
Subject: Line arrays: 3 way(4 way) or two way
Posted by [Marlboro](#) on Mon, 28 Sep 2009 16:34:08 GMT

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I've always believed that sub woofers should really be sub woofers, and should cover the bandwidth from 14 - 30. Above that you should use a standard stereo woofer up to maybe 200 or so, and then a wide range speaker covering 200-3000(give or take), and tweeter systems above that.

Of course there are lots of ways to do it. I don't need the subwoofer part since I only listen to music with my system, and would NOT try to duplicate real explosions. If I need to hear real explosions, I go out to the shooting range and target shoot my S&W 357mag! Knowing what a real explosion sounds like, I'm not interested in duplicating it!

Marlboro

Subject: Re: Line arrays: 3 way(4 way) or two way
Posted by [darkmoebius2](#) on Mon, 28 Sep 2009 19:59:55 GMT

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I have been thinking about the sonic benefits of a woofer array to spare having to push 3"-4" drivers too low in order to use a subwoofer. But, that opens up a host of problems, itself - 1) a woofer array will place another large monolith in the listening room, not an easy sell to spouses, 2) transition in that audible 200-400Hz range and issues of localization, 3) cost, cost, cost!

All this is being thought in the context of active crossovers.

The thing is...I am addicted to near fullrange single driver (w/ minimal crossover) sound having lived with it for the last 5-7 years. The "coherency" of the critical FR range is intoxicating.

Subject: Re: Line arrays: 3 way(4 way) or two way
Posted by [Marlboro](#) on Mon, 28 Sep 2009 20:24:09 GMT

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RE:

"The thing is...I am addicted to near fullrange single driver (w/ minimal crossover) sound having lived with it for the last 5-7 years. The "coherency" of the critical FR range is intoxicating. "

Absolutely. Running passive crossovers in the middle of that range just obliterates the coherency. Wow do I agree with you there.

Subject: Multisubs

Posted by [Wayne Parham](#) on Mon, 28 Sep 2009 21:28:06 GMT

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For indoor installs, I like subs to be run up higher, sometimes to around 60-80Hz, other times even just north of 100Hz (if close enough to mains). The reason is to introduce dense interference in order to smooth room modes.

Multiple subs

Subject: Re: Line arrays: 3 way(4 way) or two way

Posted by [darkmoebius2](#) on Mon, 28 Sep 2009 23:02:11 GMT

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Marlboro wrote on Mon, 28 September 2009 15:24: Running passive crossovers in the middle of that range just obliterates the coherency. Wow do I agree with you there. I first got turned onto this by some reviews of single-driver speakers. I ended up buying a kit for the Hammer Dynamics Super-12 speakers. What an eye-opener. That pro audio 12" widerange driver with a tweeter aligned in a coaxial manner just blew my socks off. I'd never heard midrange like that - music just flowed.

I upped the game later with Cain & Cain IM-Bens (mine are in cherry) w/ matching dual subwoofers for the last 5+ years. The combination with top notch single-ended triode amps and a good vinyl rig was sublime, at times. Although, there is still a big difference between the presentation of a large 12-15" widerange driver and smaller ones.

But, there is only so much a single driver can do and the limitations of low power (<8wpc) amps in a larger room eventually got the search for "more" going. I wanted to keep the coherency and tonality/richness in the mids while adding greater dynamics on large, complex, music of scale along with true bass impact and depth.

First on my list was large planar/ribbons like Soundlab, Magnepan, Apogee, etc. But, they are limited in their own ways - mainly SPL's.

Then, I had a chance to hear ESP Concert Grand SI(\$40k)(Stereophile review) at the 2006 THE Show in Los Angeles. Elliot Midwood of Acoustic Image had a room that changed my audio world. The ESP's were driven by 250wpc Wavestream Kinetic V8 monoblocks(\$35k) and Elliot's Messenger preamp(\$25k). The vinyl front end was all Brinkman w/ the Balance turntable, Brinkman's 12" arm, and Brinkman cart(\$25k-30k?).

Granted that is a ridiculous and unobtainable price of system for 99.9% of us, but it was the sound that floored me - explosive dynamics, effortless delivery, and soundstaging to die for. Yet, it still got the tonality of grand piano and vocals dead right. I'd never heard anything like. And so, my eyes were open to the potential of high(er) power and multi-driver speakers. The ESP's are a

large D'Appolito configuration, but it's what got me headed down the road towards arrays.

Anyway, that's my long-winded way of saying that I would love to still keep a crossover out that critical range as much as possible, keep that coherency, yet get the dynamics and soundstaging.

Subject: Re: Line arrays: 3 way(4 way) or two way
Posted by [selahaudio](#) on Mon, 28 Sep 2009 23:05:22 GMT

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darkmoebius2 wrote on Mon, 28 September 2009 14:59I have been thinking about the sonic benefits of a woofer array to spare having to push 3"-4" drivers too low in order to use a subwoofer. But, that opens up a host of problems, itself - 1) a woofer array will place another large monolith in the listening room, not an easy sell to spouses, 2) transition in that audible 200-400Hz range and issues of localization, 3) cost, cost, cost!

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Well if you don't want a crossover point in the 1-2.5K range then you probably should consider another type of design. Personally I've never heard a system with the woofer running up high that made me want to build something like that. The concentric drivers (Seas,GPA-604) sound far better to me.

Subject: Re: Line arrays: 3 way(4 way) or two way
Posted by [Marlboro](#) on Mon, 28 Sep 2009 23:58:41 GMT

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So I take it that you don't have a line array?

I'm from the old school(meaning stereo systems from the early 70's and late 60's. You get this when you are more than 60 years old.

But I really don't see a problem with a line array with what you want. Its not hard to find a high xmax speaker that will do 200-3000 and a set of nice B&G neo ribbons, and stereo woofers.

It's be a three way unless you need to hear explosions, and then you need what my old school would call a sub woofer, and for that you will need a 10 cu ft box with two 15 inch woofers in it covering the 14-29hz range only. At that frequency range it will truly be non directional.

Subject: Re: Line arrays: 3 way(4 way) or two way
Posted by [darkmoebius2](#) on Tue, 29 Sep 2009 03:50:05 GMT
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selahaudio wrote on Mon, 28 September 2009 18:05 Well if you don't want a crossover point in the 1-2.5K range then you probably should consider another type of design. Sorry, I guess, in my long-winded story, I forgot to make the point that the ESP's showed me it was possible to have that fullrange single-driver type of coherence in a multi-way system - even without SET amps.

Is it possible the 1st order crossovers play a bigger part in the sensation of coherence than the actual crossover points?

In reality, it is probably the whole enchilada - drivers selection, crossover points & slope, cabinet, and complete speaker design. But, I'd sure like to know if anyone has noticed whether 1st order x-o's sound significantly different than others when well executed.

Marlboro wrote on Mon, 28 September 2009 18:58 So I take it that you don't have a line array? Nope, not yet. I'm still in the heavy research phase. I only make major system changes once every 5-7 years, that includes 1-3 years of research, hemming and hawing, and false starts.

So, I still have a long way to go in the learning department since this will require totally different amps(bi or tri). Since my current system is all single-ended, I'd like to go fully balanced/differential from end to end.

I hope to get out and hear a few commercial designs in the next month or so. It turns out that Audience is HQ'd about 2 hours away from me in San Diego, so that might worth the drive. And there is a pair of Tonian Pipedreams (improved Pipes) for sale about an hour from me.