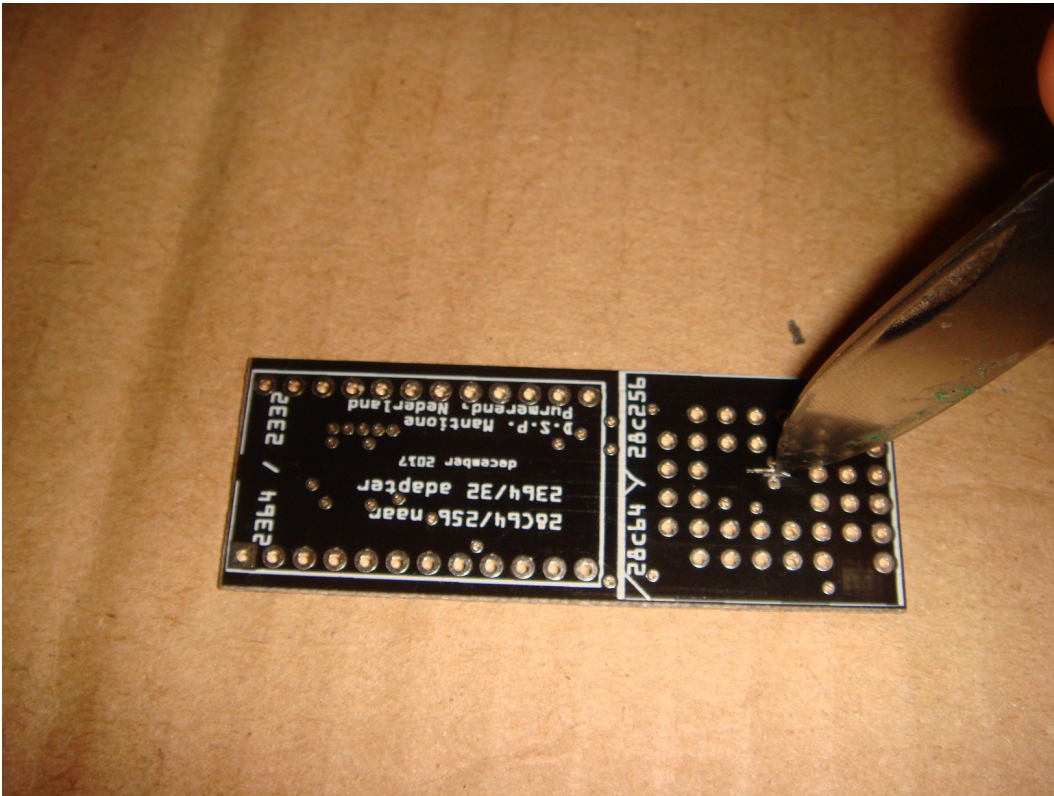


# 2364/2332 dual chip select modification

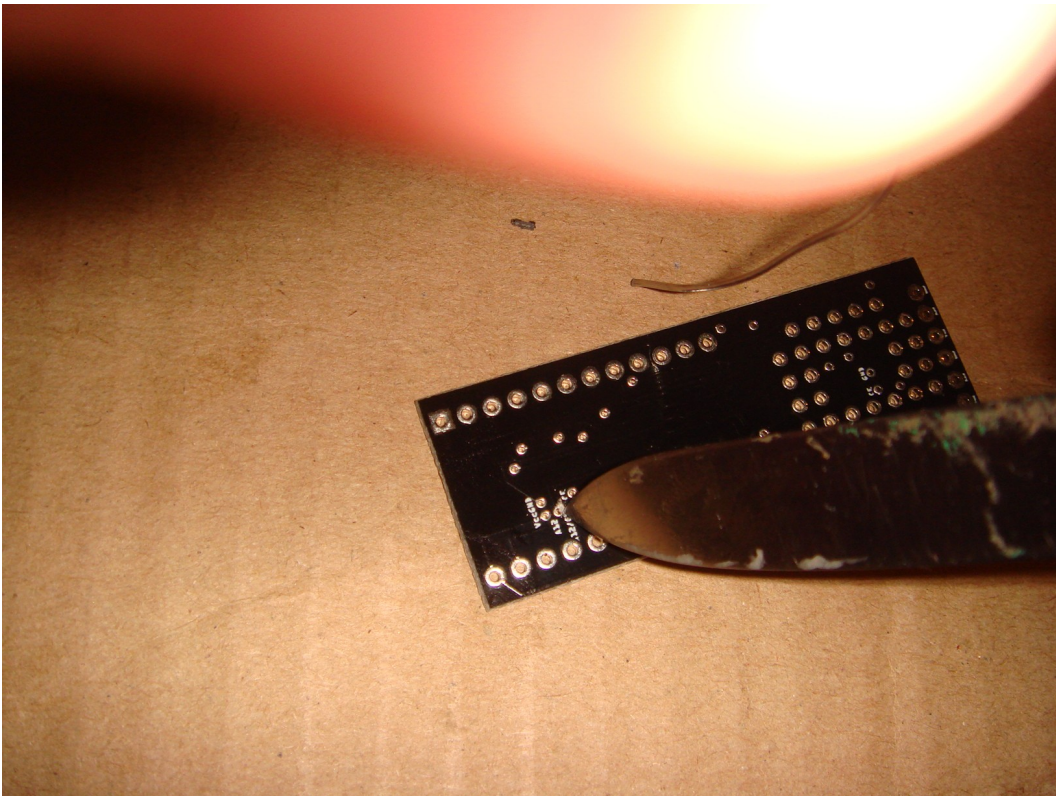
## for VIC-20 character ROM

The VIC-20 uses a 2332 ROM as its character ROM and uses both chip select lines. Therefore we have to modify the adapter.

