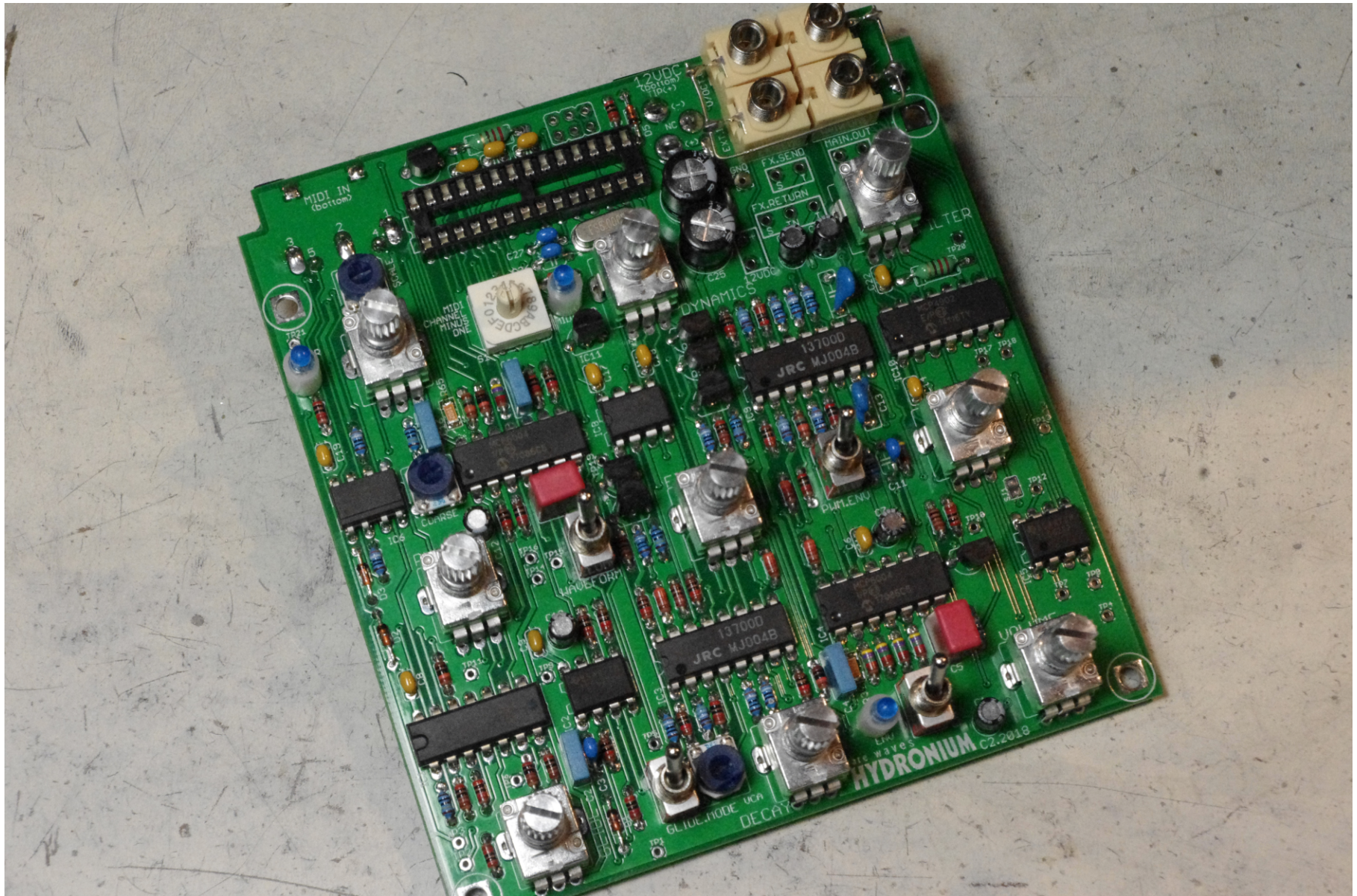
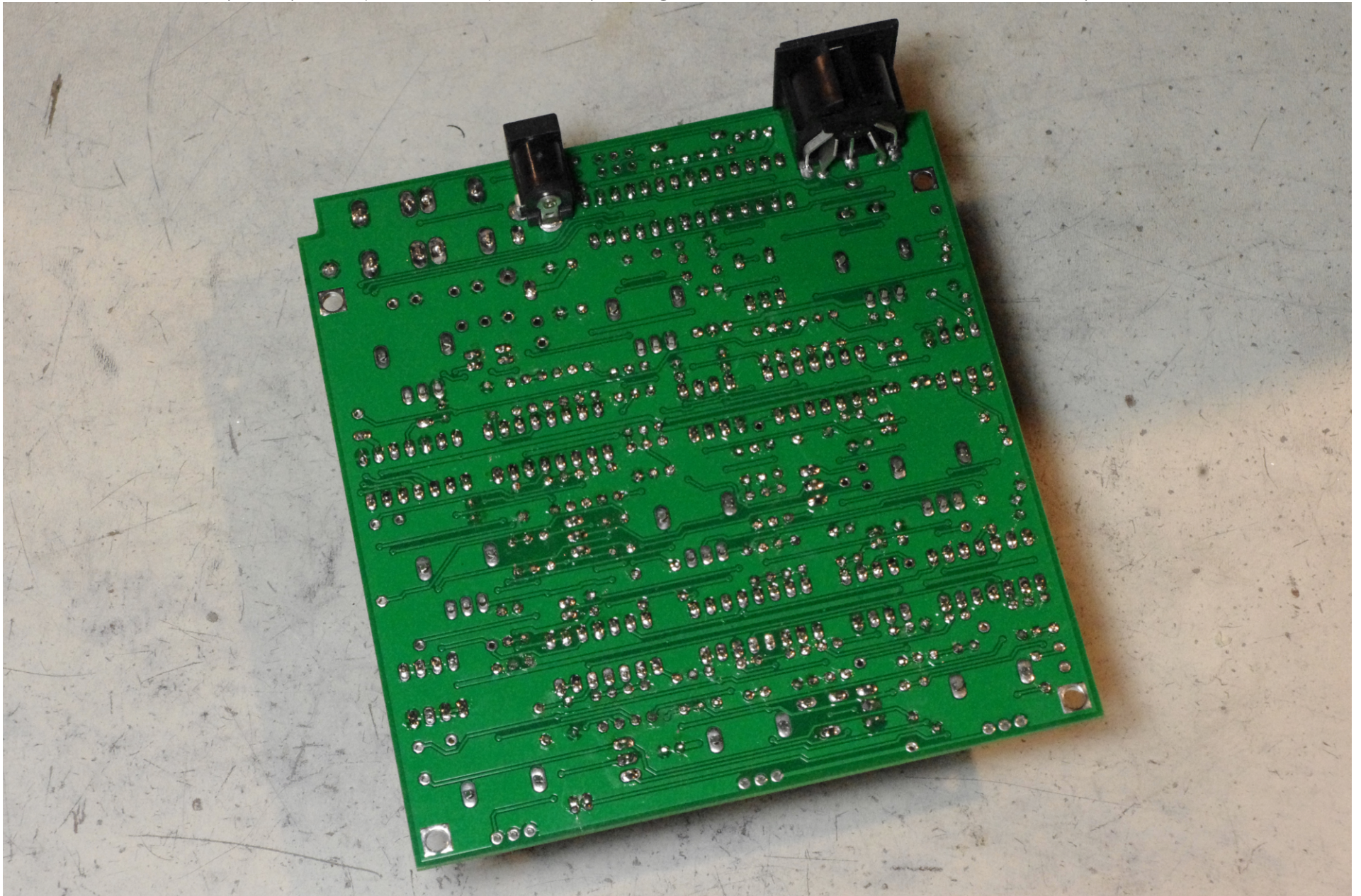


