

Electrical circuit in the guitar

The electrical components (potentiometers, capacitors, possibly also coils) included in the guitar form an electrical network the filtering effect of which may be described without much effort. The “holy aura” attributed to old components can scientifically not be substantiated, and in particular horrendous markups are not justifiable, even if corresponding myths are eagerly celebrated by some failed HiFi-authors. On the other hand, the coaxial cable connected to the pickup may spring a surprise due to a possible peculiar, humidity-dependent capacitance. Also: amplifier, loudspeaker and room must not be forgotten (Chapter 10 & 11).

The insignificant

Of course, given the right equipment and putting in many hours of effort, even minute changes in the decay behavior can be measured, e.g. when machine heads (tuners) are exchanged. The same may be possible if varnish is stripped off the guitar body, or if it is replaced by another type of varnish. However, all these changes are so tiny compared to the variations effected by the fretting hand that they simply bear no significance whatsoever.

Kaput: the broken, busted, worn out and dead

And then there are of course all those more or less broken, in fact unplayable guitars that “feature” unacceptably uneven frets, loose necks, rattling truss rods, pickups with shorts in the winding, scratching pots, bridges that shift from one rest-position to another at the slightest touch, or a “custom job” done by Mr. Knowitall. May the Eternal Shredder graciously accept their souls

**You others, though, who in your hands an unbroken guitar you hold:
Do search not for new gimmicks, but to play learn – everything else come to you it will.**

7.12.4 There’s nothing there, or is there??

That we tried, in this chapter, to trace the tiniest measurement artifact, and to capture conductances with, if possible, no less than 80 dB dynamic range – that does not imply that all the little peaks we could eventually measure are at all audible. Just as the executive authority needs to be separated from the judiciary authority, we need to distinguish psychoacoustics from instrumentation when doing an analysis of sound. The better the analytics, the safer it is to attribute a measured effect to the object to be measured, rather than running the danger that the measurement device fooled us. Indeed, it is a great result, as well, if a bridge conductance measured with much effort proves to be so small that its irrelevance is now safely established. And even if an audible effect shows up: not every difference in sound points to the source of the purportedly never-again-reproducible vintage-tone (whatever that may be) ... not every fart renders the planet inhospitable.