Assembly of the RE-303 case kit

Before assembly please check wether all of these parts were included in the plastic bag:

10 x   TX9   M3x 6mm roundhead screw
6 x   TX9   M3x 5mm countersunk screw
2 x   TX8   M2,5x 5mm countersunk screw
1 x   TX8   M2,5x 4mm roundhead screw
8 x   TX9 / phillips 2,9 x 19mm tapping screw (silver or black, depending on version)
6 x   M3 nut, stainless steel
1 x   L-bracket with 3,2mm hole and M3 thread
1 x   3.2mm lock washers, stainless steel
3 x   3.2mm washer, plastic
4 x   M3 nut, plastic
8 x   M3x 8mm spacer, nylon
3 x   M3x 18mm spacer, nylon
1 x   M3 threaded block, nickel-plated brass
2 x   M2,5 thread blocks, one with a 3,5mm hole for attachment to the front panel
1 x   slide switch with appropriate TX6 M2 countersunk screws
2 x   *electrolytic capacitor, 1µF/63V for C14 and C15 on the mainboard of the RE-303 (back side)*
4 x   self-adhesive rubber feet
1 x   M2,5 x 23mm spacer, nylon. used as a support for the switchboard. (not in the image below)

The Casing

2 x   silver or black eloxed side panels, 134mm
1 x   baseplate
1 x   front plate
1 x   forward panel
1 x   backward panel

Required Tools:

Pliers, Torx 6, Torx 8 and Torx 9 screwdrivers (also a Phillips Screwdriver if you have black case kit)

Additional Components:
2x standard MIDI / DIN5 jacks (MAB5 S) - are included in this kit!

Caution: With a closer look you'll notice that the M3 threaded block has a sagging on one side.
This sagging **MUST** point to the back while the block is screwed on!

The two M2,5 threaded blocks have a little differnce between the two of them: one has a 3,5mm hole instead of the usual thread. That block is to be attached to the front plate!

If your RE-303 Kit has NOT been soldered yet, you should NOW take a look at the last page of this instruction sheet!

Assembly:

First, check wether the baseplate is positioned correctly: The marked drilling should be on it's left half.
(Please remove the protection film from the other side)
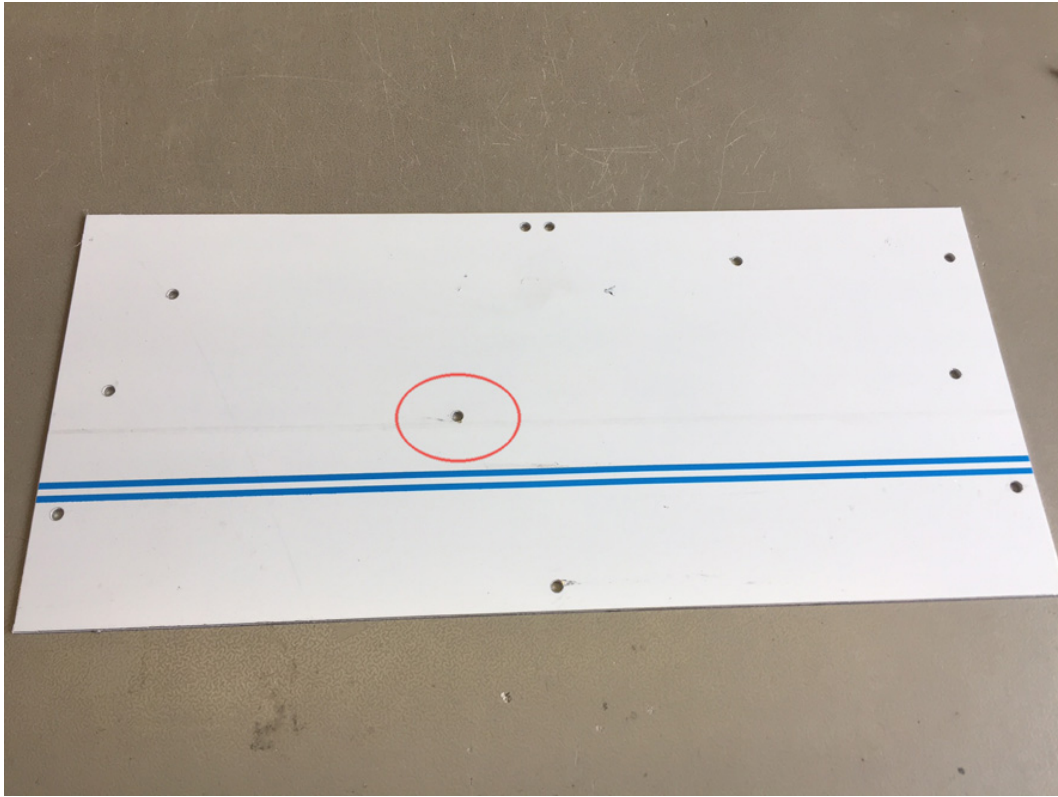
Carefully remove about 5-6mm of the protection film on each of the short edges on the inner side.
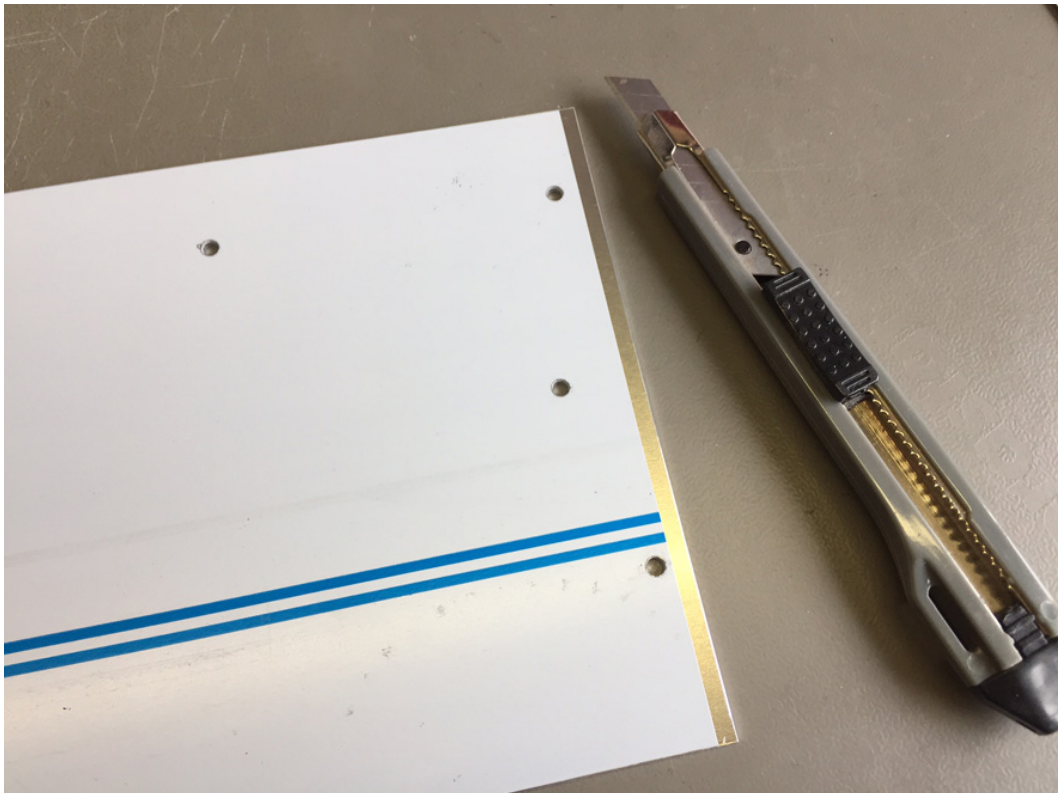
First you need to screw the **M3x 8mm** nylon spacers to the baseplate using the M3 x 6mm round-head screws. Then attach the M3 threaded block using two more M3 round-head screws. Don't attach the threaded block too tightly yet, **it should still be slightly moveable!**

