

AccessionIndex: TCD-SCSS-T.20241031.002

Accession Date: 31-Oct-2024

Accession By: Anne Murphy

Object name: Atari 1040STFM

Vintage: 1986

Synopsis: Personal computer, S/N: A133C-4005876.

Description:

The Atari ST [1] was a series of personal computers manufactured by the Atari Corporation as a successor to its 400 and 800 series. As distinct from the 400 and 800 series, the ST was sold complete with an external display. The first model released in 1985 was the 520ST, followed by the 1040ST [2] in 1986.

Trivia1: "ST" officially stands for "Sixteen/Thirty-two", referring to the Motorola 16bit external and 32bit internal busses of the Motorola MC68000 CPU.

Trivia2: The Atari ST was designed by Shiraz Shivji, who previously worked on the development of the Commodore 64.

The 520ST and 1040ST were based on the Motorola MC68000 microprocessor. The 520ST had 512kB-4MB of DRAM and 196kB of ROM, and was the first personal computer with a bitmapped color graphical user interface. The 1040ST was essentially a physical reconfiguration of the 520ST with more memory, i.e. 1MB minimum. Like the 400 and 800 series, the CPU was assisted by various custom chips: a *Shifter* for bitmap graphics, a *GLU* control logic block, and *MMU* and *DMA* ASICs. It also employed standard peripheral chips, including the Motorola MC6850P ACIA and MC68901 MFP, a Western Digital WD-1772-PH floppy controller, a Yamaha YM2149F sound generator, and a Hitachi HD6301V1 keyboard processor.

The 520ST had external floppy disks and power supplies, but the 1040ST integrated these. The floppy disk replaced the joystick ports on the 520ST right-hand side, which were moved underneath the case, with the cables conveniently running underneath to the front. Similarly the MIDI ports were moved to the left-hand side. The 1040STFM variant included an RF modulator to allow a television to be used instead of a composite monitor. Like the 400 and 800 series, the 1040STFM was quite integrated, allowing a number of external peripherals. It included DB25 RS232 serial and Centronics parallel printer ports, DE-9 Atari joystick ports, two 5-pin DIN *MIDI* ports, a custom 13-pin DIN display interface, a 19-pin custom *ACSI* I/O interface (similar to *SCSI*), a 14-pin DIN external floppy disk interface, and a 40-pin ROM cartridge port. The MIDI ports made it popular with musicians.

The 1040STFM ran Atari's *TOS*, a port of Digital Research's *GEMDOS*, a disk operating system for *GEM* (which was based on *CP/M-68K*, a port of *CP/M* to the 68000). Early examples had to boot *TOS* from floppy disk, but had ROM sockets for *TOS* ROMs when they became available.

This item includes an Atari *SH204* hard disk, the first external hard drive from Atari for the ST series computers, initially incorporating an internal *SCSI* controller (at a fixed address 0) connected to an *MFM* controller and 20MB Tandon *MFM* hard disk,

but the installed configuration and capacity is unknown. This item also includes a set of power, disk and display interface cables.

This Atari 1040STFM belonged to Dr Timothy Gayleard Murphy (Tim) [3] of the Department of Mathematics, Trinity College Dublin, well remembered for his Trojan early work on and teaching of UNIX. It probably was used to run $T_E X$ at home in the late 1980s or early 1990s. The system has been examined by Professor David Malone, a former colleague now at National University of Ireland, Maynooth; it still powers ON and works, but the hard disk does not spin up.

