

!A

LLOAD VMGR.L,A\$4000

*** End of Pass 1

LLOAD VMGR1.L,A\$4000

LLOAD VMGR2.L,A\$4000

LLOAD VMGR3.L,A\$4000

LLOAD VMGR4.L,A\$4000

LLOAD VMGR.L,A\$4000

*** End of Pass 2

```
0800      1          ttl "VTOC Manager Source Code, VMGR.L"
0800      2          src "VMGR.L"
0800      3      ;
0800      4      ;
0800      5      ; VMGR.L
0800      6      ;
0800      7      ;
0800      8      ; VTOC Manager Source Code
0800      9      ;
0800     10      ; 2024 February 14
0800     11      ;
0800     12      ;
0800     13      ; DOS 4.5, Build 06
0800     14      ;
0800     15      ; 2024 February 14
0800     16      ;
0800     17      ;
0800     18      ; Start of Source Code: 0x4000
0800     19      ; Start of Symbol List: 0x7800
0800     20      ;
0800     21      ;
0800     22      ; Copyright (c) 2024 February 14 by
0800     23      ; Walland Philip Vrbancic Jr
0800     24      ;
0800     25      ; 6223 East Peabody Street
0800     26      ; Long Beach, California 90808
0800     27      ; United States of America
0800     28      ;
0800     29      ; All Rights Reserved
0800     30      ;
0800     31      ; This software is the confidential and
0800     32      ; proprietary intellectual property of
0800     33      ; Walland Philip Vrbancic Jr
0800     34      ;
0800     35      ;
0000     36      LOC0      epz $00
0800     37      ;
0020     38      WNDLFT      epz $20
0021     39      WNDWDTH      epz $21
0022     40      WNDTOP      epz $22
0023     41      WNDBTM      epz $23
0024     42      CH          epz $24
0025     43      CV          epz $25
0800     44      ;
0032     45      INVFLG      epz $32
0033     46      PROMPT      epz $33
0036     47      CSWL        epz $36
0800     48      ;
004A     49      IOBADR      epz $4A
0800     50      ;
00EE     51      GENPTR      epz $EE
00FA     52      DATAPTR      epz $FA
00FC     53      PRNTPTR      epz $FC
0800     54      ;
0800     55      enz
0800     56      ;
0000     57      ZERO      equ $00
0007     58      SIGLEN      equ $07
00FF     59      NEGONE      equ $FF
0800     60      ;
```

0001	61	READCMD	equ	\$01
0002	62	WRITCMD	equ	\$02
0800	63	;		
0000	64	TEXTMODE	equ	\$00
0001	65	GRPHMODE	equ	\$01
0002	66	TX80MODE	equ	\$02
0003	67	LV80MODE	equ	\$03
0800	68	;		
0000	69	NORMDISP	equ	\$00
0001	70	INVRDISP	equ	\$01
0800	71	;		
0000	72	INITSCRN	equ	\$00
0001	73	HOMESCRN	equ	\$01
0800	74	;		
0000	75	EOLCLR	equ	\$00
0001	76	EOPCLR	equ	\$01
0800	77	;		
0000	78	DIRECT	equ	\$00
0001	79	INDIRECT	equ	\$01
0800	80	;		
0000	81	NOPAD	equ	\$00
0020	82	HIGHLOW	equ	\$20
0040	83	ZEROPAD	equ	\$40
0080	84	SPCPAD	equ	\$80
0800	85	;		
0004	86	NEXTLINE	equ	\$04
0007	87	CHARCELL	equ	\$07
000F	88	PCMDMASK	equ	\$0F
000F	89	NIBLMASK	equ	\$0F
0014	90	VSNLEN	equ	\$14
0018	91	NAMELEN	equ	\$18
001F	92	CVMASK	equ	\$1F
0028	93	MAXWDTH	equ	\$28
0032	94	MAXTRKS	equ	\$32
0050	95	MAXCH	equ	\$50
0060	96	MINCV	equ	\$60
007F	97	ASCIMASK	equ	\$7F
007F	98	INVRMASK	equ	\$7F
0080	99	MSBMASK	equ	\$80
0080	100	ASCIFLAG	equ	\$80
0800	101	;		
0050	102	RTNCMD	equ	\$50
0051	103	MODECMD	equ	\$51
0052	104	DISPCMD	equ	\$52
0053	105	SCRNCMD	equ	\$53
0054	106	CLRCMD	equ	\$54
0055	107	CNTRCMD	equ	\$55
0056	108	BUFRCMD	equ	\$56
0057	109	NIBLCMD	equ	\$57
0058	110	BYT1CMD	equ	\$58
0059	111	BYT2CMD	equ	\$59
005A	112	BYTNCMD	equ	\$5A
005B	113	ADRCMD	equ	\$5B
005C	114	DEC1CMD	equ	\$5C
005D	115	DEC2CMD	equ	\$5D
005E	116	DEC3CMD	equ	\$5E
005F	117	DECNCMD	equ	\$5F
0800	118	;		
0060	119	FLASH	equ	\$60
0084	120	CTRLD	equ	\$84
0087	121	BELLCHAR	equ	\$87

0088	122	LARROW	equ \$88
008A	123	DARROW	equ \$8A
008B	124	UARROW	equ \$8B
008D	125	RETURN	equ \$8D
0091	126	CTRLQ	equ \$91
0095	127	RARROW	equ \$95
009B	128	ESCAPE	equ \$9B
00A0	129	SPACE	equ " "
00AE	130	PERIOD	equ " . "
00AF	131	SLASH	equ " / "
00BA	132	COLON	equ " : "
00DF	133	LWRMASK	equ \$DF
00E0	134	LWRCASE	equ \$E0
00FF	135	DELETE	equ \$FF
0800	136	;	
0100	137	STACK	equ \$100
0100	138	PAGESIZE	equ \$100
0800	139	;	
03D0	140	DOSWARM	equ \$3D0
03D3	141	DOSCOLD	equ \$3D3
03D9	142	CALLRWTS	equ \$3D9
03E1	143	RDCLKVSN	equ \$3E1
03E3	144	GETIOB	equ \$3E3
03EA	145	HOOKDOS	equ \$3EA
0800	146	;	
C000	147	KEY	equ \$C000
C010	148	CLRKEY	equ \$C010
C050	149	TXTCLR	equ \$C050
C051	150	TXTSET	equ \$C051
C052	151	MIXCLR	equ \$C052
C054	152	LOWSCR	equ \$C054
C057	153	HIRES	equ \$C057
C082	154	ROM2WP	equ \$C082
0800	155	;	
F941	156	PRNTAX	equ \$F941
F94A	157	PRBL2	equ \$F94A
FB2F	158	INIT	equ \$FB2F
FB5B	159	TABV	equ \$FB5B
FC22	160	VTAB	equ \$FC22
FC42	161	CLREOP	equ \$FC42
FC58	162	HOME	equ \$FC58
FC9C	163	CLREOL	equ \$FC9C
FD8E	164	CROUT	equ \$FD8E
FDDA	165	PRBYTE	equ \$FDDA
FDE3	166	PRHEX	equ \$FDE3
FDED	167	COUT	equ \$FDED
FE95	168	OUTPORT	equ \$FE95
FF3A	169	BELL	equ \$FF3A
FF69	170	MONITOR	equ \$FF69
0800	171	;	
0800	172	;	
0800	173		icl "VMGR1.L"

LLOAD VMGR1.L,A\$4000

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0800          1          ttl "VTOC Manager Source Code, VMGR1.L"
0800          2          ;
0800          3          ;
0800          4          ; VMGR1.L
0800          5          ;
0800          6          ;
0000          7  DISPLAY equ TEXTMODE
0800          8          ;
0800          9          ;
0900         10          org $900
0900         11          obj $900
0900         12          usr
0900         13          ;
0900         14          ;
0900 20 EA 03         15          jsr HOOKDOS
0903         16          ;
0903 20 0C 18        17          jsr PRINT
0906         18          .if DISPLAY=TEXTMODE
0906 51 00           19          byt MODECMD,TEXTMODE
0908         20          .fi
0908         21          .if DISPLAY=GRPHMODE
0908         22          byt RETURN
0908         23          byt MODECMD,GRPHMODE
0908         24          .fi
0908         25          .if DISPLAY=TX80MODE
0908         26          byt MODECMD,TX80MODE
0908         27          .fi
0908 52 00           28          byt DISPCMD,NORMDISP
090A 53 00           29          byt SCRNCMD,INITSCRN
090C 53 01           30          byt SCRNCMD,HOMESCRN
090E 50             31          byt RTNCMD
090F             32          ;
090F 20 B3 0C        33          jsr INITPGM
0912             34          ;
0912 20 E9 0C        35          ^1 jsr SHOWMENU
0915             36          ;
0915 20 44 09        37          jsr GETOPTN
0918 B0 27           38          bcs >7
091A             39          ;
091A C9 01           40          cmp #1
091C D0 03           41          bne >2
091E             42          ;
091E 20 10 0A        43          jsr GETSDV
0921             44          ;
0921 C9 02           45          ^2 cmp #2
0923 D0 03           46          bne >3
0925             47          ;
0925 20 24 0A        48          jsr SHOWVTOC
0928             49          ;
0928 C9 03           50          ^3 cmp #3
092A D0 03           51          bne >4
092C             52          ;
092C 20 52 0A        53          jsr EDITVTOC
092F             54          ;
092F C9 04           55          ^4 cmp #4
0931 D0 03           56          bne >5
0933             57          ;
0933 20 CE 0A        58          jsr SHOWBMAP
0936             59          ;
0936 C9 05           60          ^5 cmp #5

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0938 D0 03      61      bne >6
093A           62      ;
093A 20 06 0B   63      jsr EDITBMAP
093D           64      ;
093D C9 06      65      ^6      cmp #6
093F D0 D1      66      bne <1
0941           67      ;
0941 4C 2C 0B   68      ^7      jmp QUIT
0944           69      ;
0944           70      ;
0944 20 0C 18   71      GETOPTN  jsr PRINT
0947 00 77      72      hex 0077
0949 54 00      73      byt CLRCMD,EOLCLR
094B D3 E5 EC   74      asc "Select Option:  "
094E E5 E3 F4
0951 A0 CF F0
0954 F4 E9 EF
0957 EE BA A0
095A A0
095B 50         75      byt RTNCMD
095C           76      ;
095C 20 0A 17   77      jsr GETDEC1
095F B0 0E      78      bcs >1
0961           79      ;
0961 AD A2 1A   80      lda DECVALS
0964 C9 01      81      cmp #1
0966 90 DC      82      bcc GETOPTN
0968           83      ;
0968 C9 07      84      cmp #6+1
096A B0 D8      85      bcs GETOPTN
096C           86      ;
096C 8D 89 1A   87      sta OPTION
096F           88      ;
096F 60         89      ^1      rts
0970           90      ;
0970           91      ;
0970 20 0C 18   92      GETSLOT  jsr PRINT
0973 00 77      93      hex 0077
0975 54 00      94      byt CLRCMD,EOLCLR
0977 C5 EE F4   95      asc "Enter "
097A E5 F2 A0
097D 52 01      96      byt DISPCMD,INVRDISP
097F D3 CC CF   97      asc "SLOT"
0982 D4
0983 52 00      98      byt DISPCMD,NORMDISP
0985 A0 EE F5   99      asc " number:  "
0988 ED E2 E5
098B F2 BA A0
098E A0
098F 50         100     byt RTNCMD
0990           101     ;
0990 20 0A 17   102     jsr GETDEC1
0993 B0 10      103     bcs >1
0995           104     ;
0995 F0 0E      105     beq >1
0997           106     ;
0997 AD A2 1A   107     lda DECVALS
099A C9 01      108     cmp #1
099C 90 D2      109     bcc GETSLOT
099E           110     ;
099E C9 08      111     cmp #7+1

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09A0 B0 CE      112      bcs GETSLOT
09A2            113      ;
09A2 8D 83 1A   114      sta SLOT
09A5            115      ;
09A5 60         116      ^1    rts
09A6            117      ;
09A6            118      ;
09A6 20 0C 18   119      GETDRV jsr PRINT
09A9 00 77      120      hex 0077
09AB 54 00      121      byt CLRCMD,EOLCLR
09AD C5 EE F4   122      asc "Enter "
09B0 E5 F2 A0
09B3 52 01      123      byt DISPCMD,INVRDISP
09B5 C4 D2 C9   124      asc "DRIVE"
09B8 D6 C5
09BA 52 00      125      byt DISPCMD,NORMDISP
09BC A0 EE F5   126      asc " number: "
09BF ED E2 E5
09C2 F2 BA A0
09C5 A0
09C6 50         127      byt RTNCMD
09C7            128      ;
09C7 20 0D 17   129      jsr GETDEC2
09CA B0 0E      130      bcs >1
09CC            131      ;
09CC F0 0C      132      beq >1
09CE            133      ;
09CE AD A2 1A   134      lda DECVALS
09D1 F0 D3      135      beq GETDRV
09D3            136      ;
09D3 C9 52      137      cmp #82
09D5 B0 CF      138      bcs GETDRV
09D7            139      ;
09D7 8D 84 1A   140      sta DRIVE
09DA            141      ;
09DA 60         142      ^1    rts
09DB            143      ;
09DB            144      ;
09DB 20 0C 18   145      GETVOL jsr PRINT
09DE 00 77      146      hex 0077
09E0 54 00      147      byt CLRCMD,EOLCLR
09E2 C5 EE F4   148      asc "Enter "
09E5 E5 F2 A0
09E8 52 01      149      byt DISPCMD,INVRDISP
09EA D6 CF CC   150      asc "VOLUME"
09ED D5 CD C5
09F0 52 00      151      byt DISPCMD,NORMDISP
09F2 A0 EE F5   152      asc " number: "
09F5 ED E2 E5
09F8 F2 BA A0
09FB A0
09FC 50         153      byt RTNCMD
09FD            154      ;
09FD 20 10 17   155      jsr GETDEC3
0A00 B0 0D      156      bcs >1
0A02            157      ;
0A02 F0 0B      158      beq >1
0A04            159      ;
0A04 AD A3 1A   160      lda DECVALS+1
0A07 D0 D2      161      bne GETVOL
0A09            162      ;

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0A09 AD A2 1A 163          lda DECVALS
0A0C 8D 85 1A 164          sta VOLUME
0A0F          165          ;
0A0F 60          166      ^1      rts
0A10          167          ;
0A10          168          ;
0A10 20 70 09 169      GETSDV      jsr GETSLOT
0A13 B0 0C          170          bcs >1
0A15          171          ;
0A15 20 E9 0C 172          jsr SHOWMENU
0A18          173          ;
0A18 20 A6 09 174          jsr GETDRV
0A1B          175          ;
0A1B 20 E9 0C 176          jsr SHOWMENU
0A1E          177          ;
0A1E 20 DB 09 178          jsr GETVOL
0A21          179          ;
0A21 A9 00          180      ^1      lda #ZERO
0A23          181          ;
0A23 60          182          rts
0A24          183          ;
0A24          184          ;
0A24 20 3A 0B 185      SHOWVTOC      jsr READVTOC
0A27 B0 26          186          bcs >1
0A29          187          ;
0A29 20 8E 0D 188          jsr INITVTOC
0A2C          189          ;
0A2C 20 0C 18 190          jsr PRINT
0A2F 53 01          191          byt SCRNCMD,HOMESCRN
0A31 0D          192          hex 0D
0A32 56 00          193          byt BUFRCMD,DIRECT
0A34 E3 1A          194          adr HEADER2
0A36 50          195          byt RTNCMD
0A37          196          ;
0A37 20 B2 0D 197          jsr SHOWHDR
0A3A          198          ;
0A3A 20 0C 18 199          jsr PRINT
0A3D 55          200          byt CNTRCMD
0A3E D0 F2 E5 201          asc "Press Any Key"
0A41 F3 F3 A0
0A44 C1 EE F9
0A47 A0 CB E5
0A4A F9
0A4B 50          202          byt RTNCMD
0A4C          203          ;
0A4C 20 D9 17 204          jsr GETKEY
0A4F          205          ;
0A4F A9 00          206      ^1      lda #ZERO
0A51          207          ;
0A51 60          208          rts
0A52          209          ;
0A52          210          ;
0A52 20 3A 0B 211      EDITVTOC      jsr READVTOC
0A55 B0 F8          212          bcs <1
0A57          213          ;
0A57 20 8E 0D 214          jsr INITVTOC
0A5A          215          ;
0A5A 20 0C 18 216          jsr PRINT
0A5D 53 01          217          byt SCRNCMD,HOMESCRN
0A5F 0B          218          hex 0B
0A60 56 00          219          byt BUFRCMD,DIRECT

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0A62 DE 1A      220      adr HEADER1
0A64 50         221      byt RTNCMD
0A65           222      ;
0A65 A9 00      223      ^1      lda #ZERO
0A67           224      ;
0A67 8D 89 1A   225      ^2      sta OPTION
0A6A           226      ;
0A6A AD 89 1A   227      ^3      lda OPTION
0A6D 20 C4 0B   228      jsr SETOPTN
0A70           229      ;
0A70 20 D9 17   230      jsr GETKEY
0A73           231      ;
0A73 48         232      pha
0A74           233      ;
0A74 20 C7 0B   234      jsr CLROPTN
0A77           235      ;
0A77 68         236      pla
0A78           237      ;
0A78 C9 9B      238      cmp #ESCAPE
0A7A F0 4C      239      beq >9
0A7C           240      ;
0A7C C9 8D      241      cmp #RETURN
0A7E D0 21      242      bne >4
0A80           243      ;
0A80 20 C1 0B   244      jsr EDTOPTN
0A83           245      ;
0A83 20 0C 18   246      jsr PRINT
0A86 00         247      hex 00
0A87 54 00      248      byt CLRCMD,EOLCLR
0A89 50         249      byt RTNCMD
0A8A           250      ;
0A8A AD 89 1A   251      lda OPTION
0A8D           252      ;
0A8D 0A         253      asl
0A8E A8         254      tay
0A8F           255      ;
0A8F B9 A2 1B   256      lda HDRTBL2,Y
0A92 8D 9C 0A   257      sta MOD3+1
0A95           258      ;
0A95 B9 A3 1B   259      lda HDRTBL2+1,Y
0A98 8D 9D 0A   260      sta MOD3+2
0A9B           261      ;
0A9B 20 00 00   262      MOD3      jsr *-*
0A9E           263      ;
0A9E 4C 6A 0A   264      jmp <3
0AA1           265      ;
0AA1 C9 88      266      ^4      cmp #LARROW
0AA3 D0 09      267      bne >6
0AA5           268      ;
0AA5 CE 89 1A   269      ^5      dec OPTION
0AA8 10 C0      270      bpl <3
0AAA           271      ;
0AAA A9 11      272      lda #NOPTION-1
0AAC D0 B9      273      bne <2      ; always taken
0AAE           274      ;
0AAE C9 8A      275      ^6      cmp #DARROW
0AB0 D0 0C      276      bne >8
0AB2           277      ;
0AB2 EE 89 1A   278      ^7      inc OPTION
0AB5           279      ;
0AB5 AD 89 1A   280      lda OPTION

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0AB8 C9 12      281      cmp #NOPTION
0ABA D0 AE      282      bne <3
0ABC           283      ;
0ABC F0 A7      284      beq <1                ; always taken
0ABE           285      ;
0ABE C9 8B      286      ^8      cmp #UARROW
0AC0 F0 E3      287      beq <5
0AC2           288      ;
0AC2 C9 95      289      cmp #RARROW
0AC4 F0 EC      290      beq <7
0AC6           291      ;
0AC6 D0 9D      292      bne <1                ; always taken
0AC8           293      ;
0AC8 20 88 0B   294      ^9      jsr SAVEVTOC
0ACB           295      ;
0ACB A9 00      296      lda #ZERO
0ACD           297      ;
0ACD 60         298      rts
0ACE           299      ;
0ACE           300      ;
0ACE 20 3A 0B   301      SHOWBMAP jsr READVTOC
0AD1 B0 30      302      bcs >1
0AD3           303      ;
0AD3 20 0C 18   304      jsr PRINT
0AD6 53 01      305      byt SCRNCMD,HOMESCRN
0AD8 08         306      hex 08
0AD9 56 00      307      byt BUFRCMD,DIRECT
0ADB F6 1A      308      adr HEADER4
0ADD 8D 8D      309      byt RETURN,RETURN
0ADF 0F         310      hex 0F
0AE0 5D         311      byt DEC2CMD
0AE1 34 1C      312      adr NUMTRKS
0AE3 A0 D4 F2   313      asc " Tracks"
0AE6 E1 E3 EB
0AE9 F3
0AEA 50         314      byt RTNCMD
0AEB           315      ;
0AEB 20 A9 15   316      jsr SHOWMAP
0AEE           317      ;
0AEE 20 0C 18   318      jsr PRINT
0AF1 55         319      byt CNTRCMD
0AF2 D0 F2 E5   320      asc "Press Any Key"
0AF5 F3 F3 A0
0AF8 C1 EE F9
0AFB A0 CB E5
0AFE F9
0AFF 50         321      byt RTNCMD
0B00           322      ;
0B00 20 D9 17   323      jsr GETKEY
0B03           324      ;
0B03 A9 00      325      ^1      lda #ZERO
0B05           326      ;
0B05 60         327      rts
0B06           328      ;
0B06           329      ;
0B06 20 3A 0B   330      EDITBMAP jsr READVTOC
0B09 B0 1E      331      bcs >1
0B0B           332      ;
0B0B 20 0C 18   333      jsr PRINT
0B0E 53 01      334      byt SCRNCMD,HOMESCRN
0B10 06         335      hex 06

