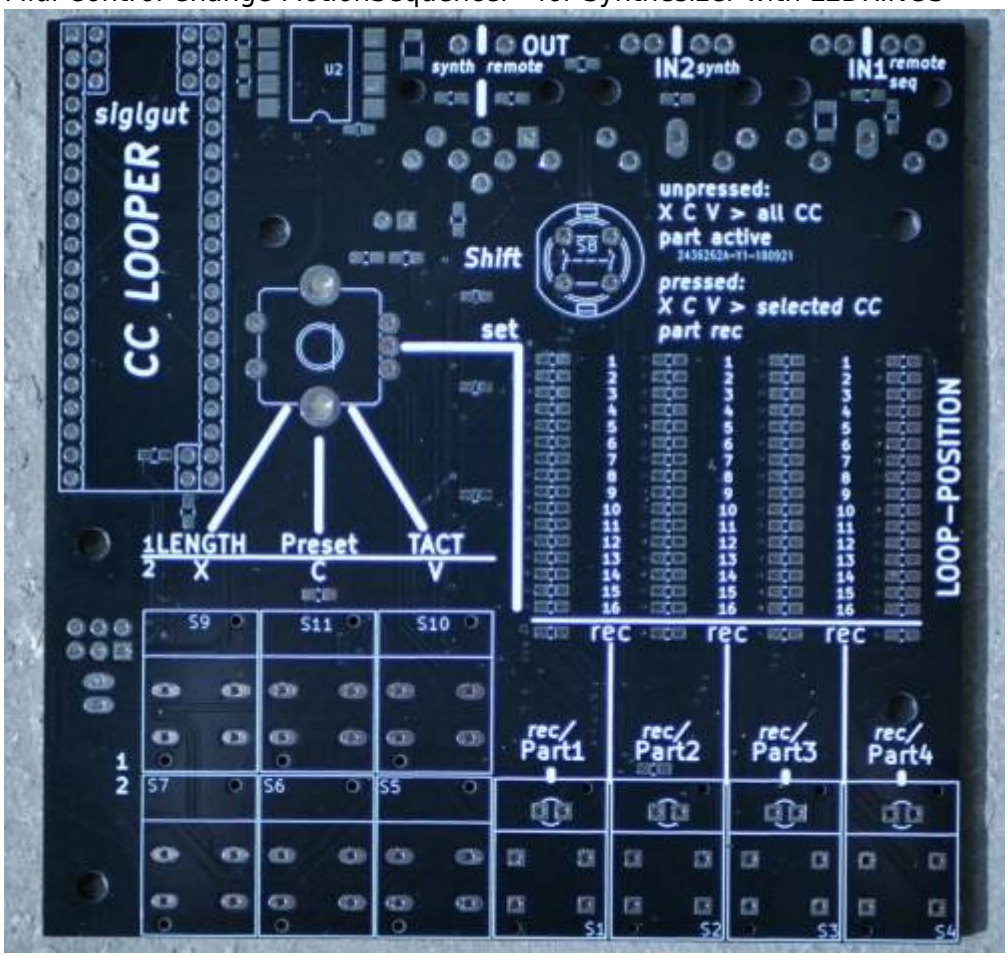
CC-Looper

CC-Automation
Midi Control Change MotionSequencer - for Synthesizer with LEDRINGS



Features

* 4Midichannels @ each 512Steps X 32th-looprate X 128 CCs
* only a few of the 128CC should be used @ once - 4x128xCCs @ 32th is Midi Data MESS and µC Death
* maybe only 256Steps, will depend on RAM.... RealWorld will tell
* each TRACK has a shared Track length for all its 128 CCs
* Copy, Paste, Clear: for the all 128CCs/or single CC
* There is no EDIT, you can clear a CC or Track and make a new Take
* 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

External Requirement:(for example)

- You need a Synth with LEDRINGs - otherwise you have no Feedback and Overview - NordRack III is such one
- Melody/Clock Source with ProgramChange-Output: midibox_seq_v4l oops that dont do PC...
- Melody/Clock/CC Destination: NordRack III or any other Synth with Visual Feedback off CC-States

Midibox:

- dipcoref4 - this is the µC Brain for the Looper
- cc-looper - this is the UI-PCB of the Looper
- no other PCBs needet

- µSD-Card, formated with FAT32
- Soldering Iron - with a Dip that can Handle SMD-Parts, Wires, solder Paste for the µC....
- USB Power Supply with µUSB-Connector

