Subject: Panel resonance
Posted by Wayne Parham on Tue, 03 Sep 2002 22:50:21 GMT
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The reason bracing works is that it raises the resonance of the panels out of the region where resonance is a problem. If you have a cabinet that's tuned for 40Hz, you don't want the panels to be easily excited by panel resonance at 40Hz. So if you stiffen the cabinet enough to raise panel resonance up to 4kHz, you've moved it out of "harms way."If the frequency of panel resonance is raised high enough, it will be beyond the crossover point, and eliminated for all practical purposes. Preloading a panel stiffens it and raises its resonant frequency considerably. Both the braced panels and the thrust rods connecting them are stressed and made to be more rigid. So the entire structure is made less excitable near the frequencies of interest.