



## ***MSD Super Disk Drives Maximize Commodore® Speed and Capacity***

Micro Systems Development Super Disk Drives are Commodore compatible disk drives. They are designed to be interfaced to the complete line of Commodore computers.

The Super Disk Drives are high quality "smart" disk drives that do not require the use of any memory in the computer. Instead, the Super Disk Drives contain their own microprocessor and memory — making it possible for the computer to send the drives a command and then continue other operations. The disk drive, in turn, processes the command and performs the specified function.

The Super Disk Drives are upward compatible with disks that have been formatted on a Commodore 2040 disk drive, and are read/write compatible with disks from the Commodore 2031, 4040, 1540, and 1541 disk drives. This means that programs written on the Super Disk Drives can be used with the 2031, 4040, 1540, 1541 and vice versa.

The interfacing to the Commodore computers is accomplished through either the Commodore serial interface bus or the Commodore IEEE interface bus. The IEEE parallel interface has compatibility over the complete Commodore computer line: Commodore Series 2001 (BASIC 3.0 or higher); Commodore Series 3000 (BASIC 3.0 or higher); Commodore Series 4000 (BASIC 4.0); Commodore Series 8000 (BASIC 4.0); Commodore 64; and Commodore VIC-20.

## Super Disk Drive

The MSD Super Disk Drive (SD-1) offers more than Commodore® compatibility. The larger 4K buffer memory is a significant advantage to programmers for creating more powerful programs. It opens more files at any time, and many internal operations are faster.

Unique external packaging of the SD-1 means less physical space is required, saving dollars in ergonomic space efficiency. Damaging heat retention is also minimized.

Internal state-of-the-art design provides greater durability for longer life, and more speed and power for internal operations. Formatting diskettes can be accomplished in 18 seconds, and utility commands executed within the drive are faster.

MSD Serial and IEEE-488 interfaces can be used with the SD-1. Both are compatible with the complete Commodore computer line. IEEE operations means more than twice the speed of serial interfacing which results in cost effective labor savings.

## Dual Disk Drive

The Dual Disk Drive (SD-2) offers the same advantages at the SD-1 including additional power. The IEEE-488 interface enhances the SD-2 with greater speed.

Many programs requiring both program and data disks can be run without stopping to change disks. The dual capacity of the SD-2 means no more time and effort wasted on the load/unload/load process. Information for backup purposes can be transferred from one disk to another in one step.

The SD-2 can be configured as a single disk drive, and costs less than that of two single disk drives.

### SD-1

- 4K buffer memory
- Unique packaging design
  - takes up less physical space
  - minimizes component-damaging heat
- State-of-the-art internal design
  - greater durability and reliability
  - more speed and power
- Serial and IEEE Parallel interface
  - IEEE provides twice the speed of serial
  - compatibility with all Commodore computers

### SD-2

- 6K buffer memory
- Dual disk capability
- Disks can be copied faster and easier for backup purposes.
- Costs less than two single disk drives.
- Can be configured as two single drives or one dual drive.

## MSD SUPER DISK DRIVE TECHNICAL SPECIFICATIONS

### STORAGE\*

Total Capacity	174848 bytes per diskette
Sequential	168656 bytes per diskette
Relative	167132 bytes per diskette
	65535 records per file
Directory Entries	144 per diskette
Blocks	683 total per diskette
	664 available per diskette
Tracks	35 per diskette
Sectors	17 to 21 per track
Bytes	256 per sector
Diskettes	Standard 5 1/4", single sided, single density

\*NOTE: The SD-2 contains two disk drive mechanisms and can therefore handle two times the above capacities (one for each diskette).

### SOFTWARE

16K Bytes Operating System  
 4K RAM buffer area (6K for the SD-2)  
 Microprocessor based disk controller (6511Q)  
 Commodore Compatible Serial Bus Interface  
 Commodore Compatible IEEE Parallel Bus Interface

### PHYSICAL

Dimensions	SD-1	SD-2
Height	5.9" (150 mm)	5.9" (150 mm)
Width	3.9" (100 mm)	5.6" (143 mm)
Depth	12.4" (315 mm)	12.4" (315 mm)

### INTERFACE

Dual Commodore compatible Serial Bus  
 Commodore compatible IEEE Parallel Bus  
 Jumpers for selecting device number 8, 9, 10, or 11.

### ELECTRICAL REQUIREMENTS

Voltage 110 or optional 220 VAC  
 Frequency 50 or 60 Hertz  
 Power 50 Watts

