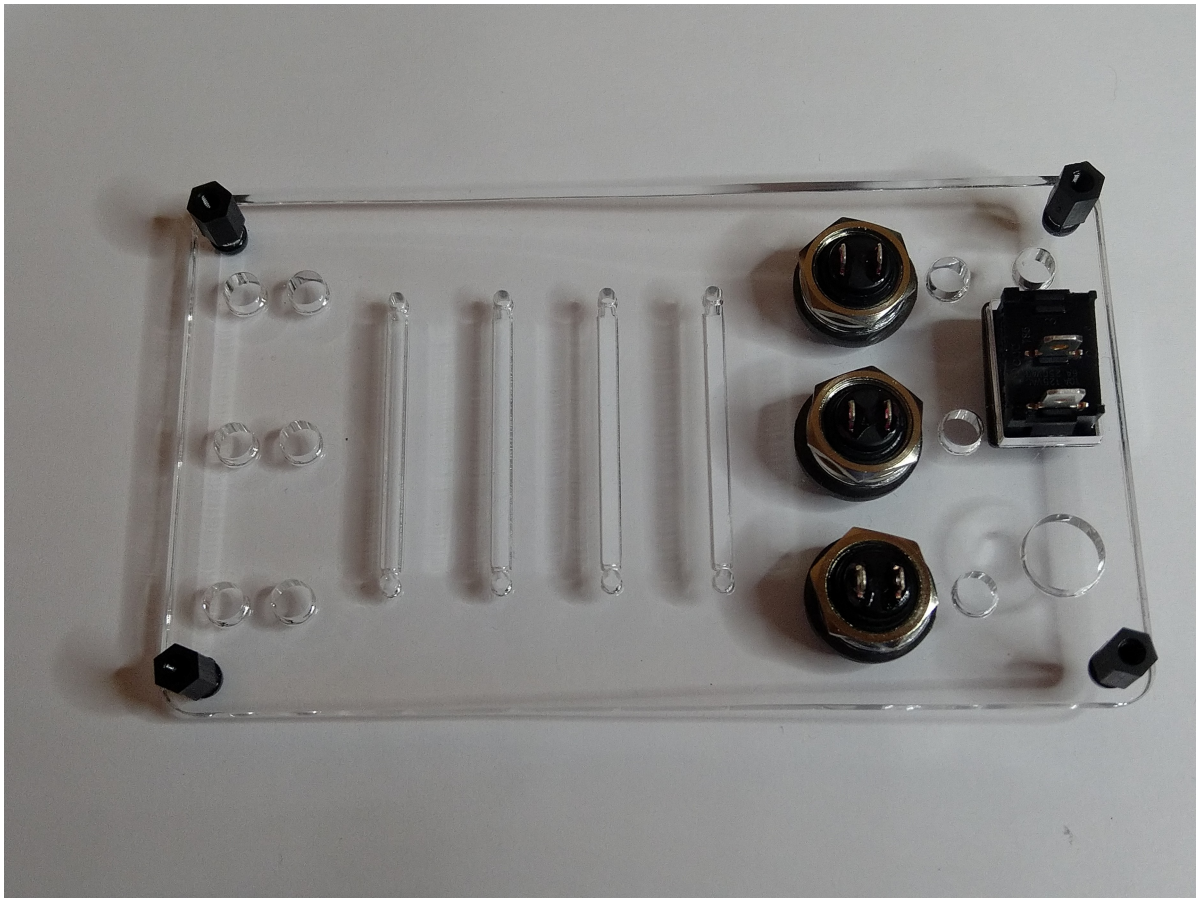
Soldering instructions

Congratulations on buying a great product for Podcasting, Live streaming, Recording, Mixing and many other things.

This manual will guide you through the assembly process for the MIDI fader controller. Please read this carefully in order to be able to assemble everything without problems. If you face any problems, don‘t hesitate to write a mail.

1 Frontplate pre-assembly

1. Make sure to start with the frontplate the right way round.
2. Screw in the four M3x6mm posts with the four plastic M3 screws.
3. Loosely screw in the three buttons. You have to be able to rotate them later.
4. Push in the rocker switch. It may not sit tight due to the frontplate thickness.