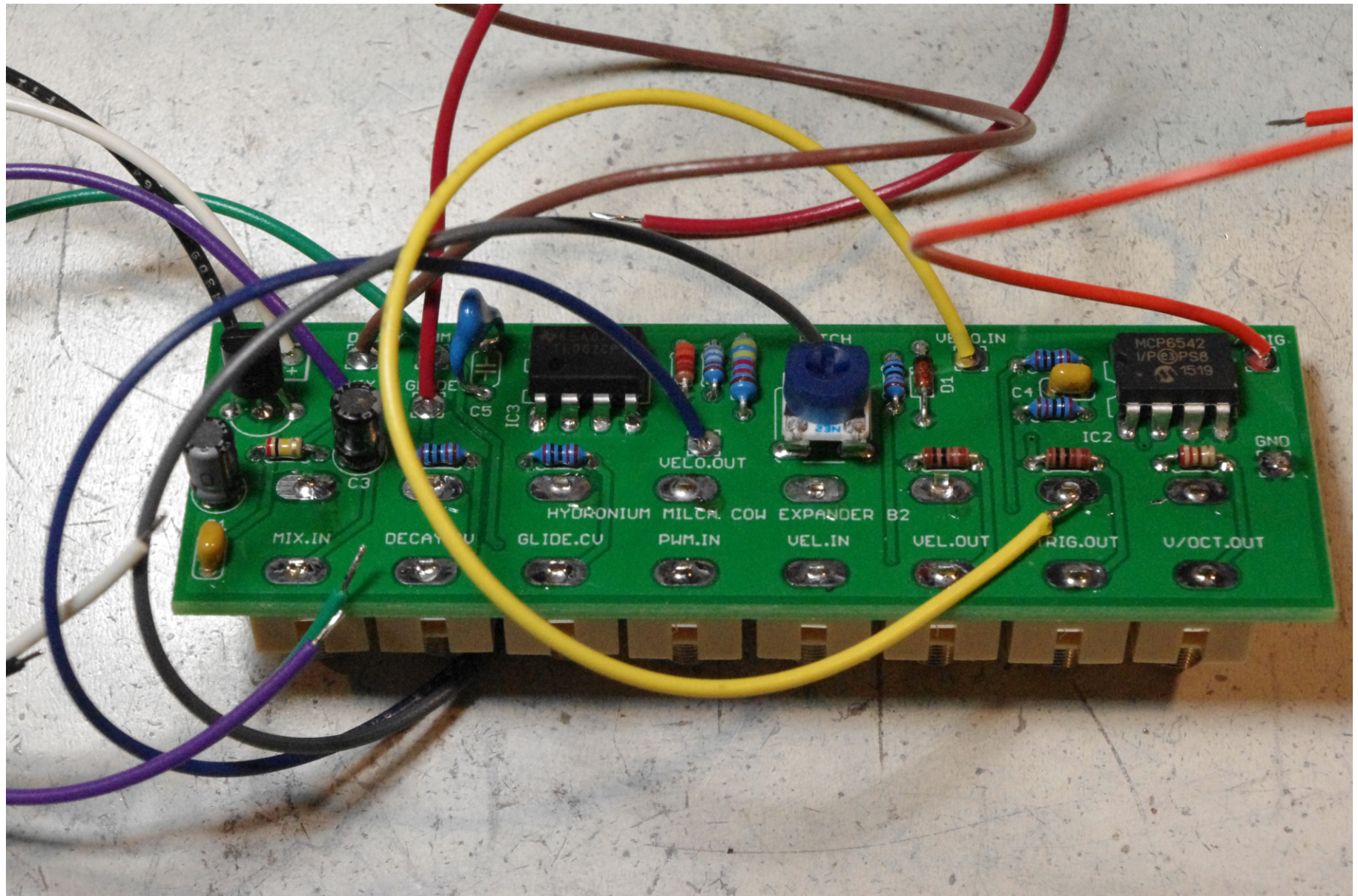
Main PCB : Assembly completed (top side)



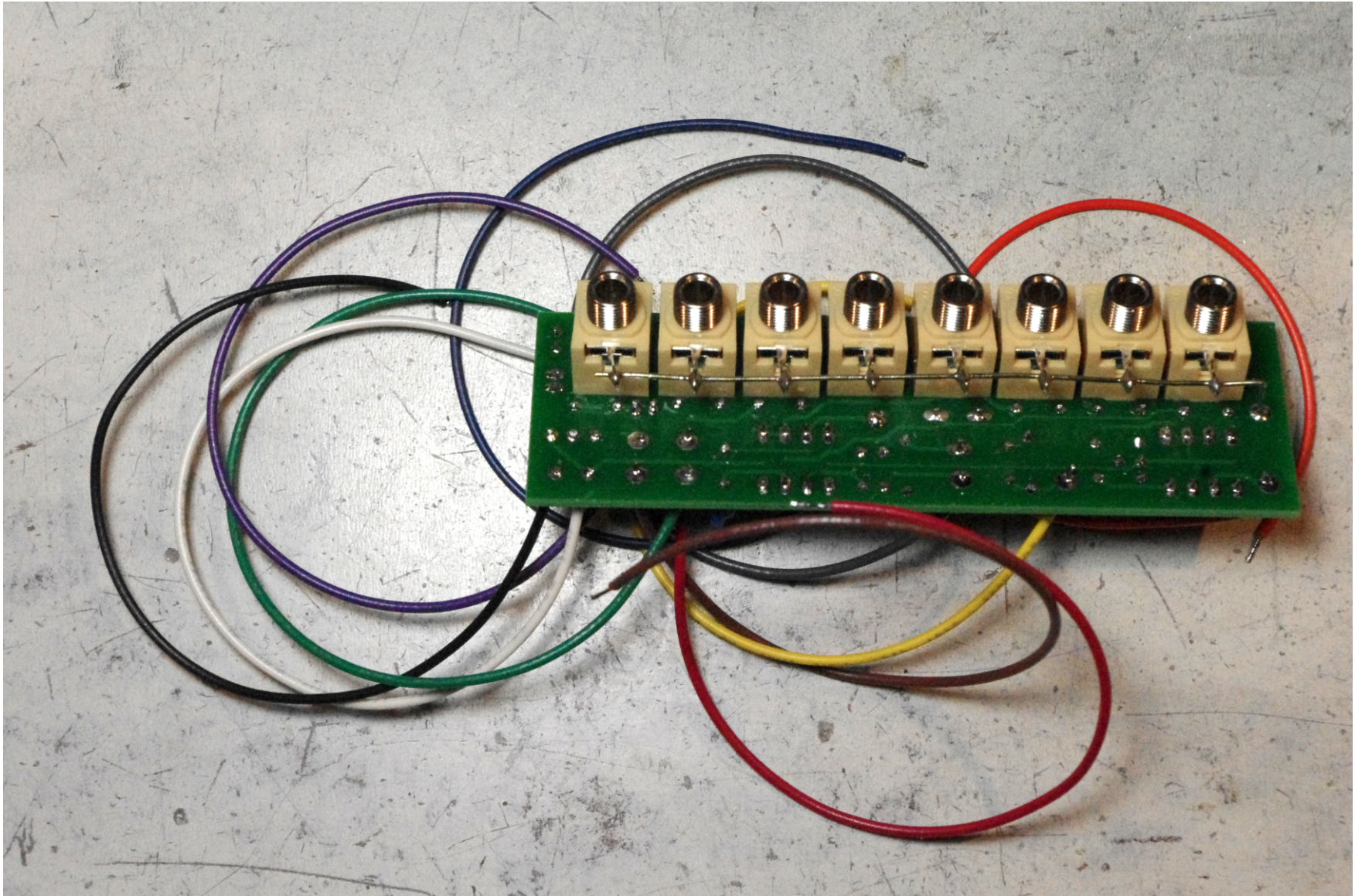
Main PCB : Assembly completed (bottom side). Tabletop configuration shown. Eurorack version has no parts on this side.



