Subject: 4 Pi Build in San Luis Obispo - Flush Mounting and Bracing
Posted by alexg on Sun, 24 Jan 2021 18:19:49 GMT
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Hello from San Luis Obispo, CA!

After more than a year of pestering Wayne via email and scouring the forum I have started my 4 Pi build. My goal is to share my progress along the way but have a few questions to get started.

1) I want to flush mount the horn/waveguide. Does anyone have any pointers to share? My thought was to make the first cut with a jig saw and some kind of cutting guide and then go back over the opening with a router and rabbet bit. One thing is for sure, I am definitely going to mess this part up once or twice so I had several extra pieces cut so that I can just do it over if necessary.

2) Is wood glue sufficient for securing the bracing on the inside of the enclosure? I am thinking about using wood glue and shorter brad nails, nailed from the exterior of the enclosure. Good idea or not necessary?

Speakers will go in the Great Room (Kitchen/Dining Room/Living Room). Due to the layout and size of this space my plan is to build 3 speakers. Speakers will be set up in an L shaped formation so that I will have 2 listening areas (See diagram below). 2 of the speakers will flank the fireplace for critical listening, home theater (tv is mounted above fireplace), or if I just want to relax on the sofa and listen. For this configuration, speakers will be set up approx 8-10' apart with flanking subs. Listening position will be 8-10 feet away. The third speaker will be used in conjunction with the speaker to the right of the fireplace. Third speaker will be positioned approx 20' from the other speaker. Together this configuration will be used for daily listening and background music while we are in the kitchen and/or sitting at the island where we spend most of our time while in this space. I will use a toggle switch to toggle back and forth between the configurations. As far as my diagram goes, I am not an artist and definitely not an engineer.

Room Diagram

To build 3 speakers I used 2 full sheets of MDF. This gives me all of the pieces I will need with enough material left over for extra "parts," primarily the baffles. As I mentioned above, in case I mess something up I can just start over. I do own a table saw (portable, contractor grade) but in order to ensure accuracy and consistency I had the local lumber yard cut the pieces for me. I am not talking about Home Depot! The local lumber yard has been around for decades. In addition to supplying lumber and hardware, they specialize in hardwoods, trim, and molding. They have an old school professional grade table saw that is dead accurate and offer a cutting service. For $20 they made my cuts using a cut sheet that I provided. For anyone planning to go the DIY route and not use Wayne's Kit (which is a great value and would have made my life infinitely easier) I highly recommend this approach if you do not have a cabinet style table saw.

A few construction pics.

File Attachments

1) 4 Pi - Room Diagram.jpg, downloaded 1654 times
2) 4 Pi - Gluing up enclosures.jpg, downloaded 1741 times
3) 4 Pi - 2 Enclosures.jpg, downloaded 1776 times
4) 4 Pi - Ports.jpg, downloaded 1790 times