ESoCoP

Restoration of the notorious Keytronics keyboards

written by Sergio Gervasini for ESOCOP – The European Society for Computer Preservation
http://www.esocop.org

Table of Contents

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http://www.esocop.org/gnu/gnu-1.3-license.txt

References

Key Tronic wiki:
https://en.wikipedia.org/wiki/Key_Tronic

Introduction

On the old computers, especially in the 70s and 80s, Keytronics keyboards were often used, the reason was mostly about they did not have electrical contacts but were based on a capacitive effect and were therefore considered "eternal".

For many years it worked this way, but for us who repair old computers, the definition of "eternal" it's quite funny, since these keyboard often do not work anymore.

The problem it's quite easy to understand: over the years, the sponge under each key pulverizes and therefore no longer allows the approach of the "thin plastic" that enable the capacitive effect to the card below, simply it does not work any more.

In order to rapair these keyboards, we just need to remove them completely and replace the sponges and the relative layer of mylar (that is the material of which is composed the "thin plastic").

Materials needed
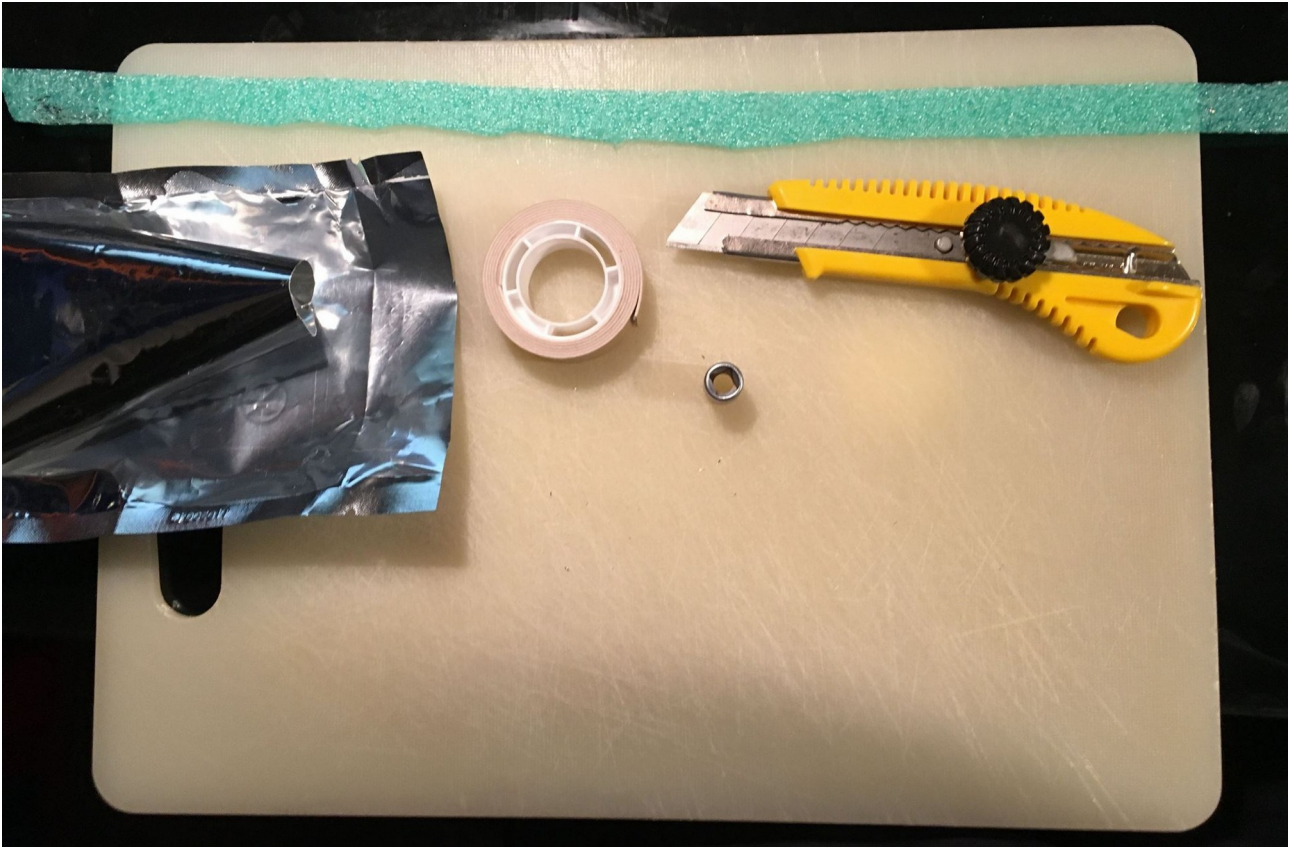
I did this work on a General Processor computer, which has been restored in a hurry to be exhibited to the Turin's "A bit of [hi]story 2018" event, and that I did not think I could repair in time.

