

LDOS (tm)LSI UTILITY DISKS

from

By: KIM WATT

POWERSOFT

a division of Breeze/QSD, Inc.

UTILITY DISK

2 (c)1982

\$29.95

Disk #2 Includes:

PMOD/CMD - A Disk-File-Memory Modification Utility.

PMOD,aaaa (display memory address)

PMOD,filespec,aaaa (file to display,starting rel. sector)

PMOD :b,c,d (drive,cylinder,sector to display)

LOADING INSTRUCTIONS

- MOD I or III -

- 1) Prepare a SINGLE density LDOS formatted diskette. This disk may be 35, 40, or 80 tracks, but SINGLE density!
- 2) Boot the MASTER disk you received in this package in drive 0. You will be prompted to insert the destination diskette, and the files will be "moved" to YOUR diskette with no effort on your part. Single drive owners will need to swap disks a few times.
- 3) LX-80 users should treat the enclosed MASTER disk as a 35 track single density data diskette.

PMOD

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The PMOD Utility is a comprehensive Disk/File/Memory Modification Utility. It allows easy user interaction between memory and disk storage systems. All LDOS supported disk devices may be operated on, including Single/Double Density, Single/Double Sided, 5" and 8" floppies and fixed/removable rigid disk systems. It has a full screen display of 256 bytes at a time with both HEX and ASCII formats, and makes use of dual cursors for easy modification. The user can go to the heart of a disk and modify in HEX, ASCII, DECIMAL, BINARY, or OCTAL input. The syntax of the PMOD command is:

```
=====
! PMOD,aaaa                                     !
! PMOD,filespec,bbbb                             !
! PMOD,:c,d,e                                   !
!                                               !
!      aaaa = memory address to modify         !
!      filespec = any valid LDOS filespec      !
!      bbbb = relative file sector (optional)  !
!      :c = drive to modify (0-7, colon mandatory) !
!      d = cylinder number (defaults 0)       !
!      e = sector number (defaults 0)         !
!                                               !
! abbr: NONE                                    !
=====
```

NOTE: It is recommended to SET,*KI,KI/DVR (jkl) before using entering PMOD so the control keys and screenprinter will be active.

There are 3 modes of operation of the program as indicated by the command line:

➤ Memory Modify ➤

Enter the memory address where modification is to begin. You may enter the number in Hex, Decimal, Octal, or Binary by PRECEDING the number with H, D, O, or B respectively. Decimal is the default value if none of the above are specified.

After entering the address and pressing <ENTER>, you will view the contents of 1 page of memory (256 bytes) starting at the specified address. Please refer to the following screen dump:

0000	F3AF	C315	30C3	0040	C300	40E1	E9C3	1230	.	.	.	.	.	.	.	.	.	.	.	.
HEX0010	C303	40C5	0601	182E	C306	40C5	0602	1826	.	.	.	.	.	.	.	.	.	.	.	.
MEM0020	C309	40C5	0604	181E	C30C	4011	1540	18E3	.	.	.	.	.	.	.	.	.	.	.	.
0030	C30F	4011	1D40	18E3	C312	4011	2540	18DB	.	.	.	.	.	.	.	.	.	.	.	.
0040	C3D9	05C9	0000	C374	06CD	2B00	B7C0	18F9	.	.	.	.	.	.	.	.	.	.	.	.
0050	11E5	4118	BE11	ED41	18C1	11F5	4118	BC00	.	.	.	.	.	.	.	.	.	.	.	.
0060	C3FB	0120	FBC9	C339	30C3	5204	111D	4218	.	.	.	.	.	.	.	.	.	.	.	.
0070	AA00	C3CC	0611	8040	21F7	1801	2700	EDB0	.	.	.	.	.	.	.	.	.	.	.	.
0080	21E5	4236	3A23	7023	362C	2322	A740	112D	.	.	.	.	.	.	.	.	.	.	.	.
0090	0106	1C21	5241	36C3	2373	2372	2310	F706	.	.	.	.	.	.	.	.	.	.	.	.
00A0	1536	C923	2323	10F9	21E8	4370	31F8	42CD	.	.	.	.	.	.	.	.	.	.	.	.
00B0	BF1B	0000	0021	0501	CDA7	28CD	B31B	38F5	.	.	.	.	.	.	.	.	.	.	.	.
00C0	D7B7	2012	214C	4423	7CB5	281B	7E47	2F77	.	.	.	.	.	.	.	.	.	.	.	.
00D0	BE70	28F3	1811	CD5A	1EB7	C297	19EB	2B3E	.	.	.	.	.	.	.	.	.	.	.	.
00E0	BF46	77BE	7020	CE2B	1114	45DF	DA7A	1911	.	.	.	.	.	.	.	.	.	.	.	.
00F0	CEFF	22B1	4019	22A0	40CD	4D1B	2111	01C3	.	.	.	.	.	.	.	.	.	.	.	.