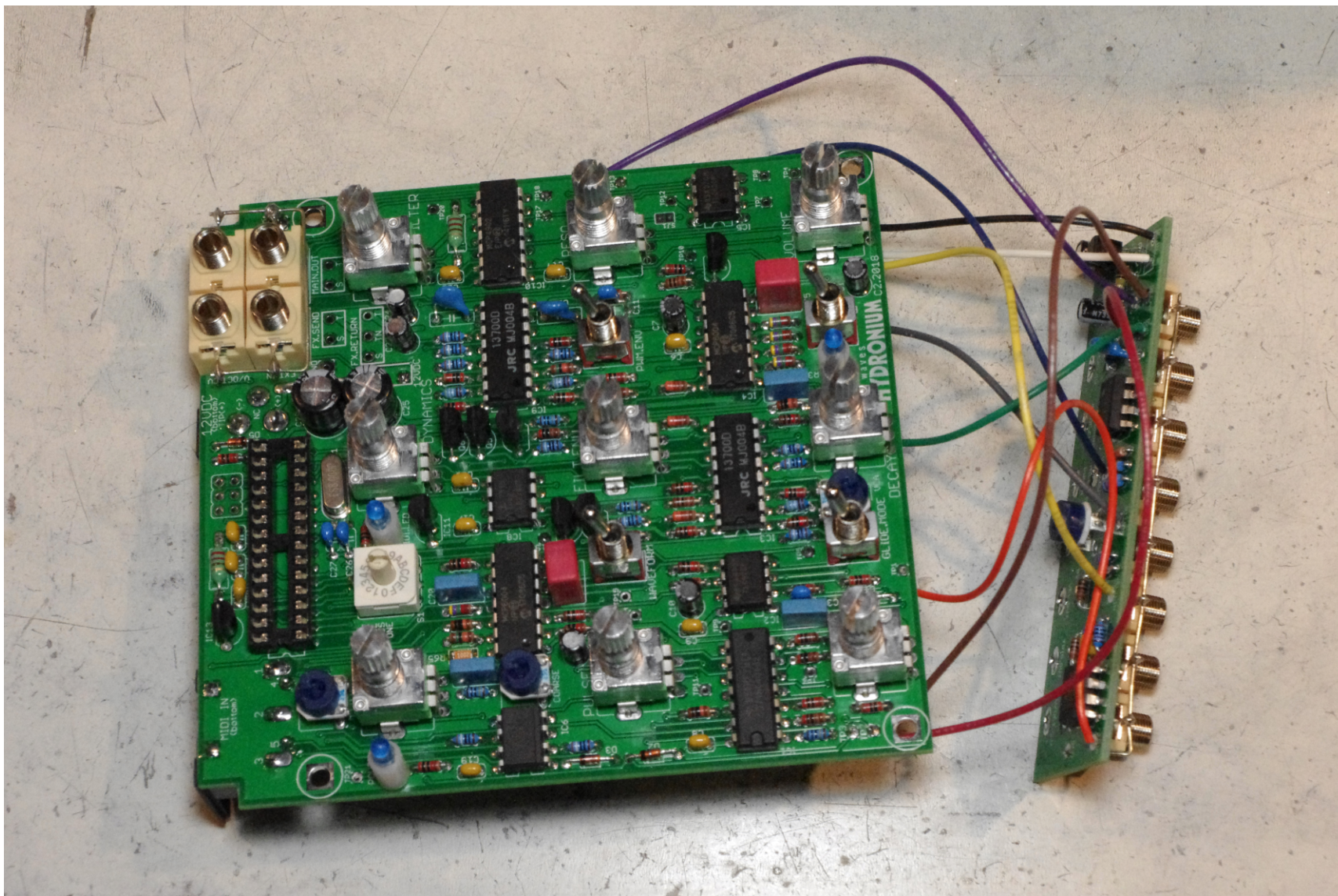
Tabletop Expander PCB : Component side, with interboard wires.

