Subject: question for Wayne about ports
Posted by wasteh202 on Sat, 21 Dec 2002 19:34:02 GMT
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Wayne, hello again Wayne. I have a question about the ports.1- I am building the 2Pi towers. Will it make much difference if I use a 4 1/4" inch hole instead of the called for 4 1/2. How long is the port. I know that you say that the port is the thickness of the wood. Does this mean that a tube is not required inside the box... just a hole? I am using 3/4" plywood stock, thanks again Wayne.

Subject: Answer about ports
Posted by Wayne Parham on Sat, 21 Dec 2002 19:56:58 GMT
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The port length is actually set by the thickness of the baffle. There are different hole sizes shown in the plans for various baffle thicknesses, so pick the wood you've chosen and size the port hole cutout accordingly. For 3/4" wood, cut the port hole 4-5/8" diameter.

Subject: Re: Answer about ports
Posted by wasteh202 on Sat, 21 Dec 2002 22:39:09 GMT
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Thanks for such a quick answer! WOW... you are really fast.

Subject: Unintended mods on box size
Posted by wasteh202 on Sat, 21 Dec 2002 23:21:58 GMT
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I have done some woodworking in the past but I am not exactly a cabinent maker. I did intend to make the boxes different from the 13"x16"x46" which is called for, but what I ended up with is a bit off from what I planed. What I endedup with for the dimensions on the 2Pi towers is 14 1/2" x 16 1/2" x 46" outside dimensions (ya I know I goofed). I am using 3/4" birch plywood. I have 2x2 (1 1/2" x 1 1/2") in all four corners vertical from top to bottom where plywood sides and front/back meet, and top and bottom where top/bottom and front/sides meet (I saw this done by another person who built the 2Pi). I will be bracing with 2x2 also. My port came out about 1/8 too big at 4 3/4" (thats a pretty big hole) about 1/8 bigger that I tried to cut it but my sabre saw got away from

me a bit. I would like to have used a hole saw for the port hole but could not find one that big. Good thing I decided to put the port hole in the back side. I think if it will help I can put something inside the port hole if I need to to make it a bit smaller. Given all the 2x2 I have inside it will take up some volume so maybe the extra large box will not be a problem. As far as the box size being a bit larger than it should be... maybe I will be O.K. with the port being 4 3/4" instead of 4 5/8" as specified. What do you think Wayne?

Subject: Re: Unintended mods on box size
Posted by mollecon on Sun, 22 Dec 2002 02:39:29 GMT
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Well if you actually did make the box' internal volume a bit large that might compensate somewhat for the too large reflex port. The changes will probably alter the systems characteristics a bit, but I doubt if it will have much negative influence on the sound quality, if any at all.Mind you, reflex boxes CAN be very sensitive to alterations, but given the fact we're talking about a big box with a pair of relatively small, stiff suspensioned drivers there is more margin for mistakes... To my experience at least. And as you mention yourself, having the ports on the backside makes it easier to experiment without messing up the look of the box.Just my two cents. :)

Subject: Re: Unintended mods on box size
Posted by Wayne Parham on Sun, 22 Dec 2002 03:55:48 GMT
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The larger box would need a larger diameter port to maintain the same Helmholtz frequency. It could also use a shorter port, but that's not possible since port size equals baffle thickness in this case. The point is that while this isn't very specific, in general, Rodney has gone in the right direction. If interested, box frequency can be measured using information contained in the post called, "Measure impedance."

Subject: 14 1/4 x 16 x 44 3/4
Posted by Jabberwock on Sun, 22 Dec 2002 13:35:56 GMT
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These are the dimensions that I ended with on my 2 Pi towers. The material is 3/4 Birch-faced MDF. The port, which I moved to the front, is of course 3/4 long and 4 5/8 round.I started with the intention of having a professional cabinetmaker pre-cut all the pieces for me, but for various reasons I won't go into I decided instead to have a nearby lumber yard make the rough cuts for me. I did the rest myself with simple handtools -- in a third-floor apartment of all places. Thus the

odd dimensions.Right now they are clamped together. Fiberglass installed but no bracing yet. Still, they sound wonderful!

Subject: "correcting" the incorrect port size
Posted by Sam P. on Sun, 22 Dec 2002 16:00:31 GMT
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can still be done. Take a scrap of cabinet material, and place it over the port opening. Trace the outline of the port cutout on the scrap. Now cut around the line ON THE OUTSIDE, but close to the line. Sand to fit the opening snugly, but able to be pushed into place fairly easily. Glue the piece back into the hole. If you want, smear glue and apply another patch on the inside. Samps, I dig using my 3 inch hole saw...VERY clean outward edges of the port holes. I think the same "mandrel"(sp?) takes up to 4 inch or larger saws...quite a wrist wrencher when it bites a bit too hard into the work:(

Subject: Re: Unintended mods on box size
Posted by wasteh202 on Sun, 22 Dec 2002 21:31:14 GMT
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Thanks to everybody for your responses, I definitely appreciate your help. Wayne thanks for the interesting math problem but I appear to be a bit out of my league here(at least with the port calulations).I have calculated that the larger box less the volume of the 2x2 bracing will leave me with an additional 1000 cubic inches of space in the cabinent. I will just assume that the large port hole will be close to what is required and see how it sounds. It may actually be pretty close. I will get back to you soon as I am just about finished with the one box and will try it out before building the second. I have learned by doing that I can sometimes avoid mistakes or make things easier on the second one.