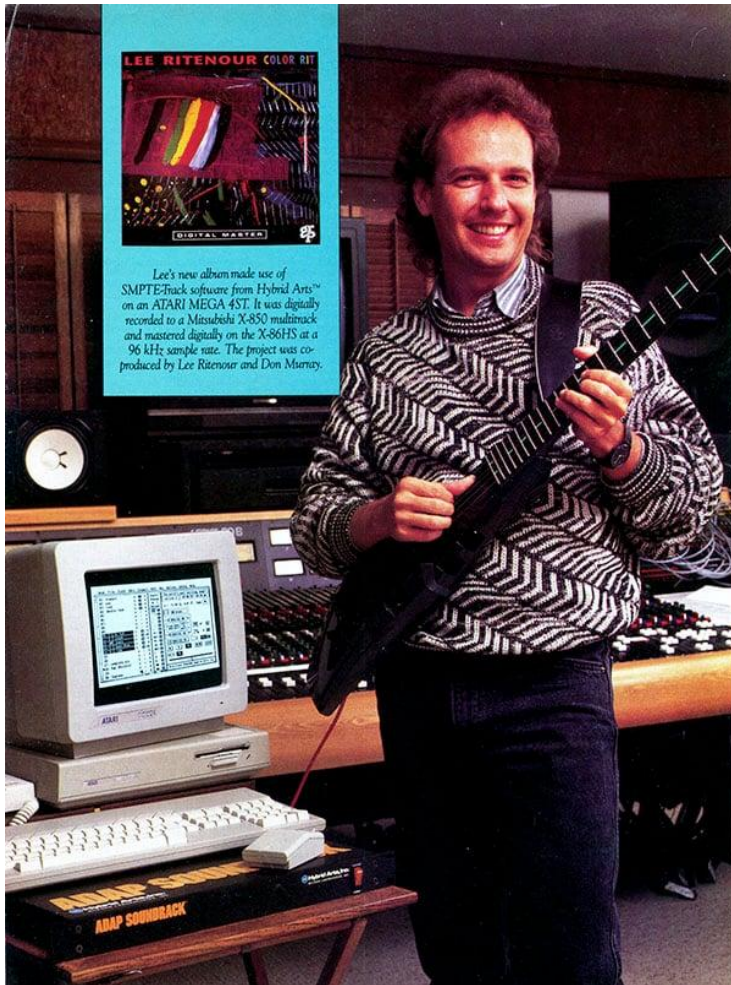
Many thanks to Tim's wife Anne Murphy for donating this item.

The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>
Click '*Accession Index*' (1st column listed) for related folder, or '*About*' for further guidance. Some of the items below may be more properly part of other categories of this catalog, but are listed here for convenience.

Accession Index	Object with Identification
TCD-SCSS-T.20241031.002.001	Atari 1040STFM. Personal computer, S/N: A133C-4005876. 1986.
TCD-SCSS-T.20241031.002.002	Atari SH204 hard disk. c.1985.
TCD-SCSS-T.20241031.002.003	Atari 1040STFM cables.
TCD-SCSS-T.20150112.006	Atari 400XL. Home game computer. Model: 400U, S/N: BX 078, 050 127044. 1983.
TCD-SCSS-V.20121208.473	Atari User vol.2 no.2 June 1986, 1986.

References:

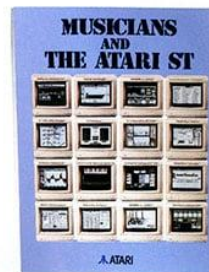
1. Wikipedia, *Atari ST*, see: https://en.wikipedia.org/wiki/Atari_ST
Last browsed to on 31-Oct-2024.
2. myoldcomputers.com, *Atari 1040ST*, (actually *1040STE* released in 1987), see: https://www.myoldcomputers.com/museum/computers/atari_1040st.htm
Last browsed to on 6-Nov-2024.
3. Richard M. Timoney, *Timothy Gayleard Murphy*, Irish Math. Soc. Bulletin, Number 82, Winter 2018, 4–10, ISSN 0791-5578, see: <https://www.irishmathsoc.org/bull82/obit.pdf>
Last browsed to on 2-Nov-2024.



“Technically, the Atari ST handles MIDI timing better than the others. Musically, it has a great feel.”

“When I went to purchase a computer, I talked to several of the top studio drummers around Los Angeles who overdub on everybody’s computer tracks. I asked them which computer felt the best to them. They all told me the Atari. Whatever the technical reasons, the Atari ST just handles MIDI timing better.”

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Figure 1: Atari ST advertisement.

From: https://www.reddit.com/r/atarist/comments/14j523m/atari_st_magazine_advertisement_if_you_are_a/



Figure 2: Atari 1040STFM, front view.



Figure 3: Atari 1040STFM, left view.



Figure 4: Atari 1040STFM, right view.



Figure 5: Atari 1040STFM, left-side MIDI in & out ports and cartridge ROM port.



Figure 6: Atari 1040STFM, rear view.



Figure 7: Atari 1040STFM, rear modem, printer, hard disk and floppy disk ports.

