



DOES A GUITAR'S
FINISH REALLY AFFECT
THE OVERALL TONE?



Dana Bourgeois Responds

Q:

I know wood selection, body shape, body size, and body thickness all contribute to an acoustic guitar's tone, but I find little mention of body finishes. I really enjoyed an old parlor guitar that had a thick woody percussive tone. I largely attribute the tone to the aged shellac finish on the guitar. My question is, how well do contemporary finishes age, and what types of tonal characteristics can be expected from different finish types and finish techniques as they "open up"?

—CHRISTIAN ARIAL

A:

Traditional finishes, such as varnishes and nitrocellulose lacquer, take many years or even decades to fully cure, while catalyzed finishes, like urethane and polyester, can cure in a matter of days. Nitrocellulose, for example, starts out shiny, thick, and soft, and over decades becomes duller and harder, loses density, and develops myriad patterns of tiny cracks.

Vintage enthusiasts believe that the generally revered sound of older guitars is in good part attributable to the qualities that traditional finishes develop over time. Because the specific gravity of a finish is many times greater than that of spruce, the finish damps vibrations. No luthier would build a guitar without finish, however, because the damping property of finish is relied upon to filter unwanted frequencies. **The trick is to select a finish that best compliments a guitar's design and voicing considerations, and to apply it in a way that damps undesirable frequencies, but doesn't damp desirable ones.**

So, if some finishes take decades to achieve ideal damping properties, wouldn't it be better to apply one that already achieves optimal results for the type of guitar being built? And

BOURGEAIS—KEVIN KINNAR

The damping property of finish is relied upon to filter unwanted frequencies.

if an ideal finish could be engineered, why would we want it to change over time?

I try not to judge the relative merits of varnish, lacquer, urethane, polyester, and other finishes, for much the same reason that I cannot say Adirondack spruce is superior to European spruce, or that Brazilian rosewood is always a better choice than mahogany. **Like tonewoods, a finish can only be judged in the context of a specific application.**

At a time when oil varnish is all the rage, it's interesting to note that guitar builders James Olson and Kevin Ryan are finishing some of the finest sounding guitars on the planet with polyester. Their guitars sound the way they do, in part, because of, and not in spite of, their use and expert application of polyester finish.

Just sayin'.

Though traditional finishes have long been considered a holy grail, catalyzed finishes, properly engineered and applied, may allow luthiers to offer players better sounding guitars with shorter break-in periods. As is the case in so many other aspects of lutherie, much effort is devoted to the understanding and use of a large variety of finishes. While we don't know exactly where all of these efforts will lead, it's a good bet that in the foreseeable future luthiers will continue to innovate, and guitarists will continue to reap the benefits.

DANA BOURGEAIS 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 e-mail titled "Guitar Guru" to senior editor Marc Greilsamer at marc@stringletter.com, and he'll forward it to the expert luthier.

acousticguitar.com