

USBSID-Pico PCB revision v1.3

manual

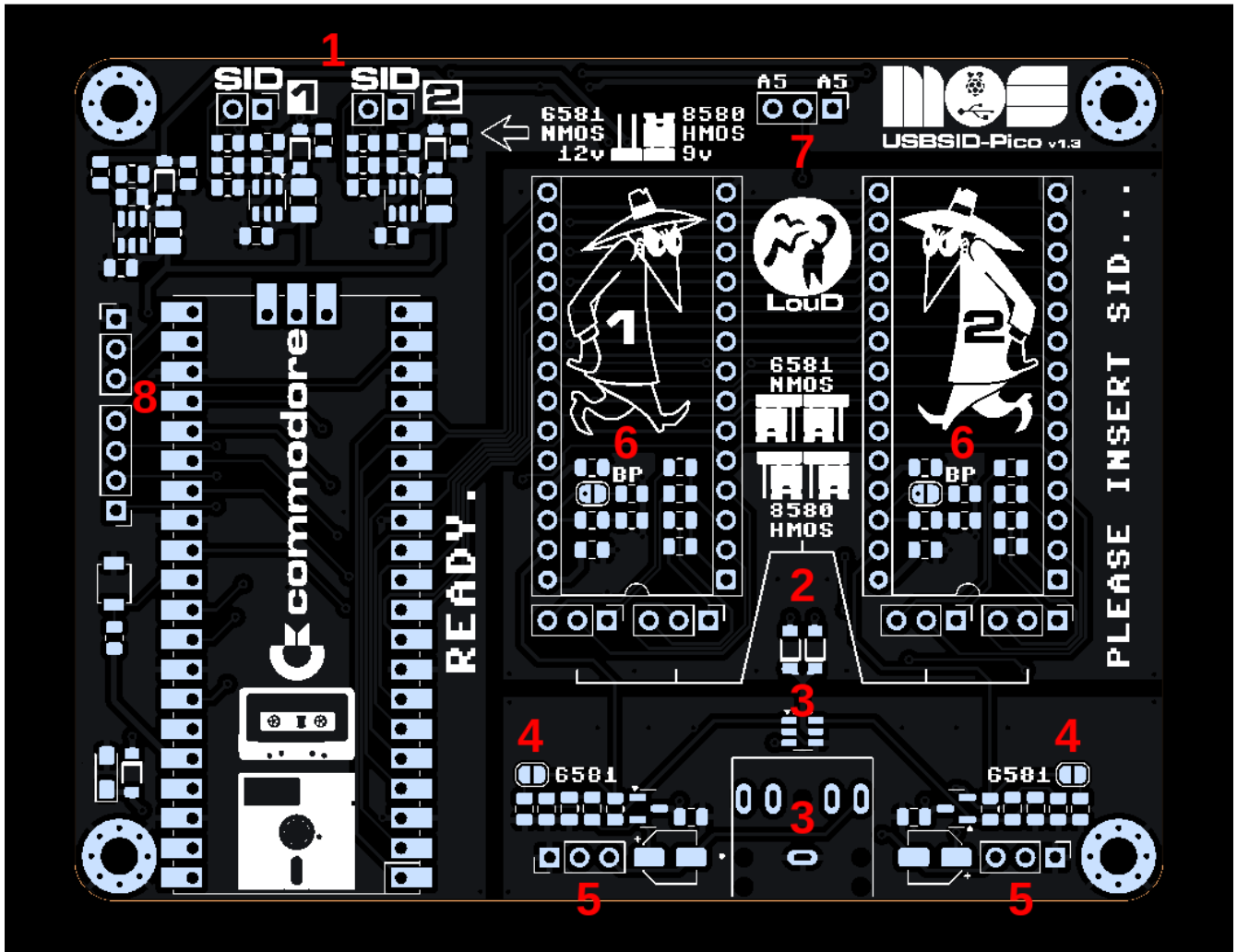


Figure 1. PCB Top

1. Socket SID type / voltage selection jumper



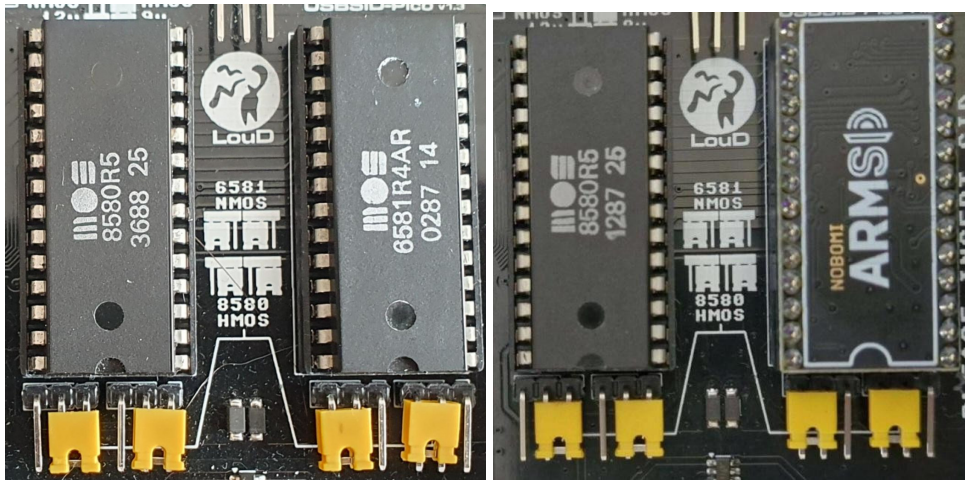
Voltage control per SID/socket.

Please be careful and choose the right voltage setting!

SID1 is for socket 1 (left) and **SID2** is for socket 2 (right)

- No jumper cap (open) = for **6581** SID only!! (12 volts)
- Jumper cap (closed) = for **8580** SID (9 volts)
- Most clone SID chips do not use the higher voltage pin.
Please check with the manufacturers manual if you are not sure!

2. SID filter selection jumpers



Each socket has 2 jumpers that need to be in the same position. These jumpers control which filter capacitors are active for that socket.

Accidentally mixing these jumpers should not do any harm but might make audio sound worse.

- Jumpers on the left (closed) = 6581 filters (470pF)
- Jumpers on the right (closed) = 8580 filters (22nF)

3. Audio circuit



Each socket has its own audio circuit with a voltage follower audio filter. This is also used in the Commodore64 and on the SID Blaster.

- For each circuit there is a solder pad marked 6581, this is an extra pull down resistor required when using a MOS6581 SID.
- Each socket also has an optional header with 3 pins. The pinout is from left to right GND, IN, OUT (markings are on the bottom of the PCB)



On the bottom of the PCB each socket has a solder pad marked EXT IN. Close this to connect the IN pin of the audio header to the SID chip EXT-IN pin. **You have to provide the audio in filter!**



I take no responsibility for you breaking your SID chip by using this!

- Inside each socket there is a solderpad marked BP. This provides an optional filter bypass by decoupling EXT-IN to GND with a 330k resistor. Also known as digi-boost for 8580 SID chips.
- Optional header for connecting the A5 address line to Clone SID chips. There are 2 A5 pins, one for each socket that are both connected to the same GPIO pin. The pinout is from left to right A5, SW, A5 (markings are on the bottom of the PCB)



The SW pin is an optional pin for adding a switch to control the mono / audio switch manually.

8. Optional header for UART pins and unused GPIO for future use (markings are on the bottom of the PCB)
9. Last but not least, the digital audio switch IC. Switching from mono (both SID chips play over left and right) to Stereo (SID1 over the left channel and SID2 over the right channel) and back is handled by the firmware through settings or automatically by supported players.

