Subject: A question about speaker impedence ratings
Posted by wunhuanglo on Thu, 10 Jul 2003 05:04:46 GMT
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I suppose this isn't a very smart question, but I'm a little uncertain and maybe somebody could smarten me up a bit.If I use a parallel crossover for an 8 ohm woofer to an 8 ohm tweeter at 1KHz, first order Butterworth, the cap is 20 microfarads and the inductor 1.27 mH, each of which conveniently have impedances of 8 ohms. Consequently, I get a "series added" impedance for the system of 8 ohms.But it seems that if I want to use another topology or crossover point, I'm going to have a hard time summing all impedances to 8 ohms, especially if my goals include suppressing resonances, padding down one driver to level match the other, compensating for impedance peaks with a Zobel, etc...So I guess what I'm wondering is, overall, is it a happy coincidence that most crossover/driver system impedances sum to approximately 8 ohms? Or are speaker impedance ratings of "8 ohm" kind of wildly optimistic?

Subject: An answer about speaker impedence ratings
Posted by Wayne Parham on Thu, 10 Jul 2003 14:39:03 GMT
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Advertised impedance is a sort of an averaged value. The impedance rating of loudspeakers is an approximate value, and is what you can usually expect in the midband of each subsystem. The crossover prevents each driver from loading the system except in its passband, so the system impedance curve looks much like the individual impedance curves of each of its drivers, connected by a transition region between each. To know overall system impedance as a function of frequency, you can either measure at several frequency points or you can model the loudspeaker circuit with Spice.

Subject: Re: An answer about speaker impedence ratings
Posted by john on Thu, 21 Aug 2003 12:26:14 GMT
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Can I than alter the impedence by, say, hooking up a resister in series? I'd like to slightly modify mine from 6-ohm to 8-ohm