

TABØR

build guide v1.1



Hi fellow!

Just a quick intro before starting,

TABØR is made of two boards:

- brain board with all the electrolytic capacitors, vactrol, ICs and reverse polarity protection components
- control board with all the potentiometers, jacks, LEDs and the 2 legs avalanche transistors

Following this guide, the boards are assembled by the *height criteria*: short components first, tall components last.

At the end the two boards are connected thanks to their headers and the panel mounted.

Be careful to check the correct position of the two boards while connecting them and before powering up the module: potentiometers legs must face down on the control board and power socket must be up in the brain board.

Another tool that can help you finding the components on the boards are the interactive BOMs linked here:

tinyurl.com/taborbom

Download them and open the .html file with a browser. They also work offline.

now let's begin!

brain board

ceramic caps:

Snap them in. Don't mind their polarity.

tip: since they are of the same height, you can wait and solder all the ceramic caps, diodes and resistors at the same time after you've placed all of them on this side of the board.

5	C3, C4, C5, C6, C9	100n
2	C12, C19	10p
1	C10	1n

diodes:

They are placed in vertical position: mind their polarity, the circular line (*white*) on the PCB needs to match the circular line (*black*) on the component.

13	D1, D3, D4, D5, D7, D8, D9, D10, D11, D12, D13, D17, D18	1N4148
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resistors:

They are placed in vertical position.

The body of the resistor goes on top of the white circle marked on the PCB.

tip: they don't have a polarity; this precaution is due to avoid them touching while soldered.

7	R6, R15, R17, R22, R24, R26, R35	1k
7	R7, R11, R19, R20, R25, R30, R36	100k
4	R1, R3, R23, R28	10k
1	R2	33k
1	R18	200r

transistors:

The "D" shape white symbol on the PCB needs to be aligned with the "D" shape of the transistor that needs to be soldered.

2	Q1, Q5	2N3904
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ICs:

Place the sockets matching the drawings on the PCB, be careful of the notch direction.

tip: flip the board, bend one of the socket legs and solder that leg. Check if the socket is aligned with the PCB. If so solder all the other pins.

Place the ICs and be careful of the notch direction.

3	U3, U7, U11	TL072
1	U2	NE555

headers:

Short legs are what needs to be soldered: Insert the short legs inside the hole.

Always check if you are on the right side of the board by looking at the drawings and texts on the PCB: the header's body needs to match the drawing on the PCB.

*tip: solder one pin and check if the header row is aligned and perfectly vertical with the PCB.
If so solder all the other pins.*

4	J102, J104, J106, J108	MALE
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you deserve a good damn cup of coffee now

done?

ok, flip the board

diodes:

They are placed in vertical position.

Mind their polarity, the horizontal line (*white*) on the PCB needs to match the horizontal line (*white*) on the component.

2	D2, D6	1N5817
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ferrite:

Snap them in. Don't mind their polarity.

2	FB1, FB2	FERRITE
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eurorack power socket:

Place the socket matching the drawing on the PCB.

tip: solder one pin and check. If the socket is aligned solder all the other pins.

1	J1	EURORACK_HEADER
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vactrols:

Match the short leg of the vactrol with the squared solder pad on the PCB.

tip: it's easier to bend at 90° degree all the four legs before trying to fit the vactrol in place.

9	U1, U4, U5, U6, U8, U9, U10, U12, U13	VTL5C1
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electrolytic capacitors:

Mind the cap: short leg (-) goes in the hole in the white side of the drawing on the PCB.

1	C22	47u
1	C15	470u
1	C16	330u
1	C17	680u
2	C1, C7	22u
2	C14, C20	1u_audio
1	C18	1u
3	C2, C8, C11	10u

film capacitors:

Snap them in. Don't mind their polarity.

2	C13, C21	100n_audio
1	C23	750n

check if everything is in place and then you are done with the brain board
if you need a break there are a lot of good ol' cat videos on the internet

control board

resistors:

They are placed in vertical position.

The body of the resistor goes on top of the white circle marked on the PCB.

tip: they don't have a polarity; this precaution is due to avoid them touching while soldered.

16	R4, R5, R8, R9, R10, R12, R13, R14, R16, R21, R27, R29, R31, R33, R34, R37	1k
1	R32	10k

transistors:

Remove the middle leg of the transistors (pin 2: the base).

tip: you can gently move it back and forth until it breaks, or you can cut it - the shortest possible - with a wire cutter.

the "D" shape white symbol on the PCB needs to be aligned with the "D" shape of the transistor.

5	Q2, Q3, Q4, Q6, Q7	BC337
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LEDs:

Short leg goes into the square pin (bottom).

Remember that Y stays for yellow LEDs, R for red, G for green and B for blue

tip: the closer to the PCB, the more they will be diffused on the panel's hollow window.

1	D21	Y_3mm
1	D22	R_3mm
1	D16	G_5mm
1	D14	Y_5mm
1	D15	R_5mm
2	D19, D20	B_5mm

surface components:

Wait to solder them: just place all of them in their right place and move to the next step.

3	p2, p3, p4	50k_t18
1	p1	50k_round
1	p5	10k_t18
1	p6	10k_round
12	J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13	PJ398SM

now the other side

headers:

Always check if you are on the right side of the board by looking at the drawings and texts on the PCB: the header's body needs to match the drawing on the PCB.

tip: solder one pin and check if the header row is aligned and perfectly vertical with the PCB.

If so solder all the other pins.

4	J101, J103, J105, J107	FEMALE
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At last put the panel on - check its direction - tighten the nuts and then solder all the surface components.

tip: we are soldering them now to ensure that all the surface components are aligned with the panel

Put the knobs on the potentiometers and tight their screws where necessary.

check if everything is in place and then you are done with the control board

Make a sandwich with the two boards considering their direction and connect the power supply
tip: mind the polarity on the header socket on your case, remember that red line is -12v

done! enjoy your new

TABØR

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