Subject: Newbie, need help about series speaker
Posted by MusicMann on Tue, 14 Oct 2003 15:17:10 GMT
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Hi,I'm new in audio, and need help about series speaker. How if I series 2 piece of two way speaker, ex. 2 Pi Theatre? I think the impedance will double, and there no different in sensitivity, but it will raise the power handling, am I correct? Is there any other effect? Someone tell me that the series config is different from pararel config due to Passive X-over network, he explain to me that the signal is goes through the passive of the first speaker system before entering the second. What is the result or effect if I do that? Any reply will be appreciated.

Subject: The problem is the damping factor...
Posted by mollecon on Tue, 14 Oct 2003 18:40:40 GMT
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If you couple two systems in series as described you will basically mess up the damping factor of each system, thus making the amp's ability to control the bass drivers near resonance almost zero. The result could be a boomy & undefined bass. That's why putting bass drivers in series is a big 'NO NO' in most books you can read about loudspeakers. The parallel coupling doesn't cause this, but do halfen the impedance, which not all amp's are too happy about.But using bass drivers in series have been done successfully both in some DIY & commercial systems. At least, there's no immediate danger in trying! Put two in series & see what happens! If the bass isn't messed up, it's OK in THAT respect.Mind you, there can be other ill effects, on the acoustical side, by using two or more loudspeaker systems - but that's another story.

Subject: Re: The problem is the damping factor...
Posted by Adam on Wed, 15 Oct 2003 01:59:37 GMT
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I'd have to disagree with this... A) there's no evidence to suggest that wiring series would "mess up" bass response, and B) if anything, it would improve damping factor, as damping factor is increased as impedance increases. In any event, modern amps have such high damping factors that even such an effect is meaningless unless you are running the amp way below its rate impedance... This is audiophyle nonsense, no offense intended...Series, parallel, whatever... Series wiring will give you no increase in sensitivity, but will double your power handling. However, as your friend mentioned, there will be crossover interactions when wiring mult-way speakers in series with each other. Single drivers are no problem.Adam

Subject: Thank's Adam (nt)
Posted by MusicMann on Wed, 15 Oct 2003 03:02:56 GMT
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nt.

Subject: Nonsense?????
Posted by mollecon on Wed, 15 Oct 2003 11:32:24 GMT
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Quote: " This is audiophyle nonsense, no offense intended..."It's a matter of physics, quite simply - no offense intended.

Subject: Re: Nonsense?????
Posted by Adam on Wed, 15 Oct 2003 12:45:58 GMT
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Damping factor is physics, but you place far too much bearing on subwoofer sound quality on it. In any event, your numbers are *still* reversed. The higher impedance load will if anything give a higher damping factor. Even so, there is no noticable difference between 100 or 200 damping on an amp. Feel free, try an A/B test I guarantee you won't notice a difference... It's not a valid reason to shy away from series wiring.Adam

Subject: Re: Thank's Adam (nt)
Posted by Adam on Wed, 15 Oct 2003 14:14:43 GMT
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Sorry, let me correct myself... It WILL give you an increase in sensitivity based on 1 watt... Using two drivers over one will always give you a 3 db increase sensitivity based on pure wattage input regardless of how the drivers are wired. However, this 3db gain is offset by the doubling of impedance, which will lose 3db over the regular, smaller load. Follow me?Adam

Subject: Re: Thank's Adam (nt)
Posted by Gabriel on Fri, 24 Oct 2003 13:19:29 GMT
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Dear Adam,Thank's and I already understand that, all I worried is the signal flow, since it have a passive x-over and use multi speaker, and I'm sure it will effect the sound, and will far from I expected.