

# Dual Eurorack Panel Wiring W/ 5v Mods for **SYMPLESEQ**

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Due to popular request, I have devised this handy wiring guide for **SYMPLESEQ** Eurorack panels!

This guide will show you how to wire up your dual Eurorack **SYMPLESEQ** panel from **Re:Synthesis**.

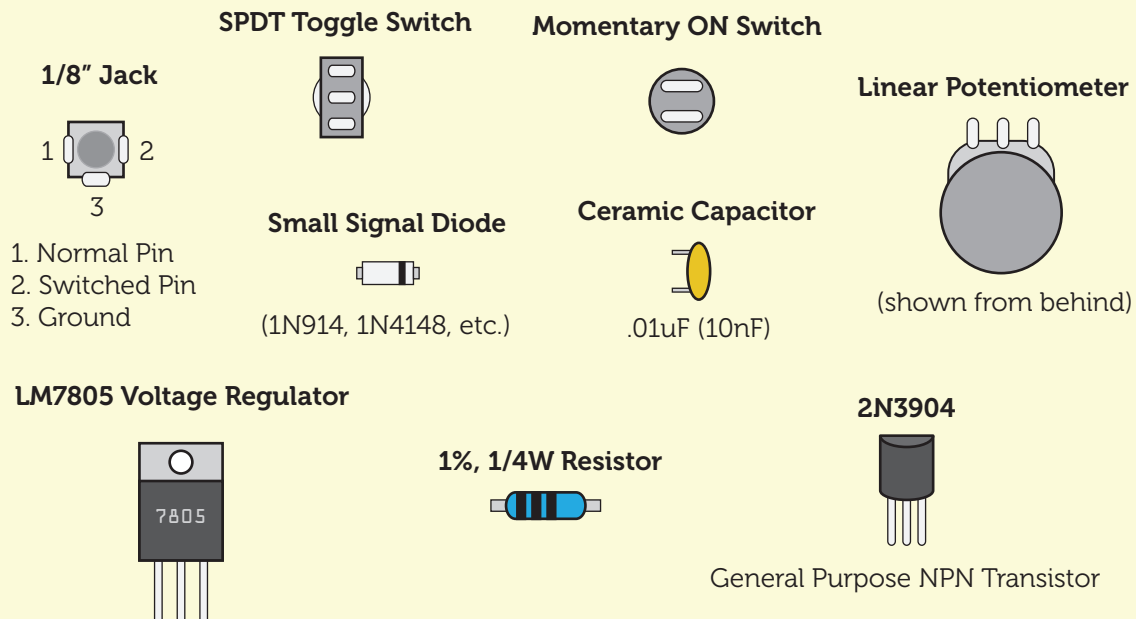
This version is for those of you who want to make the 5V level conversion modifications. It shows how to wire your panel while also showing how to add in the mods.

After assembling with these modifications, your **SYMPLESEQ** will output 0 to 5V CV, 5V gate, 5V clock, and also accept 5V clock signals at its input instead of the default 0-12V.

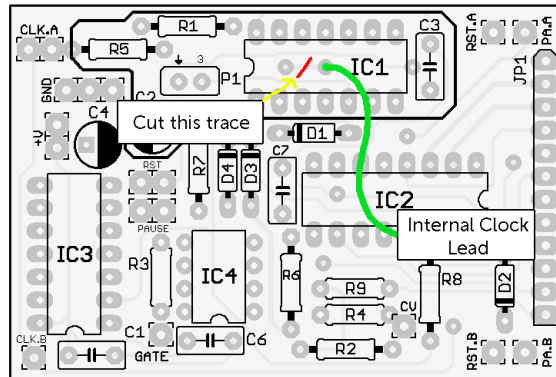
Regarding diode placement in the diagrams -- they are there as a guide only! You may find it easier to place the diodes somewhere else along the wire. This will not affect performance so feel free to move it however you like, of course ensuring that it is still facing the right way!

