

PoorKoi

Build Guide

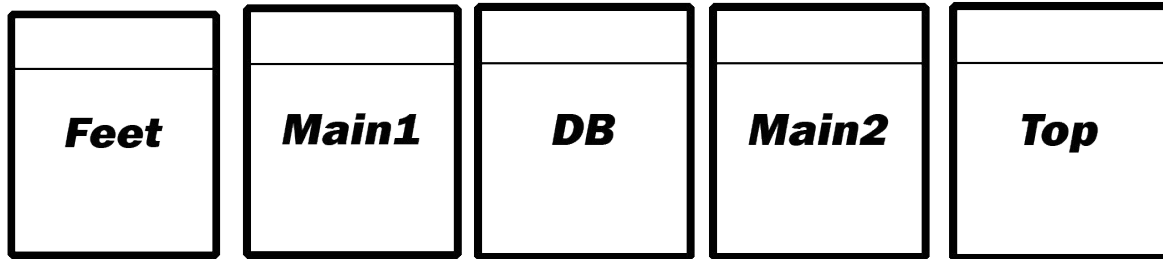


Step 0 : kit content

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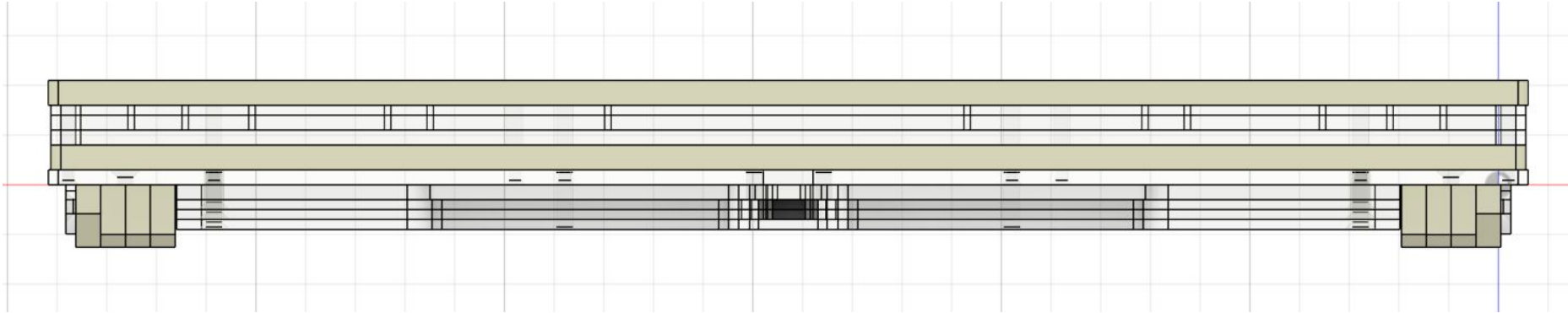
You will find in this kit:

- 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
- Goodies ! 😊



Step 0 : content

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Kit is full of surprises with 24 simple configurations mixing frosted and clear parts. In white all the parts available in both variants. 😊



- tops
- 5mm acrylic layer on top of Koi's one
- 5mm pieces of feet

Step 1 : qmk toolbox installation

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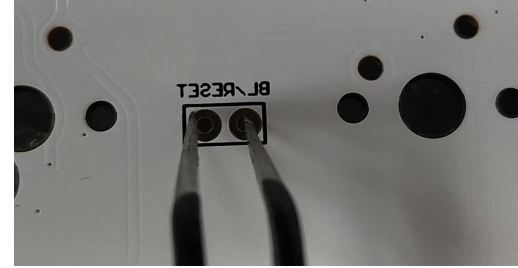
- PCB is empty of firmware, you will learn if not how to flash your PCB. Easy step no worries !
- Download **QMK Toolbox** here:
https://github.com/qmk/qmk_toolbox/releases/download/0.3.3/qmk_toolbox_install.exe (latest version at the time of writing)
- You can trust the installer, the warning is related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