Finally, attach the M2,5 threaded block: This one has to be attached with a M2,5 x 4mm screw, which needs to be put into the baseplate and then screwed into the **FIRST** thread of the threaded block! Be sure to accurately align the threaded block. The **SECOND** M2,5 thread will be used later for the M2,5 x 23mm nylon spacer to support the switchboard.
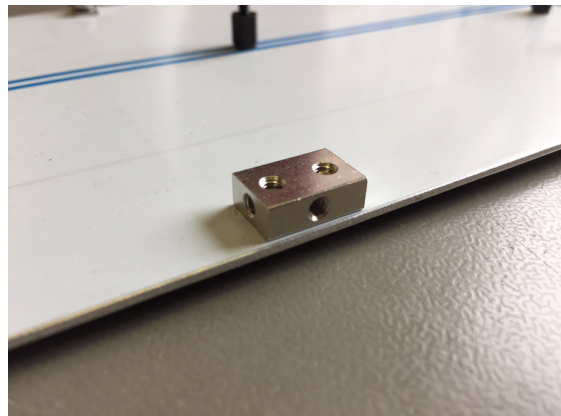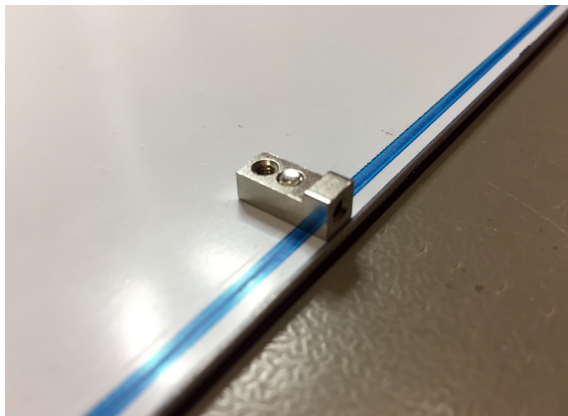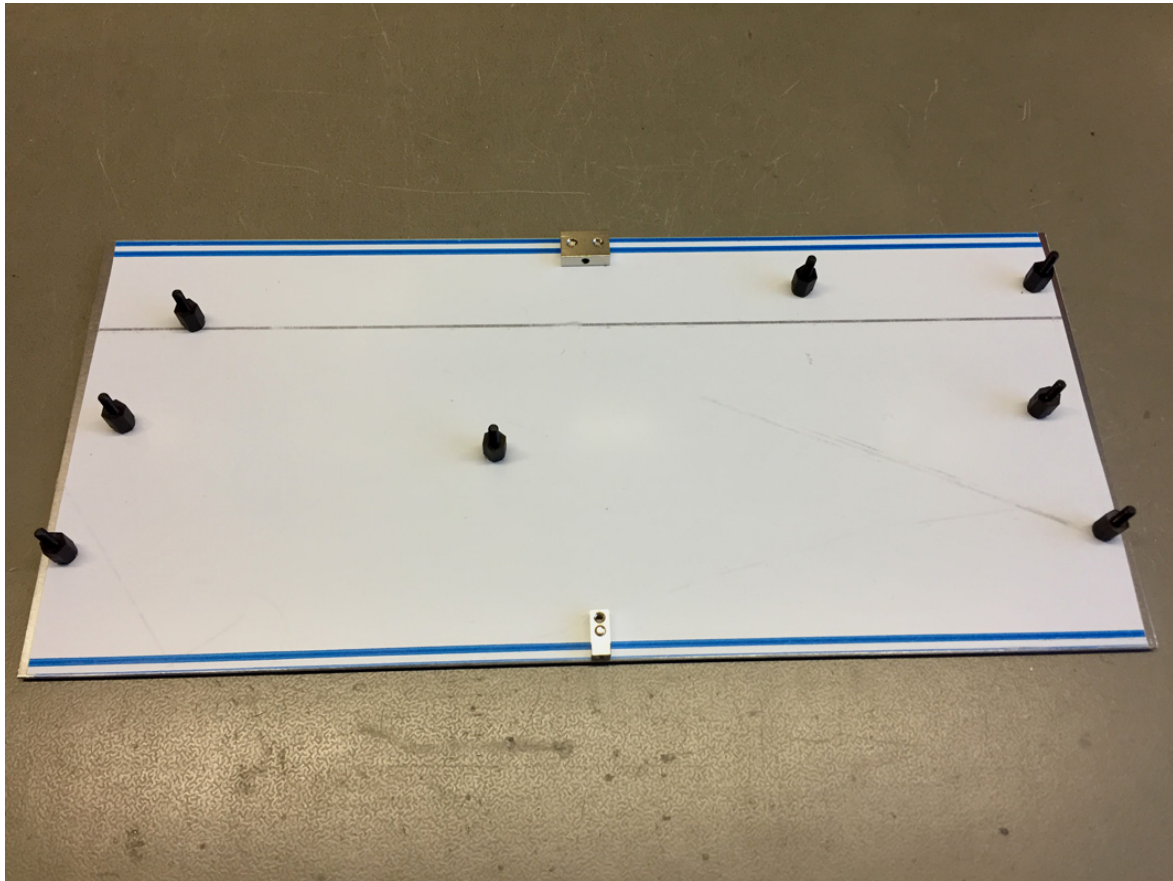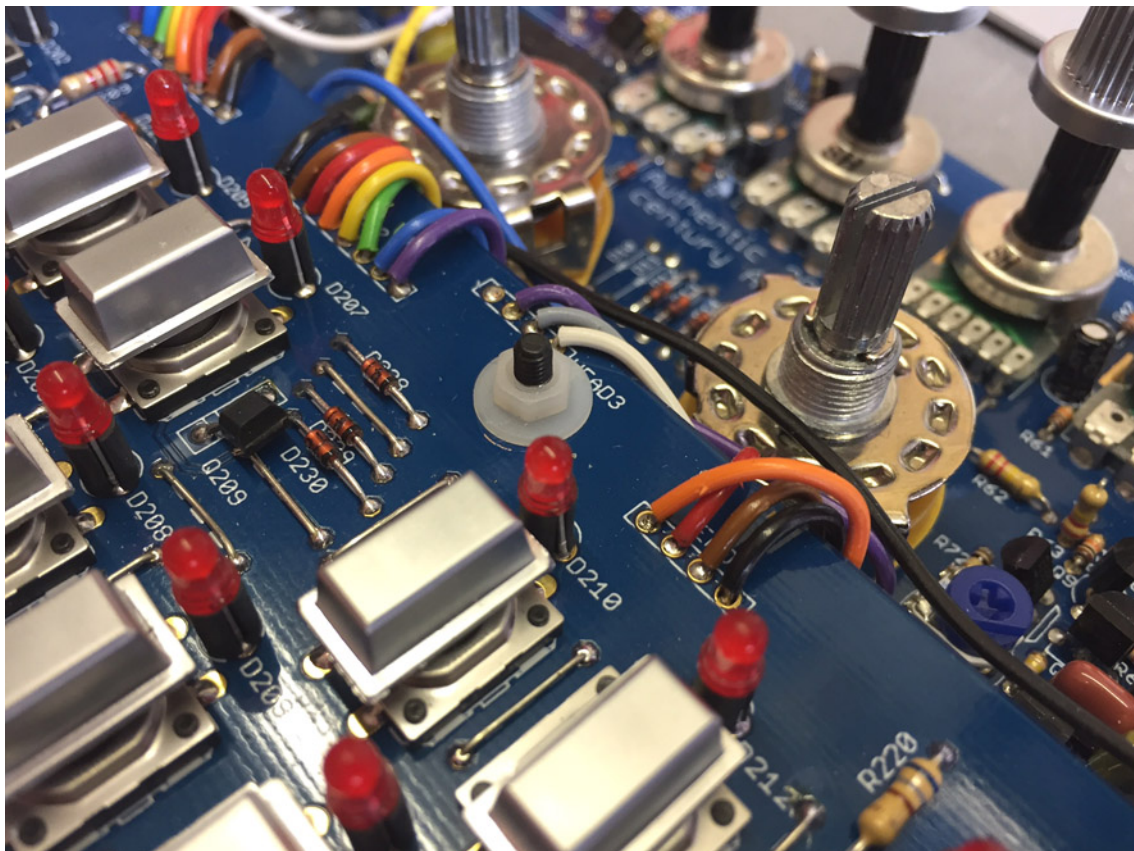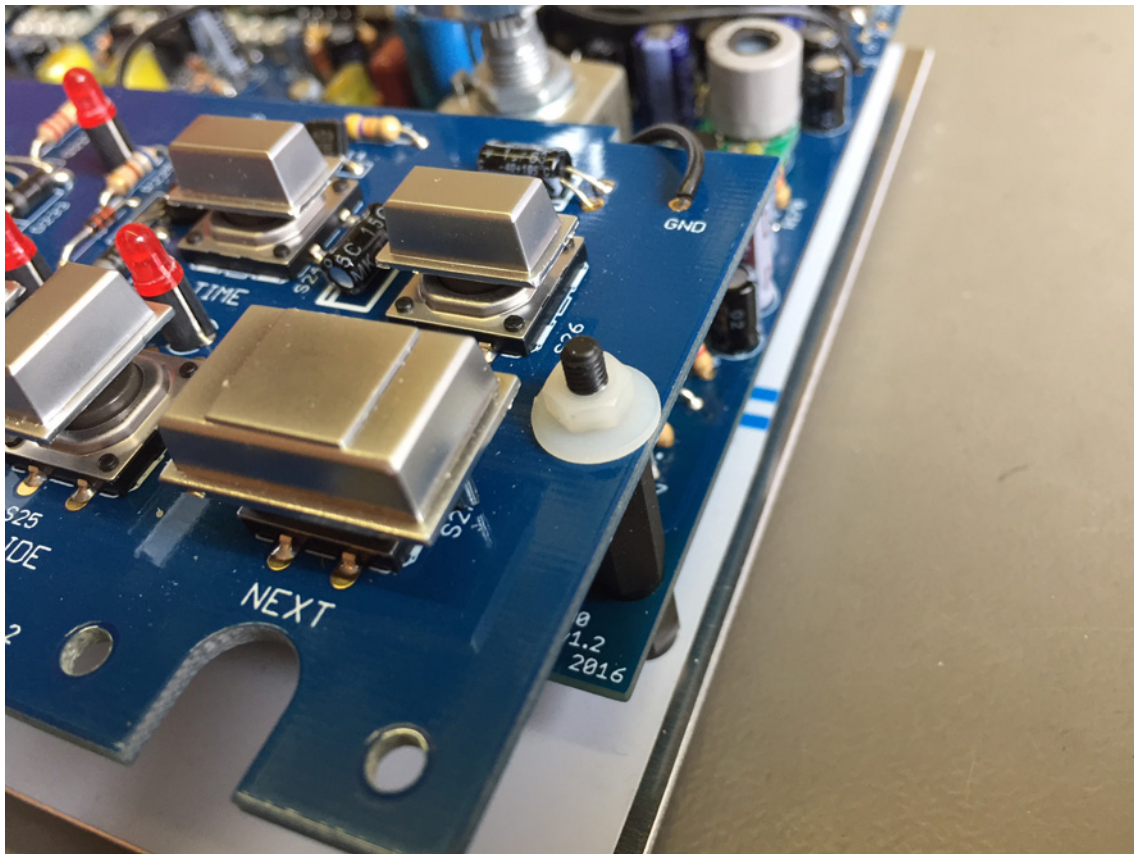
Now we can fit the electronics to the baseplate. Make sure to place the interior securely and to properly align it!
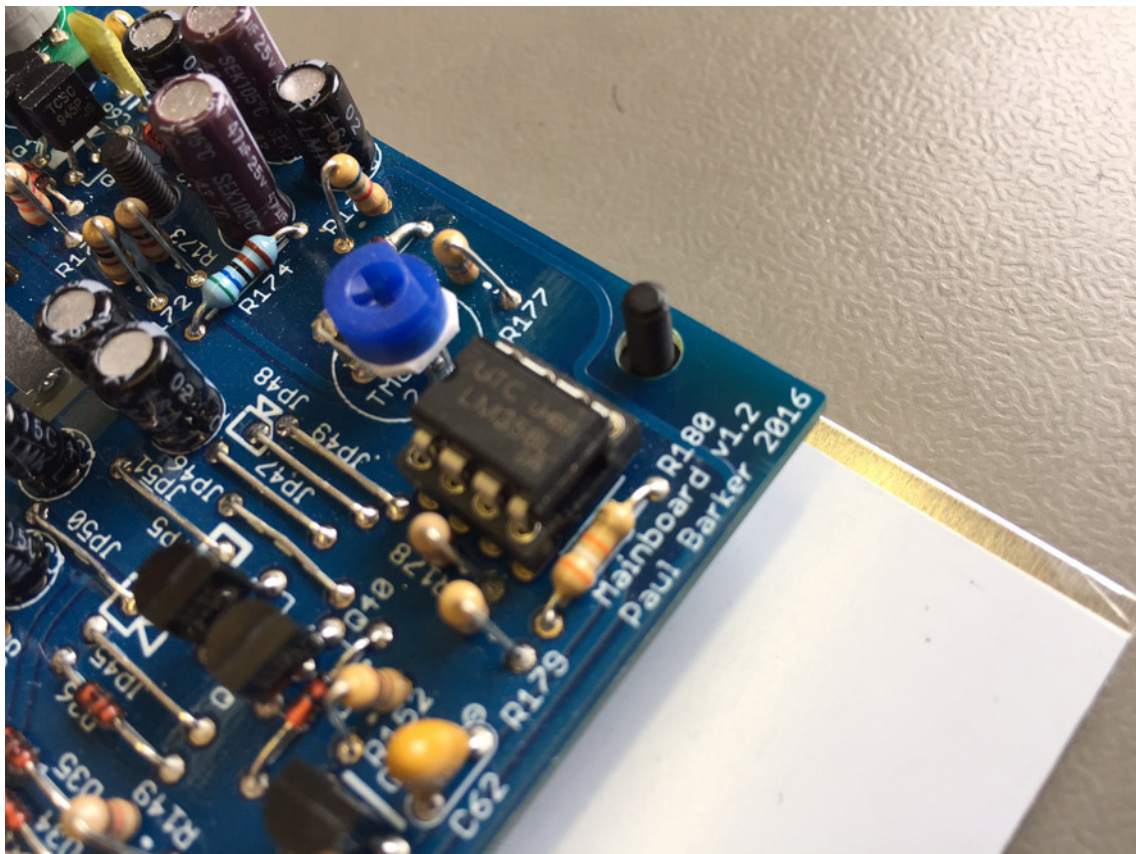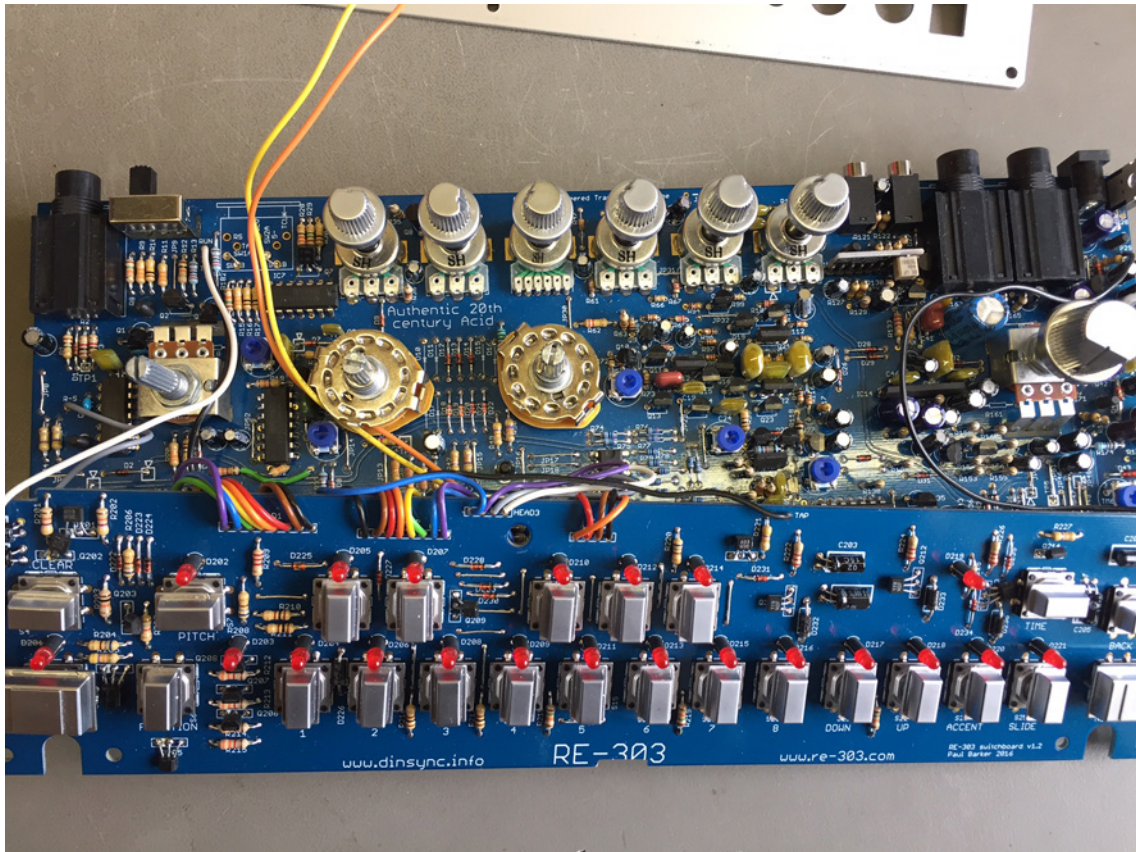
