RESTORING MY BBC MODEL B MICRO

Ben Charlton twitter.com/bencc

My BBC Model B

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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 5¹/₄ floppy drives
- Joysticks
- Lightpen
- Beebcalc spreadsheet ROM
- Wordwise word processor ROM
- Books!

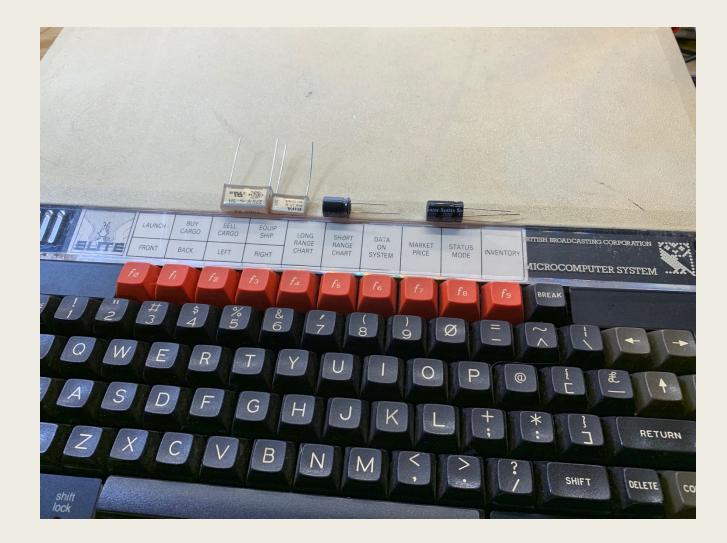
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- 4 channel TI audio chip (as used in many arcade games and SEGA console)
- Tape interface
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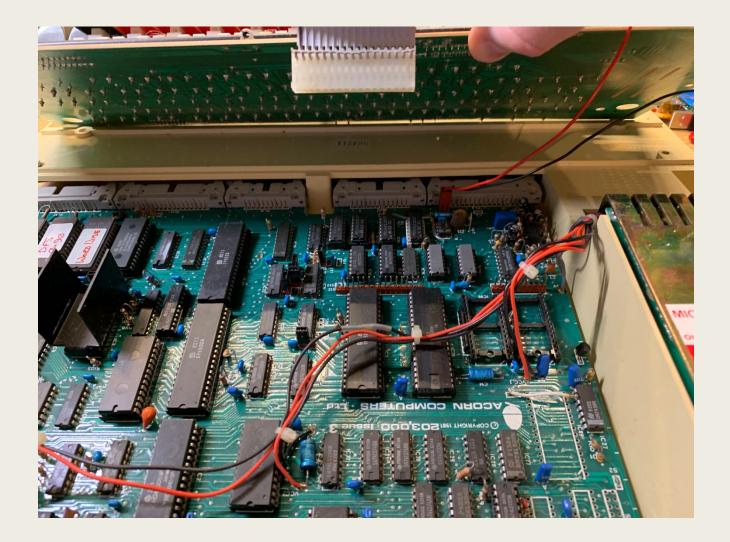
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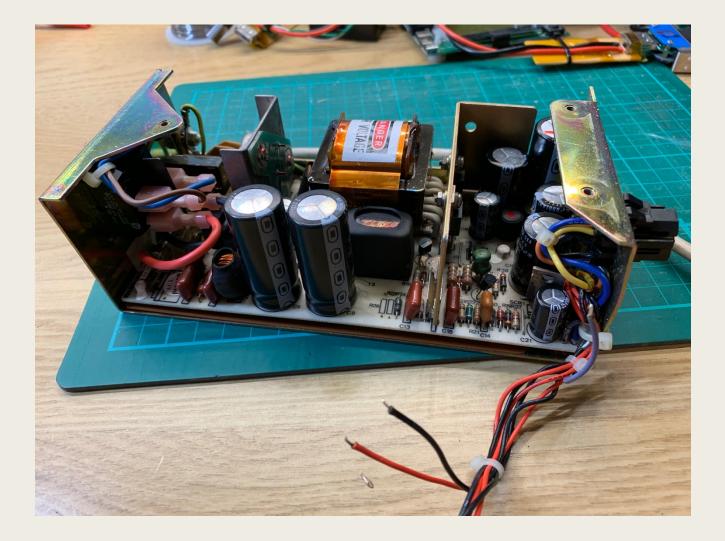
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- Notorious for power supply failures after ~30 years!

