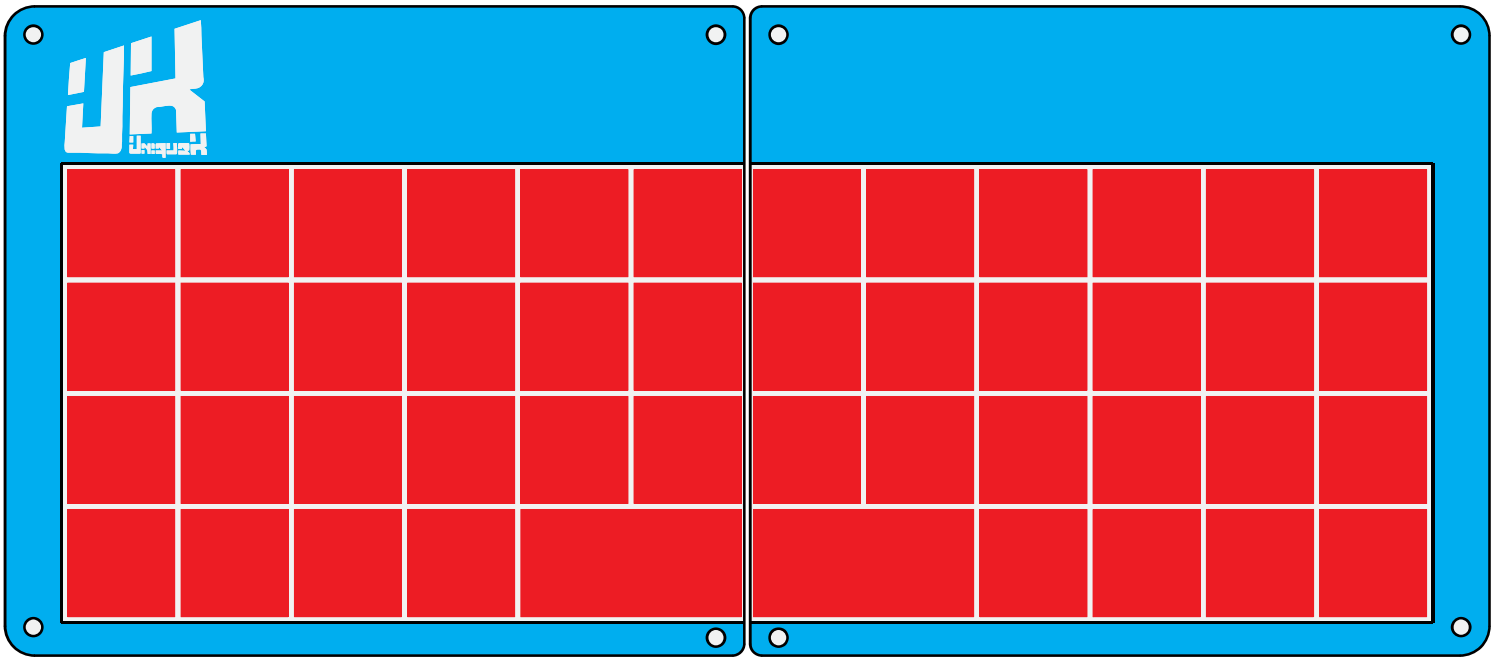
DIVERGE TM 2 R0 “JOVIAN”
SPLIT COMBINING MECHANICAL BACKLID KEYBOARD



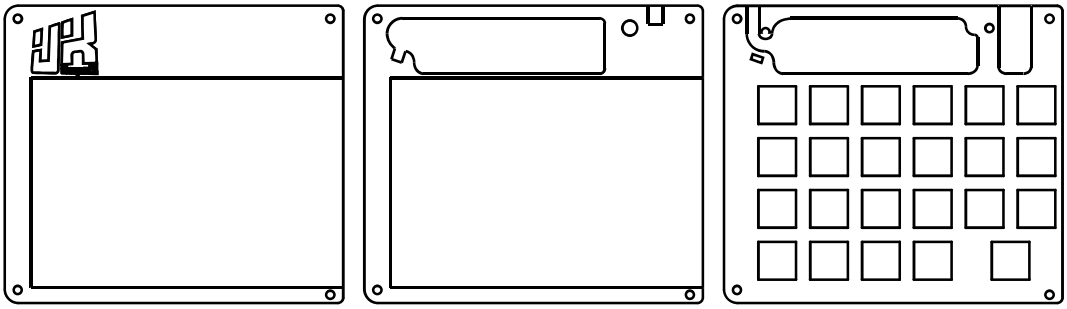
Model: Diverge TM 2 typeZERO R0 “Ioviani Seniores”
Dimensions: 125mm x 110 mm x 20mm per side
Number of Keys: 46
Max Number of Layers: 13
Keycaps: 1u x 44, 2u x 2
Interface: HID via USB
Rollover: NKRO/6KRO Togglable
Assembly Instruction: http://unikeyboard.io/instruct/diverge-tm-2

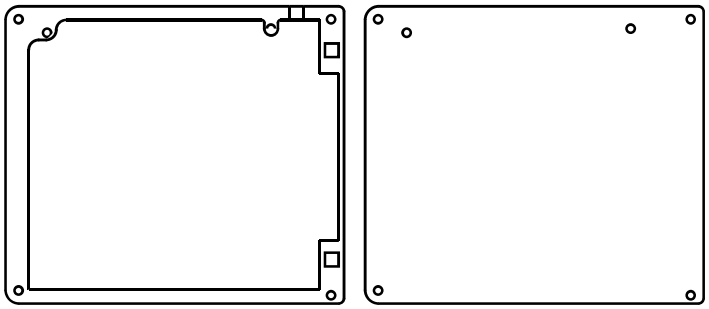
WARNING

- Choking Hazard:
  This product contains small parts, use with adult supervision.
- Lead Hazard:
  The solder used on the PCB contains lead which may lead to lead poisoning, the solder that you are using also very likely contains lead if it is not explicitly labelled as “Lead Free,” do not eat or drink whilst soldering and do not bite your fingers, solder wire, or soldering iron.
- Temperature Hazard:
  Assembly of this kit requires the use of a soldering iron, a soldering iron is extremely hot when turned on, do not touch, or lick any parts of a soldering iron which is hot with any of your body parts other than the handle with your hand.