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0B11 56 00      336      byt BUFRCMD,DIRECT
0B13 F1 1A      337      adr HEADER3
0B15 8D 8D      338      byt RETURN,RETURN
0B17 0F         339      hex 0F
0B18 5D         340      byt DEC2CMD
0B19 34 1C      341      adr NUMTRKS
0B1B A0 D4 F2   342      asc " Tracks"
0B1E E1 E3 EB
0B21 F3
0B22 50         343      byt RTNCMD
0B23           344      ;
0B23 20 7C 16   345      jsr EDITMAP
0B26           346      ;
0B26 20 88 0B   347      jsr SAVEVTOC
0B29           348      ;
0B29 A9 00      349      ^1   lda #ZERO
0B2B           350      ;
0B2B 60         351      rts
0B2C           352      ;
0B2C           353      ;
0B2C 20 0C 18   354      QUIT   jsr PRINT
0B2F           355      .if DISPLAY=GRPHMODE
0B2F           356      byt MODECMD,TEXTMODE
0B2F           357      .fi
0B2F           358      .if DISPLAY=TX80MODE
0B2F           359      byt MODECMD,LV80MODE
0B2F           360      .fi
0B2F 52 00      361      byt DISPCMD,NORMDISP
0B31 53 00      362      byt SCRNCMD,INITSCRN
0B33 8D         363      byt RETURN
0B34 53 01      364      byt SCRNCMD,HOMESCRN
0B36 50         365      byt RTNCMD
0B37           366      ;
0B37 4C D3 03   367      jmp DOSCOLD
0B3A           368      ;
0B3A           369      ;
0B3A A9 01      370      READVTOC lda #READCMD
0B3C           371      ;
0B3C 2C 00 00   372      bit *-*
0B3F           373      dfs !-2
0B3D           374      ;
0B3D           375      ;
0B3D A9 02      376      WRITVTOC lda #WRITCMD
0B3F           377      ;
0B3F 8D D2 1B   378      sta COMMAND
0B42           379      ;
0B42 AD 83 1A   380      lda SLOT
0B45           381      ;
0B45 0A         382      asl
0B46 0A         383      asl
0B47 0A         384      asl
0B48 0A         385      asl
0B49           386      ;
0B49 8D C7 1B   387      sta RWSLOT
0B4C           388      ;
0B4C AD 84 1A   389      lda DRIVE
0B4F 8D C8 1B   390      sta RWDRIVE
0B52           391      ;
0B52 AD 85 1A   392      lda VOLUME
0B55 8D C9 1B   393      sta RWVOLUME
0B58           394      ;

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0B58 A0 C6      395      ldy #TBLTYPE
0B5A A9 1B      396      lda /TBLTYPE
0B5C            397      ;
0B5C 20 D9 03   398      jsr CALLRWTS
0B5F 90 26      399      bcc >1
0B61            400      ;
0B61 20 0C 18   401      jsr PRINT
0B64 00 62      402      hex 0062
0B66 54 01      403      byt CLRCMD,EOPCLR
0B68 65         404      hex 65
0B69 D2 D7 D4   405      asc "RWTS return error: 0x"
0B6C D3 A0 F2
0B6F E5 F4 F5
0B72 F2 EE A0
0B75 E5 F2 F2
0B78 EF F2 BA
0B7B A0 A0 B0
0B7E F8
0B7F 58         406      byt BYT1CMD
0B80 D3 1B      407      adr ERRRCODE
0B82 50         408      byt RTNCMD
0B83            409      ;
0B83 20 D9 17   410      jsr GETKEY
0B86            411      ;
0B86 38         412      sec
0B87            413      ;
0B87 60         414      ^1    rts
0B88            415      ;
0B88            416      ;
0B88 20 0C 18   417      SAVEVTOC jsr PRINT
0B8B 00 77      418      hex 0077
0B8D 54 00      419      byt CLRCMD,EOLCLR
0B8F D3 E1 F6   420      asc "Save these changes (Y/N): "
0B92 E5 A0 F4
0B95 E8 E5 F3
0B98 E5 A0 E3
0B9B E8 E1 EE
0B9E E7 E5 F3
0BA1 A0 A8 D9
0BA4 AF CE A9
0BA7 BA A0 A0
0BAA 50         421      byt RTNCMD
0BAB            422      ;
0BAB 20 E5 17   423      jsr READKEY
0BAE B0 10      424      bcs >2
0BB0            425      ;
0BB0 F0 0E      426      beq >2
0BB2            427      ;
0BB2 C9 D9      428      cmp #"Y"
0BB4 F0 04      429      beq >1
0BB6            430      ;
0BB6 C9 F9      431      cmp #"y"
0BB8 D0 06      432      bne >2
0BBA            433      ;
0BBA 20 ED FD   434      ^1    jsr COUT
0BBD            435      ;
0BBD 20 3D 0B   436      jsr WRITVTOC
0BC0            437      ;
0BC0 60         438      ^2    rts
0BC1            439      ;
0BC1            440      ;

```

```

0BC1 A2 AA      441  EDTOPTN  ldx #"*"
0BC3           442  ;
0BC3 2C 00 00   443           bit *-*
0BC6           444           dfs !-2
0BC4           445  ;
0BC4 A2 BE      446  SETOPTN  ldx #">"
0BC6           447  ;
0BC6 2C 00 00   448           bit *-*
0BC9           449           dfs !-2
0BC7           450  ;
0BC7 A2 A0      451  CLROPTN  ldx #" "
0BC9           452  ;
0BC9 AD 89 1A   453           lda OPTION
0BCC 0A         454           asl
0BCD A8         455           tay
0BCE           456  ;
0BCE B9 7E 1B   457           lda HDRTBL1,Y
0BD1 8D DB 0B   458           sta MOD2+1
0BD4           459  ;
0BD4 B9 7F 1B   460           lda HDRTBL1+1,Y
0BD7 8D DC 0B   461           sta MOD2+2
0BDA           462  ;
0BDA 8E 00 00   463  MOD2     stx *-*
0BDD           464  ;
0BDD 20 B2 0D   465           jsr SHOWHDR
0BE0           466  ;
0BE0 20 0C 18   467           jsr PRINT
0BE3 55         468           byt CNTRCMD
0BE4 D0 F2 E5   469           asc "Press ESC to Quit"
0BE7 F3 F3 A0
0BEA C5 D3 C3
0BED A0 F4 EF
0BF0 A0 D1 F5
0BF3 E9 F4
0BF5 50         470           byt RTNCMD
0BF6           471  ;
0BF6 60         472           rts
0BF7           473  ;
0BF7           474  ;
0BF7 20 0D 17   475  GETDATE  jsr GETDEC2
0BFA B0 4D      476           bcs >6
0BFC           477  ;
0BFC F0 0B      478           beq >1
0BFE           479  ;
0BFE AD A2 1A   480           lda DECVALS
0C01 20 9D 0C   481           jsr MAKEHEX
0C04           482  ;
0C04 8D 90 1A   483           sta SAVDATE+5
0C07           484  ;
0C07 90 06      485           bcc >2                ; always taken
0C09           486  ;
0C09 AD 90 1A   487  ^1      lda SAVDATE+5
0C0C 20 DA FD   488           jsr PRBYTE
0C0F           489  ;
0C0F A9 AF      490  ^2      lda #SLASH
0C11 20 ED FD   491           jsr COUT
0C14           492  ;
0C14 20 0D 17   493           jsr GETDEC2
0C17 B0 30      494           bcs >6
0C19           495  ;
0C19 F0 0B      496           beq >3

```

```

0C1B      497 ;
0C1B AD A2 1A 498      lda DECVALS
0C1E 20 9D 0C 499      jsr MAKEHEX
0C21      500 ;
0C21 8D 8F 1A 501      sta SAVDATE+4
0C24      502 ;
0C24 90 06      503      bcc >4                ; always taken
0C26      504 ;
0C26 AD 8F 1A 505      ^3      lda SAVDATE+4
0C29 20 DA FD 506      jsr PRBYTE
0C2C      507 ;
0C2C A9 AF      508      ^4      lda #SLASH
0C2E 20 ED FD 509      jsr COUT
0C31      510 ;
0C31 20 0D 17 511      jsr GETDEC2
0C34 B0 13      512      bcs >6
0C36      513 ;
0C36 F0 0A      514      beq >5
0C38      515 ;
0C38 AD A2 1A 516      lda DECVALS
0C3B 20 9D 0C 517      jsr MAKEHEX
0C3E      518 ;
0C3E 8D 8E 1A 519      sta SAVDATE+3
0C41      520 ;
0C41 60      521      rts
0C42      522 ;
0C42 AD 8E 1A 523      ^5      lda SAVDATE+3
0C45 20 DA FD 524      jsr PRBYTE
0C48      525 ;
0C48 18      526      clc
0C49      527 ;
0C49 60      528      ^6      rts
0C4A      529 ;
0C4A      530 ;
0C4A 20 0D 17 531      GETTIME jsr GETDEC2
0C4D B0 4D      532      bcs >6
0C4F      533 ;
0C4F F0 0B      534      beq >1
0C51      535 ;
0C51 AD A2 1A 536      lda DECVALS
0C54 20 9D 0C 537      jsr MAKEHEX
0C57      538 ;
0C57 8D 8D 1A 539      sta SAVDATE+2
0C5A      540 ;
0C5A 90 06      541      bcc >2                ; always taken
0C5C      542 ;
0C5C AD 8D 1A 543      ^1      lda SAVDATE+2
0C5F 20 DA FD 544      jsr PRBYTE
0C62      545 ;
0C62 A9 BA      546      ^2      lda #COLON
0C64 20 ED FD 547      jsr COUT
0C67      548 ;
0C67 20 0D 17 549      jsr GETDEC2
0C6A B0 30      550      bcs >6
0C6C      551 ;
0C6C F0 0B      552      beq >3
0C6E      553 ;
0C6E AD A2 1A 554      lda DECVALS
0C71 20 9D 0C 555      jsr MAKEHEX
0C74      556 ;
0C74 8D 8C 1A 557      sta SAVDATE+1

```

```

0C77          558 ;
0C77 90 06     559      bcc >4          ; always taken
0C79          560 ;
0C79 AD 8C 1A  561 ^3      lda SAVDATE+1
0C7C 20 DA FD  562      jsr PRBYTE
0C7F          563 ;
0C7F A9 BA     564 ^4      lda #COLON
0C81 20 ED FD  565      jsr COUT
0C84          566 ;
0C84 20 0D 17  567      jsr GETDEC2
0C87 B0 13     568      bcs >6
0C89          569 ;
0C89 F0 0A     570      beq >5
0C8B          571 ;
0C8B AD A2 1A  572      lda DECVALS
0C8E 20 9D 0C  573      jsr MAKEHEX
0C91          574 ;
0C91 8D 8B 1A  575      sta SAVDATE
0C94          576 ;
0C94 60        577      rts
0C95          578 ;
0C95 AD 8B 1A  579 ^5      lda SAVDATE
0C98 20 DA FD  580      jsr PRBYTE
0C9B          581 ;
0C9B 18        582      clc
0C9C          583 ;
0C9C 60        584 ^6      rts
0C9D          585 ;
0C9D          586 ;
0C9D A2 FF     587 MAKEHEX ldx #NEGONE
0C9F          588 ;
0C9F 38        589      sec
0CA0          590 ;
0CA0 E8        591 ^1      inx
0CA1          592 ;
0CA1 E9 0A     593      sbc #10
0CA3 B0 FB     594      bcs <1
0CA5          595 ;
0CA5 69 0A     596      adc #10
0CA7          597 ;
0CA7 8D 8A 1A  598      sta SAVNUM
0CAA          599 ;
0CAA 8A        600      txa
0CAB          601 ;
0CAB 0A        602      asl
0CAC 0A        603      asl
0CAD 0A        604      asl
0CAE 0A        605      asl
0CAF          606 ;
0CAF 0D 8A 1A  607      ora SAVNUM
0CB2          608 ;
0CB2 60        609      rts
0CB3          610 ;
0CB3          611 ;

```

BSAVE SEG01,A\$0900,B,L\$03B3

```

0CB3          612      usr SEG01
0CB3          613 ;
0CB3          614 ;
0CB3          615      icl "VMGR2.L"

```

LLOAD VMGR2.L,A\$4000


```

0CB3          1          ttl "VTOC Manager Source Code, VMGR2.L"
0CB3          2          ;
0CB3          3          ;
0CB3          4          ; VMGR2.L
0CB3          5          ;
0CB3          6          ;
0CB3          7          obj $900
0CB3          8          usr
0CB3          9          ;
0CB3         10          ;
0CB3 20 E3 03 11 INITPGM jsr GETIOB
0CB6         12          ;
0CB6 84 4A    13          sty IOBADR
0CB8 85 4B    14          sta IOBADR+1
0CBA         15          ;
0CBA A0 01    16          ld y #RWSLOT-TBLTYPE
0CBC         17          ;
0CBC B1 4A    18 ^1      lda (IOBADR),Y
0CBE 99 C6 1B 19          sta TBLTYPE,Y
0CC1         20          ;
0CC1 C8       21          iny
0CC2         22          ;
0CC2 C0 04    23          cpy #RWTRACK-TBLTYPE
0CC4 D0 F6    24          bne <1
0CC6         25          ;
0CC6 A0 0E    26          ld y #VOLFND-TBLTYPE
0CC8         27          ;
0CC8 B1 4A    28 ^2      lda (IOBADR),Y
0CCA 99 C6 1B 29          sta TBLTYPE,Y
0CCD         30          ;
0CCD C8       31          iny
0CCE         32          ;
0CCE C0 11    33          cpy #TBLSIZE
0CD0 D0 F6    34          bne <2
0CD2         35          ;
0CD2 AD C7 1B 36          lda RWSLOT
0CD5         37          ;
0CD5 4A       38          lsr
0CD6 4A       39          lsr
0CD7 4A       40          lsr
0CD8 4A       41          lsr
0CD9         42          ;
0CD9 8D 83 1A 43          sta SLOT
0CDC         44          ;
0CDC AD C8 1B 45          lda RWDRIVE
0CDF 8D 84 1A 46          sta DRIVE
0CE2         47          ;
0CE2 AD C9 1B 48          lda RWVOLUME
0CE5 8D 85 1A 49          sta VOLUME
0CE8         50          ;
0CE8 60       51          rts
0CE9         52          ;
0CE9         53          ;
0CE9 A0 BF    54 SHOWMENU ld y #VSNBUFR
0CEB A9 1A    55          lda /VSNBUFR
0CED         56          ;
0CED 20 8A 0D 57          jsr READVSN
0CF0         58          ;
0CF0 20 0C 18 59          jsr PRINT
0CF3 53 01    60          byt SCRNCMD,HOMESCRN

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```

0CF5 55          61          byt CNTRCMD
0CF6 C1 F0 F0    62          asc "Apple ][ VTOC Manager"
0CF9 EC E5 A0
0CFC DD DB A0
0CFF D6 D4 CF
0D02 C3 A0 CD
0D05 E1 EE E1
0D08 E7 E5 F2
0D0B 8D 8D      63          byt RETURN,RETURN
0D0D 0A          64          hex 0A
0D0E 56 00      65          byt BUFRCMD,DIRECT
0D10 BF 1A      66          adr VSNBUFR
0D12 50          67          byt RTNCMD
0D13            68          ;
0D13 20 0C 18   69          jsr PRINT
0D16 66          70          hex 66
0D17 55          71          byt CNTRCMD
0D18 CF F0 F4    72          asc "Option Menu"
0D1B E9 EF EE
0D1E A0 CD E5
0D21 EE F5
0D23 69 02      73          hex 6902
0D25 B1 A0 AD    74          asc "1 - Set Slot/Drive/Volume ("
0D28 A0 D3 E5
0D2B F4 A0 D3
0D2E EC EF F4
0D31 AF C4 F2
0D34 E9 F6 E5
0D37 AF D6 EF
0D3A EC F5 ED
0D3D E5 A0 A8
0D40 5C          75          byt DEC1CMD
0D41 83 1A      76          adr SLOT
0D43 AF          77          asc "/"
0D44 5D          78          byt DEC2CMD
0D45 84 1A      79          adr DRIVE
0D47 AF          80          asc "/"
0D48 5E          81          byt DEC3CMD
0D49 85 1A      82          adr VOLUME
0D4B A9          83          asc ")"
0D4C 6B 02      84          hex 6B02
0D4E B2 A0 AD    85          asc "2 - Show "
0D51 A0 D3 E8
0D54 EF F7 A0
0D57 56 00      86          byt BUFRCMD,DIRECT
0D59 E3 1A      87          adr HEADER2
0D5B 6D 02      88          hex 6D02
0D5D B3 A0 AD    89          asc "3 - "
0D60 A0
0D61 56 00      90          byt BUFRCMD,DIRECT
0D63 DE 1A      91          adr HEADER1
0D65 6F 02      92          hex 6F02
0D67 B4 A0 AD    93          asc "4 - Show "
0D6A A0 D3 E8
0D6D EF F7 A0
0D70 56 00      94          byt BUFRCMD,DIRECT
0D72 F6 1A      95          adr HEADER4
0D74 71 02      96          hex 7102
0D76 B5 A0 AD    97          asc "5 - "
0D79 A0
0D7A 56 00      98          byt BUFRCMD,DIRECT

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```

0D7C F1 1A      99      adr HEADER3
0D7E 73 02     100      hex 7302
0D80 B6 A0 AD   101      asc "6 - Quit"
0D83 A0 D1 F5
0D86 E9 F4
0D88 50         102      byt RTNCMD
0D89           103      ;
0D89 60         104      rts
0D8A           105      ;
0D8A           106      ;
0D8A 38         107      READVSN  sec
0D8B           108      ;
0D8B 6C E1 03   109      jmp (RDCLKVSN)
0D8E           110      ;
0D8E           111      ;
0D8E AD 01 1C   112      INITVTOC lda FRSTTRK
0D91 F0 09      113      beq >1
0D93           114      ;
0D93 AD 03 1C   115      lda DOSVRSN
0D96 C9 10      116      cmp #$10
0D98 B0 05      117      bcs >2
0D9A           118      ;
0D9A A9 33      119      lda #$33
0D9C           120      ;
0D9C 8D 03 1C   121      ^1    sta DOSVRSN
0D9F           122      ;
0D9F AD 08 1C   123      ^2    lda DISKNAME
0DA2 0D 09 1C   124      ora DISKNAME+1
0DA5 D0 0A      125      bne >4
0DA7           126      ;
0DA7 A0 17      127      ldy #NAMELEN-1
0DA9           128      ;
0DA9 A9 A0      129      lda #SPACE
0DAB           130      ;
0DAB 99 08 1C   131      ^3    sta DISKNAME,Y
0DAE           132      ;
0DAE 88         133      dey
0DAF 10 FA      134      bpl <3
0DB1           135      ;
0DB1 60         136      ^4    rts
0DB2           137      ;
0DB2           138      ;
0DB2 AD 03 1C   139      SHOWHDR lda DOSVRSN
0DB5           140      ;
0DB5 4A         141      lsr
0DB6 4A         142      lsr
0DB7 4A         143      lsr
0DB8 4A         144      lsr
0DB9           145      ;
0DB9 8D 8A 1A   146      sta SAVNUM
0DBC           147      ;
0DBC 20 0C 18   148      jsr PRINT
0DBF 00 62      149      hex 0062
0DC1 B1 F3 F4   150      asc "1st Cat T/S  -"
0DC4 A0 C3 E1
0DC7 F4 A0 D4
0DCA AF D3 A0
0DCD A0 A0 AD
0DD0 A0 B0 F8   151      HDRMOD01 asc " 0x"
0DD3 58         152      byt BYT1CMD
0DD4 01 1C      153      adr FRSTTRK

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0DD6 AF B0 F8      154      asc  "/0x"
0DD9 58            155      byt  BYT1CMD
0DDA 02 1C        156      adr  FRSTSEC
0DDC 8D            157      byt  RETURN
0DDD C4 CF D3     158      asc  "DOS Version  -"
0DE0 A0 D6 E5
0DE3 F2 F3 E9
0DE6 EF EE A0
0DE9 A0 A0 AD
0DEC A0            159      HDRMOD02 asc  " "
0DED 57            160      byt  NIBLCMD
0DEE 8A 1A        161      adr  SAVNUM
0DF0 AE            162      asc  "."
0DF1 57            163      byt  NIBLCMD
0DF2 03 1C        164      adr  DOSVRSN
0DF4 8D            165      byt  RETURN
0DF5 C4 CF D3     166      asc  "DOS Build  -"
0DF8 A0 C2 F5
0DFB E9 EC E4
0DFE A0 A0 A0
0E01 A0 A0 AD
0E04 A0            167      HDRMOD03 asc  " "
0E05 58            168      byt  BYT1CMD
0E06 04 1C        169      adr  DOSBUILD
0E08 8D            170      byt  RETURN
0E09 C4 CF D3     171      asc  "DOS RAM  -"
0E0C A0 D2 C1
0E0F CD A0 A0
0E12 A0 A0 A0
0E15 A0 A0 AD
0E18 A0            172      HDRMOD04 asc  " "
0E19 54 00        173      byt  CLRCMD,EOLCLR
0E1B 50            174      byt  RTNCMD
0E1C              175      ;
0E1C A2 0E        176      ldx  #DOSRAMH
0E1E A0 1B        177      ldy  /DOSRAMH
0E20              178      ;
0E20 AD 05 1C     179      lda  DOSRAM
0E23              180      ;
0E23 C9 48        181      cmp  #'H'
0E25 F0 16        182      beq  >1
0E27              183      ;
0E27 C9 C8        184      cmp  #"H"
0E29 F0 12        185      beq  >1
0E2B              186      ;
0E2B A2 1A        187      ldx  #DOSRAML
0E2D A0 1B        188      ldy  /DOSRAML
0E2F              189      ;
0E2F C9 4C        190      cmp  #'L'
0E31 F0 0A        191      beq  >1
0E33              192      ;
0E33 C9 CC        193      cmp  #"L"
0E35 F0 06        194      beq  >1
0E37              195      ;
0E37 A9 3F        196      lda  #'?'
0E39              197      ;
0E39 A2 25        198      ldx  #UNKNOWN
0E3B A0 1B        199      ldy  /UNKNOWN
0E3D              200      ;
0E3D 20 2F 10     201      ^1 jsr  PRNTBUFT
0E40              202      ;

