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Subject: Active Crossover Question

Posted by [MikeT](#) on Thu, 01 Dec 2005 16:35:58 GMT

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Is there any reason that a pro sound type active crossover would or would not work in a DIY speaker project. Thinking of a Behringer or Ashly model as seen at Parts Express. Just wondering.

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Subject: Re: Active Crossover Question

Posted by [Jim Griffin](#) on Fri, 02 Dec 2005 00:32:57 GMT

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Mike, An active crossover is an excellent idea for a line array. You'll have to account for the extra amplifiers you'll need and cabling as you realize. The benefit is that you can optimize each band some better and get better results than from a passive crossover. You'll save much time and hair with an active crossover. You will likely need a measurement system to get decent results. Each active crossover--Behringer, Ashly, BSS, DBX, Rane, etc.--have advantages and disadvantages so it is worth reviewing just which crossover would work best for you. Read some or message boards and hear about just how much efforts the users need to get good results. For what it is worth, I'm using a DEQX crossover and it is very slick but not cheap. Let us hear how you progress. Jim

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Subject: Re: Active Crossover Question

Posted by [Bill Wassilak](#) on Fri, 02 Dec 2005 14:44:19 GMT

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Don't just get an analog x-over, the way things are now days why not go to a digital x-over(DSP, also known as speaker management systems). For a few dollars more there well worth it, on many of them you can control the x-over slopes, time align, etc. etc., a lot more than you can do with just an analog one. For example here some pretty resonable models: Behringer Ultra Drive Pro DCX2496 for \$250 DBX Drive Rack PA for around \$400 DBX Drive Rack 260 for around \$750 Shop around and you can find some deals. HTH Bill W.

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Subject: Re: Active Crossover Question

Posted by [MikeT](#) on Fri, 02 Dec 2005 14:57:04 GMT

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Thanks for the feedback Mr. Griffin- I have multiple amps and have even found the cabling. Was wondering about sound quality when using an active xover. What would make one better than another for home audio use? Any thoughts would be appreciated as I intend on going with an active. A xover designer I am not. -Mike T

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Subject: Re: Active Crossover Question  
Posted by [MikeT](#) on Fri, 02 Dec 2005 16:42:28 GMT  
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Thanks for the feedback- I was wondering about analog/digital. Decisions, decisions.- Mike T

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Subject: Re: Active Crossover Question  
Posted by [Jim Griffin](#) on Sat, 03 Dec 2005 02:55:23 GMT  
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Mike,I suspect that the sound quality of most all of the digital crossover candidates that I mentioned would be between acceptable to excellent so you'll need to do homework to ascertain which one sounds best to you. You might find some help from prosound guys who use the various units for the Ashly, BSS, DBX, and such. I haven't used enough of the other digital active crossovers to be able to judge all of the merits or demerits of each one. I would suggest that you spend time to understand how the various candidates work and what kind of care and feeding they take to be implemented. For example, the Behringer DCX 2496 has an Achilles heel in that it does not have volume control of the 6 channels after digital processing. Why some others have had success working around that issue with the Behringer, this alone was a killer for my work.  
Jim

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Subject: Re: Active Crossover Question  
Posted by [MikeT](#) on Mon, 05 Dec 2005 14:23:33 GMT  
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Thanks Jim- When you say that you lose volume control after processing with the Behringer do you mean that the pre amp volume control becomes inop.? Checked into DEQX- sounds like something I would like to have- maybe someday. Thanks for the feedback. Mike T.

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Subject: Re: Active Crossover Question

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Posted by [Jim Griffin](#) on Mon, 05 Dec 2005 15:01:09 GMT

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Mike, You can always vary the volume via your preamp but you would be changing the analog signal level into the Behringer DCX 2496 crossover so you could lose bits in the process as this is done before the analog to digital conversion in the unit. The better way to go is to have digital volume control on the 6 outputs from the digital crossover. Second best would be to vary the 6 outputs after the DAC within the processor. In either of these cases you would have full line level inputs to the digital crossover and you process the digital info without losing digital data. For example, the DEQX has its volume control after it does its digital magic. Some of the other digital crossovers may have this capability but I know that the Behringer does not. The other part of this issue is what happens with sources with digital inputs into the crossover? Having volume control in the digital world or post digital processing is a good thing. Jim

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Subject: Re: Active Crossover Question