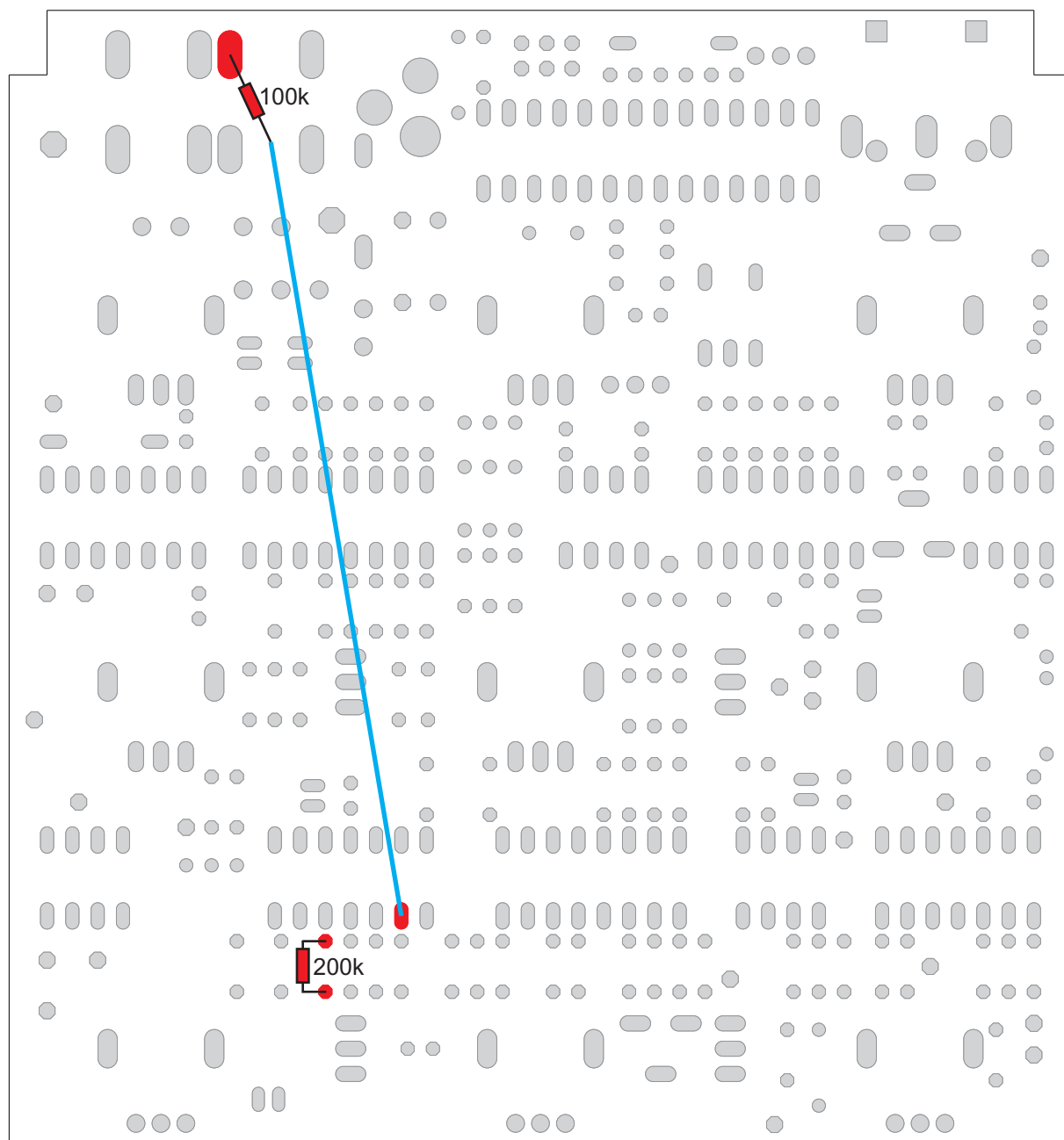


Tabletop Expander PCB : Solder side, with interboard wires.



Tabletop version : Interboard wiring reference photo



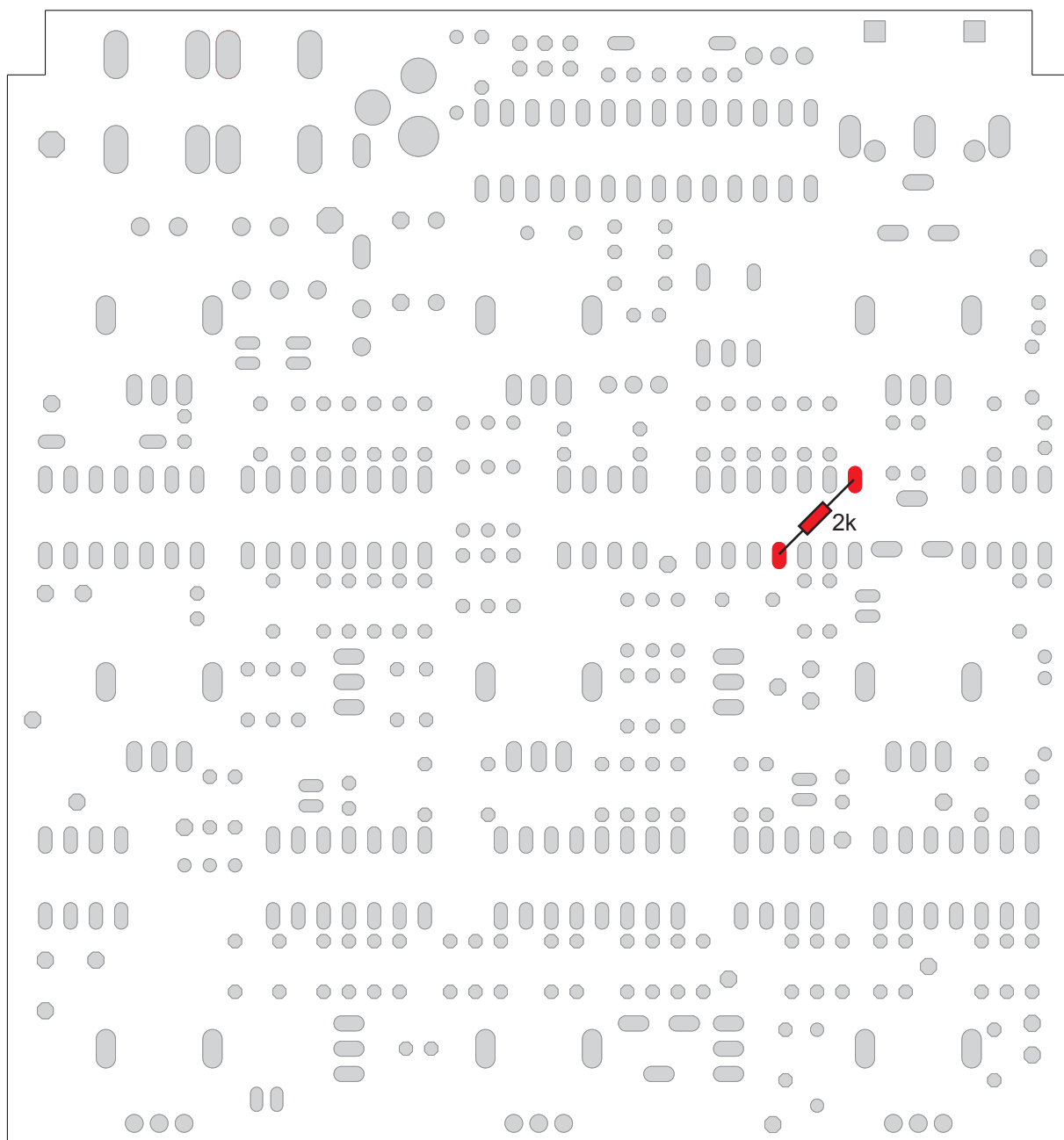


For CV-Gate users :

To make the VCF track the V/OCT CV in jack, add a 100k resistor from V/OCT CV to IC4 pin 2.

Then put a 200k resistor in parallel with R21.

This can be done while the PCB is mounted to the case. The diagram on this page shows the PCB from the back side.