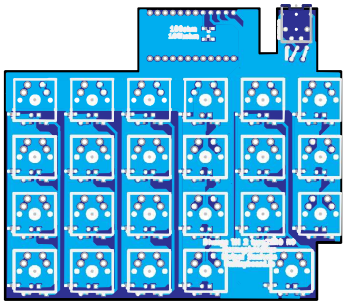
PARTS

Acrylic Frames (Two of each)

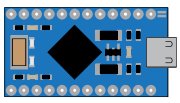




PCB x 2



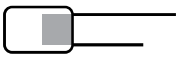
Pro Micro x 2



Switches x 46

Resistor x 2 (100Kohm)

LEDs x 46



Diodes x 46

MOSFET x 2

Resistors x 48 (100ohm)

USB Cable x 1

TRRS Cable x 1

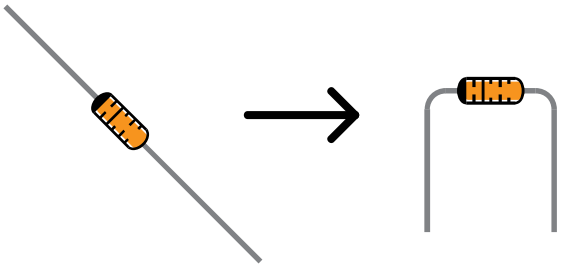
Ziptie x 1

TRRS Socket x 2

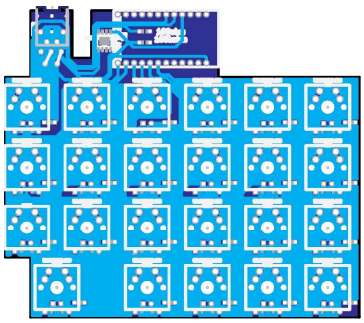
Magnets x 4

ASSEMBLY INSTRUCTIONS

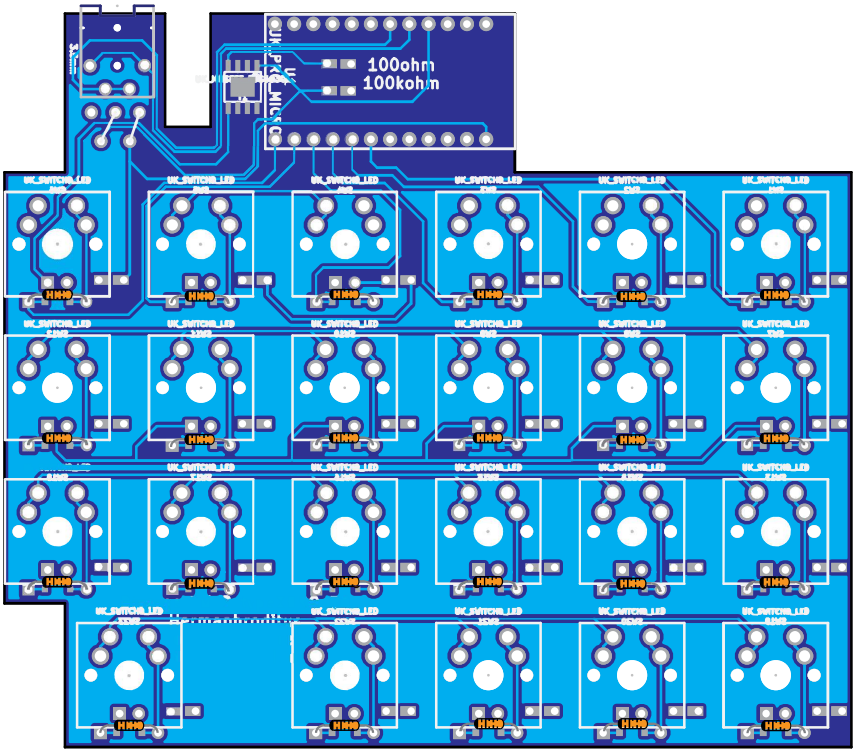
01 Bend all diodes as shown below



02 Orient the PCB as follows



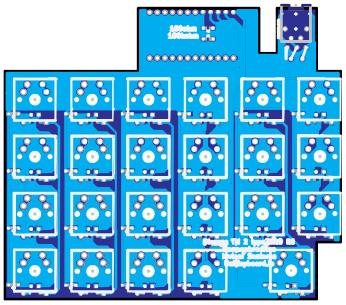
03 We are currently building the LEFT side. Insert all the diodes as shown below



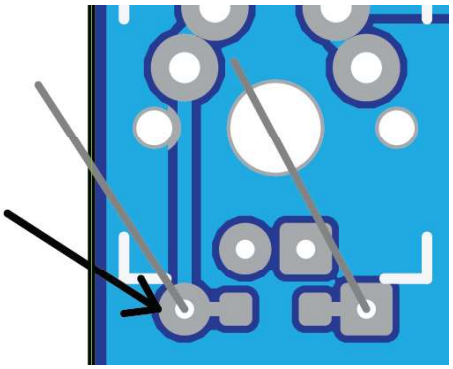
Make sure to orient all the diodes like this

Now solder on all the diodes

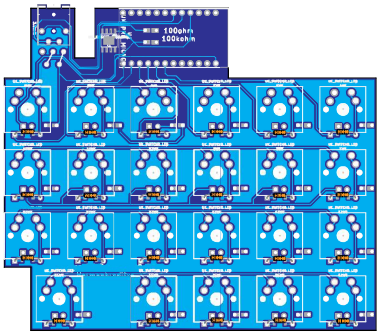
04 Reorient your PCB as follows



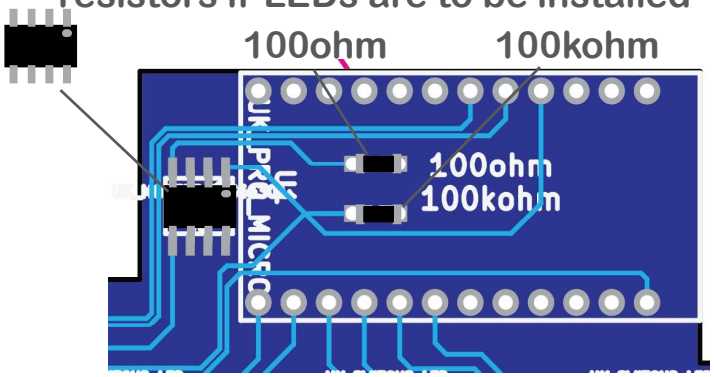
05 Cut off the leads with a nail clipper or snipper



