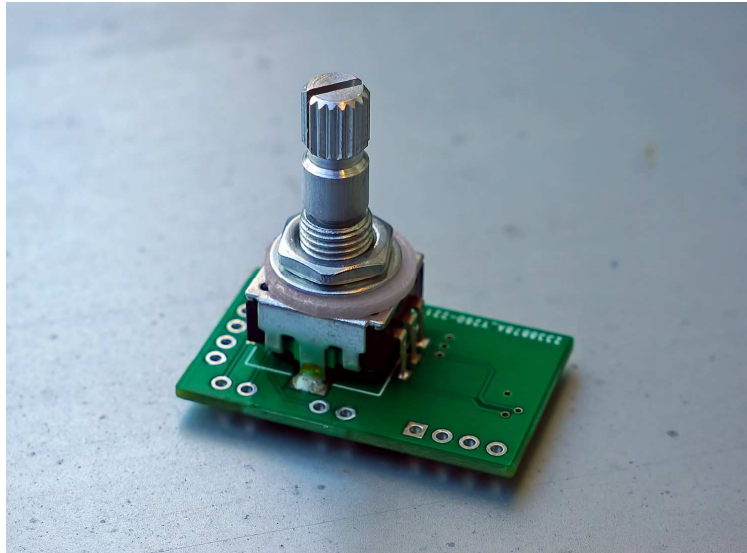## Korg Poly800 / EX800 Data Entry Knob Installation Guide v2:

## READ THE ENTIRE GUIDE BEFORE STARTING INSTALLATION

This guide details the data entry knob installation on both the Poly800 mkI and the mkII. The only difference is that the power wiring can be slightly different on the mkII.

In the kit you should have an encoder PCB, and knob with either a green or a blue cap.



Please note; you can mount the knob wherever you want, but it is mainly designed to be installed on the panel in the position shown below.
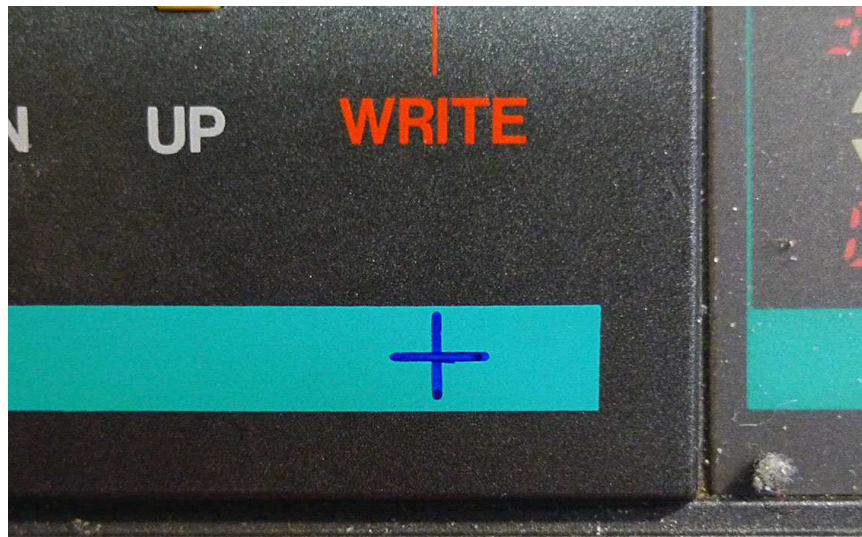


Drill the hole here to mount the knob in the recommended position. Line it up with the red line above 'WRITE', and exactly halfway across the blue bar. This should be as accurate as possible.

Once you have the hole drilled you can remove the nut and the metal washer from the encoder, but leave the white plastic washer in place as this is designed to go inside the panel. If you are mounting the knob in the recommended position, this washer acts as a spacer so that the data knob board doesn't interfere with the poly800's buttons PCB. If you are mounting the knob elsewhere then it is recommended you still use the washer on the inside of the case if possible, as it means there is less space between the actual knob itself and the panel when you push the knob on.

