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Subject: new xo question - light dawns!

Posted by [DRC](#) on Thu, 15 May 2003 12:44:29 GMT

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Hi Wayne, I got a pair of 8 Ohm 10 watt resistors and put them in series with the mids. Didn't hear much if any change, certainly no improvement. So I took em out, put on Shawn Colvin, who has the kind of voice that exacerbates the problem and listened at lowish volume up near the drivers. The problem turns out not to be the woofer; the tweeter is still too hot! So I threw the 8 Ohm in series in front of the attenuation/comp block you sent, and things are sounding waaaaay more balanced and coherent. Very, very pretty sound. Q1: How much (additionally) have I taken the TAD2001 down with the added 8 Ohm? Q2: Back to the xo channel w/ the funky woofer portion. I took a longer look at what was happening, and now I'm really perplexed. On the good xo side, W+ and W- produce signal. Connecting W+, Input- does as well. W+, In+ produces nothing. On the funky side, W+, W- produces nothing. W+, Input - produces nothing. W+, Input \*\* produces signal! What the h\*\*\*? Is this puppy wired up wrong to begin with? How do I get this straight before the NE Bot meeting Saturday? The correct one sounds much better than the funky one, needless to say. Keep your ears and your mind open.

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Subject: Re: new xo question - light dawns!

Posted by [Wayne Parham](#) on Thu, 15 May 2003 21:55:47 GMT

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If you put an additional 8 ohms resistance in series with the tweeter, you would increase attenuation about 3dB. I ran it in Spice and expected to find additiinal peaking, but really didn't see it. Then again, I simply increased the value of R1, when actually, R1 is after the shunt value R2 and your added resistance will be placed before it. Still, the quick check of simply changing R1 to add 8 ohms gives a pretty good indication, and it shows 3dB difference. About the woofer section of the crossover, that really is a bummer. And I'm having a hard time following this. I'd like to see you have all the bugs worked out by Saturday, but I think the best thing might be to send them to me and let me have a look at them. The way to do this is to measure for continuity with a meter to isolate the problem. It may be a simple matter where the problem is obvious. Or it may be something like a cracked etch or bad connection, in which case it may have continuity sometimes, and then lose it with the presence or absence of pressure on some particulat part or place on the board. But I think it's just gonna take some inspection to find out. I'm sorry to see it buggin' you. That kind of stuff is really frustrating.

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Subject: Re: new xo question - light dawns!

Posted by [DRC](#) on Thu, 15 May 2003 23:10:13 GMT

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Cool! I didn't think it was more than that, and couldn't imagine that it would be any less. Just what the doctor ordered to blend those two drivers.I'll see if the collective Bot genius can wrestle the goofy one to the ground Saturday. They'll provide the general idea of what they sound like, at the very least.Thanks!  
Keep your ears and your mind open.

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