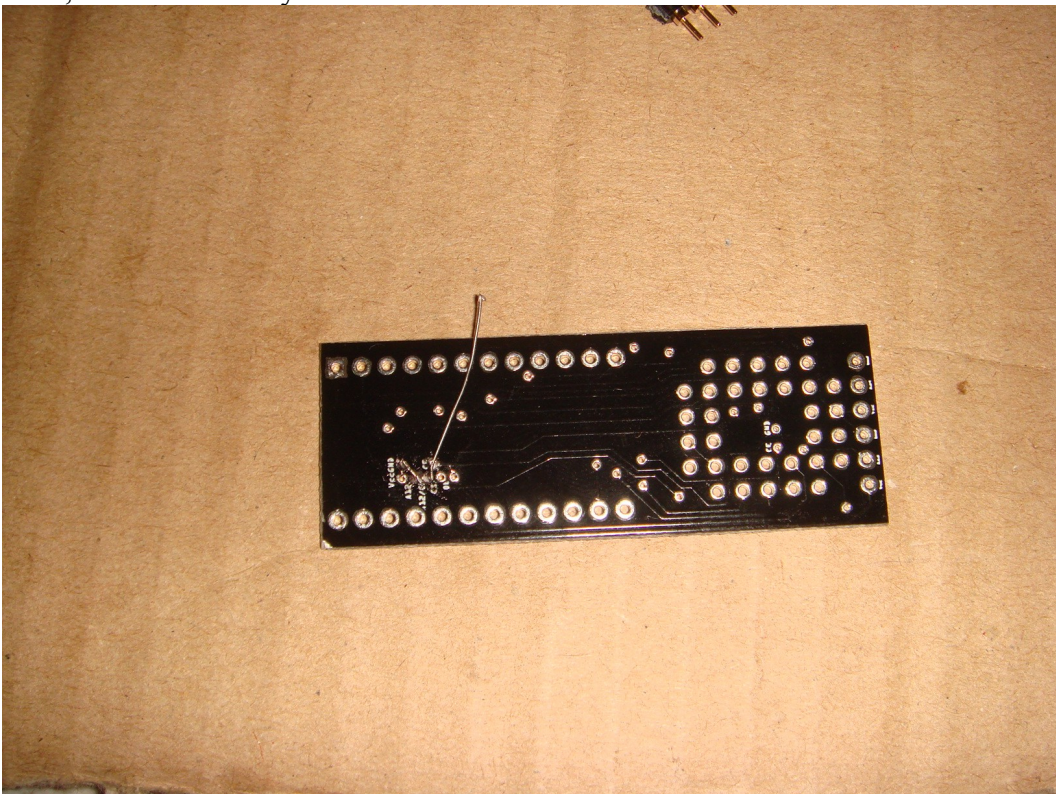
The first step is to disconnect CE from GND. This connection is on the top of the PCB between two vias. Cut the trace with a knife and test with a multimeter that the connection is broken:



