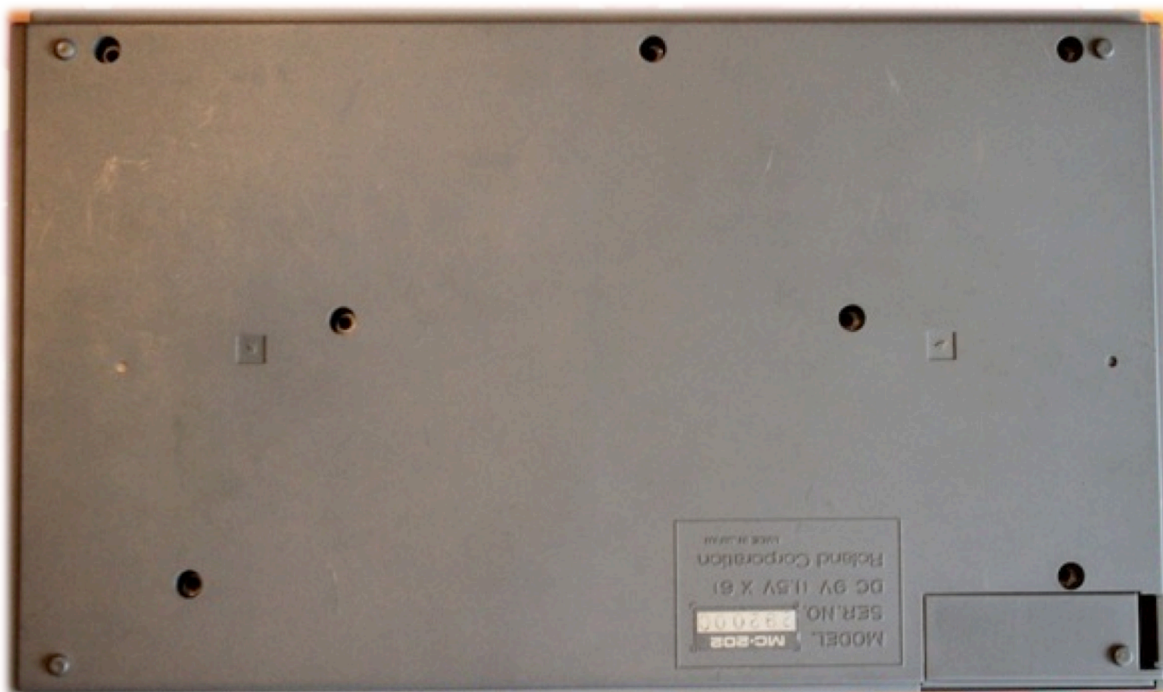


How to midify a Roland MC202 using MiniCV

The CV/gate jacks from the MC202 are very slow and almost useless. You need to install a midi converter if you want to control your MC202 and the MiniCV is your best choice. There is very little space in the MC202 and the MiniCV is the tiniest converter on the market. The MiniCV fits the power supply of the MC202. It only needs 1mA, most converters need much more, something the MC 202 can't deliver without artifacts. The voltage of the mc202 is perfect for the MiniCV. No other MIDI converter on the market will be so quickly installed as the MiniCV.

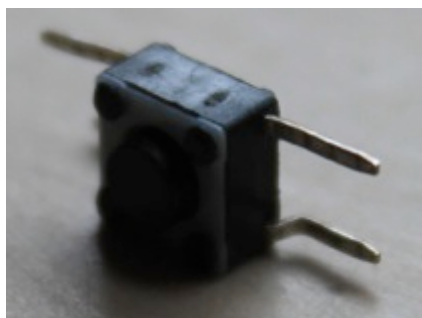
1 Open the MC202.

Remove the 7 screws on the bottom. Carefully flip the bottom cover to the side of the batteries so you don't break the 2 wires going to the battery contacts.

