MICROPERIPHERALS™
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SPECIFICATION

FDOS - II

(FLOPPY DISK OPERATING SYSTEM)

FOR iCOM MODEL FD360 FLOPPY DISK

GENERAL DESCRIPTION

The iCOM Floppy Disk Operating System (FDOS) works in conjuntion with iCOM's Model FD360 Floppy Disk to provide several unique features designed for direct use with microcomputers and microprocessors. The FD360 Interface Kits are supplied ready to plug directly into the user's microcomputer. Or, the iCOM Type 50 General Purpose Interface may be used to interface the FD360 to most microporcessors using only three latching I/O chips. In addition to direct hardware compatibility with the microcomputer, the FD360 is fully supported with a complete Flexible Disk Operating System (FDOS) which speeds program development time by a factor of 100 over a Teletype based system.

FD360 HARDWARE FEATURES

- Direct Hardware compatibility with most microcomputers - includes all interconnecting ribbon cables.
- Fully supported with iCOM's Flexible Disk Operating System (FDOS) package - see "Software".
- Includes all the following features of iCOM's proven FD360 Floppy Disk Subsystem:
  - both disk head and pressure pad retract from media when not reading or writing to increase media life.
  - motor shuts down on load and unload to reduce media hub wear.
  - data format is IBM 3540 and 3740 compatible.
  - data storage capacity of 256,256 bytes per diskette.
  - controller handles up to four drive units for total storage capacity of more than 1 megabyte.

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- each drive unit may be individually write-protected.

- controller contains two separate 128-byte input and output buffers, enabling completely asynchronous byte transfers to/from the CPU at data rates up to 500K bytes per second.

- complete hardware track seek and seek verification.

- complete hardware CRC generation and verification.

POWERFUL FDOS-II SOFTWARE

. A COMPLETE PROGRAM DEVELOPMENT PACKAGE

The FD360 FDOS-II is a complete program development system which, along with the microcomputer's monitor, provides high-speed software development tools usually available only on large mini-computer systems. With iCOM FDOS-II, the operator virtually eliminates the need for paper tape or cassette storage and handling. Program storage and back-up is now on low-cost, reusable, compact diskettes which are readily available from a number of sources including iCOM. FDOS-II contains such single command operations as disk-to-disk program editing and assembling; disk-to-memory program loading; named files; disk-to-punch device; reader device-to-disk; and disk-to-disk transferring. Using FDOS-II the operator can achieve at least a 50-fold increase in program development throughput. The time required for a typical edit/assembly sequence is reduced to minutes, as opposed to almost 3 hours required when using a Teletype, or 45 minutes when using a high speed paper tape reader or cassette unit.

. INCLUDES RESIDENT FDOS, PLUS ASSEMBLER AND EDITOR

The resident FDOS-II is contained in a PROM associated with the FD360 Interface. FDOS-II contains its own disk-resident assembler and editor which are functionally identical to the microcomputer's stand-alone editor and assembler. The microcomputer's monitor remains intact, thus retaining all existing non-FDOS operations. FDOS-II is operational on any system containing an iCOM FD360 with from one to four disk drive units, and FDOS-II can utilize all disk storage capacity available.

. VARIABLE-LENGTH NAMED FILES

The storage area on each diskette is available for any number of files of any length from a single sector up to an entire diskette. The files may contain program source data, program object data, or user generated data. Files are specified

by a 1-5 character filename, and any number of files may be merged to create a new file. Any file may be renamed, or files may be deleted (FDOS repacks the diskette to make the deleted filespace available). Also files may be tagged with attributes (i.e. a file may be declared permanent, not allowing it to be inadvertently deleted).

. POWERFUL COMMAND REPERTOIRE AVAILABLE:

NOTE: Filenames are specified as xxxxx or xxxxx:u, where xxxxx is the 1-5 character alphanumeric filename and u is drive unit number 0, 1, 2, or 3 into which the diskette is loaded. If :u is omitted, drive unit "0" is assumed.

ASMB,source filename,destination filename,p

assembles the contents of the source file and directs the object to the destination file. p is the pass number which determines whether the assembly should produce a listing only, object only, or both.

BUILD,destination filename

enables the user to build a new source file onto the diskette from the console keyboard.

CHGAT,filename,new attributes

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

COPY

copies the contents of the diskette in drive unit "0" onto the diskette in drive unit "1".

CREAT,filename,size

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

DELET:u,filename 1,filename 2,.....,filename n

deletes the designated files from the diskette in drive unit u, and then repacks the contents of that diskette, making the disk space available for additional files.

DUMP,filename

dumps the contents of the file to the punch output storage device, or communication link device.

EDIT,input filename,output filename

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

HOME,u

positions the disk head on drive unit "u" to track 0.

INIT,u

initializes the file directory on the diskette in drive unit "u". Clears any existing user files on that diskette.

LIST,u

lists the contents of the file directory on the diskette in drive unit u. Lists the filenames, attributes, and file sizes in sectors.

LOAD,destination filename

loads the contents of the reader device into the specified file on diskette.

MERGE,new filename,filename 1,filename 2,....,filename n

creates a new file which is a concatenation of filenames 1-n, in that order.

MNTR

returns to the microcomputer system monitor.

PRINT,filename

prints the contents of the file on the list output device.

RENAM,old filename, new filename

renames the old file with the new filename.

RUN,filename

loads the contents of the file into RAM for execution.

XGEN

enables system generation of other iCOM FDOS versions as might become available in the future.