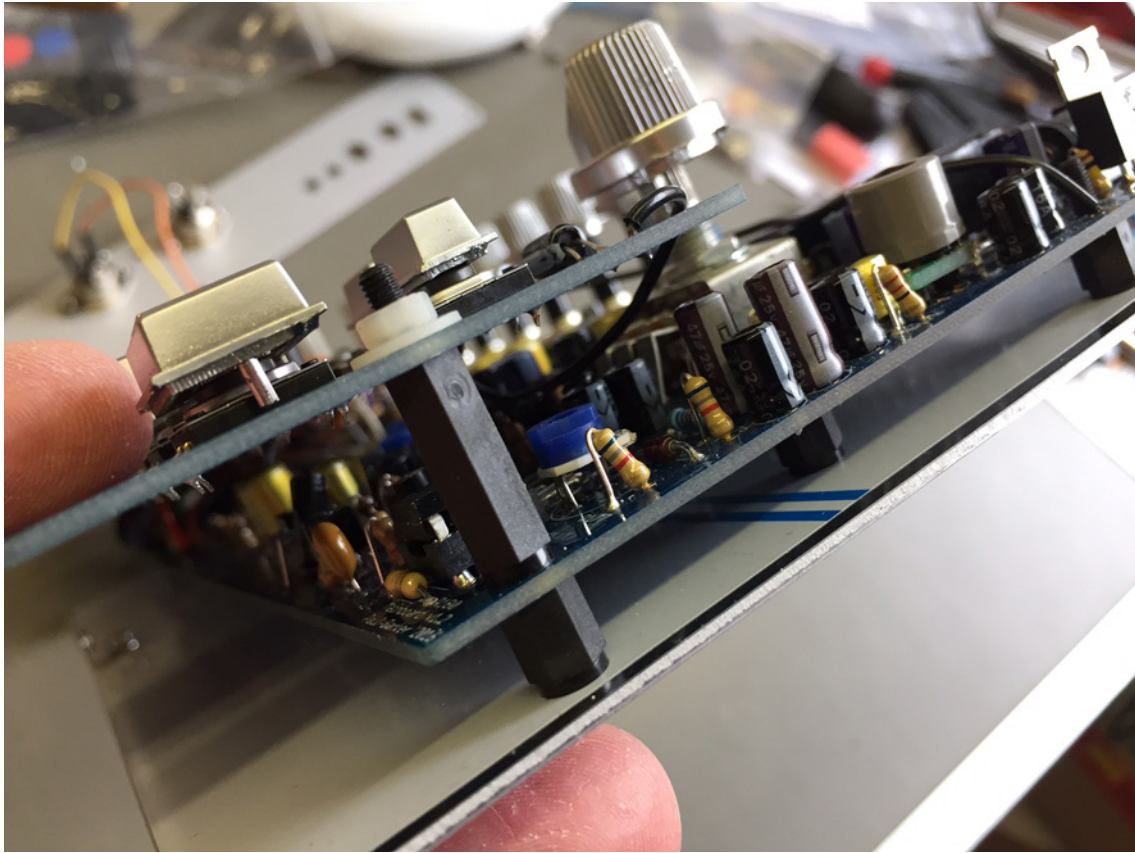Attach your M3 x 18mm nylon spacers to the forward 8mm spacers.
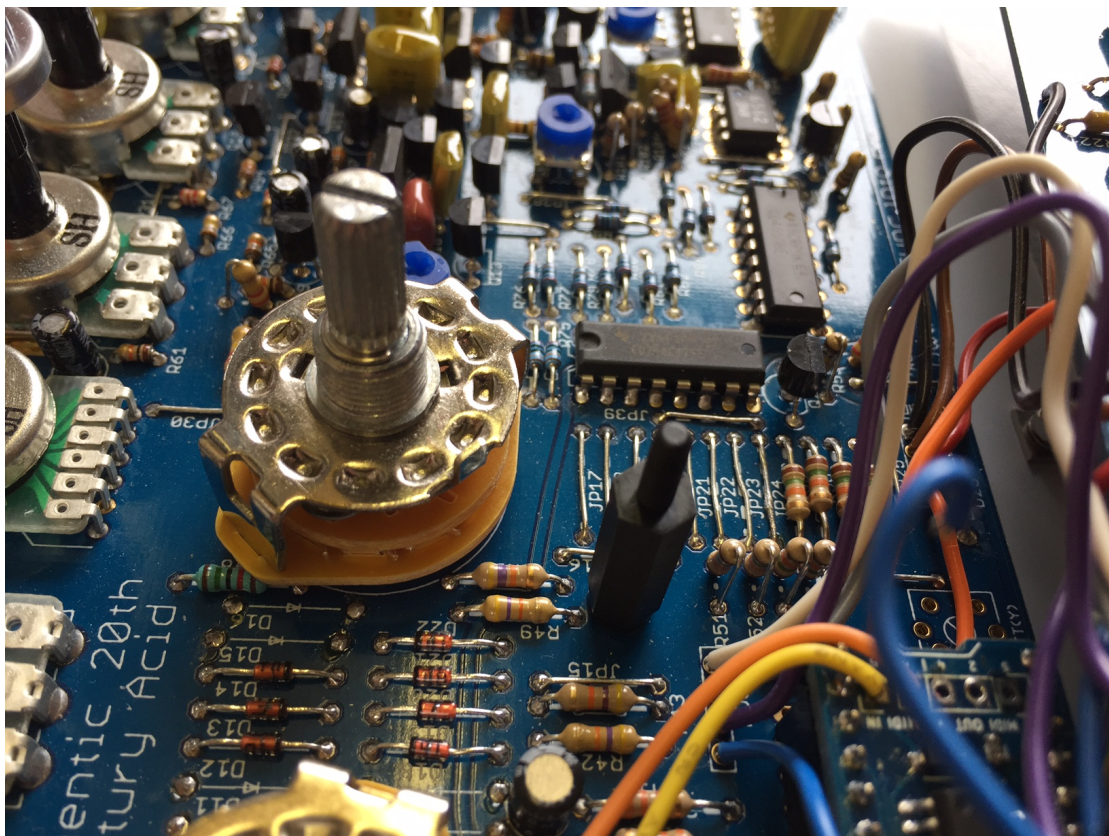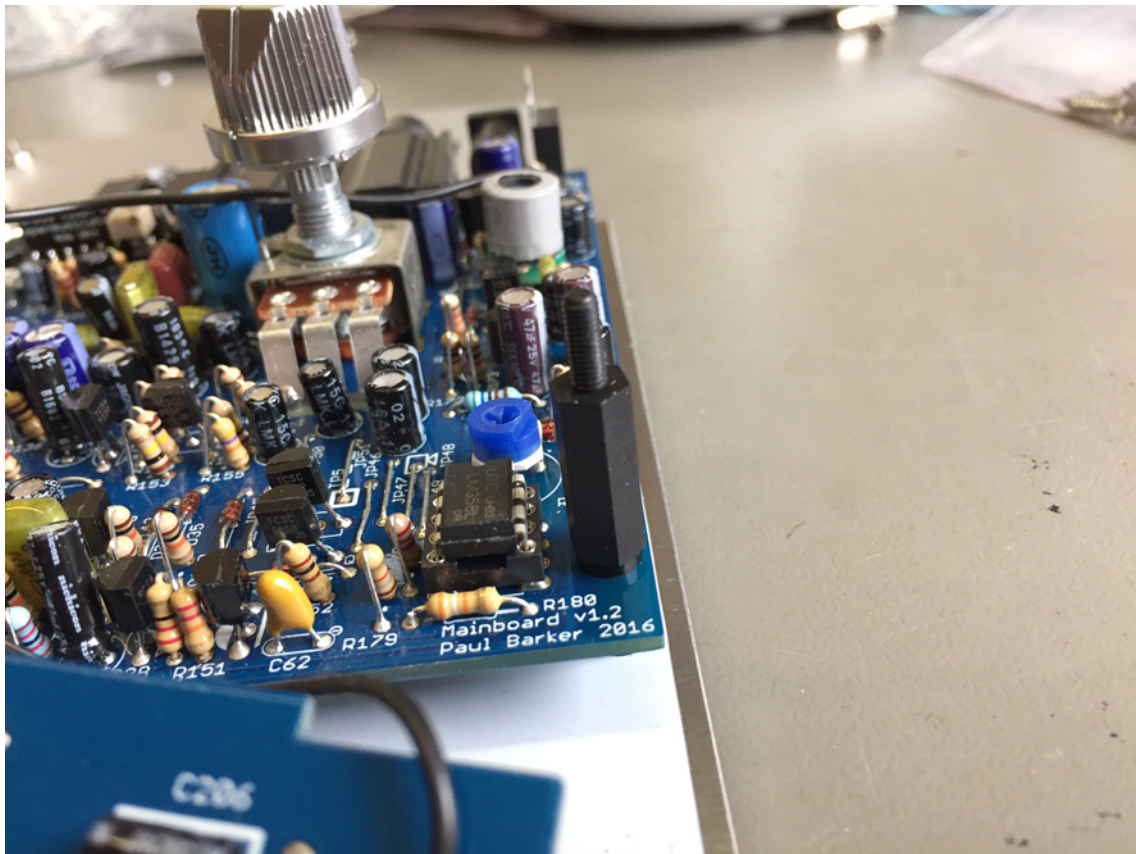
Now you can place the switchboard and attach it with the three plastic washers and three M3 plastic nuts.
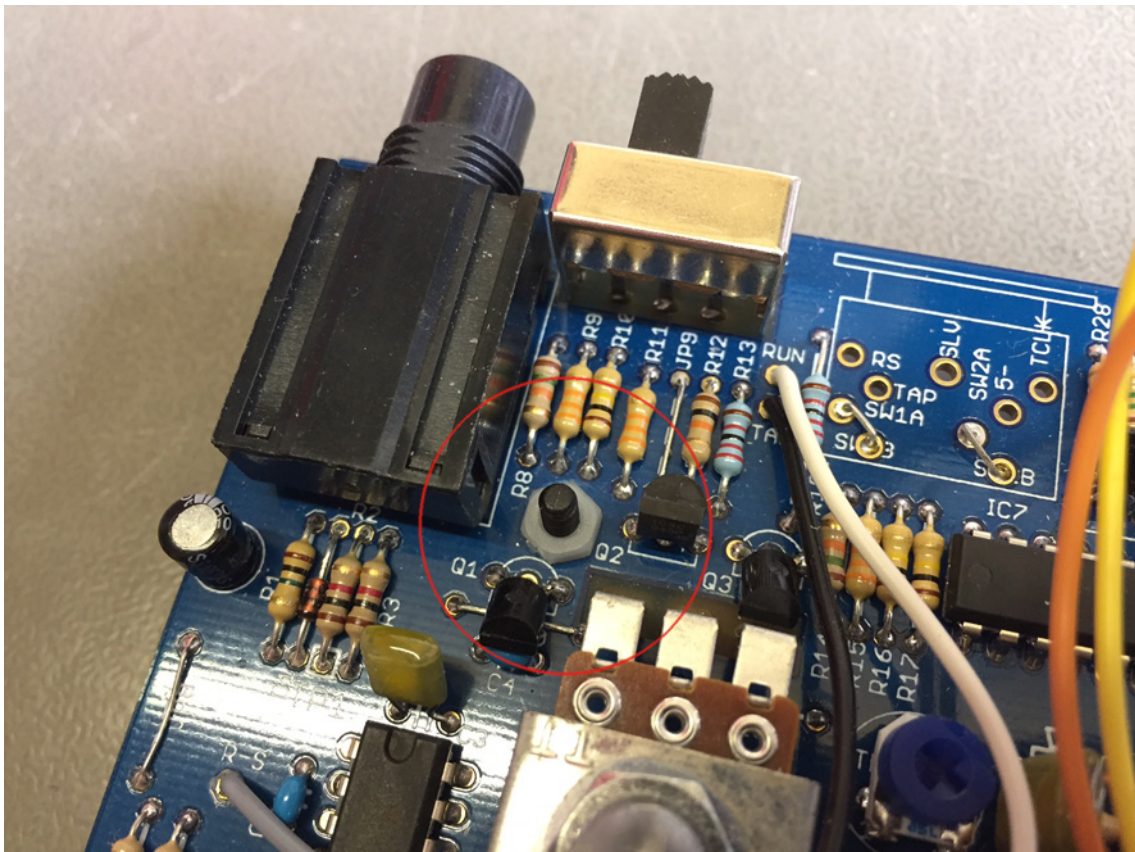

