Subject: Acoustics of musical instruments
Posted by Paul C. on Wed, 14 May 2003 01:15:50 GMT
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Yes, that post is under the bridge, and couples the vibrations in the bridge to the backside of the violin. Interestingly, the shape of the violin is not just style, with the cutouts on each side, and the "f" shaped slots on each side. There is a reason for the contour of the violin, and all of the curves. There have also been some interesting measurements of the vibrational characteristics of the wood and varnish of the Stradivarius instruments. They have been able to duplicate the tonal effects.Dr. Arthur Benade did acoustical research into reed instruments, mostly the clarinet. It was easier to model, with its cylindrical bore. In place of the mouthpiece and reed, he used a driver not unlike a horn driver. There were also many observations that to me, appear to be similar to what we observe with horn speakers.There is a link to saxophone acoustics:http://www.phys.unsw.edu.au/~jw/saxacoustics.htmlAnd if you hunt around on that site, you can find acoustical treatises on other instruments.

http://www.phys.unsw.edu.au/STAFF/ACADEMIC/wolfe.html