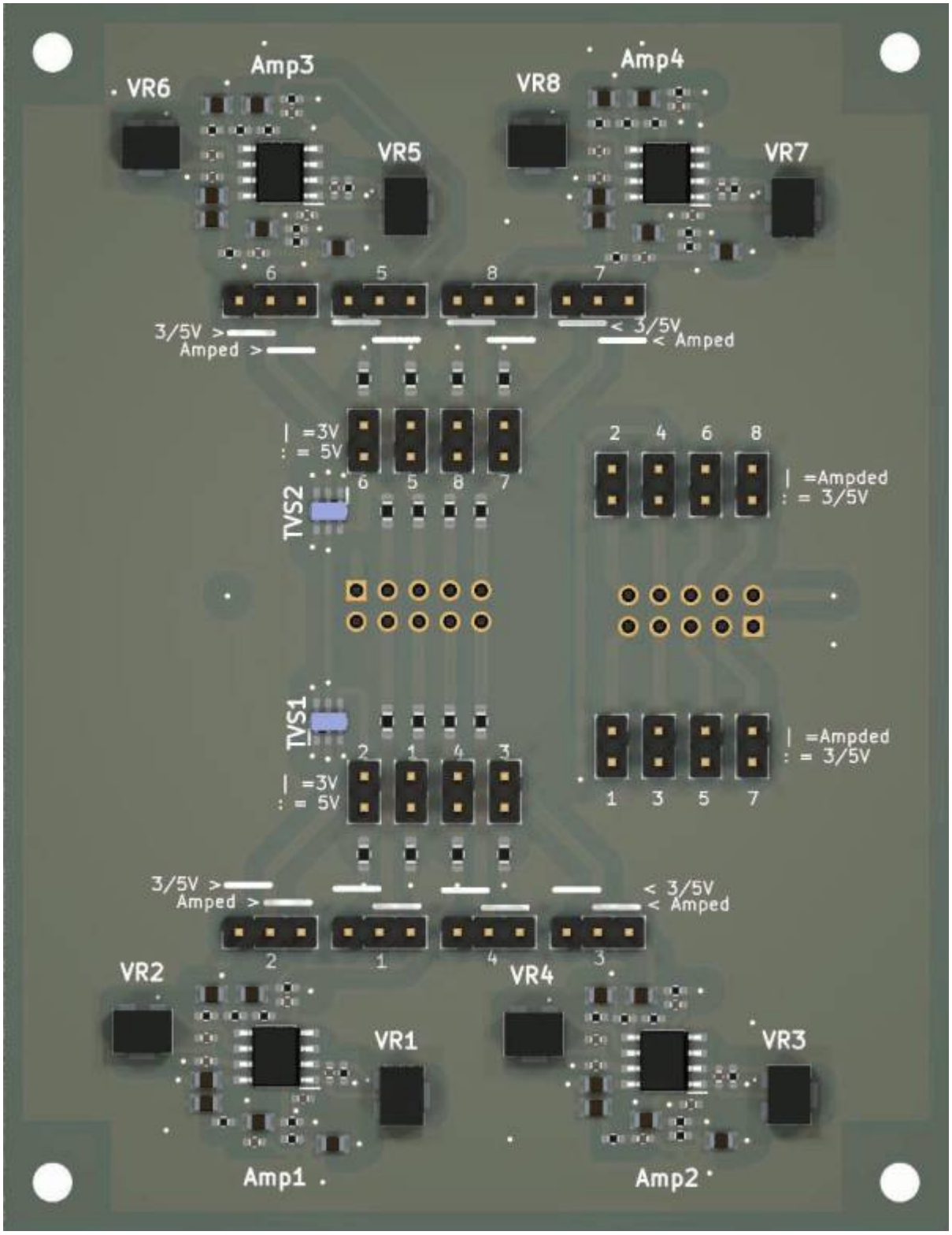
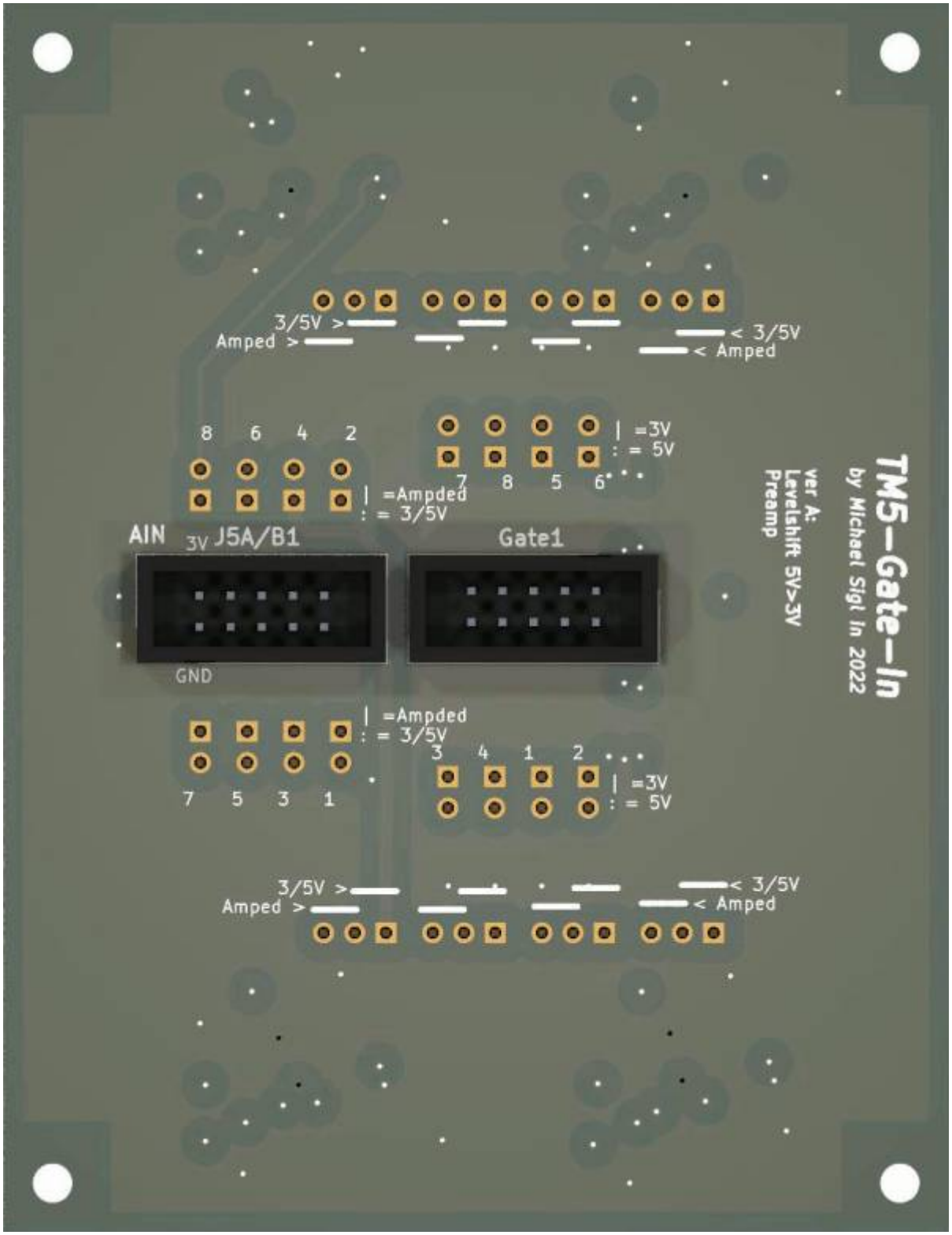
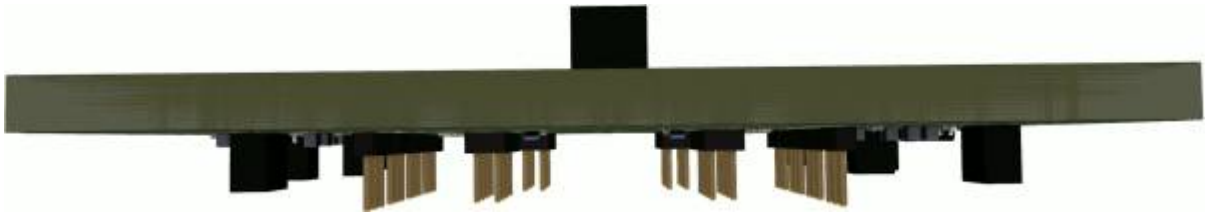
TM5 Gate/Trigger Input





