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Subject: Re: 9 fostex f200a in line array

Posted by [Jim Griffin](#) on Thu, 03 Feb 2005 21:40:01 GMT

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Kloss, While those Fostex drivers are very nice full range devices when used as point sources, they have limitations when you start to array them. My line array white paper (see link) details some of the design limitations. When you bring two perfect drivers together so that at a frequency wherein they are less than a wavelength (WL) center to center (ctc) apart, then their overall directivity will increase. But beyond one WL ctc, you will start to have declining directivity and eventually at a spacing of 2WL you'll have cancellation. Bottom line is that a line array composed of full range drivers will not function up to 20,000 Hz unless they have ctc spacing of less than (theoretically) 0.68" which means less than 0.68" diameter drivers spaced with their flanges touching. You can almost get by if you use less than 1.36" drivers on the same centers as the ears have less sensitivity in the 10-20 kHz octave. I have seen and heard a line array composed of 2.125" drivers spaced 2.125" ctc and it took a lot of equalization to get the upper octave to sound right. What I suggest is that you think of a two-way design that adheres to a crossover based upon the ctc criteria that is outlined in my white paper. That works. Jim

Near Field Line Array White Paper

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