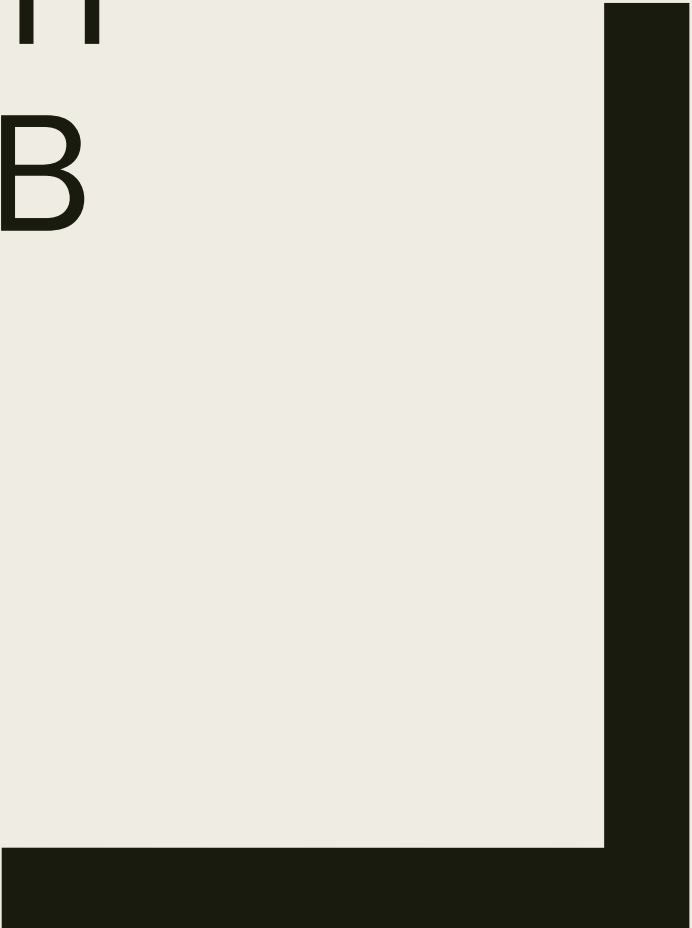




RESTORING MY BBC MODEL B MICRO

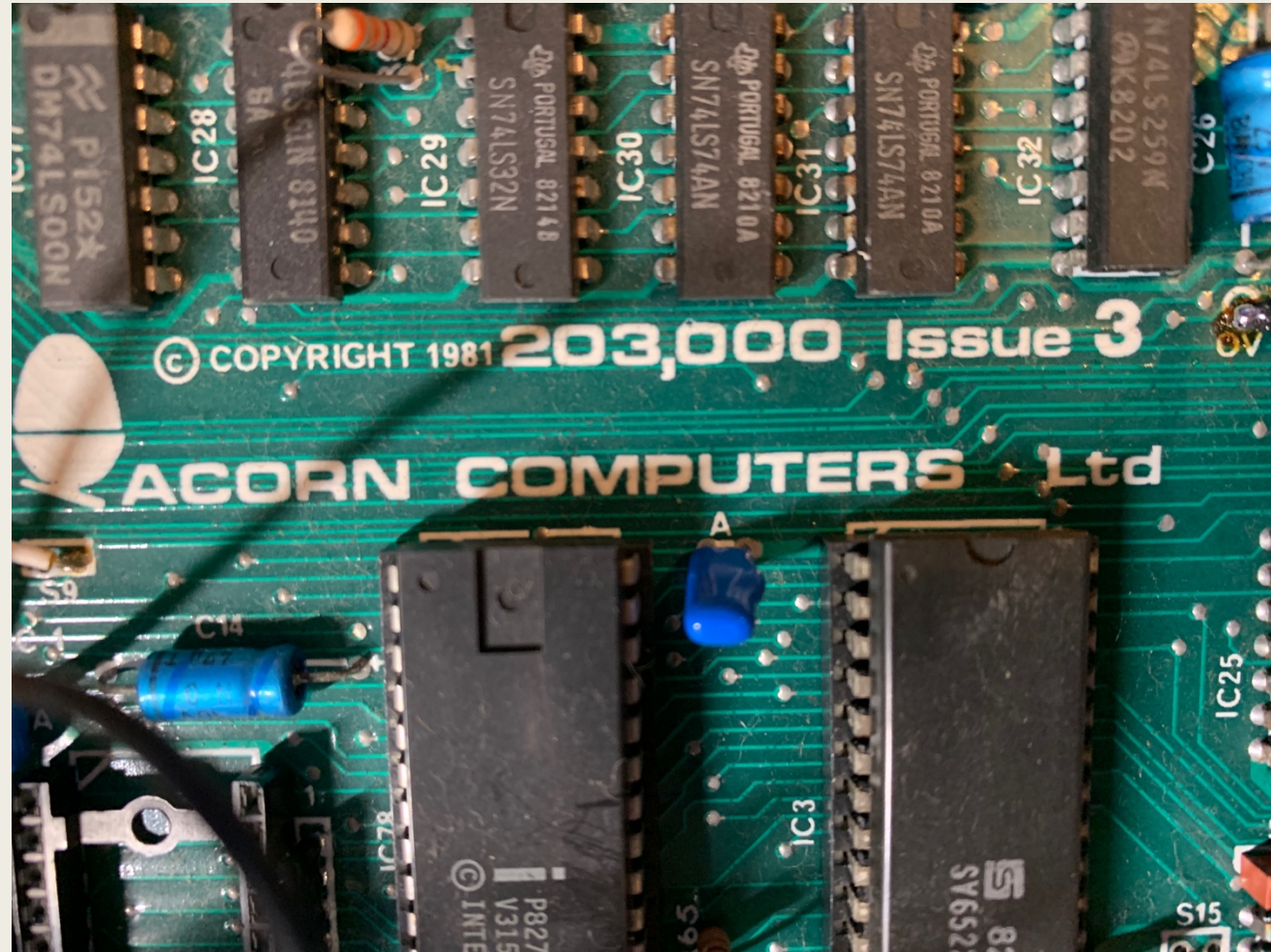
Ben Charlton
twitter.com/bencc



My BBC Model B

Released in 1981, I think mine was made in '82.

My BBC Model B



My BBC Model B

Released in 1981, I think mine was made in '82.

Issue 3 board, first significant production run. Issue 4 and 7 boards most common.

Given it in ~1990 (I was 9-ish)

Actively used until 1995. Big part of my childhood.

Stored in lofts and damp garages until early this year.

Last tested ~7 years ago when I collected it from my parents.

Accessories

- I've also got:
 - *Proper Microvitec CUB monitor*
 - *Dual 5¼ floppy drives*
 - *Joysticks*
 - *Lightpen*
 - *Beebcalc spreadsheet ROM*
 - *Wordwise word processor ROM*
 - *Books!*

Specifications

- 32 Kb RAM
- 2 MHz 6502 processor

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- 640×256, 16 colour (but not at the same time!) graphics
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- The BEST '80s home computer keyboard.
- Notorious for power supply failures after ~30 years!

