

PoorKoi

Build Guide

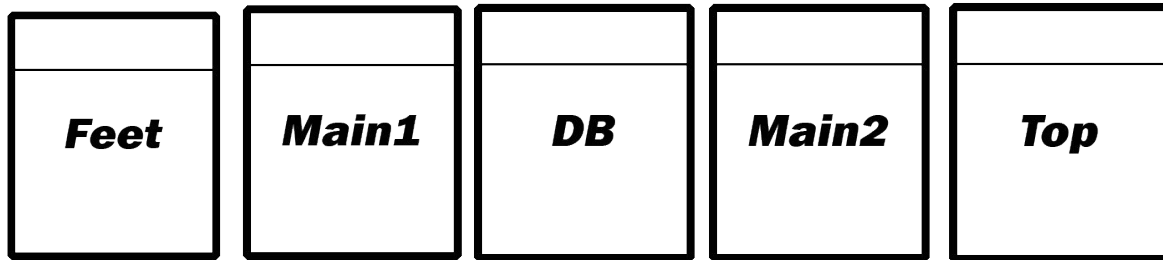


Step 0 : kit content

— — —

You will find in this kit:

- Acrylic layers with 3 clear tops and 3 frosted ones
- A white solder PCB (WK/WKL/HHKB | Split backspace/Iso Enter/Split leftshift/Split spacebar)
- A C5 daughterboard
- Screws:
 - 1 x Feet : screws for feet
 - 1 x Main 1 : screws for main acrylic layer
 - 1 x Main 2 : screws for usb stack
 - 1 x DB : screws for daughterboard
 - 1 x Top : screws for top stack
 - 1 x Bonus : spare screws



Step 1 : qmk toolbox installation

— — —

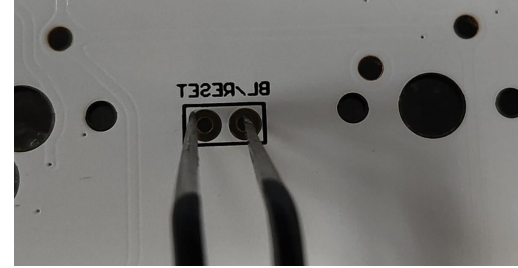
- PCB is empty of firmware, you will learn if not how to flash your PCB. Easy step no worries !
- Download **QMK Toolbox** here:
https://github.com/qmk/qmk_toolbox/releases/download/0.3.3/qmk_toolbox_install.exe (latest version at the time of writing)
- You can trust the installer, the warning is related to missing certificate
- Once installed, please launch as administrator
- Click on **Tools\Install drivers** and wait the console closing by itself



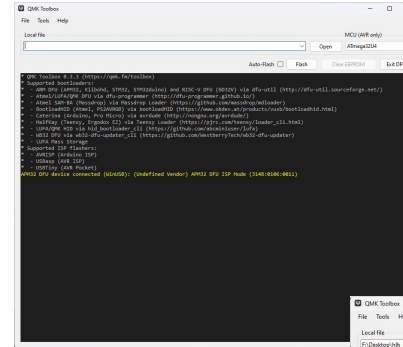
Step 1 : firmware flashing

- Run **QMK Toolbox**
- Connect daughterboard to PCB with JST cable
- Plug daughterboard to computer
- Get latest PoorKoi's firmware here :
<https://github.com/H3ll10n/PoorKoi>
- Firmware is inside subfolder «**firmware**»
- Use your tweezer to short the 2 pins of **RESET (1)**
- A yellow message appears in QMK Toolbox
 - PCB is in debug mode ready to flash (2)
 - Remove tweezer
- Load .bin file and press flash
- Wait until the end of process (3)
- Once firmware is flashed you can unplug daughterboard and close qmk toolbox