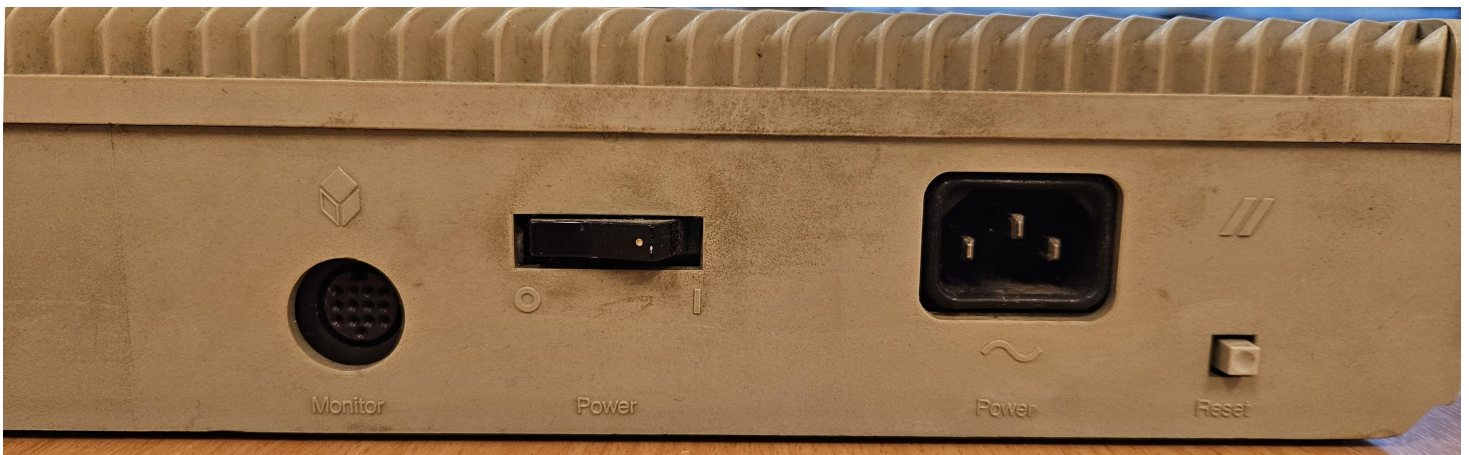


Figure 8: Atari 1040STFM, rear display port, AC power switch, AC power input, and reset button.