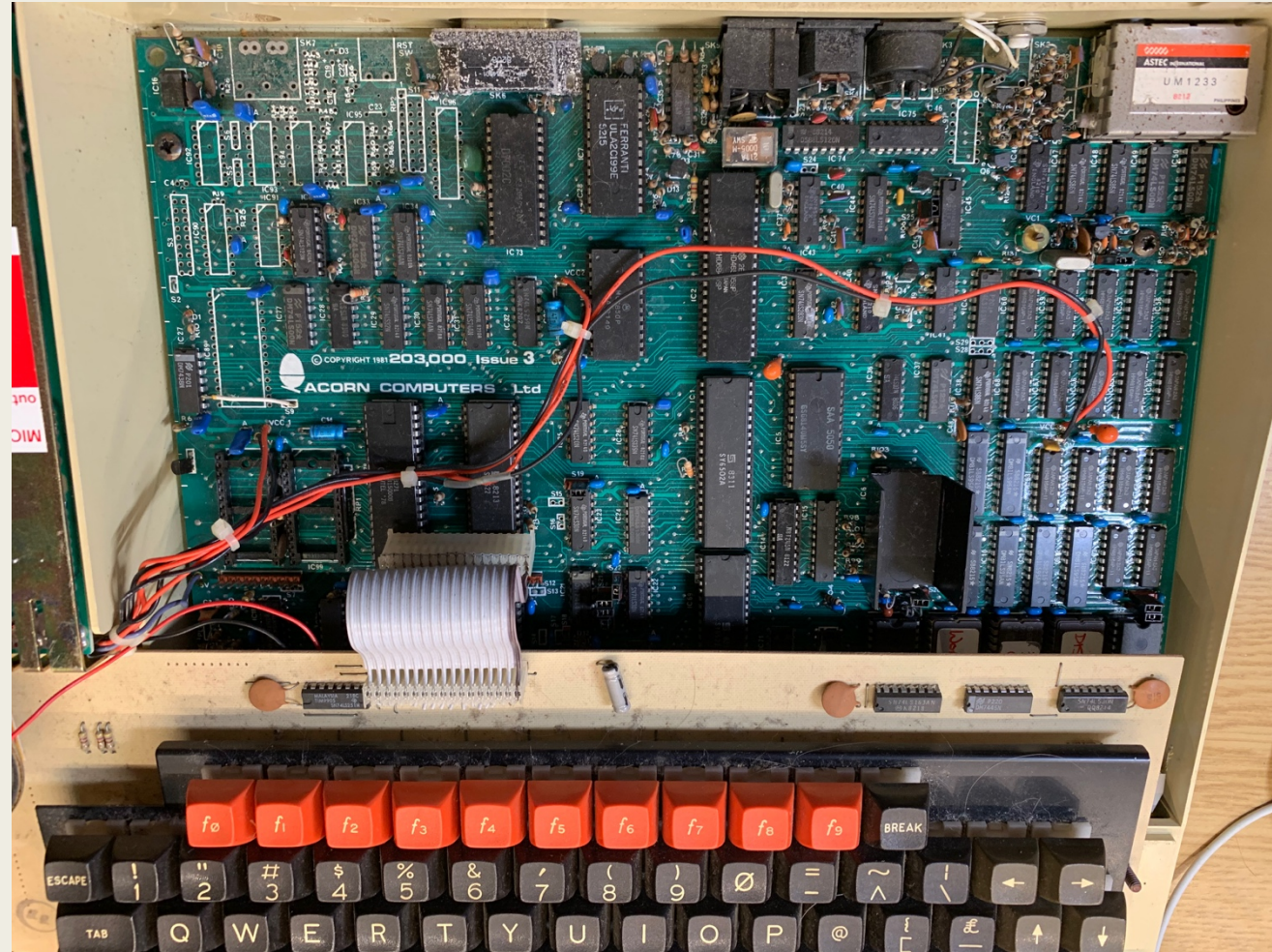
Power Supply Fix



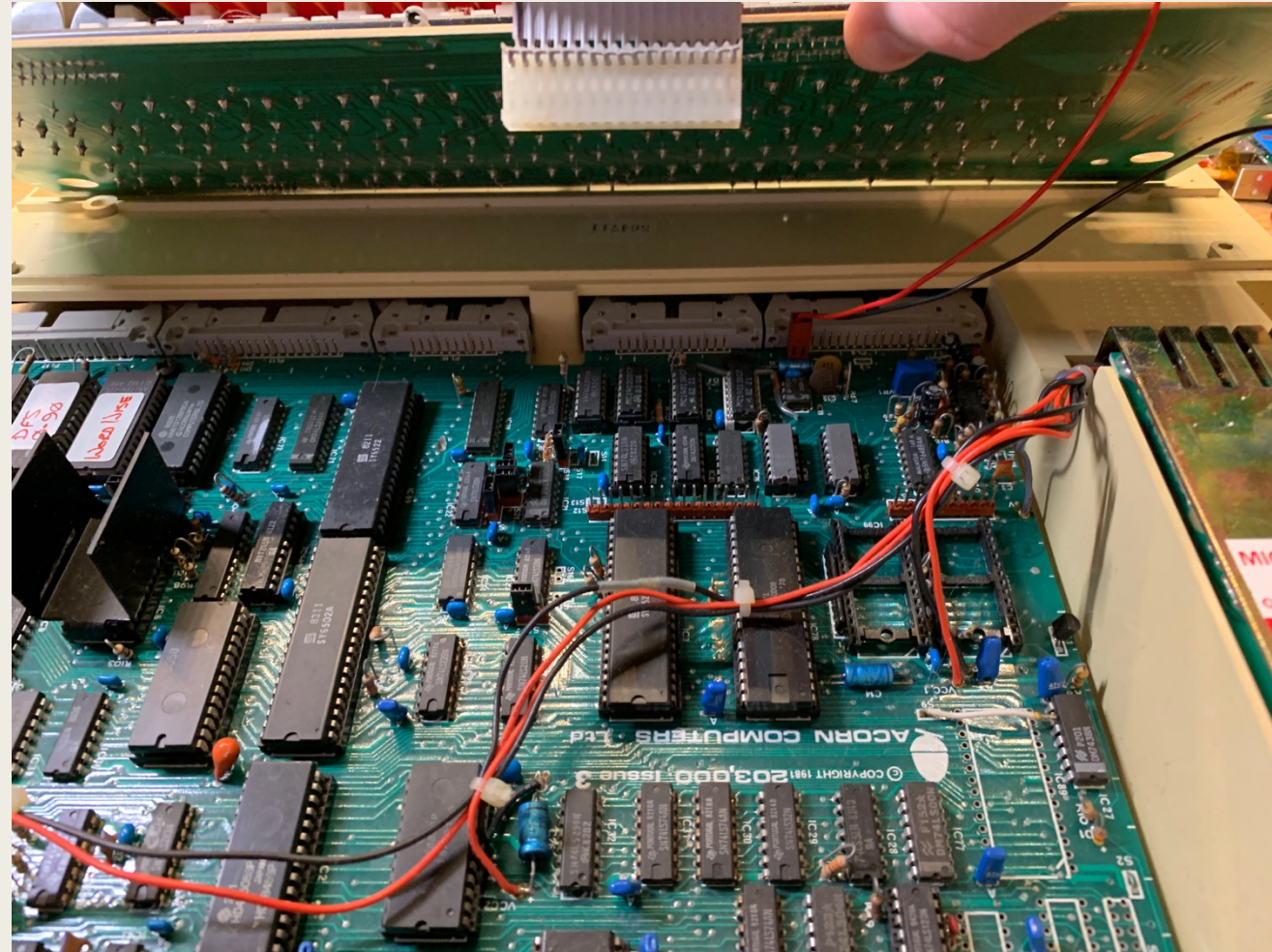
Power Supply Fix



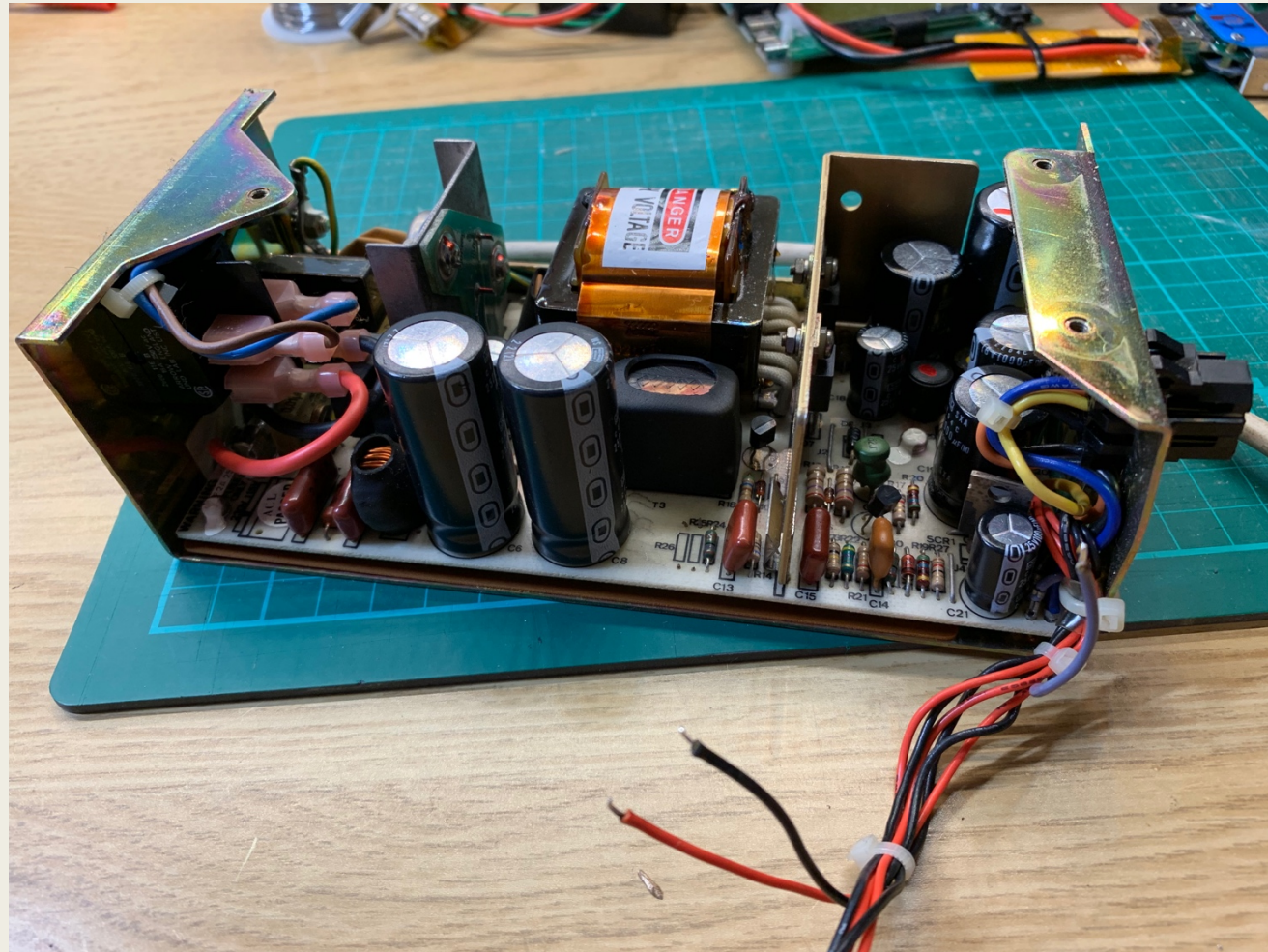
