MachDOS

Version 3.7

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MachDOS Menu Functions

A. DISK DIRECTORY LIST.
Similar to DOS II. Minor change to read the entire
directory into memory before it is displayed. If MEM.SAV is
used, it will ask permission to overwrite the program area.
The biggest changes are:

   a) Sorted directory display. Sort options are sort by
   Name-Ext, Ext-Name, or no sort at all. See CONFIGUR
   utility to change.

   b) The directory is displayed two entries per line when
   directed to the screen. It is still one entry per line
   for other output devices (printer, disk file, etc)

   c) Directing the output to a disk file now works!

B. RUN CARTRIDGE.
Same as DOS II. If you are using Mach on one of the newer
XL series systems (excluding the 1200XL), you will have a
pleasant surprise. Mach switches the XL BASIC in an out to
give you more ram while operating in Mach mode. BASIC is
switched back in when you request option "B".

C. COPY FILE(s). Same as DOS II.

D. DELETE FILE(s). Same as DOS II.

E. RENAME FILE(s). Same as DOS II.

F. LOCK FILE(s). Same as DOS II.

G. UNLOCK FILE(s). Same as DOS II.

H. SAVE MACH.
Changed from DOS II to load an overlay from the boot disk.
If the system disk is not in D1:, Mach will ask you to
insert it. Don't worry if you have changed the density;
Mach will set it to load the overlay, then reset it to what
it was, if necessary, for you to write the Mach file at a
density different than the boot disk.

I. FORMAT DISK.

Similar to DOS II. The only difference is that if you try to boot a disk that was formatted under Mach but does not contain any operating system, you will NOT get a boot error. Instead, it will boot as though the disk drive was not turned on. If you have double sided drives and have configured the drive as double sided, Mach will use both sides (1427 free sectors or 360K).

J. DUPLICATE DISK.

Similar to DOS II with one major exception: after you have told Mach the source and destination drives, it will ask you if it is a "File" or "Sector" copy. Atari DOS II's "J" function is the same as the "File" option (only those sectors used by files are copied.

The Sector option performs a sector by sector copy of your disk, regardless of the contents.

K. BINARY SAVE. Same as DOS II.

L. BINARY LOAD. Same as DOS II.

M. RUN AT ADDRESS. Same as DOS II.

N. CREATE MEM SAV FILE. Same as DOS II.

O. DUPLICATE FILE(s).

The Mach DUP FILE is really a full one drive copy function. If you specify wild cards for more than one file, Mach will read as many files into memory as it can, then ask you to switch disks, repeating the process as times as necessary to complete the request. The files will be processed in alphabetical order.

P. SET DENSITY.

Asks you for the drive number to reverse the density (between single and double). The menu display will be updated to reflect the new density.

Q. CONVERT FILE(s).

Similar to the "O" function with one important difference: the output will be at the opposite density as the input. In other words, a single drive density converter!

R. SET DEFAULT DRIVE.
   Changes the drive which is to be assigned as D1:. In other
   words, if you say the default drive is 2, then all requests
   for D1: will be routed to drive 2, and all request for D2:
   will be routed to drive 1. Sounds a little confusing, but it
   won't be after you try it a couple of times.

V. SET WRITE VERIFY.
   Reverses the current Write verify status.

X. FIX SYS.
   Fix the non-resident portion of Mach in memory. Transfers
   to the cartridge or XL BASIC will have approximately 7k less
   ram, but transfers between DOS and the cartridge will take
   less than a half second.

MACHDOS Utilities

CONFIGUR.   This program is used to set Mach configuration options.

Options:

A-[set] Active Drives [On/Off]
Define the drives you have active. After pressing "A" hit the digit key corresponding to the drive you want to toggle. Remember, if you use RamDisk, you must make drive 4 active.

B-[set] File Buffers
Sets the number of 256 byte file buffers. This is the maximum number of files you can have open at any one time (try 3 or 4).