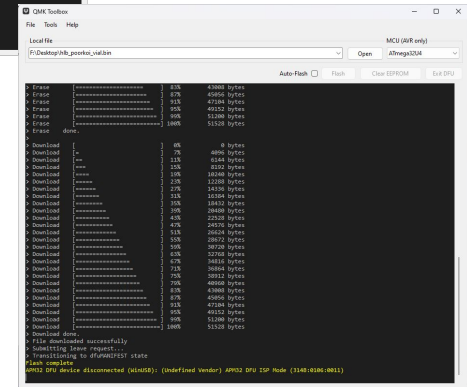
1



2



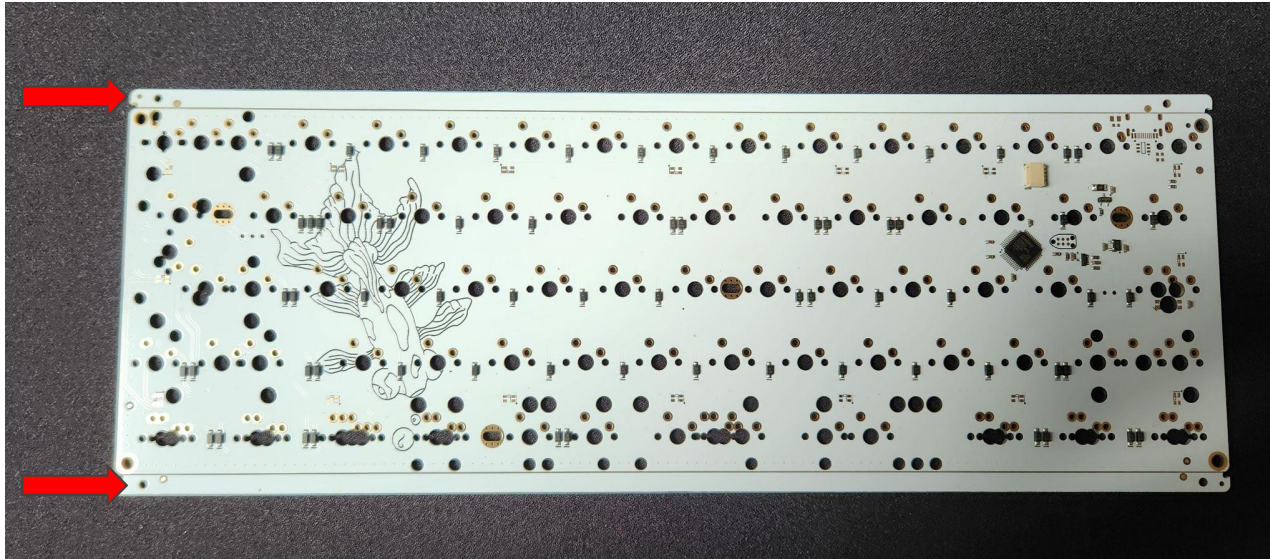
3



Step 2 : check PCB

— — —

- PCB is made with a panelization layout around the wider edges
- Those parts must be removed by hand or with a plier. Break those parts using the cut line



Step 2 : check PCB

— — —

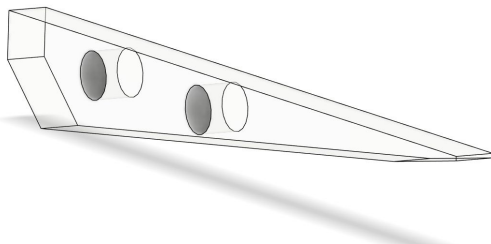
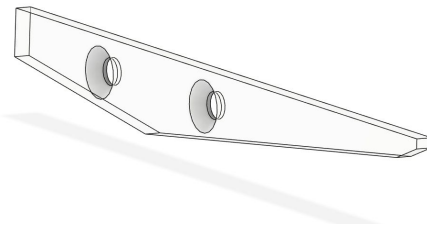
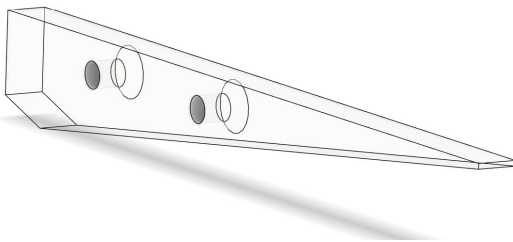
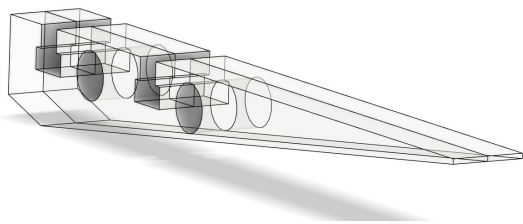
- To test PCB we will use <https://config.qmk.fm/#/test> because VIAL requires to unlock PCB and without switches it's a dual tweezers process
- Plug daughterboard
- Put sunglasses and flip PCB :)
- User your tweezer to test each switch contact holes. Everyone must answer except MO(1) located at the right of right shift
- Once PCB is checked you're free to solder or mill-max your PCB
 - Lube and test your stabilizers
 - Insert switches on the plate and clip on PCB
 - **PCB supports caps lock LED think about it before soldering !**
 - Solder your switches if required

