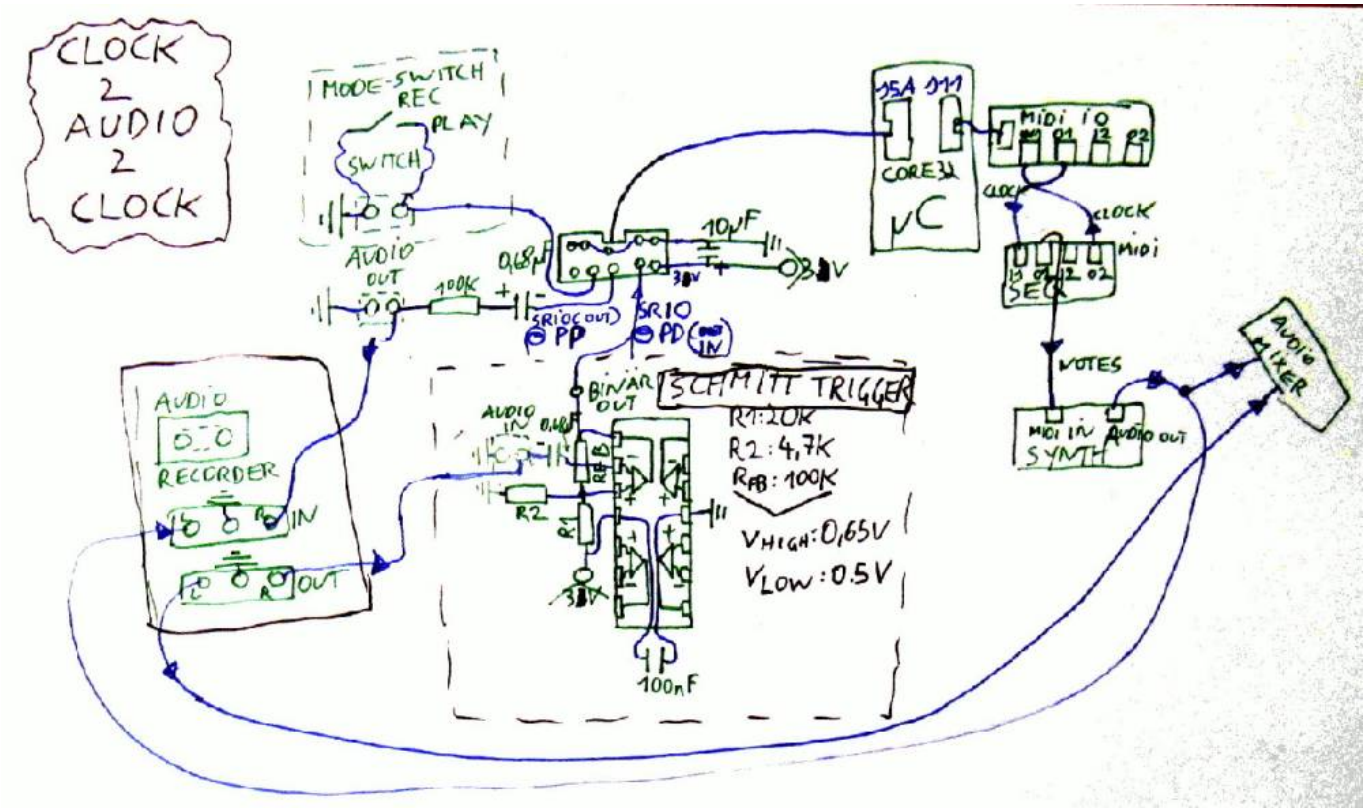
