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Subject: Re: Horns, transmission lines and reflex cabinets

Posted by [Martin](#) on Tue, 16 Aug 2005 22:48:26 GMT

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I agree with Wayne's interpretation of transmission lines and horns. Most back loaded horn designs start out in the low frequencies as transmission lines and transition to horns as frequency increases. If you calculate the cross-sectional area of the mouth of your horn, double it for the floor reinforcement, and then calculate the cut-off frequency I bet you will find it is in the hundreds of Hz range. The bass below this frequency is due to transmission line standing waves not horn action. If you supply your horn mouth's physical dimensions I will do the calculation by return post and we can see what the results show. You also wrote : "For these reasons, if I am going to put my Lowther DX4s into a box, it will be a back horn, not a reflex box, which Lowther owners say suck, nor transmission lines, which are a step above reflex boxes, but still not as good a match." I own seven pairs of Lowther drivers, including a pair of DX4's, and find they perform very well in TL and ML TL style enclosures. So this Lowther owner definitely does not feel that this design option "sucks". It is one compromise that can be considered for Lowther drivers. I also use 200 watts of SS power and can report that does not "suck" either. Martin  
Quarter Wavelength Loudspeaker Design

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