Subject: Pi 500 Hz Xover for 515B/511B???
Posted by AstroSonic on Fri, 30 May 2003 14:49:47 GMT
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I am currently trying to crossover an Altec 515B in a BR to an Altec 511B/Iconic Model 102-16. The Iconic driver is very similar to the Altec 902, including its sensitivity (106 db/w/m) and impedance (16 ohms). Iconic has said (email to me) that the Model 102 can be used in-home (i.e., at low power) down to 500 Hz with a 2nd order network. The 511B/102 combo works very well together with a straight 2nd order Butterworth with a zobel on the woofer, but needs a little HF EQ. After de-ringing the 511B, I decided to try adding some HF EQ. My attempts at adding the EQ have produced mixed results. The EQ happens (good) but peaking in the 4-7 kHz range also occurs. Crude measurements using a RS SLM and the warbble tone sequence on the Stereophile CD2 Test CD show 1 1/2 to 4 db of rise in the 4-7 kHz range. The peaking is clearly audible, produces an unnaturally detailed sound and distorts the soundstage. The sound without the EQ is much more natural, but lacks a little air. I suspect that the peaking may be due to resonant interaction between the horn driver and crossover, as described in the Pi Crossover document. Damping is probably needed and it appears that the optimum damping is best determined using a modeling program like SPICE. I am hoping that this problem has already been solved. Has a Pi type network been developed that is suitable for this combination of drivers?Regards,AstroSonic