Subject: Rework Foster / Dayton Neo array
Posted by Marc G on Wed, 20 Aug 2008 18:51:35 GMT
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Well about two years ago I built my el-cheapo array. I used the Madisound buyout 5 1/4" (Foster or Fostex I can't remember), mids.I then went to sealed enclosures, then added a line of the Dayton 3/4" Neo Domes with the truncated (by me), flanges. Each step was better but I can't help but think that the Mids just can't reach a comfortable crossover point that the Neo's can handle. I was tri-amping with a Behringer analog 3 way crossover and using good equipment overall. I was able to use an Ultracurve to EQ the beast then was able to use my crossover alone to set levels and bypass the ultra curve, getting pretty flat without any other EQ.After all the work I picked up a set of cheap Heresy's and they just killed my COMPLICATED array project. They sounded so well integrated and mine did not. Hmmm. Well, I'm sure the tweets are the biggest investment of the project and I think I would like to reuse them. Maybe I should buy some mids that integrate better. They sound OK but the HI-VI B3s or the round frame seem like a better match. Is there a passive crossover out there to mate a 3" Hi-Vi or similar to a Dayton Neo array ? If not, what small affordable 3-4 inch driver would be a good match for my Neo array ?

Subject: Re: Rework Foster / Dayton Neo array
Posted by Marlboro on Fri, 22 Aug 2008 03:39:00 GMT
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You haven't given ME enough information to be able to reliably advise you. Do you have any woofers involved in your system? What are the specs on the Fosters since Madison no longer sellsx them? How big a line of tweeters did you use? What were the crossover frequencies you used? If you have no woofer are you using an equalizer? What about the heresy's blew your system away? Stuff like that.I'm actually having problems myself. My tweeter amp died and I can't seem to figure out why I can't get the replacement tweeter amps to work with the system. Its weird!Marlboro

Subject: Re: Rework Foster / Dayton Neo array
Posted by Marc G on Fri, 22 Aug 2008 08:06:48 GMT
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So Sorry, Yep, I'm using a ported 2 x 8" crossed in at 150 hz with both the 1980 Heresys and the line. I'm using a line of 32 Neo's and 12 of the Foster 00463 Woofers. The published curve has them flat out to 5K where they drop quickly. I have them in a sealed box fabbed up from the open baffle I started with. I believe I sent you pictures before, long ago. I was quite proud of the effort anyway. I'm using a Behringer CX3400
http://www.guitarcenter.com/Behringer-CX3400-Super-X-Pro-Crossover-101219558-i1125203.gc

I was crossing anywhere from 2k to 5K. running the HP on the tweets and the LP on the mids. Using my ultra curve and the measuring mic back about 10 feet I got it pretty even with the level controls on the X-over alone. Still, it sounded like separate drivers. Foster "0463" 8 ohm, Vas 6.6, FS 81 hz.My AMC Digital amp lost a channel 1 of 4. Well it kind of got scratchy. Runs the subs ok though when bridged. I'm hesitant to scrap the tweeter line. But I understand these woofs may find a better home.Marc

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Subject: Some thoughts.....
Posted by Marlboro on Sat, 23 Aug 2008 17:09:39 GMT
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I've thought about your problem and I'm still not sure I know what it is. You've told us the configuration of your system and that its the heresy(large woofer, midrange horn, tweeter horn) that you feel beats out your system. There are several things which could be involved.1. You've not defined "integration" for you. Does integration mean the sound that comes from a horn system?2. You've not indicated your amplification system. Mine uses nearly 1300 watts RMS total. Your system may be way way way less efficient than the heresy's and you could actually be hearing a lack of power that provides less impact and thus perceived less integration. I agree with Thylantyr that systems run on less than 1000 watts won't give you the resource you need.3. I'm not sure that the Foster's are the best midrange to use with the Dayton neo's and I personally believe that they are stretched too thinly to cross any higher than about 1600, and the neo's can't go any lower than 2400 on a 24 db slope. This would make it seem as if you had separate speakers and a drop out in the critical 1600 - 2500 midrange area.Marlboro