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```

0E40 20 0C 18      203      jsr PRINT
0E43 8D 8D          204      byt RETURN,RETURN
0E45 D6 EF EC      205      asc "Volm Number  -"
0E48 ED A0 CE
0E4B F5 ED E2
0E4E E5 F2 A0
0E51 A0 A0 AD
0E54 A0 B0 F8      206      HDRMOD05 asc " 0x"
0E57 58            207      byt BYT1CMD
0E58 06 1C          208      adr DISKVOL
0E5A A0 A8          209      asc " ("
0E5C 5E            210      byt DEC3CMD
0E5D 06 1C          211      adr DISKVOL
0E5F A9            212      asc ")"
0E60 8D            213      byt RETURN
0E61 D6 EF EC      214      asc "Volm Type  -"
0E64 ED A0 D4
0E67 F9 F0 E5
0E6A A0 A0 A0
0E6D A0 A0 AD
0E70 A0            215      HDRMOD06 asc " "
0E71 54 00          216      byt CLRCMD,EOLCLR
0E73 50            217      byt RTNCMD
0E74              218      ;
0E74 A2 30          219      ldx #VOLTYPB
0E76 A0 1B          220      ldy /VOLTYPB
0E78              221      ;
0E78 AD 07 1C       222      lda DISKTYPE
0E7B              223      ;
0E7B C9 42          224      cmp #'B'
0E7D F0 16          225      beq >2
0E7F              226      ;
0E7F C9 C2          227      cmp #"B"
0E81 F0 12          228      beq >2
0E83              229      ;
0E83 A2 3D          230      ldx #VOLTYPD
0E85 A0 1B          231      ldy /VOLTYPD
0E87              232      ;
0E87 C9 44          233      cmp #'D'
0E89 F0 0A          234      beq >2
0E8B              235      ;
0E8B C9 C4          236      cmp #"D"
0E8D F0 06          237      beq >2
0E8F              238      ;
0E8F A9 BF          239      lda #"?"
0E91              240      ;
0E91 A2 25          241      ldx #UNKNOWN
0E93 A0 1B          242      ldy /UNKNOWN
0E95              243      ;
0E95 20 2F 10       244      ^2 jsr PRNTBUFT
0E98              245      ;
0E98 20 0C 18       246      jsr PRINT
0E9B 8D            247      byt RETURN
0E9C 54 00          248      byt CLRCMD,EOLCLR
0E9E D6 EF EC      249      asc "Volm Subject  -"
0EA1 ED A0 D3
0EA4 F5 E2 EA
0EA7 E5 E3 F4
0EAA A0 A0 AD
0EAD A0 B0 F8      250      HDRMOD07 asc " 0x"
0EB0 5B 01         251      byt ADRCMD,INDIRECT

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```

0EB2 28 1C      252      adr DISKSUBJ
0EB4 A0 A8      253      asc " ("
0EB6 5F 00      254      byt DECNCMD,NOPAD
0EB8 28 1C      255      adr DISKSUBJ
0EBA A9         256      asc ")"
0EBB 50         257      byt RTNCMD
0EBC           258      ;
0EBC A0 17      259      ldy #NAMELEN-1
0EBE           260      ;
0EBE B9 08 1C   261      ^3   lda DISKNAME,Y
0EC1 99 A6 1A   262      sta NAMEBUFR,Y
0EC4           263      ;
0EC4 88         264      dey
0EC5 10 F7      265      bpl <3
0EC7           266      ;
0EC7 20 0C 18   267      jsr PRINT
0ECA 8D         268      byt RETURN
0ECB D6 EF EC   269      asc "Volm DiskName -"
0ECE ED A0 C4
0ED1 E9 F3 EB
0ED4 CE E1 ED
0ED7 E5 A0 AD
0EDA A0         270      HDRMOD08 asc " "
0EDB 54 00      271      byt CLRCMD,EOLCLR
0EDD 56 00      272      byt BUFRCMD,DIRECT
0EDF A6 1A      273      adr NAMEBUFR
0EE1 D6 EF EC   274      asc "Volm DateTime -"
0EE4 ED A0 C4
0EE7 E1 F4 E5
0EEA D4 E9 ED
0EED E5 A0 AD
0EF0 A0         275      HDRMOD09 asc " "
0EF1 50         276      byt RTNCMD
0EF2           277      ;
0EF2 A0 20      278      ldy #INITIME
0EF4 A9 1C      279      lda /INITIME
0EF6           280      ;
0EF6 20 4D 10   281      jsr PRINTIME
0EF9           282      ;
0EF9 20 0C 18   283      jsr PRINT
0EFC 8D         284      byt RETURN
0EFD D6 D4 CF   285      asc "VTOC DateTime -"
0F00 C3 A0 C4
0F03 E1 F4 E5
0F06 D4 E9 ED
0F09 E5 A0 AD
0F0C A0         286      HDRMOD10 asc " "
0F0D 50         287      byt RTNCMD
0F0E           288      ;
0F0E A0 2A      289      ldy #VTOCTIME
0F10 A9 1C      290      lda /VTOCTIME
0F12           291      ;
0F12 20 4D 10   292      jsr PRINTIME
0F15           293      ;
0F15 20 0C 18   294      jsr PRINT
0F18 8D 8D      295      byt RETURN,RETURN
0F1A D4 AF D3   296      asc "T/S Pairs      -"
0F1D A0 D0 E1
0F20 E9 F2 F3
0F23 A0 A0 A0
0F26 A0 A0 AD

```

```

0F29 A0 B0 F8      297  HDRMOD11 asc " 0x"
0F2C 58            298      byt BYT1CMD
0F2D 27 1C        299      adr NUMTSENT
0F2F A0 A8        300      asc " ("
0F31 5E            301      byt DEC3CMD
0F32 27 1C        302      adr NUMTSENT
0F34 A9            303      asc ")"
0F35 8D            304      byt RETURN
0F36 CE E5 F8     305      asc "Next Track    -"
0F39 F4 A0 D4
0F3C F2 E1 E3
0F3F EB A0 A0
0F42 A0 A0 AD
0F45 A0 B0 F8     306  HDRMOD12 asc " 0x"
0F48 58            307      byt BYT1CMD
0F49 30 1C        308      adr NXTTOALC
0F4B A0 A8        309      asc " ("
0F4D 5D            310      byt DEC2CMD
0F4E 30 1C        311      adr NXTTOALC
0F50 A9            312      asc ")"
0F51 8D            313      byt RETURN
0F52 D4 EB A0     314      asc "Tk Allocation -"
0F55 C1 EC EC
0F58 EF E3 E1
0F5B F4 E9 EF
0F5E EE A0 AD
0F61 A0 B0 F8     315  HDRMOD13 asc " 0x"
0F64 54 00        316      byt CLRCMD,EOLCLR
0F66 50            317      byt RTNCMD
0F67              318      ;
0F67 A2 4A        319      ldx #ALLDIRN
0F69 A0 1B        320      ldy /ALLDIRN
0F6B              321      ;
0F6B AD 31 1C     322      lda ALLCDIR
0F6E C9 FF        323      cmp #NEGONE
0F70 F0 0C        324      beq >4
0F72              325      ;
0F72 A2 56        326      ldx #ALLDIRP
0F74 A0 1B        327      ldy /ALLDIRP
0F76              328      ;
0F76 C9 01        329      cmp #1
0F78 F0 04        330      beq >4
0F7A              331      ;
0F7A A2 25        332      ldx #UNKNOWN
0F7C A0 1B        333      ldy /UNKNOWN
0F7E              334      ;
0F7E 20 3B 10     335      ^4 jsr PRNTBUFH
0F81              336      ;
0F81 20 0C 18     337      jsr PRINT
0F84 8D            338      byt RETURN
0F85 C3 EF EE     339      asc "Config/Lock    -"
0F88 E6 E9 E7
0F8B AF CC EF
0F8E E3 EB A0
0F91 A0 A0 AD
0F94 A0 B0 F8     340  HDRMOD14 asc " 0x"
0F97 58            341      byt BYT1CMD
0F98 32 1C        342      adr DOSCONFIG
0F9A AF B0 F8     343      asc "/0x"
0F9D 54 00        344      byt CLRCMD,EOLCLR
0F9F 50            345      byt RTNCMD

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```

0FA0          346 ;
0FA0 A2 6C     347      ldx #LOCKU
0FA2 A0 1B     348      ldy /LOCKU
0FA4          349 ;
0FA4 AD 33 1C  350      lda DISKLOCK
0FA7 29 80     351      and #MSBMASK
0FA9 10 04     352      bpl >5
0FAB          353 ;
0FAB A2 62     354      ldx #LOCKL
0FAD A0 1B     355      ldy /LOCKL
0FAF          356 ;
0FAF 20 3B 10  357 ^5      jsr PRNTBUFH
0FB2          358 ;
0FB2 20 0C 18  359      jsr PRINT
0FB5 8D        360      byt RETURN
0FB6 D6 EF EC  361      asc "Volume Tracks -"
0FB9 F5 ED E5
0FBC A0 D4 F2
0FBF E1 E3 EB
0FC2 F3 A0 AD
0FC5 A0 B0 F8  362 HDRMOD15 asc " 0x"
0FC8 58        363      byt BYT1CMD
0FC9 34 1C     364      adr NUMTRKS
0FCB A0 A8     365      asc " ("
0FCD 5D        366      byt DEC2CMD
0FCE 34 1C     367      adr NUMTRKS
0FD0 A9        368      asc ")"
0FD1 8D        369      byt RETURN
0FD2 D4 F2 E1  370      asc "Track Sectors -"
0FD5 E3 EB A0
0FD8 D3 E5 E3
0FDB F4 EF F2
0FDE F3 A0 AD
0FE1 A0 B0 F8  371 HDRMOD16 asc " 0x"
0FE4 58        372      byt BYT1CMD
0FE5 35 1C     373      adr NUMSECS
0FE7 A0 A8     374      asc " ("
0FE9 5D        375      byt DEC2CMD
0FEA 35 1C     376      adr NUMSECS
0FEC A9        377      asc ")"
0FED 8D        378      byt RETURN
0FEE D4 F2 E1  379      asc "Track Phases -"
0FF1 E3 EB A0
0FF4 D0 E8 E1
0FF7 F3 E5 F3
0FFA A0 A0 AD
0FFD A0 B0 F8  380 HDRMOD17 asc " 0x"
1000 58        381      byt BYT1CMD
1001 26 1C     382      adr VTOCPHAS
1003 A0 A8     383      asc " ("
1005 5D        384      byt DEC2CMD
1006 26 1C     385      adr VTOCPHAS
1008 A9        386      asc ")"
1009 8D        387      byt RETURN
100A D3 E5 E3  388      asc "Sector Bytes -"
100D F4 EF F2
1010 A0 C2 F9
1013 F4 E5 F3
1016 A0 A0 AD
1019 A0 B0 F8  389 HDRMOD18 asc " 0x"
101C 57        390      byt NIBLCMD

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101D 37 1C      391      adr BYTPRSEC+1
101F 58          392      byt BYT1CMD
1020 36 1C      393      adr BYTPRSEC
1022 A0 A8      394      asc " ("
1024 5F 00      395      byt DECNCMD,NOPAD
1026 36 1C      396      adr BYTPRSEC
1028 A9          397      asc ")"
1029 00 77      398      hex 0077
102B 54 00      399      byt CLRCMD,EOLCLR
102D 50          400      byt RTNCMD
102E            401      ;
102E 60          402      rts
102F            403      ;
102F            404      ;
102F 8E 49 10    405      PRNTBUFT stx BUFRMOD
1032 8C 4A 10    406      sty BUFRMOD+1
1035            407      ;
1035 20 ED FD     408      jsr COUT
1038            409      ;
1038 4C 44 10     410      jmp PRNTBUF
103B            411      ;
103B 8E 49 10     412      PRNTBUFH stx BUFRMOD
103E 8C 4A 10     413      sty BUFRMOD+1
1041            414      ;
1041 20 DA FD     415      jsr PRBYTE
1044            416      ;
1044 20 0C 18     417      PRNTBUF  jsr PRINT
1047 56 00        418      byt BUFRCMD,DIRECT
1049 25 1B        419      BUFRMOD  adr UNKNOWN
104B 50           420      byt RTNCMD
104C            421      ;
104C 60           422      rts
104D            423      ;
104D            424      ;
104D 84 EE        425      PRINTIME sty GENPTR
104F 85 EF        426      sta GENPTR+1
1051            427      ;
1051 A0 05        428      ldz #5
1053            429      ;
1053 B1 EE        430      ^1      lda (GENPTR),Y
1055 20 DA FD     431      jsr PRBYTE
1058            432      ;
1058 B9 78 1B     433      lda DATIMSEP,Y
105B F0 06        434      beq >2
105D            435      ;
105D 20 ED FD     436      jsr COUT
1060            437      ;
1060 88           438      dey
1061 10 F0         439      bpl <1
1063            440      ;
1063 60           441      ^2      rts
1064            442      ;
1064            443      ;
1064 20 0C 18     444      HDREDT01 jsr PRINT
1067 00 77        445      hex 0077
1069 54 00        446      byt CLRCMD,EOLCLR
106B C5 EE F4     447      asc "Enter first catalog Track: 0x"
106E E5 F2 A0
1071 E6 E9 F2
1074 F3 F4 A0
1077 E3 E1 F4

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107A E1 EC EF
107D E7 A0 D4
1080 F2 E1 E3
1083 EB BA A0
1086 A0 B0 F8
1089 50          448      byt RTNCMD
108A          449      ;
108A 20 F9 16    450      jsr GETHEX2
108D B0 49       451      bcs >2
108F          452      ;
108F F0 0E       453      beq >1
1091          454      ;
1091 AD 9E 1A    455      lda HEXVALS
1094 CD 34 1C    456      cmp NUMTRKS
1097 B0 CB       457      bcs HDREDT01
1099          458      ;
1099 8D 01 1C    459      sta FRSTTRK
109C          460      ;
109C 20 B2 0D    461      jsr SHOWHDR
109F          462      ;
109F 20 0C 18    463      ^1 jsr PRINT
10A2 00 77       464      hex 0077
10A4 54 00       465      byt CLRCMD,EOLCLR
10A6 C5 EE F4    466      asc "Enter first catalog Sector: 0x"
10A9 E5 F2 A0
10AC E6 E9 F2
10AF F3 F4 A0
10B2 E3 E1 F4
10B5 E1 EC EF
10B8 E7 A0 D3
10BB E5 E3 F4
10BE EF F2 BA
10C1 A0 A0 B0
10C4 F8
10C5 50          467      byt RTNCMD
10C6          468      ;
10C6 20 F9 16    469      jsr GETHEX2
10C9 B0 0D       470      bcs >2
10CB          471      ;
10CB F0 0B       472      beq >2
10CD          473      ;
10CD AD 9E 1A    474      lda HEXVALS
10D0 CD 35 1C    475      cmp NUMSECS
10D3 B0 CA       476      bcs <1
10D5          477      ;
10D5 8D 02 1C    478      sta FRSTSEC
10D8          479      ;
10D8 60          480      ^2 rts
10D9          481      ;
10D9          482      ;
10D9 20 0C 18    483      HDREDT02 jsr PRINT
10DC C5 EE F4    484      asc "Enter DOS Version (x.y): "
10DF E5 F2 A0
10E2 C4 CF D3
10E5 A0 D6 E5
10E8 F2 F3 E9
10EB EF EE A0
10EE A8 F8 AE
10F1 F9 A9 BA
10F4 A0 A0
10F6 50          485      byt RTNCMD

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10F7          486 ;
10F7 20 0A 17 487      jsr GETDEC1
10FA B0 3B    488      bcs >3
10FC          489 ;
10FC 08       490      php
10FD          491 ;
10FD AD A2 1A 492      lda DECVALS
1100          493 ;
1100 28       494      plp
1101 D0 0C    495      bne >1
1103          496 ;
1103 AD 03 1C 497      lda DOSVRSN
1106          498 ;
1106 4A       499      lsr
1107 4A       500      lsr
1108 4A       501      lsr
1109 4A       502      lsr
110A          503 ;
110A 48       504      pha
110B          505 ;
110B 20 E3 FD 506      jsr PRHEX
110E          507 ;
110E 68       508      pla
110F          509 ;
110F 0A       510      ^1    asl
1110 0A       511      asl
1111 0A       512      asl
1112 0A       513      asl
1113          514 ;
1113 8D 8A 1A 515      sta SAVNUM
1116          516 ;
1116 A9 AE    517      lda #PERIOD
1118 20 ED FD 518      jsr COUT
111B          519 ;
111B 20 0A 17 520      jsr GETDEC1
111E B0 17    521      bcs >3
1120          522 ;
1120 08       523      php
1121          524 ;
1121 AD A2 1A 525      lda DECVALS
1124          526 ;
1124 28       527      plp
1125 D0 05    528      bne >2
1127          529 ;
1127 AD 03 1C 530      lda DOSVRSN
112A 29 0F    531      and #$0F
112C          532 ;
112C 48       533      ^2    pha
112D          534 ;
112D 20 E3 FD 535      jsr PRHEX
1130          536 ;
1130 68       537      pla
1131          538 ;
1131 0D 8A 1A 539      ora SAVNUM
1134 8D 03 1C 540      sta DOSVRSN
1137          541 ;
1137 60       542      ^3    rts
1138          543 ;
1138          544 ;
1138 20 0C 18 545      HDREDT03 jsr PRINT
113B C5 EE F4 546      asc "Enter DOS Build number:  "

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113E E5 F2 A0
1141 C4 CF D3
1144 A0 C2 F5
1147 E9 EC E4
114A A0 EE F5
114D ED E2 E5
1150 F2 BA A0
1153 A0
1154 50          547      byt RTNCMD
1155          548      ;
1155 20 0D 17    549      jsr GETDEC2
1158 B0 0B      550      bcs >1
115A          551      ;
115A F0 09      552      beq >1
115C          553      ;
115C AD A2 1A   554      lda DECVALS
115F 20 9D 0C   555      jsr MAKEHEX
1162          556      ;
1162 8D 04 1C   557      sta DOSBUILD
1165          558      ;
1165 60          559      ^1    rts
1166          560      ;
1166          561      ;
1166 20 0C 18    562      HDREDT04 jsr PRINT
1169 00 77      563      hex 0077
116B 54 00      564      byt CLRCMD,EOLCLR
116D C5 EE F4   565      asc "Enter DOS RAM version (H/L):  "
1170 E5 F2 A0
1173 C4 CF D3
1176 A0 D2 C1
1179 CD A0 F6
117C E5 F2 F3
117F E9 EF EE
1182 A0 A8 C8
1185 AF CC A9
1188 BA A0 A0
118B 50          566      byt RTNCMD
118C          567      ;
118C 20 E5 17    568      jsr READKEY
118F B0 13      569      bcs >3
1191          570      ;
1191 F0 11      571      beq >3
1193          572      ;
1193 C9 E0      573      cmp #LWRCASE
1195 90 02      574      bcc >1
1197          575      ;
1197 29 DF      576      and #LWRMASK
1199          577      ;
1199 C9 C8      578      ^1    cmp #"H"
119B F0 04      579      beq >2
119D          580      ;
119D C9 CC      581      cmp #"L"
119F D0 C5      582      bne HDREDT04
11A1          583      ;
11A1 8D 05 1C   584      ^2    sta DOSRAM
11A4          585      ;
11A4 60          586      ^3    rts
11A5          587      ;
11A5          588      ;
11A5 20 0C 18   589      HDREDT05 jsr PRINT
11A8 00 77      590      hex 0077

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11AA 54 00      591      byt CLRCMD,EOLCLR
11AC C5 EE F4   592      asc "Enter volume Volume number:  "
11AF E5 F2 A0
11B2 F6 EF EC
11B5 F5 ED E5
11B8 A0 D6 EF
11BB EC F5 ED
11BE E5 A0 EE
11C1 F5 ED E2
11C4 E5 F2 BA
11C7 A0 A0
11C9 50          593      byt RTNCMD
11CA          594      ;
11CA 20 10 17   595      jsr GETDEC3
11CD B0 0D      596      bcs >1
11CF          597      ;
11CF F0 0B      598      beq >1
11D1          599      ;
11D1 AD A3 1A   600      lda DECVALS+1
11D4 D0 CF      601      bne HDREDT05
11D6          602      ;
11D6 AD A2 1A   603      lda DECVALS
11D9 8D 06 1C   604      sta DISKVOL
11DC          605      ;
11DC 60          606      ^1      rts
11DD          607      ;
11DD          608      ;
11DD 20 0C 18   609      HDREDT06 jsr PRINT
11E0 00 77      610      hex 0077
11E2 54 00      611      byt CLRCMD,EOLCLR
11E4 C5 EE F4   612      asc "Enter volume Type (B/D):  "
11E7 E5 F2 A0
11EA F6 EF EC
11ED F5 ED E5
11F0 A0 D4 F9
11F3 F0 E5 A0
11F6 A8 C2 AF
11F9 C4 A9 BA
11FC A0 A0
11FE 50          613      byt RTNCMD
11FF          614      ;
11FF 20 E5 17   615      jsr READKEY
1202 B0 13      616      bcs >3
1204          617      ;
1204 F0 11      618      beq >3
1206          619      ;
1206 C9 E0      620      cmp #LWRCASE
1208 90 02      621      bcc >1
120A          622      ;
120A 29 DF      623      and #LWRMASK
120C          624      ;
120C C9 C2      625      ^1      cmp #"B"
120E F0 04      626      beq >2
1210          627      ;
1210 C9 C4      628      cmp #"D"
1212 D0 C9      629      bne HDREDT06
1214          630      ;
1214 8D 07 1C   631      ^2      sta DISKTYPE
1217          632      ;
1217 60          633      ^3      rts
1218          634      ;

