

!A

LLOAD INCL.L,A\$4000

LLOAD PROGRAM.L,A\$4000

\*\*\* End of Pass 1

LLOAD INCL.L,A\$4000

LLOAD PROGRAM1.L,A\$4000

LLOAD INPUT.L,A\$4000

LLOAD PRINT.L,A\$4000

LLOAD DATA.L,A\$4000

LLOAD PROGRAM.L,A\$4000

\*\*\* End of Pass 2

```
0800      1          ttl "PROGRAM Source Code, PROGRAM.L"
0800      2          src "PROGRAM.L"
0800      3      ;
0800      4      ;
0800      5      ; PROGRAM.L
0800      6      ;
0800      7      ;
0800      8      ; PROGRAM Source Code
0800      9      ;
0800     10      ; 2024 February 14
0800     11      ;
0800     12      ;
0800     13      ; DOS 4.5, Build 06
0800     14      ;
0800     15      ; 2024 February 14
0800     16      ;
0800     17      ;
0800     18      ; Start of Source Code: 0x4000
0800     19      ; Start of Symbol List: 0x7800
0800     20      ;
0800     21      ;
0800     22      ; Copyright (c) 2024 February 14 by
0800     23      ; Walland Philip Vrbancic Jr
0800     24      ;
0800     25      ; 6223 East Peabody Street
0800     26      ; Long Beach, California 90808
0800     27      ; 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      ;
0800     36      ; Description of PROGRAM.
0800     37      ;
0800     38      ;
0800     39          icl "INCL.L"
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LLOAD INCL.L,A$4000
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```
0800          1          ttl "PROGRAM Source Code, INCL.L"
0800          2          ;
0800          3          ;
0800          4          ; INCL.L
0800          5          ;
0800          6          ;
0800          7          ; This file defines all the page zero locations, equates,
0800          8          ; memory locations, and parameters used by PROGRAM.
0800          9          ;
0800         10          ;
0000         11  LOC0      epz $00
0020         12  WNDLFT    epz $20
0021         13  WNDWDTH   epz $21
0022         14  WNDTOP    epz $22
0023         15  WNDBTM    epz $23
0024         16  CH        epz $24
0025         17  CV        epz $25
0032         18  INVFLG    epz $32
0033         19  PROMPT    epz $33
0800         20          ;
0076         21  ASRUN     epz $76
0800         22          ;
00D8         23  ASONERR   epz $D8
0800         24          ;
00F6         25  GENPTR    epz $F6
00FA         26  DATAPTR   epz $FA
00FC         27  PRNTPTR   epz $FC
0800         28          ;
0800         29          enz
0800         30          ;
0000         31  ZERO      equ $00
0006         32  DATELEN   equ $06
000E         33  VRSNLEN   equ $0E
0013         34  VSNLEN    equ $13
0018         35  NAMELEN   equ $18
00FF         36  NEGONE    equ $FF
0800         37          ;
0000         38  TEXTMODE  equ $00
0001         39  GRPHMODE  equ $01
0002         40  TX80MODE  equ $02
0003         41  LV80MODE  equ $03
0800         42          ;
0000         43  NORMDISP  equ $00
0001         44  INVRDISP  equ $01
0800         45          ;
0000         46  INITSCRN  equ $00
0001         47  HOMESCRN  equ $01
0800         48          ;
0000         49  EOLCLR    equ $00
0001         50  EOPCLR    equ $01
0800         51          ;
0000         52  DIRECT    equ $00
0001         53  INDIRECT  equ $01
0800         54          ;
0000         55  NOPAD     equ $00
0020         56  HIGHLOW   equ $20
0040         57  ZEROPAD   equ $40
0080         58  SPCPAD    equ $80
0800         59          ;
0004         60  NEXTLINE  equ $04
```

```
0007          61  CHARCELL equ $07
000F          62  PCMDMASK equ $0F
000F          63  NIBLMASK equ $0F
001F          64  CVMASK   equ $1F
0028          65  MAXWDTH  equ $28
0050          66  MAXCH    equ $50
0060          67  MINCV    equ $60
007F          68  INVRMASK equ $7F
0080          69  ASCIFLAG equ $80
00DF          70  LWRMASK  equ $DF
00E0          71  LWRCASE  equ $E0
0800          72  ;
0050          73  RTNCMD   equ $50
0051          74  MODECMD  equ $51
0052          75  DISPCMD  equ $52
0053          76  SCRNCMD  equ $53
0054          77  CLRCMD   equ $54
0055          78  CNTRCMD  equ $55
0056          79  BUFRCMD  equ $56
0057          80  NIBLCMD  equ $57
0058          81  BYT1CMD  equ $58
0059          82  BYT2CMD  equ $59
005A          83  BYTNCMD  equ $5A
005B          84  ADRCMD   equ $5B
005C          85  DEC1CMD  equ $5C
005D          86  DEC2CMD  equ $5D
005E          87  DEC3CMD  equ $5E
005F          88  DECNCMD  equ $5F
0800          89  ;
0084          90  CTRLD    equ $84
0087          91  BELLCHAR equ $87
0088          92  LARROW   equ $88
008A          93  DARROW   equ $8A
008B          94  UARROW   equ $8B
008D          95  RETURN   equ $8D
0091          96  CTRLQ    equ $91
0095          97  RARROW   equ $95
009B          98  ESCAPE   equ $9B
00A0          99  SPACE    equ $A0
00A5          100 PERCENT  equ $A5
00AD          101 MINUS    equ $AD
00AE          102 PERIOD   equ $AE
00BF          103 QUESTION equ $BF
00FC          104 BAR      equ $FC
00FF          105 DELETE   equ $FF
0800          106 ;
0100          107 STACK    equ $100
0100          108 PAGESIZE equ $100
0800          109 ;
03D0          110 DOSWARM  equ $3D0
03D3          111 DOSCOLD  equ $3D3
03D6          112 CALLFM   equ $3D6
03D9          113 CALLRWTS equ $3D9
03DC          114 GETFMCB  equ $3DC
03E1          115 RDVSNADR  equ $3E1
03EA          116 HOOKDOS   equ $3EA
03E8          117 RDCLKADR  equ $3E8
03ED          118 PRTERADR  equ $3ED
0800          119 ;
0900          120 PAGE09   equ $0900
0800          121 ;
```

```
BFF8      122  INITDOS      equ  $BFF8
BFFB      123  DISKTBL     equ  $BFFB
0800      124  ;
C000      125  KEY         equ  $C000
C010      126  CLRKEY      equ  $C010
0800      127  ;
C050      128  TXTCLR      equ  $C050
C051      129  TXTSET      equ  $C051
C052      130  MIXCLR      equ  $C052
C054      131  LOWSCR      equ  $C054
C057      132  HIRES       equ  $C057
0800      133  ;
F941      134  PRNTAX      equ  $F941
FB2F      135  INIT        equ  $FB2F
FC22      136  VTAB        equ  $FC22
FC42      137  CLREOP      equ  $FC42
FC58      138  HOME        equ  $FC58
FC9C      139  CLREOL      equ  $FC9C
FD8E      140  CROUT       equ  $FD8E
FDDA      141  PRBYTE      equ  $FDDA
FDE3      142  PRHEX       equ  $FDE3
FDED      143  COUT        equ  $FDED
FE95      144  OUTPORT     equ  $FE95
FF3A      145  BELL        equ  $FF3A
0800      146  ;
0800      147  ;
0800      148              icl  "PROGRAM1.L"
```

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LLOAD PROGRAM1.L,A$4000
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```
0800          1          ttl "PROGRAM Source Code, PROGRAM1.L"
0800          2          ;
0800          3          ;
0800          4          ; PROGRAM1.L
0800          5          ;
0800          6          ;
0800          7          ;DISPLAY equ TEXTMODE
0001          8          DISPLAY equ GRPHMODE
0800          9          ;DISPLAY equ TX80MODE
0800         10          ;
0800         11          ;
0900         12          org PAGE09
0900         13          obj PAGE09
0900         14          usr
0900         15          ;
0900         16          ;
0900 BA        17          tsx
0901 8A        18          txa
0902 48        19          pha
0903 20 8E FD   20          jsr CROUT
0906 68        21          pla
0907 20 DA FD   22          jsr PRBYTE
090A 20 8E FD   23          jsr CROUT
090D 20 7E 12   24          jsr GETKEY
0910          25          ;
0910 20 2E 13   26          jsr PRINT
0913          27          .if DISPLAY=TEXTMODE
0913          28          byt MODECMD,TEXTMODE
0913          29          .fi
0913          30          .if DISPLAY=GRPHMODE
0913 8D        31          byt RETURN
0914 51 01      32          byt MODECMD,GRPHMODE
0916          33          .fi
0916          34          .if DISPLAY=TX80MODE
0916          35          byt MODECMD,TX80MODE
0916          36          .fi
0916 52 00      37          byt DISPCMD,NORMDISP
0918 53 00      38          byt SCRNCMD,INITSCRN
091A 53 01      39          byt SCRNCMD,HOMESCRN
091C 50         40          byt RTNCMD
091D          41          ;
091D 20 AB 0E   42          jsr TESTVAL
0920          43          ;
0920 20 48 09   44          jsr SHOWVAL
0923          45          ;
0923          46          QUIT:
0923 20 2E 13   47          jsr PRINT
0926          48          .if DISPLAY=GRPHMODE
0926 51 00      49          byt MODECMD,TEXTMODE
0928          50          .fi
0928          51          .if DISPLAY=TX80MODE
0928          52          byt MODECMD,LV80MODE
0928          53          .fi
0928 52 00      54          byt DISPCMD,NORMDISP
092A 53 00      55          byt SCRNCMD,INITSCRN
092C 8D        56          byt RETURN
092D 53 01      57          byt SCRNCMD,HOMESCRN
092F 50         58          byt RTNCMD
0930          59          ;
0930 A9 A5      60          lda #PERCENT
```

```

0932 85 33      61      sta PROMPT
0934           62      ;
0934 A9 00      63      lda #ZERO
0936 85 76      64      sta ASRUN
0938 85 D8      65      sta ASONERR
093A           66      ;
093A BA        67      tsx
093B 8A        68      txa
093C 20 DA FD   69      jsr PRBYTE
093F           70      ;
093F 20 8E FD   71      jsr CROUT
0942           72      ;
0942 20 EA 03    73      jsr HOOKDOS
0945           74      ;
0945 4C D3 03    75      jmp DOSCOLD
0948           76      ;
0948           77      ;
0948           78      SHOWVAL:
0948 A9 D8        79      lda #"X"
094A 8D FA 1A    80      sta CHARBUFR
094D           81      ;
094D 20 2E 13    82      jsr PRINT
0950 53 01        83      byt SCRNCMD,HOMESCRN
0952 55           84      byt CNTRCMD
0953 D4 E8 E9     85      asc "This is a test of PRINT"
0956 F3 A0 E9
0959 F3 A0 E1
095C A0 F4 E5
095F F3 F4 A0
0962 EF E6 A0
0965 D0 D2 C9
0968 CE D4
096A 8D 8D        86      byt RETURN,RETURN
096C AA AA AA     87      asc "*** Start PRNTBUFR call ***"
096F A0 D3 F4
0972 E1 F2 F4
0975 A0 D0 D2
0978 CE D4 C2
097B D5 C6 D2
097E A0 E3 E1
0981 EC EC A0
0984 AA AA AA
0987 8D           88      byt RETURN
0988 10           89      hex 10
0989 56 00        90      byt BUFRCMD,DIRECT
098B 20 1B        91      adr TESTMSG
098D 8D           92      byt RETURN
098E 08           93      hex 08
098F 56 00        94      byt BUFRCMD,DIRECT
0991 FA 1A        95      adr CHARBUFR
0993 8D           96      byt RETURN
0994 AA AA AA     97      asc "*** End PRNTBUFR call ***"
0997 A0 C5 EE
099A E4 A0 D0
099D D2 CE D4
09A0 C2 D5 C6
09A3 D2 A0 E3
09A6 E1 EC EC
09A9 A0 AA AA
09AC AA
09AD 8D 8D 50     98      byt RETURN,RETURN,RTNCMD

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09B0          99 ;
09B0 A9 EA    100      lda #$EA
09B2 8D 62 1A 101      sta NUM
09B5          102 ;
09B5 20 E3 FD 103      jsr PRHEX
09B8          104 ;
09B8 20 2E 13 105      jsr PRINT
09BB 8D       106      byt RETURN
09BC AA AA AA 107      asc "*** Start PRNTNIBL call ***"
09BF A0 D3 F4
09C2 E1 F2 F4
09C5 A0 D0 D2
09C8 CE D4 CE
09CB C9 C2 CC
09CE A0 E3 E1
09D1 EC EC A0
09D4 AA AA AA
09D7 8D 57     108      byt RETURN,NIBLCMD
09D9 62 1A     109      adr NUM
09DB 8D       110      byt RETURN
09DC AA AA AA 111      asc "*** End PRNTNIBL call ***"
09DF A0 C5 EE
09E2 E4 A0 D0
09E5 D2 CE D4
09E8 CE C9 C2
09EB CC A0 E3
09EE E1 EC EC
09F1 A0 AA AA
09F4 AA
09F5 8D 8D 50 112      byt RETURN,RETURN,RTNCMD
09F8          113 ;
09F8 A9 A3     114      lda #$A3
09FA 8D 62 1A 115      sta NUM
09FD          116 ;
09FD 20 DA FD 117      jsr PRBYTE
0A00          118 ;
0A00 20 2E 13 119      jsr PRINT
0A03 8D       120      byt RETURN
0A04 AA AA AA 121      asc "*** Start PRNT1BYT call ***"
0A07 A0 D3 F4
0A0A E1 F2 F4
0A0D A0 D0 D2
0A10 CE D4 B1
0A13 C2 D9 D4
0A16 A0 E3 E1
0A19 EC EC A0
0A1C AA AA AA
0A1F 8D 58     122      byt RETURN,BYT1CMD
0A21 62 1A     123      adr NUM
0A23 8D       124      byt RETURN
0A24 AA AA AA 125      asc "*** End PRNT1BYT call ***"
0A27 A0 C5 EE
0A2A E4 A0 D0
0A2D D2 CE D4
0A30 B1 C2 D9
0A33 D4 A0 E3
0A36 E1 EC EC
0A39 A0 AA AA
0A3C AA
0A3D 8D 8D 50 126      byt RETURN,RETURN,RTNCMD
0A40          127 ;

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0A40 A9 56      128      lda #$56
0A42 8D 62 1A   129      sta NUM
0A45           130      ;
0A45 20 DA FD   131      jsr PRBYTE
0A48           132      ;
0A48 A9 78      133      lda #$78
0A4A 8D 63 1A   134      sta NUM+1
0A4D           135      ;
0A4D 20 DA FD   136      jsr PRBYTE
0A50           137      ;
0A50 20 2E 13   138      jsr PRINT
0A53 8D         139      byt RETURN
0A54 AA AA AA   140      asc "*** Start PRNT2BYT call ***"
0A57 A0 D3 F4
0A5A E1 F2 F4
0A5D A0 D0 D2
0A60 CE D4 B2
0A63 C2 D9 D4
0A66 A0 E3 E1
0A69 EC EC A0
0A6C AA AA AA
0A6F 8D 59      141      byt RETURN,BYT2CMD
0A71 62 1A      142      adr NUM
0A73 8D         143      byt RETURN
0A74 AA AA AA   144      asc "*** End PRNT2BYT call ***"
0A77 A0 C5 EE
0A7A E4 A0 D0
0A7D D2 CE D4
0A80 B2 C2 D9
0A83 D4 A0 E3
0A86 E1 EC EC
0A89 A0 AA AA
0A8C AA
0A8D 8D 8D 50   145      byt RETURN,RETURN,RTNCMD
0A90           146      ;
0A90 20 2E 13   147      jsr PRINT
0A93 8D         148      byt RETURN
0A94 D0 F2 E5   149      asc "Press any key to continue  "
0A97 F3 F3 A0
0A9A E1 EE F9
0A9D A0 EB E5
0AA0 F9 A0 F4
0AA3 EF A0 E3
0AA6 EF EE F4
0AA9 E9 EE F5
0AAC E5 A0 A0
0AAF 50         150      byt RTNCMD
0AB0           151      ;
0AB0 20 7E 12   152      jsr GETKEY
0AB3           153      ;
0AB3 20 2E 13   154      jsr PRINT
0AB6 53 01      155      byt SCRNCMD,HOMESCRN
0AB8 50         156      byt RTNCMD
0AB9           157      ;
0AB9 A9 FE      158      lda #$FE
0ABB 8D 62 1A   159      sta NUM
0ABE           160      ;
0ABE 20 DA FD   161      jsr PRBYTE
0AC1           162      ;
0AC1 A9 DC      163      lda #$DC
0AC3 8D 63 1A   164      sta NUM+1

