Subject: Re: Front horns
Posted by robertG on Mon, 23 Aug 2004 16:18:49 GMT
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A back horn does "boost" both low and mid frequencies. It is mainly used with very low Qts drivers with defficiencies in low and mid band. Typically, it will enhance frequencies from 50 or 60Hz all the way to 300Hz. So it is a very efficient design. Both the upper and lower limits are design dependent (cavity volume and throat area for higher freq.) horn lentgh and mouth area (as well as horn profile - or expansion curve) for lower cutoff point.Naturally, the driver itself plays a major role in the equation (size, resonance frequency).A front horn has the same effect, except the physical properties are different. It will be used for mid and upper mid reinforcement, and very little bass reinforcement, unless it is both very long with a very large terminus, in which case higher frequencies will suffer (being radiated at the end of a very long tunnel - with very little dispersion). The idea with BLH is that the energy past the higher cut-off will radiate from the driver (without need for reinforcement).Everything is design dependent, and a front horn would be used effectively as a mid-driver in an all horn loaded 3 way system. All kind of variances can be applied, like the Voice of Theater (Altec A7), in which the bass driver is both reflex-loaded and front-horn loaded (very short horn), with a mid-high front horn on top (and very large optional wings for lower freq. support).Horn requirements for high frequencies is frequency dependant, meaning that high freq. are very short and do not need large horns.