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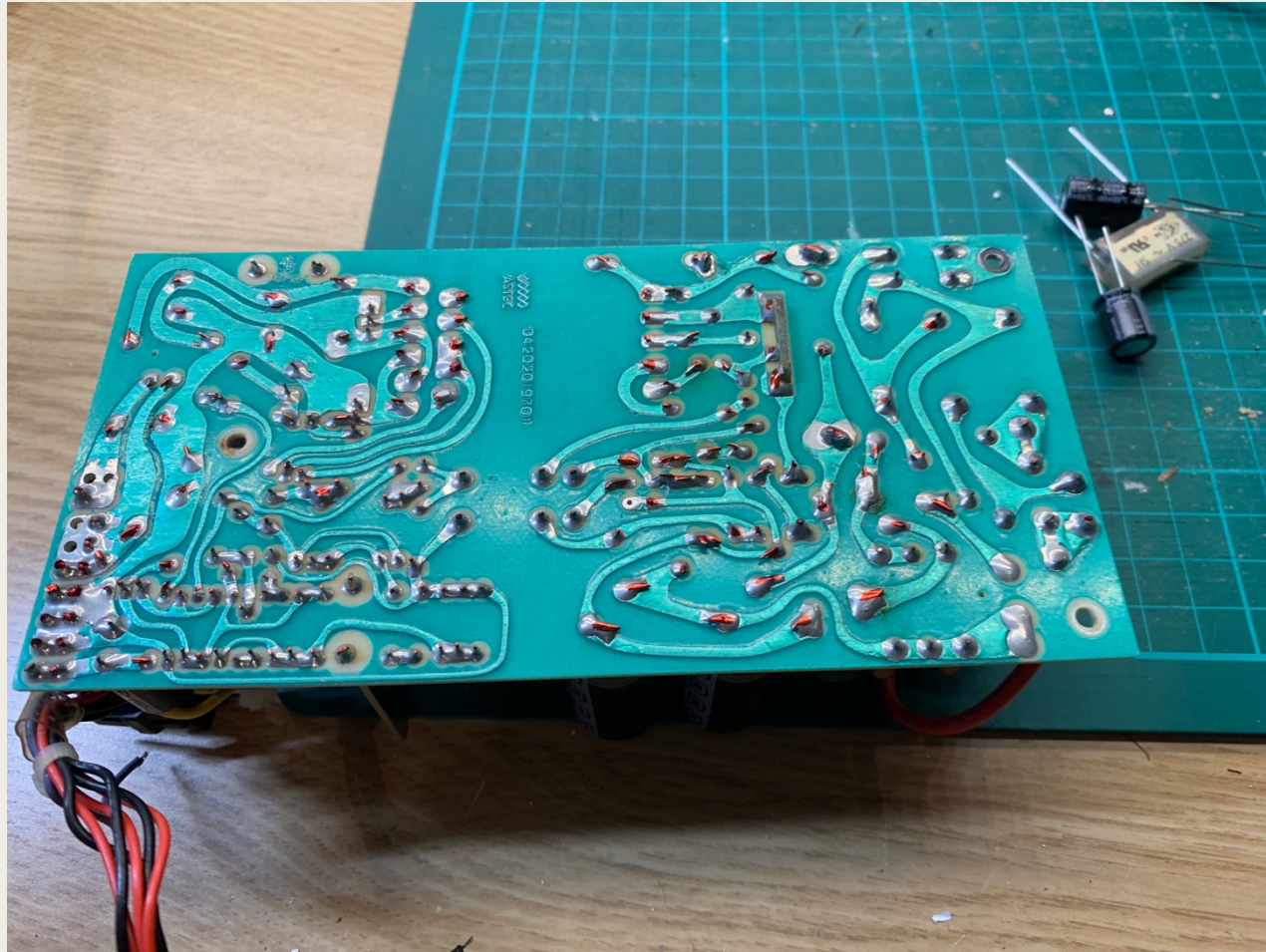
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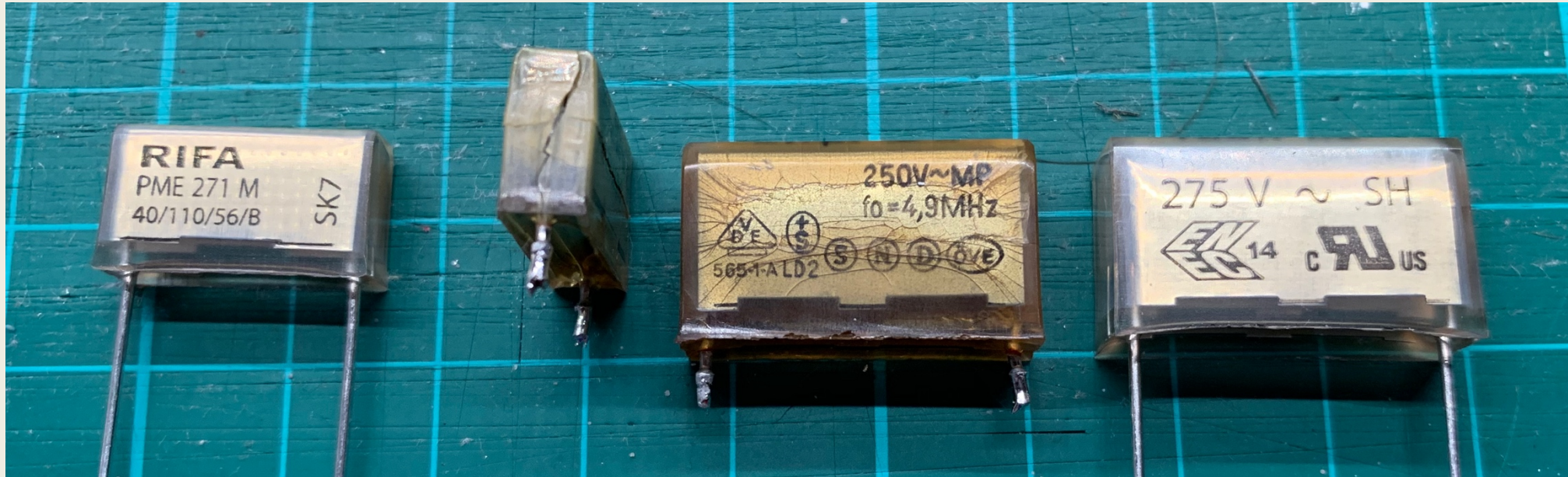
Power Supply Fix