Have fun building and playing your new dual Eurorack **SYMPLESEQ**! :)

## Parts Legend

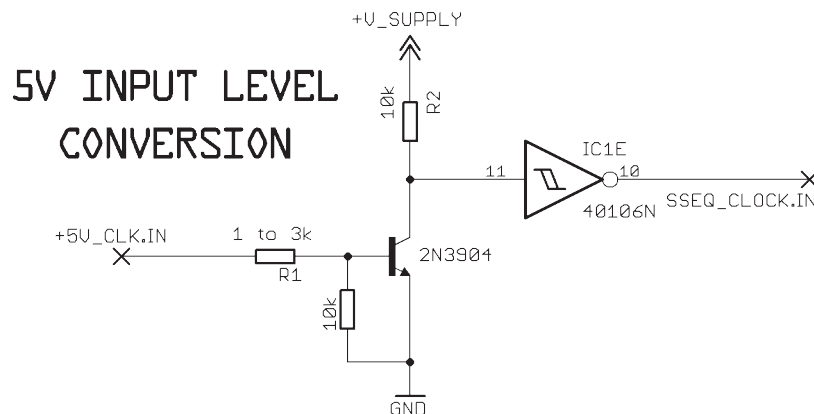


**Step 1:** Cut the indicated trace on each logic board's top layer and solder a new internal clock lead on the indicated pad. Note that there is only one pad which it is to be attached to, and it is underneath IC1. Do not be confused by the fact that I drew the wire passing over IC2. It does NOT connect to IC2!

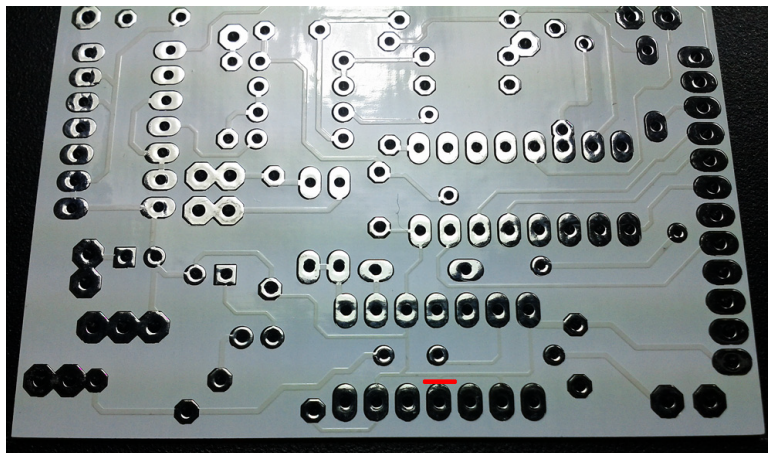


**Step 2:** Prepare the logic board for the 5V clock level input conversion.

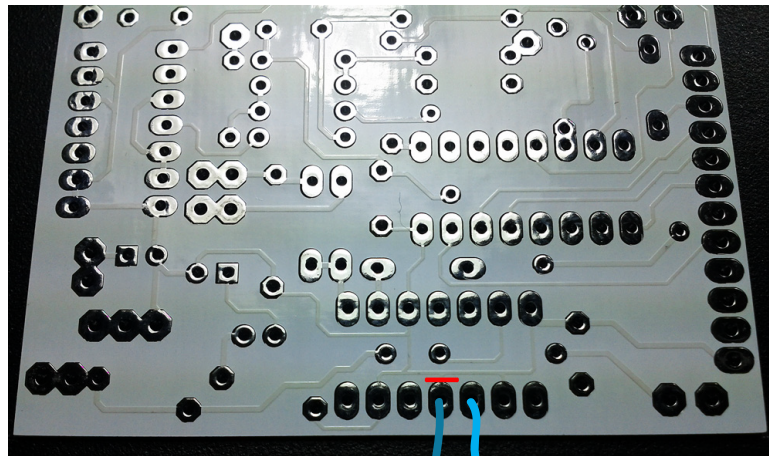
Here is the schematic we are aiming to create for this modification to work:



Begin by cutting the trace marked in red below. Verify with your multimeter that it is no longer conducting current between the pad below the trace and the other pads it used to be connected to.