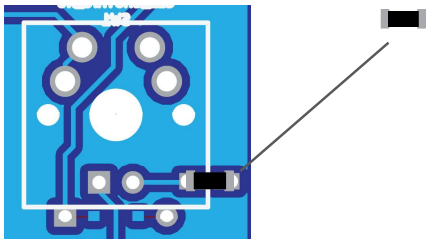
06 Reorient your PCB as follows



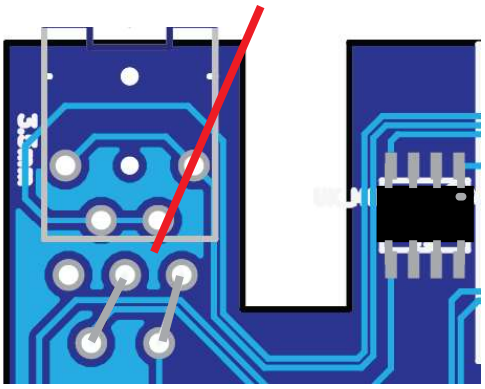
07 Solder on the MOSFET, notice the orientation of the MOSFET marked by a dot in the corner, solder the marked resistors if LEDs are to be installed



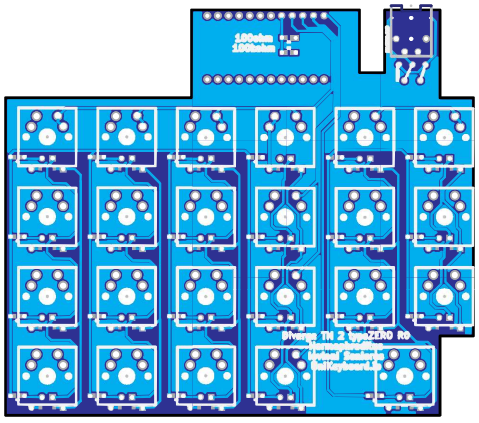
08 Solder on the resistors on all the switches (skip this step if you do not need LEDs)



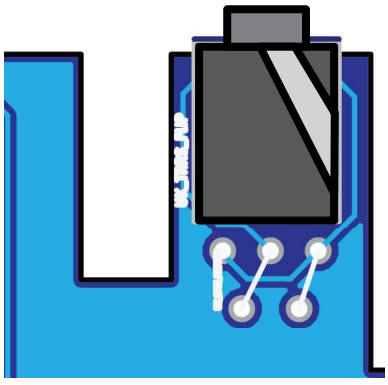
09 Insert 2 leads cut from the diodes and solder them by following the white lines on the PCB



