Subject: Tweeters? More or Better.....
Posted by Bill on Tue, 19 Oct 2004 03:12:32 GMT
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ON an array, do you think it is better to have more tweeters or to use fewer but better sounding tweeter?

Subject: Re: Tweeters? More or Better.....
Posted by Bill Fitzmaurice on Tue, 19 Oct 2004 11:08:00 GMT
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I believe what's most important is that the tweeter and woofer lines be very close to the same height, and that going with higher quality at the expense of element height matching is a serious error. I'd go with the best tweeter you can afford in the numbers that are required to do the job.

Subject: Re: Tweeters? More or Better.....
Posted by Bill on Tue, 19 Oct 2004 14:34:15 GMT
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Thanks for the reply. I have never built a line array but I have built several DIY speakers.I just bought 20 of the VIFA TC18WG-15-08 7" INFINITY WOOFER at PE for $9.00. It was a deal I couldn't pass up. I plan to use 9 a-side and keep 2 as spares...just in case. My thoughts on tweeters are:1. go with the pt-2 planar. I have not heard them and would like to know other's opinions. I have some reservations about using a "budget" planar as I was not happy with the sound of the BG NEO-3 and the Freq. Respon. seems to roll off above 5K (depends on the graph you go by). I am not sure if I will be able to buy enough to equal the height of the line exactly but may come close. 2. buy as many North creek D25-06S ($36 per pair)as my budget will allow. I have heard them and like them, for the price. But in light of your reply this does not seem like a good way to go as I will not be able to afford enough to equal the height of the mid/bass array3. Use the Stryke audio SA-TW1 . they have it for $7.00 and it doesn't look bad, from what little info there is on it. Any one heard it?What are your thoughts on combing effects if I try to go the dome route and try to stretch them out to fit the height of the array?Bill

Subject: Re: Tweeters? More or Better.....
Posted by Bill Fitzmaurice on Tue, 19 Oct 2004 19:31:01 GMT
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Whatever you do go for as solid a line as you can get. Planars are nice for that, but not cheap. You can use domes but the frame has to be small and the drivers mounted as tight to each other as possible; a typical 1" dome within a 3 to 4 inch frame won't make it. My experience is that a line is so different from a point source that you can get away with far less driver 'quality'. Go for good response with low power handling and SPL; that keeps the individual units cheap, and using a bunch (at least 20 per box to match your woofer line height)gives the necessary power handling.

Subject: Commetns on Tweeters
Posted by Jim Griffin on Tue, 19 Oct 2004 23:05:26 GMT
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Bill,The P-E Pt2, the Madisound Silver Flute YAG20-1 and the Stryke SA-TW1 are essentially the same tweeter so purchase on best price/availability. The Silver Flutes are used in the Linus 2 line array (the larger array in the attached photo and contact Rick Craig at www.selahaudio.com for info). I would worry a bit as the 7" woofers really need to be crossed no higher than 2000 Hz so mating to the planars would be a little bit tricky but very doable. The Linus 2 crosses at 2300 Hz from Vifa TC14's to the planars. The planar tweeters need to be mounted in a slot cutout without gaps. I would use 8 to 9 per side to get the vertical coverage (standing and sitting), extend the near field , and to equalize the in-room power response between the woofer and tweeter lines.As explained in my Near Field Line Array white paper it is difficult to get small enough/good enough dome tweeters to work well through 20 kHz without combing. I avoid them for that reason.Ribbon tweeters such as the Fountek JP-2's, Aurum Cantus G3, Raven R2, etc. would take your the sound quality of your array to the next level but likely your budget would be far exceeded.Jim
Near Field Line Array White Paper

Subject: Re: Commetns on Tweeters
Posted by Bill on Wed, 20 Oct 2004 01:34:15 GMT
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Thank for the information and I plan to read your white paper. I don't think this will change your mind but the Stryke SA-TW1 (you might have been thinking o fhte Stryke SA-rtw2)is a dome tweeter that is on sale for $7.00:http://yellow.mynethost.com/~bv126368/shop/catalog/product_info.php?cPath=23&products_id=46&osCsid=a4981bbead726728c824d914a424a323at this price I could buy 14 of them for every $100 spent to the 4 pt-2 for every $100. Having said that I think that I am going to go for 8 of the pt-2 a-side and try using a 4th order x-over point at 2300 Hz.What is your opinion of the PT-2s decrease in amplitude at higher Frequency. The Madisound graph shows a decrease of about 10 db from 1750 to 20K where as the PE graph shows the dip to be about 5db from 1750 to 2500 and then leveling off.Is this audible (or even measureable) in the speaker you built?

Subject: More Comments on Tweeters
Posted by Jim Griffin on Wed, 20 Oct 2004 02:08:08 GMT
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Bill,Good catch on the Stryke planar part number--it is the SA-RTW2. I'm not familiar with their dome tweeter so all I can not add much to how it might work. I think that 8 Pt2's per side would be nice and you can work the crossover issues in the 2000-2300 Hz area. The Rt2 has a peak in this area and wants to roll-off below 2000 Hz. So a 4th order acoustic would be ideal plus it should reduce the small peak a bit on the low end. My data on the Silver Flute YAG20's is that they tail off about 5 dB between 2000 and 20,000 Hz. They do have a few dips along the way but all excursions are within that 5 dB window. Plus or minus 2.5 dB over that range isn't too bad plus you can equalize some of that rolloff within the crossover network. Now a true ribbon tweeter will do better but would cost 5 times a Pt2. The Pt2's aren't the ultimate but good enough to function well in a line array. You really need to read the white paper before you get too far along on your array.Jim