Subject: Jordan JX92S questions?
Posted by Norris Wilson on Thu, 12 Aug 2004 01:13:08 GMT
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Hi everyone,I have been looking at the Jordan JX92S transmission line project on the Jordan website. The only damping material shown to be used on their site, is felt behind the driver. I have not built a transmission line speaker before, but I thought that stuffing the line is important. Has anyone here built this Jordan design? If so, could you help with the proper stuffing material and quanity?Also, has anyone experimented or built a speaker system using mutiple Jordan JX92S drivers in an array or multiples of two or more?Possibly used multiple drivers with a modified varient of the transmission line project?And finally, has anyone been able to integrate a subwoofer successfully with the Jordan JX92S speaker? If so, what model or specific design worked well, DIY or commercial units, self powered or drone with active or passive crossover ect? The Seas 10" aluminum woofer looks like it could be a good match with the Jordan. Any and all help and sugestions will be greatly appreciated.ThanksNorris Wilson

Subject: Stuffing thickness
Posted by Ralph on Thu, 12 Aug 2004 02:01:19 GMT
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I can't hear any difference using thin felt. You need thicker material for it to work IMHO.Ralph

Subject: Re: Stuffing thickness
Posted by Norris Wilson on Thu, 12 Aug 2004 02:56:13 GMT
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Hi Ralph,I was wondering if a thicker, possibly .5 inch felt would be enough to load the TL properly? Is the felt or stuffing behind the driver all that is needed?ThanksNorris

Subject: Re: Stuffing thickness
Posted by Ralph on Thu, 12 Aug 2004 03:53:24 GMT
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This is my litmus test. Take a plastic drinking cup and talk into it. Listen to your voice. Next put your stuffing material in the cup and do the same thing. You should hear a big difference. If not, the stuffing doesn't work.Ralph

Subject: Re: Stuffing thickness
Posted by Bill Fitzmaurice on Thu, 12 Aug 2004 11:35:58 GMT
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If the line is not completely stuffed throughout its length it will not perform as a transmission line; I'm not familiar with the design in question, but the lack of full stuffing makes me question it.A transmission line by dint of its design will develop a number of resonant modes throughout its length; it is critical that those modes be damped with stuffing or the response curve will be quite erratic. When properly stuffed a transmission line will have a smooth frequency response with no internal reflective modes and an impedance sweep will show a single impedance peak at the line frequency with no peaks anywhere else. Without adequate stiuffing it will exhibit numerous impedance peaks and the response will also be marred by a series of peaks and dips.

Subject: Re: Stuffing thickness
Posted by Manualblock on Fri, 13 Aug 2004 00:20:47 GMT
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Hi Bill; When you say full; How would you determine the exact amount of stuffing and is placement critical along the line? Or do you stuff the line to a certain density and that will address the nodes? Is there a specific density required of the material itself that is optimal for this application? Thanks, J.R.

Subject: Re: Jordan JX92S - I'm going to take a wild guess here...
Posted by wunhuanglo on Fri, 13 Aug 2004 10:01:40 GMT
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After looking at the plans, I think it's a matter of "completeness". The plan says that the vented version is depicted. It also shows what changes to make to the woodwork to convert it into a transmission line.In the other plans shown, they talk about using long fiber wool compressed to half-volume. I think that what they neglected to say is that you need the same thing if you elect to go with the transmission line configuration in the cabinet you're looking at.

Subject: Thanks wunhuanglo!
Posted by Norris Wilson on Fri, 13 Aug 2004 10:59:50 GMT
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It is obvious that I did not read the published information thorough enough to catch it all. This is

close enough to get the speaker acomplished.And thanks to all who contributed to my inquiry.Norris Wilson

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Subject: Re: Stuffing thickness
Posted by Bill Fitzmaurice on Fri, 13 Aug 2004 16:24:02 GMT
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There are some formulas for the amount of stuffing, according to the material, F3 and other considerations, but they aren't terribly precise. The best way to do it is to run an impedance plot. With no stuffing or insufficient stuffing you'll have one large peak at the Fo and a number of smaller ones above it, as I noted before. When a sufficient stuffing density is reached only the high spike will remain, with the rest suppressed, along with the resonances that caused them. With polyester pillow stuffing you'll usually find that sufficient stuffing to throughly fill the line without compresssing it is sufficient. A line with inadequate stuffing has not only ragged response but the roll off below Fo is at 12dB, the same as a vented box. Properly stuffed a line rolls off below Fo at 6dB, so you have the bass response at Fo of a vented box but the slower rolloff and cone control of a sealed box below that.

Subject: sealed 12db vented 24db
Posted by spnman on Fri, 13 Aug 2004 16:48:16 GMT
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If aligned for max flat response, doesn't a typical vented box rolloff at 24db/oct and sealed at 12db/oct?

Subject: Yes, you're right.
Posted by Bill Fitzmaurice on Fri, 13 Aug 2004 19:30:46 GMT
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Got confused with the rolloff of line arrays in the nearfield versus farfield, 3dB versus 6dB, and must have split the difference. I'm still working my way through a chemotherapy induced haze, so please forgive if at times I get numerically challenged.

Subject: Re: Yes, you're right.
Posted by spnman on Fri, 13 Aug 2004 21:44:20 GMT

Bill,I hope that you get well soon.Steve

Subject: Re: Stuffing thickness
Posted by Manualblock on Sun, 15 Aug 2004 00:51:13 GMT

Thanks much, J.R. Any change as a consequence of different stuffing material,ie; long haired wool etc.?