

9.5 Mounting plates

Since the magnetic alternating field is not limited to the interior of a pickup, it is possible that metal parts mounted in the vicinity of the pickup influence the mechano-electric transmission parameters. Examples for such parts are the rectangular bridge plate of the Telecaster lead pickup, or pickguards made from metal. The **eddy currents** induced in these part dampen the pickup and reduce the inductivity L and the resonance peak. Some **Stratocaster** pickguards are entirely made of plastic – no eddy currents can happen here. However, often more or less thin metal foil or even metal sheets are glued underneath the pickguard for shielding purposes. The thicker these foils or sheets, the more they dampen the resonance. Particularly "efficient" in this way are pickguards entirely fabricated from metal (e.g. aluminium). The dampening effect can be audible in a direct A/B comparison – the range of brilliance which is so important to the "Fender Sound" is attenuated by about 2 dB. (**Fig. 9.17**)

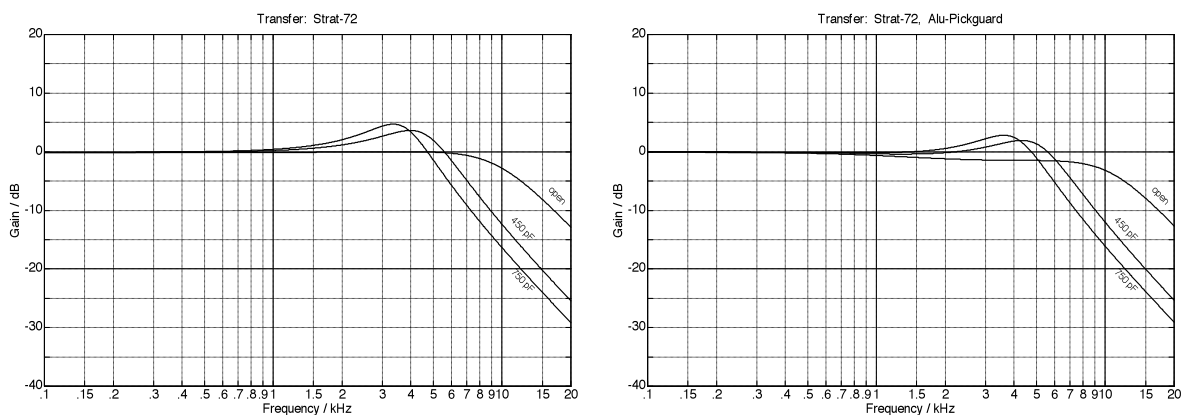


Fig. 9.17: Transfer characteristic of a Stratocaster pickup without and with aluminium pickguard

Similarly, the transfer characteristics of the **Telecaster** bridge pickup will change if a well conducting bridge plate is mounted (**Fig. 9.18**). The differences resulting from the comparison between two bridge plates are however so small that they will normally not be registered. If that happens nevertheless: a thin slit in the bridge plate effectively prevents the eddy currents from flowing.

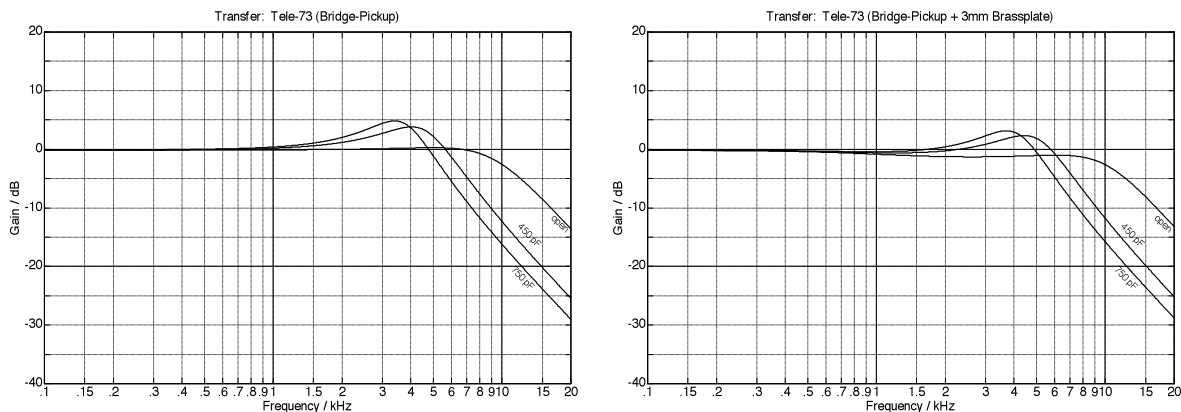


Fig. 9.18: Transfer characteristic of a Telecaster pickup without and with brass bridge plate (Gotoh).