
Subject: help spend my money on an array project
Posted by [jtwrace](#) on Thu, 29 Oct 2009 22:47:14 GMT
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I built a 3-way speaker using a Foutek 2.0 and Accuton C-79. I was so impressed when I just crossed the mid / tweeter to my subs that I started thinking about building an array of the same. This design would use 20 C-79 with 18 Founteks. With some talking with others and looking at measurements, I'm starting to question my thought. I've looked at the Accuton 220/T11 and then use the Newform Research R30 2x stacked per side.

My concern is that looking at the measurements, the 220 just doesn't seem as good as the C-79. I really don't want to lose the "magic" that I had with the C-79. So, what are your thoughts and recommendations? I have also contacted Audio Technology about some custom mids as well.

BTW-my thought is to use my 300w Class Mono Blocks on the mids and use a tube amp on the ribbons. I currently use two aluminum cabinet Rythmik Audio subs with an active Ashly 3.24CL crossover.

Thanks-

Subject: Re: help spend my money on an array project
Posted by [Marlboro](#) on Fri, 30 Oct 2009 03:26:18 GMT
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Whoa! This is way outta my league. Just the cost of the raw speakers is going to be almost \$8000. With that package you will probably want to put together cabinetry for another 2K, so your system will cost you \$10K, not including your labor.

If it doesn't sound totally unreal, I can't imagine what would.

I hope that you are under the age of 40, since anyone over that doesn't have enough ear left to hear the difference.

Marlboro

Subject: Re: help spend my money on an array project
Posted by [jtwrace](#) on Fri, 30 Oct 2009 14:55:00 GMT
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Marlboro wrote on Thu, 29 October 2009 22:26Whoa! This is way outta my league. Just the cost of the raw speakers is going to be almost \$8000. With that package you will probably want to put together cabinetry for another 2K, so your system will cost you \$10K, not including your labor.

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Marlboro

LOL. I thought nothing was out of your league after reading many of your posts.

Yes, but the money is not the primary concern...the sound is. I just would hate to put the effort into this project and wish I used a different driver. I also understand that many will have different ideas / designs but am I OK with using 20 C-79's with the Founteks?

Subject: A WOOFER ARRAY?

Posted by [Marlboro](#) on Fri, 30 Oct 2009 17:07:38 GMT

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Money...!!

I was constrained in my design primarily by money. I couldn't spend more than \$1500 total including all amplification, electronic crossovers, all speakers and all materials. My labor was free. I had one amp to start and two 12 inch 15 xmax poly prop woofers that currently list for \$139 each. I had to buy everything else.

I bought each speaker first in one and listened critically to the extent that a then set of 54 year old ears can do. I spent a lot of time on ebay looking for the right amps and trying and sometimes failing to get what I wanted. I read every piece of information that I could find that pertained to any design part of the system, and then I put it all together on paper first. And then I started building.

It took me nearly 18 months to design, 4 months to buy the amps and crossovers on ebay, and an additional 6 months of spare time to build the system. From its inception to siting and listening it took more than two years.

But your material look like a splitting of hairs that I simply couldn't do. It looks like it should be TAKE ON ALL COMERS no matter what.

I wonder if you are doing this, and money is not an issue, that you don't make it a 4 way and include a line woofers to handle the 40-200hz range. I've been thinking of doing that myself to handle the 40-155 range which is currently handled by my dual 12 inch woofers. I would then use my 12 inchers for only very low bass and explosions in the range from 16-40. They would be true stereo subs.

Marlboro

Subject: Re: help spend my money on an array project

Posted by [Jim Griffin](#) on Sat, 31 Oct 2009 00:33:16 GMT

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jtwrace,

With your desire to use these specific drivers and such why haven't you contacted your fellow NC speaker professional aka Rick Craig of Selah Audio? He has the experience you need to create arrays commensurate with the performance of these drivers and their cost. This should not be a DIY kind of job for these drivers but rather your opportunity to achieve something special.

Jim

Subject: Re: help spend my money on an array project

Posted by [jtwrace](#) on Sat, 31 Oct 2009 00:42:05 GMT

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Jim Griffin wrote on Fri, 30 October 2009 19:33jtwrace,

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Jim

I have...meeting up soon.

Subject: Tangent....

Posted by [Marlboro](#) on Sat, 31 Oct 2009 16:27:08 GMT

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JTW,

Lets assume that you move on to finding some professional builder to put this together for you, to spend your money for you.

But back to us who would never hire an independent builder because we accurately or fallaciously believe that we can always do it better ourselves for less money(I had a friend one time, best man at my wedding, who married an heiress, and fell into the trap that since he had all the money he could ever want that hiring someone would be easier and better than doing things himself---sometimes true, sometimes not.)

I'm wondering about the Accuton C-79's? Is there any place where an independent evaluation of these speakers has been made? They are essentially three inch domes made of ceramic, and from the data provided by them it seems that they have a quite a bit of ringing problem, and don't go lower than 400hz. I wonder if one might be better off with using Dayton RS-52. In a line array

you could cross them at 450 and cut their flanges to cross pretty high. They have an exceptionally flat frequency response, very very low distortion, and very little ringing at all.

Additionally, while there has been plenty of discussion here about the benefits of the fountek 2.0's by people who listen to them and certain people's preferences for them, I still wonder if using them when you have to cross below 4Khz where their performance drops, it might be preferable to use Bohlender Graebener Neo3 PDR's which are almost half the price, and have way better specs.