Do this by hand and be sure not to attach them too tightly. The whole switchboard should still be a bit movable.

As you can see from a side view, everything should be placed nice and parallel!

There's still one plastic M3 nut left, which is used to attach the mainboard right next to Q2.

Now it's time to put the MIDI jacks and the sync switch in place.

Use the M3x 5mm countersunk screws and M3 nuts to attach the jacks, lock-washers are **NOT** needed!

Attach the slide switch with the M2 countersunk screws. Keep the proper fit in mind with this one! Move the switch a few times to make sure it works and isn't stuck.

Now you can check the fittings for the bushings in the backward panel.

If everything fits well, it's time to attach all the cables.

The MIDI jacks should sit perfectly between the axes of the potentiometers.

There are two 1µF electrolytic capacitors, directly underneath the MIDI-OUT jack (C14 and C15)
They're located in the back between JP37 and D24.

If the two electrolytic capacitors, which are attached to the mainboard, are too big to properly fit the MIDI-OUT jack, replace them with the miniature electrolytic capacitors included in this kit.
Caution: As usual with polarized electrolytic capacitors, be sure to attach them in the right direction! **Plus & Minus!**
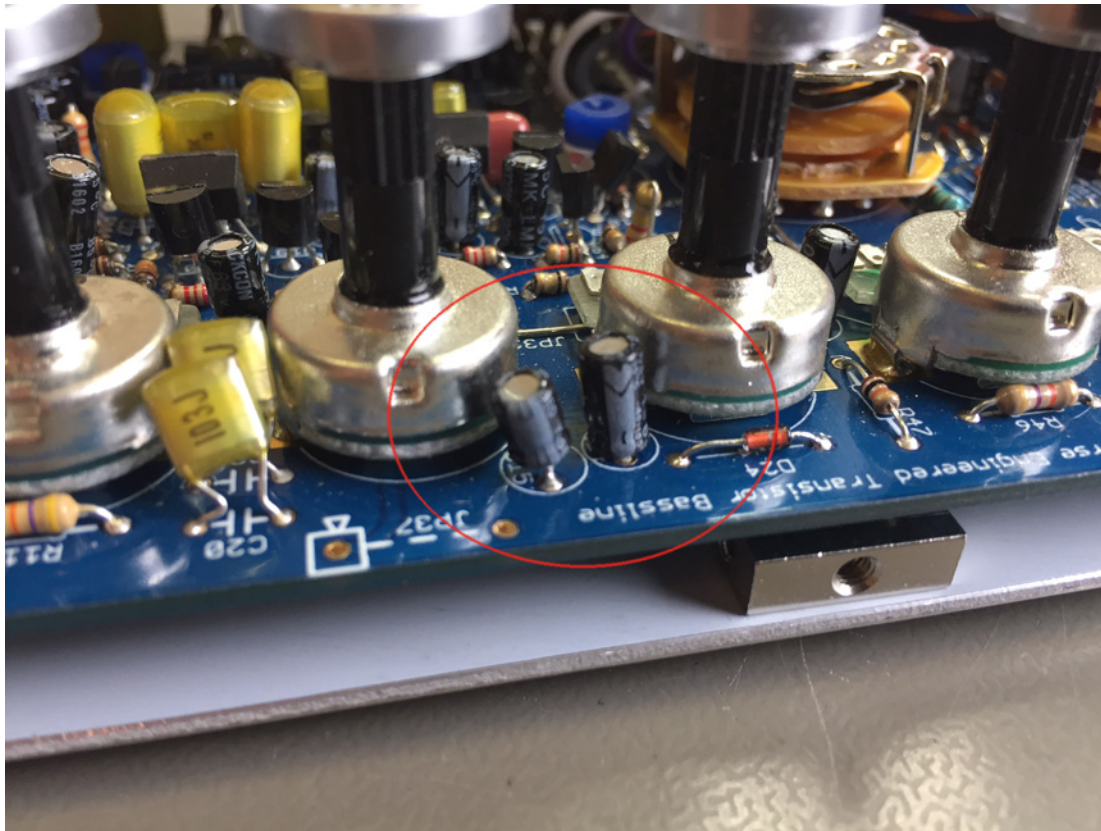

