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Subject: Fours and Paramours

Posted by [Wayne Parham](#) on Tue, 05 Mar 2002 04:43:40 GMT

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There are many things that can cause problems in the 100Hz to 500Hz range. The obvious one is the midwoofer, but it is more often caused by internal cabinet standing wave resonances. Floor bounce usually occurs in the range too, although I wouldn't expect it in this case. Honestly, I don't

building and shipping a lot of these lately, so I have many chances to listen to them at various volume levels and with many different kinds of music. Just the other day, I listened to Rick Wakeman pound the keys on the song Awaken, and the album, "The six wives of Henry VIII" on Theater fours. Awesome! Certainly no weakness in the octave above or below middle C to my ears. Very pure and strong there, to tell the truth, but not peaky or overpowering. I've listened to 'em at length with music from Beethoven to hard rock like Limp Bizkit and Tool, from Sarah McLachlan's pure voice to Roy Orbison's, the Stray Cats 50's style stand up bass to Steve Howe on acoustic guitar in the 70's art-rock band, Yes. Recently, I even cranked up a pair to full power and watched the movie Matrix, start to finish. That's a treat that will bring beads of sweat to your forehead from emotional energy! Here's the response graph of the Delta 15: Delta 15 frequency

response of this speaker. From 100Hz to 800Hz, they're ruler flat. And if you have wired in the crossover circuit as shown, I don't think you are having problems with an underdamped filter or anything like that. The crossover is pretty well thought out, and the cabinet configuration is not one that is vulnerable to midrange anomalies so I expect your system's performance is probably pretty good. You might check your cabinet, make sure it is well braced, so no panel vibration. And also make sure you have insulation as described in the plans. If you've tried alternate forms of insulation material like some do, try going with the R11 on the back, side and bottom. Put a sheet across the cross-section brace. This damps standing waves very well but without it, you might have some problems.