Tubbutec ModyPoly

Midi retrofit and feature extension Rev.3

Installation Manual for Korg Mono/Poly
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
- 3u3 electrolytitic capacitor, 820R, 10K7 and 11K5 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 Mono/Poly 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 three resistors and one capacitor.
Important: Before doing any of the steps below unplug the Mono/Poly´s power chord!

Opening the Mono/Poly

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

Installing the jacks

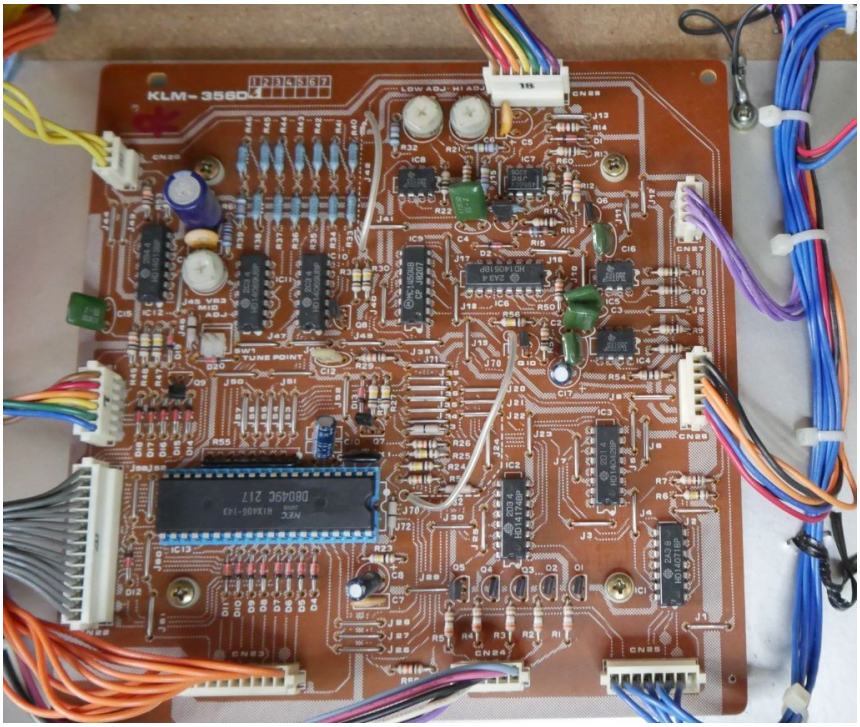
Use the stencil provided to mark the location of the three holes for the midi connectors and the sustain jack. You can choose any location for these holes. We recommend to remove the serial plate beside the power connector and drill the holes there. This way, if you ever want to remove the connectors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

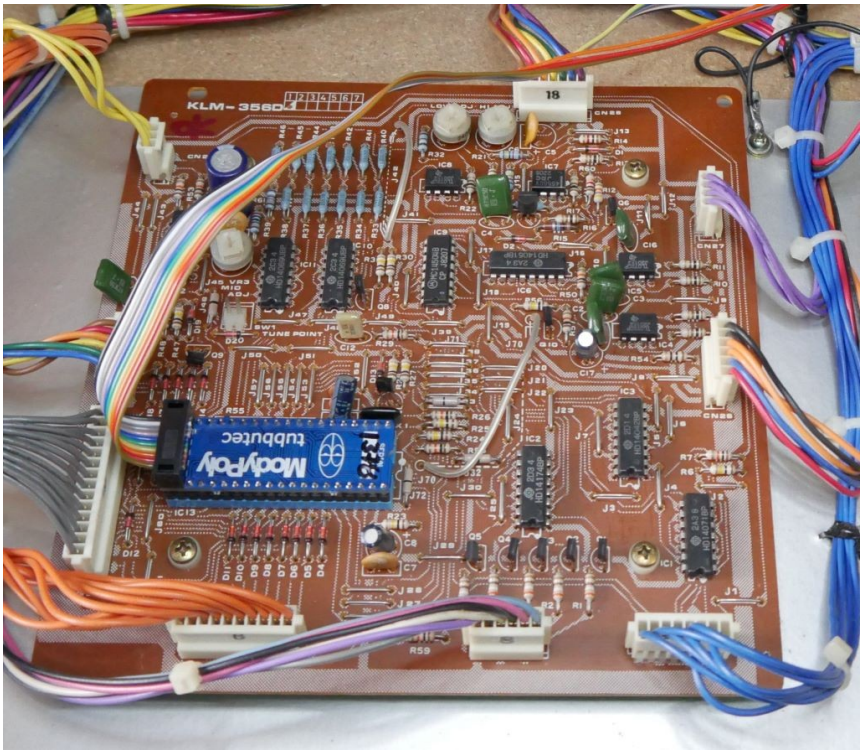
Alternatively we offer a new rear panel for the Mono/Poly which has the holes for the jacks already drilled. It also has a C14 power cable connector to get rid of the non-detachable power cable.