The next step is to disconnect A12 from CS2. Cut between the via that is marked “A12/CS2” and the one marked “A12”. Please note that there is a trace running from left to right not far below the line of vias, so please cut exactly between the vias and do not make a long cut. Confirm with a multimeter that the connection is broken:



Next step is to connect the via marked “A12” to the via marked “GND” and the via marked “A12/CS2” to “CE”. My method was to solder the leg of a resistor to the vias, and when this is done, cut the rest away:



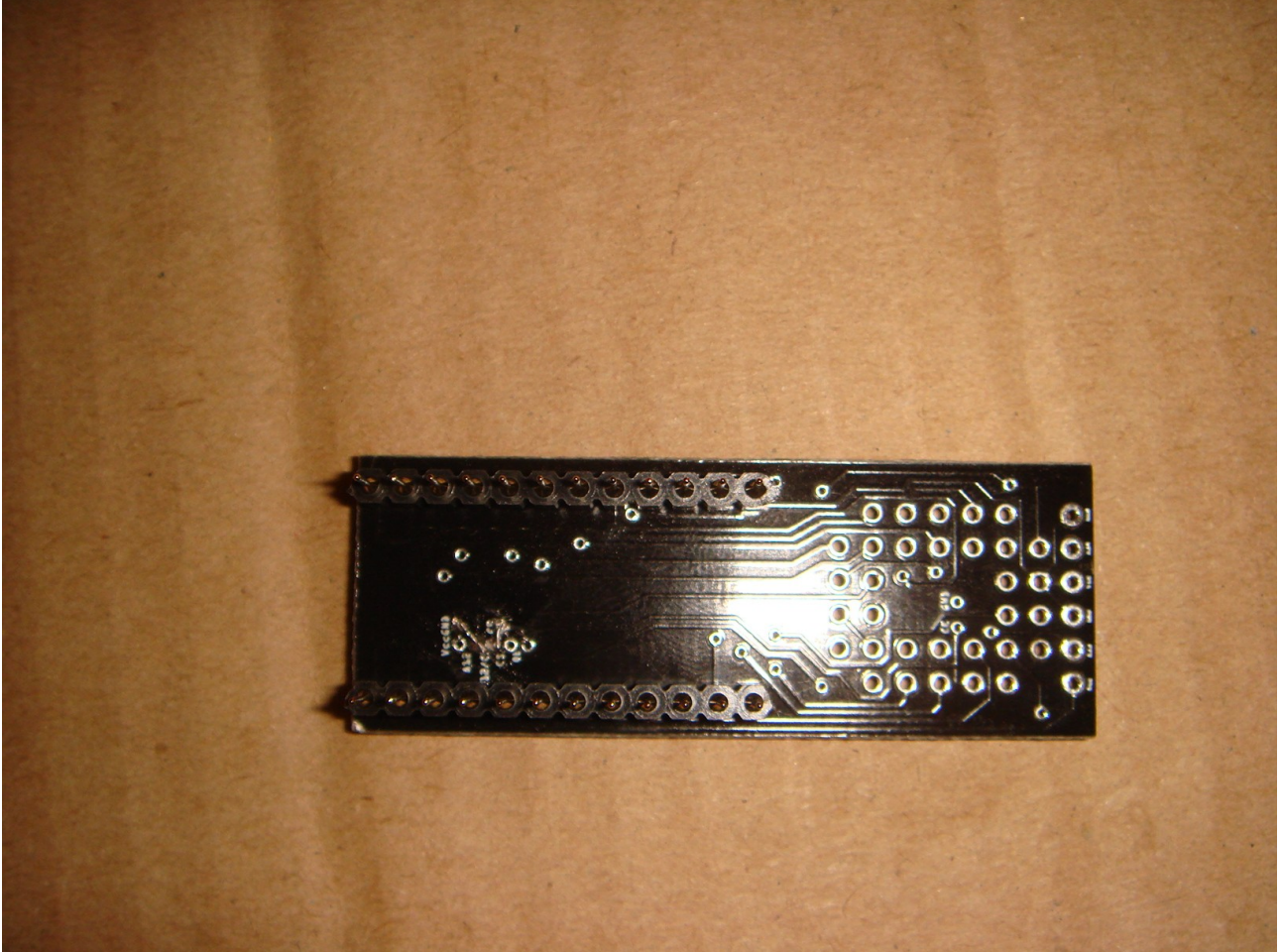
Please be careful not to reconnect both vias again! Also, avoid connecting vias that you don't need to touch. I initially made an error here myself, I had made a connection between Vcc and GND, creating a nice short circuit. After making the modification, please test the connections carefully



