Subject: Re: Pi midhorn: how thick to be effective?
Posted by Wayne Parham on Fri, 08 Feb 2013 21:25:27 GMT
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You know, you can really reduce panel thickness with the right bracing. Bracing is usually much more effective because the brace is in compression or tension, whereas the panel being braced is in shear. It's a lot easier to bend a panel than it is to compress or stretch it, so making it stronger by virtue of thickness isn't as good as using braces. Of course, we usually do both.

You can also use constained layer damping, which allows really thin materials to act as barriers. So a thin CSD panel with braces could be used. Just two thin sheets of some rigid material with viscous material in between. The viscous material provides resistance to shear deflection, and so this plus the bracing makes a very solid construct.