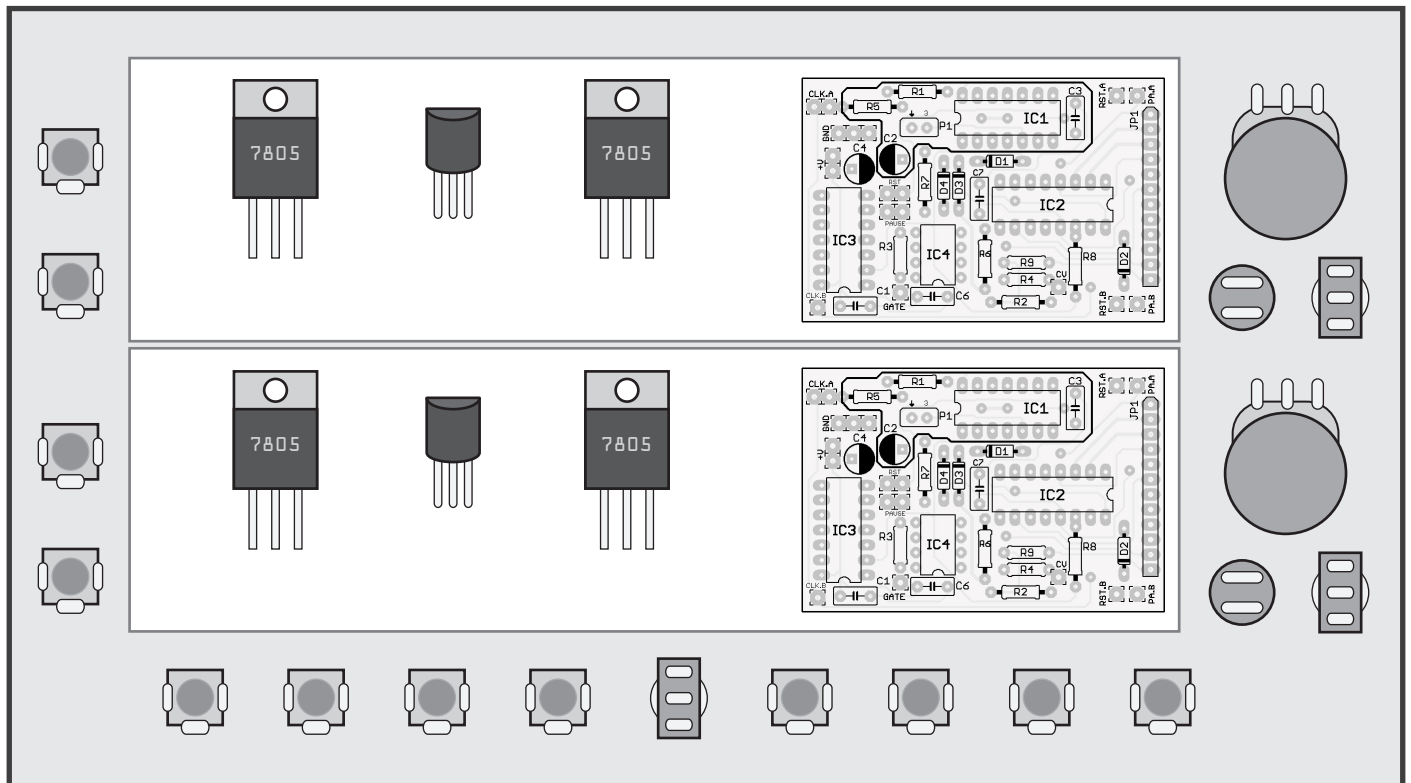
Now, solder on two wires to the two pads of the 40106 on the bottom of the logic board, as per the schematic. Take note of which one is pin 10, and which is pin 11. Using different coloured wire here is a good idea since the bottom of the logic board is not as visible when installed in the module.



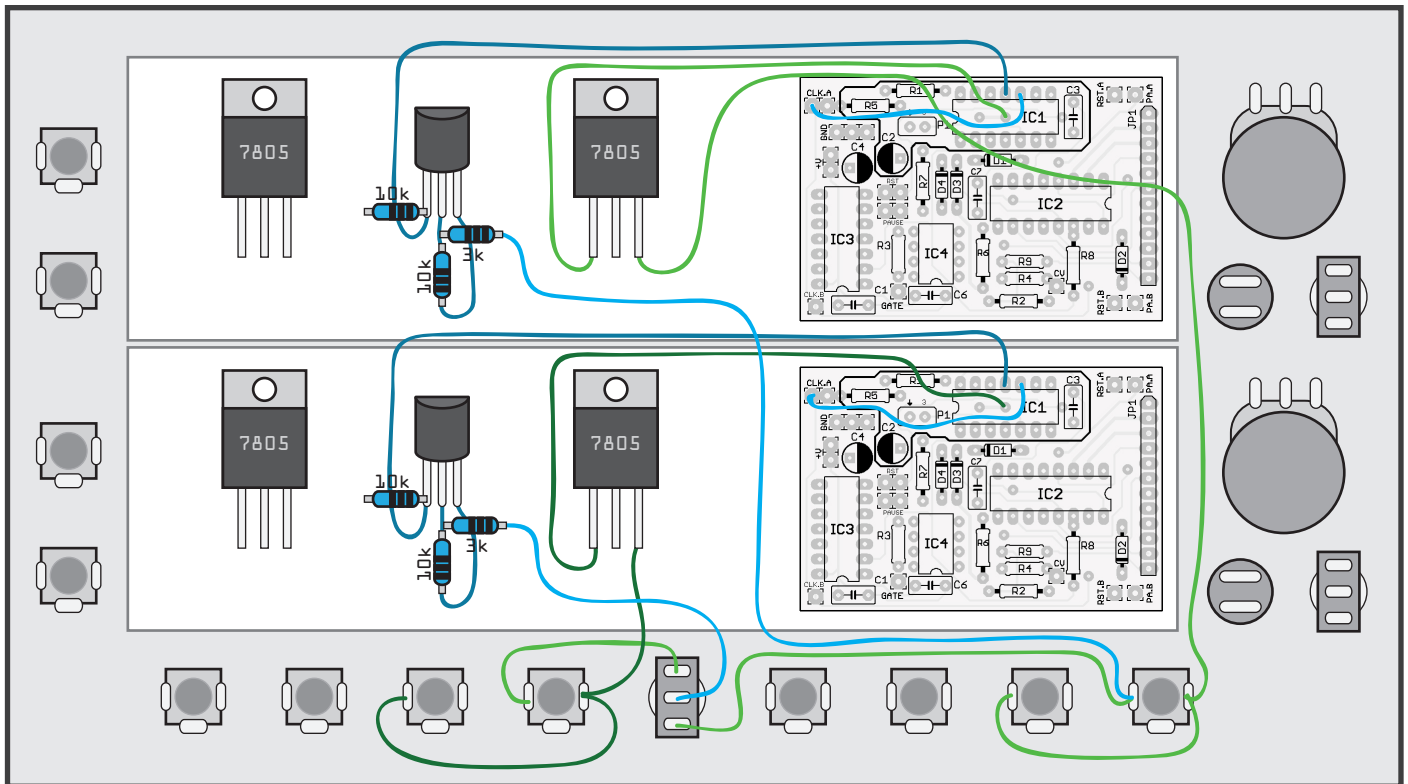
pin 11      pin 10

With your new internal clock lead and these two pins of the 40106 being brought out to wires, you are now ready to begin putting the panel wiring together!

