Subject: DCX crossover installed
Posted by jphaggar on Tue, 26 Jun 2007 09:13:12 GMT
View Forum Message <> Reply to Message

It's been 2 days I have my RS 8 arrays playing through the DCX 2496using the subs bash amps , the Dussun V8 for the mids and the Sim W5 for the highs. It's a good feeling to be able to play with the xover slopes an have the instant effects while listening ! I need to get accustomed to the new setup and the multiple possibilities that doesn't make things really easy . Any practical recommendations would certainly be welcome .JP

Subject: Re: DCX crossover installed
Posted by Marlboro on Tue, 26 Jun 2007 12:13:41 GMT
View Forum Message <> Reply to Message

You don't sound terribly encouraged....

Subject: Re: DCX crossover installed
Posted by jphaggar on Wed, 27 Jun 2007 07:15:59 GMT
View Forum Message <> Reply to Message

To tell you the truth, I did not put enought time to it I need a few more days when I'' be back from vacation.My first trials tell me that the original sound caracter of the speakers cannot be dramatically improved , it all depends on the drivers chosen . There is a part of the midrange specially with human voices that needs correction , I may be needing a Equalizer like the behringer DEQ 2496 , but I give myself some more days of trial first . But the real question is : Is it worth building arrays considering all the complexity of the project ? can't we obtain much more refined speakers using much better components using a 3 way config and a much easier to deal with project . Not to mention the weight a difficulty it implicate each time you want to move them or whatever ? Then if you want to sell them !!!!! your scope of clients is so much reduced !!I am not saying I did not have fun building this project this was a relatively easy task because I am a furniture manufacturer , but I just imagine how difficult it is for an amateur to do it on his own !!Now that I am in it I am decided to try everything possible to make this project a success (hopefully).

Subject: Re: DCX crossover installed
Posted by Marlboro on Wed, 27 Jun 2007 14:19:38 GMT
View Forum Message <> Reply to Message

Well, obviously I disagree that you can build a conventional system with the same sound presence, low distortion, and dynamic range as you can for a line array.Some line array designs are better than others. I personally believe that my own design is head an shoulders above many others including the commercial ones.I have an equalizer, but I don't use it. Both my tweeter and woofer array amps have individual volume controls which allows me to modify the system without resorting to phase whacking equalization.Sorry your system doesn't meet your needs.Marlboro

---

Subject: Re: DCX crossover installed
Posted by Anonymous on Wed, 27 Jun 2007 19:22:23 GMT
View Forum Message <> Reply to Message

Post pics of your speaker. Link the drivers you used and amps.Maybe we can figure out a crossover scheme for those drivers.DCX has delays, I use a delay on one channel, 15mS to giveme depth. DCX has PEQ, no need for another seperate EQ. You can EQ any inputand output.DCX has presets to store your special settings and you can recallthem instantly.

Subject: Re: DCX crossover installed
Posted by lcholke on Sun, 01 Jul 2007 14:19:33 GMT
View Forum Message <> Reply to Message

Hi Jp,What drivers are you using? Any pics? The cabs must be very good looking since you know woodworking.----------When I first hooked up my DEX2496 I noticed a new clarity just by having the steep slopes on each driver. The opamps used in the xover are not very clean. So I took the dex out and went passive again.Reciently I put the LM4562 opamp in the output board and removed the other opamps in the signal path. The improvement is very large.The second way to get a good sound out of the DEX2496 is to send a digital signal into it. I have the SRC2496 feeding the DEX2496.The third way is to keep the output level of the DCX high and use a preamp to limit the volume.----------For normal listening levels a low priced driver in a line array (8 per side) will be used with very low wattages. 6.25 watts in 8 drivers will replace 50 watts in one driver. The cone sound color (resonance) will still be there, but since the excursion is so low, the driver will sound very clean. The voice coil will stay in the gap. The suspension will stay very linear. The air when compressed distorts some. This effect is also reduced by having more cone area. The expensive drivers place a large amt of the construction cost in a suspension and magnet that stay linear at higher wattages. My first array was with the $.98 NSB drivers. ----------Linc