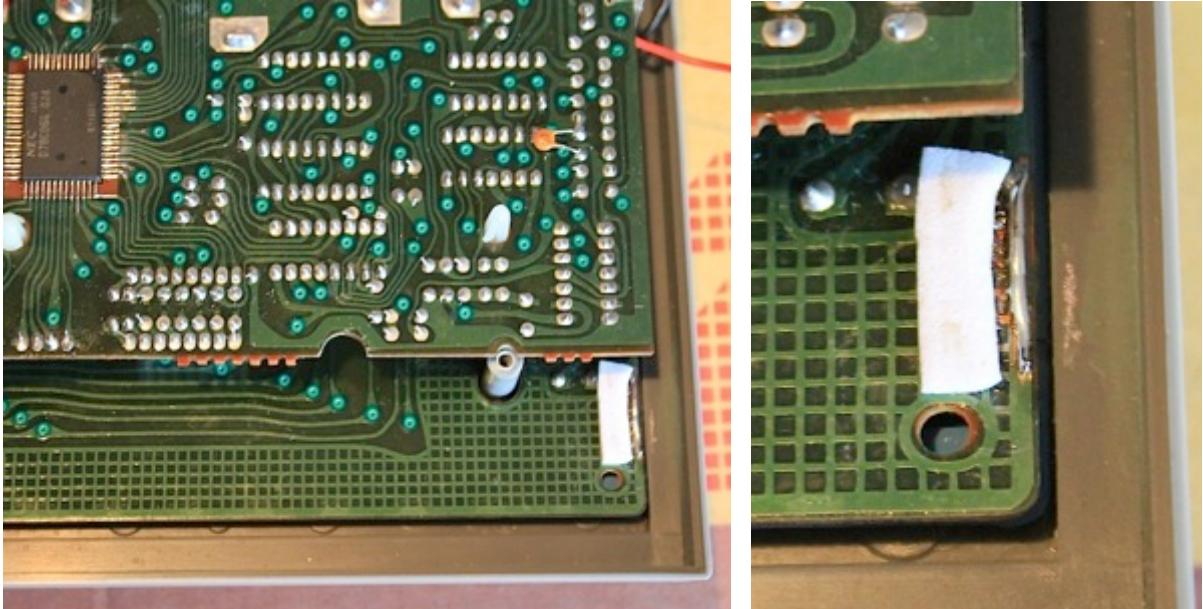


2 Prepare and install the switch.

bend the legs of the switch and cut one leg. Solder a grey wire and insulate it with with heat shrink tubing.



We are going to install the switch under the little door for the batteries. When it will be installed you can reach it with a pencil or screwdriver when you open the little door. This way you don't have to drill a hole in your synth. Scrape the green mask of the pcb with a knife or sharp screwdriver, clean it and put on some solder. Next to it you can put some double sided tape.



Solder the switch on to the PCB with the 2 legs to the right.

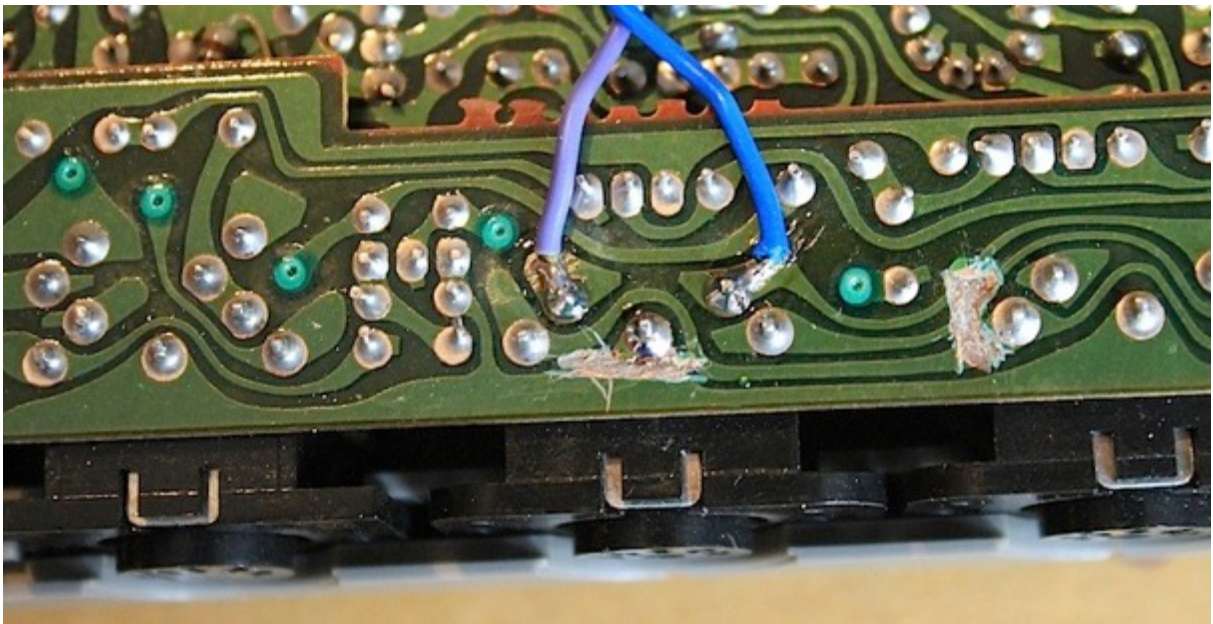


3 The MIDI connector.

The MC202 has 2 sync outputs. We're going to transform the first sync output (the middle DIN connector) to the midi in. This way we don't have to drill holes in the body of your beloved synth. For this you need a sharp knife such as an X-Acto and cut the pcb traces like in the photo .