Set

Cabeling

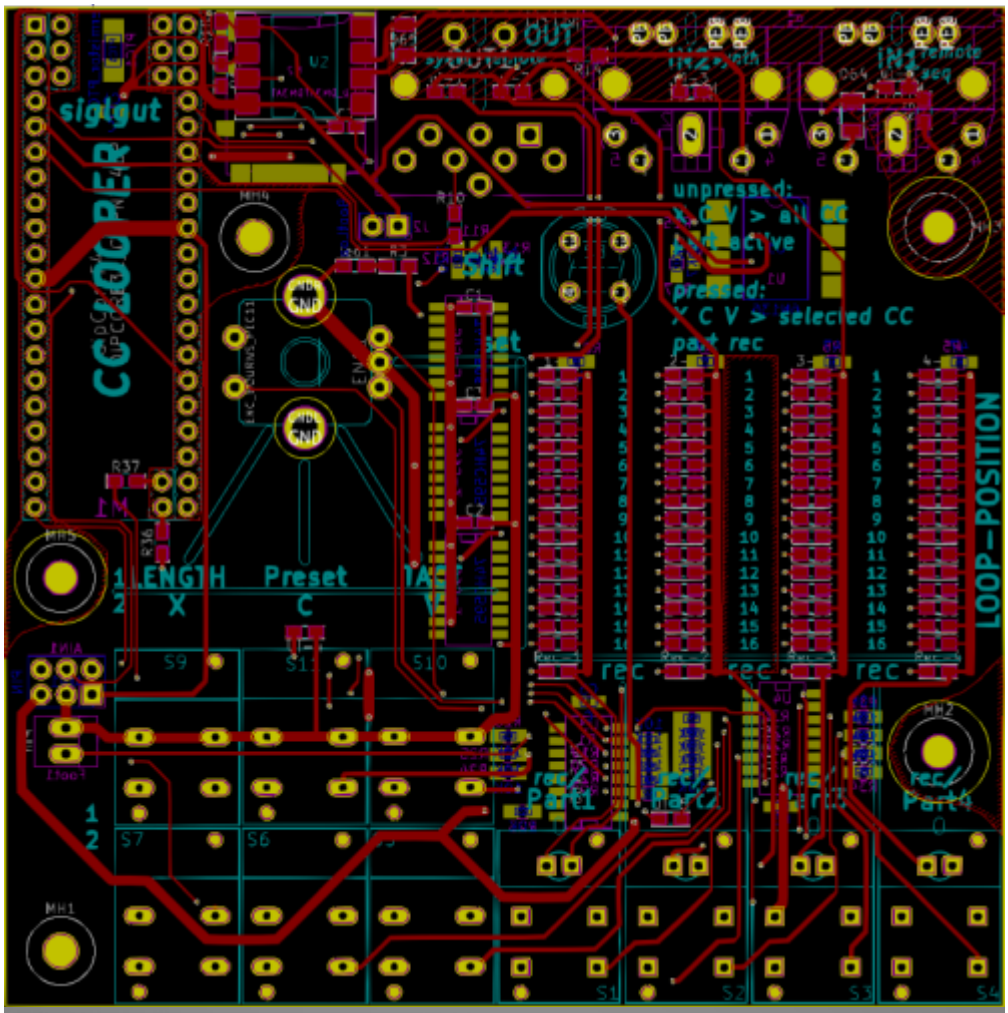
Midi IN1 »> MelodySequencer and Remote Devices
Midi IN2 »> Midi Out from Synthesizer - which sends out the Moved CCs
Midi OUT »> Midi IN of Synthesizer input (Automated CCs merged with mididata from Midi IN1)

