Subject: Bracing, cabinet volume, and crossover answers
Posted by Wayne Parham on Thu, 19 Jul 2001 10:07:40 GMT
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Displacement of all parts inside the cabinet has been accounted for. The volume offsets from the drivers, crossover and braces are all part of the design. Also, the alignment is slightly overdamped so that minor changes in tuning, electro-mechanical parameters or environmental conditions have little impact. It was done this way on purpose, to make sure that the speaker will sound good in all conditions and power levels.I put the compensation components in the tweeter cable assembly. By using several 10 watt parts, you build-in a better thermal margin. As such, the components are able to handle high power levels and don't even get hot at moderate power levels. I group them as two blocks of four and wire tie them all together. It's the most compact way to build them into cable assemblies like that.If you build the crossover using a breadboard, you can put the compensation components on the board. When doing so, I would elevate them off the board 1/8 inch or so. The leads are strong enough to support their weight, and this will prevent them from heating the board at high power levels or vibrating against it and buzzing. Likewise, I'd cushion the large coils and caps with silicon adhesive to prevent vibration.