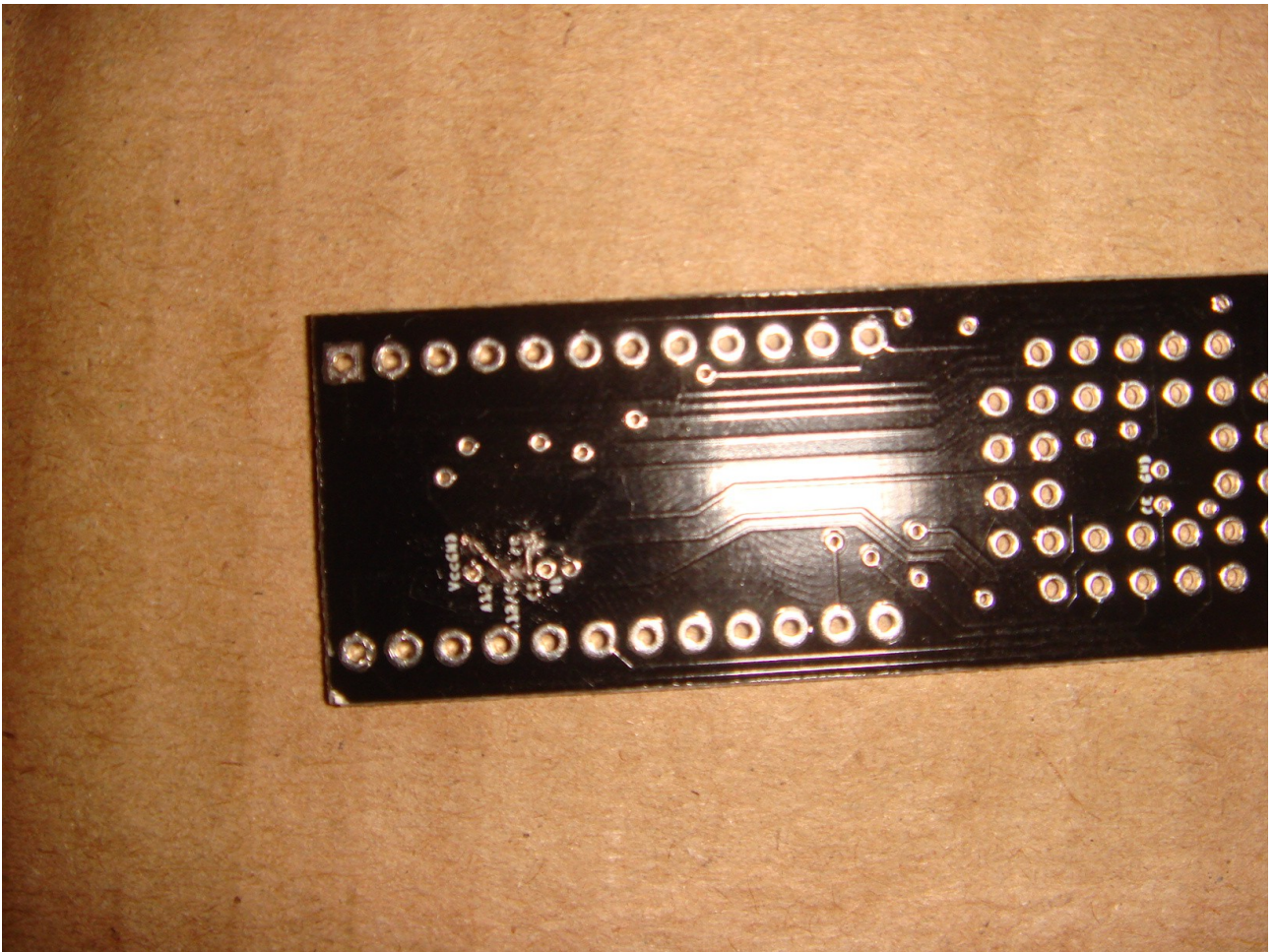
with a multimeter so you are sure that you have connected the vias you want connected and not the ones that don't need connected.

