WIKIPEDIA

Exatron Stringy Floppy

The **Exatron Stringy Floppy** (or **ESF**) is a continuous loop tape drive developed by Exatron.

An Exatron Stringy Floppy (cover removed) designed for use with the TRS-80 Model 1

The company introduced an S-100 stringy floppy drive at the 1978 West Coast Computer Faire, and a version for the Radio Shack TRS-80 in 1979. Exatron sold about 4,000 TRS-80 drives by August 1981 for $249.50 each, stating that it was "our best seller by far". The tape cartridge is about the size of a business card, but about $\frac{3}{16}$ inch (4.8 millimetres) thick.[1] The magnetic tape inside the cartridge is $\frac{1}{16}$ inch (1.6 millimetres) wide.

There is no single catalog of files; to load a specific file the drive searches the entire tape, briefly stopping to read the header of each found file. The tape loop only moves in one direction, so a file that starts behind the current location cannot be read until the drive searches the entire loop for it. The device is capable of reading and writing random access data files (unlike a datacassette). If a record being sought has been overshot the drive advances the tape until it loops around to the beginning and continues seeking from there.[2]

According to *Embedded Systems* magazine, the Exatron Stringy Floppy uses Manchester encoding, achieving 14K read-write speeds and the code controlling the device was developed by Li-Chen Wang, who also wrote a Tiny BASIC, the basis for the TRS-80 Model I Level I BASIC.

In the July 1983 issue of *Compute!'s Gazette* the Exatron Stringy Floppy for the Commodore VIC-20 and the 64 was reviewed. Calling the peripheral "a viable alternative" to tape or disk, the magazine noted that "under ideal conditions, a Stringy Floppy can outperform a VIC-1540/1541 disk drive". Texas Instruments licensed the Stringy Floppy as the Waferdrive for its TI 99/2 and CC-40 computers.[2]

The Exatron drive was initially used in the Prophet-10 music synthesizer and was later replaced with a micro-cassette drive from Braemar, reportedly due to unreliability and poor mutual compatibility of the former.[3]

Cartridges, or "wafers", were available with tape lengths ranging from 5 to 75 feet.[1] Known data capacities/tape length are: 4 kB/5 feet, 16 kB/20 feet, 48 kB/50 feet, and 64 kB/75 feet.[4] One complete cycle through a 20-foot tape takes 55 to 65 seconds, depending on the number of files on it.[2]

See also

- ZX Microdrive
- Rotronics Wafadrive

References

1. Barry, John (1981-08-31). "Stringy Floppy from Exatron" (https://books.google.com/books?id=rD0EAAAAMBAJ&lpg=PA44&pg=PA47#v=onepage&q&f=true). *InfoWorld*. pp. 47–48. Retrieved 15 February 2015.
2. Halfhill, Tom R. (July 1983). "Exatron Stringy Floppy for VIC-20 and 64" (https://archive.org/stream/1983-07-computegazette/Compute_Gazette_Issue_01_1983_Jul#page/n59/mode/2up). *Compute!'s Gazette*. pp. 58–62. Retrieved 6 February 2016.
3. Reid, Gordon (March 1999). "Sequential Circuits – Prophet Synthesizers 5 & 10 (Retro)" (https://web.archive.org/web/20160203065241/http://www.soundonsound.com/sos/mar99/articles/retroprophet.htm). *Sound on Sound*. Archived from the original (http://www.soundonsound.com/sos/mar99/articles/retroprophet.htm) on 3 February 2016. Retrieved January 23, 2015.
4. Reed, Matthew. "The Exatron Stringy Floppy" (http://www.trs-80.org/exatron-stringy-floppy/). Retrieved 23 March 2014.

External links

- Exatron Stringy Floppy as described by Bill Fletcher (http://www.digibarn.com/collections/devices/stringy-floppy/)
- Getting Files off Stringy Floppy Wafers for use in Emulators (http://www.classic-computers.org.nz/system-80/software_esf_archive-imaging.htm)
- Advertisements (http://www.trs-80.org/exatron-stringy-floppy/)
- Exatron Official Website (http://www.exatron.com/)