Subject: minimum width of cabinet on Three Pi reflex
Posted by Hodel on Tue, 02 Apr 2002 21:50:04 GMT
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A reviewer said that in order to insure a good wavelaunch, the width of the front baffle had to be at least 19 inches. I am considering building the Three Pi reflex Thermionics with a front baffle width of 14 inches and increase the height to keep the same volume (any wider than 14 inches just doesn't work in my small family room). Can anyone provide any information as to problems with a 14 inch wide front baffle?

Subject: two "walls" will be almost touching the driver
Posted by Sam P. on Wed, 03 Apr 2002 11:55:37 GMT
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and may not permit you to place sufficient damping material inside. Sound energy from the rear of the cone will be more able to bounce right back thru the cone instead of being absorbed, often complained of as "too forward a midrange" and/or peakiness. Instead of the dimensional ratio's used by Wayne, you could try Weem's suggestion (0.67/1.0/1.8) for a tall, narrow box. How many cu.ft. do you want/need? Samput a layer of R13 'glass at each end (top/bottom) of the long enclosure to help reduce/suppress standing wave generation...orient the driver to insure that the solid portions of the basket are towards the walls if possible...

Subject: Re: two "walls" will be almost touching the driver
Posted by Hodel on Wed, 03 Apr 2002 22:31:04 GMT
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Sam,Thanks for the help...it sounds like I need to make sure I have enough room on the sides for the damping material. Could you recomment anything other than fiberglass (like bubble pack?). Do I increase the volume of the enclousure by the volume of the fiberglass/bubblepack or is it transparent to sound? I will use the same volume as Wayne suggest for the Thermionics Three Pi reflex which is about 4 cubic feet.

Subject: Re: minimum width of cabinet on Three Pi reflex
Posted by DavidW on Wed, 03 Apr 2002 23:16:06 GMT
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The more narrow baffle will have slightly less midbass than the wider one because of baffle diffraction loss.David

Subject: effect of 'glass on box volume
Posted by Sam P. on Thu, 04 Apr 2002 11:49:14 GMT
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is very hard, maybe not even possible to predict. I do know that my 4 Pi Pro's are very close to a net internal Vb of 2.5cu.ft., and when verifying Fb with specific port tube configurations...the only answer explaining the resultant Fb's is that THE BOX THINKS IT'S ABOUT 3.3cu.ft.. At 40 and the final 48Hz. Fb, boxplot agrees with my Fb/port tube measurement results only when the box is specified to be around 3.3cu.ft. So in this ONE SPECIFIC case, a 2.5cu.ft. volume, PLUS 1.2cu.ft. of R13, resulted in an effective Vb of around 3.3cu.ft. Verified twice by careful zplots at 40 and 48Hz. (using 3in. and 1.5in. port tube lengths). A conservative estimate is the "apparent" volume WAS INCREASED by at least half the amount of 'glass added. The major implication of the added volume is that if not accounted for, your Vb will be too large, causing system tuning to be lower than desired...maybe causing low end extension of the bass to suffer. 5 or 10Hz. of box tuning can be significant...if you can trust the sim data. JBL2035 was used in the situation above. Sam