You can now mount the kit into the casing by sticking the encoder through the hole and securing it with the metal washer and nut on the outside of the case. See the wiring images for positioning.
If you have a Poly800 mkI you may have to twist the white rubber wiring loom holder aside while you install the kit, and then twist it back once the kit is in place. The mkII doesn't have this wiring loom.
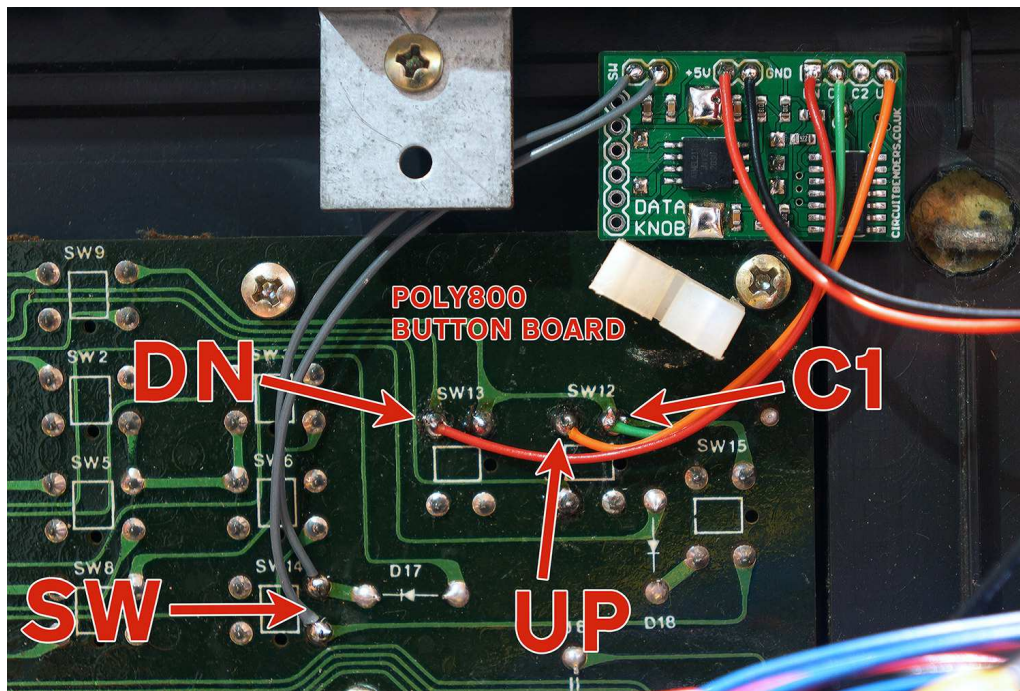


The green common (COM) wire should be soldered to the top right pin of SW12. You can use either the C1 or C2 solder points on the Data Knob PCB for this.
The orange parameter up (UP) wire should be soldered to the top left pin of SW12.
The red parameter down (DN) wire should be soldered to the top left pin of SW13
The two grey program mode (PROG) wires should be soldered to the top and bottom right pins of SW14.
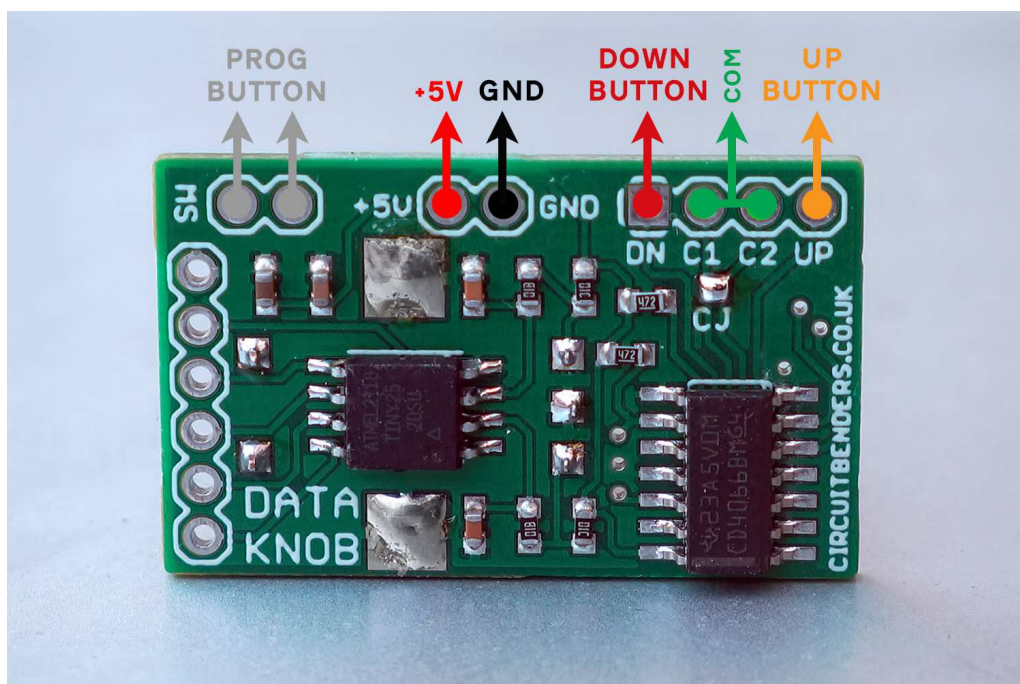
You will need to source +5v and GND to power the board. If you have a mkI synth then here are two options here. The easiest way of doing it is to unscrew the chorus board to the right and wire the power connections to the positions shown at the top of the next page.

