Subject: 2-Pi tower port size???
Posted by Wayne-o on Tue, 12 May 2009 21:17:49 GMT
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At 4.5 cu. feet and a 4.5 inch port it would seem that the 2-Pi tower would have a port frequency of 49 hertz. Does the insulation slow down the airspeed this much ? Or is it because the sound has to pass thru 2 sheets of insulation ? Does the insulation act like a air-port like the dynaco used ? Thanks.

Subject: Re: 2-Pi tower port size???
Posted by Wayne Parham on Tue, 12 May 2009 22:14:10 GMT
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If you measure it, you'll find it resonates around 40Hz to 42Hz, somewhere in there. I've seen some Helmholtz calculators that show values a little higher, some a little lower. Mostly I think it's the difference in the area offset, sometimes called "corrected length". If you try two or three

reflex cabinets in that standing waves are developed within the passband. That makes port and driver location pretty important. It also makes the insulation even more important than usual, so be sure to install it as described in the plans.

Subject: Re: 2-Pi tower port size???
Posted by Wayne-o on Fri, 15 May 2009 00:23:33 GMT
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Ok your saying that on a tower or pipe box-plot is not the right software to figure the port size .

Subject: Re: 2-Pi tower port size???
Posted by Wayne Parham on Fri, 15 May 2009 01:09:27 GMT
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Well, not necessarily. It probably is, and I think most of the software out there does a pretty good job modeling. But I also think that real short ports and/or those with large area start to deviate more due to length correction. Insulation has an influence too, as do other factors. The good thing is if you get it close, you're fine because this isn't a place where being spot-on is required or even possible. There are too many parameter shifts in this kind of system.

Subject: Re: 2-Pi tower port size???
Posted by Mark Andrews on Wed, 27 May 2009 18:33:49 GMT
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I just modeled the 2Pi Tower in LSPCad and its spot on 40-42 Hz port res giving an F3 of ca 36/7 Hz.

Lowering the port res frequency does give a wee bit more extension ca 35 cycles (very wee) but the response curve starts to look a bit strange.

40Hz is good - great stuff Wayne.... and yes I really need to get to build my pair - the kits are still in the boxes Wayne packed them in!!

HTH

Mark Andrews