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FPDJ: Project Abstract

FPDJ is a standalone electronic music production station. It is a three part device consisting of a synthesizer module, a sampler module, and a sequencer module that controls the two. The sampler pulls audio loops and one-shot samples from an SD card into the BRAM. The synth generates sound by filtering various waveforms, similar to an analog subtractive synthesizer. The sequencer manages a rhythmic and melodic pattern, editable in real-time, to trigger and modify sounds from the sampler and the synth. The user interacts with the three systems using switches, potentiometers, and LED indicators. Altogether, the three modules enable the production and live performance of electronic music, similar to the Novation Circuit or the Teenage Engineering Pocket Operators.