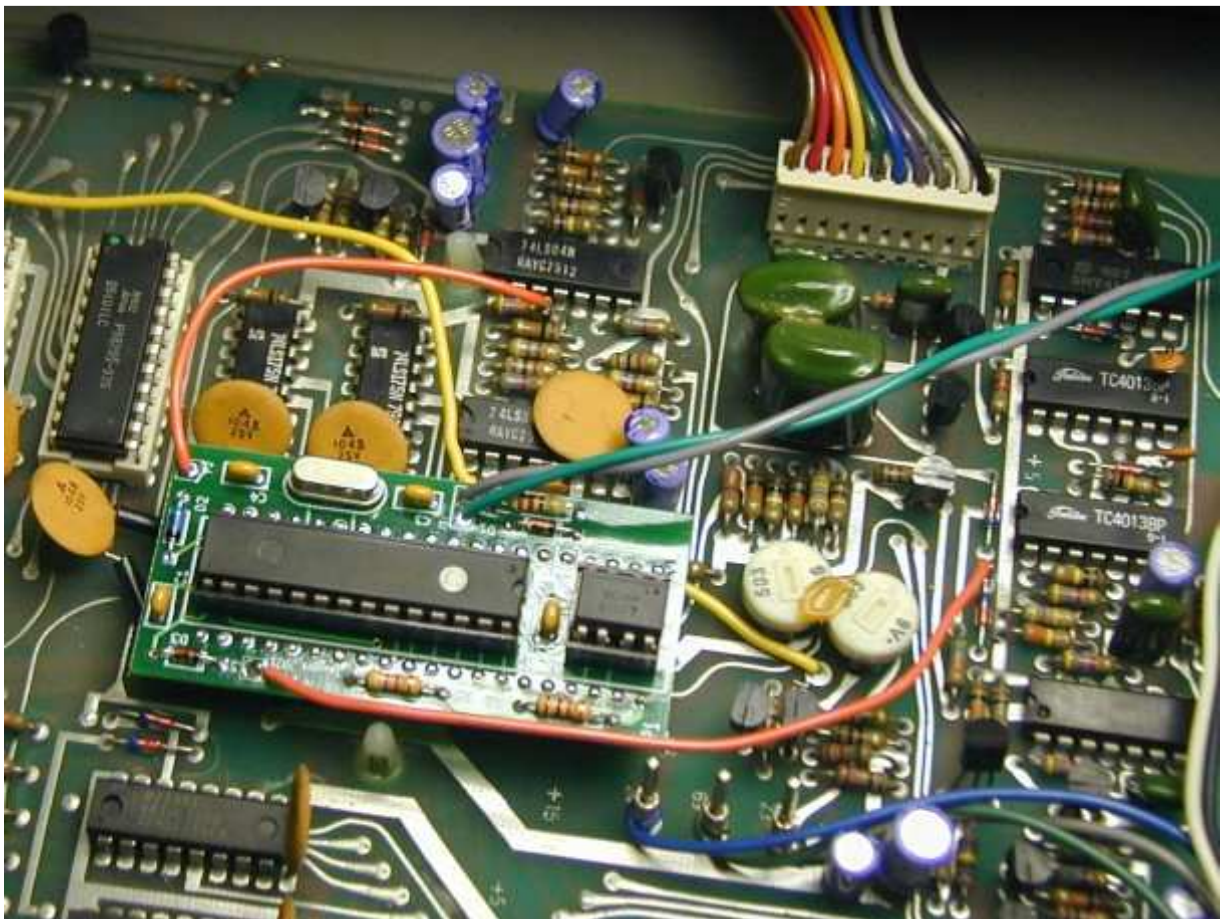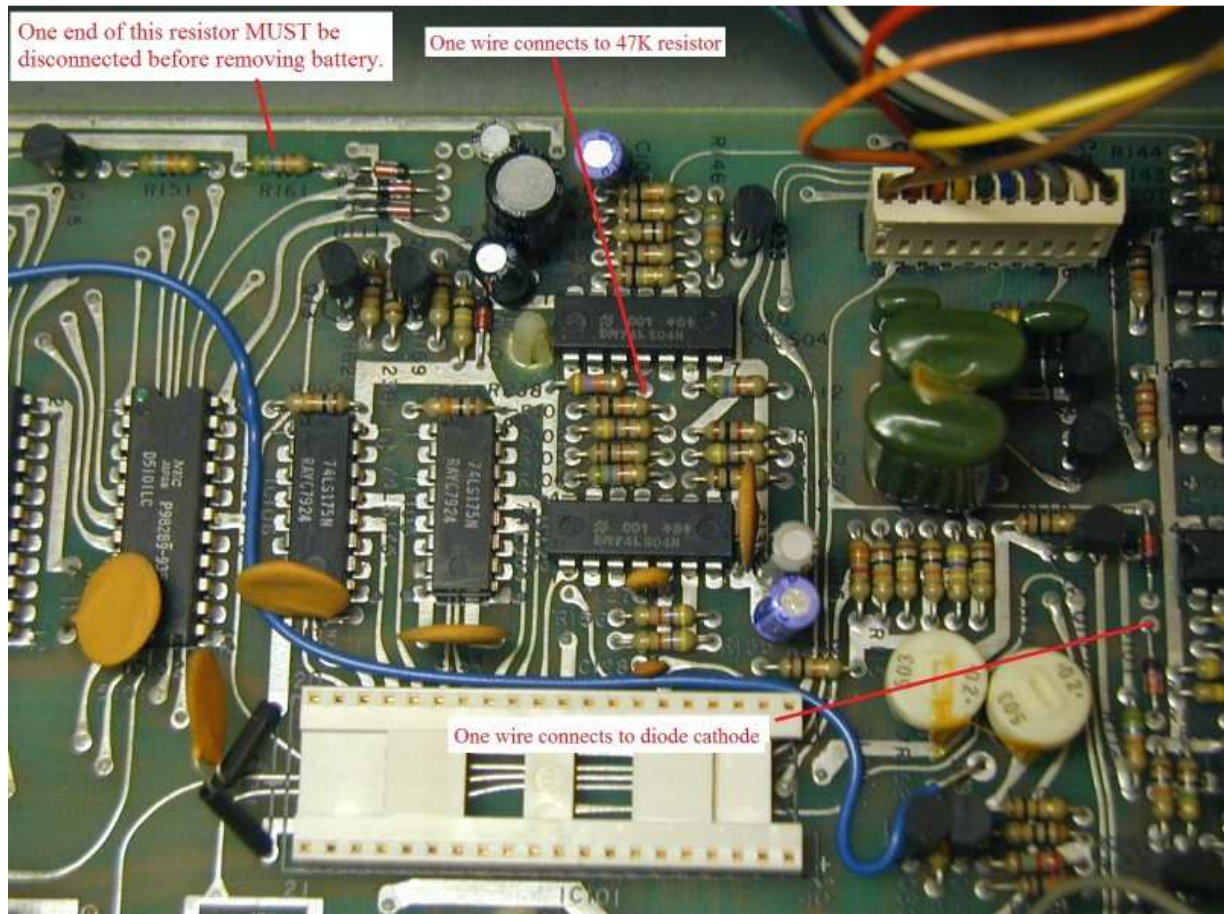Instructions for installing the CR-78 MCU replacement   R Grieb 11/03/2021