Additionally in using either the Accuton's or the RS52's, you will need a 4-way to make it viable. You need an array to cover the range from about 60hz to 500hz, with a set of stereo subwoofers covering the range of 16-60 or so. I'd go with the RSS210's, but if you can deal with a dropping frequency response below 80hz a line array of Visaton AL200's has a better distortion figure.

My problem is believing the data reports of manufacturers. I need some kind of independent testing to verify what they say. All manufacturers, whether of raw speakers or of completed speakers, tend to gloss over their deficiencies, and stress their strengths. Its part of marketing. So one of the benefits of being a DIYer is that you can sift through the marketing and find speakers that are the best, and the best is not always the highest price.

Marlboro

Subject: Re: Tangent....

Posted by [jtwrace](#) on Sat, 31 Oct 2009 17:36:22 GMT

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Marlboro wrote on Sat, 31 October 2009 11:27JTW,

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Marlboro

Thanks for your advice...you obviously haven't read my first post and the first sentence. I would say that you shouldn't judge anyones ability via a forum. You might be surprised.

Thanks for your help!

Subject: Re: Tangent....

Posted by [Marlboro](#) on Sat, 31 Oct 2009 18:01:32 GMT

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OH... yes I did.

You built a system using just one of them each for each speaker, and loved them. And you wondered if maybe used in a line array they might be wonderful. And i don't deny they might be.

My only comment is that I've never had the luxury(alright, shortly after an inheritance I did before it all went into college educations for my kids) of spending whatever I wanted. But even if I do in the future, I always get a big kick out of doing things for less expensive and proving that they are every bit as good as if I'd paid big bucks.

Over my 60 years, I've always found that there is an alternative that costs less and works every bit as good as the one that costs more.

Its a personality flaw I suspect.

I also didn't want to put a crossover between 100 and 3000, but c-to-c limits kind of prevent that in line arrays so, i went with 155hz - 2500hz, which was as close as i could get.

Subject: Re: help spend my money on an array project

Posted by [jtwrace](#) on Sat, 31 Oct 2009 22:06:39 GMT

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Jim Griffin wrote on Fri, 30 October 2009 19:33jtwrace,

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Jim

Jim

I have contacted Rick and will be visiting soon. I really want to build these myself though. I do want to thank you for your white paper. I have found it to be a great source for some of my questions.

Subject: Re: help spend my money on an array project

Posted by [AudioFred](#) on Sun, 01 Nov 2009 14:14:43 GMT

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At any budget level the final outcome will depend on selecting drivers that are highly compatible and designing an enclosure and crossover that optimizes their strengths. I've designed and built some "buyout" arrays that sounded pretty good considering the cost of the parts, and I've built a few that were complete disasters, but it didn't matter because none had more than \$300 in parts. It was worth it for the learning experience, but for anything over \$1K I ask the experts for help.

It would be tragic if you spent \$10K+ only to find that the "system" you had assembled included some elements whose lack of compatibility resulted in sub-optimal performance. At that budget level any diy speaker pair you build should be a world class performer, at least as good as the most expensive commercial products out there and better than most.

An experienced line array designer will be able to advise you about which combinations of drivers / enclosure / crossover design will provide the best performance. Your cost for the completed design plus all parts (minus the enclosures) will be approximately equal to the retail price of the parts, so there's really no downside.

Subject: Re: help spend my money on an array project

Posted by [jtwrace](#) on Sun, 01 Nov 2009 14:38:28 GMT

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AudioFred wrote on Sun, 01 November 2009 08:14At any budget level the final outcome will depend on selecting drivers that are highly compatible and designing an enclosure and crossover that optimizes their strengths. I've designed and built some "buyout" arrays that sounded pretty

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An experienced line array designer will be able to advise you about which combinations of drivers / enclosure / crossover design will provide the best performance. Your cost for the completed design plus all parts (minus the enclosures) will be approximately equal to the retail price of the parts, so there's really no downside.

I agree. Just so you know I will be using an active crossover with the arrays bi-amped.

Subject: Re: help spend my money on an array project
Posted by [Marlboro](#) on Sun, 01 Nov 2009 14:45:42 GMT
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Do you have access to a at least a 1/3 octave constant Q equalizer, a calibrated test mic, and computer software to measure the output? So you can adjust it to fit the exact needs of your room?

Marlboro

Subject: Re: help spend my money on an array project
Posted by [jtwrace](#) on Sun, 01 Nov 2009 14:51:07 GMT
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Marlboro wrote on Sun, 01 November 2009 08:45Do you have access to a at least a 1/3 octave constant Q equalizer, a calibrated test mic, and computer software to measure the output? So you can adjust it to fit the exact needs of your room?

Marlboro

my current crossover:
<http://www.ashly.com/324clspecs.html>
I use REW with a calibrated Naint mic.

Subject: Re: help spend my money on an array project
Posted by [Marlboro](#) on Sun, 01 Nov 2009 15:52:22 GMT
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I should think you'd want to use something with a little higher quality than that old piece.

Holy Electronics, batman! I bet that cost more than my entire system. You sure don't skimp on these things. Clearly you are not a lowly public school educator with a mortgage, either that or you won the lottery some time ago or Martha Stewart is your mother!

Marlboro

Subject: Re: help spend my money on an array project
Posted by [jtwrace](#) on Sun, 01 Nov 2009 16:01:59 GMT
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Marlboro wrote on Sun, 01 November 2009 09:52 I should think you'd want to use something with a little higher quality than that old piece.

Holy Electronics, batman! Clearly you are not a lowly public school educator with a mortgage, either that or you won the lottery some time ago or Martha Stewart is your mother!

Marlboro

none of the above.
