Subject: C5 & R3 values - accuracy of driver
Posted by Super_BQ on Fri, 15 Mar 2002 10:05:10 GMT
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Hello Wayne,I'm curious on the accuracy of my Eminence Delta 15A woofer (used in Theater 4 Pi speaker xover). On their spec. page they show:Coil Inductance (Le) = 0.86 mH Coil Impedance (Re) = 6.9 ohmsUsing the above, C5 = 18uF and R3 = 8.625But when using my LCR digital multi-meter to measure the actual woofer I get:Coil Inductance (Le) = 0.66 mH Coil Impedance (Re) = 6.5 ohmsUsing the above, C5 = 15.62uF and R3 = 8.125 ohmsShould I use C5 & R3 values that I measured with my LCR meter or should I just stick with say a 20mH inductor as mentioned from other previous posts? Is it that Eminence's specification shows a "nominal" value and what I get with my LCR meter will be different? Brendon

Subject: Re: C5 & R3 values - accuracy of driver
Posted by dbeardsl on Fri, 15 Mar 2002 14:49:35 GMT
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Hmm.. thats really odd that the inductance is off, try measuring a known inductance to make sure yer meter isn't funny. Thats mainly a function of voice coil winds and diameter, don't how that could change much from unit to unit... I'll let Wayne tackle the "She needs a 15.62uF cap, She needs it not, She needs a 16.52uF Cap, shee needs it not" problem

Subject: Re: C5 & R3 values - accuracy of driver
Posted by Wayne Parham on Fri, 15 Mar 2002 17:15:56 GMT
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A Zobel woofer damper is a very wide tolerance device. You can change values a great degree and not detect a difference in performance. See pages 61 and 62 of the crossover document, where it shows the difference between a damper using 7.35 and 10 ohms, and 20uF and 24uF. You can't tell 'em apart.

Subject: Re: C5 & R3 values - accuracy of driver
Posted by Super_BQ on Sat, 16 Mar 2002 11:23:17 GMT
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Yes my LCR meter is pretty accurate (at least for the inductance goes). I also find it funny that both drivers are not identical spec (with reasonable variances). For each speakers i get an:Le of 0.66mH & 0.64mHRe of 6.5 & 6.4 ohmsSo for C5 i've installed 15uF Solen capacitor and for R3 I used 7.5 ohm resistor. Also just finished doing a super duty bracing for the cabinets and letting it set as we speak. Will give a final review after good break-in.

Subject: the past
Posted by dbeardsl on Sat, 16 Mar 2002 17:13:22 GMT
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Are these the same speakers you said sounded thin a while ago? if so, what did you do to fix them?

Subject: Re: the past
Posted by Super_BQ on Sun, 17 Mar 2002 06:22:11 GMT
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Yes they DID sound thin but after doing a super bracing effort on both speakers and RE-DOING the xover - it MADE A WHOLE WORLD OF DIFFERENCE! - will post pictures soon. The Theater 4 Pi aren't really broken in yet but so far.. they are quite dynamic and fast in sound. Right now i'm a little annoyed of mis-placing 4 of the woofer screws...

Subject: Cool!
Posted by dbeardsl on Sun, 17 Mar 2002 06:36:10 GMT
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When you get the pics, post a link or email them to me, I'll pass em to the Pi Pictures site.