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1218      635 ;
1218 20 0C 18 636 HDREDT07 jsr PRINT
121B C5 EE F4 637      asc "Enter volume Subject (xxxx):  0x"
121E E5 F2 A0
1221 F6 EF EC
1224 F5 ED E5
1227 A0 D3 F5
122A E2 EA E5
122D E3 F4 A0
1230 A8 F8 F8
1233 F8 F8 A9
1236 BA A0 A0
1239 B0 F8
123B 50      638      byt RTNCMD
123C      639 ;
123C 20 FF 16 640      jsr GETHEX4
123F B0 0E    641      bcs >1
1241      642 ;
1241 F0 0C    643      beq >1
1243      644 ;
1243 AD 9F 1A 645      lda HEXVALS+1
1246 8D 28 1C 646      sta DISKSUBJ
1249      647 ;
1249 AD 9E 1A 648      lda HEXVALS
124C 8D 29 1C 649      sta DISKSUBJ+1
124F      650 ;
124F 60      651 ^1      rts
1250      652 ;
1250      653 ;
1250 A0 17    654 HDREDT08 ldz #NAMELEN-1
1252      655 ;
1252 A9 A0    656      lda #SPACE
1254      657 ;
1254 99 A6 1A 658 ^1      sta NAMEBUFR,Y
1257      659 ;
1257 88      660      dey
1258 10 FA    661      bpl <1
125A      662 ;
125A C8      663      iny
125B      664 ;
125B 8C 91 1A 665      sty COUNT
125E      666 ;
125E 20 0C 18 667      jsr PRINT
1261 C5 EE F4 668      asc "Enter Name:  "
1264 E5 F2 A0
1267 CE E1 ED
126A E5 BA A0
126D A0
126E 50      669      byt RTNCMD
126F      670 ;
126F 20 E5 17 671 ^2      jsr READKEY
1272 B0 48    672      bcs >7
1274      673 ;
1274 F0 36    674      beq >5
1276      675 ;
1276 C9 88    676      cmp #LARROW
1278 F0 04    677      beq >3
127A      678 ;
127A C9 FF    679      cmp #DELETE
127C D0 18    680      bne >4
127E      681 ;

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127E AC 91 1A    682  ^3      ldy COUNT
1281 F0 EC      683      beq <2
1283           684      ;
1283 C6 24      685      dec CH
1285 CE 91 1A   686      dec COUNT
1288           687      ;
1288 88         688      dey
1289           689      ;
1289 A9 A0      690      lda #SPACE
128B 99 A6 1A   691      sta NAMEBUFR,Y
128E           692      ;
128E 20 0C 18   693      jsr PRINT
1291 54 00      694      byt CLRCMD,EOLCLR
1293 50         695      byt RTNCMD
1294           696      ;
1294 90 D9      697      bcc <2                ; always taken
1296           698      ;
1296 C9 A0      699      ^4      cmp #SPACE
1298 90 D5      700      bcc <2
129A           701      ;
129A AC 91 1A   702      ldy COUNT
129D           703      ;
129D C0 18      704      cpy #NAMELEN
129F B0 CE      705      bcs <2
12A1           706      ;
12A1 99 A6 1A   707      sta NAMEBUFR,Y
12A4           708      ;
12A4 20 ED FD   709      jsr COUT
12A7           710      ;
12A7 EE 91 1A   711      inc COUNT
12AA D0 C3      712      bne <2                ; always taken
12AC           713      ;
12AC AD 91 1A   714      ^5      lda COUNT
12AF F0 0B      715      beq >7
12B1           716      ;
12B1 A0 17      717      ldy #NAMELEN-1
12B3           718      ;
12B3 B9 A6 1A   719      ^6      lda NAMEBUFR,Y
12B6 99 08 1C   720      sta DISKNAME,Y
12B9           721      ;
12B9 88         722      dey
12BA 10 F7      723      bpl <6
12BC           724      ;
12BC 60         725      ^7      rts
12BD           726      ;
12BD           727      ;
12BD A0 05      728      HDREDT09 ldy #5
12BF           729      ;
12BF B9 20 1C   730      ^1      lda INITIME,Y
12C2 99 8B 1A   731      sta SAVDATE,Y
12C5           732      ;
12C5 88         733      dey
12C6 10 F7      734      bpl <1
12C8           735      ;
12C8 20 0C 18   736      jsr PRINT
12CB C5 EE F4   737      asc "Enter volume Date (mm/dd/yy):  "
12CE E5 F2 A0
12D1 F6 EF EC
12D4 F5 ED E5
12D7 A0 C4 E1
12DA F4 E5 A0

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12DD A8 ED ED
12E0 AF E4 E4
12E3 AF F9 F9
12E6 A9 BA A0
12E9 A0
12EA 50          738      byt RTNCMD
12EB          739      ;
12EB 20 F7 0B    740      jsr GETDATE
12EE B0 37       741      bcs >3
12F0          742      ;
12F0 20 0C 18    743      jsr PRINT
12F3 00 77       744      hex 0077
12F5 54 00       745      byt CLRCMD,EOLCLR
12F7 C5 EE F4    746      asc "Enter volume Time (hh:mm:ss):  "
12FA E5 F2 A0
12FD F6 EF EC
1300 F5 ED E5
1303 A0 D4 E9
1306 ED E5 A0
1309 A8 E8 E8
130C BA ED ED
130F BA F3 F3
1312 A9 BA A0
1315 A0
1316 50          747      byt RTNCMD
1317          748      ;
1317 20 4A 0C    749      jsr GETTIME
131A B0 0B       750      bcs >3
131C          751      ;
131C A0 05       752      ldy #5
131E          753      ;
131E B9 8B 1A    754      ^2      lda SAVDATE,Y
1321 99 20 1C    755      sta INITIME,Y
1324          756      ;
1324 88          757      dey
1325 10 F7       758      bpl <2
1327          759      ;
1327 60          760      ^3      rts
1328          761      ;
1328          762      ;
1328 A0 05       763      HDREDT10 ldy #5
132A          764      ;
132A B9 2A 1C    765      ^1      lda VTOCTIME,Y
132D 99 8B 1A    766      sta SAVDATE,Y
1330          767      ;
1330 88          768      dey
1331 10 F7       769      bpl <1
1333          770      ;
1333 20 0C 18    771      jsr PRINT
1336 C5 EE F4    772      asc "Enter VTOC Date (mm/dd/yy):  "
1339 E5 F2 A0
133C D6 D4 CF
133F C3 A0 C4
1342 E1 F4 E5
1345 A0 A8 ED
1348 ED AF E4
134B E4 AF F9
134E F9 A9 BA
1351 A0 A0
1353 50          773      byt RTNCMD
1354          774      ;

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1354 20 F7 0B      775          jsr GETDATE
1357 B0 35         776          bcs >3
1359              777          ;
1359 20 0C 18      778          jsr PRINT
135C 00 77         779          hex 0077
135E 54 00         780          byt CLRCMD,EOLCLR
1360 C5 EE F4      781          asc "Enter VTOC Time (hh:mm:ss):  "
1363 E5 F2 A0
1366 D6 D4 CF
1369 C3 A0 D4
136C E9 ED E5
136F A0 A8 E8
1372 E8 BA ED
1375 ED BA F3
1378 F3 A9 BA
137B A0 A0
137D 50           782          byt RTNCMD
137E              783          ;
137E 20 4A 0C      784          jsr GETTIME
1381 B0 0B         785          bcs >3
1383              786          ;
1383 A0 05         787          ldz #5
1385              788          ;
1385 B9 8B 1A      789          ^2      lda SAVDATE,Y
1388 99 2A 1C      790          sta VTOCTIME,Y
138B              791          ;
138B 88           792          dey
138C 10 F7         793          bpl <2
138E              794          ;
138E 60           795          ^3      rts
138F              796          ;
138F              797          ;
138F 20 0C 18      798      HDREDT11 jsr PRINT
1392 C5 EE F4      799          asc "Enter number T/S Pairs:  0x"
1395 E5 F2 A0
1398 EE F5 ED
139B E2 E5 F2
139E A0 D4 AF
13A1 D3 A0 D0
13A4 E1 E9 F2
13A7 F3 BA A0
13AA A0 B0 F8
13AD 50           800          byt RTNCMD
13AE              801          ;
13AE 20 F9 16      802          jsr GETHEX2
13B1 B0 08         803          bcs >1
13B3              804          ;
13B3 F0 06         805          beq >1
13B5              806          ;
13B5 AD 9E 1A      807          lda HEXVALS
13B8 8D 27 1C      808          sta NUMTSENT
13BB              809          ;
13BB 60           810          ^1      rts
13BC              811          ;
13BC              812          ;
13BC 20 0C 18      813      HDREDT12 jsr PRINT
13BF 00 77         814          hex 0077
13C1 54 00         815          byt CLRCMD,EOLCLR
13C3 C5 EE F4      816          asc "Enter next Track allocation:  0x"
13C6 E5 F2 A0
13C9 EE E5 F8

```

```

13CC F4 A0 D4
13CF F2 E1 E3
13D2 EB A0 E1
13D5 EC EC EF
13D8 E3 E1 F4
13DB E9 EF EE
13DE BA A0 A0
13E1 B0 F8
13E3 50          817      byt RTNCMD
13E4          818      ;
13E4 20 F9 16    819      jsr GETHEX2
13E7 B0 0D       820      bcs >1
13E9          821      ;
13E9 F0 0B       822      beq >1
13EB          823      ;
13EB AD 9E 1A    824      lda HEXVALS
13EE CD 34 1C    825      cmp NUMTRKS
13F1 B0 C9       826      bcs HDREDT12
13F3          827      ;
13F3 8D 30 1C    828      sta NXTTOALC
13F6          829      ;
13F6 60          830      ^1    rts
13F7          831      ;
13F7          832      ;
13F7 20 0C 18    833      HDREDT13 jsr PRINT
13FA 00 77       834      hex 0077
13FC 54 00       835      byt CLRCMD,EOLCLR
13FE C5 EE F4    836      asc "Enter allocation Direction (+/-):  "
1401 E5 F2 A0
1404 E1 EC EC
1407 EF E3 E1
140A F4 E9 EF
140D EE A0 C4
1410 E9 F2 E5
1413 E3 F4 E9
1416 EF EE A0
1419 A8 AB AF
141C AD A9 BA
141F A0 A0
1421 50          837      byt RTNCMD
1422          838      ;
1422 20 E5 17    839      jsr READKEY
1425 B0 11       840      bcs >2
1427          841      ;
1427 F0 0F       842      beq >2
1429          843      ;
1429 A2 01       844      ldx #1
142B          845      ;
142B C9 AB       846      cmp #"+"
142D F0 06       847      beq >1
142F          848      ;
142F A2 FF       849      ldx #NEGONE
1431          850      ;
1431 C9 AD       851      cmp #"-"
1433 D0 C2       852      bne HDREDT13
1435          853      ;
1435 8E 31 1C    854      ^1    stx ALLCDIR
1438          855      ;
1438 60          856      ^2    rts
1439          857      ;
1439          858      ;

```

```

1439 20 0C 18      859  HDREDT14 jsr PRINT
143C 00 77          860          hex 0077
143E 54 00          861          byt CLRCMD,EOLCLR
1440 C5 EE F4      862          asc "Enter volume Config:  0x"
1443 E5 F2 A0
1446 F6 EF EC
1449 F5 ED E5
144C A0 C3 EF
144F EE E6 E9
1452 E7 BA A0
1455 A0 B0 F8
1458 50              863          byt RTNCMD
1459              864  ;
1459 20 F9 16      865          jsr GETHEX2
145C B0 08          866          bcs >1
145E              867  ;
145E F0 06          868          beq >1
1460              869  ;
1460 AD 9E 1A      870          lda HEXVALS
1463 8D 32 1C      871          sta DOSCONFIG
1466              872  ;
1466 20 0C 18      873  ^1      jsr PRINT
1469 00 77          874          hex 0077
146B 54 00          875          byt CLRCMD,EOLCLR
146D C5 EE F4      876          asc "Enter volume Lock (L/U):  "
1470 E5 F2 A0
1473 F6 EF EC
1476 F5 ED E5
1479 A0 CC EF
147C E3 EB A0
147F A8 CC AF
1482 D5 A9 BA
1485 A0 A0
1487 50              877          byt RTNCMD
1488              878  ;
1488 20 E5 17      879          jsr READKEY
148B B0 17          880          bcs >4
148D              881  ;
148D F0 15          882          beq >4
148F              883  ;
148F C9 E0          884          cmp #LWRCASE
1491 90 02          885          bcc >2
1493              886  ;
1493 29 DF          887          and #LWRMASK
1495              888  ;
1495 A2 80          889  ^2      ldx #$80
1497              890  ;
1497 C9 CC          891          cmp #"L"
1499 F0 06          892          beq >3
149B              893  ;
149B A2 00          894          ldx #ZERO
149D              895  ;
149D C9 D5          896          cmp #"U"
149F D0 98          897          bne HDREDT14
14A1              898  ;
14A1 8E 33 1C      899  ^3      stx DISKLOCK
14A4              900  ;
14A4 60              901  ^4      rts
14A5              902  ;
14A5              903  ;
14A5 20 0C 18      904  HDREDT15 jsr PRINT

```

```

14A8 00 77          905          hex 0077
14AA 54 00          906          byt CLRCMD,EOLCLR
14AC C5 EE F4      907          asc "Enter volume Tracks (35/40/48):  "
14AF E5 F2 A0
14B2 F6 EF EC
14B5 F5 ED E5
14B8 A0 D4 F2
14BB E1 E3 EB
14BE F3 A0 A8
14C1 B3 B5 AF
14C4 B4 B0 AF
14C7 B4 B8 A9
14CA BA A0 A0
14CD 50            908          byt RTNCMD
14CE              909          ;
14CE 20 0D 17      910          jsr GETDEC2
14D1 B0 14          911          bcs >2
14D3              912          ;
14D3 F0 12          913          beq >2
14D5              914          ;
14D5 AD A2 1A      915          lda DECVALS
14D8 C9 23          916          cmp #35
14DA F0 08          917          beq >1
14DC              918          ;
14DC C9 28          919          cmp #40
14DE F0 04          920          beq >1
14E0              921          ;
14E0 C9 30          922          cmp #48
14E2 D0 C1          923          bne HDREDT15
14E4              924          ;
14E4 8D 34 1C      925          ^1      sta NUMTRKS
14E7              926          ;
14E7 60            927          ^2      rts
14E8              928          ;
14E8              929          ;
14E8 20 0C 18      930          HDREDT16 jsr PRINT
14EB 00 77          931          hex 0077
14ED 54 00          932          byt CLRCMD,EOLCLR
14EF C5 EE F4      933          asc "Enter track Sectors (16/32):  "
14F2 E5 F2 A0
14F5 F4 F2 E1
14F8 E3 EB A0
14FB D3 E5 E3
14FE F4 EF F2
1501 F3 A0 A8
1504 B1 B6 AF
1507 B3 B2 A9
150A BA A0 A0
150D 50            934          byt RTNCMD
150E              935          ;
150E 20 0D 17      936          jsr GETDEC2
1511 B0 10          937          bcs >2
1513              938          ;
1513 F0 0E          939          beq >2
1515              940          ;
1515 AD A2 1A      941          lda DECVALS
1518 C9 10          942          cmp #16
151A F0 04          943          beq >1
151C              944          ;
151C C9 20          945          cmp #32
151E D0 C8          946          bne HDREDT16

```

```

1520          947 ;
1520 8D 35 1C 948 ^1      sta NUMSECS
1523          949 ;
1523 60      950 ^2      rts
1524          951 ;
1524          952 ;
1524 20 0C 18 953 HDREDT17 jsr PRINT
1527 00 77    954          hex 0077
1529 54 00    955          byt CLRCMD,EOLCLR
152B C5 EE F4 956          asc "Enter track Phases (1-99):  "
152E E5 F2 A0
1531 F4 F2 E1
1534 E3 EB A0
1537 D0 E8 E1
153A F3 E5 F3
153D A0 A8 B1
1540 AD B9 B9
1543 A9 BA A0
1546 A0
1547 50      957          byt RTNCMD
1548          958 ;
1548 20 0D 17 959          jsr GETDEC2
154B B0 0E    960          bcs >1
154D          961 ;
154D F0 0C    962          beq >1
154F          963 ;
154F AD A2 1A 964          lda DECVALS
1552 F0 D0    965          beq HDREDT17
1554          966 ;
1554 C9 64    967          cmp #100
1556 B0 CC    968          bcs HDREDT17
1558          969 ;
1558 8D 26 1C 970          sta VTOCPHAS
155B          971 ;
155B 60      972 ^1      rts
155C          973 ;
155C          974 ;
155C 20 0C 18 975 HDREDT18 jsr PRINT
155F 00 77    976          hex 0077
1561 54 00    977          byt CLRCMD,EOLCLR
1563 C5 EE F4 978          asc "Enter sector Bytes (100/200):  0x"
1566 E5 F2 A0
1569 F3 E5 E3
156C F4 EF F2
156F A0 C2 F9
1572 F4 E5 F3
1575 A0 A8 B1
1578 B0 B0 AF
157B B2 B0 B0
157E A9 BA A0
1581 A0 B0 F8
1584 50      979          byt RTNCMD
1585          980 ;
1585 20 FC 16 981          jsr GETHEX3
1588 B0 1E    982          bcs >2
158A          983 ;
158A F0 1C    984          beq >2
158C          985 ;
158C AD 9F 1A 986          lda HEXVALS+1
158F D0 CB    987          bne HDREDT18
1591          988 ;

```

```

1591 AD 9E 1A      989          lda HEXVALS
1594 C9 10        990          cmp #$10
1596 F0 04        991          beq >1
1598              992          ;
1598 C9 20        993          cmp #$20
159A D0 C0        994          bne HDREDT18
159C              995          ;
159C 4A           996          ^1      lsr
159D 4A           997          lsr
159E 4A           998          lsr
159F 4A           999          lsr
15A0              1000         ;
15A0 8D 37 1C     1001         sta BYTPRSEC+1
15A3              1002         ;
15A3 A9 00        1003         lda #ZERO
15A5 8D 36 1C     1004         sta BYTPRSEC
15A8              1005         ;
15A8 60           1006         ^2      rts
15A9              1007         ;
15A9              1008         ;
15A9 20 0C 18     1009     SHOWMAP  jsr PRINT
15AC 00 65        1010         hex 0065
15AE D4 F2 EB     1011         asc "Trk|00001111 00001111 00001111 00001111"
15B1 FC B0 B0
15B4 B0 B0 B1
15B7 B1 B1 B1
15BA A0 B0 B0
15BD B0 B0 B1
15C0 B1 B1 B1
15C3 A0 B0 B0
15C6 B0 B0 B1
15C9 B1 B1 B1
15CC A0 B0 B0
15CF B0 B0 B1
15D2 B1 B1 B1
15D5 8D          1012         byt RETURN
15D6 CE F5 ED     1013         asc "Num|C840C840 C840C840 C840C840 C840C840"
15D9 FC C3 B8
15DC B4 B0 C3
15DF B8 B4 B0
15E2 A0 C3 B8
15E5 B4 B0 C3
15E8 B8 B4 B0
15EB A0 C3 B8
15EE B4 B0 C3
15F1 B8 B4 B0
15F4 A0 C3 B8
15F7 B4 B0 C3
15FA B8 B4 B0
15FD 8D          1014         byt RETURN
15FE D2 EE E7     1015         asc "Rng|FB73FB73 FB73FB73 FB73FB73 FB73FB73"
1601 FC C6 C2
1604 B7 B3 C6
1607 C2 B7 B3
160A A0 C6 C2
160D B7 B3 C6
1610 C2 B7 B3
1613 A0 C6 C2
1616 B7 B3 C6
1619 C2 B7 B3
161C A0 C6 C2

```

```

161F B7 B3 C6
1622 C2 B7 B3
1625 8D          1016      byt RETURN
1626 50          1017      byt RTNCMD
1627          1018      ;
1627 A0 27      1019      ldy #39
1629          1020      ;
1629 A9 AD      1021      lda #"-"
162B          1022      ;
162B 20 ED FD  1023      ^1   jsr COUT
162E          1024      ;
162E 88          1025      dey
162F D0 FA      1026      bne <1
1631          1027      ;
1631 8C 91 1A   1028      sty COUNT
1634          1029      ;
1634 20 8E FD   1030      ^2   jsr CROUT
1637          1031      ;
1637 A9 04      1032      lda #4
1639 8D 92 1A   1033      sta COUNT2
163C          1034      ;
163C 20 0C 18   1035      jsr PRINT
163F A0          1036      asc " "
1640 58          1037      byt BYT1CMD
1641 91 1A      1038      adr COUNT
1643 50          1039      byt RTNCMD
1644          1040      ;
1644 A9 FC      1041      lda #"|"
1646          1042      ;
1646 20 ED FD   1043      ^3   jsr COUT
1649          1044      ;
1649 AD 91 1A   1045      lda COUNT
164C          1046      ;
164C 0A          1047      asl
164D 0A          1048      asl
164E          1049      ;
164E 69 38      1050      adc #BITMAP
1650 8D 58 16   1051      sta SHOWMOD
1653          1052      ;
1653 20 0C 18   1053      jsr PRINT
1656 5A 04      1054      byt BYTNCMD,4
1658 00 1C      1055      SHOWMOD adr VTOCBUFR
165A 50          1056      byt RTNCMD
165B          1057      ;
165B EE 91 1A   1058      inc COUNT
165E          1059      ;
165E AD 91 1A   1060      lda COUNT
1661 CD 34 1C   1061      cmp NUMTRKS
1664 F0 0D      1062      beq >4
1666          1063      ;
1666 C9 32      1064      cmp #MAXTRKS
1668 F0 09      1065      beq >4
166A          1066      ;
166A A9 A0      1067      lda #SPACE
166C          1068      ;
166C CE 92 1A   1069      dec COUNT2
166F D0 D5      1070      bne <3
1671          1071      ;
1671 F0 C1      1072      beq <2      ; always taken
1673          1073      ;
1673 20 0C 18   1074      ^4   jsr PRINT

```