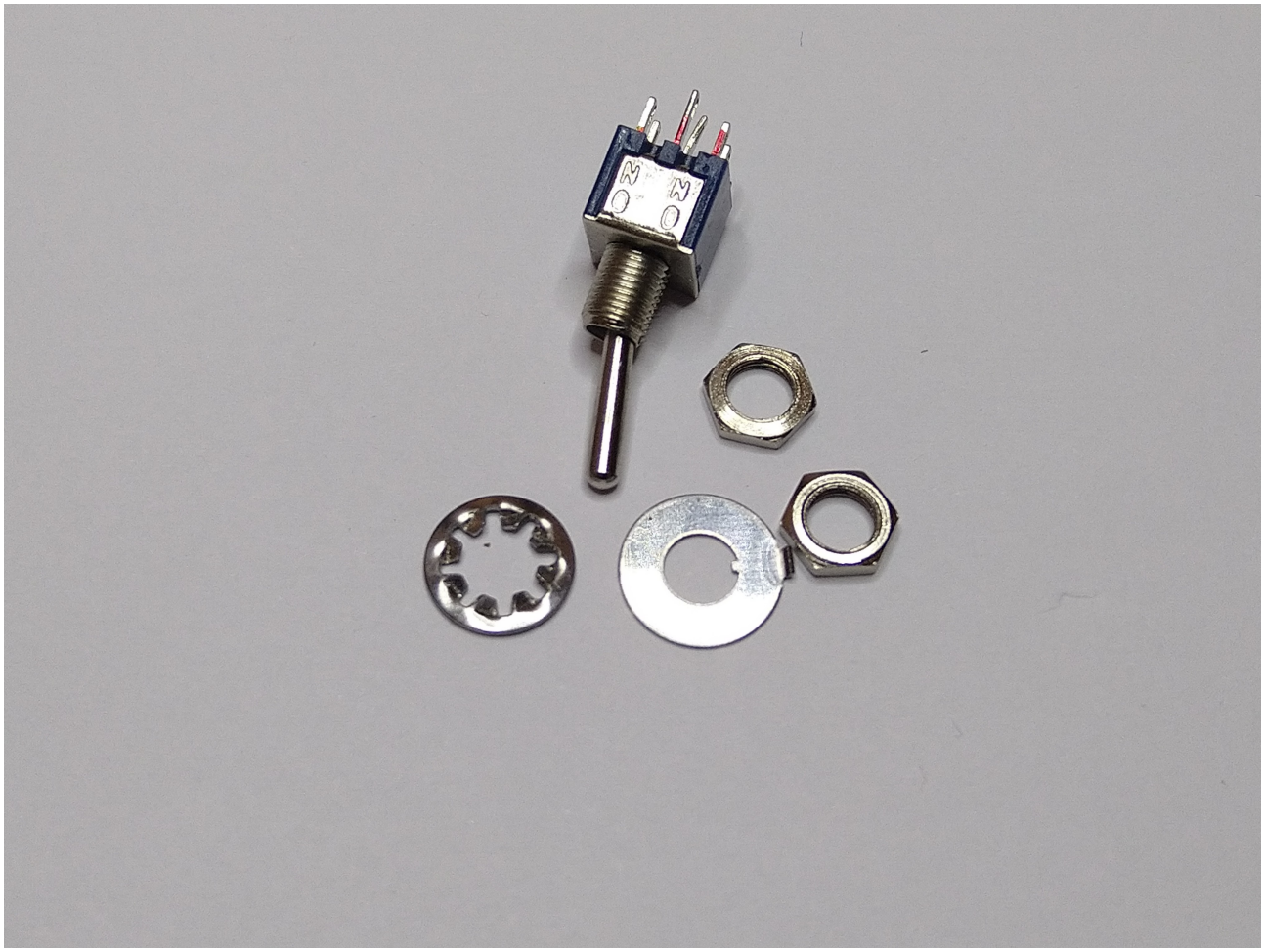


2 PCB through hole preparation

1. Put in the 8 LEDs with the long lead on the left side. They will not work the other way round.
2. The faders have a top and bottom side, put them in with the two pins on top.
3. No soldering, you‘ll need to be able to adjust everything later.