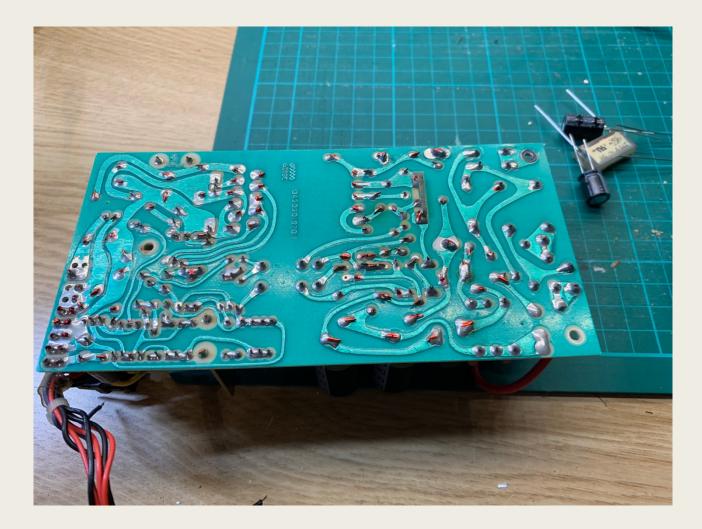




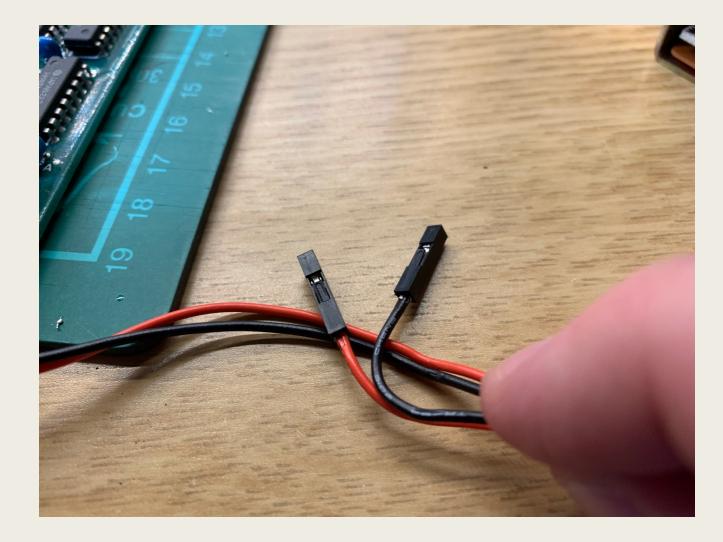








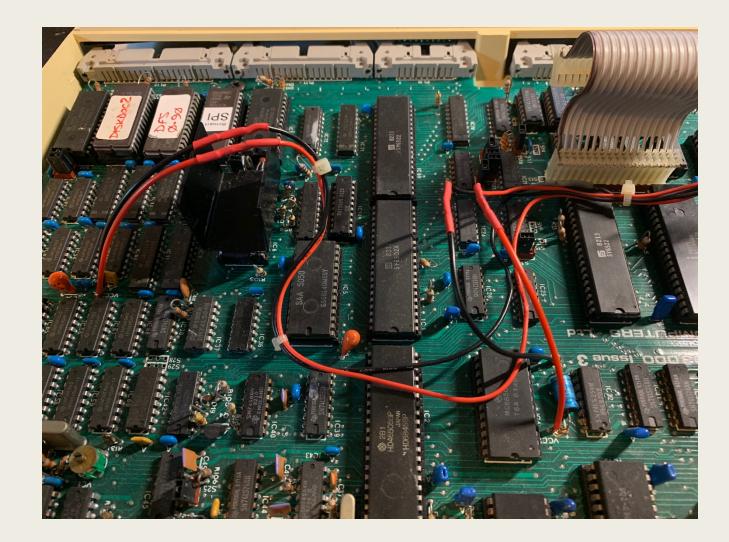




IT'S ALIVE (sort of)

