Subject: Re: Another perspective
Posted by Earl Geddes on Fri, 24 Dec 2004 20:47:51 GMT
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The problem with 40 x 90 is that direct radiating sources can't have this pattern and its hard to keep a constant coverage angle as the frequency goes down.The shorting ring is probably the only distortion (I'm only talking non-linear distortion here) in a loudspeaker that is highly audible at reasonable listening levels and this is easily explained. From my study of distortion (see my web site) I know that higher orders of nonlinearity are the most important (its not 2nd harmonic that you are hearing, more likeley 4th of higher) and the shorting ring acts on the full bandwidth of the signal, not LF dominated like any excursion related distortion. My point is simply that drivers in which nonlinear distortion is not a factor are readily available. I would never consider ANY driver without a shorting ring - its simply a given IMO.Another study that we did was on the audibility of distortion in compression drivers - both linear and nonlinear. Bottom line is (the deatils wil be published shortly) that nonlinear distortion in a compression driver is irrelavent - no one could hear any in any driver up to the drivers thermal limits - and these were 4" high power units. So at reasonable levels nonlinear distortion is irrelavent in compression drivers and most other drivers I would suspect. I always say that distortion in a driver is not the issue, overdriving it is. So long as it is not overdriven nonlinear distortion is negligable. If you can actually hear distortion then you have the worng speaker - too little output capability. Get a bigger one.