The far left column of the screen indicates the current modify BA (HEX, DECimal, ASCii, OCTal, BINary), and the MEM indicates that you are the MEMORY MODIFY mode. The next column is the 4 character HEX address where the data is that you are viewing. The center columns of the display is the HEX representation of the 16 bytes starting at the address indicated at the row beginning. There is a space between each quad (2 bytes, 4 ASCII characters) for easier viewing. On the far right is the representative ASCII character of the 16 bytes on that row. All bytes less than 20H (32 decimal) are displayed as a period (.) to indicate non-printing character. You are now in the MEMORY PAGING MODE. Several keys are active at this point:

BREAK → terminate the program
 SHIFT CLEAR → prompt for a new address
 M → enter MODIFY mode
 A → set ASCII modify
 B → set BINARY modify
 D → set DECIMAL modify
 H → set HEXIDECIMAL modify
 O → set OCTAL modify
 X → prompt for new source data
 RIGHT ARROW → increment displayed address by 1 byte
 LEFT ARROW → decrement displayed address by 1 byte
 UP ARROW → increment displayed address by 1 page (256 bytes)
 DOWN ARROW → decrement displayed address by 1 page

→ Disk Modify →

Enter a Drive, Cylinder, and Sector where modification is to begin. You MUST precede the drive number with a colon (:) to distinguish between memory address. The Cylinder and Sector numbers default to 0 if not issued. The Cylinder may be answered with the AT symbol (@) to page directly to the directory track.

After answering the prompt and pressing <ENTER> the specified sector will be read from disk and displayed to the video. Please refer to the

	00	00FE	14F3	3A02	4357	1E04	CD74	4320	713A	..:..CW..ltC q:
HEX	10	0051	E610	286E	D92A	1651	557C	0707	07E6	.Q. (n*.QU!...
DRV	20	0767	0784	075F	21FF	51D9	CD5D	433D	200C	.g..._!_!_!_!_!_!_!
Ø	30	CD4E	43CD	5D43	7723	10F9	18EE	3D28	0BCD	UNC!JCw#. = (.!
CYL	40	5D43	47CD	5D43	10FB	18E0	CD4E	43E9	CD5D	JCG!JC. !. UNC!J
ØØ	50	4347	CD5D	436F	05CD	5D43	6705	C9D9	2C20	CG!JC. Co. !JCg. !
SID	60	0FE5	CD74	4320	19E1	1C7B	D612	2002	5F14	..ltC .. (.. ..
Ø	70	7ED9	C9C7	0605	C5CD	8E43	C1E6	1CC8	10F6	~!C! !. !C! !. !C! !.
SEC	80	21E6	43DD	21F4	43CD	1B02	CD40	00C7	01F4	!C! !. !C! !. !C! !.
ØØ	90	B1ED	410D	3E18	ED51	CDDF	43DB	F0CB	4720	!A. >.. !C! !. !C! !.
STD	A0	FA7B	D3F2	3E81	D3F4	21D3	4322	4A40	3EC3	!C! !. !C! !. !C! !.
5"	B0	3249	4021	0051	D511	02C1	3E80	CDDF	433E	210!.. !C! !. !C! !.
FLP	C0	C0D3	E4DB	F0A3	28FB	EDA2	7AD3	F4ED	A220	!C! !. !C! !. !C! !.
DD	D0	FA18	FEE1	D1AF	D3E4	3E81	D3F4	DBF0	C9D3	!C! !. !C! !. !C! !.
SS	E0	F006	0C10	FEC9	17E8	4469	736B	2065	7272	... Disk err
F0	F0	6F72	1F03	17E8	4E6F	2073	7973	7465	6D03	or... No system.

