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ITERATED MAPS APPLIED TO
OSCILLATIONS OF CLARINET-LIKE MUSICAL INSTRUMENTS

Jean Kergomard
Laboratoire de Mécanique et d'Acoustique CNRS
31 Chemin Joseph Aiguier
13402 Marseille. Francia
Tel: 33 491 164 381
E-mail: kergomard@lma.cnrs-mrs.fr

ABSTRACT

It is possible to reduce the calculation of oscillations of a clarinet to a simple iteration by using a simplified model (Mc Intyre et al, 1983). Choosing the variables incoming wave - outcoming wave, the iteration of a function f(x) is calculated from initial conditions. Using this idea, one obtains the possible range of the values of the excitation parameters for which the reed can beat, or for which the sign of the flow rate is inverted. The iterated functions give indications concerning give useful insight on periodic and chaotic regimes, periodicity windows, or intermittencies.