this is one essential part for my triggermatrix5
* Levelshift from 5V to the for the MCU required 3V, with a Resistor Divider
* Overvoltage Protectect with TVS-Diodes
* Preamp-Section

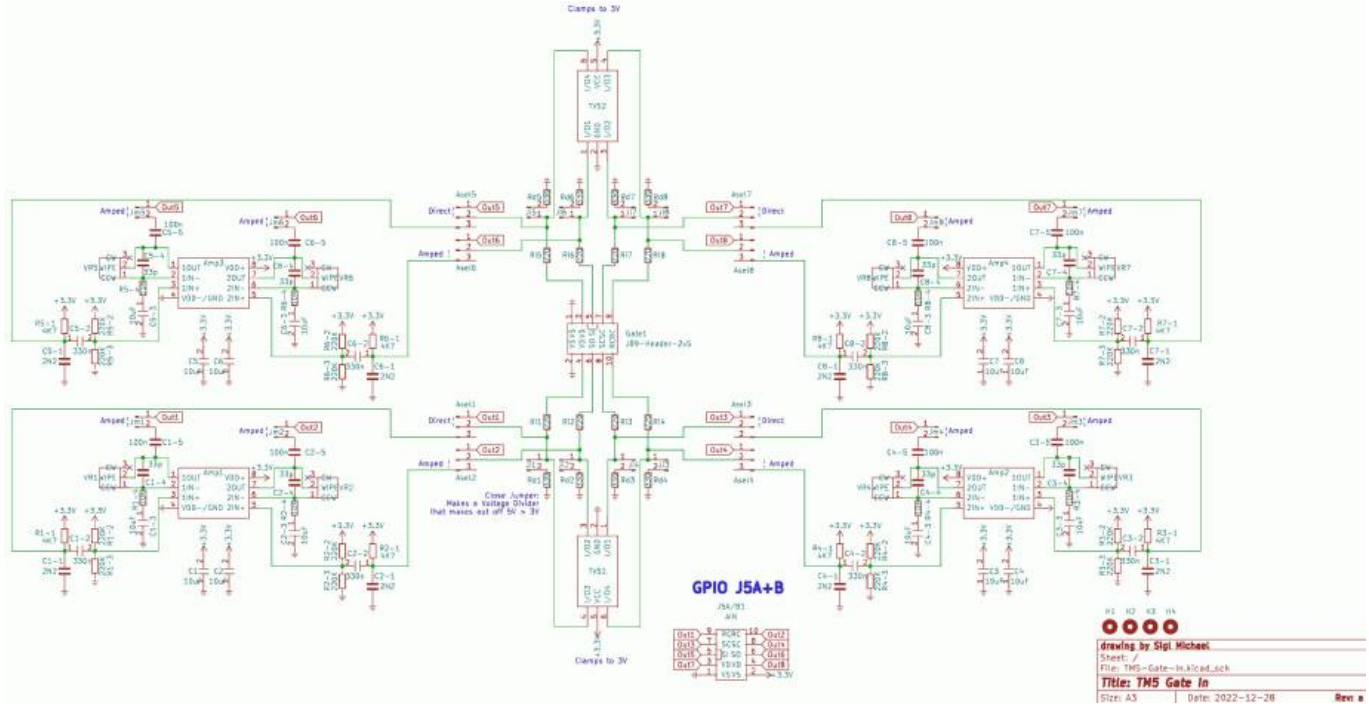
5V, 3V or Pre-Amped input - can be set vie Jumpers and Potentiometers, the PCB itself should be mounted on the Groundplate off the housing, the housing should have a service-plate to access this Settings!:



8 Channels, are managed here, so in order to have 16channels, you need 2 off this PCBs
if you dont want a Preamp, then dont stuff the Preamp-section > this will make this PCB a lot off cheaper!

Shematic

tm5-gatein-schema.pdf



Building and BOM

BOM

Follwing list is for reference, and debugging only, **no need to order them!** all the parts are already soldered on the PCB!

Comment	Designator	Footprint	LCSC	
8	VR1 -VR8	Poti-SMD-200K-3224W-1-204E 1204E C55072		

Comment	Designator	Footprint	LCSC	
8	C1-1, C2-1, C3-1, C4-1, C5-1, C6-1, C7-1, C8-1	2N2	C_0402	C1531
8	C1-4, C2-4, C3-4, C4-4, C5-4, C6-4, C7-4, C8-4	33p	C_0402	C1562
8	C1-5, C2-5, C3-5, C4-5, C5-5, C6-5, C7-5, C8-5	100n	C_0402	C307331
8	C1-2, C2-2, C3-2, C4-2, C5-2, C6-2, C7-2, C8-2	330n	C_0805	C1740
16	C1, C1-3, C2, C2-3, C3, C3-3, C4, C4-3, C5, C5-3, C6, C6-3, C7, C7-3, C8, C8-3	10uF	C_0805	C440198
8	R1-4, R2-4, R3-4, R4-4, R5-4, R6-4, R7-4, R8-4	10K	R_0402	C25744
16	R1-2, R1-3, R2-2, R2-3, R3-2, R3-3, R4-2, R4-3, R5-2, R5-3, R6-2, R6-3, R7-2, R7-3, R8-2, R8-3	220K	R_0402	C25767
8	R1-1, R2-1, R3-1, R4-1, R5-1, R6-1, R7-1, R8-1	4K7	R_0402	C25900
8	Ri1 – Ri8	220	R_0603	C22962
8	Rd1 – Rd8	330	R_0603	C23138
4	Amp1 - Amp4	OP-Amp-TLC2272ACDR	SOIC127P600X175-8N C478072	
2	TVS1, TVS2	3V-4fach-TVS-PRTR5V0U4D,125	SOT95P275X110-6N	C96236
1	Gate1	J89-Header-2×5	Con-2×5-J89	
1	J5A/B1	AIN	Con-2×5-J89	
8	Asel1 – Asel8	-	PinHeader_1x03	
8	Ji1 - Ji8	5V/3V	PinHeader_2x01	
8	Jm1 - Jm8	Amped	2×01	