---

Subject: Re: DCX crossover installed

Posted by jphaggar on Mon, 02 Jul 2007 16:38:19 GMT
View Forum Message <> Reply to Message

I expect that Minor changes would do the job but unfortunately it seems I cannot put my finger on the problem . I keep trying .Maybe I should use an test mic with an RTA to pinpoint the problematic frequencies , I still have to learn about testing , wich makes things a bit slower for me . Is there a simplistic testing method ?JP

Subject: Re: DCX crossover installed
Posted by jphaggar on Mon, 02 Jul 2007 16:44:04 GMT
View Forum Message <> Reply to Message

Pictures of my arrays are here :http://i132.photobucket.com/albums/q30/jphaggar/Line%20Array%20RS%208%20before/DSC00556.jpgdrivers are Dayton RS180 and Fountek Neo 2JP

Subject: Re: DCX crossover installed
Posted by lcholke on Tue, 03 Jul 2007 14:48:21 GMT
View Forum Message <> Reply to Message

The cabs look great. You have almost the exact speaker that I have. The tweeters are the same. The box looks basically the same. I have the silver flute woofers. I ended placing some silicone on the dust caps to eliminate some of the resonance.What are the settings on the behringer xover. Did you make a baffle step compensation? What are the xover points? -Linc

Subject: Re: DCX crossover installed
Posted by jphaggar on Tue, 03 Jul 2007 17:12:12 GMT
View Forum Message <> Reply to Message

xover points are 80HZ to the subs that are not visible on this picture , 2000HZ LR 24db slope , no baffle step comp for the moment .Any suggestions ?

Subject: Re: DCX crossover installed
Posted by lcholke on Wed, 04 Jul 2007 13:24:55 GMT

View Forum Message <> Reply to Message

Hi JP,Try a 3 to 6 db boost from 350 to 450 hz,and a slope of 6db. All finalized by ear since room gain is hard to predict.See the attachment for the calc.----------What are you not hearing from your system. Is it clarity or tone? ----------Linc
http://www.trueaudio.com/st_diff1.htm

Subject: Re: DCX crossover installed
Posted by jphaggar on Wed, 04 Jul 2007 20:04:58 GMT
View Forum Message <> Reply to Message

I have clinical clarity, lack of tone !!!

Subject: Can tone be fixed with eq?
Posted by lcholke on Fri, 06 Jul 2007 11:53:44 GMT
View Forum Message <> Reply to Message

I have the same problem depending on the recording. I am re-adjusting the system every few weeks.How do others solve this problem? Does getting the system flat with a SPL meter realy solve this?-Linc

Subject: What does "lack of tone" mean?
Posted by Marlboro on Sun, 08 Jul 2007 12:34:29 GMT
View Forum Message <> Reply to Message

What is this for you?What does the guy who designed your kit say about your problem?Marlboro

Subject: Re: DCX crossover installed
Posted by Rick Craig on Sun, 08 Jul 2007 22:33:15 GMT
View Forum Message <> Reply to Message

JP,If you don't apply any baffle step compensation then the speakers will sound too forward and thin in the lower midrange. If you're setting your microphone at the listening position you should

shelve slightly downward the response above 200hz. The amount of tilt will depend on your room and listening preference.

Subject: Re: Can tone be fixed with eq?
Posted by Rick Craig on Sun, 08 Jul 2007 22:43:22 GMT
View Forum Message <> Reply to Message

The problem could be due more to the recordings and not your system. If you set the Behringer mic at your listening position I would shelve down the response from 200hz on up (see my response to JP above). Most tonal quality issues can be solved with EQ but some of the differences I think are related to the driver design and cone material. JP's system has aluminum cones and the material stiffness can give the lower mid / upper bass area a slightly "dry" quality.

Subject: Bad Recordings?
Posted by JD on Mon, 09 Jul 2007 13:47:28 GMT
View Forum Message <> Reply to Message

So almost all his recordings are bad? I find that kind of hard to believe. Surely some of his recordings would turn out to be less that he thought, but not almost all.I can think of one that my wife listens to in the car all the time, and I thought it would be great, but when I brought it inside to my speakers, it turned out to be thin and almost un-listenable. I took it back out to the car.JD

Subject: Re: Can tone be fixed with eq?
Posted by jphaggar on Mon, 09 Jul 2007 14:32:39 GMT
View Forum Message <> Reply to Message

I've applied 6db baffle step to the input at 250Hz upwards on a 6db slope and got some improvement but still not what I want the sound to be !! I think the cone material is probably the most important issue and I recommend to anyone going for a project as important as a line array to buy the best Mid/Bass drivers and I presume that treated paper cones should be the choice , but meanwhile could I rectify some of the cone problems using some EQ ? If yes what are the frequencies that are typical to this particular driver and that could be rectified if someone has tested this Dayton RS 180?

Subject: Re: Bad Recordings?

Posted by Rick Craig on Mon, 09 Jul 2007 15:03:59 GMT
View Forum Message <> Reply to Message

I didn't say that all recordings are bad. Often a speaker is blamed when in reality the recording is the problem. If you notice a wide variance from different recordings it may be that the speaker is very revealing of the source.

Subject: Re: Can tone be fixed with eq?
Posted by Rick Craig on Mon, 09 Jul 2007 15:07:03 GMT
View Forum Message <> Reply to Message

What are the specific recordings that you are evaluating the speakers with?

Subject: rs 180 plot (nt)
Posted by lcholke on Tue, 10 Jul 2007 15:48:23 GMT
View Forum Message <> Reply to Message

http://www.lonesaguaro.com/speakers/DaytonRS7/CryoMeasure.htm
http://www.lonesaguaro.com/speakers/DaytonRS7/CryoMeasure.htm

Subject: Re: Can tone be fixed with eq?
Posted by jphaggar on Tue, 10 Jul 2007 15:49:23 GMT
View Forum Message <> Reply to Message

Recordings:1- Doug Macleod : Whose truth whose lies2- Eric Ribb :Livin locin3- Peter Cincotti: Cincotti4- Bia : sources5- Jazz at the pwnshop6-Kenny Barron trio7-Brad Mehldau trio8-The LA four : going home9- Diane Krall : from this moment10- Madeleine Peyroux : The perect world11- Jack Johnson : between dreams12- Classical music selection from Accuphase and many more !!!!!!!!!!!!

Subject: Re: Can tone be fixed with eq?
Posted by Rick Craig on Tue, 10 Jul 2007 18:39:12 GMT
View Forum Message <> Reply to Message

That's a nice selection of music.

Subject: Re: Bad Recordings?
Posted by Tom R. on Wed, 11 Jul 2007 01:38:38 GMT
View Forum Message <> Reply to Message

Just for the sake of discussion, and no offense to JP, but could the problem be in the wiring? Are the speakers wired correctly? With all the discussion of “lake of tone”,and the music listened to, I would think at least one song would sound good, an instrumental, a good jazz recording? Just a thought in the trouble shooting process

---

Subject: Re: rs 180 plot (nt)
Posted by jphaggar on Wed, 11 Jul 2007 05:11:59 GMT
View Forum Message <> Reply to Message

Interresting to see the dips and peeks that corresponds to the complain I have about the sound , I am not an expert but woulk like to hear you guys who understand those graphs like Rick or Jim to translate those in terms I can understand and deal with .Thanks guys

---

Subject: Re: Bad Recordings?
Posted by jphaggar on Wed, 11 Jul 2007 16:38:03 GMT
View Forum Message <> Reply to Message