Step 3 : feet

— — —

Feet

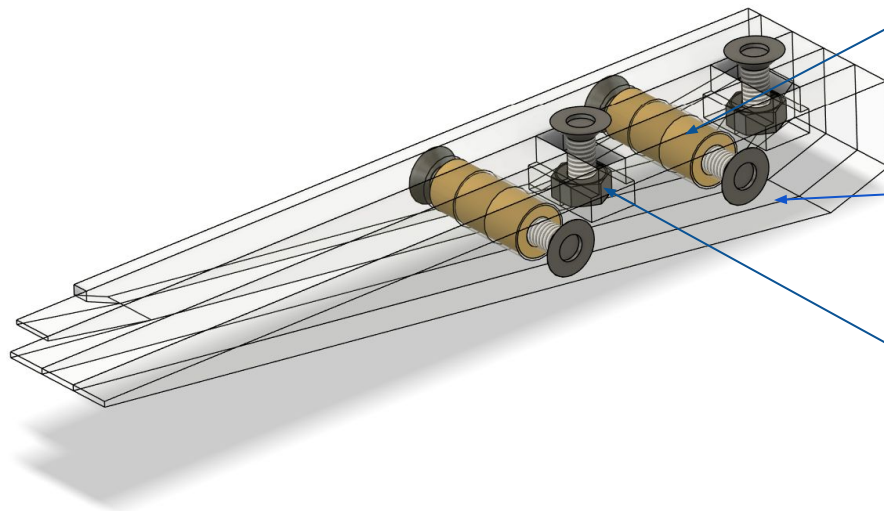
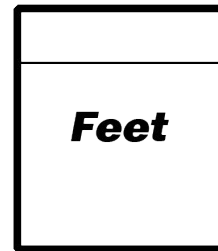
Example of left foot acrylic layers (left and right are distinct by milling)



Step 3 : feet

— — —

Feet are symmetrical



Insert
M3x14 mm

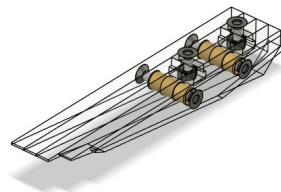
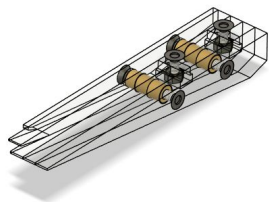
Screw
M3x8 mm