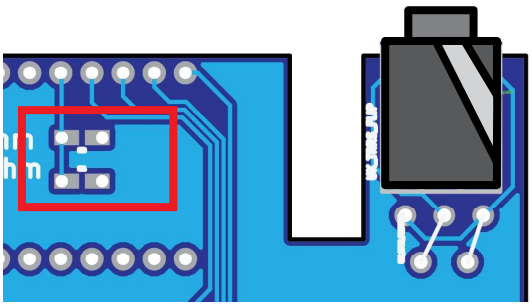
10 Reorient your PCB as follows



11 Solder on the TRRS jack, make sure the TRRS jack is facing up and the diodes are facing down

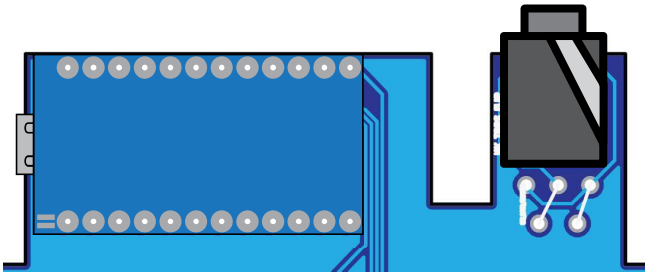


12 (Optional) Place sellotape onto the location marked with a red rectangle

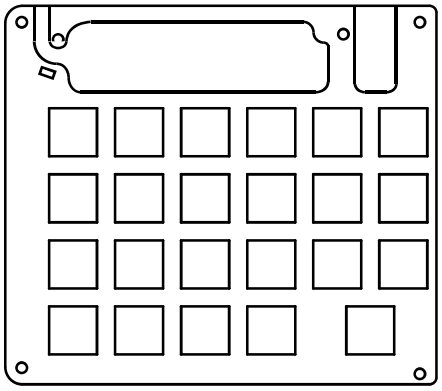


13 Orient the LEFT controller as follows (Controller packages should be marked LEFT or RIGHT)

14 Place and solder the controller as follows

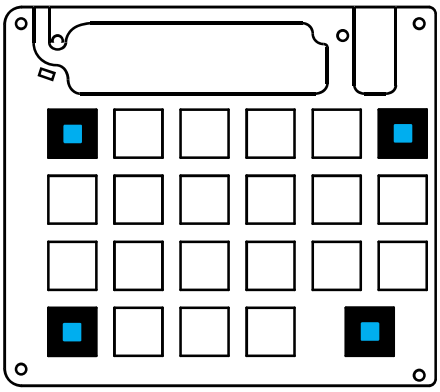


15 Orient the acrylic mount plate as follows

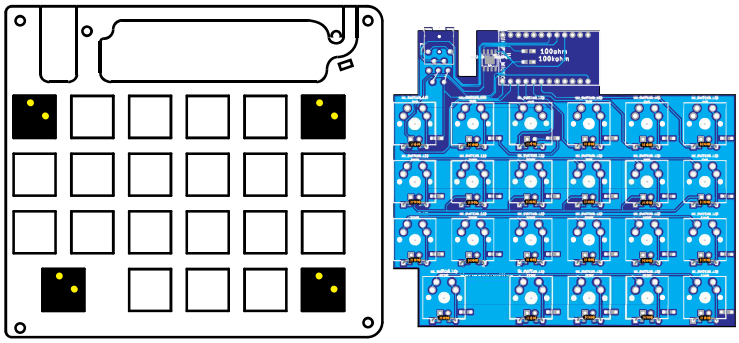


16 Press four switches into the corners of the plate

Switch →

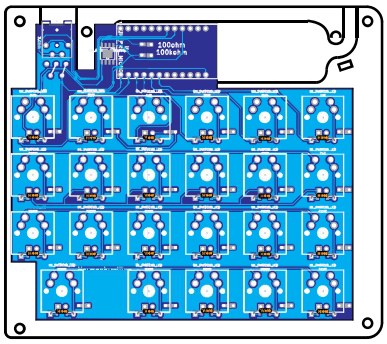


17 Reorient the PCB and acrylic piece as follows such that the switches are facing downads and the diodes are facing upwards



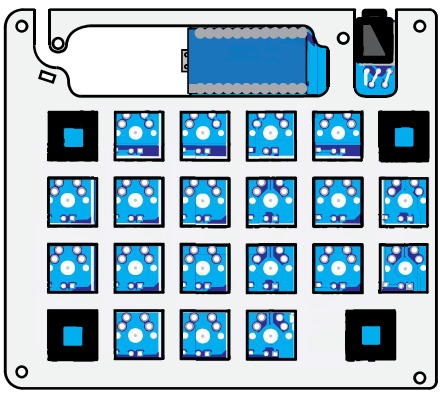
Flipped switch →

18 Place the PCB onto the plate, make sure to press firmly on the switches

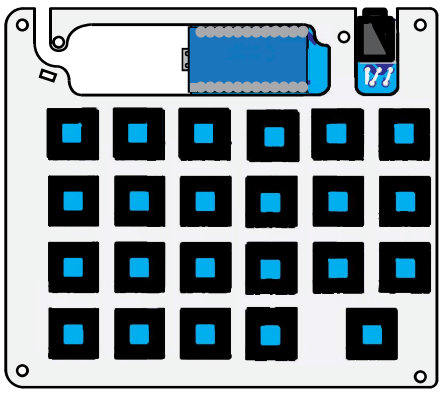


Solder the four switches so that the PCB and plate are now held together

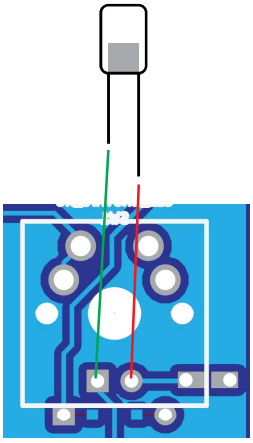
19 Reorient the assembly as follows



20 Place the rest of the switches in and solder them

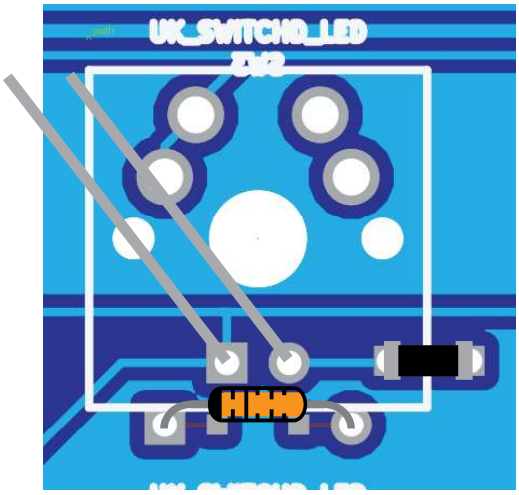


21 If you wish to install LEDs, insert each individual LED into the Cherry MX switch's LED socket and solder them one by one, make sure to do them one by one so that each LED is deeply seated and does not poke out and obstruct the keycaps.

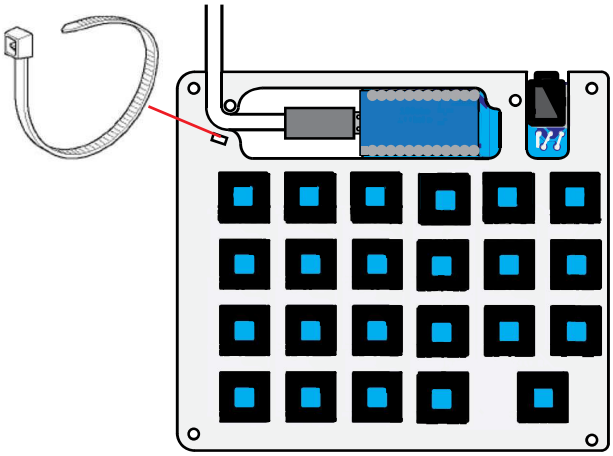


Make sure the long lead goes to the circular pin and the short lead goes to the square pin

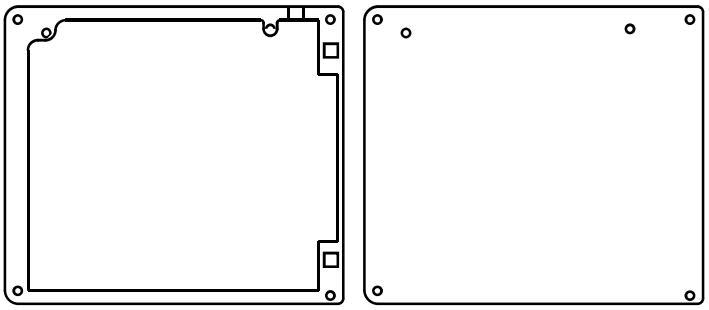
22 Cut off the leads with a nail clipper or snipper