C-[set] Directory Sort
Cycles through directory sort options (none, Name-Ext, Ext-Name)

D-[set] System Lock
Toggles the resident console processor switch. Eliminates need to access disk when returning to Mach from Basic, or other cartridge. Uses an additional 7k of memory though.

E-[set] Ram Disk Type
Pressing this key cycles thru all supported Memory Expansion systems. List currently supports none, 130XE, AXLON, MOSAIC, INTEC boards as well as the 800+ and MACE modifications.

F-[set] Ram Disk Size
Pressing this key cycles thru the supported Ram Disk Sizes in 16k multiples. Note: this is the amount of memory available for the RamDisk. For example, the 130XE has 64k; the 288k 800+ has 240k for the ram disk (Mach gives you 950 DD sectors!).

G-Activate [deactivate] RamDisk
Toggles RamDisk switch. Note: this does not affect the running system, but will become effective the next time the system is booted.

H-Configure Drives
  Will   request   drive   number to configure. After entering
  it, will   display current setting for number of sides and
  density. Hitting the number next to sides or density will
  toggle that setting. Hitting RETURN will return to Drive
  question. Hitting escape or return will go return to main
  menu level.

START-Apply Changes to Mach
  Mach is modified to conform to the Parameters shown in the
  menu, and return to the main Mach menu.

  The changes are only applied to the running version. You
  must use Mach menu option "H" to make the changes
  permanent.

SELECT-Quit, **don't change**
  Return to the main Mach menu without making any changes to
  the system.

  NOTE: any drive configuration changes will remain in
  effect.

BACKUP.   This program is used to copy disk images into Mach
Files.   Several disks images can be stored on a single DS/DD
diskette.   Really saves on disk storage since most disks don't
use the whole thing.

Options:

A-Source Drive
  Define the drive that is to be copied.

B-First Sector
  The starting sector to be copied. default is 1

C-Last Sector
  The last sector to be copied. Default is 720 for single
  side, and 1990 for double sided diskettes.

D-Read Source (start backup)
  Just what it says. Starts running the copy. Will not
  start if target file name and drive are not set.

E-[set] Copy Type
  Toggles between file and sector copy types (see Mach Main
  menu "J" function for definition of types). File copies

are normally faster and produce smaller backup image
files.

F-Target Drive
   Set drive number to write backup image files onto.

G-Target File
   Set Backup image file name. Name only, "BKU" is standard
   extension.

H-Close Target [file]
   Dump remaining buffer and close image file.

I-List Files (directory)
   List all "BKU" files on the target drive.

J-Configure Drive
   Same as defined in CONFIGUR program.

Z-Quit [and return] to Mach

RESTORE. Opposite of BACKUP. Writes
disk image files back to a disk.

                    Options:

A-Source Drive
   Drive that contains the backup image file.

B-Source File
   Name of backup image file (without extension).

C-Configure Drive
   Same as CONFIGUR program.

D-List Files (directory)
   List all backup image files on source drive.

E-Target Drive
   Drive with diskette to be reloaded

I-Format Target
   Toggles format switch. If on, will format diskette before
   reloading it.

R-Restore data
   Start reloading disk.   If the target drive is
   reconfigurable (e.g. Percom, INDUS, RANA, etc) it will be
   set appropriately for the backup image.

Z-Quit [and return] to Dos

COMPAR. Sector by sector comparison of two disks (if you don't really believe that BACKUP/RESTORE work then try this one to verify, otherwise tells you any differences between disks.

The program requires at least two disk drives to function.

Options:

  A-[set] Drive A
    Defines one of the drives to be used in the comparison.

  B-[set] Drive B
    Defines the other drive to be used in the comparison.

  C-Start Compare
    Run the comparison. Compares one track at a time (displays current track number)

  F-First Sector
    Starting sector for comparison Default is 1

  L-Last Sector
    Ending sector for comparison. Default is 720 or 1990 depending on SS or DS sectors.

  J-Configure Drive
    Same as the CONFIGUR program.