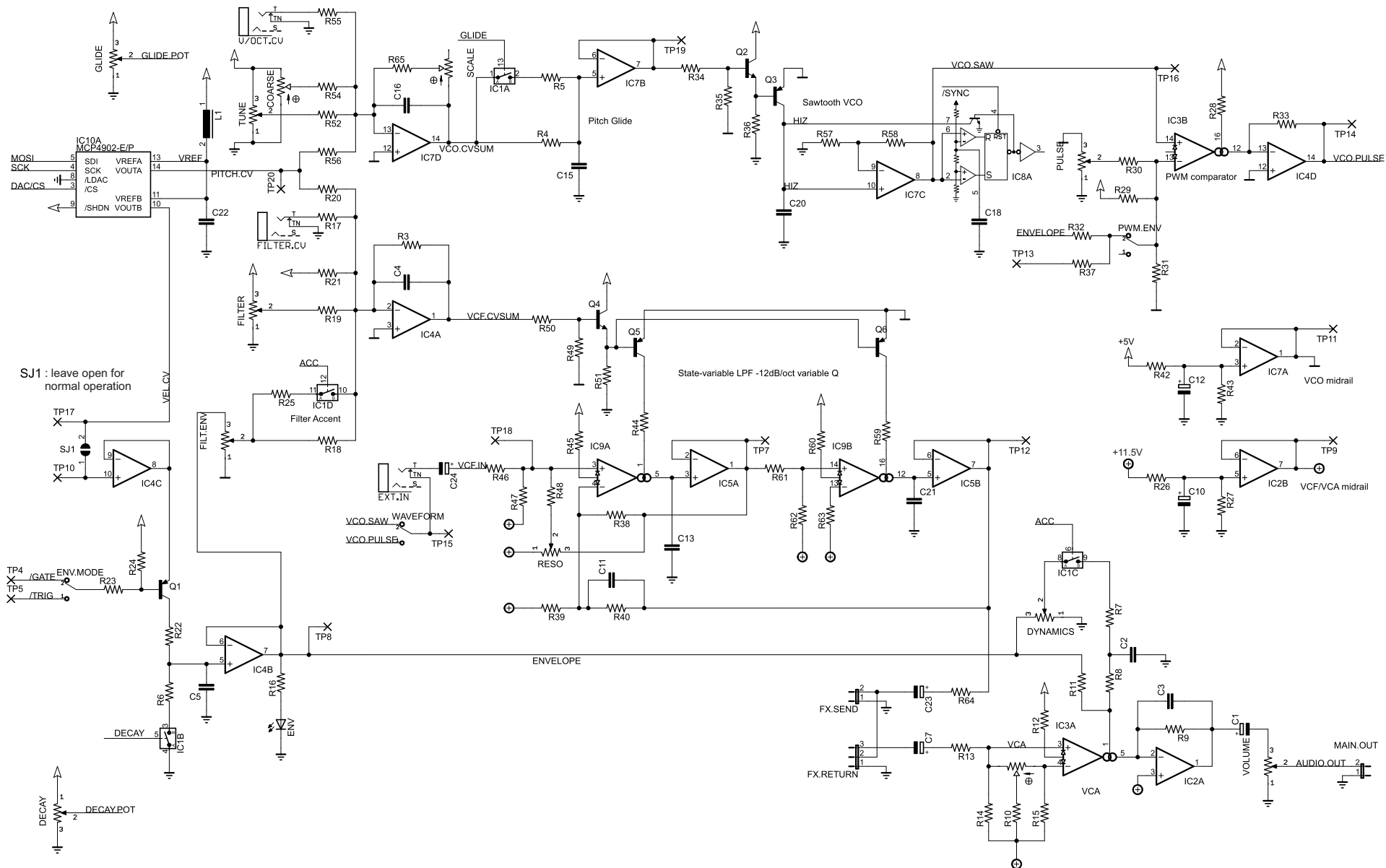
HYDRONIUM MAIN PCB REV. C - VIEW FROM BOTTOM SIDE

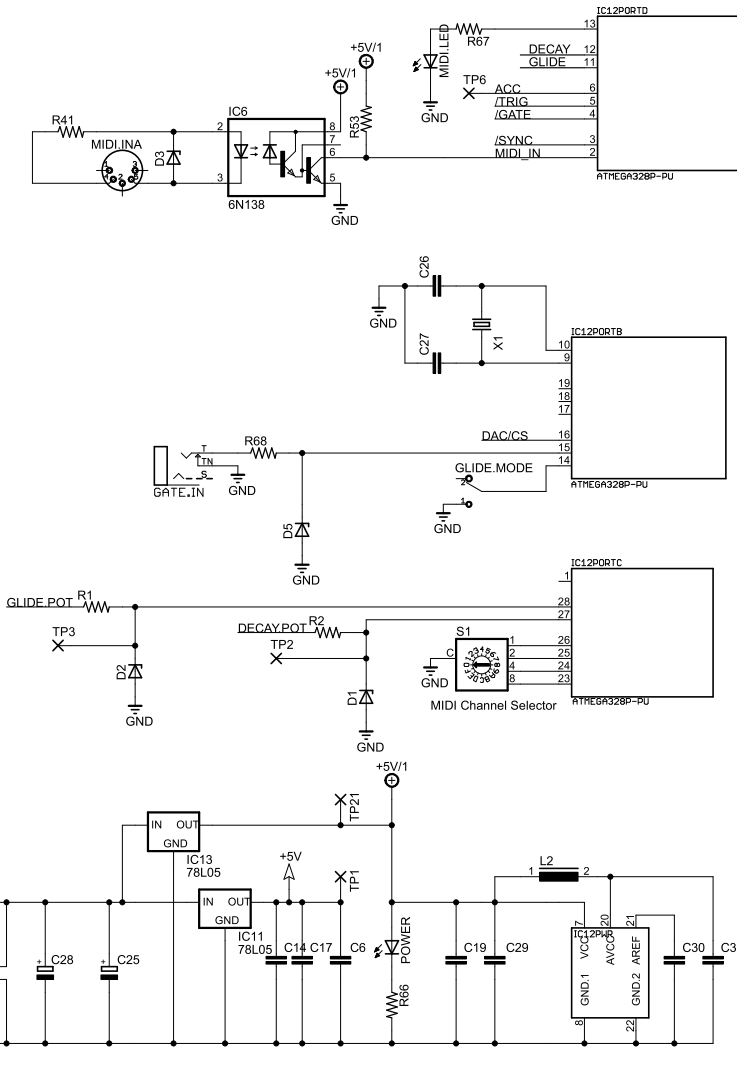
Glide tuning error reduction :

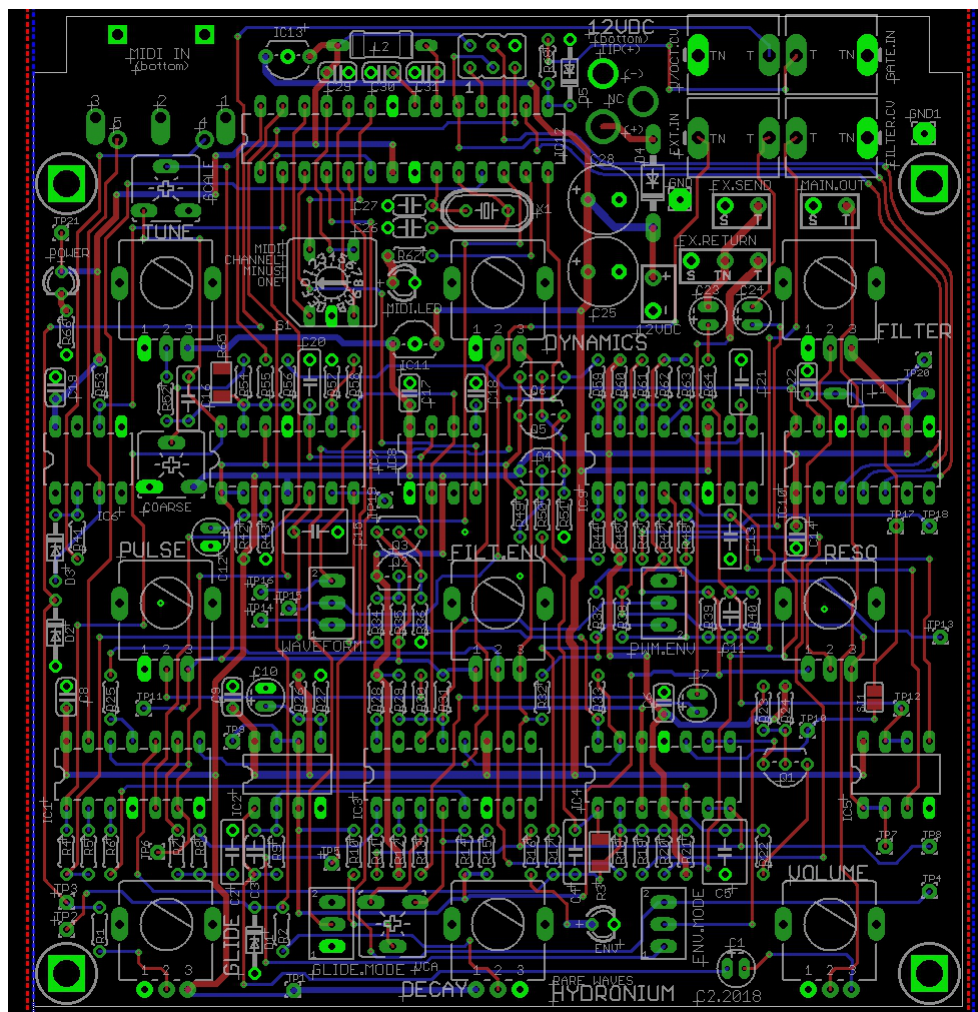
To reduce the VCO tuning error caused by long glide time settings, make the following modification:

Solder a 2.0k (or 2.2k) resistor between Pin 14 and Pin 4 of IC 7

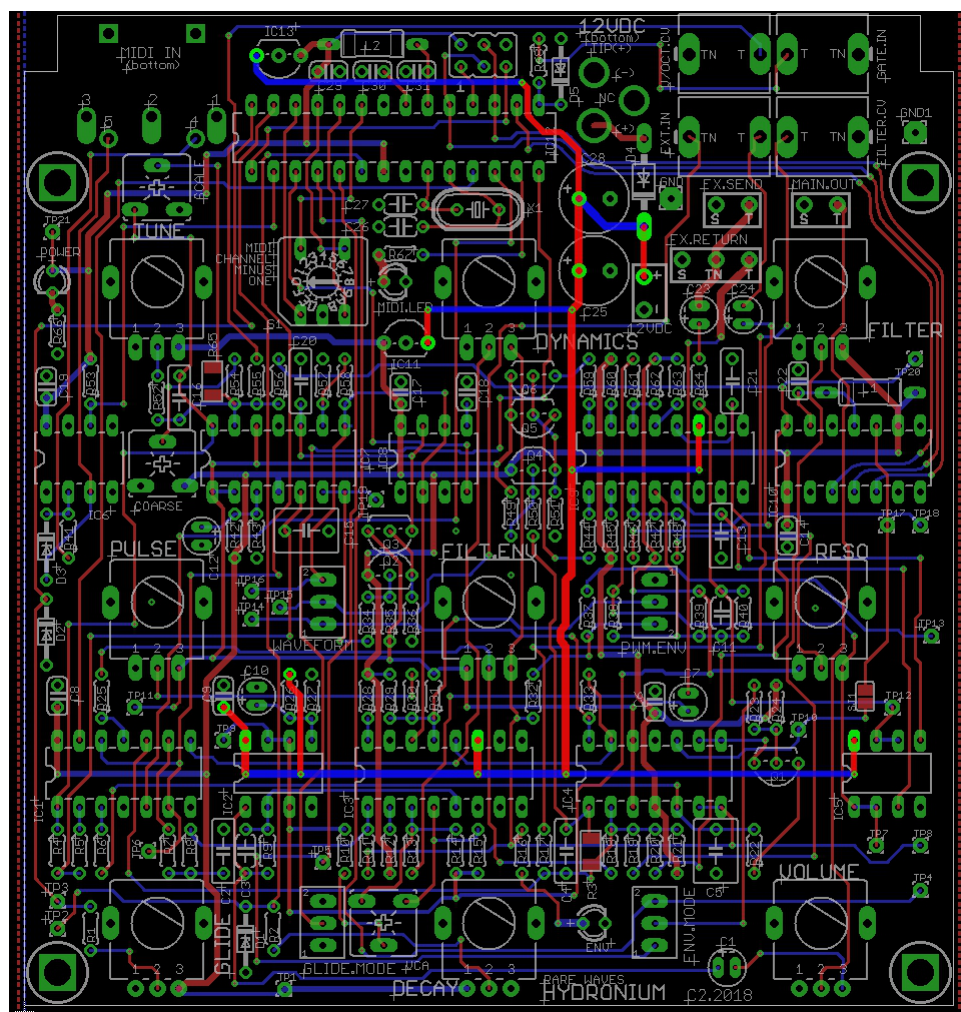
This can be done while the PCB is mounted to the case. The diagram on this page shows the PCB from the back side.





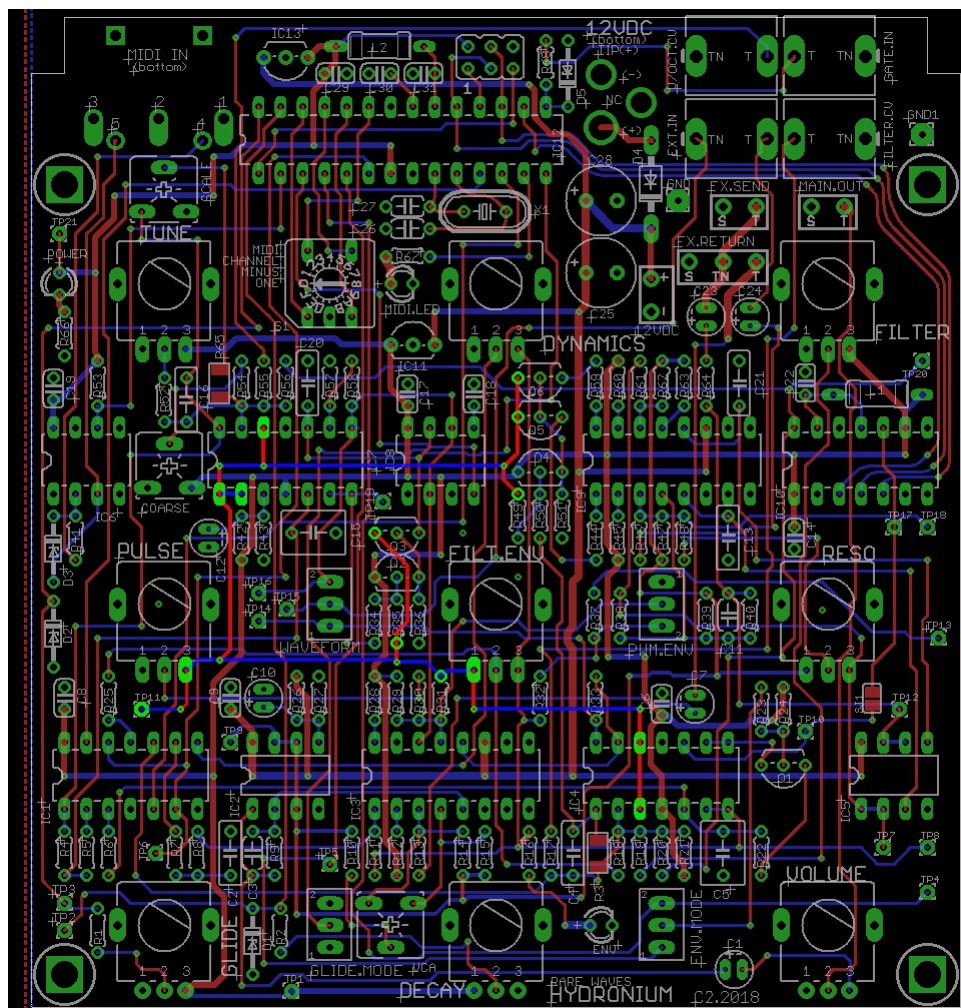


0 volts DC (Ground)

