

!A

LLOAD CLIENT.L,A\$4000

\*\*\* End of Pass 1

LLOAD CLIENT1.L,A\$4000

LLOAD CLIENT2.L,A\$4000

LLOAD CLIENT3.L,A\$4000

LLOAD CLNTPRNT.L,A\$4000

LLOAD CLNTDATA.L,A\$4000

LLOAD CLIENT.L,A\$4000

\*\*\* End of Pass 2

```
0800      1          ttl "Client Source Code, CLIENT.L"
0800      2          src "CLIENT.L"
0800      3      ;
0800      4      ;
0800      5      ; CLIENT.L
0800      6      ;
0800      7      ;
0800      8      ; Client Source Code
0800      9      ;
0800     10      ; 2022 July 23
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      ; Unitied 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      ;
0010     36      ZXOR      epz $10
0011     37      ZSUM      epz $11
0012     38      ZBYTES    epz $12          ; 2 bytes
0014     39      ZMATCH    epz $14
0015     40      ZSAVA     epz $15
0800     41      ;
0020     42      WNDLFT     epz $20
0021     43      WNDWDTH    epz $21
0022     44      WNDTOP     epz $22
0023     45      WNDBTM     epz $23
0024     46      CH         epz $24
0025     47      CV         epz $25
0800     48      ;
0032     49      INVFLG     epz $32
0800     50      ;
00EC     51      DOSPTR     epz $EC
00EE     52      GENPTR     epz $EE
00FA     53      DATAPTR    epz $FA
00FC     54      PRNTPTR    epz $FC
0800     55      ;
0800     56      enz
0800     57      ;
0000     58      ZERO      equ $00
00FF     59      NEGONE     equ $FF
0800     60      ;
```

0045	61	DOSVRSN	equ	\$45	
0006	62	DOSBLD	equ	\$06	
0800	63	;			
0010	64	ETRKNDX	equ	\$10	
001C	65	ESECNDX	equ	\$1C	
0800	66	;			
0001	67	MINRTRY	equ	\$01	
0009	68	MAXRTRY	equ	\$09	
0001	69	MINSLOT	equ	\$01	
0007	70	MAXSLOT	equ	\$07	
0001	71	MINDRV	equ	\$01	
0051	72	MAXDRV	equ	\$51	
0001	73	MINPHAS	equ	\$01	
0010	74	MAXPHAS	equ	\$10	
0012	75	MINTRKS	equ	\$12	
0030	76	MAXTRKS	equ	\$30	
0800	77	;			
0004	78	WAIT100U	equ	\$04	; 100 usec delay
000A	79	WAIT400U	equ	\$0A	; 400 usec delay
000C	80	WAIT500U	equ	\$0C	; 500 usec delay
0011	81	WAIT001M	equ	\$11	; 1 msec delay
003D	82	WAIT010M	equ	\$3D	; 10 msec delay
008B	83	WAIT050M	equ	\$8B	; 50 msec delay
00C5	84	WAIT100M	equ	\$C5	; 100 msec delay
00F2	85	WAIT150M	equ	\$F2	; 150 msec delay
0800	86	;			
0000	87	TEXTMODE	equ	\$00	
0001	88	GRPHMODE	equ	\$01	
0002	89	TX80MODE	equ	\$02	
0003	90	LV80MODE	equ	\$03	
0800	91	;			
0000	92	NORMDISP	equ	\$00	
0001	93	INVRDISP	equ	\$01	
0800	94	;			
0000	95	INITSCRN	equ	\$00	
0001	96	HOMESCRN	equ	\$01	
0800	97	;			
0000	98	EOLCLR	equ	\$00	
0001	99	EOPCLR	equ	\$01	
0800	100	;			
0000	101	DIRECT	equ	\$00	
0001	102	INDIRECT	equ	\$01	
0800	103	;			
0000	104	NOPAD	equ	\$00	
0020	105	HIGHLOW	equ	\$20	
0040	106	ZEROPAD	equ	\$40	
0080	107	SPCPAD	equ	\$80	
0800	108	;			
0003	109	BUFRSIZE	equ	\$03	
0004	110	NEXTLINE	equ	\$04	
0006	111	CLKSIZE	equ	\$06	
0007	112	CHARCELL	equ	\$07	
000F	113	PCMDMASK	equ	\$0F	
000F	114	NIBLMASK	equ	\$0F	
001F	115	CVMASK	equ	\$1F	
0028	116	MAXWDTH	equ	\$28	
0050	117	MAXCH	equ	\$50	
0060	118	MINCV	equ	\$60	
007F	119	INVRMASK	equ	\$7F	
0080	120	ASCIFLAG	equ	\$80	
0800	121	;			

```
0050      122  RTNCMD    equ  $50
0051      123  MODECMD  equ  $51
0052      124  DISPCMD  equ  $52
0053      125  SCRNCMD  equ  $53
0054      126  CLRCMD   equ  $54
0055      127  CNTRCMD  equ  $55
0056      128  BUFRCMD  equ  $56
0057      129  NIBLCMD  equ  $57
0058      130  BYT1CMD  equ  $58
0059      131  BYT2CMD  equ  $59
005A      132  BYTNCMD  equ  $5A
005B      133  ADRCMD   equ  $5B
005C      134  DEC1CMD  equ  $5C
005D      135  DEC2CMD  equ  $5D
005E      136  DEC3CMD  equ  $5E
005F      137  DECNCMD  equ  $5F
0800      138  ;
0060      139  FLASH    equ  $60
0087      140  BELLCHAR equ  $87
0088      141  LARROW   equ  $88
008A      142  DARROW   equ  $8A
008B      143  UARROW   equ  $8B
008D      144  RETURN   equ  $8D
0091      145  CTRLQ    equ  $91
0095      146  RARROW   equ  $95
009B      147  ESCAPE   equ  $9B
00A0      148  SPACE    equ  " "
0800      149  ;
0001      150  DRIVE1    equ  $01
0002      151  DRIVE2    equ  $02
0800      152  ;
0000      153  RWTSSEEK  equ  $00
0001      154  RWTSREAD  equ  $01
0002      155  RWTSWRIT  equ  $02
0004      156  RWTSFRMT  equ  $04
0800      157  ;
0800      158  ; Program Error Values
0800      159  ;
0001      160  MAIN1.E    equ  $01
0002      161  MAIN2.E    equ  $02
0010      162  FSSC.E     equ  $10
0018      163  ASYNC.E    equ  $18
0020      164  EMENU1.E   equ  $20
0021      165  EMENU2.E   equ  $21
0030      166  CHK4D1.E   equ  $30
0034      167  CHK4D2.E   equ  $34      ; received H
0036      168  CHK4D3.E   equ  $36
0037      169  CHK4D4.E   equ  $37
0040      170  READ1.E    equ  $40
0041      171  READ2.E    equ  $41
0047      172  READ3.E    equ  $47
0050      173  WRIT1.E    equ  $50
0054      174  WRIT2.E    equ  $54      ; received H
0055      175  WRIT3.E    equ  $55      ; received H
0060      176  SNDCF1.E    equ  $60      ; uses 60 and 61
0062      177  SNDCF2.E    equ  $62      ; uses 62 and 63
0064      178  SNDCF3.E    equ  $64      ; uses 64 and 65
0070      179  SNDTS1.E    equ  $70
0071      180  SNDTS2.E    equ  $71
0072      181  SNDTS3.E    equ  $72
0073      182  SNDTS4.E    equ  $73
```