The screen format is similar to Memory Modify except for the far left column of data, which indicates the source of the information. You are given the Drive, Cylinder, and Sector being viewed. You are supplied with the size of the drive (5 or 8"), and if it is a Floppy or Rigid drive. If a floppy, you are given the density (single or double), and the number of sides (single or double). If a Rigid drive, you are told if it is Fixed or Removable. You are now in the SECTOR PAGING MODE. The following keys are active:

BREAK - terminate program
SHIFT CLEAR - prompt for new Drive, Cylinder, and Sector
M - enter MODIFY mode
A - set ASCII modify
B - set BINARY modify
D - set DECIMAL modify
H - set HEX modify
O - set OCTAL modify
X - prompt for new source data
0-9 - page to corresponding sector
@ - page to current sector on directory track
R - restore drive to cylinder 0, sector 0
RIGHT ARROW - increment sector
LEFT ARROW - decrement sector
UP ARROW - increment track
DOWN ARROW - decrement track
SHIFT RIGHT ARROW - page to highest sector on current track
SHIFT DOWN ARROW - page to lowest sector on current track
SHIFT UP ARROW - page to highest cylinder on disk, current sector

- File Modify -

Enter a filespec that you wish to view. You may optionally follow the filename with the relative sector that you wish to start with. After locating the file, the specified relative sector (default zero) will read from the disk and displayed to the video. Please refer to the following screen dump:

```

P00 0506 504D 4F44 2020 0102 0052 E521 A462 ..PMOD ...R! !,b
HEX M10 CD67 44E1 1807 2100 6436 0D18 EFCB 6F53 gD...!.d6..oS
DRV 020 DA48 53FE 3F20 08E5 CD7C 60E1 2318 EEFE HS? .i@#.
0 D30 3A28 19FE 21CA EA52 E5CD 8253 E1DA EB52 :(.!R!S'R
/40 ED43 EE55 3E01 324C 56C3 2155 237E D630 C.U>.2LV-!U#~0
C50 DA39 53FE 08D2 3953 3268 524F E53A 0400 9S. 9S2hR0! :..
M60 FE30 2805 CDB8 4418 03CD 9042 3E08 E1C2 0(.D..B>.
D70 3B53 E53E 004F CD8F 47FD 220C 5EE1 23AF ;S!>.0G".^#
80 32CF 5D32 CE5D FD7E 07E6 1F3C FDCB 046E 2J2J~.<J.n
90 2802 CB27 FDCB 035E 2811 4FFD 7E07 0F0F (.T~.^(.0...
A0 0F0F 0FE6 073C 47AF 8110 FD32 C354 CD6F ...<G..2Tlo
B0 5338 23FE 4020 06FD 7E09 2318 07CD 8253 S8#@.~.#..LS
RSEC C0 DA42 5379 32CF 5DCD 6F53 380A CD82 53DA BSy2J]oS8..S
0000 D0 4253 7932 CE5D 3E02 324C 56C3 9C5D 21B9 BSy2J]>.2LV-J!
EOFS E0 61CD 6744 061F 2100 64CD 4000 DA65 5378 a!gD...!dL. eSx
0018 F0 B7CA 0A52 1832 2311 5F64 CD1C 44C2 3B53 [L.R.2#._dL.D";S

```

The screen layout is similar to the Memory Modify, except for the left column. You are given the drive number that you are working on. The filename that you are viewing is displayed vertically starting just to the right of the cursor. Near the bottom you are given the RELATIVE SECTOR you are viewing, and the END OF FILE SECTOR. Normally, you will only be able to view up to 1 less than the EOFS. You are now in the FILE PAGING MODE. Several keys are active:

- BREAK - terminate program
- SHIFT CLEAR - prompt for a new relative sector
- M - enter Modify mode
- A - set ASCII modify
- B - set BINARY modify
- D - set DECIMAL modify
- H - set HEX modify
- O - set OCTAL modify
- X - prompt for new source data
- RIGHT ARROW - increment to the next relative sector
- UP ARROW - same as right arrow
- LEFT ARROW - decrement to next relative sector
- DOWN ARROW - same as left arrow

NOTE: When using the FILE MODIFY option on DIR/SYS, the sectors will not be written as Read-Protected, and will require a "Repair (alien)" after updating back to disk. Use the DISK MODIFY option to correctly handle the directory track.

→ Modify Mode →

The MODIFY MODE is common to all of the above 3 modes of operation, and is entered by pressing M when the desired data is being viewed in one of the above PAGING modes. The cursor will move into the HEX and ASCII portions of the display (dual cursors), and will flash very rapidly. Refer to the following screen dump:

```

67J 00 00FE 14F3 3A02 4357 1E04 CD74 4320 713A . . . . CW . . tC q:
HEX 10 0051 E610 286E D92A 1651 557C 0707 07E6 . . . . (n . . QU) . . . .
DRV 20 0767 0784 075F 21FF 51D9 CD5D 433D 200C . g . . . . ! @ . . JC = .
0 30 CD4E 43CD 5D43 7723 10F9 18EE 3D28 0BCD UNCLJCw# . . . . F (.
CYL 40 5D43 47CD 5D43 10FB 18E0 CD4E 43E9 CD5D JCGJJC . . . . UNCLJC]
00 50 4347 CD5D 436F 05CD 5D43 6705 C9D9 2C20 CGLJCo . . . . JCG .
SID 60 0FE5 CD74 4320 19 1C7B D612 2002 5F14 . . . . tC . . . . { . . . .
0 70 7ED9 C9C7 0605 C5CD 8E43 C1E6 1CC8 10F6 ~ . . . . . . . . . .
SEC 80 21E6 43DD 21F4 43CD 1B02 CD40 00C7 01F4 ! . . . . ! . . . . C . . . . . . . .
00 90 81ED 410D 3E18 ED51 CDDF 43DB F0CB 4720 * . . . . A . . . . > . . . . C . . . . G
STD A0 FA7B D3F2 3E81 D3F4 21D3 4322 4A40 3EC3 ( . . . . > . . . . ! . . . . C " J >
5" B0 3249 4021 0051 D511 02C1 3E80 CDDF 433E 210 . . . . ! . . . . > . . . . C >
FLP C0 C0D3 E4DB F0A3 28FB EDA2 7AD3 F4ED A220 ( . . . . . . . . . . z . . . .
DD D0 FA18 FEE1 D1AF D3E4 3E81 D3F4 DBF0 C9D3 > . . . . > . . . . > . . . . > . . . .
SS E0 F006 0C10 FEC9 17E8 4469 736B 2065 7272 . . . . . . . . . . Disk err
F0 6F72 1F03 17E8 4E6F 2073 7973 7465 6D03 or . . . . No system.

```

At the top left of the display, you are given the RELATIVE BYTE within the displayed data where the cursor lies. The following keys are active at this point:

- BREAK → abort the modify mode, re-read the source data as it was before any changes were made, and return back to the paging mode you came from. NOTE: In the MEMORY MODE, the changes are immediate, and cannot be re-read. In this case, the BREAK key is identical to pressing the ENTER key.
- ENTER → terminate the modify mode, and write the modified data back to the source with all changes, and return to the paging mode you came from. NOTE: Changes are immediate in the MEMORY MODE, and control is merely passed back to the paging mode.
- SHIFT CLEAR → homes the cursor to the first relative byte being displayed.
- CLEAR ENTER → allows you to change the current BASE you are modifying in without leaving the modify mode. You will have a new flashing prompt in the left column of the display. Enter A, B, D, H, or O to set ASCII, BINARY, DECIMAL, HEX, or OCTAL bases respectively. Any other keys will be ignored. You will then return back to the modify mode at the same location you came from.
- ARROW KEYS → move the cursor 1 byte in the corresponding direction without affecting any of the bytes.
- SHIFT ARROW KEYS → move the cursor to extreme row or column ends in the associated direction without affecting any of the bytes.

NOTE: In the DISK MODIFY and FILE MODIFY you will not be able to move the cursor beyond the edges of the displayed data. In the MEMORY MODIFY, if you attempt to move the cursor beyond the edges, additional data is brought to the screen to supply the desired information.

If you are in the ASCII MODIFY MODE, and the key you enter does not apply to any of the above conditions, then that character is entered at the current cursor location, and the cursor is advanced by one byte.

If you are NOT in ASCII MODIFY, several additional features are available:

G - followed by a number moves the cursor immediately to the RELATIVE BYTE in the page that you are viewing.

L - followed by a number moves the cursor to the NEXT OCCURRENCE of the specified byte. The cursor will move to the last byte on the screen if the requested byte is not located.

P - followed by a number DUPLICATES the current byte located under the cursor to the following indicated number of bytes.

< - will shift all bytes from the cursor to the page end by one byte, and place a zero at the last location on the screen. This allows you to DELETE text at the cursor.

> - will shift all bytes from the cursor to the page end by one byte, and place a zero at the current cursor location. This allows you to INSERT text at the cursor.

NOTE: The above five commands are disabled in the ASCII MODIFY MODE and will merely insert the character into the text.