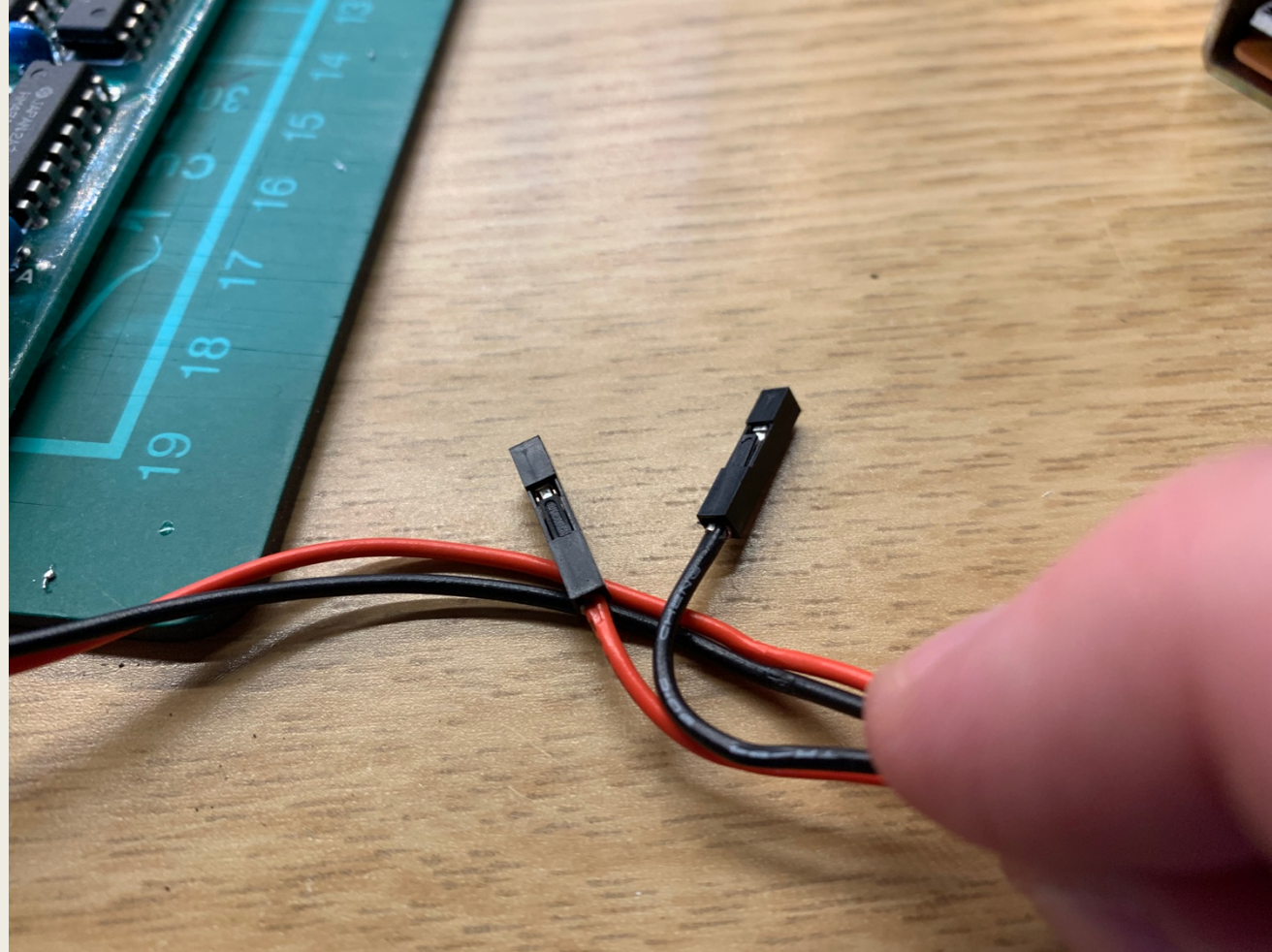
Power Supply Fix



Power Supply Fix



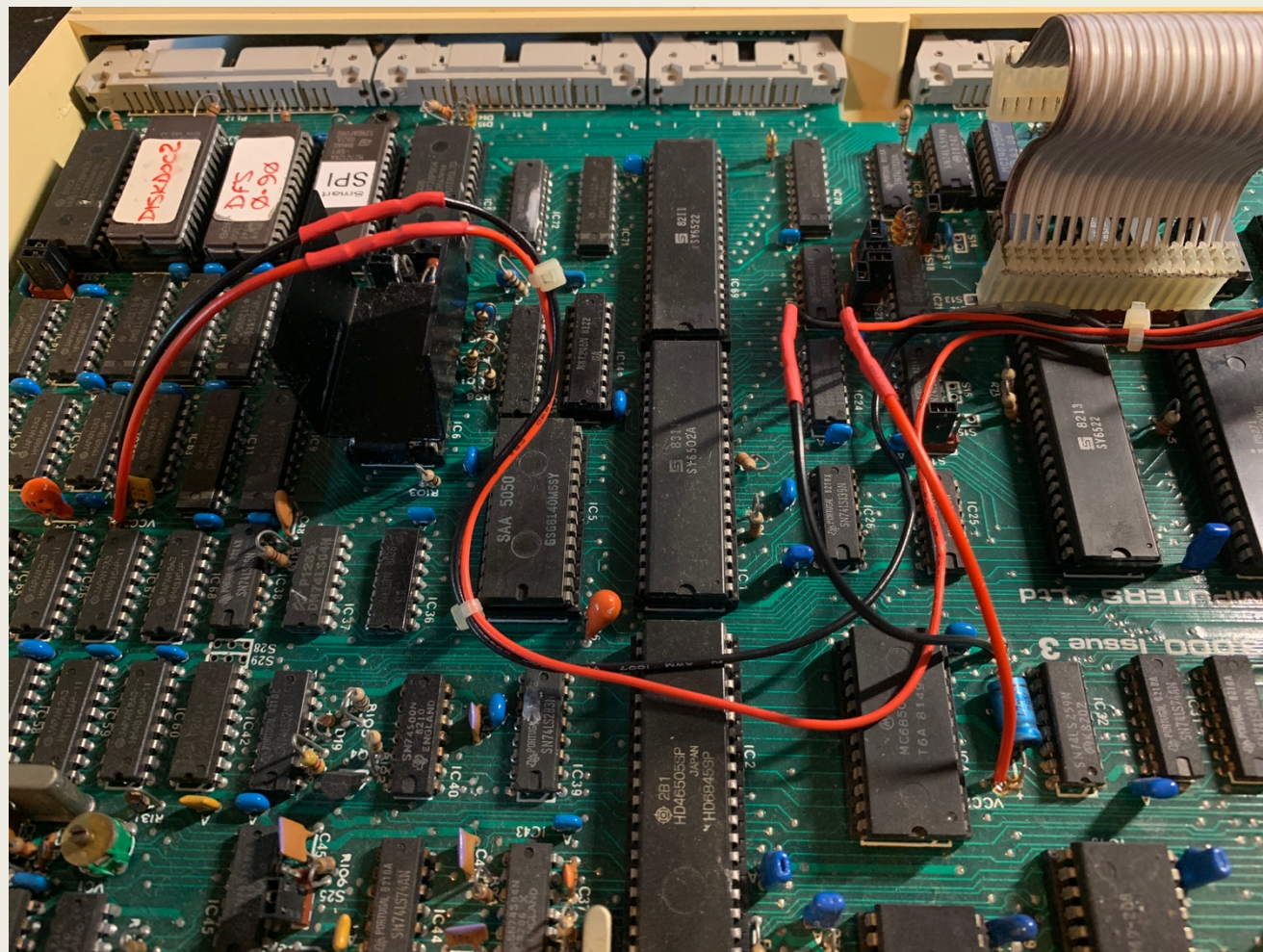
Power Supply Fix



IT'S ALIVE (sort of)