0078	183	RCVTS1.E	equ	\$78	
0079	184	RCVTS2.E	equ	\$79	
0080	185	SNDRW1.E	equ	\$80	
0081	186	SNDRW2.E	equ	\$81	
0082	187	SNDRW3.E	equ	\$82	
0088	188	RCVRW1.E	equ	\$88	
0089	189	RCVRW2.E	equ	\$89	
0090	190	SNDTX1.E	equ	\$90	
0091	191	SNDTX2.E	equ	\$91	
0092	192	SNDTX3.E	equ	\$92	
0098	193	RCVTX1.E	equ	\$98	
0099	194	RCVTX2.E	equ	\$99	
00A0	195	PDATA1.E	equ	\$A0	
00A1	196	PDATA2.E	equ	\$A1	; uses A1 and A2
00A3	197	PDATA3.E	equ	\$A3	; uses A3 and A4
00B0	198	GDATA1.E	equ	\$B0	
00B1	199	GDATA2.E	equ	\$B1	
00B2	200	GDATA3.E	equ	\$B2	
00C0	201	GTRACK.E	equ	\$C0	; uses C0 and C1
00D0	202	PTRACK.E	equ	\$D0	
0800	203	;			
0100	204	STACK	equ	\$100	
0100	205	PAGESIZE	equ	\$100	
0800	206	;			
03D3	207	DOSCOLD	equ	\$3D3	
03D9	208	CALLRWTS	equ	\$3D9	
03E1	209	RDCLKVSN	equ	\$3E1	
03EA	210	HOOKDOS	equ	\$3EA	
0800	211	;			
BFF0	212	BLDVRSN	equ	\$BFF0	
BFF1	213	BLDNMBR	equ	\$BFF1	
BFFA	214	INITVAL	equ	\$BFFA	
0800	215	;			
C000	216	MEMTOP	equ	\$C000	
0800	217	;			
C000	218	KEY	equ	\$C000	
C010	219	CLRKEY	equ	\$C010	
0800	220	;			
C050	221	TXTCLR	equ	\$C050	
C051	222	TXTSET	equ	\$C051	
C052	223	MIXCLR	equ	\$C052	
C054	224	LOWSCR	equ	\$C054	
C057	225	HIRES	equ	\$C057	
0800	226	;			
C088	227	DATA	equ	\$C088	; receive (read)
0800	228	;			transmit (write)
C089	229	STATUS	equ	\$C089	; status (read), reset (write)
C08A	230	COMMAND	equ	\$C08A	; command (read and write)
C08B	231	CONTROL	equ	\$C08B	; control (read and write)
0800	232	;			
CFFF	233	CLRROM	equ	\$CFFF	
0800	234	;			
FB2F	235	INIT	equ	\$FB2F	
FC22	236	VTAB	equ	\$FC22	
FC42	237	CLREOP	equ	\$FC42	
FC58	238	HOME	equ	\$FC58	
FC9C	239	CLREOL	equ	\$FC9C	
FCA8	240	WAIT	equ	\$FCA8	
FDE3	241	PRHEX	equ	\$FDE3	
FDED	242	COUT	equ	\$FDED	
FE95	243	OUTPORT	equ	\$FE95	

```
FF3A          244  BELL      equ  $FF3A
FF58          245  IORTS     equ  $FF58
0800          246  ;
0800          247  ;
0800          248          icl  "CLIENT1.L"

LLOAD CLIENT1.L,A$4000
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```
0800          1          ttl "Client Source Code, CLIENT1.L"
0800          2          ;
0800          3          ;
0800          4          ; CLIENT1.L
0800          5          ;
0800          6          ;
0000          7  DISPLAY equ TEXTMODE
0800          8          ;
0000          9  DEBUG   equ 0
0001         10 NOTDEBUG equ DEBUG^1
0800         11          ;
0800         12          ;
0900         13          org $900
0900         14          obj $900
0900         15          usr
0900         16          ;
0900         17          ;
0900 BA       18          tsx
0901 8E 4A 19 19          stx STACKPTR
0904         20          ;
0904 20 EA 03 21          jsr HOOKDOS
0907         22          ;
0907 20 D3 16 23          jsr PRINT
090A         24          .if DISPLAY=TEXTMODE
090A 51 00     25          byt MODECMD,TEXTMODE
090C         26          .fi
090C         27          .if DISPLAY=GRPHMODE
090C         28          byt RETURN
090C         29          byt MODECMD,GRPHMODE
090C         30          .fi
090C         31          .if DISPLAY=TX80MODE
090C         32          byt MODECMD,TX80MODE
090C         33          .fi
090C 52 00     34          byt DISPCMD,NORMDISP
090E 53 00     35          byt SCRNCMD,INITSCRN
0910 53 01     36          byt SCRNCMD,HOMESCRN
0912 50        37          byt RTNCMD
0913         38          ;
0913 20 AC 09   39          jsr INITPGM
0916 B0 54     40          bcs EXITPGM
0918         41          ;
0918 20 58 FC   42          jsr HOME
091B 20 22 0C  43          jsr SHOWMENU
091E         44          ;
091E 20 E4 13  45          jsr AUTOSYNC
0921 B0 49     46          bcs EXITPGM
0923         47          ;
0923 A9 00     48  START   lda #ZERO
0925 8D D0 1A  49          sta CLSRRUN
0928         50          ;
0928 20 22 0C  51          jsr SHOWMENU
092B         52          ;
092B 20 94 10  53          jsr SNDCFDCB
092E B0 3C     54          bcs EXITPGM
0930         55          ;
0930 20 17 0A   56          jsr EDITMENU
0933 B0 37     57          bcs EXITPGM
0935         58          ;
0935 20 53 0E   59          jsr CHK4DISK
0938 B0 32     60          bcs EXITPGM
```

```

093A          61 ;
093A A0 88    62      ldy #CLKBUFR1
093C A9 19    63      lda /CLKBUFR1
093E          64 ;
093E 20 DF 12 65      jsr GETTIME
0941          66 ;
0941 AD C1 1A 67      lda VOLXFER
0944 D0 07    68      bne >1
0946          69 ;
0946 20 88 0F 70      jsr DOREADER
0949 90 07    71      bcc >2
094B          72 ;
094B B0 1F    73      bcs EXITPGM
094D          74 ;
094D 20 1D 10 75      ^1 jsr DOWRITER
0950 B0 1A    76      bcs EXITPGM
0952          77 ;
0952 A0 8E    78      ^2 ldy #CLKBUFR2
0954 A9 19    79      lda /CLKBUFR2
0956          80 ;
0956 20 DF 12 81      jsr GETTIME
0959          82 ;
0959 20 0D 14 83      jsr SHOWTIME
095C 20 E8 15 84      jsr PRESNCLR
095F          85 ;
095F A2 01    86      ldx #MAIN1.E
0961 B0 09    87      bcs EXITPGM
0963          88 ;
0963 A9 C6    89      lda #"F"
0965 20 3F 16 90      jsr TXSSC00
0968          91 ;
0968 A2 02    92      ldx #MAIN2.E
096A 90 B7    93      bcc START
096C          94 ;
096C          95 ;
096C 8E 4F 19 96      EXITPGM stx ERRORVAL
096F          97 ;
096F A9 C8    98      lda #"H"
0971 20 3F 16 99      jsr TXSSC00
0974          100 ;
0974 AE 4F 19 101      ldx ERRORVAL
0977 E0 20    102      cpx #EMENU1.E
0979 F0 20    103      beq >1
097B          104 ;
097B 20 D3 16 105      jsr PRINT
097E 00 76    106      hex 0076
0980 AA AA AA 107      asc "*** Program error 0x"
0983 A0 D0 F2
0986 EF E7 F2
0989 E1 ED A0
098C E5 F2 F2
098F EF F2 A0
0992 B0 F8
0994 58        108      byt BYT1CMD
0995 4F 19     109      adr ERRORVAL
0997 50        110      byt RTNCMD
0998          111 ;
0998 20 E8 15  112      EXITPGM2 jsr PRESNCLR
099B          113 ;
099B 20 D3 16 114      ^1 jsr PRINT
099E          115      .if DISPLAY=GRPHMODE

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099E          116          byt MODECMD,TEXTMODE
099E          117          .fi
099E          118          .if DISPLAY=TX80MODE
099E          119          byt MODECMD,LV80MODE
099E          120          .fi
099E 52 00      121          byt DISPCMD,NORMDISP
09A0 53 00      122          byt SCRNCMD,INITSCRN
09A2 00 76      123          hex 0076
09A4 50         124          byt RTNCMD
09A5          125          ;
09A5 AE 4A 19   126          ldx STACKPTR
09A8 9A         127          txs
09A9          128          ;
09A9 4C D3 03   129          jmp DOSCOLD
09AC          130          ;
09AC          131          ;
09AC          132          ; Check for DOS 4.5 initialization values.  Allow previous
09AC          133          ; and current build number as valid.
09AC          134          ;
09AC AD F0 BF   135  INITPGM  lda BLDVRSN
09AF C9 45      136          cmp #DOSVRSN
09B1 D0 1C      137          bne >2
09B3          138          ;
09B3 AD F1 BF   139          lda BLDNMBR
09B6 C9 07      140          cmp #DOSBLD+1
09B8 B0 15      141          bcs >2
09BA          142          ;
09BA C9 05      143          cmp #DOSBLD-1
09BC 90 11      144          bcc >2
09BE          145          ;
09BE 20 8D 13   146          jsr FINDSSC
09C1 B0 0B      147          bcs >1
09C3          148          ;
09C3 20 2C 16   149          jsr INITSSC
09C6          150          ;
09C6 A9 00      151          lda #ZERO
09C8 8D CF 1A   152          sta CLSRSTAT
09CB 8D D0 1A   153          sta CLSRRUN
09CE          154          ;
09CE 60         155          ^1  rts
09CF          156          ;
09CF 20 D3 16   157          ^2  jsr PRINT
09D2 00 6A      158          hex 006A
09D4 55         159          byt CNTRCMD
09D5 C3 CC C9   160          asc "CLIENT uses features found only in"
09D8 C5 CE D4
09DB A0 F5 F3
09DE E5 F3 A0
09E1 E6 E5 E1
09E4 F4 F5 F2
09E7 E5 F3 A0
09EA E6 EF F5
09ED EE E4 A0
09F0 EF EE EC
09F3 F9 A0 E9
09F6 EE
09F7 8D 8D      161          byt RETURN,RETURN
09F9 55         162          byt CNTRCMD
09FA C4 CF D3   163          asc "DOS 4.5.05 or DOS 4.5.06."
09FD A0 B4 AE
0A00 B5 AE B0

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0A03 B5 A0 EF
0A06 F2 A0 C4
0A09 CF D3 A0
0A0C B4 AE B5
0A0F AE B0 B6
0A12 AE
0A13 50          164          byt RTNCMD
0A14          165          ;
0A14 4C 98 09    166          jmp EXITPGM2
0A17          167          ;
0A17          168          ;
0A17 A9 00       169 EDITMENU lda #ZERO
0A19 8D D0 1A    170          sta CLSRRUN
0A1C          171          ;
0A1C A9 0E       172          lda #NOPTION-1
0A1E          173          ;
0A1E 2C 00 00    174          bit *-*
0A21          175          dfs !-2
0A1F          176          ;
0A1F A9 00       177 ^1      lda #ZERO
0A21          178          ;
0A21 8D 58 19    179 ^2      sta OPTION
0A24          180          ;
0A24 20 09 0C    181 ^3      jsr SETOPTN
0A27 20 AB 16    182          jsr WAITKEY
0A2A          183          ;
0A2A 08          184          php
0A2B 48          185          pha
0A2C          186          ;
0A2C 20 0C 0C    187          jsr CLROPTN
0A2F          188          ;
0A2F 68          189          pla
0A30 28          190          plp
0A31          191          ;
0A31 B0 4F       192          bcs >7          ; escape
0A33 D0 2F       193          bne >4          ; not return
0A35          194          ;
0A35 20 06 0C    195          jsr EDTOPTN
0A38          196          ;
0A38 AD 58 19    197          lda OPTION
0A3B 0A          198          asl
0A3C A8          199          tay
0A3D          200          ;
0A3D B9 B2 19    201          lda CSCTBL2,Y
0A40 8D 4A 0A    202          sta EDITMOD1+1
0A43          203          ;
0A43 B9 B3 19    204          lda CSCTBL2+1,Y
0A46 8D 4B 0A    205          sta EDITMOD1+2
0A49          206          ;
0A49 20 00 00    207 EDITMOD1 jsr *-*
0A4C B0 34       208          bcs >7
0A4E          209          ;
0A4E 20 0C 0C    210          jsr CLROPTN
0A51 20 94 10    211          jsr SNDCFDCB
0A54          212          ;
0A54 E8          213          inx          ; SNDCFn.E+1
0A55 B0 2D       214          bcs >8
0A57          215          ;
0A57 AD D0 1A    216          lda CLSRRUN
0A5A F0 C8       217          beq <3
0A5C          218          ;

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0A5C C9 01      219      cmp #1
0A5E F0 20      220      beq >6
0A60            221      ;
0A60 A2 20      222      ldx #EMENU1.E
0A62            223      ;
0A62 38         224      sec
0A63            225      ;
0A63 60         226      rts
0A64            227      ;
0A64 C9 8B      228      ^4      cmp #UARROW
0A66 D0 09      229      bne >5
0A68            230      ;
0A68 CE 58 19   231      dec OPTION
0A6B 10 B7      232      bpl <3
0A6D            233      ;
0A6D A9 0E      234      lda #NOPTION-1
0A6F D0 B0      235      bne <2
0A71            236      ;
0A71 C9 8A      237      ^5      cmp #DARROW
0A73 D0 AF      238      bne <3
0A75            239      ;
0A75 AD 58 19   240      lda OPTION
0A78 69 00      241      adc #ZERO
0A7A            242      ;
0A7A C9 0F      243      cmp #NOPTION
0A7C F0 A1      244      beq <1
0A7E            245      ;
0A7E D0 A1      246      bne <2      ; always taken
0A80            247      ;
0A80 18         248      ^6      clc
0A81            249      ;
0A81 60         250      rts
0A82            251      ;
0A82 A2 21      252      ^7      ldx #EMENU2.E
0A84            253      ;
0A84 60         254      ^8      rts
0A85            255      ;
0A85            256      ;
0A85 AE C5 1A   257      CSCSUB01 ldx CLNTRTRY
0A88 20 8D 16   258      jsr WAITAROW
0A8B            259      ;
0A8B C9 01      260      cmp #MINRTRY
0A8D B0 02      261      bcs >1
0A8F            262      ;
0A8F A9 09      263      lda #MAXRTRY
0A91            264      ;
0A91 C9 0A      265      ^1      cmp #MAXRTRY+1
0A93 90 02      266      bcc >2
0A95            267      ;
0A95 A9 01      268      lda #MINRTRY
0A97            269      ;
0A97 8D C5 1A   270      ^2      sta CLNTRTRY
0A9A            271      ;
0A9A 20 22 0C   272      jsr SHOWMENU
0A9D 90 E6      273      bcc CSCSUB01      ; always taken
0A9F            274      ;
0A9F            275      ;
0A9F AE CA 1A   276      CSCSUB02 ldx SRVRTRY
0AA2 20 8D 16   277      jsr WAITAROW
0AA5            278      ;
0AA5 C9 01      279      cmp #MINRTRY

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0AA7 B0 02      280      bcs >1
0AA9            281      ;
0AA9 A9 09      282      lda #MAXRTRY
0AAB            283      ;
0AAB C9 0A      284      ^1      cmp #MAXRTRY+1
0AAD 90 02      285      bcc >2
0AAF            286      ;
0AAF A9 01      287      lda #MINRTRY
0AB1            288      ;
0AB1 8D CA 1A   289      ^2      sta SRVRTRY
0AB4            290      ;
0AB4 20 22 0C   291      jsr SHOWMENU
0AB7 90 E6      292      bcc CSCSUB02      ; always taken
0AB9            293      ;
0AB9            294      ;
0AB9 AE C6 1A   295      CSCSUB03 ldx CLNTSLOT
0ABC 20 8D 16   296      jsr WAITAROW
0ABF            297      ;
0ABF C9 01      298      cmp #MINSLOT
0AC1 B0 02      299      bcs >1
0AC3            300      ;
0AC3 A9 07      301      lda #MAXSLOT
0AC5            302      ;
0AC5 C9 08      303      ^1      cmp #MAXSLOT+1
0AC7 90 02      304      bcc >2
0AC9            305      ;
0AC9 A9 01      306      lda #MINSLOT
0ACB            307      ;
0ACB 8D C6 1A   308      ^2      sta CLNTSLOT
0ACE            309      ;
0ACE 20 22 0C   310      jsr SHOWMENU
0AD1 90 E6      311      bcc CSCSUB03      ; always taken
0AD3            312      ;
0AD3            313      ;
0AD3 AE CB 1A   314      CSCSUB04 ldx SRVRSLOT
0AD6 20 8D 16   315      jsr WAITAROW
0AD9            316      ;
0AD9 C9 01      317      cmp #MINSLOT
0ADB B0 02      318      bcs >1
0ADD            319      ;
0ADD A9 07      320      lda #MAXSLOT
0ADF            321      ;
0ADF C9 08      322      ^1      cmp #MAXSLOT+1
0AE1 90 02      323      bcc >2
0AE3            324      ;
0AE3 A9 01      325      lda #MINSLOT
0AE5            326      ;
0AE5 8D CB 1A   327      ^2      sta SRVRSLOT
0AE8            328      ;
0AE8 20 22 0C   329      jsr SHOWMENU
0AEB 90 E6      330      bcc CSCSUB04      ; always taken
0AED            331      ;
0AED            332      ;
0AED AE C7 1A   333      CSCSUB05 ldx CLNTDRV
0AF0 20 8D 16   334      jsr WAITAROW
0AF3            335      ;
0AF3 C0 B1      336      cpy #"1"
0AF5 D0 02      337      bne >1
0AF7            338      ;
0AF7 69 09      339      adc #9      ; carry set by compare
0AF9            340      ;

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0AF9 C9 01      341  ^1      cmp #MINDRV
0AFB B0 02      342          bcs >2
0AFD           343  ;
0AFD A9 51      344          lda #MAXDRV
0AFF           345  ;
0AFF C9 52      346  ^2      cmp #MAXDRV+1
0B01 90 02      347          bcc >3
0B03           348  ;
0B03 A9 01      349          lda #MINDRV
0B05           350  ;
0B05 8D C7 1A   351  ^3      sta CLNTDRV
0B08           352  ;
0B08 20 22 0C   353          jsr SHOWMENU
0B0B 90 E0      354          bcc CSCSUB05      ; always taken
0B0D           355  ;
0B0D           356  ;
0B0D AE CC 1A   357  CSCSUB06 ldx SRVRDRV
0B10 20 8D 16   358          jsr WAITAROW
0B13           359  ;
0B13 C0 B1      360          cpy #"1"
0B15 D0 02      361          bne >1
0B17           362  ;
0B17 69 09      363          adc #9      ; carry set by compare
0B19           364  ;
0B19 C9 01      365  ^1      cmp #MINDRV
0B1B B0 02      366          bcs >2
0B1D           367  ;
0B1D A9 51      368          lda #MAXDRV
0B1F           369  ;
0B1F C9 52      370  ^2      cmp #MAXDRV+1
0B21 90 02      371          bcc >3
0B23           372  ;
0B23 A9 01      373          lda #MINDRV
0B25           374  ;
0B25 8D CC 1A   375  ^3      sta SRVRDRV
0B28           376  ;
0B28 20 22 0C   377          jsr SHOWMENU
0B2B 90 E0      378          bcc CSCSUB06      ; always taken
0B2D           379  ;
0B2D           380  ;
0B2D AE C8 1A   381  CSCSUB07 ldx CLNTVOL
0B30 20 8D 16   382          jsr WAITAROW
0B33           383  ;
0B33 C0 B0      384          cpy #"0"
0B35 90 0C      385          bcc >1
0B37           386  ;
0B37 C0 BA      387          cpy #"9"+1
0B39 B0 08      388          bcs >1
0B3B           389  ;
0B3B 98         390          tya
0B3C 29 0F      391          and #NIBLMASK
0B3E A8         392          tay
0B3F           393  ;
0B3F 8A         394          txa
0B40 79 67 19   395          adc VOLTBL,Y
0B43           396  ;
0B43 8D C8 1A   397  ^1      sta CLNTVOL
0B46           398  ;
0B46 20 22 0C   399          jsr SHOWMENU
0B49 90 E2      400          bcc CSCSUB07
0B4B           401  ;

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0B4B          402 ;
0B4B AE CD 1A 403 CSCSUB08 ldx SRVRVOL
0B4E 20 8D 16 404 jsr WAITAROW
0B51          405 ;
0B51 C0 B0    406 cpy #"0"
0B53 90 0C    407 bcc >1
0B55          408 ;
0B55 C0 BA    409 cpy #"9"+1
0B57 B0 08    410 bcs >1
0B59          411 ;
0B59 98       412 tya
0B5A 29 0F    413 and #NIBLMASK
0B5C A8       414 tay
0B5D          415 ;
0B5D 8A       416 txa
0B5E 79 67 19 417 adc VOLTBL,Y
0B61          418 ;
0B61 8D CD 1A 419 ^1 sta SRVRVOL
0B64          420 ;
0B64 20 22 0C 421 jsr SHOWMENU
0B67 90 E2    422 bcc CSCSUB08
0B69          423 ;
0B69          424 ;
0B69 AE C9 1A 425 CSCSUB09 ldx CLNTPHAS
0B6C 20 8D 16 426 jsr WAITAROW
0B6F          427 ;
0B6F C9 01    428 cmp #MINPHAS
0B71 B0 02    429 bcs >1
0B73          430 ;
0B73 A9 10    431 lda #MAXPHAS
0B75          432 ;
0B75 C9 11    433 ^1 cmp #MAXPHAS+1
0B77 90 02    434 bcc >2
0B79          435 ;
0B79 A9 01    436 lda #MINPHAS
0B7B          437 ;
0B7B 8D C9 1A 438 ^2 sta CLNTPHAS
0B7E          439 ;
0B7E 20 22 0C 440 jsr SHOWMENU
0B81 90 E6    441 bcc CSCSUB09 ; always taken
0B83          442 ;
0B83          443 ;
0B83 AE CE 1A 444 CSCSUB10 ldx SRVRPHAS
0B86 20 8D 16 445 jsr WAITAROW
0B89          446 ;
0B89 C9 01    447 cmp #MINPHAS
0B8B B0 02    448 bcs >1
0B8D          449 ;
0B8D A9 10    450 lda #MAXPHAS
0B8F          451 ;
0B8F C9 11    452 ^1 cmp #MAXPHAS+1
0B91 90 02    453 bcc >2
0B93          454 ;
0B93 A9 01    455 lda #MINPHAS
0B95          456 ;
0B95 8D CE 1A 457 ^2 sta SRVRPHAS
0B98          458 ;
0B98 20 22 0C 459 jsr SHOWMENU
0B9B 90 E6    460 bcc CSCSUB10 ; always taken
0B9D          461 ;
0B9D          462 ;

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```

0B9D AE C1 1A 463 CSCSUB11 ldx VOLXFER
0BA0 20 8D 16 464 jsr WAITAROW
0BA3 465 ;
0BA3 29 01 466 and #1
0BA5 8D C1 1A 467 sta VOLXFER
0BA8 468 ;
0BA8 20 22 0C 469 jsr SHOWMENU
0BAB 90 F0 470 bcc CSCSUB11 ; always taken
0BAD 471 ;
0BAD 472 ;
0BAD AE C2 1A 473 CSCSUB12 ldx INITFLAG
0BB0 20 8D 16 474 jsr WAITAROW
0BB3 475 ;
0BB3 29 01 476 and #1
0BB5 8D C2 1A 477 sta INITFLAG
0BB8 478 ;
0BB8 20 22 0C 479 jsr SHOWMENU
0BBB 90 F0 480 bcc CSCSUB12 ; always taken
0BBD 481 ;
0BBD 482 ;
0BBD AE C3 1A 483 CSCSUB13 ldx VOLTRKS
0BC0 20 8D 16 484 jsr WAITAROW
0BC3 485 ;
0BC3 C9 12 486 cmp #MINTRKS
0BC5 B0 02 487 bcs >1
0BC7 488 ;
0BC7 A9 30 489 lda #MAXTRKS
0BC9 490 ;
0BC9 C9 31 491 ^1 cmp #MAXTRKS+1
0BCB 90 02 492 bcc >2
0BCD 493 ;
0BCD A9 12 494 lda #MINTRKS
0BCF 495 ;
0BCF 8D C3 1A 496 ^2 sta VOLTRKS
0BD2 497 ;
0BD2 20 22 0C 498 jsr SHOWMENU
0BD5 90 E6 499 bcc CSCSUB13 ; always taken
0BD7 500 ;
0BD7 501 ;
0BD7 AE 71 19 502 CSCSUB14 ldx SECNDX
0BDA 20 8D 16 503 jsr WAITAROW
0BDD 504 ;
0BDD 29 01 505 and #1
0BDF 8D 71 19 506 sta SECNDX
0BE2 507 ;
0BE2 AA 508 tax
0BE3 509 ;
0BE3 BD 72 19 510 lda SECTORS,X
0BE6 8D C4 1A 511 sta VOLSECS
0BE9 512 ;
0BE9 20 22 0C 513 jsr SHOWMENU
0BEC 90 E9 514 bcc CSCSUB14 ; always taken
0BEE 515 ;
0BEE 516 ;
0BEE AE D0 1A 517 CSCSUB15 ldx CLSRRUN
0BF1 518 ;
0BF1 20 8D 16 519 jsr WAITAROW
0BF4 10 02 520 bpl >1
0BF6 521 ;
0BF6 A9 02 522 lda #2
0BF8 523 ;

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```

0BF8 C9 03      524  ^1      cmp #3
0BFA 90 02      525          bcc >2
0BFC           526  ;
0BFC A9 00      527          lda #ZERO
0BFE           528  ;
0BFE 8D D0 1A   529  ^2      sta CLSRRUN
0C01           530  ;
0C01 20 22 0C   531          jsr SHOWMENU
0C04 90 E8      532          bcc CSCSUB15      ; always taken
0C06           533  ;
0C06           534  ;
0C06           535  ; Fall into SHOWMENU.
0C06           536  ;
0C06 A2 AA      537  EDTOPTN  ldx #"*"
0C08           538  ;
0C08 2C 00 00   539          bit *-*
0C0B           540          dfs !-2
0C09           541  ;
0C09 A2 BE      542  SETOPTN  ldx #">"
0C0B           543  ;
0C0B 2C 00 00   544          bit *-*
0C0E           545          dfs !-2
0C0C           546  ;
0C0C A2 A0      547  CLROPTN  ldx #" "
0C0E           548  ;
0C0E AD 58 19   549          lda OPTION
0C11 0A         550          asl
0C12 A8         551          tay
0C13           552  ;
0C13 B9 94 19   553          lda CSCTBL1,Y
0C16 8D 20 0C   554          sta OPTNMOD+1
0C19           555  ;
0C19 B9 95 19   556          lda CSCTBL1+1,Y
0C1C 8D 21 0C   557          sta OPTNMOD+2
0C1F           558  ;
0C1F 8E 00 00   559  OPTNMOD  stx *-*
0C22           560  ;
0C22           561  ; Fall into SHOWMENU.
0C22           562  ;
0C22           563  ;
0C22 A0 D0      564  SHOWMENU  ldy #XFER1
0C24 A9 19      565          lda /XFER1
0C26           566  ;
0C26 AE C1 1A   567          ldx VOLXFER
0C29 F0 04      568          beq >1
0C2B           569  ;
0C2B A0 DF      570          ldy #XFER2
0C2D A9 19      571          lda /XFER2
0C2F           572  ;
0C2F 8C 96 0D   573  ^1      sty SHOWMOD1
0C32 8D 97 0D   574          sta SHOWMOD1+1
0C35           575  ;
0C35 A0 EE      576          ldy #NAME1
0C37 A9 19      577          lda /NAME1
0C39           578  ;
0C39 AE C1 1A   579          ldx VOLXFER
0C3C F0 04      580          beq >2
0C3E           581  ;
0C3E A0 F5      582          ldy #NAME2
0C40 A9 19      583          lda /NAME2
0C42           584  ;

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0C42 8C 9C 0D      585  ^2      sty SHOWMOD2
0C45 8D 9D 0D      586      sta SHOWMOD2+1
0C48              587  ;
0C48 A0 FC          588      ldy #INIT1
0C4A A9 19          589      lda /INIT1
0C4C              590  ;
0C4C AE C2 1A      591      ldx INITFLAG
0C4F F0 04          592      beq >3
0C51              593  ;
0C51 A0 08          594      ldy #INIT2
0C53 A9 1A          595      lda /INIT2
0C55              596  ;
0C55 8C B2 0D      597  ^3      sty SHOWMOD3
0C58 8D B3 0D      598      sta SHOWMOD3+1
0C5B              599  ;
0C5B A9 32          600      lda #RUN1
0C5D A2 1A          601      ldx /RUN1
0C5F              602  ;
0C5F AC D0 1A      603      ldy CLSRRUN
0C62              604  ;
0C62 88            605  ^4      dey
0C63 30 08          606      bmi >5
0C65              607  ;
0C65 18            608      clc
0C66              609  ;
0C66 69 0E          610      adc #RUNLEN
0C68 90 F8          611      bcc <4
0C6A              612  ;
0C6A E8            613      inx
0C6B D0 F5          614      bne <4                ; always taken
0C6D              615  ;
0C6D 8D F4 0D      616  ^5      sta SHOWMOD4
0C70 8E F5 0D      617      stx SHOWMOD4+1
0C73              618  ;
0C73 A0 14          619      ldy #STAT1
0C75 A9 1A          620      lda /STAT1
0C77              621  ;
0C77 AE CF 1A      622      ldx CLSRSTAT
0C7A F0 04          623      beq >6
0C7C              624  ;
0C7C A0 23          625      ldy #STAT2
0C7E A9 1A          626      lda /STAT2
0C80              627  ;
0C80 8C 12 0E      628  ^6      sty SHOWMOD5
0C83 8D 13 0E      629      sta SHOWMOD5+1
0C86              630  ;
0C86 20 D3 16      631      jsr PRINT
0C89 00 60          632      hex 0060
0C8B 55            633      byt CNTRCMD
0C8C C3 EC E9      634      asc "Client Serial Communication"
0C8F E5 EE F4
0C92 A0 D3 E5
0C95 F2 E9 E1
0C98 EC A0 C3
0C9B EF ED ED
0C9E F5 EE E9
0CA1 E3 E1 F4
0CA4 E9 EF EE
0CA7 19 62          635      hex 1962
0CA9 C3 EC E9      636      asc "Client  Server"
0CAC E5 EE F4

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0CAF	A0	A0	D3		
0CB2	E5	F2	F6		
0CB5	E5	F2			
0CB7	19	63		637	hex 1963
0CB9	AD	AD	AD	638	asc "-----"
0CBC	AD	AD	AD		
0CBF	A0	A0	AD		
0CC2	AD	AD	AD		
0CC5	AD	AD			
0CC7	01	64		639	hex 0164
0CC9	CE	F5	ED	640	asc "Number of Retries"
0CCC	E2	E5	F2		
0CCF	A0	EF	E6		
0CD2	A0	D2	E5		
0CD5	F4	F2	E9		
0CD8	E5	F3			
0CDA	17			641	hex 17
0CDB	AD			642	asc "-"
0CDC	A0			643	CSCMOD01 asc " "
0CDD	1D			644	hex 1D
0CDE	5C			645	byt DEC1CMD
0CDF	C5	1A		646	adr CLNTRTRY
0CE1	A0			647	asc " "
0CE2	20			648	hex 20
0CE3	A0			649	CSCMOD02 asc " "
0CE4	25			650	hex 25
0CE5	5C			651	byt DEC1CMD
0CE6	CA	1A		652	adr SRVRRTRY
0CE8	A0			653	asc " "
0CE9	01	65		654	hex 0165
0CEB	D6	EF	EC	655	asc "Volume Slot Number"
0CEE	F5	ED	E5		
0CF1	A0	D3	EC		
0CF4	EF	F4	A0		
0CF7	A0	A0	CE		
0CFA	F5	ED	E2		
0CFD	E5	F2			
0CFF	17			656	hex 17
0D00	AD			657	asc "-"
0D01	A0			658	CSCMOD03 asc " "
0D02	1D			659	hex 1D
0D03	5C			660	byt DEC1CMD
0D04	C6	1A		661	adr CLNTSLOT
0D06	A0			662	asc " "
0D07	20			663	hex 20
0D08	A0			664	CSCMOD04 asc " "
0D09	25			665	hex 25
0D0A	5C			666	byt DEC1CMD
0D0B	CB	1A		667	adr SRVRSLOT
0D0D	A0			668	asc " "
0D0E	01	66		669	hex 0166
0D10	D6	EF	EC	670	asc "Volume Drive Number"
0D13	F5	ED	E5		
0D16	A0	C4	F2		
0D19	E9	F6	E5		
0D1C	A0	A0	CE		
0D1F	F5	ED	E2		
0D22	E5	F2			
0D24	17			671	hex 17
0D25	AD			672	asc "-"
0D26	A0			673	CSCMOD05 asc " "

0D27	1C	674	hex	1C
0D28	5D	675	byt	DEC2CMD
0D29	C7 1A	676	adr	CLNTDRV
0D2B	A0	677	asc	" "
0D2C	20	678	hex	20
0D2D	A0	679	CSCMOD06	asc " "
0D2E	24	680	hex	24
0D2F	5D	681	byt	DEC2CMD
0D30	CC 1A	682	adr	SRVRDRV
0D32	A0	683	asc	" "
0D33	01 67	684	hex	0167
0D35	D6 EF EC	685	asc	"Volume Volume Number"
0D38	F5 ED E5			
0D3B	A0 D6 EF			
0D3E	EC F5 ED			
0D41	E5 A0 CE			
0D44	F5 ED E2			
0D47	E5 F2			
0D49	17	686	hex	17
0D4A	AD	687	asc	" -"
0D4B	A0	688	CSCMOD07	asc " "
0D4C	1B	689	hex	1B
0D4D	5E	690	byt	DEC3CMD
0D4E	C8 1A	691	adr	CLNTVOL
0D50	A0	692	asc	" "
0D51	20	693	hex	20
0D52	A0	694	CSCMOD08	asc " "
0D53	23	695	hex	23
0D54	5E	696	byt	DEC3CMD
0D55	CD 1A	697	adr	SRVRVOL
0D57	A0	698	asc	" "
0D58	01 68	699	hex	0168
0D5A	D6 EF EC	700	asc	"Volume Phase Number"
0D5D	F5 ED E5			
0D60	A0 D0 E8			
0D63	E1 F3 E5			
0D66	A0 A0 CE			
0D69	F5 ED E2			
0D6C	E5 F2			
0D6E	17	701	hex	17
0D6F	AD	702	asc	" -"
0D70	A0	703	CSCMOD09	asc " "
0D71	1C	704	hex	1C
0D72	5D	705	byt	DEC2CMD
0D73	C9 1A	706	adr	CLNTPHAS
0D75	A0	707	asc	" "
0D76	20	708	hex	20
0D77	A0	709	CSCMOD10	asc " "
0D78	24	710	hex	24
0D79	5D	711	byt	DEC2CMD
0D7A	CE 1A	712	adr	SRVRPHAS
0D7C	A0	713	asc	" "
0D7D	01 6A	714	hex	016A
0D7F	D4 F2 E1	715	asc	"Transfer Direction"
0D82	EE F3 E6			
0D85	E5 F2 A0			
0D88	C4 E9 F2			
0D8B	E5 E3 F4			
0D8E	E9 EF EE			
0D91	17	716	hex	17
0D92	AD	717	asc	" -"

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0D93 A0          718  CSCMOD11 asc " "
0D94 56 00       719          byt BUFRCMD,DIRECT
0D96 00 00       720  SHOWMOD1 adr *-*          ; transfer direction
0D98 01 6B       721          hex 016B
0D9A 56 00       722          byt BUFRCMD,DIRECT
0D9C 00 00       723  SHOWMOD2 adr *-*
0D9E A0 D6 EF    724          asc " Volume Verify  -"
0DA1 EC F5 ED
0DA4 E5 A0 D6
0DA7 E5 F2 E9
0DAA E6 F9 A0
0DAD A0 AD
0DAF A0          725  CSCMOD12 asc " "
0DB0 56 00       726          byt BUFRCMD,DIRECT
0DB2 00 00       727  SHOWMOD3 adr *-*          ; volume write/init
0DB4 01 6C       728          hex 016C
0DB6 D6 EF EC    729          asc "Volume Tracks/Sectors -"
0DB9 F5 ED E5
0DBC A0 D4 F2
0DBF E1 E3 EB
0DC2 F3 AF D3
0DC5 E5 E3 F4
0DC8 EF F2 F3
0DCB A0 AD
0DCD A0          730  CSCMOD13 asc " "
0DCE 1C          731          hex 1C
0DCF 5D          732          byt DEC2CMD
0DD0 C3 1A       733          adr VOLTRKS
0DD2 20          734          hex 20
0DD3 A0          735  CSCMOD14 asc " "
0DD4 24          736          hex 24
0DD5 5D          737          byt DEC2CMD
0DD6 C4 1A       738          adr VOLSECS
0DD8 01 6E       739          hex 016E
0DDA D6 EF EC    740          asc "Volume Transfer State -"
0DDD F5 ED E5
0DE0 A0 D4 F2
0DE3 E1 EE F3
0DE6 E6 E5 F2
0DE9 A0 D3 F4
0DEC E1 F4 E5
0DEF A0 AD
0DF1 A0          741  CSCMOD15 asc " "
0DF2 56 00       742          byt BUFRCMD,DIRECT
0DF4 00 00       743  SHOWMOD4 adr *-*          ; begin volume transfer
0DF6 01 6F       744          hex 016F
0DF8 C3 EF ED    745          asc "Communication State - "
0DFB ED F5 EE
0DFE E9 E3 E1
0E01 F4 E9 EF
0E04 EE A0 A0
0E07 A0 D3 F4
0E0A E1 F4 E5
0E0D A0 AD A0
0E10 56 00       746          byt BUFRCMD,DIRECT
0E12 00 00       747  SHOWMOD5 adr *-*          ; client/server status
0E14 07 71       748          hex 0771
0E16 B0 B1 B2    749          asc "0123456789ABCDEF0123456789ABCDEF"
0E19 B3 B4 B5
0E1C B6 B7 B8
0E1F B9 C1 C2

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0E22 C3 C4 C5
0E25 C6 B0 B1
0E28 B2 B3 B4
0E2B B5 B6 B7
0E2E B8 B9 C1
0E31 C2 C3 C4
0E34 C5 C6
0E36 01 72      750      hex 0172
0E38 D4 F2 E1   751      asc "Track"
0E3B E3 EB
0E3D 00 74      752      hex 0074
0E3F D3 E5 E3   753      asc "Sector"
0E42 F4 EF F2
0E45 07 72      754      hex 0772
0E47 54 00      755      byt CLRCMD,EOLCLR
0E49 07 73      756      hex 0773
0E4B 54 00      757      byt CLRCMD,EOLCLR
0E4D 07 74      758      hex 0774
0E4F 54 00      759      byt CLRCMD,EOLCLR
0E51 50         760      byt RTNCMD
0E52           761      ;
0E52 60         762      rts                ; carry flag always clear
0E53           763      ;
0E53           764      ;
0E53           765      ; Extract Client values.  If VOLXFER is 0x00 then Client is
0E53           766      ; Reader and Server is Writer.  If VOLXFER is not 0x00 then
0E53           767      ; Client is Writer and Server is Reader.  The flow of data
0E53           768      ; is always from Reader to Writer.
0E53           769      ;
0E53 AD C5 1A   770      CHK4DISK lda CLNTRTRY
0E56 8D 53 19   771      sta NRETRIES
0E59           772      ;
0E59 AD C6 1A   773      lda CLNTSLOT
0E5C 8D 4C 19   774      sta SLOT
0E5F           775      ;
0E5F 0A         776      asl
0E60 0A         777      asl
0E61 0A         778      asl
0E62 0A         779      asl
0E63           780      ;
0E63 8D E0 1A   781      sta SNUM16
0E66           782      ;
0E66 AD C7 1A   783      lda CLNTDRV
0E69 8D E1 1A   784      sta DNUM
0E6C           785      ;
0E6C AD C8 1A   786      lda CLNTVOL
0E6F 8D E2 1A   787      sta VNUM
0E72           788      ;
0E72 AD C9 1A   789      lda CLNTPHAS
0E75 8D E9 1A   790      sta RWTSPHAS
0E78           791      ;
0E78 AD C3 1A   792      lda VOLTRKS
0E7B 8D 50 19   793      sta LASTTRK
0E7E           794      ;
0E7E AD C4 1A   795      lda VOLSECS
0E81 8D 51 19   796      sta LASTSEC
0E84           797      ;
0E84 A0 00      798      ldy #ZERO
0E86           799      ;
0E86 CD 72 19   800      cmp SECTORS
0E89 F0 01      801      beq >0

```

```

0E8B      802 ;
0E8B C8    803      iny
0E8C      804 ;
0E8C B9 74 19 805 ^0      lda BUFFERS,Y
0E8F 8D 55 19 806      sta BUFRTRKS
0E92      807 ;
0E92 B9 76 19 808      lda BUFLFLAGS,Y
0E95 8D 56 19 809      sta BUFRFLAG
0E98      810 ;
0E98 A9 00    811      lda #ZERO
0E9A 8D E3 1A 812      sta TNUM
0E9D 8D E4 1A 813      sta SNUM
0EA0 8D E7 1A 814      sta BUFADR
0EA3      815 ;
0EA3 A8      816      tay
0EA4      817 ;
0EA4 99 00 1B 818 ^1      sta DATABUFR,Y
0EA7      819 ;
0EA7 C8      820      iny
0EA8 D0 FA    821      bne <1
0EAA      822 ;
0EAA A9 1B    823      lda /DATABUFR
0EAC 8D E8 1A 824      sta BUFADR+1
0EAF      825 ;
0EAF      826 ;
0EAF      827 ; If VOLXFER=0, call RWTS to read T/S 0x00/0x00.
0EAF      828 ; If VOLXFER=1, call RWTS to write T/S 0x00/0x00.
0EAF      829 ; If VOLXFER=1 & INITFLAG=1, call RWTS to format volume.
0EAF      830 ;
0EAF 20 D3 16 831      jsr PRINT
0EB2 02 76    832      hex 0276
0EB4 D6 EF EC 833      asc "Volume must be in slot #"
0EB7 F5 ED E5
0EBA A0 ED F5
0EBD F3 F4 A0
0EC0 E2 E5 A0
0EC3 E9 EE A0
0EC6 F3 EC EF
0EC9 F4 A0 A3
0ECC 5C      834      byt DEC1CMD
0ECD 4C 19    835      adr SLOT
0ECF AC A0 E4 836      asc ", drive #"
0ED2 F2 E9 F6
0ED5 E5 A0 A3
0ED8 5D      837      byt DEC2CMD
0ED9 E1 1A    838      adr DNUM
0EDB 50      839      byt RTNCMD
0EDC      840 ;
0EDC 20 E8 15 841      jsr PRESNCLR
0EDF      842 ;
0EDF A2 36    843      ldx #CHK4D3.E
0EE1 B0 66    844      bcs >6
0EE3      845 ;
0EE3 A9 D2    846      lda #"R" ; ready to check volume
0EE5 20 3F 16 847      jsr TXSSC00 ; no wait
0EE8      848 ;
0EE8 A2 30    849      ldx #CHK4D1.E
0EEA B0 5D    850      bcs >6
0EEC      851 ;
0EEC 20 0B 16 852      jsr DOCLEAR
0EEF      853 ;

