

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

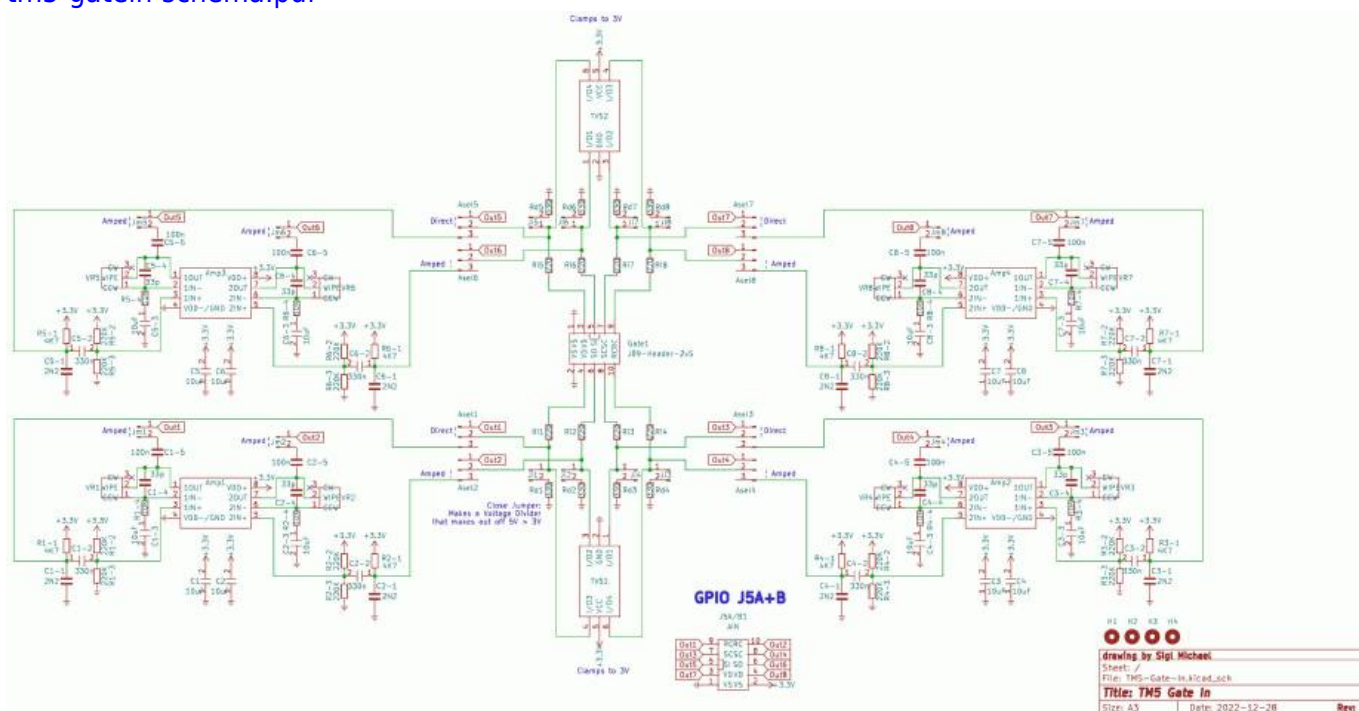
5V, 3V or Pre-Amped input - can be set vie Jumpers and Potentiometers, the PCB itself should be mounted on the Groundplate off the housing, the housing should have a service-plate to access this Settings!:



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!

Schematic

[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-2x5 | Con-2x5-J89 | |
| 1 | J5A/B1 | AIN | Con-2x5-J89 | |
| 8 | Asel1 - Asel8 | - | PinHeader_1x03 | |
| 8 | Ji1 - Ji8 | 5V/3V | PinHeader_2x01 | |
| 8 | Jm1 - Jm8 | Amped | 2x01 | |

Order-List

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

copy following list into this [mouser.com-Link](https://www.mouser.com)

