
Subject: Re: internal pressure

Posted by [Anonymous](#) on Tue, 10 Oct 2006 16:32:27 GMT

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You will find a million recipes on cabinet deadening that confuse everyone. The basic rule is: A heavy wooden box well braced gets you closer to the goal of making a dead cabinet. You can do whatever you want to achieve this goal. Thick wood, tiles on the inside, sand, concrete, composites, kitchen sink. The problem is easy to solve when you are building a small speaker box as you don't care if the speaker box weighs 50 - 100 pounds. When building a line array, it's a hard pill to swallow that you might need a 500 pound cabinet to solve the problem to your satisfaction. You need to find a compromise, weight vs. performance. It's your call. The problem is easily solved with 1.5" thick MDF cabinet walls + internal bracing. You need excellent bracing methodologies and you can use plywood bracing to keep it lighter, but still a very heavy box. Replace the 1.5" MDF with 1.5" plywood and you cut your cabinet weight in 1/2, but performance is also reduced, catch 22. A hybrid 3/4" MDF + 3/4" plywood is another choice, better performance than 1.5" plywood, but not as good as 1.5"

MDF. http://home.pacbell.net/lordpk/robarray/Rear_chamber-2.JPG Example; This line array is 3/4" oak plywood. Four isolated chambers, 3 pieces of wood to make those chambers and to brace the cabinet. To keep the weight down and to make a dead box, I installed smaller 12" x 12" pieces of 5/8" MDF to every wall in each chamber except the front baffle. I could have used 3/4" + 5/8" lamination but I chose this method to trim weight. After the build, the hammer test revealed that each chamber can be improved as the ringing wasn't as good as I wanted. To solve this, a 1" dowel was inserted in each chamber to couple the left and right sides of the cabinet. I don't see any reason to use sand, or to add tiles because in the end, the cabinet will be heavy and to get a heavy cabinet you can just start off with thick walls with bracing and the construction project becomes easier. Fine tune the cabinet later with dowels or whatever piece of wood.