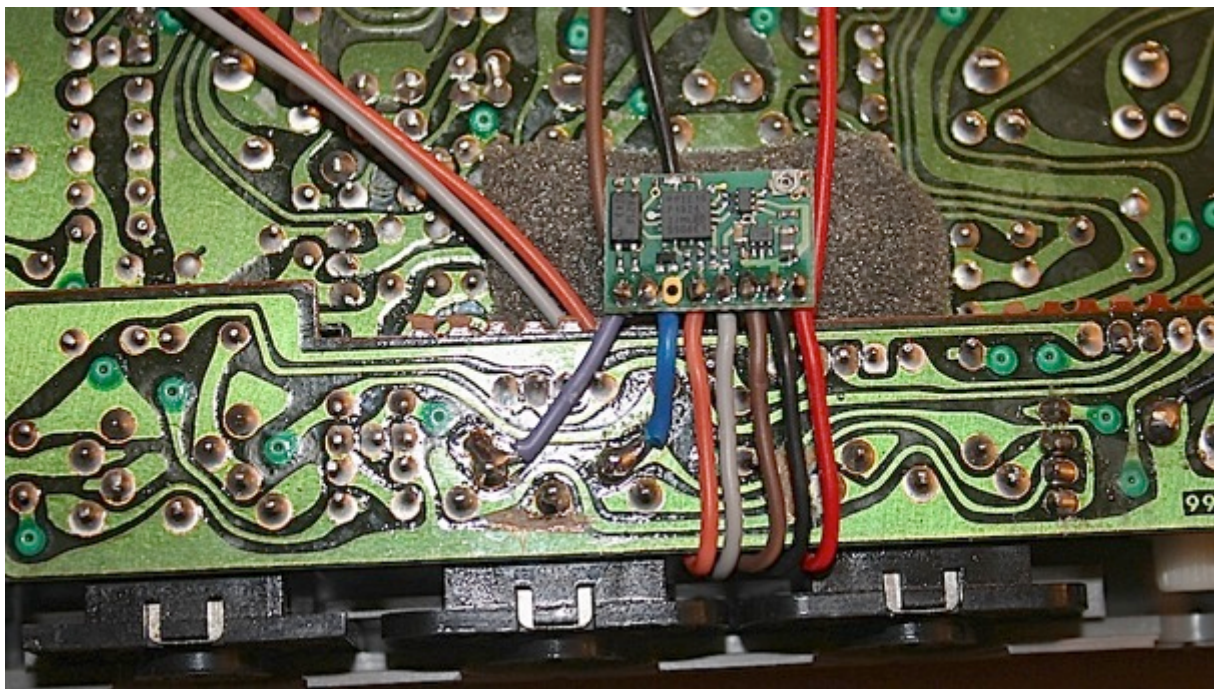
Solder 2 wires, if you want, you can scrape some green mask of the PCB . Don't use leadfree solder here!



4 Prepare and install the MiniCV

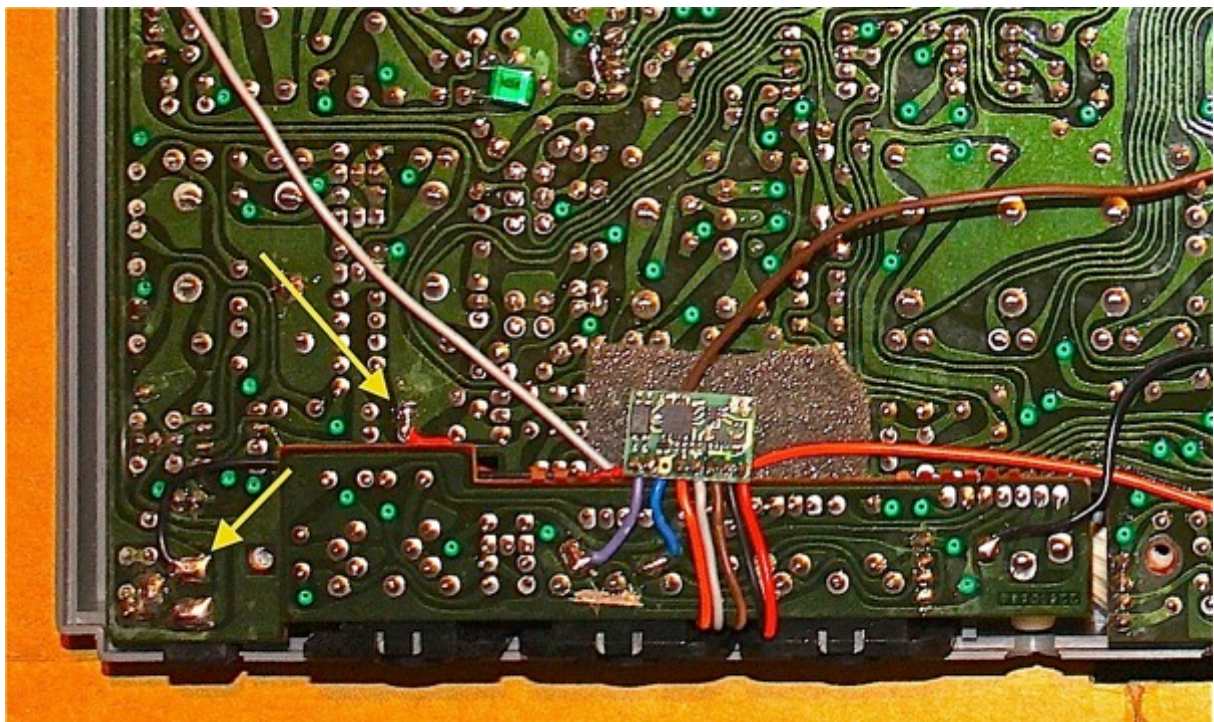
Guide the grey wire of the switch under the little PCB of the DIN connectors. Guide 4 other wires the same way. Red (power supply) black (GND) brown (cv) orange (gate). Feel free to use different colours.

