
Subject: 4PI cabinet drawing

Posted by [Mik112](#) on Sat, 10 Aug 2019 19:24:21 GMT

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Hi Wayne,

I have 2 pc. 4Pi running here with JBL2226,BC250/290 and the original crossover for 4 years. Sounds very well, but I would like to have your original cabinet drawings for 2 new cabinets.

Michael

Subject: Re: 4PI cabinet drawing

Posted by [Wayne Parham](#) on Sun, 11 Aug 2019 14:39:38 GMT

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Subject: Re: 4PI cabinet drawing

Posted by [leonski](#) on Wed, 27 Nov 2019 20:16:51 GMT

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Can you perhaps send me a copy as well?

I'd like to get a build-list together and can therefore estimate costs. And see if Pocket screws are a possibility as well as PlyBoo..... Bamboo Plywood.

Subject: Re: 4PI cabinet drawing

Posted by [Wayne Parham](#) on Wed, 27 Nov 2019 21:44:02 GMT

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Be careful with plywood though. The only product I can endorse is Baltic Birch. It is made with very thin laminates clamped under a lot of pressure and held with plenty of glue. This fills any voids present in the laminates with glue.

The problem with most plywoods is internal voids. Debris in the voids can buzz. And even if a sheet seems to be free of buzzes at first, it often times has voids that shed debris over time. So a

panel develops a buzz after a few months or years. The vibrations from the speaker tend to shake loose debris, that then buzzes in the void.

Subject: Re: 4PI cabinet drawing
Posted by [leonski](#) on Wed, 27 Nov 2019 21:54:41 GMT
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The product I'm considering is NOT wood. Plyboo is made from Bamboo....a Grass. This stuff, at least the samples I have seen is basically a manufactured product and void-free. Even better than Marine Plywood, from that regard.

We got piece of gear once at work, shipped to us on a plywood pallet. It was maybe 20 ply / 20mm or so. That piece was fought over by the unpackers.

Plyboo is like that. Attached image of of the Neapolitan. It is the heaviest and densest of the samples I received. I weighed and measured them all. The piece in the photo is 3/4" thick and I routed a 1/4 round corner on it. Careful!

Bamboo has a high silica content and dulls even SiC tooling fairly quickly. Watch out for burns.

File Attachments

1) [neo bamboo.jpg](#), downloaded 727 times

Subject: Re: 4PI cabinet drawing
Posted by [Wayne Parham](#) on Wed, 27 Nov 2019 22:40:24 GMT
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That all sounds very good. From what you are saying, it may be even better than Baltic Birch where voids are concerned.

Do check one more thing though. Plywoods and fiberboards are good because they are made of multiple types of fibers and glue. The construction and the use of dissimilar materials tends to make the panels somewhat self-damping. When you strike one, it doesn't ring for a long time. It sounds like a dull thud rather than a sharp almost drum-head sound, like some hardwoods do. If you look at this on a measurement system, you'll see the undamped hardwood panel rings for tens of milliseconds, sometimes nearly 100mS. An MDF panel decays much more quickly.

So you might want to compare the damping of this new bamboo product against MDF to see how they stack up. If you're interested and willing to do this, get two sheets of the same size and thickness and measure them. Mount a loudspeaker to each, but don't cut a hole. Put the measurement microphone on the opposite side of the panel as the speaker, and suspend the panel or set it up on a cradle. Then do an impulse measurement. What we will see is the impulse

response of the panel. The speaker will have an effect too, but it will be minimized by the fact that there is no hole in the wood. We will be measuring mostly what is radiated by the panel after it is "struck" by the impulse from the loudspeaker.

If all that's not possible, simply get two sheets of similar dimensions and strike them with your knuckle. Compare how they sound. The one that sounds more dead wins.