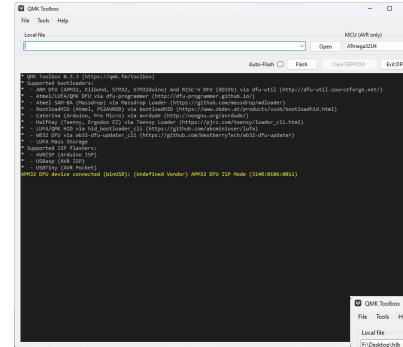
Step 1 : firmware flashing

- 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

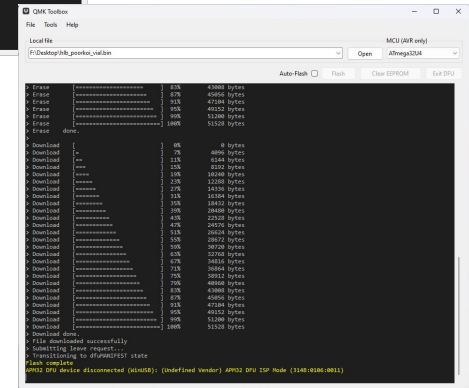
1



2



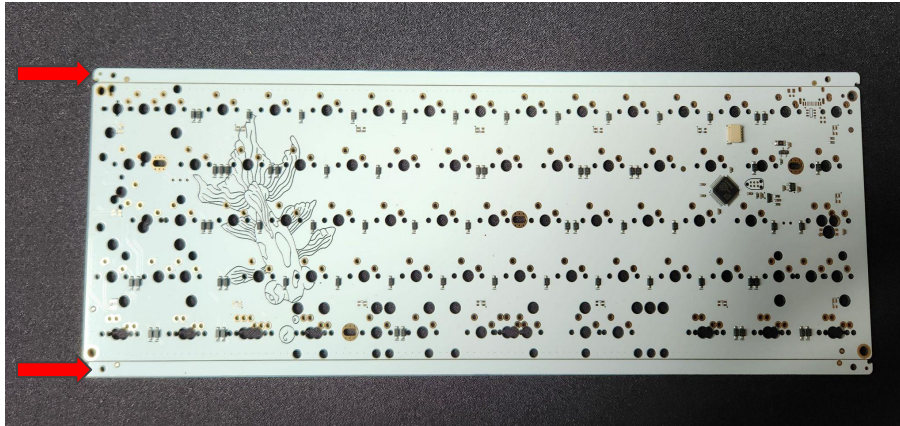
3



Step 2 : check PCB

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- 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

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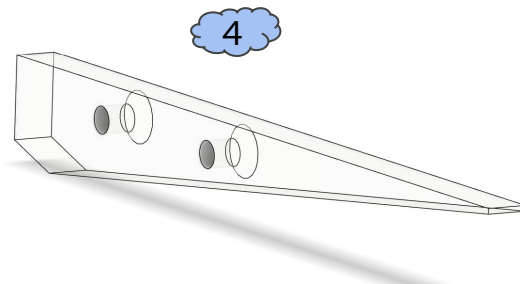
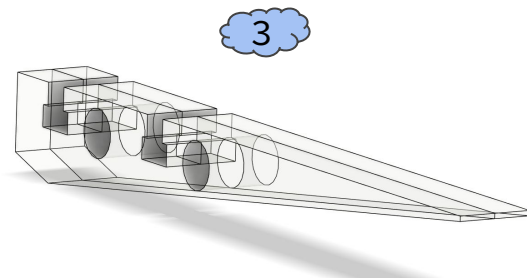
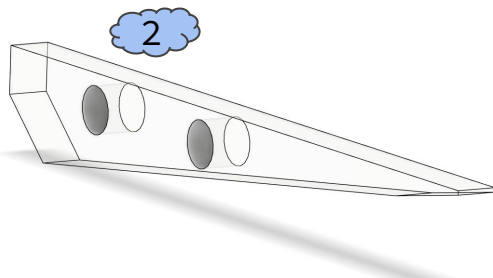
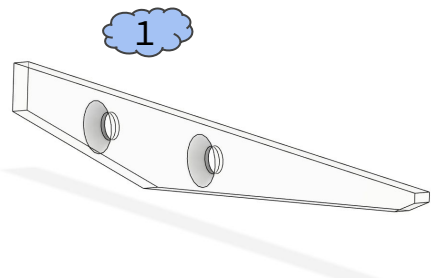
- To test PCB we will use <https://config.qmk.fm/#/test> because VIAL requires to unlock PCB and without switches it's a dual tweezers process
- Plug daughterboard
- User your tweezer to test each switch contact holes. Everyone must answer except M0(1) located at the right of right shift
- Once PCB is checked you're free to solder or mill-max your PCB
 - PCB supports underglow RGB but due to some issue during order, you have to solder the led included in the kit. Please read carefully the disclaimer on the main git repo webpage.
 - 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

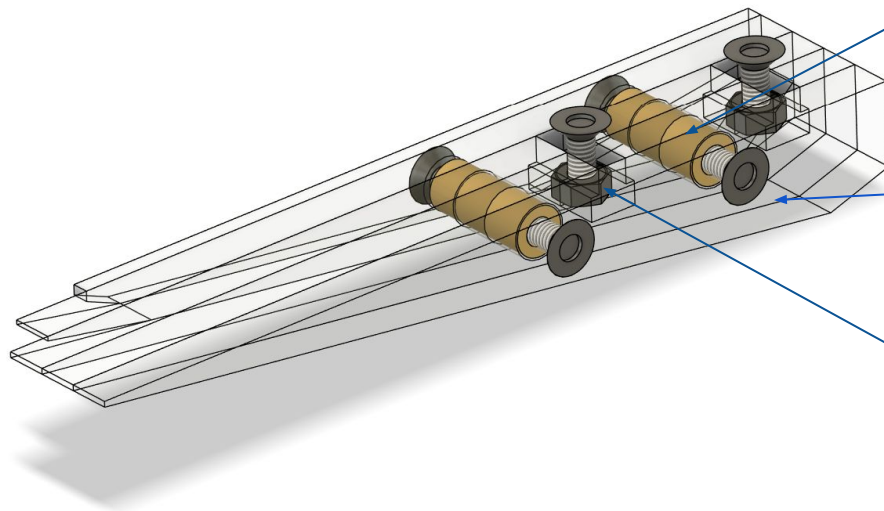
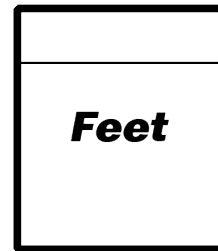
Example of left foot acrylic layers (left and right are distinct by milling)



Step 3 : feet

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Feet are symmetrical



Insert
M3x14 mm

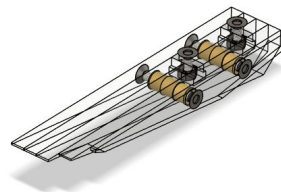
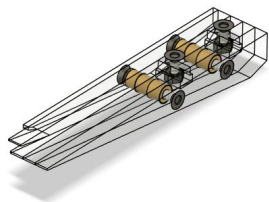
Screw
M3x8 mm

Bolt M3

Step 3 : feet

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Feet should look like this

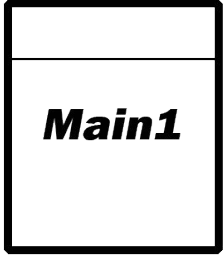


Feet

Step 4 : bottom stack

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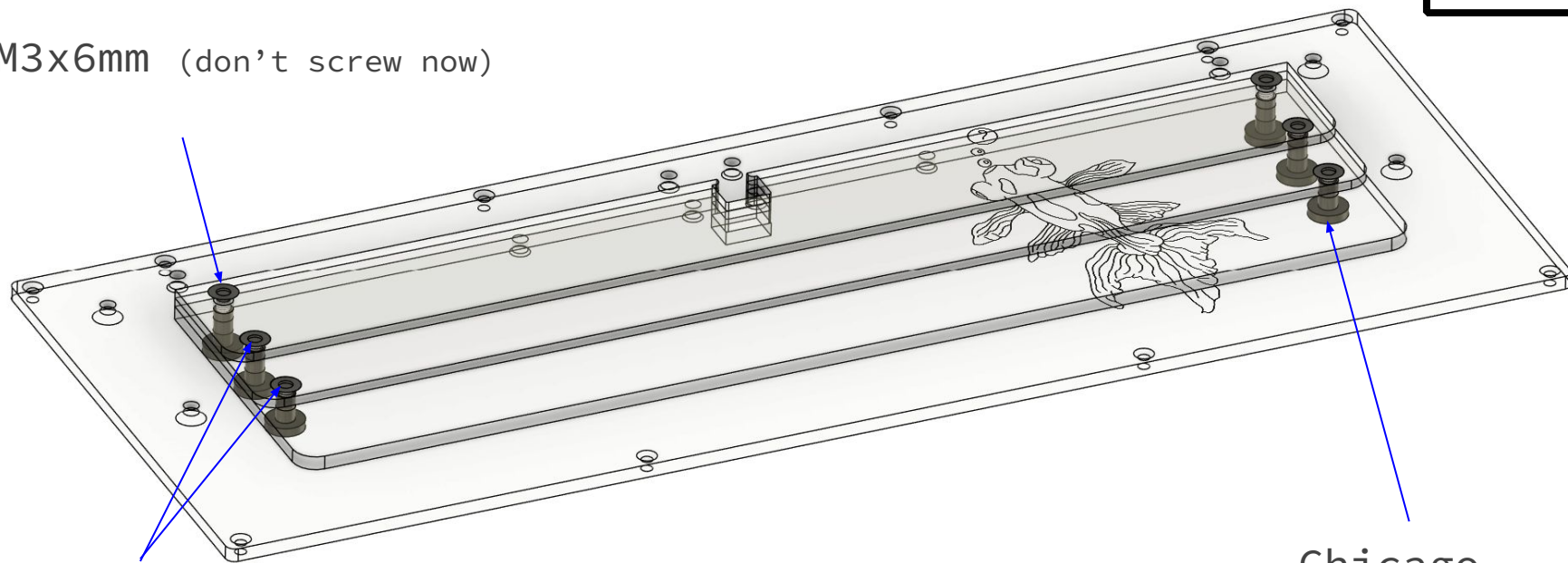
- Use Chicago screws head down
- Put the main acrylic layer with koi fish
 - Use picture on next page
- Put the other 3 acrylic layers to match next picture



Step 4 : bottom stack

Main1

M3x6mm (don't screw now)



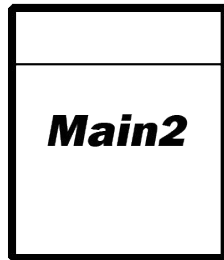
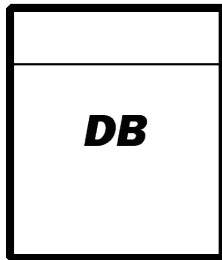
M3x4mm

Chicago

Step 4 : bottom stack

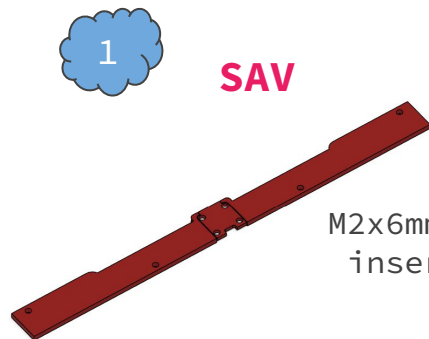
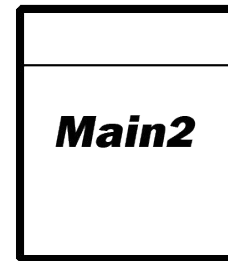
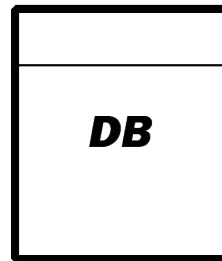
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- Plug JST cable to daughterboard
- Insert JST through the main acrylic layer
- Setup countersunk M2 screws and insert and put them on table, screw head down.
Insert acrylic layers
- Use M2x3mm screws to secure daughterboard
- Stack halves acrylic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