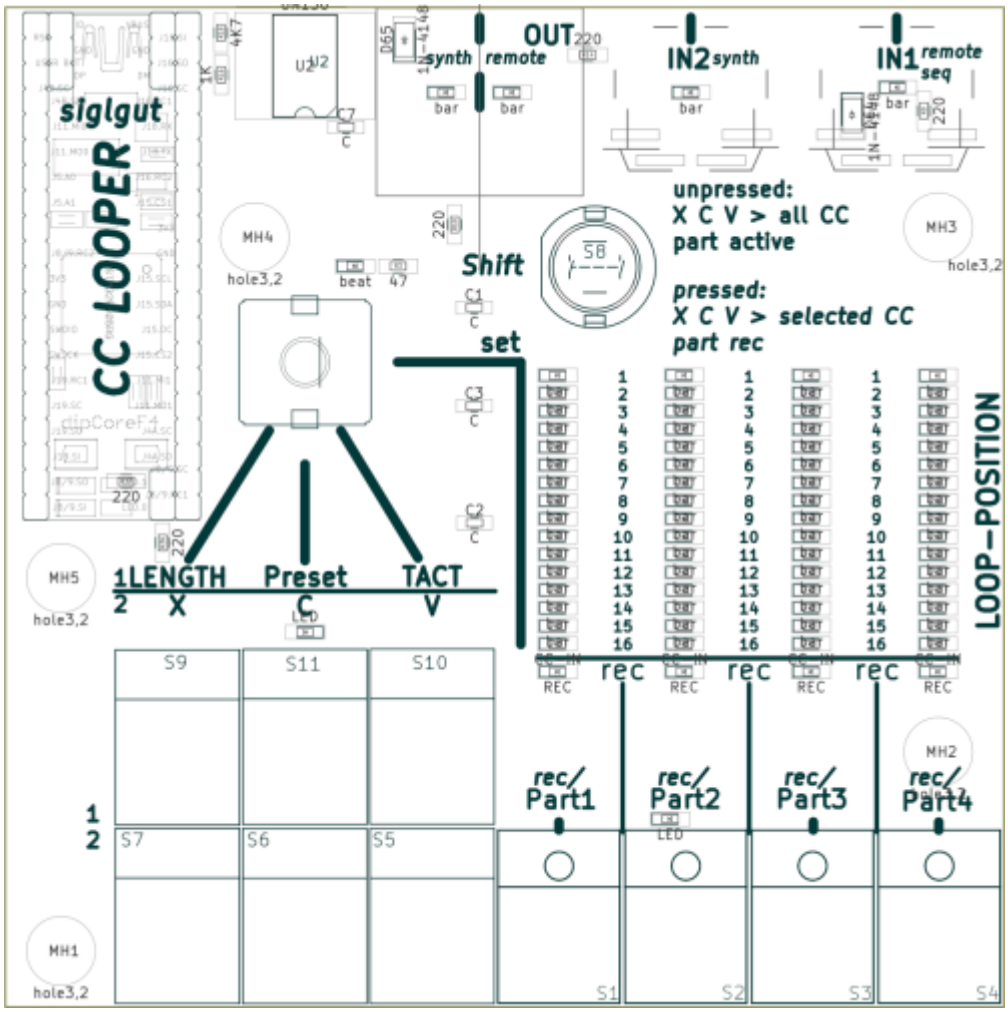
Software

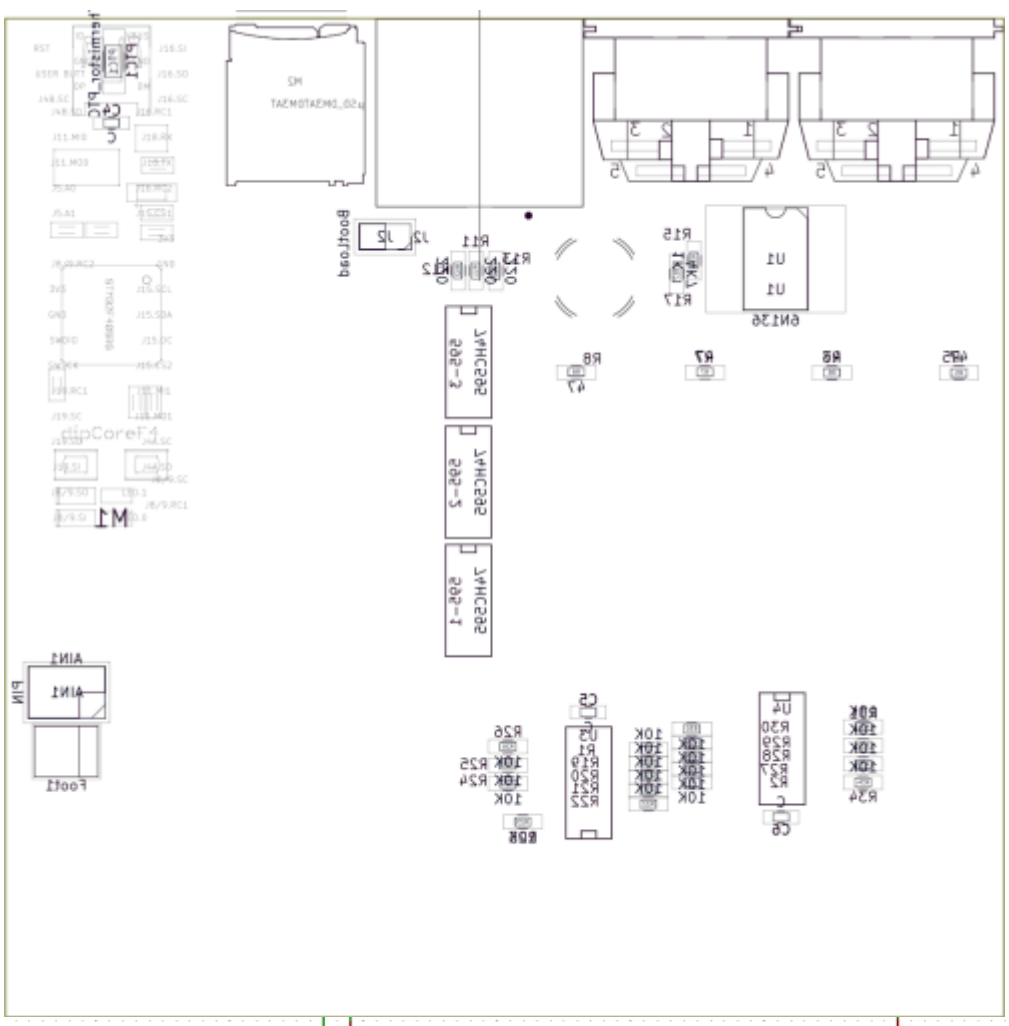
Firmware

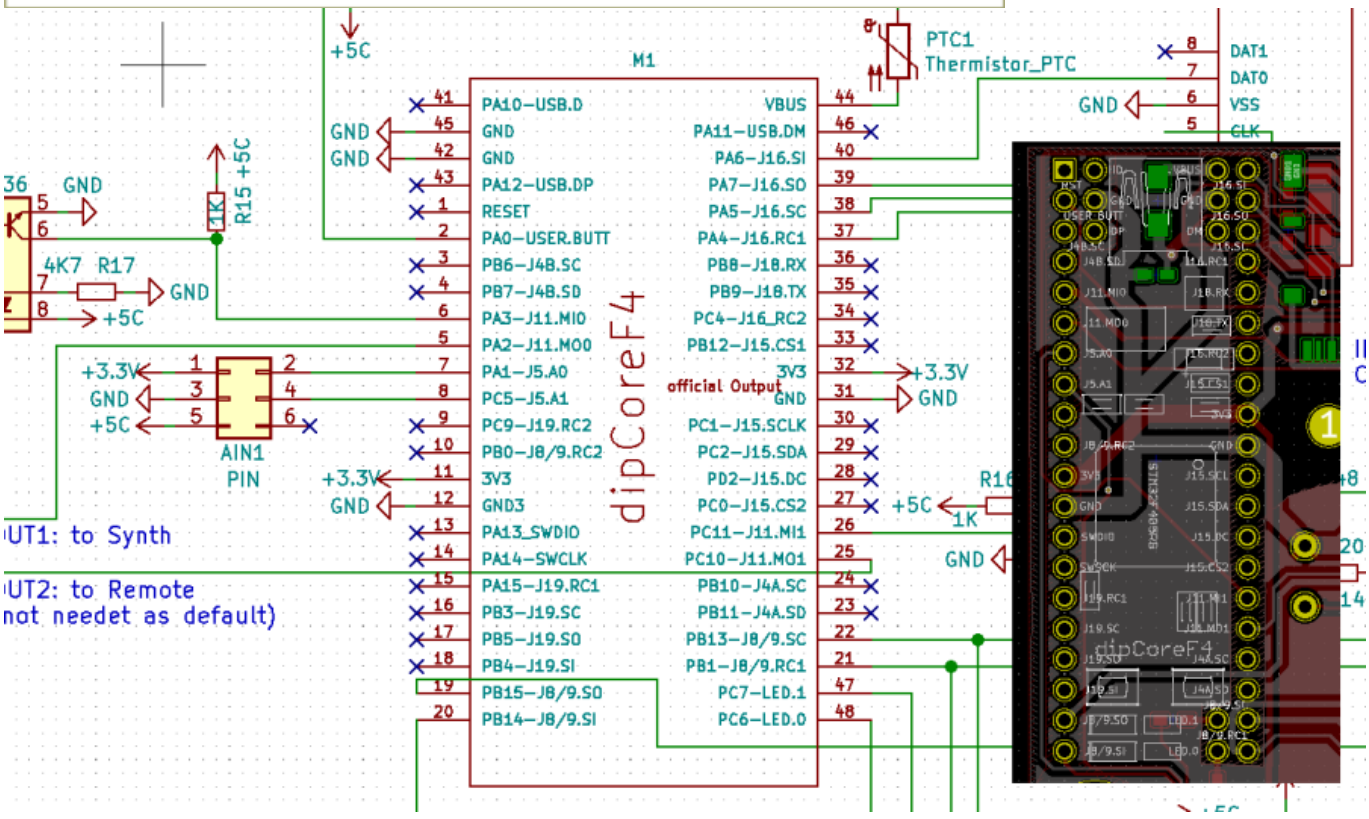
Fix Me! Firmware not made yet