Bolt M3

Step 3 : feet

— — —

Feet should look like this

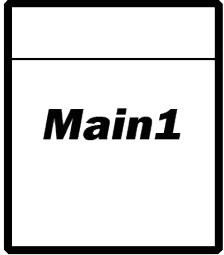


Feet

Step 4 : bottom stack

— — —

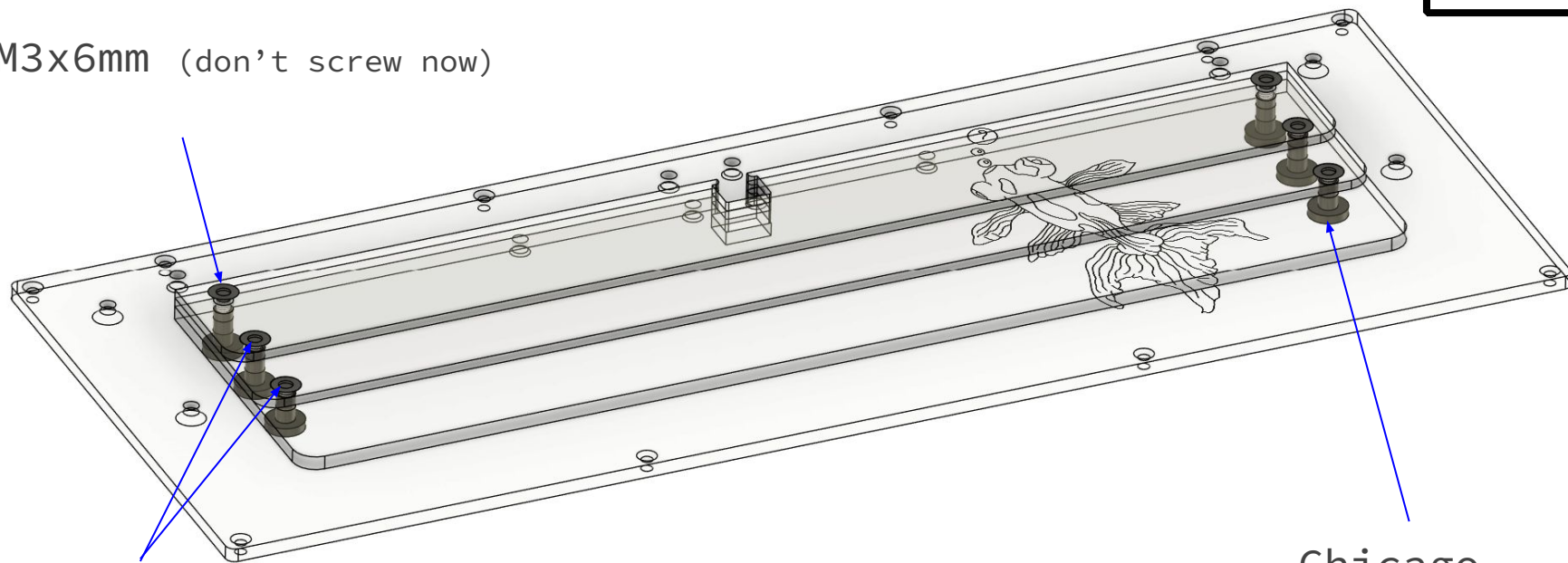
- Use Chicago screws head down
- Put the main acrylic layer with koi fish
 - Use picture on next page
- Put the other 3 acrylic layers to match next picture



Step 4 : bottom stack

Main1

M3x6mm (don't screw now)



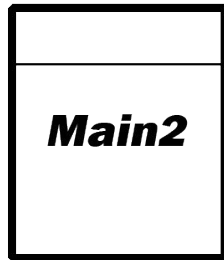
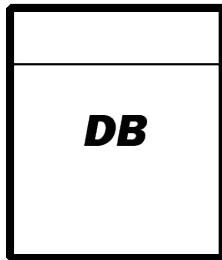
M3x4mm

Chicago

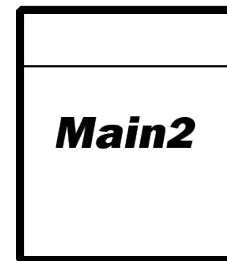
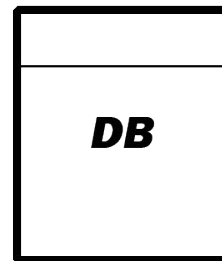
Step 4 : bottom stack

— — —

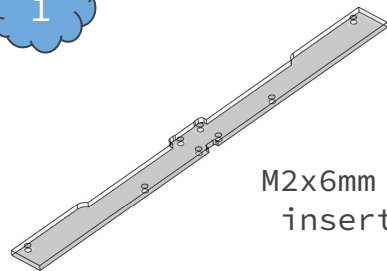
- Plug JST cable to daughterboard
- Insert JST through the main acrylic layer
- Setup countersunk M2 screws and insert and put them on table, screw head down.
Insert acrylic layers
- Use M2x3mm screws to secure daughterboard
- Stack halves acrylic layers around the daughterboard and final layer as shown on next picture
- Screw everything to secure bottom stack



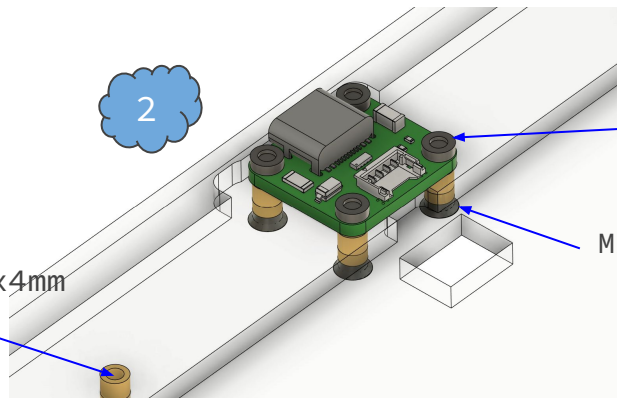
Step 4 : assembler la stack



1



2

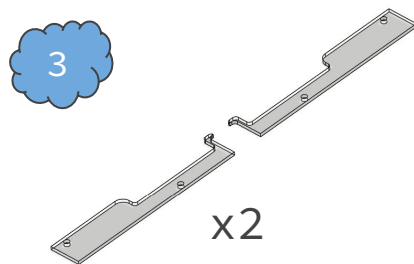


M2x6mm + M2x4mm
insert 6mm

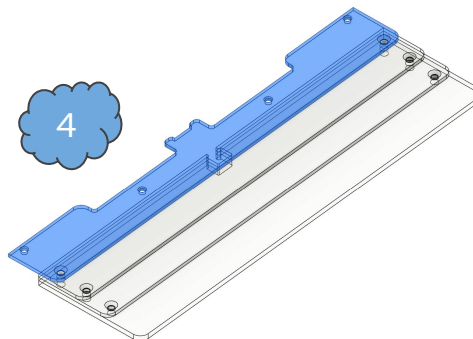
M2x3mm

M2x4mm + insert 4mm

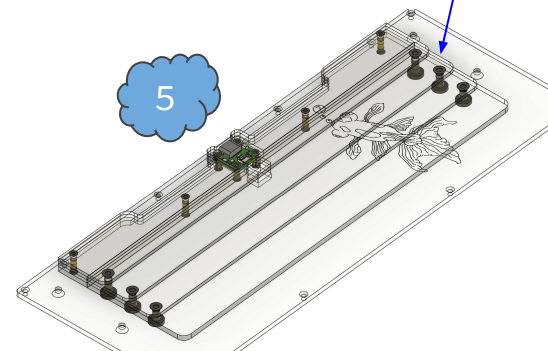
3



4



5



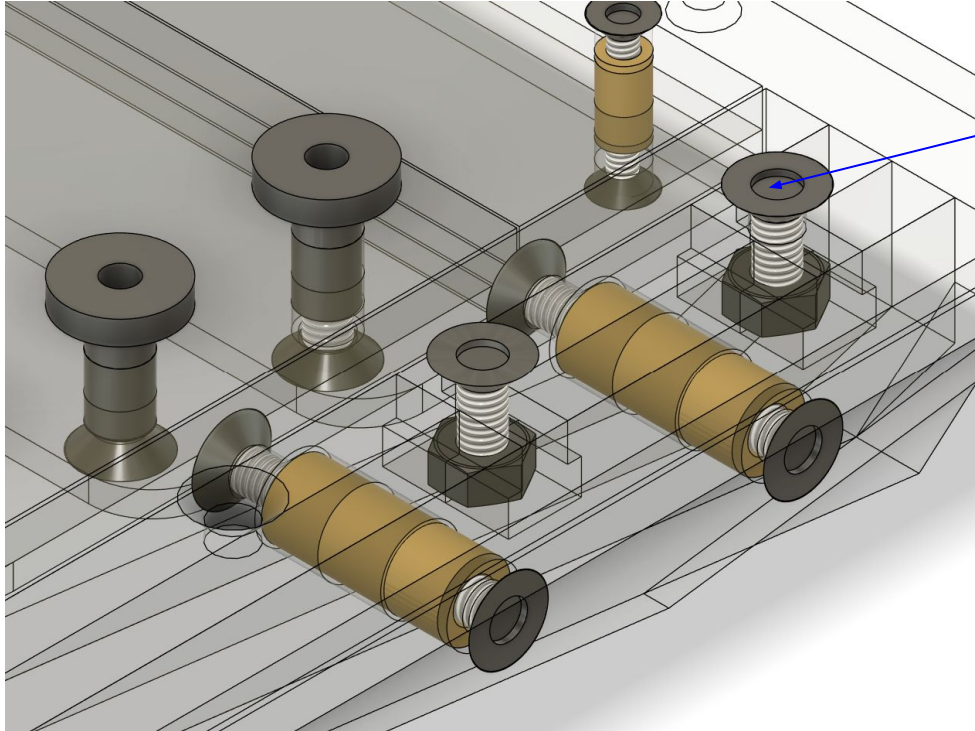
M3x6mm
M3x4mm