Remove the cover of the unit.   Prepare a place to store the original MCU safely.   This could be either some anti-static foam, or a static-resistant chip tube. If you don't have either of these, you can wrap a single layer of aluminum foil around a small piece of styrofoam.   The idea is to short all pins of the chip together when it is pressed into the foam, to prevent damage.   Now remove the MCU by prying up a little bit at a time on each end of the chip.   A small flat-blade screwdriver works well for this. Make sure you are prying between the socket and the chip, and not between the pc board and the socket. Try to lift the chip straight up. If you lift one end a lot more than the other, you will bend some of the pins.   Once the chip is free, place it on the foam or in the tube in case you want to put it back someday. When you grab the chip, hold it by the ends, so that you are not touching any of the pins.

Carefully plug the MCU replacement board into the socket, making sure that it's facing as shown in the photo below, and all of the pins are lined up correctly before you push it down. Note that you may need to lean the disc capacitor at the end over a little.

With a small pair of pliers, bend the free ends of the two wires into a U-shaped loop. The wire connected to P2 connects to one end of a 47K resistor, as shown in the photo. Solder it in place. The other wire connects to one end of a diode.   Make sure the wire ends do not touch any other components. Here is another photo showing the connection points:

One end of this resistor MUST be disconnected before removing battery.

One wire connects to 47K resistor

One wire connects to diode cathode

You will need to cut a hole in the back panel to install the MIDI jack permanently.   Here is a photo showing one place for it: