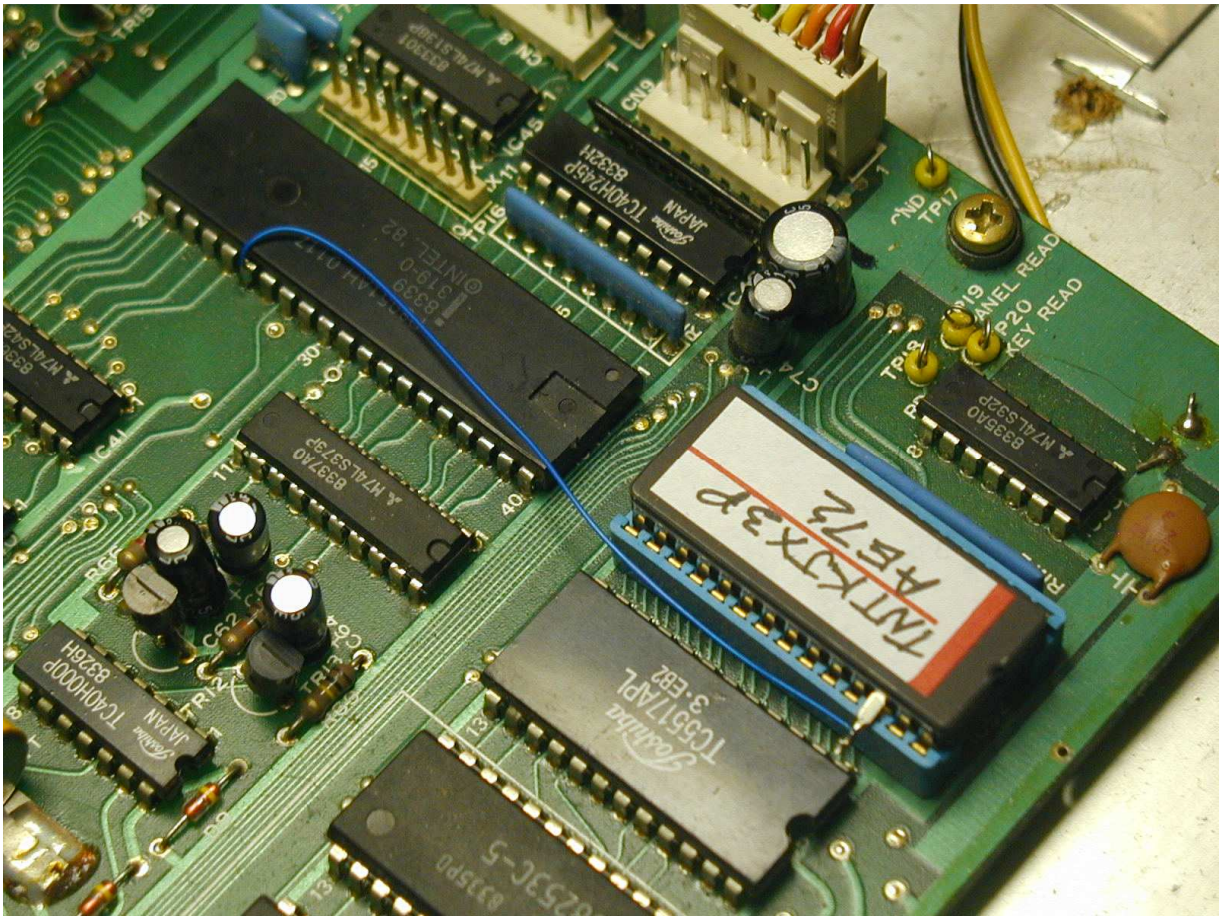
Installation instructions for Tauntek JX-3P Firmware R Grieb 4/03/21

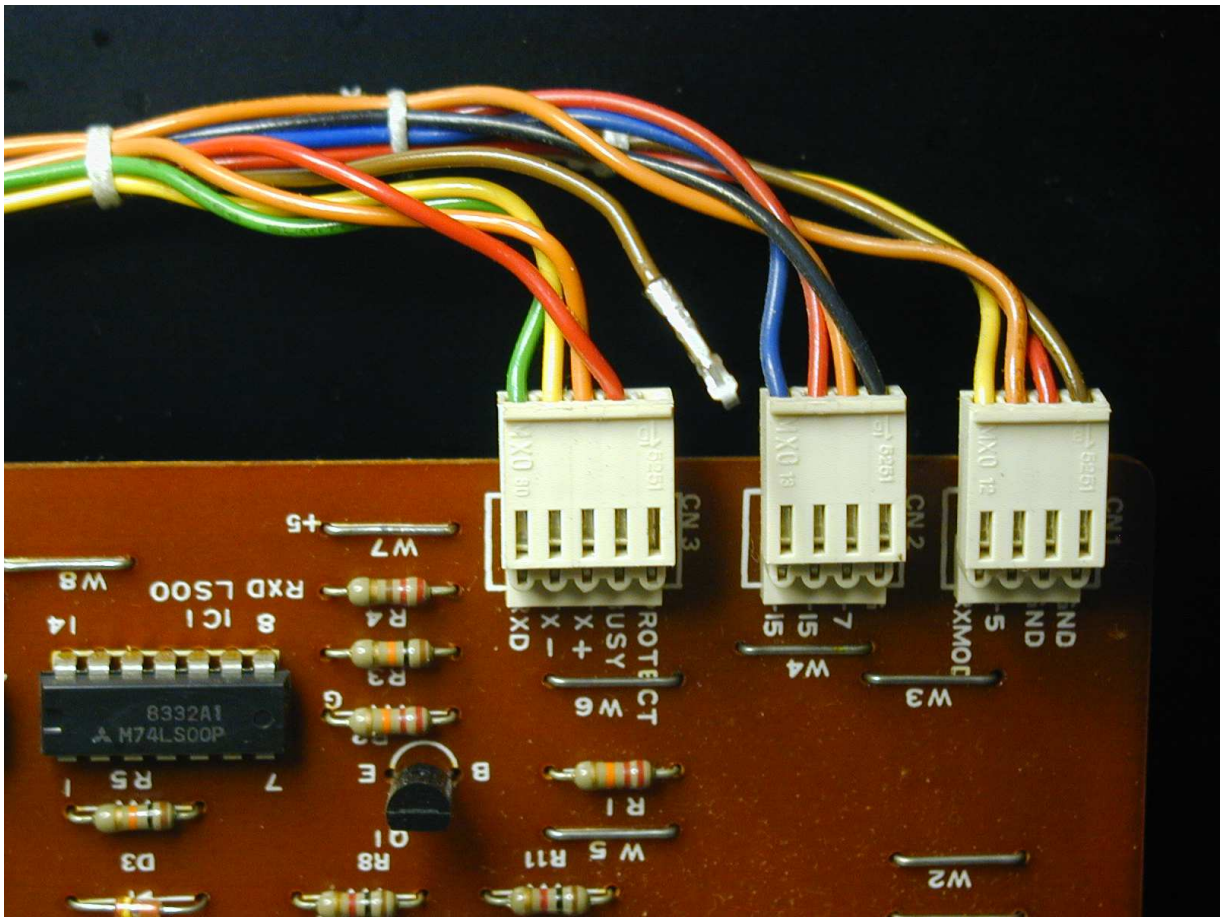
The original firmware for the JX-3P was stored in either a 2764 EPROM or an equivalent Masked ROM. The new firmware requires more space, so it must be installed in a 27128 or 27256 EPROM. To use these larger chips, a wire must be added to connect an additional address line from the 8051 MCU chip to the EPROM. This address line happens to connect to pin 26 on both chips. This pin on the MCU is not connected to anything else, so the wire can simply be soldered onto the pin on the top side of the board. (I don't normally suggest doing this, but it's certainly easier than taking the board out to solder it underneath) Put a little bit of solder on the pin first, and also on the bare end of the wire, then place the wire against the pin and solder it quickly, being careful not to short pin 26 to one next to it. Pin 26 on the EPROM socket is connected to +5 volts, so this pin on the EPROM cannot be inserted into the socket. Instead, it should be (carefully) bent up so that it does not connect to the socket, and the wire soldered to it. Solid-core wire is much better for this type of jumper than stranded wire, as the end can be bent into a hook or L shape easily. Here is a photo showing the EPROM pin 26 connected with AWG 30 "wire-wrap" wire:



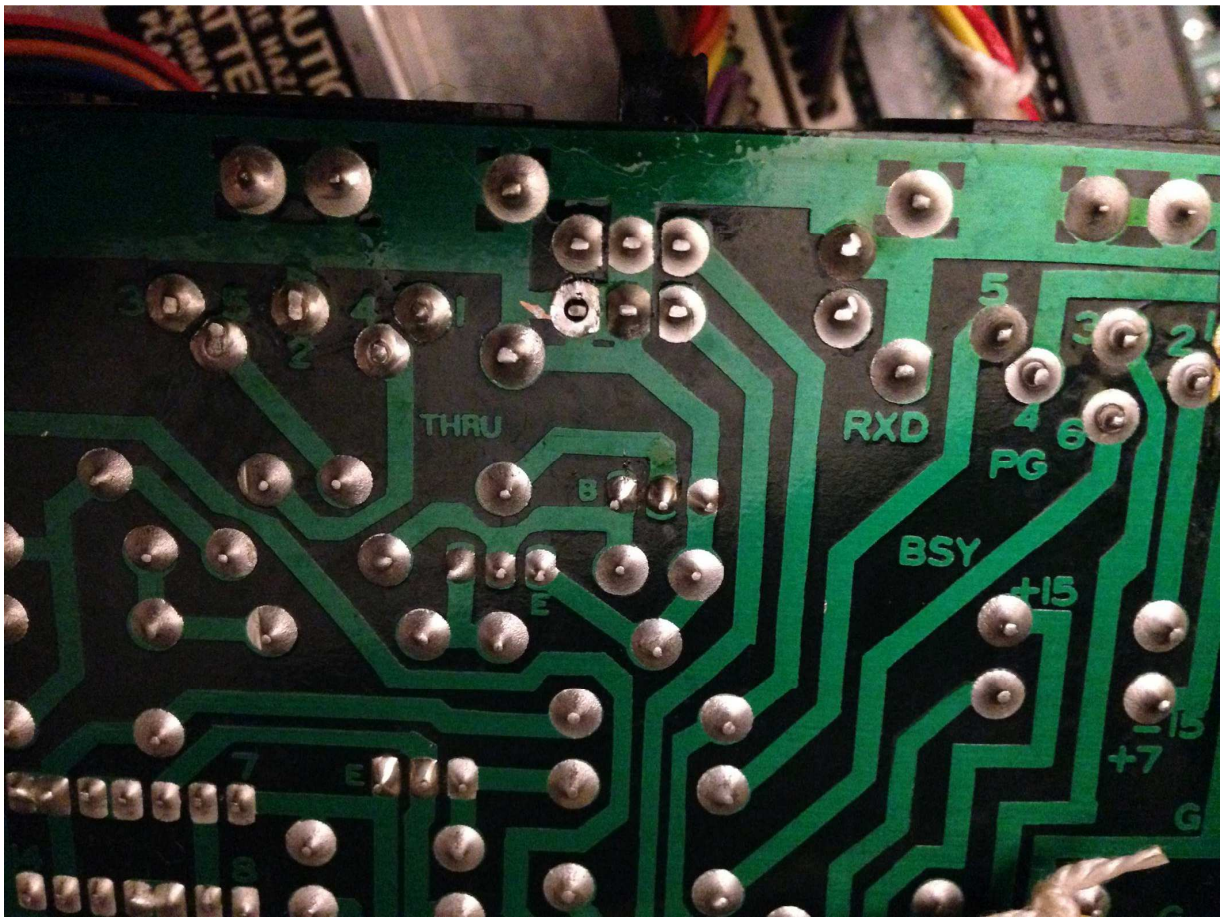
Roland designed the JX-3P to use the PG-200 for patch editing. As a result, memory is protected with the Protect switch in the MIDI position, as well as in the Protect position. The new firmware needs to be able to write to this memory with the switch in the MIDI position. There are three ways this can be accomplished:

1) The easiest way to unprotect memory in the MIDI position is to simply cut the Protect wire about 1" from connector CN3 on the jacks board. Leaving 1" of wire will make it easy to re-connect the two ends later if desired. With this wire cut, memory will be unprotected in all three positions of the switch.

2) Another way to accomplish this same mod is to remove the Protect wire from the plastic connector housing. First unplug the cable from CN3 on the jacks board. On one side of the connector you can see a small opening for each contact, with an aluminum-colored piece of metal in each one. To remove the wire and contact, you need to push down on the end of this bit of metal that is closer to the wire, and pull on the wire after it is pressed down. Don't pull on the wire until you have pressed down on the metal bar. Here is a photo of that connector with the Protect wire removed:



3) The above two methods leave memory unprotected in all three switch positions. It is also possible to modify the jacks board so that MIDI will be unprotected, but in the Protect position memory will be protected. To accomplish this, one pin of the Protect switch must be isolated from the circuit board trace. Here is a photo showing how this looks on the later version of the jacks pcb:



One possible problem with this approach is that the switch pin may move a little as the switch setting is changed, so even though it appears to be isolated, it could possibly re-connect by accident, causing mysterious problems.