

CV-1

CV-Recorder/Looper & CV-Generator

Control Voltage Recorder, Looper, and Generator - for a own Eurorack-Line... more in Future!



-this picture is the first prototype - pre-Eurorack



Features

- * A Envelope which can be Recored from an AIN-Source, it can be Editet on Startpoint,ATK-Playbackrate, Decay-Playbackrate
- * LFO which Waveform is stepless morphable from Sine Square Tri Saw-Up to Saw-Down...(only Clocksynced!)
- * MSQ MotionSequencer to loop a CV-Signal.
- * A Mixer Page which Mixes/Mutes ENV+LFO+MSQ - and scales the output CV
- * Copy, Paste, Clear: to Transfair the CV Sequence to other CV1 Instances
- * ProgramChange Load and Store on microSD-Card, Load and Store are CC-Commands, so you can remote the device
- * The Sequencer can be set to Tact Systems: 3/4 4/4 5/4 7/4 9/4 11/4 13/4

Hardware Requirements

Midibox:

- [dipcoref4](#) - this is the μ C Brain for CV1
- no other PCBs needet - but expandable with other Eurorackmodules in Future

- µSD-Card, formatted with FAT32
- Soldering Iron - with a Dip that can Handle SMD-Parts, Wires, solder Paste for the µC....
- Eurorack Power Source +-12V AND +5V!

Set

Cabeling

Midi IN1 »> CV1 Remote Device or a Midi-Sequencer

Midi OUT »> to a Global CV1 Remote Device  - which will need a lot of Midiinputs [M16?](#)

- @JMidi1: connect your Sequencer to get Midiclock and Programchanges
- @JAIN1: 2 CV Inputs - 12V tollerant
- @JAUT3: 1 CV Output - (internal DAC with Protection Cirtuit > 12V Tollerant)
- @J19: Get up to 8 CV-Outputs, with a [AoutNG](#)
- @JLCD1: up to 4 Additional OLED-Displays for every one a Reset Line - so no additonal Circuit needet
- @J89: DIN and DOUT Shiftregister Chain: thought for decidet Expander Modules (which will come in near future)
- @J2/Bootload: If the core is not starting up - because of bad-Firmware, then bridge this Jumper to come into the Bootload-Mode

Software

Firmware

yes it loopin... but not good enough to release anything...

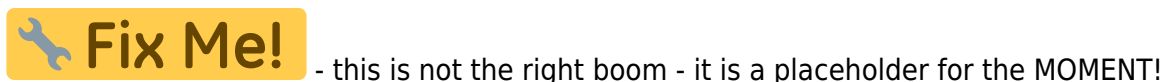
Building

Frontpanel



Case

BOM



| Ref | Qty | Value | Footprint | MouserPart | |
|---|-----|------------------------|--------------------------|----------------------|------------------------|
| C1 - C7 | 7 | 100nF | 0603 Capacitor | 81-GRM33C71C104ME14D | Mouser |
| Rec-1 - Rec-4, UI-5 UI-4, led1, -1 -2 -3 -4 | 11 | REC, LED, beat, CC-IN, | 0603 LED | 630-ASMT-RR45-AQ902 | Mouser |
| 1-16 (LED-BAR) | 64 | bar | 0603 LED | 755-SMLEN3WBC8W1 | Mouser |
| D64 D65 | 2 | 1N-4148 | 1206 Diode | 833-1N4148W-TP | Mouser |
| PTC1 | 1 | Thermistor_PTC | 1206 Resistor | 576-1206L150THWR | Mouser |
| R1, R2, R19 - R34 | 18 | 10K | 1206 Resistor | 603-AC0603FR-0710KL | Mouser |
| R3 R5 R6 R7 R8 | 5 | 47 | 1206 Resistor | 603-RC0603FR-0747RL | Mouser |
| R9-R14, R36, R37 | 8 | 220 | 1206 Resistor | 603-RC0603FR-07220RL | Mouser |
| R15 R16 | 2 | 1K | 1206 Resistor | 603-RC0603JR-071KL | Mouser |
| R17 R18 | 2 | 4K7 | 1206 Resistor | 603-RC0603FR-074K7L | Mouser |
| OUT1 | 1 | Midi | DIN-8-SDF-80J | 490-SDF-80J | Mouser |
| M1 | 1 | DIPCORE32_CMPNT_48P | 517-929870-01-20-RA | DIP-40 | Mouser |
| S8 | 1 | Shift | DT6 | 611-D6R00F1LFS | Mouser |
| S1 - S4 | 1 | Part1 | 611-SERWHAUOA | DTL2-1-LED | Mouser |
| S5 - S7, S9 - S10 | 6 | X,C,V,Len,Pre,Tac | 611-SERRDAUOA | DTL2-1-NO-LED | Mouser |
| ENC1 | 1 | ENC_BOURNS_PEC11 | ENC_BOURNS_PEC11+SW | 652-PEC11R-4215F-S24 | Mouser |
| IN1 IN2 | 2 | Midi | Midi-Socket-MAB5SH-DIN-5 | 566-MAB5SH | Mouser |
| Foot1 | 1 | Pin | | | |
| J2 | 1 | BootLoad | | | |
| AIN1 | 1 | PIN | | | |
| U1 U2 | 2 | 6N136 | SMDIP-8_W11.48mm | 782-6N136-X009 | Mouser |
| -595 | 3 | 74HC595 | SO-16-N | 621-74AHC595S16-13 | Mouser |
| U3 U4 | 2 | 74LS165 | SO-16-N | 595-SN74LS165ADR | Mouser |

| Ref | Qty | Value | Footprint | MouserPart | |
|-----|-----|----------------|-----------|--------------------|------------------------|
| M2 | 1 | μSD_DM3ATDM3AT | MSD_DM3AT | 798-DM3AT-SF-PEJM5 | Mouser |

To Do

a housing/case or frontplate

Resources

Community users working on it

- [Phatline](#) = Programming, Documentation...

Just let a Private message on the forum to user already involved.

I have ProtoBoards here - i test one, and if it works, i can share them for Beta Testing-if you pay the postage

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