Subject: Re: Rise in Spl with third order 11 khz high pass around 5.5khz
Posted by Wayne Parham on Thu, 02 Aug 2001 09:14:47 GMT
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First. Do not use a notch filter. Let's not complicate the issues here.Second. Let's get rid of those 0.22mH inductors. Replace them with 15 ohm resistors. Also, your choice of capacitors is a little large, and I would recommend that you use 1uF and 0.33uF instead of 1.5uF and 0.5uF. What you chose would be appropriate for 11Khz, if that's what you really want. But if you are really looking for -3dB at 16Khz, and -12dB at 8Khz, then use the components I'm suggesting. What you have (after replacing the inductor with the resistor) will offer you -3dB at 11Khz, and -12dB at 5.5Khz.Third. Look at the response curve of the KSN 1005's. I can't recall if it's the same as the 1038's or not. If so, then you'll have pretty much the response curve I've described above. But if it's not similar - and instead has a peak at 5Khz - then you may have increased output because of that. After all, if the tweeter has a 12dB peak at 5Khz, then the tweeter would be just as loud at 5.5Khz as it was at 16Khz. It would drop 3dB at 12Khz from 16Khz, but would be back up 3dB at 5500Hz. So if the tweeter is truly 6dB louder at 5500Hz, then it may be that the 1005's have an 18dB peak at 5500Hz. I don't know.But let's start with the crossover itself. Remove the inductors, and replace them with resistors. Make certain that you've chosen the slope you want, and if you're looking for output in only the top octave - "the air" - then go with the 1uF and 0.33uF caps. If you're looking for some output in the very highest midrange, the "top of the brass instruments" and the "wisp of female vocals," then keep the capacitors you've got.