

ACOUSTICS2008/1059 **What have they done to the Strads?**

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Almost every baroque violin, including those of Stradivarius etc, was extensively modified during the conversion to the romantic or modern configuration. What were the acoustic and playing changes?

To answer this question, independently of the confounding factors of wood and manufacture, a baroque violin was made and subjected to acoustic and playing tests, before and after (i) replacement of the neck and fingerboard with longer, heavier more inclined parts, (ii) replacing gut with modern nylon-cored strings. Other changes were also made, including bridge style and position, bass bar and soundpost sizes and bow used.

Loudness (Saunders plot) was not greatly changed, except for the E string with a long string length. Some acoustic features survived the changes, and professional baroque and modern style players reported that the instrument preserved some of its "personality". Comparisons were made with modern gut strings used by professional baroque players. As well as the acoustic differences, player assessments of bright/dull, full/thin, open/closed, ease of response, evenness, dynamic range are reported. Averaged over all ratings, the players ranked the romantic set up slightly better than the baroque (78% vs 71%).