23 Insert the USB cable and secure the USB cable with the zip tie



24 Prepare for the next step by obtaining and orienting these two pieces of acrylic as follows

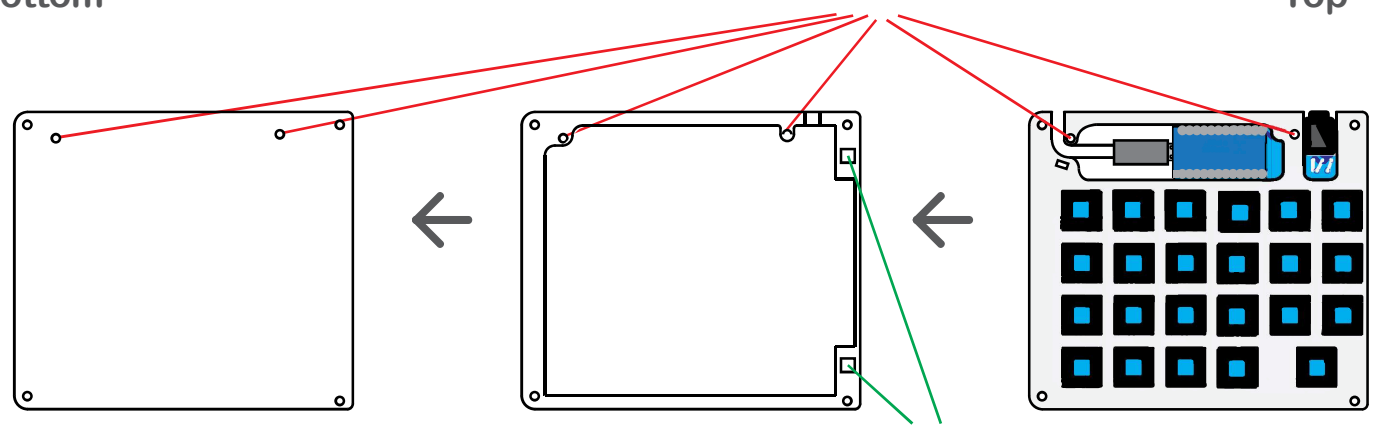


25 Stack the plates in the order as shown below and screw the screws marked red below, also place the magnets into the slots marked green

Bottom

Screw this screw in

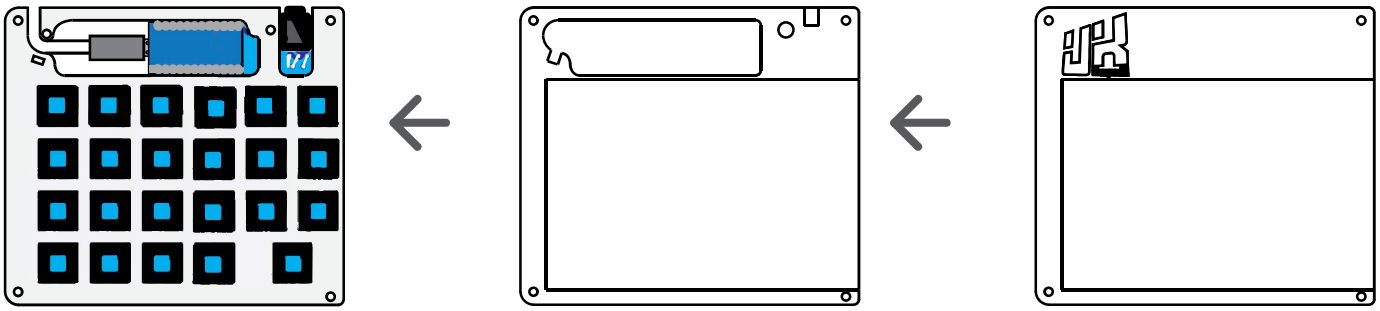
Top



Place magnets in here

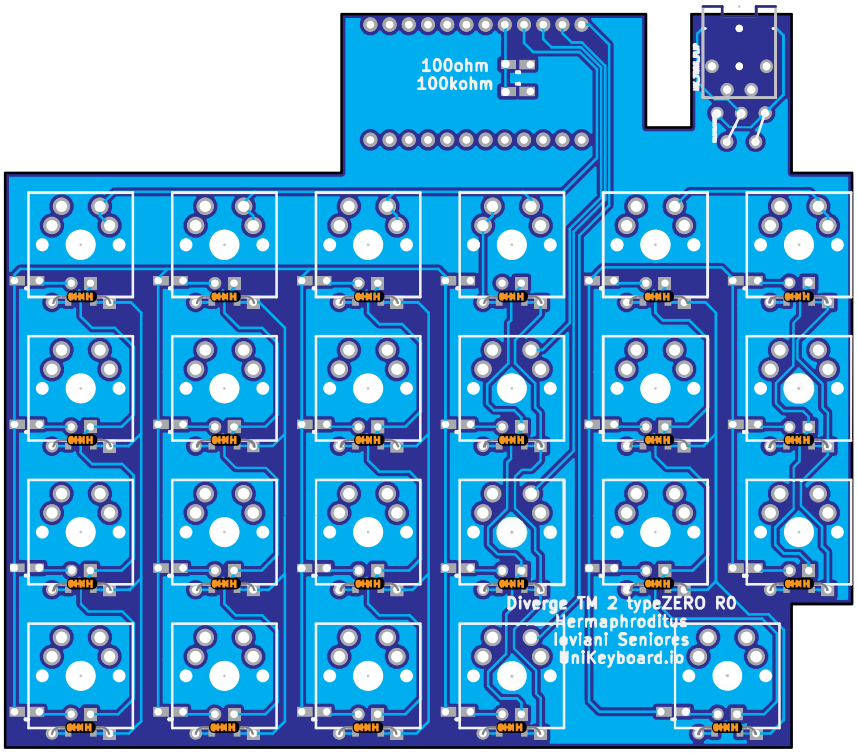
26 Get the rest of the acrylic plates, stack them and screw in the rest of the screws

Bottom Top



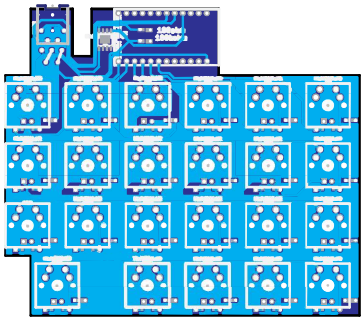
27 We are now building the RIGHT side. Orient the second PCB and insert the diodes as shown below