A good alternative to the resistor leg method is to take a single vein of a wire, and stick the vein through the via holes. This guides the soldering tin.

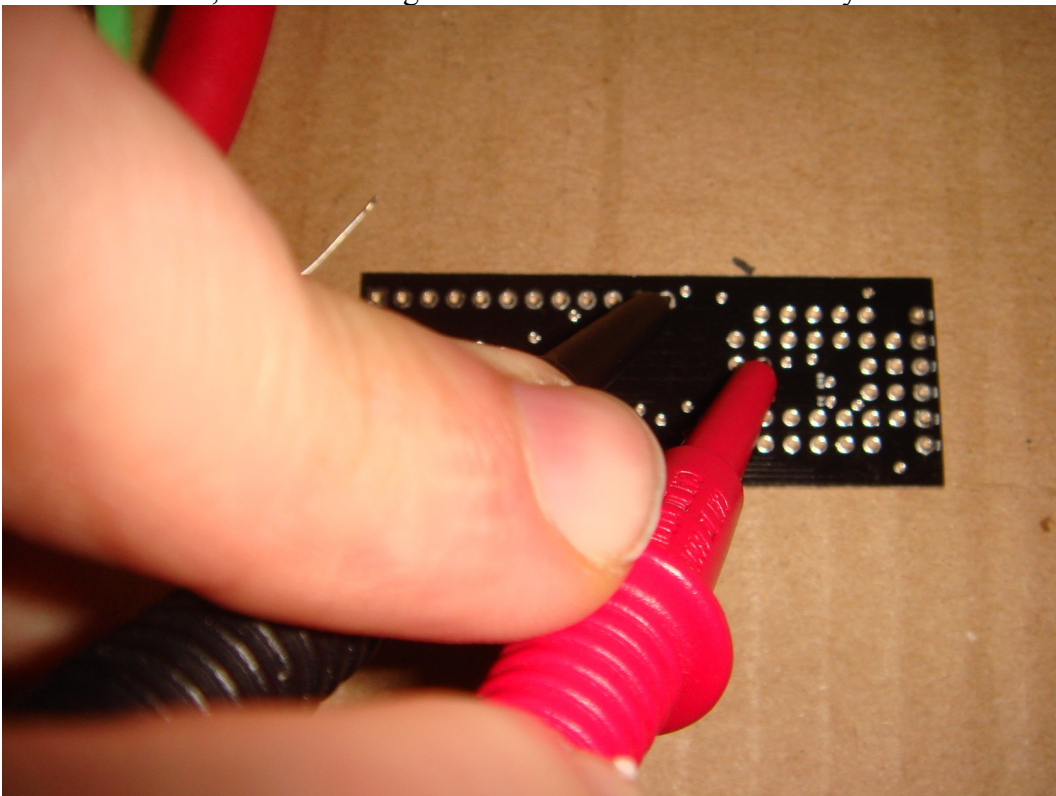
My PCB did look as follows after modification:





