Subject: DIY cylinder sub-woofer
Posted by Mark Korda on Mon, 09 Jun 2003 20:27:34 GMT
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Hi all, I need some advice. I plan to build a sub-woofer. I have sitting in my apartment a PVC 12 inch in diameter green water company tube that you all have seen at construction sites. I have a 12 inch Titantic sub-woofer that I want to connect to the tube in a down firing position. The tube is 2 and a half feet long, roughly giving me 2 and 1/2 cubic feet of volume. I'm going to cap the end and if I have to use a variovent on the top end. Is this enough volume for the 12 inch Titantic from Parts Express? Will increased Dacron stuffing or egg crate increase interior volume? Boy, I would really apreciate some ideas here, I have most of the speaker design books but spent some time in summer school way back for algebra and trig etc..... Thanks all.... Mark Korda

Subject: Re: DIY cylinder sub-woofer
Posted by Wayne Parham on Mon, 09 Jun 2003 20:37:23 GMT
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You could make the tube long enough that it formed a 1/4 wave pipe tuned for bass. That would use the standing wave as a tuning mechanism. Another thing that comes to mind is to make the tube smaller, so that it was really just a volume to make a sealed or vented sub. In this way, the shape isn't as important as the volume.

Subject: Re: DIY cylinder sub-woofer
Posted by steve f on Mon, 09 Jun 2003 23:28:25 GMT
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Hi Mark,I'm not trying to rain on your parade, but I remember reading somewhere that the Titanic 12" driver has too much "sag" to be mounted face down in an enclosure. The weight of the cone plus good old gravity and softness of the suspension, can cause the cone to sag or drop a bit in its frame. More than 5% is considered unacceptable. I'm not sure however & I wish I had time tonight to check the math. You can check it out at www.adireaudio.com/tech_papers/driver_orientation.htm The math is easy, and only requires a calculator.Take care,Steve

Subject: 2 cu ft sealed box
Posted by JLapaire on Tue, 10 Jun 2003 09:19:39 GMT
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The P.E. catalog suggests 2 cu ft sealed box with 50% fill.I agree with Steve about not down-firing this driver. It's just too floppy to stay linear over time.John

Titanic MKII

Subject: Re: DIY cylinder sub-woofer
Posted by Bill Martinelli on Tue, 10 Jun 2003 10:52:20 GMT
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Hi Mark,If your water pipe is 12" id and 30" long you'll have 2 cubic foot as John suggest. I have read that the egg crate is not the hot setup. 50% fiber fill sounds better to me. If this driver is not suited to mount vertical, You might find a nice spot for it to lay down along a wall or behind the couch. If your driver is not going to fit exactly into the tube. You can cut a ring from 3/4 ply. Predrill and screw the ring to the tube radially and you can then mount the driver to the ring which has now become a face flange to the pipe. I like Wayne's Idea. lots of options for the parts you have.Bill

Subject: Re: DIY cylinder sub-woofer
Posted by Mark Korda on Tue, 10 Jun 2003 20:18:36 GMT
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Hi, I would like to thank Bill Martinelli, J Lapaire, Steve F, and Wayne Parham for their input on my question. I came up with the answer with their help. I'm going to get the sewer pipe out of my apartment and have already ordered the 3 cubic foot enclosure that Parts Express sells made for the Titantic. If you guys read this I say many thank yous for your time. I do have one more question, What would you stuff it with, Dacron, loose or tight, or egg crate foam as I did in my mini monitors that I built with Woodstyle 602 and variovent. Thanks, Mark.

Subject: Re: DIY cylinder sub-woofer
Posted by Wayne Parham on Wed, 11 Jun 2003 00:06:58 GMT
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Personally, I still like to use good old R13 insulation in my speakers.Good luck with your project!

Subject: Re: DIY cylinder sub-woofer
Posted by Mark Korda on Wed, 11 Jun 2003 01:54:03 GMT
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Hi Wayne, is that the Pink Panther stuff? Mark.

Subject: Re: DIY cylinder sub-woofer
Posted by Wayne Parham on Wed, 11 Jun 2003 03:21:51 GMT
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R13 is plain old commercial insulation used for temperature and sound control. You can find it in any builder's supply store.

Subject: Re: Pink or Yellow <nt>
Posted by Bill Martinelli on Wed, 11 Jun 2003 16:31:30 GMT
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remove the paper
