Subject: Re: 3pi 4pi?-->4pi w JBL+B&C
Posted by my0x on Fri, 05 Jul 2013 13:57:36 GMT
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I've eagerly been following some other recent build threads while I've been getting my 4 pi project together. Here is a progress report so far:

Keeping costs down: 3 or 4 months ago I was on the fence about 3pi or 4pi. I decided to go the 4pi route when I came across a pair of used JBL 2226's on ebay for around 250, shipped to my door. I figured that even if they were toast, I could re-cone them with JBL cones and I would still be way ahead of the impressive price tag they carry when new. Since this seller had 8 2226's he was selling, I had him send me the closest matching pair of the lot. I was pleased when they arrived. Despite being dusty and slightly faded from more on one side than the other, they measured 5.3 and 5.4 ohms impedance, and test tones played through each didn't raise any alarms.
For a little bit, I chased after a pair of JBL 4725's for $600 from a local craigslist as it not only has the JBL 2226h woofer but the famed 2426h compression driver as well. I was wary when the seller who was eager to unload them took a while to inform me that one of the woofers had been rebuilt and didn't know if it was OEM. If you can get them at a good price and they aren't thrashed, you have sourced all 4 drivers needed for your 4 pi's if you want to go the all JBL route.

Building the cabinets: I built the cabinets with fully biscuited 3/4" mdf panels. The biscuits ensure panel alignment when gluing up and add strength to the final cabinet. Someone gave me a cheapo 10" ryobi table saw a while ago- don't even bother with anything like this. While it is fine for ripping things down for some house projects, it is not a precision tool, even with the crosscut jig I built for it. On top of that, it is light and has to be supported from falling over when mounted to it's legs. I ended up using my buddy's saw with a 4' wide plinth, good runoff table, and a long fence that actually squares. All of the panels were accurately cut within 45 minutes. Use lots of clamps and excessive glue - the glue that squeezes out is easily scraped and sanded down when dry. It also ensures a sealed cabinet when building flush panels. After getting rid of the assembly glue, I squeezed a bead on the inside seams of both cabinets to make sure it's doubly sealed. Use a vacuum attachment to the biscuit joiner and the router - usually a cheap adapter piece for any shop vac will do. This helps keep the tool's cutting area clear, your shop area clean, and your lungs and eyes happy. 80 some biscuits = 160 cuts = lots of nasty mdf dust.

The r-13 insulation wasn't as bad as I thought it might be to work with. Just make sure to be covered head to toe and use long gloves. It cuts easily and staples into the cabinet and your done.

I cut gaskets from pvc shower pan liner, and t-nuts for attaching the drivers to the cabinets. I don't have the compression drivers or crossover bits yet, but I will in a couple of weeks. I intend to cover the MDF panels fully with KD-Panels veneer panel which is a 1/8" veneered plywood, and make full grills with speaker cloth ala the late 1960's AR-5's and AR-7's I used to have. Kind of old school, but I really enjoyed that look and will protect the drivers from dust, cat hair, and curious visiting tiny hands. I'll also make an overlay panel for the front to have a flush finish at the face of the drivers.

Managing expectations and budget: My hobbies are supported in our house, but with a new rule: find a new home for my old project or gear before I start on three new ones and leave two on the workbench. It's a lifestyle change for the better. I'm more apt to do more research and take my time working on something through completion, and the workbench or living room isn't so crowded. Despite the 'wall of speaker' in my living room at the moment, the Decware HDT's I built some years ago have a new home waiting for them, and their proceeds will fund the B&C compression drivers and high quality crossover components.

At the moment, I've clamped a panel into the hole for the high frequency driver so I can test the cabinet so far---far more even and constant bass response than the HDT...and just so much more below 80 hz! Looking forward to the completion of this project!

File Attachments

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