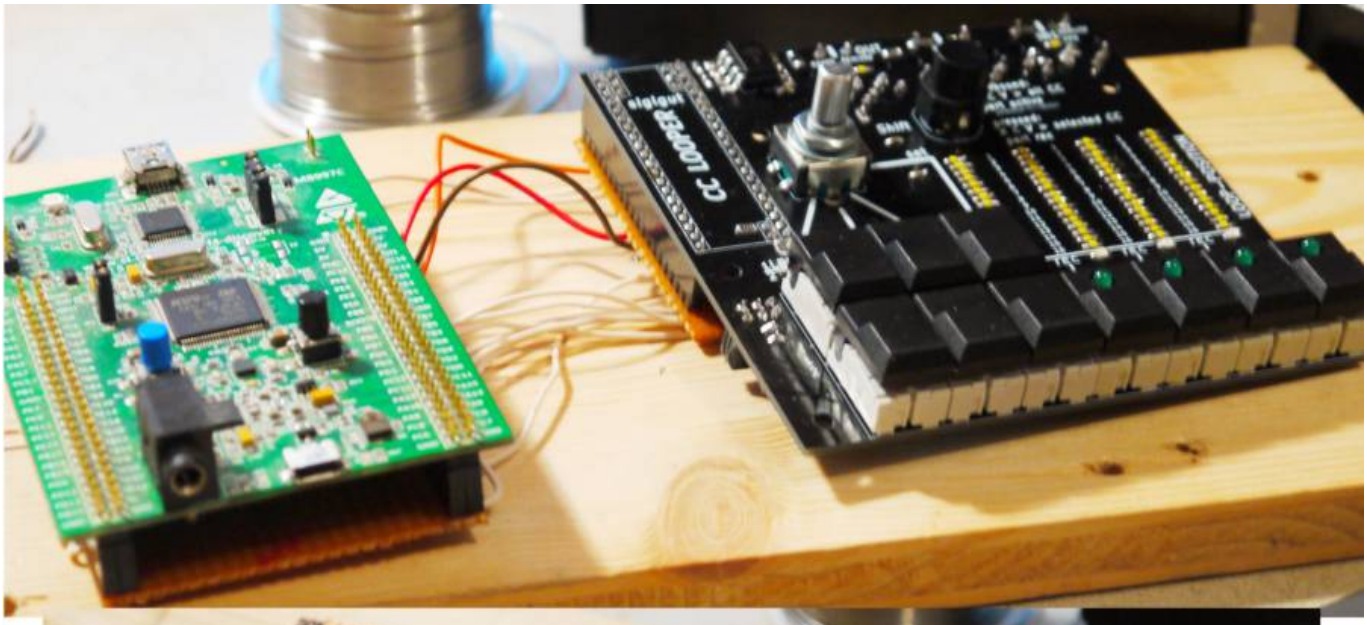
Building

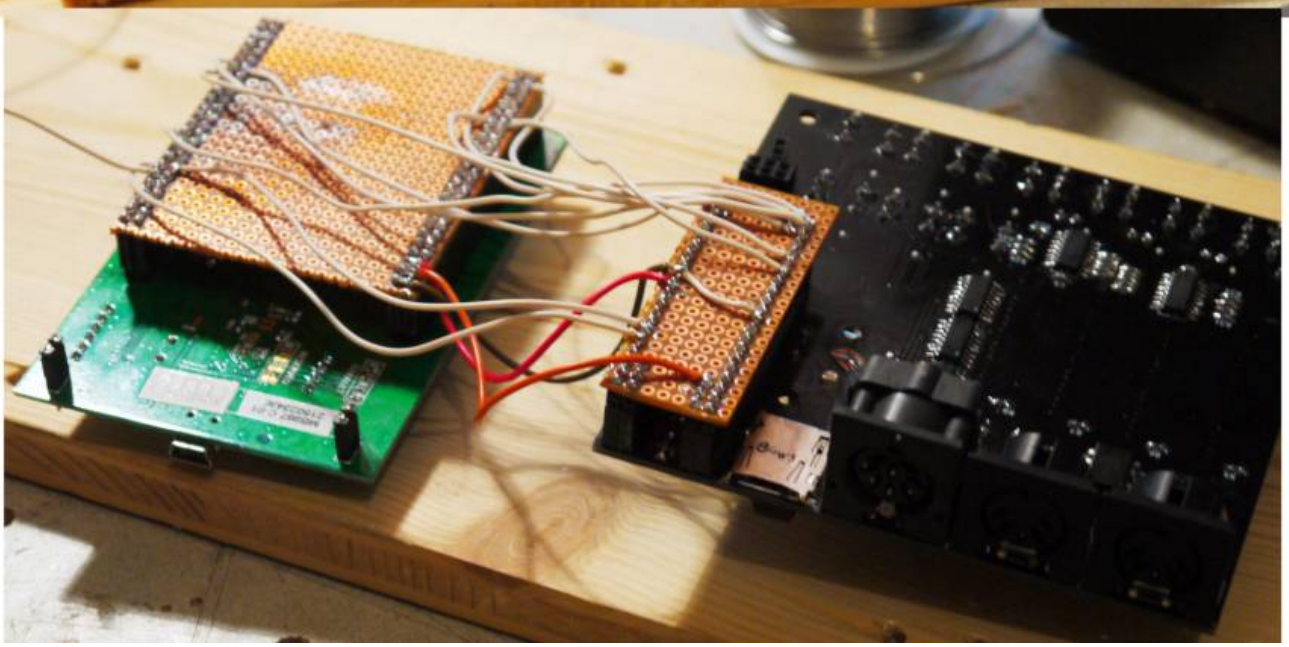

siglgut
CC LOOPER
OUT
synth remote
IN2 synth
IN1 remote seq
unpressed:
X C V > all CC
part active
pressed:
X C V > selected CC
part rec
Shift
set
LOOP—POSITION
1LENGTH
2 X
Preset
C
TACT
V
rec
rec/
Part1
rec/
Part2
rec/
Part3
rec/
Part4
S1
S2
S3
S4
S5
S6
S7
S9
S10
S11