```

1676 00 77      1075      hex 0077
1678 54 00      1076      byt CLRCMD,EOLCLR
167A 50          1077      byt RTNCMD
167B           1078      ;
167B 60          1079      ^0      rts
167C           1080      ;
167C           1081      ;
167C 20 A9 15    1082      EDITMAP  jsr SHOWMAP
167F           1083      ;
167F 20 0C 18    1084      ^1      jsr PRINT
1682 00 77      1085      hex 0077
1684 54 00      1086      byt CLRCMD,EOLCLR
1686 C5 EE F4    1087      asc "Enter track number to edit:  0x"
1689 E5 F2 A0
168C F4 F2 E1
168F E3 EB A0
1692 EE F5 ED
1695 E2 E5 F2
1698 A0 F4 EF
169B A0 E5 E4
169E E9 F4 BA
16A1 A0 A0 B0
16A4 F8
16A5 50          1088      byt RTNCMD
16A6 20 F9 16    1089      jsr GETHEX2
16A9 B0 D0        1090      bcs <0
16AB           1091      ;
16AB F0 D2        1092      beq <1
16AD           1093      ;
16AD AD 9E 1A    1094      lda HEXVALS
16B0 CD 34 1C    1095      cmp NUMTRKS
16B3 B0 CA        1096      bcs <1
16B5           1097      ;
16B5 0A          1098      asl
16B6 0A          1099      asl
16B7           1100      ;
16B7 8D 91 1A    1101      sta COUNT
16BA           1102      ;
16BA 69 38        1103      adc #BITMAP
16BC 8D D6 16    1104      sta EDITMOD
16BF           1105      ;
16BF 20 0C 18    1106      jsr PRINT
16C2 00 77      1107      hex 0077
16C4 54 00      1108      byt CLRCMD,EOLCLR
16C6 C5 EE F4    1109      asc "Enter Bitmap ( "
16C9 E5 F2 A0
16CC C2 E9 F4
16CF ED E1 F0
16D2 A0 A8
16D4 5A 04        1110      byt BYTNCMD,4
16D6 00 1C        1111      EDITMOD  adr VTOCBUFR
16D8 A9 BA A0     1112      asc "):  0x"
16DB A0 B0 F8
16DE 50          1113      byt RTNCMD
16DF           1114      ;
16DF 20 05 17    1115      jsr GETHEX8
16E2 B0 9B        1116      bcs <1
16E4           1117      ;
16E4 F0 96        1118      beq EDITMAP
16E6           1119      ;
16E6 A2 00        1120      ldx #ZERO

```

```
16E8          1121 ;
16E8 AC 91 1A 1122      ldy COUNT
16EB          1123 ;
16EB BD 9E 1A 1124 ^2    lda HEXVALS,X
16EE 99 38 1C 1125      sta BITMAP,Y
16F1          1126 ;
16F1 C8       1127      iny
16F2          1128 ;
16F2 E8       1129      inx
16F3          1130 ;
16F3 E0 04    1131      cpx #4
16F5 D0 F4    1132      bne <2
16F7          1133 ;
16F7 F0 83    1134      beq EDITMAP      ; always taken
16F9          1135 ;
16F9          1136 ;
```

BSAVE SEG02,A\$0900,B,L\$0A46

```
16F9          1137      usr SEG02
16F9          1138 ;
16F9          1139 ;
16F9          1140      icl "VMGR3.L"
```

LLOAD VMGR3.L,A\$4000

```
16F9          1          ttl "VTOC Manager Source Code, VMGR3.L"
16F9          2          ;
16F9          3          ;
16F9          4          ; VMGR3.L
16F9          5          ;
16F9          6          ;
16F9          7          obj $900
16F9          8          usr
16F9          9          ;
16F9         10          ;
16F9 A9 02     11 GETHEX2  lda #2
16FB         12          ;
16FB 2C 00 00 13          bit *-*
16FE         14          dfs !-2
16FC         15          ;
16FC A9 03     16 GETHEX3  lda #3
16FE         17          ;
16FE 2C 00 00 18          bit *-*
1701         19          dfs !-2
16FF         20          ;
16FF A9 04     21 GETHEX4  lda #4
1701         22          ;
1701 2C 00 00 23          bit *-*
1704         24          dfs !-2
1702         25          ;
1702 A9 06     26 GETHEX6  lda #6
1704         27          ;
1704 2C 00 00 28          bit *-*
1707         29          dfs !-2
1705         30          ;
1705 A9 08     31 GETHEX8  lda #8
1707         32          ;
1707 38        33          sec
1708 B0 0C     34          bcs >1
170A         35          ;
170A         36          ;
170A A9 01     37 GETDEC1  lda #1
170C         38          ;
170C 2C 00 00 39          bit *-*
170F         40          dfs !-2
170D         41          ;
170D A9 02     42 GETDEC2  lda #2
170F         43          ;
170F 2C 00 00 44          bit *-*
1712         45          dfs !-2
1710         46          ;
1710 A9 03     47 GETDEC3  lda #3
1712         48          ;
1712 2C 00 00 49          bit *-*
1715         50          dfs !-2
1713         51          ;
1713 A9 05     52 GETDEC5  lda #5
1715         53          ;
1715 18        54          clc
1716         55          ;
1716 08        56 ^1      php
1717         57          ;
1717 8D 93 1A  58          sta NNUMS
171A         59          ;
171A A9 00     60          lda #ZERO
```

```

171C          61 ;
171C A0 0E      62      ldy #CHARBUFR-NENTRY+1
171E          63 ;
171E 99 95 1A   64 ^2      sta NENTRY,Y
1721          65 ;
1721 88         66      dey
1722 10 FA      67      bpl <2
1724          68 ;
1724 20 E5 17    69 NUMLOOP jsr READKEY
1727 90 03      70      bcc >3
1729          71 ;
1729 28         72      plp
172A          73 ;
172A 38         74      sec
172B          75 ;
172B 60         76      rts
172C          77 ;
172C D0 0A      78 ^3      bne >4
172E          79 ;
172E AC 95 1A   80      ldy NENTRY
1731 D0 4B      81      bne NUMPROC
1733          82 ;
1733 28         83      plp
1734          84 ;
1734 A9 00      85      lda #ZERO
1736          86 ;
1736 18         87      clc
1737          88 ;
1737 60         89      rts
1738          90 ;
1738 C9 88      91 ^4      cmp #LARROW
173A F0 06      92      beq >5
173C          93 ;
173C C9 FF      94      cmp #DELETE
173E D0 0F      95      bne >6
1740          96 ;
1740 A9 88      97      lda #LARROW
1742          98 ;
1742 AC 95 1A   99 ^5      ldy NENTRY
1745 F0 DD     100      beq NUMLOOP
1747          101 ;
1747 20 00 18   102      jsr PRNTCHAR
174A          103 ;
174A CE 95 1A   104      dec NENTRY
174D 10 D5     105      bpl NUMLOOP      ; always taken
174F          106 ;
174F C9 E0     107 ^6      cmp #LWRCASE
1751 90 02     108      bcc >7
1753          109 ;
1753 29 DF     110      and #LWRMASK
1755          111 ;
1755 AC 95 1A   112 ^7      ldy NENTRY
1758 CC 93 1A   113      cpy NNUMS
175B B0 C7     114      bcs NUMLOOP
175D          115 ;
175D AA        116      tax
175E          117 ;
175E E9 AF     118      sbc #"0"-1
1760 30 C2     119      bmi NUMLOOP
1762          120 ;
1762 C9 0A     121      cmp #10

```

```

1764 90 0C      122      bcc >8
1766           123      ;
1766 28         124      plp
1767 08         125      php
1768           126      ;
1768 90 BA      127      bcc NUMLOOP
176A           128      ;
176A E9 11      129      sbc #17
176C           130      ;
176C C9 06      131      cmp #6
176E B0 B4      132      bcs NUMLOOP
1770           133      ;
1770 69 0A      134      adc #10
1772           135      ;
1772 99 96 1A    136      ^8      sta NUMVALS,Y
1775           137      ;
1775 8A         138      txa
1776           139      ;
1776 20 00 18    140      jsr PRNTCHAR
1779           141      ;
1779 EE 95 1A    142      inc NENTRY
177C D0 A6      143      bne NUMLOOP      ; always taken
177E           144      ;
177E 28         145      NUMPROC  plp
177F 90 2F      146      bcc DECPROC
1781           147      ;
1781 CC 93 1A    148      HEXPROC  cpy NNUMS
1784 B0 13      149      bcs >2
1786           150      ;
1786 A2 06      151      ldx #6
1788           152      ;
1788 BD 96 1A    153      ^1      lda NUMVALS,X
178B 9D 97 1A    154      sta NUMVALS+1,X
178E           155      ;
178E CA         156      dex
178F 10 F7      157      bpl <1
1791           158      ;
1791 A9 00      159      lda #ZERO
1793 8D 96 1A    160      sta NUMVALS
1796           161      ;
1796 C8         162      iny
1797 D0 E8      163      bne HEXPROC
1799           164      ;
1799 A2 06      165      ^2      ldx #6
179B A0 03      166      ldY #3
179D           167      ;
179D BD 96 1A    168      ^3      lda NUMVALS,X
17A0           169      ;
17A0 0A         170      asl
17A1 0A         171      asl
17A2 0A         172      asl
17A3 0A         173      asl
17A4           174      ;
17A4 1D 97 1A    175      ora NUMVALS+1,X
17A7 99 9E 1A    176      sta HEXVALS,Y
17AA           177      ;
17AA CA         178      dex
17AB CA         179      dex
17AC           180      ;
17AC 88         181      dey
17AD 10 EE      182      bpl <3

```

```

17AF          183 ;
17AF 60       184      rts
17B0          185 ;
17B0 AE 95 1A 186 DECPROC  ldx NENTRY
17B3 CA       187      dex
17B4          188 ;
17B4 A0 00    189      ldy #ZERO
17B6          190 ;
17B6 BD 96 1A 191 ^1      lda NUMVALS,X
17B9 F0 19    192      beq >3
17BB          193 ;
17BB AD A2 1A 194 ^2      lda DECVALS
17BE 79 D4 1A 195      adc DECTBL,L,Y
17C1 8D A2 1A 196      sta DECVALS
17C4          197 ;
17C4 AD A3 1A 198      lda DECVALS+1
17C7 79 D9 1A 199      adc DECTBLH,Y
17CA 8D A3 1A 200      sta DECVALS+1
17CD          201 ;
17CD B0 09    202      bcs >4
17CF          203 ;
17CF DE 96 1A 204      dec NUMVALS,X
17D2 D0 E7    205      bne <2
17D4          206 ;
17D4 C8       207 ^3      iny
17D5          208 ;
17D5 CA       209      dex
17D6 10 DE    210      bpl <1
17D8          211 ;
17D8 60       212 ^4      rts
17D9          213 ;
17D9          214 ;
17D9 2C 10 C0 215 GETKEY  bit CLRKEY
17DC          216 ;
17DC AD 00 C0 217 ^1      lda KEY
17DF 10 FB    218      bpl <1
17E1          219 ;
17E1 2C 10 C0 220      bit CLRKEY
17E4          221 ;
17E4 60       222      rts
17E5          223 ;
17E5          224 ;
17E5 20 0C 18 225 READKEY  jsr PRINT
17E8 52 01    226      byt DISPCMD,INVRDISP
17EA A0       227      asc " "
17EB 88       228      byt LARROW
17EC 50       229      byt RTNCMD
17ED          230 ;
17ED 20 D9 17 231      jsr GETKEY
17F0          232 ;
17F0 20 0C 18 233      jsr PRINT
17F3 52 00    234      byt DISPCMD,NORMDISP
17F5 A0       235      asc " "
17F6 88       236      byt LARROW
17F7 50       237      byt RTNCMD
17F8          238 ;
17F8 C9 9B    239      cmp #ESCAPE
17FA F0 03    240      beq >1
17FC          241 ;
17FC C9 8D    242      cmp #RETURN
17FE          243 ;

```

```

17FE 18          244      clc
17FF          245      ;
17FF 60          246      ^1      rts
1800          247      ;
1800          248      ;
1800 8D A4 1A    249      PRNTCHAR sta CHARBUFR
1803          250      ;
1803 20 0C 18    251          jsr PRINT
1806 56 00       252          byt BUFRCMD,DIRECT
1808 A4 1A       253          adr CHARBUFR
180A 50          254          byt RTNCMD
180B          255      ;
180B 60          256          rts
180C          257      ;
180C          258      ;
180C 8D EC 18    259      PRINT sta PRNTSAVA+1
180F 8E EA 18    260          stx PRNTSAVX+1
1812 8C E8 18    261          sty PRNTSAVY+1
1815          262      ;
1815 68          263          pla
1816 85 FC       264          sta PRNTPTR
1818          265      ;
1818 68          266          pla
1819 85 FD       267          sta PRNTPTR+1
181B          268      ;
181B E6 FC       269      PRNTLOOP inc PRNTPTR
181D D0 02       270          bne >1
181F          271      ;
181F E6 FD       272          inc PRNTPTR+1
1821          273      ;
1821 A0 00       274      ^1      ldy #ZERO
1823          275      ;
1823 B1 FC       276          lda (PRNTPTR),Y
1825 10 10       277          bpl >3
1827          278      ;
1827 C9 A0       279          cmp #SPACE
1829 90 06       280          bcc >2
182B          281      ;
182B 20 86 18    282          jsr PRNTOUT
182E          283      ;
182E 4C 1B 18    284          jmp PRNTLOOP
1831          285      ;
1831 20 8A 18    286      ^2      jsr PRNTOUT2
1834          287      ;
1834 4C 1B 18    288          jmp PRNTLOOP
1837          289      ;
1837 C9 50       290      ^3      cmp #MAXCH
1839 B0 04       291          bcs >4
183B          292      ;
183B 85 24       293          sta CH
183D          294      ;
183D 90 DC       295          bcc PRNTLOOP
183F          296      ;
183F C9 60       297      ^4      cmp #MINCV
1841 90 0A       298          bcc >5
1843          299      ;
1843 29 1F       300          and #CVMASK
1845 85 25       301          sta CV
1847          302      ;
1847 20 22 FC    303      PRNTMOD1 jsr VTAB
184A          304      ;

```

```

184A 4C 1B 18      305      jmp PRNTLOOP
184D              306      ;
184D 29 0F          307      ^5      and #PCMDMASK
184F AA            308      tax
1850              309      ;
1850 BD AC 18      310      lda PRNTBL,X
1853 8D 63 18      311      sta PRNTMOD2+1
1856              312      ;
1856 BD BC 18      313      lda PRNTBLL,X
1859 8D 81 18      314      sta PRNTMOD3+1
185C              315      ;
185C BD CC 18      316      lda PRNTBLH,X
185F 8D 82 18      317      sta PRNTMOD3+2
1862              318      ;
1862 90 19          319      PRNTMOD2 bcc PRNTBR4
1864              320      ;
1864 C8             321      PRNTBR1 iny
1865              322      ;
1865 B1 FC          323      lda (PRNTPTR),Y
1867 8D AB 18      324      sta FRMTVAL
186A              325      ;
186A C8             326      PRNTBR2 iny
186B              327      ;
186B B1 FC          328      lda (PRNTPTR),Y
186D 85 FA          329      sta DATAPTR
186F              330      ;
186F C8             331      PRNTBR3 iny
1870              332      ;
1870 B1 FC          333      lda (PRNTPTR),Y
1872 85 FB          334      sta DATAPTR+1
1874              335      ;
1874 98             336      tya
1875              337      ;
1875 65 FC          338      adc PRNTPTR
1877 85 FC          339      sta PRNTPTR
1879 90 02          340      bcc PRNTBR4
187B              341      ;
187B E6 FD          342      inc PRNTPTR+1
187D              343      ;
187D 18             344      PRNTBR4 clc
187E              345      ;
187E A0 00          346      ldy #ZERO
1880              347      ;
1880 20 00 00        348      PRNTMOD3 jsr *-*
1883              349      ;
1883 4C 1B 18      350      jmp PRNTLOOP
1886              351      ;
1886              352      ;
1886              353      PRNTOUT:
1886 09 00          354      OUTMOD1 ora #ZERO
1888 49 00          355      OUTMOD2 eor #ZERO
188A              356      ;
188A 4C ED FD      357      PRNTOUT2 jmp COUT
188D              358      ;
188D              359      ;
188D              360      ; Notes on DISPCMD as index
188D              361      ;
188D              362      ; 0 - Normal display
188D              363      ; 1 - Inverse display
188D              364      ;
188D 00 40          365      OUTTBL1 hex 0040      ; TEXT

```

```

188F 00 00      366      hex 0000      ; GRPH
1891 00 00      367      hex 0000      ; TX80
1893           368      ;
1893 00 C0      369      OUTTBL2  hex 00C0
1895 00 80      370      hex 0080
1897 00 00      371      hex 0000
1899           372      ;
1899 FF 3F      373      OUT80COL hex FF3F
189B           374      ;
189B           375      ;
189B 22 FC      376      VTABADRS  adr VTAB
189D EE 18      377      adr PRINTRTN
189F 22 FC      378      adr VTAB
18A1           379      ;
18A1           380      ;
18A1 ED FD      381      OUTADRS  adr COUT
18A3 83 1A      382      adr PRNTGRPH
18A5 ED FD      383      adr COUT
18A7           384      ;
18A7 00         385      PRNTSAV  hex 00
18A8 00 00      386      PRNTNUM  hex 0000
18AA           387      ;
18AA           388      ;
18AA           389      ; Notes on MODEVAL and FRMTVAL
18AA           390      ;
18AA           391      ; 0 - 40 column TEXT mode
18AA           392      ; 1 - GRAPHICS mode
18AA           393      ; 2 - 80 column TEXT mode
18AA           394      ; 3 - exit 80 TEXT, enter 40 TEXT
18AA           395      ;
18AA           396      ; 0x00 - no left padding
18AA           397      ; 0x20 data in high/low order, otherwise low/high order
18AA           398      ; 0x40 - zero left padding
18AA           399      ; 0x80 - space left padding
18AA           400      ;
18AA 00         401      MODEVAL  hex 00
18AB 00         402      FRMTVAL  hex 00
18AC           403      ;
18AC           404      ;
18AC           405      ; Branch table of command routines.
18AC           406      ;
18AC           407      PRNTBL:
18AC 19         408      byt PRNTBR4-PRNTBR1 ; 50
18AD 0B         409      byt PRNTBR3-PRNTBR1 ; 51
18AE 0B         410      byt PRNTBR3-PRNTBR1 ; 52
18AF 0B         411      byt PRNTBR3-PRNTBR1 ; 53
18B0 0B         412      byt PRNTBR3-PRNTBR1 ; 54
18B1 19         413      byt PRNTBR4-PRNTBR1 ; 55
18B2 00         414      byt PRNTBR1-PRNTBR1 ; 56
18B3 06         415      byt PRNTBR2-PRNTBR1 ; 57
18B4 06         416      byt PRNTBR2-PRNTBR1 ; 58
18B5 06         417      byt PRNTBR2-PRNTBR1 ; 59
18B6 00         418      byt PRNTBR1-PRNTBR1 ; 5A
18B7 00         419      byt PRNTBR1-PRNTBR1 ; 5B
18B8 06         420      byt PRNTBR2-PRNTBR1 ; 5C
18B9 06         421      byt PRNTBR2-PRNTBR1 ; 5D
18BA 06         422      byt PRNTBR2-PRNTBR1 ; 5E
18BB 00         423      byt PRNTBR1-PRNTBR1 ; 5F
18BC           424      ;
18BC           425      ;
18BC           426      ; Address tables of command routines.

```

```

18BC          427 ;
18BC          428 PRNTBLL:
18BC DC       429      byt PRNTRTN      ; 50
18BD EF       430      byt PRNTMODE     ; 51
18BE 3A       431      byt PRNTDISP     ; 52
18BF 59       432      byt PRNTSCRN     ; 53
18C0 69       433      byt PRNTCLR      ; 54
18C1 73       434      byt PRNTCNTR     ; 55
18C2 85       435      byt PRNTBUFR     ; 56
18C3 A0       436      byt PRNTNIBL     ; 57
18C4 A9       437      byt PRNT1BYT     ; 58
18C5 AC       438      byt PRNT2BYT     ; 59
18C6 A5       439      byt PRNTNBYT     ; 5A
18C7 B8       440      byt PRNTADR      ; 5B
18C8 D0       441      byt PRNT1DEC     ; 5C
18C9 D6       442      byt PRNT2DEC     ; 5D
18CA E3       443      byt PRNT3DEC     ; 5E
18CB ED       444      byt PRNTNDEC     ; 5F
18CC          445 ;
18CC          446 PRNTBLH:
18CC 18       447      hby PRNTRTN      ; 50
18CD 18       448      hby PRNTMODE     ; 51
18CE 19       449      hby PRNTDISP     ; 52
18CF 19       450      hby PRNTSCRN     ; 53
18D0 19       451      hby PRNTCLR      ; 54
18D1 19       452      hby PRNTCNTR     ; 55
18D2 19       453      hby PRNTBUFR     ; 56
18D3 19       454      hby PRNTNIBL     ; 57
18D4 19       455      hby PRNT1BYT     ; 58
18D5 19       456      hby PRNT2BYT     ; 59
18D6 19       457      hby PRNTNBYT     ; 5A
18D7 19       458      hby PRNTADR      ; 5B
18D8 19       459      hby PRNT1DEC     ; 5C
18D9 19       460      hby PRNT2DEC     ; 5D
18DA 19       461      hby PRNT3DEC     ; 5E
18DB 19       462      hby PRNTNDEC     ; 5F
18DC          463 ;
18DC          464 ;
18DC          465 ; RTNCMD (0x50)
18DC          466 ;
18DC BA       467 PRNTRTN tsx
18DD          468 ;
18DD A5 FC    469      lda PRNTPTR
18DF 9D 01 01 470      sta STACK+1,X
18E2          471 ;
18E2 A5 FD    472      lda PRNTPTR+1
18E4 9D 02 01 473      sta STACK+2,X
18E7          474 ;
18E7 A0 00    475 PRNTSAVY ldy #ZERO
18E9 A2 00    476 PRNTSAVX ldx #ZERO
18EB A9 00    477 PRNTSAVA lda #ZERO
18ED          478 ;
18ED 18       479      clc
18EE          480 ;
18EE 60       481 PRNTRTN rts
18EF          482 ;
18EF          483 ;
18EF          484 ; MODECMD (0x51)
18EF          485 ;
18EF          486 ; 0 - 40 column TEXT mode
18EF          487 ; 1 - GRAPHICS mode

```