If you are NOT in ASCII MODIFY, and NONE of the above conditions are met, then the input is interpreted as part of NUMERICAL input. If you are in HEX mode, for example, you must enter TWO HEX DIGITS (0-9,A-F) to change a single byte. Decimal mode expects 3 digits (0-9), Octal mode expects digits (0-7), and Binary mode expects 8 digits (0-1). You may pre-terminate the numerical input by pressing ENTER. Thus, in HEX mode, ENTER is the same as entering 03, in Binary mode, 111 ENTER is the same as entering 0000111. When you are in the middle of entering a number, the cursor will change to indicate that more input is required to complete the current operation. If you enter incorrect digits BEFORE completing the number, entering an INVALID character will terminate the entry. Thus, in HEX modify, you type a 3, but meant to enter a 4, just hit an invalid key (X for example) to terminate the operation and leave the byte unchanged. In the above special commands, G, L, and P, the numerical input following the command will be in the current BASE. If you are in HEX modify, then G10 is a valid command to move the cursor to relative byte 10H, but in DECIMAL modify, you must enter G016 to achieve the same results.

Any key that does not meet any of the above conditions will be ignored.

When first entering this program, the DATA SOURCE information may be entered directly from the DOS READY command line, or will be prompted for if not supplied with the command. If you wish to examine a file that could be interpreted as an address, you may PRECEDE the filename with an exclamation point (!) to FORCE PMOD to interpret it as a filespec.

PMOD, HF000 will display memory address F000H.
PMOD,!HF000 will display the file HF000

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UTILITY DISK

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Disk #3 Includes:

- PCHECK/CMD - LDOS Directory Check Utility. Checks a drive or a file, (GAT, HIT, BOOT, etc.) for integrity.
- PFIX/CMD - FIXES problem discovered by PCHECK/CMD. You may repair GAT or HIT table, repair BOOT sector, or repair FILE records. This program might fix that crashed disk that has you going nuts!

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Disk #5 Includes:

- PREFORM/CMD - Disk Re-Formatter Utility. Fixes CRC errors and "strengthens" the format on older disks. A FORMAT without ERASE utility (5" floppy only)
- PVU/CMD - a Disk Verification Utility. Detects bad sectors. Fix them with PREFORM/CMD.
- PERASE/CMD - Disk Bulk Eraser (5" floppy only)

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Disk #7 Includes:

- PMOVE/CMD - A SUPER FAST Multiple Copy Utility!
- PDIRT/CMD - Read a Mod III TRSDOS directory from LDOS!
- PASSGO/CMD - Removes passwords from A file or a WHOLE disk!
- PUN/CMD - UN-REPAIR a disk. (Mod I only)
- PEX/CMD - A disk exerciser for head cleaning kits.

UTILITY DISK

2 (c)1982

\$29.95

Disk #2 Includes:

PMOD/CMD - A Disk-File-Memory Modification Utility.

- PMOD,aaaa (display memory address)
- PMOD,filespec,aaaa (file to display, starting rel. sector)
- PMOD :b,c,d (drive,cylinder,sector to display)

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Disk #4 Includes:

- PFIND/CMD - FIND a string, replace a string, find a byte, find a WORD, replace a byte or word! FIND ANYTHING on the disk FAST! Replace it FAST!
- PCOMPARE/CMD - Compare a FILE or a sector to any other file or sector. Detects the minutest differences! Send the outputs from above to video or printer.

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Disk #6 Includes:

- PCLEAR/CMD- Erases unassigned sectors and Directory slots. Removes ALL traces of "killed" files!
- PSS/CMD - Sector Status Utility. Finds WHAT file is assigned to WHAT sector.
- PNAP/CMD - Disk-File Mapping Utility. Map a FILE or a disk! Shows exactly WHERE all files are with extents.

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Disk #8 Includes:

- PNX/FLT-MX80 graphics
- PHELP/CMD -Instant HELP! Very complete. Saves time!
- PBOOT/FIX - Customize YOUR LDOS Boot graphics and message!
- PFILT/FLT - A User Definable Filter. Very flexible!
- DVORAK/FLT - DVORAK/QWERTY Keyboard Filter.
- DVORAK/JCL - DVORAK Keyboard Table (used with PFILT/FLT)
- CODE/JCL - Keyboard EN-Coding TABLE (used with PFILT/FLT)
- DECODE/JCL - Keyboard DE-Coding Table (used with PFILT/FLT)