Subject: Re: Rise in Spl with third order 11 khz high pass around 5.5khz
Posted by Wayne Parham on Wed, 15 Aug 2001 22:55:19 GMT
View Forum Message <> Reply to Message

You don't want shunt inductors across piezo tweeters. They're piezoelectric devices, which are fundamentally capacitive. So by putting a coil across them, we are building a reactive resonator also known as a tank circuit. And parallel tank circuits have minimum impedance which approaches zero at their resonant frequency, which is determined by the formula:Fr = 1 / 2 * Pi *

zero with the coils installed. It also means that the current through the tweeter approaches infinity, so naturally you'll expect a puff of smoke to accompany this frequency. Even if it's outside of the audio bandwidth by a considerable margin, I'd still discourage use of coils across this tweeter. Amplifier oscillation or the impulse of power-on or power-off surges could very well excite the system into resonance and make a nice demonstration of pyrotechnics for you.