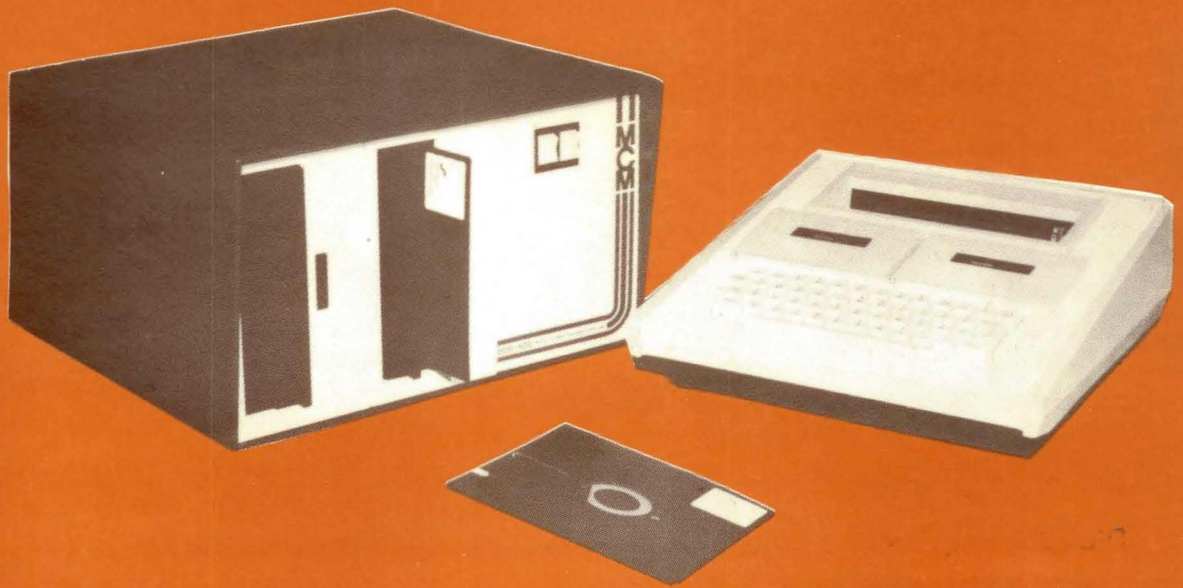


# MCM

World's first  
portable full-service  
APL computer.  
World wide  
distribution/service.



## SDS - 250 / DDS - 500

### DISKETTE SUBSYSTEMS

The MCM DISKETTE SYSTEM provides the user with totally random on-line storage. Access time for any random files are typically one second, under control of the MCM Virtual Memory System. In order to meet the demands of both large and small applications, MCM offers two models - the SDS-250 Single Diskette and the DDS-500 Dual Diskette Systems. With the exception of the additional disk in the DDS-500, both systems are identical.

Each DISKETTE provides immediate access to over 250,000 characters of online stored data and programs. If your data requirements exceed the 500,000 character capacity of the DDS-500 - simply add as many SDS-250's or DDS-500's as required, up to a maximum of eight drives (2 megabytes).

Each system includes a number of advanced features designed to enhance performance and extend the life of the unit. Some of these features include; a patented diskette/clamping registration design which eliminates the possibility of damage to the diskette due to misregistration and guarantees over 30,000 interchanges with each diskette; proprietary ceramic read/write head to provide media life exceeding 3.5 million passes per track and head

life exceeding 15,000 power-on hours; and activity light indicating drive in use; and RELIABILITY with an average in excess of 8000 operating hours between failures specified under normal usage conditions.

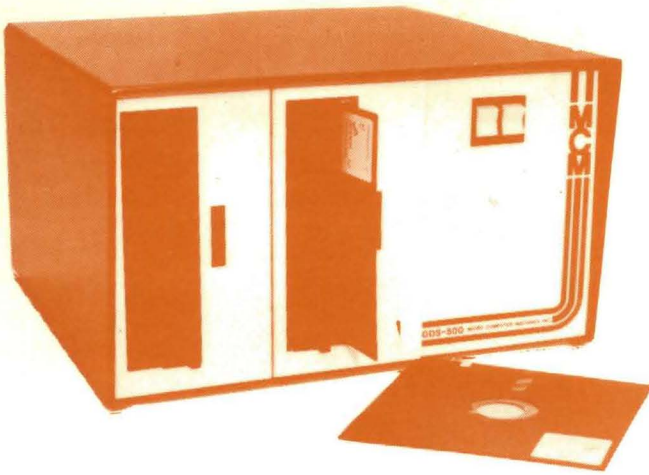
Both DISKETTE Systems operate under MCM's highly regarded Virtual Operating System (AVS), and External Allocation System (EASY), allowing both tapes and diskettes to be accessed interchangeably. No program modifications are required.

Each diskette contains 208 alternate sectors which are used to replace any data sector which may become defective. This reduces the possibility of failure by a factor in excess of 100. The system also maintains two redundancy check sums per sector with full read after write and bit checking for every bit written on the disk.

Access method is Random with dynamic recovery in the case of write error. First fit allocation minimizes seek time.

THE DDS-500 & SDS-250 - LOGICAL EXTENSIONS OF THE MCM MICRO COMPUTER SYSTEM.

## SPECIFICATIONS



### SDS-250 and DDS-500 DISKETTE SUBSYSTEMS

#### 1. PERFORMANCE SPECIFICATIONS

##### CAPACITY

Per Diskette	250 kilobytes (actual data) max.
Per Track	4096 bytes (actual data) max.
Sector	16 per track
Per Sector	256 bytes
Security	
Per Diskette	208 alternate sectors

##### TRANSFER RATE

Write	330 ms/sector
Read	165 ms/sector

SECTOR LATENCY (AVERAGE) 165 ms

##### TRACK ACCESS TIME

Per Track 10 ms

HEAD LOAD TIME 35 ms

#### 2. FUNCTIONAL SPECIFICATIONS

Rotating Speed	360 RPM
Recording Density (inside track)	3200 bpi
Flux Density	6400 fci
Track Density	48 tpi
Tracks	77
Physical Sectors	16
Index	1
Encoding Method	FM
Media Requirements	32 Hard Sector Diskette

#### 3. PHYSICAL SPECIFICATIONS

##### Environmental Limits

Ambient Temperature	10°C to 38°C 50°F to 100°F
Relative Humidity	20% to 80% (without condensation)

##### AC Power Requirements

50/60 Hz $\pm$ 0.5 Hz	
100/115 VAC	100 to 127V @ 1.8A (DDS) typical 1.4A (SDS)
Installations	
200/230 VAC	200 to 253V @ .95A (DDS) typical .75A (SDS)
Installations	

##### Mechanical Dimensions

Width	44.5 cm (17.25 in.)
Depth	45 cm (17.5 in.)
Height	27.5 cm (10.75 in.)
Weight	22 kg (50 lbs.)

Convenience outlets are provided at the rear of the chassis to facilitate connection of other equipment.

#### 4. RELIABILITY SPECIFICATIONS

MTBF:	5000 Power-On hours under heavy usage
Mean Time Between Failure	8000 Power-On hours under typical usage
PM:	Every 5000 POH under heavy usage
Preventative Maintenance Frequency	Every 15000 POH under typical usage
MTTR:	
Mean Time to Repair	30 minutes
Error Rates:	
Soft Read Errors	1 per 10 <sup>9</sup> bits read
Hard Read Errors	1 per 10 <sup>12</sup> bits read
Seek Errors	1 per 10 <sup>6</sup> seeks
Media Life:	
Passes per Track	3.5 x 10 <sup>6</sup>
Insertions	30000+

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