Subject: Re: Heavy-cones verses light-cones in basshorns
Posted by DMoore on Tue, 12 Sep 2006 16:44:49 GMT
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Hi, Wayne.I would assume that a 3-octave limited horn would/could "enjoy" a large-mass driver, i.e., it won't matter whether it has a light cone, because it technically doesn't go high enough in frequency band pass to actually make use of it.I would also mention that large-mass drivers tend to heat up the VC (comparitively) more than a lighter assembly MIGHT, simply because more energy is required to move the mass, overcoming inertia and all that. In the case of sealed back chambers, this could be a potential design consideration brought about specifically by the choice of driver mass and power handling capability, depending on the application, of course. Large SPL requirements would definitely put this consideration on the designer's plate, I would think.Personally, I've always regarded large-mass drivers (i.e., heavy cones) to be more appropriate for direct radiator use rather than used as horn drivers. Sort of a bellweather for me in selecting drivers.In a resistive, pressurized environment such as that presented by a horn throat or more likely, a throat cavity opening, will naturally decrease the cone excursion to a great degree, and hence the potential for cone deformation is severely reduced. I tend to completely discount cone deformation as an important consideration in horns for this reason.I think the "old guys" had it right the first time. I look for horn drivers with relatively light cones and large BL's and the lower Qts, the better, but then I'm going for 4 octaves or more, too.Dana