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Subject: some additional thoughts
Posted by Marlboro on Sat, 23 Aug 2008 22:19:43 GMT
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Marc,As I finished finding an amp that would drive the tweeters(I bought a number back when I was building and designing the system two of which were dead on arrival from the wonderful ebay sellers but I didn't know until months later when I got around to hooking them up.)What are you using the balance the different lines? I've not found the gain controls on my Rane to be up to the task. As a consequence, both the tweeter and the woofer sub lines are driven by amps with their own gain controls on them. This allows me to make balance adjustments that would be impossible with just the little Rane. When Klipsh built the Heresy's they put in what is commonly called the California sound, which is heavy on emphasis in the impact bass. The horns tend to a more crisp sound, and the whole package is designed for rock bands. I wonder if its a combination of balance and equalization(caused in the passive cross) that has got you enthused with the sound of the Heresy speakers.Of course, this doesn't deny my first two points in the first missive response. Altho some would simply blame it on: If you use cheap speakers you'll get cheap sound. I think its more complicated than that.Marlboro

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Subject: Re: Some thoughts.....
Posted by Marc G on Sun, 24 Aug 2008 03:49:32 GMT
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Well, that pretty much sums up what I'm hearing. I've been using a Crown DC 300A for mids, my AMC digital 40 wpc amp for highs and a Mackie 1400 for my subs. When I use my 2 Table Tubas I only need about 50 wpc for the subs. All my amps have individual gain controls and I use them. So it seems these drivers aren't going to like each other no matter what I do. I think I really hear an underlap in response. That must be why they sound like two sources of the same signal. I guess It's my turn to decide what avenue to pursue. Smaller B3N woofers and my tweeter line or a single xt25 tweeter for my woofer line.I guess I will have to model a box volume for the Hi-Vi. Do you have any rough ideas for a passive crossover for the Hi-Vi 's and the Dayton Neo's ?

Subject: all comes down to money.....
Posted by Marlboro on Sun, 24 Aug 2008 07:29:18 GMT
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Well, first of all how much money do you have to spend?Marc,Building a simple three way is usually pretty forgiving, but as you've discovered, building a line array inexpensively without taking care to see that all the elements fit together like a glove can be less than successful. Its easily done, but you have to do a lot of design looking and waiting ahead of time.If i were you I would simply replace the fosters with a three incher. But I designed my system so that the speakers would work together before I started. If you search around you might be able to come up with 32 sammi's and pay not more than $5 each. Here's some guy who will sell you a case for less than $3.99
each:http://cgi.ebay.com/3-1-4-SAMMI-WOOFER-MIDS-CW77B10-4OHM-ALLISON-NEW_W0QQitemZ280129614660QQihZ018QQcategoryZ3276QQrdZ1QQssPageNameZWD1VQQcmdZViewItemI'd keep the electronic crossovers, though you could get one of the heavy hitters in passive's over at PE Tech form like Jeff or Pete or Curt to actually design a passive for you. But in my opinion, The evils of passives bring in more troubles than they are worth.As I see it, if you go to a single tweeter you lose the low distortion and the wonderful line array benefits. But it all comes down to how much money you want to spend.Compare 16 PT2 planars for $28 each for $448 or the B3n's for $305. I's stick with the domes if I were you. 64 domes are incredibly distortion free as well as super responsive. If you go with a tweeter you really need one that can give you the same sensitivity as a line of mids, but with individual volume controls on the amps that is not as necessary as when you have a passive crossover.You might want to consider the benefits of putting the 3 inchers into individual tube enclosures also, but that is pretty labor intensive.Just my thoughts. Others may have better choices.Marlboro

Subject: Re: all comes down to money.....
Posted by Marc G on Sun, 24 Aug 2008 18:03:15 GMT

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I checked out the Sammi's and put a question in to the seller.I see they are the 4 ohm version so I imagine just doing a series parallel arrangement should get me close to my 6-8 ohm target. My question to you is what would be a good sealed box volume for these drivers. I dont have the time for a fancy enclosure. A sealed box should be good to 100-120 hz right ? My line of Fosters were 63" and 16 - 3.24 drivers would get me approx 52 inches. Why do you suggest 32 units ?Marc

