Subject: PI mid horn
Posted by Zene Gillette on Mon, 29 Dec 2008 15:19:52 GMT
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Hi guys ... I thought I'd better quit bugging Wayne and solicit help here. I have P.Audio 12" coax speakers that I think might do well in the PI mids. The EBP is over 220, Fs - 47hz. PI horns are designed for 10's with a 4 1/2" by 4 1/2" throat, a ratio of approx. 2.6:1. Using the same math for a normal 12" the throat would be 5 1/2" x 5 1/2". Here is problem; the true effective Sd (cone area) of the coaxes is about the same as a 10" due to the huge hole for the coax horn. So, do I use the existing horn throat? I'm never clear enough, so you may have to straighten me out on how to explain. I do not mock up or experiment. My first design will be finished complex wood. Thanks, Zene

Subject: Re: PI mid horn
Posted by Wayne Parham on Mon, 29 Dec 2008 17:20:09 GMT
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I think the biggest difference you'll see is above 1kHz, and that's best discovered by measurement.

Subject: Re: PI mid horn
Posted by Zene Gillette on Tue, 30 Dec 2008 00:14:06 GMT
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Thanks, Wayne. Does that mean either throat will be OK? I can always extend back to original throat if I decide to use a 10".Zene

Subject: Re: PI mid horn
Posted by Wayne Parham on Tue, 30 Dec 2008 02:08:41 GMT
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There's really no way to know without assembling it and measuring. I know you would prefer to know what to expect in advance, but with a new driver in the picture, you really can't. If you want to stick with a known entity, you'll need to use one of the drivers that has already been tested.You can use a computer simulation to model the pistonic behavior of a new speaker in that horn, and with that you will find the amplitude response at the low end of the range. But up high, there are more things that come into play. That's why it is probably most reasonable to expect to measure

a new midhorn design (or an untested driver in an existing design) to know how it will behave.

Subject: Re: PI mid horn
Posted by Zene Gillette on Tue, 30 Dec 2008 05:49:36 GMT
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Good points, will do more research/testing. You've come thru again, thanks. Zene

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