Subject: Things and stuff
Posted by Wayne Parham on Mon, 01 Dec 2003 20:24:51 GMT
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A first-order crossover adjacent to a third-order crossover has 180o phase shift. So swap the wires on the tweeter. The Zobel on your midwoofer makes your coil act as a first-order filter.Without a Zobel, a series coil acts as (much) less than first-order and it isn't a crossover at all. It is a stepped attenuator, with a nearly flat response curve having 3-6dB attenuation above a the frequency where voice coil inductance becomes significant compared to series coil inductance. There is no electrical rolloff as is expected of a crossover because voice coil reactance rises proportionally to series coil reactance making them form a voltage divider that is nearly linear with respect to frequency. Typically phase shift on such an arrangement is less than 20o rather than the 90o shift at the asymptote of a first order filter.So anyway, the Zobel makes your series coil become a first-order filter. Being adjacent to a third-order filter causes a 180o shift. So swap the wires and see what happens.