Subject: Line Array Impressions
Posted by FredT on Wed, 15 Sep 2004 12:15:11 GMT
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Colin had responded to my posting on the general forum with a question about my favorite line arrays, and this forum seems to be a more approprate place to respond to that part of his question. So, here goes:Line arrays are all the rage lately with the introduction of the Epiphany models and the rave reviews they are getting in the audio press. I haven't heard them but I would expect they sound very good and deserve this praise. The only problem with them is their cost: The 12/12 mode, their smallest full array, retails for $14K plus, placing it out of the realm of possibility for most audiophiles. The Pipedreams is even more out of our league.At the other end of the spectrum you can pull together an array of Parts Express 87 cent buyout specials for only a few dollars. No doubt this will sound better than these drivers in a point source or mtm configuration, but the final product will still be limited by the inherent shortcomings of very inexpensive drivers - especially in the areas of power handling capacity & dynanics, midrange clarity and treble resolution. Haven't heard on of these so I can't speak from experience.But there's a whole range of possibilities between $300 and $3,000 that can sound quite good. Here are my impressions of the ones I have heard:My first experience with line arrays was with a pair of Bottlehead Straight 8's I built a few years ago. These don't really qualify as nearfield line arrays because their woofer array is only about three and a half feet long, too short to permit nearfield listening from any reasonable distance. Also, they incorporate a point source tweeter. I'm including them anyway because they do take advantage of the 3dB efficiency boost you get each time you double the number of midbass drivers. Their 97dB MTM drivers combine to produce an oveall efficiency of about 96dB. I was very disappointed with the sound of these speakers. The tweeter had a large peak at about 3khz, which produced a nice immediacy to the sound of acoustic instruments, but large scale orchestral music quickly brought on the worst kind of fingernails-on-a-blackboard listener fatigue. I sold them within a year. (After I sold them Bottlehead offered plans for an improved crossover which addressed the tweeter issue, and more recently have discontinued this speaker from their line of otherwise fine products). My next line array experience was with the GR Research Alpha LS, which I auditioned at Danny Ritchie's house in Wichita Falls, TX about two years ago. This is a seriously good speaker! I know there has been some back-and-forth discussion on the various forums about the quality of its woofers and the frequency extention and dispersionof its tweeters, but it worked for me. Danny put a classical solo piano piece on at concert volume level and I still recall it was the most believable reproduction of a concert grand piano I have heard to date on any speakers including those in the $15K range. I did not buy the Alpah, but only because at that time I was unsure about my ability to build a large 17-driver double walled enclosure and concerned about the fact that my wife and I wouldn't be able to move its 230 pounds around the house. I had no reservations about the sound or the very reasonable $2K price tag.Still wanting a line array after building an Eros MTM pair I decided to buy a Linus 2 kit from Selah Audio for $900. The Linus uses 10 Viva TC series midwoofers and 8 Silver Flute planar tweeters in a very simple-to-build sealed enclosure. So for about $1,200 including diy enclosures you get the efficiency, dynamics, low distortion at high listening levels, and soundstange that line arrays are famous for. What you don't get is bass extention (they are designed for use with a subwoofer) and the last word in midrange clarity and treble resolution that you get from speakers with more expensive $60 - $120 drivers. The sound quality is comparable to my Vandersteen 1C's, entry level PSB speakers, etc. Selah Audio no longer advertises the Linus 2 but Rick Craig has told me he still offers the kit for under $1,000. At

that price it is probably the best value in line arrays speakers on the market today. (PSSST - Mine are for sale on Audiogon with beautiful oak veneered enclosures for only $1,200:)My next encounter was the self-designed AnorexiArrays, using ten $7 Parts Express buyout Vifa 4.5" woofers and a single Peerless horn loaded fabric dome point source tweeter. Like most of the PE buyout Vifa 4.4" woofers, these were designed for use in a small ported satellite enclosure and responded down to 90hz. A subwoofer was needed for any serious listening. Total cost including the crossovers and enclosures was about $300. I will tell you how they sound, but be aware that any diy speaker builder's opinion of his own speakers is comparable to a mom's opinion of the beauty and intelligence of her children, so take it with a grain of salt: They offer the efficiency, dynamics and soundstage of a line array, but not the last word in resolution. The Linus ribbons' resolution is clearly better than that of the $22 Peerless horns in the AnorexiArray. The good news is that I had so little invested in them that I was able to offer them recently on Audiogon for $450 with an inexpensive Parts Express subwoofer to handle the low two octaves. The buyer is very happy with them.My current Line Array project is the FredArray. It's similar to the AnorexiArray except that it uses 10 Silver Flute 5.25" woofers instead of the 4.5" Vifas. This will provide an F3 in the 50's with in-room resposne into the 40s', negating the need for a subwoofer. I'm starting with the Peerless tweeter, but if the final product sounds halfway decent I may substitute a Fountek ribbon for enhanced treble resolution. Total investment in this array pair with enclosures and the Peerless tweeters will be about $450. If it sounds good I will plan to sell it in the $800 range, and here's why:)My sweet, beautiful, sexy, caring wife has offered to give me a pair of "reference quality" line arrays for Christmas this year. I'm thinking along the lines of eight or nine 7" Vifa PL or XT series woofers and an equal number of the larger Fountek ribbon tweeters in each six foot tall enclosure, for use with separate subwoofers. Since I (she) will be investing about $4K in the internal parts alone I intend to pay a bit extra to have a truly qualified person design the enclosure and crossover, and I'll do the dumb manual labor for which I am better qualified. This is why I'm on a selling spree with all the other arrays, to create space and money for the next step.Hope this rambling post is useful to someone. Comments are invited.

Subject: Re: Line Array Impressions
Posted by FredT on Wed, 15 Sep 2004 12:22:31 GMT
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See Dr Jim Griffin's white paper on nearfiled line arrays at
http://www.audiodiycentral.com/awpapers.shtmlPhotos of my speakers at the link below
Speakers

Subject: Re: Line Array Impressions
Posted by FredT on Wed, 15 Sep 2004 13:39:44 GMT
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Correction: Regarding the Bottlehead Straight 8 speakers I said "Their 97dB MTM drivers

combine to produce an oveall efficiency of about 96dB". I meant to say their 87dB MCM brand drivers combine... One limitation of this speaker I didn't mention is the fact that it used $10 woofers and a $12 tweeter. A better choice would be the original Linus 1 speaker, which incorporates 12 of the shielded version of the MCM sourced Straight Eight 5" woofer and six $25 Silver Flute planar tweeters instead of the one $12 MCM tweeter used in the Striaght 8. Total cost for the drivers and crossover parts for the Linus 1 will be about the same as the $600 price of the Straight 8 parts, and you will get a better sounding speaker for your $600 investment. But if you are willing to shell out $600, for just $300 more you can get a Linus 2 array kit which included 10 of the much better 5.5" Vifa TC drivers and 8 Silver Flute tweeters plus all the crossover parts. The bottom line is about $200 worth of drivers in the Straight 8 for $600 total msrp versus about $800 worth in the Linus 2 for $900 msrp.

Subject: Re: Line Array Impressions
Posted by Norton on Wed, 15 Sep 2004 16:20:11 GMT
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Thank you for your detailed review. It is most helpful. Your speakers on the website are incredible, by the way! Is that piano black laquer on your newest creation? Norton

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Subject: Re: Line Array Impressions
Posted by FredT on Wed, 15 Sep 2004 20:14:39 GMT
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Thanks. Nope, it's Rustoleum brand Satin Black straight from a spray can.
