

Tubbutec ModyPoly

Midi retrofit and feature extension Rev.3

Installation Manual for Korg Polysix

<http://tubbutec.de>

NOTE: this is the installation manual for ModyPoly Rev.3.
You can find the text 'rev3' on the bottom of the ModyPoly chip!



Tools you will need:

- Soldering iron
- Metal drill 3.2mm (or similar)
- Metal drill for a 15mm hole (stepping drill for example)
- Center punch
- Screw driver

Included in the kit:

- ModyPoly chip
- 34K and 68K resistors
- Midi socket drill guide
- 4x M3 bolt, 4xM3 nut for midi sockets
- Sticker for midi socket labelling

Installation

The ModyPoly is a drop in replacement for the "key assigner" IC and thus very easy to install. Just plug and play basically. Three holes for the midi sockets and the sustain pedal jack have to be drilled in the back of the Polysix and if you want to be able to control the filter via midi there is one cable to solder. Midi pitch bend requires soldering of two resistors. Important: Before doing any of the steps below unplug the Polysix's power chord!

Opening the Polysix

In order to open the Polysix you have to take out the four screws in the corners of the front panel and four screws on the underside of the synth. You can then open the front panel.

Installing the jacks

Use the stencil provided to mark the location of the seven holes for the midi connectors and the sustain jack. You can choose any location for these holes. We recommend to remove the serial plate beside the power connector and drill the holes there. This way, if you ever want to remove the connectors for some reason, you can cover the holes with the plate.

Alternatively we offer a new rear panel for the Polysix which has the holes for the jacks already drilled. It also has a C14 power cable connector to get rid of the non-detachable power cable.

The DIN connector with three cables is for midi out, the one with two for midi in and the jack for the sustain pedal. A drill aid for the connectors and a sticker comes with the kit. Use the four black M3 screws and nuts provided to mount the midi sockets. The recommended way to do this is from behind, so you do not have to resolder the wires.

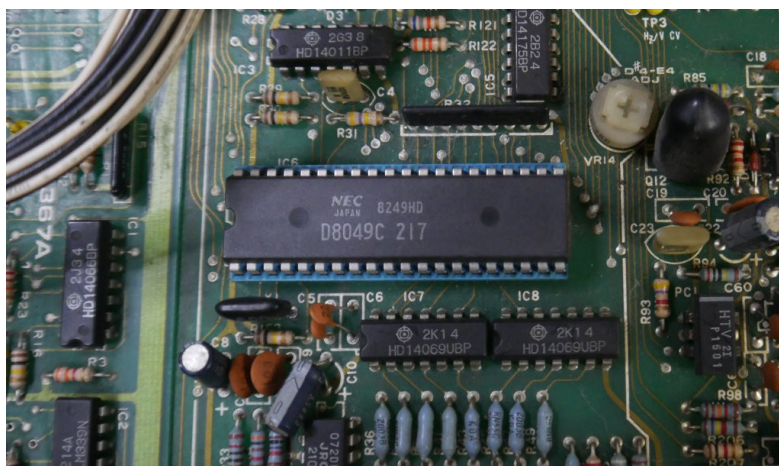


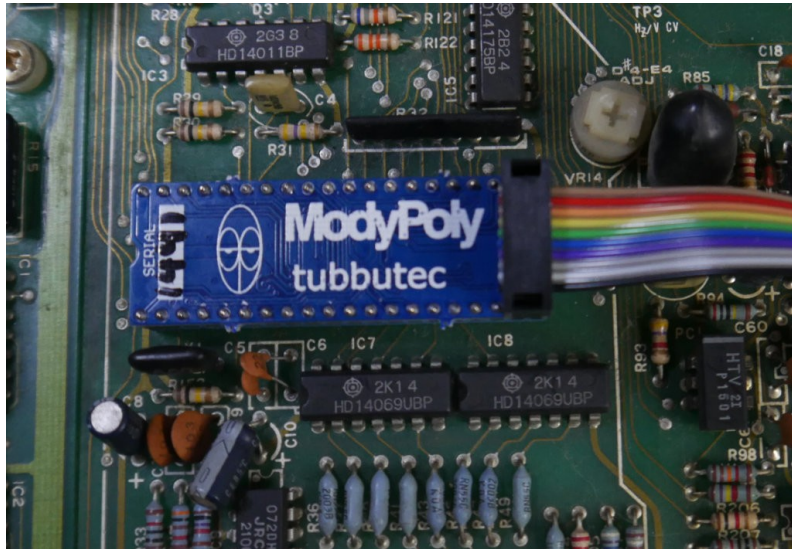
Installing the ModyPoly chip

First remove the keyboard to access the key assigner IC. To do so, unplug the connector coming from the keyboard, then remove the screws on the bottom of the Polysix and remove the keyboard.