```

18EF          488 ; 2 - 80 column TEXT mode
18EF          489 ; 3 - exit 80 TEXT, enter 40 TEXT
18EF          490 ;
18EF A5 FB    491 PRNTMODE lda DATAPTR+1
18F1 29 03    492          and #3
18F3          493 ;
18F3 C9 02    494          cmp #TX80MODE
18F5 D0 09    495          bne >1
18F7          496 ;
18F7 A9 B3    497          lda #"3"
18F9 20 95 FE 498          jsr OUTPORT
18FC          499 ;
18FC A9 02    500          lda #TX80MODE
18FE D0 1A    501          bne >2
1900          502 ;
1900 C9 03    503 ^1      cmp #LV80MODE
1902 D0 16    504          bne >2
1904          505 ;
1904 AD 99 18 506          lda OUT80COL
1907 85 32    507          sta INVFLG
1909          508 ;
1909 A9 9B    509          lda #ESCAPE
190B 20 ED FD 510          jsr COUT
190E          511 ;
190E A9 91    512          lda #CTRLQ
1910 20 ED FD 513          jsr COUT
1913          514 ;
1913 A9 B0    515          lda #"0"
1915 20 95 FE 516          jsr OUTPORT
1918          517 ;
1918 A9 00    518          lda #TEXTMODE
191A          519 ;
191A 8D AA 18 520 ^2      sta MODEVAL
191D          521 ;
191D 0A      522          asl
191E A8      523          tay
191F          524 ;
191F B9 9B 18 525          lda VTABADRS,Y
1922 8D 48 18 526          sta PRNTMOD1+1
1925          527 ;
1925 B9 9C 18 528          lda VTABADRS+1,Y
1928 8D 49 18 529          sta PRNTMOD1+2
192B          530 ;
192B B9 A1 18 531          lda OUTADRS,Y
192E 8D 8B 18 532          sta PRNTOUT2+1
1931          533 ;
1931 B9 A2 18 534          lda OUTADRS+1,Y
1934 8D 8C 18 535          sta PRNTOUT2+2
1937          536 ;
1937 4C EA 03 537          jmp HOOKDOS
193A          538 ;
193A          539 ;
193A          540 ; DISPCMD (0x52)
193A          541 ;
193A          542 ; 0 - Normal display
193A          543 ; 1 - Inverse display
193A          544 ;
193A A4 FB    545 PRNTDISP ldy DATAPTR+1
193C          546 ;
193C AD AA 18 547          lda MODEVAL
193F C9 02    548          cmp #TX80MODE

```

```
1941 D0 05      549      bne >1
1943           550      ;
1943 BE 99 18    551      ldx OUT80COL,Y
1946 86 32      552      stx INVFLG
1948           553      ;
1948 0A         554      ^1      asl
1949 65 FB      555      adc DATAPTR+1
194B           556      ;
194B A8         557      tay
194C           558      ;
194C B9 8D 18    559      lda OUTTBL1,Y
194F 8D 87 18    560      sta OUTMOD1+1
1952           561      ;
1952 B9 93 18    562      lda OUTTBL2,Y
1955 8D 89 18    563      sta OUTMOD2+1
1958           564      ;
1958 60         565      rts
1959           566      ;
1959           567      ;
1959           568      ; SCRNCMD (0x53)
1959           569      ;
1959           570      ; 0 - INIT
1959           571      ; 1 - HOME
1959           572      ;
1959 2C 54 C0    573      PRNTSCRN bit LOWSCR
195C           574      ;
195C           575      .if DISPLAY=GRPHMODE
195C           576      ;
195C           577      lda MODEVAL
195C           578      cmp #GRPHMODE
195C           579      bne >2
195C           580      ;
195C           581      lda DATAPTR+1
195C           582      bne >1
195C           583      ;
195C           584      jmp SCRNNINIT
195C           585      ;
195C           586      ^1      jmp SCRNNHOME
195C           587      ;
195C           588      .fi
195C           589      ;
195C A5 FB      590      ^2      lda DATAPTR+1
195E D0 06      591      bne >3
1960           592      ;
1960 2C 51 C0    593      bit TXTSET
1963           594      ;
1963 4C 2F FB    595      jmp INIT
1966           596      ;
1966 4C 58 FC    597      ^3      jmp HOME
1969           598      ;
1969           599      ;
1969           600      ; CLRCMD (0x54)
1969           601      ;
1969           602      ; 0 - EOL
1969           603      ; 1 - EOP
1969           604      ;
1969           605      PRNTCLR:
1969           606      .if DISPLAY=GRPHMODE
1969           607      ;
1969           608      lda MODEVAL
1969           609      cmp #GRPHMODE
```

```

1969          610          bne >2
1969          611          ;
1969          612          lda DATAPTR+1
1969          613          bne >1
1969          614          ;
1969          615          jmp SCRNEOL
1969          616          ;
1969          617          ^1      jmp SCRNEOP
1969          618          ;
1969          619          .fi
1969          620          ;
1969 A5 FB      621          ^2      lda DATAPTR+1
196B D0 03     622          bne >3
196D          623          ;
196D 4C 9C FC  624          jmp CLREOL
1970          625          ;
1970 4C 42 FC  626          ^3      jmp CLREOP
1973          627          ;
1973          628          ;
1973          629          ; CNTRCMD (0x55)
1973          630          ;
1973 A9 9F      631 PRNTCNTR lda #SPACE-1
1975          632          ;
1975 C8         633          ^1      iny
1976          634          ;
1976 D1 FC      635          cmp (PRNTPTR),Y
1978 90 FB      636          bcc <1
197A          637          ;
197A 98         638          tya
197B          639          ;
197B 49 FF      640          eor #NEGONE
197D 65 21      641          adc WNDWDTH
197F          642          ;
197F 4A         643          lsr
1980          644          ;
1980 65 20      645          adc WNDLFT
1982 85 24      646          sta CH
1984          647          ;
1984 60         648          rts
1985          649          ;
1985          650          ;
1985          651          ; BUFRCMD (0x56)
1985          652          ;
1985          653          ; 0 - direct address
1985          654          ; 1 - indirect address
1985          655          ;
1985 AD AB 18   656 PRNTBUFR lda FRMTVAL
1988 F0 0B      657          beq >1
198A          658          ;
198A B1 FA      659          lda (DATAPTR),Y
198C AA         660          tax
198D          661          ;
198D C8         662          iny
198E          663          ;
198E B1 FA      664          lda (DATAPTR),Y
1990          665          ;
1990 86 FA      666          stx DATAPTR
1992 85 FB      667          sta DATAPTR+1
1994          668          ;
1994 88         669          dey
1995          670          ;

```

```

1995 B1 FA      671  ^1      lda (DATAPTR),Y
1997 F0 06      672          beq >2
1999            673  ;
1999 20 86 18    674          jsr PRNTOUT
199C            675  ;
199C C8          676          iny
199D D0 F6      677          bne <1
199F            678  ;
199F 60          679  ^2      rts
19A0            680  ;
19A0            681  ;
19A0            682  ; NIBLCMD (0x57)
19A0            683  ;
19A0 B1 FA      684 PRNTNIBL lda (DATAPTR),Y
19A2            685  ;
19A2 4C 3D 1A    686          jmp PRNTHEx
19A5            687  ;
19A5            688  ;
19A5            689  ; BYT1CMD (0x58)
19A5            690  ; BYT2CMD (0x59)
19A5            691  ; BYTNCMD (0x5A)
19A5            692  ;
19A5 AE AB 18    693 PRNTNBYT ldx FRMTVAL
19A8            694  ;
19A8 2C 00 00    695          bit *-*
19AB            696          dfs !-2
19A9            697  ;
19A9 A2 01      698 PRNT1BYT ldx #1
19AB            699  ;
19AB 2C 00 00    700          bit *-*
19AE            701          dfs !-2
19AC            702  ;
19AC A2 02      703 PRNT2BYT ldx #2
19AE            704  ;
19AE B1 FA      705 PRNTBYT  lda (DATAPTR),Y
19B0            706  ;
19B0 20 34 1A    707          jsr PRNTBYTE
19B3            708  ;
19B3 C8          709          iny
19B4            710  ;
19B4 CA          711          dex
19B5 D0 F7      712          bne PRNTBYT
19B7            713  ;
19B7 60          714          rts
19B8            715  ;
19B8            716  ;
19B8            717  ; ADRCMD (0x5B)
19B8            718  ;
19B8            719  ; 0 - direct address
19B8            720  ; 1 - indirect address
19B8            721  ;
19B8 AD AB 18    722 PRNTADR  lda FRMTVAL
19BB D0 06      723          bne >1
19BD            724  ;
19BD A6 FA      725          ldx DATAPTR
19BF A5 FB      726          lda DATAPTR+1
19C1            727  ;
19C1 90 06      728          bcc >2          ; always taken
19C3            729  ;
19C3 B1 FA      730  ^1      lda (DATAPTR),Y
19C5 AA          731          tax

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```

19C6          732 ;
19C6 C8       733      iny
19C7          734 ;
19C7 B1 FA    735      lda (DATAPTR),Y
19C9          736 ;
19C9 20 34 1A 737      ^2      jsr PRNTBYTE
19CC          738 ;
19CC 8A       739      txa
19CD          740 ;
19CD 4C 34 1A 741      jmp PRNTBYTE
19D0          742 ;
19D0          743 ;
19D0          744 ; DEC1CMD (0x5C)
19D0          745 ;
19D0 20 4A 1A 746 PRNT1DEC jsr HEXTODEC
19D3          747 ;
19D3 4C 3D 1A 748      jmp PRNTHex
19D6          749 ;
19D6          750 ;
19D6          751 ; DEC2CMD (0x5D)
19D6          752 ;
19D6 20 4A 1A 753 PRNT2DEC jsr HEXTODEC
19D9          754 ;
19D9          755 ;
19D9 8A       756 PRNTDEC  txa
19DA 20 3D 1A 757      jsr PRNTHex
19DD          758 ;
19DD AD A7 18 759      lda PRNTSAV
19E0          760 ;
19E0 4C 3D 1A 761      jmp PRNTHex
19E3          762 ;
19E3          763 ;
19E3          764 ; DEC3CMD (0x5E)
19E3          765 ;
19E3 20 4A 1A 766 PRNT3DEC jsr HEXTODEC
19E6          767 ;
19E6 98       768      tya
19E7 20 3D 1A 769      jsr PRNTHex
19EA          770 ;
19EA 4C D9 19 771      jmp PRNTDEC
19ED          772 ;
19ED          773 ;
19ED          774 ; DECN CMD (0x5F)
19ED          775 ;
19ED          776 ; 0x00 - no left padding
19ED          777 ; 0x20 - data in high/low order, otherwise low/high order
19ED          778 ; 0x40 - zero left padding
19ED          779 ; 0x80 - space left padding
19ED          780 ;
19ED          781 ; data in high/low order
19ED          782 ;
19ED B1 FA    783 PRNTNDEC lda (DATAPTR),Y
19EF AA       784      tax
19F0          785 ;
19F0 C8       786      iny
19F1          787 ;
19F1 B1 FA    788      lda (DATAPTR),Y
19F3 A8       789      tay
19F4          790 ;
19F4 AD AB 18 791      lda FRMTVAL
19F7 29 20    792      and #HIGHLOW

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```

19F9 D0 09      793      bne >1
19FB           794      ;
19FB 8E A8 18   795      stx PRNTNUM
19FE 8C A9 18   796      sty PRNTNUM+1
1A01           797      ;
1A01 4C 0A 1A   798      jmp >2
1A04           799      ;
1A04 8C A8 18   800      ^1 sty PRNTNUM
1A07 8E A9 18   801      stx PRNTNUM+1
1A0A           802      ;
1A0A A2 03      803      ^2 ldx #3
1A0C           804      ;
1A0C 2C AB 18   805      bit FRMTVAL
1A0F 70 18      806      bvs >6
1A11           807      ;
1A11 20 64 1A   808      ^3 jsr GETDIGIT
1A14 D0 16      809      bne >7
1A16           810      ;
1A16 2C AB 18   811      bit FRMTVAL
1A19 10 05      812      bpl >4
1A1B           813      ;
1A1B A9 A0      814      lda #SPACE
1A1D 20 86 18   815      jsr PRNTOUT
1A20           816      ;
1A20 CA         817      ^4 dex
1A21 10 EE      818      bpl <3
1A23           819      ;
1A23 AD A8 18   820      ^5 lda PRNTNUM
1A26           821      ;
1A26 4C 3D 1A   822      jmp PRNTHEx
1A29           823      ;
1A29 20 64 1A   824      ^6 jsr GETDIGIT
1A2C           825      ;
1A2C 20 3D 1A   826      ^7 jsr PRNTHEx
1A2F           827      ;
1A2F CA         828      dex
1A30 10 F7      829      bpl <6
1A32           830      ;
1A32 30 EF      831      bmi <5      ; always taken
1A34           832      ;
1A34           833      ;
1A34 48         834      PRNTBYTE pha
1A35           835      ;
1A35 4A         836      lsr
1A36 4A         837      lsr
1A37 4A         838      lsr
1A38 4A         839      lsr
1A39           840      ;
1A39 20 3F 1A   841      jsr PRNTHEx2
1A3C           842      ;
1A3C 68         843      pla
1A3D           844      ;
1A3D           845      ;
1A3D 29 0F      846      PRNTHEx and #NIBLMASK
1A3F           847      ;
1A3F 09 B0      848      PRNTHEx2 ora #"0"
1A41           849      ;
1A41 C9 BA      850      cmp #"9"+1
1A43 90 02      851      bcc >1
1A45           852      ;
1A45 69 06      853      adc #6

```

```
1A47      854 ;
1A47 4C 86 18 855 ^1      jmp PRNTOUT
1A4A      856 ;
1A4A      857 ;
1A4A A2 00 858 HEXTODEC ldx #ZERO
1A4C      859 ;
1A4C B1 FA 860      lda (DATAPTR),Y
1A4E      861 ;
1A4E C9 64 862 ^1      cmp #100
1A50 90 05 863      bcc >2
1A52      864 ;
1A52 E9 64 865      sbc #100
1A54      866 ;
1A54 C8      867      iny
1A55 D0 F7 868      bne <1
1A57      869 ;
1A57 C9 0A 870 ^2      cmp #10
1A59 90 05 871      bcc >3
1A5B      872 ;
1A5B E9 0A 873      sbc #10
1A5D      874 ;
1A5D E8      875      inx
1A5E D0 F7 876      bne <2
1A60      877 ;
1A60 8D A7 18 878 ^3      sta PRNTSAV
1A63      879 ;
1A63 60      880      rts
1A64      881 ;
1A64      882 ;
1A64 A0 00 883 GETDIGIT ldy #ZERO
1A66      884 ;
1A66 38      885 ^1      sec
1A67      886 ;
1A67 AD A8 18 887      lda PRNTNUM
1A6A FD D5 1A 888      sbc DECTBLL+1,X
1A6D 48      889      pha
1A6E      890 ;
1A6E AD A9 18 891      lda PRNTNUM+1
1A71 FD DA 1A 892      sbc DECTBLH+1,X
1A74 90 0A 893      bcc >2
1A76      894 ;
1A76 8D A9 18 895      sta PRNTNUM+1
1A79      896 ;
1A79 68      897      pla
1A7A 8D A8 18 898      sta PRNTNUM
1A7D      899 ;
1A7D C8      900      iny
1A7E D0 E6 901      bne <1
1A80      902 ;
1A80 68      903 ^2      pla
1A81      904 ;
1A81 98      905      tya
1A82      906 ;
1A82 60      907      rts
1A83      908 ;
1A83      909 ;
1A83      910 PRNTGRPH:
1A83      911 ;
1A83      912      .if DISPLAY=GRPHMODE
1A83      913 ;
1A83      914      cmp #SPACE
```

```
1A83      915      bcs >3
1A83      916      ;
1A83      917      cmp #ASCIFLAG
1A83      918      bcc >3
1A83      919      ;
1A83      920      cmp #BELLCHAR
1A83      921      bne >1
1A83      922      ;
1A83      923      jmp BELL
1A83      924      ;
1A83      925      ^1    cmp #RETURN
1A83      926      beq >2
1A83      927      ;
1A83      928      cmp #LARROW
1A83      929      bne >1
1A83      930      ;
1A83      931      dec CH
1A83      932      ;
1A83      933      ^1    cmp #DARROW
1A83      934      bne >1
1A83      935      ;
1A83      936      inc CV
1A83      937      ;
1A83      938      ^1    cmp #UARROW
1A83      939      bne >1
1A83      940      ;
1A83      941      dec CV
1A83      942      ;
1A83      943      ^1    cmp #RARROW
1A83      944      bne >1
1A83      945      ;
1A83      946      inc CH
1A83      947      ;
1A83      948      ^1    rts
1A83      949      ;
1A83      950      ^2    lda WNDLFT
1A83      951      sta CH
1A83      952      ;
1A83      953      inc CV
1A83      954      ;
1A83      955      lda CV
1A83      956      cmp WNDBTM
1A83      957      bcc >8
1A83      958      ;
1A83      959      jmp SCROLL
1A83      960      ;
1A83      961      ^3    stx SCRNSAVX+1
1A83      962      sty SCRNSAVY+1
1A83      963      ;
1A83      964      ldx /CHARTBL
1A83      965      ;
1A83      966      ldy #ZERO
1A83      967      ;
1A83      968      asl
1A83      969      bcs >4
1A83      970      ;
1A83      971      ldy #INVRMASK
1A83      972      ;
1A83      973      sec
1A83      974      ;
1A83      975      ^4    sty SCRNMOD2+1
```

```
1A83      976 ;
1A83      977      sbc #$40
1A83      978 ;
1A83      979      asl
1A83      980      bcc >5
1A83      981 ;
1A83      982      ldx /CHARTBL+$200
1A83      983 ;
1A83      984 ^5      asl
1A83      985      bcc >6
1A83      986 ;
1A83      987      inx
1A83      988 ;
1A83      989      clc
1A83      990 ;
1A83      991 ^6      adc #CHARTBL
1A83      992      sta SCRNM0D1+1
1A83      993      bcc >7
1A83      994 ;
1A83      995      inx
1A83      996 ;
1A83      997 ^7      stx SCRNM0D1+2
1A83      998 ;
1A83      999      clc
1A83     1000 ;
1A83     1001      ldx CV
1A83     1002 ;
1A83     1003      lda YBASELO,X
1A83     1004      sta SCRNM0D3+1
1A83     1005 ;
1A83     1006      lda YBASEHI,X
1A83     1007      sta SCRNM0D3+2
1A83     1008 ;
1A83     1009      ldy CH
1A83     1010      ldx #CHARCELL
1A83     1011 ;
1A83     1012 SCRNM0D1 lda *-,X
1A83     1013 ;
1A83     1014 SCRNM0D2 eor #ZERO
1A83     1015 ;
1A83     1016 SCRNM0D3 sta *-,Y
1A83     1017 ;
1A83     1018      lda SCRNM0D3+2
1A83     1019      adc #NEXTLINE
1A83     1020      sta SCRNM0D3+2
1A83     1021 ;
1A83     1022      dex
1A83     1023      bpl SCRNM0D1
1A83     1024 ;
1A83     1025      iny
1A83     1026 ;
1A83     1027 SCRNM0D4 cpy #MAXWDTH
1A83     1028      bcs <2
1A83     1029 ;
1A83     1030      sty CH
1A83     1031 ;
1A83     1032 SCRNSAVY ldy #ZERO
1A83     1033 SCRNSAVX ldx #ZERO
1A83     1034 ;
1A83     1035 ^8      rts
1A83     1036 ;
```

```
1A83      1037      ;
1A83      1038      SCRNINIT bit HIRES
1A83      1039              bit MIXCLR
1A83      1040              bit TXTCLR
1A83      1041      ;
1A83      1042              clc
1A83      1043      ;
1A83      1044              lda #MAXWDTH
1A83      1045              adc WNDLFT
1A83      1046              sta SCRNMOD4+1
1A83      1047              sta EOLMOD1+1
1A83      1048              sta SCRLMOD3+1
1A83      1049      ;
1A83      1050              rts
1A83      1051      ;
1A83      1052      ;
1A83      1053      SCROLL      lda WNDLFT
1A83      1054              sta CH
1A83      1055      ;
1A83      1056              ldx WNDBTM
1A83      1057              dex
1A83      1058              stx SCRLMOD4+1
1A83      1059      ;
1A83      1060              ldx WNDTOP
1A83      1061              stx CV
1A83      1062      ;
1A83      1063      ^1          lda YBASELO,X
1A83      1064              sta SCRLMOD2+1
1A83      1065      ;
1A83      1066              lda YBASEHI,X
1A83      1067              sta SCRLMOD2+2
1A83      1068      ;
1A83      1069              inx
1A83      1070              stx CV
1A83      1071      ;
1A83      1072              lda YBASELO,X
1A83      1073              sta SCRLMOD1+1
1A83      1074      ;
1A83      1075              lda YBASEHI,X
1A83      1076              sta SCRLMOD1+2
1A83      1077      ;
1A83      1078              ldx #CHARCELL
1A83      1079      ;
1A83      1080      ^2          ldY CH
1A83      1081      ;
1A83      1082      SCRLMOD1      lda *-,Y
1A83      1083      SCRLMOD2      sta *-,Y
1A83      1084      ;
1A83      1085              iny
1A83      1086      ;
1A83      1087      SCRLMOD3      cpy #MAXWDTH
1A83      1088              bcc SCRLMOD1
1A83      1089      ;
1A83      1090              lda SCRLMOD1+2
1A83      1091              adc #NEXTLINE-1
1A83      1092              sta SCRLMOD1+2
1A83      1093      ;
1A83      1094              lda SCRLMOD2+2
1A83      1095              adc #NEXTLINE
1A83      1096              sta SCRLMOD2+2
1A83      1097      ;
```