Step 4 : assembler la stack

<https://github.com/H3ll10n/PoorKoi/blob/main/notes/october2024/october20241012.md>

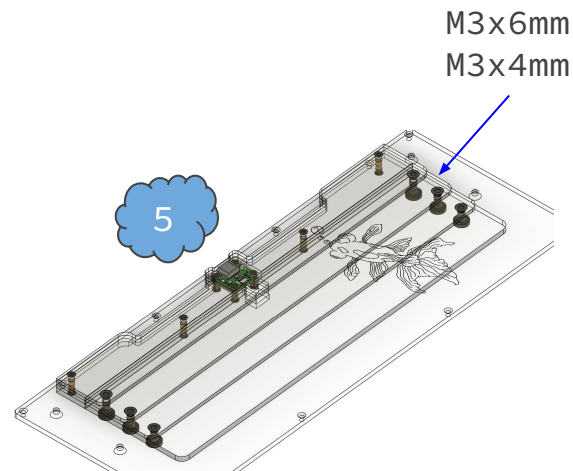
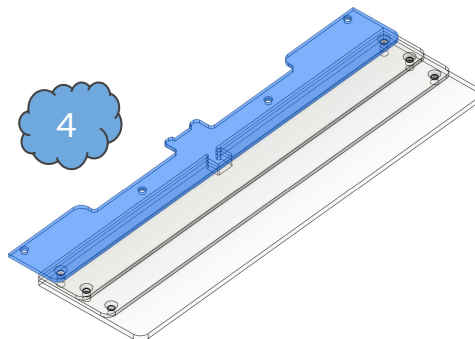
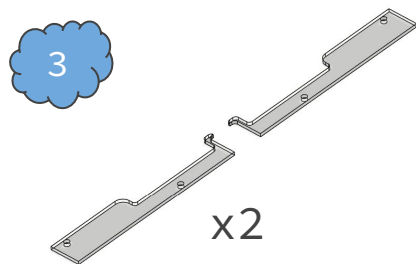


