

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

- μ SD-Card, formatted with FAT32
- Soldering Iron - with a Dip that can Handle SMD-Parts, Wires, solder Paste for the μ C....
- 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

Designator	Footprint	LCSC Part Number	Library Type	
100nF	C110	1206	C24497	basic
10uF	C1116,C2325	1206	C13585	basic
10pF	C17,C18,C19,C20,C21,C22	1206	not available	
1N4148W	D1,D2,D3,D4,D5,D64	SOD123	C81598	basic
ENC	ENC1-ENC5	ENC-PEC11R		652-PEC11R-4015F-S24
5x2-AOUT	J19	Header-2x5		
BootLoad	J2	Header-1x2		
DinDout	J89	Header-2x5		
HEADER_3	JAIN1	Header-1x3		
Header-1x4	JAIN2	Header-1x4-female		
Header-1x4	JAIN3	Header-1x4		
CV1	JAUT1,JAUT2	Header-1x2		
CV-OUT1	JAUT3	Header-1x2		
BiOff	JG1	Header-1x2		
Gain	JG2,JG3	Header-1x2		
Disconnect	JG4	Header-1x2		
Offset	JG5	Header-1x2		
Foot	JG6	Header-1x2		
Gates	JGate1	Header-2x3		
OLED3-6	JLCD1	Header-2x7		
Midi	JMidi1	Header-2x3		
Header-2x8-eurorack	Jpsu1	Header-2x8		
DIPCOREF4_52P	M1	dipCoreF4_v2c-52p-DIP-40MPNT_CORE_52P		
uSD_DM3ATDM3AT	M2	uSD-DM3AT-SF-PEJM5		798-DM3AT-SF-PEJM5
6N138	M3	DIP-8		512-6N138M
LED-Green	Menue-1,TR1,Clock-1,ENV-1,Menue-2,TR2,ENV-2,Menue-3,Menue-4,Menue-5,Menue-6	1206-LED	C559120	extended
OLED	OLED1,OLED2	SSD1306:OLED-SSD1306-128x64		
PTC	PTC1	1206	C126818	extended
10K	R28,R29,R43-R58	1206	C17902	basic
49K9	R30-R40,R61-R64	1206	C18017	extended
30K	R41,R42	1206	C17999	extended
130K	R59	1206	C17893	extended
100K	R60	1206	C17900	basic
1K	R1-R7	1206	C4410	basic
4K7	R8	1206	C17936	basic
220	R9-R27,R63	1206	C17958	basic
Trim-3224W-1-104E	RV1,RV2	Trimmer-3224W-1	C53229	extended
Trim-3214W-1-253E	RV3	Trimmer-3214W_Vertical		652-3214W-1-253E
74HC595	S1-S3	SOP-16_SOIC-16	C5947	basic
74HC165	S4,S5	SOP-16_SOIC-16	C5613	basic
TL072	U2,U3	SOP-8_SOIC-8	C6961	basic
MCP6002	U6	SOP-8_SOIC-8	C7377	basic

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

From:

<https://www.midibox.org/dokuwiki/> - **MIDIbox**

Permanent link:

<https://www.midibox.org/dokuwiki/doku.php?id=cv1&rev=1609553752>

Last update: **2021/01/02 02:15**