```
1A83      1098      dex
1A83      1099      bpl <2
1A83      1100      ;
1A83      1101      ldx CV
1A83      1102      SCRLMOD4 cpx #LOC0
1A83      1103      bne <1
1A83      1104      ;
1A83      1105      ;
1A83      1106      SCRNEOL ldx CV
1A83      1107      ;
1A83      1108      lda YBASELO,X
1A83      1109      sta EOLMOD2+1
1A83      1110      ;
1A83      1111      lda YBASEHI,X
1A83      1112      sta EOLMOD2+2
1A83      1113      ;
1A83      1114      ldx #CHARCELL
1A83      1115      ;
1A83      1116      ^1      ldY CH
1A83      1117      ;
1A83      1118      lda #ZERO
1A83      1119      ;
1A83      1120      EOLMOD1 cpy #MAXWDTH
1A83      1121      bcs >2
1A83      1122      ;
1A83      1123      EOLMOD2 sta *-*,Y
1A83      1124      ;
1A83      1125      iny
1A83      1126      bne EOLMOD1
1A83      1127      ;
1A83      1128      ^2      lda EOLMOD2+2
1A83      1129      adc #NEXTLINE-1
1A83      1130      sta EOLMOD2+2
1A83      1131      ;
1A83      1132      dex
1A83      1133      bpl <1
1A83      1134      ;
1A83      1135      rts
1A83      1136      ;
1A83      1137      ;
1A83      1138      SCRNHOMe lda WNDLFT
1A83      1139      sta CH
1A83      1140      ;
1A83      1141      lda WNDTOP
1A83      1142      sta CV
1A83      1143      ;
1A83      1144      ;
1A83      1145      SCRNEOP jsr SCRNEOL
1A83      1146      ;
1A83      1147      lda CH
1A83      1148      pha
1A83      1149      ;
1A83      1150      lda CV
1A83      1151      pha
1A83      1152      ;
1A83      1153      lda WNDLFT
1A83      1154      sta CH
1A83      1155      ;
1A83      1156      ^1      inc CV
1A83      1157      ;
1A83      1158      lda CV
```

```
1A83      1159      cmp WNDBTM
1A83      1160      bcs >2
1A83      1161      ;
1A83      1162      jsr SCRNEOL
1A83      1163      bmi <1
1A83      1164      ;
1A83      1165      ^2      pla
1A83      1166      sta CV
1A83      1167      ;
1A83      1168      pla
1A83      1169      sta CH
1A83      1170      ;
1A83      1171      rts
1A83      1172      ;
1A83      1173      ;
1A83      1174      YBASELO:
1A83      1175      hex 0080008000800080
1A83      1176      hex 28A828A828A828A8
1A83      1177      hex 50D050D050D050D0
1A83      1178      ;
1A83      1179      YBASEHI:
1A83      1180      hex 2020212122222323
1A83      1181      hex 2020212122222323
1A83      1182      hex 2020212122222323
1A83      1183      ;
1A83      1184      ;
1A83      1185      CHARTBL:
1A83      1186      hex 0000000000000000 ;
1A83      1187      hex 0008000808080808 ; !
1A83      1188      hex 0000000000141414 ; "
1A83      1189      hex 0014143E143E1414 ; #
1A83      1190      hex 00081E281C0A3C08 ; $
1A83      1191      hex 0030320408102606 ; %
1A83      1192      hex 002C122A040A0A04 ; &
1A83      1193      hex 0000000000080808 ; ^
1A83      1194      hex 0010080404040810 ; (
1A83      1195      hex 0004081010100804 ; )
1A83      1196      hex 00082A1C081C2A08 ; *
1A83      1197      hex 000008083E080800 ; +
1A83      1198      hex 0408080000000000 ; ,
1A83      1199      hex 000000003E000000 ; -
1A83      1200      hex 0008000000000000 ; .
1A83      1201      hex 0000020408102000 ; /
1A83      1202      ;
1A83      1203      hex 001C22262A32221C ; 0
1A83      1204      hex 001C080808080C08 ; 1
1A83      1205      hex 003E02041820221C ; 2
1A83      1206      hex 001C22201810203E ; 3
1A83      1207      hex 0010103E12141810 ; 4
1A83      1208      hex 001C2220201E023E ; 5
1A83      1209      hex 001C22221E020438 ; 6
1A83      1210      hex 000404040810203E ; 7
1A83      1211      hex 001C22221C22221C ; 8
1A83      1212      hex 000E10203C22221C ; 9
1A83      1213      hex 0000080008000000 ; :
1A83      1214      hex 0408080008000000 ; ;
1A83      1215      hex 0020100804081020 ; <
1A83      1216      hex 0000003E003E0000 ; =
1A83      1217      hex 0002040810080402 ; >
1A83      1218      hex 000800089820221C ; ?
1A83      1219      ;
```

```
1A83      1220      hex 003C021A2A3A221C ; @
1A83      1221      hex 0022223E22221408 ; A
1A83      1222      hex 001E22221E22221E ; B
1A83      1223      hex 001C22020202221C ; C
1A83      1224      hex 001E22222222221E ; D
1A83      1225      hex 003E02021E02023E ; E
1A83      1226      hex 000202021E02023E ; F
1A83      1227      hex 003C22320202023C ; G
1A83      1228      hex 002222223E222222 ; H
1A83      1229      hex 001C08080808081C ; I
1A83      1230      hex 001C222020202020 ; J
1A83      1231      hex 0022120A060A1222 ; K
1A83      1232      hex 003E020202020202 ; L
1A83      1233      hex 002222222A2A3622 ; M
1A83      1234      hex 002222322A262222 ; N
1A83      1235      hex 001C22222222221C ; O
1A83      1236      ;
1A83      1237      hex 000202021E22221E ; P
1A83      1238      hex 002C122A2222221C ; Q
1A83      1239      hex 0022120A1E22221E ; R
1A83      1240      hex 001C22201C02221C ; S
1A83      1241      hex 000808080808083E ; T
1A83      1242      hex 001C222222222222 ; U
1A83      1243      hex 0008142222222222 ; V
1A83      1244      hex 0022362A2A222222 ; W
1A83      1245      hex 0022221408142222 ; X
1A83      1246      hex 0008080808142222 ; Y
1A83      1247      hex 003E02040810203E ; Z
1A83      1248      hex 003C04040404043C ; [
1A83      1249      hex 0000201008040200 ; \
1A83      1250      hex 001E10101010101E ; ]
1A83      1251      hex 0000000000221408 ; ^
1A83      1252      hex 7F00000000000000 ; _
1A83      1253      ;
1A83      1254      hex 0000000000100804 ; `
1A83      1255      hex 003C223C201C0000 ; a
1A83      1256      hex 001E2222221E0202 ; b
1A83      1257      hex 003C0202023C0000 ; c
1A83      1258      hex 003C2222223C2020 ; d
1A83      1259      hex 003C023E221C0000 ; e
1A83      1260      hex 000404041E042418 ; f
1A83      1261      hex 1C203C22221C0000 ; g
1A83      1262      hex 00222222221E0202 ; h
1A83      1263      hex 001C0808080C0008 ; i
1A83      1264      hex 0C12101010180010 ; j
1A83      1265      hex 0022120E12220202 ; k
1A83      1266      hex 001C08080808080C ; l
1A83      1267      hex 00222A2A2A360000 ; m
1A83      1268      hex 00222222221E0000 ; n
1A83      1269      hex 001C2222221C0000 ; o
1A83      1270      ;
1A83      1271      hex 02021E22221E0000 ; p
1A83      1272      hex 20203C22223C0000 ; q
1A83      1273      hex 00020202063A0000 ; r
1A83      1274      hex 001E201C023C0000 ; s
1A83      1275      hex 00182404041E0404 ; t
1A83      1276      hex 002C322222220000 ; u
1A83      1277      hex 0008142222220000 ; v
1A83      1278      hex 00362A2A22220000 ; w
1A83      1279      hex 0022140814220000 ; x
1A83      1280      hex 1C203C2222220000 ; y
```

```
1A83      1281      hex 003E0408103E0000 ; z
1A83      1282      hex 0030080804080830 ; {
1A83      1283      hex 0808080808080808 ; |
1A83      1284      hex 0006080810080806 ; }
1A83      1285      hex 00000000000001A2C ; ~
1A83      1286      hex 00002A142A142A00 ;
1A83      1287      ;
1A83      1288      ;
1A83      1289      .fi
1A83      1290      ;
1A83      1291      ;
```

BSAVE SEG03,A\$0900,B,L\$038A

```
1A83      1292      usr SEG03
1A83      1293      ;
1A83      1294      ;
1A83      1295      icl "VMGR4.L"
```

LLOAD VMGR4.L,A\$4000

```

1A83          1          ttl "VTOC Manager Source Code, VMGR4.L"
1A83          2          ;
1A83          3          ;
1A83          4          ; VMGR4.L
1A83          5          ;
1A83          6          ;
1A83          7          obj $900
1A83          8          usr
1A83          9          ;
1A83         10          ;
1A83         11          SLOT      dfs 1,ZERO
1A84         12          DRIVE     dfs 1,ZERO
1A85         13          VOLUME    dfs 1,ZERO
1A86         14          ;
1A86         15          SAVX      dfs 1,ZERO
1A87         16          SAVY      dfs 1,ZERO
1A88         17          SAVA      dfs 1,ZERO
1A89         18          ;
1A89         19          OPTION    dfs 1,ZERO
1A8A         20          ;
1A8A         21          SAVNUM    dfs 1,ZERO
1A8B         22          SAVDATE   dfs 6,ZERO
1A91         23          ;
1A91         24          COUNT     dfs 1,ZERO
1A92         25          COUNT2    dfs 1,ZERO
1A93         26          ;
1A93         27          NNUMS     dfs 1,ZERO
1A94         28          SAVECH    dfs 1,ZERO
1A95         29          NENTRY    dfs 1,ZERO
1A96         30          ;
1A96         31          NUMVALS   dfs 8,ZERO
1A9E         32          ;
1A9E         33          HEXVALS   dfs 4,ZERO
1AA2         34          DECVALS   dfs 2,ZERO
1AA4         35          ;
1AA4 A0 00    36          CHARBUFR byt SPACE,ZERO
1AA6         37          ;
1AA6         38          NAMEBUFR  dfs NAMELEN+1,ZERO
1ABF         39          VSNBUFR   dfs VSNLEN+1,ZERO
1AD4         40          ;
1AD4         41          ;
1AD4 01 0A 64 42          DECTBL  byt 1,10,100,1000,10000
1AD7 E8 10
1AD9 00 00 00 43          DECTBLH  hby 1,10,100,1000,10000
1ADC 03 27
1ADE         44          ;
1ADE         45          ;
1ADE C5 E4 E9 46          HEADER1  asc "Edit "
1AE1 F4 A0
1AE3 D6 D4 CF 47          HEADER2  asc "VTOC Contents"
1AE6 C3 A0 C3
1AE9 EF EE F4
1AEC E5 EE F4
1AEF F3
1AF0 00          48          hex 00
1AF1 C5 E4 E9 49          HEADER3  asc "Edit "
1AF4 F4 A0
1AF6 D3 E5 E3 50          HEADER4  asc "Sector Bitmap Contents"
1AF9 F4 EF F2
1AFC A0 C2 E9

```

```

1AFF F4 ED E1
1B02 F0 A0 C3
1B05 EF EE F4
1B08 E5 EE F4
1B0B F3
1B0C 00          51          hex 00
1B0D          52 ;
1B0D 00          53          hex 00
1B0E A0 A8 C8    54 DOSRAMH  asc " (High RAM)"
1B11 E9 E7 E8
1B14 A0 D2 C1
1B17 CD A9
1B19 00          55          hex 00
1B1A A0 A8 CC    56 DOSRAML  asc " (Low RAM)"
1B1D EF F7 A0
1B20 D2 C1 CD
1B23 A9
1B24 00          57          hex 00
1B25          58 ;
1B25 A0 A8 F5    59 UNKNOWN  asc " (unknown)"
1B28 EE EB EE
1B2B EF F7 EE
1B2E A9
1B2F 00          60          hex 00
1B30          61 ;
1B30 A0 A8 C2    62 VOLTYPB  asc " (Boot Disk)"
1B33 EF EF F4
1B36 A0 C4 E9
1B39 F3 EB A9
1B3C 00          63          hex 00
1B3D A0 A8 C4    64 VOLTYPD  asc " (Data Disk)"
1B40 E1 F4 E1
1B43 A0 C4 E9
1B46 F3 EB A9
1B49 00          65          hex 00
1B4A          66 ;
1B4A A0 A8 EE    67 ALLDIRN  asc " (negative)"
1B4D E5 E7 E1
1B50 F4 E9 F6
1B53 E5 A9
1B55 00          68          hex 00
1B56 A0 A8 F0    69 ALLDIRP  asc " (positive)"
1B59 EF F3 E9
1B5C F4 E9 F6
1B5F E5 A9
1B61 00          70          hex 00
1B62          71 ;
1B62 A0 A8 EC    72 LOCKL    asc " (locked)"
1B65 EF E3 EB
1B68 E5 E4 A9
1B6B 00          73          hex 00
1B6C A0 A8 F5    74 LOCKU    asc " (unlocked)"
1B6F EE EC EF
1B72 E3 EB E5
1B75 E4 A9
1B77 00          75          hex 00
1B78          76 ;
1B78 00          77 DATIMSEP  byt ZERO
1B79 BA BA A0    78          asc " :: //"
1B7C AF AF
1B7E          79 ;

```

```

1B7E      80      ;
1B7E      81      HDRTBL1:
1B7E D0 0D      82      adr HDRMOD01
1B80 EC 0D      83      adr HDRMOD02
1B82 04 0E      84      adr HDRMOD03
1B84 18 0E      85      adr HDRMOD04
1B86 54 0E      86      adr HDRMOD05
1B88 70 0E      87      adr HDRMOD06
1B8A AD 0E      88      adr HDRMOD07
1B8C DA 0E      89      adr HDRMOD08
1B8E F0 0E      90      adr HDRMOD09
1B90 0C 0F      91      adr HDRMOD10
1B92 29 0F      92      adr HDRMOD11
1B94 45 0F      93      adr HDRMOD12
1B96 61 0F      94      adr HDRMOD13
1B98 94 0F      95      adr HDRMOD14
1B9A C5 0F      96      adr HDRMOD15
1B9C E1 0F      97      adr HDRMOD16
1B9E FD 0F      98      adr HDRMOD17
1BA0 19 10      99      adr HDRMOD18
1BA2      100     ;
1BA2      101     ;
1BA2      102     HDRTBL2:
1BA2 64 10      103     adr HDREDT01
1BA4 D9 10      104     adr HDREDT02
1BA6 38 11      105     adr HDREDT03
1BA8 66 11      106     adr HDREDT04
1BAA A5 11      107     adr HDREDT05
1BAC DD 11      108     adr HDREDT06
1BAE 18 12      109     adr HDREDT07
1BB0 50 12      110     adr HDREDT08
1BB2 BD 12      111     adr HDREDT09
1BB4 28 13      112     adr HDREDT10
1BB6 8F 13      113     adr HDREDT11
1BB8 BC 13      114     adr HDREDT12
1BBA F7 13      115     adr HDREDT13
1BBC 39 14      116     adr HDREDT14
1BBE A5 14      117     adr HDREDT15
1BC0 E8 14      118     adr HDREDT16
1BC2 24 15      119     adr HDREDT17
1BC4 5C 15      120     adr HDREDT18
1BC6      121     ;
0024      122     OPTIONS equ HDRTBL2-HDRTBL1
0012      123     NOPTION equ OPTIONS/2
1BC6      124     ;
1BC6      125     ;
1BC6      126     TBLTYPE dfs 1,1
1BC7      127     RWSLOT  dfs 1,ZERO
1BC8      128     RWDRIVE dfs 1,ZERO
1BC9      129     RWVOLUME dfs 1,ZERO
1BCA      130     RWTRACK  dfs 1,17
1BCB      131     RWSECTOR dfs 1,ZERO
1BCC 00 00      132     DCTADR  adr *-*
1BCE 00 1C      133     DATABUFR adr VTOCBUFR
1BD0      134     dfs 1,ZERO
1BD1      135     BYTCNT  dfs 1,ZERO
1BD2      136     COMMAND  dfs 1,ZERO
1BD3      137     ERRRCODE dfs 1,ZERO
1BD4      138     VOLFND   dfs 1,ZERO
1BD5      139     SLOTFND  dfs 1,ZERO
1BD6      140     DRVFND   dfs 1,ZERO

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```
1BD7          141      ;
0011          142      TBLSIZE equ *-TBLTYPE
1BD7          143      ;
1BD7          144      ;
```

BSAVE SEG04,A\$0900,B,L\$0154