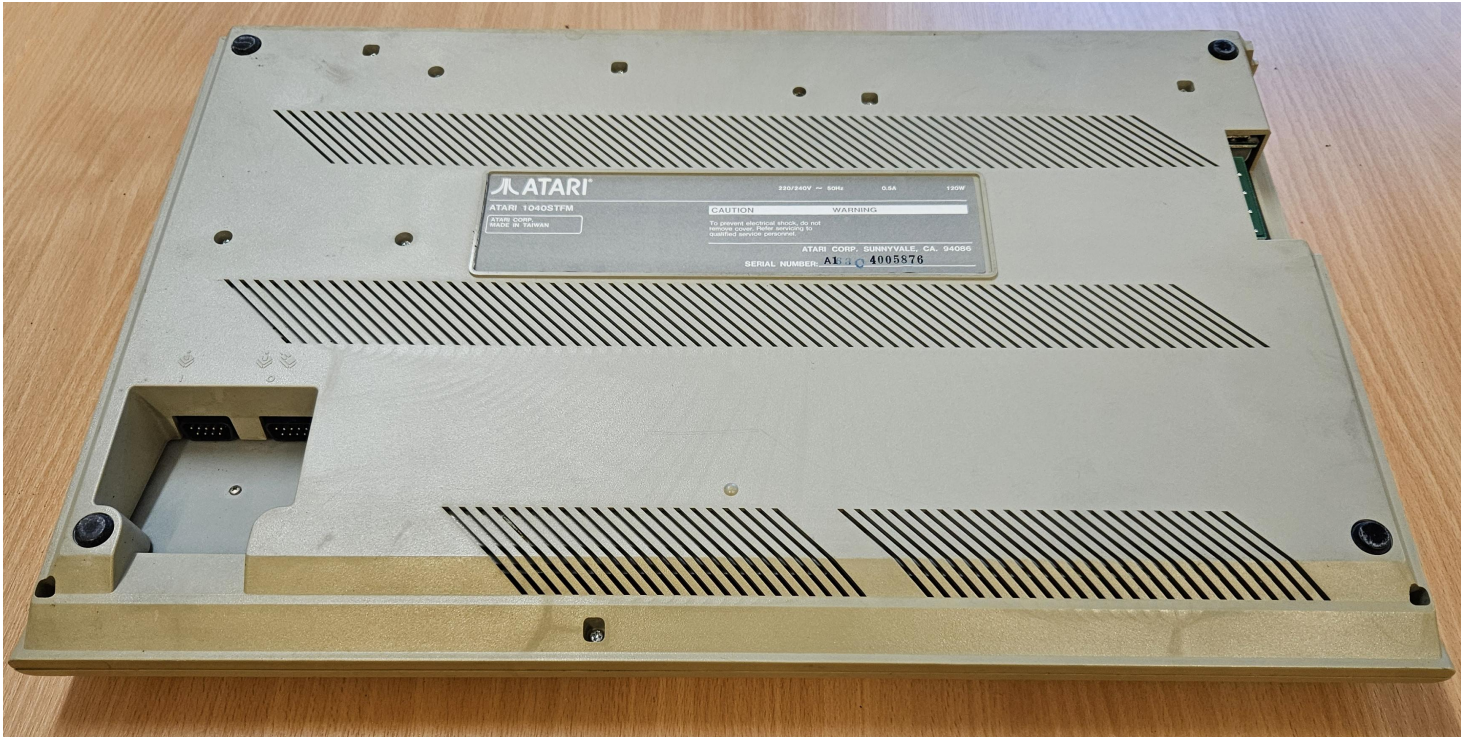


Figure 9: Atari 1040STFM, bottom view.

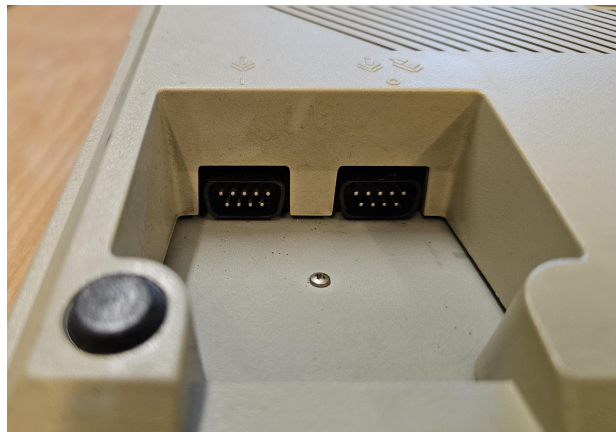


Figure 10: Atari 1040STFM, joystick ports underneath the case.

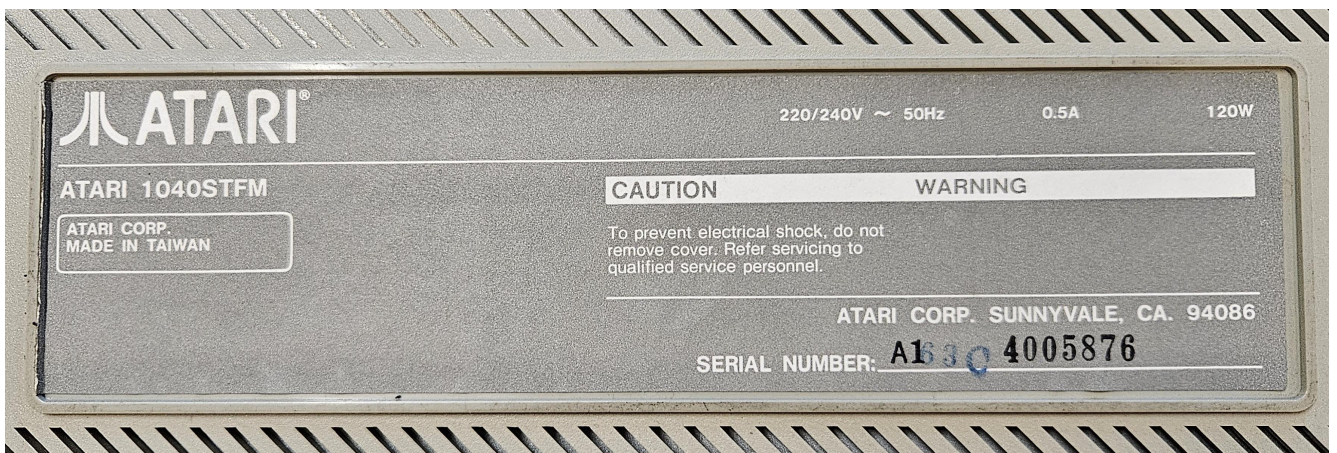


Figure 11: Atari 1040STFM manufacturing label, S/N: A133C-4005876.



