Subject: Re: 4 Pi and 3 Pi Subwoofer
Posted by Wayne Parham on Sun, 04 Sep 2011 16:47:51 GMT
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Answers by numbers:

1. The round ports are thick cardboard tubes often sold as mailer tubes. You may be able to find them locally at an office supply or drafting supply store. You can also order them online. See the link:

mount and get the same performance. It's just done for aesthetics. Some of my personal speakers have been routed to flush mount the drivers, others haven't. The only caveat is you must do both - if one drivers is routed flush, the other must also be. This keeps their depth the same relative to one another, i.e. distance from the listener.

The gasket is an extra measure, not always needed. If the surface is very flat, then the speaker will probably seal without a gasket. This is especially true of the Eminence midwoofers, which have a build-in gasket. However, the JBL woofers use an O-Ring for the seal, which comes packages with the woofer. It's really cool and all, but I prefer a traditional gasket for them, and make them out of PVC, as you've noted, the same stuff shower pans are made from these days. Same for the horns, they're usually flat and true and will seal against a flat surface but it is good to use a gasket behind them.

3. I usually paint the inside of the ports, definitely the cardboard tubes. They look great that way. Usually I pain them black but have done some brown and some grey. The rectangular ports can be veneered to match the baffle, Just veneer the wood parts used to make the port before assembly, it's a piece of cake that way.

4. You want to install a cross-brace between the woofer and tweeter. This is mentioned on the last pages of the plans, in the "General Construction Tips" section. It can be made from 1x2 or spare wood stock cut to that approximate dimension. Just run one front to back and another side to side. They should fit snugly, but not so much they bulge the panel. Just a little bit of preload. This also serves as a place to attach the insulation that spans the cross-section, also mentioned on the "General Construction Tips" page.

Note: This cross-brace is only required on physically large cabinets, bigger than about 24". It is

5. The dimenisons shown in the plans are outside dimensions assuming a single panel of the thickness shown in the plans is used to build the cabinet. If you add a panel to the front for aesthetics or to provide a CSD layer, it should be made accordingly larger. Essentually, the "inner cabinet" would be built with diemsnions shown in the plans and an added panel added over that, perhaps to cradle a grille or for whatever reason.