Subject: 2 Pi Tower Build Tips
Posted by breakfastchef on Thu, 13 Nov 2008 02:42:49 GMT
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I am putting the finishing touches on my Bottlehead Paramount monoblock amps and am about ready to start building a pair of 2 Pi towers. The plans supplied by Wayne do not have enough information to complete a set of 2 Pi's, particularly to someone new to speaker building. Though I have searched these forums extensively, I am not sure how to complete this first build without some feedback from the forum members.1) I was looking at a basic plan for an ML TL enclosure as a guideline and it appears that the top and bottom pieces are full-size to plan dimensions with all sides recessed within this footprint. Would that be a preferred? This is of interest to me as this arrangement would make it impossible to gain access to the inside of the box in the future (i.e. remove the back panel, for example) if I wanted to make changes to the stuffing or make a modification to the crossover. 2) I understand that bracing is important. How many braces and where should they be located in each cabinet? What type of bracing is preferred - cross brace, window frame brace or other?3) What type of box stuffing is recommended? Where should the box be stuffed/lined?4) Are the external binding posts included with the 2 Pi kit? If not, what do you recommend?5) Where should crossovers be mounted? Should they be accessible from the woofer port? I have no idea how long the wiring assembly is.Thanks in advance for your replies.

Subject: Re: 2 Pi Tower Build Tips
Posted by Bill Epstein on Thu, 13 Nov 2008 03:14:12 GMT
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1. There's no reason why you couldn't build as you described but the convention seems to be to have the front and back full width and everything else inside them; that's the way I've built everything. It enables you to build a 4 sided-box squared up by the top, bottom and a pair of window frame braces, then attach first the back, then the front after making cut-outs. Putting the front on last gives you room to install added bracing, stuffing and the wireing harness.2. I recommend 2 window frames dividing the cabinet unequally augmented with 1x4 pine or poplar glued and screwed to the sides vertically, then cross-braced. Watch that none of the bracing interferes with the drivers.3. Go with Wayne's rec of R-13 with the paper removed on 3 walls; that's science and none of the voodoo you'll see around the web.4. Don't know but I think they're important and used Edison Price pure tellurium copper when they were still available. Now I use Pomona gold-plated tellurium copper5. The simple 2Pi crossover has the tweeter cap attached directly to the tweeter terminals and the bass can be caulked to the bottom anywhere nearby or nested in the fiberglass on the bottom as Wayne recommends.Here's an article I wrote on building a near-2PiHave fun, find your own path but listen to Wayne, I do.

Subject: Re: 2 Pi Tower Build Tips
Posted by Shane on Thu, 13 Nov 2008 04:38:40 GMT

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Here is a link to an earlier post I made that has some pics of my Two's. There is this one (pic 1), then farther down the thread a couple of posts is (pic 2.
two towers

Subject: Re: 2 Pi Tower Build Tips
Posted by Wayne Parham on Thu, 13 Nov 2008 06:46:41 GMT
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I always make the cabinets with all sides glued together and I gain access through the woofer holes. The only exception is horns where that would be impossible. Those have access panels.Bracing should be done as two cross-braces, one-third the way up and one-third the way down. Of course, you can never over brace. Additional braces like Shane did and/or window braces like Bill suggests won't hurt. Some even use a constrained layer to damp the box or glue random blocks or panels on the baffle interiors to break up panel resonances. There comes a point of diminishing returns, but the minimum should be a pair of cross-braces.Use R11 or R13 insulation and span one side, the top and the front baffle, up to the woofer cutout hole. Also attach a sheet to each brace that completely spans the cross-section. It will look like you've broken the cabinet into three sections. Bass will go right through the insulation but it will trap midrange frequencies up, which is just exactly what we want.The amplifier connection panel is included with the kit. It requires a 2-7/8" x 2-1/4" cutout on the back in a convenient place. The crossover is wired into the cable assemblies, so you can "plug and play" when you get them. The crossover components aren't so heavy that they can't just hang off the drivers, but you could also wire tie them to a cross-brace or attach them to a panel with silicon adhesive.

Subject: Re: 2 Pi Tower Build Tips
Posted by Matts on Thu, 13 Nov 2008 21:02:08 GMT
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these are not fussy speakers if you build them according to plans. You can put together a box with the proper dimensions with butt joints using glue and drywall screws, as long as the cuts are all 'square', or you can do an all-mitred, cabinetmaker's job on 'em. If you don't have eqpmt, you can get a good lumberyard to cut the pieces for you cheaply. There's almost no xover, so you can arrange it so it's ez to get at w/out taking the box apart. Have fun!

Subject: Re: 2 Pi Tower Build Tips
Posted by Matts on Sat, 15 Nov 2008 04:54:01 GMT

Hi, I just saw your post over at Bottlehead- you may wanna go right to the Pi 4's with the JBL's and B&C's.... very nice looking work!