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Subject: Re: Crossover Question about building line arrays

Posted by [Marlboro](#) on Fri, 18 Sep 2009 22:21:14 GMT

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Wendall Evans wrote on Wed, 16 September 2009 16:45 Since there are so many speakers involved does this give more crossover options?

I'm going to answer your questions one at a time and leave a space in between for your answer.

I know what Fred is saying, but I disagree slightly.

One of my design goals (and for a low cost line array you need design goals) were to avoid a crossover in the 200-3000hz region. This really means that I was looking for a midrange speaker to handle at least 1/2 octave above and 1/2 octave below. This means the FR had to be more like 150 to 4500.

This is hard to find a good speaker in this range normally, if you need a cheap one, its worse, if you need a cheap one to play loud, forget about it because of the distortion involved. And so, IN MY OPINION, its the distortion that is the big concern. Its hard for the human ear to differentiate much less that +/- 5db in a freq response, and even less than that in certain areas of the FR.

But with a line array that has 16 of these "cheap ones" per channel, each one will only be playing .0625 of the music.

So if you want such a wide range of FR for the speaker, you are way more likely to get acceptable distortion when each one only plays 6.35% of the total music per channel. And you can do it even with some very inexpensive speakers.

What do you think?

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