Tom, I didn't say the speakers where sounding bad all the way , when it comes to criticise at this level of performance you become a little bit maniac with small defficiencies , the effect I get when listening to a non vocal jazz performance is very good with a little overall dryness and thiness on some instruments , but with the vocals it gets pretty much obvious that there are some beaming in certain intonations at some frequencies , when the project cost you almost 4k and a lot of hours of building and installing , specially when you get a design by a reputed and capable speaker designer you expect to get close to perfection when it is claimed that you could compare your babies to more than 15k commercial speakers , and i've listened to much less expensive speakers with no deficiencies of the sort , plus that after a 30 min listening session you get listening fatigue wich I dont get with a commercial pair I own (with of course less performance in other aspects like power handling and distortion) . I'm still in search of solutions !Maybe adding some mass to the speaker cones like a coat of some material ? if someone has experienced such a thing I would be happy to hear about it .Thanks JP

Subject: Re: rs 180 plot (nt)
Posted by Rick Craig on Thu, 12 Jul 2007 00:35:22 GMT
View Forum Message <> Reply to Message

The graph isn't fully representative of how the driver measures. If you look at the response curve on the Parts Express site you'll get a better idea of how it performs. There are also some positive reviews on the PE site from other people who have used the woofer.Being an aluminum cone the upper end breakup is the main issue to deal with; however, as long as the crossover point it low and the acoustic slope is steep the driver will perform well. Being a stiff cone the upper bass / lower mids will not be as "full" or "warm" as soft cone drivers; however, many people feel this is more accurate with greater resolution. Others may react differently and suggest that the sound is too "dry" or "sterile". I don't think this is a right or wrong issue but more of a matter of preference. I have shared both opinions depending on the recording.Yes, there are better 7" woofers but for the $ many people feel this one if hard to beat.

Subject: Re: Bad Recordings?
Posted by Rick Craig on Thu, 12 Jul 2007 00:50:53 GMT
View Forum Message <> Reply to Message

I do take this very seriously and want to help you attain the sound that you are desiring to achieve. Having spent several years in recording live sound I can attest that microphones and studio effects can affect vocals in a negative way. With female vocals the ribbons can be quite revealing of sibilance and the crossover point /slope / EQ settings are critical to good performance. This is also at the upper end of the woofer's response where the breakup occurs and it needs to be fully attenuated.There are some latex damping compounds that could be applied to the cone; however, be careful to avoid anything with a solvent that could affect the cone adhesives. A water-based material is going to be the best solution and the same amount must be applied to every driver to maintain the same cone mass.

Subject: Re: Bad Recordings?
Posted by Tom R. on Fri, 13 Jul 2007 01:55:33 GMT
View Forum Message <> Reply to Message

JP - I fully understand your position, you took the time to build themthinking it was a proven design, but the initial sound came up a little short of where you thought it would be….Tom R

Subject: Re: Bad Recordings?
Posted by jphaggar on Sun, 15 Jul 2007 17:33:43 GMT

View Forum Message <> Reply to Message

TomThis exactly the case , they are not up to the rest of my eqipment standard ,I think I should have chosen the higher model XT8 .JP

Subject: Re: Bad Recordings?
Posted by Marlboro on Wed, 18 Jul 2007 15:58:48 GMT
View Forum Message <> Reply to Message

Upgrade the speakers? Start over? Go back to point source?

Subject: Re: Bad Recordings?
Posted by jphaggar on Thu, 19 Jul 2007 07:15:32 GMT
View Forum Message <> Reply to Message

Well, I was in point source when I first started building my speakers , but an array is much more challenging. And I dont get discouraged , specially that I have good assistance from Rick .I may think of changing the Dayton Aluminum drivers , as I think the aluminium has a sound of itself that may be the reason for some coloration in the midrange . I have to say that to all my friends the sound is impressive !!!JP

Subject: Best Material for cone speakers?
Posted by Marlboro on Thu, 19 Jul 2007 12:24:19 GMT
View Forum Message <> Reply to Message