```

```

0EEF AD FA BF      854      lda INITVAL
0EF2 85 EC         855      sta DOSPTR
0EF4              856      ;
0EF4 AD FB BF      857      lda INITVAL+1
0EF7 85 ED         858      sta DOSPTR+1
0EF9              859      ;
0EF9 A9 01         860      lda #RWTSREAD
0EFB              861      ;
0EFB AC C1 1A      862      ldy VOLXFER
0EFE F0 09         863      beq >2
0F00              864      ;
0F00 A9 02         865      lda #RWTSWRIT
0F02              866      ;
0F02 AC C2 1A      867      ldy INITFLAG
0F05 F0 02         868      beq >2
0F07              869      ;
0F07 A9 04         870      lda #RWTSFRMT
0F09              871      ;
0F09 8D EB 1A      872      ^2 sta CMDCODE
0F0C              873      ;
0F0C A0 10         874      ^3 ldy #ETRKNDX
0F0E              875      ;
0F0E B1 EC         876      lda (DOSPTR),Y
0F10 8D 4D 19      877      sta ENDTRK
0F13              878      ;
0F13 AD C3 1A      879      lda VOLTRKS
0F16 91 EC         880      sta (DOSPTR),Y
0F18              881      ;
0F18 A0 1C         882      ldy #ESECNDX
0F1A              883      ;
0F1A B1 EC         884      lda (DOSPTR),Y
0F1C 8D 4E 19      885      sta ENDSEC
0F1F              886      ;
0F1F AD C4 1A      887      lda VOLSECS
0F22 91 EC         888      sta (DOSPTR),Y
0F24              889      ;
0F24 A0 DF         890      ldy #TBLTYPE
0F26 A9 1A         891      lda /TBLTYPE
0F28              892      ;
0F28 20 D9 03      893      jsr CALLRWTS
0F2B              894      ;
0F2B A0 10         895      ldy #ETRKNDX
0F2D              896      ;
0F2D AD 4D 19      897      lda ENDTRK
0F30 91 EC         898      sta (DOSPTR),Y
0F32              899      ;
0F32 A0 1C         900      ldy #ESECNDX
0F34              901      ;
0F34 AD 4E 19      902      lda ENDSEC
0F37 91 EC         903      sta (DOSPTR),Y
0F39              904      ;
0F39 B0 0F         905      bcs >7
0F3B              906      ;
0F3B 20 7F 16      907      ^4 jsr RXSSC80      ; wait
0F3E              908      ;
0F3E C9 C8         909      cmp #"H"
0F40 F0 05         910      beq >5
0F42              911      ;
0F42 C9 D3         912      cmp #"S"      ; done checking volume
0F44 D0 F5         913      bne <4
0F46              914      ;

```

```

0F46 18          915      clc
0F47          916      ;
0F47 A2 34      917      ^5      ldx #CHK4D2.E
0F49          918      ;
0F49 60        919      ^6      rts
0F4A          920      ;
0F4A AD EC 1A  921      ^7      lda ERRCODE
0F4D          922      ;
0F4D 4A        923      lsr
0F4E 4A        924      lsr
0F4F 4A        925      lsr
0F50 4A        926      lsr
0F51          927      ;
0F51 0A        928      asl
0F52 AA        929      tax
0F53          930      ;
0F53 BD B7 1A  931      lda RWTSADRS,X
0F56 8D 7E 0F  932      sta CHK4MOD+1
0F59          933      ;
0F59 BD B8 1A  934      lda RWTSADRS+1,X
0F5C 8D 7F 0F  935      sta CHK4MOD+2
0F5F          936      ;
0F5F 20 D3 16  937      jsr PRINT
0F62 00 76     938      hex 0076
0F64 AA AA AA  939      asc "*** RWTS error 0x"
0F67 A0 D2 D7
0F6A D4 D3 A0
0F6D E5 F2 F2
0F70 EF F2 A0
0F73 B0 F8
0F75 58          940      byt BYT1CMD
0F76 EC 1A      941      adr ERRCODE
0F78 A0 AD A0   942      asc " - "
0F7B 56 00      943      byt BUFRCMD,DIRECT
0F7D 00 00      944      CHK4MOD  adr *-*
0F7F 50         945      byt RTNCMD
0F80          946      ;
0F80 20 E8 15   947      jsr PRESNCLR
0F83 90 87      948      bcc <3
0F85          949      ;
0F85 A2 37      950      ldx #CHK4D4.E
0F87          951      ;
0F87 60        952      rts
0F88          953      ;
0F88          954      ;
0F88          955      ; Ready to transfer data from READER to WRITER.
0F88          956      ;
0F88 A9 00      957      DOREADER lda #ZERO
0F8A 8D D3 1A   958      sta TSTRACK
0F8D          959      ;
0F8D 20 08 15   960      jsr GETTRACKS
0F90 B0 7E      961      bcs >6
0F92          962      ;
0F92 A9 00      963      ^1      lda #ZERO
0F94          964      ;
0F94 8D D4 1A   965      sta TSSECTOR
0F97 8D 52 19   966      sta GOODSECS
0F9A          967      ;
0F9A A0 AA      968      ldy #"*"
0F9C 20 76 12   969      jsr SETTRK
0F9F          970      ;

```

```

0F9F A0 D2      971  ^2      ldy #"R"
0FA1 20 B3 12   972          jsr SETSEC0
0FA4           973  ;
0FA4 20 B7 16   974          jsr GETKEY
0FA7 B0 6E      975          bcs >9
0FA9           976  ;
0FA9 48         977          pha
0FAA 68         978          pla
0FAB           979  ;
0FAB 10 03      980          bpl >3
0FAD           981  ;
0FAD 20 E8 15   982          jsr PRESNCLR
0FB0           983  ;
0FB0 20 E0 10   984  ^3      jsr SNDTSDCB
0FB3           985  ;
0FB3 08         986          php
0FB4           987  ;
0FB4 C9 C8      988          cmp #"H"
0FB6 F0 63      989          beq >0
0FB8           990  ;
0FB8 28         991          plp
0FB9           992  ;
0FB9 A0 AA      993          ldy #"*"
0FBB           994  ;
0FBB B0 09      995          bcs >4
0FBD           996  ;
0FBD 20 FF 11   997          jsr SNDTXDCB
0FC0           998  ;
0FC0 A0 AD      999          ldy #"-"
0FC2           1000 ;
0FC2 B0 02      1001         bcs >4
0FC4           1002 ;
0FC4 A0 AB      1003         ldy #"+"
0FC6           1004 ;
0FC6 20 B4 12   1005  ^4      jsr SETSEC
0FC9           1006 ;
0FC9 EE D4 1A   1007         inc TSSECTOR
0FCC           1008 ;
0FCC AD D4 1A   1009         lda TSSECTOR
0FCF CD 51 19   1010         cmp LASTSEC
0FD2 D0 CB      1011         bne <2
0FD4           1012 ;
0FD4 20 7D 12   1013         jsr DONETRK
0FD7           1014 ;
0FD7 EE D3 1A   1015         inc TSTRACK
0FDA           1016 ;
0FDA CE 57 19   1017         dec TRACKCNT
0FDD D0 17      1018         bne >5
0FDF           1019 ;
0FDF A9 11      1020         lda #WAIT001M      ; get a 1.0 msec wait value
0FE1 20 A8 FC   1021         jsr WAIT          ; call WAIT
0FE4           1022 ;
0FE4 20 7A 11   1023         jsr SNDRWDCB
0FE7 B0 27      1024         bcs >6
0FE9           1025 ;
0FE9 20 08 15   1026         jsr GETTRACKS
0FEC           1027 ;
0FEC E8         1028         inx
0FED B0 21      1029         bcs >6
0FEF           1030 ;
0FEF 20 7F 16   1031         jsr RXSSC80      ; wait

```

```

0FF2      1032 ;
0FF2 C9 D3      1033      cmp #"S"
0FF4 D0 1B      1034      bne >7
0FF6      1035 ;
0FF6 AD D3 1A   1036 ^5      lda TSTRACK
0FF9 CD 50 19   1037      cmp LASTTRK
0FFC D0 94      1038      bne <1
0FFE      1039 ;
0FFE A9 11      1040      lda #WAIT001M      ; get a 1.0 msec wait value
1000 20 A8 FC   1041      jsr WAIT      ; call WAIT
1003      1042 ;
1003 20 7A 11   1043      jsr SNDRWDCB
1006 B0 08      1044      bcs >6
1008      1045 ;
1008 20 7F 16   1046      jsr RXSSC80      ; wait
100B      1047 ;
100B C9 D3      1048      cmp #"S"
100D D0 05      1049      bne >8
100F      1050 ;
100F 18         1051      clc
1010      1052 ;
1010 60         1053 ^6      rts
1011      1054 ;
1011 A2 40      1055 ^7      ldx #READ1.E
1013      1056 ;
1013 2C 00 00   1057      bit *-*
1016      1058      dfs !-2
1014      1059 ;
1014 A2 41      1060 ^8      ldx #READ2.E
1016      1061 ;
1016 2C 00 00   1062      bit *-*
1019      1063      dfs !-2
1017      1064 ;
1017 A2 47      1065 ^9      ldx #READ3.E
1019      1066 ;
1019 38         1067      sec
101A      1068 ;
101A 60         1069      rts
101B      1070 ;
101B 28         1071 ^0      plp
101C      1072 ;
101C 60         1073      rts
101D      1074 ;
101D      1075 ;
101D      1076 ; Ready to initiate data transfer from Reader to Writer.
101D      1077 ;
101D      1078 ; Wait for "H", "L", "O", or "T" commands.
101D      1079 ;
101D      1080 DOWRITER:
101D 20 7F 16   1081 ^1      jsr RXSSC80      ; wait
1020      1082 ;
1020 C9 C8      1083      cmp #"H"
1022 F0 6A      1084      beq >6
1024      1085 ;
1024 C9 CF      1086      cmp #"O"      ; pause to write data
1026 D0 21      1087      bne >2
1028      1088 ;
1028 20 C6 11   1089      jsr RCVRWDCB
102B B0 60      1090      bcs >5
102D      1091 ;
102D C9 D0      1092      cmp #"P"

```

```

102F D0 EC      1093      bne <1
1031           1094      ;
1031 20 6D 15    1095      jsr PUTRACKS
1034 B0 57      1096      bcs >5
1036           1097      ;
1036 A9 D3      1098      lda #"S"
1038 20 3F 16    1099      jsr TXSSC00          ; no wait
103B           1100      ;
103B A2 50      1101      ldx #WRIT1.E
103D B0 4E      1102      bcs >5          ; always taken
103F           1103      ;
103F AD D3 1A    1104      lda TSTRACK
1042 CD 50 19    1105      cmp LASTTRK
1045 D0 D6      1106      bne <1
1047           1107      ;
1047 18          1108      clc
1048           1109      ;
1048 60          1110      rts
1049           1111      ;
1049 C9 D4      1112      ^2      cmp #"T"
104B D0 20      1113      bne >4
104D           1114      ;
104D 20 3A 12    1115      jsr RCVTXDCB
1050 B0 08      1116      bcs >3
1052           1117      ;
1052 C9 D5      1118      cmp #"U"
1054 D0 C7      1119      bne <1
1056           1120      ;
1056 18          1121      clc
1057           1122      ;
1057 A0 AB      1123      ldy #"+"
1059           1124      ;
1059 2C 00 00    1125      bit *-*
105C           1126      dfs !-2
105A           1127      ;
105A A0 AD      1128      ^3      ldy #"-"
105C           1129      ;
105C 20 B4 12    1130      jsr SETSEC
105F           1131      ;
105F AE D4 1A    1132      ldx TSSECTOR
1062 E8          1133      inx
1063           1134      ;
1063 EC 51 19    1135      cpx LASTSEC
1066 D0 B5      1136      bne <1
1068           1137      ;
1068 20 7D 12    1138      jsr DONETRK
106B 90 B0      1139      bcc <1          ; always taken
106D           1140      ;
106D C9 CC      1141      ^4      cmp #"L"
106F D0 AC      1142      bne <1
1071           1143      ;
1071 20 32 11    1144      jsr RCVTSDCB
1074 B0 17      1145      bcs >5
1076           1146      ;
1076 C9 C8      1147      cmp #"H"
1078 F0 17      1148      beq >7
107A           1149      ;
107A C9 CD      1150      cmp #"M"
107C D0 9F      1151      bne <1
107E           1152      ;
107E A0 D7      1153      ldy #"W"

```

```
1080 20 B3 12 1154      jsr SETSEC0
1083      1155      ;
1083 AD D4 1A 1156      lda TSSECTOR
1086 D0 95 1157      bne <1
1088      1158      ;
1088 8D 52 19 1159      sta GOODSECS
108B F0 90 1160      beq <1      ; always taken
108D      1161      ;
108D 60 1162      ^5      rts
108E      1163      ;
108E A2 54 1164      ^6      ldx #WRIT2.E
1090      1165      ;
1090 60 1166      rts
1091      1167      ;
1091 A2 55 1168      ^7      ldx #WRIT3.E
1093      1169      ;
1093 60 1170      rts
1094      1171      ;
1094      1172      ;
1094      1173      icl "CLIENT2.L"
```

```
LLOAD CLIENT2.L,A$4000
```

```

1094          1          ttl "Client Source Code, CLIENT2.L"
1094          2          ;
1094          3          ;
1094          4          ; CLIENT2.L
1094          5          ;
1094          6          ;
1094          7          ; CLIENT sends "C", the contents of CFDCB, and waits for a
1094          8          ; "D" from SERVER. If CLIENT receives an "E", there was
1094          9          ; an error and the CLIENT sends "C" and the CFDCB again.
1094         10          ; If a "D" is not received within RETRYCNT, the CLIENT and
1094         11          ; SERVER both terminate further processing. If neither a
1094         12          ; "D" or an "E" is received from the SERVER, further
1094         13          ; processing is terminated.
1094         14          ;
1094         15          ; Send CFDCB data to SERVER.
1094         16          ;
1094 AD C5 1A 17 SNDCFDCB lda CLNTRTRY          ; always CLIENT
1097 8D 54 19 18          sta RETRYCNT
109A         19          ;
109A         20          .if DEBUG
109A         21          clc
109A         22          rts
109A         23          .fi
109A         24          ;
109A A9 C3 25 ^1          lda #"C"
109C 20 3F 16 26          jsr TXSSC00          ; no wait
109F         27          ;
109F A2 60 28          ldx #SND CF1.E
10A1 B0 3C 29          bcs >6
10A3         30          ;
10A3 A0 00 31          ldy #ZERO
10A5         32          ;
10A5 8C D1 1A 33          sty CFDCBXOR
10A8 8C D2 1A 34          sty CFDCBSUM
10AB         35          ;
10AB B9 C1 1A 36 ^2          lda CFDCBTBL,Y
10AE 20 3F 16 37          jsr TXSSC00
10B1         38          ;
10B1 A2 62 39          ldx #SND CF2.E
10B3 B0 2A 40          bcs >6
10B5         41          ;
10B5 C0 10 42          cpy #CFDCBXOR-CFDCBTBL
10B7 B0 0C 43          bcs >3
10B9         44          ;
10B9 4D D1 1A 45          eor CFDCBXOR
10BC 8D D1 1A 46          sta CFDCBXOR
10BF         47          ;
10BF 6D D2 1A 48          adc CFDCBSUM
10C2 8D D2 1A 49          sta CFDCBSUM
10C5         50          ;
10C5 C8 51 ^3          iny
10C6         52          ;
10C6 C0 12 53          cpy #CFDCBLEN
10C8 D0 E1 54          bne <2
10CA         55          ;
10CA 20 7F 16 56          jsr RXSSC80          ; wait
10CD         57          ;
10CD C9 C4 58          cmp #"D"
10CF F0 0D 59          beq >5
10D1         60          ;

```

```

10D1 CE 54 19      61      dec RETRYCNT
10D4 F0 04        62      beq >4
10D6              63      ;
10D6 C9 C5        64      cmp #"E"
10D8 F0 C0        65      beq <1
10DA              66      ;
10DA A2 64        67      ^4      ldx #SND CF3.E
10DC              68      ;
10DC 38           69      sec
10DD              70      ;
10DD 60           71      rts
10DE              72      ;
10DE 18           73      ^5      clc
10DF              74      ;
10DF 60           75      ^6      rts
10E0              76      ;
10E0              77      ;
10E0              78      ; READER sends "L", the contents of TSDCB, and waits for an
10E0              79      ; "M" from WRITER. If READER receives an "N", there was
10E0              80      ; an error and the READER sends "L" and the TSDCB again.
10E0              81      ; If an "M" is not received within RETRYCNT, the READER and
10E0              82      ; WRITER both terminate further processing. If neither an
10E0              83      ; "M" or an "N" is received from the WRITER, further
10E0              84      ; processing is terminated.
10E0              85      ;
10E0              86      ; Send TSDCB data to WRITER.
10E0              87      ;
10E0 AD 53 19     88      SNDTSDCB lda NRETRIES
10E3 8D 54 19     89      sta RETRYCNT
10E6              90      ;
10E6 A9 CC        91      ^1      lda #"L"
10E8 20 3F 16     92      jsr TXSSC00      ; no wait
10EB              93      ;
10EB A2 70        94      ldx #SND TS1.E
10ED B0 42        95      bcs >6
10EF              96      ;
10EF A0 00        97      ldy #ZERO
10F1              98      ;
10F1 8C D5 1A     99      sty TSDCBXOR
10F4 8C D6 1A    100      sty TSDCBSUM
10F7              101      ;
10F7 B9 D3 1A    102      ^2      lda TSDCBTBL,Y
10FA 20 3F 16    103      jsr TXSSC00
10FD              104      ;
10FD A2 71        105      ldx #SND TS2.E
10FF B0 30        106      bcs >6
1101              107      ;
1101 C0 02        108      cpy #TSDCBXOR-TSDCBTBL
1103 B0 0C        109      bcs >3
1105              110      ;
1105 4D D5 1A     111      eor TSDCBXOR
1108 8D D5 1A     112      sta TSDCBXOR
110B              113      ;
110B 6D D6 1A     114      adc TSDCBSUM
110E 8D D6 1A     115      sta TSDCBSUM
1111              116      ;
1111 C8           117      ^3      iny
1112              118      ;
1112 C0 04        119      cpy #TSDCBLEN
1114 D0 E1        120      bne <2
1116              121      ;

```

```

1116 20 7F 16      122      jsr RXSSC80          ; wait
1119              123      ;
1119 A2 72          124      ldx #SNDTS3.E
111B              125      ;
111B C9 C8         126      cmp #"H"
111D F0 12         127      beq >6
111F              128      ;
111F C9 CD         129      cmp #"M"
1121 F0 0D         130      beq >5
1123              131      ;
1123 CE 54 19      132      dec RETRYCNT
1126 F0 04         133      beq >4
1128              134      ;
1128 C9 CE         135      cmp #"N"
112A F0 BA         136      beq <1
112C              137      ;
112C A2 73         138      ^4      ldx #SNDTS4.E
112E              139      ;
112E 38            140      sec
112F              141      ;
112F 60            142      rts
1130              143      ;
1130 18            144      ^5      clc
1131              145      ;
1131 60            146      ^6      rts
1132              147      ;
1132              148      ;
1132              149      ; Receive TSDCB data from READER.
1132              150      ;
1132 A0 00         151      RCVTSDCB ldy #ZERO
1134              152      ;
1134 84 10         153      sty ZXOR
1136 84 11         154      sty ZSUM
1138              155      ;
1138 20 6A 16      156      ^1      jsr RXSSC00
113B              157      ;
113B A2 78         158      ldx #RCVTS1.E
113D B0 3A         159      bcs >6
113F              160      ;
113F 99 D3 1A     161      sta TSDCBTBL,Y
1142              162      ;
1142 C0 02         163      cpy #TSDCBXOR-TSDCBTBL
1144 B0 08         164      bcs >2
1146              165      ;
1146 45 10         166      eor ZXOR
1148 85 10         167      sta ZXOR
114A              168      ;
114A 65 11         169      adc ZSUM
114C 85 11         170      sta ZSUM
114E              171      ;
114E C8            172      ^2      iny
114F              173      ;
114F C0 04         174      cpy #TSDCBLEN
1151 D0 E5         175      bne <1
1153              176      ;
1153 A9 CE         177      lda #"N"
1155              178      ;
1155 A4 10         179      ldy ZXOR
1157 CC D5 1A     180      cpy TSDCBXOR
115A D0 18         181      bne >5
115C              182      ;

```

```

115C A4 11      183      ldy ZSUM
115E CC D6 1A   184      cpy TSDCBSUM
1161 D0 11      185      bne >5
1163           186      ;
1163 20 B7 16   187      jsr GETKEY
1166 B0 0A      188      bcs >4
1168           189      ;
1168 48         190      pha
1169 68         191      pla
116A           192      ;
116A 10 03      193      bpl >3
116C           194      ;
116C 20 E8 15   195      jsr PRESNCLR
116F           196      ;
116F A9 CD      197      ^3      lda #"M"
1171           198      ;
1171 2C 00 00   199      bit *-*
1174           200      dfs !-2
1172           201      ;
1172 A9 C8      202      ^4      lda #"H"
1174           203      ;
1174 20 3F 16   204      ^5      jsr TXSSC00          ; no wait
1177           205      ;
1177 A2 79      206      ldx #RCVTS2.E
1179           207      ;
1179 60         208      ^6      rts
117A           209      ;
117A           210      ;
117A           211      ; READER sends "O", the contents of RWDCB, and waits for a
117A           212      ; "P" from WRITER. If READER receives a "Q", there was an
117A           213      ; error and the READER sends "O" and the RWDCB again. If
117A           214      ; a "P" is not received within RETRYCNT, the READER and
117A           215      ; WRITER both terminate further processing. If neither a
117A           216      ; "P" or a "Q" is received from the WRITER, further
117A           217      ; processing is terminated.
117A           218      ;
117A           219      ; Send RWDCB data to WRITER.
117A           220      ;
117A AD 53 19   221      SNDRWDCB lda NRETRIES
117D 8D 54 19   222      sta RETRYCNT
1180           223      ;
1180 A9 CF      224      ^1      lda #"O"
1182 20 3F 16   225      jsr TXSSC00          ; no wait
1185           226      ;
1185 A2 80      227      ldx #SNDRW1.E
1187 B0 3C      228      bcs >6
1189           229      ;
1189 A0 00      230      ldy #ZERO
118B           231      ;
118B 8C DD 1A   232      sty RWDCBXOR
118E 8C DE 1A   233      sty RWDCBSUM
1191           234      ;
1191 B9 DB 1A   235      ^2      lda RWDCBTBL,Y
1194 20 3F 16   236      jsr TXSSC00
1197           237      ;
1197 A2 81      238      ldx #SNDRW2.E
1199 B0 2A      239      bcs >6
119B           240      ;
119B C0 02      241      cpy #RWDCBXOR-RWDCBTBL
119D B0 0C      242      bcs >3
119F           243      ;

```

```

119F 4D DD 1A      244      eor RWDCBXOR
11A2 8D DD 1A      245      sta RWDCBXOR
11A5              246      ;
11A5 6D DE 1A      247      adc RWDCBSUM
11A8 8D DE 1A      248      sta RWDCBSUM
11AB              249      ;
11AB C8            250      ^3      iny
11AC              251      ;
11AC C0 04         252      cpy #RWDCBLEN
11AE D0 E1         253      bne <2
11B0              254      ;
11B0 20 7F 16      255      jsr RXSSC80          ; wait
11B3              256      ;
11B3 C9 D0         257      cmp #"P"
11B5 F0 0D         258      beq >5
11B7              259      ;
11B7 CE 54 19      260      dec RETRYCNT
11BA F0 04         261      beq >4
11BC              262      ;
11BC C9 D1         263      cmp #"Q"
11BE F0 C0         264      beq <1
11C0              265      ;
11C0 A2 82         266      ^4      ldx #SNDRW3.E
11C2              267      ;
11C2 38            268      sec
11C3              269      ;
11C3 60            270      rts
11C4              271      ;
11C4 18            272      ^5      clc
11C5              273      ;
11C5 60            274      ^6      rts
11C6              275      ;
11C6              276      ;
11C6              277      ; Receive RWDCB data from READER.
11C6              278      ;
11C6 A0 00         279      RCVRWDCB ldy #ZERO
11C8              280      ;
11C8 84 10         281      sty ZXOR
11CA 84 11         282      sty ZSUM
11CC              283      ;
11CC 20 6A 16      284      ^1      jsr RXSSC00
11CF              285      ;
11CF A2 88         286      ldx #RCVRW1.E
11D1 B0 2B         287      bcs >4
11D3              288      ;
11D3 99 DB 1A      289      sta RWDCBTBL,Y
11D6              290      ;
11D6 C0 02         291      cpy #RWDCBXOR-RWDCBTBL
11D8 B0 08         292      bcs >2
11DA              293      ;
11DA 45 10         294      eor ZXOR
11DC 85 10         295      sta ZXOR
11DE              296      ;
11DE 65 11         297      adc ZSUM
11E0 85 11         298      sta ZSUM
11E2              299      ;
11E2 C8            300      ^2      iny
11E3              301      ;
11E3 C0 04         302      cpy #RWDCBLEN
11E5 D0 E5         303      bne <1
11E7              304      ;