3 Switch preparation

1. Unscrew both nuts and washers from the switches.
2. Put them into the PCB. The orientation doesn‘t matter.

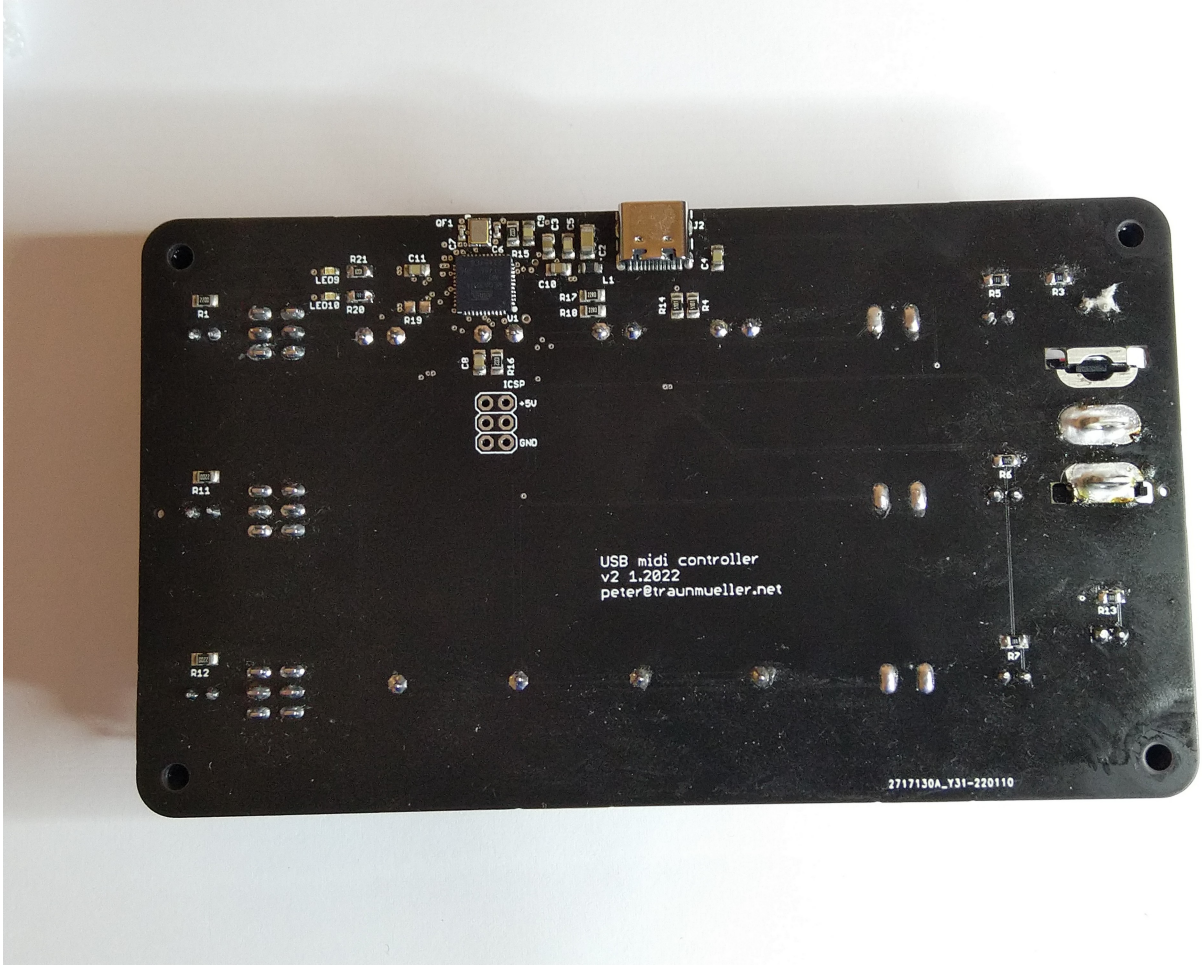


4 Frontplate and PCB assembly

1. Put everything together and wiggle the parts a bit for them to fit.
2. Tighten the button switches, they don‘t need to be overly thight.
3. Screw in the faders with the 8 metal M2.5 screws.
4. Screw on the switches with only one nut, the washers and second nut are not used.

