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Subject: Re: More two way questions...

Posted by [mollecon](#) on Tue, 13 May 2003 19:44:20 GMT

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Hi Jeff! Well, quite honestly, my assesments of efficiency/boxsize/bass response was more a qualified guess, albeit based on real life examples. Like two reflex boxes I recently calculated, both with Eminence woofers - one gave -3dB at 50Hz in a ~120 liter (~4.3 cu.ft.) box, efficiency 96-97dB, the other -3dB at 43Hz in a 77 liter(~2.75 cu.ft.) box, efficiency 94 dB. Furthermore, I'm referring to the piston working mode of the drivers, most of which have a rising response as they enter break up in the upper range. Luckily, the room boundaries often compensates in the lower frequency area. The latter means that a loudspeaker may well have a better bass response &/or efficiency 'in room' than calculation reveals, which is just as well... :-). Btw., it's my understanding that many of Wayne's designs are deliberately taking this into account, hence the 'Pi' name. There is a theoretical limit as to how efficient conventional closed boxes or reflex designs can get (about 5% I believe) - & many commercial loudspeakers don't even come near to their theoretical limits even taking their bass response into account (the efficiency limit drops as one extends the bass response in any given box size as I mentioned in the earlier post).

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