Subject: Theatre 4 Woofer RC network: I just removed it.
Posted by BillEpstein on Thu, 24 Jan 2002 14:29:21 GMT
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I liked the 8 ohm attenuation on one speaker and especially when I ran it on one speaker with the other not attenuated. Apparently the 2 "blended".But with both speakers attenuated I find the mid-range sounds "muffled". I'd rather have the bass a little peaky but the right balance in the mids with the treble.It's because the Delta runs to 1600 Hz, right? Changing cap values or resistor values make any difference?Comments, anyone? Wayne?

Subject: Comments about Zobel networks
Posted by Wayne Parham on Thu, 24 Jan 2002 17:33:06 GMT
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Page 58 of the crossover document shows the response you should expect from the system without the woofer damper filter. It's not too bad, really, but there is some peaking in the woofer at the crossover frequency. The effect of the Zobel in this particular loudspeaker is subtle, but I think it's worth adding. On some speakers, the peaking is much more severe without a Zobel, so its influence is stronger.

Subject: Question for Wayne, re: RC fine tuning.
Posted by Garland on Fri, 25 Jan 2002 13:42:30 GMT
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Wayne, If one were to want to slightly adjust the amount of damping in the RC network of the Theater 4 Pi, how much would the values used change. ie how much + or - in resistor and Capacitor values would you change to? Hope this makes sense! Thanks.Garland

Subject: Re: RC fine tuning
Posted by Wayne Parham on Fri, 25 Jan 2002 16:57:17 GMT
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A Zobel is a very high-tolerance network and small component value changes do almost nothing. Component changes less than 35% are inaudible and barely measurable. So if you're going to change resistance or capacitance values and expect to hear a difference, don't even bother to buy components of less than 30% different than specified. Perhaps 30%, 50% and 100% variance would be good choices to make. You can easily model the network in Spice to see what effect changing the values will have.

Subject: Re: RC fine tuning
Posted by BillEpstein on Fri, 25 Jan 2002 21:38:56 GMT
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I've got (2) 10 ohm 20 watt wire wounds I could parallel to make 5 ohms, 20 watts, right? The only caps I have lying around are 2.0uF. I have 2 of those which would make 4uF in parallel.What should I expect with 40% less resistance and 80% less capacitance? Is it worth trying or should I wait to get a 10uF cap?What the hell, I'll probably give it a shot anyway although the caps are the famous Bottlehead "greenie meanies" (metallised polyester) from the Foreplay kit.

Subject: Questions for Till E
Posted by Garland on Fri, 25 Jan 2002 22:27:12 GMT
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Hi Till, If you have the time I was wondering if you could answer a few questions for me:You said you felt the midrange was a bit "muffled" with the RC network on the woofer. I was wondering if you could describe the sound a bit more: is the sound recessed, or blurred, or seems to be hidden(the proverbial "veil"); that sort of thing. I am getting ready to fire up my Theater 4's in a day or so and wanted to listen for the effect you commented on. What brand and value components did you use in your crossover and zobel? The last thing we want in our loudspeakers is a muffled midrange,eh?Thanks!Garland

Subject: Re: Questions for Till E
Posted by BillEpstein on Sat, 26 Jan 2002 01:16:42 GMT
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Blurred, lack of focus, missing the aliveness that pours out of the Pi's from the first minute they're fired up. Came right back with the removal of the Zobel but so did the slightly overcooked bass. I'm playing with cable now. Have 26 ga. RS magnet wire in now sounds like a transistor radio. But the same twisted pairs of RS 26 ga. sounds great on the JBL 3677's. Go figure.Double run of Cardas something 12 ga had been sounding good. Have single runs of 12 ga. and single runs of 16 ga. zip ready to go. All these are internal hook-up. Speaker cables to amp continue to be Mapleshade double helix. Crossovers are wired up with Jena labs 18 ga polyprop dialectric. Wish I could afford the additional 40 feet ($4/ft) to wire internal with it. Or the Mapleshade, for that matter. Paramour/ Pi seems to be very sensitive to wire. Let me know what you're using.

