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Subject: Re: Horn Loading

Posted by [mikebake](#) on Fri, 20 Sep 2002 18:31:41 GMT

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"I'm hoping somebody here can explain something about horns to me. I've seen comments about how ineffective the typical Altec (eg 816 or 828 enclosure) horn loading in the bass/midrange - statements that the bass cutoff is way too high."It's not too high, just too high for full range horn loading. As Wayne mentioned, the size requirements for low bass are prohibitive in practical use. However, we are often talking about 80-120 hz and up being horn loaded. Below that many of these type boxes did act as a reflex box, with less output."What I was wondering is this: isn't the horn cutoff the limit at which the horn effectively loads the driver(impedence matches it to the room)?"Yes."Below that cutoff, isn't the driver basically a direct radiator (in the case of Altec designs, a typical driver operating in a bass reflex cabinet arrangement)?"YesIs the problem really that the spl level below the horn cutoff will be comparatively too low (yes) resulting in a very unbalanced sound? (and not necessarily; you may, upon listening decide it's not bad, or you may augment with a subwoofer)"And maybe more to the point, is there any real benefit to horn loading the bass/mid in a domestic environment where the needed "throw" is so very short anyway?"Yes. The "throw" is not what we are after, the efficiency and low distortion, etc. IS"I suspect that the "old" Altec cabinets were a necessary augmentation to the driver technology of the time;"the drivers were fine; they needed to be efficient for the low power amps available then, and they needed the clarity and projection of the horn. The concept is still valid and still very much used today; we just never get away from the size requirements for lower bass"that all this is moot with modern 15" drivers since all the two-way cinema speakers that I know of use a bass reflex cabinet and do not horn load the bass/mid any longer."More to do with space requirements and money, than issues of quality sound reproduction.