Solder the wires on the MiniCV like in the photo



6 Solder the power wires (black & red).

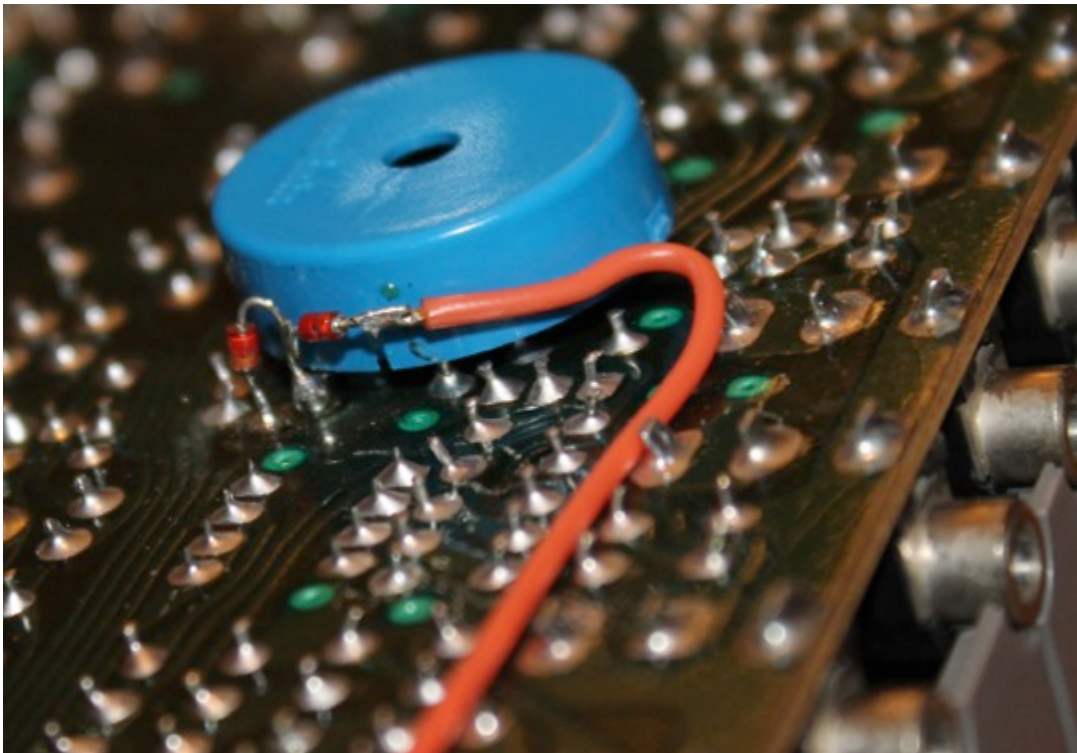
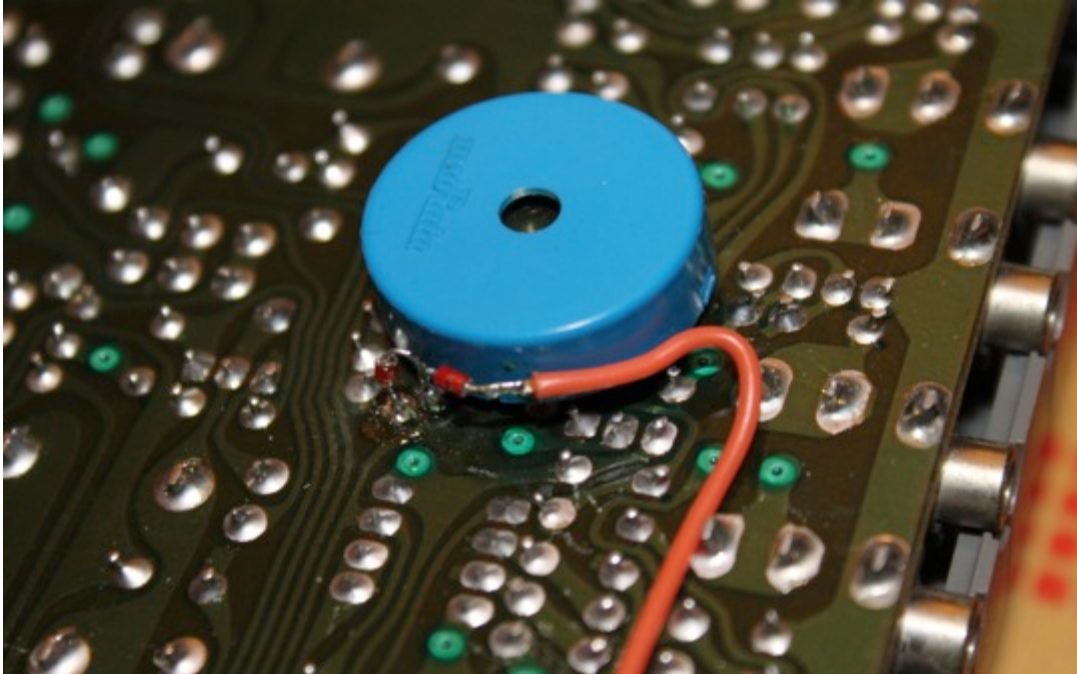
Ground wire goes to the DC input. The power will be taken after the power switch, if the synth is turned off the MiniCV will also be turned of.



