1. Solder all the capacitors first, these are film capacitors and they have no polarity

Qty	Value	Code	Name on PCB
7	100nf	104	C1, C2, C3, C4, C7, C8, C11
1	33nf	333	C10
1	4,7nf	372	C12

2. Solder trimmer resistors

Qty	Value	Code	Name on PCB
2	10k	103	R19, R10
1	20k	203	R5
1	1k	102	R4

3. Solder 3.5 jack connectors

Qty	Value	Name on PCB
3	Jack 3,5	IN, CV, OUT

4. Solder the power connector. You must solder the power connector before soldering the potentiometers and the switch. Note that the solder points are on the top side of the board. The small arrow on the connectors must be on the side with the thick white line.

5. Solder the switch.

6. Solder the potentiometers

Qty	Value	Code	Name on PCB
2	50k	503	R43, R43

7. Fine, everything is soldered!

Remove the traces of flux and screw the front panel. Do not tighten the switch nut too hard, as this may damage it.

Install the knobs on the potentiometers and fix them with a bolt inside the knob. Turn the knobs to the extreme right and extreme left positions to check their correct installation.
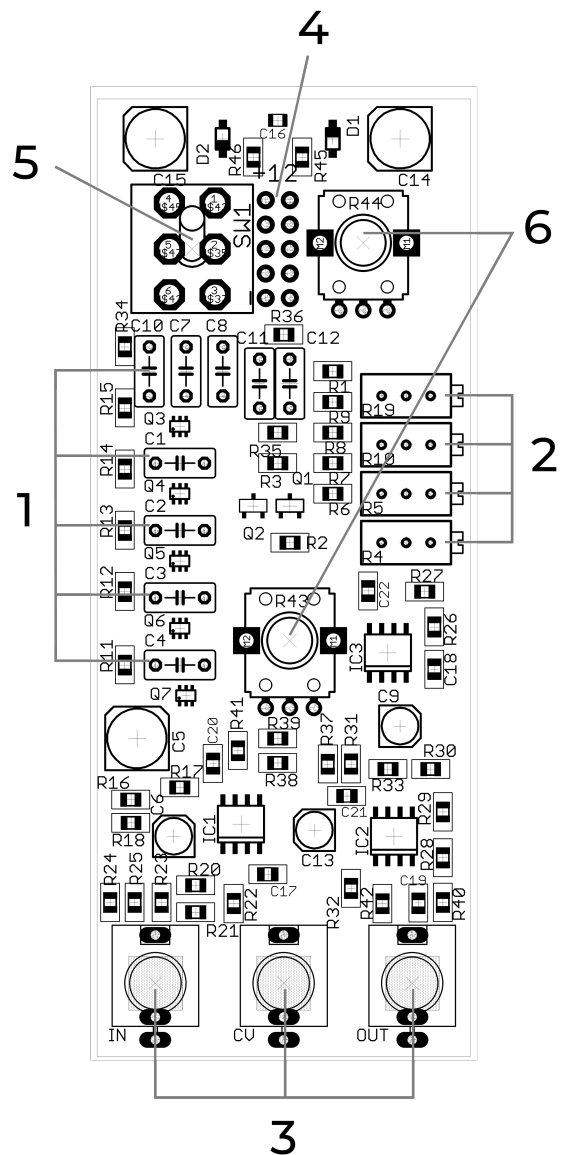
8. Set the resistance on the trimmers, for this you need a multimeter.

Measure the resistance on the contacts of the potentiometers marked with "X" in the table below (or see infographic)

Set the values on the trimmer resistors as in the table:

Name on PCB	pins			value
RES		X	X	1.65K
HIF	X	X		1.30K
LOF		X	X	1.20K
MIDF		X	X	0.56K

It's time to test the module! Connect the module to power and set the RES knob to the extreme right position. Turn the CUTOFF knob to the right and to the left. You should hear the filter self-oscillate. Correctly assembled filter starts the first time.

Calibration

Ok, everything works! Now it remains to set the frequency range of the CUTOFF knob. To do this, you will need an oscilloscope or other instrument.

Frequency range of the CUTOFF knob can be whatever you want and is set with trimmers HIF, LOF, MIDF

Tuning is done during self-oscillation, those with the extreme right position of the knob resonance.

The original FATMOOG has the following CUTOFF knob characteristics: extreme left position 27.5Hz, middle 600Hz, extreme right 20-21MHz

The tuning algorithm looks something like this:

1) set the cutoff knob to the leftmost position, measure the frequency, if necessary, adjust the frequency(27.5Hz) with a LOF trimmer
2) set the cutoff knob to the extreme right position, measure the frequency. if necessary, adjust the frequency with a MIDF of HIF trimmer (often it turns out to adjust the module using MIDF and HIF trimers, because the MIDF trimer shifts not only the middle point, but also the right border of the filter)
3) set the cutoff knob to the central position, measure the frequency. if necessary, adjust the frequency with the MIDF trimmer
4) repeat from step 1, until you reach the desired parameters