Posted by [Anonymous](#) on Mon, 05 Dec 2005 17:31:34 GMT

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I'm using a DCX2496 for the line arrays. Great unit for the money. You can feed an analog input or AES/EBU digital input. If you have a SPDIF digital signal, then get a Canare SPDIF to AES/EBU transformer {~\$20}. I'm also using a Roland M1000 for testing. CD player -> Roland -> DCX2496. I've setup a simple test to see if people can hear five a/d .. d/a conversions vs. the digital path with only one conversion, so far nobody can identify either pathway.. /lol

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Subject: Re: Active Crossover Question

Posted by [Mike T](#) on Mon, 05 Dec 2005 17:45:39 GMT

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So I can use my existing pre amp into the xover and have volume control? I have heard that I would lose volume control through the preamp if using the Behringer. What is your experience? Are there any problems going from the balanced outputs of the xover to the unbalanced inputs of my amps? I have seen cabling that allows going from balanced to unbalanced (XLR/RCA) but have no experience with this type of set up. Any insight would be helpful. -Mike T.

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Subject: Re: Active Crossover Question

Posted by [Renato](#) on Mon, 05 Dec 2005 23:07:10 GMT

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Dears, My english is too poor...but, I will try again... See this links: What you think about this ? DCX + Panasonic Digital receiver <http://www.newformresearch.com/digital-systems-overview.htm> <http://www.newformresearch.com/digital-amplifier-packages.htm> Xover Pc Solution <http://pcazeles.perso.cegetel.net/acxo.htm> <http://home.pacbell.net/donwm/> <http://www.6mons.com/industryfeatures/harddrive/harddrive.html> ]'s Renato

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Subject: Re: Active Crossover Question  
Posted by [Anonymous](#) on Tue, 06 Dec 2005 15:53:06 GMT  
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I've also tried this setup. CD player analog out -> preamp w/RCA output -> DCX analog input [using appropriate cable] It works and the preamp is the volume control. The purists prefer running the DCX 'hot' where the signal going into the unit is very high all the time and you control the volume on the output side which requires attenuation on all the outputs, --> PITA..... I've read all the debates and gathered lots of data on this unit here; <http://www.caraudioforum.com/vbb3/showthread.php?t=219105&highlight=dcx2496> I've been using this unit for 1/2 a year and I can't find a way to get bad sound from it and I tried all the bad methods of wiring it up. >> Are there any problems going from the balanced outputs of the >> xover to the unbalanced inputs of my amps? You need the appropriate cable, XLR female to RCA male adapter cable. Since the DCX will output a stronger signal and your home amp is more sensitivity to this, you may not get the best signal to noise ratio and you may hear excess hiss if you drive tweeters. There is a way to make a '-6dB XLR to RCA cable' to lower the signal level into the home amp [unless your home amp has gain control]. post #4 <http://www.caraudioforum.com/vbb3/showthread.php?t=220559&highlight=cables> XLR Output to RCA with -6dB output gain XLR Pin 1 = Shield ground => one insulated conductor and drain wire to RCA gnd XLR Pin 2 = Positive balanced signal => one insulated conductor to RCA hot XLR Pin 3 = Negative balanced signal {now ground} = don't connect

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Subject: Re: Active Crossover Question  
Posted by [Mike T](#) on Tue, 06 Dec 2005 16:47:55 GMT  
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Thanks for your feedback- I'll give it a try.

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Subject: Re: Active Crossover Question  
Posted by [daly2k](#) on Fri, 10 Feb 2006 17:56:44 GMT

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Amigos, I am building a line array loudspeaker with 12 Fountek 5" ribbons and 12 eton midrange/woofers. I am using an outboard passive crossover at 24db and with a crossover pt by simulation somewhere between 2k-2.5k depending on final listening tests. I did this because I have a large vinyl record collection and I didn't want my records going through DA & AD conversion. I also have many SACD's and I don't have a digital output for these from my Sony cd player, and I wouldn't want these reconverted anyway. I do have a digital out from my cd player and I don't mind converting this stream. The other issue is equalization in the crossover to match driver efficiencies etc. Can a digital crossover accomplish this? What if you need asymmetric crossovers? I am thinking about getting a digital unit just for the cd's and then using the passive crossover for everything else (just switching out the boxes). I have volume controls on my amps so I can control the system volume that way. When playing records I have the typical volume control through the line stage. Another idea I had was to get a room correction device but these are expensive. Any thoughts on these idea?

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