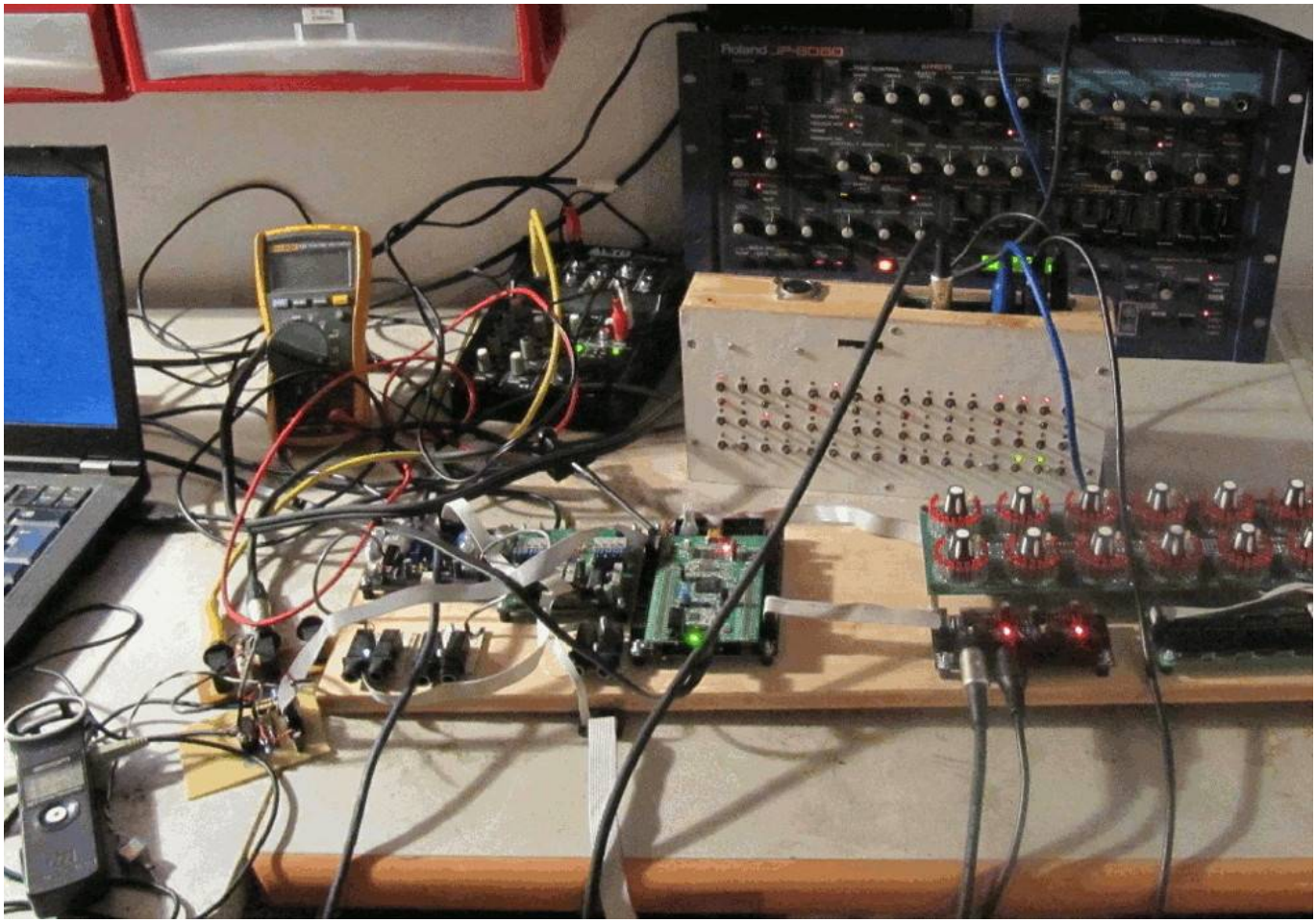
clk2a2clk

