Subject: Re: Why won't a single driver speaker do metal?
Posted by Ed Schilling on Thu, 28 Jul 2005 17:47:45 GMT
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Bob, With My X150 playing Enter Sandman and my speakers in corners I can show you 105 dB peaks all day long. This is 8 feet from the speakers not at "1 meter". I have demonstrated this to many people. With My F1 the peaks are limited to 100dB or so. And with my Audio Note 300B about 98 or so. The sound is not compressed and you can understand the lyrics easily....including the kid whispering. I have never had a single driver TL that was able to do that. I decided to see just what the 108 could do and put on the Stereophile Test CD 2. I played the drum solo. The meter recorded 115 dB peaks 8 feet from the speaker. Not a hint of distortion. Drums in the room. The right driver went south about 10 seconds from the end. The look on my guest's face was "priceless" The "Girl" kept saying...."but they are so tiny, how can they do that? Now I am NOT trying to start an argument here but I think that (even rear) horn loading increases efficiency and reduces excursion....well I think that's what Paul Klipsch used to claim. In my case the corners are used to "make the rest of the mouth of the horn". Modeling the enclosure will not give an accurate picture. But even so I'll tell you the flare is "roughly" exponential and the path is ~ 6 feet long. I have built TL's for the 108 and I can assure you the excursion is NOTICEABLY more than the same driver in my "favorite" speaker. You can see it easily when both are driven to the same SPL with the same warble tones. The TL's (I built for comparison) can't come close in clean output if both use the same driver. I will not argue that a case can not be made for the statement..."BTW most highly convoluted back horns which act more like multiple TL's than true horns, they will start to run out of excursion around 80Hz.", this may be able to be "proven on paper"...I used to assume it was true, but my observations and experiments showed this not to be the case, at least in my example of a back horn. Now, when they (my speakers) are not in corners they certainly have a higher cutoff....but the efficiency gain from a couple hundred Hz on down seems to still be there as the excursion is still noticeably less than the TL for a give SPL and freq. The TL's will go a little lower in this situation, but again, at the cost of MUCH lower maximum SPL's. They don't go lower if the Horns are in corners and are now much worse off in terms of maximum SPL. I gave up on TL single driver speakers a long time ago (years)for these and many more reasons. That said I love TL's! Just built a new one but it ain't a single driver! It uses a 6.5 in co axial with a (gasp!) crossover. It needs power and will do pretty decent SPL if it has it. Now, as we all know speaker design is an art and science and full of compromises....but the premise a single driver can't do "Metal, Rock or high SPL" is simply not true. I know of at least one that can and it uses a 4 inch driver. I promise that no one that has been in my 17 X 18 "Pink Room" will tell you single drivers can't play Metal, Rock or any music that requires high SPL without "compression" or "distortion". Assuming high SPL is in the 100-105 dB range. And anyone is welcome to come by most any time and hear for themselves.EdMy opinions, OK guys...don't beat me up too bad!