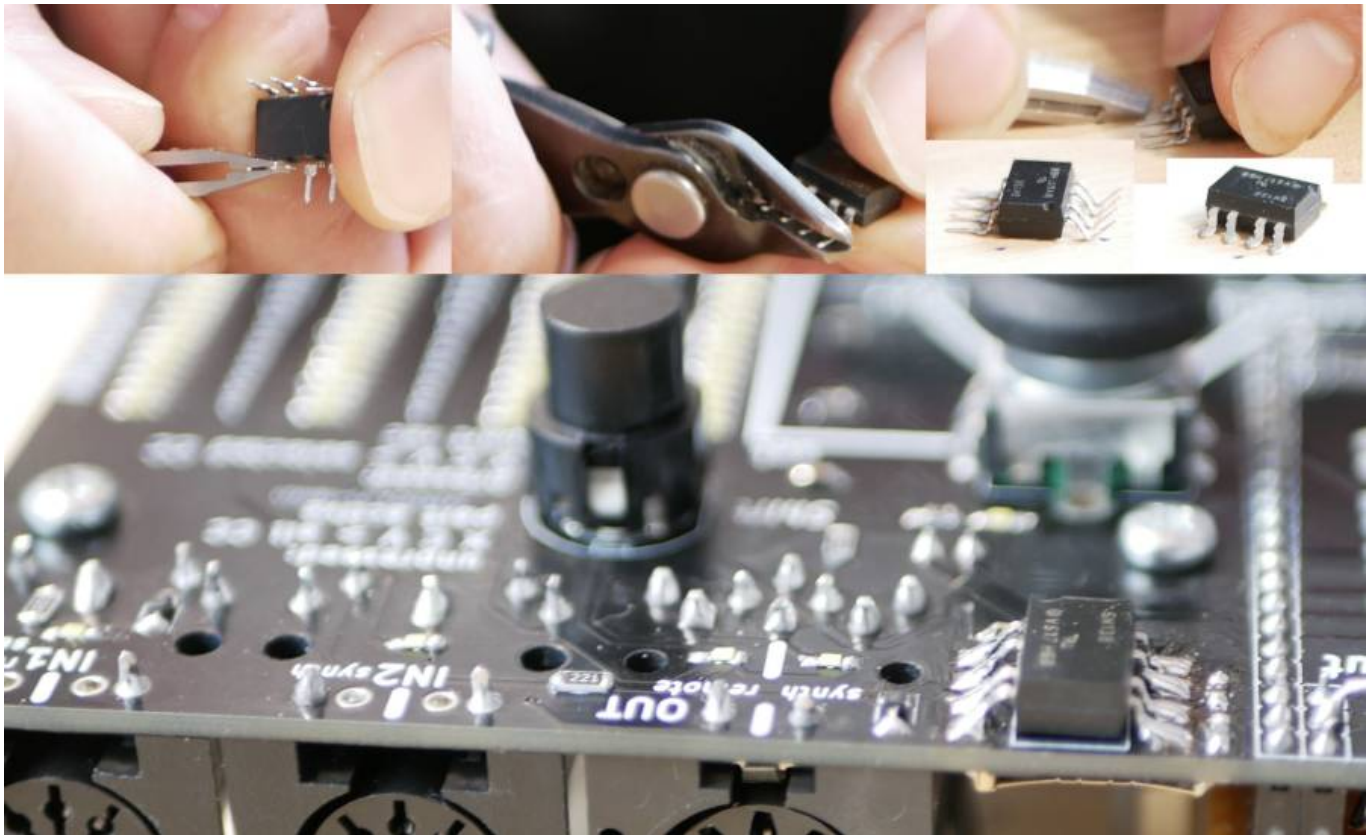

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LOOP—POSITION
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rec
rec
rec
rec/ Part1
rec/ Part2
rec/ Part3
rec/ Part4
S1
S2
S3
S4
S5
S6
S7
S9
S11
S10
MH1
MH2
MH3
MH4
MH5
hole3,2