When you come right down to it, many times the composites and the aluminum, and other exotic materials all pale to just plain paper.So you are actually saying that while you personally have a problem, no one else who listens does?Marlboro

Subject: sibilance and
Posted by Marlboro on Sat, 21 Jul 2007 15:56:58 GMT
View Forum Message <> Reply to Message

I know this is a simplified response to a more complicated question.....I don't know how other people's line arrays are set up but I can handle this by adjustment of the system. I have a pre-amp which feeds the analog electronic crossover. The crossover feeds the three ranges to three separate power amps. The tweeter and the bass power amps have volume controls on them. This allows me to adjust the intensity of the treble above 2500hz, and the bass below 165hz. When I have a recor4ding with too much sibilance then I turn the tweeter amp down a bit. When I have a recording with too much or too little bass, I adjust that too. Often rock benefits by increasing the bass end a bit, and classical by reducing it.This is sort of like equalization, but without the same phase issues, I think. Can others not do this? I made sure that the power amps I purchased had separate volume controls. It also meant that I didn't need to push to less expensive op amps of the Rane crossover too hard, and let the much more quality in the power amps do the job. If you can't find power amps with volume controls, you can always buy a control amp and use that instead. In fact, my tweeters are run out of a 60 w/ch receiver. Marlboro

---

Subject: Re: Best Material for cone speakers?
Posted by jphaggar on Sun, 22 Jul 2007 04:03:50 GMT
View Forum Message <> Reply to Message

That's not exactly what I said !Critical listening is the issue , and not just demonstrating the speakers to a bunch of friends that do not care about HIFi and are already impressed only by the size of the speakers ....

Subject: Which are you?
Posted by Marlboro on Sun, 22 Jul 2007 15:48:13 GMT
View Forum Message <> Reply to Message

I doubt that I could hear what you claim is the concern. I suspect that your hearing is far far far better than mine. What exactly is critical listening? I just wanna hear great music as exact as I can afford, and after that I just buy CD's.Before I stopped posting on the PE forum I asked: "If you could design and build a system that got 95% perfect, but it would cost an additional $2000 and 100 hours of work to make 96%, would you stop and just listen to the music, or would you put all your time into making it 96%? And struggle to keep shaving off smaller and smaller percentages?"Almost 80% of the people there said they'd go for 96%. And when I asked what they listened to most people described rock groups. That's when I knew I was in the wrong place. These people weren't interested in listening to music, they we're just compulsive about building bigger and bigger woofers and better and better and better speaker systems, no matter how much more time and energy it cost them from actual listening. Which are you?Marlboro

---

Subject: And actually...
Posted by Marlboro on Tue, 24 Jul 2007 18:18:19 GMT
View Forum Message <> Reply to Message

"These people weren't interested in listening to music, they we're just compulsive about building bigger and bigger woofers and better and better and better speaker systems, no matter how much more time and energy it cost them from actual listening."And actually, rather than honing a speaker system to be better each time, they mostly just build a different one than they build from before. One time its a tiny little one, the next time a MTM, then a mini array, than a TL. Not just goes on.Not me. I built the best I knew how from lots of research, and the money I had available. I'll only upgrade if I can find some change that will show a dramatic, not an incremental, increase in sound quality.Marlboro

Subject: Re: And actually...
Posted by jphaggar on Wed, 25 Jul 2007 05:35:45 GMT
View Forum Message <> Reply to Message

I guess I'm in the same category you are in !!Music for me is so important ! I am also a guitar player an singer but unfortunately had a medical problem with my vocal cords and I now just listen to music at home and in my car , and what is so astonishing, is that I get amazed how my car sound system sound (very enjoyable)although it is not so special, I never feel listening fatigued while on the road , but at home I do !!!!!!! and the music I listen to is Jazz (soft)and the styles that go with it , I guess you understand (Blues), Classics etc ...Hope you get a better picture of the situation I'm having ?I may have some room acoustic problems !!! but This is beyond my capacities .