Subject: Re: Questions for Till E
Posted by Garland on Sat, 26 Jan 2002 09:58:11 GMT
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I'm using Cardas 17awg hook up wire internally. I'll first use some older audioquest quartz for amp to speaker while I experiment with some DIY cables (cat 5 braids, Jon Rische co-ax etc.) Interesting, the different results using the magnet wire! I have installed the eminence crossover in my Pi's; did you use this or make the xover up from scratch? And what quality caps/resistors did you use? Right now the 4 Pi's are waiting the addition of the bracing, damping material and then sealing up and installation of drivers. Lastly I plan on veneering with cherry veneer though the cost of the veneer pushes my allotted outlay for this project over what was budgeted and cleared by the holder or the bank book, my wife; But then the veneer will go along way in allowing these large speakers to reside in our living room! Wives don't always approve of birch ply peppered with drywall screws, eh? Please keep posting about your fine tuning. And good luck! Garland P.S. Paramours are in the initial stages of assembly- ready to start wiring today.

Subject: Re: Questions for Till E
Posted by BillEpstein on Sat, 26 Jan 2002 14:35:40 GMT
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OK, the magic is back. Ripped out the magnet wire and replaced with 14 ga. that I pulled out of the Home Theatre excess as it had been playing for months and there would be no break-in issues. Instant gratification!Now the upper mids seem a tad hot on Milt Jackson's vibes, for instance. So I'm about to put alligator clips on the woofer Zobel to, dare I say it, A/B it.I think I mentioned before that Joe Bfttpslk is my patron saint? One of the 12AT7 in the Paramour has become microphonic AND I discovered that you can only R&R (remove and replace) the CH-3 lens a few times before the heads of the bolts dig away the plastic and cruise right down to the wood. Wayne, what do you think Peavey would do for me? Woe is me! Where do you get black oxide washers?Oh yeah, I used the Eminence x-over and just added the network. Mills WW 16 0hm, 10 watt resistors and 0.47uF 450V Auricaps, though. And I only used one resistor as I knew it would be used exclusively with the Paramour and wattage wouldn't be an issue. Figured one resistor would sound better than eight! And why spend $2 when you can spend $12? I liked the Auricaps so much in the Foreplay against Solens that I didn't even bother trying anything else. Have to get some Auricaps for the Paramour outputs.

Subject: Re: Questions for Till E
Posted by Garland on Sat, 26 Jan 2002 15:27:45 GMT
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Bill, I've posted on the Bottlehead forum questions concerning the parafeed cap in our paramours. I was wondering if the value of the caps could be varied to effect the low freq roll-off or woofer damping. It might be that we could effect some sort of bass synergy between the amps output and the woofers and delete the zobel. We'll see! Garland

Subject: Re: Questions for Till E
Posted by Garland on Sat, 26 Jan 2002 20:19:23 GMT
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Maybe I jumped the gun on this idea as the zobel is designed, if I am correct, to tame the peak at the xover freq of the woofer and the parafeed cap effects primarily the bass extension and

damping. It still might be fun to play around with the value of the parafeed caps anyway. See the bottlehead forum comments by Paul joppa and VoltSecond.Garland

Subject: I lost 15 pounds without dieting or excercise and I feel.....
Posted by BillEpstein on Sat, 26 Jan 2002 21:08:34 GMT
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In went the magnet wire, out came the Zobel, to the dumpster with the magnet wire, cookin' with good ole 16 ga stranded copper and finally, on alligator clips, the Zobel again.The Zobel, as I'm sure Wayne will attest thru guffaws, has a minimal influence on the overall sound as the 3 Db is at the limit of perception and repetitiuos err titious err many A/B's yields just a sense that upper mids, i.e., female vocal and glockenspiel (just kidding) is a tad smoother. Still, plucked bass and kick drum is also just a bit less forward.That's in my room with my equipment and my aging cochlea. Results may vary. Please see a doctor before beginning any.....T

Subject: Black paint
Posted by Wayne Parham on Sat, 26 Jan 2002 21:20:36 GMT
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Rather than looking for black washers, you might paint them black. Perhaps you will leave them unpainted until you are sure you won't remove the screws for a while, and then paint them black.Some screws I've used are black, but most are not. So one of the things I do is to paint the hardware with Testors gloss black paint. I do that with the ports too. It's time consuming, but I think it looks good.

Subject: Smile
Posted by Wayne Parham on Sat, 26 Jan 2002 21:27:02 GMT
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"...to the dumpster with the magnet wire, cookin' with good ole 16 ga stranded copper..."Glad to hear it. It's best to use at least 16 guage stranded wire in these speakers.

Subject: Re: link for washers
Posted by bmar on Sun, 27 Jan 2002 22:54:54 GMT
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Hi Bill,this is a link for MSC. they carry an array of industrial type fasteners. along with everything else! maybe the local yellow pages would have a listing under industrial supliers.

http://www.msc-ind.com