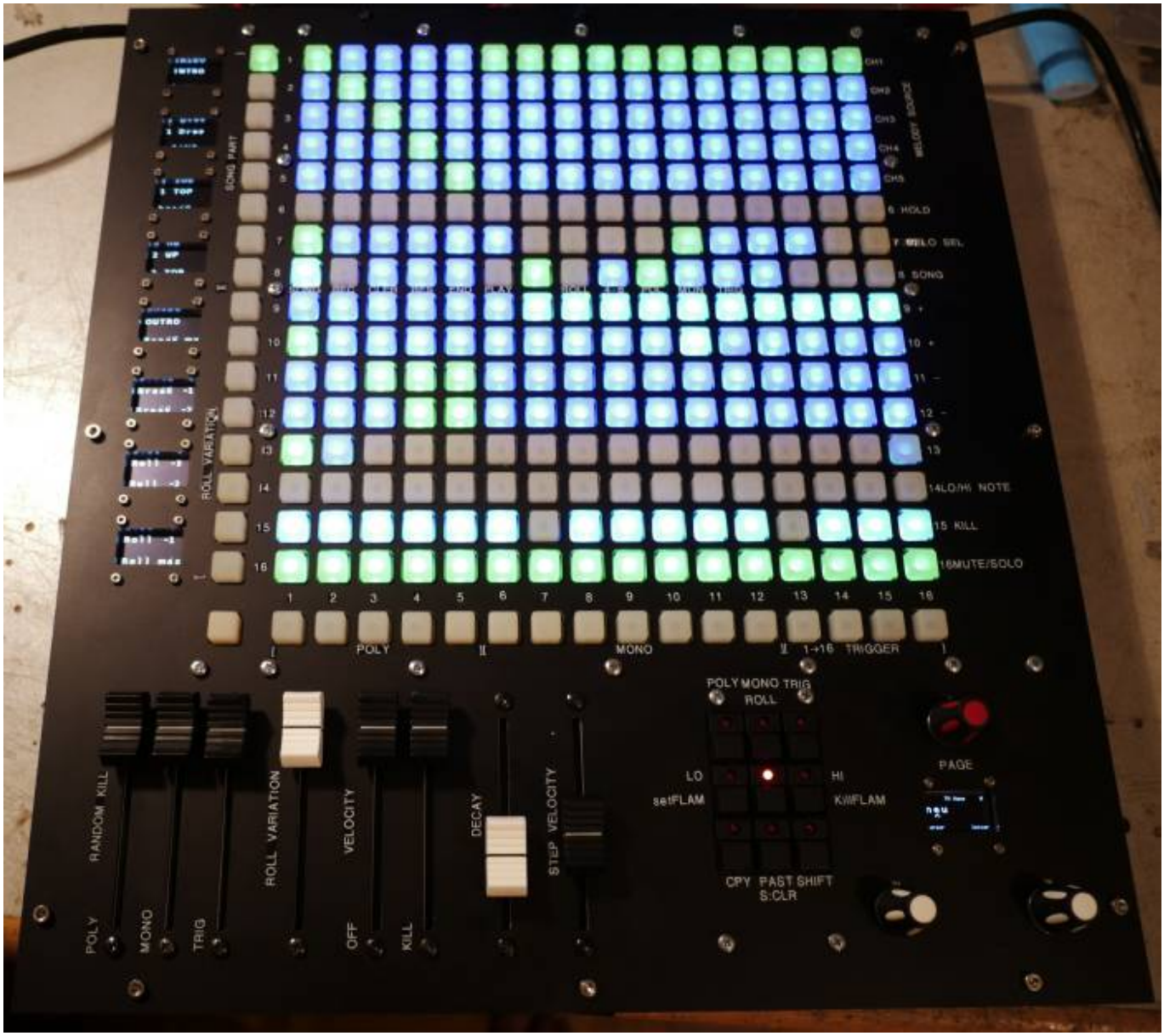
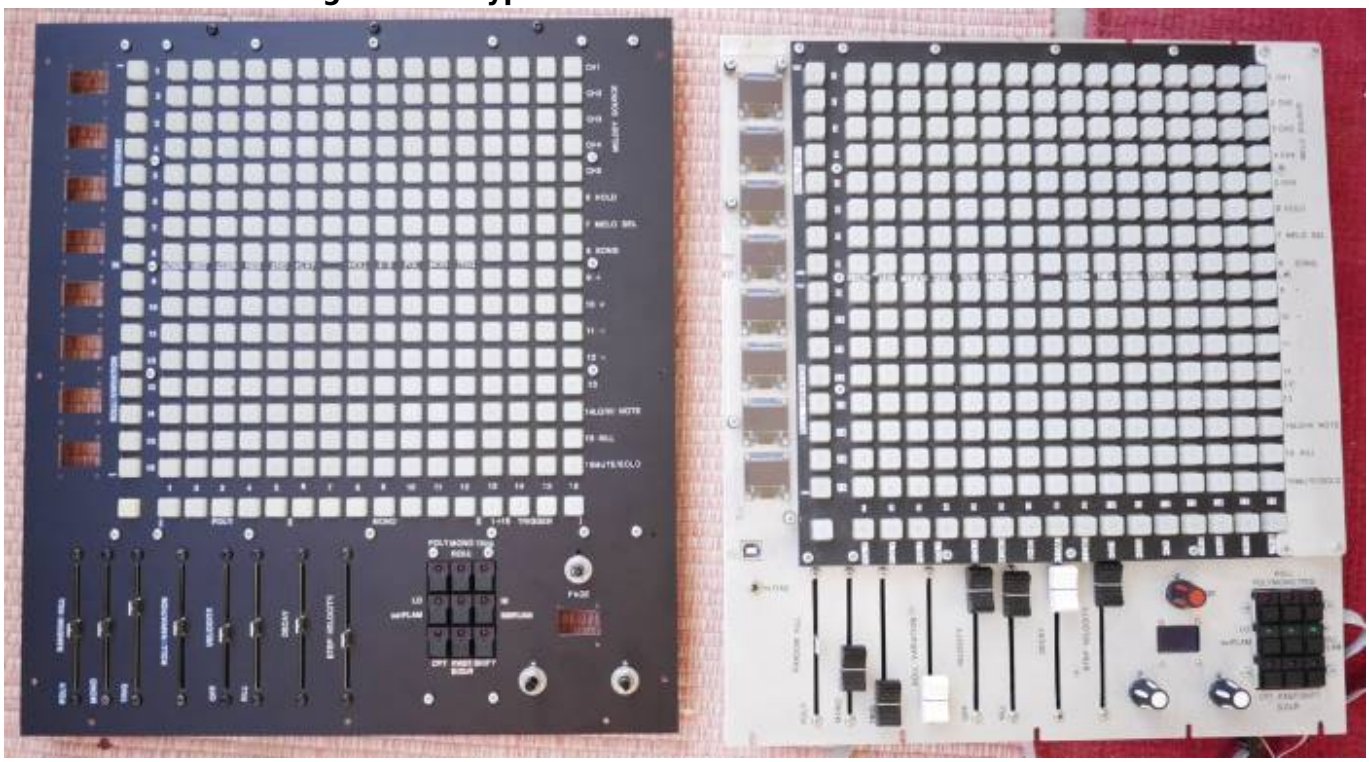
TriggerMatrix V4



