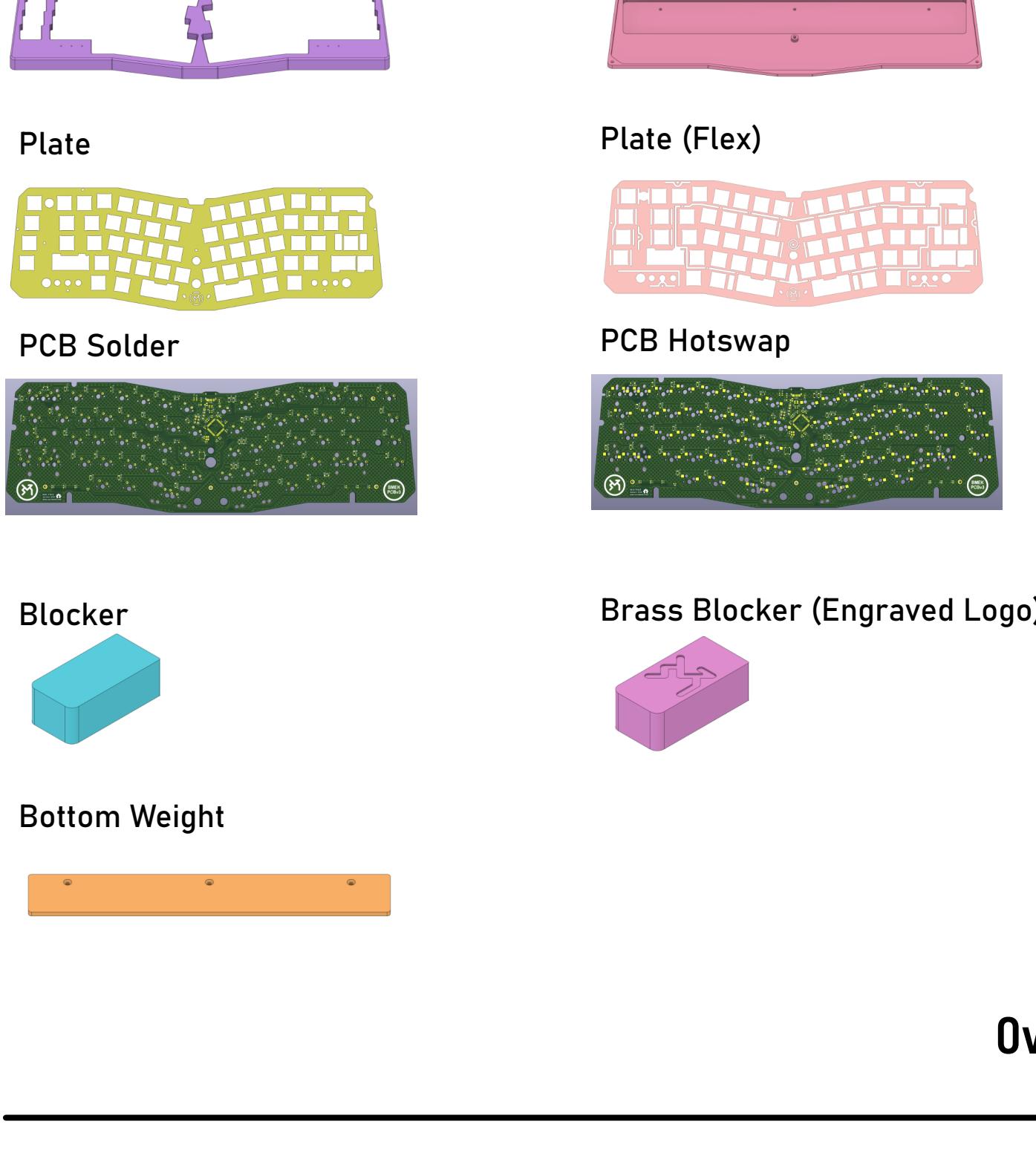


# Some tips for assembling your BMEK

## Manifest

### Main Parts



### Screws

5x ISO 4762 M2.5x0.45x8mm (Main Case Screws)

14x ISO 4762 M2x0.4x4mm (8x for Plate, 5x for PCB, 1x for Blocker)

3x ISO 10642 M3x0.5x6mm (Countersunk screw for bottom weight)

Note: The Brass Blockers in the GB have slightly shorter threads than the regular ones. For these there are shorter M2x0.4x3mm screws provided.