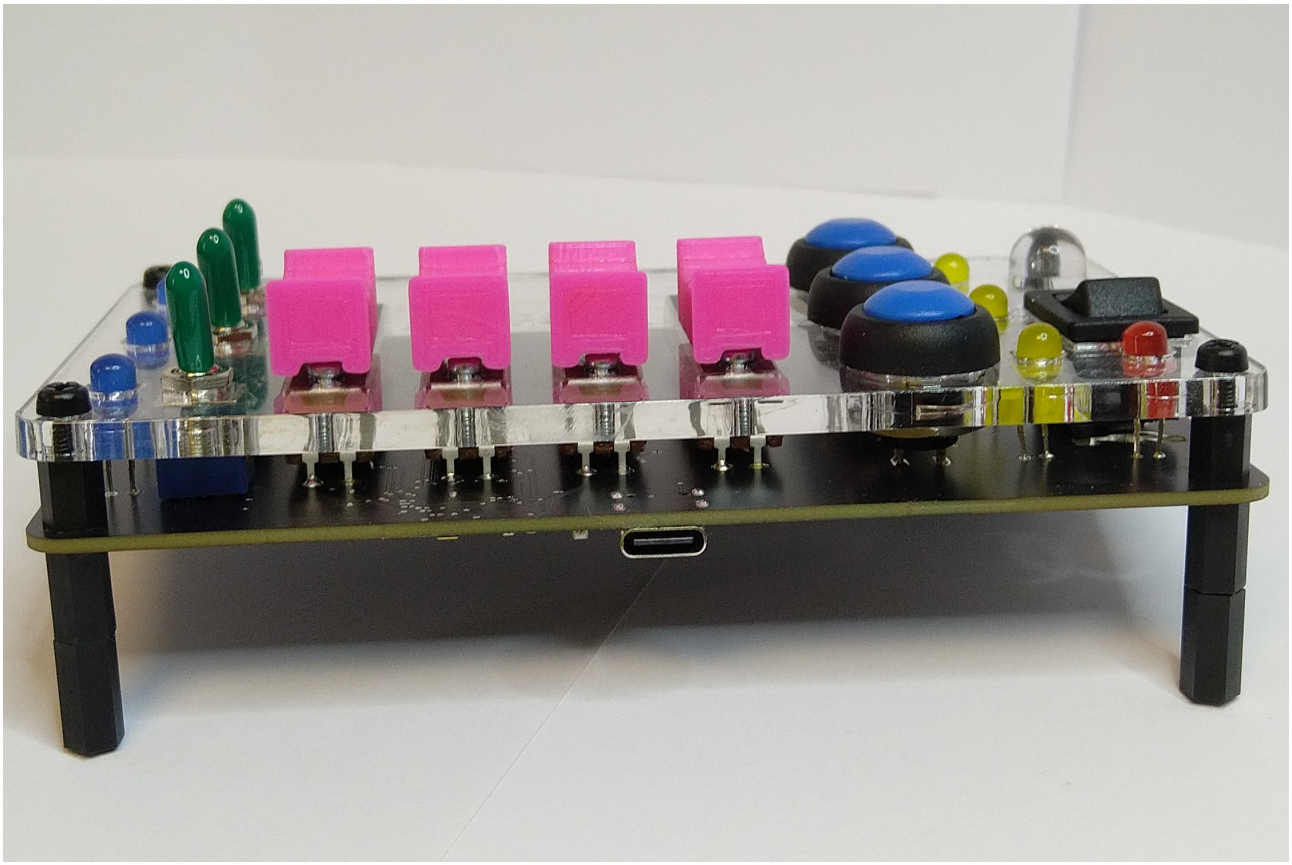
5 Soldering

1. Make sure that all parts are angled correctly and are sticking through the frontplate.
2. The LEDs need to be adjusted to the correct height for them to stick through the frontplate.
3. Solder in all connections carefully.
4. Make sure to wear proper safety equipment for soldering and adhere to safety standards.