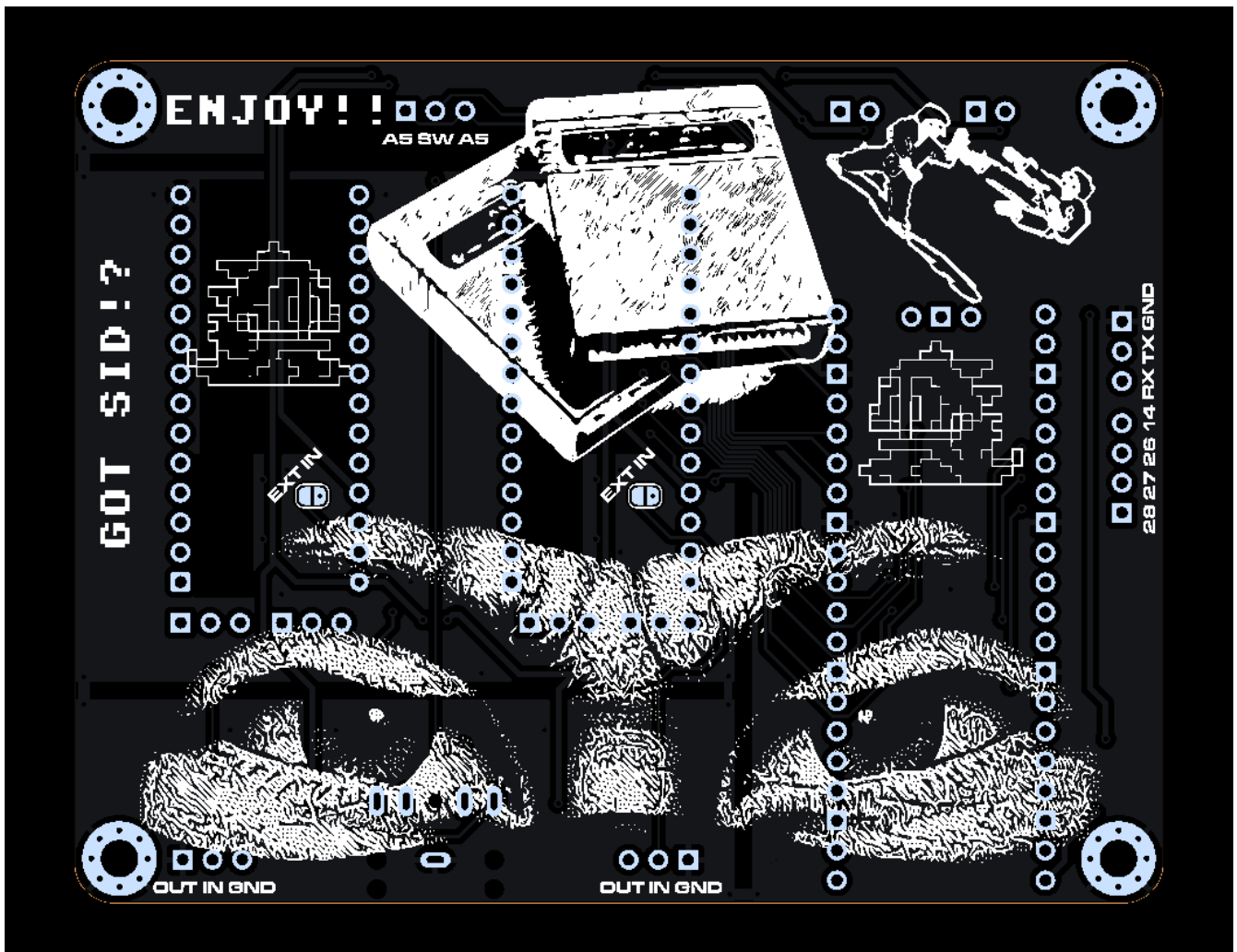


Figure 2. PCB Bottom

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