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Subject: New DIY Pi Speaker owner and have build questions

Posted by [gumby1](#) on Fri, 07 Feb 2003 06:17:21 GMT

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I just received my new DIY Two Pi Tower speaker kit in the mail and have some questions. I am meticulous when I work on my motorcycle and I'll be the same way when assembling these speakers, but have some questions. First, 5/8 inch MDF is recommended, but the plans say that 3/4 inch can be used. Is there any advantage to 3/4 inch? Second, the plans state "Line the top, one side and the front baffle, up to the woofer, with R13 insulation." Why only one side? Does it matter which side I choose to use? I guess I'm just trying to understand the rationale here on why the top, front, back, and sides don't all need insulation. I will follow the instructions exactly as they are written though because I figure the designer knows more about this than I do, but please help me get this right. Third, could you give me some good suggestions on making the cabinet "airtight"? I was just going to use some good quality wood glue and use clamps. Is there a special sealant that I should use for this purpose? Other suggestions on constructing a good cabinet? Is there a sealant that should be used when mounting the woofer and tweeter?

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Subject: Things and stuff

Posted by [Wayne Parham](#) on Fri, 07 Feb 2003 06:50:22 GMT

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I designed the speakers for 5/8" or 3/4" wood stock, and port cutout diameter is listed on the plans for each. Either way, be sure and brace the cabinets as described in the plans. You'll want braces spanning front to back and side to side; One set like that 1/3rd the way down from the top of the cabinet, another 1/3rd of the way up from the bottom. Put R13 insulation on the inside front, one side and the top and also put a sheet spanning the cross-section on each brace. This looks like it breaks the cabinet into three sections and at midrange frequencies, it does exactly that, trapping them and attenuating internal standing waves. But bass frequencies pass right through. As far as what to do to obtain an airtight cabinet, it's really not that difficult. Good build quality is all that's required. Don't line the seams with silicon, grout or gasket sealer. Just make your cuts true, form your joints well and use a liberal amount of glue. After you've assembled the speaker and installed the woofer, tweeter and connector panel, give it some serious volume. You've run that bike with open headers a time or two I suspect, so don't spare the ears on this task, just for a little while. Now feel around the circumference of the woofer and tweeter and check for gusts of air. You'll notice it most on deep bass notes, drum impacts and the like. If your woofer and tweeter holes are cut so that there is a large "lip" of contact surface area, then you probably won't need any gasket material. But if you feel any little burst of air, then form a gasket from silicon or something - just a thin bead - and run it along the sealing surface of the offending component. For more cabinet construction tips, check thorough the archives by using the search function. Try specific words like "bracing" or "joints" or "insulation." There are some really talented cabinetmakers that frequent this forum and they have given some excellent tips.

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Subject: Re: Things and stuff

Posted by [gumby1](#) on Fri, 07 Feb 2003 23:49:27 GMT

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Wayne, You answered my questions exactly and gave me some great tips. Thank you. The kit arrived relatively quickly because you used Express Mail. Priority and First Class take about 7-10 days and cost less to ship than Express. Parcel Post mail can take up to 55 days, but at about half the cost of other shipping methods. If weight is heavy and there is no hurry, Parcel Post is the way to go. Thanks again for your support and service.

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