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Subject: Re: Can I get some feedback on this design???

Posted by [Jim Griffin](#) on Sun, 19 Dec 2004 13:09:31 GMT

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Bill, You really need to have a line of tweeters for this project. The spacing that you envision for the mids indicate that comb line effects and loss of directivity will dominate above 5000 Hz. If you would run the frequency response of such a system, you would see that the on-axis response would fall from flat (the level between 200 to 3000 Hz) above 5000 Hz and would be down 10-20 dB in the 10-20 kHz octave. You would need serious equalization to flatten out such a response. Off axis it would sound phasey and in some locations in the room you would have dips and drop-outs. Depending on the width of the baffle you would have the dipole baffle shorting effects on the low end of the band but you already know about that issue. Again equalization can alleviate and help the transition between the subwoofer and the mids. Bottom line is that there is no easy way to achieve a full frequency range line array system without crossovers between bands. You can use a 31 band equalizer to cover some of the shortcomings but a properly designed system will sound better from the get go. White papers are kinda nice if they keep you from driving down blind alleys and dead end streets on the way to sonic perfection. Jim

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