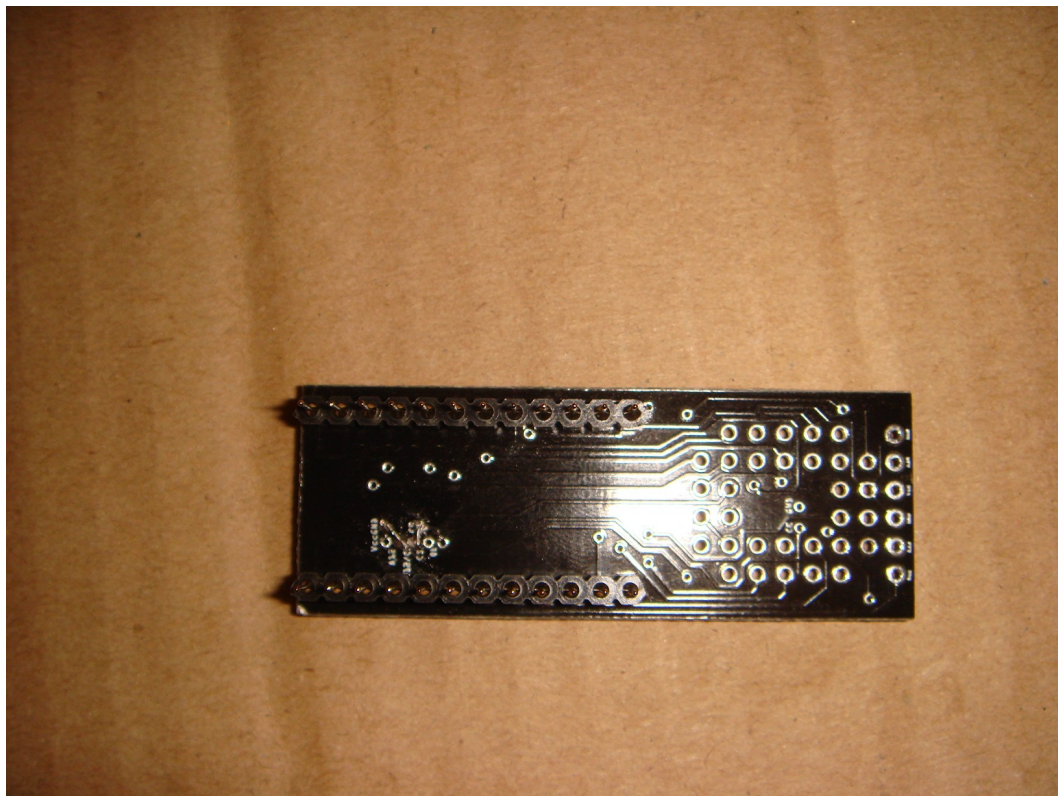


Multimeter tests, I was checking wether A12 and GND were really connected here:

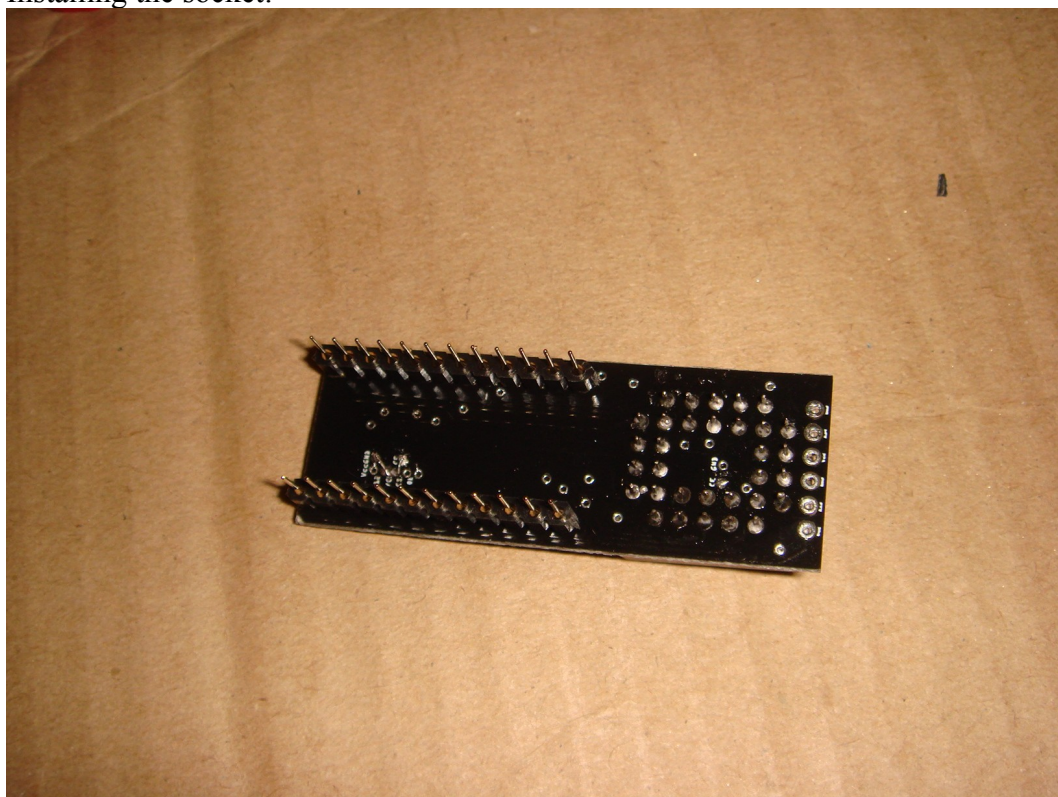




Installing the legs:

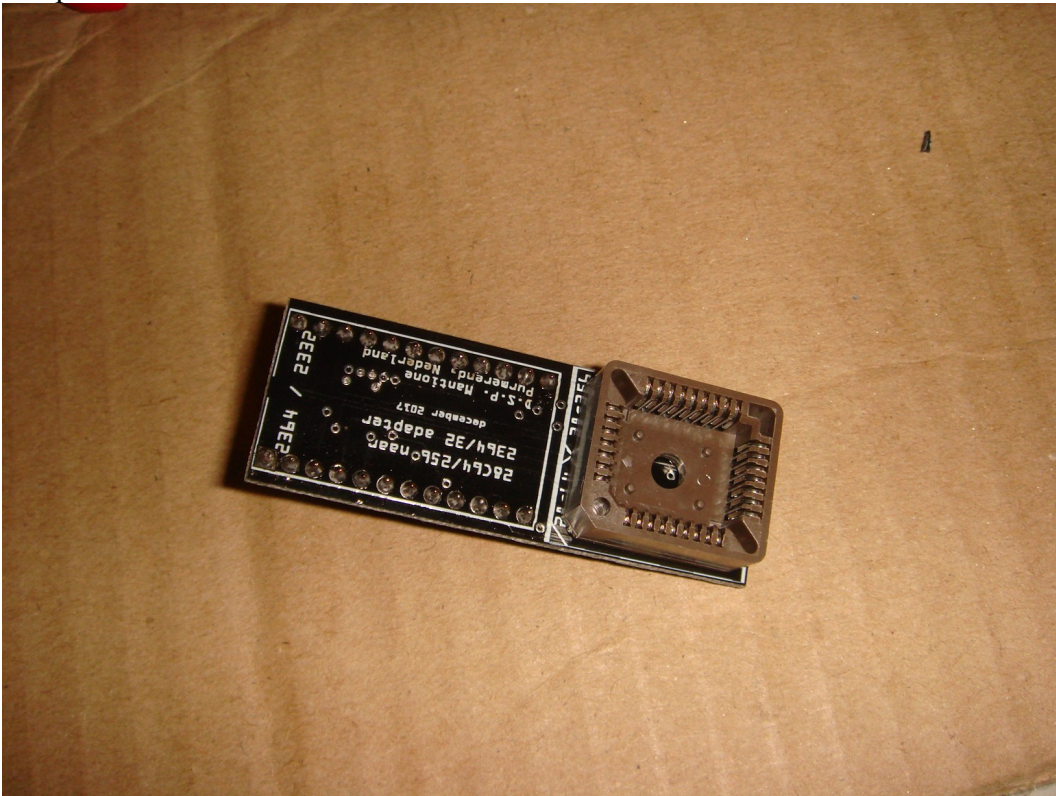


Installing the socket:

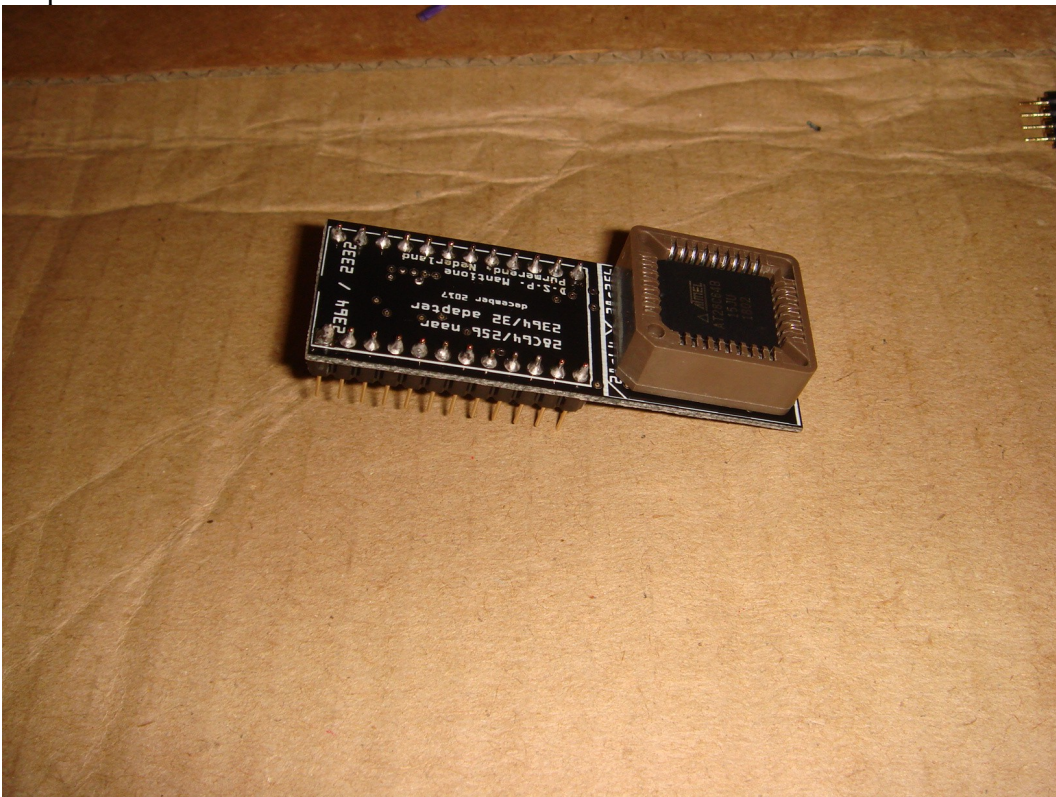




Adapter finished:



I burned the EEPROM with 2 \* the character ROM image concatenated and installed it into the adapter:





Time to install it into the VIC-20:



And... success!

