Subject: First-order tweeter crossovers
Posted by Wayne Parham on Thu, 15 Apr 2004 12:20:39 GMT
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Any of you guys running first-order tweeter crossovers?I've built several loudspeakers over the years, and many of them have used first-order crossovers. There are some distinct advantages for home use, not the least of which is cost. They generally sound pretty good too, when you don't have banks and banks of loudspeakers to try to keep phased.But I always seem to poof the tweeters. I mean, over about 10 or 20 watts, the tweeters just eventually go "phoop". Not a lot of power, really, and one minute everything sounds great and the next, no tweeter. It just disappears, like a fuse.Seems like cone tweeters and domes work OK with first-order filters. They aren't really designed for all that much power anyway. Midrange and woofer cones are always good with first-order, or even no crossover at all. But compresson drivers don't like these single-cap crossovers very much. And ribbons, you can't even think about first-order. You can actually be using a higher-order crossover and just think about the mere possibility of a first-order and the ribbon will blow. They really don't like 'em.I suppose it's probably fine for small signal SET owners to use single-cap crossovers on compression tweeters, but if you ever connect to something with a little more power, you're in trouble. Too much low frequency energy passes, even with a way-too-high crossover point. So the dynamic range is kinda limited, and I don't like that. I concluded a long time ago that I had to find other solutions.Any of you guys had any luck with more than a handful of watts to your compression tweeters on a first-order filter?