
Subject: Stereo woofer array vs Stereo sub
Posted by [goldyrathore](#) on Sat, 14 Jun 2008 08:24:23 GMT
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I am about to begin a line array for music as well as HT. The fronts are about 60" tall. The design choice I need to make is either a 6" woofer array (6 of them each for left and right channel, EQed using LT: its going to be an entirely active setup) or stereo subs each of 12" subwoofer. The mids are going to be carried by 3" fullrangers and will be crossed over to the sidefiring woofers/subs at 250 Hz. How do these two approaches compare?

Subject: Re: Stereo woofer array vs Stereo sub
Posted by [Marlboro](#) on Sat, 14 Jun 2008 15:15:21 GMT
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I'd go with dual 12 inchers any day in comparison to 6 inchers. While the 6's might produce more volume, they simply won't go as low. My dual 12 inchers go down to 25hz. You'll never find a 6 incher that will go that low, I don't think.

Subject: Door #3....line array of 12" woofers
Posted by [Scooter](#) on Mon, 16 Jun 2008 03:40:43 GMT
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I would keep the line array radiation pattern through the bass and build an array of 12" woofers. You could put three-four 12" woofers in each column .. separate from the mid bass to avoid bass vibration effects. For HT, I would build a 5.0 setup to maintain stereo bass ... no summed woofers. This would give you the best CD/SACD stereo sound. Many DVDs sound much better with the rear speakers set very low SPL or off. Very few rooms are large enough for great 5.1 or 7.1 with normal furniture.

Subject: Re: Door #3....line array of 12" woofers
Posted by [Marlboro](#) on Mon, 16 Jun 2008 04:22:14 GMT
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While that's an admirable choice, the c-to-c distance would allow two per column and still be an array. Does he have the volume space available for four per side, or the cash? Four Goldsound DVC 15mm xmax polyprops would cost \$600 including shipping, so \$1200 for 8, and not including the 600 w/ch amp he's going to need to drive them. I should think this is overkill unless you are

planning on simulating cannonfire, or nuclear explosions. In my 16 x 12 foot room two 12's crossing at 165hz are more than adequate for any music I choose to listen to. I don't try to simulate gun fire. If I want that I go out my my cabin and fire my .357.marlboro

Subject: JAES papers...listener can locate bass down to 40-50Hz

Posted by [Scooter](#) on Mon, 16 Jun 2008 05:08:47 GMT

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Hi marlboro, The JAES papers I've read match my experience: a good listener can locate the bass speaker down to 40-50Hz, and definitely at 60Hz. The literature recommendation is to maintain stereo bass to at least 50Hz. When I put a >30Hz woofer on the floor next to a line array, the sound stage image physically drops, and this is why I use bass line arrays with line array speakers. I never use subwoofers, and I am happy with close-to-flat 30Hz room boosted bass. Perfecting 80-1,500Hz human voice is my main goal. You will need to listen and compare line array bass to on-the-floor bass. The biggest waste of time and money is to do it wrong then do-it-over. There are lower cost good sounding 12" woofers.

Subject: Re: JAES papers...listener can locate bass down to 40-50Hz

Posted by [Marlboro](#) on Mon, 16 Jun 2008 14:12:16 GMT

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Its a cost issue/space issue. But adding another woofer with my crossover of 165 is all I need to keep within the c-to c guidelines. The woofers can be 6 feet apart. I don't use a sub. but a stereo 3-way.

Subject: Re: Stereo woofer array vs Stereo sub

Posted by [FredT](#) on Mon, 16 Jun 2008 14:30:41 GMT

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I want to be sure I understand the plan. What's certain at this point is an array of 3" fullrangers crossed to side firing woofers or subwoofers at 250hz. The decision is whether to use a side firing array of 6" woofers or a single 12" stereo sub. If I understood this correctly there are some issues to resolve before you buy drivers or start cutting mdf:1) Will the array of 3" fullrangers carry all the frequencies above 250hz, or will they be crossed to a tweeter array? Roger Russell of McIntosh Labs fame has proved an equalized full-range array can work, but there's still a question about whether it's as good as the more common practice of using an array of small to mid-size woofers with a separate array of ribbon, planar or dome tweeters. The consensus around the web is that the latter approach is better. See the link to Russell's web page below.2) Crossing over to side

firing woofers at 250hz raises some concerns about the use of side-firing versus front-firing woofers and about the appropriate crossover frequency. I'm out of my element here and just repeating what I have read, so does somebody else have some comments about this?
Roger Russell's Web Page

Subject: Re: Stereo woofer array vs Stereo sub
Posted by [goldyrathore](#) on Sat, 21 Jun 2008 16:57:09 GMT
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Hi,Does'nt the LT equalization help to get the desired -3db frequency and Q? With 6 (or maybe 8) woofers per side I have lots of power handling and excursion capability.Thanks,Goldy