  Z-Quit [and return] to Mach

PATASC. A very fast print program to print real ATASCII characters on most printers (at least the ones that look like Epson's for graphics printing). It also has an intelligent line wrap routine, understands BASIC line numbers, and Remarks, generates line numbers for ACTION, Prints titles, page numbers. Very good for programmer documentation.

The program initially asks for the current date to be printed on the title line. It also asks for the file name and title on entry to the program.

Options:

  A-[set] File Name
    Enter full file specification with drive, name, extension.

File must be list form of BASIC or MAC/115.

B-[turn] Generate Line #s [off/on]
Set on if file does not have line numbers (e.g. ACTION or
AMAC files).   Program will generate line numbers for each
line. Otherwise, it will use the line numbers in the file
right aligned.

C-Set Title
Enter a title up to 90 characters long.

Q-Quit [and return] to Mach

START-Start Printing
Print using the current parameter setting.

MACHDOS Differences

Mach Differences.

1. MENU WINDOW
The first thing you will notice is the new menu. The Mach "pull down" menu window is unique among Atari operating systems. You can control the menu and display totally.

Pressing the SELECT function key flips the menu up, revealing the display contents which are behind it. The next press of SELECT pulls the menu window back down.

There are several new bits of data on the menu. The top line shows the version (currently 3.7) and the CPU and RamDisk configuration that was set the last time CONFIGUR was run. Currently, Mach supports 130XE, 800XL, 800 with MOSAIC, INTEC, AXLON, MACE, and 800+ memory expansion systems.

The bottom line of the menu shows the status of each active drive. The display shows the current configuration of each drive (single or double sided, single or double density, or not on. Drives can be activated or deactivated by the CONFIGUR utility.

2. ONE KEYPRESS COMMANDS.
The next thing you notice is that selecting a menu option does not require hitting the return key. You can now type non-stop when requesting menu functions.

3. INTELLIGENT SYSTEM DISK HANDLER.
Whenever Mach wants the system disk (to load the non-resident part, or to load the Save Mach overlay), it will instruct you to insert it into drive 1 (real D1:). It will reset the density to the proper setting for the system disk. The system disk is defined as the one you booted from.

4. SAVE SYSTEM TO ANY DISK.
Unlike some other Atari operating systems, you can generate Mach on ANY diskette which is in DOS II or Mach format. It does NOT have to be formatted by Mach, nor do you have to save space for Mach at format time.

5. **INTELLIGENT CONSOLE PROCESSOR (DUP) HANDLING**
Even if you don't fix Mach (menu option X), it will check
if the console processor is intact. If it is, guess
what, no disk access. By the way, even if Fix is ON,
Mach will reload the console processor if the copy in ram
is damaged.

6. **INTELLIGENT SUPPORT OF DOUBLE DENSITY DRIVES**
If you have double density drives that will automatically
switch density to match your diskette, more good news.
Mach will automatically "sense" the density of the disk
when it opens a file. If the drive automatically senses
the density of the disk, the process is almost instant.
If not, (e.g. Percom doesn't sense drives 2 thru 9) then
Mach will try to change density when it detects a read
error during open file processing.

7. **INTELLIGENT SUPPORT OF DOUBLE SIDED DRIVES**
If you have double sided drives Mach will automatically
configure the drive to DS when you open a file from a two
sided diskette. Conversely, it will configure to single
sided when a one sided disk is installed. The only
restriction is that the two sided must have been
formatted by Mach.

8. **FEWER SYSTEM FILES with DIFFERENT NAMES.**
The operating system file names are totally different.
There is no DOS.SYS or DUP.SYS files. The only file is
MACH.SYS. Also, MEM.SAV has been changed to MEMSAV.SYS.
Even though there is only one file, Mach's console
processor (equivalent to DUP.SYS) is non-resident and
will be reloaded when necessary. AUTORUN.SYS files are
processed just like DOS 2.0.

9. **MACH.SYS is PROTECTED.**
You cannot open D:Mach.SYS from your program. You must
use the console processor to generate Mach files.