

The physical consequence of such facts is that the sound level output from many musical instruments is ***not*** constant (*i.e.* flat) with frequency. See following plot of harmonic amplitude(s) vs. frequency for a hypothetical musical instrument:

Formants/Resonances (& Anti-Resonances):

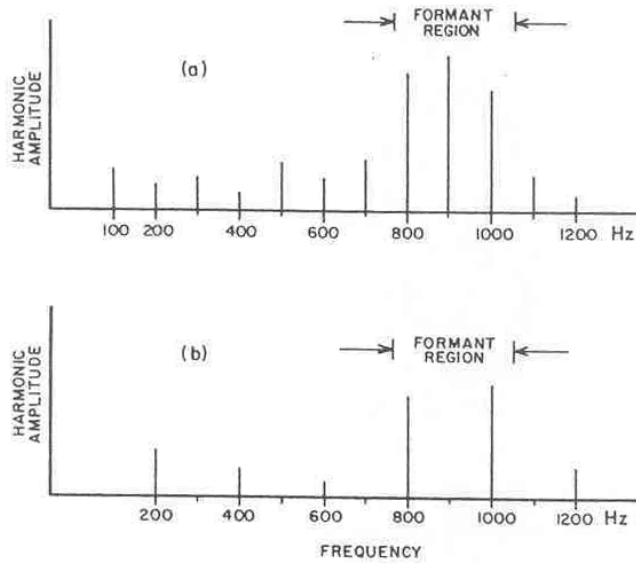


FIG. 8. Example of hypothetical tone produced by an instrument having :
formant in the region 800–1000 hertz. (a) Fundamental of 100 hertz. (b)
Fundamental of 200 hertz.

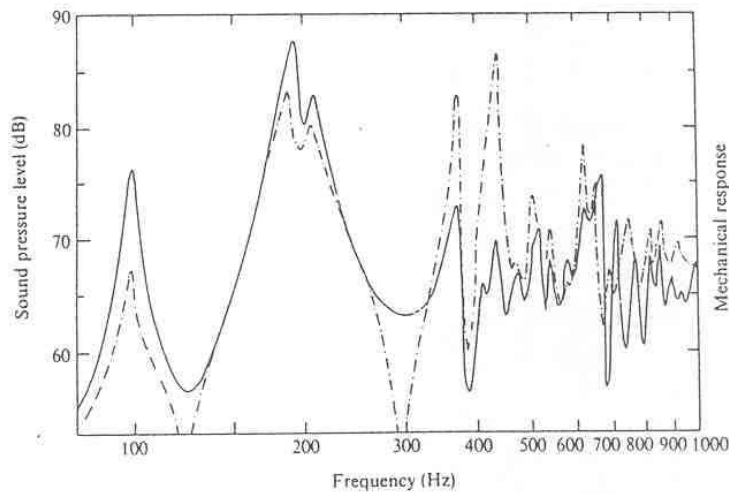


FIGURE 9.20. Mechanical frequency response and sound spectrum 1 m in front of a Martin D-28 folk guitar driven by a sinusoidal force of 0.15 N applied to the treble side of the bridge. Solid curve, sound spectrum; dashed curves, acceleration level at the driving point.