Subject: fullrange cones and whizzers, some observations
Posted by hurdy_gurdyman on Fri, 11 Jun 2004 15:34:00 GMT
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While listening to my new LS-8's last night I started wondering what made these sound so much more precise and smooth in the highs, and somewhat more extended then the LS-12's. EV rates both the LS-12's and LS-8's out to 13-14 kHz range. The 12's only measured to about 11 kHz. I haven't measured the 8's yet. I started looking over the 8's and 12's to make some comparisons visually. The most obvious difference, of course, is size. 12" vs 8". But could there be more then this involved? The cone on the 12" has a curved apex which, as you move toward the outside edge, turns into a flatter surface with concentric rings. These rings are supposed to decouple the high frequencies made in the center of the cone, so the outer edges play just the lower range of frequencies. The 8" driver has a similar curve at the throat, but then flattens out some (but not completely) before reaching the surround, and no concentric rings. This is a more rigid cone. Next comes the whizzers. They are built different from each other. The 12" model has a whizzer with a curved out profile with no bent lip on the edge. The 8" model has a steeper whizzer cone, no curviture, and a flat lip around the outer edge.Both drivers have cast zinc frames built to the same shape, both have AlNiCo slug type magnets (5.6 oz, I believe). Any theories out there as to why the LS-8's sound so much smoother in the highs? It sounds more like a good tweeter playing (I am not using a tweeter with them at this time.) The LS-12's always sounded a bit dull on top without a tweeter added, and had a noticably harder treble in it's range. I'm not saying it sounded bad (it didn't), only that the 8's are better.In fact, the 8's are smoother and more natural throughout their range. You can hear a family resemblence, but the 8's are definatly a more refined sound. Now I need to figure out why.Dave