The development of a device for documenting musical performance practice in 18th century France

—focusing on M.-D.-J.Engramelle's *Tonotechnie*(1775) and his contribution to *L'art du facteur d'orgues*(1778)—

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Automatic musical instruments manufactured in France in the 18th century were programmed by an arrangement of pins driven into the surface of a cylinder, a process known as barrel pinning. Fine musical nuances could be reproduced through the subtlety of the arrangement of the pins. It was Père Engramelle, an Augustinian friar, who was foremost in refining this technique.

In *Tonotechnie*(1775) and his contribution to *L'art du facteur d'orgues*(1778), Engramelle pointed out the limitations of conventional musical notation and tackled the problem of the misinterpretation of scores by less accomplished players. In order to record, preserve and reproduce the interpretations of great musicians, he devised an innovative method using a dial that made it possible to determine the exact durations of the notes and then to assist in marking them out on the cylinder. Striving to record "le vrai génie" of the great musicians, he expected the notater of the cylinder to add ornamentation with *goût* — just as the musicians had done. As an example, Engramelle notated a piece entitled *Romance* as performed by a famous organist of the time, Balbastre.

However, the values he suggests for the *tenue* and *silence* components of each note are really too precise. Normally, a musician's performance cannot be expressed numerically, whereas his device dissects the music with arithmetic severity.

Previously, several attempts had been made in Europe to mark up a cylinder and a roll of paper directly from the keyboard - an analogue process. Engramelle's device was digital: it calibrated the values of the notes according to the divisions on his dial. For him, *le vrai génie* of the great musicians was an ideal to be expressed with *goût*. Reproduced by a machine, their interpretations would – he hoped – be preserved for future generations with perfect accuracy.