Subject: Line Arrays At CES
Posted by FredT on Sat, 13 Jan 2007 10:42:55 GMT
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I was looking at Stereophile's online CES show coverage and saw a couple of line array speakers that raise questions in my mind.The first is the $21K Copernicus II, a line array with powered subwoofers and digital equalization. The unique feature of this array is the fact that it's baffle is concave to focus the sound more directly toward the listener's (notice I used the singular noun here) ears, and it has an electric elevator to adjust it to the right height. The question is whether the advantages of a concave array outweigh the disadvantages.http://blog.stereophile.com/ces2007/011107copernicus/The second unusual design is Gallo Acoustics $15K 5LS, which incorporates a 7' tall array of alternating woofers and tweeters. Gallo claims that alternating the two types of drivers eliminates the phase and dispersion problems encountered by other line source designs. I was under the impression that comb filtering is minimized by placing the woofers and tweeters as close as possible to each other in the vertical aray, not be separating them. http://blog.stereophile.com/ces2007/011207shin/

Subject: Re: Line Arrays At CES
Posted by Eric J on Sat, 13 Jan 2007 13:15:02 GMT
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Maybe the fact that Gallo's not using a crossover on the 5LS's contributes to the combing issue. All of them are running full range, right?. The tweeters appear to be ribbons. The mids are 4 inchers. Could work. I'd like to hear what Jim has to say.What is that stuff in front of the speakers that looks tranparent?Marlboro

Subject: Re: Line Arrays At CES
Posted by Anonymous on Sat, 13 Jan 2007 17:47:37 GMT
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I've been involved in line array debates defending them as somefolks think they are bad. I understand why they think so -- becausethe majority of them on the market are just bad designs so these folkswho hate them probably never heard a good one.These manufacturers need to stay out of the line array business, it'sgiving DIY line array builders a bad rap. /heheheheDIY for the win!

Subject: Re: Line Arrays At CES

Posted by Jim Griffin on Tue, 16 Jan 2007 00:47:54 GMT
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Marlboro,Gallo's speakers focus on their looks vs. any pretext of sound engineering so keep that in mind when you see such a design. Unless Gallo is operating in a different universe than we are, they the elements of acoustical physics still apply to his designs versus the rest of us. The intermixed spacing of woofers and tweeters is still subject to the same combing concerns as more conventional arrays. This is especially the case for the woofers. The center to center spacing between the woofers has to be at least 8 inches apart so figure on what such a spacing will impact combing from the woofers. This combing isn't a good thing by any means. The tweeters are likely ribbons so they will be less apt to exhibit combing effects if the vertical plane radiation overlap is somewhat limited. Short ribbon tweeters do have more vertical plane overlap vs. longer ribbon versions but the overlap tends to diminish as frequency increases which reduces combing as I explain in my white paper. While Gallo claims no crossover, the low pass filter on the woofers is part of a crossover per se. In reality he is using the acoustical roll off characteristics of these drivers and the low pass filter on the woofers to effect a crossover. Line arrays with low order crossovers tend to have more issues with interferences and combing so I would not suggest that this design concept is worth of emulation.Jim

Subject: Re: Line Arrays At CES
Posted by Jim Griffin on Tue, 16 Jan 2007 01:01:27 GMT
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Fred,The Alltronics focused array is what I call a double dumb speaker. First, the designer must be crazy to spend money to develop such a limited design and secondly, the purchaser must be crazy to pay over $20K for a system with those shortcomings. If you visit the www.atssounds.com website that describes these speakers they state: "The “sweet spot” is approximately one foot wide, three feet deep, and only 3 inches tall. Persons outside the spot will experience a very pleasant, full sound, comparable in quality to many fine speaker systems. But the person inside the listening area will experience a sonic experience which is breathtaking in its presence, clarity, depth, and accuracy."That is truly a single chair ride in anybody's book. If you slump or sit up in your chair, you lose the magic experience.Just how many of these focused arrays do they really plan to sell anyway? How many fools in the universe?Jim