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0AC6      165 ;
0AC6 20 DA FD 166      jsr PRBYTE
0AC9      167 ;
0AC9 A9 BA 168      lda #$BA
0ACB 8D 64 1A 169      sta NUM+2
0ACE      170 ;
0ACE 20 DA FD 171      jsr PRBYTE
0AD1      172 ;
0AD1 A9 98 173      lda #$98
0AD3 8D 65 1A 174      sta NUM+3
0AD6      175 ;
0AD6 20 DA FD 176      jsr PRBYTE
0AD9      177 ;
0AD9 20 2E 13 178      jsr PRINT
0ADC 8D 179      byt RETURN
0ADD AA AA AA 180      asc "*** Start PRNTNBYT call ***"
0AE0 A0 D3 F4
0AE3 E1 F2 F4
0AE6 A0 D0 D2
0AE9 CE D4 CE
0AEC C2 D9 D4
0AEF A0 E3 E1
0AF2 EC EC A0
0AF5 AA AA AA
0AF8 8D 181      byt RETURN
0AF9 5A 04 182      byt BYTNCMD,4
0AFB 62 1A 183      adr NUM
0AFD 8D 184      byt RETURN
0AFE AA AA AA 185      asc "*** End PRNTNBYT call ***"
0B01 A0 C5 EE
0B04 E4 A0 D0
0B07 D2 CE D4
0B0A CE C2 D9
0B0D D4 A0 E3
0B10 E1 EC EC
0B13 A0 AA AA
0B16 AA
0B17 8D 8D 50 186      byt RETURN,RETURN,RTNCMD
0B1A      187 ;
0B1A A9 EF 188      lda #$EF
0B1C 8D 62 1A 189      sta NUM
0B1F      190 ;
0B1F 20 DA FD 191      jsr PRBYTE
0B22      192 ;
0B22 A9 CD 193      lda #$CD
0B24 8D 63 1A 194      sta NUM+1
0B27      195 ;
0B27 20 DA FD 196      jsr PRBYTE
0B2A      197 ;
0B2A 20 2E 13 198      jsr PRINT
0B2D 8D 199      byt RETURN
0B2E AA AA AA 200      asc "*** Start PRNTADR call ***"
0B31 A0 D3 F4
0B34 E1 F2 F4
0B37 A0 D0 D2
0B3A CE D4 C1
0B3D C4 D2 A0
0B40 E3 E1 EC
0B43 EC A0 AA
0B46 AA AA
0B48 8D 201      byt RETURN

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0B49 5B 01      202      byt ADRCMD,INDIRECT
0B4B 62 1A      203      adr NUM
0B4D 8D         204      byt RETURN
0B4E AA AA AA   205      asc "*** End PRNTADR call ***"
0B51 A0 C5 EE
0B54 E4 A0 D0
0B57 D2 CE D4
0B5A C1 C4 D2
0B5D A0 E3 E1
0B60 EC EC A0
0B63 AA AA AA
0B66 8D 8D 50   206      byt RETURN,RETURN,RTNCMD
0B69           207      ;
0B69 20 2E 13   208      jsr PRINT
0B6C 8D         209      byt RETURN
0B6D D0 F2 E5   210      asc "Press any key to continue  "
0B70 F3 F3 A0
0B73 E1 EE F9
0B76 A0 EB E5
0B79 F9 A0 F4
0B7C EF A0 E3
0B7F EF EE F4
0B82 E9 EE F5
0B85 E5 A0 A0
0B88 50         211      byt RTNCMD
0B89           212      ;
0B89 20 7E 12   213      jsr GETKEY
0B8C           214      ;
0B8C 20 2E 13   215      jsr PRINT
0B8F 53 01      216      byt SCRNCMD,HOMESCRN
0B91 50         217      byt RTNCMD
0B92           218      ;
0B92 A9 B7      219      lda #$B7
0B94 8D 62 1A   220      sta NUM
0B97           221      ;
0B97 20 DA FD   222      jsr PRBYTE
0B9A           223      ;
0B9A 20 2E 13   224      jsr PRINT
0B9D 8D         225      byt RETURN
0B9E AA AA AA   226      asc "*** Start PRNT1DEC call ***"
0BA1 A0 D3 F4
0BA4 E1 F2 F4
0BA7 A0 D0 D2
0BAA CE D4 B1
0BAD C4 C5 C3
0BB0 A0 E3 E1
0BB3 EC EC A0
0BB6 AA AA AA
0BB9 8D 5C      227      byt RETURN,DEC1CMD
0BBB 62 1A      228      adr NUM
0BBD 8D         229      byt RETURN
0BBE AA AA AA   230      asc "*** End PRNT1DEC call ***"
0BC1 A0 C5 EE
0BC4 E4 A0 D0
0BC7 D2 CE D4
0BCA B1 C4 C5
0BCD C3 A0 E3
0BD0 E1 EC EC
0BD3 A0 AA AA
0BD6 AA
0BD7 8D 8D 50   231      byt RETURN,RETURN,RTNCMD

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0BDA          232 ;
0BDA A9 A9     233      lda #$A9
0BDC 8D 62 1A  234      sta NUM
0BDF          235 ;
0BDF 20 DA FD  236      jsr PRBYTE
0BE2          237 ;
0BE2 20 2E 13  238      jsr PRINT
0BE5 8D        239      byt RETURN
0BE6 AA AA AA  240      asc "*** Start PRNT2DEC call ***"
0BE9 A0 D3 F4
0BEC E1 F2 F4
0BEF A0 D0 D2
0BF2 CE D4 B2
0BF5 C4 C5 C3
0BF8 A0 E3 E1
0BFB EC EC A0
0BFE AA AA AA
0C01 8D 5D     241      byt RETURN,DEC2CMD
0C03 62 1A     242      adr NUM
0C05 8D        243      byt RETURN
0C06 AA AA AA  244      asc "*** End PRNT2DEC call ***"
0C09 A0 C5 EE
0C0C E4 A0 D0
0C0F D2 CE D4
0C12 B2 C4 C5
0C15 C3 A0 E3
0C18 E1 EC EC
0C1B A0 AA AA
0C1E AA
0C1F 8D 8D 50  245      byt RETURN,RETURN,RTNCMD
0C22          246 ;
0C22 A9 D9     247      lda #$D9
0C24 8D 62 1A  248      sta NUM
0C27          249 ;
0C27 20 DA FD  250      jsr PRBYTE
0C2A          251 ;
0C2A 20 2E 13  252      jsr PRINT
0C2D 8D        253      byt RETURN
0C2E AA AA AA  254      asc "*** Start PRNT3DEC call ***"
0C31 A0 D3 F4
0C34 E1 F2 F4
0C37 A0 D0 D2
0C3A CE D4 B3
0C3D C4 C5 C3
0C40 A0 E3 E1
0C43 EC EC A0
0C46 AA AA AA
0C49 8D 5E     255      byt RETURN,DEC3CMD
0C4B 62 1A     256      adr NUM
0C4D 8D        257      byt RETURN
0C4E AA AA AA  258      asc "*** End PRNT3DEC call ***"
0C51 A0 C5 EE
0C54 E4 A0 D0
0C57 D2 CE D4
0C5A B3 C4 C5
0C5D C3 A0 E3
0C60 E1 EC EC
0C63 A0 AA AA
0C66 AA
0C67 8D 8D 50  259      byt RETURN,RETURN,RTNCMD
0C6A          260 ;

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0C6A 20 2E 13      261      jsr PRINT
0C6D 8D            262      byt RETURN
0C6E D0 F2 E5      263      asc "Press any key to continue  "
0C71 F3 F3 A0
0C74 E1 EE F9
0C77 A0 EB E5
0C7A F9 A0 F4
0C7D EF A0 E3
0C80 EF EE F4
0C83 E9 EE F5
0C86 E5 A0 A0
0C89 50            264      byt RTNCMD
0C8A              265      ;
0C8A 20 7E 12      266      jsr GETKEY
0C8D              267      ;
0C8D 20 2E 13      268      jsr PRINT
0C90 53 01          269      byt SCRNCMD,HOMESCRN
0C92 50            270      byt RTNCMD
0C93              271      ;
0C93 20 2E 13      272      jsr PRINT
0C96 AA AA AA      273      asc "*** Start PRNTNDEC (NOPAD) call ***"
0C99 A0 D3 F4
0C9C E1 F2 F4
0C9F A0 D0 D2
0CA2 CE D4 CE
0CA5 C4 C5 C3
0CA8 A0 A8 CE
0CAB CF D0 C1
0CAE C4 A9 A0
0CB1 E3 E1 EC
0CB4 EC A0 AA
0CB7 AA AA
0CB9 8D            274      byt RETURN
0CBA 5F 00          275      byt DECNCMD,NOPAD
0CBC 66 1A          276      adr VAL0
0CBE A0            277      asc " "
0CBF 5F 00          278      byt DECNCMD,NOPAD
0CC1 68 1A          279      adr VAL1
0CC3 A0            280      asc " "
0CC4 5F 00          281      byt DECNCMD,NOPAD
0CC6 6A 1A          282      adr VAL2
0CC8 A0            283      asc " "
0CC9 5F 00          284      byt DECNCMD,NOPAD
0CCB 6C 1A          285      adr VAL3
0CCD A0            286      asc " "
0CCE 5F 00          287      byt DECNCMD,NOPAD
0CD0 6E 1A          288      adr VAL4
0CD2 A0            289      asc " "
0CD3 5F 00          290      byt DECNCMD,NOPAD
0CD5 70 1A          291      adr VAL5
0CD7 8D            292      byt RETURN
0CD8 AA AA AA      293      asc "*** End PRNTNDEC (NOPAD) call ***"
0CDB A0 C5 EE
0CDE E4 A0 D0
0CE1 D2 CE D4
0CE4 CE C4 C5
0CE7 C3 A0 A8
0CEA CE CF D0
0CED C1 C4 A9
0CF0 A0 E3 E1
0CF3 EC EC A0

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```

0CF6 AA AA AA
0CF9 8D 8D 50      294      byt RETURN,RETURN,RTNCMD
0CFC              295      ;
0CFC 20 2E 13      296      jsr PRINT
0CFF AA AA AA      297      asc "*** Start PRNTNDEC (SPCPAD) call ***"
0D02 A0 D3 F4
0D05 E1 F2 F4
0D08 A0 D0 D2
0D0B CE D4 CE
0D0E C4 C5 C3
0D11 A0 A8 D3
0D14 D0 C3 D0
0D17 C1 C4 A9
0D1A A0 E3 E1
0D1D EC EC A0
0D20 AA AA AA
0D23 8D              298      byt RETURN
0D24 5F 80          299      byt DECNCMD,SPCPAD
0D26 66 1A          300      adr VAL0
0D28 A0              301      asc " "
0D29 5F 80          302      byt DECNCMD,SPCPAD
0D2B 68 1A          303      adr VAL1
0D2D A0              304      asc " "
0D2E 5F 80          305      byt DECNCMD,SPCPAD
0D30 6A 1A          306      adr VAL2
0D32 A0              307      asc " "
0D33 5F 80          308      byt DECNCMD,SPCPAD
0D35 6C 1A          309      adr VAL3
0D37 A0              310      asc " "
0D38 5F 80          311      byt DECNCMD,SPCPAD
0D3A 6E 1A          312      adr VAL4
0D3C A0              313      asc " "
0D3D 5F 80          314      byt DECNCMD,SPCPAD
0D3F 70 1A          315      adr VAL5
0D41 8D              316      byt RETURN
0D42 AA AA AA      317      asc "*** End PRNTNDEC (SPCPAD) call ***"
0D45 A0 C5 EE
0D48 E4 A0 D0
0D4B D2 CE D4
0D4E CE C4 C5
0D51 C3 A0 A8
0D54 D3 D0 C3
0D57 D0 C1 C4
0D5A A9 A0 E3
0D5D E1 EC EC
0D60 A0 AA AA
0D63 AA
0D64 8D 8D 50      318      byt RETURN,RETURN,RTNCMD
0D67              319      ;
0D67 20 2E 13      320      jsr PRINT
0D6A AA AA AA      321      asc "*** Start PRNTNDEC (ZEROPAD) call ***"
0D6D A0 D3 F4
0D70 E1 F2 F4
0D73 A0 D0 D2
0D76 CE D4 CE
0D79 C4 C5 C3
0D7C A0 A8 DA
0D7F C5 D2 CF
0D82 D0 C1 C4
0D85 A9 A0 E3
0D88 E1 EC EC

```

```

0D8B A0 AA AA
0D8E AA
0D8F 8D          322      byt RETURN
0D90 5F 40       323      byt DECNCMD,ZEROPAD
0D92 66 1A       324      adr VAL0
0D94 A0          325      asc " "
0D95 5F 40       326      byt DECNCMD,ZEROPAD
0D97 68 1A       327      adr VAL1
0D99 A0          328      asc " "
0D9A 5F 40       329      byt DECNCMD,ZEROPAD
0D9C 6A 1A       330      adr VAL2
0D9E A0          331      asc " "
0D9F 5F 40       332      byt DECNCMD,ZEROPAD
0DA1 6C 1A       333      adr VAL3
0DA3 A0          334      asc " "
0DA4 5F 40       335      byt DECNCMD,ZEROPAD
0DA6 6E 1A       336      adr VAL4
0DA8 A0          337      asc " "
0DA9 5F 40       338      byt DECNCMD,ZEROPAD
0DAB 70 1A       339      adr VAL5
0DAD 8D          340      byt RETURN
0DAE AA AA AA    341      asc "*** End PRNTNDEC (ZEROPAD) call ***"
0DB1 A0 C5 EE
0DB4 E4 A0 D0
0DB7 D2 CE D4
0DBA CE C4 C5
0DBD C3 A0 A8
0DC0 DA C5 D2
0DC3 CF D0 C1
0DC6 C4 A9 A0
0DC9 E3 E1 EC
0DCC EC A0 AA
0DCF AA AA
0DD1 8D 8D 8D    342      byt RETURN,RETURN,RETURN
0DD4 D0 F2 E5    343      asc "Press any key to continue "
0DD7 F3 F3 A0
0DDA E1 EE F9
0DDD A0 EB E5
0DE0 F9 A0 F4
0DE3 EF A0 E3
0DE6 EF EE F4
0DE9 E9 EE F5
0DEC E5 A0 A0
0DEF 50          344      byt RTNCMD
0DF0            345      ;
0DF0 20 7E 12    346      jsr GETKEY
0DF3            347      ;
0DF3 20 2E 13    348      jsr PRINT
0DF6 53 01       349      byt SCRNCMD,HOMESCRN
0DF8 8D          350      byt RETURN
0DF9 50          351      byt RTNCMD
0DFA            352      ;
0DFA A9 A0       353      lda #SPACE
0DFC 8D FA 1A    354      sta CHARBUFR
0DFF            355      ;
0DFF A2 10       356      ^1  ldx #16
0E01            357      ;
0E01 20 2E 13    358      ^2  jsr PRINT
0E04 56 00       359      byt BUFRCMD,DIRECT
0E06 FA 1A       360      adr CHARBUFR
0E08 A0          361      asc " "

```

```
0E09 50          362          byt RTNCMD
0E0A          363      ;
0E0A EE FA 1A    364          inc CHARBUFR
0E0D F0 0C      365          beq >3
0E0F          366      ;
0E0F CA          367          dex
0E10 D0 EF      368          bne <2
0E12          369      ;
0E12 20 2E 13    370          jsr PRINT
0E15 8D 8D      371          byt RETURN,RETURN
0E17 50          372          byt RTNCMD
0E18          373      ;
0E18 4C FF 0D    374          jmp <1
0E1B          375      ;
0E1B 20 2E 13    376      ^3      jsr PRINT
0E1E 8D 8D 8D    377          byt RETURN,RETURN,RETURN
0E21 D4 E8 E9    378          asc "This is a test of a very long line to verify
that line wrapping is done correctly in all display modes."
0E24 F3 A0 E9
0E27 F3 A0 E1
0E2A A0 F4 E5
0E2D F3 F4 A0
0E30 EF E6 A0
0E33 E1 A0 F6
0E36 E5 F2 F9
0E39 A0 EC EF
0E3C EE E7 A0
0E3F EC E9 EE
0E42 E5 A0 F4
0E45 EF A0 F6
0E48 E5 F2 E9
0E4B E6 F9 A0
0E4E F4 E8 E1
0E51 F4 A0 EC
0E54 E9 EE E5
0E57 A0 F7 F2
0E5A E1 F0 F0
0E5D E9 EE E7
0E60 A0 E9 F3
0E63 A0 E4 EF
0E66 EE E5 A0
0E69 E3 EF F2
0E6C F2 E5 E3
0E6F F4 EC F9
0E72 A0 E9 EE
0E75 A0 E1 EC
0E78 EC A0 E4
0E7B E9 F3 F0
0E7E EC E1 F9
0E81 A0 ED EF
0E84 E4 E5 F3
0E87 AE
0E88 8D 8D 8D    379          byt RETURN,RETURN,RETURN
0E8B D0 F2 E5    380          asc "Press any key to continue  "
0E8E F3 F3 A0
0E91 E1 EE F9
0E94 A0 EB E5
0E97 F9 A0 F4
0E9A EF A0 E3
0E9D EF EE F4
0EA0 E9 EE F5
0EA3 E5 A0 A0
```



```

0EA6 50          381          byt RTNCMD
0EA7          382          ;
0EA7 20 7E 12    383          jsr GETKEY
0EAA          384          ;
0EAA 60          385          rts
0EAB          386          ;
0EAB          387          ;
0EAB          388          TESTVAL:
0EAB 20 2E 13    389          jsr PRINT
0EAE 53 01       390          byt SCRNCMD,HOMESCRN
0EB0 55          391          byt CNTRCMD
0EB1 D4 E8 E9    392          asc "This is a test of Decimal Entry"
0EB4 F3 A0 E9
0EB7 F3 A0 E1
0EBA A0 F4 E5
0EBD F3 F4 A0
0EC0 EF E6 A0
0EC3 C4 E5 E3
0EC6 E9 ED E1
0EC9 EC A0 C5
0ECC EE F4 F2
0ECF F9
0ED0 8D          393          byt RETURN
0ED1 50          394          byt RTNCMD
0ED2          395          ;
0ED2 20 2E 13    396          ^1      jsr PRINT
0ED5 8D 8D       397          byt RETURN,RETURN
0ED7 C5 EE F4    398          asc "Enter 2 dec:  "
0EDA E5 F2 A0
0EDD B2 A0 E4
0EE0 E5 E3 BA
0EE3 A0 A0
0EE5 0E          399          hex 0E
0EE6 50          400          byt RTNCMD
0EE7          401          ;
0EE7 20 62 11    402          jsr GETDEC2
0EEA 90 18       403          bcc >2
0EEC          404          ;
0EEC 20 2E 13    405          jsr PRINT
0EEF 8D 8D       406          byt RETURN,RETURN
0EF1 C5 F2 F2    407          asc "Error in entry."
0EF4 EF F2 A0
0EF7 E9 EE A0
0EFA E5 EE F4
0EFD F2 F9 AE
0F00 50          408          byt RTNCMD
0F01          409          ;
0F01 4C D2 0E    410          jmp <1
0F04          411          ;
0F04 20 2E 13    412          ^2      jsr PRINT
0F07 8D 8D       413          byt RETURN,RETURN
0F09 5B 01       414          byt ADRCMD,INDIRECT
0F0B B0 1A       415          adr DECVALS
0F0D 8D 8D       416          byt RETURN,RETURN
0F0F D6 E1 EC    417          asc "Value entered is:  "
0F12 F5 E5 A0
0F15 E5 EE F4
0F18 E5 F2 E5
0F1B E4 A0 E9
0F1E F3 BA A0
0F21 A0

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```

0F22 5D          418          byt DEC2CMD
0F23 B0 1A      419          adr DECVALS
0F25 8D 8D      420          byt RETURN,RETURN
0F27 50          421          byt RTNCMD
0F28            422          ;
0F28 20 2E 13   423          ^3      jsr PRINT
0F2B 8D 8D      424          byt RETURN,RETURN
0F2D C5 EE F4   425          asc "Enter 3 dec:  "
0F30 E5 F2 A0
0F33 B3 A0 E4
0F36 E5 E3 BA
0F39 A0 A0
0F3B 0E          426          hex 0E
0F3C 50          427          byt RTNCMD
0F3D            428          ;
0F3D 20 65 11   429          jsr GETDEC3
0F40 90 18      430          bcc >4
0F42            431          ;
0F42 20 2E 13   432          jsr PRINT
0F45 8D 8D      433          byt RETURN,RETURN
0F47 C5 F2 F2   434          asc "Error in entry."
0F4A EF F2 A0
0F4D E9 EE A0
0F50 E5 EE F4
0F53 F2 F9 AE
0F56 50          435          byt RTNCMD
0F57            436          ;
0F57 4C 28 0F   437          jmp <3
0F5A            438          ;
0F5A 20 2E 13   439          ^4      jsr PRINT
0F5D 8D 8D      440          byt RETURN,RETURN
0F5F 5B 01      441          byt ADRCMD,INDIRECT
0F61 B0 1A      442          adr DECVALS
0F63 8D 8D      443          byt RETURN,RETURN
0F65 D6 E1 EC   444          asc "Value entered is:  "
0F68 F5 E5 A0
0F6B E5 EE F4
0F6E E5 F2 E5
0F71 E4 A0 E9
0F74 F3 BA A0
0F77 A0
0F78 5F 00      445          byt DECNCMD,NOPAD
0F7A B0 1A      446          adr DECVALS
0F7C 8D 8D      447          byt RETURN,RETURN
0F7E 50          448          byt RTNCMD
0F7F            449          ;
0F7F 20 2E 13   450          ^5      jsr PRINT
0F82 8D 8D      451          byt RETURN,RETURN
0F84 C5 EE F4   452          asc "Enter 5 dec:  "
0F87 E5 F2 A0
0F8A B5 A0 E4
0F8D E5 E3 BA
0F90 A0 A0
0F92 0E          453          hex 0E
0F93 50          454          byt RTNCMD
0F94            455          ;
0F94 20 68 11   456          jsr GETDEC5
0F97 90 18      457          bcc >6
0F99            458          ;
0F99 20 2E 13   459          jsr PRINT
0F9C 8D 8D      460          byt RETURN,RETURN

```

```

0F9E C5 F2 F2      461      asc "Error in entry."
0FA1 EF F2 A0
0FA4 E9 EE A0
0FA7 E5 EE F4
0FAA F2 F9 AE
0FAD 50            462      byt RTNCMD
0FAE            463      ;
0FAE 4C 7F 0F      464      jmp <5
0FB1            465      ;
0FB1 20 2E 13      466      ^6      jsr PRINT
0FB4 8D 8D          467      byt RETURN,RETURN
0FB6 5B 01          468      byt ADRCMD,INDIRECT
0FB8 B0 1A          469      adr DECVALS
0FBA 8D 8D          470      byt RETURN,RETURN
0FBC D6 E1 EC       471      asc "Value entered is:  "
0FBF F5 E5 A0
0FC2 E5 EE F4
0FC5 E5 F2 E5
0FC8 E4 A0 E9
0FCB F3 BA A0
0FCE A0
0FCF 5F 00          472      byt DECNCMD,NOPAD
0FD1 B0 1A          473      adr DECVALS
0FD3 8D 8D 8D       474      byt RETURN,RETURN,RETURN
0FD6 C4 EF EE       475      asc "Done with Decimal entry"
0FD9 E5 A0 F7
0FDC E9 F4 E8
0FDF A0 C4 E5
0FE2 E3 E9 ED
0FE5 E1 EC A0
0FE8 E5 EE F4
0FEB F2 F9
0FED 8D 8D 8D       476      byt RETURN,RETURN,RETURN
0FF0 D0 F2 E5       477      asc "Press any key to continue  "
0FF3 F3 F3 A0
0FF6 E1 EE F9
0FF9 A0 EB E5
0FFC F9 A0 F4
0FFF EF A0 E3
1002 EF EE F4
1005 E9 EE F5
1008 E5 A0 A0
100B 50            478      byt RTNCMD
100C            479      ;
100C 20 7E 12       480      jsr GETKEY
100F            481      ;
100F 20 2E 13       482      jsr PRINT
1012 53 01          483      byt SCRNCMD,HOMESCRN
1014 55            484      byt CNTRCMD
1015 D4 E8 E9       485      asc "This is a test of HEX entry"
1018 F3 A0 E9
101B F3 A0 E1
101E A0 F4 E5
1021 F3 F4 A0
1024 EF E6 A0
1027 C8 C5 D8
102A A0 E5 EE
102D F4 F2 F9
1030 8D            486      byt RETURN
1031 50            487      byt RTNCMD
1032            488      ;

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```

1032 20 2E 13    489 ^7      jsr PRINT
1035 8D 8D      490      byt RETURN,RETURN
1037 C5 EE F4    491      asc "Enter 2 hex:  0x"
103A E5 F2 A0
103D B2 A0 E8
1040 E5 F8 BA
1043 A0 A0 B0
1046 F8
1047 10          492      hex 10
1048 50          493      byt RTNCMD
1049            494      ;
1049 20 51 11    495      jsr GETHEX2
104C 90 18      496      bcc >8
104E            497      ;
104E 20 2E 13    498      jsr PRINT
1051 8D 8D      499      byt RETURN,RETURN
1053 C5 F2 F2    500      asc "Error in entry."
1056 EF F2 A0
1059 E9 EE A0
105C E5 EE F4
105F F2 F9 AE
1062 50          501      byt RTNCMD
1063            502      ;
1063 4C 32 10    503      jmp <7
1066            504      ;
1066 20 2E 13    505      ^8      jsr PRINT
1069 8D 8D      506      byt RETURN,RETURN
106B D6 E1 EC    507      asc "Value entered is:  0x"
106E F5 E5 A0
1071 E5 EE F4
1074 E5 F2 E5
1077 E4 A0 E9
107A F3 BA A0
107D A0 B0 F8
1080 5A 04      508      byt BYTNCMD,4
1082 AC 1A      509      adr HEXVALS
1084 8D 8D      510      byt RETURN,RETURN
1086 50          511      byt RTNCMD
1087            512      ;
1087 20 2E 13    513      ^7      jsr PRINT
108A 8D 8D      514      byt RETURN,RETURN
108C C5 EE F4    515      asc "Enter 4 hex:  0x"
108F E5 F2 A0
1092 B4 A0 E8
1095 E5 F8 BA
1098 A0 A0 B0
109B F8
109C 10          516      hex 10
109D 50          517      byt RTNCMD
109E            518      ;
109E 20 54 11    519      jsr GETHEX4
10A1 90 18      520      bcc >8
10A3            521      ;
10A3 20 2E 13    522      jsr PRINT
10A6 8D 8D      523      byt RETURN,RETURN
10A8 C5 F2 F2    524      asc "Error in entry."
10AB EF F2 A0
10AE E9 EE A0
10B1 E5 EE F4
10B4 F2 F9 AE
10B7 50          525      byt RTNCMD

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```

10B8      526 ;
10B8 4C 87 10 527      jmp <7
10BB      528 ;
10BB 20 2E 13 529 ^8      jsr PRINT
10BE 8D 8D      530      byt RETURN,RETURN
10C0 D6 E1 EC 531      asc "Value entered is: 0x"
10C3 F5 E5 A0
10C6 E5 EE F4
10C9 E5 F2 E5
10CC E4 A0 E9
10CF F3 BA A0
10D2 A0 B0 F8
10D5 5A 04      532      byt BYTNCMD,4
10D7 AC 1A      533      adr HEXVALS
10D9 8D 8D      534      byt RETURN,RETURN
10DB 50      535      byt RTNCMD
10DC      536 ;
10DC 20 2E 13 537 ^7      jsr PRINT
10DF 8D 8D      538      byt RETURN,RETURN
10E1 C5 EE F4 539      asc "Enter 8 hex: 0x"
10E4 E5 F2 A0
10E7 B8 A0 E8
10EA E5 F8 BA
10ED A0 A0 B0
10F0 F8
10F1 10      540      hex 10
10F2 50      541      byt RTNCMD
10F3      542 ;
10F3 20 5A 11 543      jsr GETHEX8
10F6 90 18      544      bcc >8
10F8      545 ;
10F8 20 2E 13 546      jsr PRINT
10FB 8D 8D      547      byt RETURN,RETURN
10FD C5 F2 F2 548      asc "Error in entry."
1100 EF F2 A0
1103 E9 EE A0
1106 E5 EE F4
1109 F2 F9 AE
110C 50      549      byt RTNCMD
110D      550 ;
110D 4C DC 10 551      jmp <7
1110      552 ;
1110 20 2E 13 553 ^8      jsr PRINT
1113 8D 8D      554      byt RETURN,RETURN
1115 D6 E1 EC 555      asc "Value entered is: 0x"
1118 F5 E5 A0
111B E5 EE F4
111E E5 F2 E5
1121 E4 A0 E9
1124 F3 BA A0
1127 A0 B0 F8
112A 5A 04      556      byt BYTNCMD,4
112C AC 1A      557      adr HEXVALS
112E 8D 8D 8D 558      byt RETURN,RETURN,RETURN
1131 D0 F2 E5 559      asc "Press any key to continue "
1134 F3 F3 A0
1137 E1 EE F9
113A A0 EB E5
113D F9 A0 F4
1140 EF A0 E3
1143 EF EE F4

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```
1146 E9 EE F5
1149 E5 A0 A0
114C 50          560      byt RTNCMD
114D          561      ;
114D 20 7E 12    562      jsr GETKEY
1150          563      ;
1150 60          564      rts
1151          565      ;
1151          566      ;

BSAVE SEG01,A$0900,B,L$0851

1151          567      usr SEG01
1151          568      ;
1151          569      ;
1151          570      icl "INPUT.L"

LLOAD INPUT.L,A$4000
```

```
1151          1          ttl "PROGRAM Source Code, INPUT.L"
1151          2          ;
1151          3          ;
1151          4          ; INPUT.L
1151          5          ;
1151          6          ;
1151          7          obj PAGE09
1151          8          usr
1151          9          ;
1151         10          ;
1151         11          GETHEX2:
1151 A9 02         12          lda #2
1153         13          ;
1153 2C 00 00     14          bit *-*
1156         15          dfs !-2
1154         16          ;
1154         17          GETHEX4:
1154 A9 04         18          lda #4
1156         19          ;
1156 2C 00 00     20          bit *-*
1159         21          dfs !-2
1157         22          ;
1157         23          GETHEX6:
1157 A9 06         24          lda #6
1159         25          ;
1159 2C 00 00     26          bit *-*
115C         27          dfs !-2
115A         28          ;
115A         29          GETHEX8:
115A A9 08         30          lda #8
115C         31          ;
115C 38         32          sec
115D B0 0C       33          bcs >1
115F         34          ;
115F         35          ;
115F         36          GETDEC1:
115F A9 01         37          lda #1
1161         38          ;
1161 2C 00 00     39          bit *-*
1164         40          dfs !-2
1162         41          ;
1162         42          GETDEC2:
1162 A9 02         43          lda #2
1164         44          ;
1164 2C 00 00     45          bit *-*
1167         46          dfs !-2
1165         47          ;
1165         48          GETDEC3:
1165 A9 03         49          lda #3
1167         50          ;
1167 2C 00 00     51          bit *-*
116A         52          dfs !-2
1168         53          ;
1168         54          GETDEC5:
1168 A9 05         55          lda #5
116A         56          ;
116A 18         57          clc
116B         58          ;
116B 08         59          ^1 php
116C         60          ;
```

```

116C 8D A2 1A      61      sta NNUMS
116F              62      ;
116F A9 00        63      lda #ZERO
1171              64      ;
1171 A0 0E        65      ldy #ENTRLEN-1
1173              66      ;
1173 99 A3 1A     67      ^2      sta NENTRY,Y
1176              68      ;
1176 88           69      dey
1177 10 FA        70      bpl <2
1179              71      ;
1179 20 92 12     72      NUMLOOP jsr READKEY
117C 90 03        73      bcc >3
117E              74      ;
117E 28           75      plp
117F              76      ;
117F 38           77      sec
1180              78      ;
1180 60           79      rts
1181              80      ;
1181 D0 0A        81      ^3      bne >4
1183              82      ;
1183 AC A3 1A     83      ldy NENTRY
1186 D0 4B        84      bne NUMPROC
1188              85      ;
1188 28           86      plp
1189              87      ;
1189 A9 00        88      lda #ZERO
118B              89      ;
118B 18           90      clc
118C              91      ;
118C 60           92      rts
118D              93      ;
118D C9 88       94      ^4      cmp #LARROW
118F F0 06       95      beq >5
1191              96      ;
1191 C9 FF       97      cmp #DELETE
1193 D0 0F       98      bne >6
1195              99      ;
1195 A9 88      100      lda #LARROW
1197              101      ;
1197 AC A3 1A   102      ^5      ldy NENTRY
119A F0 DD     103      beq NUMLOOP
119C              104      ;
119C 20 A8 12   105      jsr PRNTCHAR
119F              106      ;
119F CE A3 1A   107      dec NENTRY
11A2 10 D5     108      bpl NUMLOOP      ; always taken
11A4              109      ;
11A4 C9 E0     110      ^6      cmp #LWRCASE
11A6 90 02     111      bcc >7
11A8              112      ;
11A8 29 DF     113      and #LWRMASK
11AA              114      ;
11AA AC A3 1A   115      ^7      ldy NENTRY
11AD CC A2 1A   116      cpy NNUMS
11B0 B0 C7     117      bcs NUMLOOP
11B2              118      ;
11B2 AA        119      tax
11B3              120      ;
11B3 E9 AF     121      sbc #"0"-1

```



```

11B5 30 C2      122      bmi NUMLOOP
11B7           123      ;
11B7 C9 0A      124      cmp #10
11B9 90 0C      125      bcc >8
11BB           126      ;
11BB 28         127      plp
11BC 08         128      php
11BD           129      ;
11BD 90 BA      130      bcc NUMLOOP
11BF           131      ;
11BF E9 11      132      sbc #17
11C1           133      ;
11C1 C9 06      134      cmp #6
11C3 B0 B4      135      bcs NUMLOOP
11C5           136      ;
11C5 69 0A      137      adc #10
11C7           138      ;
11C7 99 A4 1A   139      ^8 sta NUMVALS,Y
11CA           140      ;
11CA 8A         141      txa
11CB           142      ;
11CB 20 A8 12   143      jsr PRNTCHAR
11CE           144      ;
11CE EE A3 1A   145      inc NENTRY
11D1 D0 A6      146      bne NUMLOOP      ; always taken
11D3           147      ;
11D3 28         148      NUMPROC plp
11D4 90 2F      149      bcc DECPROC
11D6           150      ;
11D6 CC A2 1A   151      HEXPROC cpy NNUMS
11D9 B0 13      152      bcs >2
11DB           153      ;
11DB A2 06      154      ldx #6
11DD           155      ;
11DD BD A4 1A   156      ^1 lda NUMVALS,X
11E0 9D A5 1A   157      sta NUMVALS+1,X
11E3           158      ;
11E3 CA         159      dex
11E4 10 F7      160      bpl <1
11E6           161      ;
11E6 A9 00      162      lda #ZERO
11E8 8D A4 1A   163      sta NUMVALS
11EB           164      ;
11EB C8         165      iny
11EC D0 E8      166      bne HEXPROC
11EE           167      ;
11EE A2 06      168      ^2 ldx #6
11F0 A0 03      169      ld y #3
11F2           170      ;
11F2 BD A4 1A   171      ^3 lda NUMVALS,X
11F5           172      ;
11F5 0A         173      asl
11F6 0A         174      asl
11F7 0A         175      asl
11F8 0A         176      asl
11F9           177      ;
11F9 1D A5 1A   178      ora NUMVALS+1,X
11FC 99 AC 1A   179      sta HEXVALS,Y
11FF           180      ;
11FF CA         181      dex
1200 CA         182      dex

```

```

1201      183 ;
1201 88      184      dey
1202 10 EE    185      bpl <3
1204      186 ;
1204 60      187      rts
1205      188 ;
1205 AE A3 1A 189  DECPROC  ldx NENTRY
1208 CA      190      dex
1209      191 ;
1209 A0 00    192      ldy #ZERO
120B      193 ;
120B BD A4 1A 194  ^1      lda NUMVALS,X
120E F0 19    195      beq >3
1210      196 ;
1210 AD B0 1A 197  ^2      lda DECVALS
1213 79 F0 1A 198      adc DECTBLH,Y
1216 8D B0 1A 199      sta DECVALS
1219      200 ;
1219 AD B1 1A 201      lda DECVALS+1
121C 79 F5 1A 202      adc DECTBLH,Y
121F 8D B1 1A 203      sta DECVALS+1
1222      204 ;
1222 B0 09    205      bcs >4
1224      206 ;
1224 DE A4 1A 207      dec NUMVALS,X
1227 D0 E7    208      bne <2
1229      209 ;
1229 C8      210 ^3      iny
122A      211 ;
122A CA      212      dex
122B 10 DE    213      bpl <1
122D      214 ;
122D 60      215 ^4      rts
122E      216 ;
122E      217 ;
122E      218 SELECT:
122E 20 2E 13 219      jsr PRINT
1231 00 76    220      hex 0076
1233 54 01    221      byt CLRCMD,EOPCLR
1235 A0 D0 F2 222      asc " Press Any Key to Accept, ESC to Abort"
1238 E5 F3 F3
123B A0 C1 EE
123E F9 A0 CB
1241 E5 F9 A0
1244 F4 EF A0
1247 C1 E3 E3
124A E5 F0 F4
124D AC A0 C5
1250 D3 C3 A0
1253 F4 EF A0
1256 C1 E2 EF
1259 F2 F4
125B 50      223      byt RTNCMD
125C      224 ;
125C 90 20    225      bcc GETKEY      ; always taken
125E      226 ;
125E      227 ;
125E      228 PRESKEY1:
125E 20 2E 13 229      jsr PRINT
1261 00 76    230      hex 0076
1263 54 01    231      byt CLRCMD,EOPCLR

```

```

1265 50          232          byt RTNCMD
1266          233          ;
1266          234          ;          bcc PRESKEY          ; always taken
1266          235          ;
1266          236          ;
1266          237          PRESKEY2:
1266 20 2E 13    238          jsr PRINT
1269 00 77      239          hex 0077
126B 50        240          byt RTNCMD
126C          241          ;
126C          242          ;
126C          243          PRESKEY:
126C 20 2E 13    244          jsr PRINT
126F 55        245          byt CNTRCMD
1270 D0 F2 E5   246          asc "Press Any Key"
1273 F3 F3 A0
1276 C1 EE F9
1279 A0 CB E5
127C F9
127D 50          247          byt RTNCMD
127E          248          ;
127E          249          ;
127E          250          GETKEY:
127E 2C 10 C0    251          bit CLRKEY
1281          252          ;
1281 AD 00 C0    253          ^1          lda KEY
1284          254          ;
1284 EA          255          nop
1285          256          ;
1285 10 FA        257          bpl <1
1287          258          ;
1287 2C 10 C0    259          bit CLRKEY
128A          260          ;
128A C9 9B        261          cmp #ESCAPE
128C F0 03        262          beq >1
128E          263          ;
128E C9 8D        264          cmp #RETURN
1290          265          ;
1290 18          266          clc
1291          267          ;
1291 60          268          ^1          rts
1292          269          ;
1292          270          ;
1292          271          READKEY:
1292 20 2E 13    272          jsr PRINT
1295 52 01      273          byt DISPCMD,INVRDISP
1297 A0          274          asc " "
1298 88          275          byt LARROW
1299 50          276          byt RTNCMD
129A          277          ;
129A 20 7E 12    278          jsr GETKEY
129D          279          ;
129D 08          280          php
129E          281          ;
129E 20 2E 13    282          jsr PRINT
12A1 52 00      283          byt DISPCMD,NORMDISP
12A3 A0          284          asc " "
12A4 88          285          byt LARROW
12A5 50          286          byt RTNCMD
12A6          287          ;
12A6 28          288          plp

```

```

12A7          289 ;
12A7 60       290          rts
12A8          291 ;
12A8          292 ;
12A8          293 PRNTCHAR:
12A8 8D FA 1A 294          sta CHARBUFR
12AB          295 ;
12AB 20 2E 13 296          jsr PRINT
12AE 56 00     297          byt BUFRCMD,DIRECT
12B0 FA 1A     298          adr CHARBUFR
12B2 50        299          byt RTNCMD
12B3          300 ;
12B3 60       301          rts
12B4          302 ;
12B4          303 ;
12B4          304 PRSPCHEX:
12B4 8D 79 1A 305          sta SAVNUM
12B7          306 ;
12B7 20 2E 13 307          jsr PRINT
12BA A0        308          asc " "
12BB 57        309          byt NIBLCMD
12BC 79 1A     310          adr SAVNUM
12BE 50        311          byt RTNCMD
12BF          312 ;
12BF 60       313          rts
12C0          314 ;
12C0          315 ;
12C0          316 SELCKEY:
12C0 20 7E 12 317          jsr GETKEY
12C3 B0 0D     318          bcs >3
12C5          319 ;
12C5 C9 88     320          cmp #LARROW
12C7 D0 01     321          bne >1
12C9          322 ;
12C9 CA        323          dex
12CA          324 ;
12CA C9 95     325 ^1      cmp #RARROW
12CC D0 01     326          bne >2
12CE          327 ;
12CE E8        328          inx
12CF          329 ;
12CF C9 8D     330 ^2      cmp #RETURN
12D1          331 ;
12D1 18        332          clc
12D2          333 ;
12D2 60       334 ^3      rts
12D3          335 ;
12D3          336 ;
12D3          337 SPLITHEX:
12D3 48        338          pha
12D4          339 ;
12D4 4A        340          lsr
12D5 4A        341          lsr
12D6 4A        342          lsr
12D7 4A        343          lsr
12D8          344 ;
12D8 20 DD 12 345          jsr ASCIHEX
12DB          346 ;
12DB AA        347          tax
12DC          348 ;
12DC 68        349          pla

```

```
12DD          350      ;
12DD          351  ASCIIHEX:
12DD 29 0F      352          and #NIBLMASK
12DF          353      ;
12DF 09 B0      354          ora #"0"
12E1          355      ;
12E1 C9 BA      356          cmp #"9"+1
12E3 90 02      357          bcc >1
12E5          358      ;
12E5 69 06      359          adc #6
12E7          360      ;
12E7 A8         361      ^1      tay
12E8          362      ;
12E8 60         363          rts
12E9          364      ;
12E9          365      ;
12E9          366  MAKEHEX:
12E9 A2 FF      367          ldx #NEGONE
12EB          368      ;
12EB 38         369          sec
12EC          370      ;
12EC E8         371      ^1      inx
12ED          372      ;
12ED E9 0A      373          sbc #10
12EF B0 FB      374          bcs <1
12F1          375      ;
12F1 69 0A      376          adc #10
12F3          377      ;
12F3 8D 79 1A   378          sta SAVNUM
12F6          379      ;
12F6 8A         380          txa
12F7          381      ;
12F7 0A         382          asl
12F8 0A         383          asl
12F9 0A         384          asl
12FA 0A         385          asl
12FB          386      ;
12FB 0D 79 1A   387          ora SAVNUM
12FE          388      ;
12FE 60         389          rts
12FF          390      ;
12FF          391      ;
```

BSAVE SEG02,A\$0900,B,L\$01AE

```
12FF          392          usr SEG02
12FF          393      ;
12FF          394      ;
12FF          395          icl "PRINT.L"
```

LLOAD PRINT.L,A\$4000

```

12FF      1          ttl "PROGRAM Source Code, PRINT.L"
12FF      2      ;
12FF      3      ;
12FF      4      ; PRINT.L
12FF      5      ;
12FF      6      ;
12FF      7          obj PAGE09
12FF      8          usr
12FF      9      ;
12FF     10      ;
12FF     11  PRINTBUF:
12FF 8E 15 13     12          stx BUFRMOD
1302 8C 16 13     13          sty BUFRMOD+1
1305          14      ;
1305 B0 06        15          bcs >1
1307          16      ;
1307 20 ED FD     17          jsr COUT
130A          18      ;
130A 4C 10 13     19          jmp >2
130D          20      ;
130D 20 DA FD     21      ^1      jsr PRBYTE
1310          22      ;
1310 20 2E 13     23      ^2      jsr PRINT
1313 56 00        24          byt BUFRCMD,DIRECT
1315 15 1B        25  BUFRMOD  adr UNKNOWN
1317 50           26          byt RTNCMD
1318          27      ;
1318 60           28          rts
1319          29      ;
1319          30      ;
1319          31  PRINTIME:
1319 84 FC         32          sty PRNTPTR
131B 85 FD         33          sta PRNTPTR+1
131D          34      ;
131D A0 05        35          ldy #DATELEN-1
131F          36      ;
131F B9 EA 1A     37      ^1      lda DATIMSEP,Y
1322 20 ED FD     38          jsr COUT
1325          39      ;
1325 B1 FC         40          lda (PRNTPTR),Y
1327 20 DA FD     41          jsr PRBYTE
132A          42      ;
132A 88           43          dey
132B 10 F2        44          bpl <1
132D          45      ;
132D 60           46          rts
132E          47      ;
132E          48      ;
132E          49  PRINT:
132E 8D 0E 14     50          sta PRNTSAVA+1
1331 8E 0C 14     51          stx PRNTSAVX+1
1334 8C 0A 14     52          sty PRNTSAVY+1
1337          53      ;
1337 68           54          pla
1338 85 FC         55          sta PRNTPTR
133A          56      ;
133A 68           57          pla
133B 85 FD         58          sta PRNTPTR+1
133D          59      ;
133D E6 FC        60  PRNTLOOP inc PRNTPTR

```

```

133F D0 02      61      bne >1
1341           62      ;
1341 E6 FD      63      inc PRNTPTR+1
1343           64      ;
1343 A0 00      65      ^1      ldy #ZERO
1345           66      ;
1345 B1 FC      67      lda (PRNTPTR),Y
1347 10 10      68      bpl >3
1349           69      ;
1349 C9 A0      70      cmp #SPACE
134B 90 06      71      bcc >2
134D           72      ;
134D 20 A8 13   73      jsr PRNTOUT
1350           74      ;
1350 4C 3D 13   75      jmp PRNTLOOP
1353           76      ;
1353 20 AC 13   77      ^2      jsr PRNTOUT2
1356           78      ;
1356 4C 3D 13   79      jmp PRNTLOOP
1359           80      ;
1359 C9 50      81      ^3      cmp #MAXCH
135B B0 04      82      bcs >4
135D           83      ;
135D 85 24      84      sta CH
135F           85      ;
135F 90 DC      86      bcc PRNTLOOP
1361           87      ;
1361 C9 60      88      ^4      cmp #MINCV
1363 90 0A      89      bcc >5
1365           90      ;
1365 29 1F      91      and #CVMASK
1367 85 25      92      sta CV
1369           93      ;
1369 20 22 FC   94      PRNTMOD1 jsr VTAB
136C           95      ;
136C 4C 3D 13   96      jmp PRNTLOOP
136F           97      ;
136F 29 0F      98      ^5      and #PCMDMASK
1371 AA        99      tax
1372          100      ;
1372 BD CE 13  101      lda PRNTBL,X
1375 8D 85 13  102      sta PRNTMOD2+1
1378          103      ;
1378 BD DE 13  104      lda PRNTBLL,X
137B 8D A3 13  105      sta PRNTMOD3+1
137E          106      ;
137E BD EE 13  107      lda PRNTBLH,X
1381 8D A4 13  108      sta PRNTMOD3+2
1384          109      ;
1384 90 19     110      PRNTMOD2 bcc PRNTBR4
1386          111      ;
1386 C8        112      PRNTBR1 iny
1387          113      ;
1387 B1 FC     114      lda (PRNTPTR),Y
1389 8D CD 13  115      sta FRMTVAL
138C          116      ;
138C C8        117      PRNTBR2 iny
138D          118      ;
138D B1 FC     119      lda (PRNTPTR),Y
138F 85 FA     120      sta DATAPTR
1391          121      ;

```

```

1391 C8          122 PRNTBR3  iny
1392           123 ;
1392 B1 FC       124          lda (PRNTPTR),Y
1394 85 FB       125          sta DATAPTR+1
1396           126 ;
1396 98          127          tya
1397           128 ;
1397 65 FC       129          adc PRNTPTR
1399 85 FC       130          sta PRNTPTR
139B 90 02       131          bcc PRNTBR4
139D           132 ;
139D E6 FD       133          inc PRNTPTR+1
139F           134 ;
139F 18          135 PRNTBR4  clc
13A0           136 ;
13A0 A0 00       137          ldy #ZERO
13A2           138 ;
13A2 20 00 00    139 PRNTMOD3 jsr *-*
13A5           140 ;
13A5 4C 3D 13    141          jmp PRNTLOOP
13A8           142 ;
13A8           143 ;
13A8           144 PRNTOUT:
13A8 09 00       145 OUTMOD1  ora #ZERO
13AA 49 00       146 OUTMOD2  eor #ZERO
13AC           147 ;
13AC 4C ED FD    148 PRNTOUT2 jmp COUT
13AF           149 ;
13AF           150 ;
13AF           151 ; Notes on DISPCMD as index
13AF           152 ;
13AF           153 ; 0 - Normal display
13AF           154 ; 1 - Inverse display
13AF           155 ;
13AF 80 40       156 OUTTBL1  hex 8040          ; TEXT
13B1 80 00       157          hex 8000          ; GRPH
13B3 80 00       158          hex 8000          ; TX80
13B5           159 ;
13B5 00 C0       160 OUTTBL2  hex 00C0
13B7 00 80       161          hex 0080
13B9 00 00       162          hex 0000
13BB           163 ;
13BB FF 3F       164 OUT80COL hex FF3F
13BD           165 ;
13BD           166 ;
13BD 22 FC       167 VTABADRS  adr VTAB
13BF 10 14       168          adr PRINTRTN
13C1 22 FC       169          adr VTAB
13C3           170 ;
13C3           171 ;
13C3 ED FD       172 OUTADRS  adr COUT
13C5 C7 15       173          adr PRNTGRPH
13C7 ED FD       174          adr COUT
13C9           175 ;
13C9 00          176 PRNTSAV  hex 00
13CA 00 00       177 PRNTNUM  hex 0000
13CC           178 ;
13CC           179 ;
13CC           180 ; Notes on MODEVAL and FRMTVAL
13CC           181 ;
13CC           182 ; 0 - 40 column TEXT mode

```



```

13CC      183 ; 1 - GRAPHICS mode
13CC      184 ; 2 - 80 column TEXT mode
13CC      185 ; 3 - exit 80 TEXT, enter 40 TEXT
13CC      186 ;
13CC      187 ; 0x00 - no left padding
13CC      188 ; 0x20 - data in high/low order, otherwise low/high order
13CC      189 ; 0x40 - zero left padding
13CC      190 ; 0x80 - space left padding
13CC      191 ;
13CC 00    192 MODEVAL hex 00
13CD 00    193 FRMTVAL hex 00
13CE      194 ;
13CE      195 ;
13CE      196 ; Branch table of command routines.
13CE      197 ;
13CE      198 PRNTBL:
13CE 19    199      byt PRNTBR4-PRNTBR1 ; 50
13CF 0B    200      byt PRNTBR3-PRNTBR1 ; 51
13D0 0B    201      byt PRNTBR3-PRNTBR1 ; 52
13D1 0B    202      byt PRNTBR3-PRNTBR1 ; 53
13D2 0B    203      byt PRNTBR3-PRNTBR1 ; 54
13D3 19    204      byt PRNTBR4-PRNTBR1 ; 55
13D4 00    205      byt PRNTBR1-PRNTBR1 ; 56
13D5 06    206      byt PRNTBR2-PRNTBR1 ; 57
13D6 06    207      byt PRNTBR2-PRNTBR1 ; 58
13D7 06    208      byt PRNTBR2-PRNTBR1 ; 59
13D8 00    209      byt PRNTBR1-PRNTBR1 ; 5A
13D9 00    210      byt PRNTBR1-PRNTBR1 ; 5B
13DA 06    211      byt PRNTBR2-PRNTBR1 ; 5C
13DB 06    212      byt PRNTBR2-PRNTBR1 ; 5D
13DC 06    213      byt PRNTBR2-PRNTBR1 ; 5E
13DD 00    214      byt PRNTBR1-PRNTBR1 ; 5F
13DE      215 ;
13DE      216 ;
13DE      217 ; Address tables of command routines.
13DE      218 ;
13DE      219 PRNTBLL:
13DE FE    220      byt PRNTRTN ; 50
13DF 11    221      byt PRNTMODE ; 51
13E0 5C    222      byt PRNTDISP ; 52
13E1 7B    223      byt PRNTSCRN ; 53
13E2 9C    224      byt PRNTCLR ; 54
13E3 B7    225      byt PRNTCNTR ; 55
13E4 C9    226      byt PRNTBUFR ; 56
13E5 E4    227      byt PRNTNIBL ; 57
13E6 ED    228      byt PRNT1BYT ; 58
13E7 F0    229      byt PRNT2BYT ; 59
13E8 E9    230      byt PRNTNBYT ; 5A
13E9 FC    231      byt PRNTADR ; 5B
13EA 14    232      byt PRNT1DEC ; 5C
13EB 1A    233      byt PRNT2DEC ; 5D
13EC 27    234      byt PRNT3DEC ; 5E
13ED 31    235      byt PRNTNDEC ; 5F
13EE      236 ;
13EE      237 PRNTBLH:
13EE 13    238      hby PRNTRTN ; 50
13EF 14    239      hby PRNTMODE ; 51
13F0 14    240      hby PRNTDISP ; 52
13F1 14    241      hby PRNTSCRN ; 53
13F2 14    242      hby PRNTCLR ; 54
13F3 14    243      hby PRNTCNTR ; 55

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```

13F4 14      244      hby PRNTBUFR      ; 56
13F5 14      245      hby PRNTNIBL      ; 57
13F6 14      246      hby PRNT1BYT      ; 58
13F7 14      247      hby PRNT2BYT      ; 59
13F8 14      248      hby PRNTNBYT      ; 5A
13F9 14      249      hby PRNTADR      ; 5B
13FA 15      250      hby PRNT1DEC      ; 5C
13FB 15      251      hby PRNT2DEC      ; 5D
13FC 15      252      hby PRNT3DEC      ; 5E
13FD 15      253      hby PRNTNDEC      ; 5F
13FE      254      ;
13FE      255      ;
13FE      256      ; RTNCMD (0x50)
13FE      257      ;
13FE      258      PRNTRTN:
13FE BA      259      tsx
13FF      260      ;
13FF A5 FC    261      lda PRNTPTR
1401 9D 01 01 262      sta STACK+1,X
1404      263      ;
1404 A5 FD    264      lda PRNTPTR+1
1406 9D 02 01 265      sta STACK+2,X
1409      266      ;
1409 A0 00    267      PRNTSAVY ldy #ZERO
140B A2 00    268      PRNTSAVX ldx #ZERO
140D A9 00    269      PRNTSAVA lda #ZERO
140F      270      ;
140F 18      271      clc
1410      272      ;
1410 60      273      PRNTRTN rts
1411      274      ;
1411      275      ;
1411      276      ; MODECMD (0x51)
1411      277      ;
1411      278      ; 0 - 40 column TEXT mode
1411      279      ; 1 - GRAPHICS mode
1411      280      ; 2 - 80 column TEXT mode
1411      281      ; 3 - exit 80 TEXT, enter 40 TEXT
1411      282      ;
1411      283      PRNTMODE:
1411 A5 FB      284      lda DATAPTR+1
1413 29 03      285      and #3
1415      286      ;
1415 C9 02      287      cmp #TX80MODE
1417 D0 09      288      bne >1
1419      289      ;
1419 A9 B3      290      lda #"3"
141B 20 95 FE    291      jsr OUTPORT
141E      292      ;
141E A9 02      293      lda #TX80MODE
1420 D0 1A      294      bne >2
1422      295      ;
1422 C9 03      296      ^1 cmp #LV80MODE
1424 D0 16      297      bne >2
1426      298      ;
1426 AD BB 13    299      lda OUT80COL
1429 85 32      300      sta INVFLG
142B      301      ;
142B A9 9B      302      lda #ESCAPE
142D 20 ED FD    303      jsr COUT
1430      304      ;

```

```

1430 A9 91      305      lda #CTRLQ
1432 20 ED FD   306      jsr COUT
1435           307      ;
1435 A9 B0      308      lda #"0"
1437 20 95 FE   309      jsr OUTPORT
143A           310      ;
143A A9 00      311      lda #TEXTMODE
143C           312      ;
143C 8D CC 13   313      ^2 sta MODEVAL
143F           314      ;
143F 0A         315      asl
1440 A8         316      tay
1441           317      ;
1441 B9 BD 13   318      lda VTABADRS,Y
1444 8D 6A 13   319      sta PRNTMOD1+1
1447           320      ;
1447 B9 BE 13   321      lda VTABADRS+1,Y
144A 8D 6B 13   322      sta PRNTMOD1+2
144D           323      ;
144D B9 C3 13   324      lda OUTADRS,Y
1450 8D AD 13   325      sta PRNTOUT2+1
1453           326      ;
1453 B9 C4 13   327      lda OUTADRS+1,Y
1456 8D AE 13   328      sta PRNTOUT2+2
1459           329      ;
1459 4C EA 03   330      jmp HOOKDOS
145C           331      ;
145C           332      ;
145C           333      ; DISPCMD (0x52)
145C           334      ;
145C           335      ; 0 - Normal display
145C           336      ; 1 - Inverse display
145C           337      ;
145C           338      PRNTDISP:
145C A4 FB       339      ldy DATAPTR+1
145E           340      ;
145E AD CC 13   341      lda MODEVAL
1461 C9 02      342      cmp #TX80MODE
1463 D0 05      343      bne >1
1465           344      ;
1465 BE BB 13   345      ldx OUT80COL,Y
1468 86 32      346      stx INVFLG
146A           347      ;
146A 0A         348      ^1 asl
146B 65 FB      349      adc DATAPTR+1
146D           350      ;
146D A8         351      tay
146E           352      ;
146E B9 AF 13   353      lda OUTTBL1,Y
1471 8D A9 13   354      sta OUTMOD1+1
1474           355      ;
1474 B9 B5 13   356      lda OUTTBL2,Y
1477 8D AB 13   357      sta OUTMOD2+1
147A           358      ;
147A 60         359      rts
147B           360      ;
147B           361      ;
147B           362      ; SCRNCMD (0x53)
147B           363      ;
147B           364      ; 0 - INIT
147B           365      ; 1 - HOME

```

```

147B          366 ;
147B          367 PRNTSCRN:
147B 2C 54 C0  368         bit LOWSCR
147E          369 ;
147E          370         .if DISPLAY=GRPHMODE
147E          371 ;
147E AD CC 13  372         lda MODEVAL
1481 C9 01     373         cmp #GRPHMODE
1483 D0 0A     374         bne >2
1485          375 ;
1485 A5 FB     376         lda DATAPTR+1
1487 D0 03     377         bne >1
1489          378 ;
1489 4C 5E 16  379         jmp SCRNNINIT
148C          380 ;
148C 4C F1 16  381 ^1        jmp SCRNHOM
148F          382 ;
148F          383         .fi
148F          384 ;
148F A5 FB     385 ^2        lda DATAPTR+1
1491 D0 06     386         bne >3
1493          387 ;
1493 2C 51 C0  388         bit TXTSET
1496          389 ;
1496 4C 2F FB  390         jmp INIT
1499          391 ;
1499 4C 58 FC  392 ^3        jmp HOME
149C          393 ;
149C          394 ;
149C          395 ; CLRCMD (0x54)
149C          396 ;
149C          397 ; 0 - EOL
149C          398 ; 1 - EOP
149C          399 ;
149C          400 PRNTCLR:
149C          401         .if DISPLAY=GRPHMODE
149C          402 ;
149C AD CC 13  403         lda MODEVAL
149F C9 01     404         cmp #GRPHMODE
14A1 D0 0A     405         bne >2
14A3          406 ;
14A3 A5 FB     407         lda DATAPTR+1
14A5 D0 03     408         bne >1
14A7          409 ;
14A7 4C C7 16  410         jmp SCRNEOL
14AA          411 ;
14AA 4C F9 16  412 ^1        jmp SCRNEOP
14AD          413 ;
14AD          414         .fi
14AD          415 ;
14AD A5 FB     416 ^2        lda DATAPTR+1
14AF D0 03     417         bne >3
14B1          418 ;
14B1 4C 9C FC  419         jmp CLREOL
14B4          420 ;
14B4 4C 42 FC  421 ^3        jmp CLREOP
14B7          422 ;
14B7          423 ;
14B7          424 ; CNTRCMD (0x55)
14B7          425 ;
14B7          426 PRNTCNTR:

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```

14B7 A9 9F      427      lda #SPACE-1
14B9           428      ;
14B9 C8         429      ^1    iny
14BA           430      ;
14BA D1 FC      431      cmp (PRNTPTR),Y
14BC 90 FB      432      bcc <1
14BE           433      ;
14BE 98         434      tya
14BF           435      ;
14BF 49 FF      436      eor #NEGONE
14C1 65 21      437      adc WNDWDTH
14C3           438      ;
14C3 4A         439      lsr
14C4           440      ;
14C4 65 20      441      adc WNDLFT
14C6 85 24      442      sta CH
14C8           443      ;
14C8 60         444      rts
14C9           445      ;
14C9           446      ;
14C9           447      ; BUFRCMD (0x56)
14C9           448      ;
14C9           449      ; 0 - direct address
14C9           450      ; 1 - indirect address
14C9           451      ;
14C9           452      PRNTBUFR:
14C9 AD CD 13   453      lda FRMTVAL
14CC F0 0B      454      beq >1
14CE           455      ;
14CE B1 FA      456      lda (DATAPTR),Y
14D0 AA         457      tax
14D1           458      ;
14D1 C8         459      iny
14D2           460      ;
14D2 B1 FA      461      lda (DATAPTR),Y
14D4           462      ;
14D4 86 FA      463      stx DATAPTR
14D6 85 FB      464      sta DATAPTR+1
14D8           465      ;
14D8 88         466      dey
14D9           467      ;
14D9 B1 FA      468      ^1    lda (DATAPTR),Y
14DB F0 06      469      beq >2
14DD           470      ;
14DD 20 A8 13   471      jsr PRNTOUT
14E0           472      ;
14E0 C8         473      iny
14E1 D0 F6      474      bne <1
14E3           475      ;
14E3 60         476      ^2    rts
14E4           477      ;
14E4           478      ;
14E4           479      ; NIBLCMD (0x57)
14E4           480      ;
14E4           481      PRNTNIBL:
14E4 B1 FA      482      lda (DATAPTR),Y
14E6           483      ;
14E6 4C 81 15   484      jmp PRNTHEx
14E9           485      ;
14E9           486      ;
14E9           487      ; BYT1CMD (0x58)

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```

14E9          488 ; BYT2CMD (0x59)
14E9          489 ; BYTNCMD (0x5A)
14E9          490 ;
14E9          491 PRNTNBYT:
14E9 AE CD 13 492         ldx FRMTVAL
14EC          493 ;
14EC 2C 00 00 494         bit *-*
14EF          495         dfs !-2
14ED          496 ;
14ED          497 PRNT1BYT:
14ED A2 01    498         ldx #1
14EF          499 ;
14EF 2C 00 00 500         bit *-*
14F2          501         dfs !-2
14F0          502 ;
14F0          503 PRNT2BYT:
14F0 A2 02    504         ldx #2
14F2          505 ;
14F2          506 PRNTBYT:
14F2 B1 FA    507         lda (DATAPTR),Y
14F4          508 ;
14F4 20 78 15 509         jsr PRNTBYTE
14F7          510 ;
14F7 C8       511         iny
14F8          512 ;
14F8 CA       513         dex
14F9 D0 F7    514         bne PRNTBYT
14FB          515 ;
14FB 60       516         rts
14FC          517 ;
14FC          518 ;
14FC          519 ; ADRCMD (0x5B)
14FC          520 ;
14FC          521 ; 0 - direct address
14FC          522 ; 1 - indirect address
14FC          523 ;
14FC          524 PRNTADR:
14FC AD CD 13 525         lda FRMTVAL
14FF D0 06    526         bne >1
1501          527 ;
1501 A6 FA    528         ldx DATAPTR
1503 A5 FB    529         lda DATAPTR+1
1505          530 ;
1505 90 06    531         bcc >2 ; always taken
1507          532 ;
1507 B1 FA    533 ^1        lda (DATAPTR),Y
1509 AA       534         tax
150A          535 ;
150A C8       536         iny
150B          537 ;
150B B1 FA    538         lda (DATAPTR),Y
150D          539 ;
150D 20 78 15 540 ^2        jsr PRNTBYTE
1510          541 ;
1510 8A       542         txa
1511          543 ;
1511 4C 78 15 544         jmp PRNTBYTE
1514          545 ;
1514          546 ;
1514          547 ; DEC1CMD (0x5C)
1514          548 ;

```

```

1514          549 PRNT1DEC:
1514 20 8E 15 550          jsr HEXTODEC
1517          551 ;
1517 4C 81 15 552          jmp PRNTHEx
151A          553 ;
151A          554 ;
151A          555 ; DEC2CMD (0x5D)
151A          556 ;
151A          557 PRNT2DEC:
151A 20 8E 15 558          jsr HEXTODEC
151D          559 ;
151D          560 ;
151D 8A      561 PRNTDEC  txa
151E 20 81 15 562          jsr PRNTHEx
1521          563 ;
1521 AD C9 13 564          lda PRNTSAV
1524          565 ;
1524 4C 81 15 566          jmp PRNTHEx
1527          567 ;
1527          568 ;
1527          569 ; DEC3CMD (0x5E)
1527          570 ;
1527          571 PRNT3DEC:
1527 20 8E 15 572          jsr HEXTODEC
152A          573 ;
152A 98      574          tya
152B          575 ;
152B 20 81 15 576          jsr PRNTHEx
152E          577 ;
152E 4C 1D 15 578          jmp PRNTDEC
1531          579 ;
1531          580 ;
1531          581 ; DECNCMD (0x5F)
1531          582 ;
1531          583 ; 0x00 - no left padding
1531          584 ; 0x20 - data in high/low order, otherwise low/high order
1531          585 ; 0x40 - zero left padding
1531          586 ; 0x80 - space left padding
1531          587 ;
1531          588 PRNTNDEC:
1531 B1 FA    589          lda (DATAPTR),Y
1533 AA      590          tax
1534          591 ;
1534 C8      592          iny
1535          593 ;
1535 B1 FA    594          lda (DATAPTR),Y
1537 A8      595          tay
1538          596 ;
1538 AD CD 13 597          lda FRMTVAL
153B 29 20   598          and #HIGHLOW
153D D0 09   599          bne >1
153F          600 ;
153F 8E CA 13 601          stx PRNTNUM
1542 8C CB 13 602          sty PRNTNUM+1
1545          603 ;
1545 4C 4E 15 604          jmp >2
1548          605 ;
1548 8C CA 13 606 ^1          sty PRNTNUM
154B 8E CB 13 607          stx PRNTNUM+1
154E          608 ;
154E A2 03   609 ^2          ldx #3

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```

1550          610 ;
1550 2C CD 13 611          bit FRMTVAL
1553 70 18    612          bvs >6
1555          613 ;
1555 20 A8 15 614 ^3      jsr GETDIGIT
1558 D0 16    615          bne >7
155A          616 ;
155A 2C CD 13 617          bit FRMTVAL
155D 10 05    618          bpl >4
155F          619 ;
155F A9 A0    620          lda #SPACE
1561 20 A8 13 621          jsr PRNTOUT
1564          622 ;
1564 CA       623 ^4      dex
1565 10 EE     624          bpl <3
1567          625 ;
1567 AD CA 13 626 ^5      lda PRNTNUM
156A          627 ;
156A 4C 81 15 628          jmp PRNTHEx
156D          629 ;
156D 20 A8 15 630 ^6      jsr GETDIGIT
1570          631 ;
1570 20 81 15 632 ^7      jsr PRNTHEx
1573          633 ;
1573 CA       634          dex
1574 10 F7     635          bpl <6
1576          636 ;
1576 30 EF     637          bmi <5          ; always taken
1578          638 ;
1578          639 ;
1578          640 PRNTBYTE:
1578 48         641          pha
1579          642 ;
1579 4A         643          lsr
157A 4A         644          lsr
157B 4A         645          lsr
157C 4A         646          lsr
157D          647 ;
157D 20 83 15 648          jsr PRNTHEx2
1580          649 ;
1580 68         650          pla
1581          651 ;
1581          652 ;
1581          653 PRNTHEx:
1581 29 0F      654          and #NIBLMASK
1583          655 ;
1583 09 B0      656 PRNTHEx2 ora #"0"
1585          657 ;
1585 C9 BA     658          cmp #"9"+1
1587 90 02     659          bcc >1
1589          660 ;
1589 69 06     661          adc #6
158B          662 ;
158B 4C A8 13 663 ^1      jmp PRNTOUT
158E          664 ;
158E          665 ;
158E          666 HEXTODEC:
158E B1 FA     667          lda (DATAPTR),Y
1590          668 ;
1590          669 HEXTODC2:
1590 A2 00     670          ldx #ZERO

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```

1592          671 ;
1592 C9 64      672 ^1      cmp #100
1594 90 05      673          bcc >2
1596          674 ;
1596 E9 64      675          sbc #100
1598          676 ;
1598 C8          677          iny
1599 D0 F7      678          bne <1
159B          679 ;
159B C9 0A      680 ^2      cmp #10
159D 90 05      681          bcc >3
159F          682 ;
159F E9 0A      683          sbc #10
15A1          684 ;
15A1 E8          685          inx
15A2 D0 F7      686          bne <2
15A4          687 ;
15A4 8D C9 13   688 ^3      sta PRNTSAV
15A7          689 ;
15A7 60          690          rts
15A8          691 ;
15A8          692 ;
15A8          693 GETDIGIT:
15A8 A0 00      694          ldy #ZERO
15AA          695 ;
15AA 38          696 ^1      sec
15AB          697 ;
15AB AD CA 13   698          lda PRNTNUM
15AE FD F1 1A   699          sbc DECTBLL+1,X
15B1 48          700          pha
15B2          701 ;
15B2 AD CB 13   702          lda PRNTNUM+1
15B5 FD F6 1A   703          sbc DECTBLH+1,X
15B8 90 0A      704          bcc >2
15BA          705 ;
15BA 8D CB 13   706          sta PRNTNUM+1
15BD          707 ;
15BD 68          708          pla
15BE 8D CA 13   709          sta PRNTNUM
15C1          710 ;
15C1 C8          711          iny
15C2 D0 E6      712          bne <1
15C4          713 ;
15C4 68          714 ^2      pla
15C5          715 ;
15C5 98          716          tya
15C6          717 ;
15C6 60          718          rts
15C7          719 ;
15C7          720 ;
15C7          721 PRNTGRPH:
15C7          722 ;
15C7          723          .if DISPLAY=GRPHMODE
15C7          724 ;
15C7 C9 A0      725          cmp #SPACE
15C9 B0 37      726          bcs >3
15CB          727 ;
15CB C9 80      728          cmp #ASCIFLAG
15CD 90 33      729          bcc >3
15CF          730 ;
15CF C9 87      731          cmp #BELLCHAR

```

```

15D1 D0 03      732      bne >1
15D3           733      ;
15D3 4C 3A FF   734      jmp BELL
15D6           735      ;
15D6 C9 8D     736      ^1      cmp #RETURN
15D8 F0 19     737      beq >2
15DA           738      ;
15DA C9 88     739      cmp #LARROW
15DC D0 02     740      bne >1
15DE           741      ;
15DE C6 24     742      dec CH
15E0           743      ;
15E0 C9 8A     744      ^1      cmp #DARROW
15E2 D0 02     745      bne >1
15E4           746      ;
15E4 E6 25     747      inc CV
15E6           748      ;
15E6 C9 8B     749      ^1      cmp #UARROW
15E8 D0 02     750      bne >1
15EA           751      ;
15EA C6 25     752      dec CV
15EC           753      ;
15EC C9 95     754      ^1      cmp #RARROW
15EE D0 02     755      bne >1
15F0           756      ;
15F0 E6 24     757      inc CH
15F2           758      ;
15F2 60        759      ^1      rts
15F3           760      ;
15F3 A5 20     761      ^2      lda WNDLFT
15F5 85 24     762      sta CH
15F7           763      ;
15F7 E6 25     764      inc CV
15F9           765      ;
15F9 A5 25     766      lda CV
15FB C5 23     767      cmp WNDBTM
15FD 90 5E     768      bcc >8
15FF           769      ;
15FF 4C 76 16  770      jmp SCROLL
1602           771      ;
1602 8E 5C 16  772      ^3      stx SCRNSAVX+1
1605 8C 5A 16  773      sty SCRNSAVY+1
1608           774      ;
1608 A2 17     775      ldx /CHARTBL
160A           776      ;
160A A0 00     777      ldy #ZERO
160C           778      ;
160C 0A        779      asl
160D B0 03     780      bcs >4
160F           781      ;
160F A0 7F     782      ldy #INVRMASK
1611           783      ;
1611 38        784      sec
1612           785      ;
1612 8C 43 16  786      ^4      sty SCRNMOD2+1
1615           787      ;
1615 E9 40     788      sbc #$40
1617           789      ;
1617 0A        790      asl
1618 90 02     791      bcc >5
161A           792      ;

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```

161A A2 19      793      ldx /CHARTBL+$200
161C           794      ;
161C 0A         795      ^5      asl
161D 90 02      796      bcc >6
161F           797      ;
161F E8         798      inx
1620           799      ;
1620 18         800      clc
1621           801      ;
1621 69 4A      802      ^6      adc #CHARTBL
1623 8D 40 16   803      sta SCRNMOD1+1
1626 90 01      804      bcc >7
1628           805      ;
1628 E8         806      inx
1629           807      ;
1629 8E 41 16   808      ^7      stx SCRNMOD1+2
162C           809      ;
162C 18         810      clc
162D           811      ;
162D A6 25      812      ldx CV
162F           813      ;
162F BD 1A 17   814      lda YBASELO,X
1632 8D 45 16   815      sta SCRNMOD3+1
1635           816      ;
1635 BD 32 17   817      lda YBASEHI,X
1638 8D 46 16   818      sta SCRNMOD3+2
163B           819      ;
163B A4 24      820      ldY CH
163D A2 07      821      ldX #CHARCELL
163F           822      ;
163F BD 00 00   823      SCRNMOD1 lda *-,X
1642           824      ;
1642 49 00      825      SCRNMOD2 eor #ZERO
1644           826      ;
1644 99 00 00   827      SCRNMOD3 sta *-,Y
1647           828      ;
1647 AD 46 16   829      lda SCRNMOD3+2
164A 69 04      830      adc #NEXTLINE
164C 8D 46 16   831      sta SCRNMOD3+2
164F           832      ;
164F CA         833      dex
1650 10 ED      834      bpl SCRNMOD1
1652           835      ;
1652 C8         836      iny
1653           837      ;
1653 C0 28      838      SCRNMOD4 cpy #MAXWDTH
1655 B0 9C      839      bcs <2
1657           840      ;
1657 84 24      841      sty CH
1659           842      ;
1659 A0 00      843      SCRNSAVY ldY #ZERO
165B A2 00      844      SCRNSAVX ldX #ZERO
165D           845      ;
165D 60        846      ^8      rts
165E           847      ;
165E           848      ;
165E           849      SCRNINIT:
165E 2C 57 C0   850      bit HIRES
1661 2C 52 C0   851      bit MIXCLR
1664 2C 50 C0   852      bit TXTCLR
1667           853      ;

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```

1667 18          854          clc
1668          855          ;
1668 A9 28        856          lda #MAXWDTH
166A 65 20        857          adc WNDLFT
166C 8D 54 16     858          sta SCRNMOD4+1
166F 8D DC 16     859          sta EOLMOD1+1
1672 8D AB 16     860          sta SCRLMOD3+1
1675          861          ;
1675 60          862          rts
1676          863          ;
1676          864          ;
1676          865          SCROLL:
1676 A5 20        866          lda WNDLFT
1678 85 24        867          sta CH
167A          868          ;
167A A6 23        869          ldx WNDBTM
167C CA          870          dex
167D 8E C4 16     871          stx SCRLMOD4+1
1680          872          ;
1680 A6 22        873          ldx WNDTOP
1682 86 25        874          stx CV
1684          875          ;
1684 BD 1A 17     876          ^1 lda YBASELO,X
1687 8D A7 16     877          sta SCRLMOD2+1
168A          878          ;
168A BD 32 17     879          lda YBASEHI,X
168D 8D A8 16     880          sta SCRLMOD2+2
1690          881          ;
1690 E8          882          inx
1691 86 25        883          stx CV
1693          884          ;
1693 BD 1A 17     885          lda YBASELO,X
1696 8D A4 16     886          sta SCRLMOD1+1
1699          887          ;
1699 BD 32 17     888          lda YBASEHI,X
169C 8D A5 16     889          sta SCRLMOD1+2
169F          890          ;
169F A2 07        891          ldx #CHARCELL
16A1          892          ;
16A1 A4 24        893          ^2 ldy CH
16A3          894          ;
16A3 B9 00 00     895          SCRLMOD1 lda *-,Y
16A6 99 00 00     896          SCRLMOD2 sta *-,Y
16A9          897          ;
16A9 C8          898          iny
16AA          899          ;
16AA C0 28        900          SCRLMOD3 cpy #MAXWDTH
16AC 90 F5        901          bcc SCRLMOD1
16AE          902          ;
16AE AD A5 16     903          lda SCRLMOD1+2
16B1 69 03        904          adc #NEXTLINE-1
16B3 8D A5 16     905          sta SCRLMOD1+2
16B6          906          ;
16B6 AD A8 16     907          lda SCRLMOD2+2
16B9 69 04        908          adc #NEXTLINE
16BB 8D A8 16     909          sta SCRLMOD2+2
16BE          910          ;
16BE CA          911          dex
16BF 10 E0        912          bpl <2
16C1          913          ;
16C1 A6 25        914          ldx CV

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```

16C3 E0 00      915  SCRLMOD4 cpx #LOC0
16C5 D0 BD      916      bne <1
16C7            917  ;
16C7            918  ;
16C7            919  SCRNEOL:
16C7 A6 25      920      ldx CV
16C9            921  ;
16C9 BD 1A 17   922      lda YBASELO,X
16CC 8D E0 16   923      sta EOLMOD2+1
16CF            924  ;
16CF BD 32 17   925      lda YBASEHI,X
16D2 8D E1 16   926      sta EOLMOD2+2
16D5            927  ;
16D5 A2 07      928      ldx #CHARCELL
16D7            929  ;
16D7 A4 24      930  ^1    ldy CH
16D9            931  ;
16D9 A9 00      932      lda #ZERO
16DB            933  ;
16DB C0 28      934  EOLMOD1 cpy #MAXWDTH
16DD B0 06      935      bcs >2
16DF            936  ;
16DF 99 00 00   937  EOLMOD2 sta *-*,Y
16E2            938  ;
16E2 C8         939      iny
16E3 D0 F6      940      bne EOLMOD1
16E5            941  ;
16E5 AD E1 16   942  ^2    lda EOLMOD2+2
16E8 69 03      943      adc #NEXTLINE-1
16EA 8D E1 16   944      sta EOLMOD2+2
16ED            945  ;
16ED CA         946      dex
16EE 10 E7      947      bpl <1
16F0            948  ;
16F0 60         949      rts
16F1            950  ;
16F1            951  ;
16F1            952  SCRNHOM:
16F1 A5 20      953      lda WNDLFT
16F3 85 24      954      sta CH
16F5            955  ;
16F5 A5 22      956      lda WNDTOP
16F7 85 25      957      sta CV
16F9            958  ;
16F9            959  ;
16F9            960  SCRNEOP:
16F9 20 C7 16   961      jsr SCRNEOL
16FC            962  ;
16FC A5 24      963      lda CH
16FE 48         964      pha
16FF            965  ;
16FF A5 25      966      lda CV
1701 48         967      pha
1702            968  ;
1702 A5 20      969      lda WNDLFT
1704 85 24      970      sta CH
1706            971  ;
1706 E6 25      972  ^1    inc CV
1708            973  ;
1708 A5 25      974      lda CV
170A C5 23      975      cmp WNDBTM

```

```

170C B0 05      976      bcs >2
170E           977      ;
170E 20 C7 16   978      jsr SCRNEOL
1711 30 F3      979      bmi <1
1713           980      ;
1713 68         981      ^2      pla
1714 85 25      982      sta CV
1716           983      ;
1716 68         984      pla
1717 85 24      985      sta CH
1719           986      ;
1719 60         987      rts
171A           988      ;
171A           989      ;
171A           990      YBASELO:
171A           991      ;
171A 00 80 00   992      hex 0080008000800080
171D 80 00 80
1720 00 80
1722 28 A8 28   993      hex 28A828A828A828A8
1725 A8 28 A8
1728 28 A8
172A 50 D0 50   994      hex 50D050D050D050D0
172D D0 50 D0
1730 50 D0
1732           995      ;
1732           996      YBASEHI:
1732           997      ;
1732 20 20 21   998      hex 2020212122222323
1735 21 22 22
1738 23 23
173A 20 20 21   999      hex 2020212122222323
173D 21 22 22
1740 23 23
1742 20 20 21  1000      hex 2020212122222323
1745 21 22 22
1748 23 23
174A           1001      ;
174A           1002      ;
174A           1003      CHARTBL:
174A           1004      ;
174A 00 00 00   1005      hex 0000000000000000 ;
174D 00 00 00
1750 00 00
1752 00 08 00   1006      hex 0008000808080808 ; !
1755 08 08 08
1758 08 08
175A 00 00 00   1007      hex 0000000000141414 ; "
175D 00 00 14
1760 14 14
1762 00 14 14   1008      hex 0014143E143E1414 ; #
1765 3E 14 3E
1768 14 14
176A 00 08 1E   1009      hex 00081E281C0A3C08 ; $
176D 28 1C 0A
1770 3C 08
1772 00 30 32   1010      hex 0030320408102606 ; %
1775 04 08 10
1778 26 06
177A 00 2C 12   1011      hex 002C122A040A0A04 ; &
177D 2A 04 0A

```

```
1780 0A 04
1782 00 00 00 1012 hex 00000000000080808 ; ??
1785 00 00 08
1788 08 08
178A 00 10 08 1013 hex 0010080404040810 ; (
178D 04 04 04
1790 08 10
1792 00 04 08 1014 hex 0004081010100804 ; )
1795 10 10 10
1798 08 04
179A 00 00 08 1015 hex 0000082A1C1C2A08 ; *
179D 2A 1C 1C
17A0 2A 08
17A2 00 00 08 1016 hex 000008083E080800 ; +
17A5 08 3E 08
17A8 08 00
17AA 04 08 0C 1017 hex 04080C0000000000 ; ,
17AD 00 00 00
17B0 00 00
17B2 00 00 00 1018 hex 000000003E000000 ; -
17B5 00 3E 00
17B8 00 00
17BA 00 0C 0C 1019 hex 000C0C0000000000 ; .
17BD 00 00 00
17C0 00 00
17C2 00 00 02 1020 hex 0000020408102000 ; /
17C5 04 08 10
17C8 20 00
17CA 1021 ;
17CA 00 1C 22 1022 hex 001C22262A32221C ; 0
17CD 26 2A 32
17D0 22 1C
17D2 00 1C 08 1023 hex 001C080808080C08 ; 1
17D5 08 08 08
17D8 0C 08
17DA 00 3E 02 1024 hex 003E02041820221C ; 2
17DD 04 18 20
17E0 22 1C
17E2 00 1C 22 1025 hex 001C22201820221C ; 3
17E5 20 18 20
17E8 22 1C
17EA 00 10 10 1026 hex 0010103E12141810 ; 4
17ED 3E 12 14
17F0 18 10
17F2 00 1E 20 1027 hex 001E20201E02023E ; 5
17F5 20 1E 02
17F8 02 3E
17FA 00 1C 22 1028 hex 001C22221E02021C ; 6
17FD 22 1E 02
1800 02 1C
1802 00 08 08 1029 hex 000808081010203E ; 7
1805 08 10 10
1808 20 3E
180A 00 1C 22 1030 hex 001C22221C22221C ; 8
180D 22 1C 22
1810 22 1C
1812 00 1C 20 1031 hex 001C20203C22221C ; 9
1815 20 3C 22
1818 22 1C
181A 00 0C 0C 1032 hex 000C0C000C0C0000 ; :
181D 00 0C 0C
```

```
1820 00 00
1822 04 08 0C 1033 hex 04080C000C0C0000 ; ;
1825 00 0C 0C
1828 00 00
182A 00 20 10 1034 hex 0020100804081020 ; <
182D 08 04 08
1830 10 20
1832 00 00 00 1035 hex 0000003E003E0000 ; =
1835 3E 00 3E
1838 00 00
183A 00 02 04 1036 hex 0002040810080402 ; >
183D 08 10 08
1840 04 02
1842 00 08 00 1037 hex 000800081020221C ; ?
1845 08 10 20
1848 22 1C
184A 1038 ;
184A 00 1C 2A 1039 hex 001C2A2A2C20221C ; @
184D 2A 2C 20
1850 22 1C
1852 00 22 22 1040 hex 0022223E22221408 ; A
1855 3E 22 22
1858 14 08
185A 00 1E 24 1041 hex 001E24241C24241E ; B
185D 24 1C 24
1860 24 1E
1862 00 1C 22 1042 hex 001C22020202221C ; C
1865 02 02 02
1868 22 1C
186A 00 1E 24 1043 hex 001E24242424241E ; D
186D 24 24 24
1870 24 1E
1872 00 3E 02 1044 hex 003E02021E02023E ; E
1875 02 1E 02
1878 02 3E
187A 00 02 02 1045 hex 000202021E02023E ; F
187D 02 1E 02
1880 02 3E
1882 00 1C 22 1046 hex 001C22223202221C ; G
1885 22 32 02
1888 22 1C
188A 00 22 22 1047 hex 002222223E222222 ; H
188D 22 3E 22
1890 22 22
1892 00 1C 08 1048 hex 001C08080808081C ; I
1895 08 08 08
1898 08 1C
189A 00 0C 12 1049 hex 000C121010101038 ; J
189D 10 10 10
18A0 10 38
18A2 00 22 12 1050 hex 0022120A060A1222 ; K
18A5 0A 06 0A
18A8 12 22
18AA 00 3E 02 1051 hex 003E020202020202 ; L
18AD 02 02 02
18B0 02 02
18B2 00 22 22 1052 hex 002222222A2A3622 ; M
18B5 22 2A 2A
18B8 36 22
18BA 00 22 22 1053 hex 002222322A262222 ; N
18BD 32 2A 26
```



```
18C0 22 22
18C2 00 1C 22 1054 hex 001C22222222221C ; O
18C5 22 22 22
18C8 22 1C
18CA 1055 ;
18CA 00 02 02 1056 hex 000202021E22221E ; P
18CD 02 1E 22
18D0 22 1E
18D2 00 2C 12 1057 hex 002C122A2222221C ; Q
18D5 2A 22 22
18D8 22 1C
18DA 00 22 12 1058 hex 0022120A1E22221E ; R
18DD 0A 1E 22
18E0 22 1E
18E2 00 1C 22 1059 hex 001C22201C02221C ; S
18E5 20 1C 02
18E8 22 1C
18EA 00 08 08 1060 hex 000808080808083E ; T
18ED 08 08 08
18F0 08 3E
18F2 00 1C 22 1061 hex 001C222222222222 ; U
18F5 22 22 22
18F8 22 22
18FA 00 08 14 1062 hex 0008142222222222 ; V
18FD 22 22 22
1900 22 22
1902 00 14 2A 1063 hex 00142A2A2A222222 ; W
1905 2A 2A 22
1908 22 22
190A 00 22 22 1064 hex 0022221408142222 ; X
190D 14 08 14
1910 22 22
1912 00 08 08 1065 hex 0008080814222222 ; Y
1915 08 14 22
1918 22 22
191A 00 3E 02 1066 hex 003E02040810203E ; Z
191D 04 08 10
1920 20 3E
1922 00 38 08 1067 hex 0038080808080838 ; [
1925 08 08 08
1928 08 38
192A 00 00 20 1068 hex 0000201008040200 ; \
192D 10 08 04
1930 02 00
1932 00 0E 08 1069 hex 000E08080808080E ; ]
1935 08 08 08
1938 08 0E
193A 00 00 00 1070 hex 0000000000221408 ; ^
193D 00 00 22
1940 14 08
1942 7F 00 00 1071 hex 7F00000000000000 ; _
1945 00 00 00
1948 00 00
194A 1072 ;
194A 00 00 00 1073 hex 0000000000100804 ; `
194D 00 00 10
1950 08 04
1952 00 3C 22 1074 hex 003C223C201C0000 ; a
1955 3C 20 1C
1958 00 00
195A 00 1E 22 1075 hex 001E2222221E0202 ; b
```

```
195D 22 22 1E
1960 02 02
1962 00 3C 02 1076 hex 003C0202023C0000 ; c
1965 02 02 3C
1968 00 00
196A 00 3C 22 1077 hex 003C2222223C2020 ; d
196D 22 22 3C
1970 20 20
1972 00 3C 02 1078 hex 003C023E221C0000 ; e
1975 3E 22 1C
1978 00 00
197A 00 04 04 1079 hex 000404041E042418 ; f
197D 04 1E 04
1980 24 18
1982 1C 20 3C 1080 hex 1C203C22223C0000 ; g
1985 22 22 3C
1988 00 00
198A 00 22 22 1081 hex 00222222261A0202 ; h
198D 22 26 1A
1990 02 02
1992 00 1C 08 1082 hex 001C0808080C0008 ; i
1995 08 08 0C
1998 00 08
199A 06 08 08 1083 hex 06080808080C0008 ; j
199D 08 08 0C
19A0 00 08
19A2 00 12 0A 1084 hex 00120A060A120202 ; k
19A5 06 0A 12
19A8 02 02
19AA 00 1C 08 1085 hex 001C08080808080C ; l
19AD 08 08 08
19B0 08 0C
19B2 00 2A 2A 1086 hex 002A2A2A2A160000 ; m
19B5 2A 2A 16
19B8 00 00
19BA 00 22 22 1087 hex 00222222261A0000 ; n
19BD 22 26 1A
19C0 00 00
19C2 00 1C 22 1088 hex 001C2222221C0000 ; o
19C5 22 22 1C
19C8 00 00
19CA 1089 ;
19CA 02 02 1E 1090 hex 02021E22221E0000 ; p
19CD 22 22 1E
19D0 00 00
19D2 20 20 3C 1091 hex 20203C22223C0000 ; q
19D5 22 22 3C
19D8 00 00
19DA 00 02 02 1092 hex 00020202261A0000 ; r
19DD 02 26 1A
19E0 00 00
19E2 00 1E 20 1093 hex 001E201C023C0000 ; s
19E5 1C 02 3C
19E8 00 00
19EA 00 18 24 1094 hex 00182404041E0404 ; t
19ED 04 04 1E
19F0 04 04
19F2 00 2C 32 1095 hex 002C322222220000 ; u
19F5 22 22 22
19F8 00 00
19FA 00 08 14 1096 hex 0008142222220000 ; v
```

```

19FD 22 22 22
1A00 00 00
1A02 00 14 2A 1097          hex 00142A2A22220000 ; w
1A05 2A 22 22
1A08 00 00
1A0A 00 22 14 1098          hex 0022140814220000 ; x
1A0D 08 14 22
1A10 00 00
1A12 1C 20 3C 1099          hex 1C203C2222220000 ; y
1A15 22 22 22
1A18 00 00
1A1A 00 3E 04 1100          hex 003E0408103E0000 ; z
1A1D 08 10 3E
1A20 00 00
1A22 00 30 08 1101          hex 0030080804080830 ; {
1A25 08 04 08
1A28 08 30
1A2A 08 08 08 1102          hex 0808080808080808 ; |
1A2D 08 08 08
1A30 08 08
1A32 00 06 08 1103          hex 0006080810080806 ; }
1A35 08 10 08
1A38 08 06
1A3A 00 00 00 1104          hex 00000000000001A2C ; ~
1A3D 00 00 00
1A40 1A 2C
1A42 00 00 2A 1105          hex 00002A142A142A00 ;
1A45 14 2A 14
1A48 2A 00
1A4A          1106 ;
1A4A          1107 ;
1A4A          1108 ;
1A4A          1109      .fi
1A4A          1110 ;
1A4A          1111 ;

```

```
BSAVE SEG03,A$0900,B,L$074B
```

```

1A4A          1112      usr SEG03
1A4A          1113 ;
1A4A          1114 ;
1A4A          1115      icl "DATA.L"

```

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

```
1A4A      1          ttl "PROGRAM Source Code, DATA.L"
1A4A      2      ;
1A4A      3      ;
1A4A      4      ; DATA.L
1A4A      5      ;
1A4A      6      ;
1A4A      7          obj PAGE09
1A4A      8          usr
1A4A      9      ;
1A4A     10      ;
1A4A     11  SIGBYTES:
1A4A     12      ;
1A4A     13  CFFASIG:
1A4A A9 20     14          lda #$20
1A4C A2 00     15          ldx #$00
1A4E A9 03     16          lda #$03
1A50 A9 00     17          lda #$00          ; or #$3C
1A52     18      ;
0008     19  SIGLEN    equ *-CFFASIG
1A52     20      ;
1A52     21  DISKSIG1:
1A52 A2 20     22          ldx #$20
1A54 A0 00     23          ldy #$00
1A56 A2 03     24          ldx #$03
1A58 86 3C     25          stx $3C
1A5A     26      ;
1A5A     27  DISKSIG2:
1A5A A2 20     28          ldx #$20
1A5C A0 00     29          ldy #$00
1A5E A2 03     30          ldx #$03
1A60 84 3C     31          sty $3C
1A62     32      ;
1A62     33      ;
1A62     34  NUM      dfs 4,ZERO
1A66 00 00     35  VAL0    adr ZERO
1A68 09 00     36  VAL1    adr 9
1A6A 2F 00     37  VAL2    adr 47
1A6C 7B 00     38  VAL3    adr 123
1A6E 2E 16     39  VAL4    adr 5678
1A70 DD 87     40  VAL5    adr 34781
1A72     41      ;
1A72     42      ;
1A72     43      ;
1A72     44  SAVROMER dfs 2,ZERO
1A74     45      ;
1A74     46  SAVCH    dfs 1,ZERO
1A75     47  SAVCV    dfs 1,ZERO
1A76     48      ;
1A76     49  SAVA     dfs 1,ZERO
1A77     50  SAVX     dfs 1,ZERO
1A78     51  SAVY     dfs 1,ZERO
1A79     52      ;
1A79     53  SAVNUM   dfs 1,ZERO
1A7A     54  TEMP     dfs 1,ZERO
1A7B     55  YORN     dfs 1,ZERO
1A7C     56      ;
1A7C     57  SHOWCNT  dfs 1,ZERO
1A7D     58  LINECNT  dfs 1,ZERO
1A7E     59  PAGECNT  dfs 1,ZERO
1A7F     60      ;
```

```

1A7F          61  VSNBUFR  dfs VSNLEN+1,ZERO
1A93          62  VERSION  dfs VRSNLEN+1,ZERO
1AA2          63  ;
1AA2          64  ;
1AA2          65  ;
1AA2          66  ; Get entry parameters.
1AA2          67  ;
1AA2          68  NNUMS    dfs 1,ZERO
1AA3          69  NENTRY   dfs 1,ZERO
1AA4          70  ;
1AA4          71  NUMVALS  dfs 8,ZERO
1AAC          72  ;
1AAC          73  HEXVALS  dfs 4,ZERO
1AB0          74  DECVALS  dfs 2,ZERO
1AB2          75  ;
000F          76  ENTRLEN  equ *-NENTRY
1AB2          77  ;
1AB2          78  ;
1AB2          79  VOLTITLE  dfs NAMELEN+1,ZERO
1ACB          80  BOOTFILE  dfs NAMELEN+1,ZERO
1AE4          81  FMDATE    dfs DATELEN,ZERO
1AEA          82  ;
1AEA          83  ;
1AEA          84  ; Time and Date separators.
1AEA          85  ;
1AEA BA BA A0 86  DATIMSEP asc " :: // "
1AED AF AF A0
1AF0          87  ;
1AF0          88  ;
1AF0          89  ; Hex to decimal conversion tables.
1AF0          90  ;
1AF0 01 0A 64 91  DECTBL  byt 1,10,100,1000,10000
1AF3 E8 10
1AF5 00 00 00 92  DECTBLH hby 1,10,100,1000,10000
1AF8 03 27
1AFA          93  ;
1AFA          94  ;
1AFA A0 00     95  CHARBUFR byt SPACE,ZERO
1AFC          96  NAMEBUFR dfs NAMELEN+1,ZERO
1B15          97  ;
1B15          98  ;
1B15 A0 A8 F5 99  UNKNOWN  asc " (unknown)"
1B18 EE EB EE
1B1B EF F7 EE
1B1E A9
1B1F 00        100          byt ZERO
1B20          101  ;
1B20          102  ;
1B20 D4 E8 E9 103  TESTMSG  asc "This is a test message"
1B23 F3 A0 E9
1B26 F3 A0 E1
1B29 A0 F4 E5
1B2C F3 F4 A0
1B2F ED E5 F3
1B32 F3 E1 E7
1B35 E5
1B36 00        104          byt ZERO
1B37          105  ;
1B37          106  ;
1B37          107          dfs PAGE SIZE- *-PAGE SIZE** /PAGE SIZE,ZERO
1C00          108  ;

```

```
1C00          109  ;
```

```
BSAVE SEG04,A$0900,B,L$01B6
```

```
1C00          110          usr SEG04
```

```
1C00          111  BUFFERS:
```

```
1C00          112  ;
```

```
1C00          113  ;
```

```
1C00          114          stt "PROGRAM Symbol Table"
```

```
1C00          115  ;
```

```
1C00          116  ;
```

```
1C00          117          end 111
```

```
*** End of Assembly
```

Symbol List starts at 0x7800, ends at 0x8246, used 0x0A46, remaining 0x3402

# Symbols unsorted:

LOC0	0000	WNDLFT	0020	WNDWDTH	0021	WNDTOP	0022	WNDBTM	0023
CH	0024	CV	0025	INVFLG	0032	PROMPT	0033	ASRUN	0076
ASONERR	00D8	GENPTR	00F6	DATAPTR	00FA	PRNTPTR	00FC	ZERO	0000
DATELEN	0006	VRSNLEN	000E	VSNLEN	0013	NAMELEN	0018	NEGONE	00FF
TEXTMODE	0000	GRPHMODE	0001	TX80MODE	0002	LV80MODE	0003	NORMDISP	0000
INVRDISP	0001	INITSCRN	0000	HOMESCRN	0001	EOLCLR	0000	EOPCLR	0001
DIRECT	0000	INDIRECT	0001	NOPAD	0000	HIGHLOW	0020	ZEROPAD	0040
SPCPAD	0080	NEXTLINE	0004	CHARCELL	0007	PCMDMASK	000F	NIBLMASK	000F
CVMASK	001F	MAXWDTH	0028	MAXCH	0050	MINCV	0060	INVRMASK	007F
ASCIFLAG	0080	LWRMASK	00DF	LWRCASE	00E0	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	CTRLD	0084
BELLCHAR	0087	LARROW	0088	DARROW	008A	UARROW	008B	RETURN	008D
CTRLQ	0091	RARROW	0095	ESCAPE	009B	SPACE	00A0	PERCENT	00A5
MINUS	00AD	PERIOD	00AE	QUESTION	00BF	BAR	00FC	DELETE	00FF
STACK	0100	PAGESIZE	0100	DOSWARM	03D0	DOSCOLD	03D3	CALLFM	03D6
CALLRWTS	03D9	GETFMCB	03DC	RDVSNADR	03E1	HOOKDOS	03EA	RDCLKADR	03E8
PRTERADR	03ED	PAGE09	0900	INITDOS	BFF8	DISKTBL	BFFB	KEY	C000
CLRKEY	C010	TXTCLR	C050	TXTSET	C051	MIXCLR	C052	LOWSCR	C054
HIRES	C057	PRNTAX	F941	INIT	FB2F	VTAB	FC22	CLREOP	FC42
HOME	FC58	CLREOL	FC9C	CROUT	FD8E	PRBYTE	FDDA	PRHEX	FDE3
COUT	FDED	OUTPORT	FE95	BELL	FF3A	DISPLAY	0001	QUIT	0923
SHOWVAL	0948	TESTVAL	0EAB	GETHEX2	1151	GETHEX4	1154	GETHEX6	1157
GETHEX8	115A	GETDEC1	115F	GETDEC2	1162	GETDEC3	1165	GETDEC5	1168
NUMLOOP	1179	NUMPROC	11D3	HEXPROC	11D6	DECPROC	1205	SELECT	122E
PRESKEY1	125E	PRESKEY2	1266	PRESKEY	126C	GETKEY	127E	READKEY	1292
PRNTCHAR	12A8	PRSPCHEX	12B4	SELCKEY	12C0	SPLITHEX	12D3	ASCIHEX	12DD
MAKEHEX	12E9	PRINTBUF	12FF	BUFRMOD	1315	PRINTIME	1319	PRINT	132E
PRNTLOOP	133D	PRNTMOD1	1369	PRNTMOD2	1384	PRNTBR1	1386	PRNTBR2	138C
PRNTBR3	1391	PRNTBR4	139F	PRNTMOD3	13A2	PRNTOUT	13A8	OUTMOD1	13A8
OUTMOD2	13AA	PRNTOUT2	13AC	OUTTBL1	13AF	OUTTBL2	13B5	OUT80COL	13BB
VTABADRS	13BD	OUTADRS	13C3	PRNTSAV	13C9	PRNTNUM	13CA	MODEVAL	13CC
FRMTVAL	13CD	PRNTBL	13CE	PRNTBLL	13DE	PRNTBLH	13EE	PRNTRTN	13FE
PRNTSAVY	1409	PRNTSAVX	140B	PRNTSAVA	140D	PRNTRTN	1410	PRNTMODE	1411
PRNTDISP	145C	PRNTSCRN	147B	PRNTCLR	149C	PRNTCNTR	14B7	PRNTBUFR	14C9
PRNTNIBL	14E4	PRNTNBYT	14E9	PRNT1BYT	14ED	PRNT2BYT	14F0	PRNTBYT	14F2
PRNTADR	14FC	PRNT1DEC	1514	PRNT2DEC	151A	PRNTDEC	151D	PRNT3DEC	1527
PRNTNDEC	1531	PRNTBYTE	1578	PRNTHEx	1581	PRNTHEx2	1583	HEXTODEC	158E
HEXTODC2	1590	GETDIGIT	15A8	PRNTGRPH	15C7	SCRNMOD1	163F	SCRNMOD2	1642
SCRNMOD3	1644	SCRNMOD4	1653	SCRNSAVY	1659	SCRNSAVX	165B	SCRNINIT	165E
SCROLL	1676	SCRLMOD1	16A3	SCRLMOD2	16A6	SCRLMOD3	16AA	SCRLMOD4	16C3
SCRNEOL	16C7	EOLMOD1	16DB	EOLMOD2	16DF	SCRNHOME	16F1	SCRNEOP	16F9
YBASELO	171A	YBASEHI	1732	CHARTBL	174A	SIGBYTES	1A4A	CFFASIG	1A4A
SIGLEN	0008	DISKSIG1	1A52	DISKSIG2	1A5A	NUM	1A62	VAL0	1A66
VAL1	1A68	VAL2	1A6A	VAL3	1A6C	VAL4	1A6E	VAL5	1A70
SAVROMER	1A72	SAVCH	1A74	SAVCV	1A75	SAVA	1A76	SAVX	1A77
SAVY	1A78	SAVNUM	1A79	TEMP	1A7A	YORN	1A7B	SHOWCNT	1A7C
LINECNT	1A7D	PAGECNT	1A7E	VSNBUFR	1A7F	VERSION	1A93	NNUMS	1AA2
NENTRY	1AA3	NUMVALS	1AA4	HEXVALS	1AAC	DECVALS	1AB0	ENTRLen	000F
VOLTITLE	1AB2	BOOTFILE	1ACB	FMDATE	1AE4	DATIMSEP	1AEA	DECTBL	1AF0
DECTBLH	1AF5	CHARBUFR	1AFA	NAMEBUFR	1AFC	UNKNOWN	1B15	TESTMSG	1B20
BUFFERS	1C00								

## Symbols alphabetically sorted:

ADRCMD	005B	ASCIFLAG	0080	ASCIHEX	12DD	ASONERR	00D8	ASRUN	0076
BAR	00FC	BELL	FF3A	BELLCHAR	0087	BOOTFILE	1ACB	BUFFERS	1C00
BUFRCMD	0056	BUFRMOD	1315	BYT1CMD	0058	BYT2CMD	0059	BYTNCMD	005A
CALLFM	03D6	CALLRWTS	03D9	CFFASIG	1A4A	CH	0024	CHARBUFR	1AFA
CHARCELL	0007	CHARTBL	174A	CLRCMD	0054	CLREOL	FC9C	CLREOP	FC42
CLRKEY	C010	CNTRCMD	0055	COUT	FDED	CROUT	FD8E	CTRLD	0084
CTRLQ	0091	CV	0025	CVMASK	001F	DARROW	008A	DATAPTR	00FA
DATELEN	0006	DATIMSEP	1AEA	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E
DECNCMD	005F	DECPROC	1205	DECTBLH	1AF5	DECTBLL	1AF0	DECVALS	1AB0
DELETE	00FF	DIRECT	0000	DISKSIG1	1A52	DISKSIG2	1A5A	DISKTBL	BFFB
DISPCMD	0052	DISPLAY	0001	DOSCOLD	03D3	DOSWARM	03D0	ENTRLEN	000F
EOLCLR	0000	EOLMOD1	16DB	EOLMOD2	16DF	EOPCLR	0001	ESCAPE	009B
FMDATE	1AE4	FRMTVAL	13CD	GENPTR	00F6	GETDEC1	115F	GETDEC2	1162
GETDEC3	1165	GETDEC5	1168	GETDIGIT	15A8	GETFMCB	03DC	GETHEX2	1151
GETHEX4	1154	GETHEX6	1157	GETHEX8	115A	GETKEY	127E	GRPHMODE	0001
HEXPROC	11D6	HEXTODC2	1590	HEXTODEC	158E	HEXVALS	1AAC	HIGHLOW	0020
HIRES	C057	HOME	FC58	HOMESCRN	0001	HOOKDOS	03EA	INDIRECT	0001
INIT	FB2F	INITDOS	BFF8	INITSCRN	0000	INVFLG	0032	INVRDISP	0001
INVRMASK	007F	KEY	C000	LARROW	0088	LINECNT	1A7D	LOC0	0000
LOWSCR	C054	LV80MODE	0003	LWRCASE	00E0	LWRMASK	00DF	MAKEHEX	12E9
MAXCH	0050	MAXWDTH	0028	MINCV	0060	MINUS	00AD	MIXCLR	C052
MODECMD	0051	MODEVAL	13CC	NAMEBUFR	1AFC	NAMELEN	0018	NEGONE	00FF
NENTRY	1AA3	NEXTLINE	0004	NIBLCMD	0057	NIBLMASK	000F	NNUMS	1AA2
NOPAD	0000	NORMDISP	0000	NUM	1A62	NUMLOOP	1179	NUMPROC	11D3
NUMVALS	1AA4	OUT80COL	13BB	OUTADRS	13C3	OUTMOD1	13A8	OUTMOD2	13AA
OUTPORT	FE95	OUTTBL1	13AF	OUTTBL2	13B5	PAGE09	0900	PAGECNT	1A7E
PAGESIZE	0100	PCMDMASK	000F	PERCENT	00A5	PERIOD	00AE	PRBYTE	FDDA
PRESKEY	126C	PRESKEY1	125E	PRESKEY2	1266	PRHEX	FDE3	PRINT	132E
PRINTBUF	12FF	PRINTIME	1319	PRINTRTN	1410	PRNT1BYT	14ED	PRNT1DEC	1514
PRNT2BYT	14F0	PRNT2DEC	151A	PRNT3DEC	1527	PRNTADR	14FC	PRNTAX	F941
PRNTBL	13CE	PRNTBLH	13EE	PRNTBLL	13DE	PRNTBR1	1386	PRNTBR2	138C
PRNTBR3	1391	PRNTBR4	139F	PRNTBUFR	14C9	PRNTBYT	14F2	PRNTBYTE	1578
PRNTCHAR	12A8	PRNTCLR	149C	PRNTCNTR	14B7	PRNTDEC	151D	PRNTDISP	145C
PRNTGRPH	15C7	PRNTHEx	1581	PRNTHEx2	1583	PRNTLOOP	133D	PRNTMOD1	1369
PRNTMOD2	1384	PRNTMOD3	13A2	PRNTMODE	1411	PRNTNBYT	14E9	PRNTNDEC	1531
PRNTNIBL	14E4	PRNTNUM	13CA	PRNTOUT	13A8	PRNTOUT2	13AC	PRNTPTR	00FC
PRNTRTN	13FE	PRNTSAV	13C9	PRNTSAVA	140D	PRNTSAVX	140B	PRNTSAVY	1409
PRNTSCRN	147B	PROMPT	0033	PRSPCHEX	12B4	PRTERADR	03ED	QUESTION	00BF
QUIT	0923	RARROW	0095	RDCLKADR	03E8	RDVSNAADR	03E1	READKEY	1292
RETURN	008D	RTNCMD	0050	SAVA	1A76	SAVCH	1A74	SAVCV	1A75
SAVNUM	1A79	SAVROMER	1A72	SAVX	1A77	SAVY	1A78	SCRLMOD1	16A3
SCRLMOD2	16A6	SCRLMOD3	16AA	SCRLMOD4	16C3	SCRNCMD	0053	SCRNEOL	16C7
SCRNEOP	16F9	SCRNHOME	16F1	SCRNINIT	165E	SCRNMOD1	163F	SCRNMOD2	1642
SCRNMOD3	1644	SCRNMOD4	1653	SCRNSAVX	165B	SCRNSAVY	1659	SCROLL	1676
SELCKEY	12C0	SELECT	122E	SHOWCNT	1A7C	SHOWVAL	0948	SIGBYTES	1A4A
SIGLEN	0008	SPACE	00A0	SPCPAD	0080	SPLITHEX	12D3	STACK	0100
TEMP	1A7A	TESTMSG	1B20	TESTVAL	0EAB	TEXTMODE	0000	TX80MODE	0002
TXTCLR	C050	TXTSET	C051	UARROW	008B	UNKNOWN	1B15	VAL0	1A66
VAL1	1A68	VAL2	1A6A	VAL3	1A6C	VAL4	1A6E	VAL5	1A70
VERSION	1A93	VOLTITLE	1AB2	VRSNLEN	000E	VSNBUFR	1A7F	VSNLEN	0013
VTAB	FC22	VTABADRS	13BD	WNBDM	0023	WNDLFT	0020	WNDTOP	0022
WNDWDTH	0021	YBASEHI	1732	YBASELO	171A	YORN	1A7B	ZERO	0000
ZEROPAD	0040								

Symbols numerically sorted:

ZERO	0000	TEXTMODE	0000	NORMDISP	0000	NOPAD	0000	LOC0	0000
INITSCRN	0000	EOLCLR	0000	DIRECT	0000	INVRDISP	0001	INDIRECT	0001
HOMESCRN	0001	GRPHMODE	0001	EOPCLR	0001	DISPLAY	0001	TX80MODE	0002



LV80MODE	0003	NEXTLINE	0004	DATELEN	0006	CHARCELL	0007	SIGLEN	0008
VRSNLEN	000E	PCMDMASK	000F	NIBLMASK	000F	ENTRLEN	000F	VSNLEN	0013
NAMELEN	0018	CVMASK	001F	WNDLFT	0020	HIGHLOW	0020	WNDWDTH	0021
WNDTOP	0022	WNBDBTM	0023	CH	0024	CV	0025	MAXWDTH	0028
INVFLG	0032	PROMPT	0033	ZEROPAD	0040	RTNCMD	0050	MAXCH	0050
MODECMD	0051	DISPCMD	0052	SCRNCMD	0053	CLRCMD	0054	CNTRCMD	0055
BUFRCMD	0056	NIBLCMD	0057	BYT1CMD	0058	BYT2CMD	0059	BYTNCMD	005A
ADRCMD	005B	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E	DECNCMD	005F
MINCV	0060	ASRUN	0076	INVRMASK	007F	SPCPAD	0080	ASCIFLAG	0080
CTRLD	0084	BELLCHAR	0087	LARROW	0088	DARROW	008A	UARROW	008B
RETURN	008D	CTRLQ	0091	RARROW	0095	ESCAPE	009B	SPACE	00A0
PERCENT	00A5	MINUS	00AD	PERIOD	00AE	QUESTION	00BF	ASONERR	00D8
LWRMASK	00DF	LWRCASE	00E0	GENPTR	00F6	DATAPTR	00FA	PRNTPTR	00FC
BAR	00FC	NEGONE	00FF	DELETE	00FF	STACK	0100	PAGESIZE	0100
DOSWARM	03D0	DOSCOLD	03D3	CALLFM	03D6	CALLRWTS	03D9	GETFMCB	03DC
RDVSNADR	03E1	RDCLKADR	03E8	HOOKDOS	03EA	PRTERADR	03ED	PAGE09	0900
QUIT	0923	SHOWVAL	0948	TESTVAL	0EAB	GETHEX2	1151	GETHEX4	1154
GETHEX6	1157	GETHEX8	115A	GETDEC1	115F	GETDEC2	1162	GETDEC3	1165
GETDEC5	1168	NUMLOOP	1179	NUMPROC	11D3	HEXPROC	11D6	DECPROC	1205
SELECT	122E	PRESKEY1	125E	PRESKEY2	1266	PRESKEY	126C	GETKEY	127E
READKEY	1292	PRNTCHAR	12A8	PRSPCHEX	12B4	SELCKEY	12C0	SPLITHEX	12D3
ASCIHEX	12DD	MAKEHEX	12E9	PRINTBUF	12FF	BUFRMOD	1315	PRINTIME	1319
PRINT	132E	PRNTLOOP	133D	PRNTMOD1	1369	PRNTMOD2	1384	PRNTBR1	1386
PRNTBR2	138C	PRNTBR3	1391	PRNTBR4	139F	PRNTMOD3	13A2	PRNTOUT	13A8
OUTMOD1	13A8	OUTMOD2	13AA	PRNTOUT2	13AC	OUTTBL1	13AF	OUTTBL2	13B5
OUT80COL	13BB	VTABADRS	13BD	OUTADRS	13C3	PRNTSAV	13C9	PRNTNUM	13CA
MODEVAL	13CC	FRMTVAL	13CD	PRNTBL	13CE	PRNTBLL	13DE	PRNTBLH	13EE
PRNTRTN	13FE	PRNTSAVY	1409	PRNTSAVX	140B	PRNTSAVA	140D	PRINTRTN	1410
PRNTMODE	1411	PRNTDISP	145C	PRNTSCRN	147B	PRNTCLR	149C	PRNTCNTR	14B7
PRNTBUFR	14C9	PRNTNIBL	14E4	PRNTNBYT	14E9	PRNT1BYT	14ED	PRNT2BYT	14F0
PRNTBYT	14F2	PRNTADR	14FC	PRNT1DEC	1514	PRNT2DEC	151A	PRNTDEC	151D
PRNT3DEC	1527	PRNTNDEC	1531	PRNTBYTE	1578	PRNTHex	1581	PRNTHex2	1583
HEXTODEC	158E	HEXTODC2	1590	GETDIGIT	15A8	PRNTGRPH	15C7	SCRNMOD1	163F
SCRNMOD2	1642	SCRNMOD3	1644	SCRNMOD4	1653	SCRNSAVY	1659	SCRNSAVX	165B
SCRNINIT	165E	SCROLL	1676	SCRLMOD1	16A3	SCRLMOD2	16A6	SCRLMOD3	16AA
SCRLMOD4	16C3	SCRNEOL	16C7	EOLMOD1	16DB	EOLMOD2	16DF	SCRNHOME	16F1
SCRNEOP	16F9	YBASELO	171A	YBASEHI	1732	CHARTBL	174A	SIGBYTES	1A4A
CFFASIG	1A4A	DISKSIG1	1A52	DISKSIG2	1A5A	NUM	1A62	VAL0	1A66
VAL1	1A68	VAL2	1A6A	VAL3	1A6C	VAL4	1A6E	VAL5	1A70
SAVROMER	1A72	SAVCH	1A74	SAVCV	1A75	SAVA	1A76	SAVX	1A77
SAVY	1A78	SAVNUM	1A79	TEMP	1A7A	YORN	1A7B	SHOWCNT	1A7C
LINECNT	1A7D	PAGECNT	1A7E	VSNBUFR	1A7F	VERSION	1A93	NNUMS	1AA2
NENTRY	1AA3	NUMVALS	1AA4	HEXVALS	1AAC	DECVALS	1AB0	VOLTITLE	1AB2
BOOTFILE	1ACB	FMDATE	1AE4	DATIMSEP	1AEA	DECTBLL	1AF0	DECTBLH	1AF5
CHARBUFR	1AFA	NAMEBUFR	1AFC	UNKNOWN	1B15	TESTMSG	1B20	BUFFERS	1C00
INITDOS	BFF8	DISKTBL	BFFB	KEY	C000	CLRKEY	C010	TXTCLR	C050
TXTSET	C051	MIXCLR	C052	LOWSCR	C054	HIRES	C057	PRNTAX	F941
INIT	FB2F	VTAB	FC22	CLREOP	FC42	HOME	FC58	CLREOL	FC9C
CROUT	FD8E	PRBYTE	FDDA	PRHEX	FDE3	COUT	FDED	OUTPORT	FE95
BELL	FF3A								