```
1BD7          145              usr SEG04
1BD7          146      ;
1BD7          147      ;
1BD7          148              dfs PAGESIZE-*)&NEGONE
1C00          149      ;
1C00          150      ;
1C00          151      VTOCBUFR:
1C00          152      VTOCSB   dfs 1
1C01          153      FRSTTRK  dfs 1
1C02          154      FRSTSEC  dfs 1
1C03          155      DOSVRSN  dfs 1
1C04          156      DOSBUILD dfs 1
1C05          157      DOSRAM   dfs 1
1C06          158      DISKVOL  dfs 1
1C07          159      DISKTYPE dfs 1
1C08          160      DISKNAME dfs NAMELEN
1C20          161      INITIME  dfs 6
1C26          162      VTOCPHAS dfs 1
1C27          163      NUMTSENT dfs 1
1C28          164      DISKSUBJ dfs 2
1C2A          165      VTOCTIME dfs 6
1C30          166      NXTTOALC dfs 1
1C31          167      ALLCDIR  dfs 1
1C32          168      DOSCONFG dfs 1
1C33          169      DISKLOCK dfs 1
1C34          170      NUMTRKS  dfs 1
1C35          171      NUMSECS  dfs 1
1C36          172      BYTPRSEC dfs 2
1C38          173      BITMAP:
1C38          174      ;
1C38          175      ;
1C38          176              stt "VTOC Manager Symbol Table"
1C38          177      ;
1C38          178      ;
1C38          179              end 111
```

*** End of Assembly

Symbol List starts at 0x7800, ends at 0x8516, used 0x0D16, remaining 0x3046

Symbols unsorted:

LOC0	0000	WNDLFT	0020	WNDWDTH	0021	WNDTOP	0022	WNDBTM	0023
CH	0024	CV	0025	INVFLG	0032	PROMPT	0033	CSWL	0036
IOBADR	004A	GENPTR	00EE	DATAPTR	00FA	PRNTPTR	00FC	ZERO	0000
SIGLEN	0007	NEGONE	00FF	READCMD	0001	WRITCMD	0002	TEXTMODE	0000
GRPHMODE	0001	TX80MODE	0002	LV80MODE	0003	NORMDISP	0000	INVRDISP	0001
INITSCRN	0000	HOMESCRN	0001	EOLCLR	0000	EOPCLR	0001	DIRECT	0000
INDIRECT	0001	NOPAD	0000	HIGHLOW	0020	ZEROPAD	0040	SPCPAD	0080
NEXTLINE	0004	CHARCELL	0007	PCMDMASK	000F	NIBLMASK	000F	VSNLEN	0014
NAMELEN	0018	CVMASK	001F	MAXWDTH	0028	MAXTRKS	0032	MAXCH	0050
MINCV	0060	ASCIMASK	007F	INVRMASK	007F	MSBMASK	0080	ASCIFLAG	0080
RTNCMD	0050	MODECMD	0051	DISPCMD	0052	SCRNCMD	0053	CLRCMD	0054
CNTRCMD	0055	BUFRCMD	0056	NIBLCMD	0057	BYT1CMD	0058	BYT2CMD	0059
BYTNCMD	005A	ADRCMD	005B	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E
DECNCMD	005F	FLASH	0060	CTRLD	0084	BELLCHAR	0087	LARROW	0088
DARROW	008A	UARROW	008B	RETURN	008D	CTRLQ	0091	RARROW	0095
ESCAPE	009B	SPACE	00A0	PERIOD	00AE	SLASH	00AF	COLON	00BA
LWRMASK	00DF	LWRCASE	00E0	DELETE	00FF	STACK	0100	PAGESIZE	0100
DOSWARM	03D0	DOSCOLD	03D3	CALLRWTS	03D9	RDCLKVSN	03E1	GETIOB	03E3
HOOKDOS	03EA	KEY	C000	CLRKEY	C010	TXTCLR	C050	TXTSET	C051
MIXCLR	C052	LOWSCR	C054	HIRES	C057	ROM2WP	C082	PRNTAX	F941
PRBL2	F94A	INIT	FB2F	TABV	FB5B	VTAB	FC22	CLREOP	FC42
HOME	FC58	CLREOL	FC9C	CROUT	FD8E	PRBYTE	FDDA	PRHEX	FDE3
COUT	FDED	OUTPORT	FE95	BELL	FF3A	MONITOR	FF69	DISPLAY	0000
GETOPTN	0944	GETSLOT	0970	GETDRV	09A6	GETVOL	09DB	GETSDV	0A10
SHOWVTOC	0A24	EDITVTOC	0A52	MOD3	0A9B	SHOWBMAP	0ACE	EDITBMAP	0B06
QUIT	0B2C	READVTOC	0B3A	WRITVTOC	0B3D	SAVEVTOC	0B88	EDTOPTN	0BC1
SETOPTN	0BC4	CLROPTN	0BC7	MOD2	0BDA	GETDATE	0BF7	GETTIME	0C4A
MAKEHEX	0C9D	INITPGM	0CB3	SHOWMENU	0CE9	READVSN	0D8A	INITVTOC	0D8E
SHOWHDR	0DB2	HDRMOD01	0DD0	HDRMOD02	0DEC	HDRMOD03	0E04	HDRMOD04	0E18
HDRMOD05	0E54	HDRMOD06	0E70	HDRMOD07	0EAD	HDRMOD08	0EDA	HDRMOD09	0EF0
HDRMOD10	0F0C	HDRMOD11	0F29	HDRMOD12	0F45	HDRMOD13	0F61	HDRMOD14	0F94
HDRMOD15	0FC5	HDRMOD16	0FE1	HDRMOD17	0FFD	HDRMOD18	1019	PRNTBUFT	102F
PRNTBUFH	103B	PRNTBUF	1044	BUFRMOD	1049	PRINTIME	104D	HDREDT01	1064
HDREDT02	10D9	HDREDT03	1138	HDREDT04	1166	HDREDT05	11A5	HDREDT06	11DD
HDREDT07	1218	HDREDT08	1250	HDREDT09	12BD	HDREDT10	1328	HDREDT11	138F
HDREDT12	13BC	HDREDT13	13F7	HDREDT14	1439	HDREDT15	14A5	HDREDT16	14E8
HDREDT17	1524	HDREDT18	155C	SHOWMAP	15A9	SHOWMOD	1658	EDITMAP	167C
EDITMOD	16D6	GETHEX2	16F9	GETHEX3	16FC	GETHEX4	16FF	GETHEX6	1702
GETHEX8	1705	GETDEC1	170A	GETDEC2	170D	GETDEC3	1710	GETDEC5	1713
NUMLOOP	1724	NUMPROC	177E	HEXPROC	1781	DECPROC	17B0	GETKEY	17D9
READKEY	17E5	PRNTCHAR	1800	PRINT	180C	PRNTLOOP	181B	PRNTMOD1	1847
PRNTMOD2	1862	PRNTBR1	1864	PRNTBR2	186A	PRNTBR3	186F	PRNTBR4	187D
PRNTMOD3	1880	PRNTOUT	1886	OUTMOD1	1886	OUTMOD2	1888	PRNTOUT2	188A
OUTTBL1	188D	OUTTBL2	1893	OUT80COL	1899	VTABADRS	189B	OUTADRS	18A1
PRNTSAV	18A7	PRNTNUM	18A8	MODEVAL	18AA	FRMTVAL	18AB	PRNTBL	18AC
PRNTBLL	18BC	PRNTBLH	18CC	PRNTRTN	18DC	PRNTSAVY	18E7	PRNTSAVX	18E9
PRNTSAVA	18EB	PRINTRTN	18EE	PRNTMODE	18EF	PRNTDISP	193A	PRNTSCRN	1959
PRNTCLR	1969	PRNTCNTR	1973	PRNTBUFR	1985	PRNTNIBL	19A0	PRNTNBYT	19A5
PRNT1BYT	19A9	PRNT2BYT	19AC	PRNTBYT	19AE	PRNTADR	19B8	PRNT1DEC	19D0
PRNT2DEC	19D6	PRNTDEC	19D9	PRNT3DEC	19E3	PRNTNDEC	19ED	PRNTBYTE	1A34
PRNTHEx	1A3D	PRNTHEx2	1A3F	HEXTODEC	1A4A	GETDIGIT	1A64	PRNTGRPH	1A83
SLOT	1A83	DRIVE	1A84	VOLUME	1A85	SAVX	1A86	SAVY	1A87
SAVA	1A88	OPTION	1A89	SAVNUM	1A8A	SAVDATE	1A8B	COUNT	1A91
COUNT2	1A92	NNUMS	1A93	SAVECH	1A94	NENTRY	1A95	NUMVALS	1A96
HEXVALS	1A9E	DECVALS	1AA2	CHARBUFR	1AA4	NAMEBUFR	1AA6	VSNBUFR	1ABF
DECTBLL	1AD4	DECTBLH	1AD9	HEADER1	1ADE	HEADER2	1AE3	HEADER3	1AF1

HEADER4	1AF6	DOSRAMH	1B0E	DOSRAML	1B1A	UNKNOWN	1B25	VOLTYPB	1B30
VOLTYPD	1B3D	ALLDIRN	1B4A	ALLDIRP	1B56	LOCKL	1B62	LOCKU	1B6C
DATIMSEP	1B78	HDRTBL1	1B7E	HDRTBL2	1BA2	OPTIONS	0024	NOPTION	0012
TBLTYPE	1BC6	RWSLOT	1BC7	RWDRIVE	1BC8	RWVOLUME	1BC9	RWTRACK	1BCA
RWSECTOR	1BCB	DCTADR	1BCC	DATABUFR	1BCE	BYTCNT	1BD1	COMMAND	1BD2
ERRRCODE	1BD3	VOLFND	1BD4	SLOTFND	1BD5	DRVFND	1BD6	TBLSIZE	0011
VTOCBUFR	1C00	VTOCSB	1C00	FRSTTRK	1C01	FRSTSEC	1C02	DOSVRSN	1C03
DOSBUILD	1C04	DOSRAM	1C05	DISKVOL	1C06	DISKTYPE	1C07	DISKNAME	1C08
INITIME	1C20	VTOCPHAS	1C26	NUMTSENT	1C27	DISKSUBJ	1C28	VTOCTIME	1C2A
NXTTOALC	1C30	ALLCDIR	1C31	DOSCONFIG	1C32	DISKLOCK	1C33	NUMTRKS	1C34
NUMSECS	1C35	BYTPRSEC	1C36	BITMAP	1C38				

Symbols alphabetically sorted:

ADRCMD	005B	ALLCDIR	1C31	ALLDIRN	1B4A	ALLDIRP	1B56	ASCIFLAG	0080
ASCIMASK	007F	BELL	FF3A	BELLCHAR	0087	BITMAP	1C38	BUFRCMD	0056
BUFRMOD	1049	BYT1CMD	0058	BYT2CMD	0059	BYTCNT	1BD1	BYTNCMD	005A
BYTPRSEC	1C36	CALLRWTS	03D9	CH	0024	CHARBUFR	1AA4	CHARCELL	0007
CLRCMD	0054	CLREOL	FC9C	CLREOP	FC42	CLRKEY	C010	CLROPTN	0BC7
CNTRCMD	0055	COLON	00BA	COMMAND	1BD2	COUNT	1A91	COUNT2	1A92
COUT	FDED	CROUT	FD8E	CSWL	0036	CTRLD	0084	CTRLQ	0091
CV	0025	CVMASK	001F	DARROW	008A	DATABUFR	1BCE	DATAPTR	00FA
DATIMSEP	1B78	DCTADR	1BCC	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E
DECNCMD	005F	DECPROC	17B0	DECTBLH	1AD9	DECTBL	1AD4	DECVALS	1AA2
DELETE	00FF	DIRECT	0000	DISKLOCK	1C33	DISKNAME	1C08	DISKSUBJ	1C28
DISKTYPE	1C07	DISKVOL	1C06	DISPCMD	0052	DISPLAY	0000	DOSBUILD	1C04
DOSCOLD	03D3	DOSCONFIG	1C32	DOSRAM	1C05	DOSRAMH	1B0E	DOSRAML	1B1A
DOSVRSN	1C03	DOSWARM	03D0	DRIVE	1A84	DRVFND	1BD6	EDITBMAP	0B06
EDITMAP	167C	EDITMOD	16D6	EDITVTOC	0A52	EDTOPTN	0BC1	EOLCLR	0000
EOPCLR	0001	ERRRCODE	1BD3	ESCAPE	009B	FLASH	0060	FRMTVAL	18AB
FRSTSEC	1C02	FRSTTRK	1C01	GENPTR	00EE	GETDATE	0BF7	GETDEC1	170A
GETDEC2	170D	GETDEC3	1710	GETDEC5	1713	GETDIGIT	1A64	GETDRV	09A6
GETHEX2	16F9	GETHEX3	16FC	GETHEX4	16FF	GETHEX6	1702	GETHEX8	1705
GETIOB	03E3	GETKEY	17D9	GETOPTN	0944	GETSDV	0A10	GETSLOT	0970
GETTIME	0C4A	GETVOL	09DB	GRPHMODE	0001	HDREDT01	1064	HDREDT02	10D9
HDREDT03	1138	HDREDT04	1166	HDREDT05	11A5	HDREDT06	11DD	HDREDT07	1218
HDREDT08	1250	HDREDT09	12BD	HDREDT10	1328	HDREDT11	138F	HDREDT12	13BC
HDREDT13	13F7	HDREDT14	1439	HDREDT15	14A5	HDREDT16	14E8	HDREDT17	1524
HDREDT18	155C	HDRMOD01	0DD0	HDRMOD02	0DEC	HDRMOD03	0E04	HDRMOD04	0E18
HDRMOD05	0E54	HDRMOD06	0E70	HDRMOD07	0EAD	HDRMOD08	0EDA	HDRMOD09	0EF0
HDRMOD10	0F0C	HDRMOD11	0F29	HDRMOD12	0F45	HDRMOD13	0F61	HDRMOD14	0F94
HDRMOD15	0FC5	HDRMOD16	0FE1	HDRMOD17	0FFD	HDRMOD18	1019	HDRTBL1	1B7E
HDRTBL2	1BA2	HEADER1	1ADE	HEADER2	1AE3	HEADER3	1AF1	HEADER4	1AF6
HEXPROC	1781	HEXTODEC	1A4A	HEXVALS	1A9E	HIGHLOW	0020	HIRES	C057
HOME	FC58	HOMESCRN	0001	HOOKDOS	03EA	INDIRECT	0001	INIT	FB2F
INITIME	1C20	INITPGM	0CB3	INITSCRN	0000	INITVTOC	0D8E	INVFLG	0032
INVRDISP	0001	INVRMASK	007F	IOBADR	004A	KEY	C000	LARROW	0088
LOC0	0000	LOCKL	1B62	LOCKU	1B6C	LOWSCR	C054	LV80MODE	0003
LWRCASE	00E0	LWRMASK	00DF	MAKEHEX	0C9D	MAXCH	0050	MAXTRKS	0032
MAXWDTH	0028	MINCV	0060	MIXCLR	C052	MOD2	0BDA	MOD3	0A9B
MODECMD	0051	MODEVAL	18AA	MONITOR	FF69	MSBMASK	0080	NAMEBUFR	1AA6
NAMELEN	0018	NEGONE	00FF	NENTRY	1A95	NEXTLINE	0004	NIBLCMD	0057
NIBLMASK	000F	NNUMS	1A93	NOPAD	0000	NOPTION	0012	NORMDISP	0000
NUMLOOP	1724	NUMPROC	177E	NUMSECS	1C35	NUMTRKS	1C34	NUMTSENT	1C27
NUMVALS	1A96	NXTTOALC	1C30	OPTION	1A89	OPTIONS	0024	OUT80COL	1899
OUTADRS	18A1	OUTMOD1	1886	OUTMOD2	1888	OUTPORT	FE95	OUTTBL1	188D
OUTTBL2	1893	PAGESIZE	0100	PCMDMASK	000F	PERIOD	00AE	PRBL2	F94A
PRBYTE	FDDA	PRHEX	FDE3	PRINT	180C	PRINTIME	104D	PRINTRTN	18EE
PRNT1BYT	19A9	PRNT1DEC	19D0	PRNT2BYT	19AC	PRNT2DEC	19D6	PRNT3DEC	19E3
PRNTADR	19B8	PRNTAX	F941	PRNTBL	18AC	PRNTBLH	18CC	PRNTBL	18BC

PRNTBR1	1864	PRNTBR2	186A	PRNTBR3	186F	PRNTBR4	187D	PRNTBUF	1044
PRNTBUFH	103B	PRNTBUFR	1985	PRNTBUFT	102F	PRNTBYT	19AE	PRNTBYTE	1A34
PRNTCHAR	1800	PRNTCLR	1969	PRNTCNTR	1973	PRNTDEC	19D9	PRNTDISP	193A
PRNTGRPH	1A83	PRNTHX	1A3D	PRNTHX2	1A3F	PRNTLOOP	181B	PRNTMOD1	1847
PRNTMOD2	1862	PRNTMOD3	1880	PRNTMODE	18EF	PRNTNBYT	19A5	PRNTNDEC	19ED
PRNTNIBL	19A0	PRNTNUM	18A8	PRNTOUT	1886	PRNTOUT2	188A	PRNTPTR	00FC
PRNTRTN	18DC	PRNTSAV	18A7	PRNTSAVA	18EB	PRNTSAVX	18E9	PRNTSAVY	18E7
PRNTSCRN	1959	PROMPT	0033	QUIT	0B2C	RARROW	0095	RDCLKVSN	03E1
READCMD	0001	READKEY	17E5	READVSN	0D8A	READVTOC	0B3A	RETURN	008D
ROM2WP	C082	RTNCMD	0050	RWDRIVE	1BC8	RWSECTOR	1BCB	RWSLOT	1BC7
RWTRACK	1BCA	RWVOLUME	1BC9	SAVA	1A88	SAVDATE	1A8B	SAVECH	1A94
SAVEVTOC	0B88	SAVNUM	1A8A	SAVX	1A86	SAVY	1A87	SCRNCMD	0053
SETOPTN	0BC4	SHOWBMAP	0ACE	SHOWHDR	0DB2	SHOWMAP	15A9	SHOWMENU	0CE9
SHOWMOD	1658	SHOWVTOC	0A24	SIGLEN	0007	SLASH	00AF	SLOT	1A83
SLOTFND	1BD5	SPACE	00A0	SPCPAD	0080	STACK	0100	TABV	FB5B
TBLSIZE	0011	TBLTYPE	1BC6	TEXTMODE	0000	TX80MODE	0002	TXTCLR	C050
TXTSET	C051	UARROW	008B	UNKNOWN	1B25	VOLFND	1BD4	VOLTYPB	1B30
VOLTYPD	1B3D	VOLUME	1A85	VSNBUFR	1ABF	VSNLEN	0014	VTAB	FC22
VTABADRS	189B	VTOCBUFR	1C00	VTOCPHAS	1C26	VTOCSB	1C00	VTOCTIME	1C2A
WNCBTM	0023	WNDLFT	0020	WNDTOP	0022	WNDWDTH	0021	WRITCMD	0002
WRITVTOC	0B3D	ZERO	0000	ZEROPAD	0040				

Symbols numerically sorted:

ZERO	0000	TEXTMODE	0000	NORMDISP	0000	NOPAD	0000	LOC0	0000
INITSCRN	0000	EOLCLR	0000	DISPLAY	0000	DIRECT	0000	READCMD	0001
INVRDISP	0001	INDIRECT	0001	HOMESCRN	0001	GRPHMODE	0001	EOPCLR	0001
WRITCMD	0002	TX80MODE	0002	LV80MODE	0003	NEXTLINE	0004	SIGLEN	0007
CHARCELL	0007	PCMDMASK	000F	NIBLMASK	000F	TBLSIZE	0011	NOPTION	0012
VSNLEN	0014	NAMELEN	0018	CVMASK	001F	WNDLFT	0020	HIGHLOW	0020
WNDWDTH	0021	WNDTOP	0022	WNCBTM	0023	OPTIONS	0024	CH	0024
CV	0025	MAXWDTH	0028	MAXTRKS	0032	INVFLG	0032	PROMPT	0033
CSWL	0036	ZEROPAD	0040	IOBADR	004A	RTNCMD	0050	MAXCH	0050
MODECMD	0051	DISPCMD	0052	SCRNCMD	0053	CLRCMD	0054	CNTRCMD	0055
BUFRCMD	0056	NIBLCMD	0057	BYT1CMD	0058	BYT2CMD	0059	BYTNCMD	005A
ADRCMD	005B	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E	DECNCMD	005F
MINCV	0060	FLASH	0060	INVRMASK	007F	ASCIMASK	007F	SPCPAD	0080
MSBMASK	0080	ASCIFLAG	0080	CTRLD	0084	BELLCHAR	0087	LARROW	0088
DARROW	008A	UARROW	008B	RETURN	008D	CTRLQ	0091	RARROW	0095
ESCAPE	009B	SPACE	00A0	PERIOD	00AE	SLASH	00AF	COLON	00BA
LWRMASK	00DF	LWRCASE	00E0	GENPTR	00EE	DATAPTR	00FA	PRNTPTR	00FC
NEGONE	00FF	DELETE	00FF	STACK	0100	PAGESIZE	0100	DOSWARM	03D0
DOSCOLD	03D3	CALLRWTS	03D9	RDCLKVSN	03E1	GETIOB	03E3	HOOKDOS	03EA
GETOPTN	0944	GETSLOT	0970	GETDRV	09A6	GETVOL	09DB	GETSDV	0A10
SHOWVTOC	0A24	EDITVTOC	0A52	MOD3	0A9B	SHOWBMAP	0ACE	EDITBMAP	0B06
QUIT	0B2C	READVTOC	0B3A	WRITVTOC	0B3D	SAVEVTOC	0B88	EDTOPTN	0BC1
SETOPTN	0BC4	CLROPTN	0BC7	MOD2	0BDA	GETDATE	0BF7	GETTIME	0C4A
MAKEHEX	0C9D	INITPGM	0CB3	SHOWMENU	0CE9	READVSN	0D8A	INITVTOC	0D8E
SHOWHDR	0DB2	HDRMOD01	0DD0	HDRMOD02	0DEC	HDRMOD03	0E04	HDRMOD04	0E18
HDRMOD05	0E54	HDRMOD06	0E70	HDRMOD07	0EAD	HDRMOD08	0EDA	HDRMOD09	0EF0
HDRMOD10	0F0C	HDRMOD11	0F29	HDRMOD12	0F45	HDRMOD13	0F61	HDRMOD14	0F94
HDRMOD15	0FC5	HDRMOD16	0FE1	HDRMOD17	0FFD	HDRMOD18	1019	PRNTBUFT	102F
PRNTBUFH	103B	PRNTBUF	1044	BUFRMOD	1049	PRINTIME	104D	HDREDT01	1064
HDREDT02	10D9	HDREDT03	1138	HDREDT04	1166	HDREDT05	11A5	HDREDT06	11DD
HDREDT07	1218	HDREDT08	1250	HDREDT09	12BD	HDREDT10	1328	HDREDT11	138F
HDREDT12	13BC	HDREDT13	13F7	HDREDT14	1439	HDREDT15	14A5	HDREDT16	14E8
HDREDT17	1524	HDREDT18	155C	SHOWMAP	15A9	SHOWMOD	1658	EDITMAP	167C
EDITMOD	16D6	GETHEX2	16F9	GETHEX3	16FC	GETHEX4	16FF	GETHEX6	1702
GETHEX8	1705	GETDEC1	170A	GETDEC2	170D	GETDEC3	1710	GETDEC5	1713
NUMLOOP	1724	NUMPROC	177E	HEXPROC	1781	DECPROC	17B0	GETKEY	17D9

READKEY	17E5	PRNTCHAR	1800	PRINT	180C	PRNTLOOP	181B	PRNTMOD1	1847
PRNTMOD2	1862	PRNTBR1	1864	PRNTBR2	186A	PRNTBR3	186F	PRNTBR4	187D
PRNTMOD3	1880	PRNTOUT	1886	OUTMOD1	1886	OUTMOD2	1888	PRNTOUT2	188A
OUTTBL1	188D	OUTTBL2	1893	OUT80COL	1899	VTABADRS	189B	OUTADRS	18A1
PRNTSAV	18A7	PRNTNUM	18A8	MODEVAL	18AA	FRMTVAL	18AB	PRNTBL	18AC
PRNTBLL	18BC	PRNTBLH	18CC	PRNTRTN	18DC	PRNTSAVY	18E7	PRNTSAVX	18E9
PRNTSAVA	18EB	PRINTRTN	18EE	PRNTMODE	18EF	PRNTDISP	193A	PRNTSCRN	1959
PRNTCLR	1969	PRNTCNTR	1973	PRNTBUFR	1985	PRNTNIBL	19A0	PRNTNBYT	19A5
PRNT1BYT	19A9	PRNT2BYT	19AC	PRNTBYT	19AE	PRNTADR	19B8	PRNT1DEC	19D0
PRNT2DEC	19D6	PRNTDEC	19D9	PRNT3DEC	19E3	PRNTNDEC	19ED	PRNTBYTE	1A34
PRNTHX	1A3D	PRNTHX2	1A3F	HEXTODEC	1A4A	GETDIGIT	1A64	SLOT	1A83
PRNTGRPH	1A83	DRIVE	1A84	VOLUME	1A85	SAVX	1A86	SAVY	1A87
SAVA	1A88	OPTION	1A89	SAVNUM	1A8A	SAVDATE	1A8B	COUNT	1A91
COUNT2	1A92	NNUMS	1A93	SAVECH	1A94	NENTRY	1A95	NUMVALS	1A96
HEXVALS	1A9E	DECVALS	1AA2	CHARBUFR	1AA4	NAMEBUFR	1AA6	VSNBUFR	1ABF
DECTBLL	1AD4	DECTBLH	1AD9	HEADER1	1ADE	HEADER2	1AE3	HEADER3	1AF1
HEADER4	1AF6	DOSRAMH	1B0E	DOSRAML	1B1A	UNKNOWN	1B25	VOLTYPB	1B30
VOLTYPD	1B3D	ALLDIRN	1B4A	ALLDIRP	1B56	LOCKL	1B62	LOCKU	1B6C
DATIMSEP	1B78	HDRTBL1	1B7E	HDRTBL2	1BA2	TBLTYPE	1BC6	RWSLOT	1BC7
RWDRIVE	1BC8	RWVOLUME	1BC9	RWTRACK	1BCA	RWSECTOR	1BCB	DCTADR	1BCC
DATABUFR	1BCE	BYTCNT	1BD1	COMMAND	1BD2	ERRRCODE	1BD3	VOLFND	1BD4
SLOTFND	1BD5	DRVFND	1BD6	VTOCSB	1C00	VTOCBUFR	1C00	FRSTTRK	1C01
FRSTSEC	1C02	DOSVRSN	1C03	DOSBUILD	1C04	DOSRAM	1C05	DISKVOL	1C06
DISKTYPE	1C07	DISKNAME	1C08	INITIME	1C20	VTOCPHAS	1C26	NUMTSENT	1C27
DISKSUBJ	1C28	VTOCTIME	1C2A	NXTTOALC	1C30	ALLCDIR	1C31	DOSCONFIG	1C32
DISKLOCK	1C33	NUMTRKS	1C34	NUMSECS	1C35	BYTPRSEC	1C36	BITMAP	1C38
KEY	C000	CLRKEY	C010	TXTCLR	C050	TXTSET	C051	MIXCLR	C052
LOWSCR	C054	HIRES	C057	ROM2WP	C082	PRNTAX	F941	PRBL2	F94A
INIT	FB2F	TABV	FB5B	VTAB	FC22	CLREOP	FC42	HOME	FC58
CLREOL	FC9C	CROUT	FD8E	PRBYTE	FDDA	PRHEX	FDE3	COUT	FDED
OUTPORT	FE95	BELL	FF3A	MONITOR	FF69				