Indeed, I didn't have enough time to find materials from any supplier, so I managed the restoration with some stuff I had available: a strip of green sponge less than 2mm thick, thick double-sided tape, an antistatic bag used for electronic components and some tools.

The peculiarity lies in the antistatic bag, not everyone knows that it is normally made of mylar and therefore it's good shaped for this type of operation. To be sure: just cut a small square of the antistatic bag and try it on the printed circuit of the keyboard when the computer is switched on (do not make shortcuts with the keyboard open!). By pressing it with a non-metallic object on one of the islands on the board it shall appear the relative character on the screen, if this happens you are ok.

How to do

The operation itself it's quite simple but almost tedious because it must be repeated for all the keys, in my case 77.
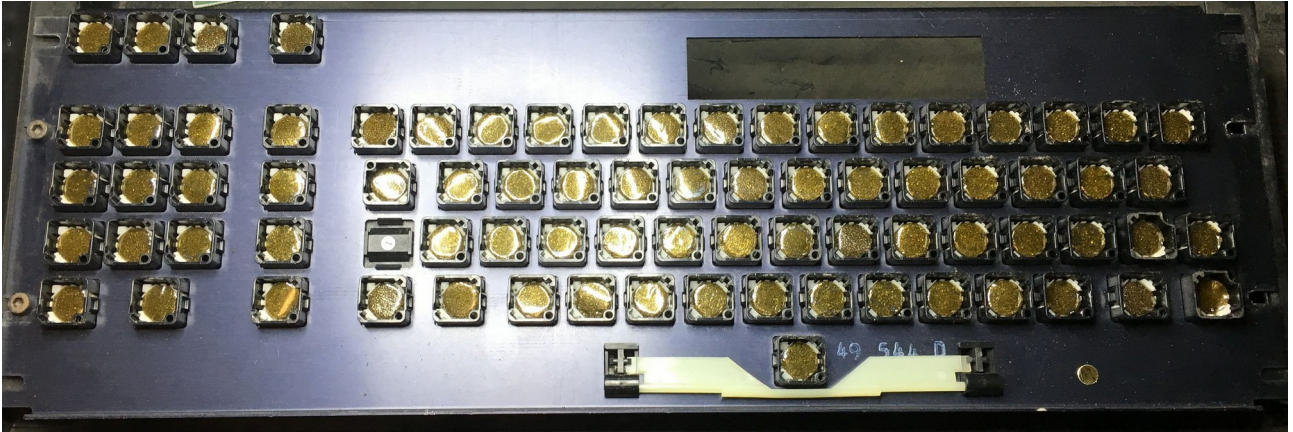

