

Parts List:

1x Abacus Panel

2x Light guides

2x Switch Caps

7x M3 Screws

7x M3 Screw Terminals

Tools needed:

Soldering Iron

Flush /side cutter / snips

Super Glue / Hot Glue

Tweezers

Assembly:

1. Remove the Behringer stock knobs from the module by carefully pulling them away from the panel. They are D shaft knobs and should come off without difficulty.
2. On the back of the module, unscrew the 7 screws holding the PCB to the front panel standoffs.
3. Carefully remove the light baffles for the cycle buttons. They come off by squeezing the black tabs on the back of the PCB. They should come off without force. The cycle buttons should come off with a light tug.
4. Now position the new panel on the module so you have a good idea of how it will fit together. The led holes might be a little bit tight. If it's **too** tight, you can enlarge them a bit with a round file or even a knife tip.
5. The screw terminals on the left and right sides (U4 + U5) need to be trimmed down with snips on two their legs so they don't hang off the board. Optionally you can also trim the bottom two (U6 + U7) as well. If left as is, they will touch the rails of your case, but they are flat enough that it doesn't really matter.
6. Now it is time to solder the screw terminals to the back of the new panel. This should be done carefully in steps:

First solder one pin for each of the terminals, leaving the other 3 pins unsoldered. Be very careful to align the circular terminal with the circle marked on the PCB.

There is some room for error, but aim to have the terminal perfectly centered above the white circle.

My preferred way to do it is to put a small dab of solder on the part's pin on its own. Then put a small patch of solder on the corresponding solder pad. Finally, using tweezers, hold the part in position with one hand, while using the soldering iron to heat the solder.

Do this for all seven terminals. This way, if you need to make an adjustment, it will be easy to de-solder the terminal for repositioning.

Test that the panel fits. At this point you should be able to test the screws as well. Make sure everything screws together without force

Once you are confident that the solder terminals are aligned, you can solder the rest of the pins and pads. For the bottom two terminals, make sure not to use too much solder and check that they are flat so they don't cause a gap between the Abacus and your case's rails.

7. Now it's just a matter of installing the light guides. A small dab of glue on the back of the panel will hold them in place permanently. The button caps can be secured with hot glue or just a small strip of scotch tape around the shaft of the button should make for a very snug fit.

8. You can optionally disable 3 of the 4 leds around the cycle button by removing the series resistor. I have done this on my module to reduce the bleed through the panel gaps. You could also devise some kind of light baffling. I haven't come up with a great solution for this so if you have a good idea let me know!