Planed in 3D:



Left: Serial Nr1 « » Right: Prototype



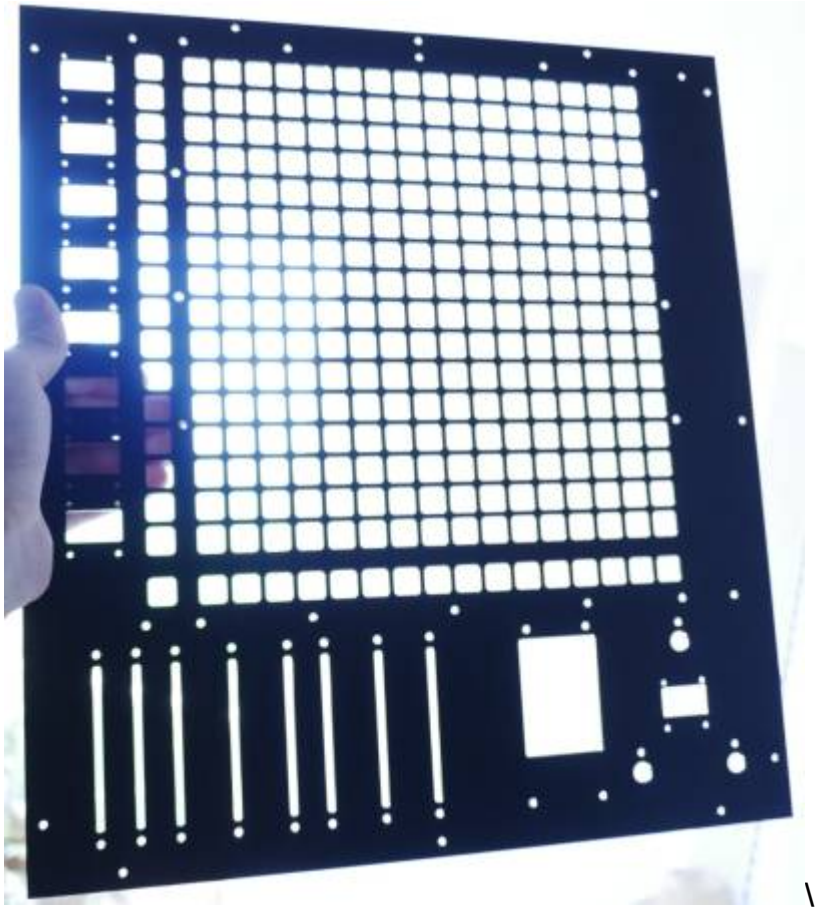
CODE, FIRMWARE

Install MIOS Studio, connect TM4 via USB, and Start the STUDIO

1. Upload MIOS BOOTLOADER
2. (only needet for Virgin Machines) type following commands into the MIOS-TERMINAL:

- set lcd_type GLCD_SSD1306_ROTATED
- set lcd_num_x 9
- set lcd_num_y 1
- set lcd_width 128
- set lcd_height 64
- store

