Subject: Re: Active Crossover - 4Pi Tower?
Posted by Wayne Parham on Sun, 25 Jun 2006 03:19:54 GMT
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Lots of good input here already, that's for sure. Paul's exactly right that the passive tweeter circuit does more than just crossover and attenuate. The reactive components in the passive circuit all interact to produce the desired response curve. And Cody is right too, inferring that compensation might be performed by the active unit itself, provided it has CD compensation as a configuration option. Some active units have this feature, but since there is no real "standard" CD curve, the implementation is different from unit to unit, of those that even have the option.

A long time ago, here on the forum, I provided a schematic for an op-amp based active crossover circuit. I also made a tube circuit, and included a schematic and PSpice file for it. Links to both of those posts are shown below. Eric Mainardi has offered to provide an active crossover kit, so you might post over on the Selectronic forum. His solution provides the exact right curve. This is the EQ curve we want sent to the tweeter:

You could add the compensation cable assembly to the tweeter, after the amp. It will act as an attenuator and do some level setting. But that sort of defeats the purpose of biamping, and while it provides some EQ, the shelved portion of the curve is provided by the interaction of the passive crossover and the driver and tweeter cable assembly. Resistors R1 and R2 set the Q of the crossover circuit, causing it to make the response curve shown above. But if the passive crossover isn't used, this response doesn't result.<p>More information can be found in the following posts:
Active highpass filter (op-amp)
Reverse attenuation and HF comp. networks, active X-over
6DJ8 Tube Crossover
Compensation circuits
Triphon Crossover
Active crossover
"Crossover Electronics 101"