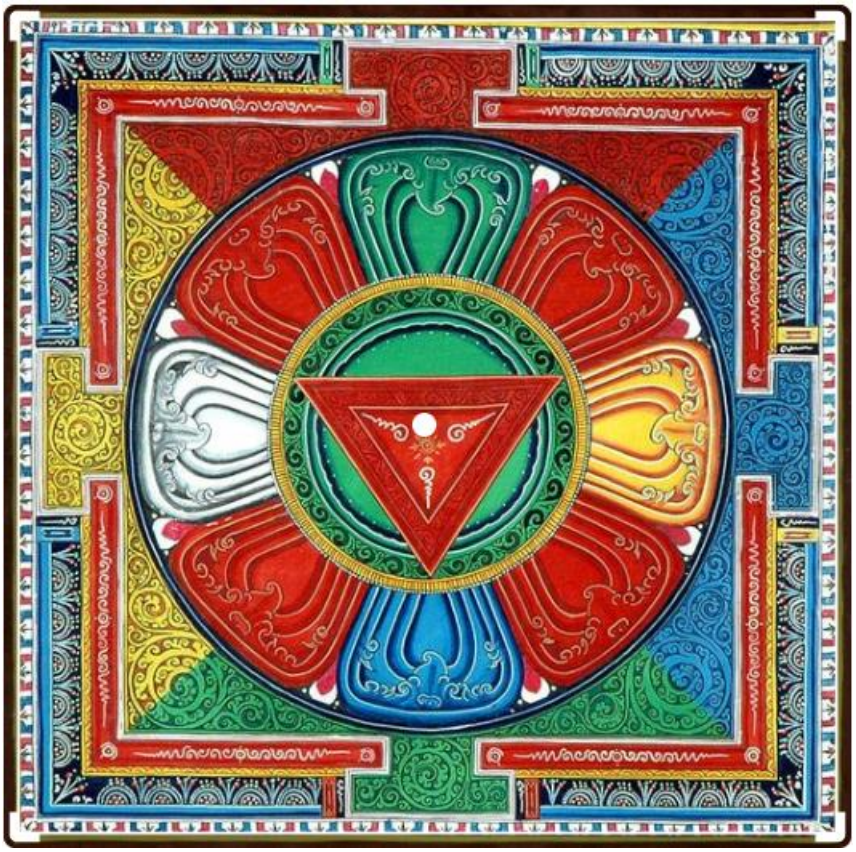


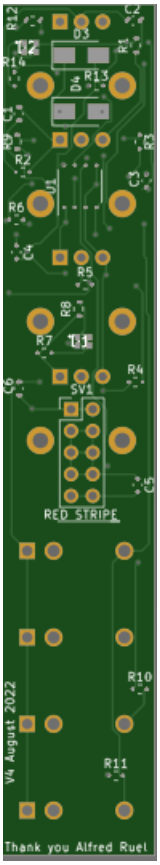
DE-5: Shakti - शक्ति)

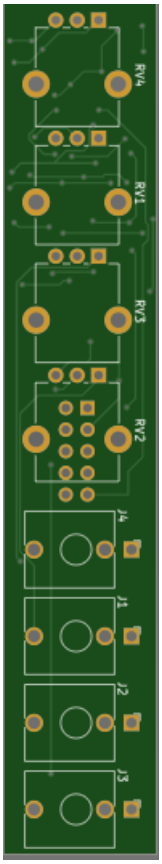
!!!WARNING! DEALING WITH FEEDBACK CAN BE HAZARDOUS TO YOUR EARS AND GEAR SUCH AS OTHER MODULES, SPEAKERS, DAWS, MIXERS ETC. TO BE SURE YOU HAVE HEALTHY LEVELS ALWAYS PLACE AN ATTENUATOR OR ATTENUATED MIXER OUTPUT BETWEEN YOUR MODULAR AND OTHER GEAR. IT MIGHT ALSO OPEN GATES TO UNKNOWN SONIC DIMENSIONS. DJUPVIKS ELEKTRONIK AND THONK TAKE NO RESPONSEBILITY IF GEAR WITHIN YOUR MODULAR OR OUTSIDE IS HARMED BECAUSE OF SHAKTI. YOU HAVE BEEN WARNED! PRECEIDE WITH CAUTION! WARNING!!!

Shakti is a 4hp no-input mixer in eurorack format. I've been doing no-input mixing with guitar pedals and various devices for almost two decades, while the modular synth is a wonderful instrument in itself it's lacking a standalone, dedicated device for no-input mixing which was odd to me because feedback mixing is such a huge part of experimental music. I decided to invent such a device if not for my own needs as a musician.

Shakti contains 3 different feedback loops in a very small package. 2 internal ones (represented but the pots Feedback and Feedback II, where Feedback is a normal signal, Feedback II which is an inverted signal and Receive – an external path (one that you send out from the module, through the modules of your choice and then back again). When working with feedback all three of these will intermingle fast which means both feedback pots and receive knobs will affect each other. A filter is attached to the first feedback path but since all signals will intermingle in this circuit (it is a mixer after all) so the filter will affect all three paths. Starting with the knob in the middle, it has a lowpass filter to the right and high pass to the left. OUTPUT I contains the inverted signal whereas OUTPUT II contains the normal signal. Shakti can be used as a stereo module since the 2 outputs might differ tremendously at times (se video examples).

