HiRes installation manual

https://tubbutec.de

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Contents

1 Introduction

HiRes is an upgrade for the ModyPoly which adds high pitch resolution, microtuning and portamento. It works for Polysix and Mono/Poly (and is somewhat usable on the Poly-61).

- Adds portamento to any ModyPoly equipped Polysix. An optional panel and portamento time knob is also available.

- Enables mirotuning and custom scales on Polysix and Mono/Poly.

- Voice spread / detuning parameter available via midi

- High precision pitch bend for Polysix and Mono/Poly

2 Kit options

2.1 Base board only

The basic HiRes board which plugs into the ModyPoly + connector to the DAC. Gives you all functionality, but portamento time can only be set via midi or the config menu. This is probably your choice for a Mono/Poly or if you do not want to drill a hole in your Polysix.

2.2 Base board + portamento panel

All base board options, but also includes a portamento time knob + panel for the Polysix. The panel is screen printed and anodized aluminum,color matched to the 'polysix-blue'. A black knob with similar feel to the original is included, but you can use an original knob as well.

3 Installing the HiRes board

Installing the base board on a ModyPoly is fairly easy and only requires some simple soldering. If you purchased a ModyPoly with Hires already installed you can skip this step.

Place the HiRes board on top of the ModyPoly. It should align with pin 7 (see picture). Then solder the half-holes of the HiRes board to the ModyPoly pins.

4 Installing the DAC connector in a Polysix

Three wires need to be soldered to parts on the Polysix board. These are analogue power (AVCC, red), analogue ground (AGND, black) and the DAC voltage output from the HiRes board (DAC_OUT, yellow). Solder AVCC to pin 14 of IC8, AGND to pin 7 of IC8 and DAC_OUT to the lower leg of R49. Finally plug the connector into the socket labeled 'DAC'

5 Installing the DAC connector in a Mono/Poly

Three wires need to be soldered to parts on the Mono/Poly board. These are analogue power (AVCC, red), analogue ground (AGND, black) and the DAC voltage output from the HiRes board (DAC_OUT, yellow). Solder AVCC to pin 14 of IC10, AGND to pin 7 of IC10 and DAC_OUT to the upper leg of R39. Finally plug the connector into the socket labeled 'DAC'

6 Installing the portamento panel (Polysix)

The PORTAMENTO TIME panel is designed to be installed below the BEND INTENSITY and TUNE knob of the Polysix, but can of course also be placed elsewhere.

