Holster Box by Hochmuth Fortschreiter

Description

The *Holster Box* is a hardware midi sequencer project in progress and not yet finished. It was initiated by the Leipzig-situated producer and live-act *Weng Holster* and is very specific in functionality.

Basically it is designed as a step-sequencer with three 8-step lines to control velocity, note number and midi channel. Each step triggers and stops a note, whose velocity is set by a 3-state switch (off, half velocity and full velocity). The note on/off command is sent on a different midi channel (1-8) on each step if wanted. This aims on triggering different sounds (or devices) on each step and is realized via a potentiometer line. The note numbers are controlled by one potentiometer and have no step-by-step control line. We think about different scales to implement for musical results in this case.

Each of the three lines is equipped with a 2-state switch (use/law) that determines whether the line parameter is controlled by the step controls (law) or by a special *chaos* function (use), which calculates new value lines in a random manner. This calculation is triggered by the chaos button besides the use/law-switch and can be applied on the fly. The note number line has a third button – reset – which resets the note numbers for each step to a predefined value, so to have a harmonic key point.

The tempo may be set by the slow/fast-potentiometer and is intended to be displayed by the clock leds. The run button starts/stops the sequencer. Finally there are 2x5 clock buttons with integrated leds, that are used for clock dividing (upper line) and multiplying (lower).

The circuit will be built around a parallax propeller chip which controls multiplexers, a/d-converters and the midi interface. The chip features true parallel processing with eight processors sharing one memory, so measuring switch and potentiometer states is done by one processor, while the other calculates lines and a third drives the midi interface, all three cogs working parallel on the same data.

For debugging purposes a tv driver is implemented by the developer. If there will be enough time and energy, the debug screen will be modified to serve as a visualization source for vjs. Finally the propeller pcb board is intended to be mounted in such a way, that its rs323 programming interface jack can be accessed from outside the box for re-programming.

The project has almost reached the final programming stage and will hopefully terminate before summer 2008.