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 µC Brain for CV1
- no other PCBs needet - but expandable with other Eurorackmodules in Future

- µSD-Card, formated 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 Fix Me! - which will need a lot of Midiinputs M16?

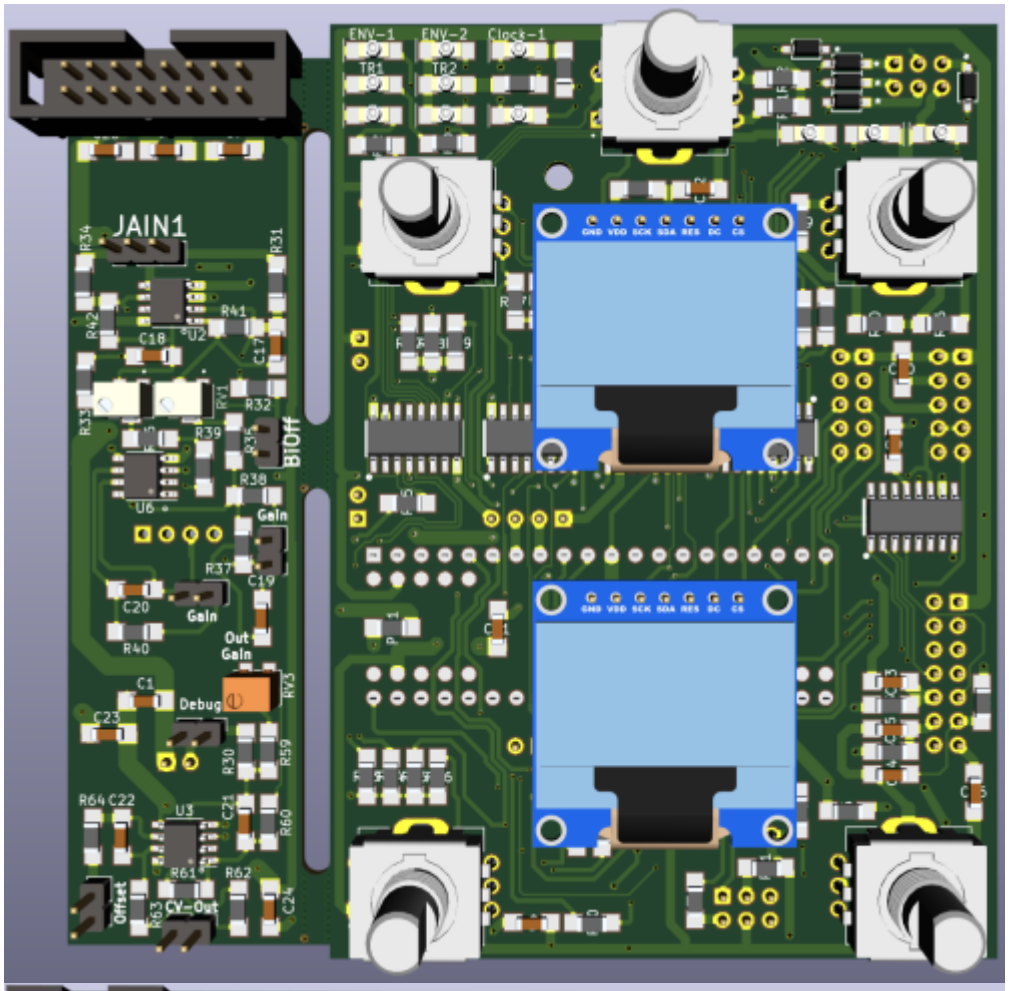
- @JMidi1: connect your Sequencer to get Midiclock and Programchanges
- @JAIN1: 2 CV Inputs - 12V tollerant
- @JAUT3: 1 CV Output - (internal DAC with Protection Cirtuit > 12V Tollerant)
- @J19:Get up to 8 CV-Outputs, with a AoutNG
- @JLCD1: up to 4 Additional OLED-Displays for every one a Reset Line - 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

