
Subject: ZMAX figure for very low damping factor amplifiers

Posted by [Super_BQ](#) on Wed, 15 Aug 2001 13:39:09 GMT

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I've been told to look for a woofer that has very low ZMax figure. What range of ZMax figures should I be looking in 15" or 18" woofers? What trade-offs are there to using an extremely low ZMax figure? I see the cheaper models of woofers have a lower ZMax figure and the more expensive flashy ones have a high figure. The amplifier I plan to use has a damping factor similar to SET or other tube amplifiers. Power i'm driving is 25 watts x 2.

Subject: I vote for Delta15 and Theater Seven Pi

Posted by [AudioLapDance](#) on Wed, 15 Aug 2001 15:12:09 GMT

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Hey Super BQ,I found the Delta15 is a good compromise of price and performance and with 52 ohms Zmax, it is good for tube amps too. Wayne's designs can handle a lot of power but because of their high efficiency, that's another reason they work well with low powered amps.Ask Nelson what the output impedance of the Son of Zen is; I think it will be under 1 ohm. My Decware Zen is 0.8 ohm.If you have the space I would go for the Theater Seven Pi.Good luck!Are you doing this DIY?Jeff

Subject: Re: ZMAX figure for very low damping factor amplifiers

Posted by [Wayne Parham](#) on Wed, 15 Aug 2001 15:41:43 GMT

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Of course, the cabinet will modify the woofer impedance curve substantially, but if used in a reflex cabinet, I'd still try to find a woofer with free air Zmax under 50 - 75 ohms and woofers for sealed cabinets probably should be even lower. This is important when using amps with low damping factor (high output impedance), less as output impedance goes down (damping factor up).

Subject: Re: ZMAX figure for very low damping factor amplifiers

Posted by [Super_BQ](#) on Wed, 15 Aug 2001 18:30:06 GMT

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Wayne, I like to thank you for all your help. Would building the Seven Pi - 18 Cornerhorns be worse than the 15" 7 Pi for the amp I'm using?

Subject: Re: ZMAX figure for very low damping factor amplifiers
Posted by [Wayne Parham](#) on Wed, 15 Aug 2001 21:25:54 GMT

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The JBL 2241 and 2242 have relatively low Zmax - just like the 2226 does. They're all about 60 ohms at resonance in free air, which makes the in-cabinet peaks about 30 ohms. That's good for tube amps and so any of those one will work very well for you. Not only is the impedance curve pretty benign but the cabinets are overdamped, which makes them tolerant of higher output impedance and other causes of eletro-mechanical parameters shifts, such as voice coil heating, environmental conditions, etc.

Subject: Re: I vote for Delta15 and Theater Seven Pi
Posted by [Super_BQ](#) on Wed, 15 Aug 2001 23:17:12 GMT

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Hi Jeff,I've already e-mailed Nelson Pass on the output impedance of the son of zen amp I built. unfortunately I'm visiting in Canada (and shopping) and won't be back in New Zealand for another 6 weeks. So there's no way I could even get a reading in the short time. I'll post as soon as I get a reply from Mr. Pass.

Subject: Welcome to Canada, eh! (nt)
Posted by [AudioLapDance](#) on Thu, 16 Aug 2001 10:09:15 GMT

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nt