Subject: 6DJ8 Tube Crossover
Posted by Wayne Parham on Thu, 02 Jan 2003 08:51:53 GMT
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OrCad's version "PSpice" to run this model, and you'll need to install the libraries contained in the distribution file. It's a pretty big distribution, to tell the truth, but it has the advantage of allowing you to work directly with the schematic. OrCad was originally written for PCB layout, so you can layout a circuit board and have fiberglass made with it too.

First, download "PSpice" and install it, and then download the 6DJ8 crossover model. Inside the crossover distribution file, you'll find another archive called "Tubemods.zip" which must be installed and configured before the model will work.

First, second and third order networks can be formed by configuring the circuit to use one, two or

crossover networks. This is the HF compensation section of the circuit, and values may be modified for different amounts of compensation. You'll also notice the addition of resistor R17 in the LF circuit, which damps the filter and improves response. All other component designations follow those used by Steve Bench in his crossover circuit.

Subject: Re: 6DJ8 Tube Crossover
Posted by spkrman57 on Thu, 02 Jan 2003 09:11:50 GMT
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Wayne,   Would like to see if anyone out there will provide kit form or finished built product for those of us who don't have the time to build. Sounds like a good thing though. Keep us informed. Regards, Ron

Subject: Re: 6DJ8 Tube Crossover
Posted by Wayne Parham on Thu, 02 Jan 2003 18:16:33 GMT
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Check out Gary Kaufmann's PCB:

The traces correspond to Steve Bench's crossover, which is what the circuit is based on. Steve says that Gary's board has room for the extra components, and you can see from the photograph that there are what appears to be prototyping holes just under the tube location. I haven't confirmed this to be true, but since there are only four additional parts, I expect that it will work quite well. My circuit is the same as Steve's, except for the additional components R15, R16, R17 and C10, used for tweeter compensation. The Spice model makes it easy to tailor the crossover and configure it for response curves that suit our needs.

Subject: Wayne....
Posted by Garland on Thu, 02 Jan 2003 18:27:01 GMT
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At some time would you be able to specify the components on Gary Kaufman's boards for use with My Theater 4's. I'm fair at soldering but no good at working with computers, downloads, etc. Dave Cope and I are ordering a batch of boards from Gary and hope to have something working in the not too distant future. (That is, "with a little help from our friends")G.

Posted by Wayne Parham on Thu, 02 Jan 2003 19:00:40 GMT
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I'd be happy to make a recommendation for the configuration of these boards for your Theater

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Posted by Rusty Iron on Thu, 02 Jan 2003 21:09:28 GMT
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Hi Wayne,I already have the board for Steve's crossover which I got from Gary and I'm also interested in setting it up for the Pi4. Would certainly appreciate receiving your response also when you have it worked out.Regards,Russ Stevens

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Posted by Garland on Thu, 02 Jan 2003 23:12:26 GMT
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"You da Man!"Thanks as always!G.

Posted by Wayne Parham on Wed, 08 Jan 2003 22:30:33 GMT
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Here are lists of component values:For an Altec 811 or other horn with collapsing directivity:R1 - 1MR2 - 1MR3 - 1MR4 - 91KR5 - 100KR6 - 100KR7 - 22KR8 - 1MR9 - 89KR10 - 18KR11 - 1.3MR12 - 1.3MR13 - 22KR14 - 1MR15 - 3.3MR16 - 3.3MR17 - 220KC1 - 0.22uFC2 - 2200pFC3 - 0.01uFC4 - 270pFC5 - 0.22uFC6 - 2200pFC7 - 2200pFC8 - 2200pFC9 - 0.22uFC10 - 15pFFor a Peavey CH-3, Eminence H290 or Martinelli horn:R1 - 1MR2 - 1MR3 - 1MR4 - 75KR5 - 83KR6 - 83KR7 - 22KR8 - 1MR9 - 150KR10 - 33KR11 - 2.2MR12 - 2.2MR13 - 22KR14 - 1MR15 - 3.3MR16 - 3.3MR17 - 220KC1 - 0.22uFC2 - 1600pFC3 - 6800pFC4 - 200pFC5 - 0.22uFC6 - 1000pFC7 - 1000pFC8 - 1000pFC9 - 0.22uFC10 - 10pFThe response curves look good so give those values a try and let us know how it sounds.

Posted by Wayne Parham on Wed, 08 Jan 2003 22:34:57 GMT
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I've listed component values here