Subject: Line Array Impedance Question
Posted by FredT on Sat, 28 Apr 2007 21:06:39 GMT
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For a line array with eight midwoofers, each being an 8 ohm impedance driver, the usual wiring choices yield either a 16 ohm or a 4 ohm nominal impedance. The 16 ohm wiring is good for use with tube amps, especially SET's and OTL's. The 4 ohm alternative might be a better choice for use with a solid state amp.If you know in advance you will be using the array with both tube and solid state amps, is there any reason why you wouldn't wire it for 8 ohms nominal impedance using a quasi 3-3-3 arrangement, with an 8 ohm resistor substituting for the 9th driver?

Subject: Re: Line Array Impedance Question
Posted by Marlboro on Sat, 28 Apr 2007 22:11:18 GMT
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Fred,I asked this question of several respected EE types. I've been told by everyone that you cannot substitute a resister for a speaker. A resister is static, and a speaker is dynamic, and you won't like the results.Marlboro

Subject: Re: Line Array Impedance Question
Posted by Anonymous on Sun, 29 Apr 2007 00:36:15 GMT
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My budget array has a toggle switch to select midwoofer arrayimpedance, low impedance or high impedance. I believe I boughta 15A 4PDT switch, one for the mids, another for the tweeters,per cabinet. If you use a passive crossover, not active, then you need to makea second set of crossovers.

Subject: Re: Line Array Impedance Question
Posted by Jim Griffin on Mon, 30 Apr 2007 01:49:16 GMT
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Fred,With the assumption that you have a two-way crossover of some sort, you would need two different crossovers--one for 4 ohms and one for 16 ohms. Let us assume that the woofer line is either 4 or 16 ohms. Then the impedance sensitivity would be different for these two impedances so the tweeter (or tweeter line) would necessitate separate crossovers or else their sensitivities wouldn't align across the frequency band. Now if you just added a resistor into for a

WWW/WRW/WWW configuration, two things are of concern. First, the series resistor would impact the box tuning for the center set of drivers. Second, the SPL output of this center set would be less than the outer two sets. Typically, you would prefer a constant output level from all drivers in the line or a taper of high SPL to lower at the ends of the line. Jim

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Subject: Re: Line Array Impedance Question
Posted by FredT on Mon, 30 Apr 2007 10:24:48 GMT
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Thanks all for the responses. Sounds like a 6.9 ohm 3-2-3 power tapered midwoofer arrangement might be a better option. It will be easy to convert to this wiring arrangement and then convert back to 16 ohms if the 6.9 doesn't work out. Like the 8 ohm version this would require a different crossover and less tweeter padding, but it's still a reasonable match for tube SET amps and capable of extracting more power from solid state amps. The solid state amp power issue is relevant because all my ss amps are low power: a 50 watt NAD, a 25 watt class A Monarchy, and a 6 watt (into 8 ohms) Trends TA-10.1. Getting a more powerful amp would also be an option, but I prefer the sound of these amps, especially the Monarchy and the T amp, more than the sound of the affordable higher power amps I've heard.