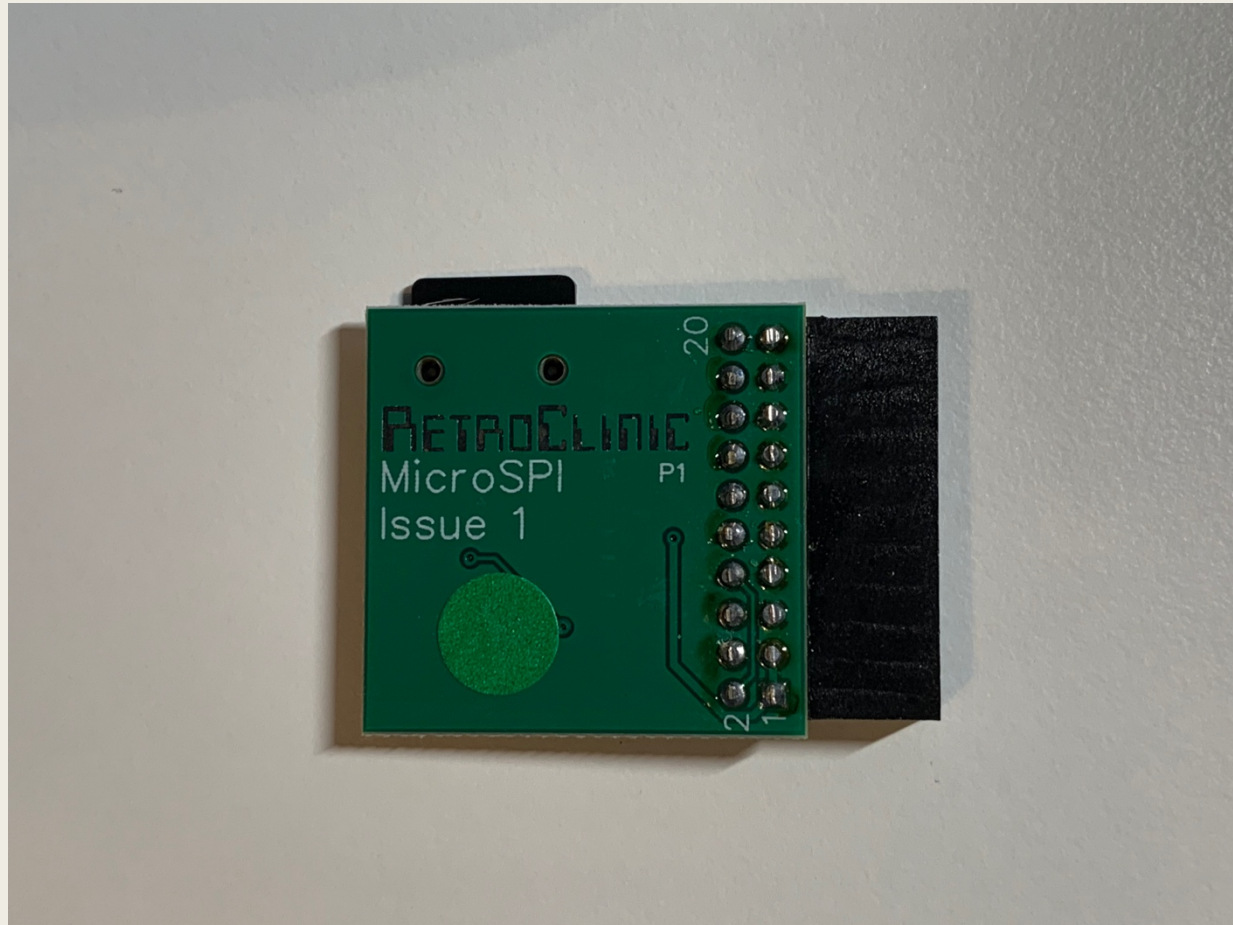
Rubbish crimping ☹️



IT'S ALIVE!