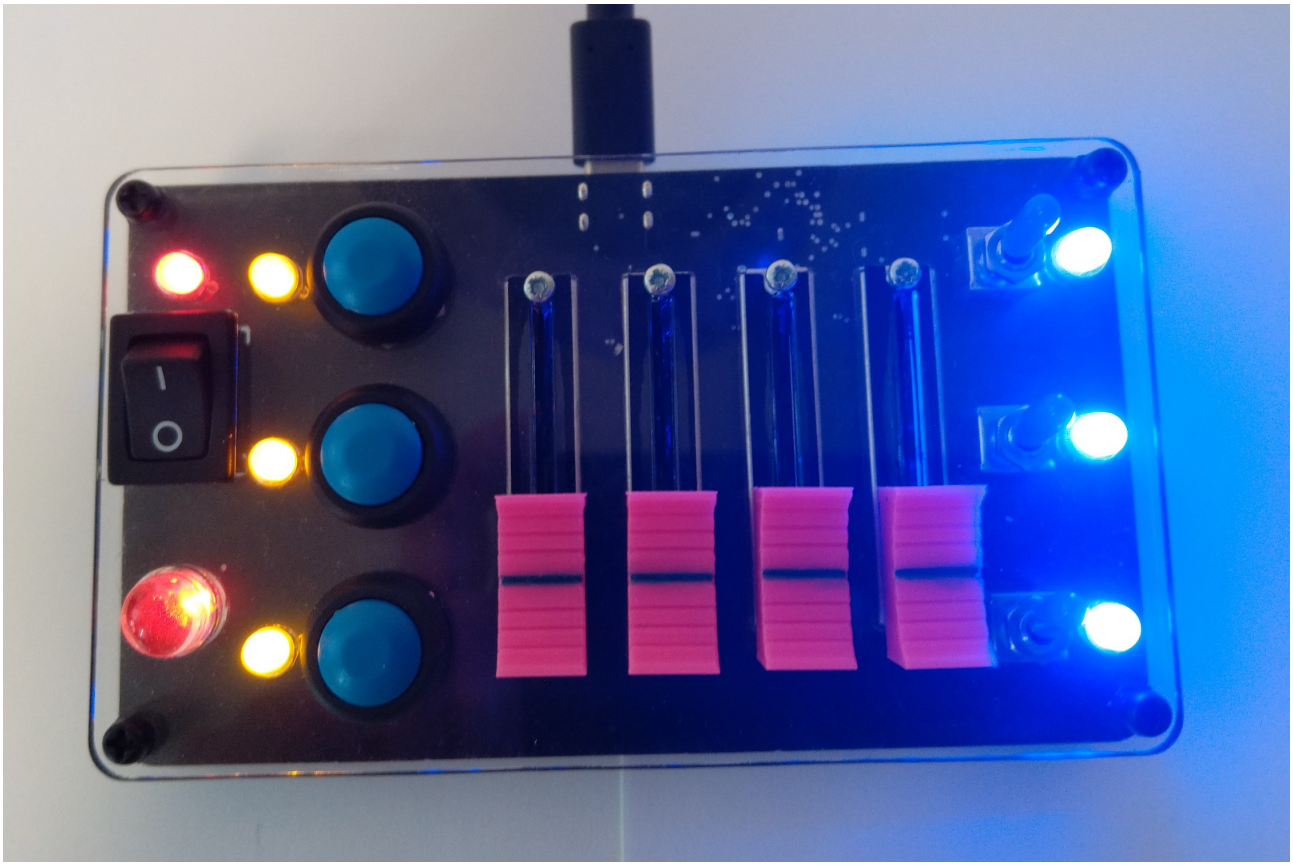
6 Final assembly

1. Screw in the plastic M3 posts, in the back stack two together to have the fader stand at an angle.
2. Put the fader knobs onto the faders.
3. Push the switch covers over the switches.



7 Testing

1. Make sure that all solder connections are proper and no short circuits have been made.
2. Clean the board from flux residue and other dirt.
3. Connect the fader to a current limited supply to protect your computer USB ports. The current draw should be between 30mA and 80mA depending on the LEDs turned on.
4. If the two blue LEDs on the back light the microcontroller works.
5. Try out all the buttons and faders. While changing things, the 10mm LED on the bottom left should light dimly.
6. If everything works and you are sure about the current draw connect the unit to your computer. Depending on your operating system and software used, everythig should work out of the box.