PCB´s:

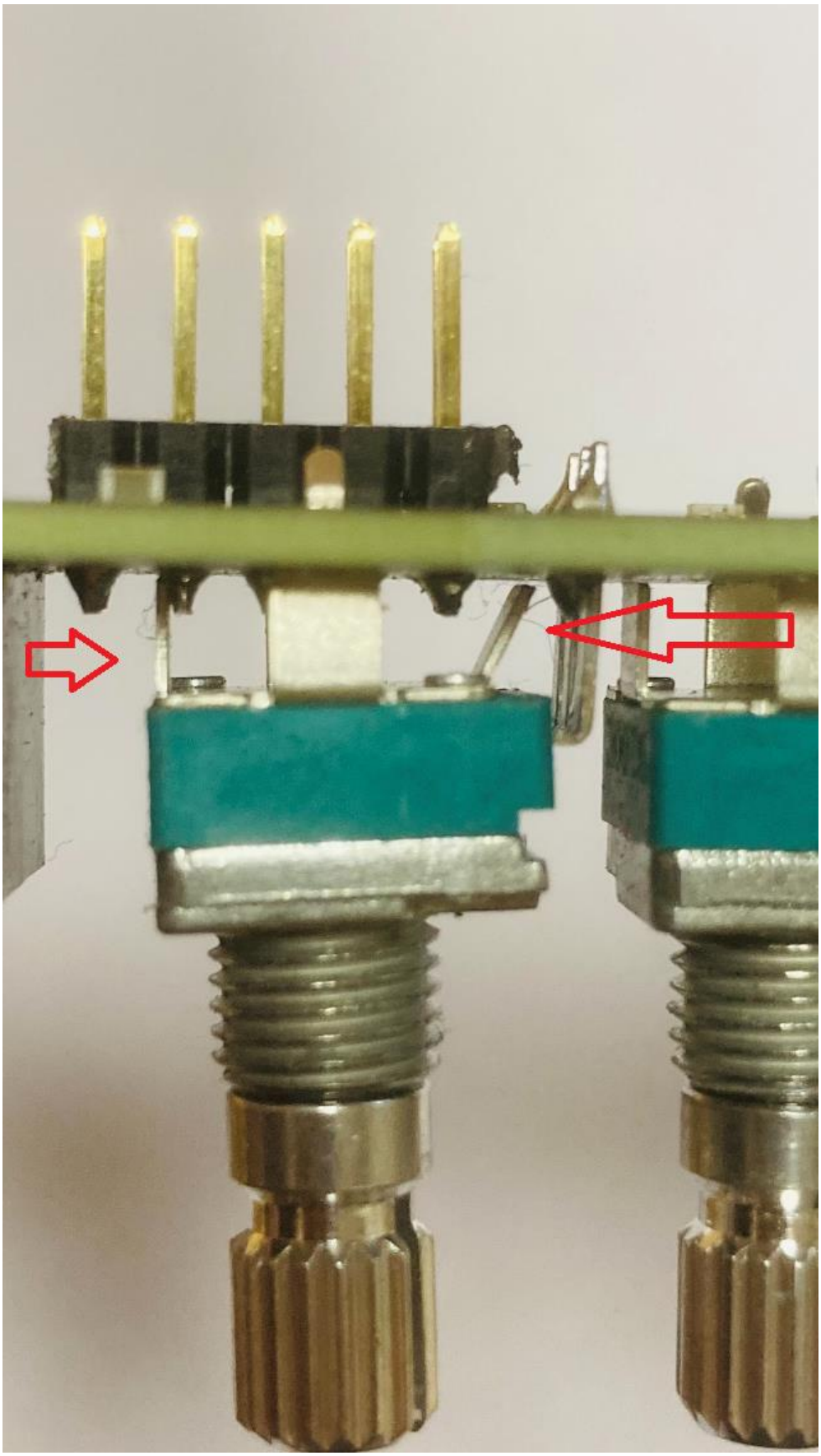




Front Back

This build is as straight forward as it gets and contains very few parts.

- Start with the power connector (since there will be a pot placed over it at the next stage). Use the silkscreen so you know what side it should be placed on. Place it on the same side where the silkscreen reads “RED STRIPE”.
- Fold the front log beneath one of the pots and place it on the opposite side of the power connector. Make sure the front lug on the potentiometer is not touching the power connector. If the back lug is touching the soldered pins of the power connector is not a problem since they are for ground (0v). Measure the log with the power connector with a multimeter to make absolutely sure there is not a connection between the two. Inspect that it looks like the picture below:

- 

- Solder one pin on the pot from the top (that way it won't fall off).
- Place all the other pots on the pcb and solder one pin from the top side.
- Place the 4 jacks and solder the ground pin so they won't fall off (that is the pin that goes outside of the jack and has a square pad – the one that is easiest to reach from the top.
- Attach the panel and screw all nuts. Make sure everything is aligned, if not: heat the one soldered pin on the jack/pot and align it. When everything looks right solder all pins from the bottom side. Be careful not to touch any pre-soldered components. If so you might ruin the module. It's tight at some points but shouldn't be a problem as long as you are focused!
- Attach the knobs on the pots.

Finally attach the power cable - make sure the red stripe faces towards the text 'RED STRIPE'.

Done, time to release your inner noise demons!

BOM

4 100k t18 9mm Alpha pots
4 Thonkicon Jacks
1 Powerconnector
4 Micro t18 knobs (black)