



MACH5TM

CARTRIDGE & DISK

INSTRUCTION MANUAL

for

COMMODORE 64TM and 1541 DISK

CARTRIDGE FAST LOADER

NOTE: MACH 5 is designed for use with the Commodore 64™ and 1541™ disk drive.

SET UP

1. Make sure that your computer is turned off before inserting or removing your MACH 5 CARTRIDGE.
2. Insert the MACH 5 CARTRIDGE into the cartridge slot on your computer.
3. Turn on your Disk Drive and your Computer.

After the computer has been turned on, the words "**MACH-5 LOADER ENGAGED!**" will be displayed on the screen.

If the above does not occur or if the screen fails to come up, turn off all equipment and try again, starting with step 1 above.

MENU

Type "**← M**" to display the command menu at any time.

The following commands are available with MACH 5 CARTRIDGE.

COMMAND FUNCTION

- | | |
|----|--|
| \$ | List a directory on the screen without erasing the program in memory.
While listing a disk directory to the screen, the display scrolling may be paused and unpaused by pressing the 'space' bar.
To load a file from a directory that has been listed to the screen, simply move the cursor to the leftmost column next to the file name, and use the appropriate command key to load the file. |
| @ | COMMAND Send a DOS command to the disk drive (Ex. @I is the same as OPEN 15,8,15,"I": CLOSE 15)
By pressing the '@' key (which is used to send a command to the drive) and the 'return', the error condition of the drive may be displayed. |
| / | FILENAME The same as LOAD "FILENAME",8 |
| £ | The '£' key, followed by a file name, will not only load a BASIC file, but will also immediately run the file. EXAMPLE: LOAD "filename", 8:RUN |

↑	FILENAME	The same as LOAD "FILENAME",8,1
=	FILENAME	The same as SAVE "FILENAME",8
← *		The same as LOAD ":",8,1 When using the '← *' command, if the file does not auto-execute, the file will now be made to execute. EXAMPLE: LOAD ":",8,1:RUN
← P		The same as OPEN 4,4,7:CMD4 (Print upper/lower case)
← U		The same as OPEN4,4:CMD4 (Print upper case/graphics)
← C		The same as PRINT#4: CLOSE 4 (Close Printer)
← L		The same as LOAD" (add FILENAME", DEVICE#)
← S		The same as SAVE" (add FILENAME", DEVICE#)
← M		Display menu
← R		Disable Disk Drive RATTLE ON ERROR CHECK (To re-enable rattle, turn drive off and)
← D		Disable FAST LOADER but retain commands
← E		Enable FAST LOADER
← H		Hard copy print out of the screen. (screen dump)
← O		'O', will restore a BASIC program previously "NEW'd", or restore the program after a system reset. (This is equivalent to the BASIC command 'OLD').

ADDITIONAL INFORMATION

- To disable **COMMANDS**, but not affect **FAST LOADER** type **SYS 57043**
- To enable **COMMANDS ONLY** type **SYS 57054**
- To enable **COMMANDS** and **FAST LOADER** type **SYS 57051**
- To enable **FAST LOADER ONLY** type **SYS 57003** (with BASIC + 4K type **SYS 57013** to enable **FAST LOADER ONLY**)
- The directory list command "**S**" will use the device # for the last drive accessed. You may directly select a device by typing **Poke 186,DV**, where DV = Device number (8-11)
- The "↑", "@", "/", and "=" commands can reference device # 8 only.
- To perform a **LOAD** or **SAVE** to another device # you must use the "← L" or "← S" commands or normal BASIC syntax.
- Users of **SYSRES** (TM by Solidus International) can do fast

program file loads with MACH 5 but must use conventional BASIC syntax (i.e. LOAD "FILE", DR).

- There are very few programs that will not load with MACH 5 engaged. If a program does fail to load, try typing "**← D**" to disable the FAST LOADER rather than removing the CARTRIDGE. The time required to load a program depends on many factors including booting technique, error checking, etc. Speeds up to 500% of normal are possible with long, single file program loads. With copy protected programs it is usually possible to save a few seconds as well as drive wear by disabling the drive rattle. Some programs, however, may not load properly with the rattle disabled.
- After the computer is first turned on, be sure and wait for the disk light to go out before accessing the disk with a command such as "**\$**".
- If a scrambled (non-working) screen occurs when MACH 5 CARTRIDGE and/or a printer interface is connected to your printer the problem is most commonly a weak or failing power supply. See your local commodore dealer and try a different power supply.