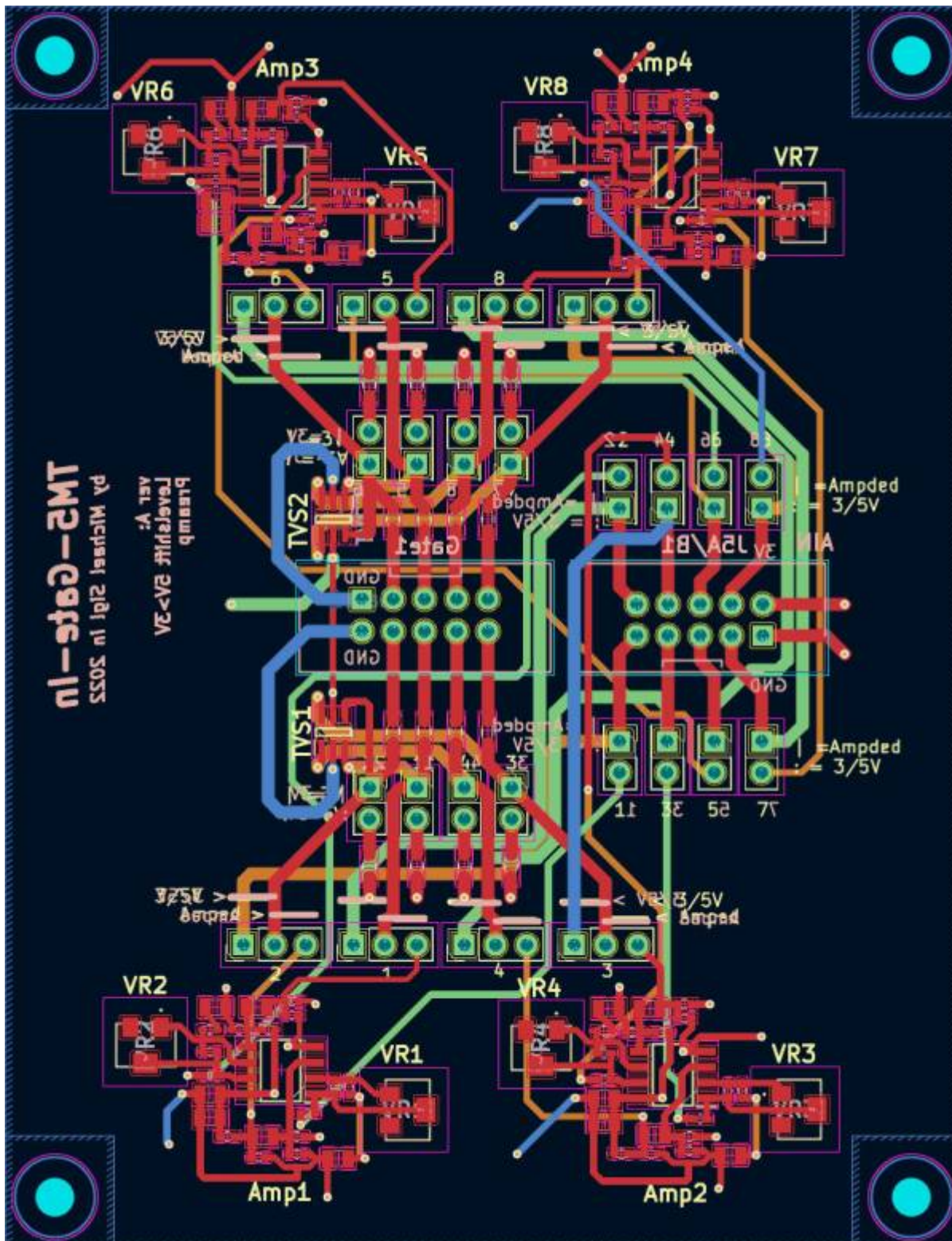
517-30310-6002|5

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 & Schematic, UI-Programming, Documentation...

Just let a Private message on the forum to user already involved.

or join the forum: [Triggermatrix 5](#)

From:

<https://midibox.org/dokuwiki/> - **MIDIbox**

Permanent link:

<https://midibox.org/dokuwiki/doku.php?id=tm5-gateinput&rev=1672316742>

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