First of all, you have to clean the key from the residues of sponge in order to leave the transparent plastic disk inside the key clean enough to allow the double-sided adhesive tape to stick.
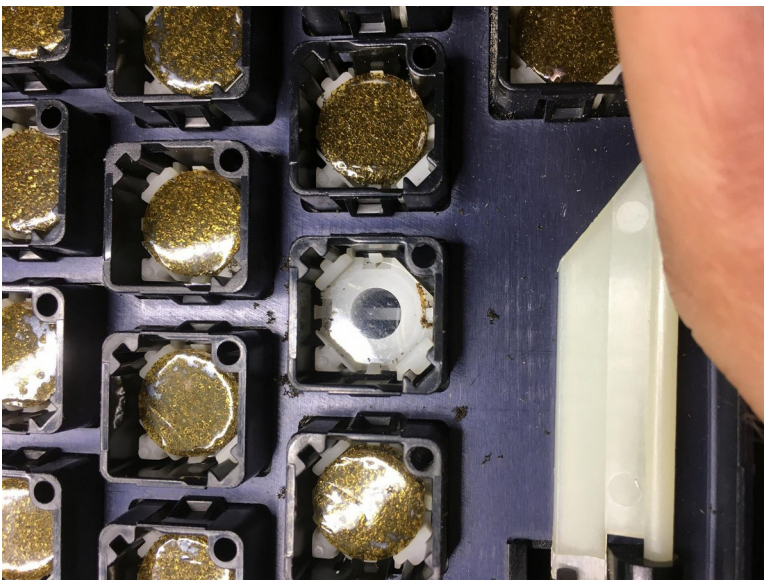
Then prepare a small square sandwich consisting of two layers of double-sided adhesive with the sponge in between; on one of the sides then glue the mylar.
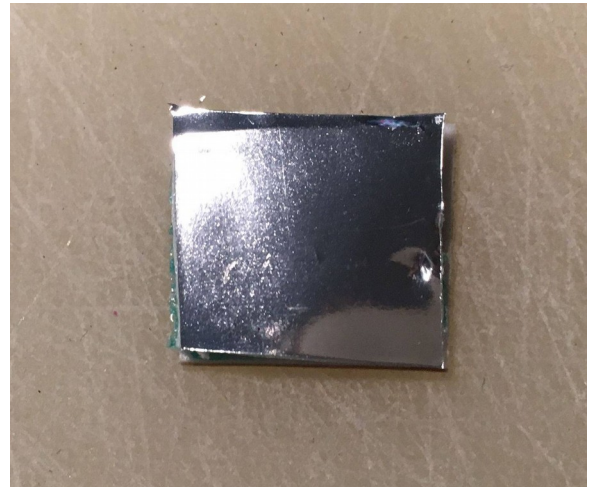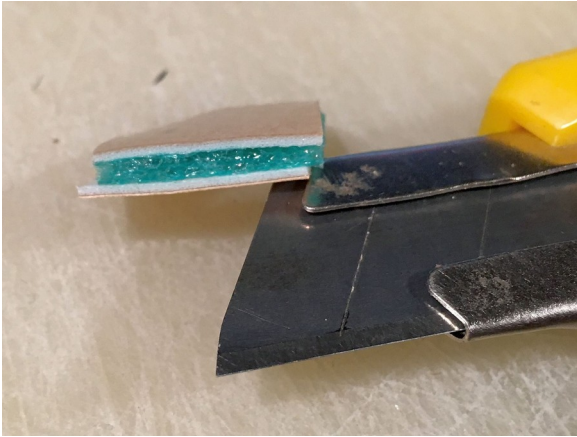
On the other side of the sandwich place a suitable diameter 10 / 11mm socket wrench, and then cut it all around with a cutte.
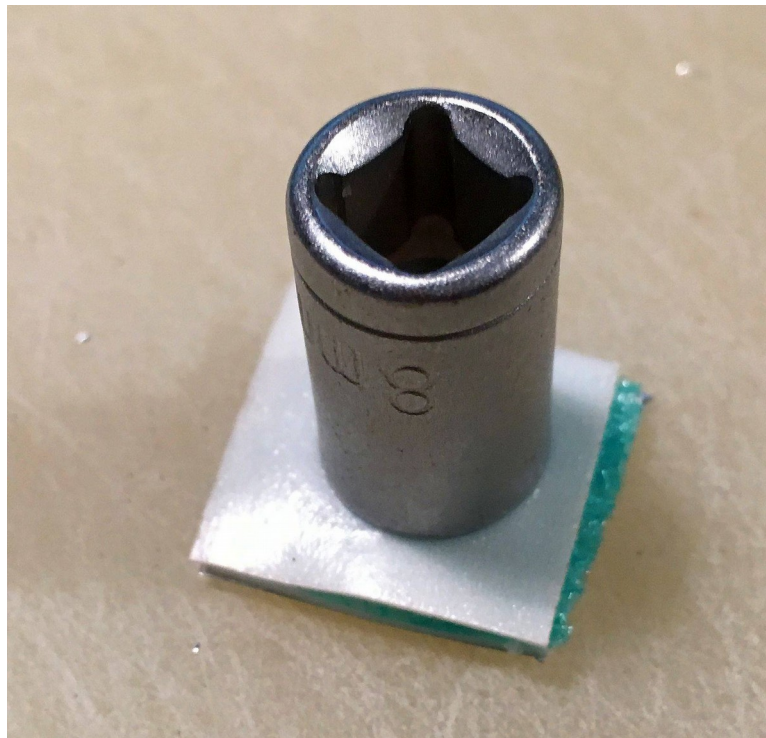
Once the socket wrench has been removed, it' enough to attach the rod to the key itself.

Perhaps, It's more easy to look at the pictures than to explain it!