Subject: Crossover values for Drivers with different Impedance??
Posted by longdrive55 on Tue, 08 Jul 2003 02:48:52 GMT
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All,I'm just starting my journey into using horn speakers. I've got a pair of Altec 288-16K CD's and Altec 416-8B woofers that I'm building a speaker pair from. Thanks to Wayne, I've been learning a lot about crossovers lately (Crossover 101 thread) and investigating his Pi passive crossovers. I haven't got all the math figured out just yet and wondered if anyone can help me understand how to tweak component values if one driver is at a higher impedance than another (e.g. my 16 ohm CD and 8 ohm woofer). Do I just parallel a 16 ohm resistor across the compression driver input for an 8 ohm load to match the woofer? Coversely, I guess I could run an 8 ohm resistor in series with the input of the woofer to bring it up to the same level impedance as the CD (depending on what impedance I need for the crossover circuit to work). Would either of these work? Is there a better way to do this? Am I asking for trouble in using drivers with dissimilar impedance?Finally, what impedance value do the Pi crossovers assume for their respective drivers?Thanks for any help,Erik

Subject: Re: are your 288's a matched pair?
Posted by Sam P. on Tue, 08 Jul 2003 10:23:30 GMT
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If they are like most of the "pairs" of altec drivers I've seen, the diaphrams will not even be from the same years, sometimes not even the same part #!? With used CD's, I prefer to replace the 'phrams with KNOWN good oem ones from Bill at Great Plains(source for Iconics production parts). And of course, you would obtain the CORRECT 8 ohm ones:) A benefit of new 'phrams will be that the freq. response characteristics on the left and right will be much closer to each other. Yes, you could add a resistor to either driver to make the Z's the same, but a series R to the woofer will KILL your amplifier damping ability and throw away 1/2 the LF energy as HEAT, while a shunt resistor will merely drop the HF driver by 3dB while blowing off 1/2 the HF energy. INEFFICIENT as hell. And a waste of good components. You can always rework the HF crossover values for the 16 ohm HF Z, why exactly is THAT such a forbidding prospect in the first place? Sam