

6.6 The pickup in isolation

Its internal build does not exclusively determine the transmission behavior of the piezo pickup – the surface it is positioned on also weighs in. Measuring the pickup without an abutting surface, i.e. without guitar body, therefore represents an obvious step. We must, however, not expect to find an ideal, frequency-independent transmission factor. Rather, the contrary will be the case: in isolated condition, strong Eigen-vibrations may possibly happen that only receive attenuation by mounting the pickup. **Fig. 6.18** depicts laser-measurements of the Viper-pickup (Ovation EA-68) taken out of the guitar and clamped in a bench vise in two different ways.

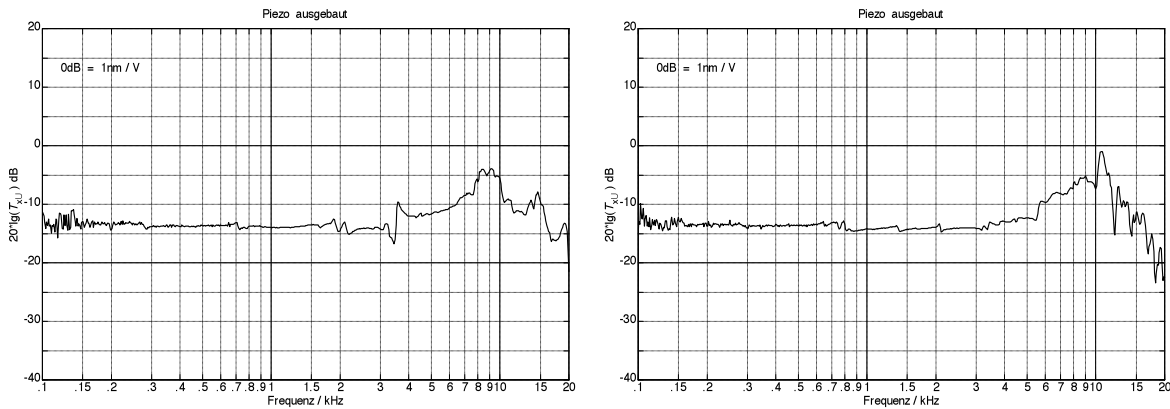


Abb. 6.18: Transmission factor of the Viper-pickup taken out of the guitar and clamped in a bench vise. “Ausgebaut” = de-mounted i.e. in isolation.

This type of mounting is not very meaningful and difficult to reproduce. As an alternative, the pickup was laid on top of a fist-sized brass-block and firmly braced with 2 to 6 steel wires (Fig. 6.19). Depending on the contact between u-rail and brass-block, we obtain a big variety of transmission characteristics – and therefore the measurement of the pickup mounted to the guitar is indeed the most suitable one.

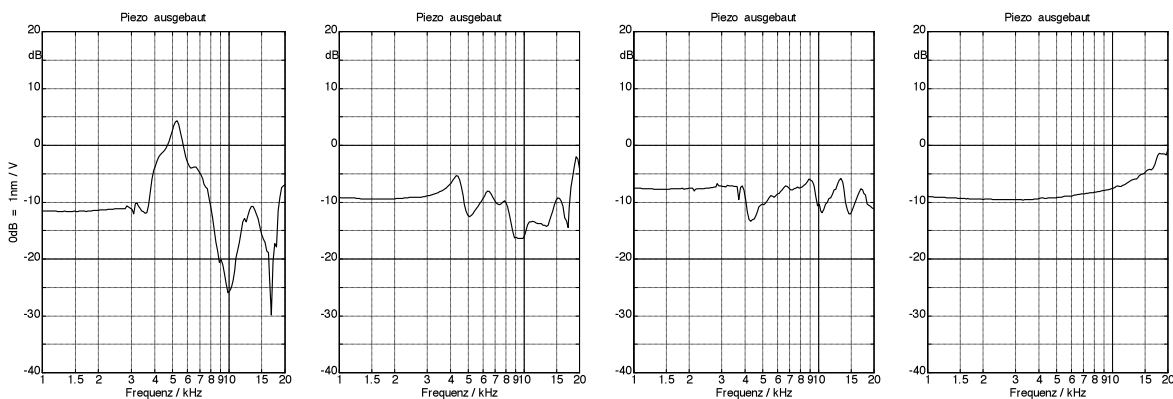


Fig. 6.19: Transmission factor of the Viper-pickup taken from the guitar and braced to a brass-block. “ausgebaut” = de-mounted i.e. in isolation. “Frequenz” = frequency

A curiosity on the side: the u-rail had a paper label (type, serial number) glued to its lower side. Due to this, part of the rail had no mechanical contact to the base anymore. Genius or ignorance?

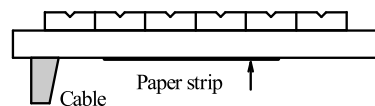


Fig. 6.20: Viper-pickup