```

```

11E7 A9 D1      305      lda #"Q"
11E9           306      ;
11E9 A4 10      307      ldy ZXOR
11EB CC DD 1A   308      cpy RWDCBXOR
11EE D0 09      309      bne >3
11F0           310      ;
11F0 A4 11      311      ldy ZSUM
11F2 CC DE 1A   312      cpy RWDCBSUM
11F5 D0 02      313      bne >3
11F7           314      ;
11F7 A9 D0      315      lda #"P"
11F9           316      ;
11F9 20 3F 16   317      ^3      jsr TXSSC00          ; no wait
11FC           318      ;
11FC A2 89      319      ldx #RCVRW2.E
11FE           320      ;
11FE 60         321      ^4      rts
11FF           322      ;
11FF           323      ;
11FF           324      ; READER sends "T", compressed sector data, the contents
11FF           325      ; of TXDCB, and waits for a "U" from WRITER. If READER
11FF           326      ; receives a "V", there was an error and the READER sends
11FF           327      ; the compressed sector data and the TXDCB again. If a
11FF           328      ; "U" is not received within RETRYCNT, the READER and
11FF           329      ; WRITER both terminate further processing. If neither
11FF           330      ; a "U" or a "V" is received from the WRITER, further
11FF           331      ; processing is terminated.
11FF           332      ;
11FF           333      ; Send compressed sector data to WRITER.
11FF           334      ;
11FF AD 53 19   335      SNDTXDCB lda NRETRIES
1202 8D 54 19   336      sta RETRYCNT
1205           337      ;
1205 A9 D4      338      ^1      lda #"T"
1207 20 3F 16   339      jsr TXSSC00          ; no wait
120A           340      ;
120A A2 90      341      ldx #SNDTX1.E
120C B0 2B      342      bcs >5
120E           343      ;
120E 20 3A 14   344      jsr PUTDATA
1211 B0 26      345      bcs >5
1213           346      ;
1213           347      ; Send TXDCB data.
1213           348      ;
1213 A0 00      349      ldy #ZERO
1215           350      ;
1215 B9 D7 1A   351      ^2      lda TXDCBTBL,Y
1218 20 3F 16   352      jsr TXSSC00
121B           353      ;
121B A2 91      354      ldx #SNDTX2.E
121D B0 1A      355      bcs >5
121F           356      ;
121F C8         357      iny
1220           358      ;
1220 C0 04      359      cpy #TXDCBLEN
1222 D0 F1      360      bne <2
1224           361      ;
1224           362      ; Request response from WRITER if checksums agreed.
1224           363      ;
1224 20 7F 16   364      jsr RXSSC80          ; wait
1227           365      ;

```

```

1227 C9 D5      366      cmp #"U"
1229 F0 0D      367      beq >4
122B           368      ;
122B CE 54 19   369      dec RETRYCNT
122E F0 04      370      beq >3
1230           371      ;
1230 C9 D6      372      cmp #"V"
1232 F0 D1      373      beq <1
1234           374      ;
1234 A2 92      375      ^3      ldx #SNDTX3.E
1236           376      ;
1236 38         377      sec
1237           378      ;
1237 60         379      rts
1238           380      ;
1238 18         381      ^4      clc
1239           382      ;
1239 60         383      ^5      rts
123A           384      ;
123A           385      ;
123A           386      ; Receive compressed sector data and TXDCB from READER.
123A           387      ; Respond with "U" if checksums agree or "V" if they do
123A           388      ; not agree.
123A           389      ;
123A 20 A7 14   390      RCVTXDCB jsr GETDATA
123D B0 36      391      bcs >3
123F           392      ;
123F           393      ; Get checksums.
123F           394      ;
123F A0 00      395      ldy #ZERO
1241           396      ;
1241 20 6A 16   397      ^1      jsr RXSSC00
1244           398      ;
1244 A2 98      399      ldx #RCVTX1.E
1246 B0 2D      400      bcs >3
1248           401      ;
1248 99 D7 1A   402      sta TXDCBTBL,Y
124B           403      ;
124B C8         404      iny
124C           405      ;
124C C0 04      406      cpy #TXDCBLEN
124E D0 F1      407      bne <1
1250           408      ;
1250           409      ; Verify checksums.
1250           410      ;
1250 A9 D6      411      lda #"V"
1252           412      ;
1252 A4 10      413      ldy ZXOR
1254 CC D9 1A   414      cpy TXDCBXOR
1257 D0 17      415      bne >2
1259           416      ;
1259 A4 11      417      ldy ZSUM
125B CC DA 1A   418      cpy TXDCBSUM
125E D0 10      419      bne >2
1260           420      ;
1260 A4 12      421      ldy ZBYTES
1262 CC D7 1A   422      cpy TXDCBBYT
1265 D0 09      423      bne >2
1267           424      ;
1267 A4 13      425      ldy ZBYTES+1
1269 CC D8 1A   426      cpy TXDCBBYT+1

```

```

126C D0 02      427      bne >2
126E           428      ;
126E A9 D5      429      lda #"U"
1270           430      ;
1270 20 3F 16    431      ^2      jsr TXSSC00      ; no wait
1273           432      ;
1273 A2 99      433      ldx #RCVTX2.E
1275           434      ;
1275 60         435      ^3      rts
1276           436      ;
1276           437      ;
1276 20 9C 12    438      SETTRK   jsr PUTTRK
1279           439      ;
1279 98         440      tya
127A           441      ;
127A 4C ED FD    442      jmp COUT
127D           443      ;
127D           444      ;
127D 20 9C 12    445      DONETRK   jsr PUTTRK
1280           446      ;
1280 AD 52 19     447      lda GOODSECS
1283 CD 51 19     448      cmp LASTSEC
1286 B0 06        449      bcs >1
1288           450      ;
1288 20 E3 FD     451      jsr PRHEX
128B           452      ;
128B 4C 93 12     453      jmp >2
128E           454      ;
128E A9 AB        455      ^1      lda #"+"
1290 20 ED FD     456      jsr COUT
1293           457      ;
1293           458      ;
1293           459      ; Clear previous results.
1293           460      ;
1293 20 D3 16     461      ^2      jsr PRINT
1296 07 74        462      hex 0774
1298 54 00        463      byt CLRCMD,EOLCLR
129A 50           464      byt RTNCMD
129B           465      ;
129B 60           466      rts
129C           467      ;
129C           468      ;
129C A9 12        469      PUTTRK   lda #18
129E 85 25        470      sta CV
12A0           471      ;
12A0 AD D3 1A     472      lda TSTRACK
12A3 C9 20        473      cmp #32
12A5 90 03        474      bcc >1
12A7           475      ;
12A7 E6 25        476      inc CV
12A9           477      ;
12A9 18           478      clc
12AA           479      ;
12AA 29 1F        480      ^1      and #$1F
12AC           481      ;
12AC 69 07        482      adc #7
12AE 85 24        483      sta CH
12B0           484      ;
12B0 4C 22 FC     485      jmp VTAB
12B3           486      ;
12B3           487      ;

```

```

12B3 18          488 SETSEC0  clc
12B4          489 ;
12B4 08          490 SETSEC   php
12B5          491 ;
12B5 A9 14       492         lda #20
12B7 20 D2 12    493         jsr PUTSEC
12BA          494 ;
12BA 98          495         tya
12BB 20 ED FD    496         jsr COUT
12BE          497 ;
12BE 28          498         plp
12BF B0 08       499         bcs >2
12C1          500 ;
12C1 C0 AB       501         cpy #"+"
12C3 D0 03       502         bne >1
12C5          503 ;
12C5 EE 52 19    504         inc GOODSECS
12C8          505 ;
12C8 60          506 ^1      rts
12C9          507 ;
12C9 A9 15       508 ^2      lda #21
12CB 20 D2 12    509         jsr PUTSEC
12CE          510 ;
12CE 8A          511         txa
12CF          512 ;
12CF 4C E3 FD    513         jmp PRHEX
12D2          514 ;
12D2          515 ;
12D2 85 25       516 PUTSEC  sta CV
12D4          517 ;
12D4 18          518         clc
12D5          519 ;
12D5 AD D4 1A    520         lda TSSECTOR
12D8 69 07       521         adc #7
12DA 85 24       522         sta CH
12DC          523 ;
12DC 4C 22 FC    524         jmp VTAB
12DF          525 ;
12DF          526 ;
12DF 18          527 GETTIME  clc
12E0          528 ;
12E0 6C E1 03    529         jmp (RDCLKVSN)
12E3          530 ;
12E3          531 ;
12E3 A9 00       532 GETSIZE  lda #ZERO
12E5          533 ;
12E5 8D 82 19    534         sta XFERBYTS
12E8 8D 83 19    535         sta XFERBYTS+1
12EB 8D 84 19    536         sta XFERBYTS+2
12EE          537 ;
12EE AE C3 1A    538         ldx VOLTRKS
12F1          539 ;
12F1 F8          540         sed
12F2 18          541         clc
12F3          542 ;
12F3 AD 84 19    543 ^1      lda XFERBYTS+2
12F6 69 96       544         adc #$96
12F8 8D 84 19    545         sta XFERBYTS+2
12FB          546 ;
12FB AD 83 19    547         lda XFERBYTS+1
12FE 69 40       548         adc #$40

```

```

1300 8D 83 19    549      sta XFERBYTS+1
1303            550      ;
1303 AD 82 19    551      lda XFERBYTS
1306 69 00       552      adc #ZERO
1308 8D 82 19    553      sta XFERBYTS
130B            554      ;
130B CA         555      dex
130C D0 E5      556      bne <1
130E            557      ;
130E D8         558      cld
130F            559      ;
130F 60         560      rts
1310            561      ;
1310            562      ;
1310 A9 00       563      GETSECS lda #ZERO
1312 8D 85 19    564      sta SECTIME      ; clear hundredths
1315 8D 86 19    565      sta SECTIME+1    ; clear 10 hundredths
1318            566      ;
1318 F8         567      sed              ; turn on decimal mode
1319 38         568      sec
131A            569      ;
131A AD 90 19    570      lda CLKBUFR2+2    ; subtract hours
131D ED 8A 19    571      sbc CLKBUFR1+2
1320 B0 02       572      bcs >1
1322            573      ;
1322 69 24       574      adc #$24          ; sets carry flag
1324            575      ;
1324 AA         576      ^1 tax            ; hours difference
1325            577      ;
1325 AD 8F 19    578      lda CLKBUFR2+1    ; subtract minutes
1328 ED 89 19    579      sbc CLKBUFR1+1
132B A8         580      tay              ; minutes difference
132C B0 09       581      bcs >2
132E            582      ;
132E 69 60       583      adc #$60          ; sets carry flag
1330 A8         584      tay
1331            585      ;
1331 8A         586      txa              ; recall hours
1332 E9 01       587      sbc #1          ; decrement hours
1334 AA         588      tax
1335 90 53       589      bcc >6          ; exit with carry set
1337            590      ;
1337 AD 8E 19    591      ^2 lda CLKBUFR2    ; subtract seconds
133A ED 88 19    592      sbc CLKBUFR1
133D 8D 87 19    593      sta SECTIME+2    ; seconds difference
1340 B0 13       594      bcs >3
1342            595      ;
1342 69 60       596      adc #$60          ; sets carry flag
1344 8D 87 19    597      sta SECTIME+2
1347            598      ;
1347 98         599      tya              ; recall minutes
1348 E9 01       600      sbc #1          ; decrement minutes
134A A8         601      tay
134B B0 08       602      bcs >3
134D            603      ;
134D A0 59       604      ldy #$59          ; borrow 1 hour of minutes
134F            605      ;
134F 8A         606      txa              ; recall hours
1350 E9 00       607      sbc #ZERO        ; decrement hours
1352 AA         608      tax
1353 90 35       609      bcc >6          ; exit with carry set

```

```
1355          610 ;
1355 18        611 ^3      clc
1356          612 ;
1356 98        613 ^4      tya          ; recall minutes
1357 E9 00     614      sbc #ZERO      ; decrement minutes count
1359 90 15     615      bcc >5
135B          616 ;
135B A8       617      tay
135C          618 ;
135C AD 87 19 619      lda SECTIME+2      ; recall seconds
135F 69 59    620      adc #$59        ; add 60 seconds/minute
1361 8D 87 19 621      sta SECTIME+2
1364 90 F0    622      bcc <4
1366          623 ;
1366 AD 86 19 624      lda SECTIME+1
1369 69 00    625      adc #ZERO        ; increment hundredths count
136B 8D 86 19 626      sta SECTIME+1
136E 90 E6    627      bcc <4          ; always taken
1370          628 ;
1370 8A       629 ^5      txa          ; recall hours
1371 E9 00    630      sbc #ZERO      ; decrement hours count
1373 90 16    631      bcc >7
1375          632 ;
1375 AA       633      tax
1376          634 ;
1376 AD 86 19 635      lda SECTIME+1      ; recall thousandths
1379 69 35    636      adc #$35        ; add 3600 seconds/hour
137B 8D 86 19 637      sta SECTIME+1
137E 90 F0    638      bcc <5
1380          639 ;
1380 AD 85 19 640      lda SECTIME
1383 69 00    641      adc #ZERO        ; increment 10 thousandths
1385 8D 85 19 642      sta SECTIME
1388 90 E6    643      bcc <5          ; always taken
138A          644 ;
138A 38       645 ^6      sec
138B          646 ;
138B D8       647 ^7      cld          ; turn off decimal mode
138C          648 ;
138C 60       649      rts
138D          650 ;
138D          651 ;
138D          652      icl "CLIENT3.L"
```

LLOAD CLIENT3.L,A\$4000

```

138D          1          ttl "Client Source Code, CLIENT3.L"
138D          2          ;
138D          3          ;
138D          4          ; CLIENT3.L
138D          5          ;
138D          6          ;
138D          7          ; Find Super Serial Card.
138D          8          ;
138D 2C FF CF   9  FINDSSC  bit CLRROM
1390          10         ;
1390 A0 00      11         ldy #ZERO
1392 84 EE      12         sty GENPTR
1394          13         ;
1394 A2 07      14         ldx #7
1396          15         ;
1396 8A         16         ^1 txa
1397 09 C0      17         ora /MEMTOP
1399 85 EF      18         sta GENPTR+1
139B          19         ;
139B A0 07      20         ldy #SSCLEN-1
139D          21         ;
139D B1 EE      22         ^2 lda (GENPTR),Y
139F D9 DC 13   23         cmp SSCSIG,Y
13A2 D0 2E      24         bne >3
13A4          25         ;
13A4 88         26         dey
13A5 10 F6      27         bpl <2
13A7          28         ;
13A7 2C FF CF   29         bit CLRROM
13AA          30         ;
13AA 8A         31         txa
13AB          32         ;
13AB 0A         33         asl
13AC 0A         34         asl
13AD 0A         35         asl
13AE 0A         36         asl
13AF          37         ;
13AF 8D 4B 19   38         sta SSCSNUM
13B2          39         ;
13B2 09 89      40         ora #STATUS
13B4          41         ;
13B4 8D 44 16   42         sta TXMOD1+1
13B7 8D 5B 16   43         sta TXMOD3+1
13BA 8D 6D 16   44         sta RXMOD1+1
13BD 8D 80 16   45         sta RXMOD3+1
13C0          46         ;
13C0 AD 4B 19   47         lda SSCSNUM
13C3 09 88      48         ora #DATA
13C5          49         ;
13C5 8D 4F 16   50         sta TXMOD2+1
13C8 8D 66 16   51         sta TXMOD4+1
13CB 8D 76 16   52         sta RXMOD2+1
13CE 8D 89 16   53         sta RXMOD4+1
13D1          54         ;
13D1 60         55         rts
13D2          56         ;
13D2 2C FF CF   57         ^3 bit CLRROM
13D5          58         ;
13D5 CA         59         dex
13D6 D0 BE      60         bne <1

```

```

13D8      61 ;
13D8 A2 10      62      ldx #FSSC.E
13DA      63 ;
13DA 38      64      sec
13DB      65 ;
13DB 60      66      rts
13DC      67 ;
13DC      68 ;
13DC 2C 58 FF      69 SSSCSIG bit IORTS
13DF 70 0C      70      bvs SSSCSIG+$11
13E1 38      71      sec
13E2 90 00      72      bcc *+2
13E4      73      dfs !-1
13E3 18      74      clc
13E4      75 ;
0008      76 SSSCLEN equ *-SSCSIG
13E4      77 ;
13E4      78 ;
13E4      79 ; Attempt to autosync with SERVER.
13E4      80 ;
13E4      81 ; CLIENT sends "A" and waits for a "B" from SERVER.
13E4      82 ;
13E4      83 ; If ESCAPE is pressed, autosync is terminated.
13E4      84 ;
13E4      85 AUTOSYNC:
13E4      86      .if DEBUG
13E4      87      clc
13E4      88      rts
13E4      89      .fi
13E4      90 ;
13E4 A9 C1      91 ^1      lda #"A"
13E6      92 ;
13E6 20 3F 16      93      jsr TXSSC00      ; no wait, ignore timeout
13E9      94 ;
13E9 A9 C5      95      lda #WAIT100M
13EB 20 A8 FC      96      jsr WAIT
13EE      97 ;
13EE A9 F2      98      lda #WAIT150M
13F0 20 A8 FC      99      jsr WAIT
13F3      100 ;
13F3 20 B7 16      101      jsr GETKEY      ; only accept ESC
13F6      102 ;
13F6 A2 18      103      ldx #ASYNC.E
13F8 B0 12      104      bcs >2
13FA      105 ;
13FA 20 6A 16      106      jsr RXSSC00      ; no wait
13FD B0 E5      107      bcs <1
13FF      108 ;
13FF C9 C2      109      cmp #"B"
1401 D0 E1      110      bne <1
1403      111 ;
1403 20 6A 16      112      jsr RXSSC00      ; if SERVER sends another "B"
1406      113 ;
1406 A9 01      114      lda #1
1408 8D CF 1A      115      sta CLSRSTAT
140B      116 ;
140B 18      117      clc
140C      118 ;
140C 60      119 ^2      rts
140D      120 ;
140D      121 ;

```

```

140D 20 E3 12      122  SHOWTIME jsr GETSIZE
1410 20 10 13      123              jsr GETSECS
1413              124  ;
1413 20 D3 16      125              jsr PRINT
1416 02 76          126              hex 0276
1418 CD EF F6      127              asc "Moved "
141B E5 E4 A0
141E 5A 03          128              byt BYTNCMD,3
1420 82 19          129              adr XFERBYTES
1422 A0 E2 F9      130              asc " bytes in "
1425 F4 E5 F3
1428 A0 E9 EE
142B A0
142C 5A 03          131              byt BYTNCMD,3
142E 85 19          132              adr SECTIME
1430 A0 F3 E5      133              asc " seconds"
1433 E3 EF EE
1436 E4 F3
1438 50              134              byt RTNCMD
1439              135  ;
1439 60              136              rts
143A              137  ;
143A              138  ;
143A AD D3 1A      139  PUTDATA  lda TSTRACK
143D AC D4 1A      140              ldy TSSECTOR
1440              141  ;
1440 20 16 16      142              jsr GETPAGE
1443 85 EF          143              sta GENPTR+1
1445              144  ;
1445 A0 00          145              ldy #ZERO
1447              146  ;
1447 84 EE          147              sty GENPTR
1449 8C D9 1A      148              sty TXDCBXOR
144C 8C DA 1A      149              sty TXDCBSUM
144F 8C D7 1A      150              sty TXDCBBYT
1452 8C D8 1A      151              sty TXDCBBYT+1
1455              152  ;
1455 B1 EE          153  ^1          lda (GENPTR),Y
1457              154  ;
1457 85 14          155  ^2          sta ZMATCH
1459              156  ;
1459 20 8A 14      157              jsr TXDATA4
145C              158  ;
145C A2 A0          159              ldx #PDATA1.E
145E B0 1B          160              bcs >5
1460              161  ;
1460 C8              162              iny
1461 F0 18          163              beq >5
1463              164  ;
1463 B1 EE          165              lda (GENPTR),Y
1465 C5 14          166              cmp ZMATCH
1467 D0 EE          167              bne <2
1469              168  ;
1469 A2 3F          169              ldx #$40-1
146B              170  ;
146B C8              171  ^3          iny
146C F0 0E          172              beq TXDATA2
146E              173  ;
146E CA              174              dex
146F F0 04          175              beq >4
1471              176  ;

```

```

1471 D1 EE      177      cmp (GENPTR),Y
1473 F0 F6      178      beq <3
1475           179      ;
1475 20 7C 14    180      ^4      jsr TXDATA2
1478 90 DB      181      bcc <1
147A           182      ;
147A E8         183      inx                ; PDATA2.E+1 or PDATA3.E+1
147B           184      ;
147B 60         185      ^5      rts
147C           186      ;
147C           187      ;
147C 20 8A 14    188      TXDATA2 jsr TXDATA4
147F B0 25      189      bcs >7
1481           190      ;
1481 98         191      tya
1482           192      ;
1482 20 3F 16    193      jsr TXSSC00
1485 90 0A      194      bcc >6
1487           195      ;
1487 A2 A3      196      ldx #PDATA3.E
1489           197      ;
1489 60         198      rts
148A           199      ;
148A 20 3F 16    200      TXDATA4 jsr TXSSC00
148D           201      ;
148D A2 A1      202      ldx #PDATA2.E
148F B0 15      203      bcs >7
1491           204      ;
1491 4D D9 1A    205      ^6      eor TXDCBXOR
1494 8D D9 1A    206      sta TXDCBXOR
1497           207      ;
1497 6D DA 1A    208      adc TXDCBSUM
149A 8D DA 1A    209      sta TXDCBSUM
149D           210      ;
149D 18         211      clc
149E           212      ;
149E EE D7 1A    213      inc TXDCBBYT
14A1 D0 03      214      bne >7
14A3           215      ;
14A3 EE D8 1A    216      inc TXDCBBYT+1
14A6           217      ;
14A6 60         218      ^7      rts
14A7           219      ;
14A7           220      ;
14A7 AD D3 1A    221      GETDATA lda TSTRACK
14AA AC D4 1A    222      ldy TSSECTOR
14AD           223      ;
14AD 20 16 16    224      jsr GETPAGE
14B0 85 EF      225      sta GENPTR+1
14B2           226      ;
14B2 A0 00      227      ldy #ZERO
14B4           228      ;
14B4 84 10      229      sty ZXOR
14B6 84 11      230      sty ZSUM
14B8 84 12      231      sty ZBYTES
14BA 84 13      232      sty ZBYTES+1
14BC 84 EE      233      sty GENPTR
14BE           234      ;
14BE 20 EF 14    235      ^1      jsr RXDATA2
14C1           236      ;
14C1 A2 B0      237      ldx #GDATA1.E

```

```

14C3 B0 29      238      bcs >5
14C5            239      ;
14C5            240      ; Save as possible duplicate.
14C5            241      ;
14C5 91 EE      242      ^2      sta (GENPTR),Y
14C7            243      ;
14C7 85 14      244      sta ZMATCH
14C9            245      ;
14C9 C8         246      iny
14CA F0 21      247      beq >4
14CC            248      ;
14CC            249      ; Check for duplicate.
14CC            250      ;
14CC 20 EF 14   251      jsr RXDATA2
14CF            252      ;
14CF A2 B1      253      ldx #GDATA2.E
14D1 B0 1B      254      bcs >5
14D3            255      ;
14D3 C5 14      256      cmp ZMATCH
14D5 D0 EE      257      bne <2
14D7            258      ;
14D7            259      ; Expand the duplicates.
14D7            260      ;
14D7 20 EF 14   261      jsr RXDATA2
14DA            262      ;
14DA A2 B2      263      ldx #GDATA3.E
14DC B0 10      264      bcs >5
14DE            265      ;
14DE 8D E7 14   266      sta GETDAMOD+1
14E1            267      ;
14E1 A5 14      268      lda ZMATCH
14E3            269      ;
14E3 91 EE      270      ^3      sta (GENPTR),Y
14E5            271      ;
14E5 C8         272      iny
14E6            273      ;
14E6 C0 00      274      GETDAMOD cpy #*-*
14E8 D0 F9      275      bne <3
14EA            276      ;
14EA 98         277      tya
14EB D0 D1      278      bne <1
14ED            279      ;
14ED 18         280      ^4      clc
14EE            281      ;
14EE 60         282      ^5      rts
14EF            283      ;
14EF 20 6A 16   284      RXDATA2 jsr RXSSC00
14F2 B0 13      285      bcs >6
14F4            286      ;
14F4 85 15      287      sta ZSAVA
14F6            288      ;
14F6 45 10      289      eor ZXOR
14F8 85 10      290      sta ZXOR
14FA            291      ;
14FA 65 11      292      adc ZSUM
14FC 85 11      293      sta ZSUM
14FE            294      ;
14FE 18         295      clc
14FF            296      ;
14FF A5 15      297      lda ZSAVA
1501            298      ;