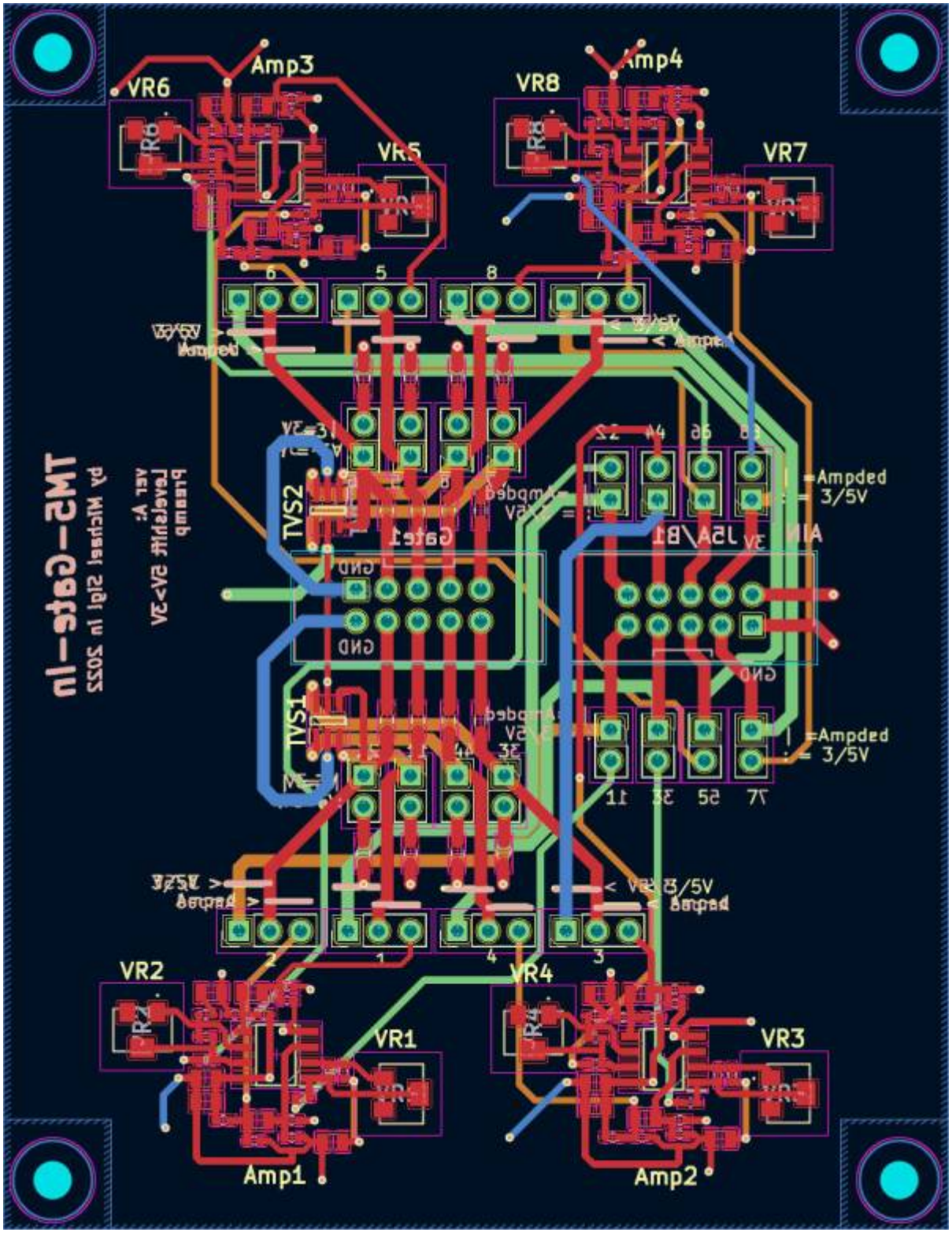
Order-List

This Quantitys are for ONE Board, you may need 2 Boards...

copy following list into this mouser.com-Link

```
517-30310-6002|5
```

Order from Reichelt:
3x 1x20Pin Male 2,54mm Header
4x 2x5Pin FeMale 2,54mm Header
32x Jumper



To Do

waiting for the assembled Prototype

Community users working on it

- **Phatline** = PCB & Shematic, UI-Programming, Documentation...

Just let a Private message on the forum to user already involved.
or join the forum: Triggermatrix 5

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Last update: **2022/12/29 12:25**