Subject: CrossOver questions on 4 Pi
Posted by HaknHendrix on Sun, 29 Feb 2004 00:48:06 GMT
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After receiving the Pi crossover schematics from Wayne, and following a bunch of threads on the subject in the forum, I think I am almost there.In consideration of using the PXB2-1K6 Eminence crossover for the 4 PI theater (Delta 15a, PSD2002), I would like to confirm and get suggestion on the following:Tweeter Compenstion: R1, R2, and C1.R1 and R2 would be constructed from two sets of four 30 ohm, 10 Watt resistors. This would provide a create a 16 ohm, 40 watt network. Would use PE part number: 004-30.C1 - not much luck in tracking down a 0.47 uF, 200V (NP) capacitor - any suggestions?Woofer Zobel configuration: C5 and R3.R3 - requires an 8ohm resistor. Please advise as to what dummy load resistor would be appropriate, the 100 watt or the 200 watt version (019-020 or 019-030 respectively).C5 - 20 uF - what voltage rating would be advised and what PE partnumber would be appropriate?By the way, I will be using a 100W SS amp for the time being - does this impact the crossover componentry?Thanks in advance!Hakn

Subject: Re: CrossOver questions on 4 Pi
Posted by Wayne Parham on Sun, 29 Feb 2004 07:28:12 GMT
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We make tweeter compensation cable assemblies using blocks of 16 ohm, 10 watt, non-inductive resistors. Four of them connected in series-parallel are used for R1 and another four are used for R2. Capacitor C1 is a polypropylene film/foil 0.47uF capacitor. For the woofer Zobel network, we use a 100 watt 8 ohm resistor and a 20uF 250V capacitor. You can see how these cables look in the post called "Compensation networks - Photos."

Suitable parts from Parts Express include the 004-16 16 ohm (R1/R2) resistors, 027-458 0.47uF (C1) capacitor, 019-020 (R3) 8 ohm resistor and 027-436 20uF (C5) capacitor.

Subject: Re: CrossOver questions on 4 Pi
Posted by HaknHendrix on Wed, 03 Mar 2004 16:03:20 GMT
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thanks for your quick response!

Subject: Re: CrossOver questions on 4 Pi

Posted by GarMan on Wed, 03 Mar 2004 20:38:10 GMT
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100W resistor for the Zobel! Is there really a need for that?

Subject: Re: CrossOver questions on 4 Pi
Posted by Wayne Parham on Thu, 04 Mar 2004 01:47:12 GMT
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The Zobel resistor will dissipate a lot of power if you put the juice to your speakers. See page 72

That's where it's doing its job. This is a range where there is usually a lot of energy in most material, so you don't want to be under-rated at 1kHz. But certainly R3 can be made smaller if you're running a low-power SET amp.Resist the temptation to omit the Zobel damper, even though its parts are large and relatively expensive. Without damping, the circuit would peak at 1kHz and cause the system to make sort of a hollow, nasal sound. I've heard systems described as "cardboardy" when a midwoofer is peaking around 1kHz because of the lack of proper damping.

Subject: Crossover Wire Recommendation
Posted by HaknHendrix on Fri, 05 Mar 2004 15:23:59 GMT
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Could you suggest the type of wire (gage, Sound King 16 GA?) the crossover to the compensation to the speakers should be wired with?Perhaps - 16 GA Sound King gspeaker cable....

Subject: Re: Crossover Wire Recommendation
Posted by Wayne Parham on Sat, 06 Mar 2004 00:09:49 GMT
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I like to use 16 or 18 guage stranded copper pairs for short internal wire runs.