7 Solder the gate wire (orange).

You need 2 small diodes. First cut the little trace (only 2 mm long) next to the buzzer. Solder the first diode as a bridge over the cutaway. Pay attention to the polarity of the

diode. Test the mc202: the internal keyboard should work as normal, if not you might have switched the polarity. Take the second diode and solder it to the gate wire (orange). Solder to the solder pad close to the buzzer (rings of both diodes here). Pay attention to the direction of the diode. When this is done, the synth should work as before and if you connect the midi the synth will also respond to midi triggering. Only one wire to go.

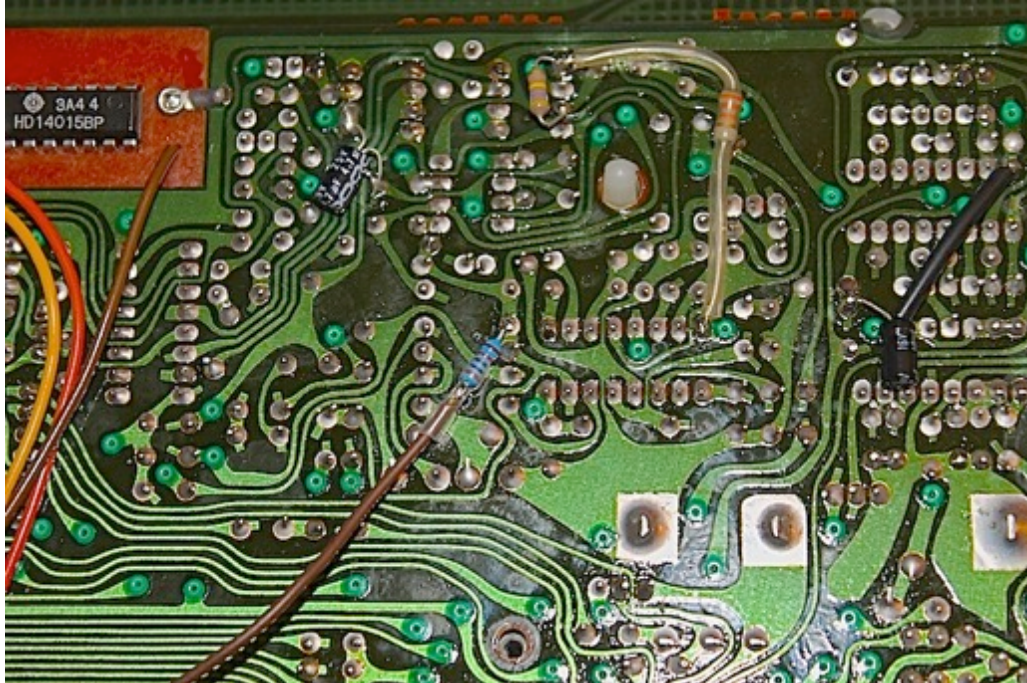


8 Solder the CV wire (brown).

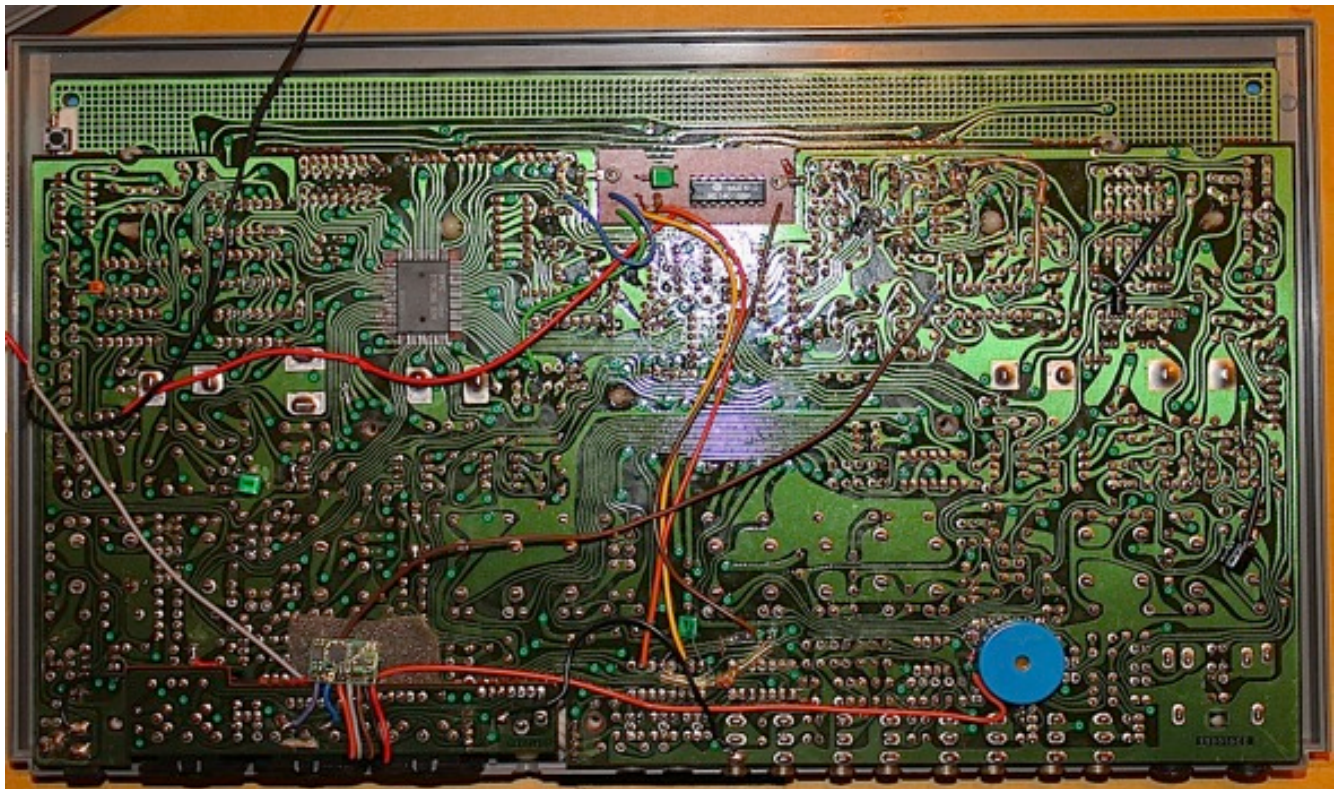
There is no simple answer to where to connect the CV input of the MC202.

You could add a switch to switch between the internal control voltage and midi and on the other hand to engage the portamento.

You could add an extra opamp to buffer the internal keyboard voltage and the midi CV. The external input is too slow and not accurate. Therefore we will sum the midi CV with all the other control voltages, directly to the VCO. Take a 100k resistor and solder it to the CV wire (brown) of the MiniCV and solder it to the indicated place on the PCB.