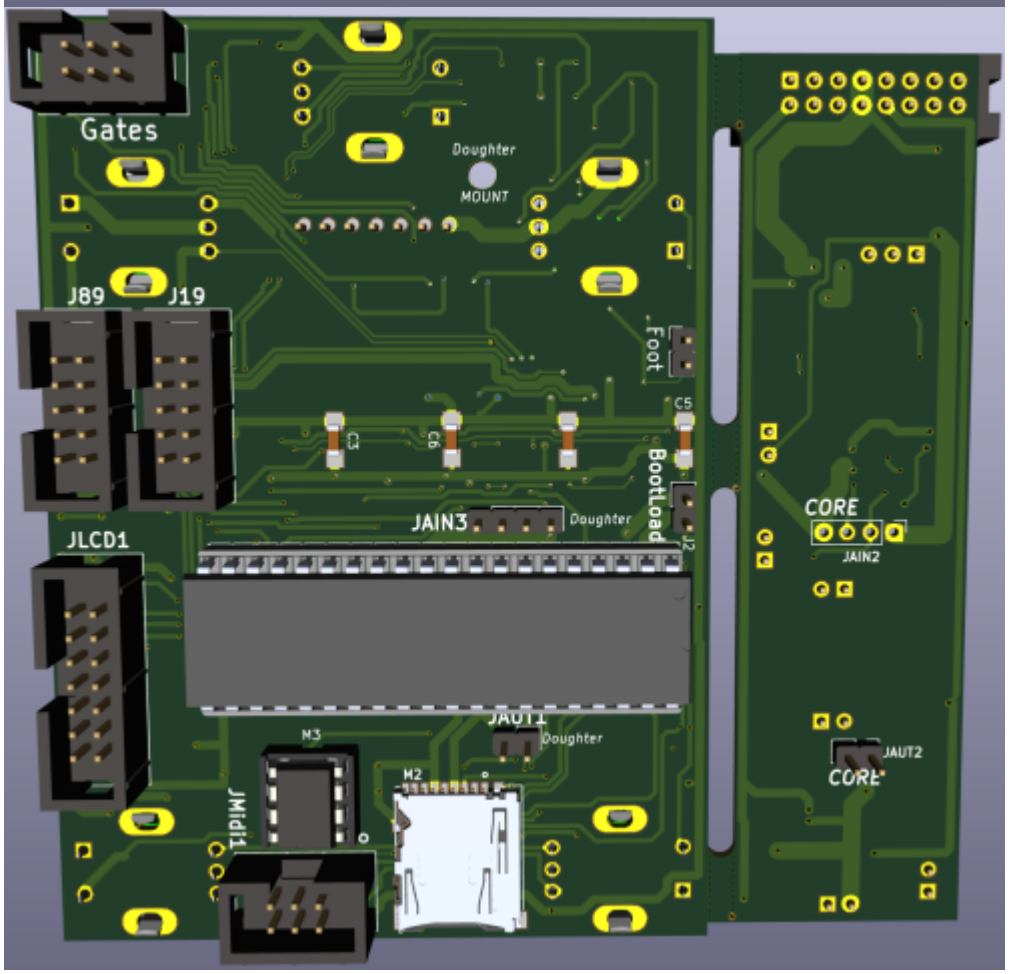
Software

Firmware

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

Building


ENV-1
ENV-2
Clock-1
JAIN1
BiOff
Gain
Out Gain
Debug
Offset
CV-Out


Gates
Daughter
MOUNT
J89
J19
Foot
BootLoad
JAIN3
Daughter
JLCD1
CORE
JAIN2
JAUT1
Daughter
JAUT2
CORE
M3
M2
JMidi1

Frontpanel



- Eurorack Alu-Plate

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 avaiable	
1N4148W	D1,D2,D3,D4,D5,D64	SOD123	C81598	basic
ENC	ENC1-ENC5	ENC-PEC11R		652-PEC11R-4015F-S24
5×2-AOUT	J19	Header-2×5		
BootLoad	J2	Header-1×2		
DinDout	J89	Header-2×5		
HEADER_3	JAIN1	Header-1×3		
Header-1×4	JAIN2	Header-1×4-female		
Header-1×4	JAIN3	Header-1×4		
CV1	JAUT1,JAUT2	Header-1×2		
CV-OUT1	JAUT3	Header-1×2		
BiOff	JG1	Header-1×2		
Gain	JG2,JG3	Header-1×2		
Disconnect	JG4	Header-1×2		
Offset	JG5	Header-1×2		
Foot	JG6	Header-1×2		
Gates	JGate1	Header-2×3		
OLED3-6	JLCD1	Header-2×7		
Midi	JMidi1	Header-2×3		
Header-2×8-eurorack	Jpsu1	Header-2×8		
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-SSD1306-128×64		
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

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