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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 through 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.