

601 Disc Storage Drive Description

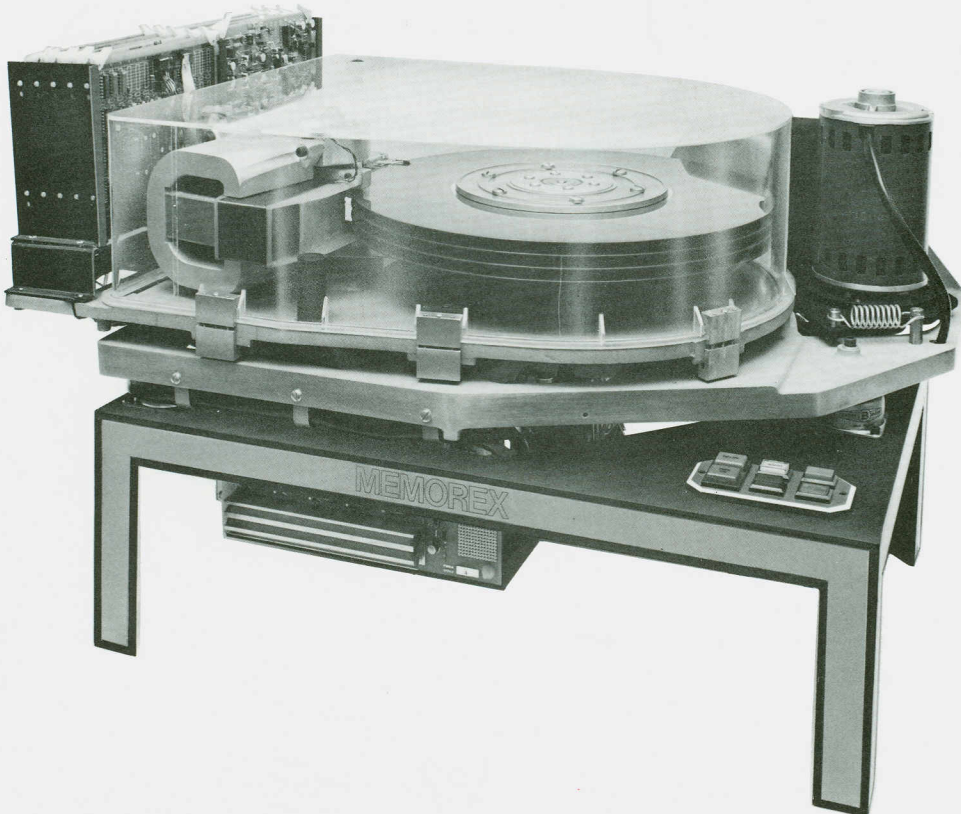
The Memorex 601 is a modular 25 Mb / 50 Mb / 75 Mb disc storage drive intended for a broad range of applications that require a cost-effective, highly reliable, low maintenance, operator independent unit. The 601 stores up to 75 megabytes of digital data on four fixed discs. Data is accessed by the read/write heads, which are positioned by a servo controlled actuator. An optional feature offers 500 thousand or 1 megabyte of fast access, fixed head storage.

The 601 consists of two basic assemblies: Deck Plate and Frame. The Deck Plate Assembly, which is factory sealed, contains the recording heads, actuator, spindle, absolute filter, and discs enclosed in an airtight replaceable module. This airtight enclosure, together with the closed loop, re-circulating air system, significantly reduces contamination from outside. A rotary actuator is used to position the heads. This mechanism has a higher level of performance at substantially reduced power than a linear

type positioner. The two recording heads per surface are of the low mass, low load flying slider type. The heads fly closer to the disc surface than previously possible and they exhibit a high degree of compliance in following the surface contours. This allows greater bit recording densities and improved performance. In addition a PCB Assembly is mounted on the deck plate outside the airtight enclosure.

The Frame Assembly contains the drive motor, power cables, and mounting hardware for the Deck Plate. Space is provided for an optional power supply.

The multi-layered logic circuits are located in the Electronics Cage that provide the local control functions and the interface to a control unit.



601 Disc Storage Drive Features

Superior Head Design

The highly compliant 601 heads fly extremely low, allowing greater bit densities and improved recording performance. The low load/low mass heads have been proven to be much less sensitive to orientation, shock, and vibration than previous designs.

Rotary Actuator

Head positioning is achieved through the use of a rotary actuator which requires 40% less power to perform the same function as a linear actuator. The lower heat and fewer parts provide a higher degree of reliability. The heads are allowed to contact the disc surface when it is not rotating, therefore, the need for a complex loading/unloading mechanism is eliminated.

Sealed Environment

The heads, discs, and actuator are enclosed in a sealed cover. Air inside the enclosure is continuously recirculated through absolute filters when the drive is in operation. This recirculation and continuous re-filtration assures minimum contamination and maximum reliability.

Disc Coating Characteristics

Oxide particles in the coating are circumferentially aligned to provide high signal output and resolution. Memorex 100X coating surface shield extends the useful disc life over 100 times the life of discs not coated.

Detailed Product Documentation

The 601 is supported with complete documentation:

Technical Manual
Illustrated Parts Catalog
Logics

Packaging Convenience

The compact design of the 601 allows it to be mounted in a standard 19 inch relay rack.

601 Disc Storage Drive Specifications

Capacity (unformatted)

Track Capacity	17,960 Bytes
Cylinder Capacity	72K/144K/216K Bytes
Drive Capacity	25/50/75 Megabytes

Data Retrieval Times

Average Latency	10.1 msec.
Minimum	
Access Time	10 msec.
Average	
Access Time	30 msec.
Maximum	
Access Time	60 msec.
Data Transfer Rate	885,000 bytes/sec.

Recording Characteristics

	Model 25	Model 50	Model 75
Data Surfaces	2	4	6
Data Heads	4	8	12
Heads per Surface	2	2	2
Tracks per Cylinder	4	8	12

	All Models
Data Tracks per Head	350
Tracks per Inch	300
Bits per Inch	5640
Head Load (grams)	10
Head Mass (grams)	0.25
Head Flying Height (microinches max)	25
Fixed Head Option (kilobytes)	500/1000
Servo Surfaces	1
Coating Thickness Nominal I.D. to O.D. (microinches)	35-50
Surface Smoothness (microinches)	Under 1.0

Dimensions

Width	17.5 in (44.9 cm)
Height	12.5 in (32.1 cm)*
Depth	28.5 in (73.1 cm)
	*16½ in (42.3 cm) with power supply
Weight	65.5 lbs. (29.7 kg)*
	*82.5 lbs. (37.4 kg) with power supply

Environmental Conditions

Operational	Non-Operational
Temperature	
+40/ +120°F (+5/ +50°C)	-40/ +130°F (-40/ +55°C)
Relative Humidity	
20%/90%	5%/90%

Power Requirements

117/208/230 VAC ± 10%, 60 Hz
220/380 VAC ± 10%, 50 Hz

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