### Other

4x Self-gluing rubber feet, circular, 10mm diameter

1x Hex Key 1.5mm

1x Hex Key 2mm

## Overall Assembly

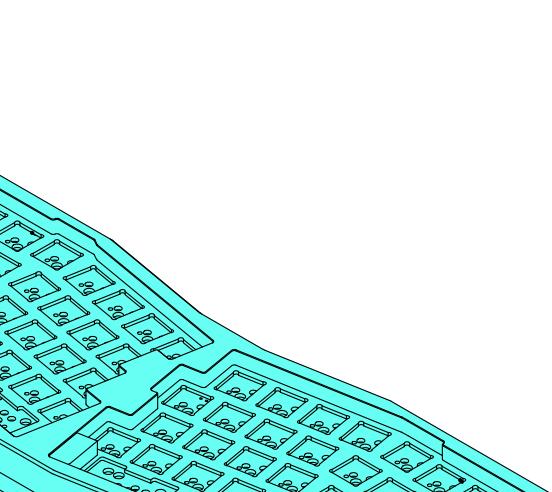
### Disassemble first!

For safer shipping, the BMEK comes mostly assembled with plate & PCB inside the case. However, I recommend to disassemble the case entirely first, and build the PCB & Plate assembly outside of the case first.

### Don't over-tighten screws!

Once metal surfaces made contact, extra tightening will cause threads and/or screw heads to strip!

Especially stripping the hex screw head can be painful, as it is difficult to extract stripped screws from the countersunk holes.



### Case bent?

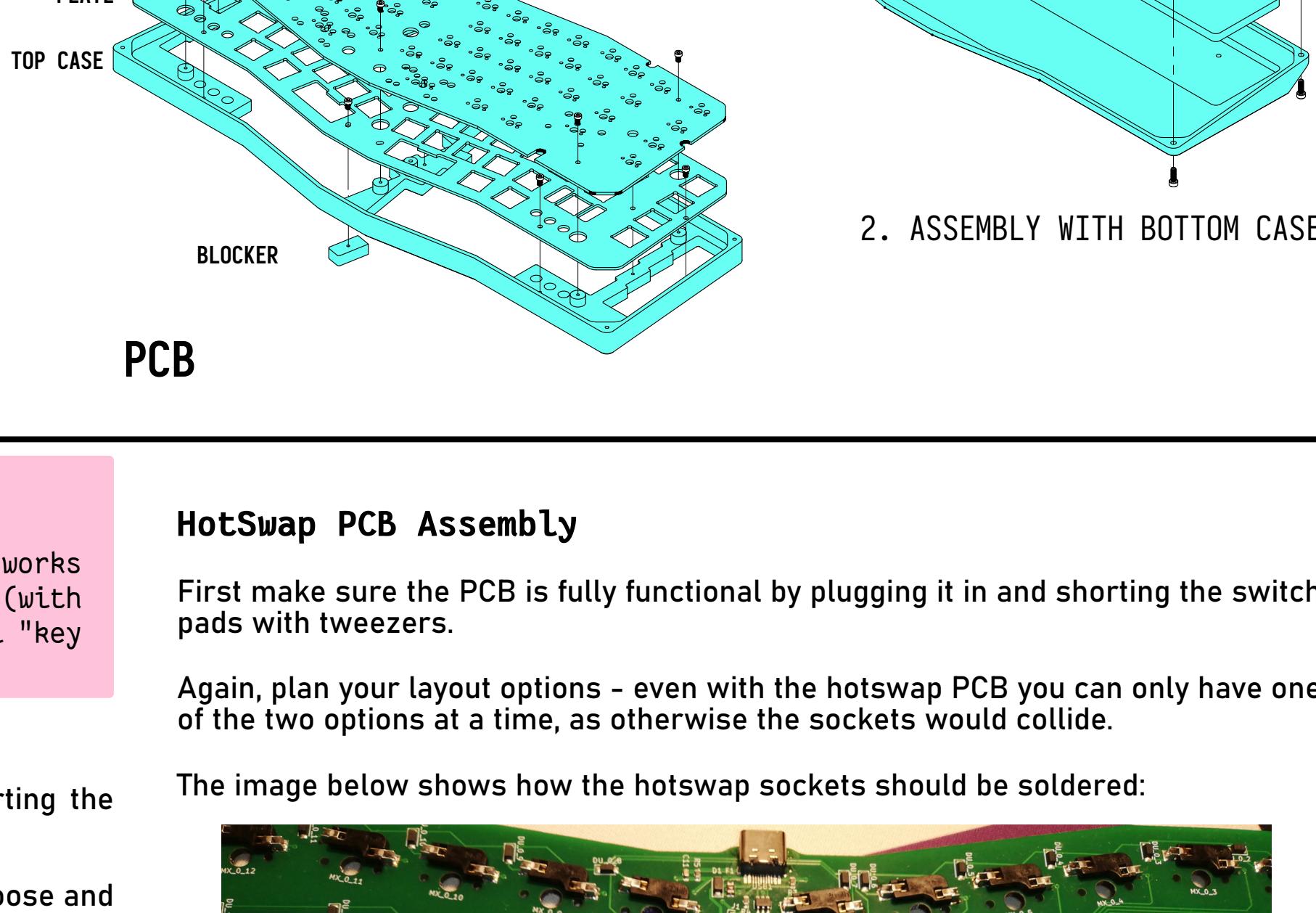
The bottom cases may have a slight curve to them from the anodization/hardening process. This is no reason for concern, as the center case screw will pull it straight nicely during assembly. Take care not to over-tighten the case screws, though!

