
Subject: Line array differences: small vs large mids
Posted by [Marlboro](#) on Mon, 28 Sep 2009 14:14:45 GMT

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Recently Rick Craig made a comment somewhere that his building of line arrays has switch from using 5.5 - 7.7 mid woofers to using 3-4 inch speakers. His most recent double line has HV 3 inchers in it. This is the model that I used from the beginning, though probably for other reasons than Rick Craig.

We all know that with sensitivity and dynamics as the only issues, line arrays beat the pants off even the best point source speakers.

But what about tonality? Does the use of smaller 3 inch wide ranges along with a stereo woofer system impact the tonality part? or what does the use of the smaller wide range units bring to the table that the 5.5-7 inch models not?

Marlboro

Subject: Re: Line array differences: small vs large mids
Posted by [selahaudio](#) on Mon, 28 Sep 2009 15:09:10 GMT

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Marlboro wrote on Mon, 28 September 2009 09:14 Recently Rick Craig made a comment somewhere that his building of line arrays has switch from using 5.5 - 7.7 mid woofers to using 3-4 inch speakers. His most recent double line has HV 3 inchers in it. This is the model that I used from the beginning, though probably for other reasons than Rick Craig.

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Marlboro

Wrong - that's not what I said. I've found the 3"-5" woofers work best with the majority of planar / ribbon tweeters in a passive design. If a DSP crossover is used then the 7" drivers can easily be implemented as well. I've built several successful designs with the 7" woofers but the 5" drivers tended to integrate better when passive crossovers were used.

In choosing 3"-4" drivers you have to be careful. The Fs must be low enough and some excursion capability is needed. That's where your drivers fall short because the Fs is too high (more suitable for a midrange) and the x-max is very limited.

Subject: Re: Line array differences: small vs large mids
Posted by [Marlboro](#) on Mon, 28 Sep 2009 16:21:35 GMT
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Lets not get too excited here, Rick. I checked my message and the word "wrong" was not used, nor was there any implication of wrongness in using a larger woofer as opposed to a smaller one.

Since you apparently have brought up my line array when I never even mentioned it, with a pot shot which clearly defined my system as "...your drivers fall short", when I just asked a civil question, I do need to respond to that.

Of course if you use a smaller wide range instead of a mid, then the use of a mandatory dual woofer system is necessary, IMO. I have my stereo 12 inch 15mm x-max woofers crossed at 185, using a 24 db octave analog crossover.

What kind of xmax do you believe is required in mm for a 3 inch speaker, and what FS do you think should be there, and with what crossover frequency and what order?

Rick, you seem to have made a specific comment about my Sammi's. I hate to burst your bubble.

Your Hv's have an X-max of 3mm, and so do the Sammi's. And while your HV's have an FS of 77, you generally use them with passive crossovers, and perhaps not fourth order. My Sammi's have an fs of 105(pretty LOW for a midrange since most cone mid ranges have FS' in the range of 400-500hz), but then I cross them at 185hz using a 24 db/octave analog active crossover to 12 inch stereo woofers, so they are pretty much out of the picture by the time the woofer takes over. So I don't know what speaker YOU think I have in my system, but it clearly not the one you are familiar with.

But be that as it may, they are my choices which work for me, perhaps you could follow-up with the xmax you think should be in a small speaker, and what FS, including the crossover and the woofer kind to make that work FOR YOU.

Kind regards,

Marlboro

Subject: Specifically..... WHY?
Posted by [Marlboro](#) on Mon, 28 Sep 2009 16:51:10 GMT
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wrong spot see above