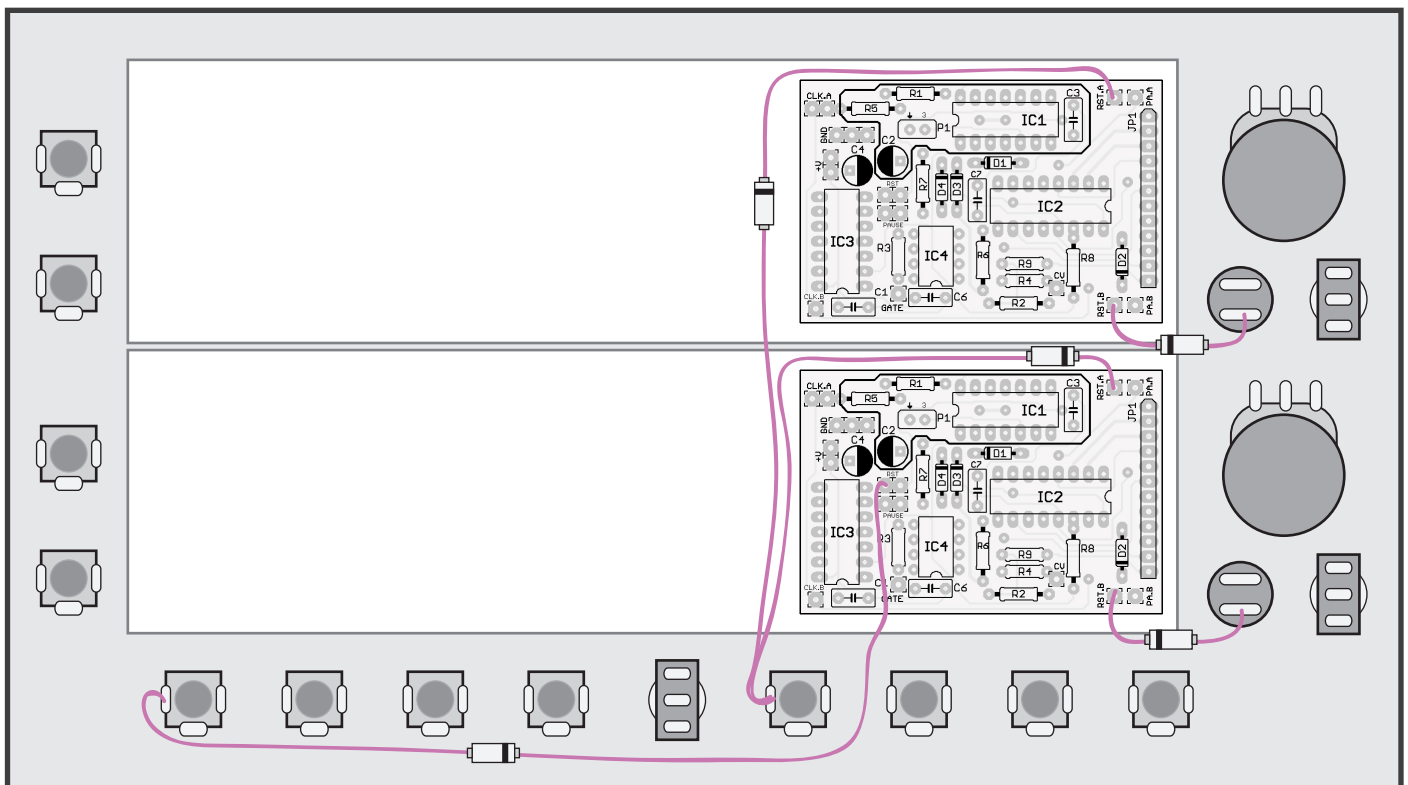
**Step 3:** Take 4x 7805 regulators and affix them to the panel with the screws that hold the control boards on the panel. Take two 2N3904s and glue them to the back of the control boards, being careful not to heat them up too much if using hot glue. Two 7805s are for the clock outputs. The other two are for the gate outputs to be 5V.