### Seam visible?

The BMEK does not feature a seamless design, so the seam between the top and bottom case will always be somewhat visible. For best alignment, I usually start by tightening only the center screw until it starts putting on pressure, and then I'll carefully align top and bottom case before further tightening the rest of the screws.

### Brass Blockers

The brass blockers have slightly shorter threads than the regular aluminum blockers, so to make sure you can fully tighten them, use the shorter M2 screws that should be provided in the envelope.



### Always test your PCB first!

Connect the PCB to your PC using a USB cable and check if it works as expected by shorting the two contacts of the switches (with tweezers or a piece of wire). The VIA configurator has a useful "key tester" interface.

### Plan Layout

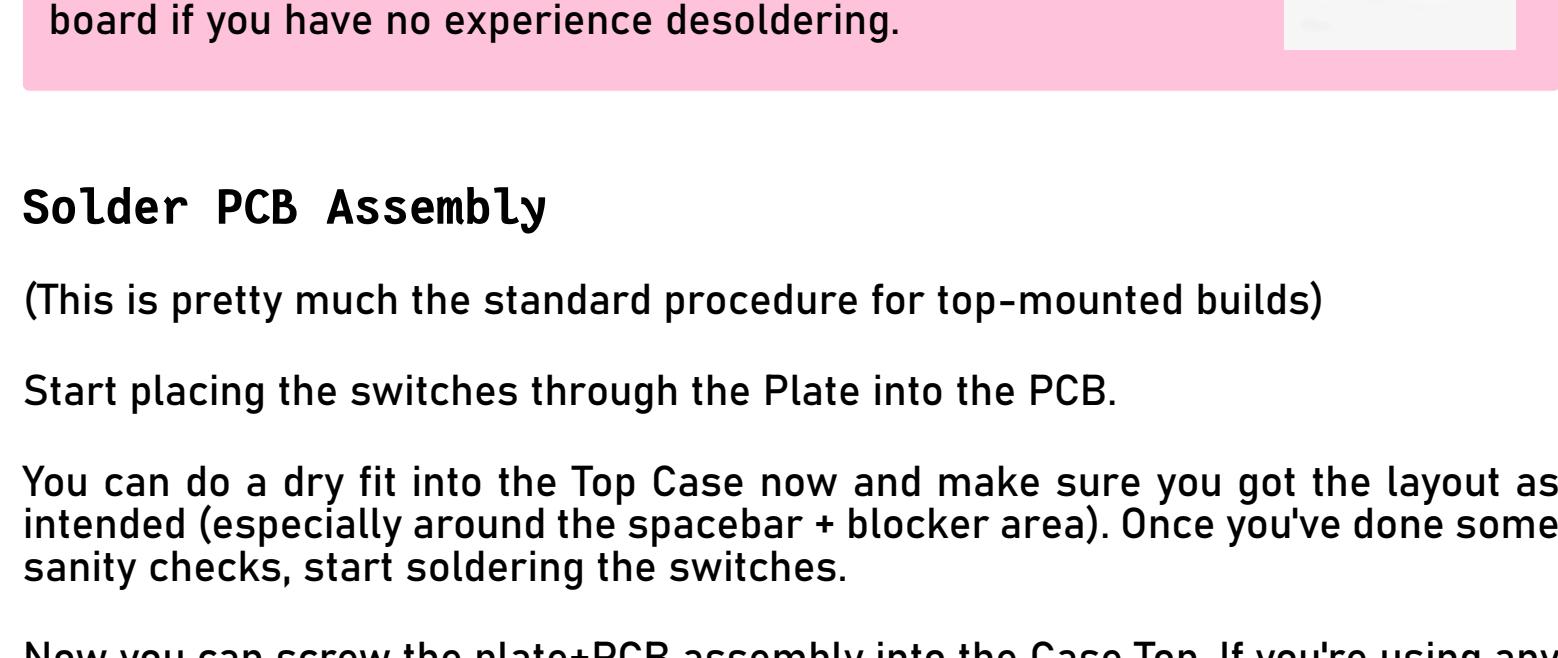
First make sure the PCB is fully functional by plugging it in and shorting the switch pads with tweezers.