Figure 12: Atari SH204 hard disk, front view.

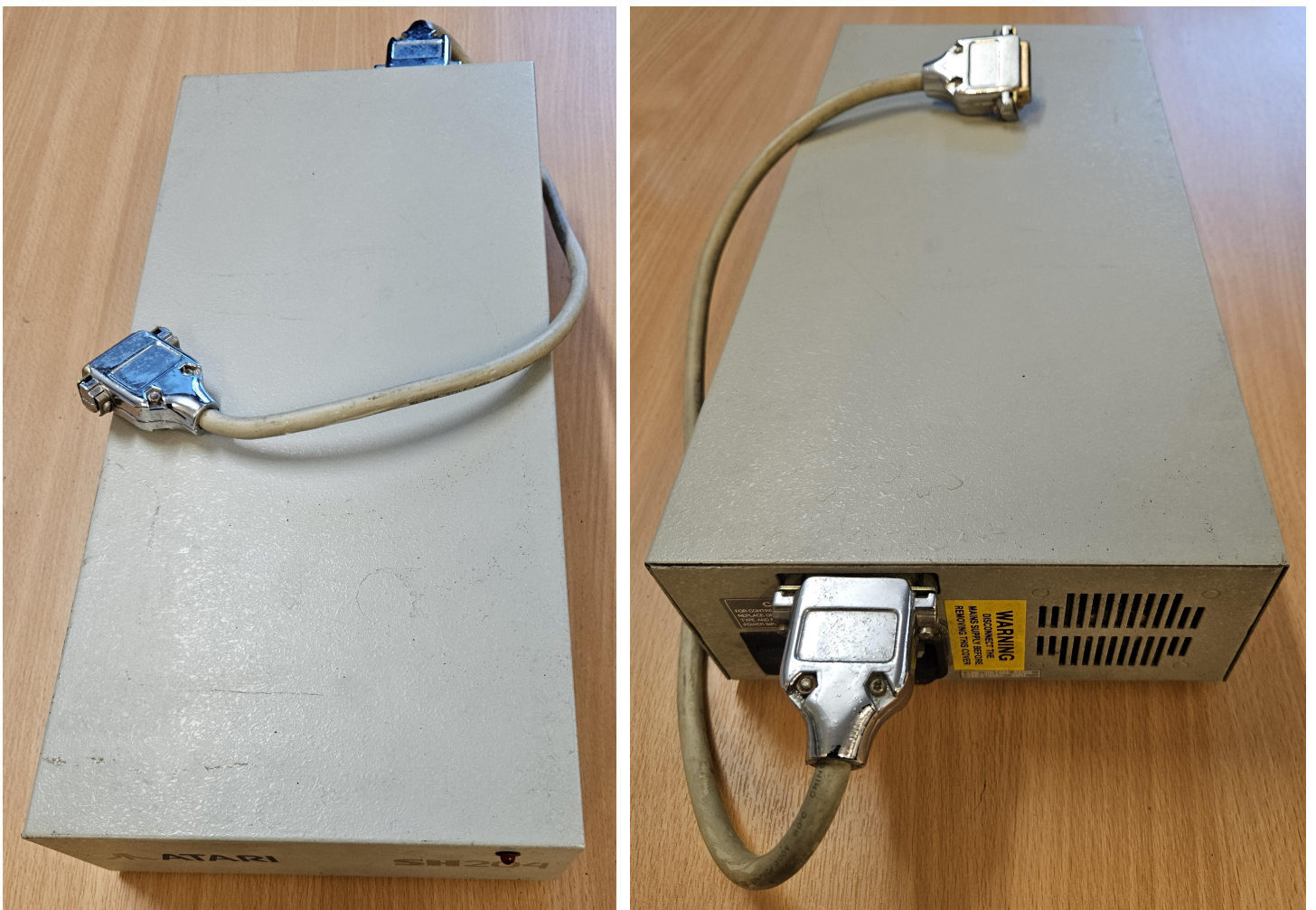


Figure 13: Atari SH204 hard disk, top and rear views.



Figure 14: Atari SH204 hard disk, rear view.



Figure 15: Atari SH204 hard disk, rear view closeups.