M2x6mm + M2x4mm
insert 6mm



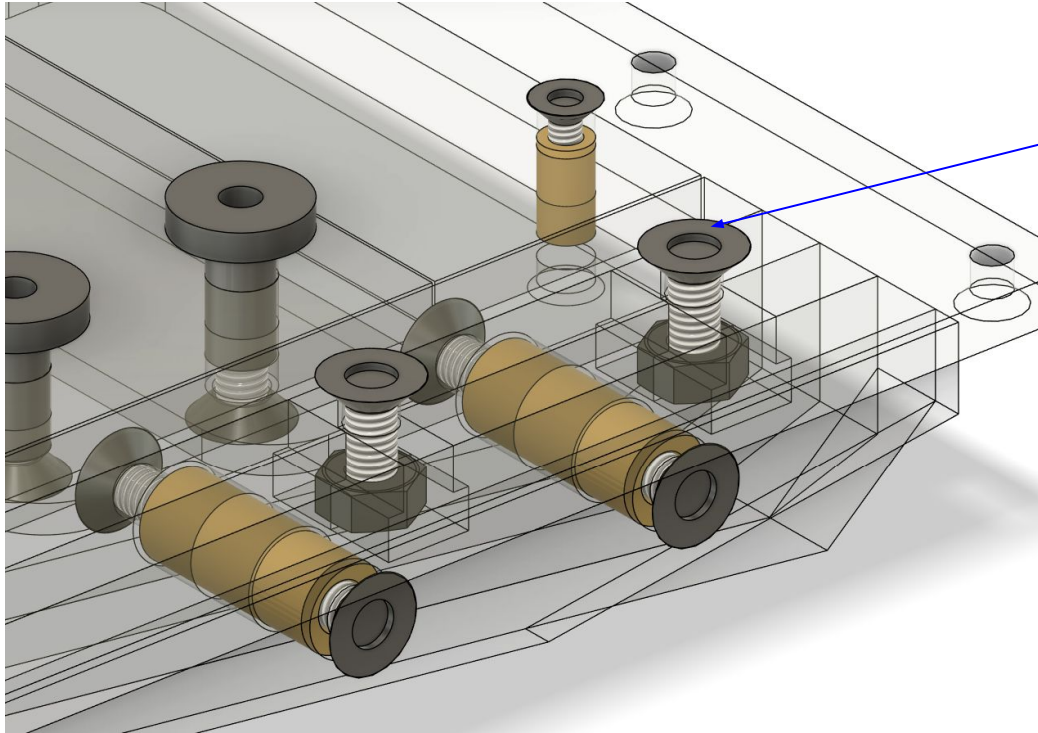
M2x3mm

SAV: M2x3mm + insert 3mm



Step 5 : feet assembly

Feet



M3x8mm

Screw carefully - not too tight !!

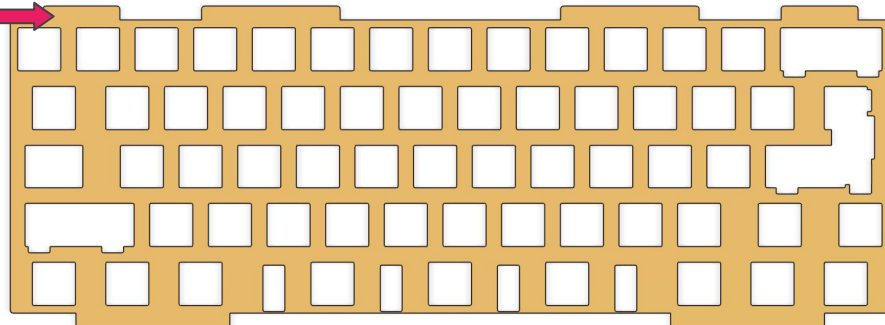
Step 6 : gaskets

Gaskets sizes are :

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

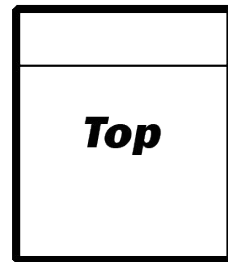
Just install gaskets on plate on both sides

zone de gasket

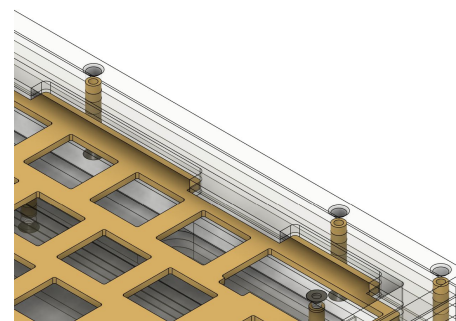
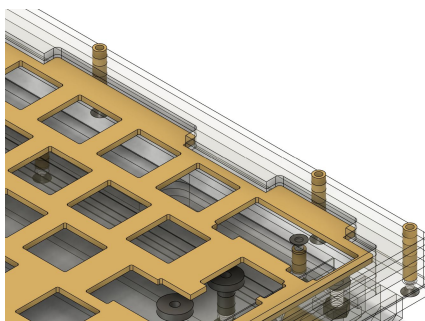
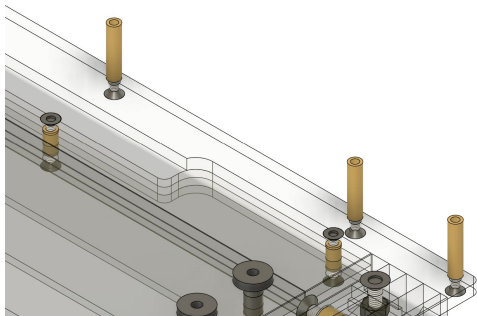


SAV

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. Layer has no milling 😊
 - 2 x 3mm layers, one without cut then one with the cuts
 - Plate
 - 2mm layer
 - Top WK/WKL/HHKB in clear or frosted as you like 😊



Step 7 : top stack

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

Top