Take a good look at the PCB and understand what layout you want to choose and where to solder the switches (see below for layout options).

I also suggest to start by mounting the stabilizers to the PCB (because of how painful it is if you forget them).

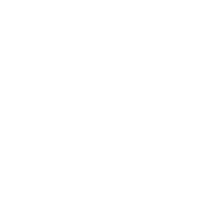
### Layout Options:

- 2U backspace VS Split backspace
- 2.75u right shift VS split right shift
- 2.75u spacebar VS 2.25u spacebar (both left and right half)
- 2.25u left shift vs ISO-style split left-shift



### Mount your Stabilizers before Soldering!

If you forget to, you'll have to desolder your switches, which can be a lot of work and potentially risk destroying your board if you have no experience desoldering.



### Solder PCB Assembly

(This is pretty much the standard procedure for top-mounted builds)

Start placing the switches through the Plate into the PCB.

You can do a dry fit into the Top Case now and make sure you got the layout as intended (especially around the spacebar + blocker area). Once you've done some sanity checks, start soldering the switches.

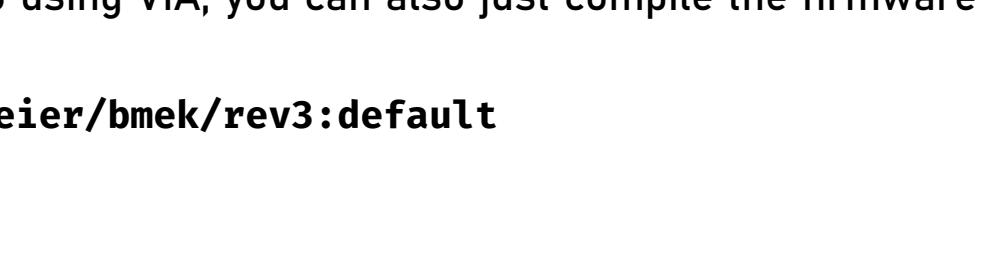
Now you can screw the plate+PCB assembly into the Case Top. If you're using any blockers, it's best to (re-)attach them now to the plate, so you can make sure they sit tight in the corner.

Note: For the Solder PCB, the screws that attach the PCB to the top case are optional.

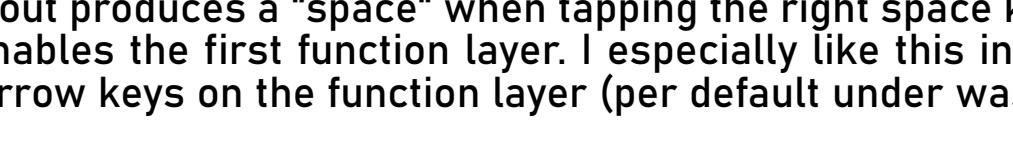
## Configuration

### Remapping keys & changing LEDs:

The PCBs come pre-flashed with the VIA firmware. VIA is a tool that allows you to configure your keymap on the fly, as well as configuring Macros, changing the LED color & more. You can get VIA on: [caniusevia.com](http://caniusevia.com)



In VIA, on the left side under "LAYOUTS", you can configure the layout options for the BMEK (i.e if you're using split backspace, split left-shift, etc.).



Alternatively to using VIA, you can also just compile the firmware with plain old QMK:

```
make bemeier/bmek/rev3:default
```

### Spacebar == FN:

The default layout produces a "space" when tapping the right space key, but when holding it, it enables the first function layer. I especially like this in combination with the nav/arrow keys on the function layer (per default under wasd and hjkl).

## "Hacks"

### Add a LED Diffuser:

You can cover the LED holes from the inside of the case with a small piece of white paper & scotch tape to diffuse the LEDs:

