## Alessandro Ludovico, *Readme 2004: Software Art and Cultures.* Aarhus University Press, 2004

CATEGORY: HARDWARE TRANSFORMATION

DOT\_MATRIX\_SYNTH / PAUL SLOCUM http://runme.org/project/+dot-matrix-synth/

FEATURED BY ALESSANDRO LUDOVICO

LONG before the orchestrations of the [The User] band and their symphony for dot matrix printers, in 1970 some engineers were able to extract melodies from a noisy printer. It was the IBM 1403 printer, from which were obtained 'covers' of famous classic tunes studying which characters the machine were needed to let it play a certain note and how many times to print them to have a note of a certain length. After some decades, dot matrix printers are still exploited as futuristic musical instruments, but with more sophisticated practices. Firmware hacking is one of them, which gives pretty good results to the courageous ones who do EPROM reprogramming, with the help of enough knowledge and luck. The act of transforming a machine, distorting the original intentions of its builder, becomes then possible, and the results are new functionalities which change its identity. Dot Matrix Synth is an idea conceived and put into practice reprogramming the firmware of an Epson LQ-500 dot matrix printer, made in 1985. Starting from the idea to build a lo-fi mellowtron, the author was possessed by the holy fire of discovery and succeeded in exploiting not only the printer head movements, but also those of the paper feeder and the beeps of the control panel, even through an added simple keyboard where each key corresponds to a musical piece which, while played, produces an image controlled by the rhythm of the music. So the mutated output gives a new personality to this hardware machines, such as a gender change that gives completely different perspectives.