Midiclock 2 Audio Converter, Audio 2 Midiclock Converter
4 Recording a Midiclock on a Audio-Track on your Multitrack-Recording-Device
in order to get the possibility to overdub a sequencer track on Recording Devices without Midi-Clock builtin



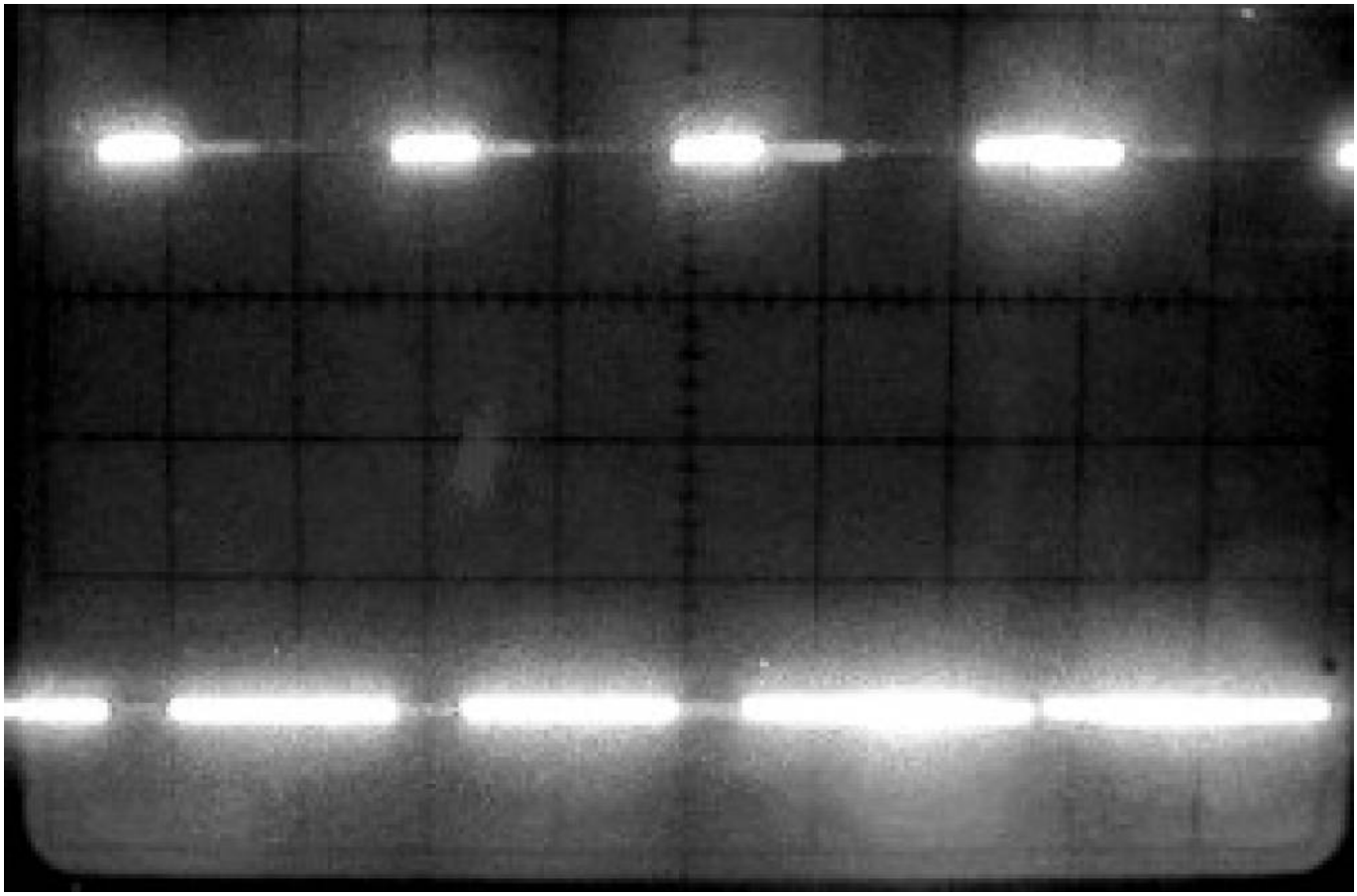
Video



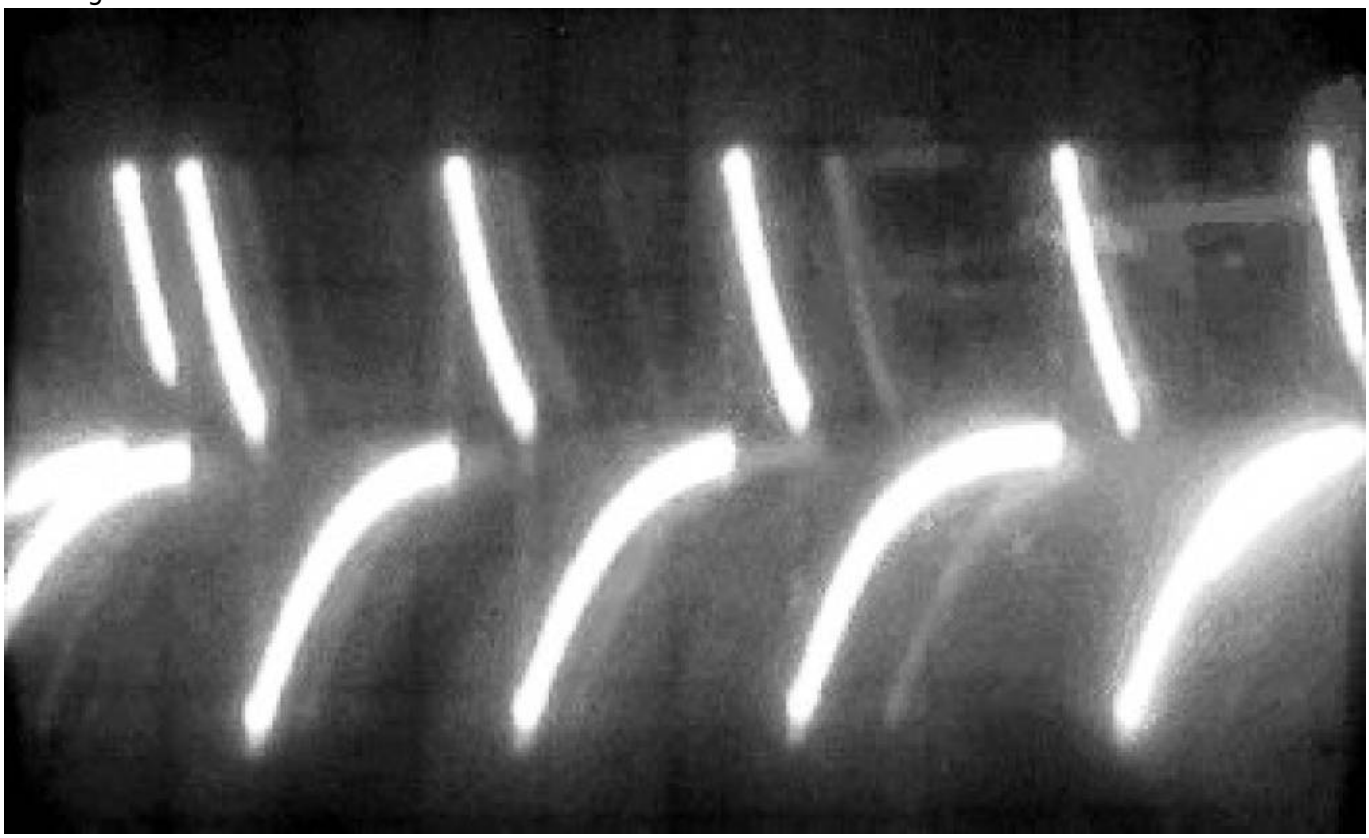
Introduction

i fell in love with a zoom livetrack-l12, a multitrack-audio-recorder, in a compact design, severell submixes, parametric eqs, compressor, efx and a extra master-track-recording, and that for a good price…
but it doesnt have midi… in specially it does not have a midiclock.
so when i have to make a track new, or i want to overdub a track, a track that is Midiclock-Driven a sequencer track for example…

So with this device, i lose one Audio-Track, because i use this one Audio-Track, as a Click-Track, it records Audio-Rectangle-Pulses, which are a converted Midiclock-Pulses



when i then playback the Click-Track-Recording, it converts this Audio Pulses back to Midiclock-Messages.



Thats all, not much code, stripped down, running thight.

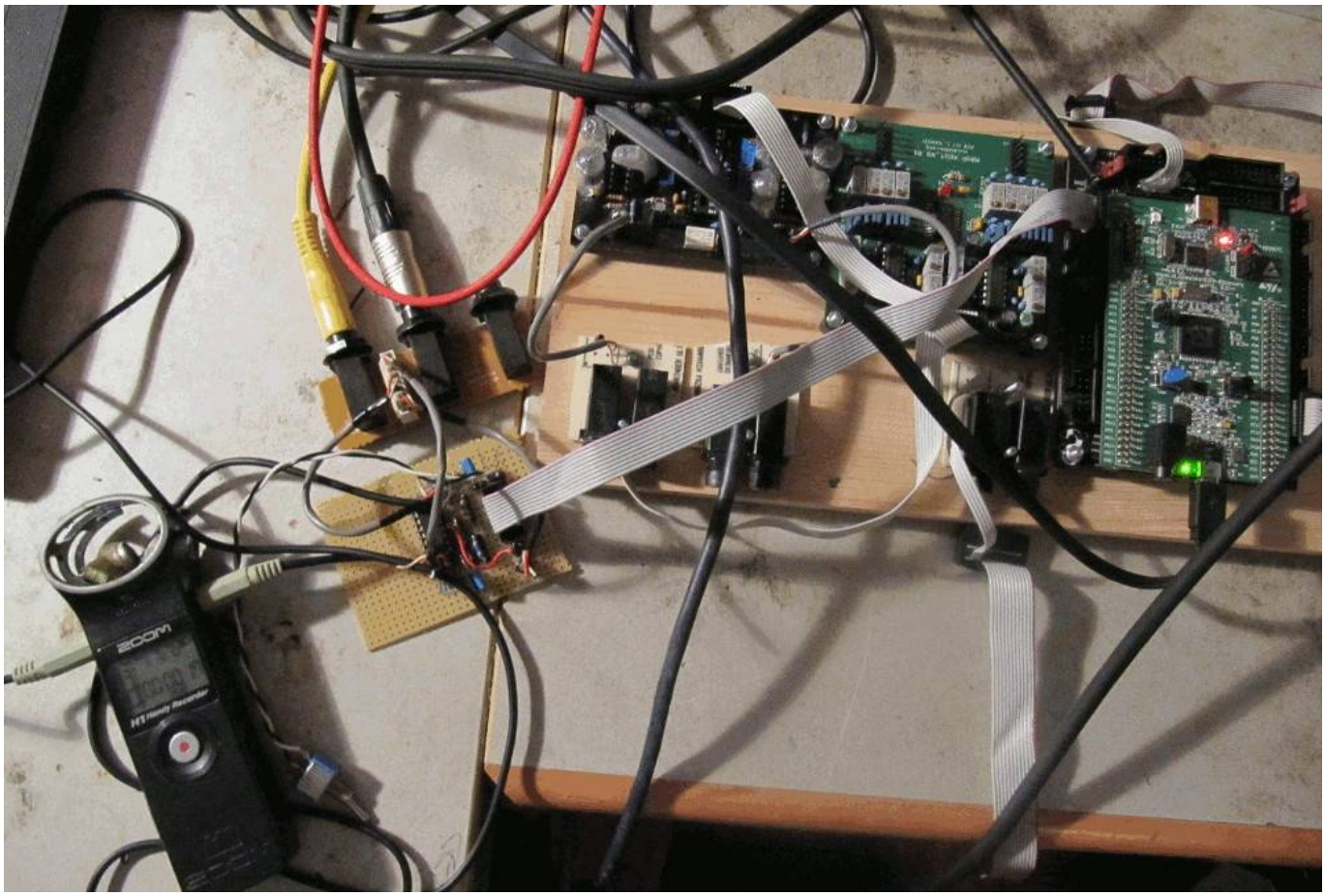
Features

- **convert Midi-Clock-Data to Audio-Pulses**
- convert Audio-Pulses to Midi-Clock-Data

Hardware Requirements

External Requirement:(for example)

- Clock Source aka Sequencer: midibox_seq_v4l
- a Synth: JP8080
- a Multitrack-Audio-Recorder: Zoom Livetrack L12
- 3x Midi-Cables



Midibox:

- core32
- 1xMidi IO
- Soldering Iron, Wires, PCB....
- USB Power Supply

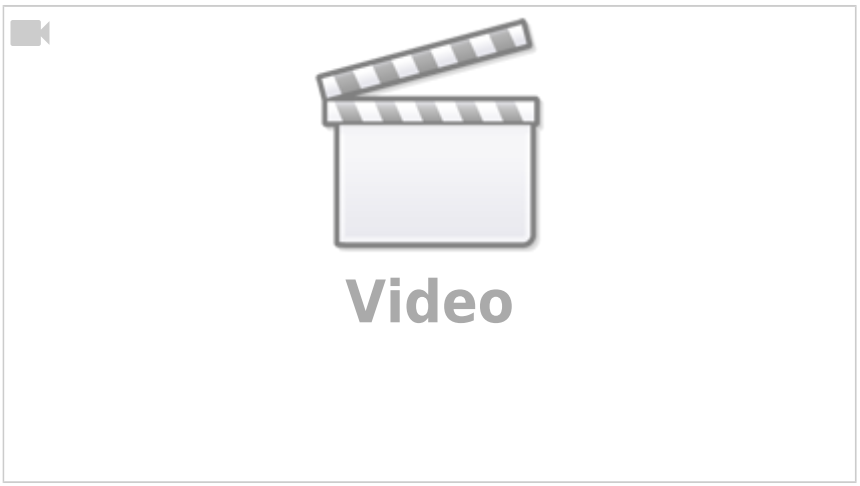
Schmitt-Trigger:

