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Subject: Re: Horns, transmission lines and reflex cabinets

Posted by [Wayne Parham](#) on Fri, 19 Aug 2005 02:14:32 GMT

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Look at it this way. Lets say the speaker isn't excursion limited. Lets say that the horn actually reduces excursion to zero, and it stays that way through the entire bass range. That would be cool, 'cause it would stop IMD. But midrange and treble output would still be provided as direct radiation from the driver. So that sets your SPL limit. You certainly wouldn't want to have the bass range boosted above the midrange and treble. Now look at the real world. Even a very good horn has excursion peaks and dips as you pass through the bass range. The best you can expect is to reduce excursion just above the flare frequency and then again at about twice that frequency, maybe even a third excursion dip above that. But between these dips, excursion rises and it is at those points that you'll want to focus your design efforts. Those excursion peaks will be what sets your limits on the low end.

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