Make sure to orient all the diodes like this

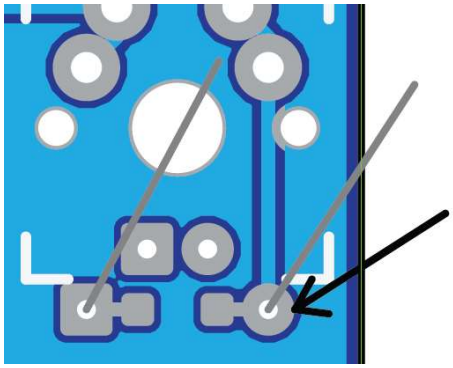


Now solder on all the diodes

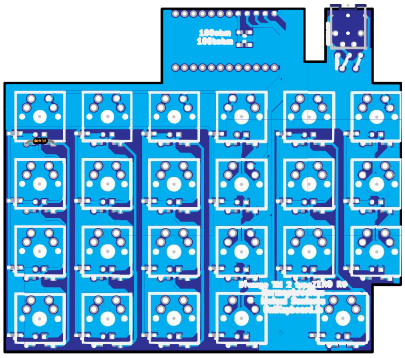
28 Reorient your PCB as follows



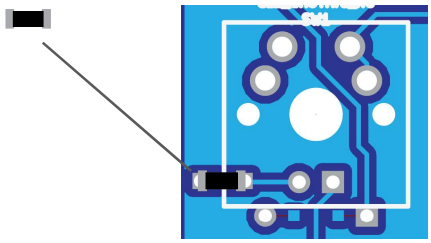
29 Cut off the leads with a nail clipper or snipper



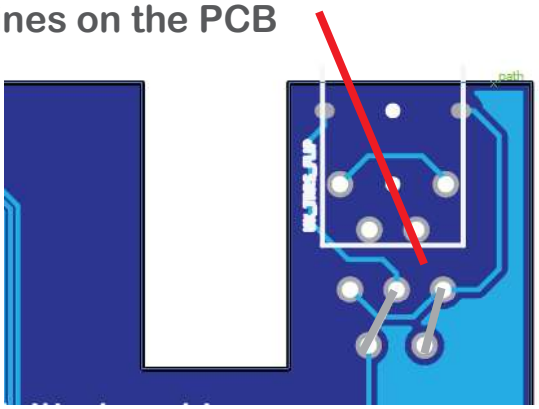
30 Reorient your PCB as follows



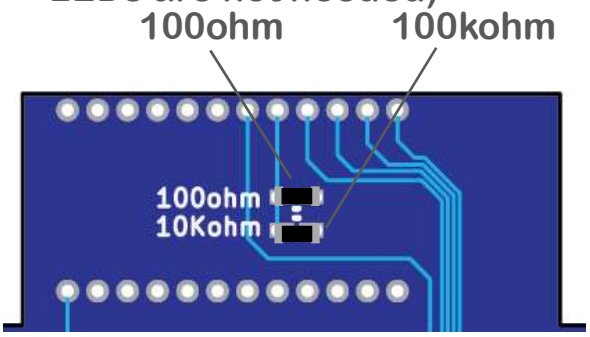
07 Solder on the resistors on all the switches (skip this step if you do not need LEDs)



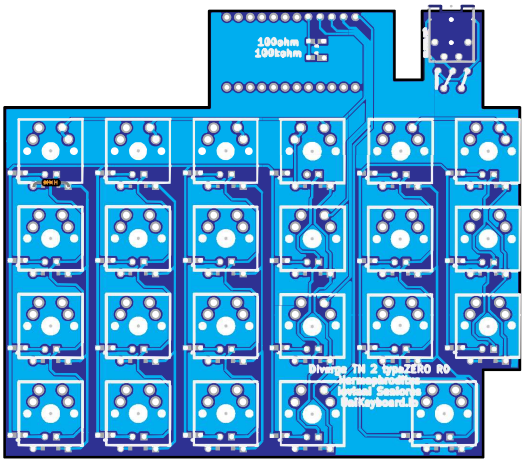
09 Insert 2 leads cut from the diodes and solder them by following the white lines on the PCB



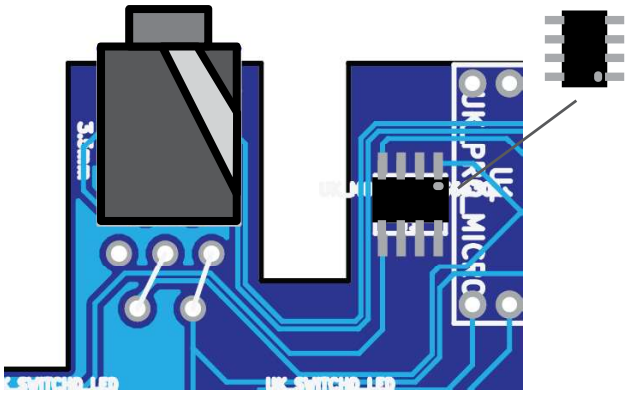
09 Solder on the resistors pictured below, notice that the diodes are facing upwards. (skip this step if LEDs are not needed)



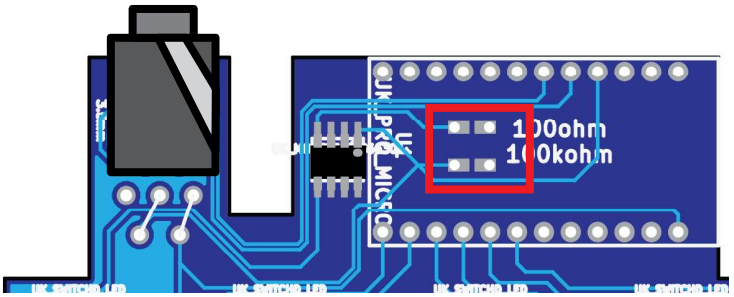
10 Reorient your PCB as follows



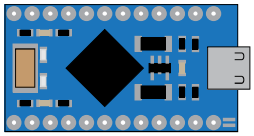
11 Solder on the TRRS jack and MOSFET, make sure the TRRS jack is facing up and the diodes are facing down