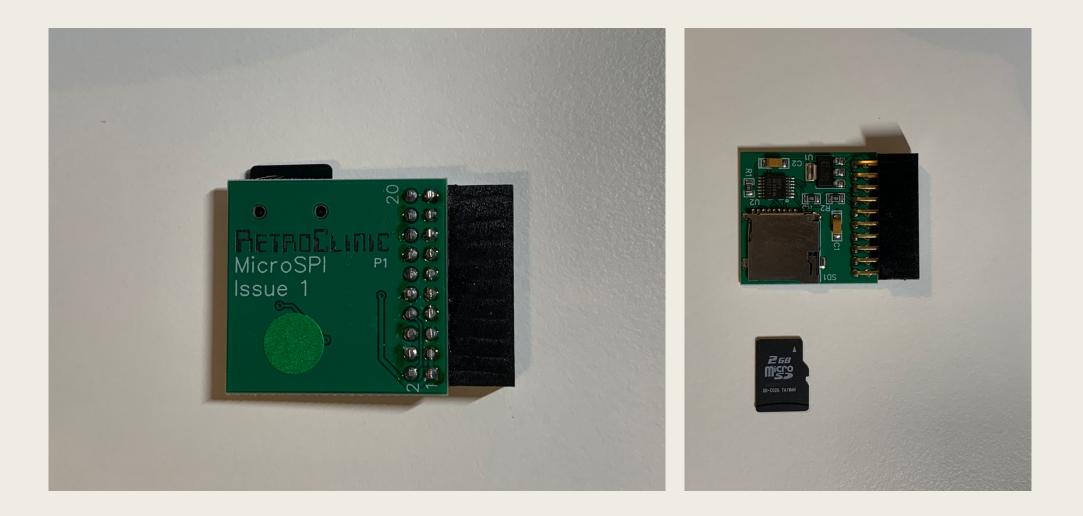


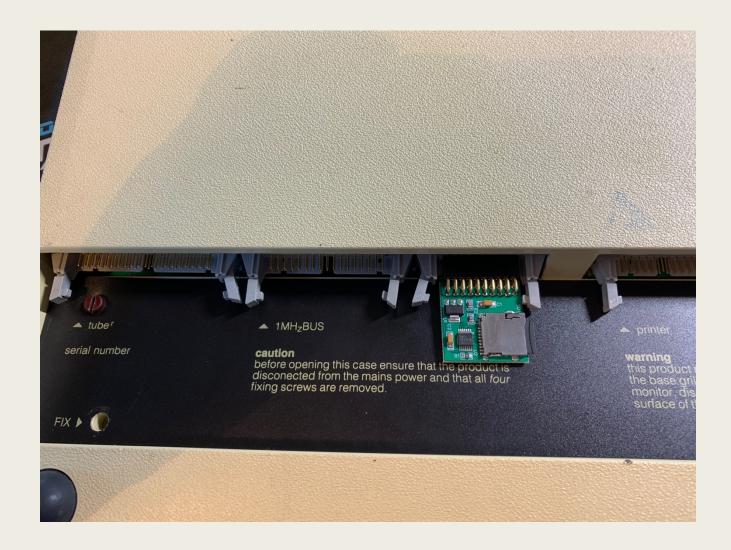
Rubbish crimping ③



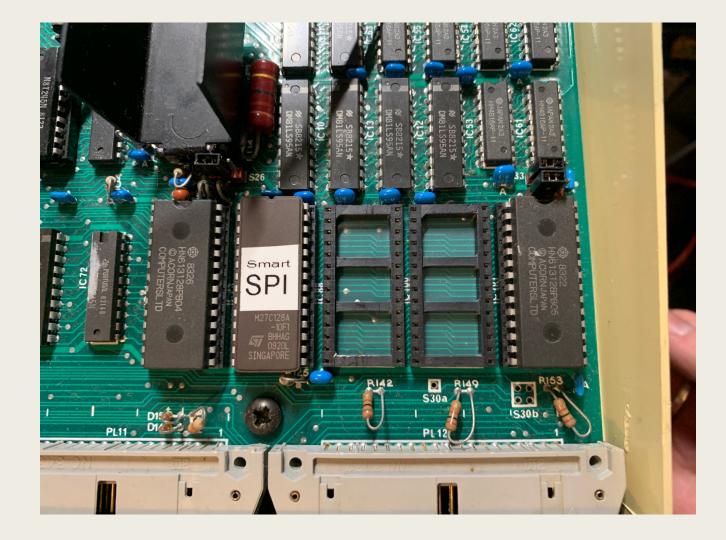
IT'S ALIVE!



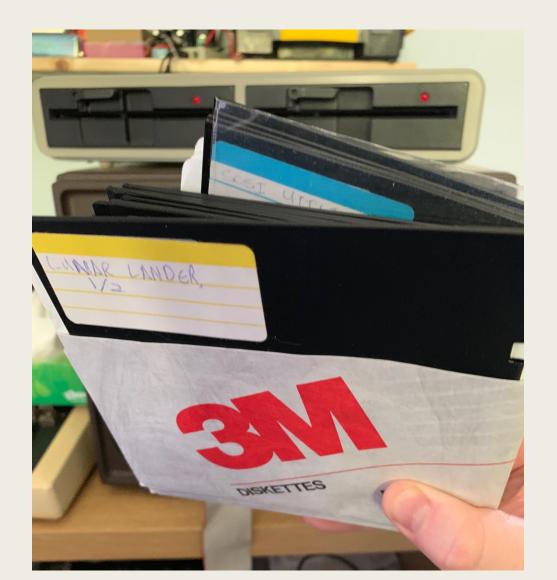








Software recovery

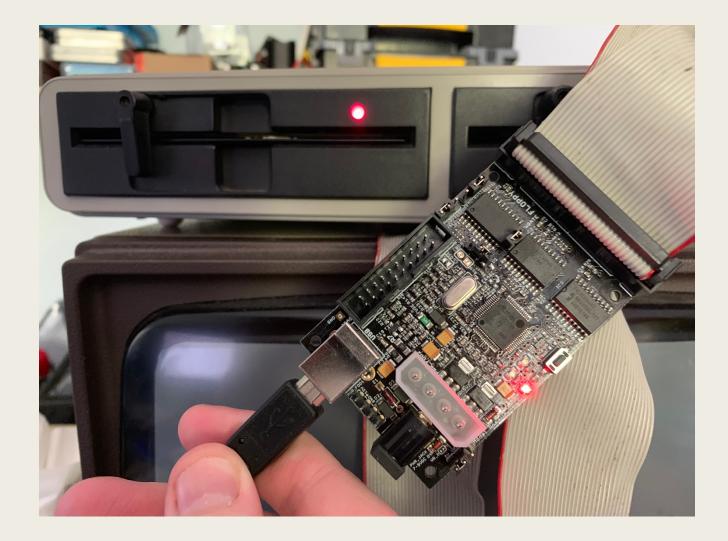


Software recovery

- 5¼" single density disks, "FM" encoded.
- 256 bytes per sector
- 10 sectors per track
- 40 or 80 tracks per side
- 100 or 200 kB.

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- 256 bytes per sector
- 10 sectors per track
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- Treasure Island by Robert Louis Stevenson is 387 kB
- Tolstoy's War and Peace is 3200kB.



USB2 to 'Shugart interface' floppy adaptor

- Works with $5\frac{1}{4}$ ", and $3\frac{1}{2}$ ", 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!