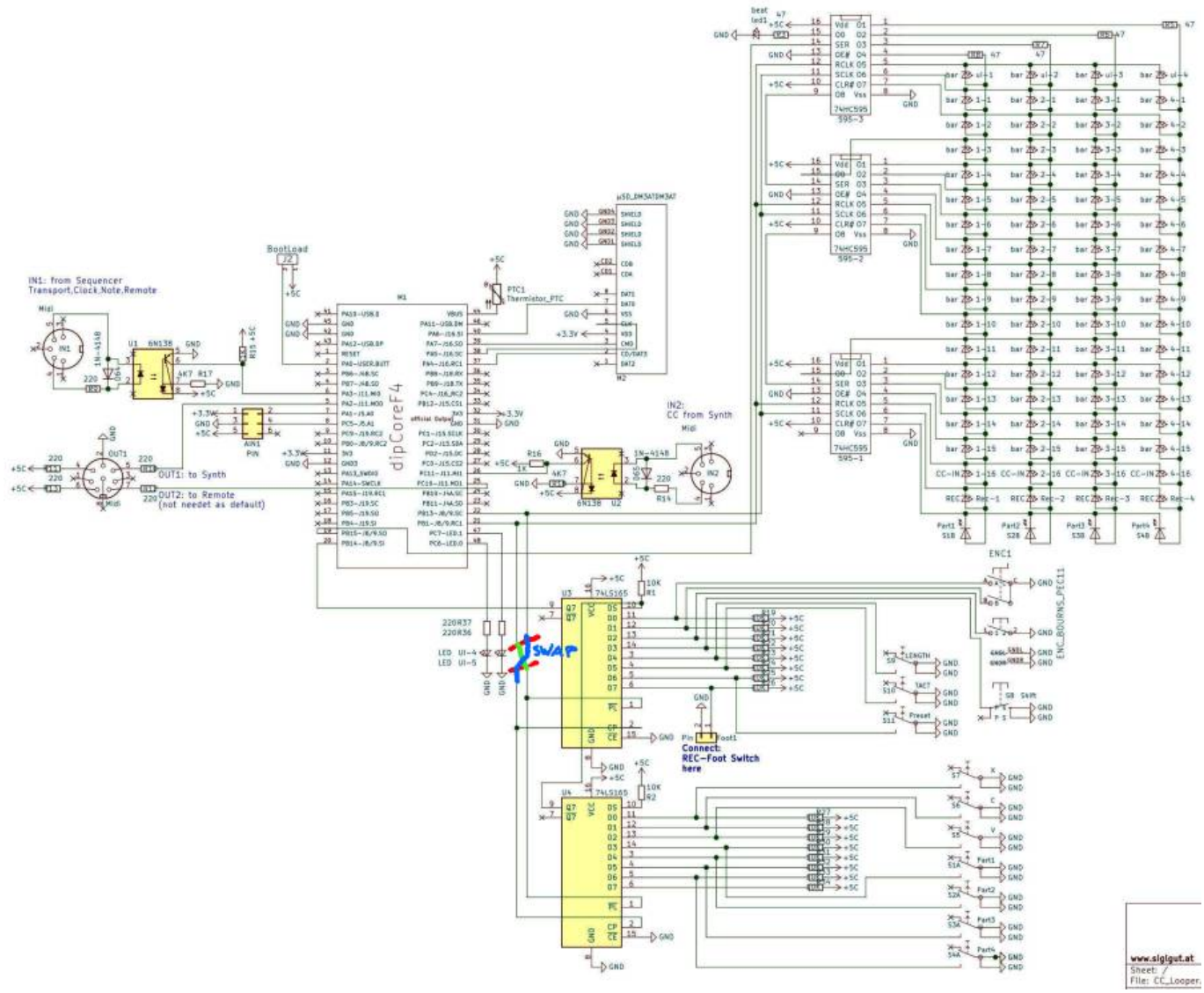


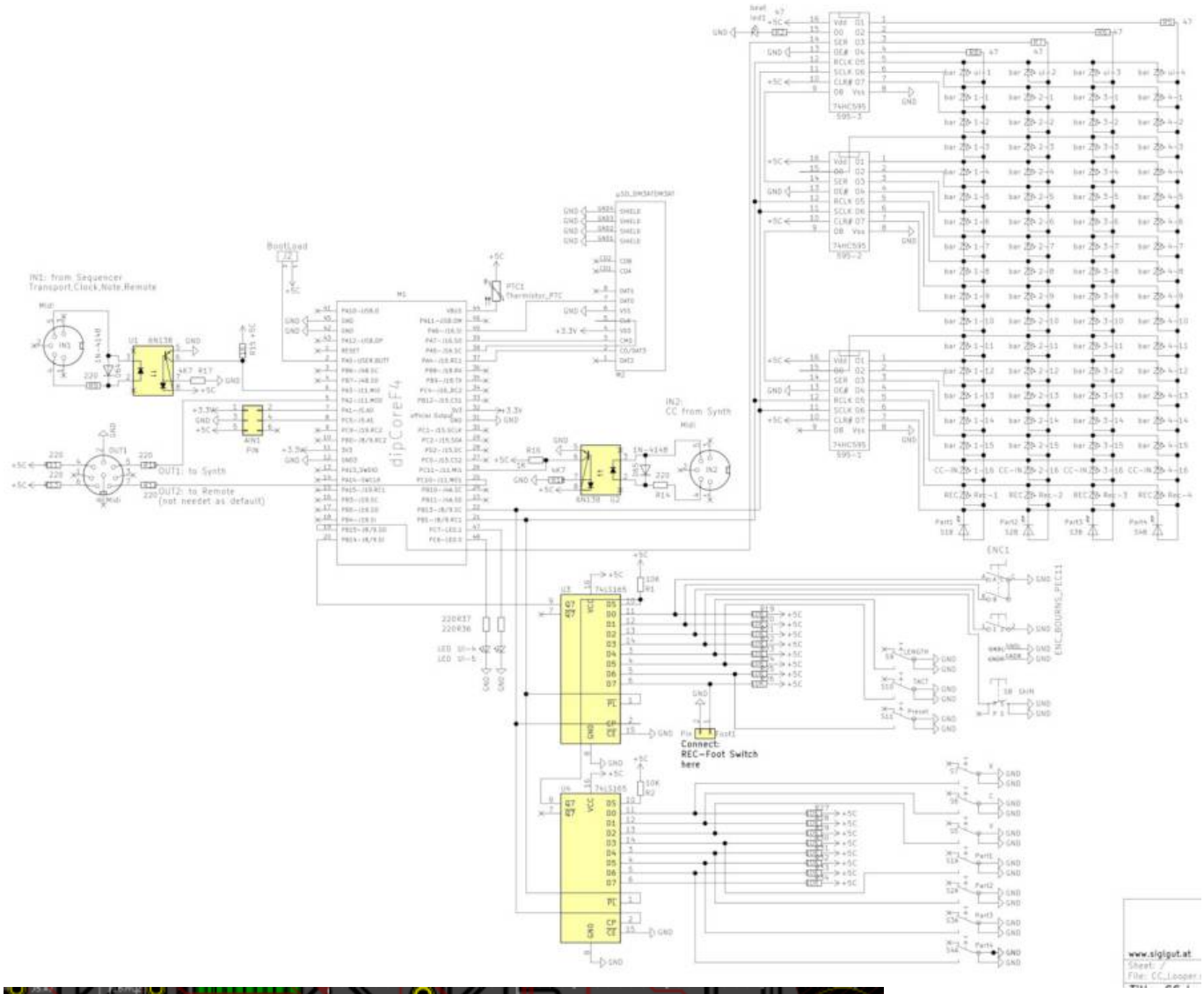

M1
dipCoreF4
PTC1
Thermistor_PTC
DAT1
DAT0
VSS
CLK
GND
+5C
+3.3V
R15 +5C
4K7 R17
AIN1
PIN
R16
1K
official Output
PA10–USB.D
PA11–USB.DM
PA6–J16.SI
PA7–J16.SO
PA5–J16.SC
PA4–J16.RC1
PB8–J18.RX
PB9–J18.TX
PC4–J16_RC2
PB12–J15.CS1
PA0–USER.BUTT
PB6–J4B.SC
PB7–J4B.SD
PA3–J11.MI0
PA2–J11.MO0
PA1–J5.A0
PC5–J5.A1
PC9–J19.RC2
PB0–J8/9.RC2
3V3
GND3
PA13_SWDIO
PA14–SWCLK
PA15–J19.RC1
PB3–J19.SC
PB5–J19.SO
PB4–J19.SI
PB15–J8/9.SO
PB14–J8/9.SI
VBUS
PC1–J15.SCLK
PC2–J15.SDA
PD2–J15.DC
PC0–J15.CS2
PC11–J11.MI1
PC10–J11.MO1
PB10–J4A.SC
PB11–J4A.SD
PB13–J8/9.SC
PB1–J8/9.RC1
PC7–LED.1
PC6–LED.0
UT1: to Synth
UT2: to Remote
not needet as default)

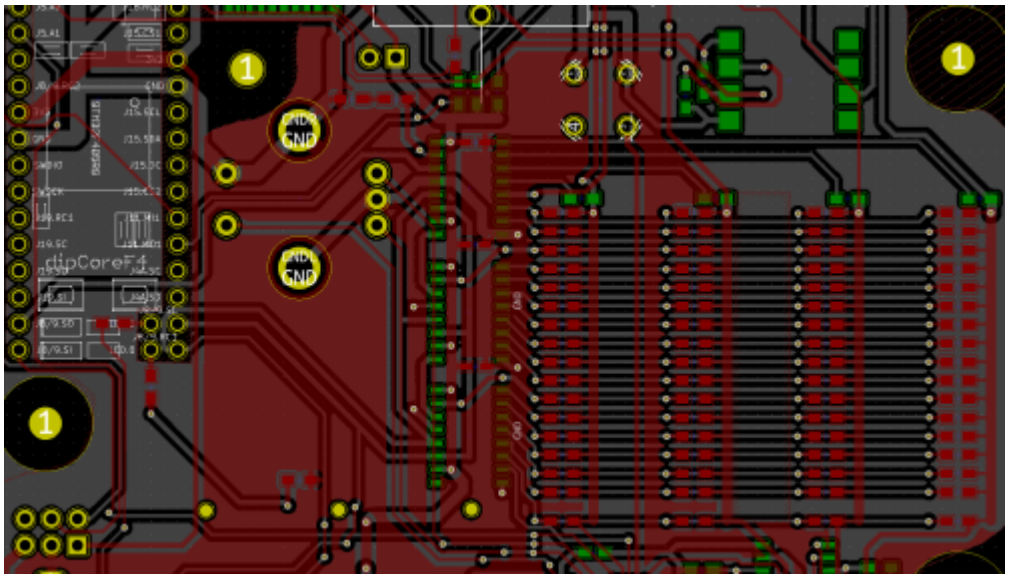

CC LOOPER






IN1: from Sequencer
Transport,Clock,Note,Remote
IN2:
CC from Synth
OUT1: to Synth
OUT2: to Remote
(not needet as default)
BootLoad
dipCoreF4
ENC1
Connect:
REC-Foot Switch
here
www.sigigut.at





Frontpanel

Fix Me! - a clear Acrylic Frontplate, with NO Engravings, UI-Labeling is viewable from PCB

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
M2	1	µSD_DM3ATDM3AT	MSD_DM3AT	798-DM3AT-SF-PEJM5	Mouser

To Do

alot, beta test, programming the firmware, housing

Resources

KiCad-Dataccl-dipcore.7z
its based on a mixture off:

- msq-cc-lre
- msq-cc-bcr

but its a complete new design, and firmware

Community users working on it

- **Phatline** = Programming, Documentation...

Just let a Private message on the forum to user already involved.
I have 10 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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