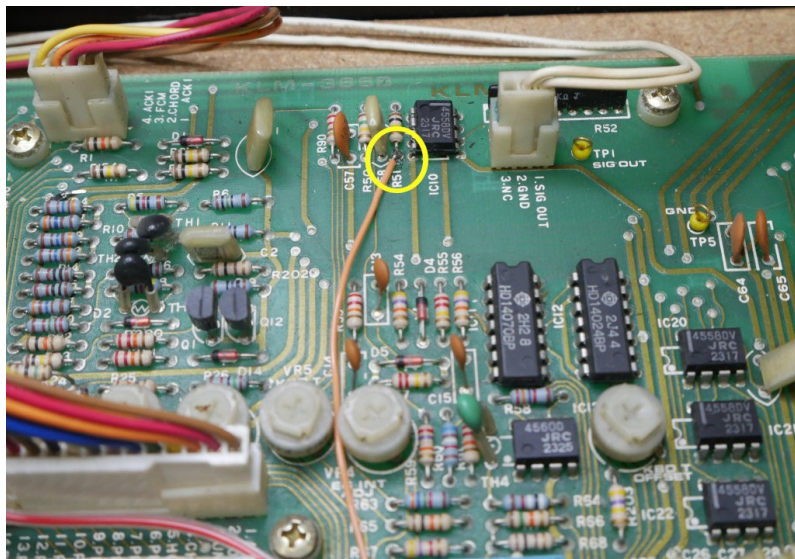
In order to install the processor board you have to remove the existing processor (IC6 D8049C 217) and replace it with the ModyPoly chip. You can use a small screw driver to carefully lift the processor out of its socket. When putting the ModyPoly chip into the socket, mind the orientation (cables are on the right side) and be careful not to bend any pins.





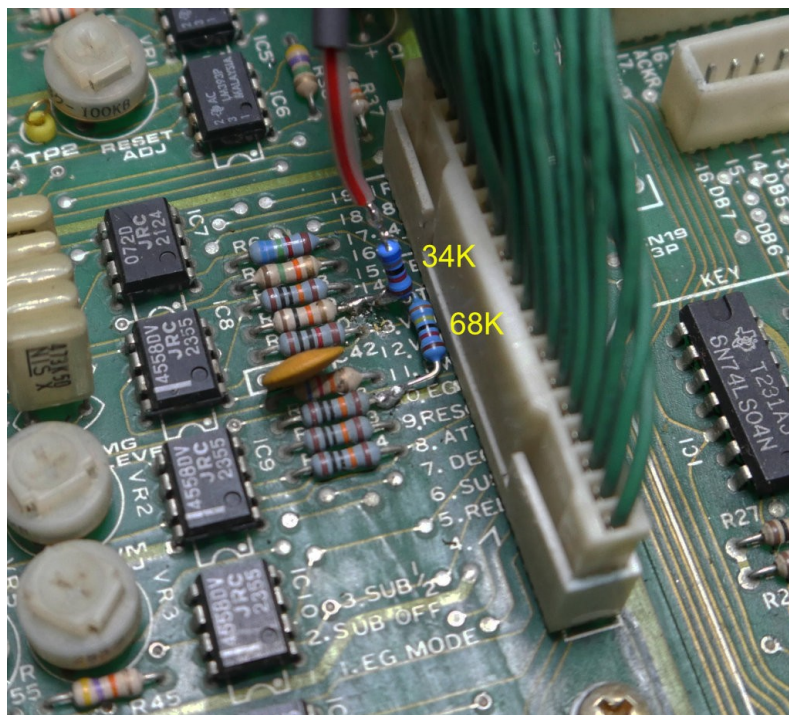
Soldering the filter wire

If you want to be able to control the filter via midi, you will have to solder one cable to the leg of a resistor (R51) on the back of the voice board (KLM-366B) as shown in the picture. The cable is the orange wire coming from the ModyPoly board.



Soldering the pitch bend wire

In order to add midi controlled pitch bend to your Polysix you need two resistors, one 68k one 34k. Other values are also possible, as long as one has double the value of the other. This will change the maximum pitch bend range. Smaller values will increase the range. The resistors need to be soldered onto board KLM-367A as shown in the picture. Solder the red wire to the free leg of the 34k resistor. Some heat shrink is recommended here.



Pitch bend calibration

After installing the pitch bend resistors, the pitch bend CV needs to be calibrated due to part tolerances. To perform pitch bend calibration set the tune knob to the center position, make sure the pitch bend wheel is at center and then use midi to send midi pitch bend messages until the synth is in tune. While it is in tune switch into the config menu (press HOLD until it starts blinking) and press 'pitch bend cal' (The second highest key on the keyboard) to save the current setting as the new pitch bend center position. Exit the config menu by pressing HOLD again.

That's it. Have fun.