Now we'll ready the front plate: The L-angle is to be placed on the **back** of the plate with one lock washer and one M3 nut.
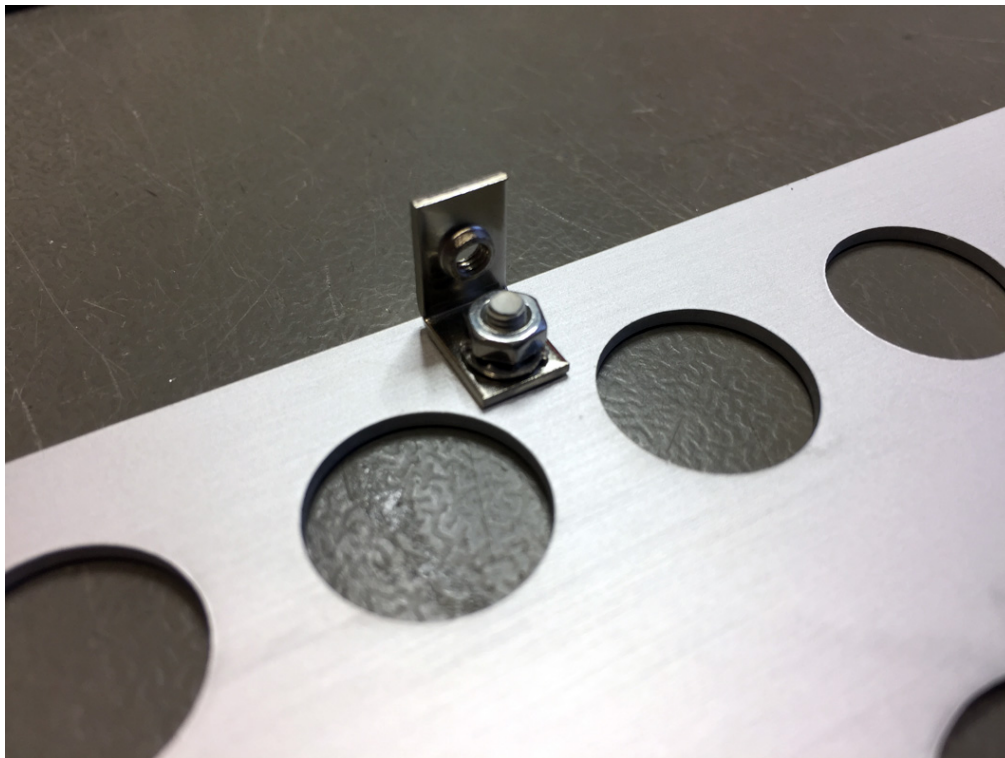
At the forward edge you'll find a use for the M2,5 threaded block with the 3,2mm drilling. Simply attach the block with a M3 female screw and align it properly. Do not break the M3 bolt while tightening the female screw! *About 1-1,5mm of the M3 bolt should still stick out.*
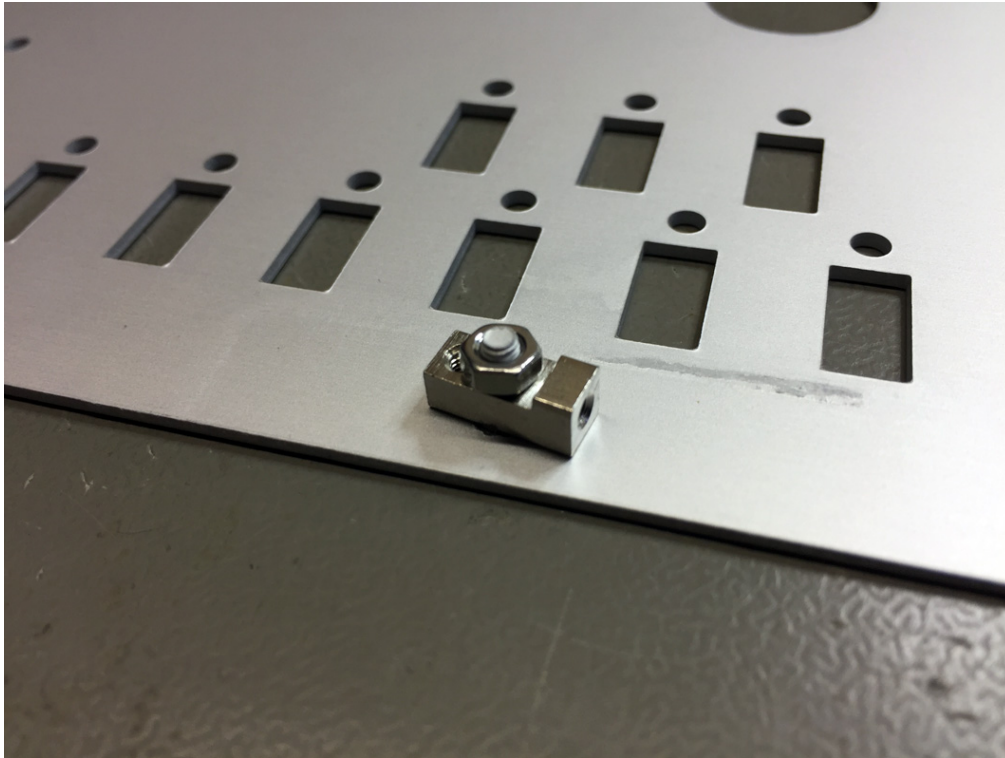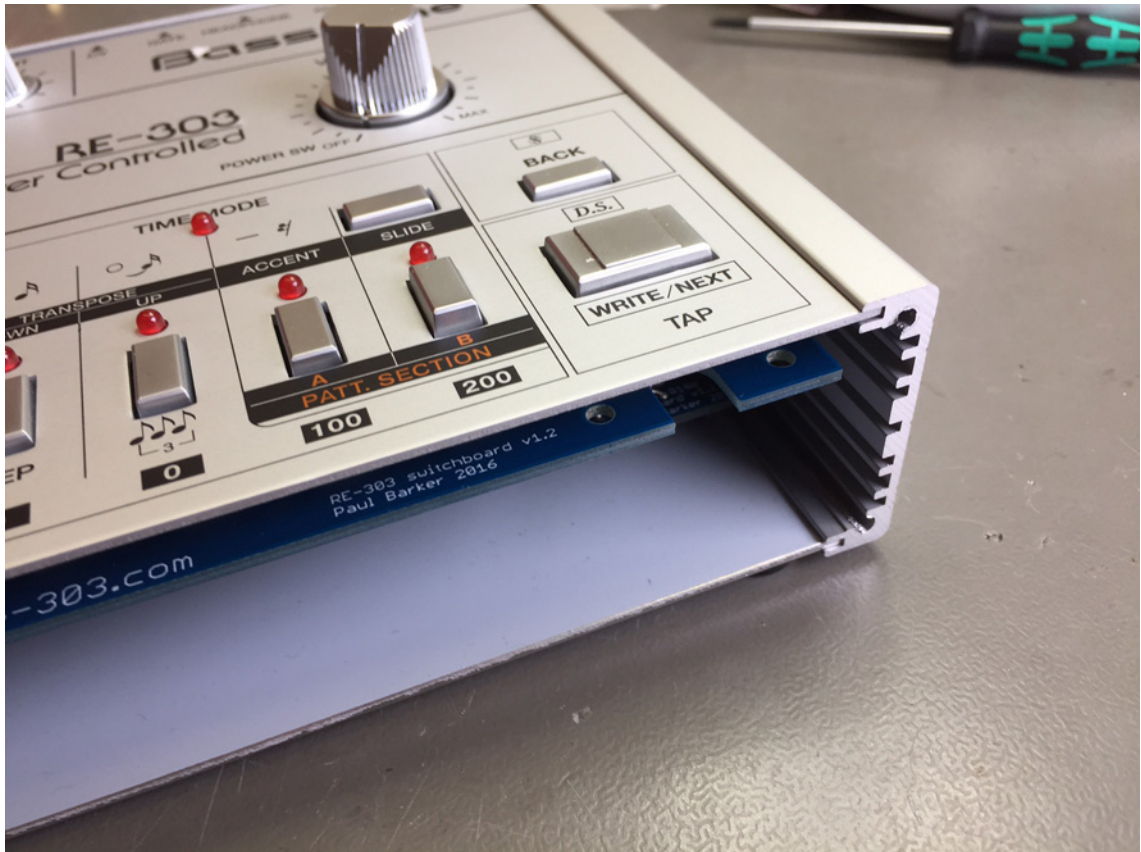

