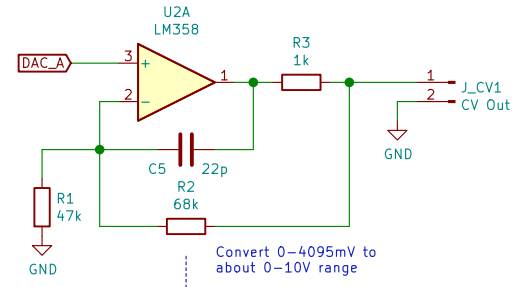
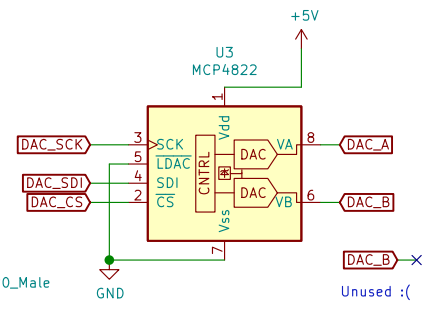
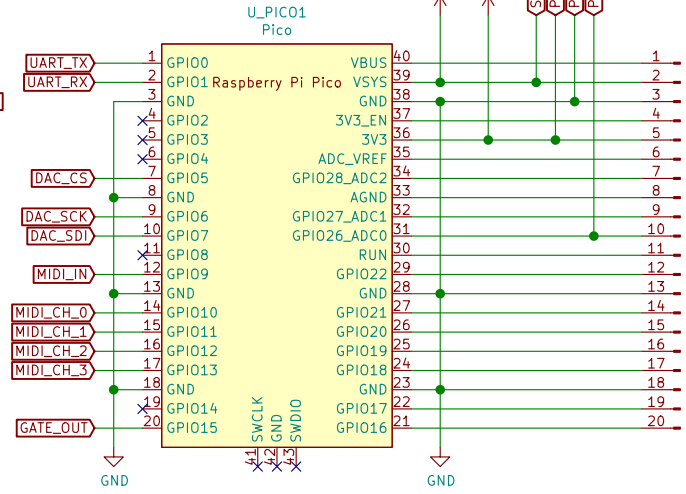


PB pins are used for hardware pitch bend

J_SWIO1
UART Programming

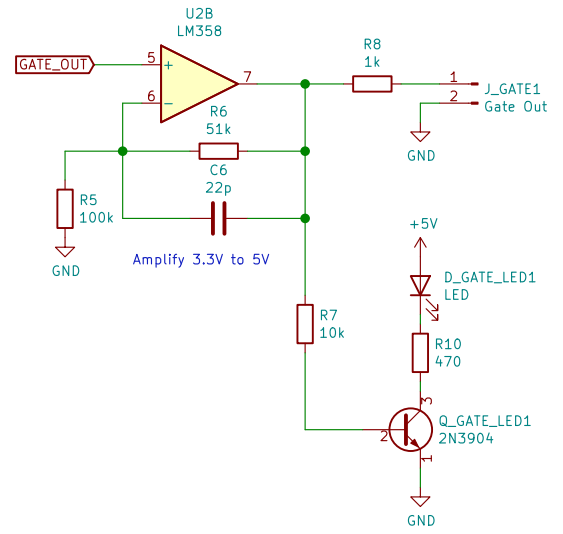


Convert 0-4095mV to about 0-10V range

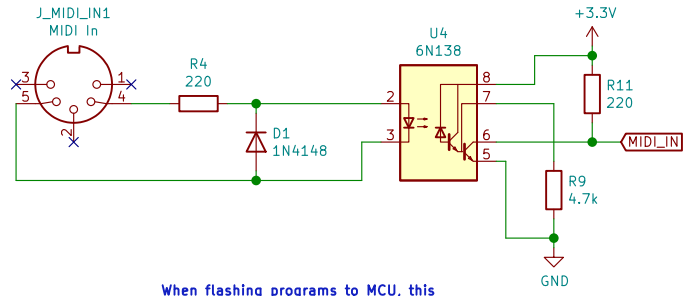
Calibration

The max output of the DAC is 4095mV. At this point the CV output should be 10000mV (10V) to cover the 10 octave range. This is an amplification of $A = 10000 / 4095 = 2.442$. This op-amp configuration provides a fairly close amplification to this depending on the accuracy of R1, R2 and R3.

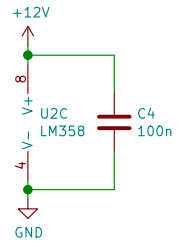
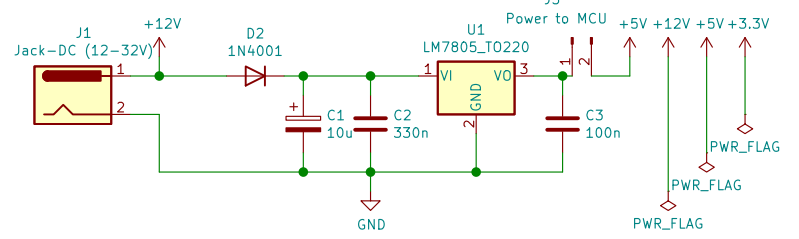
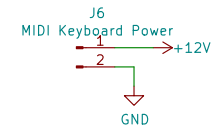
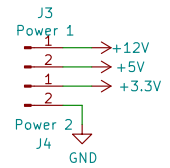
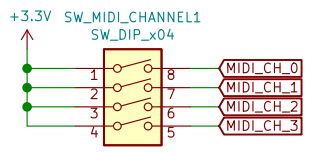
To further refine the output use the firmware calibration.



Amplify 3.3V to 5V



When flashing programs to MCU, this jumper MUST BE disconnected. The MCU should receive its power from the SWD device (another RPi Pico, Picoprobe).



H1 H2 H3 Mounting holes

Shmørgerh

Sheet: /
File: pico-midi2cv.sch

Title: Midi to CV

Size: A4
KiCad E.D.A. kicad (5.1.7-0-10_14)

Date:

Rev:

Id: 1/1