3. (for Version Updates) Unzip the TM4-Firmware, and Upload the TM4.hex
4. Unconnect USB & Connect the USB again — finished.
5. If the Machine is not detected by mios studio, and you already checked the usb-connections, the device or the code is broken, for that on the backside of TM4 is a switch, please set it to “bLOAD”, now you can upload new & unbroken codes, dont forget to set it to “normal” back again - after upload new code - else the APP will not boot…
===== BUILD ===== ==== BOM, Components, PCBs ==== * BLM16x16x, not longer produced anymore…
*** CORE32 STM32F4**
*** 2x Midi IO * DINX4 * 8x 10K Lin, Faders * 6x Fader-Knob, BLACK * 2x Fader-Knob, WHITE * 9x Switches * 3x Encoder * 9x OLED-Displays 128x64px 0,96" * 108x M2 Nuts * 36x M2 Screws * 20x Crimpable connector, 2x5 Pole * 5x Crimpable connector, 2x8 Pole * 1x 26Pole Wire * 1x Boot-Switch for Bootload-Mod * 3x Encoder Knob * Full Sized SD-CARD, which is not Hi-Capacity, eg take 4 or 8GB Cards!**
*** 2x Wood: 15 x 400 x 39mm, or > 16 x 400 x 39mm (39mm is minimal, i took 40mm…) * 1x Wood: 15 x 335 x 39mm, or > 16 x 333 x 39mm (39mm is minimal, i took 40mm…) * 3mm Alu Plates for Ground and Backpanel (you cut and drill it by your own) * 3mm Alu Frontpanel, CNC-machined (See DXF-File for more info) ====Pictured Doku====**
BLM16x16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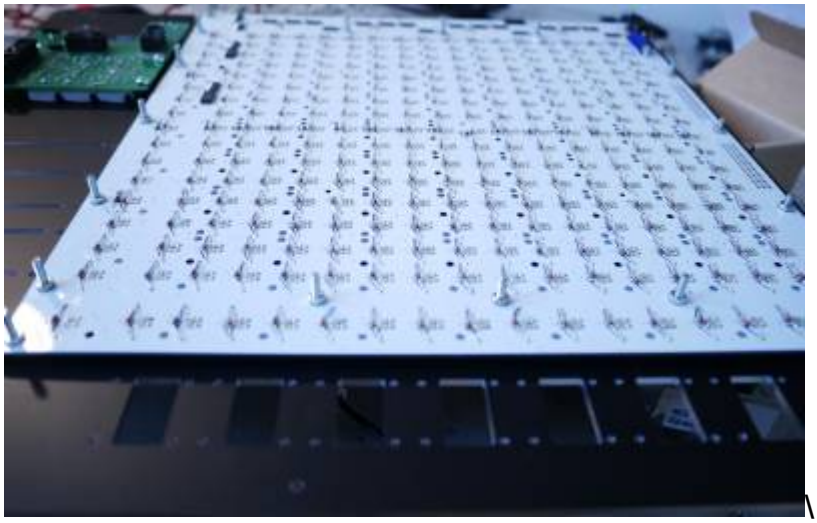
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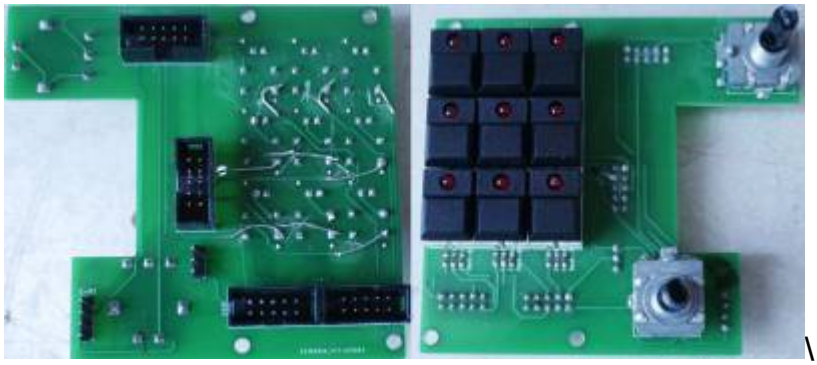
Code-Block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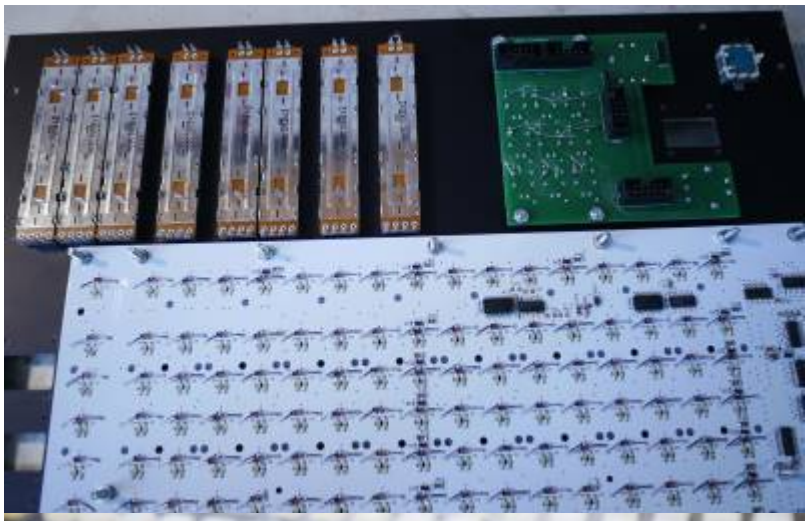
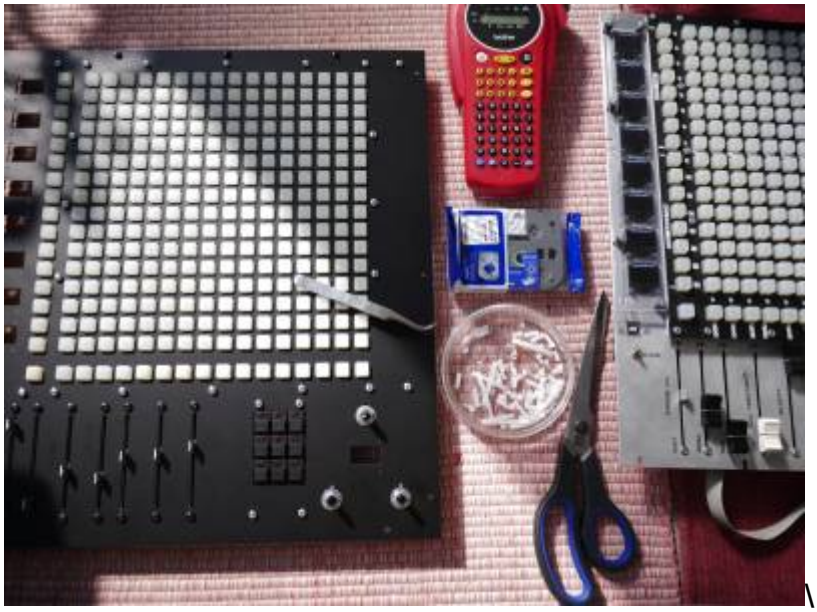


