EENT building instructions

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roland

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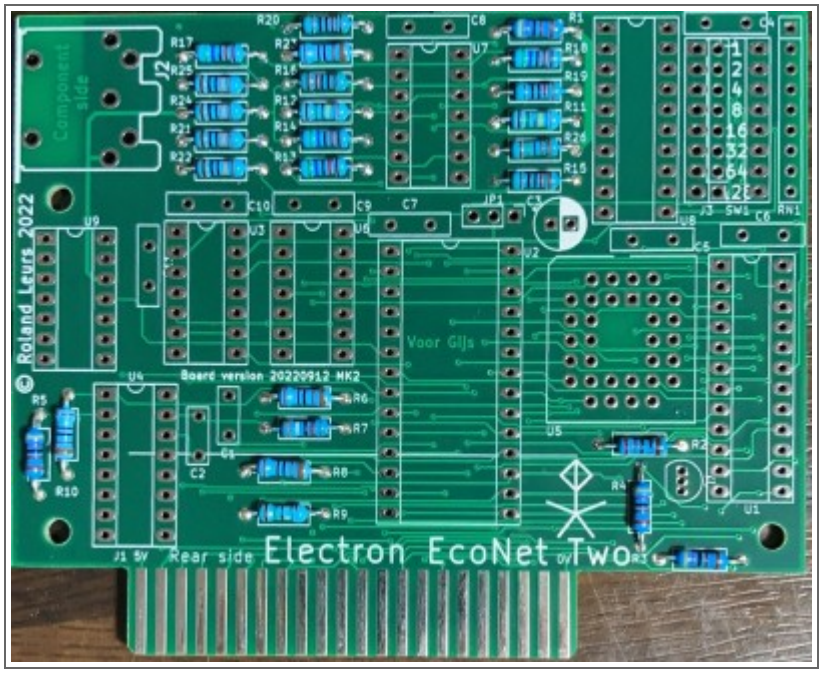
Thu Dec 29, 2022 9:51 pm

I start this new topic for easily finding the building instructions for the EENT. It's quite streight-forward to build it when you order a kit or a bare PCB. In the attached PDF you'll see the part list.

Building the EENT is easy, even if you have only little soldering skills. It takes about 1 to 1.5 hour to build it, including folding the resistor pins.

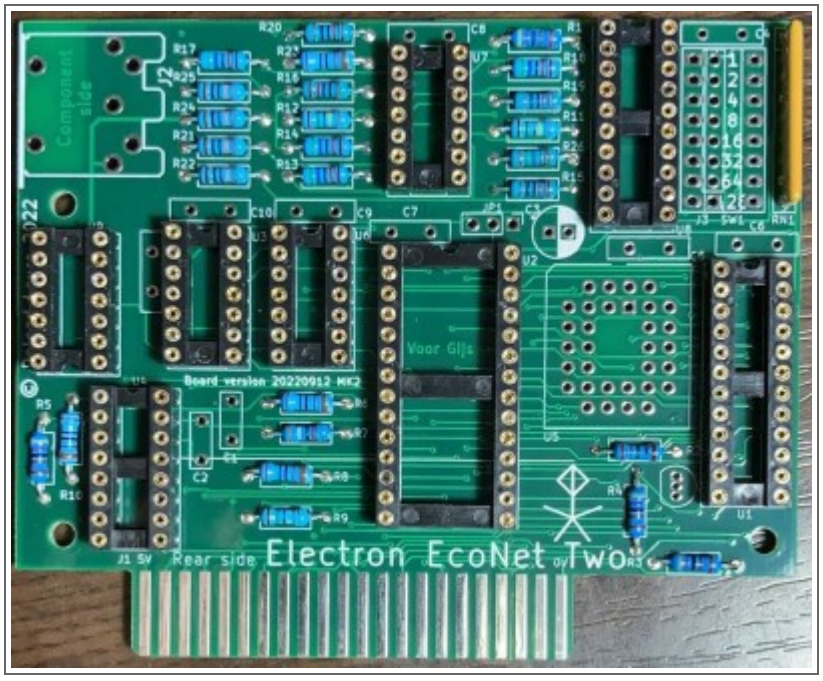
The word *eend* in Dutch means *duck*. We pronounce *eend* and *eent* the same, like: *ain't*. The name of the board is just a bit playing with Dutch language. A new born baby eend (duck) can stand on its legs just a few moments after being born. So does our EENT: only four resistors are needed to make it stand on its legs 😄

After folding all the resistors (they all have the same footprint) you mount them first on the board. I put them in place first and then I solder them.

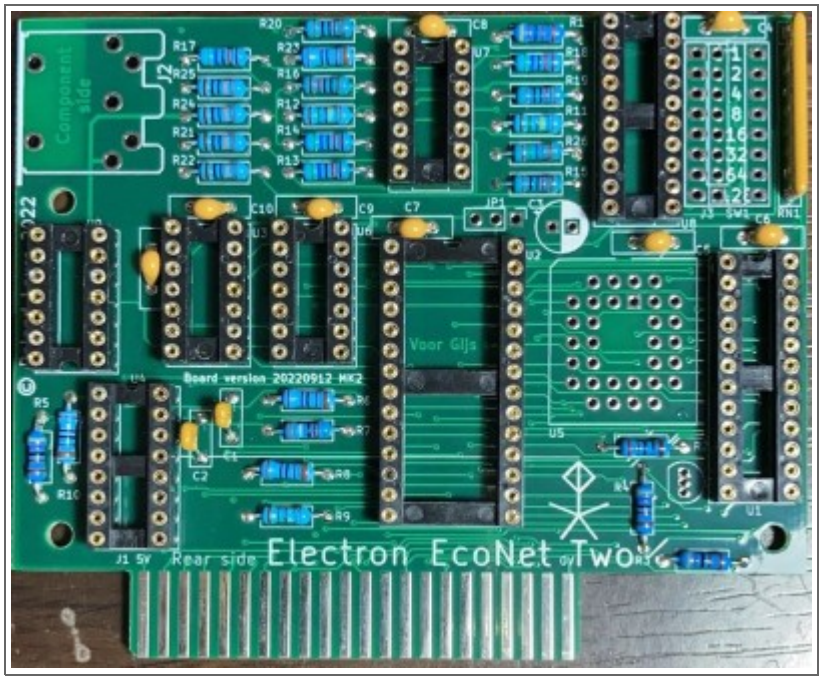


To keep them in place while turning the board around and during soldering I use some paper-based tape (like the one that painters use):