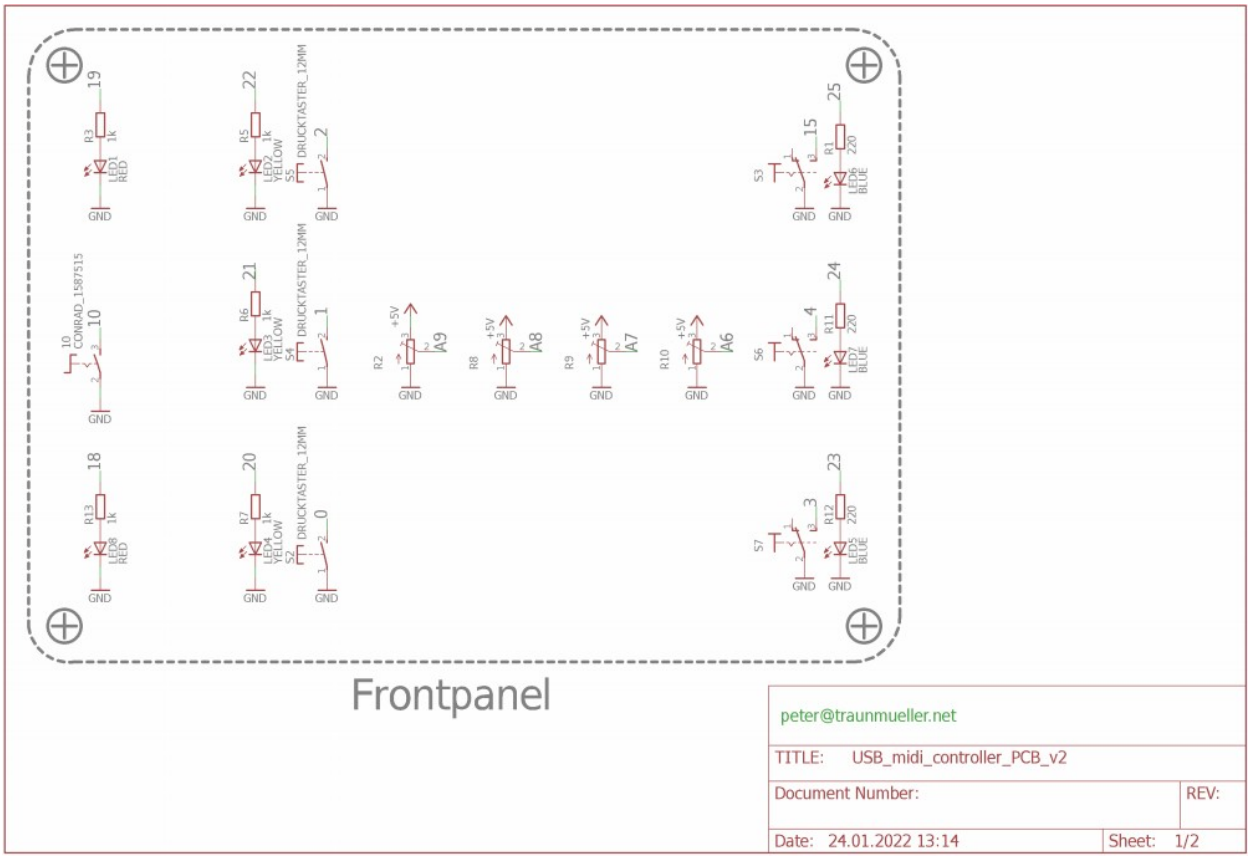


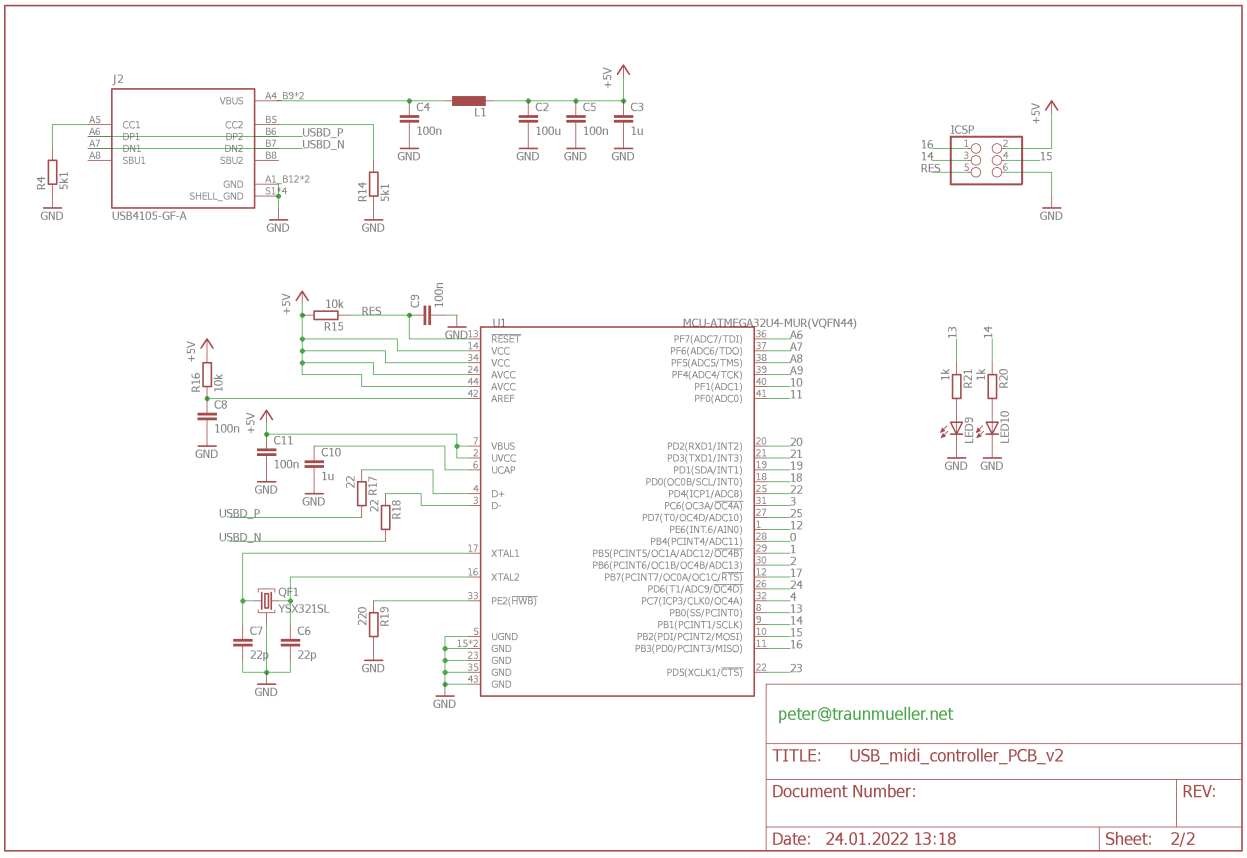
Congratulations!

You‘ve sucessfully assembled the MIDI fader controller!

8 Documentation

Schematics:





Additional information:

This USB C based controller is the perfect solution for **Podcasting**, **Live streaming**, **Recording**, **Mixing** and many other things like lighting control that require a software solution for fading and switching. All faders and switches can be used as custom controls in many different software tools like Mixxx, MIDI Mixer, Ableton and many more.

The switches and buttons all are heavy duty and have a really awesome clicky feeling to them. This makes the controls blindly usable due to their positioning and haptic feedback. LEDs light up with their corresponding switch/button by default to indicate them being turned on/pressed.

All the code is open source and can be individually customized. Each element has a dedicated input or output from the microcontroller and can be arbitrarily controlled. There are two debug LEDs on the back to indicate operation.

- 4 Faders
- 3 Push buttons
- 3 Switches
- 1 Rocker switch
- 7 5mm LEDs
- 1 10mm LED

In term of size, the fully assembled USB controller is 135x75x55mm (5.3x2.9x2.1 inch)

The USB MIDI fader controller has been tested to be working out of the box with the following configurations:

- Macbook mac OS - Studio one
- Windows 7 - Sunlite suite
- Ubuntu Linux - Mixxx

After USB connection is established, the unit shows up as a dedicated MIDI device. The operating systems tested (Windows, mac OS, Ubuntu) didn't need a special installation or driver installed.

No dedicated power supply is needed, all necessary power is supplied over the USB C port.

Please note that if you have a cheaper shipping option I'm gladly using it and refunding you the difference. The item still is a prototype. It is working as intended, but funny quirks and other things are possible. It is not certified and only suited for prototyping. The unit is not assembled by default, you have to solder everything yourself and need the tools (soldering iron, screw driver, solder,...) for that. All parts are included. The USB C cable is not included, as I don't know what type of cable you need. I will send you a recommendation for a cheap one if needed.

If you have any questions, just shoot me a message!

Have fun tinkering and thanks for buying!