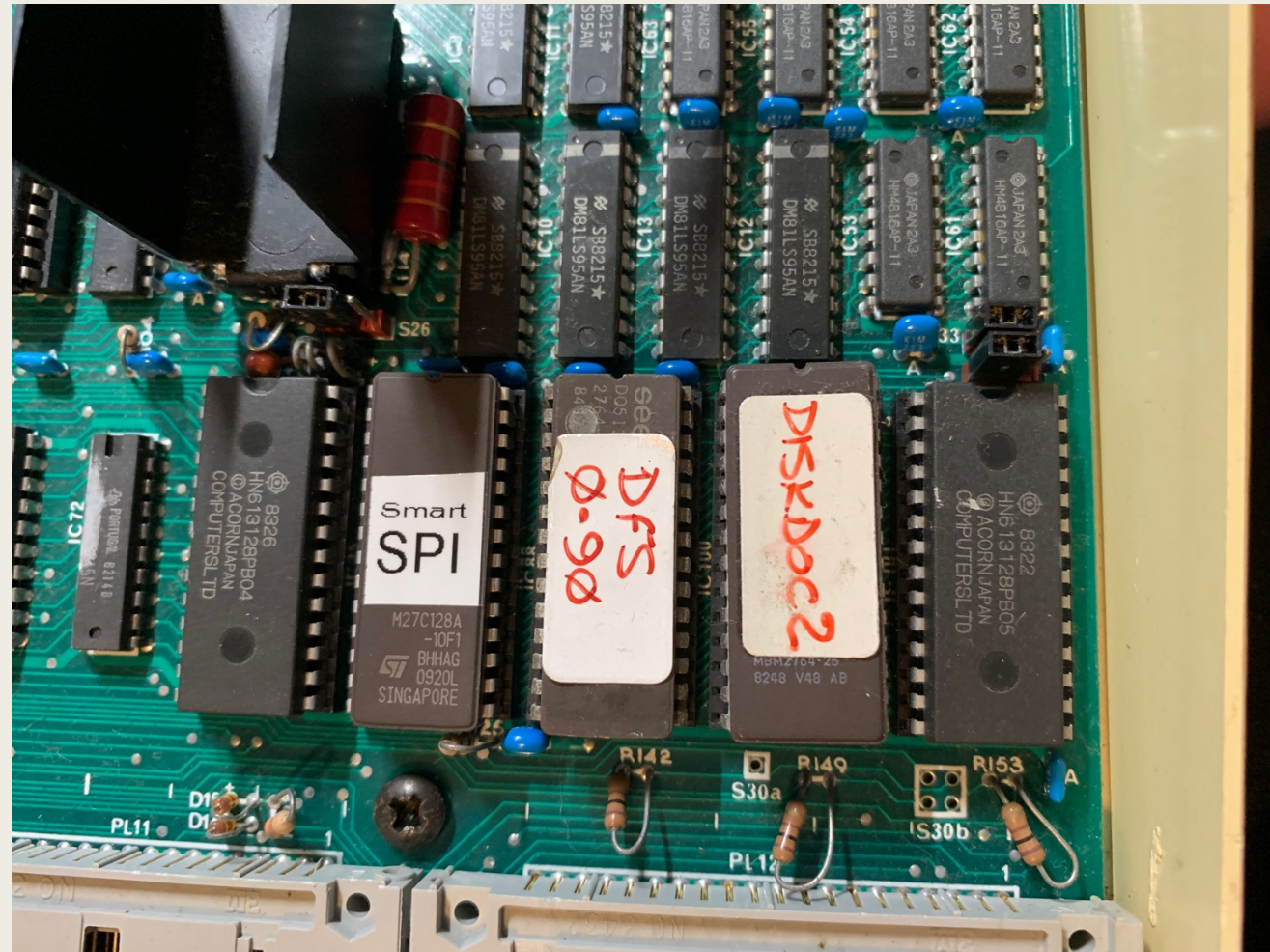
Modern Storage



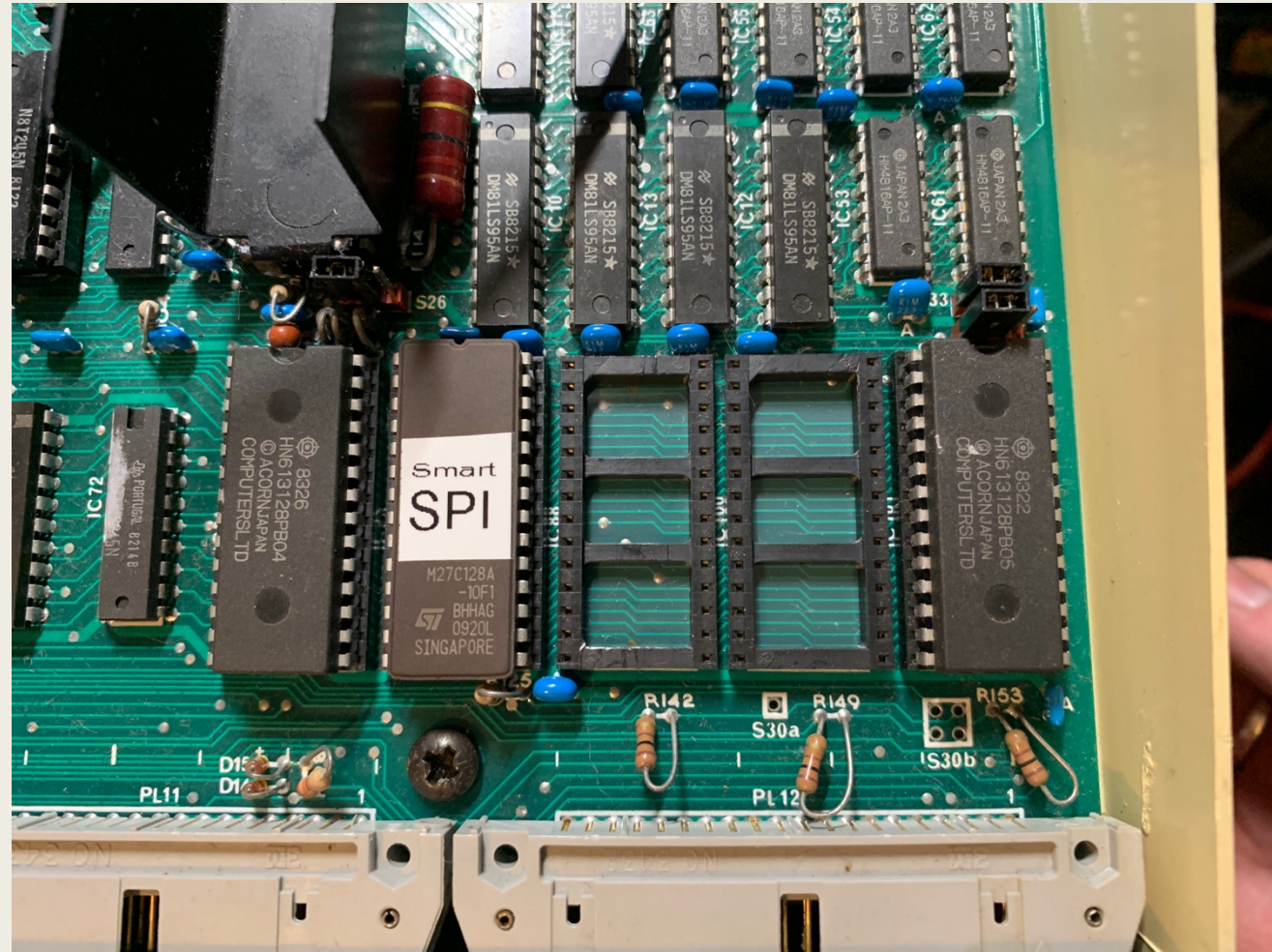
Modern Storage



Modern Storage



Modern Storage



Software recovery



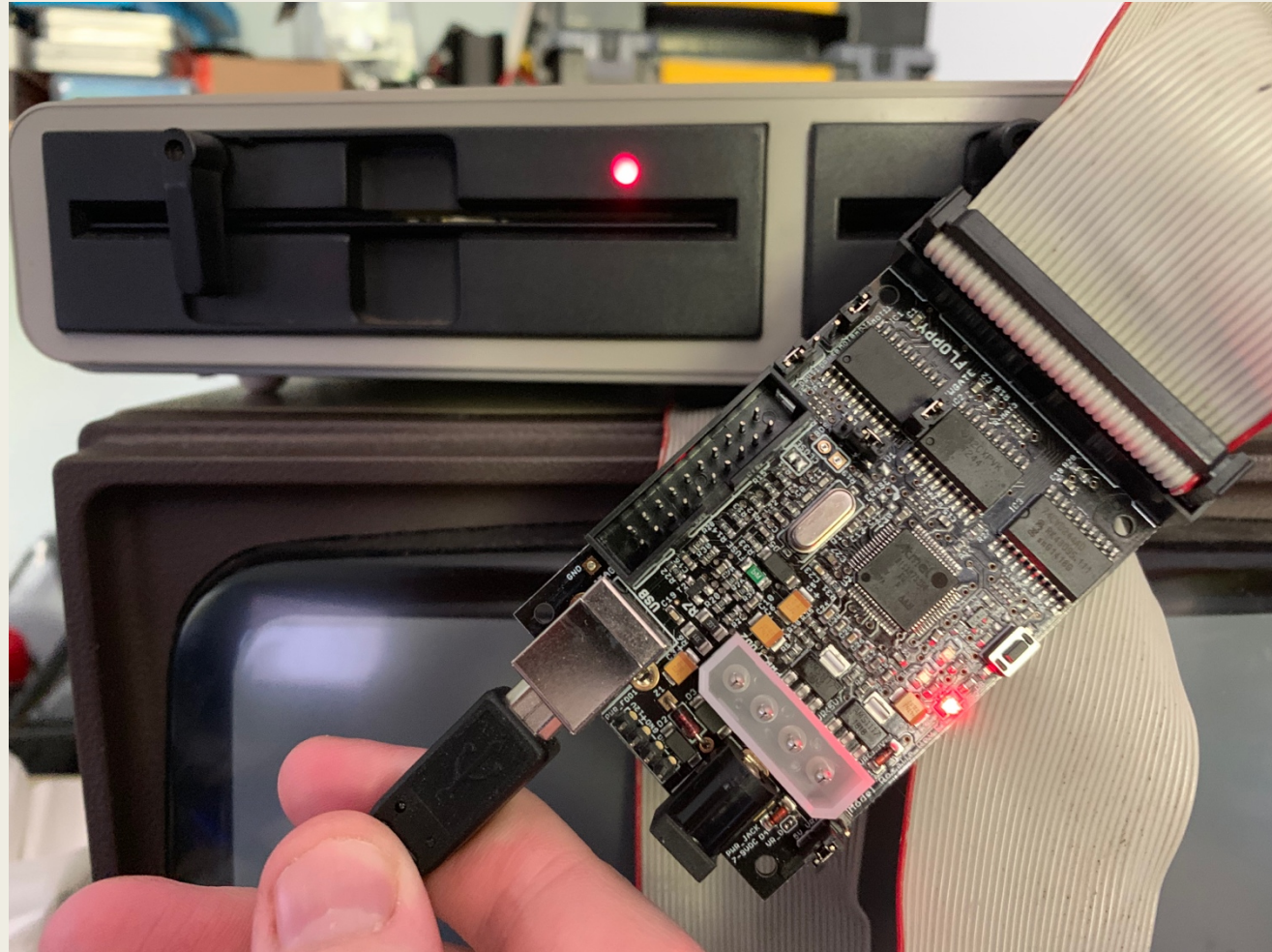
Software recovery

- 5¼" single density disks, "FM" encoded.
- 256 bytes per sector
- 10 sectors per track
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- 100 or 200 kB.

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- 256 bytes per sector
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- 100 or 200 kB.
- Treasure Island by Robert Louis Stevenson is 387 kB
- Tolstoy's War and Peace is 3200kB.

Kryoflux!



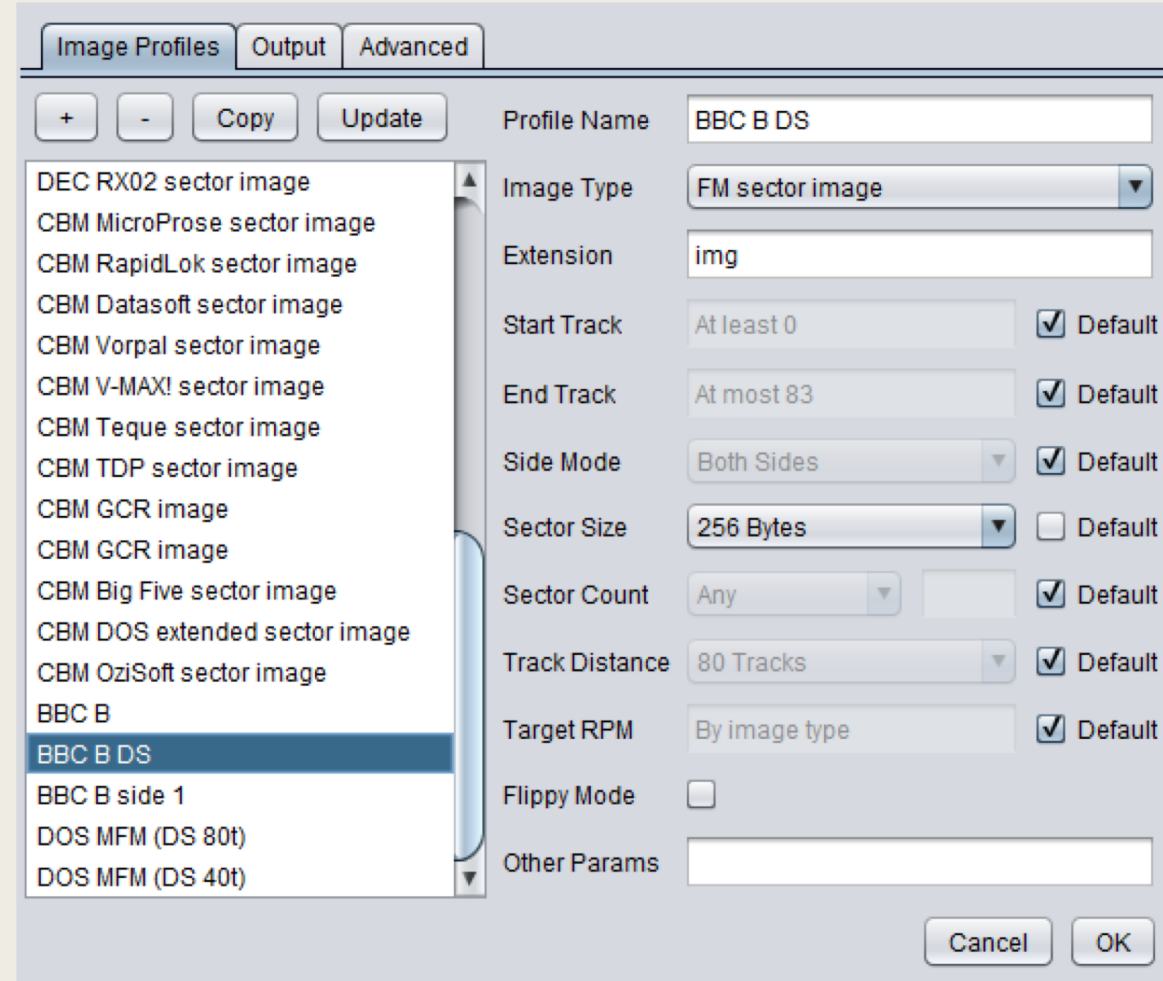
Kryoflux

- USB2 to 'Shugart interface' floppy adaptor
- Works with 5¼", and 3½", and even 8" drives.
- Reads the raw magnetic flux of the disk, doesn't care about formatting.
- Later software process constructs a valid floppy image.
- <https://www.kryoflux.com/>