Subject: Sammi's plus neos in pvc tubes
Posted by Marlboro on Sun, 24 Aug 2008 19:06:08 GMT
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I used a separate PVC tube for each of them, stuffed to 4 lb/cu in fiberglass. Have you seen my enclosure system? I used 16 of them per side myself in a 7.5 foot high system. I wouldn't cross them below 145-150 where you'll get a resonance in the tube to support the lower end(though not very much considering the intense stuffing).I can email you the information about the tubes if you want.The Calipso LINE ARRAY:
http://pub48.bravenet.com/photocenter/album.php?usernum=4095425731&album=48032
 The Calipso LINE ARRAY

Subject: Re: Sammi's plus neos in pvc tubes
Posted by Marc G on Sun, 24 Aug 2008 20:28:51 GMT
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Yes I remember your PVC enclosures and it just seems like too much time investment for me these days. I was hoping to run them in a sealed enclosure so volume wouldn't be too sensitive a factor. A big plus would be reusing the cabs I have and making a new mid baffle. Do you know a good volume range per driver in a sealed configuration?That way I can adjust the number of drivers for my cab volume, or block off a portion of the cab to adjust the volume.

Subject: Re: Sammi's plus neos in pvc tubes
Posted by Marlboro on Sun, 24 Aug 2008 23:42:24 GMT
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At this point, you should run one of the programs that tell you what o use. I know that my system sounds fabulous with no feeling of hearing speakers at all, but only of hearing performers. The problem is that my system was designed as a total package. I don't know if taking the Sammi's

and putting them into a giant box where all the back sound interacts with each other would produce the same quality as I have, and I'm not willing to conjecture about it. So good luck. Use one of the programs. FWIW, the volume on my individual speakers, crossed at 165 and 2400, was a cylinder of 4 inches x 23.5 inches= 295.42857142857116 inches. You don't have to be as precise as I was.

Subject: Re: Sammi's plus neos in pvc tubes
Posted by Marc G on Mon, 25 Aug 2008 03:42:12 GMT
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I understand that the tubing influenced your mids c to c spacing. Do you have issues with lobing since the 3 inchers go up much higher than the 5 inchers I have ? If I was going for tight spacing how many units should go for ? 16, 20, 24.

Subject: Re: Sammi's plus neos in pvc tubes
Posted by Marlboro on Mon, 25 Aug 2008 05:05:16 GMT
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MARC,No problems with lobing that I have noticed. As to spacing, it depends on your nearfield listening, your crossover frequencies, and other parameters from Jim Griffin's white paper. Marlboro

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Subject: Decide to do?
Posted by Marlboro on Wed, 27 Aug 2008 00:18:00 GMT
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So what did you decide to do?

Subject: Re: Decide to do?
Posted by Marc G on Wed, 27 Aug 2008 00:33:32 GMT
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Well, ... I contacted the Sammi seller and those can be had for a bit less like $3.50 each. Tempting. The frames look difficlt to mount / seal with only a 1 mm of edge Ideally I would like to

build another simple tower box design but with the option of using a passive crossover with an lpad to balance the respective lines. I want it all.Seriously I'm giving the current set-up one more workout before it goes in the garbage. I'm wondering if the use of a known driver like the B3s or n would allow me the possibility of using a variation of CC's Scrappy crosovers.

Subject: Re: Decide to do?
Posted by Marlboro on Wed, 27 Aug 2008 03:30:57 GMT
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The frames are difficult since there are four mounting screw holes on the outside. A judicious use of a little black silicone adhesive in a very tight place makes the seal solid.I would recommend that you re-read Rod Elliot on the evils of passive crossovers in speaker design.Are you tossing the Neo's, and everything?

Subject: Re: Decide to do?
Posted by Marc G on Wed, 27 Aug 2008 22:06:39 GMT
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No If worst comes to worst I will junk the cabs and eBay the drivers.