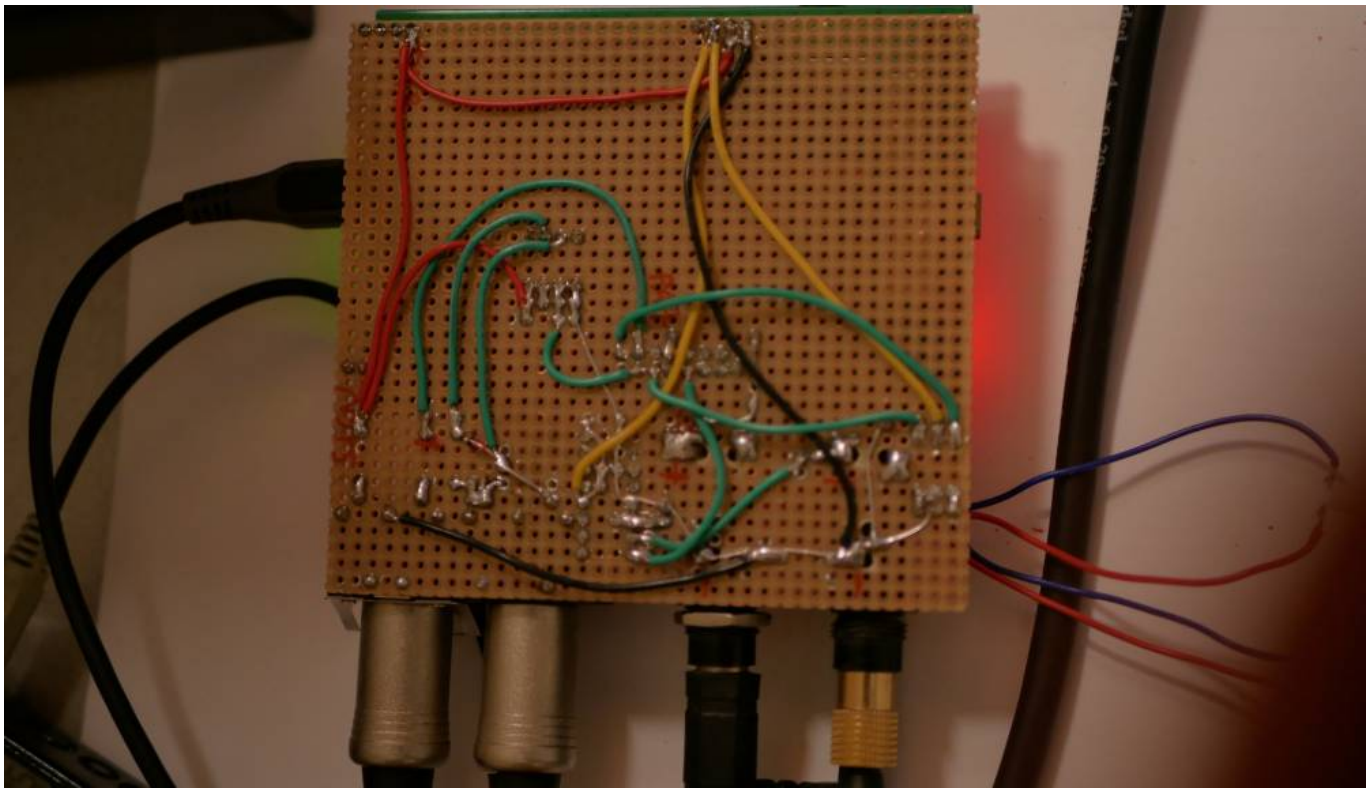
- TS-274 OP-Amp
- 14 Pin - DIP-Socket

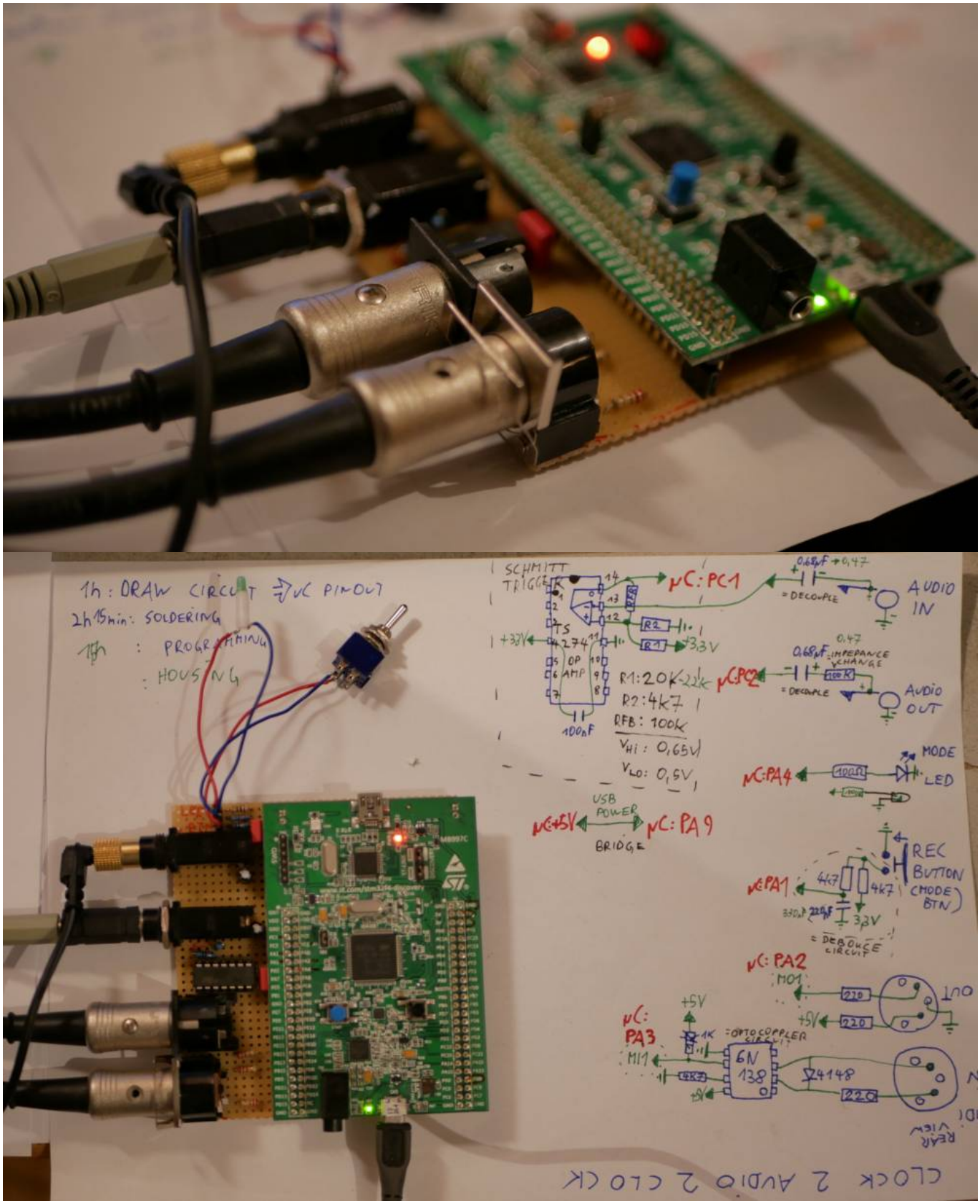
- Pin-Header 2x5Pins (to connect the PCB to Core J5A)(you will also need a cable 4 that)
- Resistor R1 20K
- Resistor R2 4K7
- Resistor RFB 100K
- Resistor for Output-Gain-Reduction 100K
- 2x Electrolyt Capacitor 0,67uF (to decouple audio in and out)
- Electrolyt Capacitor 10uF for Supply
- Capacitor 100nF to denoise the OP-Amps-Rails...
- 2 Audio Cables+Sockets for the connection to the Recorder (6,3 mono jacks)

on Protoboard

here i have made it all on protoboard:






1h: DRAW CIRCUIT
2h 15min: SOLDERING
: PROGRAMMING
: HOUSING
SCHMITT TRIGGER
µC: PC1
AUDIO IN
DECOUPLE
AUDIO OUT
IMPEDANCE CHANGE
R1: 20K-22K
R2: 4K7
RFB: 100K
VHI: 0,65V
VLO: 0,5V
µC: PC2
MODE LED
µC: PA4
USB POWER BRIDGE
µC: 5V
µC: PA9
REC BUTTON (MODE BTN)
µC: PA1
DEBOUNCE CIRCUIT
µC: PA2
µC: PA3
OPTOCOPPLER CIRCUIT
6N 138
4148
CLOCK 2 AUDIO 2 CLOCK