The part oft he M3 bolt, which is sticking out, needs to be filed down: File it down until the bolt sits flush with the female screw. You'll need this additional space for the switchboard!
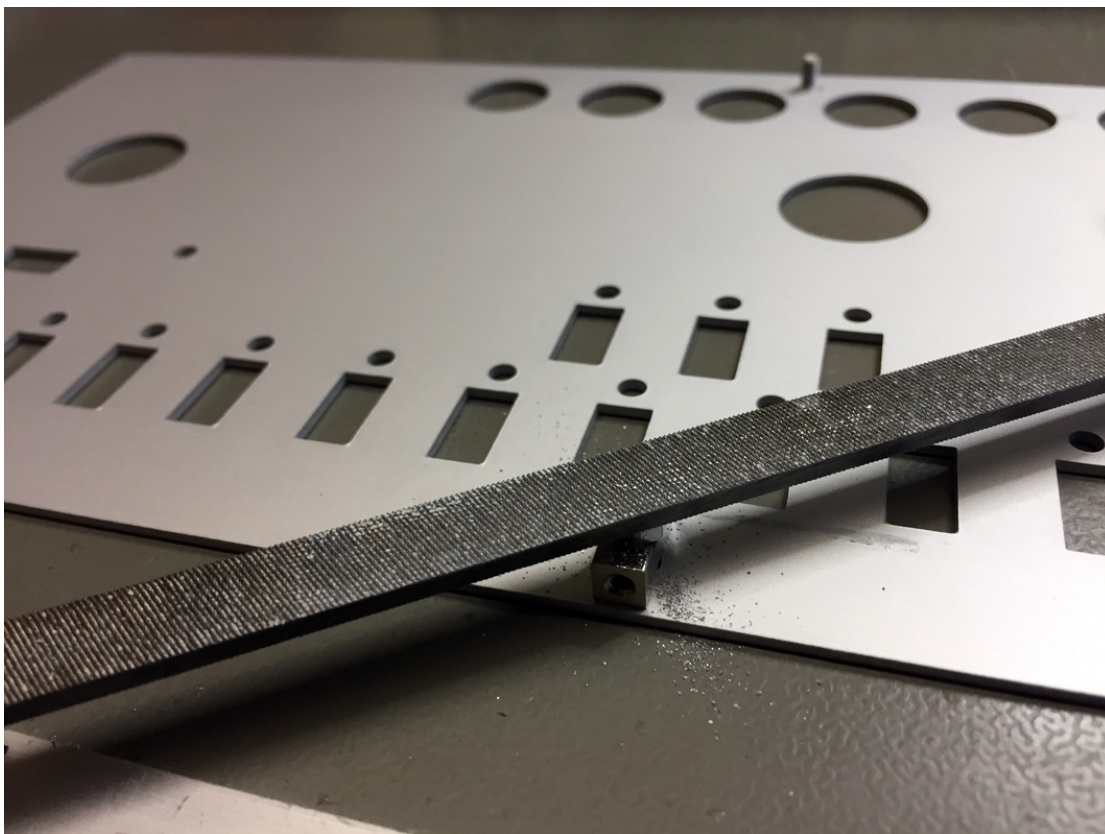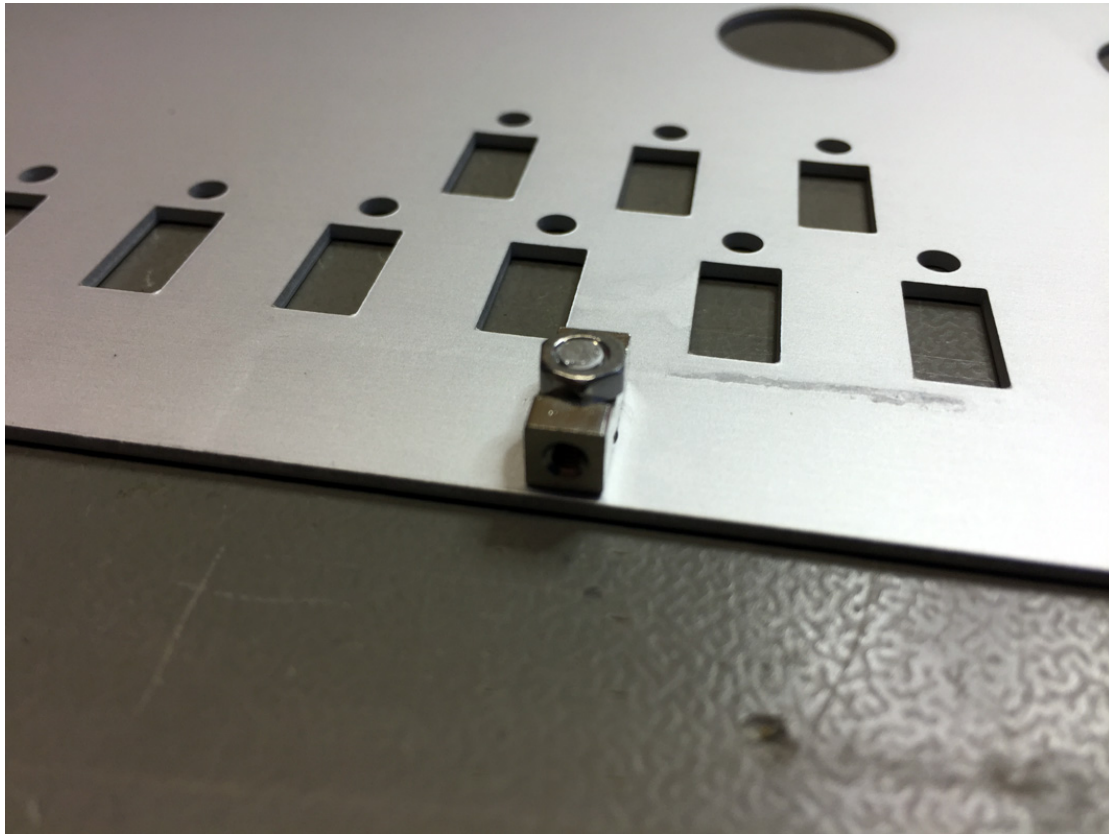
The filed off bolt **should look like this.**

Now fit the front plate and put on the side panels.

Now the 23mm stand with M2,5 thread is to be screwed to the BACKWARD connector, to support the switchboard.

If all the cable work is already done, you can screw the back panel on.

Attach the back panel with the 2,9mm x 19mm tapping screws. It is **NOT** required to drill holes into the side panels! The screws should be screwed directly into the panels!