BASIC + 4K

(Requires MACH 5 Disk)

BASIC + 4K makes available an additional 4096 bytes of memory for BASIC programming and is completely compatible with all of the standard CBM BASIC commands. This extra area can be used for larger BASIC programs, more information stored as variables, etc.

GETTING STARTED . . .

Insert the **MACH 5 DISK** into your disk drive and type **/BAS*** (If you are not using **MACH 5 CARTRIDGE**, type **LOAD "BAS*",8**). When the computer responds with "Ready", type **RUN**. **BASIC + 4K** will be automatically installed in memory.

MEMORY LOCATIONS . . .

When **BASIC + 4K** is loaded and operating in the computer, the

BASIC ROM routines are located from \$B000 to \$CFFF and the KERNAL ROM routines are located from \$E000 to \$FFFF. Free BASIC + 4K memory extends from \$0800 to \$AFFF (2048 to 45055).

FAST LOADING WITH BASIC + 4K . . .

When BASIC + 4K is installed, MACH 5 LOADER is automatically disengaged. The same thing occurs if run/stop — restore is pressed or if a 'BRK' is executed. To re-engage MACH 5 LOADER, type SYS 57013.

To disable BASIC + 4K, turn the computer off and then on again.

NOTE: Most compiled programs have memory conflicts and will not work properly with BASIC + 4K.

The extra commands do not work with BASIC + 4K.

DISK ORGANIZER

(REQUIRES MACH 5 CARTRIDGE & DISK)

MACH DISK ORGANIZER is a very useful disk file management system designed to assist you in cataloging your program disks and the files contained on them. Once disks have been cataloged by the system, the information is stored on a data disk.

Disk Organizer offers you a variety of ways to display this information on the screen, print it on any properly interfaced 80-column printer or search for specific files.

Disk Organizer maintains some very useful information about the files stored on your disk. It keeps track of the file name, the disk it is located on, the size of the file, what type of file it is and even it's location by track and sector on it's disk!

GETTING STARTED . . .

Insert the MACH 5 DISK into your disk drive and type **/DIS***. When the computer responds with "Ready", type RUN.

(NOTE: MACH 5 CARTRIDGE MUST BE INSTALLED TO USE THE DISK ORGANIZER.)

USING 1 or 2 DISK DRIVES . . .

Disk Organizer allows you to use two disk drives for catalog-

ing. The drive for accessing the data disk must always be device #8. You can use a disk drive with device #9 thru 11 as the drive that reads the directories of the disk you are going to catalog. You must specify the device # for your 2nd drive each time you load the program.

MAIN MENU . . .

Disk Organizer is very easy to use and simple to operate. Each function is well explained on the screen and you can cancel a function, most of the time, by pressing F8. If this is your first time using the program, you will need to prepare a data storage disk. (see F3 below)

OPTIONS

F1 — Add A Directory

Using this option will allow you to add a new disk with it's directory and files into the organizer system. As the files are read from the new disk, the file names will be sorted before they are stored on the data storage disk.

***IMPORTANT NOTE!** Each disk entered into the system must have a unique disk name! The program will not accept two disks with the same name.*

F2 — Delete A Directory

This option is used for deleting a single disk directory along with any information about it found in the Master List. Most of the time you will not be deleting directories but occasionally a disk may become obsolete, the disk may no longer be in your library or the file information needs to be updated.

F3 — Prepare New Data Disk

You will use this option to format and prepare a disk for use as a data storage disk with the Disk Organizer system. Once you have prepared a data storage disk, do not use it for any other purpose as it will decrease the number of directories that can be stored on it.

F4 — Print/Display Options

See section on "Print/Display Options Menu."

F5— Sort Catalogs

After disk directories have been added to a data storage disk, use this option to sort the directories and their file information into the Master List. The files are sorted numeric/alphabetical ac-

ording to the file names.

You can perform this option any time and the length of time it takes depends on how many directories there are that have been added to a data storage disk that have not yet been sorted into the Master List.

If you are going to want to search for a particular file name with the F6 option, it would be a good idea to do a sort first to make sure the Master List is up to date.

IMPORTANT NOTE! *The sort that is performed is a disk-based sort. The data storage disk needs to be in the proper drive.*

F6 — Search For File(s)

This option will find the occurrence of a file name, or any part of a file name, in the Master List. All occurrences will be displayed on the screen along with type of file, size of file, name of disk the file is located on and starting track and sector of file.

F7 — View/Change Disk Name

Use this option to change the name of a disk. Each disk directory added to a particular data storage must have a unique name. The system will not allow two disks to be cataloged on the same data storage disk with the same name.

F8 — DOS Options

Selecting this option allows you to perform five DOS functions without leaving the Disk Organizer; reading a disk directory, scratching a file, validating a disk, formatting a disk, and renaming a file. For more information on what these functions do, refer to your disk drive manual.

PRINT/DISPLAY OPTIONS MENU . . .

F1 — Display Single Directory

This option is used to display, on the screen, the file names of a single directory. Other file information is displayed along with the file name, including file size, file type, and it's track/sector location on the disk.

F2 — Print Single Directory

This option is used to print on an 80-column printer all of the file information of a single directory.

F3 — Print Complete Master List

This option is used to print all the files contained in the Master List. Each page is numbered, starting at '1'. Up to 57 file names

are printed on a single page along with the specific file information for each file name.

F4 — Display List of Disk Directories

Use this option to list the disk directories that are on a data storage disk to the screen.

F5 — Print List of PGR Files

This option will print a list of the file names from the Master List that are PRG (program) files.

F6 — Print List of SEQ Files

This option will print a list of the file names from the Master List that are SEQ (sequential) files.

F7 — Print List of OTHER Files

This option will print a list of the file names from the Master List that are REL (relative),USR (user), or DEL (deleted) files.

F8 — Return to Main Menu

ADDITIONAL FEATURES . . .

CTRL P — At any time, when there is the flashing prompt at the bottom of the screen, pressing the CTRL key and P will print the information displayed on the screen to the printer.

CTRL Q — Pressing the CTRL key and Q will terminate printing, screen displaying of information or searching for a file.

S Key — Pressing the S key during a screen listing will freeze the listing of information on screen until S is pressed again. You can use the CTRL P option to dump the screen to your printer while the listing is stopped.

RUN/STOP and RESTORE — Should the system "lock up" while trying to read a disk directory, hold down the RUN/STOP key and press the RESTORE key to return you to the main menu and "unlock" the system.

A data disk will be full when 130 directories have been entered, or less than 222 blocks remain "free" on the data disk.

ACCESS SOFTWARE

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New Commands

- * 10-second 1541 disk formatting
- * Internal change of drive number
- * All drive operations use internal drive number.
- * Hexidecimal, decimal and binary number conversions.

10 SECOND 1541 disk formatting

Format: @f:name,id

Operation: '@' denotes a disk command.

'f' invokes the special 1541 fast disk formatting.

'name' is the name of the new disk. up to 16 characters in length.

'id' is the two digit identification of the disk.

INTERNAL CHANGE OF DRIVE NUMBER

Format: @8, @9, @10, @11

Operation: '@' denotes a disk command.

'8, 9, 10 or 11' refers to the drive that will now be accessed for the following disk operations.

This process is the same as the BASIC statement "POKE 186,DN", where DN is the drive number.

ALL DRIVE OPERATIONS USE INTERNAL DRIVE NUMBER.

On previous versions of Mach-5, using the shorthand load and save commands always inserted '8,' or ',8,1'. Now, when using any of the disk oriented commands, the current drive number (found in memory location \$BA, decimal 186) is automatically inserted into the load/save/DOS command.

HEXIDECIMAL, DECIMAL AND BINARY NUMBER CONVERSIONS.

Format: \$HHHH

+DDDDDD

ZBBBBBBBBBBBBBBBB

Operation: The hexidecimal, decimal and binary equivalents of any of the input numbers will be displayed on the screen. Up to four hex digits (0-F), six decimal digits (0-9) or 16 binary (0-1) may be entered for conversion.