```

```

1501 E6 12      299      inc ZBYTES
1503 D0 02      300      bne >6
1505            301      ;
1505 E6 13      302      inc ZBYTES+1
1507            303      ;
1507 60          304      ^6      rts
1508            305      ;
1508            306      ;
1508            307      ; Read eight tracks of data or until LASTTRK.
1508            308      ;
1508 AD D3 1A    309      GETRACKS lda TSTRACK
150B 8D DB 1A    310      sta RWTRACK
150E            311      ;
150E A9 00      312      lda #ZERO
1510 8D DC 1A    313      sta NTRACKS
1513            314      ;
1513 AD 55 19    315      lda BUFRTRKS
1516 8D 57 19    316      sta TRACKCNT
1519            317      ;
1519 A9 01      318      lda #RWTSREAD
151B 8D EB 1A    319      sta CMDCODE
151E            320      ;
151E AD D3 1A    321      ^1      lda TSTRACK
1521 CD 50 19    322      cmp LASTTRK
1524 F0 31      323      beq >3
1526            324      ;
1526 8D E3 1A    325      sta TNUM
1529            326      ;
1529 AC 51 19    327      ldy LASTSEC
152C 88          328      dey
152D 8C E4 1A    329      sty SNUM
1530            330      ;
1530 20 16 16    331      jsr GETPAGE
1533 8D E8 1A    332      sta BUFADR+1
1536            333      ;
1536 A0 D2      334      ldy #"R"
1538 20 76 12    335      jsr SETTRK
153B            336      ;
153B A0 DF      337      ^2      ldy #TBLTYPE
153D A9 1A      338      lda /TBLTYPE
153F            339      ;
153F 20 D9 03    340      jsr CALLRWTS
1542 B0 21      341      bcs >4
1544            342      ;
1544 CE E8 1A    343      dec BUFADR+1
1547            344      ;
1547 CE E4 1A    345      dec SNUM
154A 10 EF      346      bpl <2
154C            347      ;
154C EE D3 1A    348      inc TSTRACK
154F EE DC 1A    349      inc NTRACKS
1552            350      ;
1552 CE 57 19    351      dec TRACKCNT
1555 D0 C7      352      bne <1
1557            353      ;
1557 AD DB 1A    354      ^3      lda RWTRACK
155A 8D D3 1A    355      sta TSTRACK
155D            356      ;
155D AD 55 19    357      lda BUFRTRKS
1560 8D 57 19    358      sta TRACKCNT
1563            359      ;

```

```

1563 18          360          clc
1564          361          ;
1564 60          362          rts
1565          363          ;
1565 20 BB 15     364          ^4      jsr PRTRWERR
1568 90 D1       365          bcc <2
156A          366          ;
156A A2 C0      367          ldx #GTRACK.E
156C          368          ;
156C 60          369          rts
156D          370          ;
156D          371          ;
156D          372          ; Write eight tracks of data or until LASTTRK.
156D          373          ;
156D AD DC 1A   374 PUTRACKS lda NTRACKS
1570 F0 3F      375          beq >3
1572          376          ;
1572 8D 57 19    377          sta TRACKCNT
1575          378          ;
1575 AD DB 1A    379          lda RWTRACK
1578 8D D3 1A    380          sta TSTACK
157B          381          ;
157B A9 02      382          lda #RWTSWRIT
157D 8D EB 1A    383          sta CMDCODE
1580          384          ;
1580 AD D3 1A    385          ^1      lda TSTACK
1583 8D E3 1A    386          sta TNUM
1586          387          ;
1586 AC 51 19    388          ldy LASTSEC
1589 88          389          dey
158A 8C E4 1A    390          sty SNUM
158D          391          ;
158D 20 16 16    392          jsr GETPAGE
1590 8D E8 1A    393          sta BUFADR+1
1593          394          ;
1593 A0 D7       395          ldy #"W"
1595 20 76 12    396          jsr SETTRK
1598          397          ;
1598 A0 DF       398          ^2      ldy #TBLTYPE
159A A9 1A       399          lda /TBLTYPE
159C          400          ;
159C 20 D9 03    401          jsr CALLRWTS
159F B0 12       402          bcs >4
15A1          403          ;
15A1 CE E8 1A    404          dec BUFADR+1
15A4          405          ;
15A4 CE E4 1A    406          dec SNUM
15A7 10 EF       407          bpl <2
15A9          408          ;
15A9 EE D3 1A    409          inc TSTACK
15AC          410          ;
15AC CE 57 19    411          dec TRACKCNT
15AF D0 CF       412          bne <1
15B1          413          ;
15B1 18          414          ^3      clc
15B2          415          ;
15B2 60          416          rts
15B3          417          ;
15B3 20 BB 15    418          ^4      jsr PRTRWERR
15B6 90 E0       419          bcc <2
15B8          420          ;

```

```

15B8 A2 D0      421      ldx #PTRACK.E
15BA           422      ;
15BA 60         423      rts
15BB           424      ;
15BB           425      ;
15BB 20 D3 16   426      PRTRWERR jsr PRINT
15BE 00 76      427      hex 0076
15C0 AA AA AA   428      asc "*** RWTS error 0x"
15C3 A0 D2 D7
15C6 D4 D3 A0
15C9 E5 F2 F2
15CC EF F2 A0
15CF B0 F8
15D1 58         429      byt BYT1CMD
15D2 EC 1A      430      adr ERRCODE
15D4 A0 EF EE   431      asc " on T/S 0x"
15D7 A0 D4 AF
15DA D3 A0 B0
15DD F8
15DE 58         432      byt BYT1CMD
15DF E3 1A      433      adr TNUM
15E1 AF B0 F8   434      asc "/0x"
15E4 58         435      byt BYT1CMD
15E5 E4 1A      436      adr SNUM
15E7 50         437      byt RTNCMD
15E8           438      ;
15E8 20 D3 16   439      PRESNCLR jsr PRINT
15EB 00 77      440      hex 0077
15ED 55         441      byt CNTRCMD
15EE D0 F2 E5   442      asc "Press any key to continue"
15F1 F3 F3 A0
15F4 E1 EE F9
15F7 A0 EB E5
15FA F9 A0 F4
15FD EF A0 E3
1600 EF EE F4
1603 E9 EE F5
1606 E5
1607 50         443      byt RTNCMD
1608           444      ;
1608 20 AB 16   445      jsr WAITKEY
160B           446      ;
160B 08         447      DOCLEAR php
160C           448      ;
160C 20 D3 16   449      jsr PRINT
160F 00 76      450      hex 0076
1611 54 01      451      byt CLRCMD,EOPCLR
1613 50         452      byt RTNCMD
1614           453      ;
1614 28         454      plp
1615           455      ;
1615 60         456      rts
1616           457      ;
1616           458      ;
1616           459      ; Calculate the memory page for the sector and track values
1616           460      ; contained in the Y-reg and A-reg, respectively.
1616           461      ;
1616           462      GETPAGE:
1616 CD 55 19    463      ^1      cmp BUFRTRKS
1619 90 05      464      bcc >2
161B           465      ;

```

```

161B ED 55 19    466          sbc BUFRTRKS
161E 10 F6      467          bpl <1                ; always taken
1620            468          ;
1620 2C 56 19    469          ^2          bit BUFRFLAG
1623 10 01      470          bpl >3
1625            471          ;
1625 0A          472          asl
1626            473          ;
1626 AA          474          ^3          tax
1627            475          ;
1627 98          476          tya
1628 7D 78 19    477          adc TRACKTBL,X
162B            478          ;
162B 60          479          rts
162C            480          ;
162C            481          ;
162C            482          ; For the STATUS register, writing to the register resets
162C            483          ; the SSC.
162C            484          ;
162C            485          ; For the COMMAND register, bit 0 when set enables the
162C            486          ; receiver and bit 3 when set enables the transmitter.
162C            487          ;
162C            488          ; For the CONTROL register, bits 0-3 select the baud rate
162C            489          ; and bit 4 when set selects the baud rate generator.
162C            490          ;
162C AE 4B 19    491          INITSSC  ldx SSCSNUM
162F            492          ;
162F A9 00      493          lda #ZERO
1631 9D 89 C0    494          sta STATUS,X
1634            495          ;
1634 A9 09      496          lda #%00001001
1636 9D 8A C0    497          sta COMMAND,X
1639            498          ;
1639 A9 1F      499          lda #%00011111          ; 19,200 Hz
163B            500          ;          lda #%00010000          ; 115,200 Hz
163B 9D 8B C0    501          sta CONTROL,X
163E            502          ;
163E 60          503          rts
163F            504          ;
163F            505          ;
163F            506          ; Read ACIA Status/Reset Register.
163F            507          ;
163F            508          ; Bit   Description
163F            509          ; ---  -----
163F            510          ; 0    parity error detected when 1
163F            511          ; 1    framing error detected when 1
163F            512          ; 2    overrun detected when 1
163F            513          ; 3    ACIA receive register full when 1
163F            514          ; 4    ACIA transmit register empty when 1
163F            515          ; 5    Data Carrier Detect (DCD) true when 0
163F            516          ; 6    Data Set Ready (DSR) true when 0
163F            517          ; 7    interrupt (IRQ) has occurred when 1
163F            518          ;
163F            519          ;
163F            520          ; Send SSC data.
163F            521          ;
163F            522          ; Wait for only 256 iterations for an empty ACIA transmit
163F            523          ; register with DCD true and DSR true.
163F            524          ;
163F 85 15      525          TXSSC00  sta ZSAVA
1641            526          ;

```

```
1641 A2 00      527      ldx #ZERO
1643           528      ;
1643 AD 89 C0    529 TXMOD1  lda STATUS
1646 29 70      530      and #%01110000
1648           531      ;
1648 49 10      532      eor #%00010000
164A D0 07      533      bne >1
164C           534      ;
164C A5 15      535      lda ZSAVA
164E           536      ;
164E 8D 88 C0    537 TXMOD2  sta DATA
1651           538      ;
1651 18         539      clc
1652           540      ;
1652 60         541      rts
1653           542      ;
1653 E8         543 ^1      inx
1654 D0 ED      544      bne TXMOD1
1656           545      ;
1656 38         546      sec
1657           547      ;
1657 60         548      rts
1658           549      ;
1658           550      ;
1658           551      ; Send SSC data. Wait indefinitely for an empty ACIA
1658           552      ; transmit register with DCD true and DSR true.
1658           553      ;
1658 85 15      554 TXSSC80  sta ZSAVA
165A           555      ;
165A AD 89 C0    556 TXMOD3  lda STATUS
165D 29 70      557      and #%01110000
165F           558      ;
165F 49 10      559      eor #%00010000
1661 D0 F7      560      bne TXMOD3
1663           561      ;
1663 A5 15      562      lda ZSAVA
1665           563      ;
1665 8D 88 C0    564 TXMOD4  sta DATA
1668           565      ;
1668 18         566      clc
1669           567      ;
1669 60         568      rts
166A           569      ;
166A           570      ;
166A           571      ; Receive SSC data.
166A           572      ;
166A           573      ; Wait for only 256 iterations for a full ACIA receive
166A           574      ; register with DCD true and DSR true.
166A           575      ;
166A A2 00      576 RXSSC00  ldx #ZERO
166C           577      ;
166C AD 89 C0    578 RXMOD1  lda STATUS
166F 29 68      579      and #%01101000
1671           580      ;
1671 49 08      581      eor #%00001000
1673 D0 05      582      bne >1
1675           583      ;
1675 AD 88 C0    584 RXMOD2  lda DATA
1678           585      ;
1678 18         586      clc
1679           587      ;
```

```
1679 60          588          rts
167A          589          ;
167A E8          590      ^1      inx
167B D0 EF       591          bne RXMOD1
167D          592          ;
167D 38          593          sec
167E          594          ;
167E 60          595          rts
167F          596          ;
167F          597          ;
167F          598      ; Receive SSC data.  Wait indefinitely for a full
167F          599      ; ACIA receive register with DCD true and DSR true.
167F          600          ;
167F          601      RXSSC80:
167F          602          ;
167F AD 89 C0     603      RXMOD3      lda STATUS
1682 29 68       604          and #%01101000
1684          605          ;
1684 49 08       606          eor #%00001000
1686 D0 F7       607          bne RXMOD3
1688          608          ;
1688 AD 88 C0     609      RXMOD4      lda DATA
168B          610          ;
168B 18          611          clc
168C          612          ;
168C 60          613          rts
168D          614          ;
168D          615          ;
168D          616          icl "CLNTPRNT.L"
```

```
LLOAD CLNTPRNT.L,A$4000
```

```

168D          1          ttl "Client Print Source Code, CLNTPRNT.L"
168D          2          ;
168D          3          ;
168D          4          ; CLNTPRNT.L
168D          5          ;
168D          6          ;
168D          7          ; Calls WAITKEY; LARROW decrements X-reg and RARROW
168D          8          ; increments X-reg.  ESC and RTN return to EDITMENU.
168D          9          ;
168D 20 AB 16    10 WAITAROW jsr WAITKEY
1690 B0 0F      11          bcs >3
1692          12          ;
1692 F0 0D      13          beq >3
1694          14          ;
1694 A8         15          tay
1695          16          ;
1695 C0 88      17          cpy #LARROW
1697 D0 01      18          bne >1
1699          19          ;
1699 CA        20          dex
169A          21          ;
169A C0 95      22 ^1      cpy #RARROW
169C D0 01      23          bne >2
169E          24          ;
169E E8        25          inx
169F          26          ;
169F 8A        27 ^2      txa
16A0          28          ;
16A0 60        29          rts
16A1          30          ;
16A1 68        31 ^3      pla
16A2 68        32          pla
16A3          33          ;
16A3 60        34          rts
16A4          35          ;
16A4          36          ;
16A4          37          ; Fall into WAITKEY.
16A4          38          ;
16A4 A9 60      39 READKEY  lda #FLASH
16A6 20 ED FD    40          jsr COUT
16A9          41          ;
16A9 C6 24      42          dec CH
16AB          43          ;
16AB          44          ;
16AB 20 B7 16    45 WAITKEY  jsr GETKEY
16AE B0 06      46          bcs >1
16B0          47          ;
16B0 F0 04      48          beq >1
16B2          49          ;
16B2 0A        50          asl
16B3 90 F6      51          bcc WAITKEY
16B5          52          ;
16B5 6A        53          ror
16B6          54          ;
16B6 60        55 ^1      rts
16B7          56          ;
16B7          57          ;
16B7 AD 00 C0    58 GETKEY   lda KEY
16BA 10 09      59          bpl >1
16BC          60          ;

```

```

16BC 2C 10 C0      61          bit CLRKEY
16BF              62      ;
16BF C9 9B        63          cmp #ESCAPE
16C1 F0 03        64          beq >2
16C3              65      ;
16C3 C9 8D        66          cmp #RETURN
16C5              67      ;
16C5 18           68      ^1      clc
16C6              69      ;
16C6 60           70      ^2      rts
16C7              71      ;
16C7              72      ;
16C7 8D 5B 19     73  PRNTCHAR sta CHARBUFR
16CA              74      ;
16CA 20 D3 16     75          jsr PRINT
16CD 56 00        76          byt BUFRCMD,DIRECT
16CF 5B 19        77          adr CHARBUFR
16D1 50           78          byt RTNCMD
16D2              79      ;
16D2 60           80          rts
16D3              81      ;
16D3              82      ;
16D3 8D B3 17     83  PRINT      sta PRNTSAVA+1
16D6 8E B1 17     84          stx PRNTSAVX+1
16D9 8C AF 17     85          sty PRNTSAVY+1
16DC              86      ;
16DC 68           87          pla
16DD 85 FC        88          sta PRNTPTR
16DF              89      ;
16DF 68           90          pla
16E0 85 FD        91          sta PRNTPTR+1
16E2              92      ;
16E2 E6 FC        93  PRNTLOOP inc PRNTPTR
16E4 D0 02        94          bne >1
16E6              95      ;
16E6 E6 FD        96          inc PRNTPTR+1
16E8              97      ;
16E8 A0 00        98      ^1      ldy #ZERO
16EA              99      ;
16EA B1 FC       100          lda (PRNTPTR),Y
16EC 10 10       101          bpl >3
16EE              102      ;
16EE C9 A0       103          cmp #SPACE
16F0 90 06       104          bcc >2
16F2              105      ;
16F2 20 4D 17    106          jsr PRNTOUT
16F5              107      ;
16F5 4C E2 16    108          jmp PRNTLOOP
16F8              109      ;
16F8 20 51 17    110      ^2      jsr PRNTOUT2
16FB              111      ;
16FB 4C E2 16    112          jmp PRNTLOOP
16FE              113      ;
16FE C9 50       114      ^3      cmp #MAXCH
1700 B0 04       115          bcs >4
1702              116      ;
1702 85 24       117          sta CH
1704              118      ;
1704 90 DC       119          bcc PRNTLOOP
1706              120      ;
1706 C9 60       121      ^4      cmp #MINCV

```

```

1708 90 0A      122      bcc >5
170A           123      ;
170A 29 1F      124      and #CVMASK
170C 85 25      125      sta CV
170E           126      ;
170E 20 22 FC   127      PRNTMOD1 jsr VTAB
1711           128      ;
1711 4C E2 16   129      jmp PRNTLOOP
1714           130      ;
1714 29 0F      131      ^5      and #PCMDMASK
1716 AA         132      tax
1717           133      ;
1717 BD 73 17   134      lda PRNTBL,X
171A 8D 2A 17   135      sta PRNTMOD2+1
171D           136      ;
171D BD 83 17   137      lda PRNTBLL,X
1720 8D 48 17   138      sta PRNTMOD3+1
1723           139      ;
1723 BD 93 17   140      lda PRNTBLH,X
1726 8D 49 17   141      sta PRNTMOD3+2
1729           142      ;
1729 90 19      143      PRNTMOD2 bcc PRNTBR4
172B           144      ;
172B C8         145      PRNTBR1 iny
172C           146      ;
172C B1 FC      147      lda (PRNTPTR),Y
172E 8D 72 17   148      sta FRMTVAL
1731           149      ;
1731 C8         150      PRNTBR2 iny
1732           151      ;
1732 B1 FC      152      lda (PRNTPTR),Y
1734 85 FA      153      sta DATAPTR
1736           154      ;
1736 C8         155      PRNTBR3 iny
1737           156      ;
1737 B1 FC      157      lda (PRNTPTR),Y
1739 85 FB      158      sta DATAPTR+1
173B           159      ;
173B 98         160      tya
173C           161      ;
173C 65 FC      162      adc PRNTPTR
173E 85 FC      163      sta PRNTPTR
1740 90 02      164      bcc PRNTBR4
1742           165      ;
1742 E6 FD      166      inc PRNTPTR+1
1744           167      ;
1744 18         168      PRNTBR4 clc
1745           169      ;
1745 A0 00      170      ldy #ZERO
1747           171      ;
1747 20 00 00   172      PRNTMOD3 jsr *-*
174A           173      ;
174A 4C E2 16   174      jmp PRNTLOOP
174D           175      ;
174D           176      ;
174D           177      PRNTOUT:
174D           178      ;
174D 09 00      179      OUTMOD1 ora #ZERO
174F 49 00      180      OUTMOD2 eor #ZERO
1751           181      ;
1751 4C ED FD   182      PRNTOUT2 jmp COUT

```

```

1754      183 ;
1754      184 ;
1754      185 ; Notes on DISPCMD as index
1754      186 ;
1754      187 ; 0 - Normal display
1754      188 ; 1 - Inverse display
1754      189 ;
1754 00 40      190 OUTTBL1  hex 0040          ; TEXT
1756 00 00      191          hex 0000          ; GRPH
1758 00 00      192          hex 0000          ; TX80
175A          193 ;
175A 00 C0      194 OUTTBL2  hex 00C0
175C 00 80      195          hex 0080
175E 00 00      196          hex 0000
1760          197 ;
1760 FF 3F      198 OUT80COL hex FF3F
1762          199 ;
1762          200 ;
1762 22 FC      201 VTABADRS  adr VTAB
1764 B5 17      202          adr PRINTRTN
1766 22 FC      203          adr VTAB
1768          204 ;
1768          205 ;
1768 ED FD      206 OUTADRS  adr COUT
176A 4A 19      207          adr PRNTGRPH
176C ED FD      208          adr COUT
176E          209 ;
176E 00          210 PRNTSAV  hex 00
176F 00 00      211 PRNTNUM  hex 0000
1771          212 ;
1771          213 ;
1771          214 ; Notes on MODEVAL and FRMTVAL
1771          215 ;
1771          216 ; 0 - 40 column TEXT mode
1771          217 ; 1 - GRAPHICS mode
1771          218 ; 2 - 80 column TEXT mode
1771          219 ; 3 - exit 80 TEXT, enter 40 TEXT
1771          220 ;
1771          221 ; 0x00 - no left padding
1771          222 ; 0x20 data in high/low order, otherwise low/high order
1771          223 ; 0x40 - zero left padding
1771          224 ; 0x80 - space left padding
1771          225 ;
1771 00          226 MODEVAL  hex 00
1772 00          227 FRMTVAL  hex 00
1773          228 ;
1773          229 ;
1773          230 ; Branch table of command routines.
1773          231 ;
1773          232 PRNTBL:
1773 19          233      byt PRNTBR4-PRNTBR1 ; 50
1774 0B          234      byt PRNTBR3-PRNTBR1 ; 51
1775 0B          235      byt PRNTBR3-PRNTBR1 ; 52
1776 0B          236      byt PRNTBR3-PRNTBR1 ; 53
1777 0B          237      byt PRNTBR3-PRNTBR1 ; 54
1778 19          238      byt PRNTBR4-PRNTBR1 ; 55
1779 00          239      byt PRNTBR1-PRNTBR1 ; 56
177A 06          240      byt PRNTBR2-PRNTBR1 ; 57
177B 06          241      byt PRNTBR2-PRNTBR1 ; 58
177C 06          242      byt PRNTBR2-PRNTBR1 ; 59
177D 00          243      byt PRNTBR1-PRNTBR1 ; 5A

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```
177E 00          244          byt PRNTBR1-PRNTBR1 ; 5B
177F 06          245          byt PRNTBR2-PRNTBR1 ; 5C
1780 06          246          byt PRNTBR2-PRNTBR1 ; 5D
1781 06          247          byt PRNTBR2-PRNTBR1 ; 5E
1782 00          248          byt PRNTBR1-PRNTBR1 ; 5F
1783            249          ;
1783            250          ;
1783            251          ; Address tables of command routines.
1783            252          ;
1783            253          PRNTBLL:
1783 A3            254          byt PRNTRTN          ; 50
1784 B6            255          byt PRNTMODE         ; 51
1785 01            256          byt PRNTDISP         ; 52
1786 20            257          byt PRNTSCRN         ; 53
1787 30            258          byt PRNTCLR          ; 54
1788 3A            259          byt PRNTCNTR         ; 55
1789 4C            260          byt PRNTBUFR         ; 56
178A 67            261          byt PRNTNIBL         ; 57
178B 70            262          byt PRNT1BYT         ; 58
178C 73            263          byt PRNT2BYT         ; 59
178D 6C            264          byt PRNTNBYT         ; 5A
178E 7F            265          byt PRNTADR          ; 5B
178F 97            266          byt PRNT1DEC         ; 5C
1790 9D            267          byt PRNT2DEC         ; 5D
1791 AA            268          byt PRNT3DEC         ; 5E
1792 B4            269          byt PRNTNDEC         ; 5F
1793            270          ;
1793            271          PRNTBLH:
1793 17            272          hby PRNTRTN          ; 50
1794 17            273          hby PRNTMODE         ; 51
1795 18            274          hby PRNTDISP         ; 52
1796 18            275          hby PRNTSCRN         ; 53
1797 18            276          hby PRNTCLR          ; 54
1798 18            277          hby PRNTCNTR         ; 55
1799 18            278          hby PRNTBUFR         ; 56
179A 18            279          hby PRNTNIBL         ; 57
179B 18            280          hby PRNT1BYT         ; 58
179C 18            281          hby PRNT2BYT         ; 59
179D 18            282          hby PRNTNBYT         ; 5A
179E 18            283          hby PRNTADR          ; 5B
179F 18            284          hby PRNT1DEC         ; 5C
17A0 18            285          hby PRNT2DEC         ; 5D
17A1 18            286          hby PRNT3DEC         ; 5E
17A2 18            287          hby PRNTNDEC         ; 5F
17A3            288          ;
17A3            289          ;
17A3            290          ; RTNCMD (0x50)
17A3            291          ;
17A3 BA            292          PRNTRTN tsx
17A4            293          ;
17A4 A5 FC        294          lda PRNTPTR
17A6 9D 01 01     295          sta STACK+1,X
17A9            296          ;
17A9 A5 FD        297          lda PRNTPTR+1
17AB 9D 02 01     298          sta STACK+2,X
17AE            299          ;
17AE A0 00        300          PRNTSAVY ldy #ZERO
17B0 A2 00        301          PRNTSAVX ldx #ZERO
17B2 A9 00        302          PRNTSAVA lda #ZERO
17B4            303          ;
17B4 18          304          clc
```

```

17B5          305 ;
17B5 60       306 PRINTRTN rts
17B6          307 ;
17B6          308 ;
17B6          309 ; MODECMD (0x51)
17B6          310 ;
17B6          311 ; 0 - 40 column TEXT mode
17B6          312 ; 1 - GRAPHICS mode
17B6          313 ; 2 - 80 column TEXT mode
17B6          314 ; 3 - exit 80 TEXT, enter 40 TEXT
17B6          315 ;
17B6 A5 FB    316 PRNTMODE lda DATAPTR+1
17B8 29 03    317          and #3
17BA          318 ;
17BA C9 02    319          cmp #TX80MODE
17BC D0 09    320          bne >1
17BE          321 ;
17BE A9 B3    322          lda #"3"
17C0 20 95 FE 323          jsr OUTPORT
17C3          324 ;
17C3 A9 02    325          lda #TX80MODE
17C5 D0 1A    326          bne >2
17C7          327 ;
17C7 C9 03    328 ^1      cmp #LV80MODE
17C9 D0 16    329          bne >2
17CB          330 ;
17CB AD 60 17 331          lda OUT80COL
17CE 85 32    332          sta INVFLG
17D0          333 ;
17D0 A9 9B    334          lda #ESCAPE
17D2 20 ED FD 335          jsr COUT
17D5          336 ;
17D5 A9 91    337          lda #CTRLQ
17D7 20 ED FD 338          jsr COUT
17DA          339 ;
17DA A9 B0    340          lda #"0"
17DC 20 95 FE 341          jsr OUTPORT
17DF          342 ;
17DF A9 00    343          lda #TEXTMODE
17E1          344 ;
17E1 8D 71 17 345 ^2      sta MODEVAL
17E4          346 ;
17E4 0A       347          asl
17E5 A8       348          tay
17E6          349 ;
17E6 B9 62 17 350          lda VTABADRS,Y
17E9 8D 0F 17 351          sta PRNTMOD1+1
17EC          352 ;
17EC B9 63 17 353          lda VTABADRS+1,Y
17EF 8D 10 17 354          sta PRNTMOD1+2
17F2          355 ;
17F2 B9 68 17 356          lda OUTADRS,Y
17F5 8D 52 17 357          sta PRNTOUT2+1
17F8          358 ;
17F8 B9 69 17 359          lda OUTADRS+1,Y
17FB 8D 53 17 360          sta PRNTOUT2+2
17FE          361 ;
17FE 4C EA 03 362          jmp HOOKDOS
1801          363 ;
1801          364 ;
1801          365 ; DISPCMD (0x52)

```

```
1801          366 ;
1801          367 ; 0 - Normal display
1801          368 ; 1 - Inverse display
1801          369 ;
1801 A4 FB    370 PRNTDISP ldy DATAPTR+1
1803          371 ;
1803 AD 71 17 372          lda MODEVAL
1806 C9 02    373          cmp #TX80MODE
1808 D0 05    374          bne >1
180A          375 ;
180A BE 60 17 376          ldx OUT80COL,Y
180D 86 32    377          stx INVFLG
180F          378 ;
180F 0A       379 ^1      asl
1810 65 FB    380          adc DATAPTR+1
1812          381 ;
1812 A8       382          tay
1813          383 ;
1813 B9 54 17 384          lda OUTTBL1,Y
1816 8D 4E 17 385          sta OUTMOD1+1
1819          386 ;
1819 B9 5A 17 387          lda OUTTBL2,Y
181C 8D 50 17 388          sta OUTMOD2+1
181F          389 ;
181F 60       390          rts
1820          391 ;
1820          392 ;
1820          393 ; SCRNCMD (0x53)
1820          394 ;
1820          395 ; 0 - INIT
1820          396 ; 1 - HOME
1820          397 ;
1820 2C 54 C0 398 PRNTSCRN bit LOWSCR
1823          399 ;
1823          400          .if DISPLAY=GRPHMODE
1823          401 ;
1823          402          lda MODEVAL
1823          403          cmp #GRPHMODE
1823          404          bne >2
1823          405 ;
1823          406          lda DATAPTR+1
1823          407          bne >1
1823          408 ;
1823          409          jmp SCRNNINIT
1823          410 ;
1823          411 ^1      jmp SCRNHOME
1823          412 ;
1823          413          .fi
1823          414 ;
1823 A5 FB     415 ^2      lda DATAPTR+1
1825 D0 06    416          bne >3
1827          417 ;
1827 2C 51 C0 418          bit TXTSET
182A          419 ;
182A 4C 2F FB 420          jmp INIT
182D          421 ;
182D 4C 58 FC 422 ^3      jmp HOME
1830          423 ;
1830          424 ;
1830          425 ; CLRCMD (0x54)
1830          426 ;
```

```

1830          427 ; 0 - EOL
1830          428 ; 1 - EOP
1830          429 ;
1830          430 PRNTCLR:
1830          431      .if DISPLAY=GRPHMODE
1830          432 ;
1830          433      lda MODEVAL
1830          434      cmp #GRPHMODE
1830          435      bne >2
1830          436 ;
1830          437      lda DATAPTR+1
1830          438      bne >1
1830          439 ;
1830          440      jmp SCRNEOL
1830          441 ;
1830          442 ^1      jmp SCRNEOP
1830          443 ;
1830          444      .fi
1830          445 ;
1830 A5 FB          446 ^2      lda DATAPTR+1
1832 D0 03        447      bne >3
1834             448 ;
1834 4C 9C FC      449      jmp CLREOL
1837             450 ;
1837 4C 42 FC      451 ^3      jmp CLREOP
183A             452 ;
183A             453 ;
183A             454 ; CNTRCMD (0x55)
183A             455 ;
183A A9 9F        456 PRNTCNTR lda #SPACE-1
183C             457 ;
183C C8           458 ^1      iny
183D             459 ;
183D D1 FC        460      cmp (PRNTPTR),Y
183F 90 FB        461      bcc <1
1841             462 ;
1841 98           463      tya
1842             464 ;
1842 49 FF        465      eor #NEGONE
1844 65 21        466      adc WNDWIDTH
1846             467 ;
1846 4A           468      lsr
1847             469 ;
1847 65 20        470      adc WNDLFT
1849 85 24        471      sta CH
184B             472 ;
184B 60           473      rts
184C             474 ;
184C             475 ;
184C             476 ; BUFRCMD (0x56)
184C             477 ;
184C             478 ; 0 - direct address
184C             479 ; 1 - indirect address
184C             480 ;
184C AD 72 17     481 PRNTBUFR lda FRMTVAL
184F F0 0B        482      beq >1
1851             483 ;
1851 B1 FA        484      lda (DATAPTR),Y
1853 AA           485      tax
1854             486 ;
1854 C8           487      iny

```

```
1855          488 ;
1855 B1 FA      489          lda (DATAPTR),Y
1857          490 ;
1857 86 FA      491          stx DATAPTR
1859 85 FB      492          sta DATAPTR+1
185B          493 ;
185B 88        494          dey
185C          495 ;
185C B1 FA      496 ^1          lda (DATAPTR),Y
185E F0 06     497          beq >2
1860          498 ;
1860 20 4D 17   499          jsr PRNTOUT
1863          500 ;
1863 C8        501          iny
1864 D0 E6     502          bne PRNTBUFR
1866          503 ;
1866 60        504 ^2          rts
1867          505 ;
1867          506 ;
1867          507 ; NIBLCMD (0x57)
1867          508 ;
1867 B1 FA      509 PRNTNIBL lda (DATAPTR),Y
1869          510 ;
1869 4C 04 19   511          jmp PRNTHEx
186C          512 ;
186C          513 ;
186C          514 ; BYT1CMD (0x58)
186C          515 ; BYT2CMD (0x59)
186C          516 ; BYTNCMD (0x5A)
186C          517 ;
186C AE 72 17   518 PRNTNBYT ldx FRMTVAL
186F          519 ;
186F 2C 00 00   520          bit *-*
1872          521          dfs !-2
1870          522 ;
1870 A2 01      523 PRNT1BYT ldx #1
1872          524 ;
1872 2C 00 00   525          bit *-*
1875          526          dfs !-2
1873          527 ;
1873 A2 02      528 PRNT2BYT ldx #2
1875          529 ;
1875 B1 FA      530 PRNTBYT  lda (DATAPTR),Y
1877          531 ;
1877 20 FB 18   532          jsr PRNTBYTE
187A          533 ;
187A C8        534          iny
187B          535 ;
187B CA        536          dex
187C D0 F7     537          bne PRNTBYT
187E          538 ;
187E 60        539          rts
187F          540 ;
187F          541 ;
187F          542 ; ADRCMD (0x5B)
187F          543 ;
187F          544 ; 0 - direct address
187F          545 ; 1 - indirect address
187F          546 ;
187F AD 72 17   547 PRNTADR  lda FRMTVAL
1882 D0 06     548          bne >1
```

```

1884          549 ;
1884 A6 FA    550      ldx DATAPTR
1886 A5 FB    551      lda DATAPTR+1
1888          552 ;
1888 90 06     553      bcc >2                ; always taken
188A          554 ;
188A B1 FA    555 ^1      lda (DATAPTR),Y
188C AA       556      tax
188D          557 ;
188D C8       558      iny
188E          559 ;
188E B1 FA    560      lda (DATAPTR),Y
1890          561 ;
1890 20 FB 18  562 ^2      jsr PRNTBYTE
1893          563 ;
1893 8A        564      txa
1894          565 ;
1894 4C FB 18  566      jmp PRNTBYTE
1897          567 ;
1897          568 ;
1897          569 ; DEC1CMD (0x5C)
1897          570 ;
1897 20 11 19  571 PRNT1DEC jsr HEXTODEC
189A          572 ;
189A 4C 04 19  573      jmp PRNTHex
189D          574 ;
189D          575 ;
189D          576 ; DEC2CMD (0x5D)
189D          577 ;
189D 20 11 19  578 PRNT2DEC jsr HEXTODEC
18A0          579 ;
18A0          580 ;
18A0 8A        581 PRNTDEC  txa
18A1 20 04 19  582      jsr PRNTHex
18A4          583 ;
18A4 AD 6E 17  584      lda PRNTSAV
18A7          585 ;
18A7 4C 04 19  586      jmp PRNTHex
18AA          587 ;
18AA          588 ;
18AA          589 ; DEC3CMD (0x5E)
18AA          590 ;
18AA 20 11 19  591 PRNT3DEC jsr HEXTODEC
18AD          592 ;
18AD 98        593      tya
18AE          594 ;
18AE 20 04 19  595      jsr PRNTHex
18B1          596 ;
18B1 4C A0 18  597      jmp PRNTDEC
18B4          598 ;
18B4          599 ;
18B4          600 ; DECNCMD (0x5F)
18B4          601 ;
18B4          602 ; 0x00 - no left padding
18B4          603 ; 0x20 - data in high/low order, otherwise low/high order
18B4          604 ; 0x40 - zero left padding
18B4          605 ; 0x80 - space left padding
18B4          606 ;
18B4          607 ; data in high/low order
18B4          608 ;
18B4 B1 FA    609 PRNTNDEC lda (DATAPTR),Y

```

```

18B6 AA          610          tax
18B7            611          ;
18B7 C8          612          iny
18B8            613          ;
18B8 B1 FA       614          lda (DATAPTR),Y
18BA A8          615          tay
18BB            616          ;
18BB AD 72 17    617          lda FRMTVAL
18BE 29 20       618          and #HIGHLOW
18C0 D0 09       619          bne >1
18C2            620          ;
18C2 8E 6F 17    621          stx PRNTNUM
18C5 8C 70 17    622          sty PRNTNUM+1
18C8            623          ;
18C8 4C D1 18    624          jmp >2
18CB            625          ;
18CB 8C 6F 17    626          ^1 sty PRNTNUM
18CE 8E 70 17    627          stx PRNTNUM+1
18D1            628          ;
18D1 A2 03       629          ^2 ldx #3
18D3            630          ;
18D3 2C 72 17    631          bit FRMTVAL
18D6 70 18       632          bvs >6
18D8            633          ;
18D8 20 2B 19    634          ^3 jsr GETDIGIT
18DB D0 16       635          bne >7
18DD            636          ;
18DD 2C 72 17    637          bit FRMTVAL
18E0 10 05       638          bpl >4
18E2            639          ;
18E2 A9 A0       640          lda #SPACE
18E4 20 4D 17    641          jsr PRNTOUT
18E7            642          ;
18E7 CA          643          ^4 dex
18E8 10 EE       644          bpl <3
18EA            645          ;
18EA AD 6F 17    646          ^5 lda PRNTNUM
18ED            647          ;
18ED 4C 04 19    648          jmp PRNTHEx
18F0            649          ;
18F0 20 2B 19    650          ^6 jsr GETDIGIT
18F3            651          ;
18F3 20 04 19    652          ^7 jsr PRNTHEx
18F6            653          ;
18F6 CA          654          dex
18F7 10 F7       655          bpl <6
18F9            656          ;
18F9 30 EF       657          bmi <5          ; always taken
18FB            658          ;
18FB            659          ;
18FB 48          660          PRNTBYTE pha
18FC            661          ;
18FC 4A          662          lsr
18FD 4A          663          lsr
18FE 4A          664          lsr
18FF 4A          665          lsr
1900            666          ;
1900 20 06 19    667          jsr PRNTHEx2
1903            668          ;
1903 68          669          pla
1904            670          ;

```

```
1904          671 ;
1904 29 0F      672 PRNTHEx and #NIBLMASK
1906          673 ;
1906 09 B0      674 PRNTHEx2 ora #"0"
1908          675 ;
1908 C9 BA      676          cmp #"9"+1
190A 90 02      677          bcc >1
190C          678 ;
190C 69 06      679          adc #6
190E          680 ;
190E 4C 4D 17   681 ^1          jmp PRNTOUT
1911          682 ;
1911          683 ;
1911 A2 00      684 HEXTODEC ldx #ZERO
1913          685 ;
1913 B1 FA      686          lda (DATAPTR),Y
1915          687 ;
1915 C9 64      688 ^1          cmp #100
1917 90 05      689          bcc >2
1919          690 ;
1919 E9 64      691          sbc #100
191B          692 ;
191B C8         693          iny
191C D0 F7      694          bne <1
191E          695 ;
191E C9 0A      696 ^2          cmp #10
1920 90 05      697          bcc >3
1922          698 ;
1922 E9 0A      699          sbc #10
1924          700 ;
1924 E8         701          inx
1925 D0 F7      702          bne <2
1927          703 ;
1927 8D 6E 17   704 ^3          sta PRNTSAV
192A          705 ;
192A 60         706          rts
192B          707 ;
192B          708 ;
192B A0 00      709 GETDIGIT ldy #ZERO
192D          710 ;
192D 38         711 ^1          sec
192E          712 ;
192E AD 6F 17   713          lda PRNTNUM
1931 FD 5E 19   714          sbc DECTBLL+1,X
1934 48         715          pha
1935          716 ;
1935 AD 70 17   717          lda PRNTNUM+1
1938 FD 63 19   718          sbc DECTBLH+1,X
193B 90 0A      719          bcc >2
193D          720 ;
193D 8D 70 17   721          sta PRNTNUM+1
1940          722 ;
1940 68         723          pla
1941 8D 6F 17   724          sta PRNTNUM
1944          725 ;
1944 C8         726          iny
1945 D0 E6      727          bne <1
1947          728 ;
1947 68         729 ^2          pla
1948          730 ;
1948 98         731          tya
```

```
1949          732 ;
1949 60        733          rts
194A          734 ;
194A          735 ;
194A          736 PRNTGRPH:
194A          737          .if DISPLAY=GRPHMODE
194A          738 ;
194A          739          cmp #SPACE
194A          740          bcs >3
194A          741 ;
194A          742          cmp #ASCIFLAG
194A          743          bcc >3
194A          744 ;
194A          745          cmp #BELLCHAR
194A          746          bne >1
194A          747 ;
194A          748          jmp BELL
194A          749 ;
194A          750 ^1        cmp #RETURN
194A          751          beq >2
194A          752 ;
194A          753          cmp #LARROW
194A          754          bne >1
194A          755 ;
194A          756          dec CH
194A          757 ;
194A          758 ^1        cmp #DARROW
194A          759          bne >1
194A          760 ;
194A          761          inc CV
194A          762 ;
194A          763 ^1        cmp #UARROW
194A          764          bne >1
194A          765 ;
194A          766          dec CV
194A          767 ;
194A          768 ^1        cmp #RARROW
194A          769          bne >1
194A          770 ;
194A          771          inc CH
194A          772 ;
194A          773 ^1        rts
194A          774 ;
194A          775 ^2        lda WNDLFT
194A          776          sta CH
194A          777 ;
194A          778          inc CV
194A          779 ;
194A          780          lda CV
194A          781          cmp WNDBTM
194A          782          bcc >8
194A          783 ;
194A          784          jmp SCROLL
194A          785 ;
194A          786 ^3        stx SCRNSAVX+1
194A          787          sty SCRNSAVY+1
194A          788 ;
194A          789          ldx /CHARTBL
194A          790 ;
194A          791          ldy #ZERO
194A          792 ;
```

```
194A      793      asl
194A      794      bcs >4
194A      795      ;
194A      796      ldy #INVRMASK
194A      797      ;
194A      798      sec
194A      799      ;
194A      800      ^4      sty SCRNMOD2+1
194A      801      ;
194A      802      sbc #$40
194A      803      ;
194A      804      asl
194A      805      bcc >5
194A      806      ;
194A      807      ldx /CHARTBL+$200
194A      808      ;
194A      809      ^5      asl
194A      810      bcc >6
194A      811      ;
194A      812      inx
194A      813      ;
194A      814      clc
194A      815      ;
194A      816      ^6      adc #CHARTBL
194A      817      sta SCRNMOD1+1
194A      818      bcc >7
194A      819      ;
194A      820      inx
194A      821      ;
194A      822      ^7      stx SCRNMOD1+2
194A      823      ;
194A      824      clc
194A      825      ;
194A      826      ldx CV
194A      827      ;
194A      828      lda YBASELO,X
194A      829      sta SCRNMOD3+1
194A      830      ;
194A      831      lda YBASEHI,X
194A      832      sta SCRNMOD3+2
194A      833      ;
194A      834      ldy CH
194A      835      ldx #CHARCELL
194A      836      ;
194A      837      SCRNMOD1 lda *-,X
194A      838      ;
194A      839      SCRNMOD2 eor #ZERO
194A      840      ;
194A      841      SCRNMOD3 sta *-,Y
194A      842      ;
194A      843      lda SCRNMOD3+2
194A      844      adc #NEXTLINE
194A      845      sta SCRNMOD3+2
194A      846      ;
194A      847      dex
194A      848      bpl SCRNMOD1
194A      849      ;
194A      850      iny
194A      851      ;
194A      852      SCRNMOD4 cpy #MAXWDTH
194A      853      bcs <2
```

```
194A      854      ;
194A      855      sty CH
194A      856      ;
194A      857      SCRNSAVY ldy #ZERO
194A      858      SCRNSAVX ldx #ZERO
194A      859      ;
194A      860      ^8      rts
194A      861      ;
194A      862      ;
194A      863      SCRNINIT bit HIRES
194A      864      bit MIXCLR
194A      865      bit TXTCLR
194A      866      ;
194A      867      clc
194A      868      ;
194A      869      lda #MAXWDTH
194A      870      adc WNDLFT
194A      871      sta SCRNMOD4+1
194A      872      sta EOLMOD1+1
194A      873      sta SCRLMOD3+1
194A      874      ;
194A      875      rts
194A      876      ;
194A      877      ;
194A      878      SCROLL   lda WNDLFT
194A      879      sta CH
194A      880      ;
194A      881      ldx WNDBTM
194A      882      dex
194A      883      stx SCRLMOD4+1
194A      884      ;
194A      885      ldx WNDTOP
194A      886      stx CV
194A      887      ;
194A      888      ^1      lda YBASELO,X
194A      889      sta SCRLMOD2+1
194A      890      ;
194A      891      lda YBASEHI,X
194A      892      sta SCRLMOD2+2
194A      893      ;
194A      894      inx
194A      895      stx CV
194A      896      ;
194A      897      lda YBASELO,X
194A      898      sta SCRLMOD1+1
194A      899      ;
194A      900      lda YBASEHI,X
194A      901      sta SCRLMOD1+2
194A      902      ;
194A      903      ldx #CHARCELL
194A      904      ;
194A      905      ^2      ldy CH
194A      906      ;
194A      907      SCRLMOD1 lda *-,Y
194A      908      SCRLMOD2 sta *-,Y
194A      909      ;
194A      910      iny
194A      911      ;
194A      912      SCRLMOD3 cpy #MAXWDTH
194A      913      bcc SCRLMOD1
194A      914      ;
```

```
194A          915          lda SCRLMOD1+2
194A          916          adc #NEXTLINE-1
194A          917          sta SCRLMOD1+2
194A          918          ;
194A          919          lda SCRLMOD2+2
194A          920          adc #NEXTLINE
194A          921          sta SCRLMOD2+2
194A          922          ;
194A          923          dex
194A          924          bpl <2
194A          925          ;
194A          926          ldx CV
194A          927  SCRLMOD4 cpx #*- *
194A          928          bne <1
194A          929          ;
194A          930          ;
194A          931  SCRNEOL ldx CV
194A          932          ;
194A          933          lda YBASELO,X
194A          934          sta EOLMOD2+1
194A          935          ;
194A          936          lda YBASEHI,X
194A          937          sta EOLMOD2+2
194A          938          ;
194A          939          ldx #CHARCELL
194A          940          ;
194A          941          ^1 ldy CH
194A          942          ;
194A          943          lda #ZERO
194A          944          ;
194A          945  EOLMOD1 cpy #MAXWDTH
194A          946          bcs >2
194A          947          ;
194A          948  EOLMOD2 sta *-*,Y
194A          949          ;
194A          950          iny
194A          951          bne EOLMOD1
194A          952          ;
194A          953          ^2 lda EOLMOD2+2
194A          954          adc #NEXTLINE-1
194A          955          sta EOLMOD2+2
194A          956          ;
194A          957          dex
194A          958          bpl <1
194A          959          ;
194A          960          rts
194A          961          ;
194A          962          ;
194A          963  SCRNHOM lda WNDLFT
194A          964          sta CH
194A          965          ;
194A          966          lda WNDTOP
194A          967          sta CV
194A          968          ;
194A          969          ;
194A          970  SCRNEOP jsr SCRNEOL
194A          971          ;
194A          972          lda CH
194A          973          pha
194A          974          ;
194A          975          lda CV
```

```
194A      976      pha
194A      977      ;
194A      978      lda WNDLFT
194A      979      sta CH
194A      980      ;
194A      981      ^1      inc CV
194A      982      ;
194A      983      lda CV
194A      984      cmp WNDBTM
194A      985      bcs >2
194A      986      ;
194A      987      jsr SCRNEOL
194A      988      bmi <1
194A      989      ;
194A      990      ^2      pla
194A      991      sta CV
194A      992      ;
194A      993      pla
194A      994      sta CH
194A      995      ;
194A      996      rts
194A      997      ;
194A      998      ;
194A      999      YBASELO:
194A      1000     hex 0080008000800080
194A      1001     hex 28A828A828A828A8
194A      1002     hex 50D050D050D050D0
194A      1003     ;
194A      1004     YBASEHI:
194A      1005     hex 2020212122222323
194A      1006     hex 2020212122222323
194A      1007     hex 2020212122222323
194A      1008     ;
194A      1009     ;
194A      1010     CHARTBL:
194A      1011     hex 0000000000000000 ;
194A      1012     hex 0008000808080808 ; !
194A      1013     hex 0000000000141414 ; "
194A      1014     hex 0014143E143E1414 ; #
194A      1015     hex 00081E281C0A3C08 ; $
194A      1016     hex 0030320408102606 ; %
194A      1017     hex 002C122A040A0A04 ; &
194A      1018     hex 0000000000080808 ; ^
194A      1019     hex 0010080404040810 ; (
194A      1020     hex 0004081010100804 ; )
194A      1021     hex 00082A1C081C2A08 ; *
194A      1022     hex 000008083E080800 ; +
194A      1023     hex 0408080000000000 ; ,
194A      1024     hex 000000003E000000 ; -
194A      1025     hex 0008000000000000 ; .
194A      1026     hex 0000020408102000 ; /
194A      1027     ;
194A      1028     hex 001C22262A32221C ; 0
194A      1029     hex 001C080808080C08 ; 1
194A      1030     hex 003E02041820221C ; 2
194A      1031     hex 001C22201810203E ; 3
194A      1032     hex 0010103E12141810 ; 4
194A      1033     hex 001C2220201E023E ; 5
194A      1034     hex 001C22221E020438 ; 6
194A      1035     hex 000404040810203E ; 7
194A      1036     hex 001C22221C22221C ; 8
```

```
194A      1037      hex 000E10203C22221C ; 9
194A      1038      hex 0000080008000000 ; :
194A      1039      hex 0408080008000000 ; ;
194A      1040      hex 0020100804081020 ; <
194A      1041      hex 0000003E003E0000 ; =
194A      1042      hex 0002040810080402 ; >
194A      1043      hex 000800089820221C ; ?
194A      1044      ;
194A      1045      hex 003C021A2A3A221C ; @
194A      1046      hex 0022223E22221408 ; A
194A      1047      hex 001E22221E22221E ; B
194A      1048      hex 001C22020202221C ; C
194A      1049      hex 001E22222222221E ; D
194A      1050      hex 003E02021E02023E ; E
194A      1051      hex 000202021E02023E ; F
194A      1052      hex 003C22320202023C ; G
194A      1053      hex 002222223E222222 ; H
194A      1054      hex 001C08080808081C ; I
194A      1055      hex 001C222020202020 ; J
194A      1056      hex 0022120A060A1222 ; K
194A      1057      hex 003E020202020202 ; L
194A      1058      hex 002222222A2A3622 ; M
194A      1059      hex 002222322A262222 ; N
194A      1060      hex 001C22222222221C ; O
194A      1061      ;
194A      1062      hex 000202021E22221E ; P
194A      1063      hex 002C122A2222221C ; Q
194A      1064      hex 0022120A1E22221E ; R
194A      1065      hex 001C22201C02221C ; S
194A      1066      hex 000808080808083E ; T
194A      1067      hex 001C222222222222 ; U
194A      1068      hex 0008142222222222 ; V
194A      1069      hex 0022362A2A222222 ; W
194A      1070      hex 0022221408142222 ; X
194A      1071      hex 0008080808142222 ; Y
194A      1072      hex 003E02040810203E ; Z
194A      1073      hex 003C04040404043C ; [
194A      1074      hex 0000201008040200 ; \
194A      1075      hex 001E10101010101E ; ]
194A      1076      hex 0000000000221408 ; ^
194A      1077      hex 7F00000000000000 ; _
194A      1078      ;
194A      1079      hex 0000000000100804 ; `
194A      1080      hex 003C223C201C0000 ; a
194A      1081      hex 001E2222221E0202 ; b
194A      1082      hex 003C0202023C0000 ; c
194A      1083      hex 003C2222223C2020 ; d
194A      1084      hex 003C023E221C0000 ; e
194A      1085      hex 000404041E042418 ; f
194A      1086      hex 1C203C22221C0000 ; g
194A      1087      hex 00222222221E0202 ; h
194A      1088      hex 001C0808080C0008 ; i
194A      1089      hex 0C12101010180010 ; j
194A      1090      hex 0022120E12220202 ; k
194A      1091      hex 001C08080808080C ; l
194A      1092      hex 00222A2A2A360000 ; m
194A      1093      hex 00222222221E0000 ; n
194A      1094      hex 001C2222221C0000 ; o
194A      1095      ;
194A      1096      hex 02021E22221E0000 ; p
194A      1097      hex 20203C22223C0000 ; q
```

```
194A      1098      hex 00020202063A0000 ; r
194A      1099      hex 001E201C023C0000 ; s
194A      1100      hex 00182404041E0404 ; t
194A      1101      hex 002C322222220000 ; u
194A      1102      hex 0008142222220000 ; v
194A      1103      hex 00362A2A22220000 ; w
194A      1104      hex 0022140814220000 ; x
194A      1105      hex 1C203C2222220000 ; y
194A      1106      hex 003E0408103E0000 ; z
194A      1107      hex 0030080804080830 ; {
194A      1108      hex 0808080808080808 ; |
194A      1109      hex 0006080810080806 ; }
194A      1110      hex 0000000000001A2C ; ~
194A      1111      hex 00002A142A142A00 ;
194A      1112      ;
194A      1113      ;
194A      1114      .fi
194A      1115      ;
194A      1116      ;
194A      1117      icl "CLNTDATA.L"
```

```
LLOAD CLNTDATA.L,A$4000
```

```

194A      1          ttl "Client Data Source Code, CLNTDATA.L"
194A      2      ;
194A      3      ;
194A      4      ; CLNTDATA.L
194A      5      ;
194A      6      ;
194A      7      STACKPTR dfs 1,ZERO
194B      8      SSCSNUM  dfs 1,ZERO
194C      9      SLOT     dfs 1,ZERO
194D     10      ENDTRK   dfs 1,ZERO
194E     11      ENDSEC   dfs 1,ZERO
194F     12      ;
194F     13      ERRORVAL dfs 1,ZERO
1950     14      ;
1950     15      LASTTRK  dfs 1,ZERO
1951     16      LASTSEC  dfs 1,ZERO
1952     17      GOODSECS dfs 1,ZERO
1953     18      ;
1953     19      NRETRIES dfs 1,3
1954     20      RETRYCNT dfs 1,ZERO
1955     21      ;
1955     22      BUFRTRKS dfs 1,ZERO
1956     23      BUFRFLAG dfs 1,ZERO
1957     24      TRACKCNT dfs 1,ZERO
1958     25      ;
1958     26      OPTION   dfs 1,ZERO
1959     27      ;
1959     28      COUNT    dfs 1,ZERO
195A     29      COUNT2   dfs 1,ZERO
195B     30      ;
195B A0 00      31      CHARBUFR byt SPACE,ZERO
195D     32      ;
195D 01 0A 64   33      DECTBL  byt 1,10,100,1000,10000
1960 E8 10
1962 00 00 00   34      DECTBLH hby 1,10,100,1000,10000
1965 03 27
1967     35      ;
1967 64 0A 14   36      VOLTBL  byt 100,10,20,30,40
196A 1E 28
196C 32 3C 46   37          byt 50,60,70,80,90
196F 50 5A
1971     38      ;
1971 00      39      SECNDX   byt 0
1972 10 20      40      SECTORS byt 16,32
1974 0A 05      41      BUFFERS byt 10,5
1976 00 FF      42      BUFLAGS byt ZERO,NEGONE
1978     43      ;
1978 1E 2E 3E   44      TRACKTBL hex 1E2E3E4E5E
197B 4E 5E
197D 6E 7E 8E   45          hex 6E7E8E9EAE
1980 9E AE
1982     46      ;
1982     47      XFERBYTS dfs BUFRSIZE,ZERO
1985     48      SECTIME  dfs BUFRSIZE,ZERO
1988     49      ;
1988     50      CLKBUFR1 dfs CLKSIZE,ZERO
198E     51      CLKBUFR2 dfs CLKSIZE,ZERO
1994     52      ;
1994     53      ;
1994     54      CSCTBL1:

```

```

1994 DC 0C          55          adr CSCMOD01
1996 E3 0C          56          adr CSCMOD02
1998 01 0D          57          adr CSCMOD03
199A 08 0D          58          adr CSCMOD04
199C 26 0D          59          adr CSCMOD05
199E 2D 0D          60          adr CSCMOD06
19A0 4B 0D          61          adr CSCMOD07
19A2 52 0D          62          adr CSCMOD08
19A4 70 0D          63          adr CSCMOD09
19A6 77 0D          64          adr CSCMOD10
19A8 93 0D          65          adr CSCMOD11
19AA AF 0D          66          adr CSCMOD12
19AC CD 0D          67          adr CSCMOD13
19AE D3 0D          68          adr CSCMOD14
19B0 F1 0D          69          adr CSCMOD15
19B2              70          ;
19B2              71          CSCTBL2:
19B2 85 0A          72          adr CSCSUB01
19B4 9F 0A          73          adr CSCSUB02
19B6 B9 0A          74          adr CSCSUB03
19B8 D3 0A          75          adr CSCSUB04
19BA ED 0A          76          adr CSCSUB05
19BC 0D 0B          77          adr CSCSUB06
19BE 2D 0B          78          adr CSCSUB07
19C0 4B 0B          79          adr CSCSUB08
19C2 69 0B          80          adr CSCSUB09
19C4 83 0B          81          adr CSCSUB10
19C6 9D 0B          82          adr CSCSUB11
19C8 AD 0B          83          adr CSCSUB12
19CA BD 0B          84          adr CSCSUB13
19CC D7 0B          85          adr CSCSUB14
19CE EE 0B          86          adr CSCSUB15
19D0              87          ;
001E              88          OPTIONS equ CSCTBL2-CSCTBL1
000F              89          NOPTION equ OPTIONS/2
19D0              90          ;
19D0              91          ;
19D0 C3 EC E9      92          XFER1      asc "Client->Server"
19D3 E5 EE F4
19D6 AD BE D3
19D9 E5 F2 F6
19DC E5 F2
19DE 00              93
19DF D3 E5 F2      94          XFER2      asc "Server->Client"
19E2 F6 E5 F2
19E5 AD BE C3
19E8 EC E9 E5
19EB EE F4
19ED 00              95          byt ZERO
19EE              96          ;
19EE D3 E5 F2      97          NAME1      asc "Server"
19F1 F6 E5 F2
19F4 00              98          byt ZERO
19F5 C3 EC E9      99          NAME2      asc "Client"
19F8 E5 EE F4
19FB 00              100         byt ZERO
19FC              101         ;
19FC D7 F2 E9      102         INIT1      asc "Write Check"
19FF F4 E5 A0
1A02 C3 E8 E5
1A05 E3 EB

```

```

1A07 00          103          byt ZERO
1A08 C9 EE E9    104  INIT2    asc "Initialize "
1A0B F4 E9 E1
1A0E EC E9 FA
1A11 E5 A0
1A13 00          105          byt ZERO
1A14             106  ;
1A14 C3 EC E9    107  STAT1    asc "Client Waiting"
1A17 E5 EE F4
1A1A A0 D7 E1
1A1D E9 F4 E9
1A20 EE E7
1A22 00          108          byt ZERO
1A23 D3 F9 EE    109  STAT2    asc "Synchronized "
1A26 E3 E8 F2
1A29 EF EE E9
1A2C FA E5 E4
1A2F A0 A0
1A31 00          110          byt ZERO
1A32             111  ;
1A32 D2 E5 E1    112  RUN1     asc "Ready to Run "
1A35 E4 F9 A0
1A38 F4 EF A0
1A3B D2 F5 EE
1A3E A0
1A3F 00          113          byt ZERO
1A40 C4 E1 F4    114  RUN2     asc "Data Transfer"
1A43 E1 A0 D4
1A46 F2 E1 EE
1A49 F3 E6 E5
1A4C F2
1A4D 00          115          byt ZERO
1A4E D1 F5 E9    116  RUN3     asc "Quit Program "
1A51 F4 A0 D0
1A54 F2 EF E7
1A57 F2 E1 ED
1A5A A0
1A5B 00          117          byt ZERO
1A5C             118  ;
000E             119  RUNLEN    equ RUN2-RUN1
1A5C             120  ;
1A5C D4 F2 E1    121  RWTSEERR1 asc "Track Init Error"
1A5F E3 EB A0
1A62 C9 EE E9
1A65 F4 A0 C5
1A68 F2 F2 EF
1A6B F2
1A6C 00          122          byt ZERO
1A6D D7 F2 E9    123  RWTSEERR2 asc "Write Protect Error"
1A70 F4 E5 A0
1A73 D0 F2 EF
1A76 F4 E5 E3
1A79 F4 A0 C5
1A7C F2 F2 EF
1A7F F2
1A80 00          124          byt ZERO
1A81 D6 EF EC    125  RWTSEERR3 asc "Volume Number Error"
1A84 F5 ED E5
1A87 A0 CE F5
1A8A ED E2 E5
1A8D F2 A0 C5

```

```

1A90 F2 F2 EF
1A93 F2
1A94 00          126          byt ZERO
1A95 C9 EE F0    127  RWTSEERR4 asc "Input Value Error"
1A98 F5 F4 A0
1A9B D6 E1 EC
1A9E F5 E5 A0
1AA1 C5 F2 F2
1AA4 EF F2
1AA6 00          128          byt ZERO
1AA7 C2 E1 E4    129  RWTSEERR5 asc "Bad Drive Error"
1AAA A0 C4 F2
1AAD E9 F6 E5
1AB0 A0 C5 F2
1AB3 F2 EF F2
1AB6 00          130          byt ZERO
1AB7          131  ;
1AB7 5C 1A       132  RWTSADRS  adr RWTSEERR1
1AB9 6D 1A       133          adr RWTSEERR2
1ABB 81 1A       134          adr RWTSEERR3
1ABD 95 1A       135          adr RWTSEERR4
1ABF A7 1A       136          adr RWTSEERR5
1AC1          137  ;
1AC1          138  ;
1AC1          139  ; Configuration Data Control Block (CFDCB)
1AC1          140  ;
1AC1          141  CFDCBTBL:
1AC1 00          142  VOLXFER   hex 00          ; Reader=0, Writer=1
1AC2 00          143  INITFLAG  hex 00          ; No=0, Yes=1
1AC3 23          144  VOLTRKS   hex 23          ; 18 - 48
1AC4 10          145  VOLSECS   hex 10          ; 16 or 32
1AC5 03          146  CLNTRTRY  hex 03          ; 1 to 9
1AC6 06          147  CLNTSLOT  hex 06          ; 1 to 7
1AC7 01          148  CLNTDRV   hex 01          ; 1 to 81
1AC8 00          149  CLNTVOL   hex 00          ; 0 to 255
1AC9 04          150  CLNTPHAS  hex 04          ; 1 to 16
1ACA 03          151  SRVRRTY   hex 03          ; 1 to 9
1ACB 06          152  SRVRSLOT  hex 06          ; 1 to 7
1ACC 01          153  SRVRDRV   hex 01          ; 1 to 81
1ACD 00          154  SRVRVOL   hex 00          ; 0 to 255
1ACE 04          155  SRVRPHAS  hex 04          ; 1 to 16
1ACF 00          156  CLSRSTAT  hex 00          ; Wait=0, Sync=1
1AD0 00          157  CLSRRUN   hex 00          ; Wait=0, Run=1, Quit=2
1AD1 00          158  CFDCBXOR  hex 00          ; checksum xor
1AD2 00          159  CFDCBSUM  hex 00          ; checksum add
1AD3          160  ;
0012          161  CFDCBLEN  equ *-CFDCBTBL
1AD3          162  ;
1AD3          163  ;
1AD3          164  ; Track/Sector Data Control Block (TSDCB)
1AD3          165  ;
1AD3          166  TSDCBTBL:
1AD3 00          167  TSTRACK   hex 00          ; 0 to 47
1AD4 00          168  TSSECTOR  hex 00          ; 0 to 31
1AD5 00          169  TSDCBXOR  hex 00          ; 0 to 255
1AD6 00          170  TSDCBSUM  hex 00          ; 0 to 255
1AD7          171  ;
0004          172  TSDCBLEN  equ *-TSDCBTBL
1AD7          173  ;
1AD7          174  ;
1AD7          175  ; Transfer Data Control Block (TXDCB)

```

```

1AD7      176      ;
1AD7      177      TXDCBTBL:
1AD7 00 00    178      TXDCBBYT hex 0000          ; 0<n+2<512
1AD9 00      179      TXDCBXOR hex 00          ; 0 to 255
1ADA 00      180      TXDCBSUM hex 00          ; 0 to 255
1ADB      181      ;
0004      182      TXDCBLEN equ *-TXDCBTBL
1ADB      183      ;
1ADB      184      ;
1ADB      185      ; Read/Write Data Control Block (RWDCB)
1ADB      186      ;
1ADB      187      RWDCBTBL:
1ADB 00      188      RWTRACK hex 00          ; 0 to 47
1ADC 00      189      NTRACKS hex 00          ; 1 to BUFRTKRS
1ADD 00      190      RWDCBXOR hex 00          ; 0 to 255
1ADE 00      191      RWDCBSUM hex 00          ; 0 to 255
1ADF      192      ;
0004      193      RWDCBLEN equ *-RWDCBTBL
1ADF      194      ;
1ADF      195      ;
1ADF      196      ; RWTS I/O Context Block
1ADF      197      ;
1ADF      198      TBLTYPE dfs 1,1
1AE0      199      SNUM16 dfs 1,ZERO
1AE1      200      DNUM dfs 1,ZERO
1AE2      201      VNUM dfs 1,ZERO
1AE3      202      TNUM dfs 1,ZERO
1AE4      203      SNUM dfs 1,ZERO
1AE5 00 00    204      DCTADR adr *-*
1AE7 00 00    205      BUFADR adr *-*
1AE9      206      RWTSPHAS dfs 1,ZERO
1AEA      207      BYTCNT dfs 1,ZERO
1AEB      208      CMDCODE dfs 1,ZERO
1AEC      209      ERRCODE dfs 1,ZERO
1AED      210      VFND dfs 1,ZERO
1AEE      211      SFND dfs 1,ZERO
1AEF      212      DFND dfs 1,ZERO
1AF0      213      ;
0011      214      TBLSIZE equ *-TBLTYPE
1AF0      215      ;
1AF0      216      ;

```

BSAVE CLIENT,A\$0900,B,L\$11F0

```

1AF0      217      usr CLIENT
1AF0      218      ;
1AF0      219      ;
1AF0      220      dfs PAGESIZE-*&NEGONE,ZERO
1B00      221      ;
1B00      222      ;
1B00      223      DATABUFR dfs PAGESIZE
1C00      224      ;
1C00      225      ;
1C00      226      stt "CLIENT Symbol Table"
1C00      227      ;
1C00      228      ;
1C00      229      end 111

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\*\*\* End of Assembly

Symbol List starts at 0x7800, ends at 0x893A, used 0x113A, remaining 0x2B96

## Symbols unsorted:

ZXOR	0010	ZSUM	0011	ZBYTES	0012	ZMATCH	0014	ZSAVA	0015
WNDLFT	0020	WNDWDTH	0021	WNDTOP	0022	WNCBTM	0023	CH	0024
CV	0025	INVFLG	0032	DOSPTR	00EC	GENPTR	00EE	DATAPTR	00FA
PRNTPTR	00FC	ZERO	0000	NEGONE	00FF	DOSVRSN	0045	DOSBLD	0006
ETRKNDX	0010	ESECNDX	001C	MINRTRY	0001	MAXRTRY	0009	MINSLOT	0001
MAXSLOT	0007	MINDRV	0001	MAXDRV	0051	MINPHAS	0001	MAXPHAS	0010
MINTRKS	0012	MAXTRKS	0030	WAIT100U	0004	WAIT400U	000A	WAIT500U	000C
WAIT001M	0011	WAIT010M	003D	WAIT050M	008B	WAIT100M	00C5	WAIT150M	00F2
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	BUFRSIZE	0003	NEXTLINE	0004	CLKSIZE	0006	CHARCELL	0007
PCMDMASK	000F	NIBLMASK	000F	CVMASK	001F	MAXWDTH	0028	MAXCH	0050
MINCV	0060	INVRMASK	007F	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
BELLCHAR	0087	LARROW	0088	DARROW	008A	UARROW	008B	RETURN	008D
CTRLQ	0091	RARROW	0095	ESCAPE	009B	SPACE	00A0	DRIVE1	0001
DRIVE2	0002	RWTSSEEK	0000	RWTSREAD	0001	RWTSWRIT	0002	RWTSFRMT	0004
MAIN1.E	0001	MAIN2.E	0002	FSSC.E	0010	ASYNCE	0018	EMENU1.E	0020
EMENU2.E	0021	CHK4D1.E	0030	CHK4D2.E	0034	CHK4D3.E	0036	CHK4D4.E	0037
READ1.E	0040	READ2.E	0041	READ3.E	0047	WRIT1.E	0050	WRIT2.E	0054
WRIT3.E	0055	SNDCF1.E	0060	SNDCF2.E	0062	SNDCF3.E	0064	SNDTS1.E	0070
SNDTS2.E	0071	SNDTS3.E	0072	SNDTS4.E	0073	RCVTS1.E	0078	RCVTS2.E	0079
SNDRW1.E	0080	SNDRW2.E	0081	SNDRW3.E	0082	RCVRW1.E	0088	RCVRW2.E	0089
SNDTX1.E	0090	SNDTX2.E	0091	SNDTX3.E	0092	RCVTX1.E	0098	RCVTX2.E	0099
PDATA1.E	00A0	PDATA2.E	00A1	PDATA3.E	00A3	GDATA1.E	00B0	GDATA2.E	00B1
GDATA3.E	00B2	GTRACK.E	00C0	PTRACK.E	00D0	STACK	0100	PAGESIZE	0100
DOSCOLD	03D3	CALLRWTS	03D9	RDCLKVSN	03E1	HOOKDOS	03EA	BLDVRSN	BFF0
BLDNMBR	BFF1	INITVAL	BFFA	MEMTOP	C000	KEY	C000	CLRKEY	C010
TXTCLE	C050	TXTCSET	C051	MIXCLR	C052	LOWSCR	C054	HIRE	C057
DATA	C088	STATUS	C089	COMMAND	C08A	CONTROL	C08B	CLRROM	CFFF
INIT	FB2F	VTAB	FC22	CLREOP	FC42	HOME	FC58	CLREOL	FC9C
WAIT	FCA8	PRHEX	FDE3	COUT	FDED	OUTPORT	FE95	BELL	FF3A
IORTS	FF58	DISPLAY	0000	DEBUG	0000	NOTDEBUG	0001	START	0923
EXITPGM	096C	EXITPGM2	0998	INITPGM	09AC	EDITMENU	0A17	EDITMOD1	0A49
CSCSUB01	0A85	CSCSUB02	0A9F	CSCSUB03	0AB9	CSCSUB04	0AD3	CSCSUB05	0AED
CSCSUB06	0B0D	CSCSUB07	0B2D	CSCSUB08	0B4B	CSCSUB09	0B69	CSCSUB10	0B83
CSCSUB11	0B9D	CSCSUB12	0BAD	CSCSUB13	0BBD	CSCSUB14	0BD7	CSCSUB15	0BEE
EDTOPTN	0C06	SETOPTN	0C09	CLROPTN	0C0C	OPTNMOD	0C1F	SHOWMENU	0C22
CSCMOD01	0CDC	CSCMOD02	0CE3	CSCMOD03	0D01	CSCMOD04	0D08	CSCMOD05	0D26
CSCMOD06	0D2D	CSCMOD07	0D4B	CSCMOD08	0D52	CSCMOD09	0D70	CSCMOD10	0D77
CSCMOD11	0D93	SHOWMOD1	0D96	SHOWMOD2	0D9C	CSCMOD12	0DAF	SHOWMOD3	0DB2
CSCMOD13	0DCD	CSCMOD14	0DD3	CSCMOD15	0DF1	SHOWMOD4	0DF4	SHOWMOD5	0E12
CHK4DISK	0E53	CHK4MOD	0F7D	DOREADER	0F88	DOWRITER	101D	SNDCFDCB	1094
SNDTSDCB	10E0	RCVTSDCB	1132	SNDRWDCB	117A	RCVRWDCB	11C6	SNDTXDCB	11FF
RCVTXDCB	123A	SETTRK	1276	DONETRK	127D	PUTTRK	129C	SETSEC0	12B3
SETSEC	12B4	PUTSEC	12D2	GETTIME	12DF	GETSIZE	12E3	GETSECS	1310
FINDSSC	138D	SSCSIG	13DC	SSCLEN	0008	AUTOSYNC	13E4	SHOWTIME	140D
PUTDATA	143A	TXDATA2	147C	TXDATA4	148A	GETDATA	14A7	GETDAMOD	14E6
RXDATA2	14EF	GETTRACKS	1508	PUTTRACKS	156D	PRTRWERR	15BB	PRESNCLR	15E8
DOCLEAR	160B	GETPAGE	1616	INITSSC	162C	TXSSC00	163F	TXMOD1	1643
TXMOD2	164E	TXSSC80	1658	TXMOD3	165A	TXMOD4	1665	RXSSC00	166A
RXMOD1	166C	RXMOD2	1675	RXSSC80	167F	RXMOD3	167F	RXMOD4	1688
WAITAROW	168D	READKEY	16A4	WAITKEY	16AB	GETKEY	16B7	PRNTCHAR	16C7

PRINT	16D3	PRNTLOOP	16E2	PRNTMOD1	170E	PRNTMOD2	1729	PRNTBR1	172B
PRNTBR2	1731	PRNTBR3	1736	PRNTBR4	1744	PRNTMOD3	1747	PRNTOUT	174D
OUTMOD1	174D	OUTMOD2	174F	PRNTOUT2	1751	OUTTBL1	1754	OUTTBL2	175A
OUT80COL	1760	VTABADRS	1762	OUTADRS	1768	PRNTSAV	176E	PRNTNUM	176F
MODEVAL	1771	FRMTVAL	1772	PRNTBL	1773	PRNTBLL	1783	PRNTBLH	1793
PRNTRTN	17A3	PRNTSAVY	17AE	PRNTSAVX	17B0	PRNTSAVA	17B2	PRINTRTN	17B5
PRNTMODE	17B6	PRNTDISP	1801	PRNTSCRN	1820	PRNTCLR	1830	PRNTCNTR	183A
PRNTBUFR	184C	PRNTNIBL	1867	PRNTNBYT	186C	PRNT1BYT	1870	PRNT2BYT	1873
PRNTBYT	1875	PRNTADR	187F	PRNT1DEC	1897	PRNT2DEC	189D	PRNTDEC	18A0
PRNT3DEC	18AA	PRNTNDEC	18B4	PRNTBYTE	18FB	PRNTHX	1904	PRNTHX2	1906
HEXTODEC	1911	GETDIGIT	192B	PRNTGRPH	194A	STACKPTR	194A	SSCSNUM	194B
SLOT	194C	ENDTRK	194D	ENDSEC	194E	ERRORVAL	194F	LASTTRK	1950
LASTSEC	1951	GOODSECS	1952	NRETRIES	1953	RETRYCNT	1954	BUFRTRKS	1955
BUFRFLAG	1956	TRACKCNT	1957	OPTION	1958	COUNT	1959	COUNT2	195A
CHARBUFR	195B	DECTBLL	195D	DECTBLH	1962	VOLTBL	1967	SECNDX	1971
SECTORS	1972	BUFFERS	1974	BUFFLAGS	1976	TRACKTBL	1978	XFERBYTS	1982
SECTIME	1985	CLKBUFR1	1988	CLKBUFR2	198E	CSCTBL1	1994	CSCTBL2	19B2
OPTIONS	001E	NOPTION	000F	XFER1	19D0	XFER2	19DF	NAME1	19EE
NAME2	19F5	INIT1	19FC	INIT2	1A08	STAT1	1A14	STAT2	1A23
RUN1	1A32	RUN2	1A40	RUN3	1A4E	RUNLEN	000E	RWTSERR1	1A5C
RWTSERR2	1A6D	RWTSERR3	1A81	RWTSERR4	1A95	RWTSERR5	1AA7	RWTSADRS	1AB7
CFDCBTBL	1AC1	VOLXFER	1AC1	INITFLAG	1AC2	VOLTRKS	1AC3	VOLSECS	1AC4
CLNTRTRY	1AC5	CLNTSLOT	1AC6	CLNTDRV	1AC7	CLNTVOL	1AC8	CLNTPHAS	1AC9
SRVRTRY	1ACA	SRVRSLOT	1ACB	SRVRDRV	1ACC	SRVRVOL	1ACD	SRVRPHAS	1ACE
CLSRSTAT	1ACF	CLSRRUN	1AD0	CFDCBXOR	1AD1	CFDCBSUM	1AD2	CFDCBLEN	0012
TSDCBTBL	1AD3	TSTRACK	1AD3	TSSECTOR	1AD4	TSDCBXOR	1AD5	TSDCBSUM	1AD6
TSDCBLEN	0004	TXDCBTBL	1AD7	TXDCBXYT	1AD7	TXDCBXOR	1AD9	TXDCBSUM	1ADA
TXDCBLEN	0004	RWDCBTBL	1ADB	RWTRACK	1ADB	NTRACKS	1ADC	RWDCBXOR	1ADD
RWDCBSUM	1ADE	RWDCBLEN	0004	TBLTYPE	1ADF	SNUM16	1AE0	DNUM	1AE1
VNUM	1AE2	TNUM	1AE3	SNUM	1AE4	DCTADR	1AE5	BUFADR	1AE7
RWTSPHAS	1AE9	BYTCNT	1AEA	CMDCODE	1AEB	ERRCODE	1AEC	VFND	1AED
SFND	1AEE	DFND	1AEF	TBLSIZE	0011	DATABUFR	1B00		

## Symbols alphabetically sorted:

ADRCMD	005B	ASCIFLAG	0080	ASYNCE	0018	AUTOSYNC	13E4	BELL	FF3A
BELLCHAR	0087	BLDNMBR	BFF1	BLDVRSN	BFF0	BUFADR	1AE7	BUFFERS	1974
BUFFLAGS	1976	BUFRCMD	0056	BUFRFLAG	1956	BUFRSIZE	0003	BUFRTRKS	1955
BYT1CMD	0058	BYT2CMD	0059	BYTCNT	1AEA	BYTNCMD	005A	CALLRWTS	03D9
CFDCBLEN	0012	CFDCBSUM	1AD2	CFDCBTBL	1AC1	CFDCBXOR	1AD1	CH	0024
CHARBUFR	195B	CHARCELL	0007	CHK4D1.E	0030	CHK4D2.E	0034	CHK4D3.E	0036
CHK4D4.E	0037	CHK4DISK	0E53	CHK4MOD	0F7D	CLKBUFR1	1988	CLKBUFR2	198E
CLKSIZE	0006	CLNTDRV	1AC7	CLNTPHAS	1AC9	CLNTRTRY	1AC5	CLNTSLOT	1AC6
CLNTVOL	1AC8	CLRCMD	0054	CLREOL	FC9C	CLREOP	FC42	CLRKEY	C010
CLROPTN	0C0C	CLRROM	CFFF	CLSRRUN	1AD0	CLSRSTAT	1ACF	CMDCODE	1AEB
CNTRCMD	0055	COMMAND	C08A	CONTROL	C08B	COUNT	1959	COUNT2	195A
COUT	FDED	CSCMOD01	0CDC	CSCMOD02	0CE3	CSCMOD03	0D01	CSCMOD04	0D08
CSCMOD05	0D26	CSCMOD06	0D2D	CSCMOD07	0D4B	CSCMOD08	0D52	CSCMOD09	0D70
CSCMOD10	0D77	CSCMOD11	0D93	CSCMOD12	0DAF	CSCMOD13	0DCD	CSCMOD14	0DD3
CSCMOD15	0DF1	CSCSUB01	0A85	CSCSUB02	0A9F	CSCSUB03	0AB9	CSCSUB04	0AD3
CSCSUB05	0AED	CSCSUB06	0B0D	CSCSUB07	0B2D	CSCSUB08	0B4B	CSCSUB09	0B69
CSCSUB10	0B83	CSCSUB11	0B9D	CSCSUB12	0BAD	CSCSUB13	0BBB	CSCSUB14	0BD7
CSCSUB15	0BEE	CSCTBL1	1994	CSCTBL2	19B2	CTRLQ	0091	CV	0025
CVMASK	001F	DARROW	008A	DATA	C088	DATABUFR	1B00	DATAPTR	00FA
DCTADR	1AE5	DEBUG	0000	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E
DECNCMD	005F	DECTBLH	1962	DECTBLL	195D	DFND	1AEF	DIRECT	0000
DISPCMD	0052	DISPLAY	0000	DNUM	1AE1	DOCLEAR	160B	DONETRK	127D
DOREADER	0F88	DOSBLD	0006	DOSCOLD	03D3	DOSPTR	00EC	DOSVRSN	0045
DOWRITER	101D	DRIVE1	0001	DRIVE2	0002	EDITMENU	0A17	EDITMOD1	0A49
EDTOPTN	0C06	EMENU1.E	0020	EMENU2.E	0021	ENDSEC	194E	ENDTRK	194D

EOLCLR	0000	EOPCLR	0001	ERRCODE	1AEC	ERRORVAL	194F	ESCAPE	009B
ESECNDX	001C	ETRKNDX	0010	EXITPGM	096C	EXITPGM2	0998	FINDSSC	138D
FLASH	0060	FRMTVAL	1772	FSSC.E	0010	GDATA1.E	00B0	GDATA2.E	00B1
GDATA3.E	00B2	GENPTR	00EE	GETDAMOD	14E6	GETDATA	14A7	GETDIGIT	192B
GETKEY	16B7	GETPAGE	1616	GETTRACKS	1508	GETSECS	1310	GETSIZE	12E3
GETTIME	12DF	GOODSECS	1952	GRPHMODE	0001	GTRACK.E	00C0	HEXTODEC	1911
HIGHLOW	0020	HIRES	C057	HOME	FC58	HOMESCRN	0001	HOOKDOS	03EA
INDIRECT	0001	INIT	FB2F	INIT1	19FC	INIT2	1A08	INITFLAG	1AC2
INITPGM	09AC	INITSCRN	0000	INITSSC	162C	INITVAL	BFFA	INVFLG	0032
INVRDISP	0001	INVRMASK	007F	IORTS	FF58	KEY	C000	LARROW	0088
LASTSEC	1951	LASTTRK	1950	LOWSCR	C054	LV80MODE	0003	MAIN1.E	0001
MAIN2.E	0002	MAXCH	0050	MAXDRV	0051	MAXPHAS	0010	MAXRTRY	0009
MAXSLOT	0007	MAXTRKS	0030	MAXWDTH	0028	MEMTOP	C000	MINCV	0060
MINDRV	0001	MINPHAS	0001	MINRTRY	0001	MINSLOT	0001	MINTRKS	0012
MIXCLR	C052	MODECMD	0051	MODEVAL	1771	NAME1	19EE	NAME2	19F5
NEGONE	00FF	NEXTLINE	0004	NIBLCMD	0057	NIBLMASK	000F	NOPAD	0000
NOPTION	000F	NORMDISP	0000	NOTDEBUG	0001	NRETRIES	1953	NTRACKS	1ADC
OPTION	1958	OPTIONS	001E	OPTNMOD	0C1F	OUT80COL	1760	OUTADRS	1768
OUTMOD1	174D	OUTMOD2	174F	OUTPORT	FE95	OUTTBL1	1754	OUTTBL2	175A
PAGESIZE	0100	PCMDMASK	000F	PDATA1.E	00A0	PDATA2.E	00A1	PDATA3.E	00A3
PRESNCLR	15E8	PRHEX	FDE3	PRINT	16D3	PRINTRTN	17B5	PRNT1BYT	1870
PRNT1DEC	1897	PRNT2BYT	1873	PRNT2DEC	189D	PRNT3DEC	18AA	PRNTADR	187F
PRNTBL	1773	PRNTBLH	1793	PRNTBLL	1783	PRNTBR1	172B	PRNTBR2	1731
PRNTBR3	1736	PRNTBR4	1744	PRNTBUFR	184C	PRNTBYT	1875	PRNTBYTE	18FB
PRNTCHAR	16C7	PRNTCLR	1830	PRNTCNTR	183A	PRNTDEC	18A0	PRNTDISP	1801
PRNTGRPH	194A	PRNTHEx	1904	PRNTHEx2	1906	PRNTLOOP	16E2	PRNTMOD1	170E
PRNTMOD2	1729	PRNTMOD3	1747	PRNTMODE	17B6	PRNTNBYT	186C	PRNTNDEC	18B4
PRNTNIBL	1867	PRNTNUM	176F	PRNTOUT	174D	PRNTOUT2	1751	PRNTPTR	00FC
PRNTRTN	17A3	PRNTSAV	176E	PRNTSAVA	17B2	PRNTSAVX	17B0	PRNTSAVY	17AE
PRNTSCRN	1820	PRTRWERR	15BB	PTRACK.E	00D0	PUTDATA	143A	PUTRACKS	156D
PUTSEC	12D2	PUTTRK	129C	RARROW	0095	RCVRW1.E	0088	RCVRW2.E	0089
RCVRWDCB	11C6	RCVTS1.E	0078	RCVTS2.E	0079	RCVTSDCB	1132	RCVTX1.E	0098
RCVTX2.E	0099	RCVTXDCB	123A	RDCLKVSN	03E1	READ1.E	0040	READ2.E	0041
READ3.E	0047	READKEY	16A4	RETRYCNT	1954	RETURN	008D	RTNCMD	0050
RUN1	1A32	RUN2	1A40	RUN3	1A4E	RUNLEN	000E	RWDCBLEN	0004
RWDCBSUM	1ADE	RWDCBTBL	1ADB	RWDCBXOR	1ADD	RWTRACK	1ADB	RWTSADRS	1AB7
RWTSERR1	1A5C	RWTSERR2	1A6D	RWTSERR3	1A81	RWTSERR4	1A95	RWTSERR5	1AA7
RWTSFRMT	0004	RWTSPHAS	1AE9	RWTSREAD	0001	RWTSSEEK	0000	RWTSWRIT	0002
RXDATA2	14EF	RXMOD1	166C	RXMOD2	1675	RXMOD3	167F	RXMOD4	1688
RXSSC00	166A	RXSSC80	167F	SCRNCMD	0053	SECNDX	1971	SECTIME	1985
SECTORS	1972	SETOPTN	0C09	SETSEC	12B4	SETSEC0	12B3	SETTRK	1276
SFND	1AEE	SHOWMENU	0C22	SHOWMOD1	0D96	SHOWMOD2	0D9C	SHOWMOD3	0DB2
SHOWMOD4	0DF4	SHOWMOD5	0E12	SHOWTIME	140D	SLOT	194C	SND CF1.E	0060
SND CF2.E	0062	SND CF3.E	0064	SND CFDCB	1094	SND RW1.E	0080	SND RW2.E	0081
SND RW3.E	0082	SND RWDCB	117A	SND TS1.E	0070	SND TS2.E	0071	SND TS3.E	0072
SND TS4.E	0073	SND TSDCB	10E0	SND TX1.E	0090	SND TX2.E	0091	SND TX3.E	0092
SND TXDCB	11FF	SNUM	1AE4	SNUM16	1AE0	SPACE	00A0	SPCPAD	0080
SRVRDRV	1ACC	SRVRPHAS	1ACE	SRVRTRY	1ACA	SRVRSLOT	1ACB	SRVRVOL	1ACD
SSCLEN	0008	SSCSIG	13DC	SSCSNUM	194B	STACK	0100	STACKPTR	194A
START	0923	STAT1	1A14	STAT2	1A23	STATUS	C089	TBLSIZE	0011
TBLTYPE	1ADF	TEXTMODE	0000	TNUM	1AE3	TRACKCNT	1957	TRACKTBL	1978
TSDCBLEN	0004	TSDCBSUM	1AD6	TSDCBTBL	1AD3	TSDCBXOR	1AD5	TSSECTOR	1AD4
TSTRACK	1AD3	TX80MODE	0002	TXDATA2	147C	TXDATA4	148A	TXDCBBYT	1AD7
TXDCBLEN	0004	TXDCBSUM	1ADA	TXDCBTBL	1AD7	TXDCBXOR	1AD9	TXMOD1	1643
TXMOD2	164E	TXMOD3	165A	TXMOD4	1665	TXSSC00	163F	TXSSC80	1658
TXTCLR	C050	TXTSET	C051	UARROW	008B	VFND	1AED	VNUM	1AE2
VOLSECS	1AC4	VOLTBL	1967	VOLTRKS	1AC3	VOLXFER	1AC1	VTAB	FC22
VTABADRS	1762	WAIT	FCA8	WAIT001M	0011	WAIT010M	003D	WAIT050M	008B
WAIT100M	00C5	WAIT100U	0004	WAIT150M	00F2	WAIT400U	000A	WAIT500U	000C
WAITAROW	168D	WAITKEY	16AB	WNBDM	0023	WNDLFT	0020	WNDTOP	0022
WNDWDTH	0021	WRIT1.E	0050	WRIT2.E	0054	WRIT3.E	0055	XFER1	19D0

XFER2	19DF	XFERBYTES	1982	ZBYTES	0012	ZERO	0000	ZEROPAD	0040
ZMATCH	0014	ZSAVA	0015	ZSUM	0011	ZXOR	0010		

## Symbols numerically sorted:

ZERO	0000	TEXTMODE	0000	RWTSSEEK	0000	NORMDISP	0000	NOPAD	0000
INITSCRN	0000	EOLCLR	0000	DISPLAY	0000	DIRECT	0000	DEBUG	0000
RWTSREAD	0001	NOTDEBUG	0001	MINSLOT	0001	MINRTRY	0001	MINPHAS	0001
MINDRV	0001	MAIN1.E	0001	INVRDISP	0001	INDIRECT	0001	HOMESCRN	0001
GRPHMODE	0001	EOPCLR	0001	DRIVE1	0001	TX80MODE	0002	RWTSWRIT	0002
MAIN2.E	0002	DRIVE2	0002	LV80MODE	0003	BUFRSIZE	0003	WAIT100U	0004
TXDCBLN	0004	TSDCBLN	0004	RWTSFRMT	0004	RWDCBLN	0004	NEXTLINE	0004
DOSBLD	0006	CLKSIZE	0006	MAXSLOT	0007	CHARCELL	0007	SSCLN	0008
MAXRTRY	0009	WAIT400U	000A	WAIT500U	000C	RUNLEN	000E	PCMDMASK	000F
NOPTION	000F	NIBLMASK	000F	ZXOR	0010	MAXPHAS	0010	FSSC.E	0010
ETRKNDX	0010	ZSUM	0011	WAIT001M	0011	TBLSIZE	0011	ZBYTES	0012
MINTRKS	0012	CFDCBLN	0012	ZMATCH	0014	ZSAVA	0015	ASYNCE	0018
ESECNDX	001C	OPTIONS	001E	CVMASK	001F	WNDLFT	0020	HIGHLOW	0020
EMENU1.E	0020	WNDWDTH	0021	EMENU2.E	0021	WNDTOP	0022	WNCBTM	0023
CH	0024	CV	0025	MAXWDTH	0028	MAXTRKS	0030	CHK4D1.E	0030
INVFLG	0032	CHK4D2.E	0034	CHK4D3.E	0036	CHK4D4.E	0037	WAIT010M	003D
ZEROPAD	0040	READ1.E	0040	READ2.E	0041	DOSVRSN	0045	READ3.E	0047
WRIT1.E	0050	RTNCMD	0050	MAXCH	0050	MODECMD	0051	MAXDRV	0051
DISPCMD	0052	SCRNCMD	0053	WRIT2.E	0054	CLRCMD	0054	WRIT3.E	0055
CNTRCMD	0055	BUFRCMD	0056	NIBLCMD	0057	BYT1CMD	0058	BYT2CMD	0059
BYTNCMD	005A	ADRCMD	005B	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E
DECNCMD	005F	SNDCE1.E	0060	MINCV	0060	FLASH	0060	SNDCE2.E	0062
SNDCE3.E	0064	SNDTS1.E	0070	SNDTS2.E	0071	SNDTS3.E	0072	SNDTS4.E	0073
RCVTS1.E	0078	RCVTS2.E	0079	INVRMASK	007F	SPCPAD	0080	SNDRW1.E	0080
ASCIFLAG	0080	SNDRW2.E	0081	SNDRW3.E	0082	BELLCHAR	0087	RCVRW1.E	0088
LARROW	0088	RCVRW2.E	0089	DARROW	008A	WAIT050M	008B	UARROW	008B
RETURN	008D	SNDTX1.E	0090	SNDTX2.E	0091	CTRLQ	0091	SNDTX3.E	0092
RARROW	0095	RCVTX1.E	0098	RCVTX2.E	0099	ESCAPE	009B	SPACE	00A0
PDATA1.E	00A0	PDATA2.E	00A1	PDATA3.E	00A3	GDATA1.E	00B0	GDATA2.E	00B1
GDATA3.E	00B2	GTRACK.E	00C0	WAIT100M	00C5	PTRACK.E	00D0	DOSPTR	00EC
GENPTR	00EE	WAIT150M	00F2	DATAPTR	00FA	PRNTPTR	00FC	NEGONE	00FF
STACK	0100	PAGESIZE	0100	DOSCOLD	03D3	CALLRWTS	03D9	RDCLKVSN	03E1
HOOKDOS	03EA	START	0923	EXITPGM	096C	EXITPGM2	0998	INITPGM	09AC
EDITMENU	0A17	EDITMOD1	0A49	CSCSUB01	0A85	CSCSUB02	0A9F	CSCSUB03	0AB9
CSCSUB04	0AD3	CSCSUB05	0AED	CSCSUB06	0B0D	CSCSUB07	0B2D	CSCSUB08	0B4B
CSCSUB09	0B69	CSCSUB10	0B83	CSCSUB11	0B9D	CSCSUB12	0BAD	CSCSUB13	0BBB
CSCSUB14	0BD7	CSCSUB15	0BEE	EDTOPTN	0C06	SETOPTN	0C09	CLROPTN	0C0C
OPTNMOD	0C1F	SHOWMENU	0C22	CSCMOD01	0CDC	CSCMOD02	0CE3	CSCMOD03	0D01
CSCMOD04	0D08	CSCMOD05	0D26	CSCMOD06	0D2D	CSCMOD07	0D4B	CSCMOD08	0D52
CSCMOD09	0D70	CSCMOD10	0D77	CSCMOD11	0D93	SHOWMOD1	0D96	SHOWMOD2	0D9C
CSCMOD12	0DAF	SHOWMOD3	0DB2	CSCMOD13	0DCD	CSCMOD14	0DD3	CSCMOD15	0DF1
SHOWMOD4	0DF4	SHOWMOD5	0E12	CHK4DISK	0E53	CHK4MOD	0F7D	DOREADER	0F88
DOWRITER	101D	SNDCEFCB	1094	SNDTSDCB	10E0	RCVTSDCB	1132	SNDRWDCB	117A
RCVRWDCB	11C6	SNDTXDCB	11FF	RCVTXDCB	123A	SETTRK	1276	DONETRK	127D
PUTTRK	129C	SETSEC0	12B3	SETSEC	12B4	PUTSEC	12D2	GETTIME	12DF
GETSIZE	12E3	GETSECS	1310	FINDSSC	138D	SSCSIG	13DC	AUTOSYNC	13E4
SHOWTIME	140D	PUTDATA	143A	TXDATA2	147C	TXDATA4	148A	GETDATA	14A7
GETDAMOD	14E6	RXDATA2	14EF	GETTRACKS	1508	PUTTRACKS	156D	PRTRWERR	15BB
PRESNCLR	15E8	DOCLEAR	160B	GETPAGE	1616	INITSSC	162C	TXSSC00	163F
TXMOD1	1643	TXMOD2	164E	TXSSC80	1658	TXMOD3	165A	TXMOD4	1665
RXSSC00	166A	RXMOD1	166C	RXMOD2	1675	RXSSC80	167F	RXMOD3	167F
RXMOD4	1688	WAITAROW	168D	READKEY	16A4	WAITKEY	16AB	GETKEY	16B7
PRNTCHAR	16C7	PRINT	16D3	PRNTLOOP	16E2	PRNTMOD1	170E	PRNTMOD2	1729
PRNTBR1	172B	PRNTBR2	1731	PRNTBR3	1736	PRNTBR4	1744	PRNTMOD3	1747
PRNTOUT	174D	OUTMOD1	174D	OUTMOD2	174F	PRNTOUT2	1751	OUTTBL1	1754

OUTTBL2	175A	OUT80COL	1760	VTABADRS	1762	OUTADRS	1768	PRNTSAV	176E
PRNTNUM	176F	MODEVAL	1771	FRMTVAL	1772	PRNTBL	1773	PRNTBLL	1783
PRNTBLH	1793	PRNTRTN	17A3	PRNTSAVY	17AE	PRNTSAVX	17B0	PRNTSAVA	17B2
PRINTRTN	17B5	PRNTMODE	17B6	PRNTDISP	1801	PRNTSCRN	1820	PRNTCLR	1830
PRNTCNTR	183A	PRNTBUFR	184C	PRNTNIBL	1867	PRNTNBYT	186C	PRNT1BYT	1870
PRNT2BYT	1873	PRNTBYT	1875	PRNTADR	187F	PRNT1DEC	1897	PRNT2DEC	189D
PRNTDEC	18A0	PRNT3DEC	18AA	PRNTNDEC	18B4	PRNTBYTE	18FB	PRNTHex	1904
PRNTHEx2	1906	HEXTODEC	1911	GETDIGIT	192B	STACKPTR	194A	PRNTGRPH	194A
SSCSNUM	194B	SLOT	194C	ENDTRK	194D	ENDSEC	194E	ERRORVAL	194F
LASTTRK	1950	LASTSEC	1951	GOODSECS	1952	NRETRIES	1953	RETRYCNT	1954
BUFRTRKS	1955	BUFRFLAG	1956	TRACKCNT	1957	OPTION	1958	COUNT	1959
COUNT2	195A	CHARBUFR	195B	DECTBL	195D	DECTBLH	1962	VOLTBL	1967
SECNDX	1971	SECTORS	1972	BUFFERS	1974	BUFFLAGS	1976	TRACKTBL	1978
XFERBYTS	1982	SECTIME	1985	CLKBUFR1	1988	CLKBUFR2	198E	CSCTBL1	1994
CSCTBL2	19B2	XFER1	19D0	XFER2	19DF	NAME1	19EE	NAME2	19F5
INIT1	19FC	INIT2	1A08	STAT1	1A14	STAT2	1A23	RUN1	1A32
RUN2	1A40	RUN3	1A4E	RWTSErr1	1A5C	RWTSErr2	1A6D	RWTSErr3	1A81
RWTSErr4	1A95	RWTSErr5	1AA7	RWTSADRS	1AB7	VOLXFER	1AC1	CFDCBTBL	1AC1
INITFLAG	1AC2	VOLTRKS	1AC3	VOLSECS	1AC4	CLNTRTRY	1AC5	CLNTSLOT	1AC6
CLNTDRV	1AC7	CLNTVOL	1AC8	CLNTPHAS	1AC9	SRVRTRY	1ACA	SRVRSLOT	1ACB
SRVRDRV	1ACC	SRVRVOL	1ACD	SRVRPHAS	1ACE	CLSRSTAT	1ACF	CLSRRUN	1AD0
CFDCBXOR	1AD1	CFDCBSUM	1AD2	TSTRACK	1AD3	TSDCBTBL	1AD3	TSSECTOR	1AD4
TSDCBXOR	1AD5	TSDCBSUM	1AD6	TXDCBTBL	1AD7	TXDCBBYT	1AD7	TXDCBXOR	1AD9
TXDCBSUM	1ADA	RWTRACK	1ADB	RWDCBTBL	1ADB	NTRACKS	1ADC	RWDCBXOR	1ADD
RWDCBSUM	1ADE	TBLTYPE	1ADF	SNUM16	1AE0	DNUM	1AE1	VNUM	1AE2
TNUM	1AE3	SNUM	1AE4	DCTADR	1AE5	BUFADR	1AE7	RWTSPHAS	1AE9
BYTCNT	1AEA	CMDCODE	1AEB	ERRCODE	1AEC	VFND	1AED	SFND	1AEE
DFND	1AEF	DATABUFR	1B00	BLDVRSN	BFF0	BLDNMBR	BFF1	INITVAL	BFFA
MEMTOP	C000	KEY	C000	CLRKEY	C010	TXTCLR	C050	TXTSET	C051
MIXCLR	C052	LOWSCR	C054	HIRES	C057	DATA	C088	STATUS	C089
COMMAND	C08A	CONTROL	C08B	CLRROM	CFFF	INIT	FB2F	VTAB	FC22
CLREOP	FC42	HOME	FC58	CLREOL	FC9C	WAIT	FCA8	PRHEX	FDE3
COUT	FDED	OUTPORT	FE95	BELL	FF3A	IORTS	FF58		