Be cautious while screwing! Be sure to hold the screws in place so they don't accidentally scratch the back panel while being screwed in.
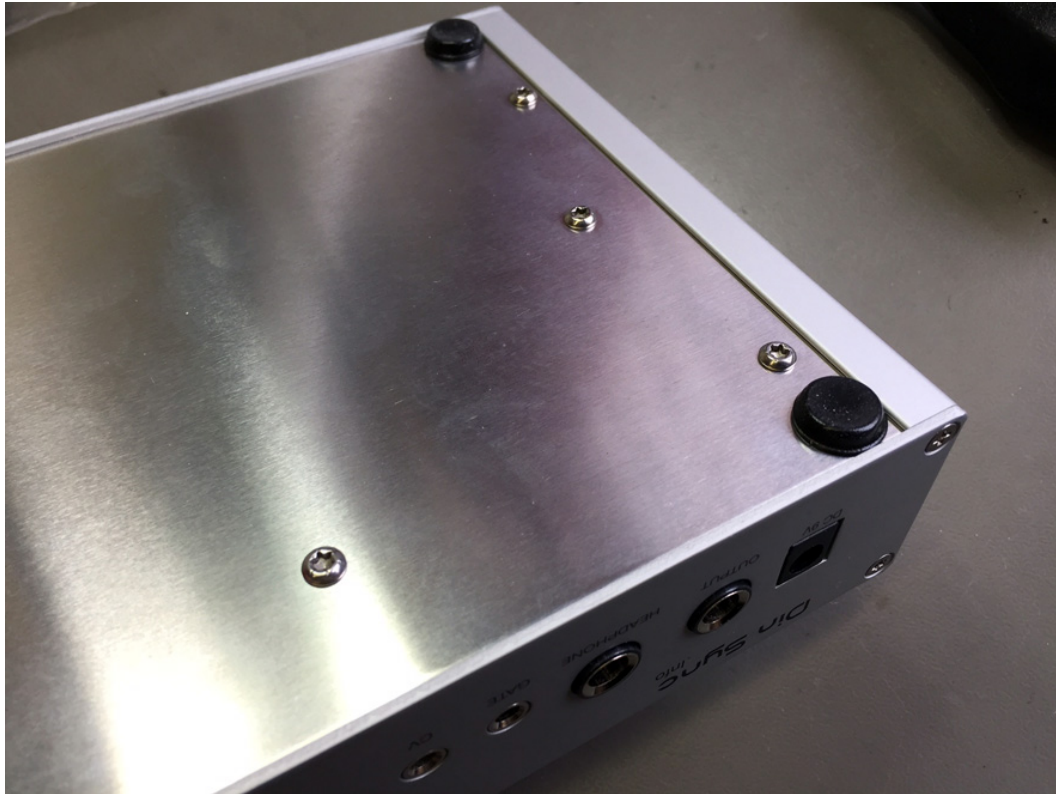
Now secure the back panel to the central attachment points with M3x 5mm counter-sunk screws. **Not too tightly!!**

Now you can simply fit the front panel and secure it with screws.

Lastly check if all your screws sit properly in their threads and then attach the rubber feet.


So yeah, we're pretty much done :-)
Attach your knobs and check for good alignment of everything.
In case your knobs are not good centered, you can slightly loosen the roundhead screws on the bottom plate to move the entire mainboard and once it's good fix it again.


A Few Additional Tips:

While I built my frist few prototypes, I used the RE-303 CPU from Sonic-Potions. (amazing product btw!)
Because I used rather high spacers, I had to remove the right angle connector from the CPU board and had to solder the MIDI cables directly onto the board.
The below image shows my first prototype, which already was already pretty cramped. (Therefore the right angle connector has already been removed in that image)
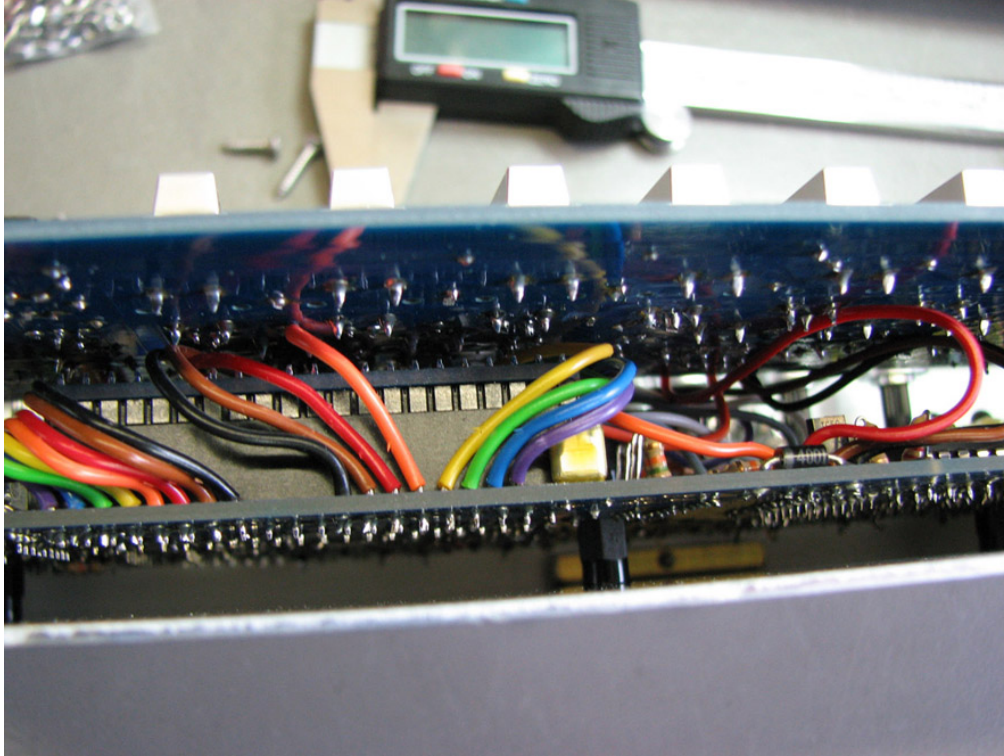

There are two possible solutions: you either use standard IC sockets or you solder the CPU directly to the mainboard.
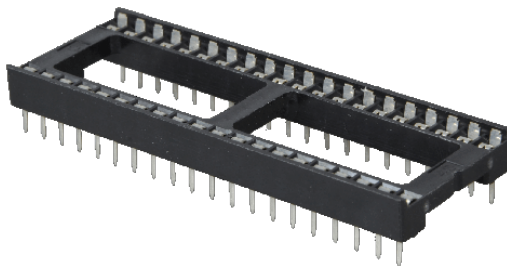
The fit of the switchboard, the potentiometers and the bushings depends on the level of precision in the assembly process. The more precisely everything is placed, the better everything will fit together. Hence it is important to keep your calm and to check things twice if necessary during construction, which will save quite a lot of time in the long run.

Of course the black anodized side rails for the black case have silver shining cutting edges.
You should paint them with a black Edding pen or any other waterproof pen, so you won't see any silver later.
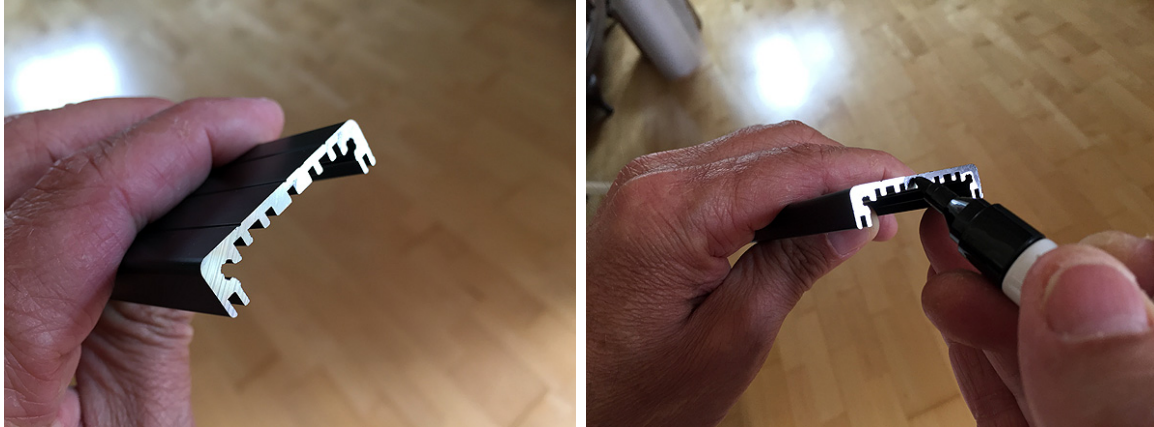
**Unfortunately I was not able to find black tapping screws with TX9 head, so the kits come with phillips head screws.
Fortunately you won't really see the philips head once they're in the case.**

Thank you folks and forgive me bad grammar :-)
I'm a stupid german you know...

Sincerely,
Christian Hartig aka SubStyler