



The Sweet Spot

What gives 12-fret guitars such a sumptuous sound?

BY DANA BOURGEOIS

Q *To my ears, guitars with 12 frets clear of the body sound fuller and richer than 14-fret models, but maybe that's because I play mostly with fingers instead of a pick. For performing, however, I need access to the upper register and therefore use 14-fret guitars. What structural characteristics account for the tonal differences between the two styles, and is there any way to get 12-fret sound in a 14-fret guitar?*

Lucille Livingston
Bartlett, Tennessee

A In the early decades of the 20th century, coinciding with the rise of radio, popular music of mostly European origin gave way to indigenous American musical forms such as Appalachian, country, blues, and jazz. Following the music's path, guitars ventured out of parlors and polite concert chambers and found their way into dancehalls and roadhouses.

Demand for increased volume stimulated growth in body size and scale length, and spurred the adoption of steel strings. In addition, changes in playing technique necessitated access to more frets. Within a period of little more than a decade, the petite, gut-strung, 12-fret parlor guitar was effectively replaced by fully modern 14-fret steel-string flattops (and archtops), whose popularity and dominance continue to this day.

To my ears, too, 12-fret guitars sound gloriously rich and full. In my four decades of stringing up brand-new guitars, the model that most consistently puts a smile on my face is the long-scale 12-fret 000. Unfortunately, I don't

make many of these, perhaps because players are by now relatively unfamiliar with the virtues of 12-fret steel-string guitars, and because some have access requirements similar to yours.

A long-scale, 12-fret 000 is essentially a 12-fret OM. The OM outline was created by shortening the upper bout of a 12-fret 000 to about the location of the 13th fret. Additional fret access was created by shifting the location of the fretboard—and with it, the bridge—to join the end of the shortened body at the 14th fret. An extra fret was added to the end of the OM fretboard, effectively preventing the soundhole from crowding the neck block.

If the 14-fret mechanical model could somehow be made to produce 12-fret sound, I'd have done it by now.

By comparison, the 12-fret 000 features a longer outline, larger vibrating top surface, and larger air cavity than its direct 14-fret counterpart. Equally significant, its bridge is located at the widest part of the lower bout, while the OM bridge is located forward of the lower bout, at a narrower area of the top and closer to its soundhole. Mechanically speaking, the rich, full sound of the 12-fret 000, and by extension all 12-fret guitars, is attributable to its bigger column of air, driven by a larger soundboard and an efficiently located bridge.

Believe me, if the 14-fret mechanical model could somehow be made to produce 12-fret sound, I'd have done it by now. Someday, maybe someone will. In the meanwhile, several contemporary builders offer a variety of 12-fret guitars with cutaways, featuring even greater upper-fret access than non-cutaway 14-fret models. The ones I've tried sound like true 12-fret guitars, are fun to play, and are worthy of a test drive. **AG**

Dana Bourgeois is a master luthier and the founder of Bourgeois Guitars in Lewiston, Maine.

GOT A QUESTION?

Uncertain about guitar care and maintenance? The ins-and-outs of guitar building? Or a topic related to your gear?

Ask *Acoustic Guitar's* resident Guitar Guru. Send an email titled "Guitar Guru" to editor Marc Greilsamer at marc@stringletter.com, and he'll forward it to the expert luthier.

If *AG* selects your question for publication, you'll receive a complimentary copy of *AG's The Acoustic Guitar Owner's Manual*.

