

Memorex 550 Flexible Disc File

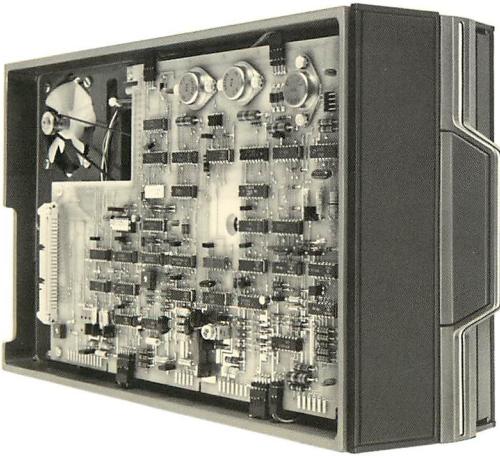
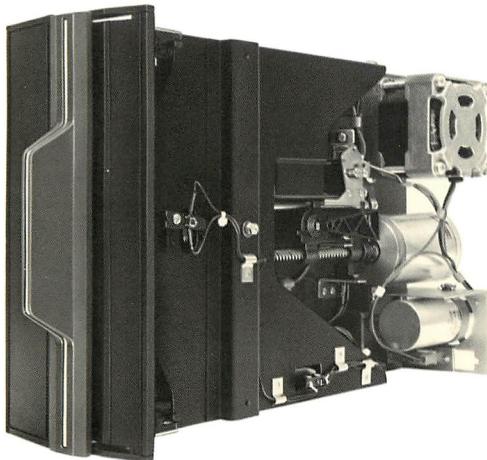
The Memorex 550 Flexible Disc File is a compact, direct access, disc storage unit that is used to record and read back digital information. Utilizing a Memorex Markette Disc Cartridge or IBM Diskette, the recording capacity of the 550 is 243 kilobytes in IBM 3740 format or up to 800 kilobytes of unformatted data.

This new file from Memorex contains a disc drive mechanism, read/write head, head positioning device and local control electronics that are assembled on a single printed circuit board. Among the file functions on the PCB are read/write amplification and transition detection, index detection, and drivers for both track positioning and head loading.

The 550 features the high reliability and performance levels that are so critical for a variety of information storage and processing applications—data entry, small business systems, terminals, point-of-sale, programmable calculators, word processing, control and test systems and mini/microcomputers. Additionally, operational simplicity and fail-safe functions limit the level of operator training that is required.

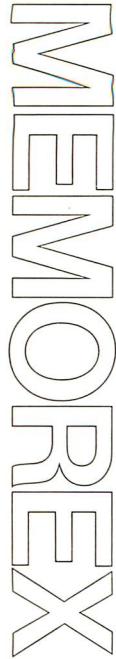
An exclusive door-controlled latch/eject mechanism on the 550 makes cartridge insertion and removal quite literally a "pop-in/pop-out" operation. A "lock stop" feature also makes it impossible to close the door on a cartridge that is not fully inserted or removed.

The flexible disc cartridge employed in the 550 is made of a 7 $\frac{1}{8}$ " polyester disc substrate coated with a magnetic oxide. For protection during handling, operation and storage, the cartridge is enclosed in a flexible plastic envelope that is 8" square by 1/16" thick.



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MEMOREX



550 Flexible
Disc File

Key Features

High Reliability

550 data transfer reliability is 10^9 bits read/soft error and 10^{12} bits read/hard error in normal operation. MTBF is 9,000 hours; MTTR is $\frac{1}{2}$ hour.

Improved Packaging

An advanced design concept permits the mounting of four 550 units vertically or two horizontally in a standard 19" rack. A structurally unique base material, fiberglass reinforced thermosetting polyester, provides high dimensional consistency and stability, and excellent rigidity-to-weight ratio. As a result the 550 is substantially lighter than previous models.

Reduced Power Consumption

A built-in circuit reduces the head positioner power by 95%, 15 milliseconds after the last stepping command.

Double Density

With an appropriate controller the 550 can be operated in the double density mode (MFM or M²FM recording) without modification or additional electronics. Encoding and decoding are performed in the controller.

Drive Select

The drive select circuitry provided allows the units to be connected and operated in either radial or parallel mode.

Media

Memorex, a leading manufacturer of precision magnetic recording media, can assure an optimum hardware/media relationship with its Markette disc cartridge. Media life, in conjunction with the 550, is 5×10^6 passes/track.

Options

Two-sided Recording (Flip Disc)

A second Index Transducer can be added to the 550 to permit recording on the reverse side of a disc when it is "flipped" over.

File Busy Indicator

A lamp may be added on the front panel to indicate when the unit is in the read or write mode.

Program-controlled Door Lock

A solenoid-operated lock, internal to the machine, may be installed to prevent opening of the door when so directed by the controller.

Write Protect

A solid state sensor can be provided that will sense the presence or absence of the standard ANSI write protect notch. This will prevent writing on the disc.

Hard Sector Separator

Circuitry can be included in the 550 to distinguish between the Index hole and up to 32 sector holes when the appropriate disc is used.

Data/Clock Separator

Special lines containing the separated data or separated clock information may be added to the unit.

Specifications

Capacity

FM IBM Format 243,000 bytes
Unformatted 401,000 bytes

MFM or M²FM
N/A
802,000 bytes

Recording Density

Inner Track: 3268 BPI
Outer Track: 1836 BPI
Track Density: 48 TPI

6536 BPI
3672 BPI
48 TPI

Data Transfer Rate

250 kb/sec

500 kb/sec

Data Retrieval Times

Average Latency: 83 msec.
(360 rpm)
Access Time: 1 Track 8 msec.
Multi-track Settle Time 6 msec./track
Head Load Time: 8 msec.
35 msec.

Power Requirements

AC	110 volts ($\pm 15\%$)	50/60 Hz ($\pm 1\%$)
	220 volts ($\pm 15\%$)	50/60 Hz ($\pm 1\%$)
DC	+24 volts ($\pm 5\%$)	1.5 amps
	+5 volts ($\pm 4\%$)	1.0 amps
	-5 volts ($\pm 4\%$)	0.2 amps

Operating Environment

Temperature: 50°F to 100°F
(10°C to 38°C)
Humidity: 20% RH to 80% RH, 78°F
(26°C) max. wet bulb

Physical Dimensions

Height:	8.75 inches (22.23 cm)
Width:	4.38 inches (11.13 cm)
Depth:	14.0 inches (35.56 cm)
Weight:	10.7 pounds (4.73 kg)
Bezel/Door Extension:	1.69 inches (4.29 cm)

Disc Cartridge

Type:	Memorex Markette or equivalent
Number of discs:	1
Tracks per surface:	77
Diameter:	7.88 inches
Cartridge dimensions:	8 x 8 x 1/16 inches
Coating:	Magnetic Oxide

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