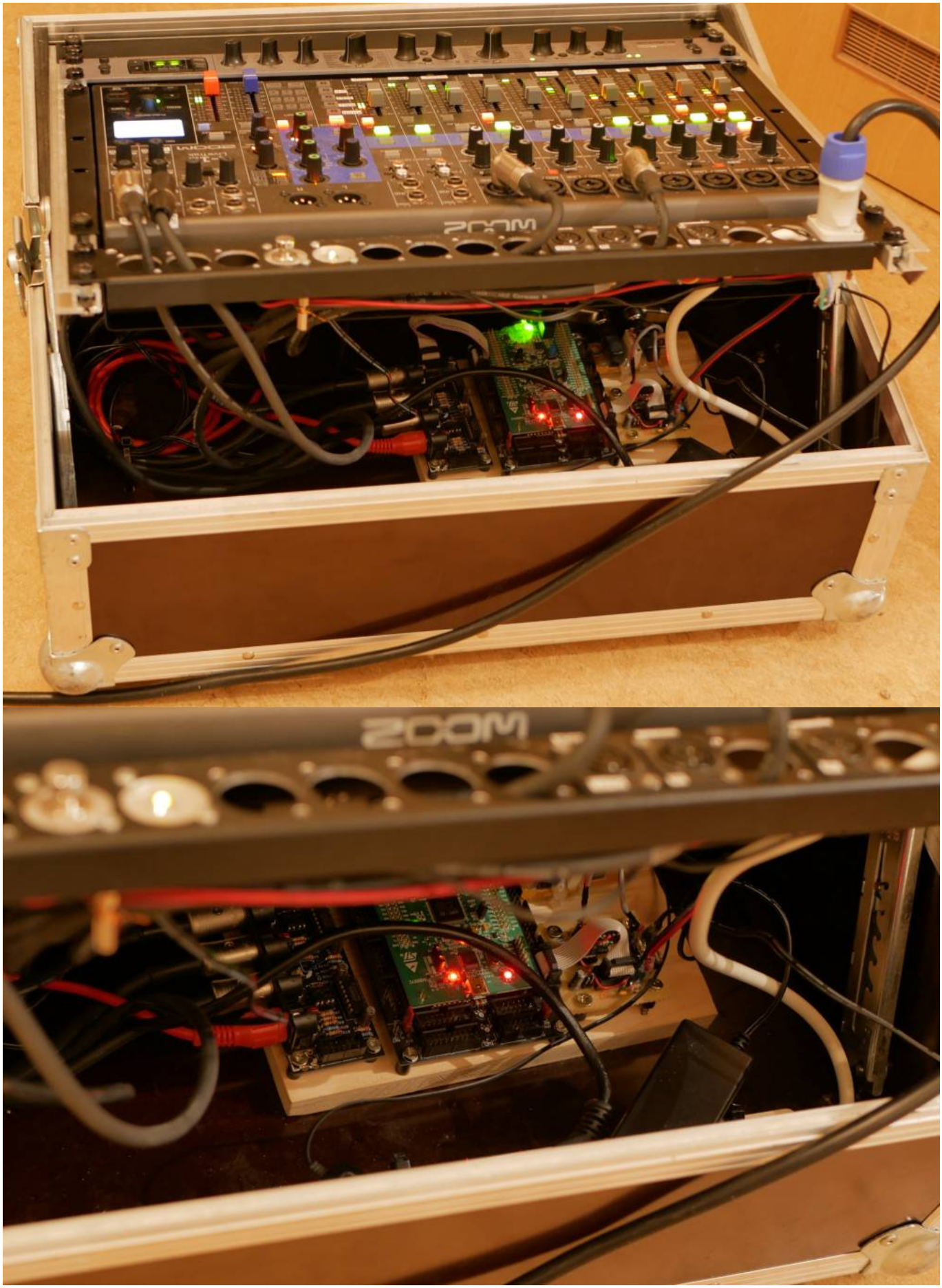
Software

Firmware

V1.2017clk2a2clk.zip hardcodet no menue, no nothing, stripped down to max performance

How I Use It - built in Rack


L-12
LiveTrak
ZOOM
t.c. electronic


ZOOM

Resources

Schmitt-Trigger-Calculator

Community users working on it

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

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