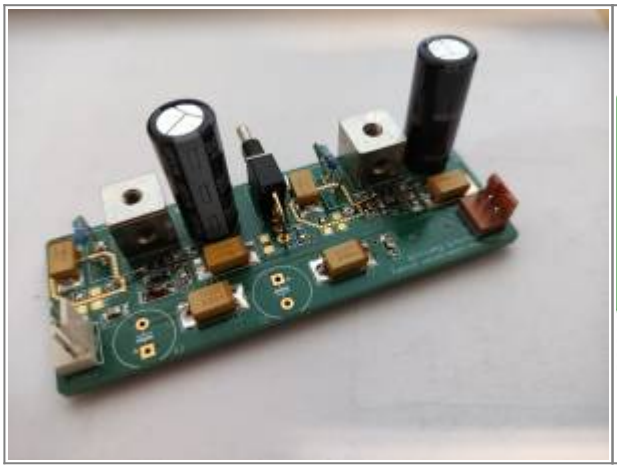
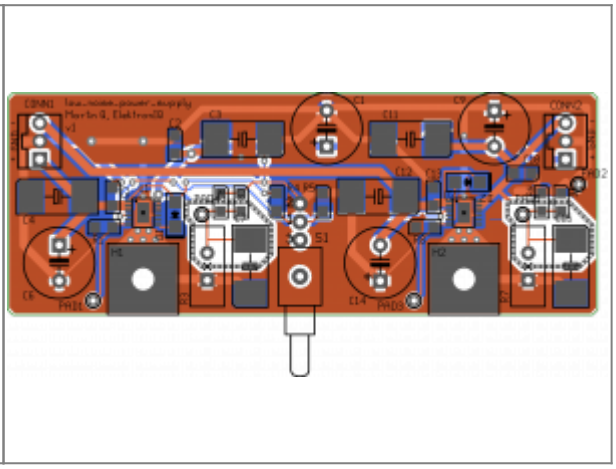
Low noise power supply





Function

- This PCB is a power supply board based on the ICs LT3045 and LT3094, that are low-noise voltage controller, i.e. low-noise alternatives to the commonly used 7815 and 7915 parts. Output voltages are set by a resistor, up to +15 and -19 V.

Options

- The output voltages can be set via a resistor.
- The supply can be turned on or off via a switch, but you could also solder a TTL signal to it.

Performance

- Noise performance has not been tested yet!

Date

- Schematic and PCB were drawn August 2021

Status

- Not implemented yet. Not tested yet.

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Schaltungsprinzip

- It's best to read the datasheet for the LT3045 to understand what was done here. The LT3094 is essentially the negative version of it, with no additional features.
- The turning on/off function was implemented using a mechanical switch.
- The current limiting function was implemented by a fixed SMD resistor.
- Thermal stuff was considered by placing the parts close to an solid metal block that is supposed to be fixed to the casing.

Schematics and layout

- Git
  - Schematic 2021-08-03
- Layout png

Meckerliste

What need to be improved: (✗, ✓, ✓, ✓)