Step 5 : feet assembly

Feet

M3x8mm

Screw carefully - not too tight !!



Step 6 : gaskets

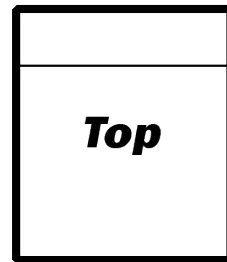
Gaskets sizes are :

- Top : 25 mm / 45 mm / 45 mm / 25 mm
- Bottom : 50mm / 50 mm

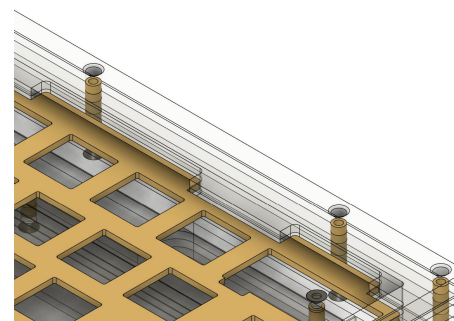
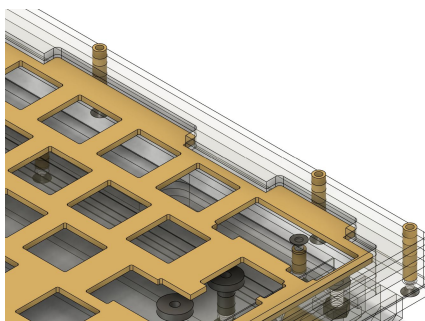
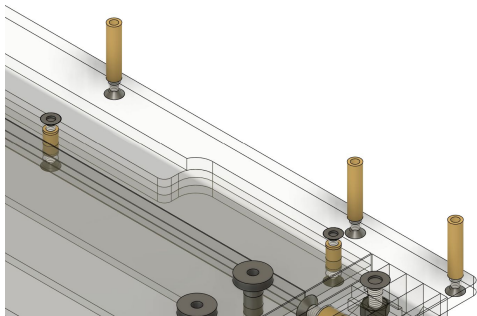
Just install gaskets on plate on both sides

Step 7 : top stack

— — —



- Setup M2x14mm inserts with M2x8mm screws by fixing them on main layer
- Add in the order below
 - 5mm clear or the frosted bonus one
 - 2 x 3mm layers
 - Plate
 - 2mm layer
 - Top WK/WKL/HHKB in clear or frosted as you like



Step 7 : top stack

— — —

- Finish with the M2 torx screws
- Your PoorKoi is now finished !!

Top