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

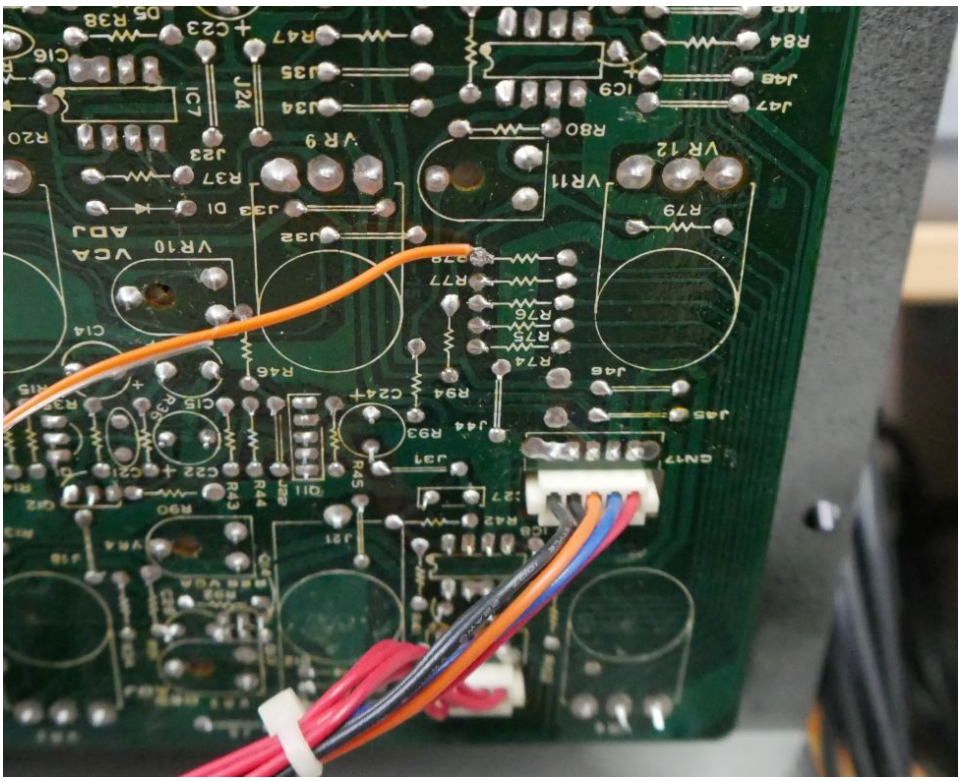
In order to install the processor board you have to remove the existing processor (IC13 D8049C 217) and replace it with the ModyPoly chip. You can use a small screw driver or an IC extraction tool to carefully lift the processor out of its socket. When putting the ModyPoly chip into the socket, mind the orientation (ribbon cable is on the left side) and be careful not to bend any pins.