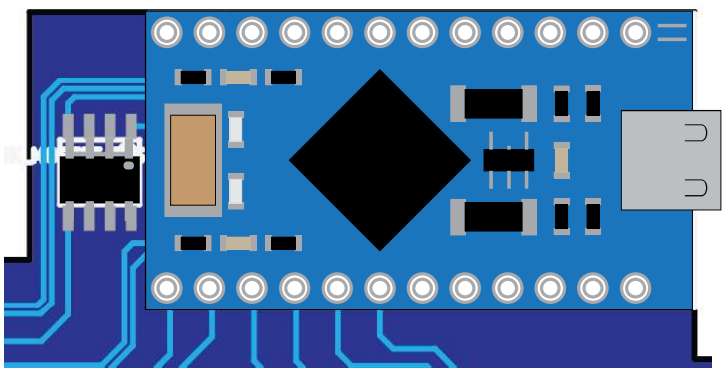
12 (Optional) Place sellotape onto the location marked with a red rectangle



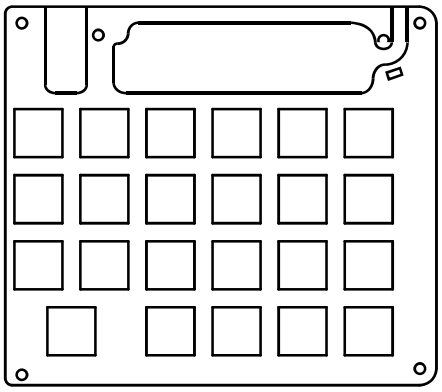
13 Orient the RIGHT controller as follows (Controller packages should be labelled LEFT or RIGHT)



14 Place and solder the controller as follows

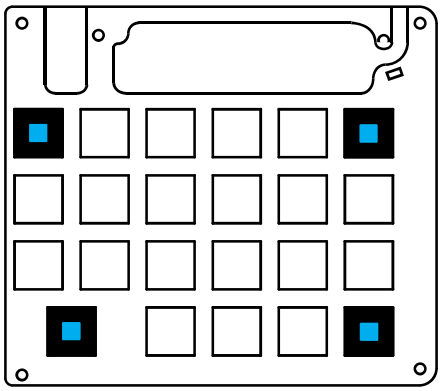


15 Orient the acrylic mount plate as follows

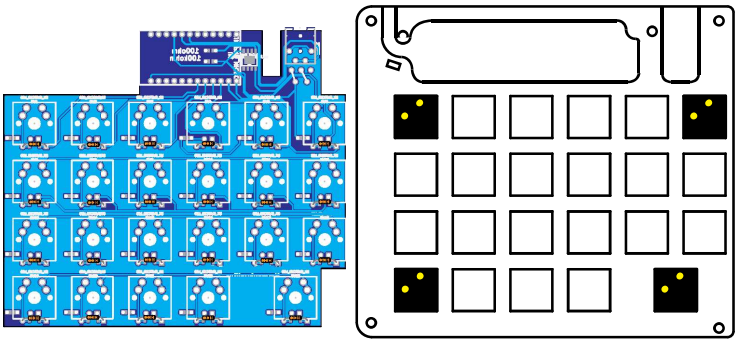


16 Press four switches into the corners of the plate

Switch →

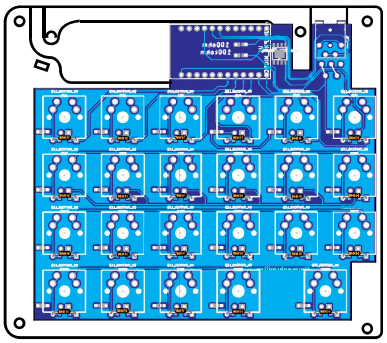


17 Reorient the PCB and acrylic piece as follows such that the switches are facing downads and the diodes are facing upwards



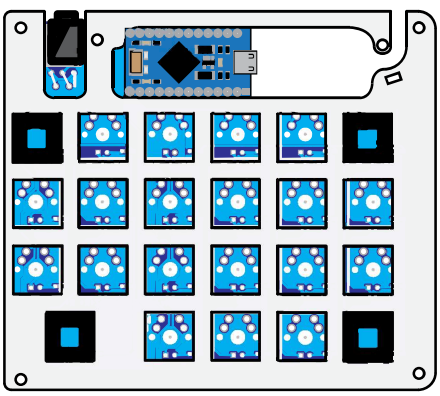
Flipped switch →

18 Place the PCB onto the plate, make sure to press firmly on the switches

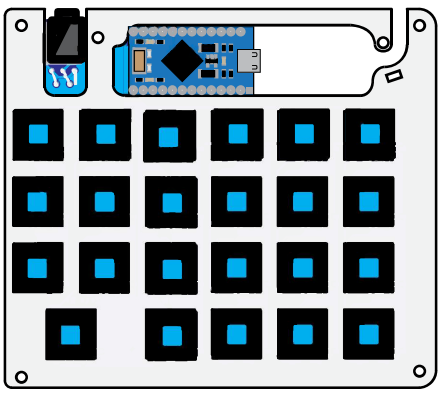


Solder the four switches so that the PCB and plate are now held together

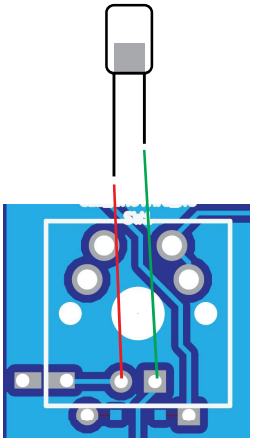
19 Reorient the assembly as follows



20 Place the rest of the switches in and solder them

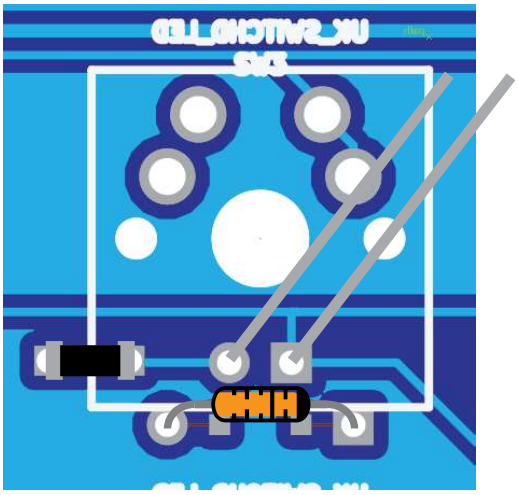


21 If you wish to install LEDs, insert each individual LED into the Cherry MX switch's LED socket and solder them one by one, make sure to do them one by one so that each LED is deeply seated and does not poke out and obstruct the keycaps.

