Subject: Re: Designing a TL
Posted by roncla on Thu, 02 Jun 2005 23:35:40 GMT
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My latest thinking on these "back-loaded horn" designs is that almost all of them are really TL's for the lowest frquencies. If you look at the mouth area, multiply it by between 2 and 8 depending on room placement, you will find that the horn cut-off frequency is probably much higher then the designs claimed low end performance. True, the trick is to blend the action. As far as the mouth size i disregard the normal final expansion and make the mouth open up in a more radical fashion and with the sloped final stage it allows the wave to expand more rapidly and gives the effect of a larger mouth as well as brings the wave centerline (maxium response axis) up closer to the driver which helps the mechanical crossover of horn mouth/driver. However this requires a slight fudge on the wave form as at the lowest frequencies it is more of an upright oval than a true circular wave. This is all accomplished for a smaller footprint and slightly exceeds the old rule of a 1:1.6 aspect ratio. However i tried a 1:1 aspect ratio and while the lower Hz was a bit cleaner the size of the mouth required was not to my liking.ron