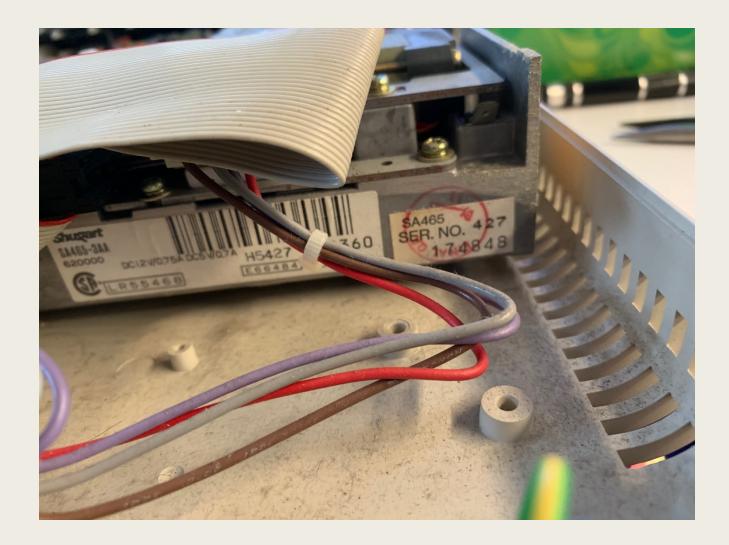
Image Profiles Output Advanced			
+ - Copy Update	Profile Name	BBC B DS	
DEC RX02 sector image	Image Type	FM sector image	•
CBM MicroProse sector image			
CBM RapidLok sector image	Extension	img	
CBM Datasoft sector image	Start Track	At least 0	Default
CBM Vorpal sector image	Statt Hack	Ariedoro	Delaut
CBM V-MAX! sector image	End Track	At most 83	🗹 Default
CBM Teque sector image			-
CBM TDP sector image	Side Mode	Both Sides	🗹 Default
CBM GCR image	Sector Size	256 Bytes	Default
CBM GCR image	000001 0120	200 5,000	
CBM Big Five sector image	Sector Count	Any	🗹 Default
CBM DOS extended sector image			
CBM OziSoft sector image	Track Distance	80 Tracks	🗹 Default
BBC B	Target RPM	By image type	Default
BBC B DS	2		_
BBC B side 1	Flippy Mode		
DOS MFM (DS 80t)	Other Params		
DOS MFM (DS 40t)	Outer Params		
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CBM GCR image	Sector Size	512 Bytes	Default		
CBM GCR image					
CBM Big Five sector image	Sector Count	Any	🗹 Default		
CBM DOS extended sector image	Track Distance	40 Tracks	Default		
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Floppy drives



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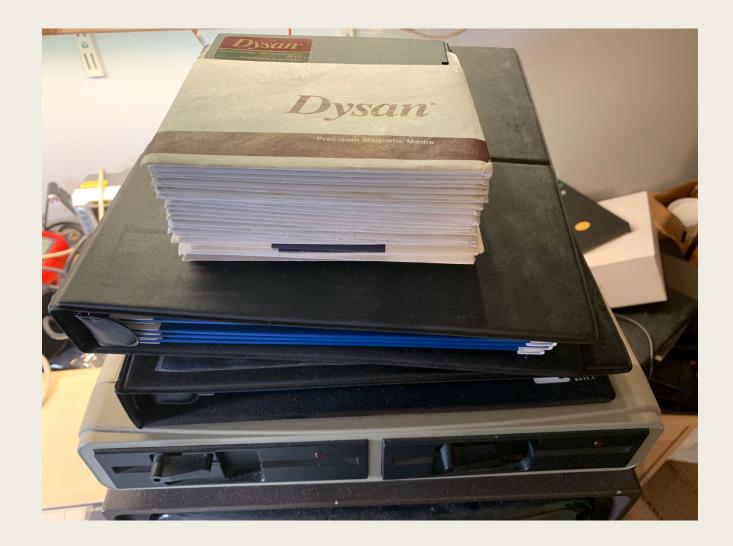
Shugart Associates

- 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
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- 1979 Alan Shugart forms Shugart Technology in 1979, sued by Xerox. Renamed company to Seagate Technology.

82 disks later...



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- 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.

5¹/₄ 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 <u>https://www.stairwaytohell.com/</u>
- BeebEm <u>http://www.mkw.me.uk/beebem/</u>
- http://bbcmicro.co.uk/