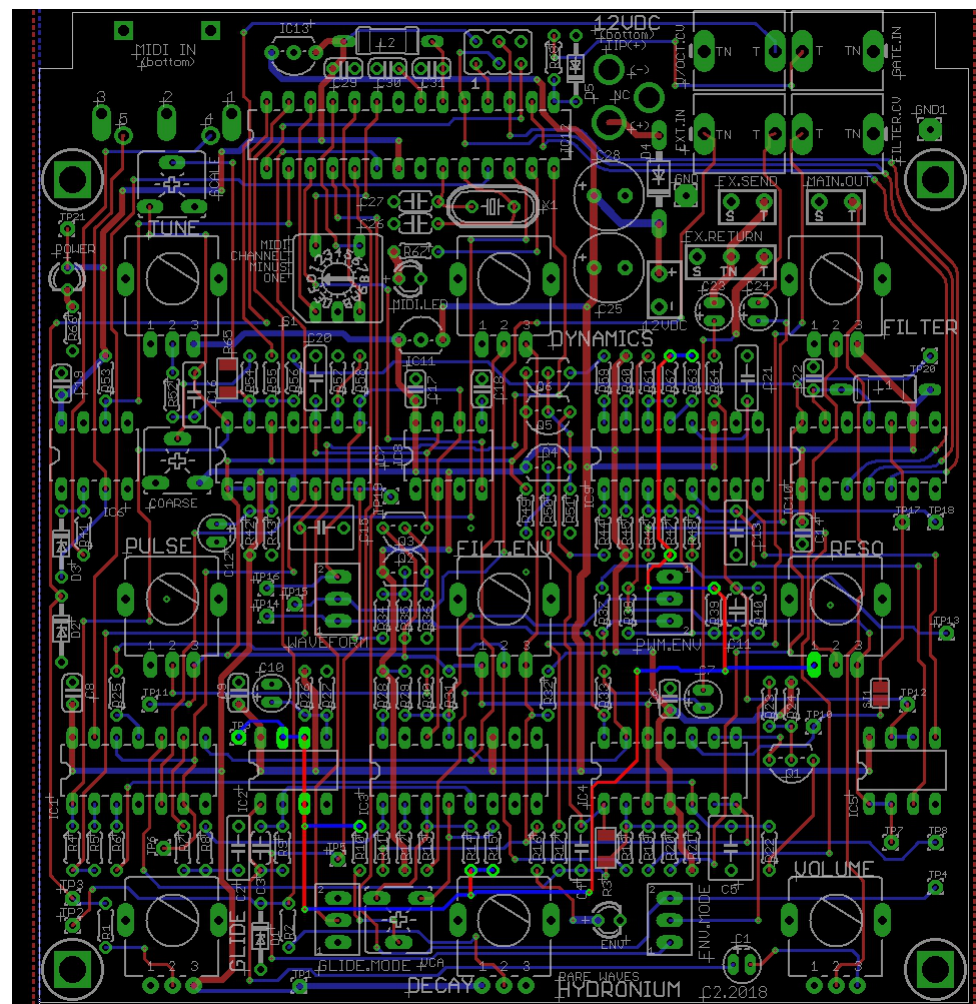


+11.5 volts DC

Hydronium power supply: DC voltages referenced to circuit ground
(Connect negative lead of DMM to the bushing of one of the 3.5mm jacks)