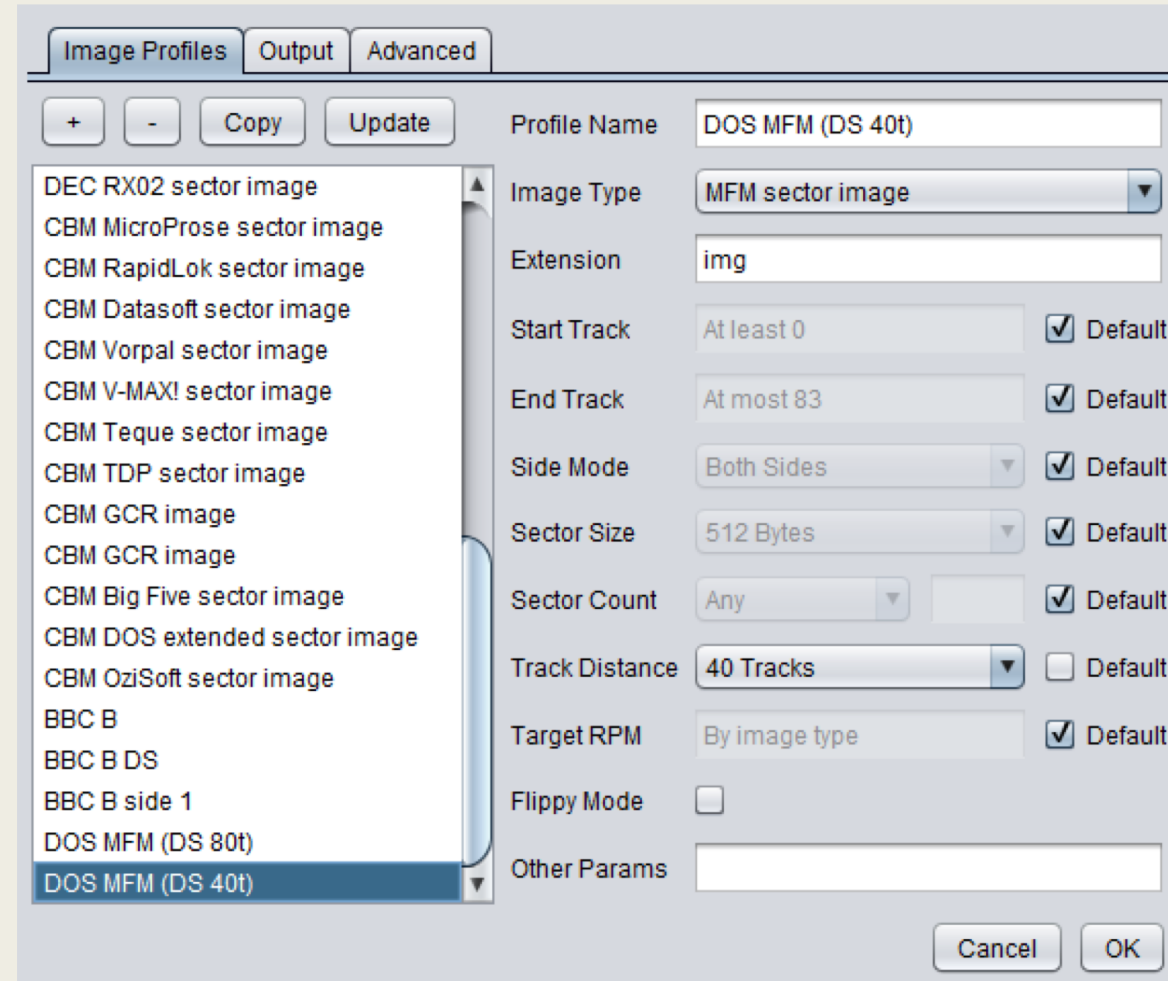
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- Can reveal old data on the disks!

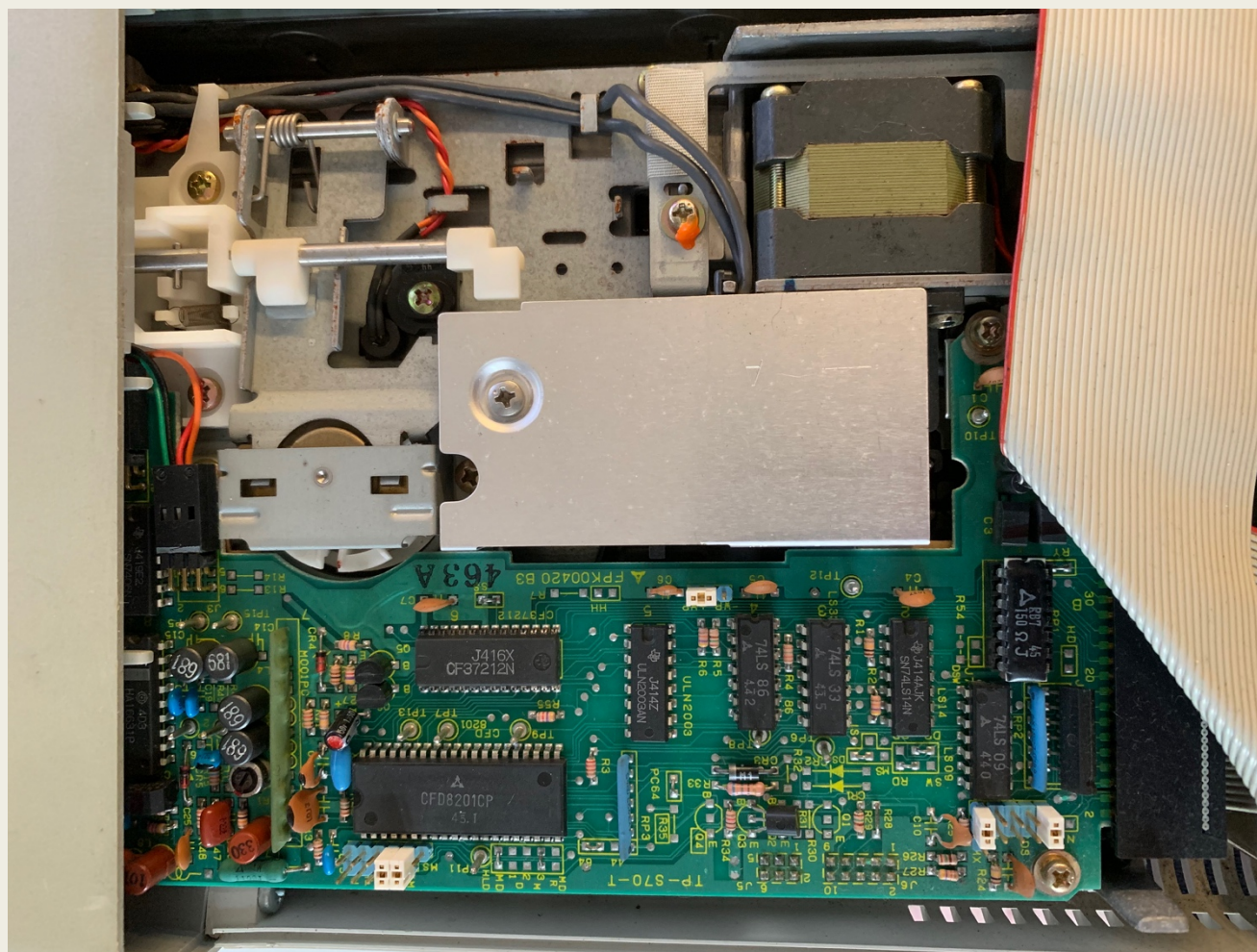
Kryoflux



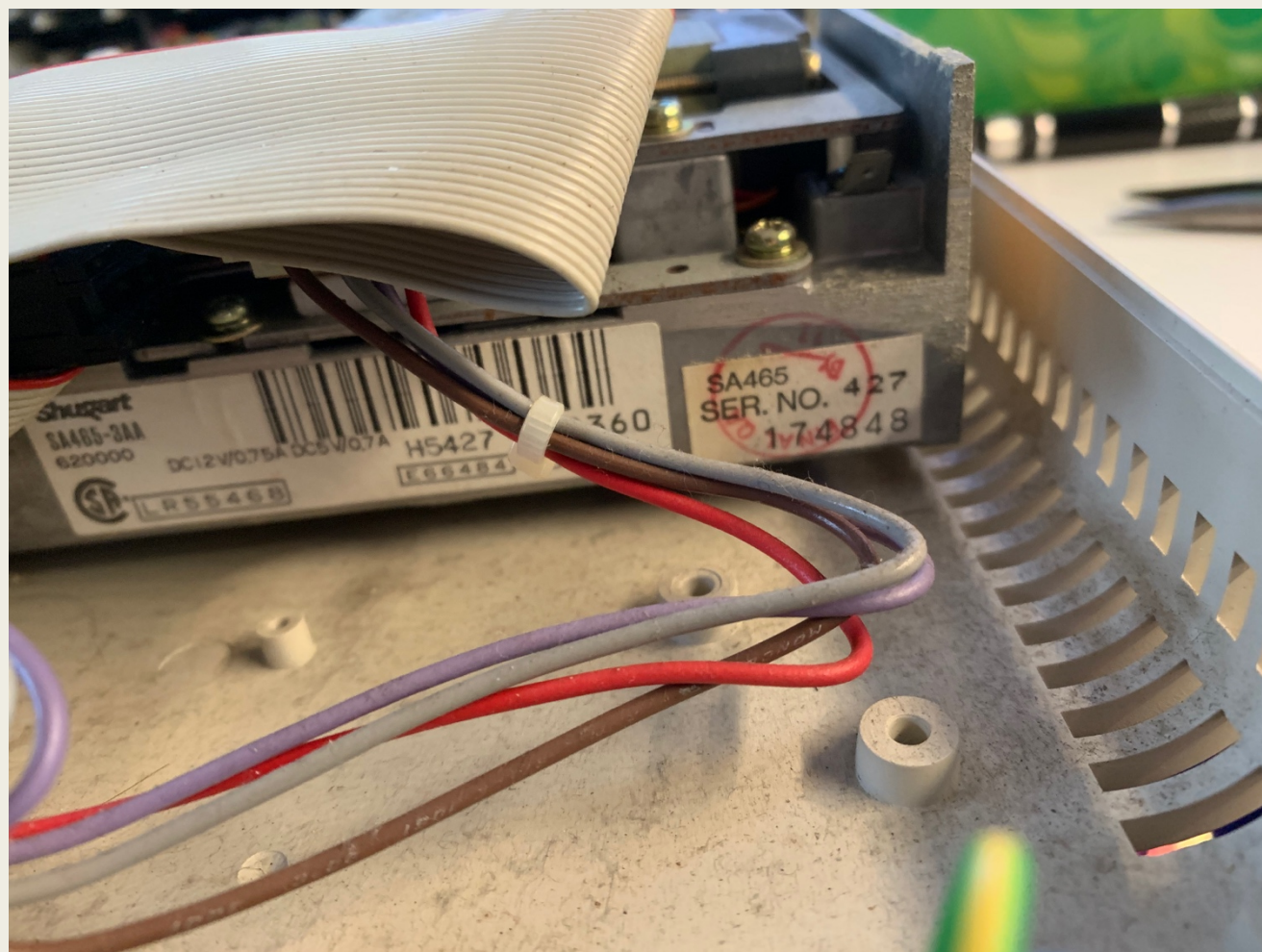
Kryoflux



Floppy drives



Floppy drives



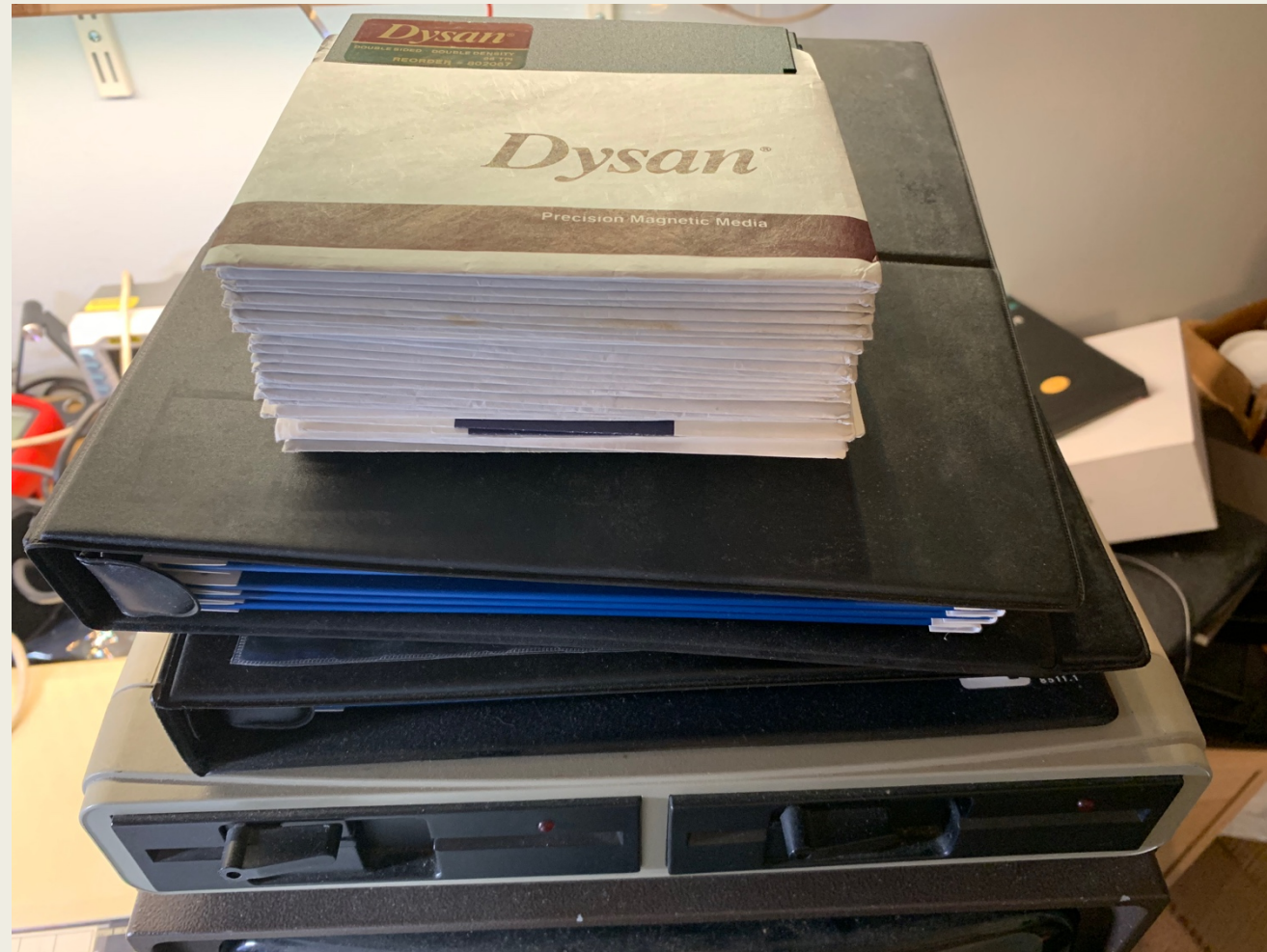
Shugart Associates

- 1973 Alan Shugart starts Shugart Associates, to build a small business computer.
- 1974 Run out of money to finish, switches to just selling storage. Alan Shugart resigns as CEO
- 1976 Releases 5 ¼ inch 'minifloppy'.
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- 1979 Alan Shugart forms Shugart Technology in 1979, sued by Xerox. Renamed company to Seagate Technology.

82 disks later...



82 disks later...

- 2.34 GB of data
- 20 - 35MB of “flux” data per disk
- Converts to 200 – 720 kB of disk image
- Mix of BBC B, PC and Xenix disks.

5¼ disk image on 4GB SD card...



Cleaning!



The future?

- It's been nice to play with the real thing again.
- BBC B going back in the loft.
- I love it, but emulation and modern screens a much nicer experience.

Useful

- SD card adaptor – RetroClinic on ebay.
- Stairway to Hell collection - <https://www.stairwaytohell.com/>
- BeebEm - <http://www.mkw.me.uk/beebem/>
- <http://bbcmicro.co.uk/>