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Subject: Listening distance

Posted by [slinco](#) on Tue, 05 Sep 2006 19:04:07 GMT

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Hi guy's. Lot's of great information here, I'm glad I found this forum. I've become confused about something to do with line arrays that maybe you can help me with. I've been reading up on Bohlender Graebener's RD series long ribbon drivers, thinking they might make an excellent mid/tweet driver for an array, or at least a nice wide range midrange driver. The thing I'm wondering about is information BG publishes about the RD series long ribbons that gives "minimum recommended listening distance" - the Rd75 (75 inch ribbon) is 15 feet, the RD50 (50 inch ribbon) is 10 feet. What they say is if you sit closer than these recommendations you'll get reduced high frequency response. The longer the ribbon, the farther you should sit from it. Seems odd. I've read Jim Griffon's paper a few times and see nothing relating to this type of phenomenon. He mentions not being too close, but for the reason of letting individual tweeters with gaps between them blend together. With a BG style single continuous ribbon that's obviously not a problem. Am I missing something? Anybody have any thoughts on this? I sit fairly close (8 or 9 feet) due to room constraints, so this type of thing is a concern to me.

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Subject: Re: Listening distance

Posted by [Jim Griffin](#) on Tue, 05 Sep 2006 23:48:42 GMT

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I don't worry too much about the listening distance. My guideline is to listen no closer than a distance equal to the height of the array. For example, 6 feet tall array so listen 6 feet or more away. Near field arrays designed per my NFLA guidelines will have drivers close enough to integrate in the near field. Of course line arrays sound great in large space but they can also work in smaller ones as well. B-G is being too conservative in my mind.

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Subject: Re: Listening distance

Posted by [slinco](#) on Wed, 06 Sep 2006 14:47:16 GMT

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Thanks Jim, that makes me feel better about pursuing these as possible drivers. Do you (or anyone else) have any experience with the Bohlender Graebener RD series? They've got a pretty remarkable frequency response : 150hz-18,500hz. And they give you the flexibility of building either dipole or monopole. Seems like a pretty nice array could be built with one of these crossing over at 300-500hz to a line of woofers. I would think using woofers this low would simplify their choice and maybe you could get away with using less expensive ones (woofers that is).

RD series planar transducers

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Subject: rd series

Posted by [lcholke](#) on Wed, 06 Sep 2006 15:59:32 GMT

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Hi Slinco, I think the main advantage of the rd series is the low xover point. It is like having a full range driver. You could use a first order xover. I heard a pair and they are very good. One issue is the low efficiency. If you really like the low xover feature these will be a good choice. You may want to listen to ribbon drivers also before deciding. The xover point will be in the 2k range though. My array gets very quiet when listening closer than 2 ft. -Linc

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Subject: Re: Listening distance

Posted by [Tom R.](#) on Wed, 06 Sep 2006 16:46:09 GMT

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The only problem is the units sensitivity, which is pretty low at 88db. The woofer line array sensitivity may be higher, depending on how they are wired, and how many drivers are used. Woofer arrays tend to be in the mid 90db range, and if you use a 88db ribbon tweeter you will have to pad down the woofer array to match the tweeters output. This power will be wasted in a passive crossover. If you have enough amplifier watts to drive the system it may not be an issue, but if you use single ended amps, you may not have enough power to drive them to decent sound pressure levels. Newform research also makes large ribbon drivers. [www.newformresearch.com](http://www.newformresearch.com)

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Subject: Re: Listening distance

Posted by [slinco](#) on Wed, 06 Sep 2006 17:25:30 GMT

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Thanks for the input guys. The low efficiency doesn't concern me too much. I'll be bi-amping with an NAD amp on the woofers. It's plenty beefy and has a variable level control on the back, +/- 6db I think, which should allow for matching up the different efficiency levels. Plus, I'll be using a Behringer 2496 EQ on the bass amp for room correction, as I do now with my bi-amped VR4jr's. Work's beautifully, and will allow another way of balancing loudness between drivers. In fact, if I do decide to buy the BG planar ribbons, the first thing I'll try is sticking them in a panel (or cabinet) on their own and using them with the VR4jr bass cabinets. They put out beautiful bass from 23-250hz - might be a nice match with the ribbons. I know it wouldn't be a true line source and would have some issues, but it'd be an interesting experiment....

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