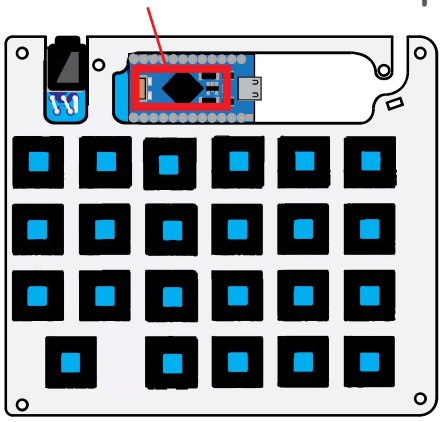


Make sure the long lead goes to the circular pin and the short lead goes to the square pin

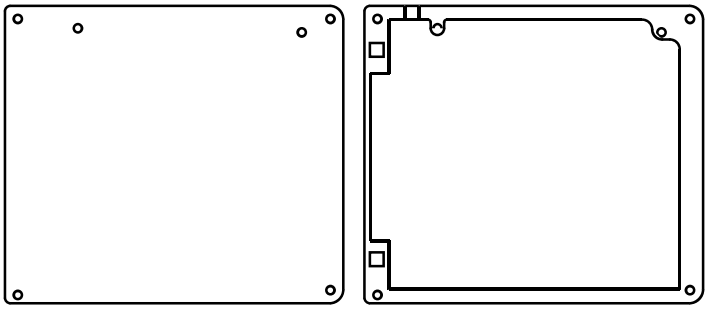
22 Cut off the leads with a nail clipper or snipper



21 (Optional) cover the surface of the controller with some black tape



22 Prepare for the next step by obtaining and orienting these two pieces of acrylic as follows

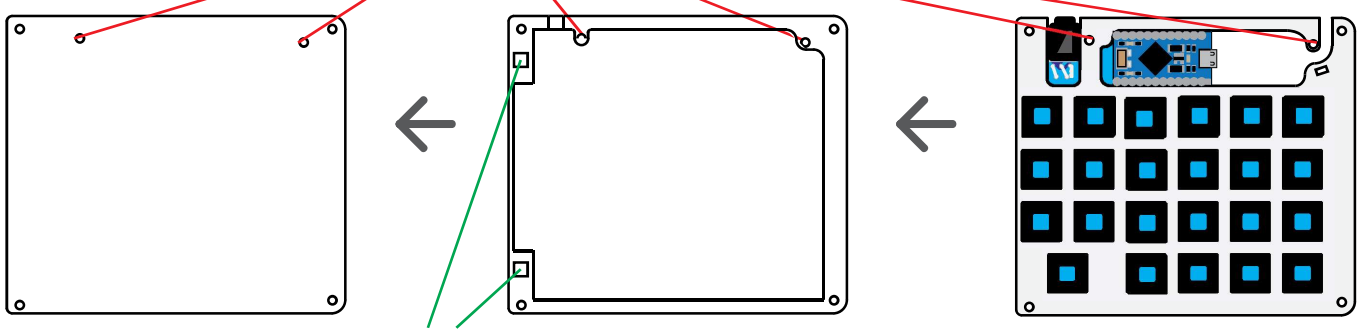


23 Stack the plates in the order as shown below and screw the screws marked red below

Bottom

Screw this screw in

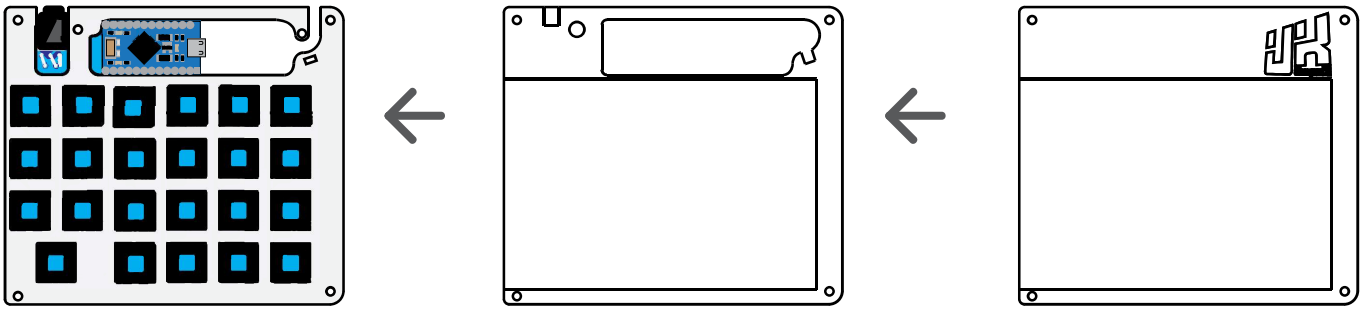
Top



Place magnets in here, make sure their polarities match with your LEFT side's magnets

26 Get the rest of the acrylic plates, stack them and screw in the rest of the screws

Bottom Top



ASSEMBLY COMPLETED

To use the Diverge TM 2, first plug in the interconnecting TRRS cable on both sides, then connect the USB cable from the left side to your computer. Do note that the TRRS cable needs to be plugged in first before the USB is connected to the computer for the Diverge 3 to work properly, alternatively, you could use the sides individually by unplugging the TRRS cable entirely. (Do not leave the TRRS cable in one side)

Now that you have completed assembly of the Diverge TM 2, you may wish to visit http://unikeyboard.com/ to obtain a copy of the Arbites key rebinder to create and upload your own customised layout.

Consider sharing your keyboard building experience with the community with some pictures if you've enjoyed this build.

If you have any questions or problems relating to the build, you can contact me at blahlicus@gmail.com for assistance.