 Mar 2009 02:56:37 GMT
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They're close enough in volume that either would work for the other if the Helmholtz frequency were right. That's the main thing, the cabinets are tuned to a different frequency. They are a slightly different volume as well.

Subject: Re: Close, but not the same
Posted by Psychoacoustic on Mon, 02 Mar 2009 04:10:13 GMT
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Wayne, thanks again for the response and plans. Getting closer to the build... couple more questions.I understand that this has been done to death, but one more time please...In Japan, I can only source 10mm ply. The plans call for 20mm (3/4").For the Pi7 specifically, would gluing two 10mm ply sheets together or one 10mm ply and one 10mm MDF be better, or no difference?Recently, there was some discussion of crossover value changes. Do you have these updated, populated crossovers ready to go?PaulW, who has built the Pi7, mentioned enlarging the mid-horn flare dimensions. Any thoughts on this?Thanks again.

Subject: Re: Close, but not the same
Posted by Wayne Parham on Mon, 02 Mar 2009 06:18:14 GMT
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For plywood, I'd use 18mm which is very close to 3/4". It's about 0.7"About crossovers, we stock assembled circuit boards using a variety of optional components. You can choose from Jantzen, Auricap, Mills, etc. We also sell unpopulated crossover PCB's if you'd rather assemble your own.About the midhorn, PaulW wrote to me some time ago when he was assembling his. He was concerned about how to mount them in the box, wondering how to trim them out. I suggested a hardwood trim that serves as a sort of edge band. The idea is to cut it to have the same angle as

the flare. It is attractive and it extends the flare slightly, which isn't a bad thing. I think that's probably what you're talking about.The midhorn is designed to be as small as possible without sacrificing sound quality. Even still, they're fairly large. Making a horn larger isn't generally a problem, it's making it smaller where you'll run into complications. You could make them larger, if you wanted, but when used in the corner, the walls tend to act as flare extensions anyway.

Subject: Oh, my mid-horn mkII idea
Posted by PaulW on Mon, 02 Mar 2009 23:05:27 GMT
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Child art added to give an idea of what I'm thinking of.Indeed that was the context the mid-horn size got raised - and I never did use the edging method. But it was mentioned that the flare would benefit from being slightly bigger so, when I get round to remaking it I was going to increase the throat to corner distance by 1 inch with the top and bottom faces slightly curved to the middle with a 2 inch increase. The 'drum' holding the driver would be made from flexible MDF (MDF sheet with slots cut 2/3's the way through the thickness at regular intervals) formed over disc of ply.
Well that's the plan, but then again, there's the power-amp upgrade, the preamp upgrade.....Paul

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Subject: Re: Oh, my mid-horn mkII idea
Posted by Wayne Parham on Mon, 02 Mar 2009 23:12:39 GMT
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The rear chamber shape is not so much an issue, you can make it however you want. As far as the size of the flare is concerned, it's not necessary to make it any bigger if it will be used in corners as intended, but it won't make it any worse either. If you change the angle of the walls, that will change things, both in terms of radiating pattern and probably the shape of the response curve too.

Subject: Re: Oh, my mid-horn mkII idea
Posted by PaulW on Mon, 02 Mar 2009 23:27:39 GMT
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The angles of the walls will remain the same, just the curved front and a 1 inch overall throat to edge increase.Paul

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Subject: You may now graduate to finger-painting
Posted by Psychoacoustic on Tue, 03 Mar 2009 00:07:47 GMT
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Paul, there's a huge underground market for naive art. Your design is aesthetically pleasing, unlike my attempts at writing Japanese, which the locals can only translate as "a monkey choking a squirrel", etc.Any thoughts on how you will mount the HF driver?I think I remember reading in your review that you felt the drivers blended seamlessly. But I promise I'm not making this up, I read in this forum some talk of altering crossover points... buggered if I can find the post.

Subject: Front edge trim on midhorn
Posted by Wayne Parham on Tue, 03 Mar 2009 03:27:43 GMT
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Oh, I see, well there you go! That's pretty much how mine are done too, with a 1" trim that covers the entire front. It's there mostly for aesthetics, but it doesn't hurt that it effectively makes the horn

tweeter

Subject: Re: You may now graduate to finger-painting
Posted by PaulW on Tue, 03 Mar 2009 11:00:40 GMT
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To mount the HF horn I would use a "T" shaped platform attached to the front/top of the horn in-line with the original dimensions, supported by the triangular brace. A similar method below to support the mid on the bass unit. Still all a bit academic at the moment as these are just ideas in my head and on the doodle pad!Don't remember any posts about altering crossover points TBH, the end result with mine is impressively cohesive as it stands - I certainly can't hear the joins ;¬)Paul

Subject: Re: Close, but not the same
Posted by Psychoacoustic on Thu, 05 Mar 2009 03:14:54 GMT
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Tracked down a hardware store that stocks 18mm 3 X 6 MDF. Can order thicker than 10mm ply, but I was told there's no 'guarantee of quality' and 'would probably have voids'.Baffle isn't so big, so there's probably no need for double thickness, true?

Subject: Re: Close, but not the same
Posted by Wayne Parham on Thu, 05 Mar 2009 03:42:14 GMT
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Excellent! That will work very well.The most important thing is bracing. Damping material placed as described in the plans is also very important. You can do a constrained layer, if you want. But I would consider that an option, whereas bracing and damping material as shown in the plans is mandatory.