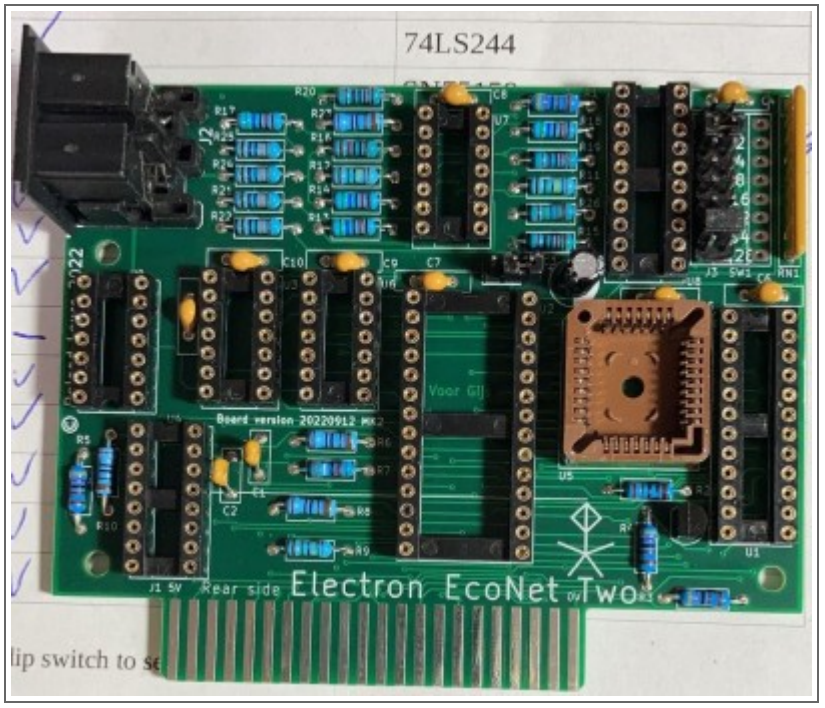
After the resistors are soldered and their legs cut off I do the same with the DIL sockets and the resistor network:



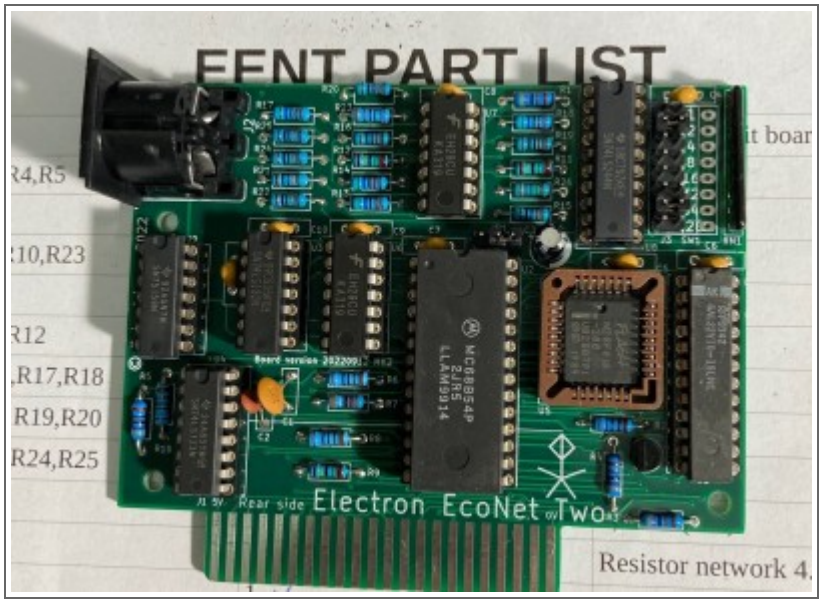
Capacitors add more colour to the board in the third step:



After soldering the last components like the PLCC32 (ROM) socket, DIN socket and the pin headers it's almost ready:



And in the last step you put the IC's in their sockets and you're ready for testing it.



Use JP1 to enable (default) the ROM13, which holds the NFS ROM, by placing the jumper over pins 1 and 2 (next to the electrolytic capacitor). In the other position ROM13 is disabled. Use J3 (or if you used an eight-way dip switch to select the station ID. It works the same way like selecting a station ID on the Beeb: open represents a '1' value, closed is a '0' value. So if you place jumpers over position 2 and 64 then you'll end up with 10111101 which is station ID 189.

If you ever want to re-flash the ROM you'll need a programmer. The board is not equipped for in-circuit updates. Only the lower 64K of the EEPROM is (partly) used:

&4000 - &7FFF: ROM BANK 13
&8000 - &BFFF: ROM BANK 1/3
&C000 - &FFFF: ROM BANK 0/2

Only ROM BANK 13 is programmed when you receive your board or kit. Feel free to program your own favourite ROMS in the remaining two lower banks. **Please remember that the current NFS ROM will not work when you program it into a lower bank!**

Good luck with building your duck

ATTACHMENTS