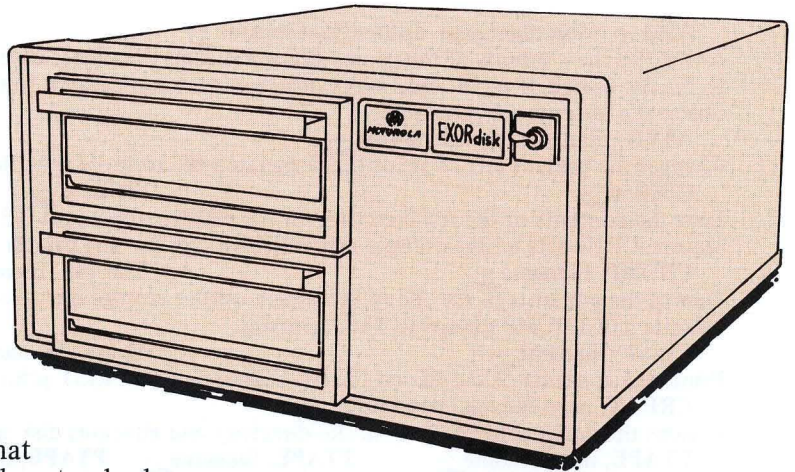




MOTOROLA MICROSYSTEMS

M6800 EXORdisk



The EXORdisk is a "floppy disk" storage system that extends the EXORciser capacity by up to one-million bytes of memory. Together with the EXORciser, and a separately available Interface Module, it provides a complete program-development system whose high-speed capabilities can be matched only by much more expensive minicomputers. The floppy disk system allows the user to assemble, in 30 seconds, programs that would require up to 2½ hour assembly time with a standard ASR-33 teletype reader.

The EXORdisk system consists of the disk-drive mechanism and a diskette which houses the EXORciser Flexible Disk Operating System II, EDOS II. The latter controls the EXORdisk and interface operations. Functions include the loading of data from the EXORdisk to the EXORciser memory or different diskettes and between diskettes and other storage media such as paper tape and cassette. If desired, the EDOS II program may be purchased on a separate diskette which contains, in addition, the M6800 Resident Editor and Assembler programs. This permits disk-to-disk program editing and assembling in addition to the various transfer functions.

The EXORdisk connects to the EXORciser via an interface module that is an optional component of the EXORciser. This module can be used to simultaneously connect an EXORTape peripheral to the EXORciser.

The EDOS II program will handle and control up to four disk drives, thereby offering memory capacity ranging from 256,256 eight-bit bytes to over 1-million bytes.

Specifications

Diskette Format:

2,050,048 Bits/Diskette
256,256 Bytes/Diskette
77 Tracks/Diskette
26 Sectors/Track
128 Bytes/Sector

Performance:

Rotational Speed – 360 RPM
Track-To-Track Access Time – 10 ms
Head Load – 40 ms
Sector Read/Write Time – 5 ms
Average Latency Time – 83 ms
Interrecord Time – 1 ms
Head Unload Time Out – 700 ms
(for maximum head and media life)

Power Requirements: 115/220 Vac, 50/60 Hz, 200 Watts

Physical Characteristics: (2-drive system)

L x H x D 17 x 8 3/4 x 17 inches
Weight 65 pounds

Electrical:

All signals are TTL, Low-True
16 Output Lines, 8 Input Lines

Options and Ordering Information

Part Number	Description
M68FD3602	EXORdisk with two drives (includes appropriate two-drive cable)
M68FD3602-12	EXORdisk for 220 V, 50/60 Hz operation
M68FD3602-19	19-inch rack mounting kit
M68FD3602-24	Cable for expanding from two-drive to four-drive system.
M68IFC	M6800 EXORciser Interface Module
M68XAE6812D	Diskette containing EDOS II, M6800 Resident Editor and M6800 Resident Assembler

EXORdisk Commands

ASM, p, sourcefilename, destinationfilename ↷

Assembles the contents of the source file and directs the object to the destination file. If p = 3, only a listing is generated to the list device. If p = 4, only a hex object output is generated to the output object file. If p = 2, both listing and object file outputs are generated.

