

*Composition for computer and some FM modules.*

Computer & software, TX-816 (Yamaha).

'Fractime' is my first completely fractal based composition. The title is a contraction of the words fractal and ragtime. It began as a study to look at what would be possible with the use of fractal geometry in the field of algorithmical composition. The fractals I've used for this piece are the Feigenbaum or bifurcation fractal and the brownian movements. As a certain kind of contrast I broke the piece into several segments connected with a short interlude with a different kind of musical character. (It's a derivation of the algorithm for complex FM syntheses.) I wrote the computer program (in KC Lisp) to generate the musical material that I recorded into a sequencer program to make selections and to be able to do some additional editing. The final sequence sends on four separate MIDI channels the messages to a TX - 816. As well as Common MIDI messages it also uses System Exclusive messages for a number of sound parameters. (Attack, sustain, release, etc.) Certain properties of the material are often connected however and can change per segment of the piece. By adding a minimum of a certain random value to the already calculated rhythmical property of the piece, certain shifts in the patterns are audible.

Fractime is originally a quadraphonic piece. For the CD recording however I used the Roland RSS system together with some additional written software (with some interpolation techniques) to place and move the four sound objects in a three dimensional cubic space.