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 confuseseveryone. The basic rule is: A heavy wooden box well braced gets youcloser 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 - 100pounds. When building a line array, it's a hard pill to swallowthat you might need a 500 pound cabinet to solve the problem toyour satisfaction.You need to find a compromise, weight vs. performance. It's yourcall.The problem is easily solved with 1.5" thick MDF cabinet walls +internal bracing. You need excellent bracing methodologies andyou 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 cabinetweight 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.JPGExample; This line array is 3/4" oak plywood. Four isolated chambers, 3 pieces of wood to make those chambers and tobrace the cabinet. To keep the weight down and to makea dead box, I installed smaller 12" x 12" pieces of 5/8" MDF toevery wall in each chamber except the front baffle. I could haveused 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 rightsides 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 youcan just start off with thick walls with bracing and the constructionproject becomes easier. Fine tune the cabinet later with dowels orwhatever piece of wood.