601 Disc Storage Drive Description

The Memorex® 601 Disc Storage Drive is a modular, 25 Mb / 50 Mb / 75 Mb disc storage drive intended for a broad range of applications that requires 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, recirculating 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. The local control and interface electronics are 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.

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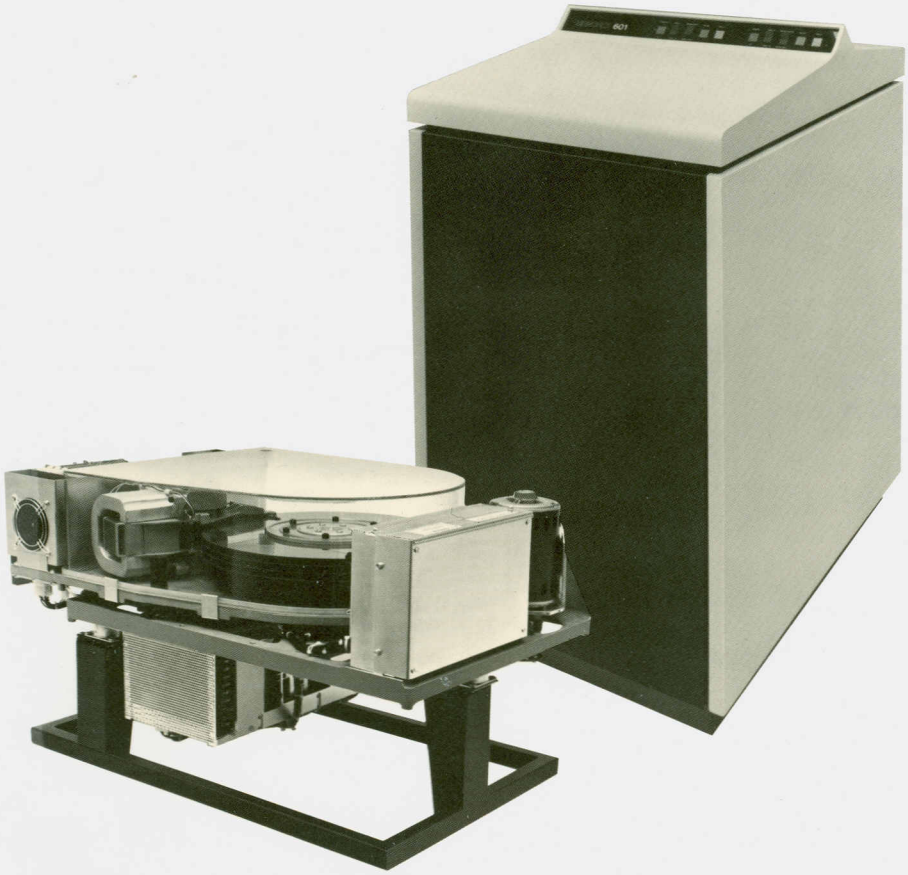
601 OEM Disc Storage Drive



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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.

Options

Dual Port
The Dual Port option on the 601 provides a means for sharing the drive between two controllers on the data channels of one or two computers allowing access to a common data base.

Power Supply
A Power Supply to provide all necessary DC power is available for mounting directly under the disc drive frame assembly or remotely in another part of the disc cabinet.

Fixed Head Storage
Thirty or sixty fixed heads (head per track) may be included in the drive to provide 500 or 1,000 kilobytes of fast access storage. The 10.1 millisecond average access time makes this option useful for memory type operations.

Control Panel
A panel with switches and indicators for control and monitoring of disc drive operations may be mounted on a standard 19 inch enclosure.

Rack Mount
The 601 may be mounted on extender slides to provide easy access to the complete unit. The Rack Mount package includes slides, lock mechanism and hardware for mounting.

VFO Data Separator/MFM Data Encoder
A specially designed, highly reliable VFO Data Separator/MFM Data Encoder provides for the transfer of standardized data between the drive and controller.

Specifications

Capacity (unformatted)

Track Capacity	17,920 Bytes
Cylinder Capacity	72K/143K/215K Bytes
Drive Capacity	25/50/75 Megabytes

Data Retrieval Times

	Horizontal	Vertical
Average Latency	10.1 msec.	10.1 msec.
Access Time		
Minimum	7 msec.	7 msec.
Average	32 msec.	35 msec.
Maximum	65 msec.	75 msec.
Data Transfer Rate	885K bytes/sec.	885K 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
Servo Surfaces	1	1	1

	All Models
Data Tracks per Head	350
Tracks per Inch	300
Bits per Inch	5636
Head Load (grams)	10
Head Mass (grams)	0.25
Head Flying Height (μ in)	25
Fixed Head Option (kilobytes)	500/1000

Dimensions

Width	17.5 in (44.5 cm)
Height	10.0 in (25.4 cm)*
Depth	28.5 in (72.4 cm)

*15.0 in (38.1 cm) with power supply

Weight	89.0 lbs. (40.4 kg)*

*122.0 lbs. (55.4 kg) with power supply

Environmental Conditions

Operational	Non-Operational
Temperature	
+50°/+110°F (+10°/+43°C)	−40°/+140°F (−40°/+60°C)
Relative Humidity	
10%/90%	10%/90%

Power Requirements
117/208/230 VAC ± 10%, 60 Hz
100/110/125/200/220/230/240 VAC ± 10%, 50 Hz

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