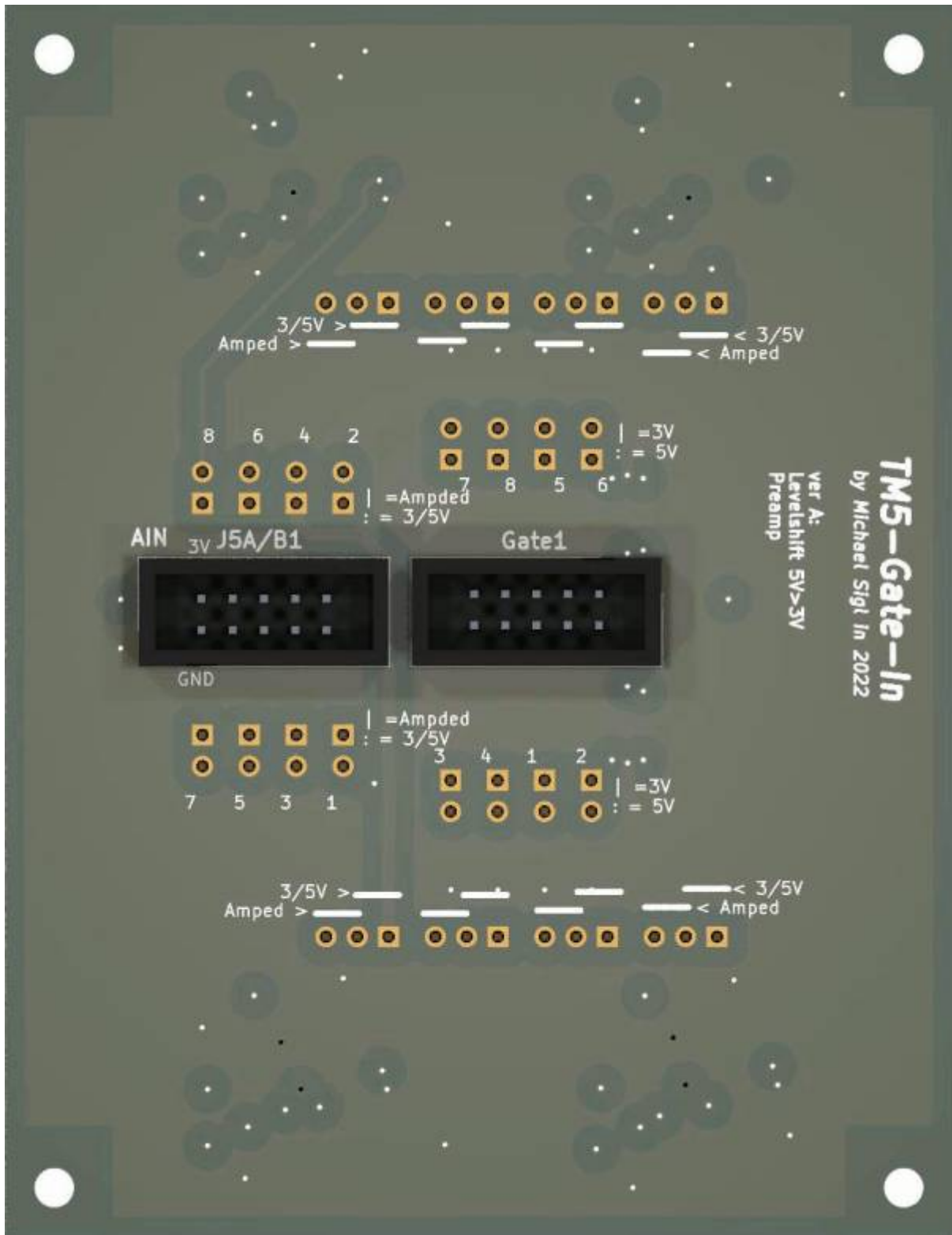


# TM5 Gate/Trigger Input

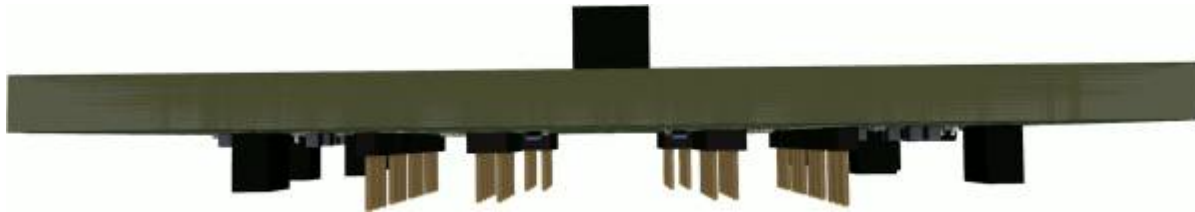




this is one essential part for my [triggermatrix5](#)