ATTR, filename, newattributes ↷

Changes the present attributes of the designated file to those specified in the new attributes field.

CDIR:u ↷

PDIR: u ↷

Lists the contents of the file directory on the diskette drive unit 0-3. Lists the filenames, attributes, and file size in sectors. CDIR lists on the console and PDIR lists on the line printer.

CDUMP, filename ↷

TDUMP, filename ↷

Dumps the contents of the file to the punch output storage device or the communication link device. CDUMP dumps to cassette and TDUMP dumps to TTY terminal.

CLIST, filename ↷

PLIST, filename ↷

Prints the contents of the file on the list output device. CLIST prints on the console and PLIST prints on the line printer.

CREAT, newfilename, newfilesize ↷

Creates the designated filename in the directory and allocates disk space equal to the size.

CTAPE, newfilename ↷

TTAPE, filename ↷

PTAPE, filename ↷

Loads the contents of the reader device into the specified file name on diskette. CTAPE transfers from cassette, PTAPE transfers from a high speed paper tape reader, and TTAPE transfers from a TTY terminal.

CXGEN ↷

PXGEN ↷

TXGEN ↷

Enables system generation of other EDOS versions that may become available in the future.

DUP ↷

Copies the contents of the diskette in drive unit 0 onto the diskette in drive unit 1.

EDIT, inputfilename, newoutputfilename ↷

EDIT, newoutputfilename ↷

Enables editing of the input file's contents. Edited data is stored into the output file.

EXBUG ↷

Returns to the EXORciser EXbug control program.

HOME: u ↷

Positions the disk head on drive unit u (0-3) to track 0.

INIT: u ↷

INITX ↷

Initiates the file directory on the diskette in drive unit u. Clears any existing user files on the diskette.

INITX implies drive unit 0 and u in INIT: u designates drive unit 1, 2, or 3.

LOAD, objectfilename ↷

Loads the contents of the file into RAM memory for execution.

MERGE, newfilename, filename1, filename2. . . filename ↷

Creates a new file which is a concentration of filenames 1-n, in that order.

PURGE: u, filename1, filename2. . . filename ↷

Deletes the designated files from the diskette in drive unit u (0-3) and then repacks the contents of that diskette, making disk space available for additional files.

RENAM, oldfilename, newfilename ↷

Renames the old file with the new file name.

Interface Command and Data Words

all signals are compatible with MC6820 PIA Chips

Input Data and Status: 8 bits, negative true, PIA address
ECO0, bits 0-7
Logic 1: 0 to 0.4 volts
Logic 0: 2.4 volts min

Output Data: 8 bits, negative true, PIA address
ECO6, bits 0-7.

Output Commands: 8 bits, negative true, PIA address
ECO2, bits 0-7.

Note: IRQA1 bit 7 is device BUSY.

COMMAND FUNCTIONS

SEEK AND VERIFY: Seeks Selected Track and Verifies Track Address from ID Field:

SEEK TRACK 0: Seeks Track 0

SECTOR AND UNIT SELECT: Specifies Sector and Unit Number for Read/Write Operation

TRACK SELECT: Specifies Selected Track to be used by Next Seek

WRITE: Write Contents of Write Buffer to Selected Sector and Unit on existing track

READ: Reads Contents of Selected Sector into Read Buffer
WRITE DELETED DATA ADDRESS MARK: Same as Write but uses header in Data Field which can later be detected in Read Operation

READ CRC: Same as Read but no data is transferred to the Read Buffer. Used to verify integrity of data previously written

SHIFT WRITE BUFFER: Loads Data into Write Buffer

SHIFT READ BUFFER: Inputs Data from Read Buffer

GATE STATUS: Gates Status or Data onto Input Data Lines.



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