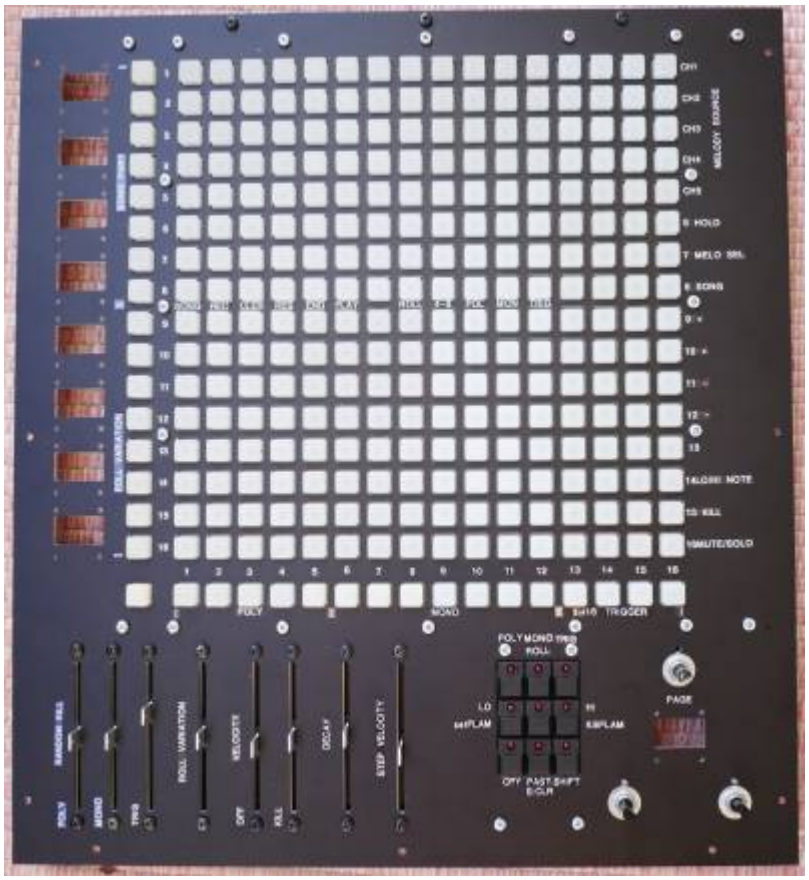


Labels:

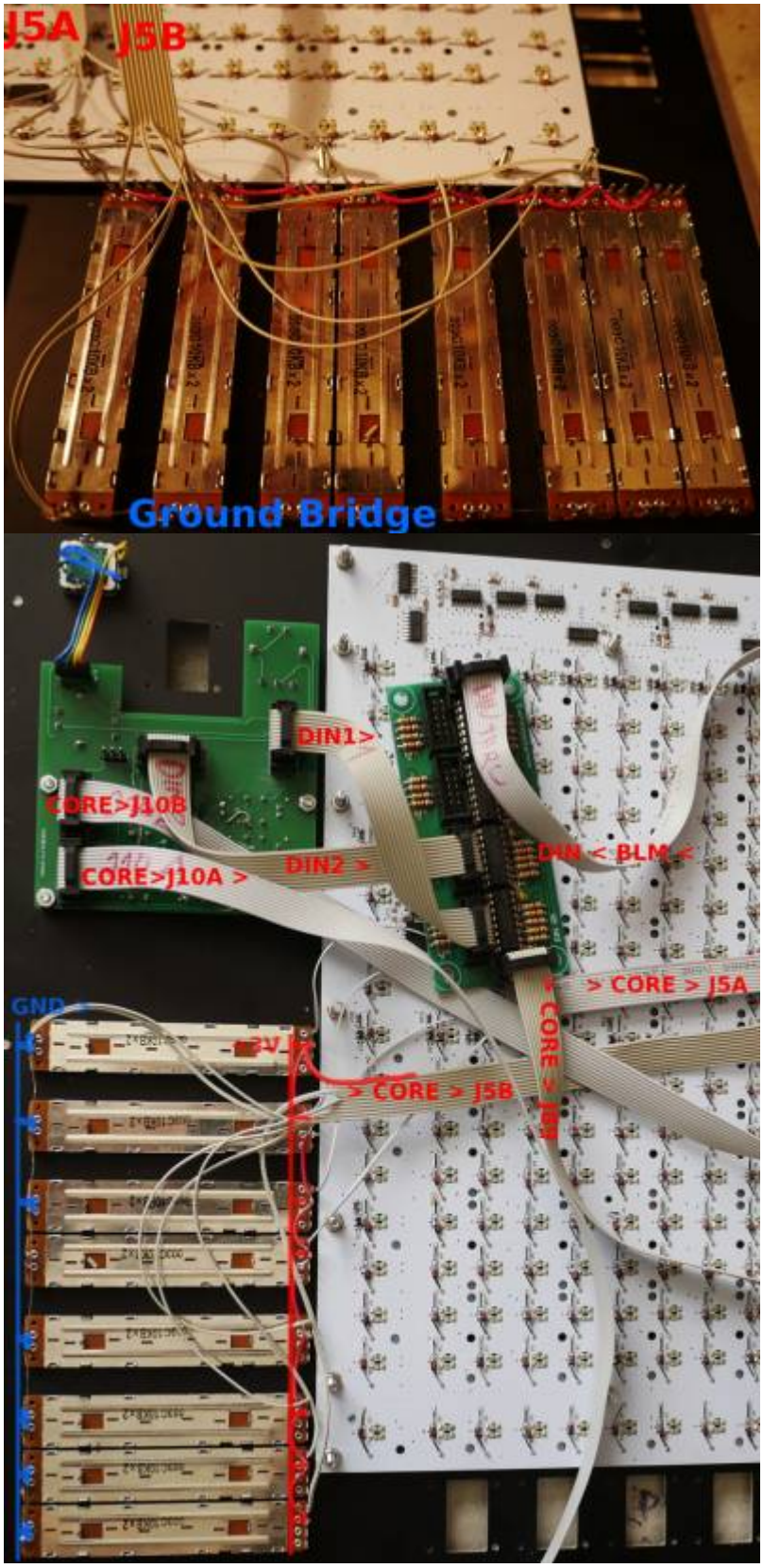