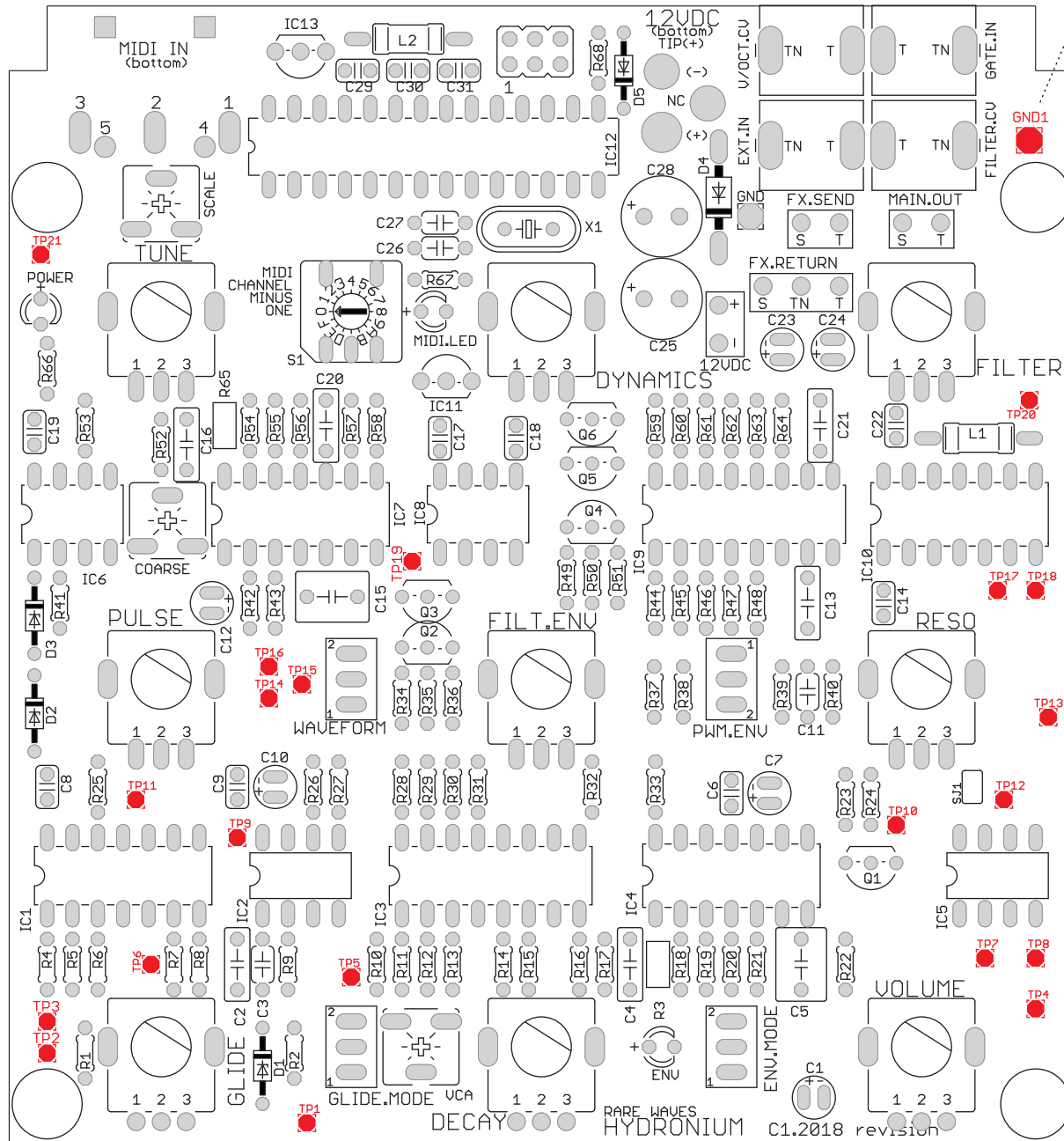
+2.5 volts DC



+5.7 volts DC

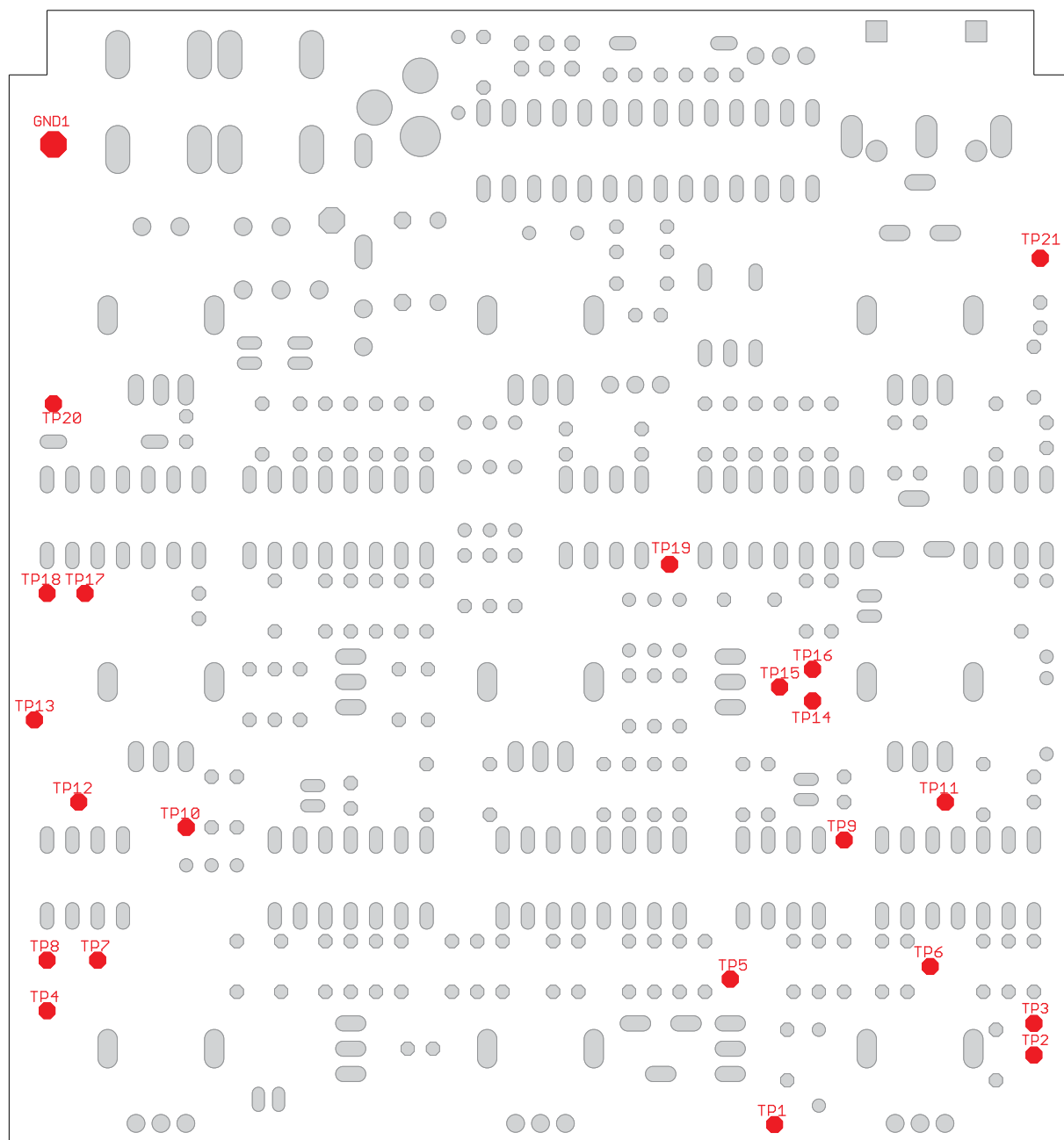
Hydronium power supply: DC voltages referenced to circuit ground
(Connect negative lead of DMM to the bushing of one of the 3.5mm jacks)

Connect negative lead of DMM or oscilloscope to GND1 pad



- TP 21: +5 VDC digital power supply
- TP 20: Pitch CV Out (39.4mV/semitone) from MIDI DAC
- TP 19: Post-glide pitch CV output to expander
- TP 18: External audio input to filter from expander
- TP 17: Velocity CV Out (0..+5V) from MIDI DAC
- TP 16: VCO sawtooth wave output
- TP 15: VCO waveform selector switch output (VCF In)
- TP 14: VCO pulse wave output
- TP 13: PWM CV input from expander
- TP 12: LPF audio output from filter
- TP 11: +2.5 VDC power supply
- TP 10: Velocity CV In (0 .. +5V) from expander
- TP 9: +5.7 VDC power supply
- TP 8: Envelope generator output
- TP 7: BPF audio output from filter
- TP 6: Accent out (5V logic from MCU)
- TP 5: Inverted Trigger out (5V logic from MCU)
- TP 4: Inverted Gate out (5V logic from MCU)
- TP 3: Glide CV Input from expander
- TP 2: Decay CV Input from expander
- TP 1: +5 VDC analog power supply

Use this diagram to access the test points from the bottom of the PCB while it is installed inside the enclosure.
Connect negative lead of DMM or oscilloscope to the bushing of one of the 1/4" jacks on the rear panel



- TP 21: +5 VDC digital power supply
- TP 20: Pitch CV Out (39.4mV/semitone) from MIDI DAC
- TP 19: Post-glide pitch CV output to expander
- TP 18: External audio input to filter from expander
- TP 17: Velocity CV Out (0..+5V) from MIDI DAC
- TP 16: VCO sawtooth wave output
- TP 15: VCO waveform selector switch output (VCF In)
- TP 14: VCO pulse wave output
- TP 13: PWM CV input from expander
- TP 12: LPF audio output from filter
- TP 11: +2.5 VDC power supply
- TP 10: Velocity CV In (0 .. +5V) from expander
- TP 9: +5.7 VDC power supply
- TP 8: Envelope generator output
- TP 7: BPF audio output from filter
- TP 6: Accent out (5V logic from MCU)
- TP 5: Inverted Trigger out (5V logic from MCU)
- TP 4: Inverted Gate out (5V logic from MCU)
- TP 3: Glide CV Input from expander
- TP 2: Decay CV Input from expander
- TP 1: +5 VDC analog power supply

HYDRONIUM MAIN PCB REV. C - VIEW FROM BOTTOM SIDE