- \* Levelshift from 5V to the for the MCU required 3V, with a Resistor Divider
- \* Overvoltage Protectect with TVS-Diodes
- \* Preamp-Section

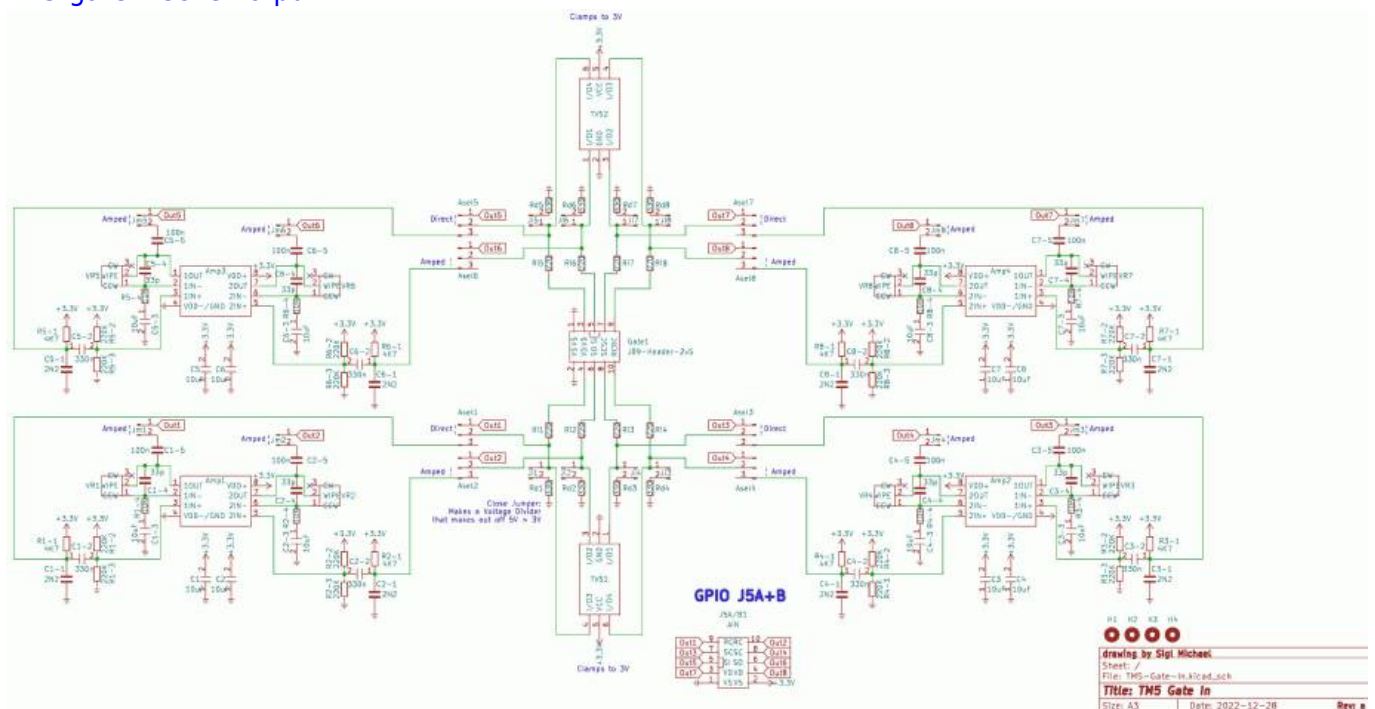
5V, 3V or Pre-Amped input - can be set vie Jumpers and Potentiometers, the PCB itself should be mounted on the Groundplate off the housing, the housing should have a service-plate to access this Settings!:



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

dont order this Parts, they are mostly pre-soldered on the PCB!

| Comment | Designator   | Footprint                                  | LCSC   |       |
|---------|--|--|--------|-------|
| 8       | VR1 -VR8   | Poti-SMD-200K-3224W-1-204E<br>1204E C55072 |        |       |
| 8       | C1-1, C2-1, C3-1,<br>C4-1, C5-1, C6-1,<br>C7-1, C8-1 | 2N2  | C_0402 | C1531 |
| 8       | C1-4, C2-4, C3-4,<br>C4-4, C5-4, C6-4,<br>C7-4, C8-4 | 33p  | C_0402 | C1562 |

| Comment | Designator   | Footprint                   | LCSC               |         |
|---------|--|-----------------------------|--------------------|---------|
| 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](#)

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://www.midibox.org/dokuwiki/> - **MIDIbox**

Permanent link:

<https://www.midibox.org/dokuwiki/doku.php?id=tm5-gateinput&rev=1672316826>

Last update: **2022/12/29 12:27**