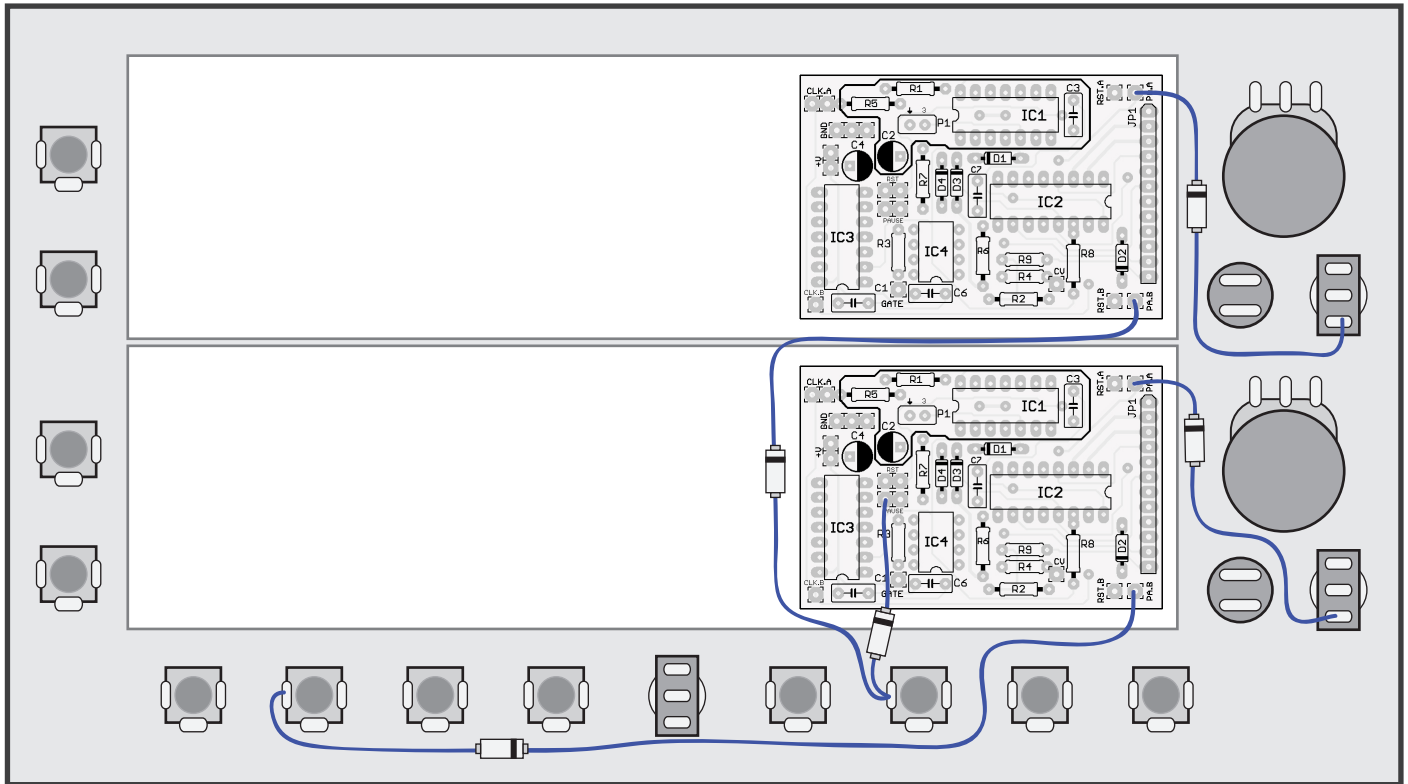
**Step 4:** Wire the clock signals as indicated, using standard SPDT ON-ON type switches and switching 1/8" jacks. Be mindful of resistor values and insulate anything you are concerned about shorting on the back of the control board. Leave the unconnected resistors hanging for now. We'll deal with them later.