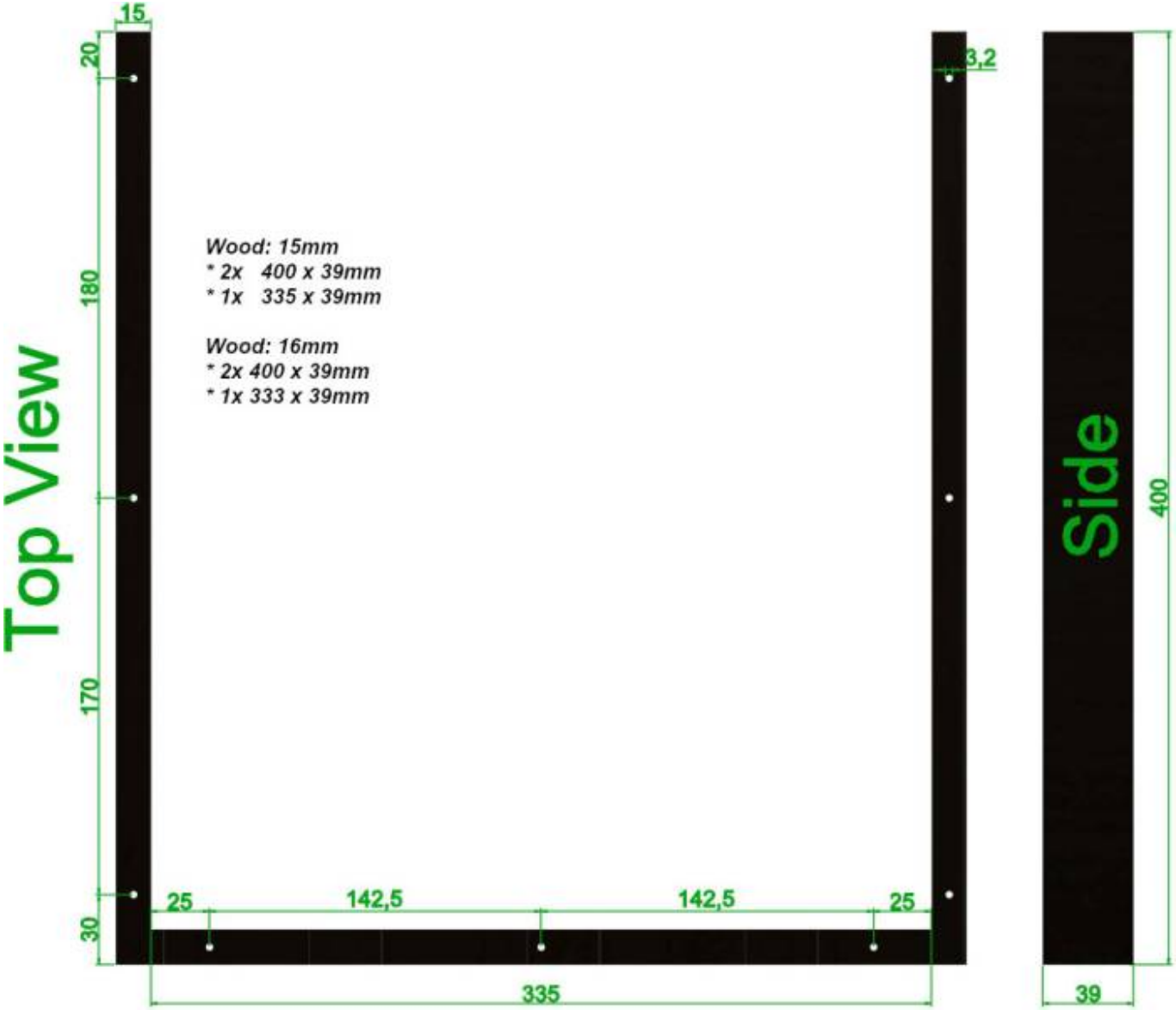
Wires:


J5A
J5B
Ground Bridge
DIN1>
CORE>J10B
DIN2 >
CORE>J10A >
DIN < BLM <
> CORE > J5A
GND
> CORE > J5B

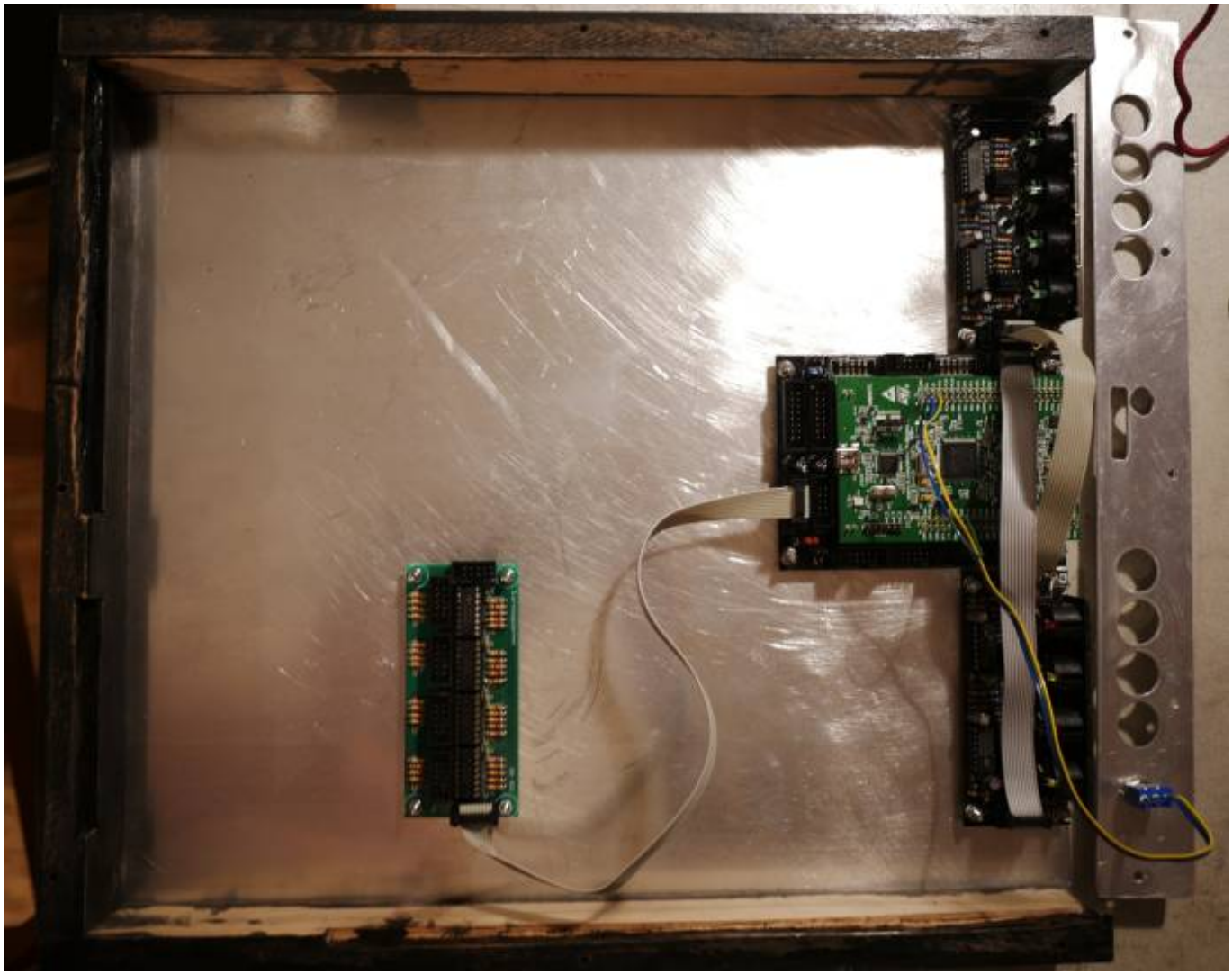


Wood-Elements:

15mm “hard-Wood”, i use BEECH, let it cut by your local hardwarestore…







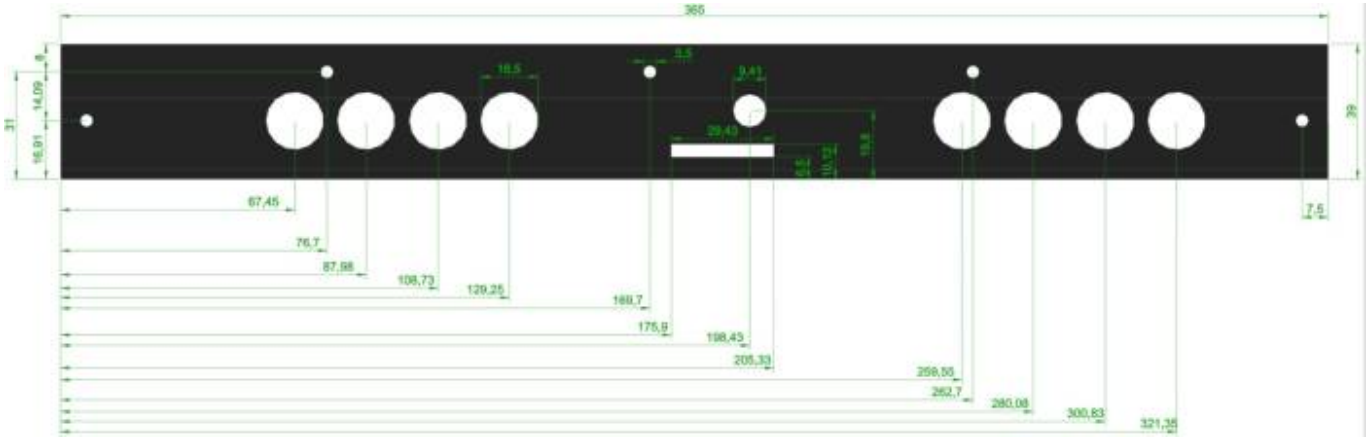
Screws:

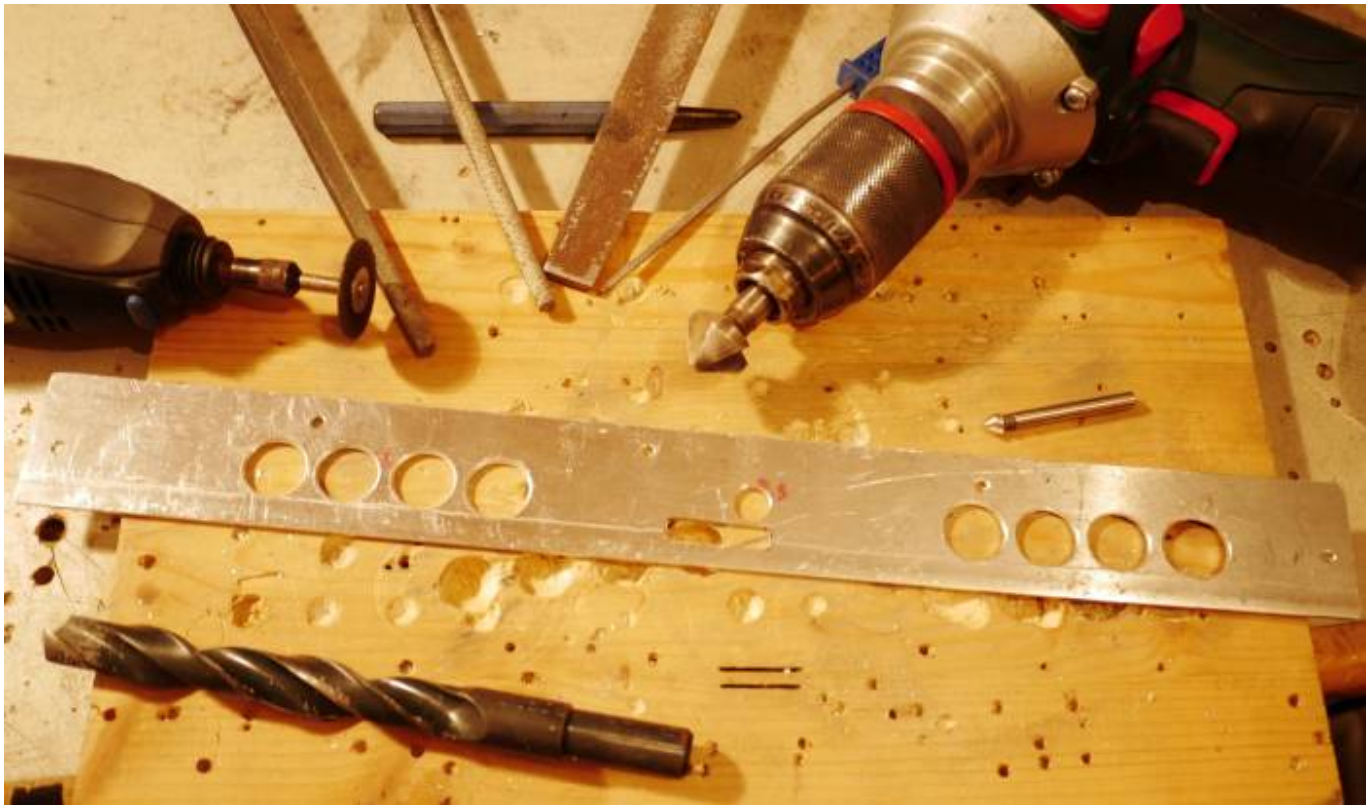

in/mm
OFF
ON
ZERO



DIY-Back-Panel:

3mm Aluminium Plate





===== Features ===== Short spoken:
*** 16xdrumtriggers > Trigger-Routing-Matrix > Drum-Syntesizers**
*** 5x Poly Melody-lines > Trigger-Routing-Matrix > Melody-Syntesizers (track 1-5)**
*** 7x Mono Melody-lines > Trigger-Routing-Matrix > Melody-Syntesizers/Pitachable Drums (track 6-12)**

Rules:
*** Drum-Trigger are Velocity Master > we dont care about the velocity of the Melodys**
*** There are Songs (ProgramChange), each Song has 8 different Trigger-Routings Presets> these are the Song-Parts**
*** Each Song has 4 StepSequencer-Variants (Rythms)**
*** Each Song can Remote up to 6 Melody Scenes (LoopA-compatible!)**
*** 256 Songs saved on SD-Card, and Load-able while playing**
*** The Tempo has to be changed by Hand or Midi, it is not saved with the song**
*** System-Settings, like Ports or MidiChannels are Hardcodet, but there will be a sys-menue in near future**
*** Triggermatrix midi-outs are connected to all synths, so it manage the program-change also**
*** 16x Trigger-OUTs with fixed Notes, on one midichannel - to connect Drum-Synths, Drum-Samplers**
*** 5x Polyphonic Melody-Retrigger-OUTs on 5 MidiChannels - to connect MelodySynths to it**
*** 7x Monophonic Melody-Retrigger-OUTs on 7 MidiChannels - to connect Monophonic Synths like pitchable Drums or Bass-Synths** Fix Me! **- i think 1-5 is poly the rest is mono!**
*** All 16 Trigger & ReTrigger-OUTs share the same Routing and Channelstrip UI (Mute, Solo, Roll…)**
*** Trigger, Poly, Mono-OUTs can be controlled seperatly by >** Random-Kill **&** Velocity-OFFSet
*** 5×16 Melody-Input-Matrix - Route & Mix Melody Inputs to the 16 Melody-Retrigger-Outs (saved in Song)**

*** 16x Melody-Input-Matrix-Hold-Buttons - hold the last Note, save it in the Patch - usefull when pitch drums.**

the Matrix has also a Trigger-Sequencer built in, the Melodys have to come from anywhere else, but @ the end, they have to be plugged into the matrix…
Trigger-sequencer, a few facts:
*** is a Drum-Step-Sequencer**
*** 256 Steps in total**
*** 32 th fixed rate**
*** 3,4,5,7,11,13/4 tact**
*** minimal LoopSection is 16steps = 1 Page, there are 16 pages to chain**
*** intro LoopSection, from step 0 until to the "minimal LoopSection"- is played once, then it loops the normal LoopSection**
*** The sequencer is made to give a static NoteStream, the Song-Structure is done LIVE by the TriggerMatrix-ROUTER**
*** Full Velocity control, visible with 3 different colours, Velocity Set via FADER**
*** Free programmable Swing to each Step, with 2 different swing Length-sets, which are controlled live with encoder**
*** copy, paste, erase of pages**
*** copy, paste, erase of rows**
*** fixed forward play direction**
===== Community users working on it ===== * Phatline** = Programming, Documentation, Hardware-Prototype, Testing, Jamin…

- Maxim Anokhin - as first User of TM4 - Serial Nr.1

Getting Involved ?

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

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