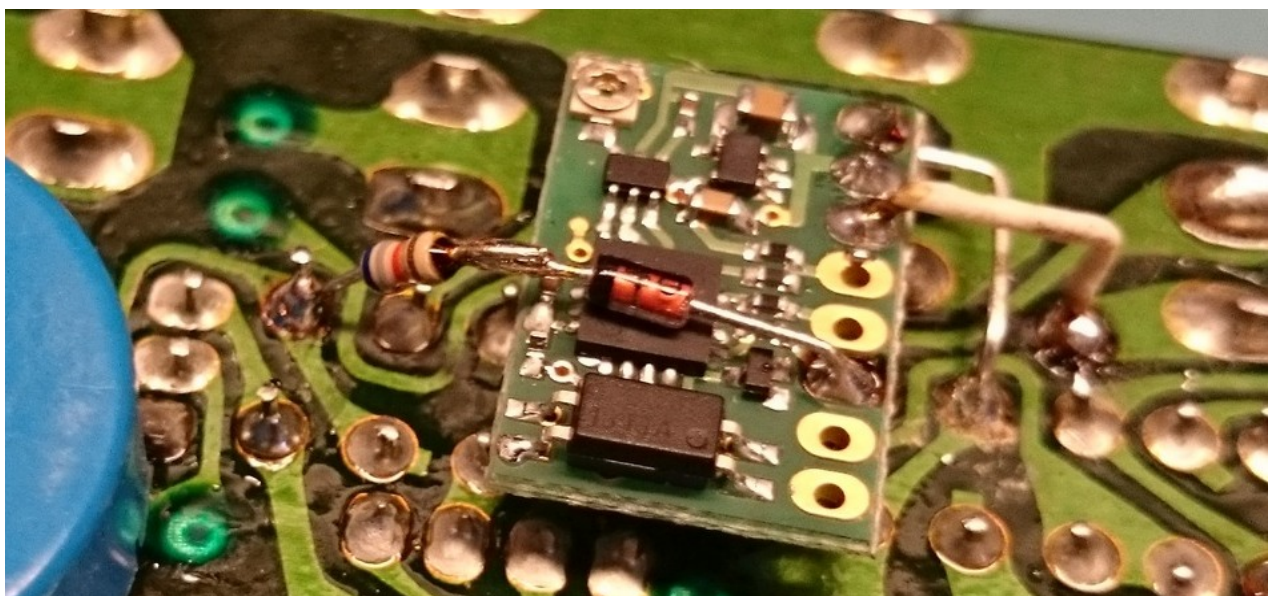
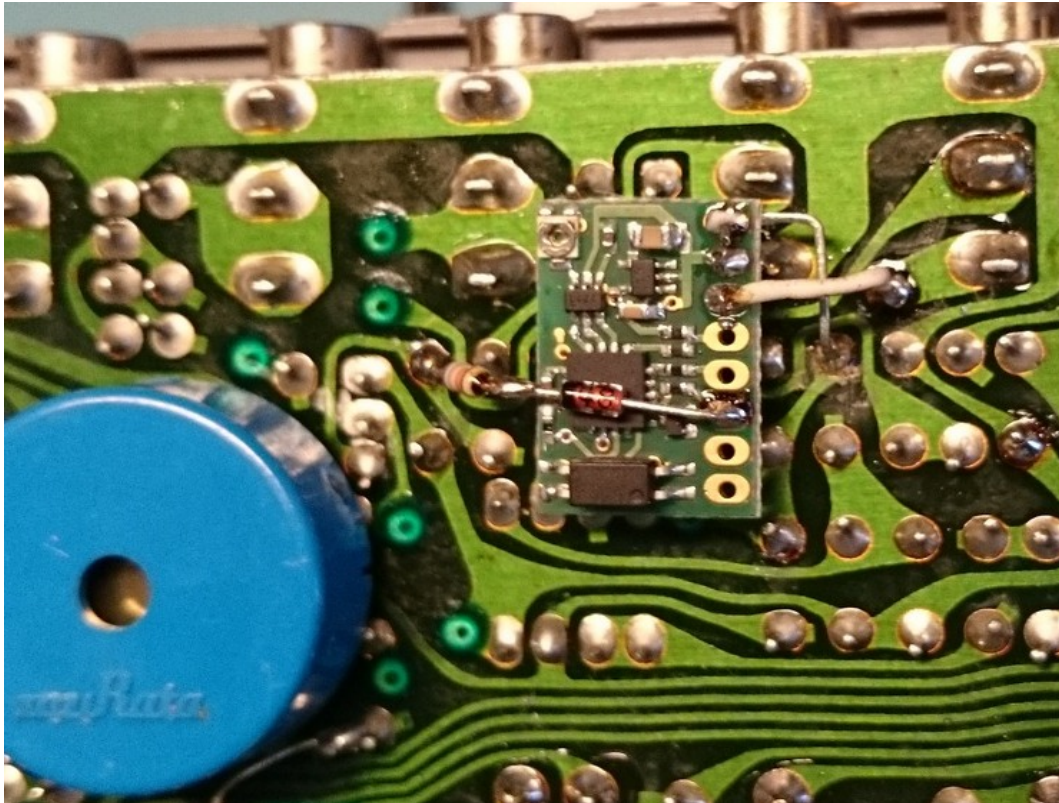
9 This is how it looks when the work is done.