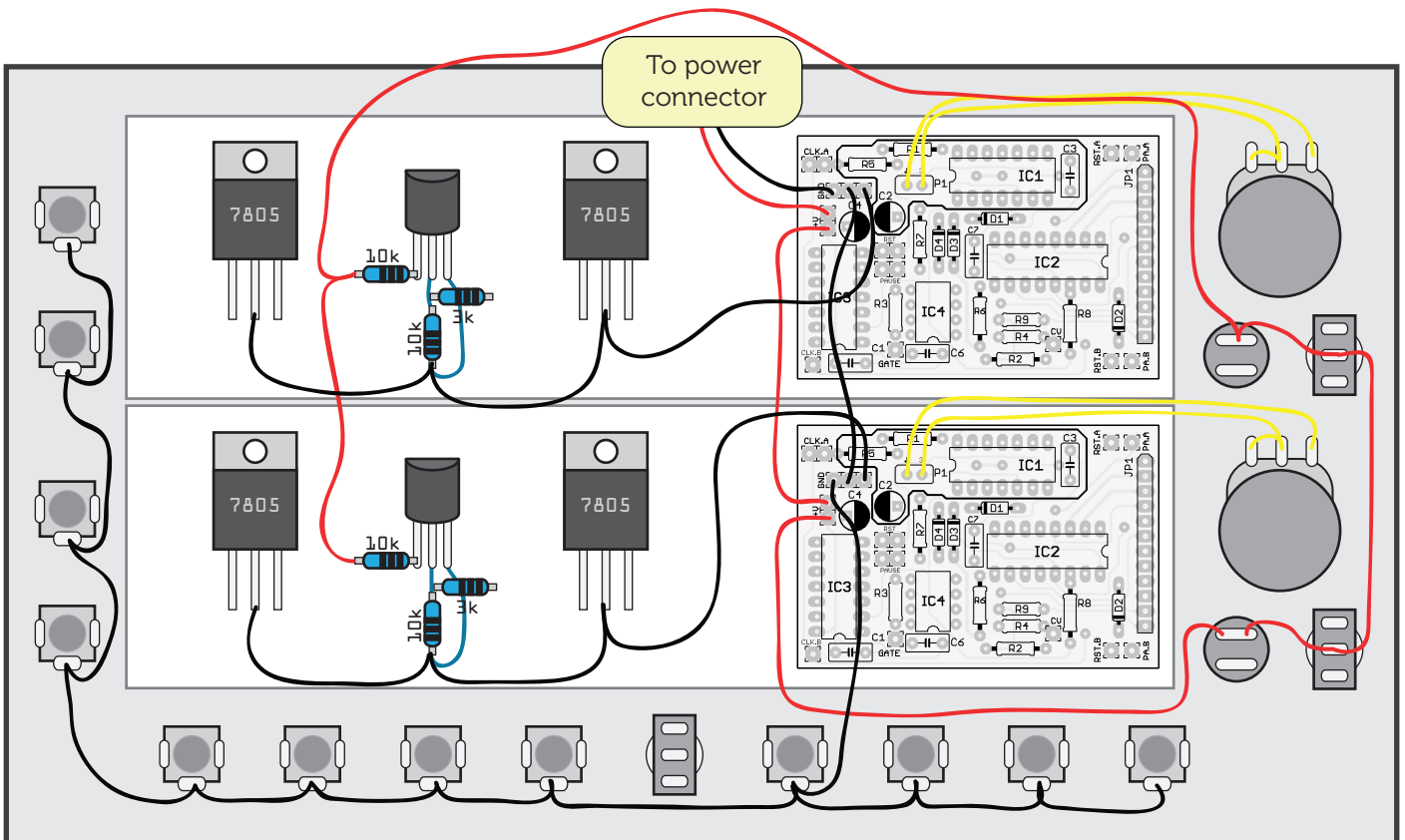
**Step 5:** Wire the reset circuitry, adding diodes where indicated. You may find that you can go straight from the button to the logic board with only the diode leads!



**Step 6:** Wire the pause circuitry, adding diodes where indicated. You may find that you can go straight from the button to the logic board with only the diode leads!

