Subject: Crossover question for Wayne or anyone else, for that matter!
Posted by Garland on Thu, 12 Sep 2002 14:36:00 GMT
View Forum Message <> Reply to Message

Is it possible, using the components in my Theater 4 Pi's crossover to construct a crossover to split the line level signal from my preamp to allow biamping the Pi's. If so, can you, or anyone, be somewhat specific about how to do it? Is this what is called an active crossover?Thanks!Garland

Subject: Line level passive crossovers
Posted by Wayne Parham on Thu, 12 Sep 2002 16:47:22 GMT
View Forum Message <> Reply to Message

You might want to consider using a passive line level crossover. What you do is to make a crossover with the same circuit topology but scaled 1000x or so, closer to preamp input impedance level. Somewhere around 10k ohms is usually fine. It's an excellent solution, and the components required are tiny.

Subject: why not consider an active tube xover
Posted by Sam P. on Thu, 12 Sep 2002 17:12:52 GMT
View Forum Message <> Reply to Message

to go with those tweaked paramours? Schematics are not hard to find, heath kit had one, "marchandelec.com" sells a current kit that is tube based. Wayne's suggestion involving the 47kohm loads might be hard to implement unless you know the input Z of your amps is still 47k. Does the z vary when your attentuator is stepped? I don't know either. Your current crossover parts can't be used, they separate the signals when working into 8 ohm loads. There is a reference to "Biamping" in the FAQ section, I think. Doing it properly requires an "active crossover" that separates the sound from the preamp into LP and HP, to be fed to your amps. Sam

Subject: Crossover networks for horns
Posted by Wayne Parham on Thu, 12 Sep 2002 19:36:40 GMT
View Forum Message <> Reply to Message

Kevin Grier (EZ_Angus) bought an active tube crossover, and I'm hoping to find time to look over

the circuit with him. It would be nice if it were able to be setup to have a response curve like the

OU, so we are fairly close. We're planning to get together soon, and see if this particular unit "fits the bill." In the meantime, I plan to examine his crossover circuit schematic more closely; Maybe use one of the Spice-like tools designed specifically for tube circuit analysis.See Kevin's thread about his tube crossover. I think that it may work well, and the response curve required might be generated with a slightly modified form of the Steve Bench crossover that Kevin plans to use. This could be done by simply adding a capacitor-bypassed series grid resistor and a small value inductor across the grid and cathode on the high frequency circuit, making it essentially the same as the "line-level passive" filter configuration I suggested to Garland. But I don't know yet - I've only just glanced at Steve Bench's crossover schematic and haven't "run the numbers" yet to see

crossover devices that our friends here have used, but limited time prevents me from looking at them all. It's even proving difficult to find time to examine even just this one unit properly.But I'd really like to have an active crossover I could recommend, having the response curve required, even if that means designing one. There's a special filter required when running compression horns, in order to provide the necessary EQ. It's not the same as a two-way crossover for direct radiators. And it would be nice to have a tube implementation and a semiconductor implementation too.We've discussed making a new design several times here on the forum, and really, the effort is about the same to start a new design as to properly analyze an existing one. That may be the best way to go about it, I don't know yet because I just haven't focused my efforts in that direction. So maybe new design vs. analysis of existing designs is "six one way and half a dozen the other."Let us know if you find others that can be configured with slightly over-unity Q at the crossover point and rising response above 4kHz. That gives us flat response for the first couple of octaves, and then rising response after that - Just what we need in order to generate an overall flat power response from the compression horns used.

Subject: Re: Crossover networks for horns
Posted by EZ_Angus on Thu, 12 Sep 2002 20:30:50 GMT
View Forum Message <> Reply to Message

Hi All: I am exciting about getting Wayne's help optimizing the tube crossover I am building for two way horns. my speakers are going to be altec 416 8-a woofers in a ported box with altec 802-8d drivers on 511b horns sitting on top. You can buy the circuit boards to build the crossover from Gary Kaufman (a real nice guy).I am now getting ready to order the parts for the crossovers and the power supply, just trying to decide what type of resistors (metal film, carbon film, carbon composition, wirewound) and caps to use in the design. any suggestions gratefully accepted.best, Kevin

---

Subject: Re: Crossover networks for horns
Posted by billfort on Fri, 13 Sep 2002 10:26:13 GMT
View Forum Message <> Reply to Message

I use Altec 604's and I'm real interested to see where Wayne goes with this as well. I've come close to buying the Marchand tube unit a few times but keep backing off because of price (I'm in Canada) and the fact that I really feel high frequency compensation is the way to go with compression drivers. For me, its got to be tubes, so it's exciting so see Wayne is thinking in this direction.Billf

Subject: Re: Crossover networks for horns
Posted by Garland on Fri, 13 Sep 2002 14:21:19 GMT
View Forum Message <> Reply to Message

Thanks for the ideas, Guys! Wayne, keep us posted on your work with Kevin's xover and Pi implimentation.G.