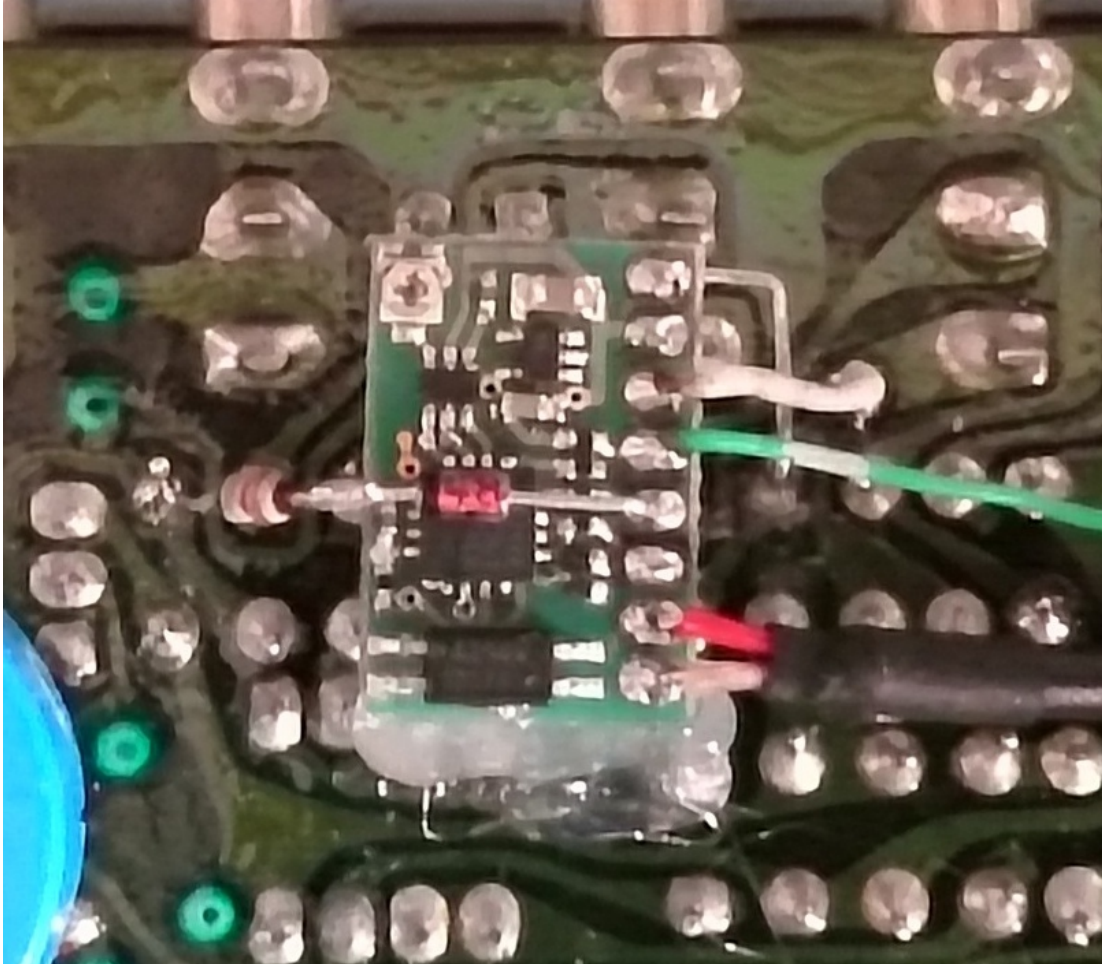
10 Alternative installation using the standard CV input.

There is about 60ms period where CV is connected directly to VCO and then switched to internal DAC, but when MINICV is tuned properly, the jump is between inaudible and acceptable. The bonus is, you can enter notes to the sequence from MIDI keyboard, and actually see them in MC display.

Look out for the mistake in installation in the following 2 pictures, gate is connected at wrong MINICV pad 3 instead of pad 4. The pad next to the midi inputs should be left free.



Power and GND connections are made from cut LED leads, and this is stiff enough for mechanical stability. The only modification not shown in the picture is removed wire that lead to switch in the CV socket, so MIDI CV can go to that contact instead. MIDI cable goes to the socket on the side, the hole was already drilled by the owner. Gate signal goes via diode and 68k to the point shown in the picture. And I cut no traces at all.



Now close the MC202 and enjoy!!