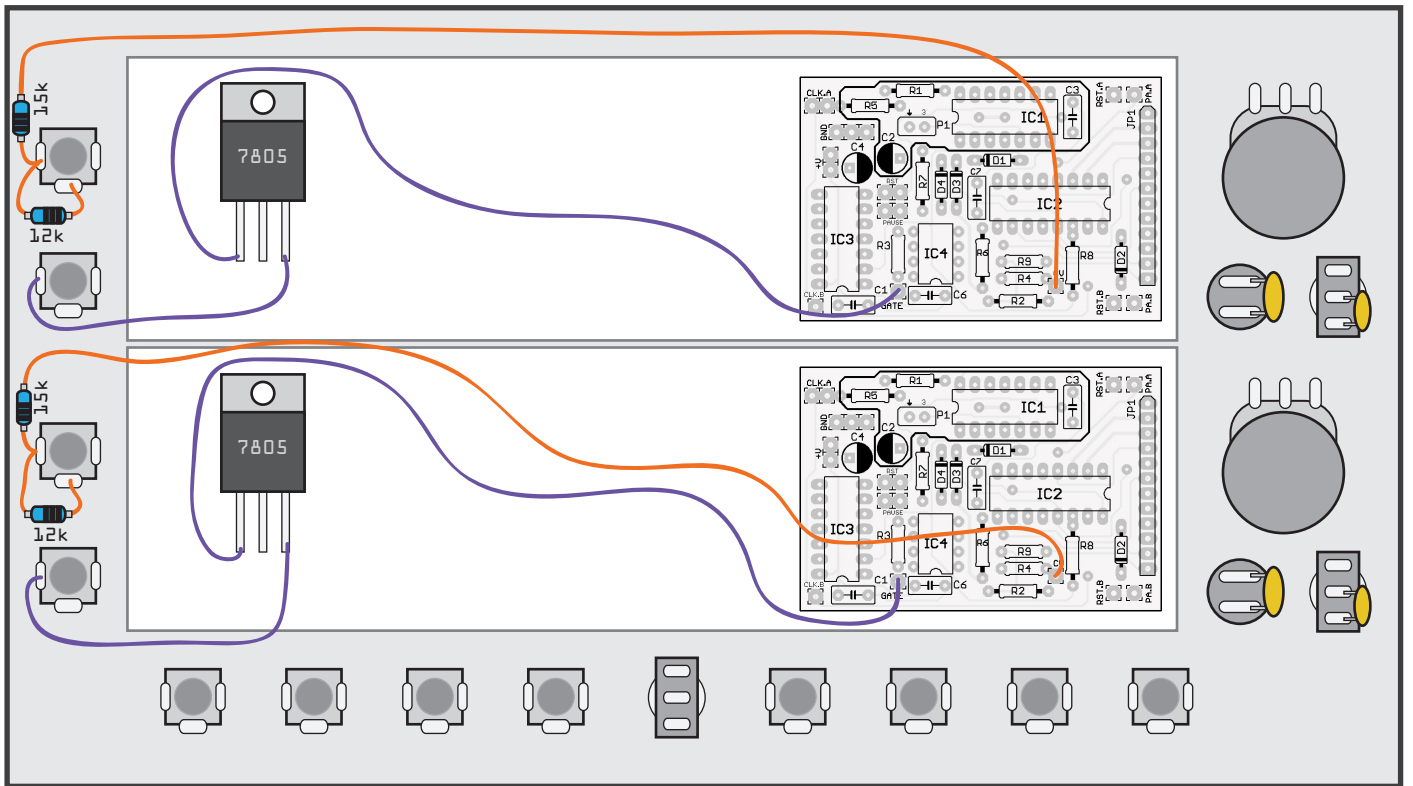


**Step 7:** Wire the rate control potentiometers and power connections





**Step 8:** Almost there! Finish off by adding the CV/Gate wires and soldering the .01uF capacitors across the switches' terminals. Pay attention to the resistor values used, of course.



**Step 9:** Now, sit back and admire your work. If all went well, your dual eurorack 5V sympleSEQ should be working just fine!

