Subject: Re: Why won't a single driver speaker do metal?
Posted by roncla on Sun, 07 Aug 2005 12:34:16 GMT
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Based on my recent back loaded horn modeling, I believe that your speakers are acting like a TL at the lowest frequencies and transition into horn like behavior probably above 100 Hz. Nothing wrong with that design method and it is the one I am exploring for my own back loaded horn speakers. Having the strong undamped TL resonance helps the bass outputSo very true! Heres a quicky method (accurate, no way, but it gives an idea of a basic BLH low FR concept). Take the tuning length until just before the final flare section. Calculate the TL response based on 1/4 wave action(straight TL), add 10 Hz. This will give the lowest frequency (approx) when wall/floor loaded. Corner loading will mean subtracting 10 hz.(given the proper room dimensions). Even Dr Bruce has stated that 1/8 mouth size had never given the calculated response when corner loaded. Yea, its a rough silly Kentucky windage/SWAG type calculation, but i have found it to be very close in many horn designs. In my designs and sims i see that 1/4 wave gives the lowest initial boost then horn action kicks in then the compressed 1/4 wave action (harmonics) enters into the picture(later in frequency). Thats the upper ripple that so many see at the limits of the horns BW. The 1/4 wave action (upper harmonics) and the horn action combine. And if its designed correctly there will be minimum ripple.ron