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Subject: error in "bench" schematic

Posted by [Sam P.](#) on Fri, 31 Jan 2003 16:34:52 GMT

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is why Wayne needed to slap R17 in there. C3 is labeled 0.01u, it SHOULD be 0.001uF. Just correcting the value of C3 changes his LP response from peaky to nice:) Sam

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Subject: Re: error in "bench" schematic

Posted by [Wayne Parham](#) on Fri, 31 Jan 2003 17:15:42 GMT

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Do you still get good bass extension with this smaller value C3? I'm not at a place to look at it, but that's a coupling capacitor, isn't it? And have you checked out the response of the stock HF circuit? Interesting, isn't it?

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Subject: C3 is cap for 2nd LP pole

Posted by [Sam P.](#) on Fri, 31 Jan 2003 19:32:37 GMT

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and it is plain WRONG. A typo. All I changed of his original schematic was the C3 value, and the LP peaking near cutoff goes away completely.. I have not looked at his original HP in spice...it was apparent there is a significant error as far as the missing resistor(R20) between C8 and the "virtual ground" junction of R11/R12(1 meg). His R10 is WAY too small, probably "tweaked" to compensate for the "unique" 3rd pole layout. BWTFDIK. For 800Hz. HP BW 3rd order values, the caps(C6,7,8) can all be 2200pF, but R9=180k, R10=90.9k, and R20=45.3k. For the 800Hz. LP BW filter values, all R's can be 90.9K(R4,5,6) and the C's vary, C2=2200pF, C3=4400pF, and C4=1100pF. These look GREAT to me. As always, hf comp. is not my bag. These values will be good for jbl/altec systems. HF shelving will be done at the amp.yeah, and C5 MUST be made larger to handle lower amplifier input Z's...looking at 2.2uF for 100K load, maybe OK down to 25K load...but 0.22uF, NO WAY..Wayne, if I fax the schematic, can you "proof-read" my results? I have the parts on hand to go with the above values, if I do the series/parallel thing as needed to generate values using 90.9k R's and 2200pF C's. Thanks. Samcan I email you the spice file itself? how would I manage that?

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Subject: you have mail:)

Posted by [Sam P.](#) on Fri, 31 Jan 2003 19:40:42 GMT

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I tried saving and attaching the file to email. Only 50kB, seems pretty small. Let me know if it "works". Sam

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Subject: Re: C3 is cap for 2nd LP pole

Posted by [Wayne Parham](#) on Sat, 01 Feb 2003 04:12:16 GMT

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That may very well be true. I didn't really take issue with the original values, and didn't pay that much attention. In my version, I needed the circuit to provide some peaking for the compensation circuit to provide the shelved region before top-octave compensation kicks in. I'd be happy to look over this stuff some more, in fact, it would be very interesting. And I appreciate your going into it further. But to be quite honest, my plate is just really, really full right now. It's not that I have no spare time in the next couple of months. It's that I don't have anywhere nearly enough time to even do what needs to be done. Know what I mean? But I'll look at your E-Mail ASAP.

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