1. Use the drill guide provided and line it up with the existing Polysix artwork. Use adhesive tape to fix it in place.

2. Use a center punch to mark the location of the hole

3. Start with a small drill and progress to larger holes with each pass. The final dimensions are not critical (because the panel covers the hole). Hole size should be 7-8mm or 15/16"
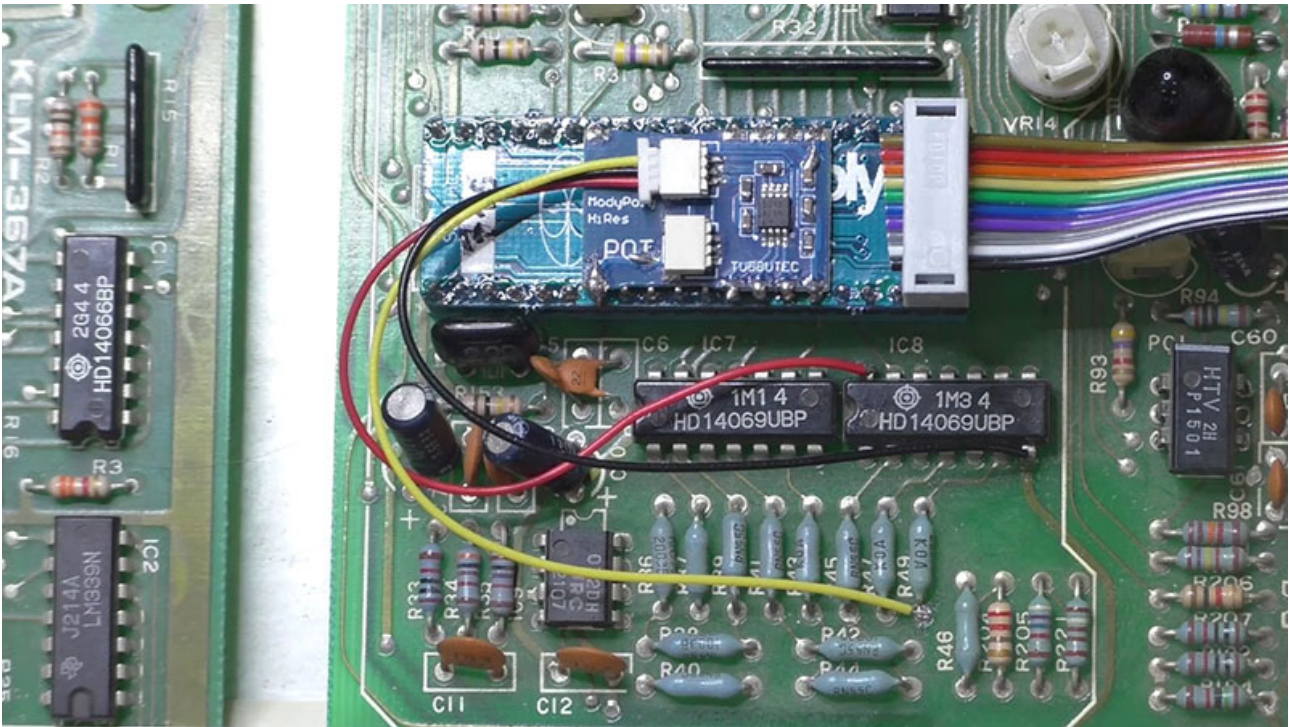
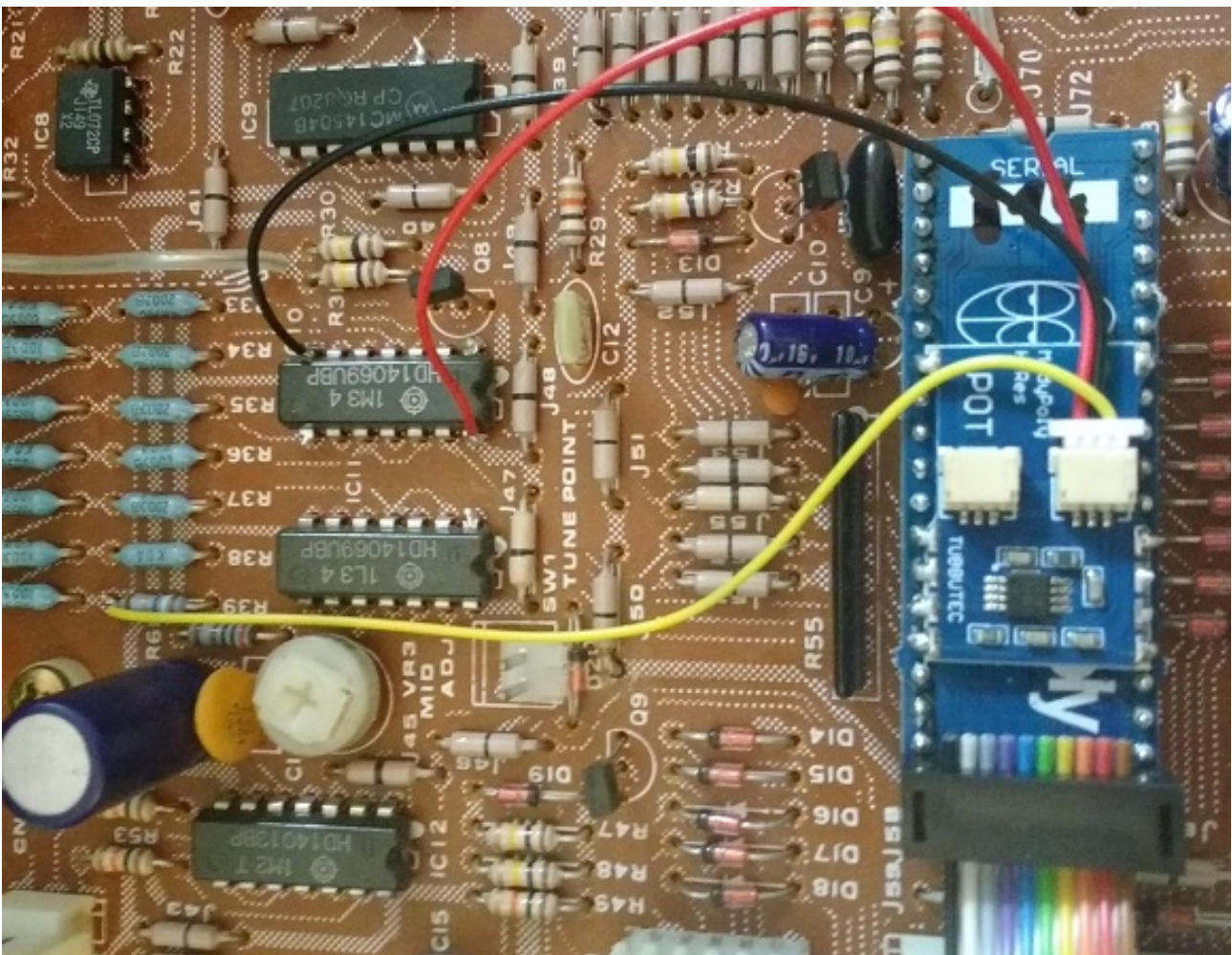Figure 1: DAC connector soldering - Polysix