The mkII version doesn't have this chorus board, so you'll need to wire the power to the points on the top right hand side of the main PCB as shown on the second image below. If you have a mkI Poly800 then you can also use this option if you wanted. Obviously any other +5v and Ground point can be used if you mount the knob elsewhere.
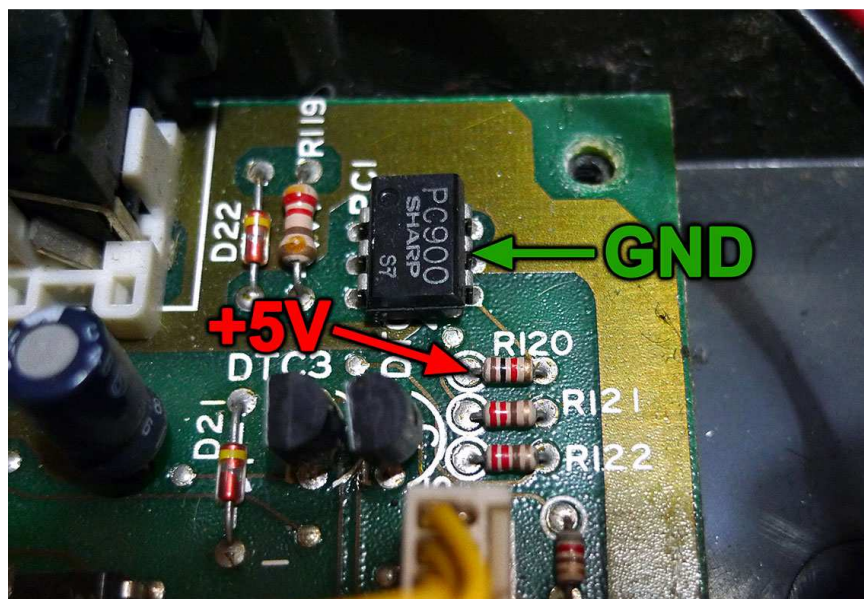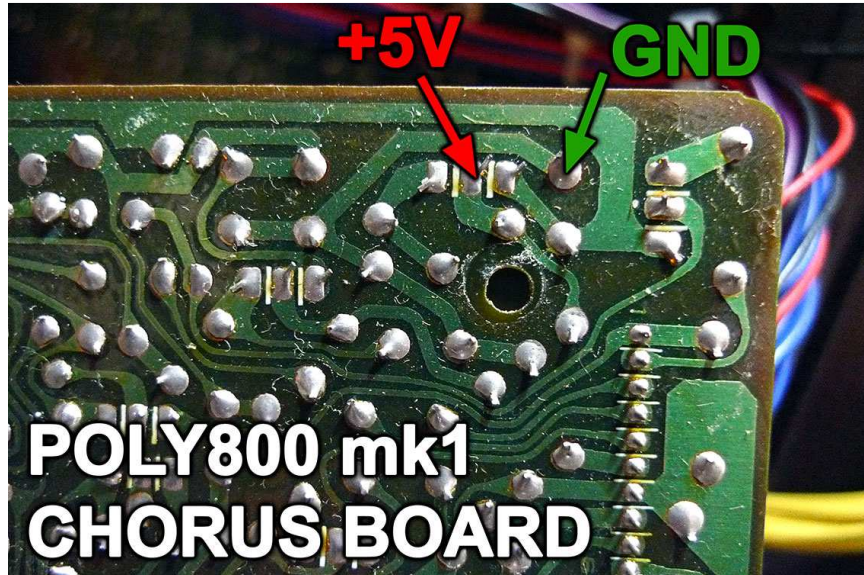




Once you have everything wired up, push the knob onto the encoder shaft and power the synth up. Pressing down on the knob should take you into edit mode, and then the knob should change the selected parameter. Pressing the knob again will take you out of edit mode, but remember that it doesn't write the edits to the saved sound unless you press the write button.

Please note: Every click of the encoder is sent to the poly800 as a button press, but due to the poly800 hardware there is a limit to how fast it can read button presses before it starts to randomly miss increments. To try and address this issue the board is set up so that it sends every single encoder click as a button press, but with a maximum speed of 30ms between presses. When the knob is turned extremely fast, any clicks that occur faster than 30ms are held in memory and queued to be sent out by the board as button presses in a steady stream at intervals the poly800 can read. This only observable effect of this is that when the knob is turned extremely fast you may notice that the numbers continue to change for a small fraction of a second after you've stopped turning as the board sends out remaining button presses in the queue. You probably won't even notice in normal operation.

Below you can see the solder points for installing the knob on an EX800. Power can be sourced from the main board as shown on page 4.