Subject: Re: First-order low-pass for speakers
Posted by Wayne Parham on Mon, 21 Apr 2003 12:57:45 GMT
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For a single coil to act as a first-order filter, the load must be purely resistive. Since the speaker is reactive, a Zobel is required to make the load approximate a resistance near the crossover frequency. Otherwise the series coil acts more like a voltage divider than a crossover, and that's why I call it a "pseudo-first-order" filter. High-pass first-order filters are usually improved with shunt resistance too - They will definitely work as a filter, but without shunt resistance, they suffer from peaking. Glance through that handout from the crossover seminar and you'll see what I mean.