Figure 2: DAC connector soldering - Mono/Poly

Figure 3: Drill guide placement, and hole drilling

Figure 4: Installing the potentiometer

4. Deburr the hole on both sides

5. Place the spacer on the potentiometer, put it through the hole and fix it with the nut on top.

6. You now have two choices for the knob

   (a) Us the black knob provided: Install the shaft adapter and fix the black knob by tightening the screw

   (b) Use an original Polysix knob (not supplied with the kit)

7. Finally plug the potentiometer connector into the socket marked POT. The red wire on the connector is not used and cut off. This is normal.

7 Updating ModyPoly firmware

HiRes requires ModyPoly firmware 2.0 or higher. You can upgrade using the firmware upgrade tool on tub-butec.de

8 Calibrating the portamento knob

If you have the potamento-time knob installed, you need to calibrate it once.
   After installing firmware 2.x, perform the following steps:

1. Go into the config menu by pressing HOLD intil it starts blinking.

2. Press the highest A# on the keyboard (labelled 'knob calib' in the keyboard picture below).

3. Turn the portamento knob all the way to the left, then turn it all the way to the right. (Repeat this a few times if you like)

4. Press the lowest C (the leftmost key on the keyboard)

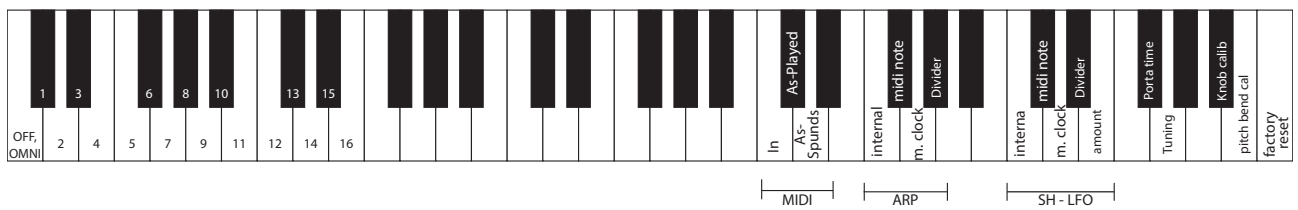5. Finally exit the config menu by pressing HOLD again. The knob is now calibrated. Calibration is saved turing power down.

Figure 5: ModyPoly config menu