Soldering the filter wire

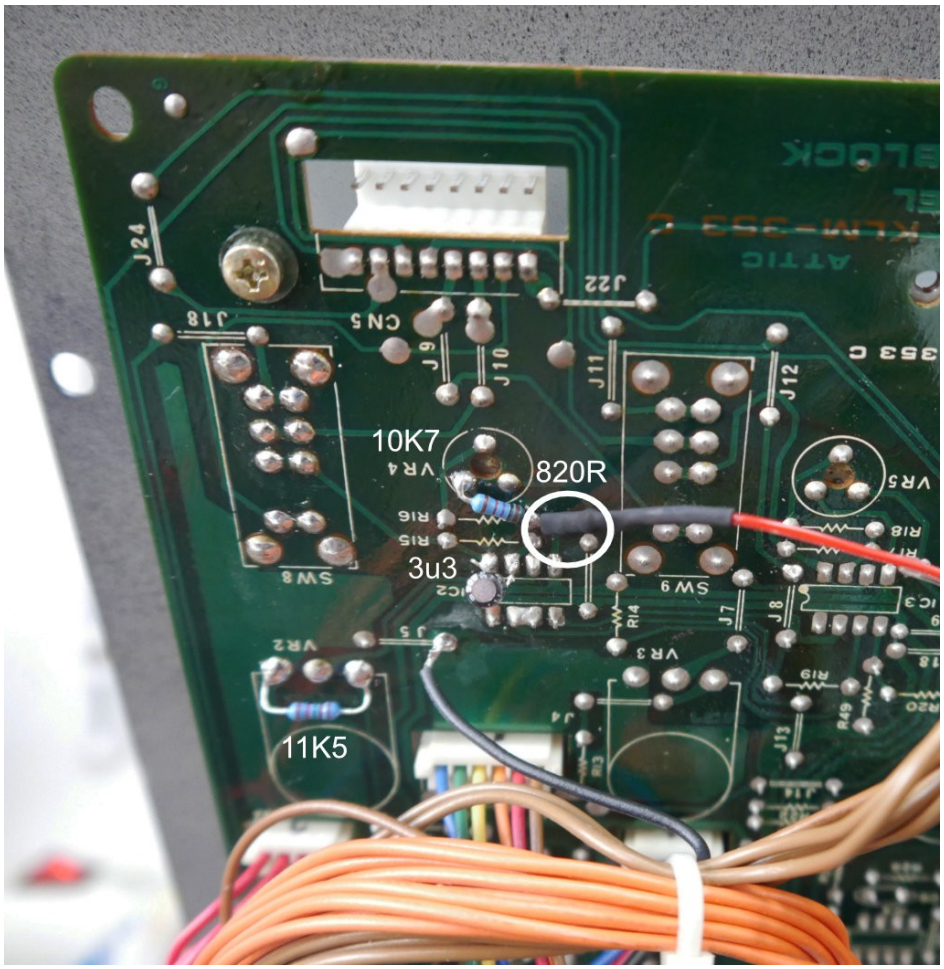
If you want to be able to control the filter via midi, you will have to solder one cable to the leg of a resistor (R78) on the right panel board (KLM-355C) as shown in the picture. The cable is the orange wire coming from the ModyPoly board.



There are Mono/Poly´s without screen printing on the board. In this case you need to take extra care where you solder the wire to.

Soldering the pitch bend wire

The red wire is for controlling pitch bend. You need to solder three resistors and one capacitor on the back side of KLM-353C board as shown in the picture.
Solder the 11K5 resistor across the outer legs of VR 2 (Bend intensity potentimeter), the 10K7 resistor between one leg of VR 4 and one leg of R16, see picture. The 820R resistor gets soldered to the same leg of R16 as the 10K7 resistor, the red wire has to be soldered to the other leg of the 820R resistor, some heat shrink may be used as shown in the image. In the image, the heat shrink covers the 820R resistor. The capacitor is soldered across the upper left two pins of IC2 (Pin 1 and 2, negative side to pin 1). The capacitor has a value of 3.3uF.



There are Mono/Poly´s without screen printing on the board. In this case you need to take extra care where you solder the parts and wire to.

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, make sure BEND INTENSITY knob is set to 0 an set the BEND switch to VCF. Play a note and switch the BEND switch to PITCH if the pitch changes you need to calibrate. Send pitch bend midi messages until there is no pitch difference between the VCF setting and the PITCH setting. We recommend using a DAW for this purpose. Now while the pitch is set correctly switch into the config menu (press HOLD until it starts blinking) and press the second uppermost keyboard key (B). Press HOLD again to exit the config menu.

That’s it. Have fun.